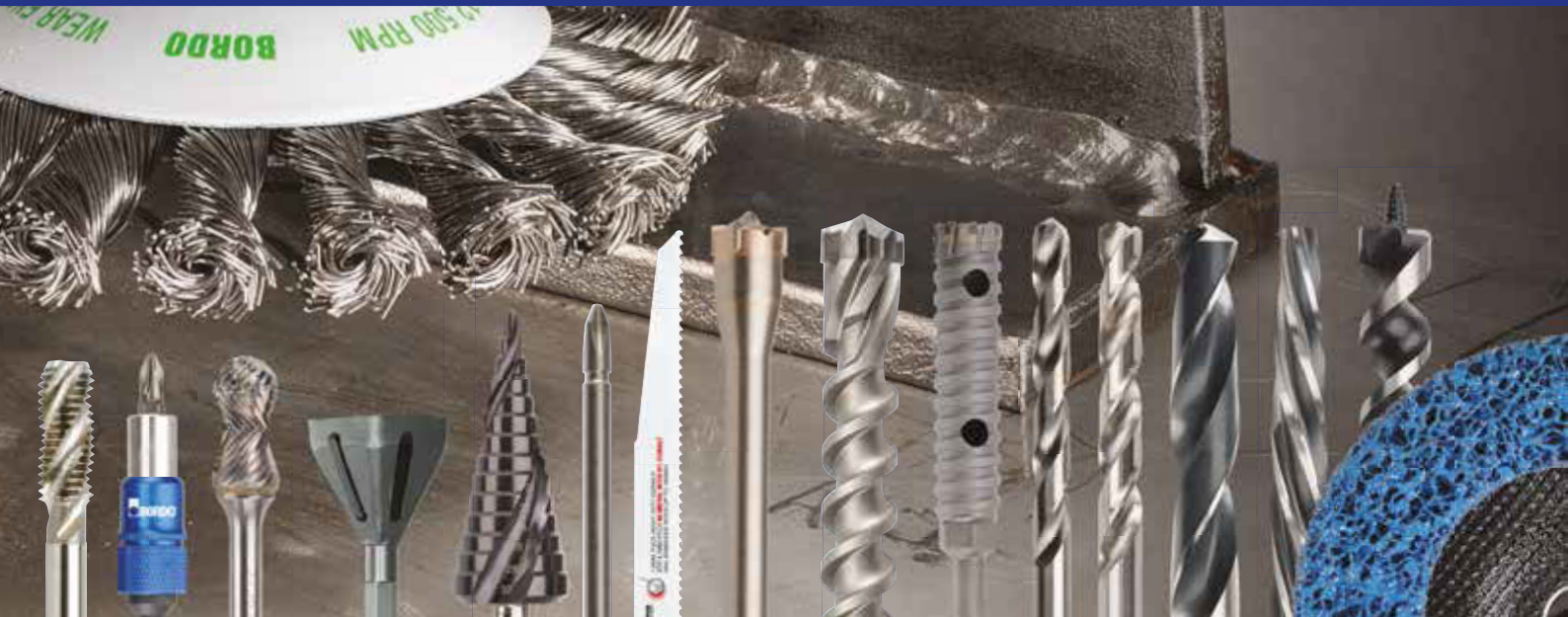


2019  
UPDATE

# BORDO<sup>®</sup>

INDUSTRIAL TOOLS



 **BLACK  
KNIGHT**

 **QUICK  
SILVER**

 **COBALT  
TOUGH**

 **DELTA POINT**

**saber**

**savage<sup>®</sup>**  
PERFORMANCE

**BUYER'S GUIDE 03/2019**



All prices in this Bordo Buyer's Guide are shown in AUSTRALIAN DOLLARS and exclude GST. Prices throughout this document are 'recommended retail prices' and there is no obligation for distributors or retailers to comply with the pricing recommendations.

Bordo International continues to make a significant commitment to environmental awareness and sustainability.

Wherever possible we avoid creating emissions, we continue to reduce the emissions that we make and we offset the emissions that we can't avoid.

- Wherever possible we utilise recyclable packing and implement a strict recycling program in our office and warehouse facilities.
- Our corporate headquarters, in the the eastern suburbs of Melbourne, is one of the first privately owned 5 star rated buildings in Australia - certified by the Green Building Council of Australia.
- In 2012 our 85kW solar array was installed – enough to supply all our electricity needs.
- We maximise our use of electronic communications and store most documents electronically to minimise the use of laser printers and paper.
- We offset the carbon emissions of our vehicles through accredited carbon offset programs.

This Buyer's Guide is printed using vegetable based inks on PEFC certified paper. Where possible we supply this publication electronically to reduce our paper usage.





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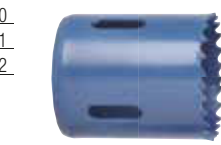
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METRIC  
JOBBER DRILLS  
DIN338



GROUP	DELT
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	DELTA POINT*
FLUTE TYPE	30° HELIX
PACKAGING	BULK

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
1.00	12	34	10	4.32	2015-1.00
1.50	18	40	10	3.87	2015-1.50
2.00	24	49	10	3.50	2015-2.00
2.50	30	57	10	3.50	2015-2.50
3.00	33	61	10	3.33	2015-3.00
3.20	36	65	10	3.33	2015-3.20
3.30	36	65	10	3.50	2015-3.30
3.50	39	70	10	3.65	2015-3.50
3.70	39	70	10	3.79	2015-3.70
3.90	43	75	10	4.09	2015-3.90
4.00	43	75	10	4.24	2015-4.00
4.10	43	75	10	4.32	2015-4.10
4.20	43	75	10	4.66	2015-4.20
4.50	47	80	10	4.66	2015-4.50
4.70	47	80	10	5.12	2015-4.70
5.00	52	86	10	5.50	2015-5.00
5.10	52	86	10	5.77	2015-5.10
5.20	52	86	10	6.36	2015-5.20
5.50	57	93	10	6.36	2015-5.50
6.00	57	93	10	7.25	2015-6.00
6.20	63	101	10	7.52	2015-6.20
6.50	63	101	10	8.08	2015-6.50
6.60	63	101	10	8.83	2015-6.60
6.80	69	109	10	8.97	2015-6.80
6.90	69	109	10	8.97	2015-6.90
7.00	69	109	10	9.43	2015-7.00
7.20	69	109	10	10.15	2015-7.20
7.50	69	109	5	10.69	2015-7.50
7.80	75	117	5	11.60	2015-7.80
7.90	75	117	5	11.60	2015-7.90
8.00	75	117	5	11.60	2015-8.00
8.50	75	117	5	13.08	2015-8.50
8.80	81	125	5	14.39	2015-8.80
9.00	81	125	5	14.39	2015-9.00
9.20	81	125	5	15.91	2015-9.20
9.30	81	125	5	15.91	2015-9.30
9.40	81	125	5	15.91	2015-9.40
9.50	81	125	5	15.91	2015-9.50
9.90	87	133	5	16.97	2015-9.90
10.00	87	133	5	17.09	2015-10.00
10.20	87	133	5	19.00	2015-10.20
10.50	87	133	5	19.35	2015-10.50
10.80	94	142	5	31.89	2015-10.80
11.00	94	142	5	22.31	2015-11.00
11.50	94	142	5	25.11	2015-11.50
11.80	94	142	5	39.12	2015-11.80
12.00	101	151	5	28.40	2015-12.00
12.20	101	151	5	43.50	2015-12.20
12.50	101	151	5	31.29	2015-12.50
12.80	101	151	5	46.36	2015-12.80
12.90	101	151	5	46.36	2015-12.90
13.00	101	151	5	33.58	2015-13.00



The Delta Point drill bit is completely unlike traditional chisel point and split point drill bits. Rather than try to modify existing point types or tweak the grind angles, Delta Point tip design required a revolutionary re-think of drill tip function.

Delta Point drills have a multi-faceted cutting tip. The overall length of the cutting edge of Delta Point significantly exceeds that of conventional split point drills of comparable size. This means there is more edge doing the cutting and this is one reason the design is superior to anything that has come before it. Although the final design might look complicated the results are simply extraordinary.

**Drills 2 times faster, lasts 10 times longer!**

**DRILLS FASTER LASTS LONGER**



\* Sizes 2.5mm and below are 135° standard chisel point.



GROUP	DELT / PANL
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	<b>DELTA POINT*</b>
FLUTE TYPE	30° HELIX
PACKAGING	<b>BULK</b>



**METRIC  
JOBBER DRILLS  
DIN338**

Delta Point drills are nearly twice as fast as conventional split point drills in mild steel. The time savings in stainless steel, aluminium and wood are even more significant.

The productivity gains from a Delta Point drill speak for themselves, but what about drill bit life? During independent drill bit lifetime testing, using 20mm mild steel plate as a reference material, Delta Point drill bits drilled ten times more holes than conventional split point drill bits.

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**DRILLS FASTER  
LASTS LONGER**

MERCHANDISER TYPE	\$ MERCH	PART NUMBER
METRIC BRIGHT 230 PIECES	<b>2,123.40</b>	2015-D2

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER
	10	2015-1.00
	10	2015-1.50
	10	2015-2.00
	10	2015-2.50
	10	2015-3.00
	10	2015-3.50
	10	2015-4.00
	10	2015-4.50
	10	2015-5.00
	10	2015-5.50
	10	2015-6.00
	10	2015-6.50
	10	2015-7.00
	5	2015-7.50
	5	2015-8.00
	5	2015-8.50
	5	2015-9.00
	5	2015-9.50
	5	2015-10.00
	5	2015-10.50
	5	2015-11.00
	5	2015-11.50
	5	2015-12.00
	5	2015-12.50
	5	2015-13.00
	10	2345-30
	10	2345-20
	10	2345-11
	10	2345-1/8

\* Sizes 2.5mm and below are 135° standard chisel point.



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JOBBER DRILLS  
DIN338**

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**DRILLS FASTER  
LASTS LONGER**



GROUP	DELT
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	<b>DELTA POINT*</b>
FLUTE TYPE	30° HELIX
PACKAGING	<b>CLAM SHELL</b>

GROUP	DELT
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	<b>DELTA POINT*</b>
FLUTE TYPE	30° HELIX
PACKAGING	<b>CLAM SHELL</b>



DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
1.00	12	34	2	8.92	2015-1.00S
1.50	18	40	2	8.12	2015-1.50S
2.00	24	49	2	7.38	2015-2.00S
2.50	30	57	2	7.38	2015-2.50S
3.00	33	61	2	6.95	2015-3.00S
3.50	39	70	1	4.24	2015-3.50S
4.00	43	75	1	4.79	2015-4.00S
4.50	47	80	1	5.20	2015-4.50S
5.00	52	86	1	6.06	2015-5.00S
5.50	57	93	1	6.95	2015-5.50S
6.00	57	93	1	7.82	2015-6.00S
6.50	63	101	1	8.74	2015-6.50S
7.00	69	109	1	10.02	2015-7.00S
7.50	69	109	1	11.31	2015-7.50S
8.00	75	117	1	12.18	2015-8.00S
8.50	75	117	1	13.61	2015-8.50S
9.00	81	125	1	14.96	2015-9.00S
9.50	81	125	1	16.51	2015-9.50S
10.00	87	133	1	17.69	2015-10.00S
10.50	87	133	1	19.85	2015-10.50S
11.00	94	142	1	22.88	2015-11.00S
11.50	94	142	1	25.65	2015-11.50S
12.00	101	151	1	28.95	2015-12.00S
12.50	101	151	1	31.89	2015-12.50S
13.00	101	151	1	34.17	2015-13.00S

MERCHANDISER TYPE	\$ MERCH	PART NUMBER
DELTA POINT 171 CLAM SHELLS	1,834.95	2015-D1

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER
	10	2015-1.00S
	10	2015-1.50S
	10	2015-2.00S
	10	2015-2.50S
	10	2015-3.00S
	10	2015-3.50S
	10	2015-4.00S
	10	2015-4.50S
	10	2015-5.00S
	5	2015-5.50S
	10	2015-6.00S
	5	2015-6.50S
	5	2015-7.00S
	5	2015-7.50S
	10	2015-8.00S
	5	2015-8.50S
	5	2015-9.00S
	3	2015-9.50S
	10	2015-10.00S
	3	2015-10.50S
	3	2015-11.00S
	3	2015-11.50S
	3	2015-12.00S
	3	2015-12.50S
	3	2015-13.00S

\* Sizes 2.5mm and below are 135° standard chisel point.



GROUP	DELT
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	<b>DELTA POINT*</b>
FLUTE TYPE	30° HELIX
PACKAGING	<b>SET</b>



**METRIC  
JOBBER DRILLS  
DIN338**

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**Drills 2 times faster, lasts 10 times longer!**

**DRILLS FASTER  
LASTS LONGER**

SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER
<b>M2 JOBBER – ABS CASE</b> 1.0 - 10.0 x 0.5mm rises	19	<b>171.55</b>	2015-M2
<b>M3 JOBBER – ABS CASE</b> 1.0 - 13.0 x 0.5mm rises	25	<b>337.57</b>	2015-M3
<b>M5 JOBBER – ABS CASE</b> 1.0 - 6.5 x 0.5mm rises 7.0 - 13.0 x 1.0mm rises	19	<b>222.17</b>	2015-M5



MERCHANDISER DESCRIPTION MERCHANDISER CONTENTS	SET QTY	\$ MERCH.	PART NUMBER
<b>DS1 MERCHANDISER 9 SETS</b>		<b>2,193.87</b>	2015-DS1
M2 DRILL SET	3		
M3 DRILL SET	3		
M5 DRILL SET	3		
<b>DS3 MERCHANDISER 9 SETS</b>		<b>3,038.13</b>	2015-DS3
M3 DRILL SET	9		

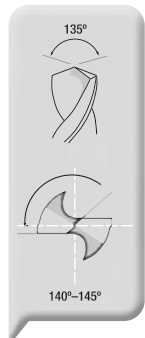
**DRILLS FASTER  
LASTS LONGER**

\* Sizes 2.5mm and below are 135° standard chisel point.

**METRIC**  
**JOBBER DRILLS**  
**DIN338**



**118° Split Point**  
(crankshaft point)  
Split point is self centering and reduces the need for end thrust. Friction at workpiece is reduced. 118° point angles are ideal for use in materials such as mild steel and cast iron. The 118° point creates easily controlled chips which are wide and thin.



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

GROUP				JOB		JOB		JOB	
SURFACE FINISH				BRIGHT		BLACK		BRONZE	
MATERIAL				HSS		HSS		HSS-Co5	
POINT TYPE				118° SPLIT POINT*		118° SPLIT POINT*		135° SPLIT POINT†	
FLUTE TYPE				30° HELIX		30° HELIX		30° HELIX	
PACKAGING				BULK		BULK		BULK	
DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
0.30	4	19	10	16.52	2007-0.30				
0.35	4	19	10	11.18	2007-0.35				
0.38	4	19	10	15.12	2007-0.38				
0.40	5	20	10	10.90	2007-0.40				
0.45	5	20	10	10.90	2007-0.45				
0.50	6	22	10	10.90	2007-0.50				
0.55	7	24	10	10.90	2007-0.55				
0.60	7	24	10	10.90	2007-0.60				
0.65	8	26	10	10.90	2007-0.65				
0.70	9	28	10	10.90	2007-0.70				
0.75	9	28	10	10.90	2007-0.75				
0.80	10	30	10	6.95	2007-0.80				
0.85	10	30	10	6.95	2007-0.85				
0.90	11	32	10	6.95	2007-0.90				
0.95	11	32	10	6.95	2007-0.95				
1.00	12	34	10	4.32	2007-1.00	4.32	2003-1.00	15.70	2011-1.00
1.05	12	34	10			4.32	2003-1.05		
1.10	14	36	10	4.32	2007-1.10	4.32	2003-1.10		
1.15	14	36	10			4.32	2003-1.15		
1.20	16	38	10	4.32	2007-1.20	4.32	2003-1.20		
1.25	16	38	10	4.32	2007-1.25	4.32	2003-1.25		
1.30	16	38	10	4.32	2007-1.30	4.32	2003-1.30		
1.35	18	40	10			5.20	2003-1.35		
1.40	18	40	10	5.20	2007-1.40	5.20	2003-1.40		
1.45	18	40	10			5.20	2003-1.45		
1.50	18	40	10	3.87	2007-1.50	3.87	2003-1.50	15.70	2011-1.50
1.55	20	43	10			5.20	2003-1.55		
1.60	20	43	10	3.79	2007-1.60	3.79	2003-1.60		
1.65	20	43	10			4.66	2003-1.65		
1.70	20	43	10	3.65	2007-1.70	3.65	2003-1.70		
1.75	22	46	10	4.32	2007-1.75	4.32	2003-1.75		
1.80	22	46	10	3.50	2007-1.80	3.50	2003-1.80		
1.85	22	46	10			4.16	2003-1.85		
1.90	22	46	10	3.50	2007-1.90	3.50	2003-1.90		
1.95	24	49	10			4.16	2003-1.95		
2.00	24	49	10	3.50	2007-2.00	3.50	2003-2.00	7.85	2011-2.00
2.05	24	49	10			4.16	2003-2.05		
2.10	24	49	10	3.50	2007-2.10	3.50	2003-2.10		
2.15	27	53	10			4.16	2003-2.15		
2.20	27	53	10	3.50	2007-2.20	3.50	2003-2.20		
2.25	27	53	10	3.50	2007-2.25	3.50	2003-2.25		
2.30	27	53	10	3.50	2007-2.30	3.50	2003-2.30		
2.35	27	53	10			4.16	2003-2.35		
2.40	30	57	10	3.50	2007-2.40	3.50	2003-2.40		
2.45	30	57	10			4.16	2003-2.45		
2.50	30	57	10	3.50	2007-2.50	3.50	2003-2.50	7.85	2011-2.50
2.55	30	57	10			4.16	2003-2.55		
2.60	30	57	10	3.50	2007-2.60	3.50	2003-2.60		
2.65	30	57	10			3.81	2003-2.65		
2.70	33	61	10	3.19	2007-2.70	3.19	2003-2.70		
2.75	33	61	10	3.81	2007-2.75	3.81	2003-2.75		
2.80	33	61	10	3.19	2007-2.80	3.19	2003-2.80		
2.85	33	61	10			3.81	2003-2.85		
2.90	33	61	10	3.19	2007-2.90	3.19	2003-2.90		

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.





GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BLACK	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	BULK	BULK	BULK

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
2.95	33	61	10			3.81	2003-2.95		
3.00	33	61	10	3.33	2007-3.00	3.33	2003-3.00	7.81	2011-3.00
3.10	36	65	10	3.33	2007-3.10	3.33	2003-3.10		
3.20	36	65	12	3.33	2007-3.20	3.33	2003-3.20		
3.26	36	65	10	6.06	2013-30				
3.30	36	65	10	3.50	2007-3.30	3.50	2003-3.30		
3.40	39	70	10	3.50	2007-3.40	3.50	2003-3.40		
3.50	39	70	10	3.65	2007-3.50	3.65	2003-3.50	8.58	2011-3.50
3.60	39	70	10	3.79	2007-3.60	3.79	2003-3.60		
3.70	39	70	10	3.79	2007-3.70	3.79	2003-3.70		
3.80	43	75	10	3.87	2007-3.80	3.87	2003-3.80		
3.90	43	75	10	4.09	2007-3.90	4.09	2003-3.90		
4.00	43	75	10	4.24	2007-4.00	4.24	2003-4.00	9.84	2011-4.00
4.10	43	75	10	4.32	2007-4.10	4.32	2003-4.10		
4.20	43	75	10	4.66	2007-4.20	4.66	2003-4.20		
4.30	47	80	10	4.66	2007-4.30	4.66	2003-4.30		
4.40	47	80	10	4.66	2007-4.40	4.66	2003-4.40		
4.50	47	80	10	4.66	2007-4.50	4.66	2003-4.50	10.81	2011-4.50
4.60	47	80	10	5.12	2007-4.60	5.12	2003-4.60		
4.70	47	80	10	5.12	2007-4.70	5.12	2003-4.70		
4.80	52	86	10	5.20	2007-4.80	5.20	2003-4.80		
4.90	52	86	10	5.50	2007-4.90	5.50	2003-4.90		
5.00	52	86	10	5.50	2007-5.00	5.50	2003-5.00	12.76	2011-5.00
5.10	52	86	10	5.77	2007-5.10	5.77	2003-5.10		
5.20	52	86	10	6.36	2007-5.20	6.36	2003-5.20		
5.30	52	86	10	6.36	2007-5.30	6.36	2003-5.30		
5.40	57	93	10	6.36	2007-5.40	6.36	2003-5.40		
5.50	57	93	10	6.36	2007-5.50	6.36	2003-5.50	14.73	2011-5.50
5.60	57	93	10	6.95	2007-5.60	6.95	2003-5.60		
5.70	57	93	10	6.95	2007-5.70	6.95	2003-5.70		
5.80	57	93	10	6.95	2007-5.80	6.95	2003-5.80		
5.90	57	93	10	6.95	2007-5.90	6.95	2003-5.90		
6.00	57	93	10	7.25	2007-6.00	7.25	2003-6.00	16.93	2011-6.00
6.10	63	101	10	7.52	2007-6.10	7.52	2003-6.10		
6.20	63	101	10	7.52	2007-6.20	7.52	2003-6.20		
6.30	63	101	10	7.52	2007-6.30	7.52	2003-6.30		
6.40	63	101	10	8.08	2007-6.40	8.08	2003-6.40		
6.50	63	101	10	8.08	2007-6.50	8.08	2003-6.50	18.24	2011-6.50
6.60	63	101	10	8.83	2007-6.60	8.83	2003-6.60		
6.70	63	101	10	8.83	2007-6.70	8.83	2003-6.70		
6.80	69	109	10	8.97	2007-6.80	8.97	2003-6.80		
6.90	69	109	10	8.97	2007-6.90	8.97	2003-6.90		
7.00	69	109	10	9.43	2007-7.00	9.43	2003-7.00	21.36	2011-7.00
7.10	69	109	10	9.43	2007-7.10	9.43	2003-7.10		
7.20	69	109	10	10.15	2007-7.20	10.15	2003-7.20		
7.30	69	109	10	10.15	2007-7.30	10.15	2003-7.30		
7.40	69	109	10	10.15	2007-7.40	10.15	2003-7.40		
7.50	69	109	5	10.69	2007-7.50	10.69	2003-7.50	24.19	2011-7.50
7.60	75	117	5	11.00	2007-7.60	11.00	2003-7.60		
7.70	75	117	5	11.60	2007-7.70	11.60	2003-7.70		
7.80	75	117	5	11.60	2007-7.80	11.60	2003-7.80		
7.90	75	117	5	11.60	2007-7.90	11.60	2003-7.90		
8.00	75	117	5	11.60	2007-8.00	11.60	2003-8.00	26.06	2011-8.00
8.10	75	117	5	12.46	2007-8.10	12.46	2003-8.10		

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.


**QUICK  
SILVER®**

**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*


**BLACK KNIGHT®**

**BLACK FINISH**  
(also called blue finish)  
A black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface helps to keep lubricant on the tool, particularly important on the cutting edges, thus reducing friction and cold welding. The result is increased tool life. *Black finish tools are generally recommended for ferrous applications where the oxide layer aids chip flow and heat dissipation.*



**BRONZE FINISH**  
(gold oxide)  
This metallic brown coloured low temperature temper treatment is normally only used on cobalt tools for identification purposes. *Cobalt HSS drills are extremely hard and provide superior performance and increased tool life especially in stainless steel and high tensile steel.*


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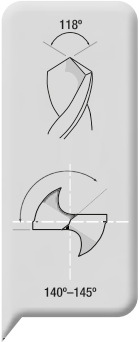
GROUP				JOB		JOB		JOB	
SURFACE FINISH				BRIGHT		BLACK		BRONZE	
MATERIAL				HSS		HSS		HSS-Co5	
POINT TYPE				118° SPLIT POINT*		118° SPLIT POINT*		135° SPLIT POINT	
FLUTE TYPE				30° HELIX		30° HELIX		30° HELIX	
PACKAGING				BULK		BULK		BULK	
DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
8.20	75	117	5	12.46	2007-8.20	12.46	2003-8.20		
8.30	75	117	5	12.46	2007-8.30	12.46	2003-8.30		
8.40	75	117	5	12.74	2007-8.40	12.74	2003-8.40		
8.50	75	117	5	13.08	2007-8.50	13.08	2003-8.50	28.71	2011-8.50
8.60	81	125	5	13.78	2007-8.60	13.78	2003-8.60		
8.70	81	125	5	13.78	2007-8.70	13.78	2003-8.70		
8.80	81	125	5	14.39	2007-8.80	14.39	2003-8.80		
8.90	81	125	5	14.39	2007-8.90	14.39	2003-8.90		
9.00	81	125	5	14.39	2007-9.00	14.39	2003-9.00	31.48	2011-9.00
9.10	81	125	5	14.96	2007-9.10	14.96	2003-9.10		
9.20	81	125	5	15.91	2007-9.20	15.91	2003-9.20		
9.30	81	125	5	15.91	2007-9.30	15.91	2003-9.30		
9.40	81	125	5	15.91	2007-9.40	15.91	2003-9.40		
9.50	81	125	5	15.91	2007-9.50	15.91	2003-9.50	35.17	2011-9.50
9.60	81	125	5	16.82	2007-9.60	16.82	2003-9.60		
9.70	87	133	5	16.82	2007-9.70	16.82	2003-9.70		
9.80	87	133	5	16.97	2007-9.80	16.97	2003-9.80		
9.90	87	133	5	16.97	2007-9.90	16.97	2003-9.90		
10.00	87	133	5	17.09	2007-10.00	17.09	2003-10.00	37.49	2011-10.00
10.10	87	133	5	26.08	2007-10.10	26.08	2003-10.10		
10.20	87	133	5	19.00	2007-10.20	19.00	2003-10.20		
10.30	87	133	5	26.08	2007-10.30	26.08	2003-10.30		
10.40	87	133	5	27.54	2007-10.40	27.54	2003-10.40		
10.50	87	133	5	19.35	2007-10.50	19.35	2003-10.50	42.34	2011-10.50
10.60	87	133	5	28.95	2007-10.60	28.95	2003-10.60		
10.70	94	142	5	28.95	2007-10.70	28.95	2003-10.70		
10.80	94	142	5	31.89	2007-10.80	31.89	2003-10.80		
10.90	94	142	5	31.89	2007-10.90	31.89	2003-10.90		
11.00	94	142	5	22.31	2007-11.00	22.31	2003-11.00	49.04	2011-11.00
11.10	94	142	5	34.78	2007-11.10	34.78	2003-11.10		
11.20	94	142	5	36.24	2007-11.20	36.24	2003-11.20		
11.30	94	142	5	36.24	2007-11.30	36.24	2003-11.30		
11.40	94	142	5	36.24	2007-11.40	36.24	2003-11.40		
11.50	94	142	5	25.11	2007-11.50	25.11	2003-11.50	55.08	2011-11.50
11.60	94	142	5	39.12	2007-11.60	39.12	2003-11.60		
11.70	94	142	5	39.12	2007-11.70	39.12	2003-11.70		
11.80	94	142	5	39.12	2007-11.80	39.12	2003-11.80		
11.90	101	151	5	39.12	2007-11.90	39.12	2003-11.90		
12.00	101	151	5	28.40	2007-12.00	28.40	2003-12.00	62.48	2011-12.00
12.10	101	151	5	43.50	2007-12.10	43.50	2003-12.10		
12.20	101	151	5	43.50	2007-12.20	43.50	2003-12.20		
12.30	101	151	5	43.50	2007-12.30	43.50	2003-12.30		
12.40	101	151	5	44.92	2007-12.40	44.92	2003-12.40		
12.50	101	151	5	31.29	2007-12.50	31.29	2003-12.50	68.74	2011-12.50
12.60	101	151	5	44.92	2007-12.60	44.92	2003-12.60		
12.70	101	151	5	46.36	2007-12.70	46.36	2003-12.70		
12.80	101	151	5	46.36	2007-12.80	46.36	2003-12.80		
12.90	101	151	5	46.36	2007-12.90	46.36	2003-12.90		
13.00	101	151	5	33.58	2007-13.00	33.58	2003-13.00	73.79	2011-13.00



GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BLACK	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	<b>118° SPLIT POINT*</b>	<b>118° SPLIT POINT*</b>	<b>135° SPLIT POINT†</b>
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	<b>BULK</b>	<b>BULK</b>	<b>BULK</b>

DIA INCH	MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
1/64	0.40	5	19	10	11.76	2006-1/64	11.76	2000-1/64		
1/32	0.79	13	35	10	7.50	2006-1/32	7.50	2000-1/32		
3/64	1.19	19	44	10	4.32	2006-3/64	4.32	2000-3/64		
1/16	1.59	22	48	10	3.79	2006-1/16	3.79	2000-1/16	8.52	2010-1/16
5/64	1.98	25	51	10	3.50	2006-5/64	3.50	2000-5/64	7.85	2010-5/64
3/32	2.38	32	57	10	3.50	2006-3/32	3.50	2000-3/32	7.85	2010-3/32
7/64	2.78	38	67	10	3.19	2006-7/64	3.19	2000-7/64	7.11	2010-7/64
1/8	3.17	41	70	10	3.33	2006-1/8	3.33	2000-1/8	7.81	2010-1/8
9/64	3.57	44	73	10	3.79	2006-9/64	3.79	2000-9/64	8.81	2010-9/64
5/32	3.97	51	79	10	4.09	2006-5/32	4.09	2000-5/32	9.57	2010-5/32
11/64	4.37	54	83	10	4.66	2006-11/64	4.66	2000-11/64	10.81	2010-11/64
3/16	4.76	59	89	10	5.12	2006-3/16	5.12	2000-3/16	11.76	2010-3/16
13/64	5.16	62	92	10	5.77	2006-13/64	5.77	2000-13/64	13.50	2010-13/64
7/32	5.56	64	95	10	6.36	2006-7/32	6.36	2000-7/32	14.73	2010-7/32
15/64	5.95	67	98	10	6.95	2006-15/64	6.95	2000-15/64	16.15	2010-15/64
1/4	6.35	70	102	10	7.82	2006-1/4	7.82	2000-1/4	18.12	2010-1/4
17/64	6.75	73	105	10	8.83	2006-17/64	8.83	2000-17/64	19.90	2010-17/64
9/32	7.14	75	108	10	9.85	2006-9/32	9.85	2000-9/32	22.28	2010-9/32
19/64	7.54	78	111	5	10.69	2006-19/64	10.69	2000-19/64	24.19	2010-19/64
5/16	7.94	81	114	5	11.60	2006-5/16	11.60	2000-5/16	26.06	2010-5/16
21/64	8.33	84	117	5	12.46	2006-21/64	12.46	2000-21/64	27.99	2010-21/64
11/32	8.73	87	121	5	13.78	2006-11/32	13.78	2000-11/32	30.82	2010-11/32
23/64	9.13	89	124	5	14.96	2006-23/64	14.96	2000-23/64	33.66	2010-23/64
3/8	9.52	92	127	5	15.91	2006-3/8	15.91	2000-3/8	36.04	2010-3/8
25/64	9.92	95	130	5	16.97	2006-25/64	16.97	2000-25/64	37.03	2010-25/64
13/32	10.32	98	133	5	19.00	2006-13/32	19.00	2000-13/32	41.65	2010-13/32
27/64	10.72	100	137	5	21.01	2006-27/64	21.01	2000-27/64	46.28	2010-27/64
7/16	11.11	103	140	5	22.78	2006-7/16	22.78	2000-7/16	49.95	2010-7/16
29/64	11.51	106	143	5	25.18	2006-29/64	25.18	2000-29/64	55.33	2010-29/64
15/32	11.91	110	146	5	28.14	2006-15/32	28.14	2000-15/32	61.78	2010-15/32
31/64	12.30	111	149	5	29.86	2006-31/64	29.86	2000-31/64	65.53	2010-31/64
1/2	12.70	114	152	5	31.29	2006-1/2	31.29	2000-1/2	68.74	2010-1/2

**FRACTIONAL  
JOBBER DRILLS**  
**ANSI  
B94-11**



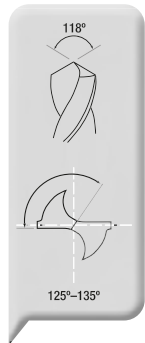
**118° Split Point**  
(crankshaft point)  
Split point is self centering and reduces the need for end thrust. Friction at workpiece is reduced. 118° point angles are ideal for use in materials such as mild steel and cast iron. The 118° point creates easily controlled chips which are wide and thin.



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.





**Standard Point**  
(chisel point)  
Standard point is suitable for general purpose drilling.

### USAGE

#### GAUGE DRILLS

Gauge size drill calculations are generally made utilising a reference book or table. For example, to drill a hole which is 10 thou (thousandth of an inch = .001) bigger than a 1/8" bolt, the user must first work out that 1/8" is 125 thou, so the required hole size is 135 thou. Using a reference table establishes that you would need a number 29.

Number drill bit gauge sizes are analogous to, but different from, American wire gauge.

Number gauge is most commonly used from size 80 (the smallest) to size 1 (the largest) followed by letter gauge size A (the smallest) to size Z (the largest). Number gauge is actually defined down to size 97, but these smallest sizes are very rarely used.



#### BRIGHT FINISH

A bright finish tool has no surface treatment and is supplied in the as-ground condition. These tools are suitable for general purpose use, particularly for non-ferrous applications.



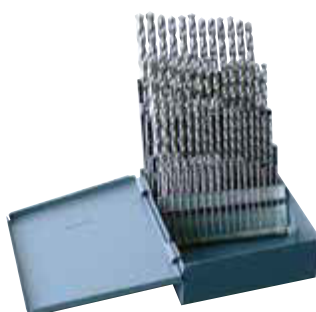
GROUP	JOB
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	118° STD CHISEL
FLUTE TYPE	30° HELIX
PACKAGING	BULK

DIA GAUGE	MM	FL INCH	OAL INCH	PACK QTY	\$ EACH	PART NUMBER
80	0.34	1/8	3/4	12	16.74	2013-80
79	0.37	1/8	3/4	12	16.74	2013-79
78	0.41	3/16	7/8	12	14.06	2013-78
77	0.46	3/16	7/8	12	14.06	2013-77
76	0.51	3/16	7/8	12	14.06	2013-76
75	0.53	1/4	1	12	14.06	2013-75
74	0.57	1/4	1	12	14.06	2013-74
73	0.61	5/16	1-1/8	12	14.06	2013-73
72	0.63	5/16	1-1/8	12	14.06	2013-72
71	0.66	3/8	1-1/4	12	14.06	2013-71
70	0.71	3/8	1-1/4	12	11.76	2013-70
69	0.74	1/2	1-3/8	12	11.76	2013-69
68	0.79	1/2	1-3/8	12	10.89	2013-68
67	0.81	1/2	1-3/8	12	10.89	2013-67
66	0.84	1/2	1-3/8	12	10.89	2013-66
65	0.89	5/8	1-1/2	12	10.89	2013-65
64	0.91	5/8	1-1/2	12	10.89	2013-64
63	0.94	5/8	1-1/2	12	10.89	2013-63
62	0.96	5/8	1-1/2	12	10.89	2013-62
61	0.99	11/16	1-5/8	12	10.89	2013-61
60	1.02	11/16	1-5/8	12	10.26	2013-60
59	1.04	11/16	1-5/8	12	10.26	2013-59
58	1.07	11/16	1-5/8	12	10.26	2013-58
57	1.09	3/4	1-3/4	12	10.26	2013-57
56	1.18	3/4	1-3/4	12	10.26	2013-56
55	1.32	7/8	1-7/8	12	6.46	2013-55
54	1.4	7/8	1-7/8	12	6.46	2013-54
53	1.51	7/8	1-7/8	12	6.46	2013-53
52	1.61	7/8	1-7/8	12	5.88	2013-52
51	1.7	1	2	12	5.88	2013-51
50	1.78	1	2	12	5.88	2013-50
49	1.85	1	2	12	5.88	2013-49
48	1.93	1	2	12	5.88	2013-48
47	1.99	1	2	12	5.88	2013-47
46	2.06	1-1/8	2-1/8	12	5.88	2013-46
45	2.08	1-1/8	2-1/8	12	5.88	2013-45
44	2.18	1-1/8	2-1/8	12	5.88	2013-44
43	2.26	1-1/4	2-1/4	12	5.88	2013-43
42	2.37	1-1/4	2-1/4	12	5.88	2013-42
41	2.44	1-3/8	2-3/8	12	5.88	2013-41



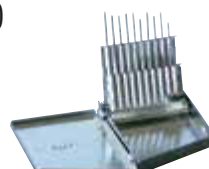
GROUP	JOB
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	118° STD CHISEL
FLUTE TYPE	30° HELIX
PACKAGING	BULK

DIA GAUGE	MM	FL INCH	OAL INCH	PACK QTY	\$ EACH	PART NUMBER
40	2.49	1-3/8	2-3/8	12	5.77	2013-40
39	2.53	1-3/8	2-3/8	12	6.06	2013-39
38	2.58	1-7/16	2-1/2	12	6.06	2013-38
37	2.63	1-7/16	2-1/2	12	6.06	2013-37
36	2.70	1-7/16	2-1/2	12	6.06	2013-36
35	2.79	1-1/2	2-5/8	12	6.06	2013-35
34	2.72	1-1/2	2-5/8	12	6.06	2013-34
33	2.87	1-1/2	2-5/8	12	6.06	2013-33
32	2.95	1-5/8	2-3/4	12	6.06	2013-32
31	3.05	1-5/8	2-3/4	12	6.06	2013-31
30	3.26	1-5/8	2-3/4	12	6.06	2013-30
29	3.45	1-3/4	2-7/8	12	6.95	2013-29
28	3.57	1-3/4	2-7/8	12	6.95	2013-28
27	3.66	1-7/8	3	12	6.95	2013-27
26	3.73	1-7/8	3	12	6.95	2013-26
25	3.80	1-7/8	3	12	6.95	2013-25
24	3.86	2	3-1/8	12	9.28	2013-24
23	3.91	2	3-1/8	12	9.28	2013-23
22	3.99	2	3-1/8	12	9.28	2013-22
21	4.04	2-1/8	3-1/4	12	9.28	2013-21
20	4.09	2-1/8	3-1/4	12	9.56	2013-20
19	4.22	2-1/8	3-1/4	12	9.56	2013-19
18	4.30	2-1/8	3-1/4	12	9.56	2013-18
17	4.39	2-3/16	3-3/8	12	9.56	2013-17
16	4.50	2-3/16	3-3/8	12	9.56	2013-16
15	4.57	2-3/16	3-3/8	12	9.56	2013-15
14	4.62	2-3/16	3-3/8	12	9.56	2013-14
13	4.70	2-5/16	3-1/2	12	9.56	2013-13
12	4.80	2-5/16	3-1/2	12	11.60	2013-12
11	4.85	2-5/16	3-1/2	12	11.60	2013-11
10	4.91	2-7/16	3-5/8	12	11.60	2013-10
9	4.98	2-7/16	3-5/8	12	11.60	2013-9
8	5.05	2-7/16	3-5/8	12	12.18	2013-8
7	5.10	2-7/16	3-5/8	12	12.18	2013-7
6	5.18	2-1/2	3-3/4	12	12.18	2013-6
5	5.22	2-1/2	3-3/4	12	12.18	2013-5
4	5.31	2-1/2	3-3/4	12	14.48	2013-4
3	5.41	2-1/2	3-3/4	12	14.48	2013-3
2	5.61	2-5/8	3-7/8	12	14.48	2013-2
1	5.79	2-5/8	3-7/8	12	14.48	2013-1



### GAUGE DRILL SETS

PAGE  
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GROUP	JOBBER / PART	JOBBER	JOBBER / PART	JOBBER / PART
SURFACE FINISH	BRIGHT	BRIGHT	BLACK	BRONZE
MATERIAL	HSS	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT*
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX	30° HELIX
PACKAGING	BULK	BULK	BULK	BULK

**METRIC  
JOBBER DRILLS**  
**DIN338**

**FRACTIONAL  
JOBBER DRILLS**  
**ANSI  
B94-11**



MERCHANDISER TYPE	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
METRIC <b>BRIGHT</b> 230 PIECES	<b>2,123.40</b>	2007-D2						
METRIC <b>BRIGHT TAPPING</b> 200 PIECES			<b>2,477.55</b>	2007-D7				
METRIC <b>BLACK</b> 230 PIECES					<b>2,123.40</b>	2003-D2		
METRIC <b>COBALT</b> 230 PIECES							<b>4,586.95</b>	2011-D2

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER
	10	2007-1.00	10	2007-2.60	10	2003-1.00	10	2011-1.00
	10	2007-1.50	10	2007-2.90	10	2003-1.50	10	2011-1.50
	10	2007-2.00	10	2007-3.20	10	2003-2.00	10	2011-2.00
	10	2007-2.50	10	2007-3.30	10	2003-2.50	10	2011-2.50
	10	2007-3.00	10	2007-3.70	10	2003-3.00	10	2011-3.00
	10	2007-3.50	10	2007-3.90	10	2003-3.50	10	2011-3.50
	10	2007-4.00	10	2007-4.10	10	2003-4.00	10	2011-4.00
	10	2007-4.50	10	2007-4.20	10	2003-4.50	10	2011-4.50
	10	2007-5.00	10	2007-4.70	10	2003-5.00	10	2011-5.00
	10	2007-5.50	10	2007-5.10	10	2003-5.50	10	2011-5.50
	10	2007-6.00	10	2007-6.60	10	2003-6.00	10	2011-6.00
	10	2007-6.50	10	2007-6.80	10	2003-6.50	10	2011-6.50
	10	2007-7.00	10	2007-6.90	10	2003-7.00	10	2011-7.00
	5	2007-7.50	5	2007-7.90	5	2003-7.50	5	2011-7.50
	5	2007-8.00	5	2007-8.40	5	2003-8.00	5	2011-8.00
	5	2007-8.50	5	2007-8.70	5	2003-8.50	5	2011-8.50
	5	2007-9.00	5	2007-8.80	5	2003-9.00	5	2011-9.00
	5	2007-9.50	5	2007-9.30	5	2003-9.50	5	2011-9.50
	5	2007-10.00	5	2007-9.40	5	2003-10.00	5	2011-10.00
	5	2007-10.50	5	2007-9.90	5	2003-10.50	5	2011-10.50
	5	2007-11.00	5	2007-10.20	5	2003-11.00	5	2011-11.00
	5	2007-11.50	5	2007-10.80	5	2003-11.50	5	2011-11.50
	5	2007-12.00	5	2007-11.10	5	2003-12.00	5	2011-12.00
	5	2007-12.50	5	2007-11.20	5	2003-12.50	5	2011-12.50
	5	2007-13.00	5	2007-12.20	5	2003-13.00	5	2011-13.00
	10	2345-30	5	2007-12.80	10	2345-30	10	2345-30
	10	2345-20	5	2007-12.90	10	2345-20	10	2345-20
	10	2345-11			10	2345-11	10	2345-11
	10	2345-1/8			10	2345-1/8	10	2345-1/8

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point.

METRIC  
 JOBBER DRILLS  
 DIN338

 FRACTIONAL  
 JOBBER DRILLS  
 ANSI  
 B94-11


GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BLACK	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT*
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	BULK	BULK	BULK



MERCHANDISER TYPE	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
FRACTIONAL <b>BRIGHT</b> 220 PIECES	2,173.65	2006-D2				
FRACTIONAL <b>BLACK</b> 220 PIECES			2,173.65	2000-D2		
FRACTIONAL <b>COBALT</b> 220 PIECES					4,872.95	2010-D2

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER
	10	2006-1/16	10	2000-1/16	10	2010-1/16
	10	2006-5/64	10	2000-5/64	10	2010-5/64
	10	2006-3/32	10	2000-3/32	10	2010-3/32
	10	2006-7/64	10	2000-7/64	10	2010-7/64
	10	2006-1/8	10	2000-1/8	10	2010-1/8
	10	2006-9/64	10	2000-9/64	10	2010-9/64
	10	2006-5/32	10	2000-5/32	10	2010-5/32
	10	2006-11/64	10	2000-11/64	10	2010-11/64
	10	2006-3/16	10	2000-3/16	10	2010-3/16
	10	2006-13/64	10	2000-13/64	10	2010-13/64
	10	2006-7/32	10	2000-7/32	10	2010-7/32
	10	2006-15/64	10	2000-15/64	10	2010-15/64
	10	2006-1/4	10	2000-1/4	10	2010-1/4
	10	2006-17/64	10	2000-17/64	10	2010-17/64
	10	2006-9/32	10	2000-9/32	10	2010-9/32
	5	2006-19/64	5	2000-19/64	5	2010-19/64
	5	2006-5/16	5	2000-5/16	5	2010-5/16
	5	2006-21/64	5	2000-21/64	5	2010-21/64
	5	2006-11/32	5	2000-11/32	5	2010-11/32
	5	2006-23/64	5	2000-23/64	5	2010-23/64
	5	2006-3/8	5	2000-3/8	5	2010-3/8
	5	2006-25/64	5	2000-25/64	5	2010-25/64
	5	2006-13/32	5	2000-13/32	5	2010-13/32
	5	2006-27/64	5	2000-27/64	5	2010-27/64
	5	2006-7/16	5	2000-7/16	5	2010-7/16
	5	2006-29/64	5	2000-29/64	5	2010-29/64
	5	2006-15/32	5	2000-15/32	5	2010-15/32
	5	2006-31/64	5	2000-31/64	5	2010-31/64
	5	2006-1/2	5	2000-1/2	5	2010-1/2

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point.





GROUP	JOBBER / PANL
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	118° SPLIT POINT*
FLUTE TYPE	30° HELIX
PACKAGING	BULK MERCHANDISER

MERCHANDISER TYPE	TOTAL PIECES	\$ MERCHANDISER	PART NUMBER
BULK JOBBER DRAWER MERCHANDISER	630	6,802.20	2007-D4

MERCHANDISER CONTENTS	QTY EACH	TYPE	SIZE	PART NUMBER	QTY EACH	TYPE	SIZE	PART NUMBER
	10	Jobber	1.0mm	2007-1.00	10	Jobber	1/16"	2006-1/16
	10	Jobber	1.5mm	2007-1.50	10	Jobber	5/64"	2006-5/64
	10	Jobber	2.0mm	2007-2.00	10	Jobber	3/32"	2006-3/32
	10	Jobber	2.5mm	2007-2.50	10	Jobber	7/64"	2006-7/64
	10	Jobber	3.0mm	2007-3.00	10	Jobber	1/8"	2006-1/8
	10	Jobber	3.3mm	2007-3.30	10	Jobber	9/64"	2006-9/64
	10	Jobber	3.5mm	2007-3.50	10	Jobber	5/32"	2006-5/32
	10	Jobber	3.7mm	2007-3.70	10	Jobber	11/64"	2006-11/64
	10	Jobber	3.9mm	2007-3.90	10	Jobber	3/16"	2006-3/16
	10	Jobber	4.0mm	2007-4.00	10	Jobber	13/64"	2006-13/64
	10	Jobber	4.1mm	2007-4.10	10	Jobber	7/32"	2006-7/32
	10	Jobber	4.2mm	2007-4.20	10	Jobber	15/64"	2006-15/64
	10	Jobber	4.5mm	2007-4.50	10	Jobber	1/4"	2006-1/4
	10	Jobber	5.0mm	2007-5.00	10	Jobber	17/64"	2006-17/64
	10	Jobber	5.1mm	2007-5.10	10	Jobber	9/32"	2006-9/32
	10	Jobber	5.5mm	2007-5.50	5	Jobber	19/64"	2006-19/64
	10	Jobber	6.0mm	2007-6.00	5	Jobber	5/16"	2006-5/16
	10	Jobber	6.5mm	2007-6.50	5	Jobber	21/64"	2006-21/64
	10	Jobber	6.6mm	2007-6.60	5	Jobber	11/32"	2006-11/32
	10	Jobber	6.8mm	2007-6.80	5	Jobber	23/64"	2006-23/64
	10	Jobber	6.9mm	2007-6.90	5	Jobber	3/8"	2006-3/8
	10	Jobber	7.0mm	2007-7.00	5	Jobber	25/64"	2006-25/64
	10	Jobber	7.5mm	2007-7.50	5	Jobber	13/32"	2006-13/32
	5	Jobber	8.0mm	2007-8.00	5	Jobber	27/64"	2006-27/64
	5	Jobber	8.4mm	2007-8.40	5	Jobber	7/16"	2006-7/16
	5	Jobber	8.5mm	2007-8.50	5	Jobber	29/64"	2006-29/64
	5	Jobber	8.7mm	2007-8.70	5	Jobber	15/32"	2006-15/32
	5	Jobber	8.8mm	2007-8.80	5	Jobber	31/64"	2006-31/64
	5	Jobber	9.0mm	2007-9.00	5	Jobber	1/2"	2006-1/2
	5	Jobber	9.4mm	2007-9.40				
	5	Jobber	9.5mm	2007-9.50	10	Panel D'End	#30	2345-30
	5	Jobber	9.9mm	2007-9.90	10	Panel D'End	#20	2345-20
	5	Jobber	10.0mm	2007-10.00	10	Panel D'End	#11	2345-11
	5	Jobber	10.2mm	2007-10.20	10	Panel S'End	#30	2346-30
	5	Jobber	10.5mm	2007-10.50	10	Panel S'End	#20	2346-20
	5	Jobber	10.8mm	2007-10.80	10	Panel S'End	#11	2346-11
	5	Jobber	11.0mm	2007-11.00				
	5	Jobber	11.1mm	2007-11.10				
	5	Jobber	11.2mm	2007-11.20				
	5	Jobber	11.5mm	2007-11.50				
	5	Jobber	11.8mm	2007-11.80				
	5	Jobber	12.0mm	2007-12.00				
	5	Jobber	12.2mm	2007-12.20				
	5	Jobber	12.5mm	2007-12.50				
	5	Jobber	12.8mm	2007-12.80				
	5	Jobber	12.9mm	2007-12.90				
	5	Jobber	13.0mm	2007-13.00				

**METRIC  
JOBBER DRILLS**  
**DIN338**

**FRACTIONAL  
JOBBER DRILLS**  
**ANSI  
B94-11**



**118° Split Point**  
(crankshaft point)  
Split point is self centering and reduces the need for end thrust. Friction at workpiece is reduced. 118° point angles are ideal for use in materials such as mild steel and cast iron. The 118° point creates easily controlled chips which are wide and thin.

**QUICK  
SILVER®**

**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point.



GROUP	JOBBER / PANEL
SURFACE FINISH	BLACK
MATERIAL	HSS
POINT TYPE	118° SPLIT POINT*
FLUTE TYPE	30° HELIX
PACKAGING	BULK MERCHANDISER

MERCHANDISER TYPE	TOTAL PIECES	\$ MERCHANDISER	PART NUMBER
BULK JOBBER DRAWER MERCHANDISER	630	6,802.20	2003-D4

MERCHANDISER CONTENTS	QTY EACH	TYPE	SIZE	PART NUMBER	QTY EACH	TYPE	SIZE	PART NUMBER
	10	Jobber	1.0mm	2003-1.00	10	Jobber	1/16"	2006-1/16
	10	Jobber	1.5mm	2003-1.50	10	Jobber	5/64"	2000-5/64
	10	Jobber	2.0mm	2003-2.00	10	Jobber	3/32"	2000-3/32
	10	Jobber	2.5mm	2003-2.50	10	Jobber	7/64"	2000-7/64
	10	Jobber	3.0mm	2003-3.00	10	Jobber	1/8"	2006-1/8
	10	Jobber	3.3mm	2003-3.30	10	Jobber	9/64"	2000-9/64
	10	Jobber	3.5mm	2003-3.50	10	Jobber	5/32"	2000-5/32
	10	Jobber	3.7mm	2003-3.70	10	Jobber	11/64"	2000-11/64
	10	Jobber	3.9mm	2003-3.90	10	Jobber	3/16"	2000-3/16
	10	Jobber	4.0mm	2003-4.00	10	Jobber	13/64"	2000-13/64
	10	Jobber	4.1mm	2003-4.10	10	Jobber	7/32"	2000-7/32
	10	Jobber	4.2mm	2003-4.20	10	Jobber	15/64"	2000-15/64
	10	Jobber	4.5mm	2003-4.50	10	Jobber	1/4"	2000-1/4
	10	Jobber	5.0mm	2003-5.00	10	Jobber	17/64"	2000-17/64
	10	Jobber	5.1mm	2003-5.10	10	Jobber	9/32"	2000-9/32
	10	Jobber	5.5mm	2003-5.50	5	Jobber	19/64"	2000-19/64
	10	Jobber	6.0mm	2003-6.00	5	Jobber	5/16"	2000-5/16
	10	Jobber	6.5mm	2003-6.50	5	Jobber	21/64"	2000-21/64
	10	Jobber	6.6mm	2003-6.60	5	Jobber	11/32"	2000-11/32
	10	Jobber	6.8mm	2003-6.80	5	Jobber	23/64"	2000-23/64
	10	Jobber	6.9mm	2003-6.90	5	Jobber	3/8"	2000-3/8
	10	Jobber	7.0mm	2003-7.00	5	Jobber	25/64"	2000-25/64
	10	Jobber	7.5mm	2003-7.50	5	Jobber	13/32"	2000-13/32
	5	Jobber	8.0mm	2003-8.00	5	Jobber	27/64"	2000-27/64
	5	Jobber	8.4mm	2003-8.40	5	Jobber	7/16"	2000-7/16
	5	Jobber	8.5mm	2003-8.50	5	Jobber	29/64"	2000-29/64
	5	Jobber	8.7mm	2003-8.70	5	Jobber	15/32"	2000-15/32
	5	Jobber	8.8mm	2003-8.80	5	Jobber	31/64"	2000-31/64
	5	Jobber	9.0mm	2003-9.00	5	Jobber	1/2"	2000-1/2
	5	Jobber	9.4mm	2003-9.40				
	5	Jobber	9.5mm	2003-9.50	10	Panel D'End	#30	2343-30
	5	Jobber	9.9mm	2003-9.90	10	Panel D'End	#20	2343-20
	5	Jobber	10.0mm	2003-10.00	10	Panel D'End	#11	2343-11
	5	Jobber	10.2mm	2003-10.20	10	Panel S'End	#30	2344-30
	5	Jobber	10.5mm	2003-10.50	10	Panel S'End	#20	2344-20
	5	Jobber	10.8mm	2003-10.80	10	Panel S'End	#11	2344-11
	5	Jobber	11.0mm	2003-11.00				
	5	Jobber	11.2mm	2003-11.20				
	5	Jobber	11.5mm	2003-11.50				
	5	Jobber	11.8mm	2003-11.80				
	5	Jobber	12.0mm	2003-12.00				
	5	Jobber	12.2mm	2003-12.20				
	5	Jobber	12.5mm	2003-12.50				
	5	Jobber	12.8mm	2003-12.80				
	5	Jobber	12.9mm	2003-12.90				
	5	Jobber	13.0mm	2003-13.00				



**118° Split Point**  
*(crankshaft point)*  
 Split point is self centering and reduces the need for end thrust. Friction at workpiece is reduced. 118° point angles are ideal for use in materials such as mild steel and cast iron. The 118° point creates easily controlled chips which are wide and thin.



**BLACK KNIGHT®**

**BLACK FINISH**  
*(also called blue finish)*

A black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface helps to keep lubricant on the tool, particularly important on the cutting edges, thus reducing friction and cold welding. The result is increased tool life.

*Black finish tools are generally recommended for ferrous applications where the oxide layer aids chip flow and heat dissipation.*

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.



GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BRIGHT	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT†
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL

DIA MM	FL MM	OAL MM	CLAM QTY	\$ CLAM	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
1.00	12	34	2	8.92	2007-1.00S	10	43.17	2007-1.00TP	2	31.47	2011-1.00S
1.50	18	40	2	8.12	2007-1.50S	10	37.65	2007-1.50TP	2	31.47	2011-1.50S
2.00	24	49	2	7.38	2007-2.00S	10	35.12	2007-2.00TP	2	15.73	2011-2.00S
2.50	30	57	2	7.38	2007-2.50S	10	35.12	2007-2.50TP	2	15.73	2011-2.50S
2.60	30	57	2	6.95	2007-2.60S						
2.90	33	61	2	6.95	2007-2.90S						
3.00	33	61	2	6.95	2007-3.00S	10	33.28	2007-3.00TP	2	15.70	2011-3.00S
3.20	36	65	2	6.95	2007-3.20S						
3.30	36	65	1	4.24	2007-3.30S						
3.50	39	70	1	4.24	2007-3.50S	10	37.65	2007-3.50TP	1	9.56	2011-3.50S
3.70	39	70	1	4.79	2007-3.70S						
3.90	43	75	1	4.79	2007-3.90S						
4.00	43	75	1	4.79	2007-4.00S	10	40.70	2007-4.00TP	1	10.96	2011-4.00S
4.10	43	75	1	5.20	2007-4.10S						
4.20	43	75	1	5.20	2007-4.20S						
4.50	47	80	1	5.20	2007-4.50S	5	23.30	2007-4.50TP	1	11.99	2011-4.50S
4.70	47	80	1	6.06	2007-4.70S						
5.00	52	86	1	6.06	2007-5.00S	5	25.51	2007-5.00TP	1	14.18	2011-5.00S
5.10	52	86	1	6.95	2007-5.10S						
5.50	57	93	1	6.95	2007-5.50S	5	31.81	2007-5.50TP	1	16.35	2011-5.50S
6.00	57	93	1	7.82	2007-6.00S	5	39.18	2007-6.00TP	1	18.79	2011-6.00S
6.50	63	101	1	8.74	2007-6.50S	5	39.18	2007-6.50TP	1	20.30	2011-6.50S
6.60	63	101	1	10.02	2007-6.60S						
6.80	69	109	1	10.02	2007-6.80S						
6.90	69	109	1	10.02	2007-6.90S						
7.00	69	109	1	10.02	2007-7.00S				1	23.72	2011-7.00S
7.50	69	109	1	11.31	2007-7.50S				1	26.86	2011-7.50S
7.90	75	117	1	12.18	2007-7.90S						
8.00	75	117	1	12.18	2007-8.00S				1	28.95	2011-8.00S
8.40	75	117	1	13.61	2007-8.40S						
8.50	75	117	1	13.61	2007-8.50S				1	31.88	2011-8.50S
8.70	81	125	1	14.96	2007-8.70S						
8.80	81	125	1	14.96	2007-8.80S						
9.00	81	125	1	14.96	2007-9.00S				1	34.93	2011-9.00S
9.30	81	125	1	16.51	2007-9.30S						
9.40	81	125	1	16.51	2007-9.40S						
9.50	81	125	1	16.51	2007-9.50S				1	39.09	2011-9.50S
9.90	87	133	1	17.69	2007-9.90S						
10.00	87	133	1	17.69	2007-10.00S				1	41.67	2011-10.00S
10.20	87	133	1	19.85	2007-10.20S						
10.50	87	133	1	19.85	2007-10.50S				1	47.08	2011-10.50S
10.80	94	142	1	22.88	2007-10.80S						
11.00	94	142	1	22.88	2007-11.00S				1	54.48	2011-11.00S
11.10	94	142	1	25.65	2007-11.10S						
11.20	94	142	1	25.65	2007-11.20S						
11.50	94	142	1	25.65	2007-11.50S				1	61.21	2011-11.50S
11.80	94	142	1	28.95	2007-11.80S						
12.00	101	151	1	28.95	2007-12.00S				1	69.40	2011-12.00S
12.20	101	151	1	31.89	2007-12.20S						
12.50	101	151	1	31.89	2007-12.50S				1	76.37	2011-12.50S
12.80	101	151	1	34.17	2007-12.80S						
12.90	101	151	1	34.17	2007-12.90S						
13.00	101	151	1	34.17	2007-13.00S				1	82.04	2011-13.00S

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.

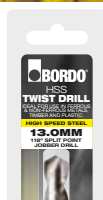

**QUICK  
SILVER®**

**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. These tools are suitable for general purpose use, particularly for non-ferrous applications.



**BRONZE FINISH**  
(gold oxide)  
This metallic brown coloured low temperature temper treatment is normally only used on cobalt tools for identification purposes. Cobalt HSS drills are extremely hard and provide superior performance and increased tool life especially in stainless steel and high tensile steel.





GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BRIGHT	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT†
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL



MERCHANDISER TYPE	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
METRIC BRIGHT 171 CLAM SHELLS	1,834.95	2007-D1				
METRIC TRADE PACK 17 CLAM SHELLS			637.62	2007-D5		
METRIC COBALT 92 CLAM SHELLS					2,552.46	2011-D1

MERCHANDISER CONTENTS	QTY CLAMS	PART NUMBER	QTY CLAMS	PART NUMBER	QTY CLAMS	PART NUMBER
	10	2007-1.00S	1	2007-1.00TP	5	2011-1.00S
	10	2007-1.50S	1	2007-1.50TP	5	2011-1.50S
	10	2007-2.00S	1	2007-2.00TP	5	2011-2.00S
	10	2007-2.50S	1	2007-2.50TP	5	2011-2.50S
	10	2007-3.00S	2	2007-3.00TP	5	2011-3.00S
	10	2007-3.50S	1	2007-3.50TP	5	2011-3.50S
	10	2007-4.00S	2	2007-4.00TP	5	2011-4.00S
	10	2007-4.50S	1	2007-4.50TP	5	2011-4.50S
	10	2007-5.00S	2	2007-5.00TP	5	2011-5.00S
	5	2007-5.50S	1	2007-5.50TP	3	2011-5.50S
	10	2007-6.00S	1	2007-6.00TP	5	2011-6.00S
	5	2007-6.50S	1	2007-6.50TP	3	2011-6.50S
	5	2007-7.00S	2	2007-M1S	3	2011-7.00S
	5	2007-7.50S			3	2011-7.50S
	10	2007-8.00S			5	2011-8.00S
	5	2007-8.50S			3	2011-8.50S
	5	2007-9.00S			3	2011-9.00S
	3	2007-9.50S			2	2011-9.50S
	10	2007-10.00S			5	2011-10.00S
	3	2007-10.50S			2	2011-10.50S
	3	2007-11.00S			2	2011-11.00S
	3	2007-11.50S			2	2011-11.50S
	3	2007-12.00S			2	2011-12.00S
	3	2007-12.50S			2	2011-12.50S
	3	2007-13.00S			2	2011-13.00S

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.



**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. These tools are suitable for general purpose use, particularly for non-ferrous applications.



**BRONZE FINISH**  
(gold oxide)  
This metallic brown coloured low temperature temper treatment is normally only used on cobalt tools for identification purposes. Cobalt HSS drills are extremely hard and provide superior performance and increased tool life especially in stainless steel and high tensile steel.



GROUP	JOB	JOB
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
POINT TYPE	<b>118° SPLIT POINT*</b>	<b>118° SPLIT POINT*</b>
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	<b>CLAM SHELL</b>	<b>CLAM SHELL</b>



MERCHANDISER TYPE	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
METRIC <b>TAPPING SIZES</b> ADD TO 2007-D1	<b>835.54</b>	2007-D6		
METRIC <b>TAPPING FULL LENGTH TIER</b>			<b>759.99</b>	2007-D6FLT

MERCHANDISER CONTENTS	QTY CLAMS	PART NUMBER	QTY CLAMS	PART NUMBER	QTY CLAMS	PART NUMBER
	2	2007-2.60S	1	2007-1.00S	1	2007-8.00S
	2	2007-2.90S	1	2007-1.50S	1	2007-8.40S
	2	2007-3.20S	1	2007-2.00S	1	2007-8.50S
	2	2007-3.30S	1	2007-2.50S	1	2007-8.70S
	2	2007-3.70S	1	2007-2.60S	1	2007-8.80S
	2	2007-3.90S	1	2007-2.90S	1	2007-9.00S
	2	2007-4.10S	1	2007-3.00S	1	2007-9.30S
	2	2007-4.20S	1	2007-3.20S	1	2007-9.40S
	2	2007-4.70S	1	2007-3.30S	1	2007-9.50S
	2	2007-5.10S	1	2007-3.50S	1	2007-9.90S
	2	2007-6.60S	1	2007-3.70S	1	2007-10.00S
	2	2007-6.80S	1	2007-3.90S	1	2007-10.20S
	2	2007-6.90S	1	2007-4.00S	1	2007-10.50S
	2	2007-7.90S	1	2007-4.10S	1	2007-10.80S
	2	2007-8.40S	1	2007-4.20S	1	2007-11.00S
	2	2007-8.70S	1	2007-4.50S	1	2007-11.10S
	2	2007-8.80S	1	2007-4.70S	1	2007-11.20S
	2	2007-9.30S	1	2007-5.00S	1	2007-11.50S
	2	2007-9.40S	1	2007-5.10S	1	2007-11.80S
	2	2007-9.90S	1	2007-5.50S	1	2007-12.00S
	2	2007-10.20S	1	2007-6.00S	1	2007-12.20S
	2	2007-10.80S	1	2007-6.50S	1	2007-12.50S
	2	2007-11.10S	1	2007-6.60S	1	2007-12.80S
	2	2007-11.20S	1	2007-6.80S	1	2007-12.90S
	2	2007-11.80S	1	2007-6.90S	1	2007-13.00S
	2	2007-12.20S	1	2007-7.00S		
	2	2007-12.80S	1	2007-7.50S		
	2	2007-12.90S	1	2007-7.90S		

**METRIC  
JOBBER DRILLS  
DIN338**

**FRACTIONAL  
JOBBER DRILLS  
ANSI  
B94-11**



**QUICK  
SILVER®**

**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.



GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BRIGHT	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT†
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL

	DIA	FL	OAL	CLAM	\$	PART	CLAM	\$	PART	CLAM	\$	PART
INCH	MM	MM	MM	QTY	CLAM	NUMBER	QTY	CLAM	NUMBER	QTY	CLAM	NUMBER
1/16	1.59	22	48	2	7.79	2006-1/16S	10	37.65	2006-1/16TP	2	17.60	2010-1/16S
5/64	1.98	25	51	2	7.38	2006-5/64S	10	35.12	2006-5/64TP	2	16.26	2010-5/64S
3/32	2.38	32	57	2	7.38	2006-3/32S	10	35.12	2006-3/32TP	2	16.26	2010-3/32S
7/64	2.78	38	67	2	6.82	2006-7/64S	10	31.85	2006-7/64TP	2	14.70	2010-7/64S
1/8	3.17	41	70	2	6.95	2006-1/8S	10	33.28	2006-1/8TP	2	15.70	2010-1/8S
9/64	3.57	44	73	1	4.32	2006-9/64S	10	37.65	2006-9/64TP	1	9.78	2010-9/64S
5/32	3.97	51	79	1	4.66	2006-5/32S	10	40.70	2006-5/32TP	1	10.60	2010-5/32S
11/64	4.37	54	83	1	5.20	2006-11/64S	5	23.30	2006-11/64TP	1	11.99	2010-11/64S
3/16	4.76	59	89	1	5.69	2006-3/16S	5	25.51	2006-3/16TP	1	13.06	2010-3/16S
13/64	5.16	62	92	1	6.36	2006-13/64S	5	28.87	2006-13/64TP	1	14.98	2010-13/64S
7/32	5.56	64	95	1	6.95	2006-7/32S	5	31.81	2006-7/32TP	1	16.35	2010-7/32S
15/64	5.95	67	98	1	7.52	2006-15/64S	5	34.76	2006-15/64TP	1	17.93	2010-15/64S
1/4	6.35	70	102	1	8.42	2006-1/4S	5	39.18	2006-1/4TP	1	20.12	2010-1/4S
17/64	6.75	73	105	1	9.43	2006-17/64S				1	22.14	2010-17/64S
9/32	7.14	75	108	1	10.40	2006-9/32S				1	24.74	2010-9/32S
19/64	7.54	78	111	1	11.31	2006-19/64S				1	26.86	2010-19/64S
5/16	7.94	81	114	1	12.18	2006-5/16S				1	28.95	2010-5/16S
21/64	8.33	84	117	1	13.08	2006-21/64S				1	31.08	2010-21/64S
11/32	8.73	87	121	1	14.39	2006-11/32S				1	34.26	2010-11/32S
23/64	9.13	89	124	1	15.48	2006-23/64S				1	37.41	2010-23/64S
3/8	9.52	92	127	1	16.51	2006-3/8S				1	40.05	2010-3/8S
25/64	9.92	95	130	1	17.55	2006-25/64S				1	41.12	2010-25/64S
13/32	10.32	98	133	1	19.57	2006-13/32S				1	46.28	2010-13/32S
27/64	10.72	100	137	1	21.62	2006-27/64S				1	51.42	2010-27/64S
7/16	11.11	103	140	1	23.31	2006-7/16S				1	55.52	2010-7/16S
29/64	11.51	106	143	1	25.79	2006-29/64S				1	61.50	2010-29/64S
15/32	11.91	110	146	1	28.68	2006-15/32S				1	68.65	2010-15/32S
31/64	12.30	111	149	1	30.43	2006-31/64S				1	72.78	2010-31/64S
1/2	12.70	114	152	1	31.89	2006-1/2S				1	76.37	2010-1/2S

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.





GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BRIGHT	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	<b>118° SPLIT POINT*</b>	<b>118° SPLIT POINT*</b>	<b>135° SPLIT POINT†</b>
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	<b>CLAM SHELL</b>	<b>CLAM SHELL</b>	<b>CLAM SHELL</b>



MERCHANDISER TYPE	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
FRACTIONAL <b>BRIGHT</b> 179 CLAM SHELLS	<b>1,901.12</b>	2006-D1				
FRACTIONAL <b>TRADE PACK</b> 16 CLAM SHELLS			<b>591.86</b>	2006-D5		
FRACTIONAL <b>COBALT</b> 99 CLAM SHELLS					<b>2,601.74</b>	2010-D1

MERCHANDISER CONTENTS	QTY CLAMS	PART NUMBER	QTY CLAMS	PART NUMBER	QTY CLAMS	PART NUMBER
	10	2006-1/16S	1	2006-1/16TP	5	2010-1/16S
	10	2006-5/64S	1	2006-5/64TP	5	2010-5/64S
	10	2006-3/32S	1	2006-3/32TP	5	2010-3/32S
	10	2006-7/64S	1	2006-7/64TP	5	2010-7/64S
	10	2006-1/8S	2	2006-1/8TP	5	2010-1/8S
	10	2006-9/64S	1	2006-9/64TP	5	2010-9/64S
	10	2006-5/32S	1	2006-5/32TP	5	2010-5/32S
	10	2006-11/64S	1	2006-11/64TP	5	2010-11/64S
	10	2006-3/16S	1	2006-3/16TP	5	2010-3/16S
	5	2006-13/64S	1	2006-13/64TP	3	2010-13/64S
	5	2006-7/32S	1	2006-7/32TP	3	2010-7/32S
	5	2006-15/64S	1	2006-15/64TP	3	2010-15/64S
	5	2006-1/4S	1	2006-1/4TP	3	2010-1/4S
	5	2006-17/64S	2	2006-F1S	3	2010-17/64S
	5	2006-9/32S			3	2010-9/32S
	5	2006-19/64S			3	2010-19/64S
	5	2006-5/16S			3	2010-5/16S
	5	2006-21/64S			3	2010-21/64S
	5	2006-11/32S			3	2010-11/32S
	5	2006-23/64S			3	2010-23/64S
	10	2006-3/8S			5	2010-3/8S
	3	2006-25/64S			2	2010-25/64S
	3	2006-13/32S			2	2010-13/32S
	3	2006-27/64S			2	2010-27/64S
	3	2006-7/16S			2	2010-7/16S
	3	2006-29/64S			2	2010-29/64S
	3	2006-15/32S			2	2010-15/32S
	3	2006-31/64S			2	2010-31/64S
	3	2006-1/2S			2	2010-1/2S

**METRIC  
JOBBER DRILLS**  
**DIN338**

**FRACTIONAL  
JOBBER DRILLS**  
**ANSI  
B94-11**

**QUICK  
SILVER®**

**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*

**COBALT  
TOUGH**

**BRONZE FINISH**  
(gold oxide)  
This metallic brown coloured low temperature temper treatment is normally only used on cobalt tools for identification purposes. *Cobalt HSS drills are extremely hard and provide superior performance and increased tool life especially in stainless steel and high tensile steel.*

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.



GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BLACK	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT†
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	SET	SET	SET



**NEW  
DELTA  
POINT**  
HIGH PERFORMANCE  
DRILL SETS PAGE 5



SET DESCRIPTION SET CONTENTS		DRILLS QTY	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
M1 JOBBER – ABS CASE	1.0 - 6.5 x 0.5mm rises	12	<b>69.58</b>	2007-M1	<b>69.58</b>	2003-M1		
M2 JOBBER – ABS CASE	1.0 - 10.0 x 0.5mm rises	19	<b>171.55</b>	2007-M2	<b>171.55</b>	2003-M2	<b>399.56</b>	2011-M2
M3 JOBBER – ABS CASE	1.0 - 13.0 x 0.5mm rises	25	<b>337.57</b>	2007-M3	<b>337.57</b>	2003-M3	<b>787.52</b>	2011-M3
M5 JOBBER – ABS CASE	1.0 - 6.5 x 0.5mm rises 7.0 - 13.0 x 1.0mm rises	19	<b>222.17</b>	2007-M5			<b>527.66</b>	2011-M5
WIRE GAUGE S2 – METAL CASE	No.61 - No.80	20	<b>259.06</b>	2013-WGS2				
WIRE GAUGE S1 – METAL CASE	No.1 - No.60	60	<b>529.43</b>	2013-WGS1				



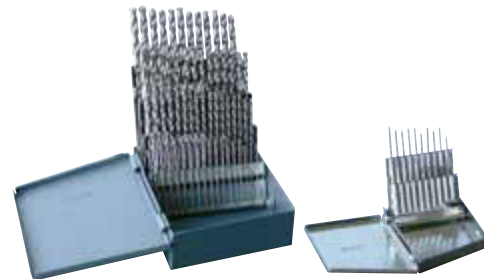
SET DESCRIPTION SET CONTENTS		SETS PER OUTER	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
METRIC JOBBER – REFILL SET	1.0 - 6.5 x 0.5mm rises	10	<b>58.23</b>	2007-M1S			<b>146.79</b>	2011-M1S

SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER
METRIC ASSORTMENT 1-10mm	110	<b>591.61</b>	2007-MA1
1.0 - 4.0 x 0.5mm rises : 10 each			
4.5 - 6.5 x 0.5mm rises : 5 each			
8.0 & 10.0mm : 5 each			
#30 Double Ended Panel Drills : 5			
Bonus 60ml Cutting Fluid			



\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.





**QUICK  
SILVER®**

**BRIGHT FINISH**

A bright finish tool has no surface treatment and is supplied in the as-ground condition. These tools are suitable for general purpose use, particularly for non-ferrous applications.



**BLACK KNIGHT®**

**BLACK FINISH**  
(also called blue finish)

A black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface helps to keep lubricant on the tool, particularly important on the cutting edges, thus reducing friction and cold welding. The result is increased tool life. Black finish tools are generally recommended for ferrous applications where the oxide layer aids chip flow and heat dissipation.



**BRONZE FINISH**

(gold oxide)  
This metallic brown coloured low temperature temper treatment is normally only used on cobalt tools for identification purposes. Cobalt HSS drills are extremely hard and provide superior performance and increased tool life especially in stainless steel and high tensile steel.



GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BLACK	BRONZE
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT†

MERCHANDISER DESCRIPTION MERCHANDISER CONTENTS	SET QTY	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
<b>DS1 MERCHANDISER 9 SETS</b>		<b>2,193.87</b>	2007-DS1			<b>5,144.22</b>	2011-DS1
M2 DRILL SET	3						
M3 DRILL SET	3						
M5 DRILL SET	3						
<b>DS2 MERCHANDISER 10 SETS</b>		<b>1,805.68</b>	2007-DS2	<b>1,805.68</b>	2003-DS2		
M1 DRILL SET	4						
M2 DRILL SET	3						
M3 DRILL SET	3						
<b>DS3 MERCHANDISER 9 SETS</b>		<b>3,038.13</b>	2007-DS3				
M3 DRILL SET	9						

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.





GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BLACK	BRONZE
MATERIAL	HSS	HSS	HSS-Co5
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT†
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	SET	SET	SET



SET DESCRIPTION SET CONTENTS		DRILLS QTY	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
F1 JOBBER – ABS CASE	1/16" - 1/4" x 1/64" rises	13	<b>73.90</b>	2006-F1	<b>73.90</b>	2000-F1		
F2 JOBBER – ABS CASE	1/16" - 3/8" x 1/64" rises	21	<b>175.30</b>	2006-F2	<b>175.30</b>	2000-F2	<b>422.78</b>	2010-F2
F3 JOBBER – ABS CASE	1/16" - 1/2" x 1/64" rises	29	<b>374.66</b>	2006-F3	<b>374.66</b>	2000-F3	<b>917.59</b>	2010-F3
F5 JOBBER – ABS CASE	1/16" - 1/4" x 1/64" rises 9/32" - 1/2" x 1/32" rises	21	<b>258.25</b>	2006-F5			<b>602.69</b>	2010-F5



SET DESCRIPTION SET CONTENTS		SETS PER OUTER	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
FRACTIONAL JOBBER – REFILL SET	1/16" - 1/4" x 1/64" rises	10	<b>61.89</b>	2006-F1S			<b>142.59</b>	2010-F1S



\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.



**DRILL  
SET  
CADDIES**

**GREAT RANGE OF  
DRILL SET CADDIES  
AVAILABLE TO SUIT  
ALL ABS SET CASES  
SEE NEXT PAGE  
FOR DETAILS**



**DRILL BIT  
MATERIALS**

**HIGH SPEED STEEL  
(HSS)**

Bordo HSS jobber drills are ground from premium quality M2 high speed steel. HSS can withstand higher operating temperatures than carbon steel without losing its temper (hardness). This property allows HSS to cut faster than high carbon steel, hence the name high speed steel. M2 HSS is an alloyed steel in the tungsten-molybdenum series which typically contains 4% Chromium, 5% Molybdenum, 6% Tungsten, 2% Vanadium and 1% Carbon (approx. by % wt). The material is also subject to high temperature heat treatment to complete the process. HSS steel has a very high wear resistance, a bending strength up to 4700MPa with high toughness and thermoplasticity.

HSS jobber drills are ideal for general purpose use in a wide variety of ferrous and non-ferrous metals, timber and plastic.

**HSS-Co5 (COBALT)**

Bordo Cobalt jobber drills are manufactured from HSS-Co5 steel, which is very similar to M2 HSS with the important addition of 5% cobalt. The addition of cobalt to M2 HSS significantly increases heat resistance and allows the drill to run at higher temperatures without losing its temper (hardness). Cobalt drills provide increased performance and tool life when machining tough steels.

HSS-Co5 (Cobalt) jobber drills are ideal for use in drilling stainless steel and high tensile steel.

GROUP	JOB	JOB	JOB
SURFACE FINISH	BRIGHT	BLACK	BRONZE
POINT TYPE	118° SPLIT POINT*	118° SPLIT POINT*	135° SPLIT POINT†

MERCHANDISER DESCRIPTION MERCANDISER CONTENTS	SET QTY	\$ MERCANDISER	PART NUMBER	\$ MERCANDISER	PART NUMBER	\$ MERCANDISER	PART NUMBER
<b>DS1 MERCHANDISER 9 SETS</b>		<b>2,424.63</b>	2006-DS1			<b>5,829.18</b>	2010-DS1
F2 DRILL SET	3						
F3 DRILL SET	3						
F5 DRILL SET	3						
<b>DS2 MERCHANDISER 10 SETS</b>		<b>1,945.48</b>	2006-DS2	<b>1,945.48</b>	2000-DS2		
F1 DRILL SET	4						
F2 DRILL SET	3						
F3 DRILL SET	3						
<b>DS3 MERCHANDISER 9 SETS</b>		<b>3,371.94</b>	2006-DS3				
F3 DRILL SET	9						

\* Sizes 3.40mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.



DRILLS  
JOBBER

DRILL SET

CADDIES

DRILL SET  
CADDIES

Drill set caddies are designed to snap into the base of Bordo ABS drill sets. The caddies allow the convenient storage of extra drills, screwdriver bits and other related accessories.

GROUP			JOB			
CADDY TYPE CONTENTS	QTY	SIZE		\$ EACH	PART NUMBER	
METRIC JOBBER DRILLS	1	1.00	BRIGHT	19.28	2018-C2S	
	1	1.50	COBALT	55.67	2018-C11S	
	1	2.00				
	1	2.50				
	1	3.00				
FRACTIONAL JOBBER DRILLS	1	1/16	BRIGHT	18.06	2018-C1S	
	1	5/64	COBALT	39.90	2018-C10S	
	1	3/32				
	1	7/64				
DOUBLE ENDED PANEL DRILLS	2	NO.30	BRIGHT	24.00	2018-C8S	
	1	NO.20				
	1	NO.11				
SCREWDRIVER BITS & BIT HOLDER	1	HX5		26.62	2018-C3S	
	1	PZ2				
	1	PH2				
	1	PH1				
	1	SL5				
NUTSETTER & DOUBLE ENDED POWER BIT	1	NS5/16		19.22	2018-C4S	
	1	PH2/SL5				



MERCHANDISER TYPE	\$ MERCH	PART NUMBER
DRILL SET CADDIES	405.50	2018-D1
MERCHANDISER CONTENTS	QTY CLAMS	PART NUMBER
	2	2018-C1S
	2	2018-C2S
	2	2018-C3S
	2	2018-C4S
	2	2018-C8S
	2	2018-C10S
	2	2018-C11S



# DRILLS REDUCED SHANK

METRIC

CLAM SHELL



## DRILL BIT SURFACE TREATMENT

**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*

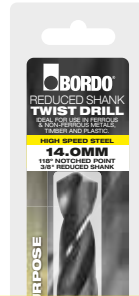
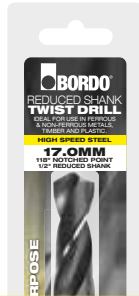
**BRIGHT/BLACK FINISH**  
These drills are ground and then a black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface aids chip flow and heat dissipation. The drill is then ground a second time to achieve a bright finish on the shank and cutting edges.

## DRILL BIT MATERIALS

**HIGH SPEED STEEL (HSS)**  
Bordo HSS drills are ground from premium quality M2 high speed steel. HSS can withstand higher operating temperatures than carbon steel without losing its temper (hardness). This property allows HSS to cut faster than high carbon steel, hence the name high speed steel. M2 HSS is an alloyed steel in the tungsten-molybdenum series which typically contains 4% Chromium, 5% Molybdenum, 6% Tungsten, 2% Vanadium and 1% Carbon (approx. by % wt). The material is also subject to high temperature heat treatment to complete the process. HSS has a very high wear resistance, a bending strength up to 4700MPa with high toughness and themoplasticity.

HSS drills are ideal for general purpose use in a wide variety of ferrous and non-ferrous metals, timber and plastic.

GROUP	PSDL	PSDL	JOBB
SURFACE FINISH	BRIGHT / BLACK	BRIGHT / BLACK	BRIGHT
MATERIAL	HSS	HSS	HSS
POINT TYPE	118° NOTCHED POINT	118° NOTCHED POINT	118° SPLIT POINT
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
SHANK DIAMETER	1/2"	3/8"	3/8"
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL



DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
10.50	87	133	1					19.85	2647-10.50
11.00	94	142	1					22.88	2647-11.00
11.50	94	142	1					25.65	2647-11.50
12.00	101	151	1					28.95	2647-12.00
12.50	101	151	1					31.89	2647-12.50
13.00	76	152	1	60.86	2654-13.00			34.17	2647-13.00
13.50	76	152	1	60.86	2654-13.50	60.86	2647-13.50		
14.00	76	152	1	60.86	2654-14.00	60.86	2647-14.00		
14.50	76	152	1	60.86	2654-14.50				
15.00	76	152	1	66.66	2654-15.00				
15.50	76	152	1	66.66	2654-15.50				
16.00	76	152	1	66.66	2654-16.00				
16.50	76	152	1	75.34	2654-16.50				
17.00	76	152	1	75.34	2654-17.00				
17.50	76	152	1	78.24	2654-17.50				
18.00	76	152	1	78.24	2654-18.00				
18.50	76	152	1	81.14	2654-18.50				
19.00	76	152	1	81.14	2654-19.00				
19.50	76	152	1	92.76	2654-19.50				
20.00	76	152	1	92.76	2654-20.00				
20.50	76	152	1	99.97	2654-20.50				
21.00	76	152	1	99.97	2654-21.00				
21.50	76	152	1	99.97	2654-21.50				
22.00	76	152	1	99.97	2654-22.00				
22.50	76	152	1	110.11	2654-22.50				
23.00	76	152	1	110.11	2654-23.00				
23.50	76	152	1	115.93	2654-23.50				
24.00	76	152	1	121.74	2654-24.00				
24.50	76	152	1	121.74	2654-24.50				
25.00	76	152	1	121.74	2654-25.00				
26.00	76	152	1	168.08	2654-26.00				
27.00	76	152	1	179.66	2654-27.00				
28.00	76	152	1	179.66	2654-28.00				
29.00	76	152	1	188.33	2654-29.00				
30.00	76	152	1	188.33	2654-30.00				

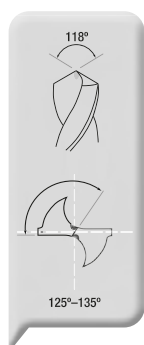
# DRILLS REDUCED SHANK

FRACTIONAL

CLAM SHELL



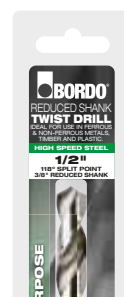
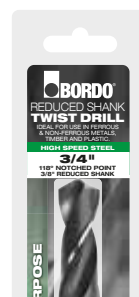
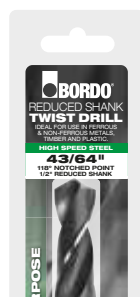
GROUP	PSDL	PSDL	JOB
SURFACE FINISH	BRIGHT/ BLACK	BRIGHT / BLACK	BRIGHT
MATERIAL	HSS	HSS	HSS
POINT TYPE	118° NOTCHED POINT	118° NOTCHED POINT	118° SPLIT POINT
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
SHANK DIAMETER	1/2"	3/8"	3/8"
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL



**Notched Point**  
A variation on standard chisel point providing faster starting and reduced drill wander. Suitable for general purpose drilling.



**118° Split Point (crankshaft point)**  
Split point is self centering and reduces the need for end thrust. Friction at workpiece is reduced. 118° point angles are ideal for use in materials such as mild steel and cast iron. The 118° point creates easily controlled chips which are wide and thin.



DIA	FL	OAL	PACK		\$	PART	\$	PART	\$	PART
INCH	MM	MM	MM	QTY	EACH	NUMBER	EACH	NUMBER	EACH	NUMBER
25/64	9.92	95	130	1					17.55	2646-25/64
13/32	10.32	98	133	1					19.57	2646-13/32
27/64	10.72	100	137	1					21.62	2646-27/64
7/16	11.11	103	140	1					23.31	2646-7/16
29/64	11.51	106	143	1					25.79	2646-29/64
15/32	11.91	110	146	1					28.68	2646-15/32
31/64	12.30	111	149	1					30.43	2646-31/64
1/2	12.70	114	152	1					31.89	2646-1/2
17/32	13.49	76	152	1	60.86	2651-17/32				
35/64	13.89	76	152	1	60.86	2651-35/64				
9/16	14.29	76	152	1	60.86	2651-9/16	60.86	2646-9/16		
37/64	14.68	76	152	1	60.86	2651-37/64				
19/32	15.08	76	152	1	66.66	2651-19/32				
39/64	15.48	76	152	1	66.66	2651-39/64				
5/8	15.88	76	152	1	66.66	2651-5/8	66.66	2646-5/8		
41/64	16.27	76	152	1	66.66	2651-41/64				
21/32	16.67	76	152	1	75.34	2651-21/32				
43/64	17.06	76	152	1	75.34	2651-43/64				
11/16	17.46	76	152	1	76.78	2651-11/16				
45/64	17.86	76	152	1	78.90	2651-45/64				
23/32	18.26	76	152	1	78.24	2651-23/32				
47/64	18.65	76	152	1	81.14	2651-47/64				
3/4	19.05	76	152	1	81.14	2651-3/4	81.14	2646-3/4		
49/64	19.45	76	152	1	92.76	2651-49/64				
25/32	19.84	76	152	1	92.76	2651-25/32				
51/64	20.24	76	152	1	95.66	2651-51/64				
13/16	20.64	76	152	1	95.66	2651-13/16				
53/64	21.03	76	152	1	99.97	2651-53/64				
27/32	21.43	76	152	1	99.97	2651-27/32				
55/64	21.83	76	152	1	99.97	2651-55/64				
7/8	22.23	76	152	1	99.97	2651-7/8				
57/64	22.62	76	152	1	110.11	2651-57/64				
29/32	23.02	76	152	1	110.11	2651-29/32				
59/64	23.42	76	152	1	115.93	2651-59/64				
15/16	23.81	76	152	1	115.93	2651-15/16				
61/64	24.21	76	152	1	121.74	2651-61/64				
31/32	24.61	76	152	1	121.74	2651-31/32				
63/64	25.00	76	152	1	121.74	2651-63/64				
1	25.40	76	152	1	121.74	2651-1				
1-1/32*	26.19	76	152	1	168.08	2651-1.1/32				
1-1/16	26.99	76	152	1	168.08	2651-1.1/16				
1-1/8	28.58	76	152	1	179.66	2651-1.1/8				
1-3/16	30.16	76	152	1	188.33	2651-1.3/16				
1-1/4	31.75	76	152	1	208.64	2651-1.1/4				

\* Discontinued - available until current stocks are depleted.

**DRILL BIT  
SURFACE  
TREATMENT**

**BRIGHT/BLACK  
FINISH**

These drills are ground and then a black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface aids chip flow and heat dissipation. The drill is then ground a second time to achieve a bright finish on the shank and cutting edges.



GROUP	PSDL	PSDL
SURFACE FINISH	BRIGHT/ BLACK	BRIGHT / BLACK
MATERIAL	HSS	HSS
POINT TYPE	118° NOTCHED POINT	118° NOTCHED POINT
FLUTE TYPE	30° HELIX	30° HELIX
SHANK DIAMETER	1/2"	1/2"
PACKAGING	INJECTION MOULDED CASE	INJECTION MOULDED CASE



SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER	\$ SET	PART NUMBER
<b>REDUCED SHANK METRIC</b>	4	<b>382.75</b>	2654-S1		
16, 18, 22, 25mm					
<b>REDUCED SHANK METRIC</b>	8	<b>836.28</b>	2654-S2		
14, 15, 16, 16.5, 18, 20, 22, 25mm					
<b>REDUCED SHANK FRACTIONAL</b>	4			<b>382.75</b>	2651-S1
5/8", 3/4", 7/8", 1"					
<b>REDUCED SHANK FRACTIONAL</b>	8			<b>836.28</b>	2651-S2
9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"					



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
<b>METRIC</b>	<b>1,378.05</b>	2654-D1		
<b>FRACTIONAL</b>			<b>1,459.18</b>	2651-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER	QTY EACH	SIZE INCH	PART NUMBER
	2	13.00	2654-13.00	2	9/16	2651-9/16
	2	13.50	2654-13.50	2	19/32	2651-19/32
	2	14.00	2654-14.00	2	5/8	2651-5/8
	2	14.50	2654-14.50	2	21/32	2651-21/32
	2	15.00	2654-15.00	2	11/16	2651-11/16
	2	16.00	2654-16.00	1	23/32	2651-23/32
	2	16.50	2654-16.50	2	3/4	2651-3/4
	1	18.00	2654-18.00	1	25/32	2651-25/32
	1	19.00	2654-19.00	1	13/16	2651-13/16
	1	20.00	2654-20.00	1	7/8	2651-7/8
	1	22.00	2654-22.00	1	15/16	2651-15/16
	1	25.00	2654-25.00	1	1	2651-1



# DRILLS LONG SERIES

METRIC

BULK & HANG SELL

METRIC  
LONG SERIES  
ANSI  
B94-11

## DRILL BIT MATERIALS

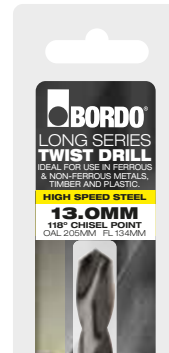
### HIGH SPEED STEEL (HSS)

Bordo HSS jobber drills are ground from premium quality M2 high speed steel. HSS can withstand higher operating temperatures than carbon steel without losing its temper (hardness). This property allows HSS to cut faster than high carbon steel, hence the name high speed steel. M2 HSS is an alloyed steel in the tungsten-molybdenum series which typically contains 4% Chromium, 5% Molybdenum, 6% Tungsten, 2% Vanadium and 1% Carbon (approx. by % wt). The material is also subject to high temperature heat treatment to complete the process. HSS has a very high wear resistance, a bending strength up to 4700MPa with high toughness and thermoplasticity.

HSS jobber drills are ideal for general purpose use in a wide variety of ferrous and non-ferrous metals, timber and plastic.



GROUP	LONG	LONG
SURFACE FINISH	BLACK	BLACK
MATERIAL	HSS	HSS
POINT TYPE	118° STD CHISEL	118° STD CHISEL
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	BULK	CLAM SHELL

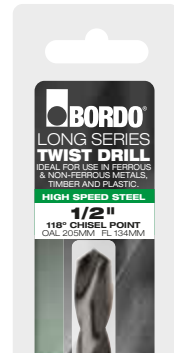


DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	PACK QTY	\$ EACH	PART NUMBER
1.00	29*	57*	10	11.39	2501-1.00	1	11.39	2501-1.00S
1.50	44*	76*	10	9.28	2501-1.50	1	9.28	2501-1.50S
2.00	57*	108*	10	11.22	2501-2.00	1	11.22	2501-2.00S
2.50	64*	117*	10	11.22	2501-2.50	1	11.22	2501-2.50S
3.00	70*	130*	10	11.22	2501-3.00	1	11.22	2501-3.00S
3.30	76*	137*	10	12.21	2501-3.30	1	12.20	2501-3.30S
3.50	76*	137*	10	12.21	2501-3.50	1	12.20	2501-3.50S
4.00	86*	146*	10	12.69	2501-4.00	1	12.69	2501-4.00S
4.20	86*	146*	10	14.93	2501-4.20	1	14.93	2501-4.20S
4.50	86*	146*	10	15.65	2501-4.50	1	15.65	2501-4.50S
5.00	92*	152*	10	16.89	2501-5.00	1	16.88	2501-5.00S
5.50	92*	152*	10	17.55	2501-5.50	1	17.55	2501-5.50S
6.00	95*	156*	10	18.79	2501-6.00	1	18.79	2501-6.00S
6.50	98*	159*	10	27.25	2501-6.50	1	27.25	2501-6.50S
7.00	98*	159*	10	27.25	2501-7.00	1	27.25	2501-7.00S
7.50	102*	162*	10	29.43	2501-7.50	1	29.43	2501-7.50S
8.00	109*	165*	5	33.82	2501-8.00	1	33.82	2501-8.00S
8.50	109*	165*	5	33.82	2501-8.50	1	33.82	2501-8.50S
9.00	115*	175*	5	39.13	2501-9.00	1	39.12	2501-9.00S
9.50	115*	175*	5	41.04	2501-9.50	1	41.04	2501-9.50S
10.00	121*	184*	5	42.27	2501-10.00	1	42.27	2501-10.00S
10.50	121*	184*	5	48.48	2501-10.50	1	48.48	2501-10.50S
11.00	128*	195*	5	54.78	2501-11.00	1	54.78	2501-11.00S
11.50	128*	195*	5	62.72	2501-11.50	1	62.72	2501-11.50S
12.00	134*	205*	5	67.30	2501-12.00	1	67.30	2501-12.00S
12.50	134*	205*	5	70.43	2501-12.50	1	70.43	2501-12.50S
13.00	134*	205*	5	73.55	2501-13.00	1	73.55	2501-13.00S

\* Some older stock may be supplied in different lengths

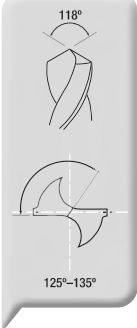


GROUP	LONG	LONG
SURFACE FINISH	BLACK	BLACK
MATERIAL	HSS	HSS
POINT TYPE	118° STD CHISEL	118° STD CHISEL
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	BULK	CLAM SHELL



DIA		FL	OAL	PACK	\$	PART	PACK	\$	PART
INCH	MM	MM	MM	QTY	EACH	NUMBER	QTY	EACH	NUMBER
1/16	1.59	50	76	10	13.08	2500-1/16	1	13.08	2500-1/16S
5/64	1.98	51	95.5	10	9.40	2500-5/64	1	9.40	2500-5/64S
3/32	2.38	57	108	10	9.40	2500-3/32	1	9.40	2500-3/32S
7/64	2.78	64	118	10	9.40	2500-7/64	1	9.40	2500-7/64S
1/8	3.17	70	131	10	10.65	2500-1/8	1	10.65	2500-1/8S
9/64	3.57	76	137	10	11.08	2500-9/64	1	11.08	2500-9/64S
5/32	3.97	76	137	10	11.90	2500-5/32	1	11.90	2500-5/32S
11/64	4.37	86	146	10	12.69	2500-11/64	1	12.69	2500-11/64S
3/16	4.76	86	146	10	15.65	2500-3/16	1	15.65	2500-3/16S
13/64	5.16	92	152	10	16.88	2500-13/64	1	16.88	2500-13/64S
7/32	5.56	92	152	10	17.55	2500-7/32	1	17.55	2500-7/32S
15/64	5.95	97	158	10	18.14	2500-15/64	1	18.14	2500-15/64S
1/4	6.35	95	155	10	20.36	2500-1/4	1	20.36	2500-1/4S
17/64	6.75	102	156	10	27.25	2500-17/64	1	27.25	2500-17/64S
9/32	7.14	102	156	10	26.60	2500-9/32	1	26.60	2500-9/32S
19/64	7.54	109	165	5	29.43	2500-19/64	1	29.43	2500-19/64S
5/16	7.94	109	165	5	30.64	2500-5/16	1	30.64	2500-5/16S
21/64	8.33	109	165	5	33.82	2500-21/64	1	33.82	2500-21/64S
11/32	8.73	115	175	5	38.20	2500-11/32	1	38.20	2500-11/32S
23/64	9.13	115	175	5	39.12	2500-23/64	1	39.12	2500-23/64S
3/8	9.52	121	184	5	40.05	2500-3/8	1	40.05	2500-3/8S
25/64	9.92	121	184	5	42.27	2500-25/64	1	42.27	2500-25/64S
13/32	10.32	121	184	5	48.48	2500-13/32	1	48.48	2500-13/32S
27/64	10.72	128	195	5	53.27	2500-27/64	1	53.27	2500-27/64S
7/16	11.11	128	195	5	54.78	2500-7/16	1	54.78	2500-7/16S
29/64	11.51	128	195	5	56.35	2500-29/64	1	56.35	2500-29/64S
15/32	11.91	134	205	5	64.18	2500-15/32	1	64.18	2500-15/32S
31/64	12.30	134	205	5	67.30	2500-31/64	1	67.30	2500-31/64S
1/2	12.70	134	205	5	70.43	2500-1/2	1	70.43	2500-1/2S

**FRACTIONAL  
LONG SERIES**  
**ANSI  
B94-11**



**Standard Point**

(chisel point)

Standard point is suitable for general purpose drilling.

**DRILL BIT  
SURFACE  
TREATMENT**

**BLACK FINISH**

(also called blue finish)

A black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface helps to keep lubricant on the tool, particularly important on the cutting edges, thus reducing friction and cold welding. The result is increased tool life. *Black finish tools are generally recommended for ferrous applications where the oxide layer aids chip flow and heat dissipation.*



GROUP	LONG	LONG
SURFACE FINISH	BLACK	BLACK
MATERIAL	HSS	HSS
POINT TYPE	118° STD CHISEL	118° STD CHISEL
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	CLAM SHELL	CLAM SHELL



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
LONG SERIES METRIC – 50 DRILLS	1,598.70	2501-D1		
LONG SERIES FRACTIONAL – 58 DRILLS			1,796.70	2500-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER	QTY EACH	SIZE INCH	PART NUMBER
	2	1.00	2501-1.00S	2	1/16	2500-1/16S
	2	1.50	2501-1.50S	2	5/64	2500-5/64S
	2	2.00	2501-2.00S	2	3/32	2500-3/32S
	2	2.50	2501-2.50S	2	7/64	2500-7/64S
	2	3.00	2501-3.00S	2	1/8	2500-1/8S
	2	3.50	2501-3.50S	2	9/64	2500-9/64S
	2	4.00	2501-4.00S	2	5/32	2500-5/32S
	2	4.50	2501-4.50S	2	11/64	2500-11/64S
	2	5.00	2501-5.00S	2	3/16	2500-3/16S
	2	5.50	2501-5.50S	2	13/64	2500-13/64S
	2	6.00	2501-6.00S	2	7/32	2500-7/32S
	2	6.50	2501-6.50S	2	15/64	2500-15/64S
	2	7.00	2501-7.00S	2	1/4	2500-1/4S
	2	7.50	2501-7.50S	2	17/64	2500-17/64S
	2	8.00	2501-8.00S	2	9/32	2500-9/32S
	2	8.50	2501-8.50S	2	19/64	2500-19/64S
	2	9.00	2501-9.00S	2	5/16	2500-5/16S
	2	9.50	2501-9.50S	2	21/64	2500-21/64S
	2	10.00	2501-10.00S	2	11/32	2500-11/32S
	2	10.50	2501-10.50S	2	23/64	2500-23/64S
	2	11.00	2501-11.00S	2	3/8	2500-3/8S
	2	11.50	2501-11.50S	2	25/64	2500-25/64S
	2	12.00	2501-12.00S	2	13/32	2500-13/32S
	2	12.50	2501-12.50S	2	27/64	2500-27/64S
	2	13.00	2501-13.00S	2	7/16	2500-7/16S
				2	29/64	2500-29/64S
				2	15/32	2500-15/32S
				2	31/64	2500-31/64S
				2	1/2	2500-1/2S

## DRILL BIT MATERIALS

### HIGH SPEED STEEL (HSS)

Bordo HSS jobber drills are ground from premium quality M2 high speed steel. HSS can withstand higher operating temperatures than carbon steel without losing its temper (hardness). This property allows HSS to cut faster than high carbon steel, hence the name high speed steel. M2 HSS is an alloyed steel in the tungsten-molybdenum series which typically contains 4% Chromium, 5% Molybdenum, 6% Tungsten, 2% Vanadium and 1% Carbon (approx. by % wt). The material is also subject to high temperature heat treatment to complete the process. HSS has a very high wear resistance, a bending strength up to 4700MPa with high toughness and thermoplasticity.

HSS jobber drills are ideal for general purpose use in a wide variety of ferrous and non-ferrous metals, timber and plastic.





GROUP	LONG
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	135° SPLIT POINT
FLUTE TYPE	30° HELIX
PACKAGING	CLAM SHELL



**135° Split Point**  
*(crankshaft point)*  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

DIA MM	FL MM	SHANK	OAL MM	PACK QTY	\$ EACH	PART NUMBER
3.00	250	3mm	315	1	59.61	2504-3.00
3.30	250	3.3mm	315	1	59.61	2504-3.30
4.00	250	4mm	315	1	59.61	2504-4.00
5.00	250	5mm	315	1	65.26	2504-5.00
6.00	250	6mm	315	1	65.26	2504-6.00
6.50	250	6.5mm	315	1	65.26	2504-6.50
8.00	250	8mm	315	1	73.26	2504-8.00
9.00	250	9mm	315	1	92.08	2504-9.00
10.00	250	10mm	315	1	92.08	2504-10.00
11.00	250	11mm	315	1	103.20	2504-11.00
12.00	250	12mm	315	1	103.20	2504-12.00
13.00	250	13mm	315	1	122.04	2504-13.00
16.00	250	1/2"	315	1	214.23	2504-16.00
16.50	250	1/2"	315	1	240.02	2504-16.50

DRILLS  
EXTRA LONG

METRIC  
MERCHANDISERS

DRILL BIT  
MATERIALS

HIGH SPEED STEEL  
(HSS)

Bordo HSS jobber drills are ground from premium quality M2 high speed steel. HSS can withstand higher operating temperatures than carbon steel without losing its temper (hardness). This property allows HSS to cut faster than high carbon steel, hence the name high speed steel. M2 HSS is an alloyed steel in the tungsten-molybdenum series which typically contains 4% Chromium, 5% Molybdenum, 6% Tungsten, 2% Vanadium and 1% Carbon (approx. by % wt). The material is also subject to high temperature heat treatment to complete the process.

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GROUP	LONG
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	135° SPLIT POINT
FLUTE TYPE	30° HELIX
PACKAGING	CLAM SHELL



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
EXTRA LONG METRIC – 10 DRILLS	857.38	2504-D1		
EXTRA LONG METRIC – 24 DRILLS			2,033.42	2504-D2

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER	QTY EACH	SIZE MM	PART NUMBER
	1	3.00	2504-3.00	3	3.00	2504-3.00
	1	3.30	2504-3.30	3	3.30	2504-3.30
	1	4.00	2504-4.00	3	4.00	2504-4.00
	1	5.00	2504-5.00	3	5.00	2504-5.00
	1	6.00	2504-6.00	3	6.00	2504-6.00
	1	6.50	2504-6.50	1	6.50	2504-6.50
	1	8.00	2504-8.00	1	8.00	2504-8.00
	1	10.00	2504-10.00	1	9.00	2504-9.00
	1	12.00	2504-12.00	1	10.00	2504-10.00
	1	16.00	2504-16.00	1	11.00	2504-11.00
				1	12.00	2504-12.00
				1	13.00	2504-13.00
				1	16.00	2504-16.00
				1	16.50	2504-16.50

# DRILLS EXTRA DEEP & LONG REACH

EXTRA DEEP HOLE

AIRCRAFT



GROUP	XTRA	XTRA	XTRA
SURFACE FINISH	BRONZE	BRONZE	BRONZE
MATERIAL	HSS-Co5	HSS-Co5	HSS-Co5
POINT TYPE	130° UX POINT	130° UX POINT	130° UX POINT
FLUTE TYPE	40° HELIX PARABOLIC	40° HELIX PARABOLIC	40° HELIX PARABOLIC
PACKAGING	BULK TUBE	BULK TUBE	BULK TUBE
LENGTH	SERIES 1	SERIES 2	SERIES 3

DIA MM	PACK QTY	FL MM	OAL MM	\$ EACH	PART NUMBER	FL MM	OAL MM	\$ EACH	PART NUMBER	FL MM	OAL MM	\$ EACH	PART NUMBER
2.00	1	90	135	30.95	2503-2.00X135								
2.50	1	95	140	32.01	2503-2.50X140								
3.00	1	105	155	34.78	2503-3.00X155	135	200	37.69	2503-3.00X200				
3.50	1	115	165	35.56	2503-3.50X165	145	210	40.82	2503-3.50X210	180	265	46.06	2503-3.50X265
4.00	1	120	175	38.74	2503-4.00X175	150	220	42.91	2503-4.00X220	190	280	47.11	2503-4.00X280
4.50	1	125	185	43.37	2503-4.50X185	160	235	51.29	2503-4.50X235	200	295	56.54	2503-4.50X295
5.00	1	135	195	48.15	2503-5.00X195	170	245	53.36	2503-5.00X245	210	315	42.94	2503-5.00X315
5.50	1	140	205	51.29	2503-5.50X205	180	260	58.65	2503-5.50X260	225	330	64.91	2503-5.50X330
6.00	1	140	205	53.36	2503-6.00X205	180	260	59.65	2503-6.00X260	225	330	65.95	2503-6.00X330
6.50	1	150	215	71.23	2503-6.50X215	190	275	77.45	2503-6.50X275	235	350	86.93	2503-6.50X350
7.00	1	155	225	74.31	2503-7.00X225	200	290	81.64	2503-7.00X290	250	370	94.25	2503-7.00X370
7.50	1	155	225	87.95	2503-7.50X225	200	290	93.17	2503-7.50X290	250	370	106.76	2503-7.50X370
8.00	1	165	240	94.25	2503-8.00X240	210	305	103.62	2503-8.00X305	235	390	116.19	2503-8.00X390
8.50	1	165	240	98.39	2503-8.50X240	210	305	107.82	2503-8.50X305	280	390	120.37	2503-8.50X390
9.00	1	175	250	102.58	2503-9.00X250	220	320	114.12	2503-9.00X320	280	410	131.88	2503-9.00X410
9.50	1	175	250	106.76	2503-9.50X250	220	320	119.35	2503-9.50X320	280	410	137.14	2503-9.50X410
10.00	1	185	265	113.04	2503-10.00X265	235	340	127.72	2503-10.00X340	295	430	150.73	2503-10.00X430

EXTRA  
DEEP HOLE  
DIN1869



## UX Point

The notched UX point provides self centering, easier penetration, improved hole accuracy and improved load distribution. The special notch geometry gives a corrected rake angle of 15° which provides a strong point for harder materials, as well as preventing snatching with materials such as Aluminium, Brass, Bronze and Plastics.

## USAGE

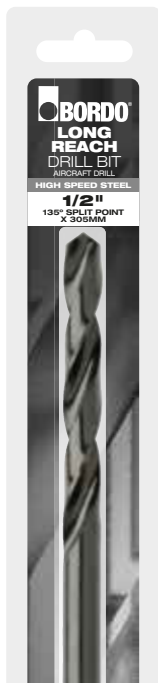
Long Reach Drills are suitable for all general purpose drilling where extra reach is required.

They are suitable for drilling:  
Wood – All types  
Plastic – All types  
Metal – Brass, Steel, Aluminium and Stainless Steel at reduced speed using cutting fluid.

Long Reach Drills have self centering 135° Split Point for fast penetration and reduced need for end thrust.

## WARNING

Long Reach Drills are not designed to drill deep holes. Maximum hole depth must be less than the flute length (FL) of the drill. Deep hole drilling requires the use of a Bordo Long Series Drill, Bordo Extra Deep Hole Drill or Bordo Auger Bit depending on the material being drilled.



GROUP	LONG
SURFACE FINISH	BLACK
MATERIAL	HSS
POINT TYPE	135° SPLIT POINT
FLUTE TYPE	30° HELIX
PACKAGING	CLAM SHELL

DIA INCH	DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
1/8	3.17	114	305	1	31.60	2502-1/8
3/16	4.76	114	305	1	59.49	2502-3/16
1/4	6.35	114	305	1	64.41	2502-1/4
5/16	7.94	114	305	1	88.84	2502-5/16
3/8	9.52	114	305	1	109.73	2502-3/8
7/16	11.11	114	305	1	123.28	2502-7/16
1/2	12.70	114	305	1	141.79	2502-1/2





GROUP	CBJB
SURFACE FINISH	VIOLET / GREY
MATERIAL	HSS-Co TiAIN COATED
POINT TYPE	MULTI FACETED
FLUTE TYPE	35° HELIX
DRILL LENGTH / TAP THREAD	STANDARD
PACKAGING	SNAP PACK

CBTP	CBTP
VIOLET / GREY	VIOLET / GREY
HSSE-V3 TiAIN COATED	HSSE-V3 TiAIN COATED
STRAIGHT	SPIRAL FLUTE
SPIRAL POINT	SPIRAL 40° HELIX
METRIC COARSE	METRIC COARSE
SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	SIZE X PITCH MM	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
2.00	24	49	1	26.53	2050-2.00					
2.50	30	57	1	27.14	2050-2.50	M3.00 x 0.5	35.05	3150-3.00	42.41	3250-3.00
3.00	33	61	1	27.82	2050-3.00					
3.30	36	65	1	28.33	2050-3.30	M4.00 x 0.7	37.81	3150-4.00	44.82	3250-4.00
3.50	39	70	1	29.41	2050-3.50					
3.70	39	70	1	30.31	2050-3.70					
4.00	43	75	1	31.20	2050-4.00					
4.20	43	75	1	32.31	2050-4.20	M5.00 x 0.8	45.52	3150-5.00	54.78	3250-5.00
4.50	47	80	1	33.08	2050-4.50					
5.00	52	86	1	35.16	2050-5.00	M6.00 x 1.0	48.50	3150-6.00	58.79	3250-6.00
5.50	57	93	1	37.96	2050-5.50					
6.00	57	93	1	43.05	2050-6.00					
6.50	63	101	1	46.12	2050-6.50					
6.80	69	109	1	48.69	2050-6.80	M8.00 x 1.25	51.16	3150-8.00	72.54	3250-8.00
7.00	69	109	1	48.90	2050-7.00					
7.50	69	109	1	51.68	2050-7.50					
7.80	75	117	1	52.56	2050-7.80					
8.00	75	117	1	52.96	2050-8.00					
8.50	75	117	1	58.83	2050-8.50	M10.00 x 1.5	67.96	3150-10.00	90.96	3250-10.00
9.00	81	125	1	60.91	2050-9.00					
9.50	81	125	1	65.19	2050-9.50					
10.00	87	133	1	68.47	2050-10.00					
10.20	87	133	1	71.64	2050-10.20	M12.00 x 1.75	114.10	3150-12.00	135.76	3250-12.00
11.00	94	142	1	79.40	2050-11.00					
12.00	101	151	1	86.44	2050-12.00	M14.00 x 2.0	133.10	3150-14.00	158.39	3250-14.00
13.00	101	151	1	101.55	2050-13.00					

for the complete range of **Colour Band Taps** see **Page 140**

### STAINLESS STEEL BLUE BAND

The machining of stainless steels is difficult due to its work hardening properties, toughness and poor thermal conductivity, which places high demands on the cutting tools. The Blue Band Series has been specifically designed to suit these difficult machining requirements.

TiAIN coating increases tool surface hardness to 87Rc. For machining materials with Hardness <350 HB : Tensile Strength <1250 N/mm2

MACHINED MATERIAL	HARDNESS Brinell	SPEED N/mm2	FEED RATE FOR DIAMETER (MM)									
			m/min	3	5	6	8	10	12	16	20	
<b>DRILLING – COPPER</b>												
Free Cutting	<250	861	12-22	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28	
Austenitic	<250	861	10-15	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28	
Martensitic, Ferritic	>300	971	12-18	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21	
<b>DRILLING – TITANIUM</b>												
Pure, Unalloyed	<200	758	20-32	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21	
Titanium Alloys	>300	971	06-12	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21	
<b>DRILLING – NICKEL</b>												
Pure, Unalloyed	<300	971	10-15	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28	



GROUP	CBJB
SURFACE FINISH	VIOLET / GREY
MATERIAL	HSS-CO TiAIN COATED
POINT TYPE	MULTI FACETED
FLUTE TYPE	35° HELIX
DRILL LENGTH / TAP THREAD	<b>STUB</b>
PACKAGING	<b>SNAP PACK</b>

CBTP	CBTP
VIOLET / GREY	VIOLET / GREY
HSSE-V3 TiAIN COATED	HSSE-V3 TiAIN COATED
SPIRAL POINT	SPIRAL FLUTE
STRAIGHT	SPIRAL 40° HELIX
METRIC COARSE	METRIC COARSE
<b>SNAP/TELESCOPIC PACK</b>	<b>SNAP/TELESCOPIC PACK</b>



DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	SIZE X PITCH MM	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
2.00	12	38	1	<b>23.85</b>	2051-2.00					
2.50	14	43	1	<b>24.10</b>	2051-2.50	M3.00 x 0.5	<b>35.05</b>	3150-3.00	<b>42.41</b>	3250-3.00
3.00	16	46	1	<b>24.76</b>	2051-3.00					
3.30	18	49	1	<b>25.63</b>	2051-3.30	M4.00 x 0.7	<b>37.81</b>	3150-4.00	<b>44.82</b>	3250-4.00
3.50	20	52	1	<b>26.04</b>	2051-3.50					
3.70	20	52	1	<b>26.43</b>	2051-3.70					
4.00	22	55	1	<b>27.32</b>	2051-4.00					
4.20	22	55	1	<b>27.71</b>	2051-4.20	M5.00 x 0.8	<b>45.52</b>	3150-5.00	<b>54.78</b>	3250-5.00
4.50	24	58	1	<b>27.82</b>	2051-4.50					
5.00	26	62	1	<b>29.03</b>	2051-5.00	M6.00 x 1.0	<b>48.50</b>	3150-6.00	<b>58.79</b>	3250-6.00
5.50	28	66	1	<b>30.89</b>	2051-5.50					
6.00	28	66	1	<b>35.68</b>	2051-6.00					
6.50	31	70	1	<b>39.35</b>	2051-6.50					
6.80	34	74	1	<b>40.74</b>	2051-6.80	M8.00 x 1.25	<b>51.16</b>	3150-8.00	<b>72.54</b>	3250-8.00
7.00	34	74	1	<b>41.24</b>	2051-7.00					
7.50	34	74	1	<b>42.63</b>	2051-7.50					
7.80	37	79	1	<b>42.83</b>	2051-7.80					
8.00	37	79	1	<b>43.73</b>	2051-8.00					
8.50	37	79	1	<b>48.29</b>	2051-8.50	M10.00 x 1.5	<b>67.96</b>	3150-10.00	<b>90.96</b>	3250-10.00
9.00	40	84	1	<b>49.98</b>	2051-9.00					
9.50	40	84	1	<b>52.26</b>	2051-9.50					
10.00	43	89	1	<b>54.34</b>	2051-10.00					
10.20	43	89	1	<b>56.92</b>	2051-10.20	M12.00 x 1.75	<b>114.10</b>	3150-12.00	<b>135.76</b>	3250-12.00
11.00	47	95	1	<b>61.33</b>	2051-11.00					
12.00	51	102	1	<b>66.09</b>	2051-12.00	M14.00 x 2.0	<b>133.10</b>	3150-14.00	<b>158.39</b>	3250-14.00
13.00	51	102	1	<b>76.81</b>	2051-13.00					

for the complete range of **Colour Band Taps** see **Page 140**

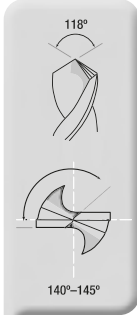
### STAINLESS STEEL BLUE BAND

The machining of stainless steels is difficult due to its work hardening properties, toughness and poor thermal conductivity, which places high demands on the cutting tools. The Blue Band Series has been specifically designed to suit these difficult machining requirements.

TiAIN coating increases tool surface hardness to 87Rc. For machining materials with Hardness <350 HB : Tensile Strength <1250 N/mm2

MACHINED MATERIAL	HARDNESS Brinell	SPEED N/mm2	SPEED m/min	FEED RATE FOR DIAMETER (MM)							
				3	5	6	8	10	12	16	20
<b>DRILLING – COPPER</b>											
Free Cutting	<250	861	12-22	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28
Austenitic	<250	861	10-15	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28
Martensitic, Ferritic	>300	971	12-18	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21
<b>DRILLING – TITANIUM</b>											
Pure, Unalloyed	<200	758	20-32	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21
Titanium Alloys	>300	971	06-12	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21
<b>DRILLING – NICKEL</b>											
Pure, Unalloyed	<300	971	10-15	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28

**METRIC  
STUB DRILLS**  
**DIN1897**



**Multi Faceted Point**  
The multi faceted point was specifically developed to enable higher load carrying capacity and to enhance feed rates during the machining of difficult materials such as stainless steel.

### DRILL BIT SURFACE TREATMENT

**VIOLET / GREY  
- TiAIN**  
(Titanium Aluminium Nitride – TiAIN)  
A violet/grey finish with a higher hardness than both TiN and TiCN coating utilises aluminium in the coating which imparts greater oxidation stability. This stability is a result of a very thin film (of Aluminium Oxide) which is formed on the surface of the TiAIN. This film is self repairing which leads to increased tool service life. This high performance coating is able to withstand much higher temperatures which allows increased speeds and feeds and semi-dry machining operations. *TiAIN coating is especially useful when machining cast iron and tough steels.*



GROUP	CBBJ
SURFACE FINISH	VIOLET / GREY
MATERIAL	HSS-Co TiAlN COATED
POINT TYPE	130° UX
FLUTE TYPE	33° HELIX PARABOLIC
THREAD	—
PACKAGING	SNAP PACK

CBDP	CBDP
VIOLET / GREY	VIOLET / GREY
HSSE-EV TiAlN COATED	HSSE-EV TiAlN COATED
SPIRAL POINT	SPIRAL FLUTE
STRAIGHT	SPIRAL 15° HELIX
METRIC COARSE	METRIC COARSE
SNAP/TELEPACK	SNAP/TELEPACK

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	SIZE X PITCH MM	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
2.00	24	49	1	11.40	2052-2.00					
2.50	30	57	1	11.40	2052-2.50	M3.00 x 0.5	35.48	3152-3.00	37.34	3252-3.00
3.00	33	61	1	13.16	2052-3.00					
3.20	36	65	1	14.38	2052-3.20					
3.30	36	65	1	14.38	2052-3.30	M4.00 x 0.7	38.66	3152-4.00	39.63	3252-4.00
3.50	39	70	1	15.33	2052-3.50					
3.70	39	70	1	16.40	2052-3.70					
4.00	43	75	1	17.08	2052-4.00					
4.10	43	75	1	18.02	2052-4.10					
4.20	43	75	1	18.15	2052-4.20	M5.00 x 0.8	43.63	3152-5.00	46.34	3252-5.00
4.50	47	80	1	18.97	2052-4.50					
5.00	52	86	1	21.55	2052-5.00	M6.00 x 1.0	45.71	3152-6.00	48.99	3252-6.00
5.50	57	93	1	25.48	2052-5.50					
6.00	57	93	1	27.25	2052-6.00					
6.50	63	101	1	30.36	2052-6.50					
6.80	69	109	1	34.96	2052-6.80	M8.00 x 1.25	58.35	3152-8.00	60.93	3252-8.00
7.00	69	109	1	34.96	2052-7.00					
7.50	69	109	1	38.77	2052-7.50					
8.00	75	117	1	41.05	2052-8.00					
8.50	75	117	1	43.91	2052-8.50	M10.00 x 1.5	77.86	3152-10.00	79.19	3252-10.00
9.00	81	125	1	47.95	2052-9.00					
9.50	81	125	1	51.90	2052-9.50					
10.00	87	133	1	55.69	2052-10.00					
10.20	87	133	1	61.12	2052-10.20	M12.00 x 1.75	110.57	3152-12.00	113.89	3252-12.00
10.50	87	133	1	63.42	2052-10.50					
11.00	94	142	1	68.59	2052-11.00					
12.00	101	151	1	77.77	2052-12.00	M14.00 x 2.0	132.76	3152-14.00	136.71	3252-14.00
13.00	101	151	1	89.16	2052-13.00					



#### UX Point

The notched UX point provides self centering, easier penetration, improved hole accuracy and improved load distribution. The special notch geometry gives a corrected rake angle of 15° which provides a strong point for harder materials, as well as preventing snatching with materials such as Aluminium, Brass, Bronze and Plastics.

#### DRILL BIT SURFACE TREATMENT

**VIOLET / GREY**  
(Titanium Aluminium Nitride – TiAlN)  
A violet/grey finish with a higher hardness than both TiN and TiCN coating utilises aluminium in the coating which imparts greater oxidation stability. This stability is a result of a very thin film (of Aluminium Oxide) which is formed on the surface of the TiAlN. This film is self repairing which leads to increased tool service life. This high performance coating is able to withstand much higher temperatures which allows increased speeds and feeds and semi-dry machining operations.  
**TiAlN coating is especially useful when machining cast iron and tough steels.**

#### TOUGH TREATABLE STEEL RED BAND

The mechanical properties of materials are influenced diversely by the addition of alloying elements and heat treatment processes, resulting in some high-strength, quenched and tempered steels or hardened steels. This range has its own unique set of machining requirements which are satisfied by the Red Band Series.

TiAlN coating increases tool surface hardness to 87Rc. For machining materials with Hardness <470 HB : Tensile Strength <1500 N/mm2

for the complete range of **Colour Band Taps** see **Page 140**

MACHINED MATERIAL	HARDNESS Brinell	SPEED N/mm2	FEED RATE FOR DIAMETER (MM)	3	5	6	8	10	12	16	20
<b>DRILLING – COPPER</b>											
High Tensile Bronze	<350	1144	15-28	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21
<b>DRILLING – CARBON ALLOY STEELS</b>											
Low Alloy Steel	>250	861	25-30	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21
Alloyed, Heat Treated	>300	971	15-20	0.04	0.06	0.06	0.07	0.10	0.11	0.13	0.16
Alloyed, Heat Treated	>350	1144	10-15	0.04	0.06	0.06	0.07	0.10	0.11	0.13	0.16
<b>DRILLING – NICKEL</b>											
Nimonic 75	>300	971	06-10	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21
Iconel 718 Alloy	<350	1144	04-08	0.04	0.06	0.06	0.07	0.10	0.11	0.13	0.16



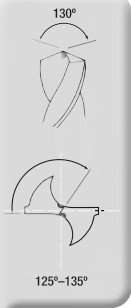


GROUP	CBJB
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	130° WEB THINNED
FLUTE TYPE	35° HELIX
THREAD	—
PACKAGING	SNAP PACK

CBTP	CBTP	CBTP
BRIGHT	BRIGHT	BRIGHT
HSSE-EV	HSSE-EV	HSSE-EV
SPIRAL POINT	SPIRAL FLUTE	ROLL FORM
STRAIGHT	SPIRAL 40° HELIX	FLUTELESS
METRIC COARSE	METRIC COARSE	METRIC COARSE
SNAP/TELEPACK	SNAP/TELEPACK	SNAP/TELEPACK



DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	SIZE X PITCH MM	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
2.00	24	49	1	4.98	2054-2.00							
2.50	30	57	1	5.20	2054-2.50	M3.00 x 0.5	16.36	3154-3.00	21.29	3254-3.00	39.39	3255-3.00
3.00	33	61	1	5.70	2054-3.00							
3.20	36	65	1	6.74	2054-3.20							
3.30	36	65	1	6.89	2054-3.30	M4.00 x 0.7	17.79	3154-4.00	20.91	3254-4.00	40.09	3255-4.00
3.50	39	70	1	7.06	2054-3.50							
3.70	39	70	1	7.06	2054-3.70							
4.00	43	75	1	7.06	2054-4.00							
4.10	43	75	1	7.79	2054-4.10							
4.20	43	75	1	8.26	2054-4.20	M5.00 x 0.8	17.70	3154-5.00	21.85	3254-5.00	42.09	3255-5.00
4.50	47	80	1	8.67	2054-4.50							
4.80	52	86	1	9.46	2054-4.80							
5.00	52	86	1	9.64	2054-5.00	M6.00 x 1.0	18.55	3154-6.00	21.65	3254-6.00	43.53	3255-6.00
5.50	57	93	1	10.02	2054-5.50							
6.00	57	93	1	11.71	2054-6.00							
6.50	63	101	1	12.28	2054-6.50							
6.80	69	109	1	13.32	2054-6.80	M8.00 x 1.25	23.67	3154-8.00	26.83	3254-8.00	47.21	3255-8.00
7.00	69	109	1	15.14	2054-7.00							
7.50	69	109	1	17.96	2054-7.50							
7.80	75	117	1	18.85	2054-7.80							
8.00	75	117	1	19.16	2054-8.00							
8.50	75	117	1	21.88	2054-8.50	M10.00 x 1.5	31.61	3154-10.00	37.84	3254-10.00	67.17	3255-10.00
9.00	81	125	1	24.70	2054-9.00							
9.50	81	125	1	26.21	2054-9.50							
10.00	87	133	1	28.01	2054-10.00							
10.20	87	133	1	28.32	2054-10.20	M12.00 x 1.75	56.86	3154-12.00	65.07	3254-12.00		
10.50	87	133	1	32.62	2054-10.50							
11.00	94	142	1	33.36	2054-11.00							
12.00	101	151	1	39.05	2054-12.00	M14.00 x 2.0	68.28	3154-14.00	78.12	3254-14.00		
13.00	101	151	1	48.66	2054-13.00							

 METRIC  
 JOBBER DRILLS  
 DIN338

**130° Thinned**  
 The thinned point reduces end thrust and optimizes centre cutting efficiency with chisel strength.

**DRILL BIT  
SURFACE  
TREATMENT**
**BRIGHT FINISH**  
 A bright finish tool has no surface treatment and is supplied in the as-ground condition. These tools are suitable for general purpose use, particularly for non-ferrous applications.

 for the complete range of **Colour Band Taps** see **Page 140**
**ALUMINIUM YELLOW BAND**

The alloying elements which are used to create the myriad of Aluminium Alloys have an effect on the machining properties of the resulting materials. This generally creates a difficult long chip form, which tends to stick to the tool, placing a unique set of demands on tooling. Yellow Band Series contends with these difficulties.

 For machining materials with Hardness <200 HB :  
 Tensile Strength <700 N/mm2

MACHINED MATERIAL	HARDNESS Brinell	SPEED N/mm2	FEED RATE FOR DIAMETER (MM)	3	5	6	8	10	12	16	20
<b>DRILLING – ALUMINIUM ALLOYS</b>											
Wrought & Extruded	<150	541	50-60	0.12	0.15	0.17	0.22	0.26	0.28	0.32	0.36
Wrought & Treated	>150	541	35-50	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28
Cast, Low Si <5%	<150	541	30-40	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28
Cast, High Si >10%	>150	541	23-35	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28
<b>DRILLING – COPPER</b>											
Pure <100	—	35-55	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21	0.21
Brass, Soft	<200	717	40-50	0.15	0.19	0.21	0.28	0.33	0.35	0.40	0.45
Brass, Bronze	>200	717	35-45	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28


**METRIC**  
**JOBBER DRILLS**  
**DIN338**

**Split Point**

The 130° Split Point provides self centering and easier penetration. The 33° helix open profile flute design has reinforced web for high rigidity under extreme conditions.

**DRILL BIT**  
**SURFACE**  
**TREATMENT**
**GOLD FINISH (TiN)**

(Titanium Nitride)  
A very hard gold coloured surface finish a few microns thick is achieved by Physical Vapour Deposition (PVD). As with all surface coated tools, performance will deteriorate after resharpening. *The coating helps to dissipate heat and reduces friction and cold welding. Higher speed and feed rates can be achieved and tool life is greatly increased.*

GROUP	CBJB
SURFACE FINISH	GOLD COLOURED
MATERIAL	HSS-CO TIN COATED
POINT TYPE	130° SPLIT POINT
FLUTE TYPE	33° HELIX
THREAD	—
PACKAGING	SNAP PACK

CBTP	CBTP
GOLD COLOURED	GOLD COLOURED
HSSE-EV TIN COATED	HSSE-EV TIN COATED
SPIRAL POINT	SPIRAL FLUTE
STRAIGHT	SPIRAL 35° HELIX
METRIC COARSE	METRIC COARSE
SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK



DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	SIZE X PITCH MM	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
2.00	24	49	1	7.27	2056-2.00					
2.50	30	57	1	7.43	2056-2.50	M3.00 x 0.5	31.61	3156-3.00	44.21	3256-3.00
3.00	33	61	1	7.88	2056-3.00					
3.20	36	65	1	7.88	2056-3.20					
3.30	36	65	1	7.88	2056-3.30	M4.00 x 0.7	35.97	3156-4.00	49.27	3256-4.00
3.50	39	70	1	8.78	2056-3.50					
3.70	39	70	1	9.56	2056-3.70					
4.00	43	75	1	9.56	2056-4.00					
4.10	43	75	1	10.20	2056-4.10					
4.20	43	75	1	10.20	2056-4.20	M5.00 x 0.8	40.30	3156-5.00	55.90	3256-5.00
4.50	47	80	1	10.47	2056-4.50					
4.80	52	86	1	11.24	2056-4.80					
5.00	52	86	1	11.24	2056-5.00	M6.00 x 1.0	45.73	3156-6.00	62.72	3256-6.00
5.50	57	93	1	13.54	2056-5.50					
6.00	57	93	1	14.35	2056-6.00					
6.50	63	101	1	16.22	2056-6.50					
6.80	69	109	1	18.27	2056-6.80	M8.00 x 1.25	48.88	3156-8.00	66.09	3256-8.00
7.00	69	109	1	18.27	2056-7.00					
7.50	69	109	1	20.05	2056-7.50					
7.80	75	117	1	21.37	2056-7.80					
8.00	75	117	1	21.37	2056-8.00					
8.50	75	117	1	23.86	2056-8.50	M10.00 x 1.5	57.19	3156-10.00	88.57	3256-10.00
9.00	81	125	1	25.79	2056-9.00					
9.50	81	125	1	28.13	2056-9.50					
10.00	87	133	1	30.42	2056-10.00					
10.20	87	133	1	32.73	2056-10.20	M12.00 x 1.75	111.36	3156-12.00	114.50	3256-12.00
10.50	87	133	1	33.85	2056-10.50					
11.00	94	142	1	36.10	2056-11.00					
12.00	101	151	1	41.10	2056-12.00	M14.00 x 2.0	129.98	3156-14.00	130.62	3256-14.00
13.00	101	151	1	51.29	2056-13.00					

for the complete range of **Colour Band Taps** see **Page 140**

**CARBON STEEL GREEN BAND**

The machinability of different carbon steels is as varied as their properties. Soft-tough construction steels place a unique set of demands on the tools. The Green Band Series of drills and taps have been developed specifically for this range of steels.

TiN coating increases tool surface hardness to 85Rc. For machining materials with Hardness <250 HB : Tensile Strength <900 N/mm2

MACHINED MATERIAL	HARDNESS Brinell	SPEED N/mm2	FEED RATE FOR DIAMETER (MM)	3	5	6	8	10	12	16	20
Free Cutting Mild Steel	<120	420	40-50	0.12	0.15	0.17	0.22	0.26	0.28	0.32	0.36
Low Carbon Steel	<200	758	30-40	0.08	0.11	0.12	0.16	0.19	0.20	0.24	0.28
Medium Carbon Steel	<250	861	25-35	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21

To convert Surface Metres Per Minute to RPM : RPM = (surface m/min x 318.5) ÷ D  
where "D" is outside diameter of drill expressed in millimeters



GROUP	CBJB
SURFACE FINISH	VIOLET / GREY
MATERIAL	HSS-CO TiAIN COATED
POINT TYPE	118° / 70° DX
FLUTE TYPE	33° HELIX
THREAD	—
PACKAGING	<b>SNAP PACK</b>

CBTP
VIOLET / GREY
HSSE-EV TiAIN COATED
SPIRAL FLUTE
SPIRAL 15° HELIX
METRIC COARSE
<b>SNAP/TELESCOPIC PACK</b>



DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	SIZE X PITCH MM	\$ EACH	PART NUMBER
4.00	43	75	1	<b>9.56</b>	2058-4.00			
4.20	43	75	1	<b>10.20</b>	2058-4.20	M5.00 x 0.8	<b>51.68</b>	3258-5.00
4.50	47	80	1	<b>10.47</b>	2058-4.50			
5.00	52	86	1	<b>11.24</b>	2058-5.00	M6.00 x 1.0	<b>59.86</b>	3258-6.00
5.50	57	93	1	<b>13.54</b>	2058-5.50			
6.00	57	93	1	<b>14.35</b>	2058-6.00			
6.50	63	101	1	<b>16.22</b>	2058-6.50			
6.80	69	109	1	<b>18.27</b>	2058-6.80	M8.00 x 1.25	<b>74.47</b>	3258-8.00
7.00	69	109	1	<b>18.27</b>	2058-7.00			
7.50	69	109	1	<b>20.05</b>	2058-7.50			
8.00	75	117	1	<b>21.37</b>	2058-8.00			
8.50	75	117	1	<b>23.86</b>	2058-8.50	M10.00 x 1.5	<b>91.84</b>	3258-10.00
9.00	81	125	1	<b>25.79</b>	2058-9.00			
9.50	81	125	1	<b>28.13</b>	2058-9.50			
10.00	87	133	1	<b>30.42</b>	2058-10.00			
10.20	87	133	1	<b>32.73</b>	2058-10.20	M12.00 x 1.75	<b>131.14</b>	3258-12.00
10.50	87	133	1	<b>33.85</b>	2058-10.50			
11.00	94	142	1	<b>36.10</b>	2058-11.00			
12.00	101	151	1	<b>41.10</b>	2058-12.00	M14.00 x 2.0	<b>151.29</b>	3258-14.00

for the complete range of **Colour Band Taps** see **Page 140**

### CAST IRON WHITE BAND

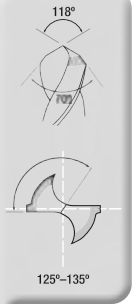
A highly abrasive material with damping and thermal conductivity, high strength and resistance to wear. Cast Iron is used extensively for mass produced components. The White Band Series is designed for this specific purpose.

TiAIN coating increases tool surface hardness to 87Rc. For machining materials with Hardness <300 HB : Tensile Strength <1000 N/mm2

MACHINED MATERIAL	HARDNESS Brinell	SPEED N/mm2	SPEED m/min	FEED RATE FOR DIAMETER (MM)							
				3	5	6	8	10	12	16	20
<b>DRILLING – CAST IRON</b>											
Plain Grey Irons	<150	541	35-45	0.12	0.15	0.17	0.22	0.26	0.28	0.32	0.36
Plain SG Iron	<250	861	23-35	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21
Alloy SG Iron Nickel	>250	861	15-28	0.06	0.08	0.09	0.12	0.14	0.15	0.16	0.21

To convert Surface Metres Per Minute to RPM : RPM = (surface m/min x 318.5) ÷ D  
where "D" is outside diameter of drill expressed in millimeters

**METRIC**  
**JOBBER DRILLS**  
**DIN338**



### DX Point

The double angled DX Point (118°/70°) minimises wear on the outer corners of the drill point in highly abrasive materials such as Cast Iron and Reinforced Plastics. The point is web thinned to enable easier penetration.

### DRILL BIT SURFACE TREATMENT

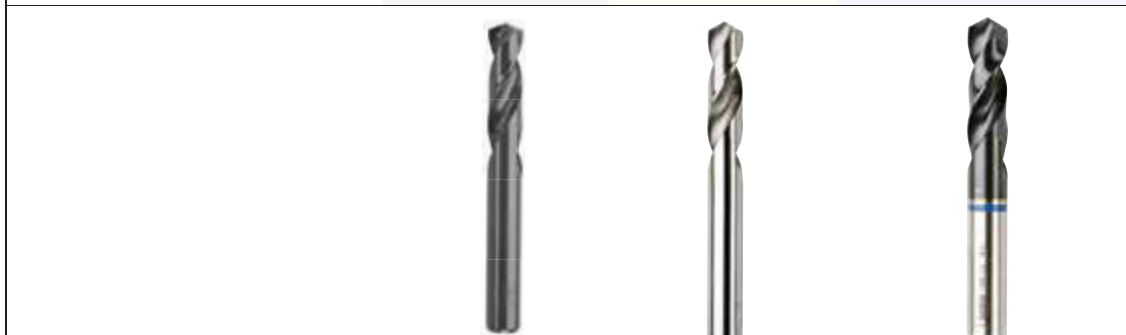
#### VIOLET / GREY (Titanium Aluminium Nitride – TiAIN)

A violet/grey finish with a higher hardness than both TiN and TiCN coating utilises aluminium in the coating which imparts greater oxidation stability. This stability is a result of a very thin film (of Aluminium Oxide) which is formed on the surface of the TiAIN. This film is self repairing which leads to increased tool service life. This high performance coating is able to withstand much higher temperatures which allows increased speeds and feeds and semi-dry machining operations. *TiAIN coating is especially useful when machining cast iron and tough steels.*

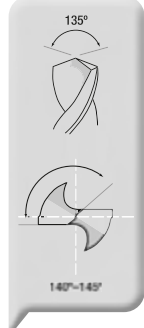




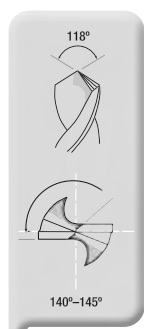
GROUP	STUB	STUB	CBJB
SURFACE FINISH	BLACK	BRIGHT	VIOLET / GREY
MATERIAL	HSS	HSS	HSS-Co TiAIN COATED
POINT TYPE	135° SPLIT POINT	135° SPLIT POINT	MULTI FACETED POINT
FLUTE TYPE	30° HELIX	30° HELIX	35° HELIX
PACKAGING	BULK	BULK	SNAP PACK



DIA MM	DIA GAUGE	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	PACK QTY	\$ EACH	PART NUMBER
1.00	—	6	26	10	4.36	2021-1.00					
1.50	—	9	32	10	3.90	2021-1.50					
2.00	—	12	38	10	3.54	2021-2.00			1	23.85	2051-2.00
2.50	—	14	43	10	3.54	2021-2.50			1	24.10	2051-2.50
3.00	—	16	46	10	3.36	2021-3.00			1	24.76	2051-3.00
3.26	30	24	49	10			3.37	2034-30			
3.30	—	18	49	—					1	25.63	2051-3.30
3.50	—	20	52	10	3.68	2021-3.50			1	26.04	2051-3.50
3.70	—	20	52	10					1	26.43	2051-3.70
4.00	—	22	55	10	4.28	2021-4.00			1	27.32	2051-4.00
4.09	20	27	54	10			4.36	2034-20			
4.20	—	22	55	—					1	27.71	2051-4.20
4.50	—	24	58	10	4.70	2021-4.50			1	27.82	2051-4.50
4.85	11	30	57	10			6.43	2034-11			
5.00	—	26	62	10	5.56	2021-5.00			1	29.03	2051-5.00
5.50	—	28	66	10	6.41	2021-5.50			1	30.89	2051-5.50
6.00	—	28	66	10	7.32	2021-6.00			1	35.68	2051-6.00
6.50	—	31	70	10	8.16	2021-6.50			1	39.35	2051-6.50
6.80	—	34	74	—					1	40.74	2051-6.80
7.00	—	34	74	10	9.51	2021-7.00			1	41.24	2051-7.00
7.50	—	34	74	10	10.80	2021-7.50			1	42.63	2051-7.50
7.80	—	37	79	—					1	42.83	2051-7.80
8.00	—	37	79	5	11.71	2021-8.00			1	43.73	2051-8.00
8.50	—	37	79	5	13.19	2021-8.50			1	48.29	2051-8.50
9.00	—	40	84	5	14.52	2021-9.00			1	49.98	2051-9.00
9.50	—	40	84	5	16.06	2021-9.50			1	52.26	2051-9.50
10.00	—	43	89	5	17.25	2021-10.00			1	54.34	2051-10.00
10.20	—	43	89	—					1	56.92	2051-10.20
10.50	—	43	89	5	19.52	2021-10.50					
11.00	—	47	95	5	22.51	2021-11.00			1	61.33	2051-11.00
11.50	—	47	95	5	25.35	2021-11.50					
12.00	—	51	102	5	28.68	2021-12.00			1	66.09	2051-12.00
12.50	—	51	102	5	31.59	2021-12.50					
13.00	—	51	102	5	33.90	2021-13.00			1	76.81	2051-13.00



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.



**Multi Faceted Point**  
The multi faceted point was specifically developed to enable higher load carrying capacity and to enhance feed rates during the machining of difficult materials such as stainless steel.



GROUP	STUB
SURFACE FINISH	BLACK
MATERIAL	HSS
POINT TYPE	135° SPLIT POINT
FLUTE TYPE	30° HELIX
PACKAGING	BULK



DIA INCH	DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
1/16	1.59	16	41	10	3.83	2020-1/16
5/64	1.98	18	43	10	3.54	2020-5/64
3/32	2.38	19	44	10	3.54	2020-3/32
7/64	2.78	21	46	10	3.22	2020-7/64
1/8	3.17	22	48	10	3.36	2020-1/8
9/64	3.57	24	49	10	3.83	2020-9/64
5/32	3.97	25	52	10	4.13	2020-5/32
11/64	4.37	27	54	10	4.70	2020-11/64
3/16	4.76	29	56	10	5.16	2020-3/16
13/64	5.16	30	57	10	5.82	2020-13/64
7/32	5.56	32	60	10	6.41	2020-7/32
15/64	5.95	33	62	10	7.02	2020-15/64
1/4	6.35	35	64	10	7.90	2020-1/4
17/64	6.75	37	67	10	8.92	2020-17/64
9/32	7.14	38	68	10	9.94	2020-9/32
19/64	7.54	40	70	5	10.80	2020-19/64
5/16	7.94	41	71	5	11.71	2020-5/16
21/64	8.33	43	75	5	12.58	2020-21/64
11/32	8.73	43	75	5	13.93	2020-11/32
23/64	9.13	44	78	5	15.09	2020-23/64
3/8	9.52	46	79	5	16.06	2020-3/8
25/64	9.92	48	83	5	17.13	2020-25/64
13/32	10.32	49	84	5	19.17	2020-13/32
27/64	10.72	51	86	5	21.21	2020-27/64
7/16	11.11	52	87	5	23.00	2020-7/16
29/64	11.51	54	90	5	25.43	2020-29/64
15/32	11.91	54	92	5	28.41	2020-15/32
31/64	12.30	56	94	5	30.15	2020-31/64
1/2	12.70	57	95	5	31.59	2020-1/2

**FRACTIONAL  
STUB DRILLS**

**DIN1897**

**DRILL BIT  
SURFACE  
TREATMENT**

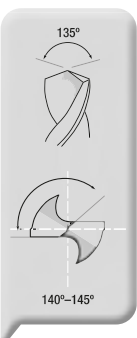
**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*

**BLACK FINISH**  
(also called blue finish)  
A black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface helps to keep lubricant on the tool, particularly important on the cutting edges, thus reducing friction and cold welding. The result is increased tool life. *Black finish tools are generally recommended for ferrous applications where the oxide layer aids chip flow and heat dissipation.*

**VIOLET / GREY**  
(Titanium Aluminium Nitride – TiAlN)  
A violet/grey finish with a higher hardness than both TiN and TiCN coating utilises aluminium in the coating which imparts greater oxidation stability. This stability is a result of a very thin film (of Aluminium Oxide) which is formed on the surface of the TiAlN. This film is self repairing which leads to increased tool service life. This high performance coating is able to withstand much higher temperatures which allows increased speeds and feeds and semi-dry machining operations. *TiAlN coating is especially useful when machining cast iron and tough steels.*

# DRILLS PANEL (RIVET)

BULK & CLAM  
MERCHANDISER



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust.  
The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

## USAGE

**PANEL DRILLS**  
Panel drills are principally used during sheet metal fabrication to drill holes for rivets. They are designed to drill shallow holes that do not exceed 1.25 x drill diameter. When using double ended panel drills ensure the drill chuck jaws are tight to prevent damage to the back of the chuck.



GROUP						PANL		PANL		PANL		PANL	
SURFACE FINISH						BRIGHT		BRIGHT		BLACK		BLACK	
MATERIAL						HSS		HSS		HSS		HSS	
POINT TYPE						135° SPLIT POINT		135° SPLIT POINT		135° SPLIT POINT		135° SPLIT POINT	
END TYPE						SINGLE ENDED		DOUBLE ENDED		SINGLE ENDED		DOUBLE ENDED	
PACKAGING						BULK (10)		BULK (10)		BULK (10)		BULK (10)	
DIA GAUGE	DIA MM / INCH	RIVET DIA.	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
—	1/8"	3mm	14	51	10			4.97	2345-1/8			4.97	2343-1/8
30	3.26mm	1/8"	14	51	10	3.19	2346-30	4.97	2345-30	3.19	2344-30	4.97	2343-30
20	4.09mm	5/32"	14	55	10	3.87	2346-20	6.06	2345-20	3.87	2344-20	6.06	2343-20
11	4.85mm	3/16"	17	62	10	4.66	2346-11	7.25	2345-11	4.66	2344-11	7.25	2343-11



GROUP						PANL		PANL		PANL	
SURFACE FINISH						BRIGHT		BRIGHT		BRIGHT	
MATERIAL						HSS		HSS		HSS	
POINT TYPE						135° SPLIT POINT		135° SPLIT POINT		135° SPLIT POINT	
END TYPE						SINGLE ENDED		DOUBLE ENDED		DOUBLE ENDED	
PACKAGING						CLAM SHELL OF 2		CLAM SHELL OF 2		CLAM SHELL OF 10	
DIA GAUGE	DIA MM / INCH	RIVET DIA.	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
—	1/8"	3mm	14	51	10			10.90	2345-1/8S	49.78	2345-1/8T
30	3.26mm	1/8"	14	51	10	7.25	2346-30S	10.90	2345-30S	49.78	2345-30T
20	4.09mm	5/32"	14	55	10	8.97	2346-20S	13.88	2345-20S	60.88	2345-20T
11	4.85mm	3/16"	17	62	10	9.56	2346-11S	15.65	2345-11S	72.57	2345-11T



MERCHANDISER TYPE				\$ MERCHANDISER		PART NUMBER	
PANEL DRILLS DOUBLE ENDED BRIGHT				345.02		2345-D1	
MERCHANDISER CONTENTS				QTY CLAMS	SIZE GAUGE	PART NUMBER	
				1	1/8	2345-1/8T	1 1/8 2345-1/8S
				2	30	2345-30T	2 30 2345-30S
				1	20	2345-20T	1 20 2345-20S
				1	11	2345-11T	1 11 2345-11S

**IMPACT DRIVER**  
**HEX SHANK**  
**PANEL DRILLS**  
**PAGE 80**





BULK



GROUP	CENT
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE / ANGLE	118° / 60°
PACKAGING	BULK

EQUIV NO.	BODY DIA. INCH	PILOT DIA. INCH	PL INCH	OAL INCH	PACK QTY	\$ EACH	PART NUMBER
1	1/8	3/64	3/64	1-1/4	1	12.30	2560-1
2	3/16	5/64	5/64	1-7/8	1	12.90	2560-2
3	1/4	7/64	7/64	2	1	14.20	2560-3
4	5/16	1/8	1/8	2-1/8	1	17.13	2560-4
5	7/16	3/16	3/16	2-3/4	1	27.79	2560-5
6	1/2	7/32	7/32	3	1	51.82	2560-6
7	5/8	1/4	1/4	3-1/4	1	78.66	2560-7
8	3/4	5/16	5/16	3-1/2	1	106.60	2560-8



SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
CENTRE DRILL SET	5	84.32	2560-S1
2560-1, 2560-2, 2560-3, 2560-4, 2560-5			



GROUP	SPOT
SURFACE FINISH	VIOLET / GREY
MATERIAL	HSS-Co5 TiAIN COATED
POINT TYPE	90°
PACKAGING	BULK

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
6.00	20	66	1	13.59	2570-6
8.00	25	79	1	15.84	2570-8
10.00	32	90	1	22.02	2570-10
12.00	30	102	1	35.62	2570-12
16.00	35	115	1	69.57	2570-16
20.00	37	130	1	129.44	2570-20

**CENTRE DRILLS**  
ANSI  
B94-11

#### USAGE

##### CENTRE DRILLS

Centre Drills are used with a lathe to centre drill stock for mounting in the lathe. They are designed to drill a small diameter pilot hole followed by a 60° countersink which provides a bearing surface for the 60° point of the lathe centre. Centre drills are also used extensively with milling machines to accurately start holes. The hole locations can be dialled in using the milling machine's calibrated handwheels. The hole is then started using the centre drill. The large diameter shank on the centre drill holds the drill point right on centre. Once the hole is started, the centre drill is replaced with a drill of the desired diameter and the finished hole is then drilled.

**NEW PRODUCT**

#### USAGE

##### SPOTTING DRILLS

Spotting Drills have practically no flutes and are designed to be extremely rigid. They are used to create precise spot holes by making a small indentation in the workpiece that prevents the twist drill from wandering.

## DRILLS SPOT WELD

METRIC

BULK

### SPOT WELD DRILLS

These drills are designed for removing spot welds and are especially useful for vehicle body repairs. The drills are designed to cut through existing spot welds, releasing damaged panels and enabling replacements to be fitted with minimum fuss. The HSS-Co5 material ensures a long bit life.



GROUP				SWDB	
SURFACE FINISH				BRIGHT	
MATERIAL				HSS-Co5	
PACKAGING				BULK	
DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
6.00	28	66	1	40.31	2555-6X66
8.00	15	38	1	38.37	2555-8X38
8.00	15	45	1	42.23	2555-8X45
8.00	37	79	1	46.46	2555-8X79

### TUNGSTEN CARBIDE TiAlN COATED SPOT WELD DRILL

These milling drills are designed for removing spot welds with pneumatic tools. They are designed for maximum performance and tool life when used on the hard welds featured in many modern vehicles. The combination of solid carbide and TiAlN coating allows them to cut very hard metal sheets up to 1500N/mm<sup>2</sup> tensile strength.



GROUP				SWDB	
SURFACE FINISH				VIOLET / GREY	
COATING				TiAlN	
MATERIAL				SOLID TUNGSTEN CARBIDE	
PACKAGING				BULK	
DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
8.00	15	45	1	247.87	2556-8X45



GROUP	GLDB
SURFACE FINISH	SHOT PEENED SHANK
POINT TYPE	TUNGSTEN CARBIDE TIPPED
POINT FORM	SPEAR
PACKAGING	CLAM SHELL



DIA INCH	DIA MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
1/8	3	63.5	1	14.12	2550-1/8
5/32	4	63.5	1	12.02	2550-5/32
3/16	5	63.5	1	12.74	2550-3/16
1/4	6	63.5	1	14.66	2550-1/4
5/16	8	70.0	1	17.75	2550-5/16
3/8	9.5	70.0	1	23.67	2550-3/8
1/2	12.5	76.0	1	36.42	2550-1/2

**TUNGSTEN  
CARBIDE  
SPEAR POINT  
DRILLS**

These drills are designed for drilling glass, tile and other hard, brittle materials. The tungsten carbide spear point is extremely hard and features uniquely sharpened edges for fast penetration with a reduced need for end thrust. These drill bits cut clean round holes without chipping or material breakage, and work best with a lubricant such as water to extend bit life.

*When drilling multiple holes in ceramic tiles, or when drilling vitrified porcelain, we recommend using either Bordo ceramic tile drills, the Bordo mist drill product range or Brilliant Diamond core drills.*

**DRILL BIT  
MATERIAL**

**TUNGSTEN  
CARBIDE**

(Commonly referred to as Carbide)  
Is a chemical compound containing equal parts of tungsten and carbon atoms. Carbide is three times stiffer than steel and is much denser than either steel or titanium. Carbide has a very high abrasion resistance and can also withstand higher temperatures than standard HSS. Carbide tools are often used for machining hard materials such as ceramics and stainless steel, as well as in situations where other tools would wear away, such as high volume production runs. Because carbide tools maintain a sharp cutting edge better than other tools, they generally produce a better finish on parts, and their temperature resistance allows faster machining. Whilst tungsten carbide is extremely hard it is also brittle so it is important to avoid bit "chattering" as this is the most common cause of tool failure.



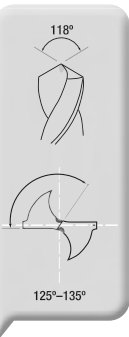
MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
GLASS & TILE DRILL	818.95	2550-D1

MERCHANDISER CONTENTS	QTY CLAMS	SIZE INCH	PART NUMBER
	5	1/8	2550-1/8
	5	5/32	2550-5/32
	5	3/16	2550-3/16
	10	1/4	2550-1/4
	10	5/16	2550-5/16
	5	3/8	2550-3/8
	5	1/2	2550-1/2





**MORSE  
TAPER DRILLS**  
**DIN345**



**Notched Point**  
A variation on standard chisel point providing faster starting and reduced drill wander. Suitable for general purpose drilling.

**DRILL BIT  
SURFACE  
TREATMENT**

**BLACK FINISH**  
(also called blue finish)  
A black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface helps to keep lubricant on the tool, particularly important on the cutting edges, thus reducing friction and cold welding. The result is increased tool life.  
*Black finish tools are generally recommended for ferrous applications where the oxide layer aids chip flow and heat dissipation.*

GROUP	MTSD
SURFACE FINISH	BLACK/BRIGHT
MATERIAL	HSS
POINT TYPE	118° NOTCHED†
FLUTE TYPE	30° HELIX
PACKAGING	SINGLE

DIA MM	MTS NO.	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
<b>MTS 1</b>						
5.00	1	52	133	1	37.07	2608-5.00
6.00	1	57	138	1	40.59	2608-6.00
7.00	1	69	150	1	41.56	2608-7.00
8.00	1	75	156	1	45.27	2608-8.00
9.00	1	81	162	1	47.01	2608-9.00
10.00	1	87	168	1	48.31	2608-10.00
10.50	1	87	168	1	47.85	2608-10.50
10.75*	1	94	175	1	47.85	2608-10.75
11.00	1	94	175	1	47.85	2608-11.00
11.25*	1	94	175	1	49.16	2608-11.25
11.50	1	94	175	1	49.16	2608-11.50
11.75*	1	101	182	1	52.56	2608-11.75
12.00	1	101	182	1	52.56	2608-12.00
12.50	1	101	182	1	54.84	2608-12.50
13.00	1	101	182	1	62.74	2608-13.00
13.50	1	108	189	1	63.89	2608-13.50
14.00	1	108	189	1	63.89	2608-14.00
<b>MTS 2</b>						
14.50	2	114	212	1	71.80	2608-14.50
15.00	2	114	212	1	71.80	2608-15.00
15.50	2	120	218	1	76.90	2608-15.50
16.00	2	120	218	1	76.90	2608-16.00
16.50	2	125	223	1	82.54	2608-16.50
17.00	2	125	223	1	82.54	2608-17.00
17.50	2	130	228	1	91.02	2608-17.50
18.00	2	130	228	1	91.02	2608-18.00
18.50	2	135	233	1	97.80	2608-18.50
19.00	2	135	233	1	97.80	2608-19.00
19.25*	2	140	238	1	103.34	2608-19.25
19.50	2	140	238	1	103.34	2608-19.50
20.00	2	140	238	1	103.34	2608-20.00
20.50	2	145	243	1	117.60	2608-20.50
21.00	2	145	243	1	117.60	2608-21.00
21.50	2	150	248	1	131.16	2608-21.50
22.00	2	150	248	1	131.16	2608-22.00
22.50	2	155	253	1	135.67	2608-22.50
23.00	2	155	253	1	138.91	2608-23.00
<b>MTS 3</b>						
23.50	3	155	276	1	161.69	2608-23.50
24.00	3	160	281	1	161.69	2608-24.00
24.50	3	160	281	1	166.21	2608-24.50
25.00	3	160	281	1	166.21	2608-25.00
25.50	3	165	286	1	176.39	2608-25.50
26.00	3	165	286	1	176.39	2608-26.00
26.50	3	165	286	1	206.91	2608-26.50
27.00	3	170	291	1	206.91	2608-27.00
27.25*	3	170	291	1	229.30	2608-27.25
27.50	3	170	291	1	229.30	2608-27.50
28.00	3	170	291	1	234.05	2608-28.00
28.50	3	175	296	1	234.05	2608-28.50
29.00	3	175	296	1	249.27	2608-29.00
29.25*	3	175	296	1	250.91	2608-29.25

GROUP	MTSD
SURFACE FINISH	BLACK/BRIGHT
MATERIAL	HSS
POINT TYPE	118° NOTCHED†
FLUTE TYPE	30° HELIX
PACKAGING	SINGLE

DIA MM	MTS NO.	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
<b>MTS 3</b>						
29.50	3	175	296	1	250.91	2608-29.50
29.75*	3	175	296	1	252.60	2608-29.75
30.00	3	175	296	1	252.60	2608-30.00
30.50	3	180	301	1	260.89	2608-30.50
31.00	3	180	301	1	264.20	2608-31.00
31.50	3	180	301	1	264.20	2608-31.50
<b>MTS 4</b>						
32.00	4	185	334	1	357.29	2608-32.00
32.50	4	185	334	1	357.29	2608-32.50
33.00	4	185	334	1	357.29	2608-33.00
33.50	4	185	334	1	430.79	2608-33.50
34.00	4	190	339	1	430.79	2608-34.00
34.50	4	190	339	1	430.79	2608-34.50
35.00	4	190	339	1	465.57	2608-35.00
35.50	4	190	339	1	465.57	2608-35.50
36.00	4	195	344	1	465.57	2608-36.00
37.00	4	195	344	1	471.48	2608-37.00
38.00	4	200	349	1	471.48	2608-38.00
39.00	4	200	349	1	533.44	2608-39.00
40.00	4	200	349	1	533.44	2608-40.00
41.00	4	205	354	1	569.32	2608-41.00
42.00	4	205	354	1	594.07	2608-42.00
43.00	4	210	359	1	608.92	2608-43.00
44.00	4	210	359	1	608.92	2608-44.00
45.00	4	210	359	1	627.48	2608-45.00
46.00	4	215	364	1	627.48	2608-46.00
47.00	4	215	364	1	683.18	2608-47.00
48.00	4	220	369	1	737.62	2608-48.00
49.00	4	220	369	1	737.62	2608-49.00
50.00	4	220	369	1	802.00	2608-50.00
<b>MTS 5</b>						
54.00*	5	230	417	1	1,287.40	2608-54.00
55.00	5	230	417	1	1,244.39	2608-55.00
58.00*	5	235	422	1	1,507.07	2608-58.00
60.00	5	235	422	1	1,521.30	2608-60.00
64.00*	5	245	432	1	1,839.52	2608-64.00
65.00	5	245	432	1	1,856.62	2608-65.00
70.00	5	250	437	1	2,129.80	2608-70.00
75.00	5	255	442	1	2,503.43	2608-75.00

**MTS Sleeves**

page  
48



† Some older stock may be 118° standard chisel point. \* Discontinued - available until current stocks are depleted.

**MORSE  
TAPER DRILLS**  
**DIN345**



**Notched Point**  
A variation on standard chisel point providing faster starting and reduced drill wander. Suitable for general purpose drilling.

**DRILL BIT  
SURFACE  
TREATMENT**

**BLACK FINISH**  
(also called blue finish)  
A black finish is achieved by steam tempering, a thermal process resulting in a porous tool coating. This surface helps to keep lubricant on the tool, particularly important on the cutting edges, thus reducing friction and cold welding. The result is increased tool life.  
*Black finish tools are generally recommended for ferrous applications where the oxide layer aids chip flow and heat dissipation.*



GROUP	MTSD
SURFACE FINISH	BLACK/BRIGHT
MATERIAL	HSS
POINT TYPE	118° NOTCHED†
FLUTE TYPE	30° HELIX
PACKAGING	SINGLE

DIA INCH	MTS NO.	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
<b>MTS 1</b>						
1/8	1	37	117	1	37.25	2607-1/8
3/16	1	52	133	1	39.94	2607-3/16
13/64	1	52	133	1	39.94	2607-13/64
7/32	1	57	138	1	39.94	2607-7/32
1/4	1	64	144	1	40.59	2607-1/4
9/32	1	69	150	1	41.56	2607-9/32
5/16	1	75	156	1	43.58	2607-5/16
21/64*	1	75	156	1	45.27	2607-21/64
11/32	1	81	162	1	47.01	2607-11/32
3/8	1	87	168	1	47.01	2607-3/8
13/32	1	87	168	1	47.85	2607-13/32
7/16	1	94	175	1	47.85	2607-7/16
15/32	1	101	182	1	49.16	2607-15/32
31/64*	1	101	182	1	54.84	2607-31/64
1/2	1	101	182	1	54.84	2607-1/2
17/32	1	108	189	1	62.74	2607-17/32
<b>MTS 2</b>						
9/16	2	114	213	1	65.00	2607-9/16
19/32	2	121	219	1	76.90	2607-19/32
5/8	2	121	219	1	76.90	2607-5/8
41/64*	2	125	223	1	82.54	2607-41/64
21/32	2	124	222	1	82.54	2607-21/32
11/16	2	130	229	1	88.20	2607-11/16
23/32	2	133	232	1	97.80	2607-23/32
3/4	2	140	238	1	102.33	2607-3/4
25/32	2	140	238	1	103.34	2607-25/32
13/16	2	146	244	1	117.60	2607-13/16
27/32	2	149	248	1	123.65	2607-27/32
7/8	2	149	248	1	135.67	2607-7/8
29/32	2	156	254	1	138.91	2607-29/32
<b>MTS 3</b>						
15/16	3	159	279	1	161.69	2607-15/16
31/32	3	159	279	1	166.21	2607-31/32
1	3	165	286	1	174.12	2607-1
1-1/16	3	168	289	1	206.91	2607-1.1/16
1-1/8	3	175	295	1	234.05	2607-1.1/8
1-3/16	3	181	302	1	252.60	2607-1.3/16
1-1/4	3	184	305	1	264.20	2607-1.1/4
<b>MTS 4</b>						
1-5/16	4	184	333	1	357.29	2607-1.5/16
1-3/8	4	191	340	1	430.79	2607-1.3/8
1-7/16	4	194	343	1	465.59	2607-1.7/16
1-1/2	4	200	349	1	471.48	2607-1.1/2
1-9/16	4	200	349	1	533.47	2607-1.9/16
1-5/8	4	206	356	1	569.32	2607-1.5/8
1-11/16	4	210	359	1	594.09	2607-1.11/16
1-3/4	4	210	359	1	608.92	2607-1.3/4
1-13/16	4	216	365	1	627.51	2607-1.13/16
1-7/8	4	219	368	1	683.18	2607-1.7/8
1-15/16	4	219	368	1	737.67	2607-1.15/16
2	4	225	375	1	802.00	2607-2
<b>MTS 5</b>						
2-3/8*	5	235	422	1	1,562.29	2607-2.3/8
2-7/8*	5	255	442	1	2,267.50	2607-2.7/8
3*	5	260	447	1	2,603.83	2607-3

† Some older stock may be 118° standard chisel point. \* Discontinued - available until current stocks are depleted.

MTS SLEEVES

The Bordo range of hardened steel Morse Taper Shank Sleeves are precision ground inside and out and are also fully through hardened. These "adapter sleeves" convert the smaller MT male taper of a tool to a larger MT shank to enable usage in a drill press or lathe fitted with a larger MTS chuck.



GROUP	MSLV
SURFACE FINISH	BRIGHT
MATERIAL	HARDENED STEEL
PACKAGING	SINGLE

MTS INSIDE	MTS OUTSIDE	PACK QTY	\$ EACH	PART NUMBER
1	2	1	36.41	2625-1X2
1	3	1	49.63	2625-1X3
2	3	1	47.75	2625-2X3
2	4	1	59.87	2625-2X4
2	5	1	91.15	2625-2X5
3	4	1	59.87	2625-3X4
3	5	1	91.15	2625-3X5
4	5	1	91.93	2625-4X5
5	6	1	236.70	2625-5X6



IDENTIFYING MORSE TAPER SHANK SIZES			
MTS #	A	B	C
MTS 1	0.4750" 12.065MM	0.3690" 9.373MM	2.13" 54.10MM
MTS 2	0.7000" 17.780MM	0.5720" 14.529MM	2.56" 65.02MM
MTS 3	0.9380" 23.825MM	0.7780" 19.761MM	3.19" 81.06MM
MTS 4	1.2310" 31.267MM	1.0200" 25.908MM	4.06" 103.12MM
MTS 5	1.7480" 44.399MM	1.4750" 37.465MM	5.19" 131.83MM
MTS 6	2.4940" 63.348MM	2.1160" 53.746MM	7.25" 184.15mm



**MORSE  
TAPER  
EXTENSION  
SOCKETS**

MTS Extension  
Sockets are used to  
extend tool lengths  
and application  
distances. They are  
also designed to  
adapt morse taper  
shank tools to a  
larger, or smaller,  
morse taper holder.  
All Bordo MTS  
extension sockets  
are hardened and  
precision ground  
internally and  
externally.



GROUP	MSLV
SURFACE FINISH	BRIGHT
MATERIAL	HARDENED STEEL
PACKAGING	SINGLE

INSIDE TO OUTSIDE	MTS NO. (INSIDE) HOLE TAPER	MTS NO. (OUTSIDE) TAPER SHANK	OAL MM	OAL INCH	PACK QTY	\$ EACH	PART NUMBER
1 TO 1	1	1	145	5-3/4	1	98.38	2626-1X1
1 TO 2	1	2	160	6-3/8	1	108.21	2626-1X2
1 TO 3	1	3	175	6-7/8	1	120.02	2626-1X3
1 TO 4	1	4	200	7-7/8	1	179.71	2626-1X4
1 TO 5	1	5	232	9-1/8	1	272.17	2626-1X5
2 TO 1	2	1	160	6-3/8	1	98.38	2626-2X1
2 TO 2	2	2	175	6-7/8	1	108.21	2626-2X2
2 TO 3	2	3	194	7-5/8	1	120.02	2626-2X3
2 TO 4	2	4	215	8-1/2	1	179.71	2626-2X4
2 TO 5	2	5	247	9-3/4	1	272.17	2626-2X5
3 TO 2	3	2	196	7-3/4	1	163.31	2626-3X2
3 TO 3	3	3	215	8-1/2	1	163.31	2626-3X3
3 TO 4	3	4	240	9-3/8	1	163.31	2626-3X4
3 TO 5	3	5	268	10-5/8	1	272.17	2626-3X5
4 TO 2	4	2	215	8-1/2	1	235.45	2626-4X2
4 TO 3	4	3	240	9-3/8	1	248.57	2626-4X3
4 TO 4	4	4	265	10-1/2	1	248.57	2626-4X4
4 TO 5	4	5	300	11-7/8	1	295.13	2626-4X5
4 TO 6	4	6	355	14	1	911.62	2626-4X6
5 TO 3	5	3	268	10 -5/8	1	498.45	2626-5X3
4 TO 5	5	4	300	11-7/8	1	498.45	2626-5X4
5 TO 5	5	5	335	13-1/4	1	518.12	2626-5X5
6 TO 5	5	6	390	15-3/8	1	983.77	2626-5X6
6 TO 6	6	6	470	18-9/16	1	1,429.74	2626-6X6

# DRILLS UNIVERSAL

METRIC

HANG, SET & MERCH

## UNIVERSAL DRILLS

### FEATURES

- DIN 8039/ISO 5468
- Special cutting edge geometry
- Diamond-ground carbide tip
- Universal drill bit with asymmetric spiral shape
- Cutting drilling spiral for optimum spoil removal
- Straight flute entry
- High-temperature brazing at 1,120°C
- Specially ground cutting helix with micro surface hardness
- Ground surface

### FOR USE IN

Masonry  
Natural Stone  
Artificial Stone  
Ceramics  
Steel / Metal  
Wood / PVC / Acrylic  
Glass  
Tiles, Hard burnt brick

**Not for hammer  
action**



GROUP	MPDB
SURFACE FINISH	BRIGHT / ORANGE
MATERIAL	STEEL
POINT TYPE	TITANIUM CARBIDE
FLUTE TYPE	30° HELIX
PACKAGING	CLAM SHELL



DIA MM	FL MM	OAL MM	SHANK MM	PACK QTY	\$ EACH	PART NUMBER
3.00	40.00	70	2.8	1	11.25	2700-3.00
4.00	40.00	75	3.8	1	11.25	2700-4.00
5.00	50.00	85	4.5	1	11.58	2700-5.00
5.50	50.00	85	4.5	1	11.93	2700-5.50
6.00	60.00	100	5.5	1	12.04	2700-6.00
6.50	60.00	100	5.5	1	13.30	2700-6.50
7.00	60.00	100	6.5	1	13.88	2700-7.00
8.00	80.00	120	7.0	1	13.99	2700-8.00
9.00	80.00	120	8.0	1	17.47	2700-9.00
10.00	80.00	120	8.9	1	17.87	2700-10.00
12.00	90.00	150	10.0	1	23.74	2700-12.00

SET DESCRIPTION	SETS PER OUTER	\$ SET	PART NUMBER
UNIVERSAL DRILL	10	66.73	2700-S1
4, 5, 6, 8 and 10mm			



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
UNIVERSAL DRILLS	387.36	2700-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER
	2	3.00	2700-3.00
	2	4.00	2700-4.00
	2	5.00	2700-5.00
	2	5.50	2700-5.50
	2	6.00	2700-6.00
	2	6.50	2700-6.50
	2	8.00	2700-8.00
	2	10.00	2700-10.00
	2	12.00	2700-12.00
	2	SET	2700-S1





# **IMPACT DRIVER** **HEX SHANK TILE DRILLS PAGE 78**



GROUP	CTDB
SURFACE FINISH	BRIGHT
MATERIAL	STEEL
POINT TYPE	TUNGSTEN CARBIDE
FLUTE TYPE	30° HELIX
PACKAGING	CLAM SHELL

## **CERAMIC TILE DRILLS**

are also suitable for use in brick, concrete and other masonry materials. Ensure the drill is in rotary only - DO NOT use hammer action.



DIA MM	FL MM	OAL MM	SHANK MM	PACK QTY	\$ EACH	PART NUMBER
3.00	42	85	3.0	1	31.19	2710-3.00
4.00	50	85	4.0	1	30.83	2710-4.00
5.00	50	85	5.0	1	32.82	2710-5.00
5.50	65	100	5.5	1	32.82	2710-5.50
6.00	65	100	6.0	1	34.44	2710-6.00
6.50	65	100	6.5	1	34.44	2710-6.50
8.00	75	125	8.0	1	43.24	2710-8.00
10.00	90	150	10.0	1	52.84	2710-10.00



SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
CERAMIC TILE DRILL SET	5	177.77	2710-S1

5, 5.5, 6, 6.5 and 8mm

## **EXTREME PERFORMANCE MULTI-FACET TUNGSTEN CARBIDE TIP**

These *Rotary Only* ceramic tile drills provide outstanding performance and extended tool life in hard ceramic materials. They feature a unique cutting edge geometry in conjunction with high temperature brazing to ensure reliable and accurate drilling in multiple hole applications.

Use of water cooling will extend bit life.

- Although these drill bits are not recommended for drilling vitrified porcelain, their superior multi-facet tungsten carbide tip enables them to drill most materials of this type, albeit with a reduced tool life.
- These ceramic tile drills can also be used to successfully drill in brick, concrete and other masonry materials.

## **DRILL BIT MATERIAL**

### **TUNGSTEN CARBIDE**

(Commonly referred to as Carbide)

Is a chemical compound containing equal parts of tungsten and carbon atoms. Carbide is three times stiffer than steel and is much denser than either steel or titanium. Carbide has a very high abrasion resistance and can also withstand higher temperatures than standard HSS. Carbide tools are often used for machining hard materials such as ceramics and stainless steel, as well as in situations where other tools would wear away, such as high volume production runs.

Because carbide tools maintain a sharp cutting edge better than other tools, they generally produce a better finish on parts, and their temperature resistance allows faster machining. Whilst tungsten carbide is extremely hard it is also brittle so it is important to avoid bit "chattering" as this is the most common cause of tool failure.



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
CERAMIC TILE DRILLS	1,055.63	2710-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER
	3	3.00	2710-3.00
	3	4.00	2710-4.00
	3	5.00	2710-5.00
	3	5.50	2710-5.50
	3	6.00	2710-6.00
	3	6.50	2710-6.50
	3	8.00	2710-8.00
	3	10.00	2710-10.00
	1	SET	2710-S1



DRILLS  
DIAMOND  
MIST

METRIC

HANG SELL

DIAMOND  
MIST DRILL

Bordo diamond mist drills are ideally suited to cutting ceramics, porcelain tiles and stone.

They produce no-crack, burr-free holes with minimum spalling.

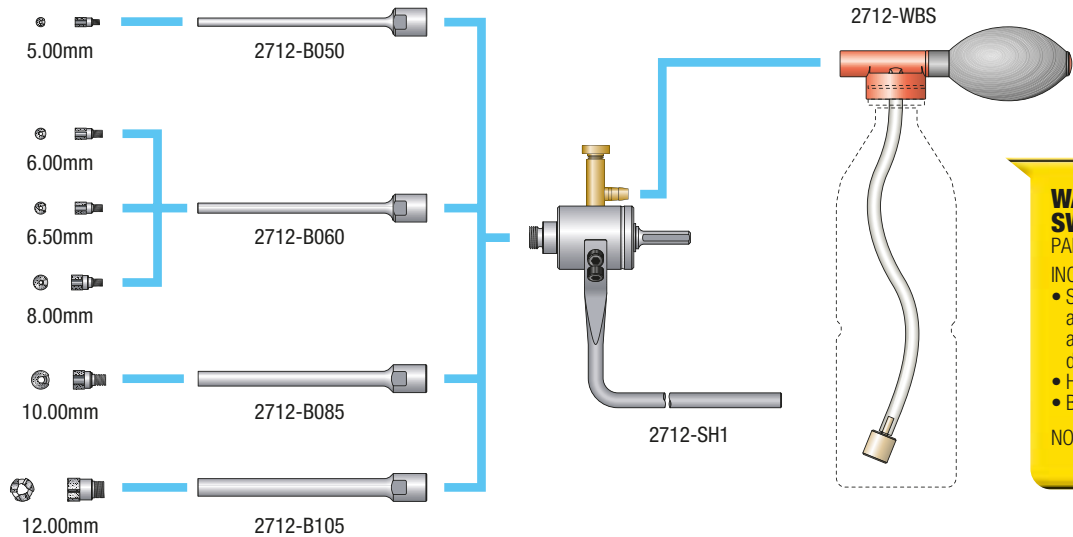
The interchangeable cutters result in a lower cost per hole than some other diamond drill solutions.

Rotary only action ensures low noise and vibration.

Speed recommendations over page.



GROUP	DIMD
TYPE	DIAMOND MIST DRILL
CUTTERS	REPLACEABLE
CUTTING SURFACE	DIAMOND
CUTTING METHOD	WET
PACKAGING	CLAM SHELL



**WATER BOTTLE  
SWIVEL SET**  
PART # 2712-WBS

INCLUDES:

- Screw top pressure bulb assembly – connects to any PET 600ml soft drink bottle
- Hose to connect to body
- Belt clip bottle holder

NOTE: Bottle not included

DIA MM	SUITS DIAMOND MIST DRILL SHANK	PACK QTY	\$ EACH	PART NUMBER
INTERCHANGEABLE DIAMOND CUTTERS				
5.00	2712-B050	1	51.93	2712-5.00
6.00	2712-B060	1	61.80	2712-6.00
6.50	2712-B060	1	61.80	2712-6.50
8.00	2712-B060	1	103.87	2712-8.00
10.00	2712-B085	1	113.75	2712-10.00
12.00	2712-B105	1	129.84	2712-12.00



SHANK #	SUITS CUTTER MM	LENGTH MM	PACK QTY	\$ EACH	PART NUMBER
MIST DRILL SHANKS ENSURE CUTTER AND SHANK ARE COMPATIBLE - SEE ABOVE					
050	5.0	100	1	86.55	2712-B050
060	6.0, 6.5, 8.0	100	1	86.55	2712-B060
085	10.0	100	1	97.37	2712-B085
105	12.0	100	1	97.37	2712-B105

DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
MIST DRILL BODY - SH1	1	298.60	2712-SH1
DRILLING TEMPLATE 4-13MM	1	53.11	2715-DT
PRESSURE WATER BOTTLE	1	18.97	2715-WB
WATER BOTTLE SWIVEL SET	1	129.84	2712-WBS



2712-SH1



2715-DT



GROUP	DIMD
TYPE	DIAMOND MIST DRILL
CUTTERS	REPLACEABLE
CUTTING SURFACE	DIAMOND
CUTTING METHOD	WET
PACKAGING	INJECTION MOULDED CASE



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
MIST DRILL SET S1	683.34	2712-S1								
MIST DRILL SET S2			862.15	2712-S2						
MIST DRILL SET S3					759.96	2712-S3				
MIST DRILL SET S4							772.75	2712-S4		
MIST DRILL SET S5									1,373.07	2712-S5

SET CONTENTS	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER
5MM CUTTER	1	2712-5.00							1	2712-5.00
6MM CUTTER			1	2712-6.00					1	2712-6.00
6.5MM CUTTER			1	2712-6.50					1	2712-6.50
8MM CUTTER			1	2712-8.00					1	2712-8.00
10MM CUTTER					1	2712-10.00			1	2712-10.00
12MM CUTTER							1	2712-12.00	1	2712-12.00
B050 SHANK	1	2712-B050							1	2712-B050
B060 SHANK			1	2712-B060					1	2712-B060
B085 SHANK					1	2712-B085			1	2712-B085
B105 SHANK							1	2712-B105	1	2712-B105
SH1 BODY	1	2712-SH1	1	2712-SH1	1	2712-SH1	1	2712-SH1	1	2712-SH1
SWIVEL SET	1	2712-WBS	1	2712-WBS	1	2712-WBS	1	2712-WBS	1	2712-WBS
TEMPLATE	1	2715-DT	1	2715-DT	1	2715-DT	1	2715-DT	1	2715-DT

#### DIAMOND MIST DRILL

Diamond mist drills are designed to deliver the correct amount of lubrication to maximise drill life and optimise drilling performance. The life of any type of diamond drill depends upon the hardness, abrasiveness and thickness of the material being drilled and the specific drilling techniques used (drill speed, pressure and lubrication). Using diamond drills in hard materials is not difficult, however drilling the hole takes time. You should consider that they aren't "drilling" a hole – they are "grinding" a hole. As the diameter of the cutter increases the optimum rotation speed decreases.

**Cutter size 5.0 to 10.0mm Rotation Speed 15,000 to 3,000 RPM; Cutter size 11.0 to 24.0mm Rotation Speed 7,000 to 1,500 RPM**

# DRILLS STEP

METRIC & FRAC.

HANG, SET, MERCH

## HSS STEP DRILLS

Bordo step drills are ideal for electrical contractors, sheetmetal workers and auto mechanics. Step drills are designed for drilling repetitive holes in steel, stainless steel, copper, brass, aluminium, plastic, plexiglas, laminates and many other thin materials.

Manufactured from premium quality high speed steel with double fluted ground cutting edges for long service life.

## STEP DRILL BENEFITS

- No pilot hole required.
- Easy to sharpen.
- Stepless drilling in the thinnest sheets.
- Burr-free drilling without sheet deformation.
- Automatic deburring.



GROUP	STEP
SURFACE FINISH	BRIGHT
MATERIAL	M2-HSS
FLUTE TYPE	STRAIGHT
FLUTES	2
PACKAGING	HANG SELL*

DIAMETER MIN    MAX	INCREMENT MM	STEP DEPTH MM	SHANK DIA. MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
4 - 12	1.0	5.5	6.0	80.0	1	65.89	2600-M1
4 - 20	2.0	3.5	8.0	67.0	1	74.27	2600-M2
6 - 30	2.0	4.0	10.0	98.0	1	136.88	2600-M3
4 - 39	2.0	4.0	10.0	107.0	1	256.70	2600-M4
10 - 46	4.0	3.0	12.0	90.0	1	328.60	2600-M5
10 - 58	4.0	3.0	12.0	105.0	1	391.78	2600-M6

DIAMETER MIN    MAX	INCREMENT INCH	STEP DEPTH INCH	SHANK DIA. INCH	OAL INCH	PACK QTY	\$ EACH	PART NUMBER
1/8" - 1/2"	1/32	9/64	1/4	3-3/64	1	69.43	2600-1
1/4" - 3/4"	1/16	5/32	3/8	2-27/32	1	78.79	2600-2

\* 2600-M5 and 2600-M6 Step Drills are not supplied in hang sell packaging.

SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
METRIC STEP DRILL SET	3	287.86	2600-S1
2600 -M1, 2600-M2, 2600-M3			



# IMPACT DRIVER HEX SHANK STEP AND CONE DRILLS PAGES 81 & 82



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
STEP AND TUBE DRILLS	2,065.28	2600-D2

MERCHANDISER CONTENTS	QTY EACH	SIZE MM/INCH	PART NUMBER	QTY EACH	SIZE MM/INCH	PART NUMBER
	1	4-12	2600-M1	1	4-12	2601-M1
	1	4-20	2600-M2	1	4-20	2601-M2
	1	6-30	2600-M3	1	6-30	2601-M3
	1	4-39	2600-M4	1	4-12	2602-M1
	1	1/8-1/2	2600-1	1	4-20	2602-M2
	1	1/4-3/4	2600-2	1	4-30	2602-M3
	1	3-14	2605-M1			
	1	4-20	2605-M2			
	1	6-30	2605-M3			





GROUP	STEP	STEP
SURFACE FINISH	BRIGHT	VIOLET / GREY
MATERIAL	M2-HSS	HSS-Co5
COATING	-	TiAIN
FLUTE TYPE	SPIRAL	SPIRAL
FLUTES	2	2
PACKAGING	HANG SELL	HANG SELL

**HSS-Co5  
SPIRAL FLUTE  
TiAIN COATED  
STEP DRILLS**

Bordo Cobalt Spiral Flute Titanium Aluminium Nitride (TiAIN) coated step drills offer unparalleled performance when drilling hard metals such as stainless steel.

- HSS-Co5 material provides increased performance and tool life when machining tough steels.
- High performance point for faster starting and reduced bit wander.
- 3 flatted shank prevents slipping in drill chuck.
- Spiral flutes enable easier tool penetration.
- Titanium Aluminium Nitride (TiAIN) is a thin film coating that was developed from Titanium Nitride. TiAIN offers higher temperature resistance than TiN, as well as slightly higher hardness and especially higher hot hardness (i.e. the hardness at high temperatures). It is primarily used in high temperature environments above the limits of TiN usage. This coating works by forming a thin surface layer of Alumina (Al<sub>2</sub>O<sub>3</sub>), or Aluminium Oxide ceramic. As the layer wears it continuously reforms.



DIAMETER MIN MAX	INCREMENT MM	STEP DEPTH MM	SHANK DIA. MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
4 - 12	1.0	4.5	6.0	66.5	1	<b>59.94</b>	2601-M1	<b>111.42</b>	2602-M1
4 - 20	2.0	5.5	8.0	75.0	1	<b>70.47</b>	2601-M2	<b>127.67</b>	2602-M2
4 - 30	2.0	5.0	10.0	100.0	1	<b>143.04</b>	2601-M3	<b>249.40</b>	2602-M3



SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER	\$ SET	PART NUMBER
<b>METRIC STEP DRILL SET M2-HSS BRIGHT</b>	3	<b>273.45</b>	2601-S1		
2601 -M1, 2601-M2, 2601-M3					
<b>METRIC STEP DRILL SET HSS-Co5 TiAIN COATED</b>	3			<b>488.49</b>	2602-S1
2602 -M1, 2602-M2, 2602-M3					

**NEW  
PRODUCT**
**HSS-Co5 (COBALT)**

Bordo Cobalt step drills are manufactured from HSS-Co5 steel, which is very similar to M2 HSS with the important addition of 5% cobalt. The addition of cobalt to M2 HSS significantly increases heat resistance and allows the drill to run at higher temperatures without losing its temper (hardness). Cobalt drills provide increased performance and tool life when machining tough steels.

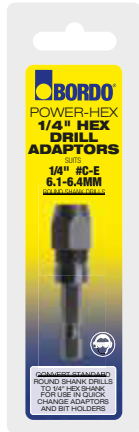


GROUP	STEP / CSNK	STEP
SURFACE FINISH	BRIGHT	BRIGHT & VIOLET/GREY
MATERIAL - STEP DRILL / COUNTERSINK	HSS / HSS-Co5	HSS / HSS-Co5
COUNTERSINK TYPE	CROSS HOLE / SINGLE / TRIPLE	—
COUNTERSINK ANGLE	90°	—
PACKAGING	MERCHANDISER	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
COUNTERSINKS - PERSPEX BENCH	2,698.99	2600-D1		
STEP DRILLS - PERSPEX BENCH			2,065.28	2600-D3

MERCHANDISER CONTENTS	QTY EACH	SIZE MM/INCH	PART NUMBER	QTY EACH	SIZE MM/INCH	PART NUMBER
COUNTERSINKS - CROSS HOLE	3	6.35	3840-6.35			
	3	10.0	3840-10			
	2	15.0	3840-15			
	2	20.0	3840-20			
	1	25.0	3840-25			
	1	30.0	3840-30			
COUNTERSINKS - SINGLE FLUTE	3	10.0	3842-10			
	2	15.0	3842-15			
	2	20.0	3842-20			
	1	25.0	3842-25			
	1	30.0	3842-30			
COUNTERSINKS - THREE FLUTE	3	10.0	3843-10			
	2	14.4	3843-14.4			
	2	20.5	3843-20.5			
	1	28.0	3843-28			
	1	35.0	3843-35			
STEP DRILLS – HSS STRAIGHT FLUTE	2	4-12	2600-M1	1	4-12	2600-M1
	1	4-20	2600-M2	1	4-20	2600-M2
	1	6-30	2600-M3	1	6-30	2600-M3
				1	4-39	2600-M4
	2	1/8-1/2	2600-1	1	1/8-1/2	2600-1
	2	1/4-3/4	2600-2	1	1/4-3/4	2600-2
STEP DRILLS – HSS SPIRAL FLUTE				1	4-12	2601-M1
				1	4-20	2601-M2
				1	4-30	2601-M3
STEP DRILLS – HSS-Co5 SPIRAL FLUTE				1	4-12	2602-M1
				1	4-20	2602-M2
				1	4-30	2602-M3
STEP DRILLS – HSS HEX SHANK				1	4-12	2604-M1
				1	4-20	2604-M2
				1	4-30	2604-M3
TUBE & SHEET DRILLS – HSS HEX				1	3-14	2605-M1
				1	4-20	2605-M2
				1	6-30	2605-M3



GROUP	PHEX
SURFACE FINISH	BLACK
SHANK TYPE	1/4" HEX
PACKAGING	CLAM SHELL

**POWER-HEX  
DRILL  
ADAPTORS**

Bordo Power-Hex Drill Adaptors convert standard round shank jobber drills to 1/4" hex shank. The resulting hex shank drill is suitable for use in quick change adaptors, bit holders and standard drill chucks.

**Guidelines for Use**

Select the correct size Power-Hex Drill Adaptor to suit the drill you wish to convert.

Loosen the collet on the adaptor and fully insert the drill into the adaptor.

Tighten the adaptor with a spanner or adjustable wrench to ensure that there is no slip.

To remove and replace the drill simply reverse the procedure.

SUITS DRILL INCH	SUITS DRILL # / LETTER	SUITS DRILL MM	PACK QTY	\$ PACK	PART NUMBER
1/32"	59-68	1.0	1	<b>9.17</b>	2201-1/32
1/16"	52-54	1.4-1.6	1	<b>9.17</b>	2201-1/16
5/64"	45-54	1.7-2.0	1	<b>9.17</b>	2201-5/64
3/32"	40-44	2.1-2.4	1	<b>9.17</b>	2201-3/32
7/64"	33-39	2.5-2.8	1	<b>9.17</b>	2201-7/64
1/8"	30-32	2.9-3.2	1	<b>9.17</b>	2201-1/8
9/64"	27-29	3.3-3.6	1	<b>9.17</b>	2201-9/64
5/32"	20-26	3.7-4.0	1	<b>9.17</b>	2201-5/32
11/64"	16-19	4.1-4.4	1	<b>9.17</b>	2201-11/64
3/16"	11-15	4.5-4.8	1	<b>9.17</b>	2201-3/16
13/64"	5-10	4.9-5.2	1	<b>9.17</b>	2201-13/64
7/32"	2-4	5.3-5.6	1	<b>9.17</b>	2201-7/32
15/64"	No.1 - Letter B	5.7-6.0	1	<b>9.17</b>	2201-15/64
1/4"	Letter C - E	6.1-6.4	1	<b>9.17</b>	2201-1/4
9/32"	Letter I - K	7.0	1	<b>9.17</b>	2201-9/32
5/16"	Letter N	8.0	1	<b>9.17</b>	2201-5/16
3/8"	Letter V	9.25	1	<b>9.17</b>	2201-3/8
<b>1/8" BULK PACK</b>					
1/8"	30-32	2.9-3.2	10	<b>74.29</b>	2201-1/8B



SET DESCRIPTION SET CONTENTS	ADAPTOR QTY	\$ SET	PART NUMBER
<b>POWER-HEX DRILL ADAPTORS – IMPERIAL</b> 1/16", 3/32", 1/8", 5/32", 3/16", 7/32" & 1/4"	<b>7</b>	<b>51.99</b>	2201-S1
<b>POWER-HEX DRILL ADAPTORS – METRIC</b> 1.0 TO 4.0MM	<b>8</b>	<b>59.44</b>	2201-S2

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
<b>POWER-HEX DRILL ADAPTORS</b>	<b>534.64</b>	2201-D1

MERCHANDISER CONTENTS	QTY	SIZE	PART NUMBER	QTY	SIZE	PART NUMBER
	2	1/32"	2201-1/32	2	13/64"	2201-13/64
	2	1/16"	2201-1/16	2	7/32"	2201-7/32
	2	5/64"	2201-5/64	2	15/64"	2201-15/64
	2	3/32"	2201-3/32	2	1/4"	2201-1/4
	2	7/64"	2201-7/64	2	9/32"	2201-9/32
	2	1/8"	2201-1/8	2	5/16"	2201-5/16
	2	9/64"	2201-9/64	2	3/8"	2201-3/8
	2	5/32"	2201-5/32	2	SET 1	2201-S1
	2	11/64"	2201-11/64	2	SET 2	2201-S2
	2	3/16"	2201-3/16			





# DRILLS POWER-HEX

## DRILL

### COUNTERSINK DRILL



GROUP	PHEX	PHEX
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
POINT TYPE	118° STD CHISEL	118° STD CHISEL
FLUTE TYPE	30° HELIX	30° HELIX
COUNTERSINK TYPE	—	4 FLUTE 90° HSS
SHANK TYPE	1/4" HEX	1/4" HEX
PACKAGING	CLAM SHELL	CLAM SHELL



#### Standard Point

(chisel point)

Standard point is suitable for general purpose drilling.

#### DRILL BIT SURFACE TREATMENT

#### BRIGHT FINISH

A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*

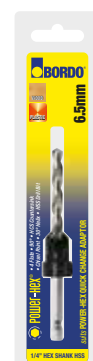
#### POWER-HEX DRILLS

Power-Hex drill bits feature a 1/4" hex shank which makes them ideal for use with quick change adaptors and bit holders. Changing your drill bit is now as easy as swapping between any other 1/4" hex shank accessory. Power-Hex drills are ideal for use with the extensive range of Bordo quick change adaptors, bit holders and quick change extensions.

#### GUIDELINES FOR USE

The depth of the drilled hole can be adjusted by loosening the grub screw on the countersink and re-positioning it at the desired position on the drill. Ensure you tighten the grub screw to secure it in place.

Power-Hex drills and countersinks are designed for use in timber and plastics – they are NOT designed for use in metal.



DIA MM	GAUGE SCREW	OAL MM	C'SINK DIA. MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
2.00	2G	69	13	1	4.05	2200-2.00	7.29	2200-2.00CS
2.50	4G	77	13	1	3.67	2200-2.50	6.64	2200-2.50CS
3.00	6G	81	13	1	3.86	2200-3.00	7.01	2200-3.00CS
3.50	8G	90	13	1	4.13	2200-3.50	7.43	2200-3.50CS
4.00	10G	95	13	1	4.48	2200-4.00	8.09	2200-4.00CS
4.50	12G	100	14	1	4.48	2200-4.50	8.09	2200-4.50CS
5.00	12G	106	16	1	5.03	2200-5.00	9.07	2200-5.00CS
5.50	—	113	16	1	5.20	2200-5.50	9.45	2200-5.50CS
6.00	—	113	16	1	5.47	2200-6.00	9.89	2200-6.00CS
6.50	—	121	16	1	5.94	2200-6.50	10.71	2200-6.50CS

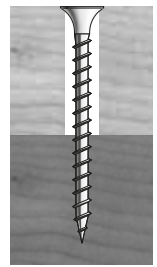


MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
POWER-HEX DRILLS	965.12	2200-D1

MERCHANDISER CONTENTS	QTY CLAMS	SIZE INCH	PART NUMBER	QTY CLAMS	SIZE INCH	PART NUMBER
	DRILLS			DRILLS WITH COUNTERSINK		
	10	2.00	2200-2.00	6	2.00	2200-2.00CS
	10	2.50	2200-2.50	6	2.50	2200-2.50CS
	10	3.00	2200-3.00	6	3.00	2200-3.00CS
	10	3.50	2200-3.50	6	3.50	2200-3.50CS
	10	4.00	2200-4.00	6	4.00	2200-4.00CS
	10	4.50	2200-4.50	6	4.50	2200-4.50CS
	10	5.00	2200-5.00	6	5.00	2200-5.00CS
	10	5.50	2200-5.50	6	5.50	2200-5.50CS
	10	6.00	2200-6.00	6	6.00	2200-6.00CS
	10	6.50	2200-6.50	6	6.50	2200-6.50CS

**COUNTERSINK  
MATERIAL**

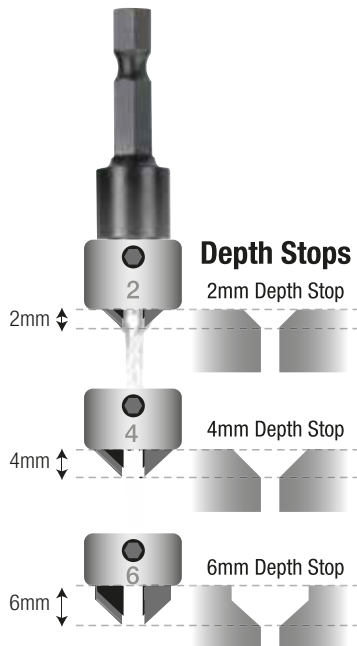
**TUNGSTEN CARBIDE**  
(Commonly referred to as Carbide)  
Is a chemical compound containing equal parts of tungsten and carbon atoms. Carbide is three times stiffer than steel and is much denser than either steel or titanium. Carbide has a very high abrasion resistance and can also withstand higher temperatures than standard HSS. Carbide tools are often used for machining hard materials such as ceramics and stainless steel, as well as in situations where other tools would wear away, such as high volume production runs. Because carbide tools maintain a sharp cutting edge better than other tools, they generally produce a better finish on parts, and their temperature resistance allows faster machining. Whilst tungsten carbide is extremely hard it is also brittle so it is important to avoid bit "chattering" as this is the most common cause of tool failure.



**SHANK HOLES**  
Using a shank hole allows the screw to thread only the base material and tighten gaps between them.



GROUP	PHDL
DRILL TYPE	HSS-Co5
POINT TYPE	135° SPLIT POINT
FLUTE TYPE	30° HELIX
COUNTERSINK MATERIAL	<b>TUNGSTEN CARBIDE</b>
COUNTERSINK TYPE	<b>90° DUAL BLADE</b>
SHANK TYPE	<b>1/4" HEX</b>
PACKAGING	<b>CLAM SHELL</b>



SIZE INCH	PILOT HARDWOOD	PILOT SOFTWOOD	SHANK HOLE	PACK QTY	\$ EACH	PART NUMBER
5/64	6G	8G	1G	1	<b>60.95</b>	2202-5/64
3/32	8G	10G	2G	1	<b>60.95</b>	2202-3/32
1/8	10G	14G	4G	1	<b>60.95</b>	2202-1/8
7/64	12G	—	5G	1	<b>60.95</b>	2202-7/64
9/64	14G	16G	6G	1	<b>60.95</b>	2202-9/64

CLAM CONTENTS	QTY	\$ CLAM	PART NUMBER
DEPTH STOPS TO SUIT TCT COUNTERSINKS 2MM, 4MM AND 6MM	3	<b>17.34</b>	2202-3ST



GROUP	PHDL		
MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	
TCT COUNTERSINK	<b>928.30</b>	2202-D1	
MERCHANDISER CONTENTS	QTY EACH	SIZE INCH	PART NUMBER
	2	3/32	2202-3/32
	2	5/64	2202-5/64
	2	7/64	2202-7/64
	2	9/64	2202-9/64
	2	1/8	2202-1/8
	2	3/32	2010-3/32S
	2	5/64	2010-5/64S
	2	7/64	2010-7/64S
	2	9/64	2010-9/64S
	2	1/8	2010-1/8S
	10	—	2202-3ST

# DRILLS DECK BITS

GAUGE

HANG SELL

## DECK BITS

Bordo Deck Bits are fully adjustable to suit your specific fastener, timber species or custom application.

Additionally Deck Bits feature:

- Pilot hole to suit 10G or 14G screws.
- Prevent decking timber splitting.
- Adjustable, free spinning, non-marking collar.
- Wide gullets prevent the jamming and clogging of wood chips.
- Large gullets also provide an unobscured view of the operation.
- Replaceable HSS pilot drill.
- Heavy duty hex shank ensures maximum torque transfer & eliminates chuck slip.



GROUP	DECK	DECK
DRILL TYPE	HSS	HSS
FLUTE TYPE	30° HELIX	30° HELIX
COUNTERSINK MATERIAL	HIGH CARBON STEEL	TUNGSTEN CARBIDE
COUNTERSINK TYPE	90° TRIPLE BLADE	90° DUAL BLADE
SHANK TYPE	1/4" HEX	1/4" HEX
PACKAGING	CLAM SHELL	CLAM SHELL

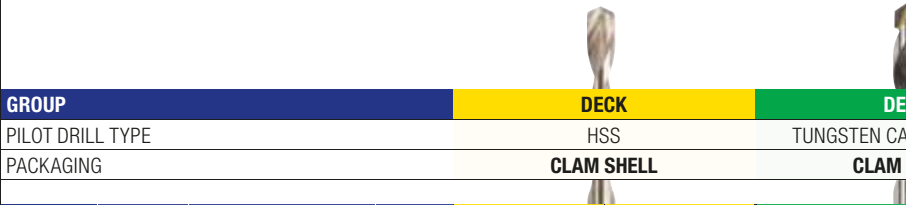


SCREW GAUGE	PILOT MM	COUNTERSINK DEPTH	PACK QTY	SETS PER OUTER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
10G	3.0	ADJUSTABLE	1	5	40.94	2203-10G	61.73	2204-10G
14G	4.8	ADJUSTABLE	1	5	43.96	2203-14G	67.17	2204-14G



## TUNGSTEN CARBIDE

(Commonly referred to as Carbide) Is a chemical compound containing equal parts of tungsten and carbon atoms. Carbide is three times stiffer than steel and is much denser than either steel or titanium. Carbide has a very high abrasion resistance and can also withstand higher temperatures than standard steel. Carbide tools are often used in repetitive applications where other tool materials would experience significant wear and performance degradation. Because carbide tools maintain a sharp cutting edge they generally produce a superior finish.



GROUP	DECK	DECK
PILOT DRILL TYPE	HSS	TUNGSTEN CARBIDE TIPPED
PACKAGING	CLAM SHELL	CLAM SHELL

SCREW GAUGE	PILOT MM	PILOT DRILL TO SUIT	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
10G	3.0	DECK BIT	1	11.77	2203-3.00	17.67	2204-3.00
14G	4.8	DECK BIT	1	17.34	2203-4.80	26.03	2204-4.80

WHEN USING TCT DECK BITS IN COMPRESSED FIBRE CEMENT SHEET, OR OTHER ABRASIVE MATERIALS, IT IS RECOMMENDED TO USE A TCT PILOT DRILL TO MAXIMISE PERFORMANCE AND INCREASE BIT LIFE.



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
DECK BIT	932.64	2203-D1

MERCHANDISER CONTENTS	QTY EACH	DESCRIPTION	PART NUMBER
	3	10G HCS DECK BIT	2203-10G
	3	14G HCS DECK BIT	2203-14G
	4	3.0MM HSS PILOT DRILL	2203-3.00
	4	4.8MM HSS PILOT DRILL	2203-4.80
	3	10G TCT DECK BIT	2204-10G
	3	10G TCT DECK BIT	2204-14G
	4	3.0MM TCT PILOT DRILL	2204-3.00
	4	4.8MM TCT PILOT DRILL	2204-4.80



## DRILLS BRAD POINT

METRIC

HANG & MERCH



GROUP	BPDB
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	W POINT
FLUTE TYPE	30° HELIX
PACKAGING	CLAM SHELL



### BRAD POINT DRILLS

Brad point drills are ideally suited to drilling dowel holes and for drilling fibreboard, plywood, softwoods and hardwoods.

#### FEATURES

- Precision ground shoulder cutters provide completely round holes and minimise break through.
- The centering tip enables drilling of precise pilot holes.
- HSS construction ensures a long service life.

#### USAGE

- Hold the drill bit perpendicular to the workpiece; start (slowly) with a low speed. Then continue drilling with the recommended speed.
- Drill using steady pressure; do not use a coolant.
- Lift out regularly, at least every 30mm, and remove spoil from the flutes.
- The workpiece should always be clamped tightly.
- Never let the drill tip impact on a hard support surface (metal/ stone).
- Blunt drill bits result in imprecise holes. Only sharp drill bits achieve optimum drilling results.

**Not for hammer action**



DIA MM	FL MM	OAL MM	SHANK MM	PACK QTY	\$ EACH	PART NUMBER
3.00	33	61	3	1	16.69	2666-3.00
4.00	43	75	4	1	16.69	2666-4.00
5.00	52	86	5	1	16.69	2666-5.00
6.00	57	93	6	1	16.69	2666-6.00
7.00*	65	109	7	1	18.63	2666-7.00
8.00	70	117	8	1	18.63	2666-8.00
9.00*	70	115	9	1	23.75	2666-9.00
10.00	82	132	10	1	29.51	2666-10.00
11.00*	81	142	10	1	37.46	2666-11.00
12.00	101	151	10	1	40.85	2666-12.00

SET DESCRIPTION SET CONTENTS	DRILL QTY	\$ SET	PART NUMBER
BRAD POINT SET	5	98.21	2666-S1
4, 5, 6, 8, 10MM			



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
BRAD POINT DRILL	663.67	2666-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM/INCH	PART NUMBER
	3	3.00	2666-3.00
	3	4.00	2666-4.00
	3	5.00	2666-5.00
	3	6.00	2666-6.00
	3	8.00	2666-8.00
	3	10.00	2666-10.00
	3	12.00	2666-12.00
	2	SET	2666-S1

\* Discontinued - available until current stocks are depleted.

## HIGH CARBON SPADE BITS

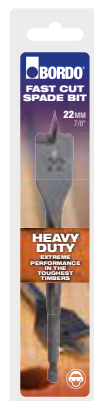
Bordo standard length spade bits are ideal for creating holes in a wide variety of timbers.

### SPADE BIT BENEFITS

- Low cost per hole.
- Fast starting.
- Heavy duty shank prevents bending.
- Hex shank prevents slippage in chuck.
- Hex shank ensures a positive lock in spade bit extensions.
- Suits all standard quick change adaptors.



GROUP	SPAD	SPAD
SURFACE FINISH	BLACK	BLACK
MATERIAL	HIGH CARBON STEEL	HIGH CARBON STEEL
POINT TYPE	SELF CENTERING	SELF CENTERING
SHANK TYPE	1/4" HEX	1/4" HEX
OAL	150MM	405MM
PACKAGING	CLAM SHELL	CLAM SHELL



DIA MM	DIA INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
6.00	1/4	1	9.43	2670-6		
8.00	5/16	1	9.43	2670-8		
10.00	3/8	1	11.46	2670-10	23.89	2672-10
11.00	7/16	1	11.53	2670-11		
12.00	—	1	11.53	2670-12		
13.00	1/2	1	11.72	2670-13		
14.00	9/16	1	11.92	2670-14		
16.00	5/8	1	12.27	2670-16	26.74	2672-16
18.00	11/16	1	13.13	2670-18		
19.00	3/4	1	13.13	2670-19	33.10	2672-19
20.00	13/16	1	13.13	2670-20	33.10	2672-20
22.00	7/8	1	13.13	2670-22	33.10	2672-22
24.00	15/16	1	14.75	2670-24		
25.00	1	1	14.75	2670-25	36.31	2672-25
28.00	1-1/8	1	14.75	2670-28		
30.00	—	1	15.05	2670-30		
32.00	1-1/4	1	15.34	2670-32	36.31	2672-32
35.00	1-3/8	1	15.74	2670-35		
38.00	1-1/2	1	16.55	2670-38		



GROUP	SPAD
SURFACE FINISH	BLACK
MATERIAL	HIGH CARBON STEEL
POINT TYPE	SELF CENTERING
SHANK	1/4" HEX

**HIGH CARBON  
SPADE BITS**

Bordo standard length spade bits are ideal for creating holes in a wide variety of timbers.

**SPADE BIT  
BENEFITS**

- Low cost per hole.
- Fast starting.
- Heavy duty shank prevents bending.
- Hex shank prevents slippage in chuck.
- Hex shank ensures a positive lock in spade bit extensions.
- Suits all standard quick change adaptors.



2670-S4 display box of 5

SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
SET 1 - CLAM SHELL 20, 22, 25MM	3	41.02	2670-S1*
SET 2 - CLAM SHELL 16, 20, 22, 25, 32MM PLUS 150MM QUICK CHANGE EXTENSION	6	89.37	2670-S2*
SET 3 - BLOW MOULDED BOX 14, 16, 20, 22, 25, 32MM PLUS 150MM QUICK CHANGE EXTENSION 5 SETS PER DISPLAY BOX	7	101.08	2670-S3
SET 4 - NYLON POUCH 12, 16, 20, 22, 25, 32MM PLUS 150MM EXTENSION 5 SETS PER DISPLAY BOX	7	100.90	2670-S4

**NEW  
PRODUCT**



2670-S4



2670-S3

\* Older stock may include 19mm instead of 20mm spade bit.



DRILLS  
SPADE

METRIC

HANG SELL

HIGH CARBON  
SPADE BITS

Bordo standard length spade bits are ideal for creating holes in a wide variety of timbers.

SPADE BIT  
BENEFITS

- Low cost per hole.
- Fast starting.
- Heavy duty shank prevents bending.
- Hex shank prevents slippage in chuck.
- Hex shank ensures a positive lock in spade bit extensions.
- Suits all standard quick change adaptors.



GROUP	SPAD
SURFACE FINISH	BLACK
MATERIAL	HIGH CARBON STEEL
POINT TYPE	SELF CENTERING
SHANK	1/4" HEX



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
SPADE BITS	866.32	2670-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER
	4	6	2670-6
	4	8	2670-8
	2	10	2670-10
	2	11	2670-11
	4	12	2670-12
	2	14	2670-14
	4	16	2670-16
	2	18	2670-18
	8	19	2670-19
	4	20	2670-20
	4	22	2670-22
	2	24	2670-24
	8	25	2670-25
	2	28	2670-28
	4	32	2670-32
	2	35	2670-35
	2	38	2670-38
	2	150	5750-14X150
	2	300	5750-14X300

**SOLID CORE  
AUGER BITS**

Solid Core Auger Bits feature a single twist solid core with wide flightings.

**AUGER BIT  
BENEFITS**

- Fully heat treated to increase durability and protect against bending in heavy duty drilling applications.
- Single spur scribes hole edge and ensures a smooth hole finish.
- Coarse screw point provides fast starting in all wood types.
- Solid centre design provides increased bit rigidity.
- Optimised flute grind ensures fast chip removal improving speed and finish.
- Hex shank ensures a positive lock in chucks and extensions.



GROUP	AUGR	AUGR	AUGR
SURFACE FINISH	BRIGHT / BLUE	BRIGHT / BLUE	BRIGHT / BLUE
MATERIAL	HIGH CARBON STEEL	HIGH CARBON STEEL	HIGH CARBON STEEL
POINT TYPE	WORM POINT	WORM POINT	WORM POINT
SHANK	3/8" (NOMINAL) HEX*	3/8" (NOMINAL) HEX*	3/8" (NOMINAL) HEX*
PACKAGING	HANG TUBE	HANG TUBE	HANG TUBE
LENGTH	SHORT	MEDIUM	LONG

DIA MM	PACK QTY	OAL MM	\$ EACH	PART NUMBER	OAL MM	\$ EACH	PART NUMBER	OAL MM	\$ EACH	PART NUMBER
6.00	1	160	26.08	2660-6X160	210	29.59	2660-6X210			
8.00	1	170	26.08	2660-8X170	225	29.59	2660-8X225			
10.00	1	190	26.08	2660-10X190	250	30.42	2660-10X250	500	55.63	2660-10X500
12.00	1	190	26.93	2660-12X190	270	33.87	2660-12X270	500	58.17	2660-12X500
13.00	1	190	26.93	2660-13X190	270	39.64	2660-13X290	500	63.90	2660-13X500
14.00	1	200	29.26	2660-14X200	290	39.64	2660-14X290	500	66.64	2660-14X500
15.00	1	200	29.43	2660-15X200						
16.00	1	200	29.43	2660-16X200	290	40.95	2660-16X290	500	69.53	2660-16X500
17.00	1	200	31.23	2660-17X200†						
18.00	1	200	31.23	2660-18X200	330	51.96	2660-18X330	500	79.16	2660-18X500
19.00	1	210	34.09	2660-19X210	330	55.50	2660-19X330	500	84.70	2660-19X500
20.00	1	210	34.09	2660-20X210	330	55.50	2660-20X330	500	84.70	2660-20X500
21.00	1	210	37.31	2660-21X210						
22.00	1	210	37.31	2660-22X210	330	60.04	2660-22X330	500	91.42	2660-22X500
25.00	1	210	39.99	2660-25X210	330	67.87	2660-25X330	500	96.93	2660-25X500
28.00	1	210	48.91	2660-28X210†						
30.00	1				330	83.43	2660-30X330			
32.00	1	210	57.84	2660-32X210†	330	95.51	2660-32X330			
35.00	1				330	111.52	2660-35X330	500	150.36	2660-35X500†
38.00	1	210	83.43	2660-38X210†	330	132.20	2660-38X330			

\* Older stock of auger drills may have 7/16" hex shank. † This product is being discontinued and is only available until current stocks are depleted.



DESCRIPTION	\$ SET	PART NUMBER
AUGER & EXTENSION SET	379.53	2660-25S1
25MM X 210MM AUGER BIT WITH 6 QUICK CHANGE 300MM LOCKING EXTENSIONS		


**NEW AND IMPROVED LOCKING EXTENSIONS**

Bordo 3/8" x 300mm quick change extensions suit all accessories with 3/8" shank and power groove. Join multiple extensions together for extreme reach. Extensions are securely joined together by rotating the threaded quick change locking collar – no threaded rods to come undone!

Extends your reach up to 1,700mm. Set contains 1 x 25mm high carbon steel, heat treated Auger Bit with coarse screw point and 6 x 300mm Quick Change Extensions.


**Extensions & Adaptors to suit Hex Shank Auger Drills see page 275**

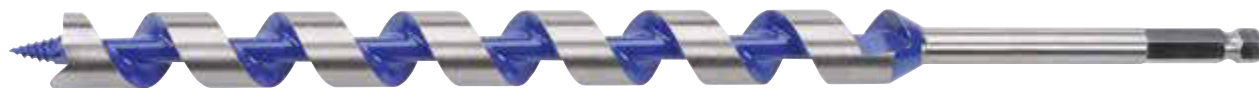
5750-38716X300 pictured Outside diameter of 27.5mm – Ideally suited for use with auger bits 28mm and above.

**SOLID CORE  
AUGER BITS**

Solid Core Auger Bits feature a single twist solid core with wide flightings.

**AUGER BIT  
BENEFITS**

- Fully heat treated to increase durability and protect against bending in heavy duty drilling applications.
- Single spur scribes hole edge and ensures a smooth hole finish.
- Coarse screw point provides fast starting in all wood types.
- Solid centre design provides increased bit rigidity.
- Optimised flute grind ensures fast chip removal improving speed and finish.
- Hex shank ensures a positive lock in chucks and extensions.



GROUP	AUGR	AUGR
SURFACE FINISH	BRIGHT / BLUE	BRIGHT / BLUE
MATERIAL	HIGH CARBON STEEL	HIGH CARBON STEEL
POINT TYPE	WORM POINT	WORM POINT
SHANK	3/8" (NOMINAL) HEX*	3/8" (NOMINAL) HEX*
PACKAGING	HANG TUBE	HANG TUBE
LENGTH	SHORT AND MEDIUM	SHORT, MEDIUM AND LONG



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
AUGER BITS - 2 TIER MERCHANDISER	980.71	2660-D1		
AUGER BITS - 3 TIER MERCHANDISER			1,475.23	2660-D2

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	OAL MM	PART NUMBER	QTY EACH	SIZE MM	OAL MM	PART NUMBER
	1	10.00	190	2660-10X190	1	8.00	170	2660-8X170
	1	12.00	190	2660-12X190	1	10.00	190	2660-10X190
	1	16.00	200	2660-16X200	1	12.00	190	2660-12X190
	1	25.00	210	2660-25X210	1	13.00	190	2660-13X190
	1	8.00	225	2660-8X225	1	14.00	200	2660-14X200
	1	10.00	250	2660-10X250	1	16.00	200	2660-16X200
	1	12.00	270	2660-12X270	1	20.00	210	2660-20X210
	1	13.00	290	2660-13X290	1	22.00	210	2660-22X210
	1	14.00	290	2660-14X290	1	25.00	210	2660-25X210
	1	16.00	290	2660-16X290	1	8.00	225	2660-8X225
	1	19.00	330	2660-19X330	1	10.00	250	2660-10X250
	1	20.00	330	2660-20X330	1	12.00	270	2660-12X270
	1	25.00	330	2660-25X330	1	13.00	290	2660-13X290
	1	10.00	500	2660-10X500	1	14.00	290	2660-14X290
	1	12.00	500	2660-12X500	1	16.00	290	2660-16X290
	1	16.00	500	2660-16X500	1	18.00	330	2660-18X330
	1	19.00	500	2660-19X500	1	19.00	330	2660-19X330
	1	25.00	500	2660-25X500	1	20.00	330	2660-20X330
	1	EXT	300	5750-38X300	1	25.00	330	2660-25X330
	1	EXT	300	5750-38716X300	1	10.00	500	2660-10X500
					1	12.00	500	2660-12X500
					1	13.00	500	2660-13X500
					1	14.00	500	2660-14X500
					1	16.00	500	2660-16X500
					1	18.00	500	2660-18X500
					1	19.00	500	2660-19X500
					1	20.00	500	2660-20X500
					1	22.00	500	2660-22X500
					1	EXT	300	5750-38X300
					1	EXT	300	5750-38716X300





GROUP	AUGR	AUGR
SURFACE FINISH	BRIGHT / BLACK	BRIGHT / BLACK
MATERIAL	HIGH CARBON STEEL	HIGH CARBON STEEL
POINT TYPE	WORM POINT	WORM POINT
OAL	<b>190MM</b>	<b>470MM</b>
SHANK	HEX WITH POWER GROOVE	HEX WITH POWER GROOVE
PACKAGING	HANG TUBE	HANG TUBE

DIA MM	PACK QTY	FL MM	OAL MM	SHANK INCH	\$ EACH	PART NUMBER	FL MM	OAL MM	SHANK INCH	\$ EACH	PART NUMBER
10.00	1	105	190	5/16	<b>32.15</b>	2665-10X190	380	470	7/16	<b>38.20</b>	2665-10X470
12.00	1	105	190	5/16	<b>37.02</b>	2665-12X190	380	470	7/16	<b>42.59</b>	2665-12X470
13.00	1	105	190	5/16	<b>37.02</b>	2665-13X190	380	470	7/16	<b>49.23</b>	2665-13X470
14.00	1	105	190	7/16	<b>39.38</b>	2665-14X190	380	470	7/16	<b>51.48</b>	2665-14X470
16.00	1	105	190	7/16	<b>41.87</b>	2665-16X190	380	470	7/16	<b>52.67</b>	2665-16X470
18.00	1	105	190	7/16	<b>46.74</b>	2665-18X190	380	470	7/16	<b>60.27</b>	2665-18X470
19.00	1	105	190	7/16	<b>46.74</b>	2665-19X190	380	470	7/16	<b>61.45</b>	2665-19X470
20.00	1	105	190	7/16	<b>49.23</b>	2665-20X190	380	470	7/16	<b>65.95</b>	2665-20X470
22.00	1	105	190	7/16	<b>51.60</b>	2665-22X190	380	470	7/16	<b>69.04</b>	2665-22X470
25.00	1	105	190	7/16	<b>58.96</b>	2665-25X190	380	470	7/16	<b>90.75</b>	2665-25X470
29.00	1	105	190	7/16	<b>63.11</b>	2665-29X190	380	470	7/16	<b>109.85</b>	2665-29X470
32.00	1	105	190	7/16	<b>74.74</b>	2665-32X190	380	470	7/16	<b>132.75</b>	2665-32X470
35.00	1	105	190	7/16	<b>88.61</b>	2665-35X190	380	470	7/16	<b>151.85</b>	2665-35X470
38.00	1	105	190	7/16	<b>100.24</b>	2665-38X190	380	470	7/16	<b>165.25</b>	2665-38X470



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
AUGER BITS - SHIP PATTERN	<b>1,908.74</b>	2665-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	OAL MM	PART NUMBER	QTY EACH	SIZE MM	OAL MM	PART NUMBER
	1	6.00	190	2665-10X190	1	6.00	470	2665-10X470
	1	8.00	190	2665-12X190	1	8.00	470	2665-12X470
	1	10.00	190	2665-13X190	1	10.00	470	2665-13X470
	1	11.00	190	2665-14X190	1	11.00	470	2665-14X470
	1	12.00	190	2665-16X190	1	12.00	470	2665-16X470
	1	14.00	190	2665-18X190	1	14.00	470	2665-18X470
	1	16.00	190	2665-19X190	1	16.00	470	2665-19X470
	1	17.00	190	2665-20X190	1	17.00	470	2665-20X470
	1	19.00	190	2665-22X190	1	19.00	470	2665-22X470
	1	21.00	190	2665-25X190	1	21.00	470	2665-25X470
	1	22.00	190	2665-29X190	1	22.00	470	2665-29X470
	1	24.00	190	2665-32X190	1	24.00	470	2665-32X470
	1	25.00	190	2665-35X190	1	25.00	470	2665-35X470
	1	38.00	190	2665-38X190	1	25.00	470	2665-38X470

**SHIP  
AUGER BITS**

Bordo Ship Augers are single twist bits, easily recognised by their lack of a central core. The ship head features a single cutter with a coarse screw. Their open pattern allows for the efficient evacuation of shavings and makes them ideal for deep hole applications. The absence of cutting spurs (or lips) makes them less susceptible to deviation due to grain and imperfections making them the preferred option for timber with a strong grain.

**SHIP AUGER  
BENEFITS**

- Hardened cutting edge for long life in hard timber, including nail-embedded wood.
- Unlikely to deviate due to grain or imperfections in the timber (such as knots) even in wood with a strong grain.
- Ideal for deep hole applications.
- Resharpenable.
- Fully-forged bit for maximum durability.

STANDARD  
SCOTCH  
PATTERN  
AUGER BITS

Heavy duty two flute auger bits are extremely efficient cutting – perfect for Australian soft and hard woods. Wide flutes provide rapid chip evacuation with a heavy duty worm point that resists breakage.

SCOTCH PATTERN  
BENEFITS

- Unlikely to deviate due to grain or imperfections in the timber (such as knots).
- Heavy duty milled flute design.
- Hardened cutting edge for long life in hard timber.
- Fully-forged bit for maximum durability.
- Resharpenable.



GROUP	AUGR
SURFACE FINISH	BRIGHT / BLACK
MATERIAL	HIGH CARBON STEEL
POINT TYPE	WORM POINT
OAL	305MM
SHANK	HEX WITH POWER GROOVE
PACKAGING	HANG TUBE

DIA MM	FL MM	OAL MM	SHANK INCH	PACK QTY	\$ EACH	PART NUMBER
6.00	200	305	7/32	1	30.37	2664-6X305
8.00	200	305	1/4	1	32.39	2664-8X305
10.00	200	305	5/16	1	34.52	2664-10X305
11.00	200	305	5/16	1	37.72	2664-11X305
12.00	200	305	5/16	1	37.72	2664-12X305
14.00	200	305	7/16	1	42.94	2664-14X305
16.00	200	305	7/16	1	51.37	2664-16X305
17.00	200	305	7/16	1	59.79	2664-17X305
19.00	200	305	7/16	1	68.21	2664-19X305
21.00	200	305	7/16	1	76.64	2664-21X305
22.00	200	305	7/16	1	76.64	2664-22X305
24.00	200	305	7/16	1	76.64	2664-24X305
25.00	200	305	7/16	1	85.05	2664-25X305
28.00	200	305	7/16	1	101.24	2664-28X305
32.00	200	305	7/16	1	126.74	2664-32X305



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
AUGER BITS - SCOTCH PATTERN	710.00	2664-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	OAL MM	PART NUMBER
	1	6.00	305	2664-6X305
	1	8.00	305	2664-8X305
	1	10.00	305	2664-10X305
	1	11.00	305	2664-11X305
	1	12.00	305	2664-12X305
	1	14.00	305	2664-14X305
	1	16.00	305	2664-16X305
	1	17.00	305	2664-17X305
	1	19.00	305	2664-19X305
	1	21.00	305	2664-21X305
	1	22.00	305	2664-22X305
	1	24.00	305	2664-24X305
	1	25.00	305	2664-25X305



GROUP	AUGR
SURFACE FINISH	BLACK
MATERIAL	HIGH CARBON STEEL
POINT TYPE	WORM POINT
OAL	<b>610MM</b>
SHANK	HEX WITH POWER GROOVE
PACKAGING	HANG TUBE

DIA MM	FL MM	OAL MM	SHANK INCH	PACK QTY	\$ EACH	PART NUMBER
10.00	200	610	23/64	1	<b>36.08</b>	2664-10X610
12.00	200	610	27/64	1	<b>42.05</b>	2664-12X610
14.00	200	610	7/16	1	<b>47.72</b>	2664-14X610
16.00	200	610	7/16	1	<b>54.27</b>	2664-16X610
19.00	200	610	7/16	1	<b>65.91</b>	2664-19X610
22.00	200	610	7/16	1	<b>79.30</b>	2664-22X610
25.00	200	610	7/16	1	<b>96.61</b>	2664-25X610

**NEW  
PRODUCT**

**LONG  
SCOTCH  
PATTERN  
AUGER BITS**

Heavy duty two flute auger bits are extremely efficient cutting – perfect for Australian soft and hard woods. Wide flutes provide rapid chip evacuation with a heavy duty worm point that resists breakage.

**SCOTCH PATTERN  
BENEFITS**

- Unlikely to deviate due to grain or imperfections in the timber (such as knots).
- Heavy duty milled flute design.
- Hardened cutting edge for long life in hard timber.
- Fully-forged bit for maximum durability.
- Resharpenable.



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
AUGER BITS - SCOTCH LONG	<b>421.94</b>	2664-D2		
AUGER BITS - SCOTCH STD AND LONG			<b>1,131.94</b>	2664-D3

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	OAL MM	PART NUMBER	QTY EACH	SIZE MM	OAL MM	PART NUMBER
	1	10.00	610	2664-10X610	1	6.00	305	2664-6X305
	1	12.00	610	2664-12X610	1	8.00	305	2664-8X305
	1	14.00	610	2664-14X610	1	10.00	305	2664-10X305
	1	16.00	610	2664-16X610	1	11.00	305	2664-11X305
	1	19.00	610	2664-19X610	1	12.00	305	2664-12X305
	1	22.00	610	2664-22X610	1	14.00	305	2664-14X305
	1	25.00	610	2664-25X610	1	16.00	305	2664-16X305
					1	17.00	305	2664-17X305
					1	19.00	305	2664-19X305
					1	21.00	305	2664-21X305
					1	22.00	305	2664-22X305
					1	24.00	305	2664-24X305
					1	10.00	610	2664-10X610
					1	12.00	610	2664-12X610
					1	14.00	610	2664-14X610
					1	16.00	610	2664-16X610
					1	19.00	610	2664-19X610
					1	22.00	610	2664-22X610
					1	25.00	610	2664-25X610

**NEW  
MERCHS**



**POWER-BORE DRILLS**

Bordo Power-Bore HSS split point auger bits outperform conventional augers in tough Australian hardwood.

**FEATURES**

- Hex shank eliminates chuck slip.
- Self feeding HSS threaded split point.
- Outperforms and outlasts conventional augers.
- Extreme performance in tough Australian hardwoods.
- Heavy duty construction for long life – guaranteed!



GROUP	AUGR
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	THREADED SPLIT POINT
SHANK TYPE	11MM HEX
PACKAGING	HANG SELL

DIA MM	OAL MM	FL MM	PACK QTY	\$ EACH	PART NUMBER
13.00	280.00	165.00	1	82.61	2662-13.0X280
14.50	300.00	180.00	1	90.03	2662-14.5X300
15.00	300.00	180.00	1	91.54	2662-15.0X300
16.00	300.00	180.00	1	94.63	2662-16.0X300
16.00	450.00	330.00	1	133.35	2662-16.0X450
17.50	300.00	180.00	1	98.34	2662-17.5X300
19.00	300.00	180.00	1	111.40	2662-19.0X300
19.00	450.00	330.00	1	152.67	2662-19.0X450
20.00	300.00	180.00	1	141.81	2662-20.0X300
22.00	300.00	200.00	1	157.68	2662-22.0X300
25.00	450.00	330.00	1	227.61	2662-25.0X450
25.50	300.00	200.00	1	206.15	2662-25.5X300
32.00	335.00	215.00	1	269.33	2662-32.0X335
38.00	335.00	220.00	1	444.25	2662-38.0X335



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
POWER-BORE	2,498.13	2662-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER
	2	13.00	2662-13.0X280
	2	14.50	2662-14.5X300
	2	15.00	2662-15.0X300
	2	16.00	2662-16.0X300
	2	17.50	2662-17.5X300
	2	19.00	2662-19.0X300
	2	20.00	2662-20.0X300
	1	22.00	2662-22.0X300
	1	25.50	2662-25.5X300
	1	32.00	2662-32.0X335
	1	38.00	2662-38.0X335



GROUP	QMWB
SURFACE FINISH	BLUE OR BLACK
MATERIAL	HIGH CARBON STEEL
CUTTERS	4 FLUTE
POINT	WORM POINT
SHANK	1/4" HEX*
PACKAGING	CLAM SHELL

**QUAD MAX  
4 FLUTE  
CUTTERS**

Use for all general drilling in wood.

**QUAD MAX BENEFITS**

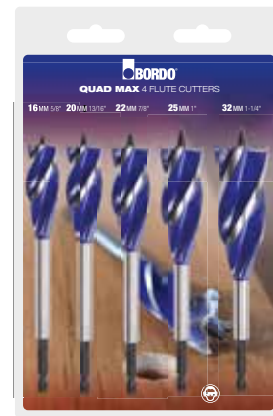
- Coarse screw point starts quickly in dry, wet & gummy wood.
- Cutting spurs reduce splintering to ensure a smooth clean hole.
- Four cutting surfaces – up to 10 times faster than standard spade bits.
- 1/4" hex shank suits Power-Hex® quick change adaptors and standard chucks.
- Fully heat treated for increased durability.



DIA MM	FL MM	OAL MM	SHANK INCH	PACK QTY	\$ EACH	PART NUMBER
16.00	70	165	1/4	1	17.28	2673-16
20.00	70	165	1/4	1	18.11	2673-20
22.00	80	165	1/4	1	18.11	2673-22
25.00	90	165	1/4	1	19.46	2673-25
32.00	90	165	7/16	1	24.58	2673-32

**Recommended  
Speeds**

Size (mm)	RPM
16 - 20	1500-2000
22 - 25	1000-1500
32	<1300



SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
SET 1 - CLAM SHELL 16, 20, 25MM	3	54.86	2673-S1
SET 2 - CLAM SHELL 16, 20, 22, 25, 32MM	5	97.55	2673-S2
SET 3 - BLOW MOULDED BOX 16, 20, 22, 25, 32MM	5	97.55	2673-S3

**NEW  
PRODUCT**

\* Older stock of 32mm Quad Max 4 flute cutters may have 7/16" hex shank

# DRILLS QUAD MAX

METRIC

MERCHANDISERS

## QUAD MAX 4 FLUTE CUTTERS

Use for all general  
drilling in wood.

### QUAD MAX BENEFITS

- Coarse screw point starts quickly in dry, wet & gummy wood.
- Cutting spurs reduce splintering to ensure a smooth clean hole.
- Four cutting surfaces – up to 10 times faster than standard spade bits.
- 1/4" hex shank suits Power-Hex® quick change adaptors and standard chucks.
- Fully heat treated for increased durability.

### Recommended Speeds

Size (mm)	RPM
16 - 20	1500-2000
22 - 25	1000-1500
32	<1300



GROUP	QMWB	—	—
PRODUCTS	QUAD MAX	QUAD MAX / SPADE BITS	QUAD MAX / SPADE / SELF FEED
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
QUAD MAX MERCHANDISER - D1	499.90	2673-D1				
WOOD DRILLING MERCHANDISER - D2			778.72	2673-D2		
WOOD DRILLING MERCHANDISER - D3					988.52	2673-D3

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER	QTY EACH	SIZE MM	PART NUMBER	QTY EACH	SIZE MM	PART NUMBER
	QUAD MAX CUTTERS			QUAD MAX CUTTERS			QUAD MAX CUTTERS		
	2	16.00	2673-16	2	16.00	2673-16	2	16.00	2673-16
	2	20.00	2673-20	2	20.00	2673-20	2	20.00	2673-20
	2	22.00	2673-22	2	22.00	2673-22	2	22.00	2673-22
	2	25.00	2673-25	2	25.00	2673-25	2	25.00	2673-25
	2	32.00	2673-32	2	32.00	2673-32	2	32.00	2673-32
	2	SET	2673-S1	2	SET	2673-S1	2	SET	2673-S1
	2	SET	2673-S2	2	SET	2673-S2	2	SET	2673-S2
				SPADE BITS			SPADE BITS		
	2	10.00	2670-10	2	10.00	2670-10	2	10.00	2670-10
	2	12.00	2670-12	2	12.00	2670-12	2	12.00	2670-12
	2	14.00	2670-14	2	14.00	2670-14	2	14.00	2670-14
	2	16.00	2670-16	2	16.00	2670-16	2	16.00	2670-16
	2	19.00	2670-19	2	19.00	2670-19	2	19.00	2670-19
	2	20.00	2670-20	2	20.00	2670-20	2	20.00	2670-20
	2	22.00	2670-22	2	22.00	2670-22	2	22.00	2670-22
	2	25.00	2670-25	2	25.00	2670-25	2	25.00	2670-25
	2	32.00	2670-32	2	32.00	2670-32	2	32.00	2670-32
	2	EXT300	5750-14X300	2	EXT300	5750-14X300	2	EXT300	5750-14X300
							SELF FEEDING WOOD BITS		
	1	25.00	2674-25				1	25.00	2674-25
	1	32.00	2674-32				1	32.00	2674-32
	1	38.00	2674-38				1	38.00	2674-38
	1	51.00	2674-51				1	51.00	2674-51
	1	54.00	2674-54				1	54.00	2674-54





GROUP	SFWB
SURFACE FINISH	BRIGHT / BLUE
MATERIAL	FORGED HIGH CARBON STEEL
POINT TYPE	REPLACEABLE SCREW POINT
CUTTING EDGES	2
PACKAGING	CLAM SHELL



DIA MM	DIA INCH	SHANK INCH	PACK QTY	\$ EACH	PART NUMBER
25.00	1	7/16	1	30.01	2674-25
29.00	1-1/8	7/16	1	31.73	2674-29
32.00	1-1/4	7/16	1	32.86	2674-32
35.00	1-3/8	7/16	1	35.36	2674-35
38.00	1-1/2	7/16	1	39.72	2674-38
44.00	1-3/4	7/16	1	47.55	2674-44
51.00	2	7/16	1	51.43	2674-51
54.00	2-1/8	7/16	1	55.78	2674-54
57.00	2-1/4	7/16	1	58.27	2674-57
65.00	2-9/16	7/16	1	65.09	2674-65
76.00	3	7/16	1	92.86	2674-76
92.00	3-5/8	7/16	1	112.56	2674-92
118.00	4-5/8	7/16	1	148.17	2674-118

**SELF FEEDING  
WOOD BITS**

Bordo Self Feeding Wood Bits are ideal for drilling large diameter holes in soft woods for plumbing and conduit penetrations and a wide variety of other applications.

**SELF FEEDING  
WOOD BITS  
FEATURE**

- Replaceable coarse screw points which drill quickly in dry, wet and gummy woods.
- 7/16" hex shanks to suit drills with 1/2" (or larger) chuck.
- Precision milled shank which eliminates wobble and runout.
- Spurs on the outside diameter cut holes cleanly and accurately.
- Dual inside cutting planes shave hole radius for clean, smooth holes without pressure.
- Forged in one piece from high carbon steel for maximum strength under the toughest drilling conditions.
- Clam shell packed with spare screw point drill.



SET TYPE	\$ SET	PART NUMBER
SELF FEEDING WOOD BITS - 9 PIECES	462.94	2674-S1
25, 29, 32, 35, 38, 44, 51, 54 AND 57MM PLUS 5 REPLACEMENT SCREW TIP POINTS AND A 300MM QUICK CHANGE EXTENSION		

**SELF FEEDING  
WOOD BITS**

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- Clam shell packed with spare screw point drill.



GROUP	SFWB
SURFACE FINISH	BRIGHT / BLUE
MATERIAL	FORGED HIGH CARBON STEEL
POINT TYPE	REPLACEABLE SCREW POINT
CUTTING EDGES	2
PACKAGING	CLAM SHELL



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
SELF FEEDING WOOD BITS	865.38	2674-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER
	1	25	2674-25
	1	29	2674-29
	1	32	2674-32
	1	35	2674-35
	1	38	2674-38
	1	44	2674-44
	1	51	2674-51
	1	54	2674-54
	1	57	2674-57
	1	65	2674-65
	1	76	2674-76
	1	92	2674-92
	1	118	2674-118
	1	300 EXT	5750-38716X300

**WOOD DRILLING MERCHANDISERS**

Additional wood drilling merchandisers featuring spade bits, quad max 4 flute cutters and self feeding wood bits are listed on page 72.

ACCESSORIES	PACK QTY	\$ EACH	PART NUMBER
NO 1 TIP - SUITS SIZES 25 – 65MM	5	3.25	2674-TIP1
NO 2 TIP - SUITS SIZES 75MM PLUS	5	2.75	2674-TIP2
GRUB SCREW	1	1.26	2674-GS



**Extensions & Adaptors to suit Self Feeding Wood Bits see page 275**

5750-38716X300 pictured Outside diameter of 27.5mm – Ideally suited for use with self feeding bits 29mm and above.

**NEW  
PRODUCT**

**E-Z CHAMFER**

Create a perfect chamfer for:

- starting a nut on a bolt or threaded bar.
- starting a button die or die nut on rod.
- creating a leading edge on timber dowel.

E-Z Chamfer efficiently removes burrs and ridges from bolts, pipe, threaded rod, bar and dowels. It is suitable for use on metals including mild and hardened steels, stainless steel, copper and brass, as well as timber, fibreglass and plastics.

E-Z Chamfer prevents sparks and burns. When used correctly at low RPMs the tool will not overheat the workpiece. Threads and burrs are sheared off creating the perfect chamfer for starting a nut or threading die.

**USAGE**

- Use at low speed – Maximum 800RPM.
- Use in impact drivers may reduce tool life.
- Start E-Z Chamfer square to the workpiece. A circular motion may improve performance on large diameter workpieces.
- E-Z Chamfer works by shearing a small amount of material every revolution. Slow drill speed with medium pressure will yield the best results in most materials. Hard materials will require a high feed pressure. In most applications it is only necessary to chamfer the first 1 to 3 threads.



GROUP	EZCH
SURFACE FINISH	BLACKENED
MATERIAL	M2 HSS
CAPACITY	8-22MM
SHANK TYPE	1/4" HEX
PACKAGING	CLAM SHELL



CAPACITY MIN – MAX	PACK QTY	\$ EACH	PART NUMBER
8 – 22	1	70.58	2210-822



**Chamfer over 1000  
Grade 12.9 Bolts!**

**Unique patented  
design!**

**World first M2-HSS  
Chamfer Tool!**

**Heavy duty single  
piece construction!**

	UNIBURR	UNIBURR PLUS	WB CHAMFER-PRO	BORDO E-Z CHAMFER
MATERIAL	HCS	HCS Coated	HCS	M2 HSS
SHANK	3 flats	3 flats	1/4" hex	1/4" hex
SIZE RANGE	8G – 3/4" 4-18mm	8G – 3/4" 4-18mm	5/16 – 1" 8-26mm	5/16 – 7/8" 8-22mm
MILD STEEL U.S. Grade 2 Metric Grade 4.8	✓	✓	✓	✓
HARD STEEL U.S. Grade 5 Metric Grade 8.8	✗	✓	✓	✓
VERY HARD STEEL U.S. Grade 8 Metric Grade 10.9	✗	✓	✓	✓
STAINLESS STEEL 300 Series	✗	✓	✓	✓
SUPER HARD STEEL U.S. Grade ASTM-A574 Metric Grade 12.9	✗	✗	✗	✓



Specifically engineered for use in impact drivers these bits are also fully compatible with conventional rotary drills. 1/4" hex shank facilitates fast tool loading in cordless impact drivers and quick change adaptors. One piece solid core design is significantly more durable than the conventional two piece design that utilises a hex sleeve on a standard round drill bit. 135° split point delivers a precision start and prevents bit wander for fast, accurate holes. Premium quality M2 HSS ensures extreme performance and long bit life.

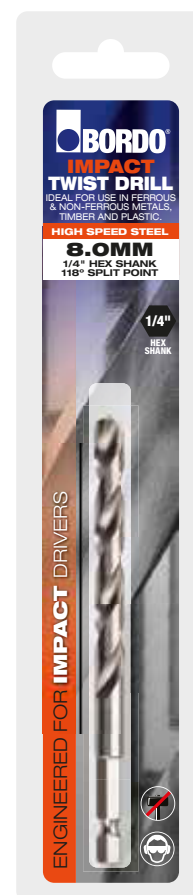


GROUP	HXJD
SURFACE FINISH	BRIGHT
MATERIAL	M2-HSS
POINT TYPE	135° SPLIT POINT
FLUTE TYPE	30° HELIX
SHANK TYPE	1/4" HEX
PACKAGING	CLAM SHELL

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
2.00	17	49	1	10.32	2206-2.00
2.50	25	57	1	10.32	2206-2.50
3.00	30	61	1	10.06	2206-3.00
3.50	39	70	1	10.06	2206-3.50
4.00	43	75	1	10.06	2206-4.00
4.50	47	80	1	10.14	2206-4.50
5.00	52	86	1	10.14	2206-5.00
5.50	57	93	1	10.14	2206-5.50
6.00	57	93	1	10.14	2206-6.00
6.50	63	101	1	10.14	2206-6.50
7.00	69	109	1	9.07	2206-7.00
7.50	69	109	1	9.69	2206-7.50
8.00	75	117	1	10.14	2206-8.00
8.50	75	117	1	10.59	2206-8.50
9.00	81	125	1	11.39	2206-9.00
9.50	81	125	1	12.55	2206-9.50
10.00	87	133	1	14.75	2206-10.00
10.50	87	133	1	16.48	2206-10.50
11.00	94	142	1	18.99	2206-11.00
11.50	94	142	1	20.24	2206-11.50
12.00	101	151	1	22.56	2206-12.00
12.50	101	151	1	23.71	2206-12.50
13.00	101	151	1	25.44	2206-13.00

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
IMPACT DRIVER DRILLS	698.24	2206-D1

MERCHANDISER CONTENTS	QTY CLAMS	SIZE MM	PART NUMBER	QTY CLAMS	SIZE	PART NUMBER
	2	2.00	2206-2.00	2	9.00	2206-9.00
	2	2.50	2206-2.50	2	9.50	2206-9.50
	2	3.00	2206-3.00	2	10.00	2206-10.00
	2	3.50	2206-3.50	2	10.50	2206-10.50
	2	4.00	2206-4.00	2	11.00	2206-11.00
	2	4.50	2206-4.50	2	11.50	2206-11.50
	2	5.00	2206-5.00	2	12.00	2206-12.00
	2	5.50	2206-5.50	2	12.50	2206-12.50
	2	6.00	2206-6.00	2	13.00	2206-13.00
	2	6.50	2206-6.50			
	2	7.00	2206-7.00	2	1/8"	2208-1/8
	2	7.50	2206-7.50	2	#11	2208-11
	2	8.00	2206-8.00	2	#20	2208-20
	2	8.50	2206-8.50	2	#30	2208-30



GROUP	HXJD	HXJD
SHANK TYPE	1/4" HEX	1/4" HEX
PACKAGING	BLOW MOULDED KIT BOX	BLOW MOULDED KIT BOX



KIT	\$ KIT	PART NUMBER	\$ KIT	PART NUMBER
IMPACT DRILL & DRIVER KIT	204.78	2206-S1		
IMPACT DRILL & POWER BIT KIT			199.86	2206-S2

KIT	QTY	SIZE MM	DESCRIPTION	PART NUMBER	QTY	SIZE MM	DESCRIPTION	PART NUMBER
	1	2.00	HEX SHANK TWIST DRILL	2206-2.00	1	2.00	HEX SHANK TWIST DRILL	2206-2.00
	1	2.50	HEX SHANK TWIST DRILL	2206-2.50	1	2.50	HEX SHANK TWIST DRILL	2206-2.50
	1	3.00	HEX SHANK TWIST DRILL	2206-3.00	1	3.00	HEX SHANK TWIST DRILL	2206-3.00
	1	4.00	HEX SHANK TWIST DRILL	2206-4.00	1	3.50	HEX SHANK TWIST DRILL	2206-3.50
	1	5.00	HEX SHANK TWIST DRILL	2206-5.00	1	4.00	HEX SHANK TWIST DRILL	2206-4.00
	1	5.50	HEX SHANK TWIST DRILL	2206-5.50	1	4.50	HEX SHANK TWIST DRILL	2206-4.50
	1	6.00	HEX SHANK TWIST DRILL	2206-6.00	1	5.00	HEX SHANK TWIST DRILL	2206-5.00
	1	6.50	HEX SHANK TWIST DRILL	2206-6.50	1	5.50	HEX SHANK TWIST DRILL	2206-5.50
	1	8.00	HEX SHANK TWIST DRILL	2206-8.00	1	6.00	HEX SHANK TWIST DRILL	2206-6.00
					1	6.50	HEX SHANK TWIST DRILL	2206-6.50
					1	8.00	HEX SHANK TWIST DRILL	2206-8.00
					1	10.00	HEX SHANK TWIST DRILL	2206-10.00
					1	12.00	HEX SHANK TWIST DRILL	2206-12.00
					1	13.00	HEX SHANK TWIST DRILL	2206-13.00
	QTY	OAL MM	IMPACT BIT DESCRIPTION	PART NUMBER	QTY	OAL MM	IMPACT BIT DESCRIPTION	PART NUMBER
	1	25	PHILLIPS #1 INSERT BIT	5305-PH1X25	1	50	PHILLIPS #1 POWER BIT	5405-PH1X50
	1	25	PHILLIPS #2 INSERT BIT	5305-PH2X25	1	50	PHILLIPS #2 POWER BIT	5405-PH2X50
	1	25	PHILLIPS #3 INSERT BIT	5305-PH3X25	1	50	PHILLIPS #3 POWER BIT	5405-PH3X50
	1	25	POZIDRIV #2 INSERT BIT	5305-PZ2X25	1	50	HEX 5MM POWER BIT	5405-HX5X50
	1	25	HEX 5MM INSERT BIT	5305-HX5X25	1	50	HEX 6MM POWER BIT	5405-HX6X50
	1	25	SQ RECESS #1 INSERT BIT	5305-SR1X25	1	50	SQ RECESS #1 POWER BIT	5405-SR1X50
	1	25	SQ RECESS #2 INSERT BIT	5305-SR2X25	1	50	SQ RECESS #2 POWER BIT	5405-SR2X50
	1	25	SQ RECESS #3 INSERT BIT	5305-SR3X25	1	50	TORX T20 POWER BIT	5405-TX20X50
	1	25	SLOT 6MM INSERT BIT	5305-SL6X25	1	50	TORX T25 POWER BIT	5405-TX25X50
	1	50	PHILLIPS #1 POWER BIT	5405-PH1X50				
1	50	PHILLIPS #2 POWER BIT	5405-PH2X50					
1	50	PHILLIPS #3 POWER BIT	5405-PH3X50					
1	50	HEX 5MM POWER BIT	5405-HX5X50					
1	50	HEX 6MM POWER BIT	5405-HX6X50					
1	50	SQ RECESS #1 POWER BIT	5405-SR1X50					
1	50	SQ RECESS #2 POWER BIT	5405-SR2X50					
1	50	TORX T20 POWER BIT	5405-TX20X50					
1	50	TORX T25 POWER BIT	5405-TX25X50					
1	65	NUTSETTER 1/4"	5605-NS1/4X65					
1	65	NUTSETTER 5/16"	5605-NS5/16X65					
1	65	NUTSETTER 3/8"	5605-NS3/8X65					
1	70	MP-QR+ INSERT BIT HOLDER	5360-MPQR1/4X70					
1	80	SLEEVE INSERT BIT HOLDER	5350-MH1/4SLX80					

These **Rotary Only** ceramic tile drills provide outstanding performance and extended tool life in hard ceramic materials. They feature a unique cutting edge geometry in conjunction with high temperature brazing to ensure reliable and accurate drilling in multiple hole applications. Use of water cooling will extend bit life.

- Although these drill bits are not recommended for drilling vitrified porcelain, their superior multi-facet tungsten carbide tip enables them to drill most materials of this type, albeit with a reduced tool life.



GROUP	CTDB
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	TUNGSTEN CARBIDE
SHANK TYPE	1/4" HEX
PACKAGING	CLAM SHELL

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
3.00	45	90	1	22.47	2750-3.00
4.00	45	90	1	22.47	2750-4.00
5.00	45	90	1	22.47	2750-5.00
5.50	45	90	1	23.93	2750-5.50
6.00	45	90	1	27.72	2750-6.00
6.50	45	90	1	33.35	2750-6.50
8.00	40	90	1	42.05	2750-8.00
10.00	36	90	1	44.58	2750-10.00

SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
IMPACT DRIVER TILE DRILL SET	8	243.59	2750-S1

3, 4, 5, 5.5, 6, 6.5, 8, 10mm

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
IMPACT DRIVER TILE DRILLS	482.63	2750-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER
	1	3.00	2750-3.00
	1	4.00	2750-4.00
	1	5.00	2750-5.00
	1	5.50	2750-5.50
	1	6.00	2750-6.00
	1	6.50	2750-6.50
	1	8.00	2750-8.00
	1	10.00	2750-10.00
	1	SET	2750-S1







GROUP	MSDB
SURFACE FINISH	SHOT PEENED
POINT TYPE	TUNGSTEN CARBIDE TIPPED
SHANK TYPE	1/4" HEX
PACKAGING	CLAM SHELL

DIAMETER MM INCH	PLUG COLOUR	FL MM	OAL MM	\$ EACH	PART NUMBER
3.00 1/8	● YELLOW	35	90	<b>8.19</b>	2534-3.00
4.00		35	90	<b>8.31</b>	2534-4.00
5.00 3/16	○ WHITE	40	100	<b>8.70</b>	2534-5.00
5.50 7/32	● RED	40	100	<b>8.95</b>	2534-5.50
6.00		50	100	<b>9.46</b>	2534-6.00
6.50 1/4	● GREEN	50	100	<b>9.71</b>	2534-6.50
7.00		50	100	<b>10.59</b>	2534-7.00
8.00 5/16	● BLUE	65	120	<b>12.10</b>	2534-8.00
10.00 3/8	● ORANGE	65	120	<b>15.63</b>	2534-10.00
12.00		90	150	<b>18.90</b>	2534-12.00

Specifically engineered for use in impact drivers these bits are also fully compatible with conventional rotary drills. 1/4" hex shank facilitates fast tool loading in cordless impact drivers and quick change adaptors.

- Premium grade carbide.
- High temperature brazing for longer life.
- Flutes designed for optimum spoil removal.

**IMPACT HEX SHANK MASONRY DRILLS ARE SUITABLE FOR USE IN**

- Concrete
- Brick
- Block
- Stone

SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
IMPACT DRIVER MASONRY DRILL SET	8	<b>71.34</b>	2534-S1

3, 4, 5, 5.5, 6, 6.5, 8, 10mm

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
IMPACT DRIVER MASONRY DRILLS	<b>181.88</b>	2534-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM	PART NUMBER
	1	3.00	2534-3.00
	1	4.00	2534-4.00
	1	5.00	2534-5.00
	1	5.50	2534-5.50
	1	6.00	2534-6.00
	1	6.50	2534-6.50
	1	7.00	2534-7.00
	1	8.00	2534-8.00
	1	10.00	2534-10.00
	1	12.00	2534-12.00
	1	SET	2534-S1



GROUP	HXJD
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	135° SPLIT POINT
END TYPE	SINGLE ENDED
SHANK TYPE	1/4" HEX
PACKAGING	CLAM SHELL

DIA GAUGE	DIA MM / INCH	RIVET DIA.	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
—	1/8"	3mm	14	51	1	<b>10.50</b>	2208-1/8
30	3.26mm	1/8"	14	51	1	<b>10.50</b>	2208-30
20	4.09mm	5/32"	14	55	1	<b>10.50</b>	2208-20
11	4.85mm	3/16"	17	62	1	<b>10.50</b>	2208-11



Specifically engineered for use in impact drivers these bits are also fully compatible with conventional rotary drills. 1/4" hex shank facilitates fast tool loading in cordless impact drivers and quick change adaptors.

One piece solid core design is significantly more durable than the conventional two piece design that utilises a hex sleeve on a standard round drill bit.

135° split point delivers a precision start and prevents bit wander for fast, accurate holes. Premium quality M2 HSS ensures extreme performance and long bit life.



GROUP	CSNK
SURFACE FINISH	BRIGHT
MATERIAL	HSS
FLUTE TYPE	TRIPLE FLUTE
ANGLE	90°
PACKAGING	HANG SELL

DIAMETER MM	CAPACITY MM-MAX	SHANK TYPE	OAL MM	PACK QTY	\$ EACH	PART NUMBER
10.0	2.5-10.0	1/4" HEX	50	1	<b>26.33</b>	3846-10
14.4	3.2-14.4	1/4" HEX	60	1	<b>34.97</b>	3846-14.4
20.5	3.5-20.5	1/4" HEX	63	1	<b>41.55</b>	3846-20.5
25.0	3.8-25.0	1/4" HEX	67	1	<b>60.51</b>	3846-25
28.0	4.0-28.0	1/4" HEX	71	1	<b>73.84</b>	3846-28



## IMPACT DRIVER

### STEP DRILLS

#### HANG & SET



GROUP	STEP
SURFACE FINISH	BRIGHT
MATERIAL	HSS
FLUTE TYPE	SPIRAL
FLUTES	1
PACKAGING	HANG SELL

DIAMETER MM MAX	INCREMENT MM	DEPTH MM	SHANK TYPE	OAL MM	PACK QTY	\$ EACH	PART NUMBER
4 - 12	1.0	4.0	1/4" HEX	66.0	1	62.01	2604-M1
4 - 20	2.0	5.5	1/4" HEX	80.0	1	74.21	2604-M2
4 - 30	2.0	5.0	1/4" HEX	102.0	1	146.10	2604-M3

Specifically engineered for use in impact drivers these bits are also fully compatible with conventional rotary drills. 1/4" hex shank facilitates fast tool loading in cordless impact drivers and quick change adaptors.



SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
METRIC IMPACT DRIVER STEP DRILL SET HSS BRIGHT 2604-M1, 2604-M2, 2604-M3	3	282.32	2604-S1

**NEW  
PRODUCT**





GROUP	STEP
SURFACE FINISH	BRIGHT
MATERIAL	HSS
FLUTE TYPE	SPIRAL
FLUTES	1
PACKAGING	HANG SELL*

#### CONE DRILLS

Bordo cone drills are ideal for electrical contractors, sheetmetal workers and auto mechanics. Cone drills are used to drill new holes or enlarge existing holes in steel, stainless steel, copper, brass, aluminium, plastic, plexiglas, laminates and many other thin materials.

Manufactured from premium quality high speed steel with double fluted ground cutting edges for long service life.

DIAMETER MM MAX	SHANK TYPE	OAL MM	PACK QTY	\$ EACH	PART NUMBER
3 – 14	1/4" HEX	64.0	1	<b>58.24</b>	2605-M1
4 – 20	1/4" HEX	82.0	1	<b>80.07</b>	2605-M2
6 – 30	1/4" HEX	102.0	1	<b>200.75</b>	2605-M3
10 – 40	1/4" HEX	94.0	1	<b>256.91</b>	2605-M4



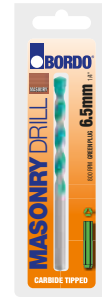
SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
METRIC IMPACT DRIVER CONE DRILL SET HSS BRIGHT	3	<b>339.06</b>	2605-S1
2605-M1, 2605-M2, 2605-M3			

\* 2605-M4 is not supplied in hang sell packaging.

**NEW  
PRODUCT**



GROUP	MSDB
SURFACE FINISH	BRIGHT WITH COLOUR CODED FLUTES
POINT TYPE	CARBIDE TIPPED
SHANK TYPE	STRAIGHT
PACKAGING	<b>CLAM SHELL</b>
LENGTH	<b>STANDARD FIXING</b>



DIAMETER MM	INCH	PLUG COLOUR	FL MM	OAL MM	SHANK MM	\$ EACH	PART NUMBER
3.00	1/8	● <b>YELLOW</b>	30	70	3.0	<b>7.62</b>	2532-3.00X70
5.00	3/16	○ <b>WHITE</b>	45	85	5.0	<b>5.82</b>	2532-5.00X85
5.50	7/32	● <b>RED</b>	50	100	5.5	<b>6.48</b>	2532-5.50X100
6.50	1/4	● <b>GREEN</b>	55	100	6.5	<b>6.48</b>	2532-6.50X100
8.00	5/16	● <b>BLUE</b>	60	120	8.0	<b>8.85</b>	2532-8.00X120
10.00	3/8	● <b>ORANGE</b>	65	120	10.0	<b>10.06</b>	2532-10.00X120

PACKAGING	SET
LENGTH	<b>STANDARD FIXING</b>

SET TYPE	\$ SET	PART NUMBER
<b>MASONRY - COLOUR FLUTE</b>	<b>45.32</b>	2532-S1

**COLOUR FLUTE  
MASONRY**

Bordo Colour Flute Masonry Drill set features "colour coded" drill sizes to match standard masonry wall plug (and spaghetti) colour coding conventions. Now you no longer need to look up reference tables to determine what drill size to use with your masonry plug - just match the colour!

**COLOUR FLUTE  
MASONRY DRILLS  
FEATURE**

- Straight shank for use in a hammer drill with a standard chuck.
- Premium grade carbide.
- High temperature brazing for longer life.
- Flutes designed for optimum spoil removal.
- Colour coded to match masonry wall plugs.

**COLOUR FLUTE  
MASONRY DRILLS  
ARE SUITABLE  
FOR USE IN**

- Concrete
- Brick
- Block
- Stone



GROUP	MSDB
DRILL TYPE	TUNGSTEN CARBIDE TIPPED
COUNTERSINK MATERIAL	<b>TUNGSTEN CARBIDE</b>
PILOT DRILL	<b>DEPTH ADJUSTABLE</b>
SHANK TYPE	<b>1/4" HEX</b>
PACKAGING	<b>CLAM SHELL</b>

SCREW GAUGE	PILOT MM	PILOT DRILL DEPTH	PACK QTY	\$ EACH	PART NUMBER
<b>8G</b>	5.0	ADJUSTABLE 9-18MM	1	<b>32.14</b>	2531-5.00-9/18
<b>10G</b>	6.0	ADJUSTABLE 9-18MM	1	<b>32.14</b>	2531-6.00-9/18

**CEMENT SHEET  
COUNTERSINK  
AND PILOT  
DRILL**

Suitable for use in all types of fibre cement sheet from 9mm to 18mm thick. Meets the specifications of James Hardie and CSR Building Products fibre cement sheet installation guidelines.

Fibre cement sheet has a high sand and cement content creating a difficult material for conventional cutting tools. Tungsten Carbide has a very high abrasion resistance and maintains a sharp cutting edge ensuring long life even in fibre cement products.



DIAMETER		PLUG COLOUR	FL	OAL	SHANK	\$	PART	FL	OAL	SHANK	\$	PART	FL	OAL	SHANK	\$	PART
MM	INCH		MM	MM	MM	EACH	NUMBER	MM	MM	MM	EACH	NUMBER	MM	MM	MM	EACH	NUMBER
3.00	1/8	● YELLOW	40	70	3.0	7.04	2530-3.00X70										
4.00	5/32	—	40	75	4.0	6.80	2530-4.00X75										
5.00	3/16	○ WHITE	50	85	5.0	5.45	2530-5.00X85	90	150	5.0	11.08	2530-5.00X150					
5.50	7/32	● RED	50	85	5.5	6.04	2530-5.50X100	90	150	5.5	10.67	2530-5.50X150					
6.00	15/64	—	60	100	6.0	6.04	2530-6.00X100	90	150	6.0	10.56	2530-6.00X150	250	330	6.0	25.90	2530-6.00X330
6.50	1/4	● GREEN	60	100	6.5	6.04	2530-6.50X100	90	150	6.5	10.81	2530-6.50X150	250	330	6.5	25.90	2530-6.50X330
7.00	9/32	—	60	100	7.0	7.69	2530-7.00X100	90	150	7.0	11.59	2530-7.00X150					
8.00	5/16	● BLUE	80	120	8.0	8.25	2530-8.00X120	90	150	8.0	12.18	2530-8.00X150	250	330	8.0	27.59	2530-8.00X330
9.00	11/32	—	80	120	9.0	9.36	2530-9.00X120										
10.00	3/8	● ORANGE	80	120	10.0	9.36	2530-10.00X120	90	150	10.0	13.99	2530-10.00X150	250	330	10.0	27.97	2530-10.00X330
11.00	7/16	● GREY						90	150	11.0	15.66	2530-11.00X150					
12.00	15/32	—						90	150	10.0	16.89	2530-12.00X150	250	330	10.0	27.97	2530-12.00X330
13.00	1/2	—						90	150	10.0	18.45	2530-13.00X150	250	330	10.0	27.97	2530-13.00X330
14.00	9/16	—						90	150	10.0	23.74	2530-14.00X150	250	330	10.0	40.85	2530-14.00X330
16.00	5/8	● BLACK						90	150	12.0	27.58	2530-16.00X150	250	330	12.0	40.85	2530-16.00X330
18.00	23/32	—						100	160	12.0	36.35	2530-18.00X150	250	330	12.0	55.93	2530-18.00X330
20.00	3/4	—						100	160	12.0	36.35	2530-20.00X150	250	330	12.0	55.93	2530-20.00X330
22.00	7/8	—						100	160	12.0	40.85	2530-22.00X150	250	330	12.0	64.88	2530-22.00X330
25.00	1	—						100	160	12.0	60.07	2530-25.00X150	250	330	12.0	81.13	2530-25.00X330



MERCHANDISER CONTENTS	PLUG COLOUR	QTY EACH	SIZE MM	PART NUMBER	QTY EACH	SIZE MM	PART NUMBER
		STANDARD FIXING			SINGLE BRICK		
	● <b>YELLOW</b>	10	3.0	2530-3.00X70			
	—	10	4.0	2530-4.00X75			
	○ <b>WHITE</b>	10	5.0	2530-5.00X85	5	5.0	2530-5.00X150
	● <b>RED</b>	10	5.5	2530-5.50X100	10	5.5	2530-5.50X150
	—	5	6.0	2530-6.00X100	5	6.0	2530-6.00X150
	● <b>GREEN</b>	5	6.5	2530-6.50X100			
	—	5	7.0	2530-7.00X100			
	● <b>BLUE</b>	10	8.0	2530-8.00X120	10	8.0	2530-8.00X150
	● <b>ORANGE</b>	5	10.0	2530-10.00X120	5	10.0	2530-10.00X150
	● <b>GREY</b>				5	11.0	2530-11.00X150
	—				5	12.0	2530-12.00X150
	—				5	13.0	2530-13.00X150





**GROO-V  
TUNGSTEN  
CARBIDE  
RAM TIP  
MULTI-PURPOSE  
DRILL BITS**

Rotary hammer or rotary-only, the Groo-V® Tip bit makes holes in almost all materials! Engineered for drilling hard materials, these specialized Ram Tip Bits have a serrated carbide tip, which penetrates faster - up to 50% faster - than standard masonry bits! (A drill press or supported drill motor is recommended for drilling hard metal).

**GROO-V DRILL  
BITS ARE  
SUITABLE  
FOR USE IN**

- Tile†
- Hard Metal
- Plastic
- Wood
- Marble†
- Granite†
- Masonry

†Because of the differing densities of these materials, the number of holes may vary. Slow drilling speeds are recommended, and in some cases, marble and granite may not be drillable with carbide tools.



GROUP	GSPEC
SURFACE FINISH	SHOT PEENED
POINT TYPE	TUNGSTEN CARBIDE RAM TIP
SHANK TYPE	FLATTED
PACKAGING	TELE-PACK

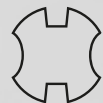
DIAMETER MM	PLUG COLOUR	FL INCH	OAL INCH	SHANK MM	\$ EACH	PART NUMBER
5.00	○ WHITE	4-1/2	6	5.0	19.06	GRT-3-6M
6.00	● RED	3-1/2	6	6.0	19.06	GRT-4-6M
8.00	● BLUE	4	6	8.0	23.46	GRT-5-6M
10.00	● ORANGE	4	6	10.0	24.92	GRT-6-6M
12.00	—	4	6	12.0	30.79	GRT-8-6M

DIAMETER INCH	PLUG COLOUR	FL INCH	OAL INCH	SHANK INCH	\$ EACH	PART NUMBER
1/8	● YELLOW	1-3/4	3	1/8	14.66	GRT-2-3
3/16	○ WHITE	2	4	3/16	17.26	GRT-3-4
3/16	○ WHITE	2-1/4	6	3/16	19.06	GRT-3-6
1/4	● GREEN	2-1/4	4	1/4	16.27	GRT-4-4
1/4	● GREEN	2-1/2	6	1/4	19.06	GRT-4-6
5/16	● BLUE	2	6	5/16	23.46	GRT-5-6
3/8	● ORANGE	4	6	3/8	24.92	GRT-6-6
1/2	—	4	6	1/2	30.79	GRT-8-6



SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
METRIC SET	5	109.94	MGRT-K5
5, 6, 8, 10 AND 12MM X 150MM OAL			
FRACTIONAL SET	5	109.94	GRT-K5
3/16, 1/4, 5/16, 3/8 AND 1/2 X 6" OAL			

### SDS Plus



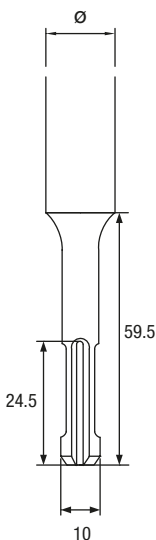
**SDS Plus®**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck



### SDS Multi-fit



**SDS Multi-fit**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® or  
Ramset R3® chuck



GROUP	SDSP	SDSM
SURFACE FINISH	SHOT PEENED	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE	VACUUM BRAZED CARBIDE
SHANK TYPE	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>
PACKAGING	<b>HANG TAB</b>	<b>HANG TAB</b>

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
	50	110		<b>SDS PLUS</b>	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>	<b>SDS MULTI-FIT</b>
4.00	50	110	1	<b>10.42</b>	2544-4.00X110		
5.00	50	110	1	<b>8.65</b>	2544-5.00X110	<b>12.36</b>	2540-5.00X110
5.50	50	110	1	<b>9.43</b>	2544-5.50X110	<b>12.36</b>	2540-5.50X110
6.00	50	110	1	<b>9.03</b>	2544-6.00X110	<b>12.36</b>	2540-6.00X110
6.50	50	110	1	<b>11.39</b>	2544-6.50X110	<b>13.26</b>	2540-6.50X110
7.00	50	110	1	<b>11.39</b>	2544-7.00X110		
8.00	50	110	1	<b>10.20</b>	2544-8.00X110	<b>14.81</b>	2540-8.00X110
10.00	50	110	1	<b>11.78</b>	2544-10.00X110	<b>16.67</b>	2540-10.00X110
	100	160		<b>SDS PLUS</b>	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>	<b>SDS MULTI-FIT</b>
5.00	100	160	1	<b>10.46</b>	2544-5.00X160	<b>13.74</b>	2540-5.00X160
5.50	100	160	1	<b>10.85</b>	2544-5.50X160	<b>13.74</b>	2540-5.50X160
6.00	100	160	1	<b>9.03</b>	2544-6.00X160	<b>13.74</b>	2540-6.00X160
6.50	100	160	1	<b>12.18</b>	2544-6.50X160	<b>15.58</b>	2540-6.50X160
7.00	100	160	1	<b>12.18</b>	2544-7.00X160	<b>17.27</b>	2540-7.00X160
8.00	100	160	1	<b>10.61</b>	2544-8.00X160	<b>15.24</b>	2540-8.00X160
10.00	100	160	1	<b>12.18</b>	2544-10.00X160	<b>17.21</b>	2540-10.00X160
12.00	100	160	1	<b>17.28</b>	2544-12.00X160	<b>22.37</b>	2540-12.00X160
13.00	100	160	1	<b>21.21</b>	2544-13.00X160	<b>25.37</b>	2540-13.00X160
15.00	100	160	1	<b>28.28</b>	2544-15.00X160	<b>28.97</b>	2540-15.00X160
16.00	100	160	1	<b>29.85</b>	2544-16.00X160	<b>33.30</b>	2540-16.00X160
	150	210		<b>SDS PLUS</b>	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>	<b>SDS MULTI-FIT</b>
5.00	150	210	1	<b>15.93</b>	2544-5.00X210	<b>21.10</b>	2540-5.00X210
5.50	150	210	1	<b>15.93</b>	2544-5.50X210		
6.00	150	210	1	<b>14.53</b>	2544-6.00X210	<b>21.10</b>	2540-6.00X210
6.50	150	210	1	<b>17.28</b>	2544-6.50X210	<b>21.10</b>	2540-6.50X210
8.00	150	210	1	<b>14.14</b>	2544-8.00X210	<b>19.86</b>	2540-8.00X210
10.00	150	210	1	<b>16.10</b>	2544-10.00X210	<b>24.97</b>	2540-10.00X210
11.00	150	210	1	<b>18.46</b>	2544-11.00X210		
12.00	150	210	1	<b>18.46</b>	2544-12.00X210	<b>27.39</b>	2540-12.00X210
16.00	150	210	1	<b>37.31</b>	2544-16.00X210	<b>43.65</b>	2540-16.00X210
18.00	150	210	1	<b>54.98</b>	2544-18.00X210	<b>54.61</b>	2540-18.00X210
20.00	150	210	1	<b>66.76</b>	2544-20.00X210	<b>68.42</b>	2540-20.00X210
	200	260		<b>SDS PLUS</b>	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>	<b>SDS MULTI-FIT</b>
8.00	200	260	1	<b>18.85</b>	2544-8.00X260	<b>27.54</b>	2540-8.00X260
10.00	200	260	1	<b>19.25</b>	2544-10.00X260	<b>27.54</b>	2540-10.00X260
12.00	200	260	1	<b>22.78</b>	2544-12.00X260	<b>28.34</b>	2540-12.00X260
13.00	200	260	1	<b>31.42</b>	2544-13.00X260		
14.00	200	260	1	<b>31.42</b>	2544-14.00X260	<b>34.39</b>	2540-14.00X260
15.00	200	260	1	<b>36.92</b>	2544-15.00X260		
22.00	200	260	1	<b>86.41</b>	2544-22.00X260	<b>105.08</b>	2540-22.00X260
24.00	200	260	1	<b>98.19</b>	2544-24.00X260	<b>119.70</b>	2540-24.00X260
25.00	200	260	1	<b>108.01</b>	2544-25.00X260	<b>127.61</b>	2540-25.00X260

The following are registered trademarks R3® – Illinois Tool Works Ramset® – Illinois Tool Works SDS Plus® – Robert Bosch Power Tool Corp. SDS Max® – Robert Bosch Power Tool Corp.



GROUP	SDSP	SDSM
SURFACE FINISH	SHOT PEENED	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE	VACUUM BRAZED CARBIDE
SHANK TYPE	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>
PACKAGING	<b>HANG TAB</b>	<b>HANG TAB</b>

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
	400	450		<b>SDS PLUS</b>	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>	<b>SDS MULTI-FIT</b>
6.50	400	450	1	<b>37.71</b>	2544-6.50X450	<b>46.87</b>	2540-6.50X450
8.00	400	450	1	<b>37.71</b>	2544-8.00X450		
10.00	400	450	1	<b>36.13</b>	2544-10.00X450	<b>46.87</b>	2540-10.00X450
12.00	400	450	1	<b>49.49</b>	2544-12.00X450	<b>49.44</b>	2540-12.00X450
14.00	400	450	1	<b>50.27</b>	2544-14.00X450	<b>59.15</b>	2540-14.00X450
16.00	400	450	1	<b>64.81</b>	2544-16.00X450	<b>59.15</b>	2540-16.00X450
18.00	400	450	1	<b>80.53</b>	2544-18.00X450	<b>88.25</b>	2540-18.00X450
20.00	400	450	1	<b>92.31</b>	2544-20.00X450	<b>88.25</b>	2540-20.00X450
22.00	400	450	1	<b>109.99</b>	2544-22.00X450	<b>122.34</b>	2540-22.00X450
24.00	400	450	1	<b>121.77</b>	2544-24.00X450	<b>153.86</b>	2540-24.00X450
25.00	400	450	1	<b>121.77</b>	2544-25.00X450	<b>153.86</b>	2540-25.00X450
26.00	400	450	1	<b>121.77</b>	2544-26.00X450		
	550	600		<b>SDS PLUS</b>	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>	<b>SDS MULTI-FIT</b>
8.00	550	600	1	<b>58.14</b>	2544-8.00X600		
10.00	550	600	1	<b>70.70</b>	2544-10.00X600		
12.00	550	600	1	<b>70.70</b>	2544-12.00X600		
14.00	550	600	1	<b>75.41</b>	2544-14.00X600		
16.00	550	600	1	<b>80.12</b>	2544-16.00X600		
18.00	550	600	1	<b>107.39</b>	2544-18.00X600		
20.00	550	600	1	<b>132.70</b>	2544-20.00X600		
22.00	550	600	1	<b>147.18</b>	2544-22.00X600		
25.00	550	600	1	<b>153.98</b>	2544-25.00X600		
	950	1000		<b>SDS PLUS</b>	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>	<b>SDS MULTI-FIT</b>
10.00	950	1000	1	<b>144.54</b>	2544-10.00X1000		
12.00	950	1000	1	<b>153.97</b>	2544-12.00X1000		
14.00	950	1000	1	<b>171.26</b>	2544-14.00X1000		
16.00	950	1000	1	<b>188.53</b>	2544-16.00X1000		
18.00	950	1000	1	<b>227.82</b>	2544-18.00X1000		
20.00	950	1000	1	<b>235.67</b>	2544-20.00X1000		
22.00	950	1000	1	<b>251.38</b>	2544-22.00X1000		
25.00	950	1000	1	<b>301.65</b>	2544-25.00X1000		

**SDS Plus**



**SDS Plus®**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck

**SDS  
Multi-fit**



**SDS Multi-fit**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® or  
Ramset R3® chuck





### SDS Plus



**SDS Plus®**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck

### SDS Multi-fit



**SDS Multi-fit**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® or  
Ramset R3® chuck



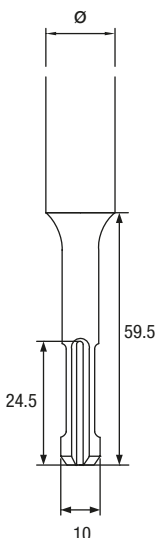
GROUP	SDSP	SDSM
SURFACE FINISH	SHOT PEENED	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE	VACUUM BRAZED CARBIDE
SHANK TYPE	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>
PACKAGING	<b>HANG PACK</b>	<b>HANG PACK</b>



DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
				SDS PLUS	SDS PLUS	SDS MULTI-FIT	SDS MULTI-FIT
5.00	100	160	10	<b>125.76</b>	2544-5.00X160TP	<b>126.41</b>	2540-5.00X160TP
5.50	100	160	10	<b>139.80</b>	2544-5.50X160TP	<b>126.41</b>	2540-5.50X160TP
6.00	100	160	10	<b>139.80</b>	2544-6.00X160TP	<b>126.41</b>	2540-6.00X160TP
6.50	100	160	10	<b>178.36</b>	2544-6.50X160TP	<b>143.33</b>	2540-6.50X160TP
8.00	100	160	10	<b>152.87</b>	2544-8.00X160TP	<b>140.12</b>	2540-8.00X160TP
10.00	100	160	10	<b>191.53</b>	2544-10.00X160TP	<b>158.33</b>	2540-10.00X160TP
12.00	100	160	10	<b>233.21</b>	2544-12.00X160TP	<b>205.78</b>	2540-12.00X160TP



SET TYPE		\$ SET	PART NUMBER	\$ SET	PART NUMBER
5 PIECE SETS	FL 100MM OAL 160MM	SDS PLUS	SDS PLUS	SDS MULTI-FIT	SDS MULTI-FIT
	5.0, 5.5, 6.5, 8.0, 10.0MM	<b>56.28</b>	2544-S1	<b>75.51</b>	2540-S1



The following are registered trademarks R3® – Illinois Tool Works Ramset® – Illinois Tool Works SDS Plus® – Robert Bosch Power Tool Corp. SDS Max® – Robert Bosch Power Tool Corp.



GROUP	SDSP	SDSM
SURFACE FINISH	SHOT PEENED	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE	VACUUM BRAZED CARBIDE
SHANK TYPE	<b>SDS PLUS</b>	<b>SDS MULTI-FIT</b>
PACKAGING	<b>HANG TAB</b>	<b>HANG TAB</b>

**SDS Plus**



**SDS Plus®**

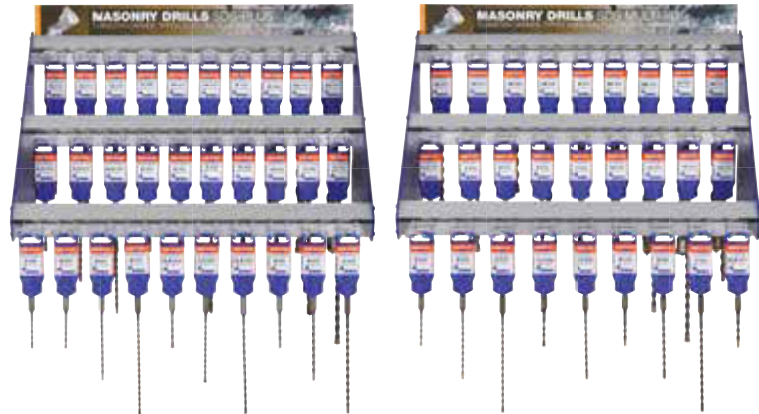
Suits all Rotary Hammers fitted with an SDS Plus® chuck

**SDS Multi-fit**



**SDS Multi-fit**

Suits all Rotary Hammers fitted with an SDS Plus® or Ramset R3® chuck



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
<b>SDS PLUS</b>	<b>1,628.60</b>	2544-D2		
<b>SDS MULTI-FIT</b>			<b>2,058.96</b>	2540-D1

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER
	3	2544-4.00X110	3	2540-5.00X110
	3	2544-5.00X110	3	2540-5.50X110
	3	2544-5.50X110	3	2540-6.00X110
	3	2544-6.00X110	3	2540-6.50X110
	3	2544-6.50X110	3	2540-8.00X110
	3	2544-8.00X110	3	2540-10.00X110
	3	2544-10.00X110	3	2540-5.00X160
	3	2544-5.00X160	3	2540-5.50X160
	3	2544-5.50X160	3	2540-6.00X160
	3	2544-6.00X160	3	2540-6.50X160
	3	2544-6.50X160	3	2540-8.00X160
	3	2544-8.00X160	3	2540-10.00X160
	3	2544-10.00X160	3	2540-12.00X160
	3	2544-12.00X160	3	2540-16.00X160
	3	2544-16.00X160	2	2540-5.00X210
	2	2544-5.00X210	2	2540-6.00X210
	2	2544-5.50X210	2	2540-8.00X210
	2	2544-6.00X210	2	2540-10.00X210
	2	2544-6.50X210	2	2540-12.00X210
	2	2544-8.00X210	2	2540-16.00X210
	2	2544-10.00X210	2	2540-18.00X210
	2	2544-12.00X210	2	2540-20.00X210
	2	2544-16.00X210	2	2540-10.00X260
	2	2544-18.00X210	2	2540-12.00X260
	2	2544-20.00X210	2	2540-22.00X260
	2	2544-10.00X260	2	2540-24.00X260
	2	2544-12.00X260	2	2540-25.00X260
	2	2544-14.00X260		
	2	2544-22.00X260		
	2	2544-25.00X260		



GROUP	XBIT
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS PLUS
PACKAGING	HANG TAB

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
	45	110		<b>X-BIT SDS PLUS</b>	<b>X-BIT SDS PLUS</b>
5.00	45	110	1	<b>13.01</b>	2538-5.00X110
5.50	45	110	1	<b>13.77</b>	2538-5.50X110
6.00	45	110	1	<b>13.77</b>	2538-6.00X110
6.50	45	110	1	<b>18.06</b>	2538-6.50X110
8.00	45	110	1	<b>15.48</b>	2538-8.00X110
10.00	45	110	1	<b>19.49</b>	2538-10.00X110
	85	160		<b>X-BIT SDS PLUS</b>	<b>X-BIT SDS PLUS</b>
5.00	85	160	1	<b>13.67</b>	2538-5.00X160
5.50	85	160	1	<b>15.20</b>	2538-5.50X160
6.00	85	160	1	<b>15.20</b>	2538-6.00X160
6.50	85	160	1	<b>19.39</b>	2538-6.50X160
8.00	85	160	1	<b>16.62</b>	2538-8.00X160
10.00	85	160	1	<b>20.81</b>	2538-10.00X160
12.00	85	160	1	<b>25.35</b>	2538-12.00X160
	135	210		<b>X-BIT SDS PLUS</b>	<b>X-BIT SDS PLUS</b>
6.00	135	210	1	<b>18.56</b>	2538-6.00X210
8.00	135	210	1	<b>19.76</b>	2538-8.00X210
10.00	135	210	1	<b>24.13</b>	2538-10.00X210
12.00	135	210	1	<b>30.21</b>	2538-12.00X210
	180	260		<b>X-BIT SDS PLUS</b>	<b>X-BIT SDS PLUS</b>
12.00	180	260	1	<b>34.10</b>	2538-12.00X260
14.00	180	260	1	<b>49.32</b>	2538-14.00X260
16.00	180	260	1	<b>69.60</b>	2538-16.00X260
18.00	180	260	1	<b>83.06</b>	2538-18.00X260
20.00	180	260	1	<b>90.66</b>	2538-20.00X260
22.00	180	260	1	<b>115.26</b>	2538-22.00X260
24.00	180	260	1	<b>128.12</b>	2538-24.00X260
25.00	180	260	1	<b>130.65</b>	2538-25.00X260
	230	310		<b>X-BIT SDS PLUS</b>	<b>X-BIT SDS PLUS</b>
6.00	230	310	1	<b>27.07</b>	2538-6.00X310
6.50	230	310	1	<b>29.61</b>	2538-6.50X310
8.00	230	310	1	<b>24.85</b>	2538-8.00X310
10.00	230	310	1	<b>29.22</b>	2538-10.00X310
12.00	230	310	1	<b>40.66</b>	2538-12.00X310
14.00	230	310	1	<b>55.21</b>	2538-14.00X310
16.00	230	310	1	<b>72.74</b>	2538-16.00X310
	350	450		<b>X-BIT SDS PLUS</b>	<b>X-BIT SDS PLUS</b>
6.50	350	450	1	<b>34.11</b>	2538-6.50X450
8.00	350	450	1	<b>34.94</b>	2538-8.00X450
10.00	350	450	1	<b>40.22</b>	2538-10.00X450
12.00	350	450	1	<b>56.03</b>	2538-12.00X450
16.00	350	450	1	<b>86.83</b>	2538-16.00X450
18.00	350	450	1	<b>104.15</b>	2538-18.00X450
20.00	350	450	1	<b>122.86</b>	2538-20.00X450
22.00	350	450	1	<b>150.71</b>	2538-22.00X450
24.00	350	450	1	<b>167.47</b>	2538-24.00X450
25.00	350	450	1	<b>170.44</b>	2538-25.00X450
	550	600		<b>X-BIT SDS PLUS</b>	<b>X-BIT SDS PLUS</b>
12.00	550	600	1	<b>80.48</b>	2538-12.00X600



**Bordo SDS Plus X-Bits drill faster and last longer than standard two edged rotary hammer bits.**

Hard stone and high MPA concrete quickly cause standard masonry bits to dull and break, but not the X-Bit.

- Single piece 4 edge tungsten carbide head.\*
- Extreme toughness and wear resistance.
- Exceptionally low vibration.
- Precision cutting facets create dimensionally accurate holes for improved anchor performance.
- Patented chamfering on the tip ensures fracture resistance when drilling into concrete reinforcing.
- Self-centering drill tip reduces bit wander.
- Four flute geometry ensures efficient dust removal.
- Solid engineered heavy duty core the length of the drill prevents bending and breakage.

\* 24.0mm X-Bits have a 3 piece tungsten carbide head.



**SDS Plus®**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck







GROUP	XBIT
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS PLUS
PACKAGING	HANG TAB



**SDS Plus**



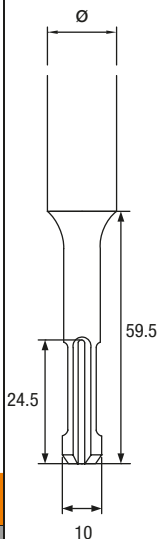
**SDS Plus®**

Suits all Rotary Hammers fitted with an SDS Plus® chuck

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
				X-BIT SDS PLUS	X-BIT SDS PLUS
5.00	85	160	10	<b>125.76</b>	2538-5.00X160TP
5.50	85	160	10	<b>139.80</b>	2538-5.50X160TP
6.00	85	160	10	<b>139.80</b>	2538-6.00X160TP
6.50	85	160	10	<b>178.36</b>	2538-6.50X160TP
8.00	85	160	10	<b>152.87</b>	2538-8.00X160TP
10.00	85	160	10	<b>191.53</b>	2538-10.00X160TP
12.00	85	160	10	<b>233.21</b>	2538-12.00X160TP



SET TYPE	\$ SET	PART NUMBER
5 PIECE SET FL 100MM OAL 160MM	X-BIT SDS PLUS	X-BIT SDS PLUS
5.0, 6.0, 6.5, 8.0, 10.0MM	<b>85.69</b>	2538-S1





GROUP	XBIT
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS PLUS
PACKAGING	HANG TAB

SDS Plus



**SDS Plus®**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck



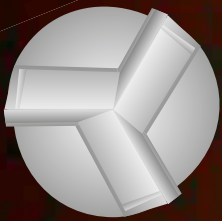
MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
X-BIT SDS PLUS	2,224.88	2538-D1

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER
	2	2538-5.00X110
	2	2538-5.00X160
	2	2538-5.50X110
	2	2538-5.50X160
	2	2538-6.00X110
	2	2538-6.00X160
	2	2538-6.00X210
	2	2538-6.50X110
	2	2538-6.50X160
	2	2538-8.00X110
	2	2538-8.00X160
	2	2538-8.00X210
	2	2538-10.00X110
	2	2538-10.00X160
	2	2538-10.00X210
	2	2538-12.00X160
	2	2538-12.00X210
	1	2538-12.00X260
	1	2538-12.00X310
	1	2538-12.00X450
	1	2538-14.00X260
	1	2538-16.00X260
	1	2538-16.00X450
	1	2538-18.00X260
	1	2538-18.00X450
	1	2538-20.00X260
	1	2538-20.00X450
	1	2538-22.00X260
	1	2538-22.00X450
	1	2538-24.00X260
	1	2538-24.00X450
	1	2538-25.00X260
	1	2538-25.00X450





Superior hole concentricity results  
in increased anchor performance.



# DELTABIT

**The Bordo range of Deltabit SDS Plus and SDS Max solid tungsten carbide head masonry drill bits offer outstanding performance in a wide variety of drilling applications. Deltabits offer specific advantages over standard SDS bits:**

- Three edge cutter provides high durability and improved drilling speed.
- Tungsten carbide head is permanently bonded to the shank through the use of a unique fusion welding technology, rather than brazing.
- Eliminates rifling – drilling holes close to perfect roundness.
- Extremely round holes result in improved fastener performance by increasing pull out loads.
- More accurate hole starting without bit walk.
- Limited circumferential wear.
- Drills through reinforcing mesh and reinforcing bar.
- Minimised bit binding against reinforcing bar – increasing operator safety.
- Easily drills through all typical steel decking plate including Bondek®.
- Reduced vibration minimising operator fatigue.
- Extremely hard wearing for long tool life.
- Triple fluted for improved dust extraction.
- Asymmetrical five cutter head on a select range of sizes in SDS Max.





**SDS Plus**

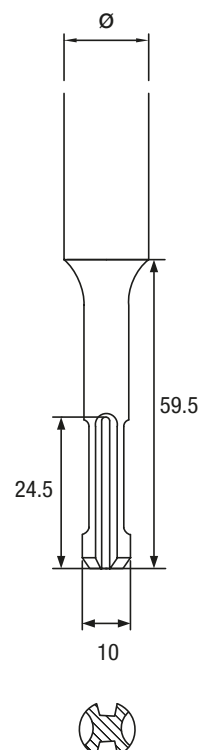

**SDS Plus®**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck



GROUP	SDSD
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	SOLID MULTI-FACET CARBIDE
SHANK TYPE	SDS PLUS
PACKAGING	HANG TAB

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
	50	116		<b>DELTABIT SDS PLUS</b>	<b>DELTABIT SDS PLUS</b>
5.00	50	116	1	<b>19.90</b>	2543-5.00X116
5.50	50	116	1	<b>19.90</b>	2543-5.50X116
6.00	50	116	1	<b>21.24</b>	2543-6.00X116
6.50	50	116	1	<b>23.54</b>	2543-6.50X116
8.00	50	116	1	<b>24.39</b>	2543-8.00X116
10.00	50	116	1	<b>32.40</b>	2543-10.00X116
	100	166		<b>DELTABIT SDS PLUS</b>	<b>DELTABIT SDS PLUS</b>
5.00	100	166	1	<b>23.54</b>	2543-5.00X166
5.50	100	166	1	<b>23.54</b>	2543-5.50X166
6.00	100	166	1	<b>24.39</b>	2543-6.00X166
6.50	100	166	1	<b>24.75</b>	2543-6.50X166
8.00	100	166	1	<b>27.55</b>	2543-8.00X166
10.00	100	166	1	<b>35.55</b>	2543-10.00X166
12.00	100	166	1	<b>41.14</b>	2543-12.00X166
	150	216		<b>DELTABIT SDS PLUS</b>	<b>DELTABIT SDS PLUS</b>
6.00	150	216	1	<b>26.70</b>	2543-6.00X216
6.50	150	216	1	<b>26.70</b>	2543-6.50X216
8.00	150	216	1	<b>30.70</b>	2543-8.00X216
10.00	150	216	1	<b>39.07</b>	2543-10.00X216
12.00	150	216	1	<b>45.14</b>	2543-12.00X216
14.00	150	216	1	<b>63.10</b>	2543-14.00X216
16.00	150	216	1	<b>81.08</b>	2543-16.00X216
18.00	150	216	1	<b>178.76</b>	2543-18.00X216
20.00	150	216	1	<b>202.47</b>	2543-20.00X216
	200	266		<b>DELTABIT SDS PLUS</b>	<b>DELTABIT SDS PLUS</b>
12.00	200	266	1	<b>51.09</b>	2543-12.00X266
16.00	200	266	1	<b>82.15</b>	2543-16.00X266
18.00	200	266	1	<b>157.99</b>	2543-18.00X266
20.00	200	266	1	<b>172.80</b>	2543-20.00X266
	250	316		<b>DELTABIT SDS PLUS</b>	<b>DELTABIT SDS PLUS</b>
6.00	250	316	1	<b>42.23</b>	2543-6.00X316
6.50	250	316	1	<b>42.71</b>	2543-6.50X316
8.00	250	316	1	<b>46.23</b>	2543-8.00X316
10.00	250	316	1	<b>55.46</b>	2543-10.00X316
12.00	250	316	1	<b>67.47</b>	2543-12.00X316
14.00	250	316	1	<b>86.88</b>	2543-14.00X316
16.00	250	316	1	<b>104.11</b>	2543-16.00X316
	400	466		<b>DELTABIT SDS PLUS</b>	<b>DELTABIT SDS PLUS</b>
10.00	400	466	1	<b>92.95</b>	2543-10.00X466
12.00	400	466	1	<b>102.54</b>	2543-12.00X466
14.00	400	466	1	<b>110.04</b>	2543-14.00X466
16.00	400	466	1	<b>109.33</b>	2543-16.00X466
18.00	400	466	1	<b>236.26</b>	2543-18.00X466
20.00	400	466	1	<b>253.01</b>	2543-20.00X466

SET TYPE	\$ SET	PART NUMBER
<b>5 PIECE SET FL 100MM OAL 166MM</b>	<b>DELTABIT SDS PLUS</b>	<b>DELTABIT SDS PLUS</b>
5.0, 5.5, 6.5, 8.0, 10.0MM	<b>134.93</b>	2543-S1





GROUP	SDSD
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	SOLID MULTI-FACET CARBIDE
SHANK TYPE	SDS PLUS
PACKAGING	HANG TAB



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
DELTAGON SDS PLUS	2,848.80	2543-D1		
DELTAGON SDS PLUS – UNIVERSAL			329.69	2543-D4

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER
	1	2543-5.00X116	1	2543-5.50X166
	1	2543-5.50X116	1	2543-6.50X166
	1	2543-6.00X116	1	2543-10.00X166
	1	2543-6.50X116	1	2543-12.00X166
	1	2543-8.00X116	1	2543-6.50X216
	1	2543-10.00X116	1	2543-8.00X216
	1	2543-5.00X166	1	2543-10.00X216
	1	2543-5.50X166	1	2543-12.00X216
	1	2543-6.00X166	1	2543-14.00X216
	1	2543-6.50X166		
	1	2543-8.00X166		
	1	2543-10.00X166		
	1	2543-12.00X166		
	1	2543-6.00X216		
	1	2543-6.50X216		
	1	2543-8.00X216		
	1	2543-10.00X216		
	1	2543-12.00X216		
	1	2543-14.00X216		
	1	2543-16.00X216		
	1	2543-18.00X216		
	1	2543-20.00X216		
	1	2543-12.00X266		
	1	2543-16.00X266		
	1	2543-18.00X266		
	1	2543-20.00X266		
	1	2543-6.00X316		
	1	2543-6.50X316		
	1	2543-8.00X316		
	1	2543-10.00X316		
	1	2543-12.00X316		
	1	2543-14.00X316		
	1	2543-16.00X316		
	1	2543-10.00X466		
	1	2543-12.00X466		
	1	2543-14.00X466		
	1	2543-16.00X466		
	1	2543-18.00X466		
	1	2543-20.00X466		



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GROUP	S MAX
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS MAX
PACKAGING	HANG TAB

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
	200	320		SDS MAX	SDS MAX
20.00	200	320	1	122.04	2547-20.00X320
22.00	200	320	1	131.48	2547-22.00X320
25.00	200	320	1	142.53	2547-25.00X320
28.00	200	320	1	163.11	2547-28.00X320
30.00	200	320	1	168.54	2547-30.00X320
32.00	200	320	1	183.68	2547-32.00X320
35.00	200	320	1	232.39	2547-35.00X320
38.00	200	320	1	288.98	2547-38.00X320
40.00	200	320	1	322.78	2547-40.00X320
	200	340		SDS MAX	SDS MAX
12.00	200	340	1	93.26	2547-12.00X340
14.00	200	340	1	104.13	2547-14.00X340
16.00	200	340	1	112.33	2547-16.00X340
18.00	200	340	1	116.52	2547-18.00X340
	400	520		SDS MAX	SDS MAX
20.00	400	520	1	141.28	2547-20.00X520
22.00	400	520	1	149.39	2547-22.00X520
25.00	400	520	1	165.78	2547-25.00X520
28.00	400	520	1	187.78	2547-28.00X520
30.00	400	520	1	201.51	2547-30.00X520
32.00	400	520	1	219.32	2547-32.00X520
35.00	400	520	1	245.33	2547-35.00X520
38.00	400	520	1	336.87	2547-38.00X520
40.00	400	520	1	353.83	2547-40.00X520
	400	540		SDS MAX	SDS MAX
12.00	400	540	1	111.09	2547-12.00X540
14.00	400	540	1	124.72	2547-14.00X540
16.00	400	540	1	131.48	2547-16.00X540
18.00	400	540	1	138.44	2547-18.00X540
	800	920		SDS MAX	SDS MAX
20.00	800	920	1	220.77	2547-20.00X920
22.00	800	920	1	224.76	2547-22.00X920
25.00	800	920	1	268.58	2547-25.00X920
28.00	800	920	1	385.39	2547-28.00X920
30.00	800	920	1	437.23	2547-30.00X920
32.00	800	920	1	475.25	2547-32.00X920
35.00	800	920	1	501.92	2547-35.00X920
38.00	800	920	1	542.45	2547-38.00X920
40.00	800	920	1	609.42	2547-40.00X920
	800	940		SDS MAX	SDS MAX
12.00	800	940	1	160.45	2547-12.00X940
14.00	800	940	1	167.29	2547-14.00X940
16.00	800	940	1	216.56	2547-16.00X940
18.00	800	940	1	217.90	2547-18.00X940
	1200	1320		SDS MAX	SDS MAX
20.00	1200	1320	1	341.19	2547-20.00X1320
25.00	1200	1320	1	556.76	2547-25.00X1320
32.00	1200	1320	1	654.75	2547-32.00X1320







GROUP	SMAX
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS MAX
PACKAGING	HANG TAB

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
MASONRY - SDS MAX	3,379.77	2547-D1

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER
	1	2547-12.00X340
	1	2547-14.00X340
	1	2547-16.00X340
	1	2547-18.00X340
	1	2547-20.00X320
	1	2547-22.00X320
	1	2547-25.00X320
	1	2547-28.00X320
	1	2547-30.00X320
	1	2547-32.00X320
	1	2547-12.00X540
	1	2547-16.00X540
	1	2547-20.00X520
	1	2547-22.00X520
	1	2547-25.00X520
	1	2547-28.00X520
	1	2547-32.00X520
	1	2547-35.00X520
	1	2547-38.00X520
	1	2547-40.00X520

GROUP	SMAX
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
SHANK TYPE	SDS MAX
PACKAGING	TELEPACK



DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
SDS MAX (MALE) ADAPTOR TO SDS PLUS	1	334.13	2547-SDSPLUS

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**SDS Max**

**NEW  
PRODUCT**

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GROUP	XMAX
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS MAX
PACKAGING	HANG TAB

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
		<b>340</b>		<b>SDS MAX</b>	<b>SDS MAX</b>
12.00	185	340	1	<b>94.29</b>	2541-12.00X340
14.00	185	340	1	<b>105.86</b>	2541-14.00X340
16.00	185	340	1	<b>123.92</b>	2541-16.00X340
18.00	185	340	1	<b>145.47</b>	2541-18.00X340
20.00	195	340	1	<b>161.63</b>	2541-20.00X340
22.00	195	340	1	<b>176.00</b>	2541-22.00X340
		<b>370</b>		<b>SDS MAX</b>	<b>SDS MAX</b>
25.00	200	370	1	<b>202.94</b>	2541-25.00X370
28.00	230	370	1	<b>245.84</b>	2541-28.00X370
30.00	230	370	1	<b>320.57</b>	2541-30.00X370
		<b>540</b>		<b>SDS MAX</b>	<b>SDS MAX</b>
12.00	385	540	1	<b>125.71</b>	2541-12.00X540
14.00	385	540	1	<b>156.24</b>	2541-14.00X540
16.00	385	540	1	<b>163.43</b>	2541-16.00X540
18.00	385	540	1	<b>169.98</b>	2541-18.00X540
20.00	395	540	1	<b>171.29</b>	2541-20.00X540
22.00	395	540	1	<b>198.00</b>	2541-22.00X540
		<b>570</b>		<b>SDS MAX</b>	<b>SDS MAX</b>
25.00	400	570	1	<b>209.00</b>	2541-25.00X570
28.00	430	570	1	<b>287.75</b>	2541-28.00X570
30.00	430	570	1	<b>306.59</b>	2541-30.00X570
32.00	430	570	1	<b>457.29</b>	2541-32.00X570
35.00	430	570	1	<b>532.71</b>	2541-35.00X570
		<b>920</b>		<b>SDS MAX</b>	<b>SDS MAX</b>
16.00	765	920	1	<b>280.76</b>	2541-16.00X920
18.00	765	920	1	<b>289.14</b>	2541-18.00X920
20.00	795	920	1	<b>303.81</b>	2541-20.00X920
25.00	780	920	1	<b>427.43</b>	2541-25.00X920
28.00	780	920	1	<b>542.67</b>	2541-28.00X920
30.00	780	920	1	<b>680.95</b>	2541-30.00X920
		<b>1320</b>		<b>SDS MAX</b>	<b>SDS MAX</b>
20.00	1150	1320	1	<b>393.90</b>	2541-20.00X1320
25.00	1180	1320	1	<b>536.38</b>	2541-25.00X1320
32.00	1180	1320	1	<b>817.14</b>	2541-32.00X1320

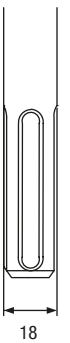


**NEW Bordo SDS Max X-Bits drill faster and last longer than standard rotary hammer bits.**

Hard stone and high MPA concrete quickly cause standard masonry bits to dull and break, but not the X-Bit.

- Single piece four edge tungsten carbide head.
- Extreme toughness and wear resistance.
- Exceptionally low vibration.
- Precision cutting facets create dimensionally accurate holes for improved anchor performance.
- Patented chamfering on the tip ensures fracture resistance when drilling into concrete reinforcing.
- Self-centering drill tip reduces bit wander.
- Four flute geometry ensures efficient dust removal.
- Solid engineered heavy duty core the length of the drill prevents bending and breakage.





GROUP	XMAX
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS MAX
PACKAGING	HANG TAB



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
X-BIT MASONRY - SDS MAX	4,341.67	2541-D1

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER
	1	2541-12.00X340
	1	2541-14.00X340
	1	2541-16.00X340
	1	2541-18.00X340
	1	2541-20.00X340
	1	2541-22.00X340
	1	2541-25.00X370
	1	2541-28.00X370
	1	2541-30.00X370
	1	2541-12.00X540
	1	2541-14.00X540
	1	2541-16.00X540
	1	2541-18.00X540
	1	2541-20.00X540
	1	2541-22.00X540
	1	2541-25.00X570
	1	2541-28.00X570
	1	2541-30.00X570
	1	2541-32.00X570
	1	2541-35.00X570



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GROUP	SMXD	SMXD
SURFACE FINISH	SHOT PEENED	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	SOLID MULTI-FACET CARBIDE – <b>3 CUTTER</b>	SOLID MULTI-FACET CARBIDE – <b>5 CUTTER</b>
SHANK TYPE	SDS MAX	SDS MAX
PACKAGING	<b>HANG TAB</b>	<b>HANG TAB</b>

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
	165	305		<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>
10.00	165	305	1	<b>146.04</b>	2549-10.00X305		
12.00	165	305	1	<b>148.82</b>	2549-12.00X305		
14.00	165	305	1	<b>162.59</b>	2549-14.00X305		
15.00	165	305	1	<b>165.35</b>	2549-15.00X305		
16.00	165	305	1	<b>168.11</b>	2549-16.00X305		
	200	340		<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>
18.00	200	340	1	<b>203.94</b>	2549-18.00X340		
18.00	200	340	1			<b>229.65</b>	2549-18.00X340-5
20.00	200	340	1	<b>231.49</b>	2549-20.00X340		
20.00	200	340	1			<b>242.41</b>	2549-20.00X340-5
22.00	200	340	1			<b>270.08</b>	2549-22.00X340
	260	380		<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>
24.00	260	380	1			<b>303.31</b>	2549-24.00X380
25.00	260	380	1			<b>330.71</b>	2549-25.00X380
	400	520		<b>DELTABIT SDS-MAX</b>	<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>
24.00	400	520	1			<b>358.47</b>	2549-24.00X520
25.00	400	520	1			<b>407.86</b>	2549-25.00X520
26.00	400	520	1			<b>413.62</b>	2549-26.00X520
	400	540		<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 3 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>	<b>DELTABIT 5 CUTTER</b>
10.00	400	540	1	<b>239.75</b>	2549-10.00X540		
12.00	400	540	1	<b>242.51</b>	2549-12.00X540		
14.00	400	540	1	<b>248.03</b>	2549-14.00X540		
16.00	400	540	1	<b>253.52</b>	2549-16.00X540		
18.00	400	540	1	<b>259.05</b>	2549-18.00X540		
20.00	400	540	1	<b>275.58</b>	2549-20.00X540		
22.00	400	540	1	<b>341.73</b>	2549-22.00X540		



**ASYMMETRICAL  
SOLID CARBIDE  
5 CUTTER HEAD**

Standard Deltabits feature a solid triple flute carbide head. Some sizes are also available with an asymmetrical solid 5 cutter carbide head for improved cutting efficiency, reduced vibration and superior performance in mesh and bar.

**SDS MAX 5 cutter  
configuration ultra  
performance bits are  
ideal for use in drilling  
pre-cast concrete.**



GROUP	RBAR	RBAR
SURFACE FINISH	SHOT PEENED	SHOT PEENED
CUTTING EDGE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK TYPE	SDS PLUS	SDS PLUS
PACKAGING	CLAM SHELL	TELEPACK

DIA MM	DIA INCH	OAL MM	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
10.00	—	305	1 PIECE	1	<b>94.16</b>	2536-10.00X305		
12.00	—	305	1 PIECE	1	<b>101.60</b>	2536-12.00X305		
14.00	—	305	1 PIECE	1	<b>111.83</b>	2536-14.00X305		
16.00	—	305	1 PIECE	1	<b>117.20</b>	2536-16.00X305		
18.00	—	305	1 PIECE	1	<b>131.09</b>	2536-18.00X305		
19.05	<b>3/4</b>	305	1 PIECE	1	<b>138.05</b>	2536-3/4X305		
20.00	—	305	1 PIECE	1	<b>143.92</b>	2536-20.00X305		
22.00	—	305	2 PIECE	1	<b>176.92</b>	2536-22.00X305		
24.00	—	305	2 PIECE	1	<b>179.56</b>	2536-24.00X305		
25.40	<b>1</b>	305	2 PIECE	1	<b>199.43</b>	2536-1X305		
28.00	—	305	2 PIECE	1	<b>214.31</b>	2536-28.00X305		
30.00	—	305	2 PIECE	1	<b>218.97</b>	2536-30.00X305		



OAL MM	SUITS MM	FITMENT	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>305</b> (205 +100MM)	≥ 22	SDS PLUS	1			<b>27.75</b>	2536-SDS12
<b>455</b> (355 +100MM)	≥ 22	SDS PLUS	1			<b>39.42</b>	2536-SDS18
<b>610</b> (510 +100MM)	≥ 22	SDS PLUS	1			<b>52.55</b>	2536-SDS24
<b>305</b> (205 +100MM)	≥ 22	STRAIGHT	1			<b>27.75</b>	2536-PS12

**SDS Plus**

**SDS Plus®**

Suits all Rotary Hammers fitted with an SDS Plus® chuck

**TCT REBAR  
CUTTERS**

At last, the answer to drilling through concrete-embedded rebar! No more broken or shattered hammer bits; now you can drill through the rebar and not have to relocate the hole!

- Improved productivity with fast and efficient rebar cutting.
- More holes per hour.

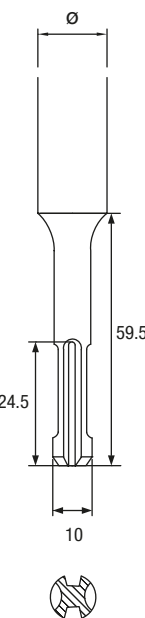
TCT Rebar Cutters enable critical placement of holes in reinforced concrete to be achieved using the combination of a tungsten carbide tipped masonry drill and a TCT rebar cutter in a rotary drill. Rebar Cutters have an external spiral pattern engineered to facilitate the efficient removal of debris. Rebar Cutters over 15mm are manufactured with a hollow core and two relief holes to enable cooling and the removal of slug and debris.

\* Discontinued item. These items will only be available until current stocks are depleted.

SDS Plus



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Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck



GROUP	RBAR
SURFACE FINISH	SHOT PEENED
MATERIAL	TUNGSTEN CARBIDE
SHANK TYPE	SDS PLUS
PACKAGING	CLAM SHELL



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
SDS PLUS REBAR CUTTER	1,827.04	2536-D1

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER
	1	2536-10.00X305
	1	2536-12.00X305
	1	2536-14.00X305
	1	2536-16.00X305
	1	2536-18.00X305
	1	2536-3/4X305
	1	2536-20.00X305
	1	2536-22.00X305
	1	2536-24.00X305
	1	2536-1X305
	1	2536-28.00X305
	1	2536-30.00X305





**SDS Plus**



**SDS Plus®**

Suits all Rotary Hammers fitted with an SDS Plus® chuck

Bordo SDS Vacuum Masonry Drill Bits reduce airborne silica dust by extracting it at the point of drilling. Holes at the bit tip and the hollow shaft design allow dust extraction through the bit while drilling the hole. The drilling of "clean" holes greatly increases productivity for chemical anchor preparation by removing the need for the "blow-brush-blow" method used with standard masonry drills. The quad cutter tungsten carbide tip provides durability in standard concrete as well as concrete with embedded rebar. The universal vacuum adapter fits most common dust extractor attachments.

**SDS Max**



**SDS Max®**

Suits all Rotary Hammers fitted with an SDS Max® chuck



GROUP	SMAX
SURFACE FINISH	SHOT PEENED
CUTTING EDGE	TUNGSTEN CARBIDE
SHANK TYPE	SDS PLUS
PACKAGING	SINGLE

DIA MM	USABLE LENGTH MM	OAL MM	HEAD STYLE	PACK QTY	\$ EACH	PART NUMBER
12.00	200	330	2-CUTTER	1	248.66	2537-12X330
14.00	250	380	2-CUTTER	1	269.59	2537-14X380
15.00	250	380	2-CUTTER	1	301.94	2537-15X380
16.00	250	380	4-CUTTER	1	336.20	2537-16X380
18.00	320	450	4-CUTTER	1	423.73	2537-18X450
20.00	320	450	4-CUTTER	1	461.80	2537-20X450
22.00	320	450	4-CUTTER	1	504.92	2537-22X450
24.00	320	450	4-CUTTER	1	548.06	2537-24X450

DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
SDS PLUS DUST EXTRACTOR ADAPTOR	1	20.71	2537-AD



GROUP	SMAX
SURFACE FINISH	SHOT PEENED
CUTTING EDGE	TUNGSTEN CARBIDE
SHANK TYPE	SDS MAX
PACKAGING	SINGLE

DIA MM	USABLE LENGTH MM	OAL MM	HEAD STYLE	PACK QTY	\$ EACH	PART NUMBER
14.00	400	620	2-CUTTER	1	589.93	2539-14X620
16.00	400	620	4-CUTTER	1	589.93	2539-16X620
18.00	400	620	4-CUTTER	1	675.56	2539-18X620
20.00	400	620	4-CUTTER	1	742.80	2539-20X620
22.00	400	620	4-CUTTER	1	802.44	2539-22X620
24.00	400	620	4-CUTTER	1	844.93	2539-24X620
25.00	500	720	4-CUTTER	1	862.69	2539-25X720
28.00	600	820	4-CUTTER	1	888.07	2539-28X820
30.00	600	820	4-CUTTER	1	970.53	2539-30X820
32.00	600	820	4-CUTTER	1	1,057.43	2539-32X820
35.00	650	820	4-CUTTER	1	1,184.30	2539-35X820

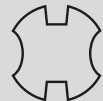
DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
SDS MAX EXTRACTOR ADAPTOR	1	31.09	2539-AD

# CHISELS MASONRY

SDS

HANG SELL

## SDS Plus



**SDS Plus®**  
Suits all Rotary  
Hammers fitted with  
an SDS Plus® chuck



GROUP	SDPC	SMCH
SURFACE FINISH	SHEET PEENED	SHEET PEENED
MATERIAL	CHROME, NICKEL, MOLY STEEL ALLOY	CHROME, NICKEL, MOLY STEEL ALLOY
SHANK TYPE	<b>SDS PLUS</b>	<b>SDS MAX</b>
PACKAGING	<b>HANG TAB</b>	<b>HANG TAB</b>

WIDTH MM	POINT TYPE	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
—	POINT	250	1	<b>35.23</b>	2546-PX250		
—	POINT	280	1			<b>39.99</b>	2548-PX280
—	POINT	400	1			<b>53.62</b>	2548-PX400
—	POINT	600	1			<b>74.06</b>	2548-PX600
20	FLAT	250	1	<b>50.55</b>	2546-F20X250		
25	FLAT	280	1			<b>52.87</b>	2548-F25X280
25	FLAT	400	1			<b>55.78</b>	2548-F25X400
25	FLAT	600	1			<b>77.81</b>	2548-F25X600
40	FLAT	250	1	<b>55.70</b>	2546-F40X250		
50	FLAT	400	1			<b>89.75</b>	2548-F50X400
50	FLAT	600	1			<b>111.99</b>	2548-F50X600
20	HOLLOW	250	1	<b>69.62</b>	2546-H20X250		

## SDS Max



**SDS Max®**  
Suits all Rotary  
Hammers fitted with  
an SDS Max® chuck



GROUP	—			
MERCHANDISER TYPE	\$ MERCHANDISER		PART NUMBER	
SDS PLUS & SDS MAX CHISELS	<b>553.66</b>		2546-D1	
MERCHANDISER CONTENTS	QTY EACH	SDS PLUS PART NUMBER	QTY EACH	SDS MAX PART NUMBER
	1	2546-PX250	1	2548-PX280
	2	2546-F20X250	1	2548-PX400
	1	2546-F40X250	1	2548-F25X280
	1	2546-H20X250	1	2548-F25X400
			1	2548-F50X400

**SDS Multi-fit**



**SDS Multi-fit**  
Suits all Rotary Hammers fitted with an SDS Plus® or Ramset R3® chuck



**FOR USE IN ROTARY HAMMERS WITH SDS CHUCK**  
RECOMMENDED 800W MIN.



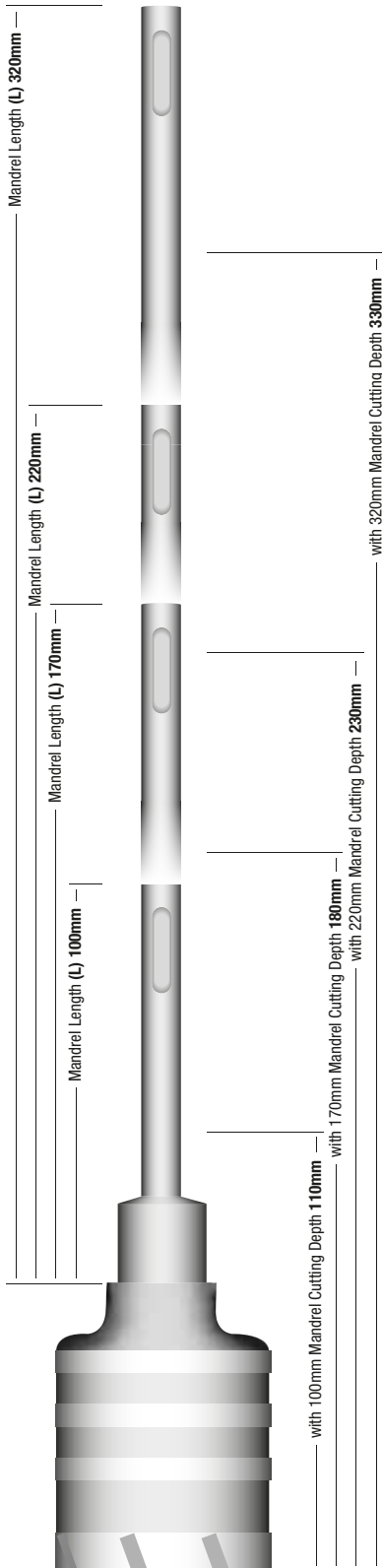
GROUP	CORE
SURFACE FINISH	SHOT PEENED
MATERIAL	CHROME, NICKEL, MOLYBDENUM STEEL ALLOY
POINT TYPE	VACUUM BRAZED CARBIDE
SHANK TYPE	SDS MULTI-FIT
PACKAGING	HANG PACK

DIA MM	THREAD MM X MM	TEETH NUMBER	PACK QTY	\$ EACH	PART NUMBER
30.00	16.0 X 2.0	5	1	141.40	7082-30
35.00	16.0 X 2.0	5	1	152.32	7082-35
40.00	16.0 X 2.0	6	1	177.94	7082-40
45.00	16.0 X 2.0	6	1	192.28	7082-45
50.00	16.0 X 2.0	7	1	210.36	7082-50
60.00	16.0 X 2.0	8	1	246.61	7082-60
66.00	16.0 X 2.0	8	1	261.14	7082-66
68.00	16.0 X 2.0	8	1	275.66	7082-68
70.00	16.0 X 2.0	8	1	282.91	7082-70
80.00	16.0 X 2.0	9	1	319.16	7082-80
85.00	16.0 X 2.0	9	1	333.69	7082-85
90.00	16.0 X 2.0	10	1	348.19	7082-90
105.00	16.0 X 2.0	11	1	402.52	7082-105
125.00	16.0 X 2.0	12	1	493.29	7082-125



LENGTH MM	CUT DEPTH MM	PACK QTY	\$ EACH	PART NUMBER
100	110	1	106.20	7082-4446
170	180	1	144.47	7082-6186
220	240	1	166.04	7082-7617
320	330	1	203.34	7082-6150

ACCESSORIES	\$ EACH	PART NUMBER
CORE BIT PILOT BIT	22.65	7082-6299





COUNTERSINKS

CROSS HOLE

BULK & SETS

COUNTERSINKS

All Bordo Countersinks are made from 100% M35 cobalt high speed steel. Cobalt offers increased wear and heat resistance in alloy steels, stainless steels and other abrasive or difficult materials. This increases tool life in all production applications.

Titanium Nitride (TiN) Coated Countersinks have a very hard gold coloured surface finish. This coating is only a few microns thick and is achieved by Physical Vapour Deposition (PVD). This treatment results in reduced friction, greater heat dissipation and reduced cold welding - which means higher speed and feed rates with greatly increased tool life. As with all surface coated tools, performance will deteriorate after resharpening.

CROSS HOLE COUNTERSINKS

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals.

These tools are best used as deburring tools, where a burr, or sharp edge, from a previous machining operation needs to be removed for cosmetic and safety reasons. However they may be used in softer materials (such as wood or plastic) to create a countersunk hole for a screw.

The intersection of the hole and cone form the cutting edge on the tool. The cone is not truly symmetrical as it is essential that the cone retreats away from the cutting edge as the tool rotates. If this does not occur the cutting edge will lack clearance and rub rather than bite into the material. This clearance is referred to as cutting relief. The radially relieved single cutting edge provides fast stock removal with low vibration for chatter-free operation ensuring the smoothest finish.



GROUP	CSNK	CSNK
SURFACE FINISH	BRIGHT	GOLD COLOURED
MATERIAL	HSS-Co5	HSS-Co5 – TIN COATED
FLUTE TYPE	CROSS HOLE	CROSS HOLE
ANGLE	90°	90°
PACKAGING	TELEPACK	TELEPACK



DIAMETER		CAPACITY MIN-MAX	SHANK TYPE		OAL MM	PACK QTY	\$	PART	\$	PART
MM	INCH		MM	INCH			EACH	NUMBER	EACH	NUMBER
6.35*	1/4	2 - 5	6.35	1/4	45	1	37.23	3840-6.35	47.81	3850-6.35
10.0	—	4 - 9	6	—	45	1	38.68	3840-10	74.26	3850-10
15.0	—	6 - 14	8	—	55	1	48.61	3840-15	68.62	3850-15
20.0	—	8 - 18	10	—	65	1	72.20	3840-20	93.85	3850-20
25.0	—	10 - 23	12	—	78	1	114.07	3840-25	141.25	3850-25
30.0	—	12 - 28	12	—	88	1	137.46	3840-30	168.51	3850-30
40.0	—	16 - 38	16	—	132	1	440.33	3840-40	505.57	3850-40

\* DOUBLE ENDED



SET	\$ SET	PART NUMBER	\$ SET	PART NUMBER
CROSS HOLE 90°	411.01	3840-S	510.90	3850-S

SET CONTENTS	SIZE MM	PART NUMBER	SIZE MM	PART NUMBER
	10.0	3840-10	10.0	3850-10
	15.0	3840-15	15.0	3850-15
	20.0	3840-20	20.0	3850-20
	25.0	3840-25	25.0	3850-25
	30.0	3840-30	30.0	3850-30



GROUP	CSNK
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co5
FLUTE TYPE	CROSS HOLE
ANGLE	60°
PACKAGING	TELEPACK



DIAMETER		CAPACITY MIN-MAX	SHANK TYPE		OAL MM	PACK QTY	\$ EACH	PART NUMBER
MM	INCH		MM	INCH				
10.0	—	5 - 9	6	—	49	1	54.27	3841-10
15.0	—	8 - 14	8	—	60	1	72.50	3841-15
20.0	—	10 - 18	10	—	72	1	112.11	3841-20
25.0	—	12 - 23	12	—	87	1	170.15	3841-25
30.0	—	15 - 28	12	—	93	1	209.56	3841-30

**COUNTERSINKS**

All Bordo Countersinks are made from 100% M35 cobalt high speed steel. Cobalt offers increased wear and heat resistance in alloy steels, stainless steels and other abrasive or difficult materials. This increases tool life in all production applications.

Titanium Nitride (TiN) Coated Countersinks have a very hard gold coloured surface finish. This coating is only a few microns thick and is achieved by Physical Vapour Deposition (PVD). This treatment results in reduced friction, greater heat dissipation and reduced cold welding - which means higher speed and feed rates with greatly increased tool life. As with all surface coated tools, performance will deteriorate after resharpening.

**SINGLE FLUTE COUNTERSINKS**

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The fluted countersink cutter is used to provide a heavy chamfer in the entrance to a drilled hole. This may be required to allow the correct seating for a countersunk head screw or to provide the lead in for a second machining operation such as tapping. Use on light to medium materials. Resharpenable.



SET	\$ SET	PART NUMBER
CROSS HOLE 60°	618.60	3841-S

SET CONTENTS	SIZE MM	PART NUMBER
	10.0	3841-10
	15.0	3841-15
	20.0	3841-20
	25.0	3841-25
	30.0	3841-30

**TRIPLE FLUTE COUNTERSINKS**

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The three fluted countersink is self centering with wide flutes and is used to provide a heavy chamfer in the entrance to a drilled hole. This may be required to allow the correct seating for a countersunk head screw or to provide the lead in for a second machining operation such as tapping. Use on medium to hard materials. Resharpenable.

COUNTERSINKS

SINGLE FLUTE

BULK & SETS

COUNTERSINKS

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GROUP	CSNK	CSNK
SURFACE FINISH	BRIGHT	GOLD COLOURED
MATERIAL	HSS-Co5	HSS-Co5 – TIN COATED
FLUTE TYPE	SINGLE FLUTE	SINGLE FLUTE
ANGLE	90°	90°
PACKAGING	TELEPACK	TELEPACK



DIAMETER		CAPACITY MIN-MAX	SHANK TYPE		OAL MM	PACK QTY	\$	PART	\$	PART
MM	INCH		MM	INCH			EACH	NUMBER	EACH	NUMBER
10.0	—	1 - 10	6	—	45	1	45.35	3842-10	47.58	3852-10
15.0	—	2 - 15	8	—	55	1	49.94	3842-15	61.44	3852-15
20.0	—	2 - 20	10	—	65	1	68.32	3842-20	89.97	3852-20
25.0	—	3 - 25	12	—	78	1	114.07	3842-25	141.25	3852-25
30.0	—	3 - 30	12	—	88	1	151.82	3842-30	182.38	3852-30



SET	\$ SET	PART NUMBER	\$ SET	PART NUMBER
SINGLE FLUTE	429.49	3842-S	522.61	3852-S

SET CONTENTS	SIZE MM	PART NUMBER	SIZE MM	PART NUMBER
	10.0	3842-10	10.0	3852-10
	15.0	3842-15	15.0	3852-15
	20.0	3842-20	20.0	3852-20
	25.0	3842-25	25.0	3852-25
	30.0	3842-30	30.0	3852-30



COUNTERSINKS

All Bordo Countersinks are made from 100% M35 cobalt high speed steel. Cobalt offers increased wear and heat resistance in alloy steels, stainless steels and other abrasive or difficult materials. This increases tool life in all production applications.

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TRIPLE FLUTE COUNTERSINKS

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The three fluted countersink is self centering with wide flutes and is used to provide a heavy chamfer in the entrance to a drilled hole. This may be required to allow the correct seating for a countersunk head screw or to provide the lead in for a second machining operation such as tapping. Use on medium to hard materials. Resharpenable.



GROUP	CSNK	CSNK
SURFACE FINISH	BRIGHT	GOLD COLOURED
MATERIAL	HSS-Co5	HSS-Co5 – TIN COATED
FLUTE TYPE	TRIPLE FLUTE	TRIPLE FLUTE
ANGLE	90°	90°
PACKAGING	TELEPACK	TELEPACK



DIAMETER MM	INCH	CAPACITY MM-MAX	SHANK TYPE MM	INCH	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
10.0	—	2.2 - 10.0	6	—	50	1	37.03	3843-10	47.58	3853-10
14.4	—	2.5 - 14.4	8	—	56	1	43.09	3843-14.4	59.20	3853-14.4
20.5	—	3.0 - 20.5	10	—	63	1	67.19	3843-20.5	88.82	3853-20.5
25.0	—	3.2 - 25.0	10	—	67	1	105.24	3843-25	132.42	3853-25
28.0	—	3.5 - 28.0	12	—	71	1	120.51	3843-28	151.08	3853-28
31.0	—	3.5 - 31.0	12	—	71	1	165.85	3843-31	201.95	3853-31
35.0*	—	4.5 - 35.0	16	—	98	1	248.12	3843-35	284.13	3853-35
40.0*	—	4.5 - 40.0	16	—	111	1	326.09	3843-40	371.71	3853-40

\* shanks have 3 flats for more effective holding

## IMPACT DRIVER HEX SHANK HSS COUNTERSINKS PAGE 80



SET	\$ SET	PART NUMBER
TRIPLE FLUTE	418.40	3843-S

SET CONTENTS	SIZE MM	PART NUMBER
	10.0	3843-10
	14.4	3843-14.4
	20.5	3843-20.5
	25.0	3843-25
	31.0	3843-31

COUNTERSINKS

All Bordo Countersinks are made from 100% M35 cobalt high speed steel. Cobalt offers increased wear and heat resistance in alloy steels, stainless steels and other abrasive or difficult materials. This increases tool life in all production applications.

Titanium Nitride (TiN) Coated Countersinks have a very hard gold coloured surface finish. This coating is only a few microns thick and is achieved by Physical Vapour Deposition (PVD). This treatment results in reduced friction, greater heat dissipation and reduced cold welding - which means higher speed and feed rates with greatly increased tool life. As with all surface coated tools, performance will deteriorate after resharpening.

SINGLE FLUTE COUNTERSINKS

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The fluted countersink cutter is used to provide a heavy chamfer in the entrance to a drilled hole. This may be required to allow the correct seating for a countersunk head screw or to provide the lead in for a second machining operation such as tapping. Use on light to medium materials. Resharpenable.

TRIPLE FLUTE COUNTERSINKS

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The three fluted countersink is self centering with wide flutes and is used to provide a heavy chamfer in the entrance to a drilled hole. This may be required to allow the correct seating for a countersunk head screw or to provide the lead in for a second machining operation such as tapping. Use on medium to hard materials. Resharpenable.



GROUP	STEP / CSNK
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co5
COUNTERSINK TYPE	CROSS HOLE / SINGLE / TRIPLE
ANGLE	90°
PACKAGING	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
COUNTERSINKS & STEP DRILLS	1,818.95	3840-D2

MERCHANDISER CONTENTS	QTY EACH	SIZE MM/INCH	PART NUMBER
COUNTERSINKS - CROSS HOLE	1	6.35	3840-6.35
	1	10.0	3840-10
	1	15.0	3840-15
	1	20.0	3840-20
	1	25.0	3840-25
	1	30.0	3840-30
COUNTERSINKS - SINGLE FLUTE	1	10.0	3842-10
	1	15.0	3842-15
	1	20.0	3842-20
	1	25.0	3842-25
	1	30.0	3842-30
COUNTERSINKS - THREE FLUTE	1	10.0	3843-10
	1	14.4	3843-14.4
	1	20.5	3843-20.5
	1	28.0	3843-28
	1	35.0	3843-35
STEP DRILLS	1	4-12	2600-M1
	1	4-20	2600-M2
	1	6-30	2600-M3
	1	1/8-1/2	2600-1
	1	1/4-3/4	2600-2

IMPACT  
DRIVER  
HEX SHANK STEP  
AND CONE DRILLS  
PAGES 81 & 82





GROUP	STEP / CSNK
SURFACE FINISH	BRIGHT
MATERIAL - STEP DRILL / COUNTERSINK	HSS / HSS-Co5
COUNTERSINK TYPE	CROSS HOLE / SINGLE / TRIPLE
COUNTERSINK ANGLE	90°
PACKAGING	MERCHANDISER

**CROSS HOLE COUNTERSINKS**

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The intersection of the hole and cone form the cutting edge on the tool. The cone is not truly symmetrical as it is essential that the cone retreats away from the cutting edge as the tool rotates. If this does not occur the cutting edge will lack clearance and rub rather than bite into the material. This clearance is referred to as cutting relief. The radially relieved single cutting edge provides fast stock removal with low vibration for chatter-free operation ensuring the smoothest finish. These tools are best used as deburring tools, where a burr, or sharp edge, from a previous machining operation needs to be removed for cosmetic and safety reasons, however they may be used in softer materials (such as wood or plastic) to create a countersunk hole for a screw.

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
COUNTERSINKS & STEP DRILLS	2,698.99	2600-D1

MERCHANDISER CONTENTS	QTY EACH	SIZE MM/INCH	PART NUMBER
COUNTERSINKS - CROSS HOLE	3	6.35	3840-6.35
	3	10.0	3840-10
	2	15.0	3840-15
	2	20.0	3840-20
	1	25.0	3840-25
	1	30.0	3840-30
COUNTERSINKS - SINGLE FLUTE	3	10.0	3842-10
	2	15.0	3842-15
	2	20.0	3842-20
	1	25.0	3842-25
	1	30.0	3842-30
COUNTERSINKS - THREE FLUTE	3	10.0	3843-10
	2	14.4	3843-14.4
	2	20.5	3843-20.5
	1	28.0	3843-28
	1	35.0	3843-35
	2	4-12	2600-M1
STEP DRILLS	1	4-20	2600-M2
	1	6-30	2600-M3
	2	1/8-1/2	2600-1
	2	1/4-3/4	2600-2

**HSS STEP DRILLS**

These step drills are ideal for electrical contractors, sheetmetal workers and auto mechanics. Step drills are designed for drilling repetitive holes in steel, stainless steel, copper, brass, aluminium, plastic, acrylic, laminates and many other thin materials.

Manufactured from premium quality high speed steel with a double fluted ground cutting edge for long service life.

**STEP DRILL BENEFITS**

- No pilot hole required.
- Easy to sharpen.
- Step depth of 5mm.
- Stepless drilling in the thinnest sheets.
- Burr-free drilling without sheet deformation.
- Automatic deburring.

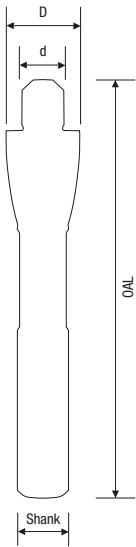


COUNTERBORES

BULK & SET

COUNTERBORES

Use with Fillister cap screw and ejector caps in moulds.

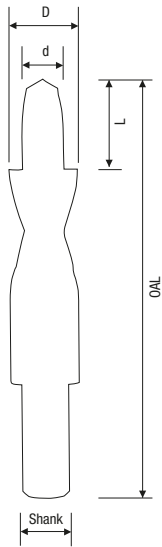


GROUP	CSNK
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co5
COUNTERBORE ANGLE	180°
PACKAGING	TELEPACK

DIAMETER		SHANK	OAL	SCREW	PACK	\$	PART
D	d	MM	MM	MM	QTY	EACH	NUMBER
6.0	3.2	6.0	71.0	M3.0	1	74.17	3870-3.0
6.5	3.7	6.5	71.0	M3.5	1	74.17	3870-3.5
8.0	4.3	8.0	71.0	M4.0	1	74.96	3870-4.0
10.0	5.3	10.0	80.0	M5.0	1	85.57	3870-5.0
11.0	6.4	10.0	80.0	M6.0	1	96.55	3870-6.0
15.0	8.4	12.5	100.0	M8.0	1	132.43	3870-8.0
18.0	10.5	12.5	100.0	M10.0	1	173.15	3870-10.0
20.0	13.0	12.5	100.0	M12.0	1	235.91	3870-12.0



SET CONTENTS	PIECES	\$	PART
	QTY	SET	NUMBER
COUNTERBORE SET	6	504.41	3870-SET
6.0/3.2, 8.0/4.3, 10.0/5.3, 11.0/6.4, 15.0/8.4, 18.0/10.5MM			

COUNTERBORE  
DRILLSUse with standard  
cap screws.

GROUP	CSNK
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co5
COUNTERBORE ANGLE	180°
PACKAGING	TELEPACK

DIAMETER D	d	SHANK MM	STEP (L) MM	OAL MM	SCREW MM	PACK QTY	\$ EACH	PART NUMBER
6.0	3.4	6.0	9.00	45.0	M3.0	1	92.70	3871-3.0
8.0	4.5	8.0	11.0	50.0	M4.0	1	93.70	3871-4.0
10.0	5.5	10.0	13.0	55.0	M5.0	1	106.97	3871-5.0
11.0	6.6	10.0	15.0	63.0	M6.0	1	120.70	3871-6.0
15.0	9.0	12.5	19.0	100.0	M8.0	1	166.23	3871-8.0
18.0	11.0	12.5	23.0	110.0	M10.0	1	243.43	3871-10.0
20.0	14.0	12.5	28.0	110.0	M12.0	1	318.60	3871-12.0



SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
COUNTERBORE DRILL SET	6	657.50	3871-SET
6.0/3.4, 8.0/4.5, 10.0/5.5, 11.0/6.6, 15.0/9.0, 18.0/11.0MM			



**MC**  
**MF**

**METRIC COARSE & FINE**

Angle of thread is 60°. The crest is flat and the thread has clearance at the root allowing external thread and internal thread to engage well. Larger root radius and lower thread height enable easy screw thread processing and increase thread screw strength. The major diameter of external thread and pitch are specified by a simple numerical value (most commonly measured in millimetres).

**TAPER TAPS**

Taper Taps have a lead of eight threads and are used as a starting tap in difficult or high precision holes. Manufactured from chrome alloy this general purpose tap is designed for use in medium tensile materials and is for hand or general machine use.

**INTERMEDIATE TAPS**

Intermediate Taps have a lead of four threads and are used in most general purpose applications to cut a thread true to a pre-drilled pilot hole.

**BOTTOMING TAPS**

Bottoming Taps have a lead of two threads and are used to ensure minimum thread run-out when tapping to the bottom of a blind hole. Bottoming Taps are typically preceded by the use of a Taper or Intermediate Tap.

GROUP	CTAP	CTAP
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	CLAM SHELL TO 12MM / TELEPACK ≥ 14MM	SET CASE



DIA MM	PITCH MM	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>METRIC COARSE</b>										
2.00	0.40	43	1.60	1	8.44	4220-2.00T	4220-2.00I	4220-2.00B	25.33	4220-2.00TS
3.00	0.50	48	2.50	1	13.08	4220-3.00T	4220-3.00I	4220-3.00B	39.21	4220-3.00TS
4.00	0.70	54	3.30	1	13.08	4220-4.00T	4220-4.00I	4220-4.00B	39.21	4220-4.00TS
5.00	0.8	60	4.20	1	8.95	4220-5.00T	4220-5.00I	4220-5.00B	23.93	4220-5.00TS
6.00	1.00	64	5.00	1	8.95	4220-6.00T	4220-6.00I	4220-6.00B	23.93	4220-6.00TS
7.00	1.00	64	6.00	1	9.26	4220-7.00T	4220-7.00I	4220-7.00B	27.71	4220-7.00TS
8.00	1.25	70	6.80	1	9.27	4220-8.00T	4220-8.00I	4220-8.00B	27.86	4220-8.00TS
9.00	1.25	75	7.80	1	12.11	4220-9.00T	4220-9.00I	4220-9.00B	36.29	4220-9.00TS
10.00	1.50	75	8.50	1	11.93	4220-10.00T	4220-10.00I	4220-10.00B	35.78	4220-10.00TS
11.00	1.50	80	9.50	1	15.00	4220-11.00T	4220-11.00I	4220-11.00B	44.99	4220-11.00TS
12.00	1.75	86	10.20	1	15.38	4220-12.00T	4220-12.00I	4220-12.00B	46.16	4220-12.00TS
14.00	2.00	91	12.00	1	22.06	4220-14.00T	4220-14.00I	4220-14.00B	66.19	4220-14.00TS
16.00	2.00	97	14.00	1	28.83	4220-16.00T	4220-16.00I	4220-16.00B	86.47	4220-16.00TS
18.00	2.50	102	15.50	1	34.37	4220-18.00T	4220-18.00I	4220-18.00B	103.11	4220-18.00TS
20.00	2.50	108	17.50	1	33.82	4220-20.00T	4220-20.00I	4220-20.00B	101.46	4220-20.00TS
22.00	2.50	119	19.50	1	44.52	4220-22.00T	4220-22.00I	4220-22.00B	133.60	4220-22.00TS
24.00	3.00	124	21.00	1	87.56	4220-24.00T	4220-24.00I	4220-24.00B	262.65	4220-24.00TS
27.00	3.00	135	24.00	1	116.41	4220-27.00T	4220-27.00I	4220-27.00B	349.22	4220-27.00TS
30.00	3.50	138	26.50	1	127.55	4220-30.00T	4220-30.00I	4220-30.00B	382.65	4220-30.00TS
33.00	3.50	151	29.50	1	178.98	4220-33.00T	4220-33.00I	4220-33.00B	536.94	4220-33.00TS
36.00	4.00	162	32.00	1	207.40	4220-36.00T	4220-36.00I	4220-36.00B	622.20	4220-36.00TS
<b>METRIC FINE</b>										
8.00	1.00	69.00	7.00	1	9.26	4221-8.00T	4221-8.00I	4221-8.00B	27.77	4221-8.00TS
10.00	1.00	75.00	9.00	1	16.70	4222-10.00T	4222-10.00I	4222-10.00B	50.17	4222-10.00TS
10.00	1.25	76.00	8.80	1	11.93	4221-10.00T	4221-10.00I	4221-10.00B	35.78	4221-10.00TS
12.00	1.25	76.00	10.80	1	25.16	4222-12.00T	4222-12.00I	4222-12.00B	75.46	4222-12.00TS
12.00	1.50	89.00	10.50	1	15.38	4221-12.00T	4221-12.00I	4221-12.00B	46.17	4221-12.00TS
14.00	1.25	76.00	12.80	1	29.93	4222-14.00T	4222-14.00I	4222-14.00B	89.81	4222-14.00TS
14.00	1.50	95.00	12.50	1	22.06	4221-14.00T	4221-14.00I	4221-14.00B	66.19	4221-14.00TS
16.00	1.50	102.00	14.50	1	28.83	4223-16.00T	4223-16.00I	4223-16.00B	86.47	4223-16.00TS
18.00	1.50	104.00	16.50	1	34.37	4221-18.00T	4221-18.00I	4221-18.00B	103.11	4221-18.00TS
20.00	1.50	104.00	18.50	1	34.37	4223-20.00T	4223-20.00I	4223-20.00B	103.11	4223-20.00TS
22.00	1.50	113.00	20.50	1	44.15	4221-22.00T	4221-22.00I	4221-22.00B	132.55	4221-22.00TS
24.00	2.00	130.00	22.00	1	89.08	4221-24.00T	4221-24.00I	4221-24.00B	267.26	4221-24.00TS
25.00	1.50	83.00	23.50	1	98.36	4223-25.00T	4223-25.00I	4223-25.00B	294.58	4223-25.00TS
32.00	1.50	102.00	30.50	1	172.86	4223-32.00T	4223-32.00I	4223-32.00B	517.64	4223-32.00TS
<b>SPARK PLUG</b>										
10.00	1.00	75.00	9.00	1	16.70	4222-10.00T	4222-10.00I	4222-10.00B	50.17	4222-10.00TS
12.00	1.25	76.00	10.80	1	25.16	4222-12.00T	4222-12.00I	4222-12.00B	75.46	4222-12.00TS
14.00	1.25	76.00	12.80	1	29.93	4222-14.00T	4222-14.00I	4222-14.00B	89.81	4222-14.00TS
18.00	1.50	104.00	16.50	1	34.37	4221-18.00T	4221-18.00I	4221-18.00B	103.11	4221-18.00TS
<b>CONDUIT</b>										
16.00	1.50	102.00	14.50	1	28.83	4223-16.00T	4223-16.00I	4223-16.00B	86.47	4223-16.00TS
20.00	1.50	104.00	18.50	1	34.37	4223-20.00T	4223-20.00I	4223-20.00B	103.11	4223-20.00TS
25.00	1.50	83.00	23.50	1	98.36	4223-25.00T	4223-25.00I	4223-25.00B	294.58	4223-25.00TS
32.00	1.50	102.00	30.50	1	172.86	4223-32.00T	4223-32.00I	4223-32.00B	517.64	4223-32.00TS



UNC  
UNF

GROUP	CTAP	CTAP
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	CLAM SHELL TO 1/2" / TELEPACK PACK ≥ 9/16"	SET CASE



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>UNC</b>										
5G	40	48.00	2.65	1	13.82	4232-5GT	4232-5GI	4232-5GB	41.47	4232-5GTS
6G	32	50.00	2.85	1	13.82	4232-6GT	4232-6GI	4232-6GB	41.47	4232-6GTS
8G	32	53.00	3.50	1	12.29	4232-8GT	4232-8GI	4232-8GB	36.89	4232-8GTS
10G	24	58.00	3.90	1	9.93	4232-10GT	4232-10GI	4232-10GB	29.87	4232-10GTS
12G	24	62.00	4.50	1	9.93	4232-12GT	4232-12GI	4232-12GB	29.87	4232-12GTS
3/16	24 UNS	58.00	3.70	1	9.93	4232-3/16T	4232-3/16I	4232-3/16B	29.87	4232-3/16TS
1/4	20	66.00	5.10	1	9.93	4232-1/4T	4232-1/4I	4232-1/4B	29.87	4232-1/4TS
5/16	18	72.00	6.60	1	9.93	4232-5/16T	4232-5/16I	4232-5/16B	29.87	4232-5/16TS
3/8	16	80.00	8.00	1	10.73	4232-3/8T	4232-3/8I	4232-3/8B	32.19	4232-3/8TS
7/16	14	85.00	9.40	1	12.96	4232-7/16T	4232-7/16I	4232-7/16B	38.83	4232-7/16TS
1/2	13	89.00	10.80	1	15.54	4232-1/2T	4232-1/2I	4232-1/2B	46.66	4232-1/2TS
9/16	12	95.00	12.20	1	25.33	4232-9/16T	4232-9/16I	4232-9/16B	76.10	4232-9/16TS
5/8	11	102.00	13.50	1	24.58	4232-5/8T	4232-5/8I	4232-5/8B	73.73	4232-5/8TS
3/4	10	112.00	16.50	1	31.19	4232-3/4T	4232-3/4I	4232-3/4B	93.68	4232-3/4TS
7/8	9	118.00	19.50	1	50.33	4232-7/8T	4232-7/8I	4232-7/8B	151.03	4232-7/8TS
1	8	130.00	22.25	1	53.81	4232-1T	4232-1I	4232-1B	161.38	4232-1TS
1-1/8	7	138.00	25.00	1	103.34	4232-1.1/8T	4232-1.1/8I	4232-1.1/8B	310.02	4232-1.1/8TS
1-1/4	7	151.00	28.00	1	125.19	4232-1.1/4T	4232-1.1/4I	4232-1.1/4B	375.58	4232-1.1/4TS
<b>UNF</b>										
5G	44	48.00	2.70	1	13.82	4234-5GT	4234-5GI	4234-5GB	41.47	4234-5GTS
6G	40	50.00	2.95	1	13.82	4234-6GT	4234-6GI	4234-6GB	41.47	4234-6GTS
8G	36	53.00	3.50	1	12.52	4234-8GT	4234-8GI	4234-8GB	37.49	4234-8GTS
10G	32	58.00	4.10	1	9.93	4234-10GT	4234-10GI	4234-10GB	29.87	4234-10GTS
12G	28	62.00	4.70	1	9.93	4234-12GT	4234-12GI	4234-12GB	29.87	4234-12GTS
3/16	32 UNS	62.00	4.10	1	11.32	4236-3/16T	4236-3/16I	4236-3/16B	33.99	4236-3/16TS
1/4	28	66.00	5.50	1	9.93	4234-1/4T	4234-1/4I	4234-1/4B	29.87	4234-1/4TS
5/16	24	69.00	6.90	1	11.12	4234-5/16T	4234-5/16I	4234-5/16B	33.40	4234-5/16TS
3/8	24	76.00	8.50	1	11.12	4234-3/8T	4234-3/8I	4234-3/8B	33.40	4234-3/8TS
7/16	20	82.00	9.90	1	14.37	4234-7/16T	4234-7/16I	4234-7/16B	43.07	4234-7/16TS
1/2	20	84.00	11.50	1	15.76	4234-1/2T	4234-1/2I	4234-1/2B	47.25	4234-1/2TS
9/16	18	90.00	12.90	1	24.78	4234-9/16T	4234-9/16I	4234-9/16B	74.33	4234-9/16TS
5/8	18	95.00	14.50	1	24.39	4234-5/8T	4234-5/8I	4234-5/8B	73.19	4234-5/8TS
3/4	16	104.00	17.50	1	28.64	4234-3/4T	4234-3/4I	4234-3/4B	85.88	4234-3/4TS
7/8	14	113.00	20.40	1	50.14	4234-7/8T	4234-7/8I	4234-7/8B	150.43	4234-7/8TS
1	12	120.00	23.25	1	51.84	4234-1T	4234-1I	4234-1B	155.52	4234-1TS
1	14 UNS	120.00	23.25	1	86.84	4236-1T	4236-1I	4236-1B	260.42	4236-1TS
1-1/8	12	127.00	26.50	1	103.74	4234-1.1/8T	4234-1.1/8I	4234-1.1/8B	311.21	4234-1.1/8TS
1-1/4	12	137.00	29.50	1	125.19	4234-1.1/4T	4234-1.1/4I	4234-1.1/4B	375.58	4234-1.1/4TS

**UNC**  
UNIFIED  
NATIONAL COARSE

This thread form was introduced in 1948 as an attempt to standardise thread forms in the USA, Canada and the UK. The thread profile of UNC is the same as for metric threads and is described in the JIS B0206 standard. The thread is described by its major diameter and the number of threads per inch of length (TPI). This thread series is commonly used in the mass production of bolts, screws and nuts. It is used for threading into lower tensile strength materials (bronze, brass, aluminium and plastics) to obtain the best resistance to stripping of the internal thread. It is also used on quick assembly or disassembly or if corrosion or slight damage is possible.

**UNF**  
UNIFIED  
NATIONAL FINE

This thread form was introduced in 1948 as an attempt to standardise thread forms in the USA, Canada and the UK. The thread profile of UNF is the same as for metric threads and is described in the JIS B0206 standard. The thread is described by its major diameter and the number of threads per inch of length (TPI). When used on external threads this series has greater tensile stress area than coarse threads of the same size. Fine series threads will resist stripping out better than coarse threads in areas where the external and mating internal threads are subjected to loads equal to or greater than the capacity of the screw or bolt. Fine threads are also used where the length of engagement is limited or where wall thickness demands a fine pitch.

BSW  
BSFBSW  
BRITISH  
STANDARD  
WHITWORTH

This thread form was developed by Sir Joseph Whitworth in 1841. The thread form has rounded roots and crests and is specified in BS84:1956. The thread angle for BSW is 55° as opposed to 60° in Metric and Unified threads.

BSF  
BRITISH  
STANDARD FINE

This thread form was based upon the British Standard Whitworth (BSW) but has a finer thread (more threads per inch for a given diameter). The thread form was first introduced in 1908 and is specified in BS84:1956.

When used on external threads this series has greater tensile stress area than coarse threads of the same size. Fine series threads will resist stripping out better than coarse threads in areas where the external and mating internal threads are subjected to loads equal to or greater than the capacity of the screw or bolt. Fine threads are also used where the length of engagement is limited or where wall thickness demands a fine pitch.

BSP  
BRITISH  
STANDARD PIPE  
BSPF (G SERIES)

This series is a pipe thread which is used mainly for mechanical coupling. The angle of thread is mainly 55° however for the US method some threads have a 60° angle. It is specified according to JIS and ISO R228.



GROUP	CTAP	CTAP
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	CLAM SHELL TO 1/2" / TELEPACK PACK ≥ 9/16"	
	SET CASE	



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>BSW</b>										
1/8	40	48.00	2.55	1	11.07	4228-1/8T	4228-1/8I	4228-1/8B	33.05	4228-1/8TS
5/32	32 (WHIT)	53.00	3.20	1	10.73	4228-5/32T	4228-5/32I	4228-5/32B	32.19	4228-5/32TS
3/16	24	58.00	3.70	1	7.60	4228-3/16T	4228-3/16I	4228-3/16B	22.74	4228-3/16TS
1/4	20	66.00	5.10	1	8.40	4228-1/4T	4228-1/4I	4228-1/4B	25.12	4228-1/4TS
5/16	18	72.00	6.50	1	9.26	4228-5/16T	4228-5/16I	4228-5/16B	27.71	4228-5/16TS
3/8	16	80.00	7.90	1	10.73	4228-3/8T	4228-3/8I	4228-3/8B	32.19	4228-3/8TS
7/16	14	85.00	9.30	1	13.30	4228-7/16T	4228-7/16I	4228-7/16B	39.87	4228-7/16TS
1/2	12	89.00	10.50	1	15.54	4228-1/2T	4228-1/2I	4228-1/2B	46.66	4228-1/2TS
9/16	12	95.00	12.10	1	25.33	4228-9/16T	4228-9/16I	4228-9/16B	76.10	4228-9/16TS
5/8	11	102.00	13.50	1	24.39	4228-5/8T	4228-5/8I	4228-5/8B	73.19	4228-5/8TS
3/4	10	112.00	16.25	1	28.64	4228-3/4T	4228-3/4I	4228-3/4B	85.88	4228-3/4TS
7/8	9	118.00	19.25	1	46.47	4228-7/8T	4228-7/8I	4228-7/8B	139.43	4228-7/8TS
1	8	130.00	22.00	1	51.84	4228-1T	4228-1I	4228-1B	155.52	4228-1TS
1-1/8	7	138.00	24.75	1	103.31	4228-1.1/8T	4228-1.1/8I	4228-1.1/8B	309.93	4228-1.1/8TS
1-1/4	7	151.00	28.00	1	127.55	4228-1.1/4T	4228-1.1/4I	4228-1.1/4B	382.65	4228-1.1/4TS
1-3/8	6	162.00	30.25	1	188.84	4228-1.3/8T	4228-1.3/8I	4228-1.3/8B	566.53	4228-1.3/8TS
1-1/2	6	170.00	33.50	1	232.79	4228-1.1/2T	4228-1.1/2I	4228-1.1/2B	698.39	4228-1.1/2TS
<b>BSF</b>										
3/16	32	58.00	4.00	1	8.44	4230-3/16T	4230-3/16I	4230-3/16B	25.33	4230-3/16TS
1/4	26	66.00	5.30	1	9.63	4230-1/4T	4230-1/4I	4230-1/4B	28.85	4230-1/4TS
5/16	22	72.00	6.80	1	11.12	4230-5/16T	4230-5/16I	4230-5/16B	33.40	4230-5/16TS
3/8	20	80.00	8.30	1	13.08	4230-3/8T	4230-3/8I	4230-3/8B	39.21	4230-3/8TS
7/16	18	85.00	9.70	1	16.11	4230-7/16T	4230-7/16I	4230-7/16B	48.28	4230-7/16TS
1/2	16	89.00	11.10	1	20.18	4230-1/2T	4230-1/2I	4230-1/2B	60.53	4230-1/2TS
9/16	16	91.00	12.70	1	30.36	4230-9/16T	4230-9/16I	4230-9/16B	91.07	4230-9/16TS
5/8	14	102.00	14.00	1	40.35	4230-5/8T	4230-5/8I	4230-5/8B	121.03	4230-5/8TS
3/4	12	112.00	16.75	1	47.66	4230-3/4T	4230-3/4I	4230-3/4B	143.01	4230-3/4TS
7/8	11	118.00	19.75	1	61.49	4230-7/8T	4230-7/8I	4230-7/8B	184.46	4230-7/8TS
1	10	130.00	22.75	1	86.43	4230-1T	4230-1I	4230-1B	259.31	4230-1TS



GROUP	CTAP	CTAP
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	CLAM SHELL TO 1/4" / TELEPACK PACK ≥ 3/8"	SET CASE



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>BSPF (G SERIES)</b>										
1/8	28	54.00	8.80	1	<b>13.82</b>	4246-1/8T	4246-1/8I	4246-1/8B	<b>41.47</b>	4246-1/8TS
1/4	19	62.00	11.80	1	<b>17.32</b>	4246-1/4T	4246-1/4I	4246-1/4B	<b>51.96</b>	4246-1/4TS
3/8	19	65.00	15.25	1	<b>25.33</b>	4246-3/8T	4246-3/8I	4246-3/8B	<b>76.10</b>	4246-3/8TS
1/2	14	79.00	19.00	1	<b>31.49</b>	4246-1/2T	4246-1/2I	4246-1/2B	<b>94.45</b>	4246-1/2TS
5/8	14	81.00	21.00	1	<b>53.43</b>	4246-5/8T	4246-5/8I	4246-5/8B	<b>160.20</b>	4246-5/8TS
3/4	14	83.00	24.50	1	<b>55.36</b>	4246-3/4T	4246-3/4I	4246-3/4B	<b>166.10</b>	4246-3/4TS
1	11	96.00	30.75	1	<b>99.23</b>	4246-1T	4246-1I	4246-1B	<b>262.83</b>	4246-1TS
1-1/4	11	102.00	39.50	1	<b>218.92</b>	4246-1.1/4T	4246-1.1/4I	4246-1.1/4B	<b>656.77</b>	4246-1.1/4TS
1-1/2	11	108.00	45.50	1	<b>270.40</b>	4246-1.1/2T	4246-1.1/2I	4246-1.1/2B	<b>811.19</b>	4246-1.1/2TS
2	11	115.00	57.00	1	<b>330.85</b>	4246-2T	4246-2I	4246-2B	<b>992.57</b>	4246-2TS
<b>BSPT (RC SERIES PIPE TAPER)</b>										
1/8	28	54.00	8.40	1	<b>33.82</b>			4248-1/8B		
1/4	19	62.00	11.20	1	<b>33.82</b>			4248-1/4B		
3/8	19	65.00	14.75	1	<b>42.24</b>			4248-3/8B		
1/2	14	79.00	18.25	1	<b>49.93</b>			4248-1/2B		
3/4	14	83.00	23.75	1	<b>70.90</b>			4248-3/4B		
1	11	96.00	30.00	1	<b>121.02</b>			4248-1B		
1-1/4	11	102.00	38.50	1	<b>247.02</b>			4248-1.1/4B		
1-1/2	11	108.00	44.50	1	<b>308.17</b>			4248-1.1/2B		
2	11	115.00	56.00	1	<b>385.21</b>			4248-2B		
<b>NPT</b>										
1/8	27	54.00	8.70	1	<b>33.82</b>			4252-1/8B		
1/4	18	62.00	11.10	1	<b>39.97</b>			4252-1/4B		
3/8	18	65.00	14.50	1	<b>51.84</b>			4252-3/8B		
1/2	14	79.00	18.00	1	<b>63.36</b>			4252-1/2B		
3/4	14	83.00	23.25	1	<b>113.34</b>			4252-3/4B		
1	11.5	96.00	29.00	1	<b>177.86</b>			4252-1B		
1-1/4	11.5	102.00	38.00	1	<b>295.77</b>			4252-1.1/4B		
1-1/2	11.5	108.00	44.00	1	<b>407.12</b>			4252-1.1/2B		
2	11.5	114.00	56.00	1	<b>633.77</b>			4252-2B		
<b>NPSF (DRYSEAL)</b>										
1/8	27	59.00	8.70	1	<b>34.61</b>			4256-1/8B		
1/4	18	67.00	11.20	1	<b>42.24</b>			4256-1/4B		
3/8	18	75.00	15.00	1	<b>65.33</b>			4256-3/8B		
1/2	14	87.00	18.50	1	<b>90.25</b>			4256-1/2B		

**NPSF (DRYSEAL) NATIONAL PIPE STRAIGHT FUEL**

Another variation of the Dryseal thread is the NPSF. It is used for internal threads and an NPTF external thread can be screwed into it to provide both a satisfactory mechanical connection and hydraulic seal. A combination of a parallel and tapered thread would not appear to be ideal but it is widely used. Many quick disconnect couplers for example have the NPSF thread and are recommended by the manufacturer for use with NPT and NPTF.

**BSP  
BSPT  
NPT  
NPSF**

**BSPT**  
BRITISH  
STANDARD  
PIPE TAPER  
(RC SERIES  
PIPE TAPER)  
This is based on the Whitworth thread form - a symmetrical V-thread with an angle of 55°. BSPT has been widely adopted internationally for interconnecting and sealing pipe ends by mating an external (male) with an internal (female) thread. The thread diameter increases along the length of the thread allowing the coupled pipes to form a seal when torqued as the flanks of the threads compress against each other. The taper is "1 to 16", meaning that for each 16 mm increase in the distance from the end, the diameter increases by 1 mm.

**NPT**  
NATIONAL PIPE  
TAPERED  
NPT is a US standard for tapered threads used to join pipes and fittings. ANSI/ASME standard B1.20.1 covers threads of 60° form with flat crests and roots. The taper on NPT threads allows them to form a seal when torqued as the flanks of the threads compress against each other. However a clearance remains between the crests and roots of the threads, resulting in a leakage around this spiral. This means that NPT fittings must be made leak free with the aid of thread seal tape or a thread sealant compound. For each 12" increase in distance from the end, the diameter increases by 3/4".





GROUP	CTAP
SURFACE FINISH	BRIGHT
MATERIAL	CHROME ALLOY
FLUTE TYPE	STRAIGHT
CONTENTS	SINGLE
PACKAGING	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
CHROME TAP MERCHANDISER	691.27	4220-D2

MERCHANDISER CONTENTS	DIAMETER PITCH / TPI	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER
METRIC COARSE			TAPER		INTERMEDIATE		BOTTOMING
	3.0 X 0.5			1	4220-3.00I		
	4.0 X 0.7	1	4220-4.00T	1	4220-4.00I	1	4220-4.00B
	5.0 X 0.8	1	4220-5.00T	1	4220-5.00I	1	4220-5.00B
	6.0 X 1.0	1	4220-6.00T	1	4220-6.00I	1	4220-6.00B
	8.0 X 1.25	1	4220-8.00T	1	4220-8.00I	1	4220-8.00B
	10.0 X 1.5	1	4220-10.00T	1	4220-10.00I	1	4220-10.00B
	12.0 X 1.75	1	4220-12.00T	1	4220-12.00I	1	4220-12.00B
	16.0 X 2.0			1	4220-16.00I		
METRIC FINE					INTERMEDIATE		
	10.0 X 1.25			1	4221-10.00I		
	12.0 X 1.25			1	4222-12.00I		
	14.0 X 1.5			1	4221-14.00I		
BSW					INTERMEDIATE		
	1/2 X 12			1	4228-1/2I		
UNC			TAPER		INTERMEDIATE		BOTTOMING
	1/4 X 20	1	4232-1/4T	1	4232-1/4I	1	4232-1/4B
	5/16 X 18	1	4232-5/16T	1	4232-5/16I	1	4232-5/16B
	3/8 X 16	1	4232-3/8T	1	4232-3/8I	1	4232-3/8B
	1/2 X 13	1	4232-1/2T	1	4232-1/2I	1	4232-1/2B
BSPT							BOTTOMING
	1/8 X 28					1	4248-1/8B
	1/4 X 19					1	4248-1/4B
	3/8 X 19					1	4248-3/8B
	1/2 X 14					1	4248-1/2B
NPT							BOTTOMING
	1/8 X 27					1	4252-1/8B
	1/4 X 18					1	4252-1/4B



GROUP	CTAP
SURFACE FINISH	BRIGHT
MATERIAL	CHROME ALLOY
LEAD TYPE	TAPER / INTERMEDIATE / BOTTOMING
FLUTE TYPE	STRAIGHT
PACKAGING	BULK MERCHANDISER

MERCHANDISER TYPE	TOTAL PIECES	\$ MERCHANDISER	PART NUMBER
BULK TAP MERCHANDISER	304	6,140.22	4220-D3

## MERCHANDISER CONTENTS

QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER
5	MC - TAPER	3 X 0.5	4220-3.00T	2	BSW - TAPER	1/2 X 12	4228-1/2T	2	UNF - INTER	3/8 X 24	4234-3/8I
5	MC - TAPER	4 X 0.7	4220-4.00T	2	BSW - INTER	1/2 X 12	4228-1/2I	1	UNF - INTER	7/16 X 20	4234-7/16I
5	MC - TAPER	5 X 0.8	4220-5.00T	2	BSW - BOTT	1/2 X 12	4228-1/2B	2	UNF - INTER	1/2 X 20	4234-1/2I
5	MC - TAPER	6 X 1	4220-6.00T					1	UNF - INTER	9/16 X 18	4234-9/16I
5	MC - TAPER	8 X 1.25	4220-8.00T	1	UNC - TAPER	8G X 32	4232-8GT	1	UNF - INTER	5/8 X 18	4234-5/8I
5	MC - TAPER	10 X 1.5	4220-10.00T	1	UNC - TAPER	10G X 24	4232-10GT	1	UNF - INTER	3/4 X 16	4234-3/4I
5	MC - TAPER	12 X 1.75	4220-12.00T	2	UNC - TAPER	3/16X24(UNS)	4232-3/16T	1	UNF - INTER	1 X 12	4234-1I
1	MC - TAPER	14 X 2	4220-14.00T	2	UNC - TAPER	1/4 X 20	4232-1/4T	1	UNF - BOTT	8G X 36	4234-8GB
1	MC - TAPER	16 X 2	4220-16.00T	2	UNC - TAPER	5/16 X 18	4232-5/16T	1	UNF - BOTT	10G X 32	4234-10GB
1	MC - TAPER	18 X 2.5	4220-18.00T	2	UNC - TAPER	3/8 X 16	4232-3/8T	2	UNF - BOTT	3/16 X 32	4236-3/16B
1	MC - TAPER	20 X 2.5	4220-20.00T	1	UNC - TAPER	7/16 X 14	4232-7/16T	2	UNF - BOTT	1/4 X 28	4234-1/4B
5	MC - INTER	3 X 0.5	4220-3.00I	2	UNC - TAPER	1/2 X 13	4232-1/2T	2	UNF - BOTT	5/16 X 24	4234-5/16B
5	MC - INTER	4 X 0.7	4220-4.00I	1	UNC - TAPER	9/16 X 12	4232-9/16T	2	UNF - BOTT	3/8 X 24	4234-3/8B
5	MC - INTER	5 X 0.8	4220-5.00I	1	UNC - TAPER	5/8 X 11	4232-5/8T	1	UNF - BOTT	7/16 X 20	4234-7/16B
5	MC - INTER	6 X 1	4220-6.00I	1	UNC - TAPER	3/4 X 10	4232-3/4T	2	UNF - BOTT	1/2 X 20	4234-1/2B
5	MC - INTER	8 X 1.25	4220-8.00I	1	UNC - TAPER	1 X 8	4232-1T	1	UNF - BOTT	9/16 X 18	4234-9/16B
5	MC - INTER	10 X 1.5	4220-10.00I	1	UNC - INTER	8G X 32	4232-8GI	1	UNF - BOTT	5/8 X 18	4234-5/8B
5	MC - INTER	12 X 1.75	4220-12.00I	1	UNC - INTER	10G X 24	4232-10GI	1	UNF - BOTT	3/4 X 16	4234-3/4B
1	MC - INTER	14 X 2	4220-14.00I	2	UNC - INTER	3/16X24(UNS)	4232-3/16I	1	UNF - BOTT	1 X 12	4234-1B
1	MC - INTER	16 X 2	4220-16.00I	2	UNC - INTER	1/4 X 20	4232-1/4I				
1	MC - INTER	18 X 2.5	4220-18.00I	2	UNC - INTER	5/16 X 18	4232-5/16I		BSPF - TAPER	1/8 X 28	4246-1/8T
1	MC - INTER	20 X 2.5	4220-20.00I	2	UNC - INTER	3/8 X 16	4232-3/8I	1	BSPF - TAPER	1/4 X 19	4246-1/4T
5	MC - BOTT	3 X 0.5	4220-3.00B	1	UNC - INTER	7/16 X 14	4232-7/16I	1	BSPF - TAPER	3/8 X 19	4246-3/8T
5	MC - BOTT	4 X 0.7	4220-4.00B	2	UNC - INTER	1/2 X 13	4232-1/2I	1	BSPF - TAPER	1/2 X 14	4246-1/2T
5	MC - BOTT	5 X 0.8	4220-5.00B	1	UNC - INTER	9/16 X 12	4232-9/16I	1	BSPF - TAPER	3/4 X 14	4246-3/4T
5	MC - BOTT	6 X 1	4220-6.00B	1	UNC - INTER	5/8 X 11	4232-5/8I	1	BSPF - TAPER	1 X 11	4246-1T
5	MC - BOTT	8 X 1.25	4220-8.00B	1	UNC - INTER	3/4 X 10	4232-3/4I	1	BSPF - INTER	1/8 X 28	4246-1/8I
5	MC - BOTT	10 X 1.5	4220-10.00B	1	UNC - INTER	1 X 8	4232-1I	1	BSPF - INTER	1/4 X 19	4246-1/4I
5	MC - BOTT	12 X 1.75	4220-12.00B	1	UNC - BOTT	8G X 32	4232-8GB	1	BSPF - INTER	3/8 X 19	4246-3/8I
1	MC - BOTT	14 X 2	4220-14.00B	1	UNC - BOTT	10G X 24	4232-10GB	1	BSPF - INTER	1/2 X 14	4246-1/2I
1	MC - BOTT	16 X 2	4220-16.00B	2	UNC - BOTT	3/16X24(UNS)	4232-3/16B	1	BSPF - INTER	3/4 X 14	4246-3/4I
1	MC - BOTT	18 X 2.5	4220-18.00B	2	UNC - BOTT	1/4 X 20	4232-1/4B	1	BSPF - INTER	1 X 11	4246-1I
1	MC - BOTT	20 X 2.5	4220-20.00B	2	UNC - BOTT	5/16 X 18	4232-5/16B	1	BSPF - BOTT	1/8 X 28	4246-1/8B
				2	UNC - BOTT	3/8 X 16	4232-3/8B	1	BSPF - BOTT	1/4 X 19	4246-1/4B
2	MF - TAPER	8 X 1	4221-8.00T	1	UNC - BOTT	7/16 X 14	4232-7/16B	1	BSPF - BOTT	3/8 X 19	4246-3/8B
2	S/PLUG - TAPER	10 X 1	4222-10.00T	2	UNC - BOTT	1/2 X 13	4232-1/2B	1	BSPF - BOTT	1/2 X 14	4246-1/2B
2	MF - TAPER	10 X 1.25	4221-10.00T	1	UNC - BOTT	9/16 X 12	4232-9/16B	1	BSPF - BOTT	3/4 X 14	4246-3/4B
2	MF - TAPER	12 X 1.25	4222-12.00T	1	UNC - BOTT	5/8 X 11	4232-5/8B	1	BSPF - BOTT	1 X 11	4246-1B
2	MF - TAPER	12 X 1.5	4221-12.00T	1	UNC - BOTT	3/4 X 10	4232-3/4B				
2	S/PLUG - TAPER	14 X 1.25	4222-14.00T	1	UNC - BOTT	1 X 8	4232-1B	2	BSPT - BOTT	1/8 X 28	4248-1/8B
2	MF - TAPER	14 X 1.5	4221-14.00T					2	BSPT - BOTT	1/4 X 19	4248-1/4B
1	CONDUIT - TAPER	25 X 1.5	4223-25.00T	1	UNF - TAPER	8G X 36	4234-8GT	1	BSPT - BOTT	3/8 X 19	4248-3/8B
2	MF - INTER	8 X 1	4221-8.00I	1	UNF - TAPER	10G X 32	4234-10GT	1	BSPT - BOTT	1/2 X 14	4248-1/2B
2	S/PLUG - INTER	10 X 1	4222-10.00I	2	UNF - TAPER	3/16 X 32	4236-3/16T	1	BSPT - BOTT	3/4 X 14	4248-3/4B
2	MF - INTER	10 X 1.25	4221-10.00I	2	UNF - TAPER	1/4 X 28	4234-1/4T	1	BSPT - BOTT	1 X 11	4248-1B
2	MF - INTER	12 X 1.25	4222-12.00I	2	UNF - TAPER	5/16 X 24	4234-5/16T				
2	MF - INTER	12 X 1.5	4221-12.00I	2	UNF - TAPER	3/8 X 24	4234-3/8T	2	NPT - BOTT	1/8 X 27	4252-1/8B
2	S/PLUG - INTER	14 X 1.25	4222-14.00I	1	UNF - TAPER	7/16 X 20	4234-7/16T	2	NPT - BOTT	1/4 X 18	4252-1/4B
2	MF - INTER	14 X 1.5	4221-14.00I	2	UNF - TAPER	1/2 X 20	4234-1/2T	1	NPT - BOTT	3/8 X 18	4252-3/8B
1	CONDUIT - INTER	25 X 1.5	4223-25.00I	1	UNF - TAPER	9/16 X 18	4234-9/16T	1	NPT - BOTT	1/2 X 14	4252-1/2B
2	MF - BOTT	8 X 1	4221-8.00B	1	UNF - TAPER	5/8X18	4234-5/8T	1	NPT - BOTT	3/4 X 14	4252-3/4B
2	S/PLUG - BOTT	10 X 1	4222-10.00B	1	UNF - TAPER	3/4 X 16	4234-3/4T	1	NPT - BOTT	1 X 11.5	4252-1B
2	MF - BOTT	10 X 1.25	4221-10.00B	1	UNF - TAPER	1 X 12	4234-1T				
2	MF - BOTT	12 X 1.25	4222-12.00B	1	UNF - INTER	8G X 36	4234-8GI				
2	MF - BOTT	12 X 1.5	4221-12.00B	1	UNF - INTER	10G X 32	4234-10GI				
2	S/PLUG - BOTT	14 X 1.25	4222-14.00B	2	UNF - INTER	3/16 X 32	4236-3/16I				
2	MF - BOTT	14 X 1.5	4221-14.00B	2	UNF - INTER	1/4X28	4234-1/4I				
1	CONDUIT - BOTT	25 X 1.5	4223-25.00B	2	UNF - INTER	5/16X24	4234-5/16I				

TAPS & DIES

CHROME ALLOY

MERCHANDISER



GROUP	-
SURFACE FINISH	BRIGHT
MATERIAL	CHROME ALLOY
TAP LEAD TYPE	TAPER / INTERMEDIATE / BOTTOMING
TAP FLUTE TYPE	STRAIGHT
PACKAGING	BULK MERCHANDISER

MERCHANDISER TYPE	TOTAL PIECES	\$ MERCHANDISER	PART NUMBER
BULK TAP & DIE MERCHANDISER	327	7,775.00	4220-D4

TAPER TAPS

Taper Taps have a lead of eight threads and are used as a starting tap in difficult or high precision holes. Manufactured from chrome alloy this general purpose tap is designed for use in medium tensile materials and is for hand or general machine use.

INTERMEDIATE TAPS

Intermediate Taps have a lead of four threads and are used in most general purpose applications to cut a thread true to a pre-drilled pilot hole.

BOTTOMING TAPS

Bottoming Taps have a lead of two threads and are used to ensure minimum thread run-out when tapping to the bottom of a blind hole. Bottoming Taps are typically preceded by the use of a Taper or Intermediate Tap.

MERCHANDISER CONTENTS											
QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER
5	MC - TAPER	4 X 0.7	4220-4.00T	1	UNC - TAPER	3/4 X 10	4232-3/4T	1	BSPF - BOTT	1/8 X 28	4246-1/8B
5	MC - TAPER	5 X 0.8	4220-5.00T	1	UNC - TAPER	8G X 32	4232-8GI	1	BSPF - BOTT	1/4 X 19	4246-1/4B
5	MC - TAPER	6 X 1	4220-6.00T	1	UNC - INTER	10G X 24	4232-10GI	1	BSPF - BOTT	3/8 X 19	4246-3/8B
5	MC - TAPER	8 X 1.25	4220-8.00T	1	UNC - INTER	3/16X24(UNS)	4232-3/16I	1	BSPF - BOTT	1/2 X 14	4246-1/2B
3	MC - TAPER	10 X 1.5	4220-10.00T	2	UNC - INTER	1/4 X 20	4232-1/4I	3	BSPT - BOTT	1/8 X 28	4248-1/8B
3	MC - TAPER	12 X 1.75	4220-12.00T	2	UNC - INTER	5/16 X 18	4232-5/16I	3	BSPT - BOTT	1/4 X 19	4248-1/4B
3	MC - TAPER	14 X 2	4220-14.00T	2	UNC - INTER	3/8 X 16	4232-3/8I	3	BSPT - BOTT	3/8 X 19	4248-3/8B
3	MC - TAPER	16 X 2	4220-16.00T	1	UNC - INTER	7/16 X 14	4232-7/16I	3	BSPT - BOTT	1/2 X 14	4248-1/2B
1	MC - TAPER	18 X 2.5	4220-18.00T	1	UNC - INTER	1/2 X 13	4232-1/2I				
1	MC - TAPER	20 X 2.5	4220-20.00T	1	UNC - INTER	9/16 X 12	4232-9/16I	3	NPT - BOTT	1/8 X 27	4252-1/8B
5	MC - INTER	4 X 0.7	4220-4.00I	1	UNC - INTER	5/8 X 11	4232-5/8I	3	NPT - BOTT	1/4 X 18	4252-1/4B
5	MC - INTER	5 X 0.8	4220-5.00I	1	UNC - INTER	3/4 X 10	4232-3/4I	3	NPT - BOTT	3/8 X 18	4252-3/8B
5	MC - INTER	6 X 1	4220-6.00I	1	UNC - INTER	8G X 32	4232-8GB	3	NPT - BOTT	1/2 X 14	4252-1/2B
5	MC - INTER	8 X 1.25	4220-8.00I	1	UNC - INTER	10G X 24	4232-10GB				
3	MC - INTER	10 X 1.5	4220-10.00I	1	UNC - BOTT	3/16X 24(UNS)	4232-3/16B	3	MC - DIE - 1D	4 X 0.7	4800-4-1D
3	MC - INTER	12 X 1.75	4220-12.00I	2	UNC - BOTT	1/4 X 20	4232-1/4B	3	MC - DIE - 1D	5 X 0.8	4800-5-1D
3	MC - INTER	14 X 2	4220-14.00I	2	UNC - BOTT	5/16 X 18	4232-5/16B	3	MC - DIE - 1D	6 X 1	4800-6-1D
3	MC - INTER	16 X 2	4220-16.00I	2	UNC - BOTT	3/8 X 16	4232-3/8B	3	MC - DIE - 1D	8 X 1.25	4800-8-1D
1	MC - INTER	18 X 2.5	4220-18.00I	1	UNC - BOTT	7/16 X 14	4232-7/16B	3	MC - DIE - 1D	10 X 1.5	4800-10-1D
1	MC - INTER	20 X 2.5	4220-20.00I	1	UNC - BOTT	1/2 X 13	4232-1/2B	3	MC - DIE - 1D	12 X 1.75	4800-12-1D
5	MC - BOTT	4 X 0.7	4220-4.00B	1	UNC - BOTT	9/16 X 12	4232-9/16B	2	MC - DIE - 1.5D	14 X 2	4800-14-1.5D
5	MC - BOTT	5 X 0.8	4220-5.00B	1	UNC - BOTT	5/8 X 11	4232-5/8B	2	MC - DIE - 1.5D	16 X 2	4800-16-1.5D
5	MC - BOTT	6 X 1	4220-6.00B	1	UNC - BOTT	3/4 X 10	4232-3/4B	1	MC - DIE - 2D	18 X 2.5	4800-18-2D
5	MC - BOTT	8 X 1.25	4220-8.00B					1	MC - DIE - 2D	20 X 2.5	4800-20-2D
3	MC - BOTT	10 X 1.5	4220-10.00B	1	UNF - TAPER	8G X 36	4234-8GT	1	MF - DIE - 1D	8 X 1	4801-8-1D
3	MC - BOTT	12 X 1.75	4220-12.00B	1	UNF - TAPER	10G X 32	4234-10GT	1	MF - DIE - 1D	10 X 1.25	4801-10-1D
3	MC - BOTT	14 X 2	4220-14.00B	2	UNF - TAPER	1/4 X 28	4234-1/4T	1	MF - DIE - 1D	12 X 1.5	4801-12-1D
3	MC - BOTT	16 X 2	4220-16.00B	2	UNF - TAPER	5/16 X 24	4234-5/16T	1	MF - DIE - 1.5D	12 X 1.25	4802-14-1.5D
1	MC - BOTT	18 X 2.5	4220-18.00B	2	UNF - TAPER	3/8 X 24	4234-3/8T	1	MF - DIE - 2D	14 X 1.25	4801-14-2D
1	MC - BOTT	20 X 2.5	4220-20.00B	1	UNF - TAPER	7/16 X 20	4234-7/16T	1	MF - DIE - 2D	14 X 1.5	4802-12-1D
2	MF - TAPER	8 X 1	4221-8.00T	1	UNF - TAPER	1/2 X 20	4234-1/2T	1	MF - DIE - 2D	16 X 1.5	4803-16-2D
2	MF - TAPER	10 X 1.25	4221-10.00T	1	UNF - TAPER	9/16 X 18	4234-9/16T	1	BSW - Die - 1D	1/2 x 12	4808-1/2-1D
2	MF - TAPER	12 X 1.5	4221-12.00T	1	UNF - TAPER	5/8X18	4234-5/8T	1	UNC - Die - 1D	8G x 32	4812-8G-1D
2	MF - TAPER	12 X 1.25	4222-12.00T	1	UNF - TAPER	3/4 X 16	4234-3/4T	1	UNC - Die - 1D	10G x 24	4812-10G-1D
1	S/PLUG - TAPER	14 X 1.25	4222-14.00T	1	UNF - INTER	8G X 36	4234-8GI	1	UNC - Die - 1D	1/4 x 20	4812-1/4-1D
1	MF - TAPER	14 X 1.5	4221-14.00T	1	UNF - INTER	10G X 32	4234-10GI	1	UNC - Die - 1D	5/16 x 18	4812-5/16-1D
1	CONDUIT - TAPER	16 X 1.5	4223-16.00T	2	UNF - INTER	1/4X28	4234-1/4I	1	UNC - DIE - 1D	3/8 X 16	4812-3/8-1D
2	MF - INTER	8 X 1	4221-8.00I	2	UNF - INTER	5/16X24	4234-5/16I	1	UNC - DIE - 1D	7/16 X 14	4812-7/16-1D
2	MF - INTER	10 X 1.25	4221-10.00I	2	UNF - INTER	3/8 X 24	4234-3/8I	1	UNC - DIE - 1D	1/2 X 13	4812-1/2-1D
2	MF - INTER	12 X 1.25	4222-12.00I	1	UNF - INTER	7/16 X 20	4234-7/16I	1	UNC - DIE - 1.5D	9/16 X 12	4812-9/16-1.5D
2	MF - INTER	12 X 1.5	4221-12.00I	1	UNF - INTER	1/2 X 20	4234-1/2I	1	UNC - DIE - 1.5D	5/8 X 11	4812-5/8-1.5D
1	S/PLUG - INTER	14 X 1.25	4221-14.00I	1	UNF - INTER	9/16 X 18	4234-9/16I	1	UNC - DIE - 2D	3/4 X 10	4812-3/4-2D
1	MF - INTER	14 X 1.5	4222-14.00I	1	UNF - INTER	5/8 X 18	4234-5/8I	1	UNF - Die - 1D	8G x 36	4814-8G-1D
1	CONDUIT - INTER	16 X 1.5	4223-16.00I	1	UNF - INTER	3/4 X 16	4234-3/4I	1	UNF - Die - 1D	10G x 32	4814-10G-1D
2	MF - BOTT	8 X 1	4221-8.00B	1	UNF - BOTT	8G X 36	4234-8GB	1	UNF - Die - 1D	3/16 x 32	4816-3/16-1D
2	MF - BOTT	10 X 1.25	4221-10.00B	1	UNF - BOTT	10G X 32	4234-10GB	1	UNF - Die - 1D	1/4 x 28	4814-1/4-1D
2	MF - BOTT	12 X 1.25	4222-12.00B	2	UNF - BOTT	1/4 X 28	4234-1/4B	1	UNF - Die - 1D	5/16 x 24	4814-5/16-1D
2	MF - BOTT	12 X 1.5	4221-12.00B	2	UNF - BOTT	5/16 X 24	4234-5/16B	1	UNF - Die - 1D	3/8 x 24	4814-3/8-1D
1	S/PLUG - BOTT	14 X 1.25	4222-14.00B	2	UNF - BOTT	3/8 X 24	4234-3/8B	1	UNF - Die - 1D	7/16 x 20	4814-7/16-1D
1	MF - BOTT	14 X 1.5	4221-14.00B	1	UNF - BOTT	7/16 X 20	4234-7/16B	1	UNF - Die - 1D	1/2 x 20	4814-1/2-1D
1	CONDUIT - BOTT	16 X 1.5	4223-16.00B	1	UNF - BOTT	1/2 X 20	4234-1/2B	1	UNF - DIE - 1.5D	9/16 X 18	4814-9/16-1.5D
				1	UNF - BOTT	9/16 X 18	4234-9/16B	1	UNF - DIE - 1.5D	5/8X18	4814-5/8-1.5D
2	BSW - TAPER	1/2 X 12	4228-1/2T	1	UNF - BOTT	5/8 X 18	4234-5/8B	1	UNF - DIE - 2D	3/4 X 16	4814-3/4-2D
2	BSW - INTER	1/2 X 12	4228-1/2I	1	UNF - BOTT	3/4 X 16	4234-3/4B	1	UNS - Die - 1D	3/16x24	4812-3/16-1D
2	BSW - BOTT	1/2 X 12	4228-1/2B	1	UNS - TAPER	3/16 X 24	4236-3/16T	1	BSPF - DIE - 2D	1/8 X 28	4818-1/8-2D
				1	UNS - INTER	3/16 X 24	4236-3/16I	1	BSPF - DIE - 2D	1/4 X 19	4818-1/4-2D
				1	UNS - BOTT	3/16 X 24	4236-3/16B	1	BSPF - DIE - 2D	3/8 X 19	4818-3/8-2D
1	UNC - TAPER	8G X 32	4232-8GT					1	BSPF - DIE - 2D	1/2 X14	4818-1/2-2D
1	UNC - TAPER	10G X 24	4232-10GT					1	BSPF - DIE - 2D	1/8 X 28	4820-1/8-2D
1	UNC - TAPER	3/16X24(UNS)	4232-3/16T	1	BSPF - TAPER	1/8 X 28	4246-1/8T	1	BSPT - DIE - 2D	1/8 X 28	4820-1/8-2D
2	UNC - TAPER	1/4 X 20	4232-1/4T	1	BSPF - TAPER	1/4 X 19	4246-1/4T	1	BSPT - DIE - 2D	1/4 X 19	4820-1/4-2D
2	UNC - TAPER	5/16 X 18	4232-5/16T	1	BSPF - TAPER	3/8 X 19	4246-3/8T	1	BSPT - DIE - 2D	3/8 X 19	4820-3/8-2D
2	UNC - TAPER	3/8 X 16	4232-3/8T	1	BSPF - TAPER	1/2 X14	4246-1/2T	1	BSPT - DIE - 2D	1/2 X 14	4820-1/2-2D
1	UNC - TAPER	7/16 X 14	4232-7/16T	1	BSPF - INTER	1/8 X 28	4246-1/8I	1	NPT - DIE - 2D	1/8 X 27	4822-1/8-2D
1	UNC - TAPER	1/2 X 13	4232-1/2T	1	BSPF - INTER	1/4 X 19	4246-1/4I	1	NPT - DIE - 2D	1/4 X 18	4822-1/4-2D
1	UNC - TAPER	9/16 X 12	4232-9/16T	1	BSPF - INTER	3/8 X 19	4246-3/8I	1	NPT - DIE - 2D	3/8 X 18	4822-3/8-2D
1	UNC - TAPER	5/8 X 11	4232-5/8T	1	BSPF - INTER	1/2 X 14	4246-1/2I	1	NPT - DIE - 2D	1/2 X 14	4822-1/2-2D





**MC  
MF**

GROUP	DIES	DIES	DIES	DIES
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY
DIE TYPE	BUTTON	BUTTON	BUTTON	NUT
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL	CLAM SHELL
OUTSIDE DIAMETER	1"	1- 1/2"	2"	-



DIAMETER MM	PITCH MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>METRIC COARSE</b>										
2.00	0.40	1	29.68	4800-2-1D						
3.00	0.50	1	25.72	4800-3-1D						
4.00	0.70	1	23.43	4800-4-1D	44.82	4800-4-1.5D			30.52	4830-4
5.00	0.80	1	23.43	4800-5-1D	44.82	4800-5-1.5D			30.52	4830-5
6.00	1.00	1	23.43	4800-6-1D	44.82	4800-6-1.5D			30.52	4830-6
7.00	1.00	1	23.43	4800-7-1D	44.85	4800-7-1.5D			31.11	4830-7
8.00	1.25	1	23.43	4800-8-1D	43.03	4800-8-1.5D			30.52	4830-8
9.00	1.25	1	23.43	4800-9-1D	42.94	4800-9-1.5D			31.11	4830-9
10.00	1.50	1	23.43	4800-10-1D	43.03	4800-10-1.5D	56.11	4800-10-2D	44.52	4830-10
11.00	1.50	1	26.42	4800-11-1D	43.75	4800-11-1.5D				
12.00	1.75	1	26.42	4800-12-1D	43.03	4800-12-1.5D	56.11	4800-12-2D	44.52	4830-12
14.00	2.00	1			43.75	4800-14-1.5D	56.11	4800-14-2D	57.21	4830-14
16.00	2.00	1			43.75	4800-16-1.5D	59.18	4800-16-2D	57.21	4830-16
18.00	2.50	1					62.22	4800-18-2D	72.21	4830-18
20.00	2.50	1					62.22	4800-20-2D	70.71	4830-20
22.00	2.50	1					67.23	4800-22-2D	107.52	4830-22
24.00	3.00	1					81.42	4800-24-2D	131.36	4830-24
27.00	3.00	1							182.47	4830-27
30.00	3.50	1							224.70	4830-30
33.00	3.50	1							270.77	4830-33
36.00	4.00	1							320.73	4830-36
<b>METRIC FINE</b>										
8.00	1.00	1	23.43	4801-8-1D	43.03	4801-8-1.5D			30.52	4831-8
10.00	1.00	1	23.43	4802-10-1D	43.03	4802-10-1.5D			44.52	4832-10
10.00	1.25	1	23.43	4801-10-1D	43.03	4801-10-1.5D			44.52	4831-10
12.00	1.25	1	26.33	4802-12-1D	43.75	4802-12-1.5D	56.11	4802-12-2D	44.52	4832-12
12.00	1.50	1	26.33	4801-12-1D	43.03	4801-12-1.5D	56.11	4801-12-2D	44.52	4831-12
14.00	1.25	1			43.75	4802-14-1.5D	56.85	4802-14-2D		
14.00	1.50	1			43.03	4801-14-1.5D	56.11	4801-14-2D	57.21	4831-14
16.00	1.50	1					59.18	4803-16-2D	57.21	4833-16
18.00	1.50	1					62.22	4802-18-2D	70.71	4832-18
20.00	1.50	1					62.07	4803-20-2D	70.71	4833-20
22.00	1.50	1					67.09	4801-22-2D	70.71	4831-22
24.00	2.00	1					81.29	4801-24-2D	70.71	4831-24
25.00	1.50	1					82.22	4803-25-2D	85.11	4833-25
<b>SPARK PLUG</b>										
10.00	1.00	1	23.43	4802-10-1D	43.03	4802-10-1.5D			44.52	4832-10
12.00	1.25	1	26.33	4802-12-1D	43.75	4802-12-1.5D	56.11	4802-12-2D	44.52	4832-12
14.00	1.25	1			43.75	4802-14-1.5D	56.85	4802-14-2D		
18.00	1.50	1					62.22	4802-18-2D	70.71	4832-18
<b>CONDUIT</b>										
16.00	1.50	1					59.18	4803-16-2D	57.21	4833-16
20.00	1.50	1					62.07	4803-20-2D	70.71	4833-20
25.00	1.50	1					82.22	4803-25-2D	85.11	4833-25

**METRIC  
COARSE & FINE**  
Angle of thread is 60°. The crest is flat and the thread has clearance at the root allowing external thread and internal thread to engage well. Larger root radius and lower thread height enable easy screw thread processing and increase thread screw strength. The major diameter of external thread and pitch are specified by a simple numerical value (most commonly measured in millimetres).

# BUTTON DIES & DIE NUTS

CHROME ALLOY

HANG SELL



**UNC**  
**UNF**

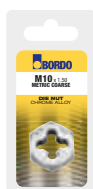
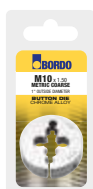
## UNC UNIFIED NATIONAL COARSE

This thread form was introduced in 1948 as an attempt to standardise thread forms in the USA, Canada and the UK. The thread profile of UNC is the same as for metric threads and is described in the JIS B0206 standard. The thread is described by its major diameter and the number of threads per inch of length (TPI). This thread series is commonly used in the mass production of bolts, screws and nuts. It is used for threading into lower tensile strength materials (bronze, brass, aluminium and plastics) to obtain the best resistance to stripping of the internal thread. It is also used on quick assembly or disassembly or if corrosion or slight damage is possible.

## UNF UNIFIED NATIONAL FINE

This thread form was introduced in 1948 as an attempt to standardise thread forms in the USA, Canada and the UK. The thread profile of UNF is the same as for metric threads and is described in the JIS B0206 standard. The thread is described by its major diameter and the number of threads per inch of length (TPI). When used on external threads this series has greater tensile stress area than coarse threads of the same size. Fine series threads will resist stripping out better than coarse threads in areas where the external and mating internal threads are subjected to loads equal to or greater than the capacity of the screw or bolt. Fine threads are also used where the length of engagement is limited or where wall thickness demands a fine pitch.

GROUP	DIES	DIES	DIES	DIES
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY
DIE TYPE	BUTTON	BUTTON	BUTTON	NUT
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL	CLAM SHELL
OUTSIDE DIAMETER	1"	1- 1/2"	2"	-



DIAMETER INCH	TPI	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>UNC</b>										
5G	40	1	29.76	4812-5G-1D						
6G	32	1	29.76	4812-6G-1D						
8G	32	1	29.76	4812-8G-1D						
10G	24	1	29.76	4812-10G-1D						
12G	24	1	29.76	4812-12G-1D						
3/16	24 UNS	1	29.76	4812-3/16-1D						
1/4	20	1	23.79	4812-1/4-1D	43.03	4812-1/4-1.5D			26.12	4842-1/4
5/16	18	1	23.79	4812-5/16-1D	43.03	4812-5/16-1.5D			26.12	4842-5/16
3/8	16	1	23.79	4812-3/8-1D	38.22	4812-3/8-1.5D			26.12	4842-3/8
7/16	14	1	26.78	4812-7/16-1D	43.03	4812-7/16-1.5D			28.43	4842-7/16
1/2	13	1	28.64	4812-1/2-1D	43.03	4812-1/2-1.5D	55.90	4812-1/2-2D	29.57	4842-1/2
9/16	12	1			47.04	4812-9/16-1.5D	60.07	4812-9/16-2D	35.78	4842-9/16
5/8	11	1			48.05	4812-5/8-1.5D	59.54	4812-5/8-2D	37.67	4842-5/8
3/4	10	1					62.22	4812-3/4-2D	46.87	4842-3/4
7/8	9	1					67.23	4812-7/8-2D	62.22	4842-7/8
1	8	1					81.08	4812-1-2D	73.74	4842-1
1-1/8	7	1							113.04	4842-1.1/8
1-1/4	7	1							119.86	4842-1.1/4
1-3/8	6	1							102.62	4842-1.3/8
1-1/2	6	1							244.94	4842-1.1/2
1-3/4	5	1							144.47	4842-1.3/4
2	4.5	1							178.08	4842-2
<b>UNF</b>										
5G	44	1	29.76	4814-5G-1D						
6G	40	1	29.76	4814-6G-1D						
8G	36	1	29.76	4814-8G-1D						
10G	32	1	29.76	4814-10G-1D						
12G	28	1	32.50	4814-12G-1D						
3/16	32 UNS	1	34.37	4816-3/16-1D					34.27	4846-3/16
1/4	28	1	23.43	4814-1/4-1D	43.03	4814-1/4-1.5D			23.79	4844-1/4
5/16	24	1	23.43	4814-5/16-1D	43.03	4814-5/16-1.5D			26.12	4844-5/16
3/8	24	1	23.43	4814-3/8-1D	43.03	4814-3/8-1.5D			26.12	4844-3/8
7/16	20	1	26.42	4814-7/16-1D	43.03	4814-7/16-1.5D			28.64	4844-7/16
1/2	20	1	28.03	4814-1/2-1D	43.03	4814-1/2-1.5D	56.11	4814-1/2-2D	29.57	4844-1/2
9/16	18	1			47.23	4814-9/16-1.5D	59.18	4814-9/16-2D	34.97	4844-9/16
5/8	18	1			47.23	4814-5/8-1.5D	59.18	4814-5/8-2D	37.41	4844-5/8
3/4	16	1					62.22	4814-3/4-2D	46.87	4844-3/4
7/8	14	1					67.23	4814-7/8-2D	62.22	4844-7/8
1	12	1					81.42	4814-1-2D	73.74	4844-1
1	14 UNS	1					120.61	4816-1-2D	95.64	4846-1
1-1/8	12	1							123.68	4844-1.1/8
1-1/4	12	1							149.02	4844-1.1/4
1-3/8	12	1							198.98	4844-1.3/8
1-1/2	12	1							248.96	4844-1.1/2



**BSW  
BSF**

GROUP	DIES	DIES	DIES	DIES
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY
DIE TYPE	BUTTON	BUTTON	BUTTON	NUT
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL	CLAM SHELL
OUTSIDE DIAMETER	1"	1- 1/2"	2"	-



DIAMETER INCH	TPI	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>BSW</b>										
1/8	40	1	24.47	4808-1/8-1D					18.99	4838-1/8
5/32	32 WHIT	1	24.79	4808-5/32-1D					31.90	4838-5/32
3/16	24	1	22.05	4808-3/16-1D	40.35	4808-3/16-1.5D			18.99	4838-3/16
1/4	20	1	22.05	4808-1/4-1D	40.35	4808-1/4-1.5D			21.70	4838-1/4
5/16	18	1	22.05	4808-5/16-1D	40.35	4808-5/16-1.5D			24.21	4838-5/16
3/8	16	1	22.05	4808-3/8-1D	40.35	4808-3/8-1.5D			24.21	4838-3/8
7/16	14	1	24.79	4808-7/16-1D	40.35	4808-7/16-1.5D			26.12	4838-7/16
1/2	12	1	26.67	4808-1/2-1D	40.09	4808-1/2-1.5D	52.63	4808-1/2-2D	27.09	4838-1/2
9/16	12	1			44.97	4808-9/16-1.5D	55.70	4808-9/16-2D	32.24	4838-9/16
5/8	11	1			44.15	4808-5/8-1.5D	55.90	4808-5/8-2D	34.61	4838-5/8
3/4	10	1					57.97	4808-3/4-2D	43.38	4838-3/4
7/8	9	1					63.00	4808-7/8-2D	58.35	4838-7/8
1	8	1					75.26	4808-1-2D	67.23	4838-1
1-1/8	7	1							112.96	4838-1.1/8
1-1/4	7	1							121.76	4838-1.1/4
1-1/2	6	1							239.32	4838-1.1/2
1-3/4	5	1							336.48	4838-1.3/4
2	4.5	1							424.07	4838-2
<b>BSF</b>										
3/16	32	1	31.11	4810-3/16-1D					27.09	4840-3/16
1/4	26	1	30.52	4810-1/4-1D	64.54	4810-1/4-1.5D			27.09	4840-1/4
5/16	22	1	31.11	4810-5/16-1D	57.60	4810-5/16-1.5D			27.09	4840-5/16
3/8	20	1	31.11	4810-3/8-1D	57.60	4810-3/8-1.5D			27.09	4840-3/8
7/16	18	1	34.97	4810-7/16-1D	57.60	4810-7/16-1.5D			37.27	4840-7/16
1/2	16	1			57.60	4810-1/2-1.5D	85.29	4810-1/2-2D	29.57	4840-1/2
9/16	16	1					88.35	4810-9/16-2D	45.33	4840-9/16
5/8	14	1					88.35	4810-5/8-2D	48.78	4840-5/8
3/4	12	1					93.40	4810-3/4-2D	59.93	4840-3/4
7/8	11	1					101.42	4810-7/8-2D	81.08	4840-7/8
1	10	1					120.23	4810-1-2D	97.56	4840-1

**BSW  
BRITISH  
STANDARD  
WHITWORTH**

This thread form was developed by Sir Joseph Whitworth in 1841. The thread form has rounded roots and crests and is specified in BS84:1956. The thread angle for BSW is 55° as opposed to 60° in Metric and Unified threads.

**BSF  
BRITISH  
STANDARD FINE**

This thread form was based upon the British Standard Whitworth (BSW) but has a finer thread (more threads per inch for a given diameter). The thread form was first introduced in 1908 and is specified in BS84:1956.

When used on external threads this series has greater tensile stress area than coarse threads of the same size. Fine series threads will resist stripping out better than coarse threads in areas where the external and mating internal threads are subjected to loads equal to or greater than the capacity of the screw or bolt. Fine threads are also used where the length of engagement is limited or where wall thickness demands a fine pitch.



**BUTTON DIES  
& DIE NUTS**

CHROME ALLOY  
HANG SELL

**BSP  
BSPT  
NPT**

**BSP**  
BRITISH  
STANDARD PIPE  
BSPF (G SERIES)  
This series is a pipe  
thread which is used  
mainly for mechanical  
coupling. The angle of  
thread is mainly 55°  
however for the US  
method some threads  
have a 60° angle.  
It is specified  
according to JIS  
and ISO R228.

**BSPT**  
BRITISH  
STANDARD  
PIPE TAPER  
(RC SERIES  
PIPE TAPER)  
This is based on  
the Whitworth thread  
form - a symmetrical  
V-thread with an  
angle of 55°. BSPT  
has been widely  
adopted internationally  
for interconnecting  
and sealing pipe ends  
by mating an external  
(male) with an internal  
(female) thread.  
The thread diameter  
increases along the  
length of the thread  
allowing the coupled  
pipes to form a seal  
when torqued as the  
flanks of the threads  
compress against  
each other. The taper  
is "1 to 16", meaning  
that for each 16 mm  
increase in the  
distance from the  
end, the diameter  
increases by 1 mm.

**NPT**  
NATIONAL PIPE  
TAPERED  
NPT is a US standard  
for tapered threads  
used to join pipes  
and fittings.  
ANSI/ASME standard  
B1.20.1 covers  
threads of 60° form  
with flat crests and  
roots. The taper on  
NPT threads allows  
them to form a seal  
when torqued as the  
flanks of the threads  
compress against  
each other. However  
a clearance remains  
between the crests  
and roots of the  
threads, resulting in  
a leakage around this  
spiral. This means  
that NPT fittings  
must be made leak  
free with the aid  
of thread seal tape  
or a thread sealant  
compound. For each  
12" increase in  
distance from the  
end, the diameter  
increases by 3/4".



GROUP	DIES	DIES	DIES	DIES
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT	BRIGHT
MATERIAL	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY
DIE TYPE	BUTTON	BUTTON	BUTTON	NUT
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL	CLAM SHELL*
OUTSIDE DIAMETER	1"	1- 1/2"	2"	-



DIAMETER INCH	TPI	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
BSPF (G SERIES)										
1/8	28	1					56.11	4818-1/8-2D	26.12	4848-1/8
1/4	19	1					56.11	4818-1/4-2D	33.41	4848-1/4
3/8	19	1					59.18	4818-3/8-2D	39.17	4848-3/8
1/2	14	1					75.67	4818-1/2-2D	55.32	4848-1/2
5/8	14	1					77.20	4818-5/8-2D	84.10	4848-5/8
3/4	14	1					75.67	4818-3/4-2D	76.44	4848-3/4
7/8	14	1					105.75	4818-7/8-2D		
1	11	1					105.75	4818-1-2D	133.62	4848-1
BSPT (Rc SERIES PIPE TAPER)										
1/8	28	1					114.85	4820-1/8-2D	38.16	4850-1/8
1/4	19	1					114.85	4820-1/4-2D	56.71	4850-1/4
3/8	19	1					122.48	4820-3/8-2D	61.89	4850-3/8
1/2	14	1					152.51	4820-1/2-2D	105.69	4850-1/2
3/4	14	1					152.51	4820-3/4-2D	159.83	4850-3/4
1	11	1							213.97	4850-1
NPT										
1/8	27	1					114.63	4822-1/8-2D		
1/4	18	1					114.63	4822-1/4-2D		
3/8	18	1					122.26	4822-3/8-2D		
1/2	14	1					152.23	4822-1/2-2D		
3/4	14	1					152.23	4822-3/4-2D		

\* BSW sizes greater than 1-1/2" and some BSPF and BSPT sizes may be supplied in bulk single packs.

# BUTTON DIES & DIE NUTS

CHROME ALLOY

HANG SELL



GROUP	DIES
SURFACE FINISH	BRIGHT
MATERIAL	CHROME ALLOY
TYPE	BUTTON DIES & DIE NUTS
CONTENTS	SINGLE
PACKAGING	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
CHROME DIE MERCHANDISER	1,446.73	4800-D3

MERCHANDISER CONTENTS	DIAMETER PITCH / TPI	QTY EACH	O.D. INCH	PART NUMBER	QTY EACH	PART NUMBER
METRIC COARSE		BUTTON DIE			DIE NUT	
	3.0 X 0.5	1	1	4800-3-1D		
	4.0 X 0.7	1	1	4800-4-1D	1	4830-4
	5.0 X 0.8	1	1	4800-5-1D	1	4830-5
	6.0 X 1.0	1	1	4800-6-1D	1	4830-6
	8.0 X 1.25	1	1	4800-8-1D	1	4830-8
	10.0 X 1.5	1	1	4800-10-1D	1	4830-10
	12.0 X 1.75	1	1	4800-12-1D	1	4830-12
	16.0 X 2.0	1	1-1/2	4800-16-1.5D	1	4830-16
METRIC FINE		BUTTON DIE			DIE NUT	
	10.0 X 1.25	1	1	4801-10-1D	1	4831-10
	12.0 X 1.25	1	1	4802-12-1D	1	4832-12
	14.0 X 1.5	1	1-1/2	4801-14-1.5D	1	4831-14
BSW		BUTTON DIE				
	1/2 X 12	1	1	4808-1/2-1D		
UNC		BUTTON DIE			DIE NUT	
	1/4 X 20	1	1	4812-1/4-1D	1	4842-1/4
	5/16 X 18	1	1	4812-5/16-1D	1	4842-5/16
	3/8 X 16	1	1	4812-3/8-1D	1	4842-3/8
	1/2 X 13	1	1	4812-1/2-1D	1	4842-1/2
BSPT					DIE NUT	
	1/8 X 28				1	4850-1/8
	1/4 X 19				1	4850-1/4
	3/8 X 19				1	4850-3/8
	1/2 X 14				1	4850-1/2
NPT		BUTTON DIE				
	1/8 X 27	1	2	4822-1/8-2D		
	1/4 X 18	1	2	4822-1/4-2D		

# BUTTON DIES & DIE NUTS

CHROME ALLOY

MERCHANDISER



GROUP	DIES
SURFACE FINISH	BRIGHT
MATERIAL	CHROME ALLOY
TYPE	BUTTON DIE / DIE NUT
PACKAGING	BULK MERCHANDISER

MERCHANDISER TYPE	TOTAL PIECES	\$ MERCHANDISER	PART NUMBER
BULK DIE MERCHANDISER	151	7,788.21	4800-D2

## MERCHANDISER CONTENTS

QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER
1	MC DIE 1D	3 X 0.5	4800-3-1D	2	NPT DIE 2D	1/8 X 27	4822-1/8-2D
2	MC DIE 1D	4 X 0.7	4800-4-1D	2	NPT DIE 2D	1/4 X 18	4822-1/4-2D
2	MC DIE 1D	5 X 0.8	4800-5-1D	2	NPT DIE 2D	3/8 X 18	4822-3/8-2D
2	MC DIE 1D	6 X 1.0	4800-6-1D	2	NPT DIE 2D	1/2 X 14	4822-1/2-2D
2	MC DIE 1D	8 X 1.25	4800-8-1D	1	NPT DIE 2D	3/4 X 14	4822-3/4-2D
2	MC DIE 1D	10 X 1.5	4800-10-1D				
2	MC DIE 1D	12 X 1.75	4800-12-1D	2	MC DIE NUT	4 X 0.70	4830-4
2	MC DIE 1.5D	14 X 2.0	4800-14-1.5D	2	MC DIE NUT	5 X 0.80	4830-5
2	MC DIE 1.5D	16 X 2.0	4800-16-1.5D	2	MC DIE NUT	6 X 1.0	4830-6
1	MC DIE 2D	18 X 2.5	4800-18-2D	2	MC DIE NUT	8 X 1.25	4830-8
1	MC DIE 2D	20 X 2.5	4800-20-2D	2	MC DIE NUT	10 X 1.5	4830-10
				2	MC DIE NUT	12 X 1.75	4830-12
1	MF DIE 1D	8 X 1.0	4801-8-1D	1	MC DIE NUT	14 X 2.0	4830-14
1	S/PLUG DIE 1D	10 X 1.0	4802-10-1D	1	MC DIE NUT	16 X 2.0	4830-16
1	MF DIE 1D	10 X 1.25	4801-10-1D	1	MC DIE NUT	18 X 2.5	4830-18
1	S/PLUG DIE 1D	12 X 1.25	4802-12-1D	1	MC DIE NUT	20 X 2.5	4830-20
1	MF DIE 1D	12 X 1.5	4801-12-1D				
1	S/PLUG DIE 1.5D	14 X 1.25	4802-14-1.5D	2	MF DIE NUT	8 X 1.0	4831-8
1	MF DIE 1.5D	14 X 1.5	4801-14-1.5D	2	S/PLUG DIE NUT	10 X 1.0	4832-10
1	MF DIE 2D	16 X 1.5	4803-16-2D	2	MF DIE NUT	10 X 1.25	4831-10
1	MF DIE 2D	25 X 1.5	4803-25-2D	2	S/PLUG DIE NUT	12 X 1.25	4832-12
				1	MF DIE NUT	14 X 1.5	4831-14
1	UNC DIE 1D	8G X 32	4812-8G-1D	1	MF DIE NUT	16 X 1.50	4833-16
1	UNC DIE 1D	10G X 24	4812-10G-1D	1	MF DIE NUT	25 X 1.5	4833-25
1	UNC DIE 1D	12G X 24	4812-12G-1D				
1	UNC DIE 1D	3/16 X 24 UNS	4812-3/16-1D	2	UNC DIE NUT	1/4 X 20	4842-1/4
2	UNC DIE 1D	1/4 X 20	4812-1/4-1D	1	UNC DIE NUT	5/16 X 18	4842-5/16
2	UNC DIE 1D	5/16 X 18	4812-5/16-1D	2	UNC DIE NUT	3/8 X 16	4842-3/8
2	UNC DIE 1D	3/8 X 16	4812-3/8-1D	2	UNC DIE NUT	7/16 X 14	4842-7/16
2	UNC DIE 1D	7/16 X 14	4812-7/16-1D	2	UNC DIE NUT	1/2 X 13	4842-1/2
2	UNC DIE 1D	1/2 X 13	4812-1/2-1D	1	UNC DIE NUT	9/16 X 12	4842-9/16
2	UNC DIE 1.5D	9/16 X 12	4812-9/16-1.5D	1	UNC DIE NUT	5/8 X 11	4842-5/8
1	UNC DIE 1.5D	5/8 X 11	4812-5/8-1.5D	1	UNC DIE NUT	3/4 X 10	4842-3/4
1	UNC DIE 2D	3/4 X 10	4812-3/4-2D	1	UNC DIE NUT	7/8 X 9	4842-7/8
1	UNC DIE 2D	7/8 X 9	4812-7/8-2D	1	UNC DIE NUT	1 X 8	4842-1
1	UNC DIE 2D	1 X 8	4812-1-2D				
				2	UNF DIE NUT	1/4 X 28	4844-1/4
2	UNF DIE 1D	8G X 36	4814-8G-1D	2	UNF DIE NUT	5/16 X 24	4844-5/16
2	UNF DIE 1D	10G X 32	4814-10G-1D	2	UNF DIE NUT	3/8 X 24	4844-3/8
2	UNF DIE 1D	12G X 28	4814-12G-1D	2	UNF DIE NUT	7/16 X 20	4844-7/16
2	UNF DIE 1D	3/16 X 32 UNS	4816-3/16-1D	2	UNF DIE NUT	1/2 X 20	4844-1/2
2	UNF DIE 1D	1/4 X 28	4814-1/4-1D	1	UNF DIE NUT	9/16 X 18	4844-9/16
2	UNF DIE 1D	5/16 X 24	4814-5/16-1D	1	UNF DIE NUT	5/8 X 18	4844-5/8
2	UNF DIE 1D	3/8 X 24	4814-3/8-1D	1	UNF DIE NUT	3/4 X 16	4844-3/4
2	UNF DIE 1D	7/16 X 20	4814-7/16-1D	1	UNF DIE NUT	7/8 X 14	4844-7/8
2	UNF DIE 1D	1/2 X 20	4814-1/2-1D	1	UNF DIE NUT	1 X 12	4844-1
1	UNF DIE 2D	9/16 X 18	4814-9/16-2D				
1	UNF DIE 2D	5/8 X 18	4814-5/8-2D	1	BSPT DIE NUT	1/8 X 27	4850-1/8
				1	BSPT DIE NUT	1/4 X 18	4850-1/4
1	BSPF DIE 2D	3/4 X 14	4818-3/4-2D	1	BSPT DIE NUT	3/8 X 18	4850-3/8
1	BSPF DIE 2D	7/8 X 14	4818-7/8-2D	1	BSPT DIE NUT	1/2 X 14	4850-1/2
1	BSPF DIE 2D	1 X 11	4818-1-2D	1	BSPT DIE NUT	3/4 X 14	4850-3/4
				1	BSPT DIE NUT	1 X 11	4850-1
2	BSPT DIE 2D	1/8 X 28	4820-1/8-2D				
2	BSPT DIE 2D	1/4 X 19	4820-1/4-2D				
2	BSPT DIE 2D	3/8 X 19	4820-3/8-2D				
2	BSPT DIE 2D	1/2 X 14	4820-1/2-2D				
1	BSPT DIE 2D	3/4 X 14	4820-3/4-2D				






GROUP	CTAP
SURFACE FINISH	BRIGHT
MATERIAL	CHROME ALLOY
PACKAGING	BLOW MOULDED CASE
TAP TYPE	INTERMEDIATE TAPS
DIE TYPE	1" BUTTON DIES



TAP & DIE SET TYPE	SETS PER OUTER	\$ SET	PART NUMBER
METRIC COARSE – QC RATCHET	4	<b>416.47</b>	4220-S2

SET CONTENTS	SIZE MM	PART NUMBER	SIZE MM	PART NUMBER
	CHROME ALLOY TAPS		CHROME ALLOY DIES	
	3.00 x 0.50	4220-3.00I	3.00 x 0.50	4800-3-1D
	4.00 x 0.70	4220-4.00I	4.00 x 0.70	4800-4-1D
	5.00 x 0.80	4220-5.00I	5.00 x 0.80	4800-5-1D
	6.00 x 1.00	4220-6.00I	6.00 x 1.00	4800-6-1D
	8.00 x 1.25	4220-8.00I	8.00 x 1.25	4800-8-1D
	10.00 x 1.50	4220-10.00I	10.00 x 1.50	4800-10-1D
	12.00 x 1.75	4220-12.00I	12.00 x 1.75	4800-12-1D
WRENCH/HOLDER	Tap Wrench	4996-1/2QC	Die Holder	–

MC

**METRIC  
COARSE & FINE**

Angle of thread is 60°. The crest is flat and the thread has clearance at the root allowing external thread and internal thread to engage well. Larger root radius and lower thread height enable easy screw thread processing and increase thread screw strength. The major diameter of external thread and pitch are specified by a simple numerical value (most commonly measured in millimeters).

**TAPER TAPS**

Taper Taps have a lead of eight threads and are used as a starting tap in difficult or high precision holes. Manufactured from HSS this general purpose tap is designed for use in medium tensile materials and is for hand or general machine use.

**INTERMEDIATE  
TAPS**

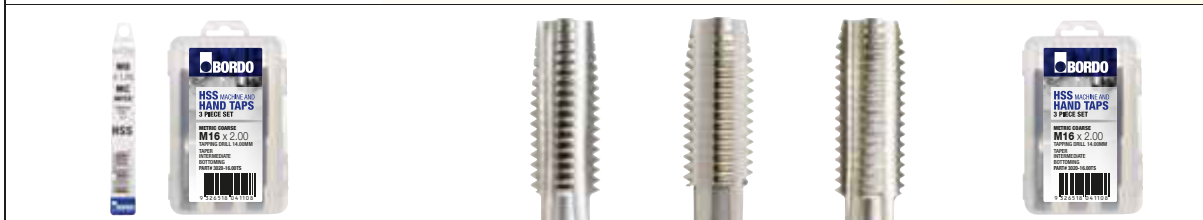
Intermediate Taps have a lead of four threads and are used in most general purpose applications to cut a thread true to a pre-drilled pilot hole.

**BOTTOMING  
TAPS**

Bottoming Taps have a lead of two threads and are used to ensure minimum thread run-out when tapping to the bottom of a blind hole. Bottoming Taps are typically preceded by the use of a Taper or Intermediate Tap.



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	



DIA MM	PITCH MM	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>METRIC COARSE</b>										
1.00	0.25	38.50	0.75	1	103.42		3020-1.00I			
1.20	0.25	38.50	0.85	1	98.51		3020-1.20I			
1.40	0.30	40.00	1.10	1	98.51		3020-1.40I			
1.60	0.35	41.00	1.25	1	82.97		3020-1.60I			
1.70	0.35	41.00	1.45	1	82.97		3020-1.80I			
2.00	0.40	41.00	1.60	1	34.58	3020-2.00T	3020-2.00I	3020-2.00B	103.73	3020-2.00TS
2.50	0.45	44.50	2.05	1	29.13	3020-2.50T	3020-2.50I	3020-2.50B	87.40	3020-2.50TS
3.00	0.50	48.00	2.50	1	21.82	3020-3.00T	3020-3.00I	3020-3.00B	65.50	3020-3.00TS
3.50	0.60	50.00	2.90	1	22.85	3020-3.50T	3020-3.50I	3020-3.50B	68.53	3020-3.50TS
4.00	0.70	53.00	3.30	1	18.93	3020-4.00T	3020-4.00I	3020-4.00B	56.76	3020-4.00TS
4.50	0.75	53.00	3.70	1	24.66	3020-4.50T	3020-4.50I	3020-4.50B	74.00	3020-4.50TS
5.00	0.80	58.00	4.20	1	21.08	3020-5.00T	3020-5.00I	3020-5.00B	63.28	3020-5.00TS
6.00	1.00	66.00	5.00	1	21.82	3020-6.00T	3020-6.00I	3020-6.00B	65.50	3020-6.00TS
7.00	1.00	66.00	6.00	1	26.16	3020-7.00T	3020-7.00I	3020-7.00B	78.43	3020-7.00TS
8.00	1.25	72.00	6.80	1	22.85	3020-8.00T	3020-8.00I	3020-8.00B	68.53	3020-8.00TS
9.00	1.25	72.00	7.80	1	37.43	3020-9.00T	3020-9.00I	3020-9.00B	112.27	3020-9.00TS
10.00	1.50	80.00	8.50	1	31.10	3020-10.00T	3020-10.00I	3020-10.00B	93.31	3020-10.00TS
12.00	1.75	89.00	10.20	1	46.06	3020-12.00T	3020-12.00I	3020-12.00B	138.17	3020-12.00TS
14.00	2.00	95.00	12.00	1	58.13	3020-14.00T	3020-14.00I	3020-14.00B	174.33	3020-14.00TS
16.00	2.00	102.00	14.00	1	70.41	3020-16.00T	3020-16.00I	3020-16.00B	211.19	3020-16.00TS
18.00	2.50	112.00	15.50	1	109.21	3020-18.00T	3020-18.00I	3020-18.00B	327.60	3020-18.00TS
20.00	2.50	112.00	17.50	1	121.50	3020-20.00T	3020-20.00I	3020-20.00B	364.48	3020-20.00TS
22.00	2.50	118.00	19.50	1	137.35	3020-22.00T	3020-22.00I	3020-22.00B	412.10	3020-22.00TS
24.00	3.00	130.00	21.00	1	158.47	3020-24.00T	3020-24.00I	3020-24.00B	475.46	3020-24.00TS
30.00	3.50	138.00	26.50	1	271.21	3020-30.00T	3020-30.00I	3020-30.00B	813.64	3020-30.00TS
33.00	3.50	151.00	29.50	1	355.91	3020-33.00T	3020-33.00I	3020-33.00B	1,067.74	3020-33.00TS
36.00	4.00	162.00	32.00	1	412.03	3020-36.00T	3020-36.00I	3020-36.00B	1,236.10	3020-36.00TS
39.00	4.00	170.00	35.00	1	493.13	3020-39.00T	3020-39.00I	3020-39.00B	1,479.39	3020-39.00TS
42.00	4.50	170.00	37.50	1	563.57	3020-42.00T	3020-42.00I	3020-42.00B	1,690.70	3020-42.00TS
45.00	4.50	187.00	40.50	1	729.32	3020-45.00T	3020-45.00I	3020-45.00B	2,187.94	3020-45.00TS
48.00	5.00	187.00	43.00	1	778.39	3020-48.00T	3020-48.00I	3020-48.00B	2,335.18	3020-48.00TS
52.00	5.00	200.00	47.00	1	958.13	3020-52.00T	3020-52.00I	3020-52.00B	2,874.37	3020-52.00TS
56.00	5.50	200.00	50.50	1	1,532.15	3020-56.00T	3020-56.00I	3020-56.00B	4,596.44	3020-56.00TS
<b>METRIC COARSE - LEFT HAND</b>										
3.00	0.50	48.00	2.50	1	49.28	3080-3.00T	3080-3.00I	3080-3.00B	147.86	3080-3.00TS
4.00	0.70	53.00	3.30	1	49.28	3080-4.00T	3080-4.00I	3080-4.00B	147.86	3080-4.00TS
5.00	0.80	58.00	4.20	1	49.28	3080-5.00T	3080-5.00I	3080-5.00B	147.86	3080-5.00TS
6.00	1.00	66.00	5.00	1	52.17	3080-6.00T	3080-6.00I	3080-6.00B	156.51	3080-6.00TS
8.00	1.25	72.00	6.80	1	54.68	3080-8.00T	3080-8.00I	3080-8.00B	164.06	3080-8.00TS
10.00	1.50	80.00	8.50	1	66.85	3080-10.00T	3080-10.00I	3080-10.00B	200.53	3080-10.00TS
12.00	1.75	89.00	10.20	1	112.78	3080-12.00T	3080-12.00I	3080-12.00B	338.34	3080-12.00TS
14.00	2.00	95.00	12.00	1	100.96	3080-14.00T	3080-14.00I	3080-14.00B	302.86	3080-14.00TS
16.00	2.00	102.00	14.00	1	100.96	3080-16.00T	3080-16.00I	3080-16.00B	302.86	3080-16.00TS
18.00	2.50	112.00	15.50	1	119.10	3080-18.00T	3080-18.00I	3080-18.00B	357.29	3080-18.00TS
20.00	2.50	112.00	17.50	1	153.30	3080-20.00T	3080-20.00I	3080-20.00B	459.91	3080-20.00TS
22.00	2.50	118.00	19.50	1	285.41	3080-22.00T	3080-22.00I	3080-22.00B	856.22	3080-22.00TS
24.00	3.00	130.00	21.00	1	285.41	3080-24.00T	3080-24.00I	3080-24.00B	856.22	3080-24.00TS



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	
	SET CASE	



DIA MM	PITCH MM	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>METRIC FINE</b>										
2.00	0.45	41.00	1.55	1	53.49		3021-2.00I			
3.00	0.35	48.00	2.65	1	42.97	3021-3.00T	3021-3.00I	3021-3.00B	128.95	3021-3.00TS
4.00	0.50	53.00	3.50	1	42.97	3021-4.00T	3021-4.00I	3021-4.00B	128.95	3021-4.00TS
4.50	0.50	53.00	4.00	1	42.97	3021-4.50T	3021-4.50I	3021-4.50B	128.95	3021-4.50TS
5.00	0.50	58.00	4.50	1	38.57	3021-5.00T	3021-5.00I	3021-5.00B	115.74	3021-5.00TS
6.00	0.75	66.00	5.20	1	38.57	3021-6.00T	3021-6.00I	3021-6.00B	115.74	3021-6.00TS
7.00	0.75	66.00	6.20	1	41.33	3021-7.00T	3021-7.00I	3021-7.00B	124.02	3021-7.00TS
8.00	0.75	69.00	7.20	1	52.80	3024-8.00T	3024-8.00I	3024-8.00B	158.40	3024-8.00TS
8.00	1.00	69.00	7.00	1	42.32	3021-8.00T	3021-8.00I	3021-8.00B	126.96	3021-8.00TS
9.00	1.00	69.00	8.00	1	61.20	3021-9.00T	3021-9.00I	3021-9.00B	183.60	3021-9.00TS
10.00	0.75	76.00	9.20	1	71.79	3024-10.00T	3024-10.00I	3024-10.00B	215.39	3024-10.00TS
10.00	1.00	76.00	9.00	1	58.21	3022-10.00T	3022-10.00I	3022-10.00B	174.65	3022-10.00TS
10.00	1.25	76.00	8.80	1	58.13	3021-10.00T	3021-10.00I	3021-10.00B	174.33	3021-10.00TS
12.00	1.00	84.00	11.00	1	83.93	3024-12.00T	3024-12.00I	3024-12.00B	251.81	3024-12.00TS
12.00	1.25	84.00	10.80	1	66.85	3022-12.00T	3022-12.00I	3022-12.00B	200.52	3022-12.00TS
12.00	1.50	89.00	10.50	1	66.85	3021-12.00T	3021-12.00I	3021-12.00B	200.52	3021-12.00TS
14.00	1.00	90.00	13.00	1	100.96	3024-14.00T	3024-14.00I	3024-14.00B	302.88	3024-14.00TS
14.00	1.25	90.00	12.80	1	98.65	3022-14.00T	3022-14.00I	3022-14.00B	295.87	3022-14.00TS
14.00	1.50	95.00	12.50	1	98.65	3021-14.00T	3021-14.00I	3021-14.00B	295.89	3021-14.00TS
16.00	1.00	95.00	15.00	1	100.96	3021-16.00T	3021-16.00I	3021-16.00B	302.88	3021-16.00TS
16.00	1.25	95.00	14.75	1	100.96	3024-16.00T	3024-16.00I	3024-16.00B	302.88	3024-16.00TS
16.00	1.50	102.00	14.50	1	98.65	3023-16.00T	3023-16.00I	3023-16.00B	295.89	3023-16.00TS
18.00	1.00	104.00	17.00	1	119.11	3021-18.00T	3021-18.00I	3021-18.00B	357.30	3021-18.00TS
18.00	1.25	104.00	16.80	1	119.11	3024-18.00T	3024-18.00I	3024-18.00B	357.30	3024-18.00TS
18.00	1.50	104.00	16.50	1	126.86	3022-18.00T	3022-18.00I	3022-18.00B	380.62	3022-18.00TS
20.00	1.50	104.00	18.50	1	158.66	3023-20.00T	3023-20.00I	3023-20.00B	475.97	3023-20.00TS
20.00	2.00	112.00	18.00	1	153.30	3021-20.00T	3021-20.00I	3021-20.00B	459.93	3021-20.00TS
22.00	1.50	113.00	20.50	1	190.10	3021-22.00T	3021-22.00I	3021-22.00B	570.34	3021-22.00TS
22.00	2.00	118.00	20.00	1	153.30	3024-22.00T	3024-22.00I	3024-22.00B	459.93	3024-22.00TS
24.00	1.50	120.00	22.50	1	171.27	3024-24.00T	3024-24.00I	3024-24.00B	513.79	3024-24.00TS
24.00	2.00	120.00	22.00	1	232.63	3021-24.00T	3021-24.00I	3021-24.00B	697.88	3021-24.00TS
25.00	1.50	120.00	23.50	1	171.27	3023-25.00T	3023-25.00I	3023-25.00B	513.79	3023-25.00TS
27.00	2.00	127.00	25.00	1	215.46	3021-27.00T	3021-27.00I	3021-27.00B	646.36	3021-27.00TS
30.00	2.00	127.00	28.00	1	242.68	3021-30.00T	3021-30.00I	3021-30.00B	728.05	3021-30.00TS
32.00	1.50	137.00	30.50	1	242.68	3021-32.00T	3021-32.00I	3021-32.00B	728.05	3021-32.00TS
<b>METRIC FINE - LEFT HAND</b>										
8.00	0.75	69.00	7.20	1	118.81	3082-8.00T	3082-8.00I	3082-8.00B	356.43	3082-8.00TS
10.00	1.00	76.00	9.00	1	163.44	3082-10.00T	3082-10.00I	3082-10.00B	490.34	3082-10.00TS
10.00	1.25	76.00	8.80	1	163.15	3083-10.00T	3083-10.00I	3083-10.00B	489.47	3083-10.00TS
12.00	1.00	84.00	11.00	1	235.63	3082-12.00T	3082-12.00I	3082-12.00B	706.88	3082-12.00TS
12.00	1.25	84.00	10.80	1	187.68	3083-12.00T	3083-12.00I	3083-12.00B	563.03	3083-12.00TS
12.00	1.50	89.00	10.50	1	187.68	3084-12.00T	3084-12.00I	3084-12.00B	563.03	3084-12.00TS
14.00	1.50	95.00	12.50	1	276.93	3082-14.00T	3082-14.00I	3082-14.00B	830.73	3082-14.00TS
16.00	1.50	102.00	14.50	1	276.93	3082-16.00T	3082-16.00I	3082-16.00B	830.73	3082-16.00TS
18.00	1.50	104.00	16.50	1	356.22	3082-18.00T	3082-18.00I	3082-18.00B	1,068.66	3082-18.00TS
20.00	1.50	104.00	18.50	1	445.42	3082-20.00T	3082-20.00I	3082-20.00B	1,336.24	3082-20.00TS
22.00	1.50	113.00	20.50	1	533.75	3082-22.00T	3082-22.00I	3082-22.00B	1,601.26	3082-22.00TS

**METRIC  
COARSE & FINE**

Angle of thread is 60°. The crest is flat and the thread has clearance at the root allowing external thread and internal thread to engage well. Larger root radius and lower thread height enable easy screw thread processing and increase thread screw strength. The major diameter of external thread and pitch are specified by a simple numerical value (most commonly measured in millimetres).

**TAPER TAPS**

Taper Taps have a lead of eight threads and are used as a starting tap in difficult or high precision holes. Manufactured from HSS this general purpose tap is designed for use in medium tensile materials and is for hand or general machine use.

**INTERMEDIATE  
TAPS**

Intermediate Taps have a lead of four threads and are used in most general purpose applications to cut a thread true to a pre-drilled pilot hole.

**BOTTOMING  
TAPS**

Bottoming Taps have a lead of two threads and are used to ensure minimum thread run-out when tapping to the bottom of a blind hole. Bottoming Taps are typically preceded by the use of a Taper or Intermediate Tap.





**SPARK  
CONDUIT  
OVERSIZE /  
GALVANISING**

## METRIC COARSE & FINE

Angle of thread is 60°. The crest is flat and the thread has clearance at the root allowing external thread and internal thread to engage well. Larger root radius and lower thread height enable easy screw thread processing and increase thread screw strength. The major diameter of external thread and pitch are specified by a simple numerical value (most commonly measured in millimeters).

## TAPER TAPS

Taper Taps have a lead of eight threads and are used as a starting tap in difficult or high precision holes. Manufactured from HSS this general purpose tap is designed for use in medium tensile materials and is for hand or general machine use.

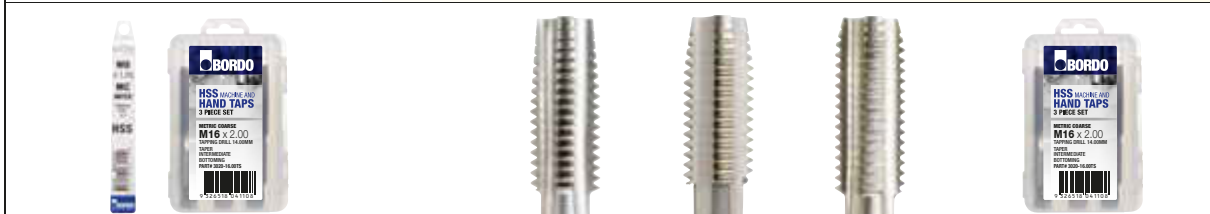
## INTERMEDIATE TAPS

Intermediate Taps have a lead of four threads and are used in most general purpose applications to cut a thread true to a pre-drilled pilot hole.

## BOTTOMING TAPS

Bottoming Taps have a lead of two threads and are used to ensure minimum thread run-out when tapping to the bottom of a blind hole. Bottoming Taps are typically preceded by the use of a Taper or Intermediate Tap.

GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	SET CASE

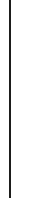


DIA MM	PITCH MM	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>SPARK PLUG</b>										
10.00	1.00	76.00	9.00	1	58.21	3022-10.00T	3022-10.00I	3022-10.00B	174.65	3022-10.00TS
12.00	1.25	84.00	10.80	1	66.85	3022-12.00T	3022-12.00I	3022-12.00B	200.52	3022-12.00TS
14.00	1.25	90.00	12.80	1	98.65	3022-14.00T	3022-14.00I	3022-14.00B	295.87	3022-14.00TS
18.00	1.50	104.00	16.50	1	126.86	3022-18.00T	3022-18.00I	3022-18.00B	380.62	3022-18.00TS
<b>CONDUIT</b>										
16.00	1.50	102.00	14.50	1	98.65	3023-16.00T	3023-16.00I	3023-16.00B	295.89	3023-16.00TS
20.00	1.50	104.00	18.50	1	158.66	3023-20.00T	3023-20.00I	3023-20.00B	475.97	3023-20.00TS
<b>OVERSIZE / GALVANISING</b>										
10.00+0.4	1.50	80.00	8.9	1	83.93			3026-10.00B		
12.00+0.4	1.75	89.00	10.6	1	100.96			3026-12.00B		
16.00+0.4	2.00	102.00	14.4	1	119.11			3026-16.00B		
20.00+0.4	2.50	112.00	17.9	1	171.27			3026-20.00B		
24.00+0.4	3.00	130.00	21.5	1	216.61			3026-24.00B		

UNC



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	
	SET CASE	



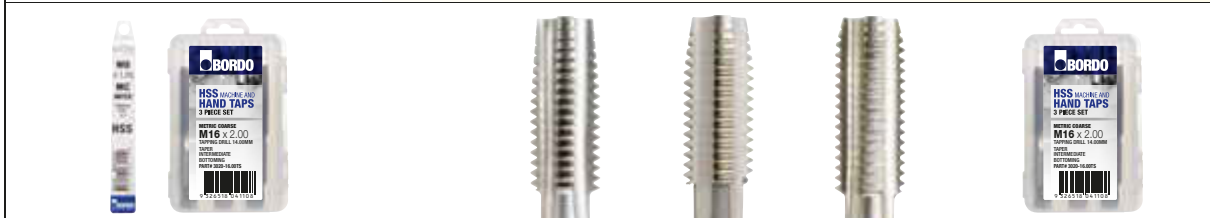
DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>UNC</b>										
5G	40	48.00	2.65	1	37.05	3032-5GT	3032-5GI	3032-5GB	111.10	3032-5GTS
6G	32	50.00	2.85	1	24.22	3032-6GT	3032-6GI	3032-6GB	72.65	3032-6GTS
8G	32	53.00	3.50	1	24.66	3032-8GT	3032-8GI	3032-8GB	74.00	3032-8GTS
10G	24	58.00	3.90	1	22.59	3032-10GT	3032-10GI	3032-10GB	67.72	3032-10GTS
12G	24	62.00	4.50	1	27.17	3032-12GT	3032-12GI	3032-12GB	81.52	3032-12GTS
3/16	24 UNS	58.00	3.70	1	26.02	3032-3/16T	3032-3/16I	3032-3/16B	78.10	3032-3/16TS
1/4	20	66.00	5.10	1	21.56	3032-1/4T	3032-1/4I	3032-1/4B	64.68	3032-1/4TS
5/16	18	72.00	6.60	1	22.59	3032-5/16T	3032-5/16I	3032-5/16B	67.72	3032-5/16TS
3/8	16	80.00	8.00	1	31.10	3032-3/8T	3032-3/8I	3032-3/8B	93.31	3032-3/8TS
7/16	14	85.00	9.40	1	41.27	3032-7/16T	3032-7/16I	3032-7/16B	123.83	3032-7/16TS
1/2	13	89.00	10.80	1	46.24	3032-1/2T	3032-1/2I	3032-1/2B	138.72	3032-1/2TS
9/16	12	95.00	12.20	1	66.85	3032-9/16T	3032-9/16I	3032-9/16B	200.52	3032-9/16TS
5/8	11	102.00	13.50	1	70.41	3032-5/8T	3032-5/8I	3032-5/8B	211.19	3032-5/8TS
3/4	10	112.00	16.50	1	91.68	3032-3/4T	3032-3/4I	3032-3/4B	274.98	3032-3/4TS
7/8	9	118.00	19.50	1	137.35	3032-7/8T	3032-7/8I	3032-7/8B	412.10	3032-7/8TS
1	8	130.00	22.25	1	165.77	3032-1T	3032-1I	3032-1B	497.31	3032-1TS
1-1/8	7	138.00	25.00	1	271.21	3032-1.1/8T	3032-1.1/8I	3032-1.1/8B	813.64	3032-1.1/8TS
1-1/4	7	151.00	28.00	1	303.00	3032-1.1/4T	3032-1.1/4I	3032-1.1/4B	909.00	3032-1.1/4TS
1-1/2	6	170.00	34.00	1	451.54	3032-1.1/2T	3032-1.1/2I	3032-1.1/2B	1,354.58	3032-1.1/2TS
1-3/4	5	187.00	39.50	1	661.77	3032-1.3/4T	3032-1.3/4I	3032-1.3/4B	1,985.30	3032-1.3/4TS
2	4.5	200.00	45.00	1	902.56	3032-2T	3032-2I	3032-2B	2,707.69	3032-2TS
<b>UNC - LEFT HAND</b>										
1/4	20	66.00	5.10	1	67.50	3090-1/4T	3090-1/4I	3090-1/4B	202.49	3090-1/4TS
5/16	18	72.00	6.60	1	78.31	3090-5/16T	3090-5/16I	3090-5/16B	234.92	3090-5/16TS
3/8	16	80.00	8.00	1	95.99	3090-3/8T	3090-3/8I	3090-3/8B	287.97	3090-3/8TS
7/16	14	85.00	9.40	1	139.88	3090-7/16T	3090-7/16I	3090-7/16B	419.64	3090-7/16TS
1/2	13	89.00	10.80	1	169.13	3090-1/2T	3090-1/2I	3090-1/2B	507.41	3090-1/2TS
5/8	11	102.00	13.50	1	196.14	3090-5/8T	3090-5/8I	3090-5/8B	588.42	3090-5/8TS
3/4	10	112.00	16.50	1	291.15	3090-3/4T	3090-3/4I	3090-3/4B	873.44	3090-3/4TS
7/8	9	118.00	19.50	1	384.96	3090-7/8T	3090-7/8I	3090-7/8B	1,154.89	3090-7/8TS
1	8	130.00	22.25	1	387.31	3090-1T	3090-1I	3090-1B	1,161.93	3090-1TS

**UNC  
UNIFIED  
NATIONAL COARSE**

This thread form was introduced in 1948 as an attempt to standardise thread forms in the USA, Canada and the UK. The thread profile of UNC is the same as for metric threads and is described in the JIS B0206 standard. The thread is described by its major diameter and the number of threads per inch of length (TPI). This thread series is commonly used in the mass production of bolts, screws and nuts. It is used for threading into lower tensile strength materials (bronze, brass, aluminium and plastics) to obtain the best resistance to stripping of the internal thread. It is also used on quick assembly or disassembly or if corrosion or slight damage is possible.



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>UNF</b>										
<b>4G</b>	48	48.00	2.40	1	<b>37.05</b>	3034-4GT	3034-4GI	3034-4GB	<b>111.10</b>	3034-4GTS
<b>5G</b>	44	48.00	2.70	1	<b>37.05</b>	3034-5GT	3034-5GI	3034-5GB	<b>111.10</b>	3034-5GTS
<b>6G</b>	40	50.00	2.95	1	<b>37.05</b>	3034-6GT	3034-6GI	3034-6GB	<b>111.10</b>	3034-6GTS
<b>8G</b>	36	53.00	3.50	1	<b>25.41</b>	3034-8GT	3034-8GI	3034-8GB	<b>76.22</b>	3034-8GTS
<b>10G</b>	32	58.00	4.10	1	<b>22.16</b>	3034-10GT	3034-10GI	3034-10GB	<b>66.46</b>	3034-10GTS
<b>12G</b>	28	62.00	4.70	1	<b>27.53</b>	3034-12GT	3034-12GI	3034-12GB	<b>82.55</b>	3034-12GTS
<b>3/16</b>	32 UNS	58.00	4.00	1	<b>31.80</b>	3036-3/16T	3036-3/16I	3036-3/16B	<b>95.42</b>	3036-3/16TS
<b>1/4</b>	28	66.00	5.50	1	<b>21.08</b>	3034-1/4T	3034-1/4I	3034-1/4B	<b>63.28</b>	3034-1/4TS
<b>5/16</b>	24	69.00	6.90	1	<b>22.30</b>	3034-5/16T	3034-5/16I	3034-5/16B	<b>66.85</b>	3034-5/16TS
<b>3/8</b>	24	76.00	8.50	1	<b>30.58</b>	3034-3/8T	3034-3/8I	3034-3/8B	<b>91.77</b>	3034-3/8TS
<b>7/16</b>	20	82.00	9.90	1	<b>41.27</b>	3034-7/16T	3034-7/16I	3034-7/16B	<b>123.83</b>	3034-7/16TS
<b>1/2</b>	20	84.00	11.50	1	<b>46.51</b>	3034-1/2T	3034-1/2I	3034-1/2B	<b>139.55</b>	3034-1/2TS
<b>9/16</b>	18	90.00	12.90	1	<b>66.85</b>	3034-9/16T	3034-9/16I	3034-9/16B	<b>200.52</b>	3034-9/16TS
<b>5/8</b>	18	95.00	14.50	1	<b>68.61</b>	3034-5/8T	3034-5/8I	3034-5/8B	<b>205.80</b>	3034-5/8TS
<b>3/4</b>	16	104.00	17.50	1	<b>91.50</b>	3034-3/4T	3034-3/4I	3034-3/4B	<b>274.47</b>	3034-3/4TS
<b>7/8</b>	14	113.00	20.40	1	<b>137.35</b>	3034-7/8T	3034-7/8I	3034-7/8B	<b>412.10</b>	3034-7/8TS
<b>1</b>	12	120.00	23.25	1	<b>165.45</b>	3034-1T	3034-1I	3034-1B	<b>496.37</b>	3034-1TS
<b>1</b>	14 UNS	120.00	24.00	1	<b>237.66</b>	3036-1T	3036-1I	3036-1B	<b>713.02</b>	3036-1TS
<b>1-1/8</b>	12	127.00	26.50	1	<b>271.21</b>	3034-1.1/8T	3034-1.1/8I	3034-1.1/8B	<b>813.64</b>	3034-1.1/8TS
<b>1-1/4</b>	12	137.00	29.50	1	<b>303.00</b>	3034-1.1/4T	3034-1.1/4I	3034-1.1/4B	<b>909.01</b>	3034-1.1/4TS
<b>1-1/2</b>	12	149.00	36.00	1	<b>450.99</b>	3034-1.1/2T	3034-1.1/2I	3034-1.1/2B	<b>1,352.98</b>	3034-1.1/2TS
<b>UNF - LEFT HAND</b>										
<b>10G</b>	32	58.00	4.10	1	<b>49.16</b>	3092-10GT	3092-10GI	3092-10GB	<b>147.48</b>	3092-10GTS
<b>1/4</b>	28	66.00	5.50	1	<b>73.64</b>	3092-1/4T	3092-1/4I	3092-1/4B	<b>220.91</b>	3092-1/4TS
<b>5/16</b>	24	69.00	6.90	1	<b>78.31</b>	3092-5/16T	3092-5/16I	3092-5/16B	<b>234.92</b>	3092-5/16TS
<b>3/8</b>	24	76.00	8.50	1	<b>99.05</b>	3092-3/8T	3092-3/8I	3092-3/8B	<b>297.14</b>	3092-3/8TS
<b>7/16</b>	20	82.00	9.90	1	<b>139.88</b>	3092-7/16T	3092-7/16I	3092-7/16B	<b>419.64</b>	3092-7/16TS
<b>1/2</b>	20	84.00	11.50	1	<b>169.13</b>	3092-1/2T	3092-1/2I	3092-1/2B	<b>507.41</b>	3092-1/2TS
<b>5/8</b>	18	95.00	14.50	1	<b>208.63</b>	3092-5/8T	3092-5/8I	3092-5/8B	<b>625.89</b>	3092-5/8TS
<b>3/4</b>	16	104.00	17.50	1	<b>296.54</b>	3092-3/4T	3092-3/4I	3092-3/4B	<b>889.60</b>	3092-3/4TS
<b>7/8</b>	14	113.00	20.40	1	<b>362.90</b>	3092-7/8T	3092-7/8I	3092-7/8B	<b>1,088.69</b>	3092-7/8TS
<b>1</b>	12	120.00	23.25	1	<b>414.68</b>	3092-1T	3092-1I	3092-1B	<b>1,244.03</b>	3092-1TS
<b>UNEF</b>										
<b>1/4</b>	32	66.00	5.60	1	<b>67.01</b>			3038-1/4B		
<b>5/16</b>	32	69.00	7.20	1	<b>72.82</b>			3038-5/16B		
<b>3/8</b>	32	76.00	8.80	1	<b>72.82</b>			3038-3/8B		
<b>1/2</b>	28	84.00	11.80	1	<b>83.93</b>			3038-1/2B		
<b>5/8</b>	24	95.00	14.75	1	<b>100.96</b>			3038-5/8B		
<b>3/4</b>	20	104.00	18.00	1	<b>119.11</b>			3038-3/4B		
<b>1</b>	20	120.00	24.20	1	<b>171.27</b>			3038-1B		

### UNF UNIFIED NATIONAL FINE

This thread form was introduced in 1948 as an attempt to standardise thread forms in the USA, Canada and the UK. The thread profile of UNF is the same as for metric threads and is described in the JIS B0206 standard. The thread is described by its major diameter and the number of threads per inch of length (TPI). When used on external threads this series has greater tensile stress area than coarse threads of the same size. Fine series threads will resist stripping out better than coarse threads in areas where the external and mating internal threads are subjected to loads equal to or greater than the capacity of the screw or bolt. Fine threads are also used where the length of engagement is limited or where wall thickness demands a fine pitch.

### UNEF UNIFIED NATIONAL EXTRA FINE

UNEF is a subset of UNF in which the thread forms feature a greater number of TPI than the standard UNF series.

### UNS UNIFIED NATIONAL SPECIAL

UNS is a variation on standard UNF and UNEF diameter and pitch combinations. UNS threads are rarely used for bolts, but rather on nuts, tapped holes, and threaded OD's. Most UNS threads have more threads per inch than the correlating UNF or UNEF standard, therefore they are often the strongest thread available. Because of this they are often used in applications where high stresses are encountered, such as machine tool spindles or automotive spindles.



BSW



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	
	SET CASE	



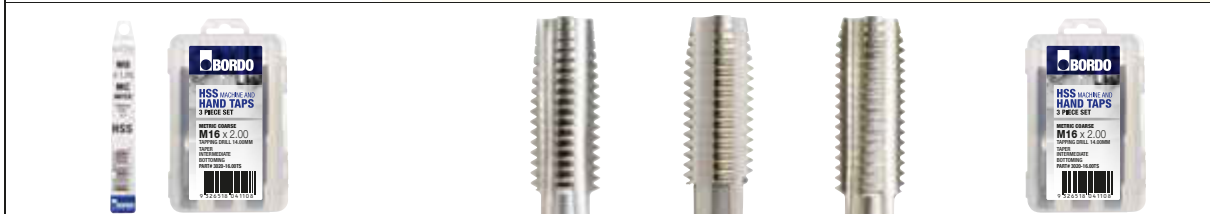
DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>BSW</b>										
1/16	60	41.00	1.20	1	110.23		3028-1/16I			
3/32	48 WHIT	44.50	1.85	1	88.44	3028-3/32T	3028-3/32I	3028-3/32B	265.25	3028-3/32TS
1/8	40	48.00	2.55	1	35.32	3028-1/8T	3028-1/8I	3028-1/8B	105.98	3028-1/8TS
5/32	32 WHIT	53.00	3.20	1	35.32	3028-5/32T	3028-5/32I	3028-5/32B	105.98	3028-5/32TS
3/16	24	58.00	3.70	1	22.30	3028-3/16T	3028-3/16I	3028-3/16B	66.85	3028-3/16TS
7/32	24 WHIT	62.00	4.50	1	33.56	3028-7/32T	3028-7/32I	3028-7/32B	100.64	3028-7/32TS
1/4	20	66.00	5.10	1	22.59	3028-1/4T	3028-1/4I	3028-1/4B	67.72	3028-1/4TS
5/16	18	72.00	6.50	1	23.68	3028-5/16T	3028-5/16I	3028-5/16B	70.97	3028-5/16TS
3/8	16	80.00	7.90	1	32.38	3028-3/8T	3028-3/8I	3028-3/8B	97.10	3028-3/8TS
7/16	14	85.00	9.30	1	43.07	3028-7/16T	3028-7/16I	3028-7/16B	129.22	3028-7/16TS
1/2	12	89.00	10.50	1	48.24	3028-1/2T	3028-1/2I	3028-1/2B	144.79	3028-1/2TS
9/16	12	95.00	12.10	1	70.00	3028-9/16T	3028-9/16I	3028-9/16B	209.99	3028-9/16TS
5/8	11	102.00	13.50	1	73.65	3028-5/8T	3028-5/8I	3028-5/8B	220.95	3028-5/8TS
3/4	10	112.00	16.25	1	95.79	3028-3/4T	3028-3/4I	3028-3/4B	287.37	3028-3/4TS
7/8	9	118.00	19.25	1	143.67	3028-7/8T	3028-7/8I	3028-7/8B	431.01	3028-7/8TS
1	8	130.00	22.00	1	173.22	3028-1T	3028-1I	3028-1B	519.65	3028-1TS
1-1/8	7	138.00	24.75	1	283.66	3028-1.1/8T	3028-1.1/8I	3028-1.1/8B	851.00	3028-1.1/8TS
1-1/4	7	151.00	28.00	1	314.32	3028-1.1/4T	3028-1.1/4I	3028-1.1/4B	942.95	3028-1.1/4TS
1-3/8	6	162.00	30.25	1	402.37	3028-1.3/8T	3028-1.3/8I	3028-1.3/8B	1,207.08	3028-1.3/8TS
1-1/2	6	170.00	33.50	1	469.38	3028-1.1/2T	3028-1.1/2I	3028-1.1/2B	1,408.16	3028-1.1/2TS
1-3/4	5	187.00	39.00	1	662.49	3028-1.3/4T	3028-1.3/4I	3028-1.3/4B	1,987.48	3028-1.3/4TS
2	4.5	200.00	44.50	1	956.60	3028-2T	3028-2I	3028-2B	2,869.79	3028-2TS
<b>BSW - LEFT HAND</b>										
1/4	20	66.00	5.10	1	66.23	3086-1/4T	3086-1/4I	3086-1/4B	198.66	3086-1/4TS
5/16	18	72.00	6.50	1	72.82	3086-5/16T	3086-5/16I	3086-5/16B	218.47	3086-5/16TS
3/8	16	80.00	7.90	1	72.82	3086-3/8T	3086-3/8I	3086-3/8B	218.47	3086-3/8TS
7/16	14	85.00	9.30	1	83.93	3086-7/16T	3086-7/16I	3086-7/16B	251.79	3086-7/16TS
1/2	12	89.00	10.50	1	83.93	3086-1/2T	3086-1/2I	3086-1/2B	251.79	3086-1/2TS
9/16	12	95.00	12.10	1	100.96	3086-9/16T	3086-9/16I	3086-9/16B	302.86	3086-9/16TS
5/8	11	102.00	13.50	1	100.96	3086-5/8T	3086-5/8I	3086-5/8B	302.86	3086-5/8TS
3/4	10	112.00	16.25	1	119.11	3086-3/4T	3086-3/4I	3086-3/4B	357.29	3086-3/4TS
7/8	9	118.00	19.25	1	246.81	3086-7/8T	3086-7/8I	3086-7/8B	740.43	3086-7/8TS
1	8	130.00	22.00	1	322.82	3086-1T	3086-1I	3086-1B	968.46	3086-1TS

BSW  
BRITISH  
STANDARD  
WHITWORTH

This thread form was developed by Sir Joseph Whitworth in 1841. The thread form has rounded roots and crests and is specified in BS84:1956. The thread angle for BSW is 55° as opposed to 60° in Metric and Unified threads.



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>BSF</b>										
3/16	32	58.00	4.00	1	24.38	3030-3/16T	3030-3/16I	3030-3/16B	73.08	3030-3/16TS
1/4	26	66.00	5.30	1	27.99	3030-1/4T	3030-1/4I	3030-1/4B	83.78	3030-1/4TS
5/16	22	72.00	6.80	1	30.31	3030-5/16T	3030-5/16I	3030-5/16B	90.92	3030-5/16TS
3/8	20	80.00	8.30	1	42.49	3030-3/8T	3030-3/8I	3030-3/8B	127.45	3030-3/8TS
7/16	18	85.00	9.70	1	50.81	3030-7/16T	3030-7/16I	3030-7/16B	152.38	3030-7/16TS
1/2	16	89.00	11.10	1	62.68	3030-1/2T	3030-1/2I	3030-1/2B	188.06	3030-1/2TS
5/8	14	102.00	14.00	1	81.09	3030-5/8T	3030-5/8I	3030-5/8B	243.28	3030-5/8TS
3/4	12	112.00	16.75	1	125.23	3030-3/4T	3030-3/4I	3030-3/4B	375.70	3030-3/4TS
7/8	11	118.00	19.75	1	169.36	3030-7/8T	3030-7/8I	3030-7/8B	508.08	3030-7/8TS
1	10	130.00	22.75	1	221.34	3030-1T	3030-1I	3030-1B	664.04	3030-1TS
<b>BSF - LEFT HAND</b>										
1/4	26	66.00	5.30	1	78.63	3088-1/4T	3088-1/4I	3088-1/4B	235.89	3088-1/4TS
5/16	22	72.00	6.80	1	86.99	3088-5/16T	3088-5/16I	3088-5/16B	260.98	3088-5/16TS
3/8	20	80.00	8.30	1	107.79	3088-3/8T	3088-3/8I	3088-3/8B	323.36	3088-3/8TS
7/16	18	85.00	9.70	1	115.58	3088-7/16T	3088-7/16I	3088-7/16B	346.75	3088-7/16TS
1/2	16	89.00	11.10	1	174.15	3088-1/2T	3088-1/2I	3088-1/2B	522.45	3088-1/2TS
5/8	14	102.00	14.00	1	194.72	3088-5/8T	3088-5/8I	3088-5/8B	584.14	3088-5/8TS
3/4	12	112.00	16.75	1	272.82	3088-3/4T	3088-3/4I	3088-3/4B	818.45	3088-3/4TS
7/8	11	118.00	19.75	1	364.45	3088-7/8T	3088-7/8I	3088-7/8B	1,093.35	3088-7/8TS
1	10	130.00	22.75	1	371.57	3088-1T	3088-1I	3088-1B	1,114.72	3088-1TS

<b>BRASS</b>										
1/4	26	66.00	5.30	1	27.20	3060-1/4T	3060-1/4I	3060-1/4B	81.60	3060-1/4TS
5/16	26	72.00	6.90	1	51.52	3060-5/16T	3060-5/16I	3060-5/16B	154.66	3060-5/16TS
3/8	26	80.00	8.50	1	51.52	3060-3/8T	3060-3/8I	3060-3/8B	154.66	3060-3/8TS
7/16	26	85.00	10.20	1	77.23	3060-7/16T	3060-7/16I	3060-7/16B	231.74	3060-7/16TS
1/2	26	89.00	11.80	1	92.09	3060-1/2T	3060-1/2I	3060-1/2B	276.28	3060-1/2TS

<b>BA</b>										
PITCH										
10	0.35	41.00	1.40	1	78.64	3044-10T	3044-10I	3044-10B	235.89	3044-10TS
9	0.39	41.00	1.55	1	74.69	3044-9T	3044-9I	3044-9B	224.06	3044-9TS
8	0.43	44.50	1.80	1	40.86	3044-8T	3044-8I	3044-8B	122.68	3044-8TS
7	0.48	44.50	2.05	1	42.51	3044-7T	3044-7I	3044-7B	127.45	3044-7TS
6	0.53	44.50	2.30	1	27.90	3044-6T	3044-6I	3044-6B	83.69	3044-6TS
5	0.59	48.00	2.65	1	25.75	3044-5T	3044-5I	3044-5B	77.06	3044-5TS
4	0.66	50.00	3.00	1	24.77	3044-4T	3044-4I	3044-4B	74.21	3044-4TS
3	0.73	53.00	3.40	1	27.58	3044-3T	3044-3I	3044-3B	82.77	3044-3TS
2	0.81	58.00	4.00	1	24.77	3044-2T	3044-2I	3044-2B	74.21	3044-2TS
1	0.9	62.00	4.50	1	27.90	3044-1T	3044-1I	3044-1B	83.69	3044-1TS
0	1.00	66.00	5.10	1	26.62	3044-0T	3044-0I	3044-0B	79.87	3044-0TS

BSF  
BRITISH  
STANDARD FINE

This thread form was based upon the British Standard Whitworth (BSW) but has a finer thread (more threads per inch for a given diameter). The thread form was first introduced in 1908 and is specified in BS84:1956.

When used on external threads this series has greater tensile stress area than coarse threads of the same size. Fine series threads will resist stripping out better than coarse threads in areas where the external and mating internal threads are subjected to loads equal to or greater than the capacity of the screw or bolt. Fine threads are also used where the length of engagement is limited or where wall thickness demands a fine pitch.

BA  
BRITISH  
ASSOCIATION

In 1884 the British Association for the Advancement of Science adopted a thread form and series, primarily for use in precision equipment. It was inspired by one used in the Swiss watch and clock industry, and was formerly sometimes called the Swiss Small Screw Thread System; but is now just referred to as the BA series. Like the Whitworth thread, it has a rounded root and crest, but the included angle is 47.5°. Despite the date of origin and the British sponsorship, the BA is a metric series. Not only is it based on the metre, but the thread frequency is specified in terms of round numbers in the pitch sequence, with threads per metre allowed to fall where it may.



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	
	SET CASE	



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
<b>BSPF (G SERIES)</b>										
1/8	28	59.00	8.80	1	<b>37.43</b>	3046-1/8T	3046-1/8I	3046-1/8B	<b>112.27</b>	3046-1/8TS
1/4	19	67.00	11.80	1	<b>52.85</b>	3046-1/4T	3046-1/4I	3046-1/4B	<b>158.64</b>	3046-1/4TS
3/8	19	75.00	15.25	1	<b>77.59</b>	3046-3/8T	3046-3/8I	3046-3/8B	<b>232.72</b>	3046-3/8TS
1/2	14	87.00	19.00	1	<b>109.21</b>	3046-1/2T	3046-1/2I	3046-1/2B	<b>327.60</b>	3046-1/2TS
5/8	14	91.00	21.00	1	<b>144.34</b>	3046-5/8T	3046-5/8I	3046-5/8B	<b>433.03</b>	3046-5/8TS
3/4	14	96.00	24.50	1	<b>155.07</b>	3046-3/4T	3046-3/4I	3046-3/4B	<b>465.24</b>	3046-3/4TS
7/8	14	102.00	28.25	1	<b>221.90</b>	3046-7/8T	3046-7/8I	3046-7/8B	<b>665.71</b>	3046-7/8TS
1	11	109.00	30.75	1	<b>257.23</b>	3046-1T	3046-1I	3046-1B	<b>771.69</b>	3046-1TS
1-1/4	11	119.00	39.50	1	<b>457.50</b>	3046-1.1/4T	3046-1.1/4I	3046-1.1/4B	<b>728.03</b>	3046-1.1/4TS
1-1/2	11	125.00	45.50	1	<b>513.98</b>	3046-1.1/2T	3046-1.1/2I	3046-1.1/2B	<b>993.48</b>	3046-1.1/2TS
1-3/4	11	132.00	51.00	1	<b>828.87</b>	3046-1.3/4T	3046-1.3/4I	3046-1.3/4B	<b>2,486.61</b>	3046-1.3/4TS
2	11	140.00	57.00	1	<b>888.31</b>	3046-2T	3046-2I	3046-2B	<b>2,664.91</b>	3046-2TS
2-1/4	11	142.00	62.70	1	<b>1,365.10</b>	3046-2.1/4T	3046-2.1/4I	3046-2.1/4B	<b>4,095.31</b>	3046-2.1/4TS
2-1/2	11	153.00	72.10	1	<b>1,825.24</b>	3046-2.1/2T	3046-2.1/2I	3046-2.1/2B	<b>5,475.74</b>	3046-2.1/2TS
3	11	164.00	84.80	1	<b>2,848.68</b>	3046-3T	3046-3I	3046-3B	<b>8,546.03</b>	3046-3TS

<b>BSPT</b>										
1/8	28	59.00	8.40	1	<b>84.56</b>			3048-1/8B		
1/4	19	67.00	11.20	1	<b>91.50</b>			3048-1/4B		
3/8	19	75.00	14.75	1	<b>140.97</b>			3048-3/8B		
1/2	14	87.00	18.25	1	<b>158.66</b>			3048-1/2B		
3/4	14	96.00	23.75	1	<b>197.26</b>			3048-3/4B		
1	11	109.00	30.00	1	<b>281.92</b>			3048-1B		
1-1/4	11	119.00	38.50	1	<b>454.55</b>			3048-1.1/4B		
1-1/2	11	125.00	44.50	1	<b>600.06</b>			3048-1.1/2B		
2	11	140.00	56.00	1	<b>980.31</b>			3048-2B		

**BSPF**  
**BSPT**

**BSP**  
BRITISH  
STANDARD PIPE  
BSPF (G SERIES)

This series is a pipe thread which is used mainly for mechanical coupling. The angle of thread is mainly 55° however for the US method some threads have a 60° angle. It is specified according to JIS and ISO R228.

**BSPT**  
BRITISH  
STANDARD PIPE  
TAPER  
(RC SERIES PIPE TAPER)

This is based on the Whitworth thread form - a symmetrical V-thread with an angle of 55°. BSPT has been widely adopted internationally for interconnecting and sealing pipe ends by mating an external (male) with an internal (female) thread. The thread diameter increases along the length of the thread allowing the coupled pipes to form a seal when torqued as the flanks of the threads compress against each other. The taper is "1 to 16", meaning that for each 16 mm increase in the distance from the end, the diameter increases by 1 mm.

**BRASS (BSB)**  
BRITISH  
STANDARD  
BRASS

Brass tubing has a uniform wall thickness, irrespective of the tube diameter, therefore any thread cut on, or in, it needs to have the same depth, so 26 TPI is standard on all BSB diameters. BSB is often confused with BS Cycle thread, the difference being that brass thread has an angle of 55° whereas Cycle is 60°.



NPT  
NPTF  
NPSF

**NPT**  
NATIONAL PIPE  
TAPERED  
NPT is a US standard  
for tapered threads  
used to join pipes  
and fittings.  
ANSI/ASME standard  
B1.20.1 covers threads  
of 60-degree form with  
flat crests and roots.  
The taper on NPT  
threads allows them  
to form a seal when  
torqued as the  
flanks of the threads  
compress against each  
other. However a  
clearance remains  
between the crests and  
roots of the threads,  
resulting in a leakage  
around this spiral. This  
means that NPT  
fittings must be made  
leak free with the aid of  
thread seal tape or  
a thread sealant  
compound. For each  
12" increase in  
distance from the  
end, the diameter  
increases by 3/4".

**NPTF (DRYSEAL TAPER)**  
NATIONAL PIPE  
TAPER FUEL

NPTF is a semi-  
compatible variant of  
NPT, designed to  
provide a more leak free  
seal without the use  
of teflon tape or other  
sealant compound.  
NPTF threads are the  
same basic shape but  
with crest and root  
heights adjusted for  
an interference fit,  
eliminating the spiral  
leakage path.

**NPSF (DRYSEAL)**  
NATIONAL PIPE  
STRAIGHT FUEL

Another variation of  
the Dryseal thread is  
the NPSF. It is used for  
internal threads and an  
NPTF external thread  
can be screwed into it  
to provide both a satis-  
factory mechanical  
connection and  
hydraulic seal. A combi-  
nation of a parallel and  
tapered thread would  
not appear to be ideal  
but it is widely used.  
Many quick disconnect  
couplers for example  
have the NPSF thread  
and are recommended  
by the manufacturer  
for use with NPT and  
NPTF.



GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
FLUTE TYPE	STRAIGHT	STRAIGHT
CONTENTS	SINGLE	3 PCS - TAPER / INTER / BOTT
PACKAGING	SNAP PACK / TELESCOPIC PACK	SET CASE



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	TAPER PART NUMBER	INTERMEDIATE PART NUMBER	BOTTOMING PART NUMBER	\$ SET	PART NUMBER
NPT										
1/8	27	59.00	8.70	1	66.23			3052-1/8B		
1/4	18	67.00	11.10	1	93.29			3052-1/4B		
3/8	18	75.00	14.50	1	140.97			3052-3/8B		
1/2	14	87.00	18.00	1	161.95			3052-1/2B		
3/4	14	96.00	23.25	1	200.85			3052-3/4B		
1	11.5	109.00	29.00	1	290.56			3052-1B		
1-1/4	11.5	119.00	38.00	1	475.30			3052-1.1/4B		
1-1/2	11.5	125.00	44.00	1	729.01			3052-1.1/2B		
2	11.5	140.00	56.00	1	1,160.93			3052-2B		

NPTF (DRYSEAL TAPER)										
1/8	27	59.00	8.40	1	81.09			3054-1/8B		
1/4	18	67.00	11.00	1	133.73			3054-1/4B		
3/8	18	75.00	14.50	1	169.06			3054-3/8B		
1/2	14	87.00	17.50	1	193.71			3054-1/2B		

NPSF (DRYSEAL)										
1/8	27	59.00	8.50	1	51.11			3056-1/8B		
1/4	18	67.00	11.00	1	84.56			3056-1/4B		
3/8	18	75.00	14.50	1	102.22			3056-3/8B		
1/2	14	87.00	18.00	1	155.09			3056-1/2B		



GROUP	HPMT	HPMT
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co5*	HSS-Co5*
FLUTE TYPE	STRAIGHT	SPIRAL 35°
POINT TYPE / LEAD (THREADS)	GUN NOSE (SPIRAL POINT) / 4-5	2-3
PACKAGING	SNAP PACK / TELESCOPIC PACK	SNAP PACK / TELESCOPIC PACK



DIA MM	PITCH MM	OAL MM	DRILL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>METRIC COARSE</b>								
3.00	0.50	48.00	2.50	1	28.53	3120-3.00	37.67	3220-3.00
3.50	0.60	50.00	2.90	1	28.53	3120-3.50	40.38	3220-3.50
4.00	0.70	53.00	3.30	1	23.68	3120-4.00	29.27	3220-4.00
5.00	0.80	58.00	4.20	1	26.45	3120-5.00	32.70	3220-5.00
6.00	1.00	66.00	5.00	1	27.17	3120-6.00	33.87	3220-6.00
7.00	1.00	66.00	6.00	1	36.29	3120-7.00	47.98	3220-7.00
8.00	1.25	72.00	6.80	1	29.27	3120-8.00	36.73	3220-8.00
9.00	1.25	72.00	7.80	1	53.99	3120-9.00	70.99	3220-9.00
10.00	1.50	80.00	8.50	1	38.85	3120-10.00	52.17	3220-10.00
11.00	1.50	85.00	9.50	1	64.29	3120-11.00	85.55	3220-11.00
12.00	1.75	89.00	10.20	1	64.40	3120-12.00	81.69	3220-12.00
14.00	2.00	95.00	12.00	1	83.53	3120-14.00	104.58	3220-14.00
16.00	2.00	102.00	14.00	1	103.55	3120-16.00	130.45	3220-16.00
18.00	2.50	112.00	15.50	1	140.97	3120-18.00	176.15	3220-18.00
20.00	2.50	112.00	17.50	1	179.70	3120-20.00	221.90	3220-20.00
22.00	2.50	118.00	19.50	1	176.64	3120-22.00	192.81	3220-22.00
24.00	3.00	130.00	21.00	1	201.31	3120-24.00	219.84	3220-24.00
27.00	3.00	135.00	24.00	1	314.62	3120-27.00		
30.00	3.50	138.00	26.50	1	371.87	3120-30.00		
33.00	3.50	151.00	29.50	1	477.58	3120-33.00		
36.00	4.00	162.00	32.00	1	529.67	3120-36.00		

<b>METRIC FINE</b>								
5.00	0.50	58.00	4.50	1	51.07	3121-5.00	66.22	3221-5.00
6.00	0.75	66.00	5.20	1	62.41	3121-6.00	66.22	3221-6.00
8.00	1.00	69.00	7.00	1	29.27	3121-8.00	54.94	3221-8.00
10.00	1.00	76.00	9.00	1	87.10	3122-10.00	72.83	3222-10.00
10.00	1.25	76.00	8.80	1	38.85	3121-10.00	78.74	3221-10.00
12.00	1.50	89.00	10.50	1	64.40	3121-12.00	123.56	3221-12.00

<b>SPARK PLUG</b>								
10.00	1.00	76.00	9.00	1	87.10	3122-10.00	72.83	3222-10.00

**SPIRAL FLUTE TAPS**

Spiral Flute Taps are used for machine tapping in all blind hole applications, especially in soft metals that produce long stringy swarf such as aluminium, copper and magnesium. Manufactured from HSS-Co5 this modern design tap uses the shear action provided by the spiral flutes to draw the swarf out of the hole which minimises swarf clogging when tapping deeper holes.

**SPIRAL POINT TAPS GUN NOSE**

Spiral Point Taps are used for machine tapping blind and through holes where there is sufficient clearance to accommodate chips. Manufactured from HSS-Co5 this modern design tap uses straight flutes supplemented by angular cutting faces at the point to produce a fine finish on the threads. Shallower flutes achieve a stronger cross section allowing the tap to withstand greater cutting forces.

\* Some older stock may be supplied as HSSE-V3

UNC  
UNF**SPIRAL FLUTE  
TAPS**

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GROUP	HPMT	HPMT
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co5*	HSS-Co5*
FLUTE TYPE	STRAIGHT	SPIRAL 35°
POINT TYPE / LEAD (THREADS)	GUN NOSE (SPIRAL POINT) / 4-5	2-3
PACKAGING	SNAP PACK / TELESCOPIC PACK	SNAP PACK / TELESCOPIC PACK



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>UNC</b>								
6G	32	50.00	2.85	1	27.99	3132-6G	34.48	3232-6G
8G	32	53.00	3.50	1	31.10	3132-8G	34.48	3232-8G
10G	24	58.00	3.90	1	28.19	3132-10G	34.48	3232-10G
12G	24	62.00	4.50	1	36.29	3132-12G	33.32	3232-12G
1/4	20	66.00	5.10	1	27.17	3132-1/4	33.87	3232-1/4
5/16	18	72.00	6.60	1	29.27	3132-5/16	37.05	3232-5/16
3/8	16	80.00	8.00	1	35.69	3132-3/8	50.81	3232-3/8
7/16	14	85.00	9.40	1	58.13	3132-7/16	71.90	3232-7/16
1/2	13	89.00	10.80	1	64.40	3132-1/2	82.45	3232-1/2
9/16	12	95.00	12.20	1	98.39	3132-9/16	107.65	3232-9/16
5/8	11	102.00	13.50	1	102.22	3132-5/8	130.45	3232-5/8
3/4	10	112.00	16.50	1	144.34	3132-3/4	176.15	3232-3/4
7/8	9	118.00	19.50	1	185.55	3132-7/8	241.79	3232-7/8
1	8	130.00	22.25	1	233.43	3132-1	280.36	3232-1
<b>UNF</b>								
5G	44	48.00	2.70	1	34.74	3134-5G	37.86	3234-5G
6G	40	50.00	2.95	1	32.25	3134-6G	35.06	3234-6G
8G	36	53.00	3.50	1	32.25	3134-8G	35.06	3234-8G
10G	32	58.00	4.10	1	28.53	3134-10G	34.94	3234-10G
12G	28	62.00	4.70	1	38.21	3134-12G	35.06	3234-12G
1/4	28	66.00	5.50	1	27.53	3134-1/4	33.87	3234-1/4
5/16	24	69.00	6.90	1	29.67	3134-5/16	37.05	3234-5/16
3/8	24	76.00	8.50	1	40.10	3134-3/8	50.81	3234-3/8
7/16	20	82.00	9.90	1	58.13	3134-7/16	71.90	3234-7/16
1/2	20	84.00	11.50	1	64.40	3134-1/2	82.45	3234-1/2
9/16	18	90.00	12.90	1	89.43	3134-9/16	97.86	3234-9/16
5/8	18	95.00	14.50	1	102.22	3134-5/8	130.45	3234-5/8
3/4	16	104.00	17.50	1	144.34	3134-3/4	176.15	3234-3/4
7/8	14	113.00	20.40	1	185.55	3134-7/8	184.82	3234-7/8
1	12	120.00	23.25	1	233.43	3134-1	231.14	3234-1

\* Some older stock may be supplied as HSSE-V3





GROUP	HPMT	HPMT
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co5*	HSS-Co5*
FLUTE TYPE	STRAIGHT	SPIRAL 35°
POINT TYPE / LEAD (THREADS)	GUN NOSE (SPIRAL POINT) / 4-5	2-3
PACKAGING	SNAP PACK / TELESCOPIC PACK	SNAP PACK / TELESCOPIC PACK



DIA INCH	TPI	OAL MM	DRILL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>BSW</b>								
1/8	40	48.00	2.55	1	<b>42.76</b>	3128-1/8	<b>41.58</b>	3228-1/8
5/32	32 WHIT	53.00	3.20	1	<b>41.27</b>	3128-5/32	<b>43.07</b>	3228-5/32
3/16	24	58.00	3.70	1	<b>33.87</b>	3128-3/16	<b>43.07</b>	3228-3/16
1/4	20	66.00	5.10	1	<b>28.85</b>	3128-1/4	<b>35.32</b>	3228-1/4
5/16	18	72.00	6.50	1	<b>30.89</b>	3128-5/16	<b>38.64</b>	3228-5/16
3/8	16	80.00	7.90	1	<b>42.06</b>	3128-3/8	<b>53.01</b>	3228-3/8
7/16	14	85.00	9.30	1	<b>60.80</b>	3128-7/16	<b>75.17</b>	3228-7/16
1/2	12	89.00	10.50	1	<b>67.46</b>	3128-1/2	<b>86.21</b>	3228-1/2
9/16	12	95.00	12.10	1	<b>85.55</b>	3128-9/16	<b>101.58</b>	3228-9/16
5/8	11	102.00	13.50	1	<b>108.72</b>	3128-5/8	<b>136.33</b>	3228-5/8
3/4	10	112.00	16.25	1	<b>152.13</b>	3128-3/4	<b>169.72</b>	3228-3/4
7/8	9	118.00	19.25	1	<b>160.32</b>	3128-7/8	<b>241.79</b>	3228-7/8
1	8	130.00	22.00	1	<b>202.71</b>	3128-1	<b>280.36</b>	3228-1

**SPIRAL FLUTE  
TAPS**

Spiral Flute Taps are used for machine tapping in all blind hole applications, especially in soft metals that produce long stringy swarf such as aluminium, copper and magnesium. Manufactured from HSS-Co5 this modern design tap uses the shear action provided by the spiral flutes to draw the swarf out of the hole which minimises swarf clogging when tapping deeper holes.

**SPIRAL POINT  
TAPS GUN NOSE**

Spiral Point Taps are used for machine tapping blind and through holes where there is sufficient clearance to accommodate chips. Manufactured from HSS-Co5 this modern design tap uses straight flutes supplemented by angular cutting faces at the point to produce a fine finish on the threads. Shallower flutes achieve a stronger cross section allowing the tap to withstand greater cutting forces.

\* Some older stock may be supplied as HSSE-V3

**MC**

**STAINLESS STEEL  
BLUE BAND**

The machining of stainless steels is difficult due to its work hardening properties, toughness and poor thermal conductivity, which places high demands on the cutting tools. The Blue Band Series has been specifically designed to suit these difficult machining requirements.

TiAlN coating increases tool surface hardness to 87Rc. For machining materials with Hardness < 350 HB : Tensile Strength <1250 N/mm<sup>2</sup>.

**TOUGH  
TREATABLE STEEL  
RED BAND**

The mechanical properties of materials are influenced diversely by the addition of alloying elements and heat treatment processes, resulting in some high-strength, quenched and tempered steels or hardened steels. This range has its own unique set of machining requirements which are satisfied by the Red Band Series.

TiAlN coating increases tool surface hardness to 87Rc. For machining materials with Hardness < 470 HB : Tensile Strength <1500 N/mm<sup>2</sup>.



GROUP	CBTP	CBTP
SURFACE FINISH	VIOLET / GREY	VIOLET / GREY
MATERIAL	HSSE-V3 TiAlN COATED	HSSE-V3 TiAlN COATED
POINT TYPE	SPIRAL POINT	SPIRAL FLUTE
FLUTE TYPE	STRAIGHT	SPIRAL 40° HELIX
PACKAGING	SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK



DIA MM	PITCH MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>METRIC COARSE</b>							
3.00	0.50	56.00	1	35.05	3150-3.00	42.41	3250-3.00
4.00	0.70	63.00	1	37.81	3150-4.00	44.82	3250-4.00
5.00	0.80	70.00	1	45.52	3150-5.00	54.78	3250-5.00
6.00	1.00	80.00	1	48.50	3150-6.00	58.79	3250-6.00
8.00	1.25	90.00	1	51.16	3150-8.00	72.54	3250-8.00
10.00	1.50	100.00	1	67.96	3150-10.00	90.96	3250-10.00
12.00	1.75	110.00	1	114.10	3150-12.00	135.76	3250-12.00
14.00	2.00	110.00	1	133.10	3150-14.00	158.39	3250-14.00
16.00	2.00	110.00	1	134.16	3150-16.00	159.65	3250-16.00
18.00	2.50	125.00	1	190.15	3150-18.00	226.26	3250-18.00
20.00	2.50	140.00	1	222.05	3150-20.00	264.25	3250-20.00
22.00	2.50	140.00	1	240.85	3150-22.00	286.60	3250-22.00
24.00	3.00	160.00	1	281.71	3150-24.00	335.22	3250-24.00

GROUP	CBTP	CBTP
SURFACE FINISH	VIOLET / GREY	VIOLET / GREY
MATERIAL	HSSE-V3 TiAlN COATED	HSSE-V3 TiAlN COATED
POINT TYPE	SPIRAL POINT	SPIRAL FLUTE
FLUTE TYPE	STRAIGHT	SPIRAL 15° HELIX
PACKAGING	SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK



DIA MM	PITCH MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>METRIC COARSE</b>							
3.00	0.50	56.00	1	35.48	3152-3.00	37.34	3252-3.00
4.00	0.70	63.00	1	38.66	3152-4.00	39.63	3252-4.00
5.00	0.80	70.00	1	43.63	3152-5.00	46.34	3252-5.00
6.00	1.00	80.00	1	45.71	3152-6.00	48.99	3252-6.00
8.00	1.25	90.00	1	58.35	3152-8.00	60.93	3252-8.00
10.00	1.50	100.00	1	77.86	3152-10.00	79.19	3252-10.00
12.00	1.75	110.00	1	110.57	3152-12.00	113.89	3252-12.00
14.00	2.00	110.00	1	132.76	3152-14.00	136.71	3252-14.00
16.00	2.00	110.00	1	133.89	3152-16.00	137.92	3252-16.00
18.00	2.50	125.00	1	185.68	3152-18.00	189.39	3252-18.00
20.00	2.50	140.00	1	204.91	3152-20.00	209.00	3252-20.00
22.00	2.50	140.00	1	213.28	3152-22.00	217.55	3252-22.00
24.00	3.00	160.00	1	261.05	3152-24.00	266.26	3252-24.00

MC



GROUP	CBTP	CBTP	CBTP
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	HSSE-V3	HSSE-V3	HSSE-V3
POINT TYPE	SPIRAL POINT	SPIRAL FLUTE	ROLL FORM
FLUTE TYPE	STRAIGHT	SPIRAL 40° HELIX	FLUTELESS
PACKAGING	SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK



DIA MM	PITCH MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
METRIC COARSE									
3.00	0.50	56.00	1	16.36	3154-3.00	21.29	3254-3.00	39.39	3255-3.00
4.00	0.70	63.00	1	17.79	3154-4.00	20.91	3254-4.00	40.09	3255-4.00
5.00	0.80	70.00	1	17.70	3154-5.00	21.85	3254-5.00	42.09	3255-5.00
6.00	1.00	80.00	1	18.55	3154-6.00	21.65	3254-6.00	43.53	3255-6.00
8.00	1.25	90.00	1	23.67	3154-8.00	26.83	3254-8.00	47.21	3255-8.00
10.00	1.50	100.00	1	31.61	3154-10.00	37.84	3254-10.00	67.17	3255-10.00
12.00	1.75	110.00	1	56.86	3154-12.00	65.07	3254-12.00		
14.00	2.00	110.00	1	68.28	3154-14.00	78.12	3254-14.00		
16.00	2.00	110.00	1	76.51	3154-16.00	98.52	3254-16.00		
18.00	2.50	125.00	1	106.10	3154-18.00	135.27	3254-18.00		
20.00	2.50	140.00	1	117.09	3154-20.00	149.29	3254-20.00		
22.00	2.50	140.00	1	121.88	3154-22.00	155.40	3254-22.00		
24.00	3.00	160.00	1	149.18	3154-24.00	190.19	3254-24.00		

ALUMINIUM  
YELLOW BAND

The alloying elements which achieve varying Aluminium Alloys have an effect on the machining properties of these materials. This generally creates a difficult long chip formation and material which has tendencies to stick to the tool, placing a unique set of demands on tooling. Yellow Band Series contends with these difficulties.

For machining materials with Hardness < 200 HB : Tensile Strength < 700 N/mm2

CARBON STEEL  
GREEN BAND

The machinability of different carbon steels is as varied as their properties. Soft-tough construction steels place a unique set of demands on the tools. The Green Band Series of drills and taps have been developed specifically for this range of steels.

TiN coating increases tool surface hardness to 85Rc. For machining materials with Hardness < 250 HB : Tensile Strength < 900 N/mm2

CAST IRON  
WHITE BAND

A highly abrasive material with damping and thermal conductivity, high strength and resistance to wear. Cast Iron is used extensively for mass produced components. The White Band Series is designed for this specific purpose.

TiAIN coating increases tool surface hardness to 87Rc. For machining materials with Hardness < 300 HB : Tensile Strength < 1000 N/mm2

GROUP	CBTP	CBTP	CBTP
SURFACE FINISH	GOLD COLOURED	GOLD COLOURED	VIOLET / GREY
MATERIAL	HSSE-V3 TIN COATED	HSSE-V3 TIN COATED	HSSE-V3 TiAIN COATED
POINT TYPE	SPIRAL POINT	SPIRAL FLUTE	SPIRAL FLUTE
FLUTE TYPE	STRAIGHT	SPIRAL 35° HELIX	SPIRAL 15° HELIX
PACKAGING	SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK	SNAP/TELESCOPIC PACK



DIA MM	PITCH MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
METRIC COARSE									
3.00	0.50	56.00	1	31.61	3156-3.00	44.21	3256-3.00	47.05	3258-3.00
4.00	0.70	63.00	1	35.97	3156-4.00	49.27	3256-4.00	47.84	3258-4.00
5.00	0.80	70.00	1	40.30	3156-5.00	55.90	3256-5.00	51.68	3258-5.00
6.00	1.00	80.00	1	45.73	3156-6.00	62.72	3256-6.00	59.86	3258-6.00
8.00	1.25	90.00	1	48.88	3156-8.00	66.09	3256-8.00	74.47	3258-8.00
10.00	1.50	100.00	1	57.19	3156-10.00	88.57	3256-10.00	91.84	3258-10.00
12.00	1.75	110.00	1	111.36	3156-12.00	114.50	3256-12.00	131.14	3258-12.00
14.00	2.00	110.00	1	129.98	3156-14.00	130.62	3256-14.00	151.29	3258-14.00
16.00	2.00	110.00	1	153.42	3156-16.00	131.79	3256-16.00	159.28	3258-16.00
18.00	2.50	125.00	1	216.92	3156-18.00	176.70	3256-18.00	201.88	3258-18.00
20.00	2.50	140.00	1	237.13	3156-20.00	194.91	3256-20.00	235.65	3258-20.00
22.00	2.50	140.00	1	255.16	3156-22.00	208.37	3256-22.00	250.34	3258-22.00
24.00	3.00	160.00	1	310.68	3156-24.00	262.55	3256-24.00	304.52	3258-24.00





GROUP	HSTD	HSTD
SURFACE FINISH	BRIGHT	BRIGHT
TAP MATERIAL	HSS	HSS
TAP LEAD	INTERMEDIATE	INTERMEDIATE
PACKAGING	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
METRIC COARSE (MC)	183.65	3020-S1		
UNIFIED NATIONAL COARSE (UNC)			192.96	3032-S1

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	3.00 X 0.50	3020-3.00I	6G X 32	3032-6GI
	4.00 X 0.70	3020-4.00I	8G X 32	3032-8GI
	5.00 X 0.80	3020-5.00I	10G X 24	3032-10GI
	6.00 X 1.00	3020-6.00I	1/4 X 20	3032-1/4I
	8.00 X 1.25	3020-8.00I	5/16 X 18	3032-5/16I
	10.00 X 1.50	3020-10.00I	3/8 X 16	3032-3/8I
	12.00 X 1.75	3020-12.00I	1/2 X 13	3032-1/2I



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
UNIFIED NATIONAL FINE (UNF)	205.09	3034-S1		
BRITISH STANDARD WHITWORTH (BSW)			219.83	3028-S1

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	6G X 40	3034-6GI	1/8 X 40	3028-1/8I
	8G X 36	3034-8GI	5/32 X 32	3028-5/32I
	10G X 32	3034-10GI	3/16 X 24	3028-3/16I
	1/4 X 28	3034-1/4I	1/4 X 20	3028-1/4I
	5/16 X 24	3034-5/16I	5/16 X 18	3028-5/16I
	3/8 X 24	3034-3/8I	3/8 X 16	3028-3/8I
	1/2 X 20	3034-1/2I	1/2 X 12	3028-1/2I

NEW  
SETSNEW  
SETS



GROUP	HSTD	CBTP	HSTD
SURFACE FINISH	BRIGHT	VIOLET / GREY	BRIGHT
DRILL MATERIAL & TYPE	HSS JOBBER	HSS-CO TiAIN JOBBER	HSS JOBBER
TAP MATERIAL & TYPE	HSS INTERMEDIATE LEAD	HSSE-V3 TiAIN INTER	HSS INTERMEDIATE LEAD
PACKAGING	SET	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
METRIC COARSE (MC)	219.85	3020-S2				
METRIC COARSE (MC) BLUE BAND			702.20	3150-S1		
UNIFIED NATIONAL COARSE (UNC)					261.98	3032-S2

NEW  
SETS

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	3.00 X 0.50	3020-3.00I	3.00 X 0.50	3150-3.00	6G X 32	3032-6GI
	4.00 X 0.70	3020-4.00I	4.00 X 0.70	3150-4.00	8G X 32	3032-8GI
	5.00 X 0.80	3020-5.00I	5.00 X 0.80	3150-5.00	10G X 24	3032-10GI
	6.00 X 1.00	3020-6.00I	6.00 X 1.00	3150-6.00	1/4 X 20	3032-1/4I
	8.00 X 1.25	3020-8.00I	8.00 X 1.25	3150-8.00	5/16 X 18	3032-5/16I
	10.00 X 1.50	3020-10.00I	10.00 X 1.50	3150-10.00	3/8 X 16	3032-3/8I
	12.00 X 1.75	3020-12.00I	12.00 X 1.75	3150-12.00	1/2 X 13	3032-1/2I
	2.50MM JOBBER	2007-2.50	2.50MM JOBBER	2050-2.50	2.90MM JOBBER	2007-2.90
	3.30MM JOBBER	2007-3.30	3.30MM JOBBER	2050-3.30	3.50MM JOBBER	2007-3.50
	4.20MM JOBBER	2007-4.20	4.20MM JOBBER	2050-4.20	3.90MM JOBBER	2007-3.90
	5.00MM JOBBER	2007-5.00	5.00MM JOBBER	2050-5.00	5.10MM JOBBER	2007-5.10
	6.80MM JOBBER	2007-6.80	6.80MM JOBBER	2050-6.80	6.60MM JOBBER	2007-6.60
	8.50MM JOBBER	2007-8.50	8.50MM JOBBER	2050-8.50	8.00MM JOBBER	2007-8.00
	10.20MM JOBBER	2007-10.20	10.20MM JOBBER	2050-10.20	10.80MM JOBBER	2007-10.80

SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
UNIFIED NATIONAL FINE (UNF)	269.91	3034-S2				
BRITISH STANDARD WHITWORTH (BSW)					275.25	3028-S2

NEW  
SETS

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	6G X 40	3034-6GI			1/8 X 40	3028-1/8I
	8G X 36	3034-8GI			5/32 X 32	3028-5/32I
	10G X 32	3034-10GI			3/16 X 24	3028-3/16I
	1/4 X 28	3034-1/4I			1/4 X 20	3028-1/4I
	5/16 X 24	3034-5/16I			5/16 X 18	3028-5/16I
	3/8 X 24	3034-3/8I			3/8 X 16	3028-3/8I
	1/2 X 20	3034-1/2I			1/2 X 12	3028-1/2I
	3.00MM JOBBER	2007-3.00			2.60MM JOBBER	2007-2.60
	3.50MM JOBBER	2007-3.50			3.20MM JOBBER	2007-3.20
	4.10MM JOBBER	2007-4.10			3.70MM JOBBER	2007-3.70
	5.50MM JOBBER	2007-5.50			5.10MM JOBBER	2007-5.10
	6.90MM JOBBER	2007-6.90			6.50MM JOBBER	2007-6.50
	8.50MM JOBBER	2007-8.50			7.90MM JOBBER	2007-7.90
	11.50MM JOBBER	2007-11.50			10.50MM JOBBER	2007-10.50



GROUP	HPMT	HPMT
SURFACE FINISH	BRIGHT	BRIGHT
TAP MATERIAL	HSS-Co5	HSS-Co5
TAP LEAD	SPIRAL POINT	SPIRAL POINT
PACKAGING	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
METRIC COARSE (MC)	238.35	3120-S1		
UNIFIED NATIONAL COARSE (UNC)			243.81	3132-S1

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	3.00 X 0.50	3120-3.00	6G X 32	3132-6G
	4.00 X 0.70	3120-4.00	8G X 32	3132-8G
	5.00 X 0.80	3120-5.00	10G X 24	3132-10G
	6.00 X 1.00	3120-6.00	1/4 X 20	3132-1/4
	8.00 X 1.25	3120-8.00	5/16 X 18	3132-5/16
	10.00 X 1.50	3120-10.00	3/8 X 16	3132-3/8
	12.00 X 1.75	3120-12.00	1/2 X 13	3132-1/2



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
UNIFIED NATIONAL FINE (UNF)	254.73	3134-S1		
BRITISH STANDARD WHITWORTH (BSW)			287.16	3128-S1

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	6G X 40	3134-6G	1/8 X 40	3128-1/8
	8G X 36	3134-8G	5/32 X 32	3128-5/32
	10G X 32	3134-10G	3/16 X 24	3128-3/16
	1/4 X 28	3134-1/4	1/4 X 20	3128-1/4
	5/16 X 24	3134-5/16	5/16 X 18	3128-5/16
	3/8 X 24	3134-3/8	3/8 X 16	3128-3/8
	1/2 X 20	3134-1/2	1/2 X 12	3128-1/2

NEW  
SETSNEW  
SETS





GROUP	HPMT	HPMT
SURFACE FINISH	BRIGHT	BRIGHT
DRILL MATERIAL & TYPE	HSS JOBBER	HSS JOBBER
TAP MATERIAL & TYPE	HSS-Co5 SPIRAL POINT	HSS-Co5 SPIRAL POINT
PACKAGING	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
METRIC COARSE (MC)	296.56	3120-S2		
UNIFIED NATIONAL COARSE (UNC)			312.83	3132-S2

NEW  
SETS

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	3.00 X 0.50	3120-3.00	6G X 32	3132-6G
	4.00 X 0.70	3120-4.00	8G X 32	3132-8G
	5.00 X 0.80	3120-5.00	10G X 24	3132-10G
	6.00 X 1.00	3120-6.00	1/4 X 20	3132-1/4
	8.00 X 1.25	3120-8.00	5/16 X 18	3132-5/16
	10.00 X 1.50	3120-10.00	3/8 X 16	3132-3/8
	12.00 X 1.75	3120-12.00	1/2 X 13	3132-1/2
	2.50MM JOBBER	2007-2.50	2.90MM JOBBER	2007-2.90
	3.30MM JOBBER	2007-3.30	3.50MM JOBBER	2007-3.50
	4.20MM JOBBER	2007-4.20	3.90MM JOBBER	2007-3.90
	5.00MM JOBBER	2007-5.00	5.10MM JOBBER	2007-5.10
	6.80MM JOBBER	2007-6.80	6.60MM JOBBER	2007-6.60
	8.50MM JOBBER	2007-8.50	8.00MM JOBBER	2007-8.00
	10.20MM JOBBER	2007-10.20	10.80MM JOBBER	2007-10.80

SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
UNIFIED NATIONAL FINE (UNF)	319.55	3134-S2		

NEW  
SETS

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	6G X 40	3134-6G		
	8G X 36	3134-8G		
	10G X 32	3134-10G		
	1/4 X 28	3134-1/4		
	5/16 X 24	3134-5/16		
	3/8 X 24	3134-3/8		
	1/2 X 20	3134-1/2		
	3.00MM JOBBER	2007-3.00		
	3.50MM JOBBER	2007-3.50		
	4.10MM JOBBER	2007-4.10		
	5.50MM JOBBER	2007-5.50		
	6.90MM JOBBER	2007-6.90		
	8.50MM JOBBER	2007-8.50		
	11.50MM JOBBER	2007-11.50		



GROUP	HPMT	HPMT	HPMT
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
DRILL MATERIAL & TYPE	—	—	HSS JOBBER
TAP MATERIAL & TYPE	HSS-Co5 SPIRAL FLUTE	HSS-Co5 SPIRAL FLUTE	HSS-Co5 SPIRAL FLUTE
PACKAGING	SET	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
METRIC COARSE (MC)	304.10	3220-S1				
METRIC COARSE (MC)					362.31	3220-S2
UNIFIED NATIONAL COARSE (UNC)			307.62	3232-S1		

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	3.00 X 0.50	3220-3.00	6G X 32	3232-6G	3.00 X 0.50	3220-3.00
	4.00 X 0.70	3220-4.00	8G X 32	3232-8G	4.00 X 0.70	3220-4.00
	5.00 X 0.80	3220-5.00	10G X 24	3232-10G	5.00 X 0.80	3220-5.00
	6.00 X 1.00	3220-6.00	1/4 X 20	3232-1/4	6.00 X 1.00	3220-6.00
	8.00 X 1.25	3220-8.00	5/16 X 18	3232-5/16	8.00 X 1.25	3220-8.00
	10.00 X 1.50	3220-10.00	3/8 X 16	3232-3/8	10.00 X 1.50	3220-10.00
	12.00 X 1.75	3220-12.00	1/2 X 13	3232-1/2	12.00 X 1.75	3220-12.00



2.50MM JOBBER	2007-2.50
3.30MM JOBBER	2007-3.30
4.20MM JOBBER	2007-4.20
5.00MM JOBBER	2007-5.00
6.80MM JOBBER	2007-6.80
8.50MM JOBBER	2007-8.50
10.20MM JOBBER	2007-10.20

SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
UNIFIED NATIONAL FINE (UNF)	309.24	3234-S1		
BRITISH STANDARD WHITWORTH (BSW)			340.90	3228-S1

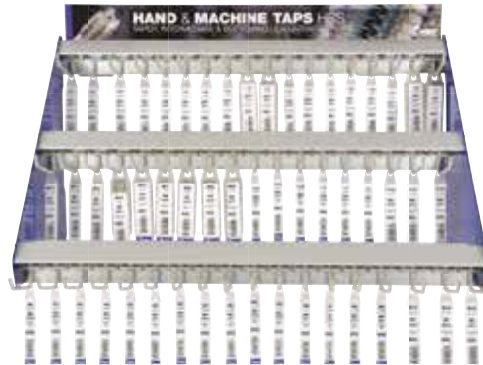
SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	6G X 40	3234-6G	1/8 X 40	3228-1/8
	8G X 36	3234-8G	5/32 X 32	3228-5/32
	10G X 32	3234-10G	3/16 X 24	3228-3/16
	1/4 X 28	3234-1/4	1/4 X 20	3228-1/4
	5/16 X 24	3234-5/16	5/16 X 18	3228-5/16
	3/8 X 24	3234-3/8	3/8 X 16	3228-3/8
	1/2 X 20	3234-1/2	1/2 X 12	3228-1/2

**NEW  
SETS**

**NEW  
SETS**



GROUP	HSTD
SURFACE FINISH	BRIGHT
MATERIAL	HSS
LEAD TYPE	TAPER / INTER / BOTTOMING
FLUTE TYPE	STRAIGHT
PACKAGING	HANG SELL MERCHANDISER



**TAPER TAPS**

Taper Taps have a lead of eight threads and are used as a starting tap in difficult or high precision holes. Manufactured from HSS this general purpose tap is designed for use in medium tensile materials and is for hand or general machine use.

**INTERMEDIATE TAPS**

Intermediate Taps have a lead of four threads and are used in most general purpose applications to cut a thread true to a pre-drilled pilot hole.

**BOTTOMING TAPS**

Bottoming Taps have a lead of two threads and are used to ensure minimum thread run-out when tapping to the bottom of a blind hole. Bottoming Taps are typically preceded by the use of a Taper or Intermediate Tap.

MERCHANDISER TYPE	TOTAL PIECES	\$ MERCHANDISER	PART NUMBER
HSS TAP MERCHANDISER	54	2,849.35	3020-D1

**MERCHANDISER CONTENTS**

QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER
1	MC - Taper	3 x 0.5	3020-3.00T	1	MC - Bott	3 x 0.5	3020-3.00B	1	UNC - Taper	3/16x 24(UNS)	3032-3/16T
1	MC - Taper	4 x 0.7	3020-4.00T	1	MC - Bott	4 x 0.7	3020-4.00B	1	UNC - Taper	1/4 x 20	3032-1/4T
1	MC - Taper	5 x 0.8	3020-5.00T	1	MC - Bott	5 x 0.8	3020-5.00B	1	UNC - Taper	5/16 x 18	3032-5/16T
1	MC - Taper	6 x 1	3020-6.00T	1	MC - Bott	6 x 1	3020-6.00B	1	UNC - Taper	3/8 x 16	3032-3/8T
1	MC - Taper	8 x 1.25	3020-8.00T	1	MC - Bott	8 x 1.25	3020-8.00B	1	UNC - Taper	1/2 x 13	3032-1/2T
1	MC - Taper	10 x 1.5	3020-10.00T	1	MC - Bott	10 x 1.5	3020-10.00B	1	UNC - Inter	3/16x 24(UNS)	3032-3/16I
1	MC - Taper	12 x 1.75	3020-12.00T	1	MC - Bott	12 x 1.75	3020-12.00B	1	UNC - Inter	1/4 x 20	3032-1/4I
1	MC - Taper	16 x 2	3020-16.00T	1	MC - Bott	16 x 2	3020-16.00B	1	UNC - Inter	5/16 x 18	3032-5/16I
1	MC - Taper	20 x 2.5	3020-20.00T	1	MC - Bott	20 x 2.5	3020-20.00B	1	UNC - Inter	3/8 x 16	3032-3/8I
1	MC - Inter	3 x 0.5	3020-3.00I					1	UNC - Inter	1/2x13	3032-1/2I
1	MC - Inter	4 x 0.7	3020-4.00I	1	BSPT - Bott	1/8 x 28	3048-1/8B	1	UNC - Bott	3/16x 24(UNS)	3032-3/16B
1	MC - Inter	5 x 0.8	3020-5.00I	1	BSPT - Bott	1/4x 19	3048-1/4B	1	UNC - Bott	1/4 x 20	3032-1/4B
1	MC - Inter	6 x 1	3020-6.00I	1	BSPT - Bott	3/8 x 19	3048-3/8B	1	UNC - Bott	5/16 x 18	3032-5/16B
1	MC - Inter	8 x 1.25	3020-8.00I	1	BSPT - Bott	1/2 x 14	3048-1/2B	1	UNC - Bott	3/8 x 16	3032-3/8B
1	MC - Inter	10 x 1.5	3020-10.00I	1	BSPT - Bott	3/4 x 14	3048-3/4B	1	UNC - Bott	1/2 x 13	3032-1/2B
1	MC - Inter	12 x 1.75	3020-12.00I								
1	MC - Inter	16 x 2	3020-16.00I	1	NPT - Bott	1/8 x 27	3052-1/8B	1	BSW - Taper	1/2 x 12	3028-1/2T
1	MC - Inter	20 x 2.5	3020-20.00I	1	NPT - Bott	1/4 x 18	3052-1/4B	1	BSW - Inter	1/2 x 12	3028-1/2I
				1	NPT - Bott	3/8 x 18	3052-3/8B	1	BSW - Bott	1/2 x 12	3028-1/2B
				1	NPT - Bott	1/2 x 14	3052-1/2B				





GROUP	HSTD
SURFACE FINISH	BRIGHT
MATERIAL	HSS
LEAD TYPE	TAPER / INTER / BOTTOMING
FLUTE TYPE	STRAIGHT
PACKAGING	BULK MERCHANDISER

MERCHANDISER TYPE	TOTAL PIECES	\$ MERCHANDISER	PART NUMBER
BULK HSS TAP MERCHANDISER	159	11,285.76	3020-D3

**TAPER TAPS**

Taper Taps have a lead of eight threads and are used as a starting tap in difficult or high precision holes. Manufactured from HSS this general purpose tap is designed for use in medium tensile materials and is for hand or general machine use.

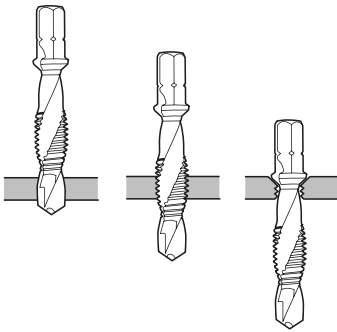
**INTERMEDIATE TAPS**

Intermediate Taps have a lead of four threads and are used in most general purpose applications to cut a thread true to a pre-drilled pilot hole.

**BOTTOMING TAPS**

Bottoming Taps have a lead of two threads and are used to ensure minimum thread run-out when tapping to the bottom of a blind hole. Bottoming Taps are typically preceded by the use of a Taper or Intermediate Tap.

MERCHANDISER CONTENTS											
QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER	QTY EACH	TYPE THREAD FORM	SIZE D X PITCH	PART NUMBER
1	MC - Taper	3 x 0.5	3020-3.00T	1	S/Plug - Bott	14 x 1.25	3022-14.00B	1	UNF - Inter	5/16 x 24	3034-5/16I
1	MC - Taper	4 x 0.7	3020-4.00T	1	MF - Bott	14 x 1.5	3021-14.00B	1	UNF - Inter	3/8 x 24	3034-3/8I
1	MC - Taper	5 x 0.8	3020-5.00T	1	MF - Bott	25 x 1.5	3023-25.00B	1	UNF - Inter	7/16 x 20	3034-7/16I
1	MC - Taper	6 x 1	3020-6.00T					1	UNF - Inter	1/2 x 20	3034-1/2I
1	MC - Taper	8 x 1.25	3020-8.00T	1	UNC - Taper	8G x 32	3032-8GT	1	UNF - Inter	9/16 x 18	3034-9/16I
1	MC - Taper	10 x 1.5	3020-10.00T	1	UNC - Taper	10G x 24	3032-10GT	1	UNF - Inter	5/8 x 18	3034-5/8I
1	MC - Taper	12 x 1.75	3020-12.00T	1	UNC - Taper	3/16x 24(UNS)	3032-3/16T	1	UNF - Inter	3/4 x 16	3034-3/4I
1	MC - Taper	14 x 2	3020-14.00T	1	UNC - Taper	1/4 x 20	3032-1/4T	1	UNF - Inter	1 x 12	3034-1I
1	MC - Taper	16 x 2	3020-16.00T	1	UNC - Taper	5/16 x 18	3032-5/16T	1	UNF - Bott	8G x 36	3034-8GB
1	MC - Taper	18 x 2.5	3020-18.00T	1	UNC - Taper	3/8 x 16	3032-3/8T	1	UNF - Bott	10G x 32	3034-10GB
1	MC - Taper	20 x 2.5	3020-20.00T	1	UNC - Taper	7/16 x 14	3032-7/16T	1	UNF - Bott	1/4 x 28	3034-1/4B
1	MC - Inter	3 x 0.5	3020-3.00I	1	UNC - Taper	1/2 x 13	3032-1/2T	1	UNF - Bott	5/16 x 24	3034-5/16B
1	MC - Inter	4 x 0.7	3020-4.00I	1	UNC - Taper	9/16 x 12	3032-9/16T	1	UNF - Bott	3/8 x 24	3034-3/8B
1	MC - Inter	5 x 0.8	3020-5.00I	1	UNC - Taper	5/8 x 11	3032-5/8T	1	UNF - Bott	7/16 x 20	3034-7/16B
1	MC - Inter	6 x 1	3020-6.00I	1	UNC - Taper	3/4 x 10	3032-3/4T	1	UNF - Bott	1/2 x 20	3034-1/2B
1	MC - Inter	8 x 1.25	3020-8.00I	1	UNC - Taper	1 x 8	3032-1T	1	UNF - Bott	9/16 x 18	3034-9/16B
1	MC - Inter	10 x 1.5	3020-10.00I	1	UNC - Inter	8G x 32	3032-8GI	1	UNF - Bott	5/8 x 18	3034-5/8B
1	MC - Inter	12 x 1.75	3020-12.00I	1	UNC - Inter	10G x 24	3032-10GI	1	UNF - Bott	3/4 x 16	3034-3/4B
1	MC - Inter	14 x 2	3020-14.00I	1	UNC - Inter	3/16x 24(UNS)	3032-3/16I	1	UNF - Bott	1 x 12	3034-1B
1	MC - Inter	16 x 2	3020-16.00I	1	UNC - Inter	1/4 x 20	3032-1/4I				
1	MC - Inter	18 x 2.5	3020-18.00I	1	UNC - Inter	5/16 x 18	3032-5/16I	1	BSPF - Taper	1/8 x 28	3046-1/8T
1	MC - Inter	20 x 2.5	3020-20.00I	1	UNC - Inter	3/8 x 16	3032-3/8I	1	BSPF - Taper	1/4 x 19	3046-1/4T
1	MC - Bott	3 x 0.5	3020-3.00B	1	UNC - Inter	7/16x14	3032-7/16I	1	BSPF - Taper	3/8 x 19	3046-3/8T
1	MC - Bott	4 x 0.7	3020-4.00B	1	UNC - Inter	1/2x13	3032-1/2I	1	BSPF - Taper	1/2 x 14	3046-1/2T
1	MC - Bott	5 x 0.8	3020-5.00B	1	UNC - Inter	9/16 x 12	3032-9/16I	1	BSPF - Taper	3/4 x 14	3046-3/4T
1	MC - Bott	6 x 1	3020-6.00B	1	UNC - Inter	5/8 x 11	3032-5/8I	1	BSPF - Taper	1 x 11	3046-1T
1	MC - Bott	8 x 1.25	3020-8.00B	1	UNC - Inter	3/4 x 10	3032-3/4I	1	BSPF - Inter	1/8 x 28	3046-1/8I
1	MC - Bott	10 x 1.5	3020-10.00B	1	UNC - Inter	1 x 8	3032-1I	1	BSPF - Inter	1/4 x 19	3046-1/4I
1	MC - Bott	12 x 1.75	3020-12.00B	1	UNC - Bott	8G x 32	3032-8GB	1	BSPF - Inter	3/8 x 19	3046-3/8I
1	MC - Bott	14 x 2	3020-14.00B	1	UNC - Bott	10G x 24	3032-10GB	1	BSPF - Inter	1/2 x 14	3046-1/2I
1	MC - Bott	16 x 2	3020-16.00B	1	UNC - Bott	3/16x 24(UNS)	3032-3/16B	1	BSPF - Inter	3/4 x 14	3046-3/4I
1	MC - Bott	18 x 2.5	3020-18.00B	1	UNC - Bott	1/4 x 20	3032-1/4B	1	BSPF - Inter	1 x 11	3046-1I
1	MC - Bott	20 x 2.5	3020-20.00B	1	UNC - Bott	5/16 x 18	3032-5/16B	1	BSPF - Bott	1/8 x 28	3046-1/8B
				1	UNC - Bott	3/8x16	3032-3/8B	1	BSPF - Bott	1/4 x 19	3046-1/4B
1	MF - Taper	8 x 1	3021-8.00T	1	UNC - Bott	7/16 x 14	3032-7/16B	1	BSPF - Bott	3/8 x 19	3046-3/8B
1	S/Plug - Taper	10 x 1	3022-10.00T	1	UNC - Bott	1/2 x 13	3032-1/2B	1	BSPF - Bott	1/2 x 14	3046-1/2B
1	MF - Taper	10 x 1.25	3021-10.00T	1	UNC - Bott	9/16 x 12	3032-9/16B	1	BSPF - Bott	3/4 x 14	3046-3/4B
1	S/Plug - Taper	12 x 1.25	3022-12.00T	1	UNC - Bott	5/8 x 11	3032-5/8B	1	BSPF - Bott	1 x 11	3046-1B
1	MF - Taper	12 x 1.5	3021-12.00T	1	UNC - Bott	3/4 x 10	3032-3/4B				
1	S/Plug - Taper	14 x 1.25	3022-14.00T	1	UNC - Bott	1 x 8	3032-1B	1	BSPT - Bott	1/8 x 28	3048-1/8B
1	MF - Taper	14 x 1.5	3021-14.00T					1	BSPT - Bott	1/4 x 19	3048-1/4B
1	MF - Taper	25 x 1.5	3023-25.00T	1	UNF - Taper	8G x 36	3034-8GT	1	BSPT - Bott	3/8 x 19	3048-3/8B
1	MF - Inter	8 x 1	3021-8.00I	1	UNF - Taper	10G x 32	3034-10GT	1	BSPT - Bott	1/2 x 14	3048-1/2B
1	S/Plug - Inter	10 x 1	3022-10.00I	1	UNF - Taper	1/4 x 28	3034-1/4T	1	BSPT - Bott	3/4 x 14	3048-3/4B
1	MF - Inter	10 x 1.25	3021-10.00I	1	UNF - Taper	5/16 x 24	3034-5/16T	1	BSPT - Bott	1 x 11	3048-1B
1	S/Plug - Inter	12 x 1.25	3022-12.00I	1	UNF - Taper	3/8 x 24	3034-3/8T				
1	MF - Inter	12 x 1.5	3021-12.00I	1	UNF - Taper	7/16 x 20	3034-7/16T	1	NPT - Bott	1/8 x 27	3052-1/8B
1	S/Plug - Inter	14 x 1.25	3022-14.00I	1	UNF - Taper	1/2 x 20	3034-1/2T	1	NPT - Bott	1/4 x 18	3052-1/4B
1	MF - Inter	14 x 1.5	3021-14.00I	1	UNF - Taper	9/16 x 18	3034-9/16T	1	NPT - Bott	3/8 x 18	3052-3/8B
1	MF - Inter	25 x 1.5	3023-25.00I	1	UNF - Taper	5/8 x 18	3034-5/8T	1	NPT - Bott	1/2 x 14	3052-1/2B
1	MF - Bott	8 x 1	3021-8.00B	1	UNF - Taper	3/4 x 16	3034-3/4T	1	NPT - Bott	3/4 x 14	3052-3/4B
1	S/Plug - Bott	10 x 1	3022-10.00B	1	UNF - Taper	1 x 12	3034-1T	1	NPT - Bott	1 x 11.5	3052-1B
1	MF - Bott	10 x 1.25	3021-10.00B	1	UNF - Inter	8G x 36	3034-8GI				
1	S/Plug - Bott	12 x 1.25	3022-12.00B	1	UNF - Inter	10G x 32	3034-10GI				
1	MF - Bott	12 x 1.5	3021-12.00B	1	UNF - Inter	1/4 x 28	3034-1/4I				



GROUP	HSTD
SURFACE FINISH	BRIGHT
MATERIAL	HSS
FLUTE TYPE	SPIRAL
SHANK	1/4" HEX
PACKAGING	CLAM SHELL

DIA MM / INCH	PITCH / TPI MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
<b>MC</b>					
3.00	0.50	36	1	34.33	3010-3.00
4.00	0.70	39	1	34.33	3010-4.00
5.00	0.80	41	1	34.33	3010-5.00
6.00	1.00	44	1	34.33	3010-6.00
8.00	1.25	51	1	37.51	3010-8.00
10.00	1.50	58	1	50.22	3010-10.00
<b>UNC</b>					
6G	32	39	1	34.33	3011-6G
8G	32	39	1	34.33	3011-8G
10G	24	41	1	34.33	3011-10G
12G	24	44	1	34.33	3011-12G
1/4	20	44	1	34.33	3011-1/4
5/16	18	50	1	37.51	3011-5/16
3/8	16	59	1	50.22	3011-3/8
<b>UNF</b>					
10G	32	41	1	34.33	3012-10G
12G	28	44	1	34.33	3012-12G
1/4	28	44	1	34.33	3012-1/4
5/16	24	50	1	37.51	3012-5/16
3/8	24	59	1	50.22	3012-3/8

SET TYPE	\$ SET	PART NUMBER
<b>HSS DRILL TAP SET- METRIC COARSE</b>	<b>150.12</b>	<b>3010-S1</b>
M3X0.50, M4X0.70, M5X0.80, M6X1.00, M8X1.25, M10X1.50 + 1/4" QUICK CHANGE BIT HOLDER		
<b>HSS DRILL TAP SET- UNC</b>	<b>150.12</b>	<b>3011-S1</b>
M8GX32, 10GX24, 12GX24, 1/4X20, 5/16X18, 3/8X16 + 1/4" QUICK CHANGE BIT HOLDER		

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
<b>DRILL TAP MERCHANDISER</b>	<b>750.34</b>	<b>3010-D1</b>

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	1	MC 3.00 X 0.50	3010-3.00
	1	MC 4.00 X 0.70	3010-4.00
	1	MC 5.00 X 0.80	3010-5.00
	1	MC 6.00 X 1.00	3010-6.00
	1	MC 8.00 X 1.25	3010-8.00
	1	MC 10.00 X 1.50	3010-10.00
	1	METRIC SET	3010-S1
	1	UNC 8G X 32	3011-8G
	1	UNC 10G X 24	3011-10G
	1	UNC 12G X 24	3011-12G
	1	UNC 1/4 X 20	3011-1/4
	1	UNC 5/16 X 18	3011-5/16
	1	UNC 3/8 X 16	3011-3/8
	1	UNC SET	3011-S1

**COMBINATION  
DRILL TAPS**

**FEATURES**

- Save time! Drill, tap and deburr in one operation.
- One-piece drill/tap guarantees correct drill for tap size.
- Tapered design prevents thread damage from over drilling.
- Made of high speed steel for long life.
- After completing tap, reverse the drill to back out.
- Use of cutting oil recommended.
- Clean tap of metal chips to extend life.
- Capacity: 10 gauge (3.5mm).

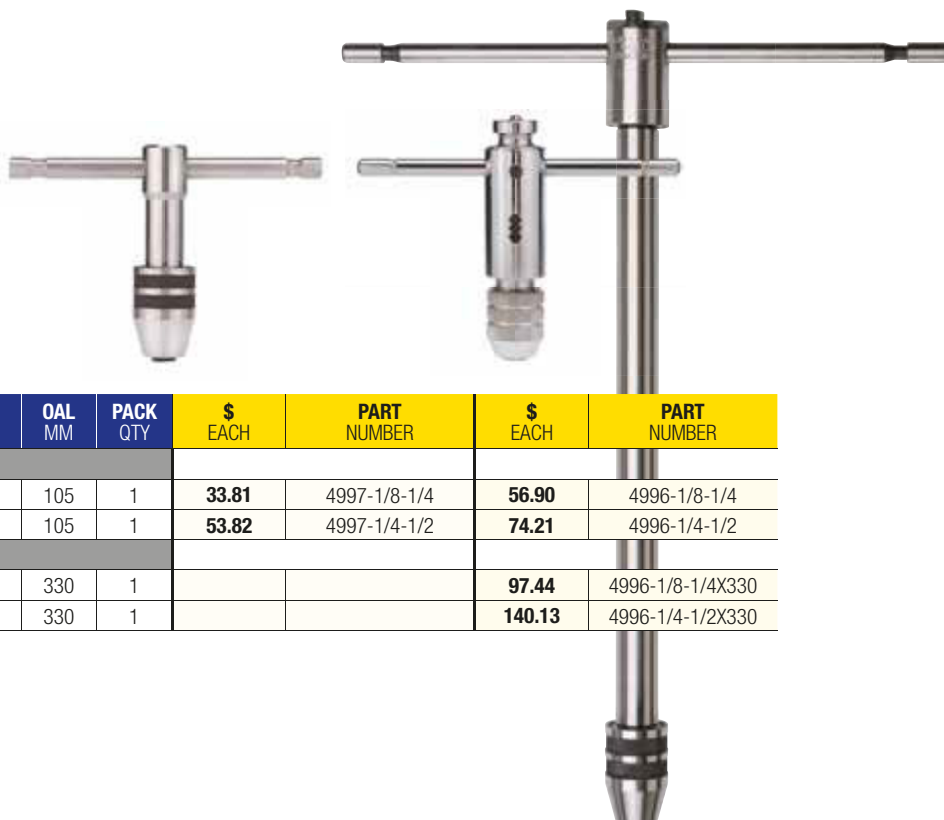


GROUP	CTAP	CTAP
WRENCH TYPE	BAR PATTERN	BAR PATTERN
PACKAGING	CLAM SHELL	BULK



SIZE	RANGE MM	RANGE INCH	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>BAR PATTERN TAP WRENCH</b>								
00	M1-M8	1/16 - 1/4	135	1	<b>72.21</b>	4998-1/16-1/4		
0	M1-M10	1/16 - 3/8	185	1	<b>70.32</b>	4998-1/16-3/8		
5	M4-M12	3/16 - 1/2	285	1	<b>72.79</b>	4998-3/16-1/2		
6	M5-M20	1/4 - 3/4	375	1	<b>117.52</b>	4998-1/4-3/4		
7	M9-M27	3/8 - 1.1/16	523	1			<b>177.47</b>	4998-3/8-1.1/16
8	M13-M33	1/2 - 1.5/16	615	1			<b>366.59</b>	4998-1/2-1.5/16

GROUP	CTAP	CTAP
WRENCH TYPE	T-PATTERN	T-PATTERN RATCHET
PACKAGING	HANG SELL	HANG SELL



SIZE	RANGE MM	RANGE INCH	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>T PATTERN TAP WRENCH - STANDARD</b>								
1/4	M3-M6	1/8 - 1/4	105	1	<b>33.81</b>	4997-1/8-1/4	<b>56.90</b>	4996-1/8-1/4
1/2	M6-M12	1/4 - 1/2	105	1	<b>53.82</b>	4997-1/4-1/2	<b>74.21</b>	4996-1/4-1/2
<b>T PATTERN TAP WRENCH - LONG</b>								
1/4	M3-M6	1/8 - 1/4	330	1			<b>97.44</b>	4996-1/8-1/4X330
1/2	M6-M12	1/4 - 1/2	330	1			<b>140.13</b>	4996-1/4-1/2X330





GROUP	CTAP
WRENCH TYPE	DIE HOLDER
PACKAGING	CLAM SHELL



SIZE INCH	OAL MM	PACK QTY	\$ EACH	PART NUMBER
DIE HOLDER				
1	230	1	32.09	4999-1
1-1/2	315	1	71.46	4999-1.1/2
2	495	1	96.77	4999-2



GROUP	CTAP		
MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	
TAP WRENCH & DIE HOLDER MERCH.	751.90	4998-D1	
MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	1	DIE HOLDER-1"	4999-1
	1	DIE HOLDER-1-1/2"	4999-1.1/2
	1	DIE HOLDER-2"	4999-2
	1	BAR TAP WRENCH "00"	4998-1/16-1/4
	1	BAR TAP WRENCH M1-M10	4998-1/16-3/8
	1	BAR TAP WRENCH M4-M12	4998-3/16-1/2
	1	BAR TAP WRENCH "6"	4998-1/4-3/4
	1	"T" TAP WRENCH-1/4"	4997-1/8-1/4
	1	"T" TAP WRENCH-1/2"	4997-1/4-1/2
	1	"T" TAP WRENCH RAT.1/4"R	4996-1/8-1/4
	1	"T" TAP WRENCH RAT.1/2"R	4996-1/4-1/2



GROUP	HSTD
PACKAGING	TELEPACK

THREAD FORM	RANGE	PACK QTY	\$ EACH	PART NUMBER
METRIC / BSW	4-62TPI / 0.25-6.0MM	1	42.63	3020-PG1
METRIC	0.25-2.5MM	1	28.86	3020-PG2
UNC / UNF	4-42TPI	1	28.86	3020-PG3
METRIC / UNC / UNF	4-42TPI / 0.25-6.0MM	1	45.90	3020-PG4

GROUP	CTAP
SURFACE FINISH	BRIGHT
SUITS TAP SIZES	M2 - M12 : 5G - 1/2"
PACKAGING	INJECTION MOULDED CASE



SET TYPE	SETS PER OUTER	\$ SET	PART NUMBER
QUICK CHANGE RATCHET SET	4	139.16	4996-1/2QC
TAP WRENCH WITH 65MM EXTENSION – HI-TORQUE			



GROUP	CTAP
SURFACE FINISH	BRIGHT
MATERIAL	CHROME ALLOY
PACKAGING	BLOW MOULDED CASE
TAP TYPE	INTERMEDIATE TAPS
DIE TYPE	1" BUTTON DIES



TAP & DIE SET TYPE	SETS PER OUTER	\$ SET	PART NUMBER
METRIC COARSE – QC RATCHET	4	416.47	4220-S2

SET CONTENTS	SIZE MM	PART NUMBER	SIZE MM	PART NUMBER
TAPS AND BUTTON DIES		CHROME ALLOY TAPS	CHROME ALLOY DIES	
	3.00 x 0.50	4220-3.00I	3.00 x 0.50	4800-3-1D
	4.00 x 0.70	4220-4.00I	4.00 x 0.70	4800-4-1D
	5.00 x 0.80	4220-5.00I	5.00 x 0.80	4800-5-1D
	6.00 x 1.00	4220-6.00I	6.00 x 1.00	4800-6-1D
	8.00 x 1.25	4220-8.00I	8.00 x 1.25	4800-8-1D
	10.00 x 1.50	4220-10.00I	10.00 x 1.50	4800-10-1D
	12.00 x 1.75	4220-12.00I	12.00 x 1.75	4800-12-1D
WRENCH/HOLDER	Tap Wrench	4996-1/2QC	Die Holder	



GROUP	DTFR	DTFR
PRODUCT	SLICK DTR CUTTING FLUID	GOLIATH SEMI-SYNTHETIC CUTTING FLUID



**SLICK DTR  
DRILLING,  
TAPPING AND  
REAMING FLUID**

SlickDTR is formulated with extreme pressure additives that significantly reduce friction at the cutting edge, extending tool life, increasing performance and producing a superior finish. SlickDTR is suitable for use on all metals including hardened steels, titaniums and nimonics.

**GOLIATH  
SEMI-SYNTHETIC  
CUTTING FLUID**

Goliath Semi-Synthetic Soluble Cutting Fluid (High Performance) Water Soluble, Long Life

PACK TYPE	PACK SIZE METRIC	PACK SIZE IMPERIAL	BOX QTY	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>SLICK DTR</b>								
BOTTLE	250ML	—	10	1	<b>19.07</b>	8200-CF250		
<b>GOLIATH SEMI-SYNTHETIC</b>								
BOTTLE	1 LITRE	—	12	6			<b>25.20</b>	CFWS1L
BOTTLE	5 LITRE	—	4	2			<b>89.59</b>	CFWS5L
DRUM	20 LITRE	—	1	1			<b>326.43</b>	CFWS20L

GROUP	DTFR	DTFR
PRODUCT	RAPIDTAP ALL-METAL FLUID & PASTE	A-9 ALUMINIUM CUTTING FLUID



**RELTON RAPID  
TAP ALL METAL  
CUTTING FLUID**

Relton USA All-Metal Cutting Fluid extends tool life.

**RELTON A-9  
ALUMINIUM  
CUTTING FLUID**

Relton A-9 Aluminium Cutting Fluid extends tool life.

PACK TYPE	PACK SIZE METRIC	PACK SIZE IMPERIAL	BOX QTY	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>RAPID-TAP FLUID</b>								
BOTTLE	118ML	4 OUNCE	24	1	<b>6.52</b>	CFRT40Z		
BOTTLE	473ML	1 PINT	12	1	<b>21.39</b>	CFRT1PT		
BOTTLE	3.785 LITRE	1 GALLON	4	1	<b>120.50</b>	CFRT1G		
DRUM	18.90 LITRE	5 GALLON	1	1	<b>541.05</b>	CFRT5G		
<b>RAPID-TAP PASTE</b>								
TUB	236ML	8 OUNCE	24	1	<b>24.34</b>	CPRT80Z		
<b>A-9 ALUMINIUM CUTTING FLUID</b>								
BOTTLE	118ML	4 OUNCE	24	1			<b>6.52</b>	CFA940Z
BOTTLE	473ML	1 PINT	12	1			<b>21.39</b>	CFA91PT
BOTTLE	3.785 LITRE	1 GALLON	4	1			<b>120.50</b>	CFA91G

***Stick-Kut lubricating wax designed for use in applications where liquid coolants are not feasible or desirable see page 228***







GROUP	EXTR	EXTR	EXTR
SURFACE FINISH	BLACK	BLACK	BLACK
MATERIAL	CHROME ALLOY	CHROME ALLOY	CHROME ALLOY
DRILL	—	—	EXTRACTOR + LH STUB DRILL
PACKAGING	BULK	CLAM SHELL	CLAM SHELL



SIZE	PILOT DRILL MM INCH	FOR BOLT MM INCH	PACK QTY	\$ EACH	PART NUMBER	PACK QTY	\$ EACH	PART NUMBER	PACK QTY	\$ EACH	PART NUMBER
1	2.00 5/64	4-4.5 5/32-3/16	5	<b>8.45</b>	9900-1	1	<b>9.25</b>	9900-1S	1+1	<b>13.44</b>	9900-1W
2	3.00 7/64	5.5-6.5 7/32-1/4	5	<b>9.03</b>	9900-2	1	<b>9.79</b>	9900-2S	1+1	<b>13.73</b>	9900-2W
3	4.00 5/32	8 5/16	5	<b>11.12</b>	9900-3	1	<b>11.72</b>	9900-3S	1+1	<b>17.11</b>	9900-3W
4	6.35 1/4	10-12 3/8-1/2	5	<b>11.93</b>	9900-4	1	<b>12.68</b>	9900-4S	1+1	<b>22.01</b>	9900-4W
5	7.50 19/64	14-20 9/16-3/4	5	<b>13.83</b>	9900-5	1	<b>14.59</b>	9900-5S	1+1	<b>25.25</b>	9900-5W
6	10.70 27/64	19-25 3/4-1	1	<b>17.88</b>	9900-6						
7	13.50 17/32	25-35 1 - 1-3/8	1	<b>28.22</b>	9900-7						
8	20.60 13/16	35-44.5 1-3/8 - 1-3/4	1	<b>126.19</b>	9900-8						
9	27.00 1-1/16	44.5-54 1-3/4 - 2-1/8	1	<b>170.15</b>	9900-9						



SET DESCRIPTION	SETS PER OUTER	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
SCREW OUT SET	10	<b>69.09</b>	9901-S1				
SCREW EXTRACTORS	10			<b>59.18</b>	9900-SM1		
SCREW EXT. + LH STUB DRILLS	5					<b>101.57</b>	9900-SM2

SET CONTENTS	QTY EACH	SIZE	PART NUMBER	QTY EACH	SIZE	PART NUMBER
	1	1	9900-1	1	1	9900-1
	1	2	9900-2	1	2	9900-2
	1	3	9900-3	1	3	9900-3
	1	4	9900-4	1	4	9900-4
	1	5	9900-5	1	5	9900-5
				1	5/64"	2005-5/64
				1	7/64"	2005-7/64
				1	5/32"	2005-5/32
				1	1/4"	2005-1/4
				1	19/64"	2005-19/64



GROUP	EXTR
SURFACE FINISH	BRONZE
MATERIAL	HSS-Co5
DRILL	LH STUB DRILL ONLY
PACKAGING	<b>BULK</b>



DIA		FL	OAL	PACK	\$	PART
INCH	MM	MM	MM	QTY		
5/64	1.98	26	54	5	<b>4.61</b>	2005-5/64
7/64	2.78	33	63	5	<b>4.34</b>	2005-7/64
5/32	3.97	38	71	5	<b>5.82</b>	2005-5/32
1/4	6.35	46	77	5	<b>9.91</b>	2005-1/4
19/64	7.54	51	90	5	<b>11.24</b>	2005-19/64

GROUP	EXTR
SURFACE FINISH	BRONZE
MATERIAL	HSS-Co5
DRILL	LH STUB DRILL ONLY
PACKAGING	<b>SET</b>



SET DESCRIPTION	SETS PER OUTER	\$ SET	PART NUMBER
LEFT HAND DRILL SET	10	<b>47.76</b>	2005-S1
5/64, 7/64, 5/32, 1/4, 19/64"			



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
SCREW EXTRACTOR MERCHANDISER	<b>1,058.99</b>	9900-D1

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	2	Screw Extractor No.1	9900-1S
	2	Screw Extractor No.2	9900-2S
	2	Screw Extractor No.3	9900-3S
	2	Screw Extractor No.4	9900-4S
	2	Screw Extractor No.5	9900-5S
	2	Screw Ext No.1 + LH Drill	9900-1W
	2	Screw Ext No.2 + LH Drill	9900-2W
	2	Screw Ext No.3 + LH Drill	9900-3W
	2	Screw Ext No.4 + LH Drill	9900-4W
	2	Screw Ext No.5 + LH Drill	9900-5W
	4	Screw Extractor Set 1	9900-SM1
	4	Screw Extractor Set 2	9900-SM2
	1	Screw Out Set	9901-S1
	1	Left Hand Drill Set	2005-S1


**M**  
METRIC

GROUP	ENDM	ENDM
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co8	HSS-Co8
LENGTH	SHORT	SHORT
TYPE	CENTRE CUTTING <b>THREADED</b>	CENTRE CUTTING <b>PLAIN - FLATTED</b>
PACKAGING	SINGLE	SINGLE

DIA MM	SHANK MM	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>SHORT</b>									
1.50	6.00	2.50	48.00	2	1	39.39	6006-1.50S		
2.00	6.00	4.00	48.00	2	1	39.39	6006-2.00S		
2.50	6.00	5.00	49.00	2	1	38.29	6006-2.50S		
3.00	6.00	5.00	49.00	2	1	38.29	6006-3.00S	38.32	6010-3.00S
3.50	6.00	6.00	50.00	2	1	32.35	6006-3.50S	52.67	6010-3.50S
4.00	6.00	7.00	51.00	2	1	32.35	6006-4.00S	32.35	6010-4.00S
4.50	6.00	7.00	51.00	2	1	32.35	6006-4.50S	52.67	6010-4.50S
5.00	6.00	8.00	52.00	2	1	32.35	6006-5.00S	32.35	6010-5.00S
5.50	6.00	8.00	52.00	2	1	38.29	6006-5.50S	52.67	6010-5.50S
6.00	6.00	8.00	52.00	2	1	38.29	6006-6.00S	38.32	6010-6.00S
6.50	10.00	10.00	60.00	2	1	48.75	6006-6.50S	68.38	6010-6.50S
7.00	10.00	10.00	60.00	2	1	48.75	6006-7.00S	48.75	6010-7.00S
7.50	10.00	10.00	60.00	2	1	49.18	6006-7.50S	68.38	6010-7.50S
8.00	10.00	11.00	61.00	2	1	49.18	6006-8.00S	49.18	6010-8.00S
8.50	10.00	11.00	61.00	2	1	51.35	6006-8.50S	68.38	6010-8.50S
9.00	10.00	11.00	61.00	2	1	51.35	6006-9.00S	51.35	6010-9.00S
9.50	10.00	11.00	61.00	2	1	49.84	6006-9.50S	68.38	6010-9.50S
10.00	10.00	13.00	63.00	2	1	49.84	6006-10.00S	49.84	6010-10.00S
10.50	12.00	13.00	70.00	2	1	56.39	6006-10.50S		
11.00	12.00	13.00	70.00	2	1	56.39	6006-11.00S	53.81	6010-11.00S
12.00	12.00	16.00	73.00	2	1	57.17	6006-12.00S	50.58	6010-12.00S
13.00	12.00	16.00	73.00	2	1	60.69	6006-13.00S	55.99	6010-13.00S
14.00	12.00	16.00	73.00	2	1	70.85	6006-14.00S	59.74	6010-14.00S
15.00	12.00	16.00	73.00	2	1	83.59	6006-15.00S	71.88	6010-15.00S
16.00	16.00	19.00	79.00	2	1	83.59	6006-16.00S	68.37	6010-16.00S
17.00	16.00	19.00	79.00	2	1	91.85	6006-17.00S		
18.00	16.00	19.00	79.00	2	1	95.82	6006-18.00S	81.24	6010-18.00S
19.00	16.00	19.00	79.00	2	1	106.82	6006-19.00S		
20.00	16.00	19.00	79.00	2	1	114.38	6006-20.00S	88.57	6010-20.00S
22.00	25.00	26.00	102.00	2	1	176.46	6006-22.00S	154.98	6010-22.00S
24.00	25.00	26.00	102.00	2	1	179.72	6006-24.00S		
25.00	25.00	26.00	102.00	2	1	179.72	6006-25.00S	154.98	6010-25.00S
28.00	25.00	26.00	102.00	2	1	229.58	6006-28.00S		
30.00	25.00	26.00	102.00	2	1	286.88	6006-30.00S		
32.00	32.00	32.00	112.00	2	1	305.55	6006-32.00S		
36.00	32.00	32.00	112.00	2	1	330.48	6006-36.00S		
40.00	32.00	38.00	118.00	2	1	472.29	6006-40.00S		
45.00	32.00	38.00	118.00	2	1	584.02	6006-45.00S		
50.00	32.00	45.00	125.00	2	1	682.03	6006-50.00S		





GROUP	ENDM	ENDM
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co8	HSS-Co8
LENGTH	LONG	LONG
TYPE	CENTRE CUTTING <b>THREADED</b>	CENTRE CUTTING <b>PLAIN - FLATTED</b>
PACKAGING	SINGLE	SINGLE

**M**  
METRIC

DIA MM	SHANK MM	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>LONG</b>									
2.00	6.00	4.00	51.00	2	1	<b>46.04</b>	6006-2.00L		
3.00	6.00	11.00	60.50	2	1	<b>46.04</b>	6006-3.00L	<b>46.04</b>	6010-3.00L
4.00	6.00	12.50	66.50	2	1	<b>36.59</b>	6006-4.00L	<b>60.90</b>	6010-4.00L
5.00	6.00	12.50	70.00	2	1	<b>37.71</b>	6006-5.00L	<b>60.90</b>	6010-5.00L
6.00	6.00	16.00	76.00	2	1	<b>44.81</b>	6006-6.00L	<b>60.90</b>	6010-6.00L
6.50	10.00	16.00	76.00	2	1	<b>56.18</b>	6006-6.50L		
7.00	10.00	16.00	76.00	2	1	<b>56.18</b>	6006-7.00L		
8.00	10.00	19.00	79.50	2	1	<b>58.37</b>	6006-8.00L	<b>58.37</b>	6010-8.00L
8.50	10.00	22.00	82.50	2	1	<b>57.99</b>	6006-8.50L	<b>85.32</b>	6010-8.50L
9.00	10.00	22.00	82.50	2	1	<b>57.99</b>	6006-9.00L	<b>60.90</b>	6010-9.00L
10.00	10.00	22.00	82.50	2	1	<b>59.74</b>	6006-10.00L	<b>59.74</b>	6010-10.00L
11.00	12.00	22.00	89.00	2	1	<b>71.63</b>	6006-11.00L	<b>67.52</b>	6010-11.00L
12.00	12.00	25.50	95.00	2	1	<b>71.63</b>	6006-12.00L	<b>66.46</b>	6010-12.00L
13.00	12.00	25.50	95.00	2	1	<b>79.51</b>	6006-13.00L	<b>79.34</b>	6010-13.00L
14.00	12.00	28.50	101.50	2	1	<b>83.05</b>	6006-14.00L	<b>79.34</b>	6010-14.00L
15.00	12.00	31.50	108.00	2	1	<b>111.50</b>	6006-15.00L	<b>95.86</b>	6010-15.00L
16.00	16.00	31.50	108.00	2	1	<b>111.50</b>	6006-16.00L	<b>95.86</b>	6010-16.00L
17.00	16.00	35.00	114.50	2	1	<b>122.08</b>	6006-17.00L		
18.00	16.00	35.00	114.50	2	1	<b>128.46</b>	6006-18.00L	<b>118.17</b>	6010-18.00L
19.00	16.00	38.00	120.50	2	1	<b>133.57</b>	6006-19.00L		
20.00	16.00	38.00	120.50	2	1	<b>156.39</b>	6006-20.00L	<b>132.92</b>	6010-20.00L



GROUP	ENDM
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co8
LENGTH	<b>SHORT</b>
TYPE	CENTRE CUTTING <b>THREADED</b>
PACKAGING	SINGLE

DIA INCH	SHANK INCH	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER
<b>SHORT</b>							
1/16	1/4	2.50	48.00	2	1	<b>40.46</b>	6000-1/16S
1/8	1/4	8.00	51.00	2	1	<b>36.73</b>	6000-1/8S
3/16	1/4	10.00	52.00	2	1	<b>32.54</b>	6000-3/16S
1/4	1/4	11.00	56.00	2	1	<b>38.57</b>	6000-1/4S
5/16	3/8	13.00	60.00	2	1	<b>48.44</b>	6000-5/16S
3/8	3/8	14.00	60.00	2	1	<b>50.14</b>	6000-3/8S
7/16	1/2	17.00	65.00	2	1	<b>56.43</b>	6000-7/16S
1/2	1/2	19.00	67.00	2	1	<b>60.69</b>	6000-1/2S
9/16	1/2	22.00	69.00	2	1	<b>70.85</b>	6000-9/16S
5/8	5/8	22.00	72.00	2	1	<b>83.59</b>	6000-5/8S
3/4	5/8	25.00	77.00	2	1	<b>106.82</b>	6000-3/4S
7/8	1	25.00	100.00	2	1	<b>176.37</b>	6000-7/8S
1	1	27.00	95.00	2	1	<b>179.72</b>	6000-1S
1-1/8	1	30.00	95.00	2	1	<b>229.58</b>	6000-1.1/8S
1-1/4	1-1/4	35.00	117.00	2	1	<b>305.55</b>	6000-1.1/4S
1-3/8	1-1/4	40.00	111.00	2	1	<b>343.69</b>	6000-1.3/8S
1-1/2	1-1/4	43.00	115.00	2	1	<b>382.38</b>	6000-1.1/2S
1-5/8	1-1/4	48.00	118.00	2	1	<b>369.06</b>	6000-1.5/8S
1-3/4	1-1/4	48.00	118.00	2	1	<b>527.59</b>	6000-1.3/4S
1-7/8	1-1/4	51.00	118.00	2	1	<b>638.67</b>	6000-1.7/8S
2	1-1/4	51.00	118.00	2	1	<b>638.67</b>	6000-2S



GROUP	ENDM
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co8
LENGTH	LONG
TYPE	CENTRE CUTTING <b>THREADED</b>
PACKAGING	SINGLE

DIA INCH	SHANK INCH	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER
LONG							
1/8	1/4	11.00	64.00	2	1	40.93	6000-1/8L
3/16	1/4	13.00	70.00	2	1	42.00	6000-3/16L
1/4	1/4	16.00	76.00	2	1	45.92	6000-1/4L
5/16	3/8	19.00	79.00	2	1	57.55	6000-5/16L
3/8	3/8	22.00	83.00	2	1	58.37	6000-3/8L
7/16	1/2	22.00	89.00	2	1	74.39	6000-7/16L
1/2	1/2	25.00	95.00	2	1	66.59	6000-1/2L
9/16	1/2	29.00	102.00	2	1	88.62	6000-9/16L
5/8	5/8	32.00	108.00	2	1	105.13	6000-5/8L
3/4	5/8	38.00	121.00	2	1	136.65	6000-3/4L
7/8	1	42.00	140.00	2	1	211.70	6000-7/8L
1	1	44.00	159.00	2	1	233.46	6000-1L
1-1/8	1	48.00	159.00	2	1	281.64	6000-1.1/8L
1-1/4	1-1/4	51.00	159.00	2	1	386.87	6000-1.1/4L
1-3/8	1-1/4	54.00	159.00	2	1	394.26	6000-1.3/8L
1-1/2	1-1/4	57.00	159.00	2	1	429.85	6000-1.1/2L
1-5/8	1-1/4	64.00	159.00	2	1	615.47	6000-1.5/8L
1-3/4	1-1/4	64.00	159.00	2	1	724.57	6000-1.3/4L
1-7/8	1-1/4	64.00	159.00	2	1	819.76	6000-1.7/8L
2	1-1/4	64.00	159.00	2	1	914.90	6000-2L

**F**  
FRACTIONAL





GROUP	ENDM	ENDM
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co8	HSS-Co8
LENGTH	SHORT / LONG	SHORT / LONG
TYPE	CENTRE CUTTING <b>THREADED</b>	CENTRE CUTTING <b>PLAIN - FLATTED</b>
PACKAGING	SINGLE	SINGLE

DIA MM	SHANK MM	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>SHORT</b>									
3.00	6.00	5.00	49.00	2	1	<b>59.74</b>	6022-3.00S	<b>72.63</b>	6024-3.00S
4.00	6.00	7.00	51.00	2	1	<b>59.74</b>	6022-4.00S	<b>67.82</b>	6024-4.00S
5.00	6.00	8.00	52.00	2	1	<b>59.74</b>	6022-5.00S	<b>71.65</b>	6024-5.00S
6.00	6.00	8.00	52.00	2	1	<b>59.74</b>	6022-6.00S	<b>72.17</b>	6024-6.00S
8.00	10.00	11.00	61.00	2	1	<b>81.89</b>	6022-8.00S	<b>92.63</b>	6024-8.00S
10.00	10.00	13.00	63.00	2	1	<b>104.12</b>	6022-10.00S	<b>97.69</b>	6024-10.00S
12.00	12.00	16.00	73.00	2	1	<b>106.52</b>	6022-12.00S	<b>129.26</b>	6024-12.00S
14.00	12.00	16.00	73.00	2	1	<b>127.30</b>	6022-14.00S		
16.00	16.00	19.00	79.00	2	1	<b>138.51</b>	6022-16.00S		
18.00	16.00	19.00	79.00	2	1	<b>165.42</b>	6022-18.00S		
20.00	16.00	19.00	79.00	2	1	<b>186.02</b>	6022-20.00S		
22.00	25.00	26.00	102.00	2	1	<b>291.55</b>	6022-22.00S		
25.00	25.00	26.00	102.00	2	1	<b>291.55</b>	6022-25.00S		
30.00	25.00	26.00	102.00	2	1	<b>424.49</b>	6022-30.00S		
<b>LONG</b>									
3.00	6.00	11.00	60.50	2	1	<b>59.02</b>	6022-3.00L	<b>62.29</b>	6024-3.00L
4.00	6.00	12.50	66.50	2	1	<b>59.02</b>	6022-4.00L	<b>62.29</b>	6024-4.00L
5.00	6.00	12.50	70.00	2	1	<b>59.02</b>	6022-5.00L	<b>62.29</b>	6024-5.00L
6.00	6.00	16.00	76.00	2	1	<b>59.49</b>	6022-6.00L	<b>62.29</b>	6024-6.00L
8.00	10.00	19.00	79.50	2	1	<b>74.54</b>	6022-8.00L	<b>84.88</b>	6024-8.00L
10.00	10.00	22.00	82.50	2	1	<b>82.61</b>	6022-10.00L	<b>107.50</b>	6024-10.00L
12.00	12.00	25.50	95.00	2	1	<b>113.97</b>	6022-12.00L	<b>107.50</b>	6024-12.00L
16.00	16.00	31.50	108.00	2	1	<b>136.93</b>	6022-16.00L	<b>141.52</b>	6024-16.00L
18.00	16.00	35.00	114.50	2	1	<b>175.04</b>	6022-18.00L	<b>183.93</b>	6024-18.00L
25.00	16.00	44.50	159.00	2	1	<b>347.19</b>	6022-25.00L	<b>285.16</b>	6024-25.00L
30.00	25.00	51.00	159.00	2	1	<b>503.30</b>	6022-30.00L	<b>581.41</b>	6024-30.00L



GROUP	ENDM
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co8
LENGTH	SHORT / LONG
TYPE	CENTRE CUTTING <b>THREADED</b>
PACKAGING	SINGLE

DIA INCH	SHANK INCH	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER
<b>SHORT</b>							
1/8	1/4	8.00	51.00	2	1	<b>56.90</b>	6016-1/8S
3/16	1/4	10.00	52.00	2	1	<b>56.90</b>	6016-3/16S
1/4	1/4	11.00	56.00	2	1	<b>56.90</b>	6016-1/4S
5/16	3/8	13.00	60.00	2	1	<b>70.25</b>	6016-5/16S
3/8	3/8	14.00	60.00	2	1	<b>70.25</b>	6016-3/8S
7/16	1/2	17.00	65.00	2	1	<b>74.10</b>	6016-7/16S
1/2	1/2	19.00	67.00	2	1	<b>109.29</b>	6016-1/2S
5/8	5/8	22.00	72.00	2	1	<b>138.64</b>	6016-5/8S
3/4	5/8	25.00	77.00	2	1	<b>185.39</b>	6016-3/4S
7/8	1	25.00	100.00	2	1	<b>300.79</b>	6016-7/8S
1	1	27.00	95.00	2	1	<b>301.01</b>	6016-1S
1-1/8	1	30.00	95.00	2	1	<b>382.88</b>	6016-1.1/8S
1-1/4	1-1/4	35.00	117.00	2	1	<b>355.72</b>	6016-1.1/4S
1-3/8	1-1/4	40.00	111.00	2	1	<b>576.72</b>	6016-1.3/8S
1-1/2	1-1/4	43.00	115.00	2	1	<b>666.40</b>	6016-1.1/2S
1-5/8	1-1/4	48.00	118.00	2	1	<b>859.27</b>	6016-1.5/8S
1-3/4	1-1/4	48.00	118.00	2	1	<b>928.16</b>	6016-1.3/4S
1-7/8	1-1/4	51.00	118.00	2	1	<b>1,019.72</b>	6016-1.7/8S
2	1-1/4	51.00	118.00	2	1	<b>1,111.26</b>	6016-2S
<b>LONG</b>							
1/8	1/4	11.00	64.00	2	1	<b>73.51</b>	6016-1/8L
3/16	1/4	13.00	70.00	2	1	<b>81.21</b>	6016-3/16L
1/4	1/4	16.00	76.00	2	1	<b>81.21</b>	6016-1/4L
5/16	3/8	19.00	79.00	2	1	<b>92.06</b>	6016-5/16L
3/8	3/8	22.00	83.00	2	1	<b>98.43</b>	6016-3/8L
7/16	1/2	22.00	89.00	2	1	<b>109.02</b>	6016-7/16L
1/2	1/2	25.00	95.00	2	1	<b>112.54</b>	6016-1/2L
5/8	5/8	32.00	108.00	2	1	<b>158.32</b>	6016-5/8L
3/4	5/8	38.00	121.00	2	1	<b>210.78</b>	6016-3/4L
7/8	1	42.00	140.00	2	1	<b>296.85</b>	6016-7/8L
1	1	44.00	159.00	2	1	<b>326.08</b>	6016-1L
1-1/8	1	48.00	159.00	2	1	<b>417.65</b>	6016-1.1/8L
1-1/4	1-1/4	51.00	159.00	2	1	<b>558.03</b>	6016-1.1/4L
1-3/8	1-1/4	54.00	159.00	2	1	<b>577.93</b>	6016-1.3/8L
1-1/2	1-1/4	57.00	159.00	2	1	<b>592.98</b>	6016-1.1/2L
1-3/4	1-1/4	64.00	159.00	2	1	<b>955.31</b>	6016-1.3/4L
2	1-1/4	64.00	159.00	2	1	<b>1,211.40</b>	6016-2L

**F**  
FRACTIONAL


**M**  
METRIC

GROUP	ENDM	ENDM
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co8	HSS-Co8
LENGTH	SHORT	SHORT
TYPE	END CUTTING <b>THREADED</b>	END CUTTING <b>PLAIN - FLATTED</b>
PACKAGING	SINGLE	SINGLE

DIA MM	SHANK MM	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>SHORT</b>									
3.00	6.00	9.50	54.00	4	1	30.81	6066-3.00S	30.81	6070-3.00S
3.50	6.00	12.50	57.00	4	1	30.22	6066-3.50S		
4.00	6.00	12.50	57.00	4	1	30.22	6066-4.00S	52.67	6070-4.00S
4.50	6.00	12.50	57.00	4	1	30.81	6066-4.50S		
5.00	6.00	16.00	60.50	4	1	30.81	6066-5.00S	52.67	6070-5.00S
5.50	6.00	16.00	60.50	4	1	30.22	6066-5.50S		
6.00	6.00	16.00	60.50	4	1	30.22	6066-6.00S	60.90	6070-6.00S
6.50	10.00	16.00	60.50	4	1	37.94	6066-6.50S		
7.00	10.00	15.00	60.50	4	1	37.94	6066-7.00S	39.85	6070-7.00S
7.50	10.00	18.00	63.50	4	1	39.85	6066-7.50S		
8.00	10.00	18.00	63.50	4	1	39.85	6066-8.00S	39.85	6070-8.00S
8.50	10.00	21.00	66.50	4	1	39.85	6066-8.50S		
9.00	10.00	21.00	66.50	4	1	39.85	6066-9.00S	68.38	6070-9.00S
9.50	10.00	21.00	66.50	4	1	39.85	6066-9.50S		
10.00	10.00	21.00	66.50	4	1	39.85	6066-10.00S	39.85	6070-10.00S
11.00	12.00	19.00	66.50	4	1	51.04	6066-11.00S	86.34	6070-11.00S
12.00	12.00	24.00	70.00	4	1	51.04	6066-12.00S	50.58	6070-12.00S
13.00	12.00	24.50	70.00	4	1	63.67	6066-13.00S	99.04	6070-13.00S
14.00	12.00	28.50	73.00	4	1	63.67	6066-14.00S	57.88	6070-14.00S
15.00	12.00	26.50	71.00	4	1	73.22	6066-15.00S	115.06	6070-15.00S
16.00	16.00	26.50	77.00	4	1	73.22	6066-16.00S	67.24	6070-16.00S
18.00	16.00	35.00	80.00	4	1	86.68	6066-18.00S	81.24	6070-18.00S
19.00	16.00	38.00	83.50	4	1	112.94	6066-19.00S		
20.00	20.00	38.00	83.50	4	1	112.94	6066-20.00S	90.41	6070-20.00S
22.00	25.00	41.50	98.50	6	1	157.21	6066-22.00S	143.95	6070-22.00S
24.00	25.00	41.50	98.50	6	1	162.82	6066-24.00S		
25.00	25.00	44.50	101.50	6	1	162.82	6066-25.00S	162.48	6070-25.00S
28.00	25.00	46.00	104.50	6	1	216.62	6066-28.00S		
30.00	25.00	46.00	104.50	6	1	239.20	6066-30.00S		
32.00	32.00	51.00	112.50	6	1	266.27	6066-32.00S		
35.00	32.00	54.00	116.00	6	1	297.78	6066-35.00S		
38.00	32.00	54.00	116.00	6	1	370.18	6066-38.00S		
40.00	32.00	55.50	117.50	6	1	446.55	6066-40.00S		
45.00	32.00	57.00	119.00	6	1	570.68	6066-45.00S		
50.00	32.00	65.00	127.00	8	1	649.79	6066-50.00S		



GROUP	ENDM	ENDM
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS-Co8	HSS-Co8
LENGTH	LONG	LONG
TYPE	END CUTTING <b>THREADED</b>	END CUTTING <b>PLAIN - FLATTED</b>
PACKAGING	SINGLE	SINGLE

DIA MM	SHANK MM	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>LONG</b>									
3.00	6.00	19.00	63.50	4	1	<b>39.39</b>	6066-3.00L	<b>39.39</b>	6070-3.00L
4.00	6.00	25.50	70.00	4	1	<b>35.78</b>	6066-4.00L	<b>60.90</b>	6070-4.00L
5.00	6.00	31.50	76.00	4	1	<b>35.78</b>	6066-5.00L	<b>60.90</b>	6070-5.00L
6.00	6.00	31.50	76.00	4	1	<b>37.37</b>	6066-6.00L	<b>60.90</b>	6070-6.00L
7.00	10.00	34.00	79.50	4	1	<b>49.26</b>	6066-7.00L		
8.00	10.00	34.00	79.50	4	1	<b>49.26</b>	6066-8.00L	<b>46.58</b>	6070-8.00L
9.00	10.00	37.00	82.50	4	1	<b>51.09</b>	6066-9.00L		
10.00	10.00	37.00	82.50	4	1	<b>51.09</b>	6066-10.00L	<b>46.58</b>	6070-10.00L
11.00	12.00	41.50	89.00	4	1	<b>64.55</b>	6066-11.00L		
12.00	12.00	49.50	95.00	4	1	<b>64.55</b>	6066-12.00L	<b>55.99</b>	6070-12.00L
13.00	12.00	50.00	95.00	4	1	<b>84.84</b>	6066-13.00L		
14.00	12.00	57.00	101.50	4	1	<b>84.84</b>	6066-14.00L	<b>73.18</b>	6070-14.00L
15.00	12.00	58.50	103.00	4	1	<b>104.32</b>	6066-15.00L		
16.00	16.00	58.50	108.50	4	1	<b>104.32</b>	6066-16.00L	<b>87.44</b>	6070-16.00L
18.00	16.00	70.00	115.00	4	1	<b>115.56</b>	6066-18.00L	<b>112.22</b>	6070-18.00L
20.00	25.00	76.00	121.50	4	1	<b>143.35</b>	6066-20.00L	<b>126.69</b>	6070-20.00L



GROUP	ENDM
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co8
LENGTH	<b>SHORT</b>
TYPE	SINGLE FLUTE <b>ROUND SHANK</b>
PACKAGING	SINGLE

DIA MM	SHANK MM	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER
<b>SHORT SINGLE FLUTE</b>							
3.00	8.00	12.00	60.00	1	1	<b>39.09</b>	6004-3.00S
4.00	8.00	12.00	60.00	1	1	<b>39.09</b>	6004-4.00S
5.00	8.00	12.00	60.00	1	1	<b>39.09</b>	6004-5.00S
6.00	8.00	14.00	60.00	1	1	<b>42.03</b>	6004-6.00S
8.00	8.00	14.00	60.00	1	1	<b>42.03</b>	6004-8.00S
10.00	8.00	14.00	60.00	1	1	<b>57.09</b>	6004-10.00S





GROUP	ENDM
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co8
LENGTH	SHORT / LONG
TYPE	END CUTTING <b>THREADED</b>
PACKAGING	SINGLE

DIA INCH	SHANK INCH	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER
<b>SHORT</b>							
1/8	1/4	10.00	54.00	4	1	<b>30.81</b>	6060-1/8S
3/16	1/4	13.00	57.00	4	1	<b>30.81</b>	6060-3/16S
1/4	1/4	16.00	60.00	4	1	<b>30.81</b>	6060-1/4S
5/16	3/8	18.00	64.00	4	1	<b>38.46</b>	6060-5/16S
3/8	3/8	22.00	67.00	4	1	<b>39.24</b>	6060-3/8S
7/16	1/2	22.00	67.00	4	1	<b>50.28</b>	6060-7/16S
1/2	1/2	24.00	70.00	4	1	<b>59.47</b>	6060-1/2S
9/16	1/2	29.00	73.00	4	1	<b>63.69</b>	6060-9/16S
5/8	5/8	32.00	77.00	4	1	<b>73.24</b>	6060-5/8S
3/4	5/8	38.00	83.00	4	1	<b>110.28</b>	6060-3/4S
7/8	1	41.00	98.00	6	1	<b>185.92</b>	6060-7/8S
1	1	43.00	102.00	6	1	<b>162.82</b>	6060-1S
1-1/8	1	46.00	105.00	6	1	<b>216.62</b>	6060-1.1/8S
1-1/4	1-1/4	51.00	113.00	6	1	<b>266.35</b>	6060-1.1/4S
1-3/8	1-1/4	54.00	116.00	6	1	<b>297.77</b>	6060-1.3/8S
1-1/2	1-1/4	54.00	116.00	6	1	<b>370.21</b>	6060-1.1/2S
1-5/8	1-1/4	54.00	116.00	8	1	<b>570.71</b>	6060-1.5/8S
1-3/4	1-1/4	57.00	119.00	8	1	<b>570.71</b>	6060-1.3/4S
1-7/8	1-1/4	62.00	124.00	8	1	<b>649.79</b>	6060-1.7/8S
2	1-1/4	65.00	127.00	8	1	<b>649.79</b>	6060-2S
<b>LONG</b>							
1/8	1/4	19.00	64.00	4	1	<b>36.73</b>	6060-1/8L
3/16	1/4	25.00	70.00	4	1	<b>34.24</b>	6060-3/16L
1/4	1/4	32.00	76.00	4	1	<b>35.80</b>	6060-1/4L
5/16	3/8	34.00	79.00	4	1	<b>47.30</b>	6060-5/16L
3/8	3/8	37.00	83.00	4	1	<b>49.08</b>	6060-3/8L
7/16	1/2	42.00	89.00	4	1	<b>54.12</b>	6060-7/16L
1/2	1/2	49.00	95.00	4	1	<b>73.41</b>	6060-1/2L
9/16	1/2	57.00	102.00	4	1	<b>104.32</b>	6060-9/16L
5/8	5/8	59.00	109.00	4	1	<b>104.32</b>	6060-5/8L
3/4	5/8	76.00	121.00	4	1	<b>130.78</b>	6060-3/4L
7/8	1	86.00	143.00	6	1	<b>179.38</b>	6060-7/8L
1	1	100.00	157.00	6	1	<b>237.74</b>	6060-1L
1-1/8	1	100.00	157.00	6	1	<b>270.66</b>	6060-1.1/8L
1-1/4	1-1/4	102.00	164.00	6	1	<b>407.85</b>	6060-1.1/4L
1-3/8	1-1/4	102.00	164.00	6	1	<b>407.85</b>	6060-1.3/8L
1-1/2	1-1/4	102.00	164.00	6	1	<b>407.85</b>	6060-1.1/2L
1-5/8	1-1/4	102.00	164.00	8	1	<b>538.04</b>	6060-1.5/8L
1-3/4	1-1/4	102.00	164.00	8	1	<b>538.04</b>	6060-1.3/4L
1-7/8	1-1/4	102.00	164.00	8	1	<b>702.57</b>	6060-1.7/8L
2	1-1/4	102.00	164.00	8	1	<b>702.57</b>	6060-2L



GROUP	ENDM
SURFACE FINISH	BRIGHT
MATERIAL	HSS-Co8
LENGTH	SHORT / LONG
TYPE	END CUTTING <b>THREADED</b>
PACKAGING	SINGLE

DIA MM	SHANK MM	FL MM	OAL MM	FLUTES #	PACK QTY	\$ EACH	PART NUMBER
<b>SHORT</b>							
3.00	6.00	9.50	54.00	3	1	<b>44.01</b>	6036-3.00S
4.00	6.00	12.50	57.00	3	1	<b>44.01</b>	6036-4.00S
5.00	6.00	16.00	60.50	3	1	<b>44.01</b>	6036-5.00S
6.00	6.00	16.00	60.50	3	1	<b>44.01</b>	6036-6.00S
8.00	10.00	18.00	63.50	3	1	<b>56.51</b>	6036-8.00S
10.00	10.00	21.00	66.50	3	1	<b>67.52</b>	6036-10.00S
12.00	12.00	24.00	70.00	3	1	<b>71.37</b>	6036-12.00S
13.00	12.00	24.50	70.00	3	1	<b>97.36</b>	6036-13.00S
14.00	12.00	28.50	73.00	3	1	<b>97.35</b>	6036-14.00S
15.00	12.00	26.50	71.00	3	1	<b>113.28</b>	6036-15.00S
16.00	16.00	26.50	77.00	3	1	<b>113.28</b>	6036-16.00S
18.00	16.00	35.00	80.00	3	1	<b>157.35</b>	6036-18.00S
19.00	16.00	38.00	83.50	3	1	<b>157.35</b>	6036-19.00S
20.00	16.00	38.00	83.50	3	1	<b>157.34</b>	6036-20.00S
22.00	25.00	41.50	98.50	3	1	<b>232.41</b>	6036-22.00S
25.00	25.00	44.50	101.50	3	1	<b>246.53</b>	6036-25.00S
<b>LONG</b>							
6.00	6.00	31.50	76.00	3	1	<b>38.72</b>	6036-6.00L
8.00	10.00	34.00	79.50	3	1	<b>51.93</b>	6036-8.00L
10.00	10.00	37.00	82.50	3	1	<b>55.51</b>	6036-10.00L
12.00	12.00	49.50	95.00	3	1	<b>76.09</b>	6036-12.00L
14.00	12.00	57.00	101.50	3	1	<b>109.81</b>	6036-14.00L
16.00	16.00	58.50	108.50	3	1	<b>122.55</b>	6036-16.00L
18.00	16.00	70.00	115.00	3	1	<b>153.14</b>	6036-18.00L
20.00	16.00	76.00	121.50	3	1	<b>181.50</b>	6036-20.00L
22.00	25.00	85.50	143.00	3	1	<b>272.00</b>	6036-22.00L
25.00	25.00	100.00	157.00	3	1	<b>300.65</b>	6036-25.00L

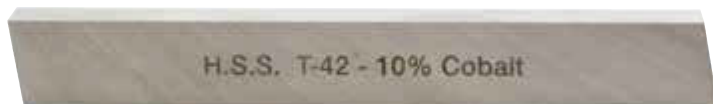
**M**  
METRIC

# TOOLBITS

HSS-Co10

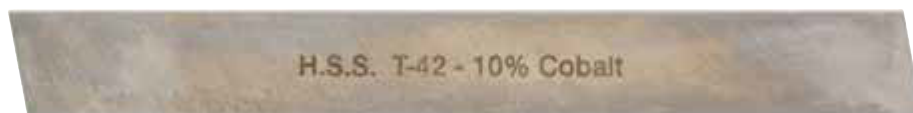
METRIC

**M**  
METRIC



GROUP	TOOL	TOOL
SHAPE	SQUARE	ROUND
MATERIAL	HSS-Co10	HSS-Co10
PACKAGING	SINGLE	SINGLE

DIAMETER MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
4.00	63.00	1			<b>17.93</b>	3813-4X63
5.00	80.00	1			<b>20.57</b>	3813-5X80
6.00	63.00	1	<b>18.09</b>	3803-6X63	<b>23.47</b>	3813-6X63
8.00	63.00	1			<b>25.18</b>	3813-8X63
8.00	100.00	1	<b>44.84</b>	3803-8X100		
10.00	100.00	1	<b>70.04</b>	3803-10X100	<b>53.03</b>	3813-10X100
12.00	100.00	1			<b>71.75</b>	3813-12X100
14.00	125.00	1	<b>95.56</b>	3803-14X125		



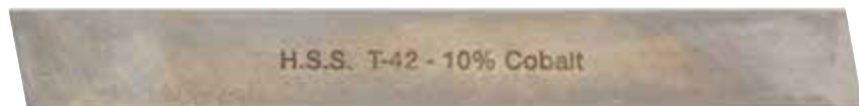
GROUP	TOOL
SHAPE	BEVEL
TYPE	PARTING OFF BLADE
MATERIAL	HSS-Co10
PACKAGING	SINGLE

OAL MM	HEIGHT MM	WIDTH MM	PACK QTY	\$ EACH	PART NUMBER
90	12	3	1	<b>78.99</b>	3826-12X3



GROUP	TOOL	TOOL	TOOL	TOOL
SHAPE	SQUARE	ROUND	SQUARE	ROUND
MATERIAL	HSS	HSS	HSS-Co10	HSS-Co10
PACKAGING	SINGLE	SINGLE	SINGLE	SINGLE

DIA INCH	LENGTH INCH	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
1/8	3	1							24.02	3812-1/8X3
3/16	2-1/2	1	12.65	3800-3/16X2.5			13.38	3802-3/16X2.5		
3/16	3	1					15.22	3802-3/16X3		
3/16	4	1							24.91	3812-3/16X4
1/4	2-1/2	1	16.94	3800-1/4X2.5			16.94	3802-1/4X2.5		
1/4	3	1	20.29	3800-1/4X3	7.77	3810-1/4X3	20.29	3802-1/4X3	26.47	3812-1/4X3
1/4	4	1	27.07	3800-1/4X4	10.50	3810-1/4X4	27.07	3802-1/4X4		
5/16	2-1/2	1	20.01	3800-5/16X2.5			20.01	3802-5/16X2.5		
5/16	3	1	24.23	3800-5/16X3	11.24	3810-5/16X3	24.23	3802-5/16X3		
5/16	4	1	32.53	3800-5/16X4			32.53	3802-5/16X4	41.79	3812-5/16X4
3/8	3	1	28.78	3800-3/8X3			28.78	3802-3/8X3		
3/8	4	1	37.76	3800-3/8X4	17.30	3810-3/8X4	37.76	3802-3/8X4	56.11	3812-3/8X4
3/8	6	1	56.87	3800-3/8X6			56.87	3802-3/8X6		
7/16	3-1/2	1							55.64	3812-7/16X3.5
7/16	4	1					62.93	3802-7/16X4		
1/2	4	1	56.57	3800-1/2X4	31.18	3810-1/2X4	56.57	3802-1/2X4	75.67	3812-1/2X4
1/2	6	1	85.06	3800-1/2X6			85.06	3802-1/2X6	112.76	3812-1/2X6
5/8	4-1/2	1	52.69	3800-5/8X4.5			82.00	3802-5/8X4.5		
5/8	6	1	83.38	3800-5/8X6			129.77	3802-5/8X6	171.85	3812-5/8X6
3/4	5	1	128.16	3800-3/4X5			118.55	3802-3/4X5		
3/4	6	1							253.81	3812-3/4X6
1	7	1	277.16	3800-1X7			267.62	3802-1X7		



GROUP	TOOL
SHAPE	BEVEL
TYPE	PARTING OFF BLADE
MATERIAL	HSS-Co10
PACKAGING	SINGLE

OAL INCH	HEIGHT INCH	WIDTH INCH	PACK QTY	\$ EACH	PART NUMBER
4-1/2	1/2	3/32	1	75.95	3825-1/2X3/32
5	5/8	3/32	1	93.82	3825-5/8X3/32
6	3/4	1/8	1	129.74	3825-3/4X1/8





GROUP	REAM
MATERIAL	HSS
FLUTE TYPE	10° LEFT HAND SPIRAL
CUTTING DIRECTION	RIGHT HAND
HOLE LIMIT	H7
PACKAGING	SINGLE

DIA MM	FL MM	OAL MM	MTS #	PACK QTY	\$ EACH	PART NUMBER
METRIC						
MTS 1						
3.00	32.00	115.00	1	1	103.45	6301-3.00
3.50	32.00	115.00	1	1	103.45	6301-3.50
4.00	38.00	120.00	1	1	103.45	6301-4.00
4.50	38.00	120.00	1	1	103.45	6301-4.50
5.00	38.00	120.00	1	1	103.45	6301-5.00
5.50	45.00	127.00	1	1	103.45	6301-5.50
6.00	45.00	127.00	1	1	92.93	6301-6.00
6.50	50.00	130.00	1	1	97.23	6301-6.50
7.00	54.00	134.00	1	1	97.23	6301-7.00
7.50	54.00	134.00	1	1	97.23	6301-7.50
8.00	58.00	138.00	1	1	97.23	6301-8.00
8.50	58.00	138.00	1	1	103.52	6301-8.50
9.00	62.00	142.00	1	1	103.52	6301-9.00
9.50	62.00	142.00	1	1	99.61	6301-9.50
10.00	66.00	146.00	1	1	99.61	6301-10.00
10.50	66.00	146.00	1	1	126.05	6301-10.50
11.00	71.00	151.00	1	1	126.05	6301-11.00
11.50	71.00	151.00	1	1	135.97	6301-11.50
12.00	76.00	156.00	1	1	120.46	6301-12.00
12.50	76.00	156.00	1	1	130.69	6301-12.50
13.00	76.00	156.00	1	1	145.44	6301-13.00
13.50	81.00	161.00	1	1	177.67	6301-13.50
14.00	81.00	161.00	1	1	145.44	6301-14.00
MTS 2						
14.50	81.00	181.00	2	1	195.84	6301-14.50
15.00	81.00	181.00	2	1	189.15	6301-15.00
15.50	87.00	187.00	2	1	215.44	6301-15.50
16.00	87.00	187.00	2	1	192.50	6301-16.00
16.50	87.00	187.00	2	1	222.43	6301-16.50
17.00	87.00	187.00	2	1	192.50	6301-17.00
17.50	93.00	193.00	2	1	248.69	6301-17.50
18.00	93.00	193.00	2	1	228.87	6301-18.00
18.50	93.00	193.00	2	1	262.15	6301-18.50
19.00	93.00	193.00	2	1	245.36	6301-19.00
19.50	100.00	200.00	2	1	278.65	6301-19.50
20.00	100.00	200.00	2	1	245.36	6301-20.00
21.00	100.00	200.00	2	1	291.00	6301-21.00
22.00	107.00	207.00	2	1	265.53	6301-22.00
23.00	107.00	207.00	2	1	318.96	6301-23.00
MTS 3						
24.00	115.00	242.00	3	1	335.74	6301-24.00
25.00	115.00	242.00	3	1	349.75	6301-25.00

GROUP	REAM
MATERIAL	HSS
FLUTE TYPE	10° LEFT HAND SPIRAL
CUTTING DIRECTION	RIGHT HAND
HOLE LIMIT	H7
PACKAGING	SINGLE

DIA INCH	FL MM	OAL MM	MTS #	PACK QTY	\$ EACH	PART NUMBER
FRACTIONAL						
MTS 1						
1/8	32.00	115.00	1	1	103.26	6300-1/8
5/32	32.00	115.00	1	1	103.26	6300-5/32
3/16	38.00	120.00	1	1	103.26	6300-3/16
7/32	45.00	127.00	1	1	103.26	6300-7/32
1/4	50.00	130.00	1	1	93.88	6300-1/4
9/32	54.00	134.00	1	1	97.23	6300-9/32
5/16	58.00	138.00	1	1	97.23	6300-5/16
11/32	62.00	142.00	1	1	103.52	6300-11/32
3/8	66.00	146.00	1	1	106.22	6300-3/8
13/32	66.00	146.00	1	1	110.21	6300-13/32
7/16	71.00	151.00	1	1	111.78	6300-7/16
15/32	76.00	156.00	1	1	116.10	6300-15/32
1/2	76.00	156.00	1	1	116.10	6300-1/2
17/32	81.00	161.00	1	1	131.38	6300-17/32
MTS 2						
9/16	81.00	181.00	2	1	146.07	6300-9/16
19/32	87.00	187.00	2	1	184.09	6300-19/32
5/8	87.00	187.00	2	1	154.69	6300-5/8
21/32	87.00	187.00	2	1	191.67	6300-21/32
11/16	93.00	193.00	2	1	176.26	6300-11/16
23/32	93.00	193.00	2	1	225.51	6300-23/32
3/4	100.00	200.00	2	1	204.27	6300-3/4
25/32	100.00	200.00	2	1	245.35	6300-25/32
13/16	100.00	200.00	2	1	219.09	6300-13/16
27/32	107.00	207.00	2	1	291.00	6300-27/32
7/8	107.00	207.00	2	1	245.66	6300-7/8
29/32	107.00	207.00	2	1	318.96	6300-29/32
MTS 3						
15/16	115.00	242.00	3	1	335.74	6300-15/16
31/32	115.00	242.00	3	1	388.93	6300-31/32
1	115.00	242.00	3	1	388.93	6300-1
1-1/16	124.00	251.00	3	1	400.10	6300-1.1/16
1-1/8	124.00	251.00	3	1	430.86	6300-1.1/8
1-3/16	133.00	260.00	3	1	500.80	6300-1.3/16
1-1/4	133.00	260.00	3	1	534.40	6300-1.1/4
MTS 4						
1-5/16	133.00	293.00	4	1	604.31	6300-1.5/16
1-3/8	142.00	302.00	4	1	649.12	6300-1.3/8
1-7/16	142.00	302.00	4	1	699.43	6300-1.7/16
1-1/2	152.00	312.00	4	1	816.95	6300-1.1/2
1-5/8	152.00	312.00	4	1	917.72	6300-1.5/8
1-3/4	163.00	323.00	4	1	1,166.73	6300-1.3/4
1-7/8	174.00	334.00	4	1	1,424.12	6300-1.7/8



GROUP	REAM
MATERIAL	HSS
FLUTE TYPE	10° LEFT HAND SPIRAL
CUTTING DIRECTION	RIGHT HAND
HOLE LIMIT	H7
PACKAGING	SINGLE

DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
METRIC					
2.00	25.00	50	1	80.22	6311-2.00
2.50	29.00	58	1	80.22	6311-2.50
3.00	31.00	62	1	73.02	6311-3.00
3.50	35.00	71	1	66.32	6311-3.50
4.00	38.00	76	1	66.32	6311-4.00
4.50	41.00	81	1	66.32	6311-4.50
5.00	44.00	87	1	66.32	6311-5.00
5.50	47.00	93	1	66.32	6311-5.50
6.00	47.00	93	1	66.32	6311-6.00
6.50	50.00	100	1	69.94	6311-6.50
7.00	54.00	107	1	69.94	6311-7.00
7.50	54.00	107	1	73.56	6311-7.50
8.00	58.00	115	1	73.56	6311-8.00
8.50	58.00	115	1	80.29	6311-8.50
9.00	62.00	124	1	90.62	6311-9.00
9.50	62.00	124	1	90.62	6311-9.50
10.00	66.00	133	1	90.62	6311-10.00
10.50	66.00	133	1	106.22	6311-10.50
11.00	71.00	142	1	111.10	6311-11.00
11.50	71.00	142	1	125.77	6311-11.50
12.00	76.00	152	1	117.79	6311-12.00
12.50	76.00	152	1	136.66	6311-12.50
13.00	76.00	152	1	136.66	6311-13.00
13.50	81.00	163	1	160.87	6311-13.50
14.00	81.00	163	1	142.98	6311-14.00
14.50	81.00	163	1	176.83	6311-14.50
15.00	81.00	163	1	176.83	6311-15.00
16.00	87.00	175	1	182.42	6311-16.00
17.00	87.00	175	1	175.70	6311-17.00
18.00	93.00	188	1	212.32	6311-18.00
19.00	93.00	188	1	205.62	6311-19.00
20.00	100.00	201	1	212.32	6311-20.00
21.00	100.00	201	1	288.21	6311-21.00
22.00	107.00	215	1	255.44	6311-22.00
23.00	107.00	215	1	318.96	6311-23.00
24.00	115.00	231	1	318.96	6311-24.00
25.00	115.00	231	1	352.54	6311-25.00

GROUP	REAM
MATERIAL	HSS
FLUTE TYPE	10° LEFT HAND SPIRAL
CUTTING DIRECTION	RIGHT HAND
HOLE LIMIT	H7
PACKAGING	SINGLE

DIA INCH	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
FRACTIONAL					
1/8	33.00	66.00	1	61.72	6310-1/8
9/64	35.00	71.00	1	61.72	6310-9/64
5/32	38.00	76.00	1	73.28	6310-5/32
11/64	41.00	81.00	1	73.28	6310-11/64
3/16	44.00	87.00	1	73.02	6310-3/16
13/64	44.00	87.00	1	62.93	6310-13/64
7/32	47.00	93.00	1	66.32	6310-7/32
15/64	47.00	93.00	1	66.32	6310-15/64
1/4	50.00	100.00	1	66.32	6310-1/4
9/32	54.00	107.00	1	69.65	6310-9/32
5/16	58.00	115.00	1	73.02	6310-5/16
11/32	62.00	124.00	1	90.62	6310-11/32
3/8	66.00	133.00	1	97.10	6310-3/8
13/32	66.00	133.00	1	97.10	6310-13/32
7/16	71.00	142.00	1	110.21	6310-7/16
15/32	76.00	152.00	1	117.79	6310-15/32
1/2	76.00	152.00	1	119.47	6310-1/2
9/16	81.00	163.00	1	142.68	6310-9/16
5/8	87.00	175.00	1	151.07	6310-5/8
11/16	93.00	188.00	1	184.36	6310-11/16
3/4	100.00	201.00	1	204.27	6310-3/4
13/16	100.00	201.00	1	222.43	6310-13/16
7/8	107.00	215.00	1	271.91	6310-7/8
15/16	115.00	231.00	1	321.77	6310-15/16
1	115.00	231.00	1	358.13	6310-1

# REAMERS

CHUCKING &

ADJUSTABLE



GROUP	REAM
MATERIAL	HSS-CO
FLUTE TYPE	10° LEFT HAND SPIRAL
CUTTING DIRECTION	RIGHT HAND
HOLE LIMIT	H7
PACKAGING	SINGLE

DIA MM / INCH	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
METRIC					
4.00	19.00	75.00	1	41.88	6321-4.00
4.50	21.00	80.00	1	46.04	6321-4.50
5.00	23.00	86.00	1	47.51	6321-5.00
5.50	26.00	93.00	1	48.47	6321-5.50
6.00	26.00	93.00	1	50.83	6321-6.00
7.00	31.00	109.00	1	53.27	6321-7.00
8.00	33.00	117.00	1	58.15	6321-8.00
9.00	36.00	125.00	1	64.19	6321-9.00
10.00	38.00	133.00	1	79.95	6321-10.00
11.00	41.00	142.00	1	89.62	6321-11.00
12.00	44.00	151.00	1	99.24	6321-12.00
13.00	44.00	151.00	1	104.14	6321-13.00
FRACTIONAL					
3/16	23.00	86.00	1	48.47	6320-3/16
1/4	28.00	101.00	1	50.83	6320-1/4
5/16	33.00	117.00	1	58.15	6320-5/16
3/8	38.00	133.00	1	82.38	6320-3/8
7/16	41.00	142.00	1	89.62	6320-7/16
1/2	44.00	151.00	1	104.14	6320-1/2



GROUP	ADRM
MATERIAL	HSS
PACKAGING	SINGLE

RANGE INCH	RANGE MM	PACK QTY	\$ EACH	PART NUMBER
1/4 - 9/32	6.35 - 7.15	1	176.31	6345-1/4
9/32 - 5/16	7.15 - 7.95	1	176.31	6345-9/32
5/16 - 11/32	7.95 - 8.70	1	176.31	6345-5/16
11/32 - 3/8	8.70 - 9.50	1	176.31	6345-11/32
3/8 - 13/32	9.50 - 10.25	1	181.70	6345-3/8
13/32 - 7/16	10.25 - 11.00	1	181.70	6345-13/32
7/16 - 15/32	11.00 - 12.00	1	185.32	6345-7/16
15/32 - 17/32	12.00 - 13.50	1	185.32	6345-15/32
17/32 - 19/32	13.50 - 15.00	1	188.60	6345-17/32
19/32 - 21/32	15.00 - 16.75	1	195.82	6345-19/32
21/32 - 23/32	16.75 - 18.25	1	220.74	6345-21/32
23/32 - 25/32	18.25 - 19.75	1	234.88	6345-23/32
25/32 - 27/32	19.75 - 21.50	1	252.30	6345-25/32
27/32 - 15/16	21.50 - 23.75	1	273.31	6345-27/32
15/16 - 1-1/16	23.75 - 27.00	1	312.34	6345-15/16
1-1/16 - 1-3/16	27.00 - 30.25	1	351.36	6345-1.1/16
1-3/16 - 1-11/32	30.25 - 34.25	1	435.54	6345-1.3/16
1-11/32 - 1-1/2	34.25 - 38.00	1	513.60	6345-1.11/32
1-1/2 - 1-13/16	38.00 - 46.00	1	747.90	6345-1.1/2
1-13/16 - 2-7/32	46.00 - 56.00	1	1,222.45	6345-1.13/16



GROUP	REAM
MATERIAL	HSS
FLUTE TYPE	STRAIGHT
INCLINATION (TAPER)	1:50
PACKAGING	SINGLE

DIA MM	MIN DIA MM	MAX DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
METRIC							
2.00	1.90	2.86	48.00	68.00	1	81.29	6331-2.00
2.50	2.40	3.36	48.00	68.00	1	81.29	6331-2.50
3.00	2.90	4.06	58.00	80.00	1	81.29	6331-3.00
4.00	3.90	5.26	68.00	93.00	1	84.46	6331-4.00
5.00	4.90	6.36	73.00	100.00	1	84.46	6331-5.00
6.00	5.90	8.00	105.00	135.00	1	87.83	6331-6.00
8.00	7.90	10.80	145.00	180.00	1	101.29	6331-8.00
10.00	9.90	13.40	175.00	215.00	1	126.05	6331-10.00
12.00	11.80	16.00	210.00	255.00	1	205.62	6331-12.00
16.00	15.80	20.40	230.00	280.00	1	450.46	6331-16.00
20.00	19.80	24.80	250.00	310.00	1	581.93	6331-20.00
25.00	24.70	30.70	300.00	370.00	1	670.98	6331-25.00

GROUP	REAM
MATERIAL	HSS
FLUTE TYPE	STRAIGHT
INCLINATION (TAPER)	1:48
PACKAGING	SINGLE

DIA INCH	NUMBER SERIES	MIN DIA MM	MAX DIA MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
FRACTIONAL								
1/16	7/0	1.10	1.63	25.4	50.8	1	81.29	6330-1/16
3/32	5/0	1.75	2.41	31.8	57.2	1	81.29	6330-3/32
7/64	4/0	2.03	2.82	38.1	63.5	1	81.29	6330-7/64
1/8	3/0	2.29	3.23	44.5	69.9	1	81.29	6330-1/8
9/64	2/0	2.64	3.63	47.6	73.0	1	81.29	6330-9/64
5/32	0	2.95	4.01	50.8	76.2	1	84.47	6330-5/32
11/64	1	3.23	4.42	52.2	88.9	1	84.47	6330-11/64
3/16	2	3.50	4.95	69.9	101.6	1	84.47	6330-3/16
7/32	3	4.13	5.59	69.9	101.6	1	84.47	6330-7/32
1/4	4	4.64	6.43	85.7	117.5	1	87.83	6330-1/4
9/32	5	5.23	7.42	104.8	142.9	1	92.93	6330-9/32
5/16	—	5.84	8.03	104.8	142.9	1	101.29	6330-5/16
11/32	6	6.43	8.81	114.3	152.4	1	102.23	6330-11/32
3/8	—	7.03	9.68	127.0	165.1	1	126.05	6330-3/8
13/32	7	7.42	10.46	146.1	190.5	1	126.05	6330-13/32
7/16	—	8.21	11.25	146.1	190.5	1	205.62	6330-7/16
1/2	8	9.41	12.85	165.1	209.6	1	205.62	6330-1/2
9/16	9	10.93	14.50	171.5	215.9	1	324.58	6330-9/16
5/8	—	12.11	16.08	190.5	235.0	1	450.46	6330-5/8
3/4	10	14.67	19.30	222.3	273.1	1	450.47	6330-3/4
7/8	11	17.45	22.48	241.3	204.8	1	581.94	6330-7/8



SPIRAL FLUTE  
TAPERED  
BRIDGE  
REAMERS

Bridge reamers are used to create an aligned hole in a structural steel assembly. These reamers enlarge and align holes for rivets and bolts in structural steel members such as I-beams, angles, channels, and plates.

The reamer is tapered for approximately half its FL allowing the reamer to enter out-of-line holes often encountered in structural work. All tools are constructed with left-hand spiral and right-hand cut. The left-hand spiral eliminates the tendency of the reamer to pull itself into the hole.

In large structural assemblies, the holes are generally punched undersize and then reamed when in position. The idea is that the holes most likely will not line up within about 1/8" when a fabricated 50 foot beam or column is finally put into place.

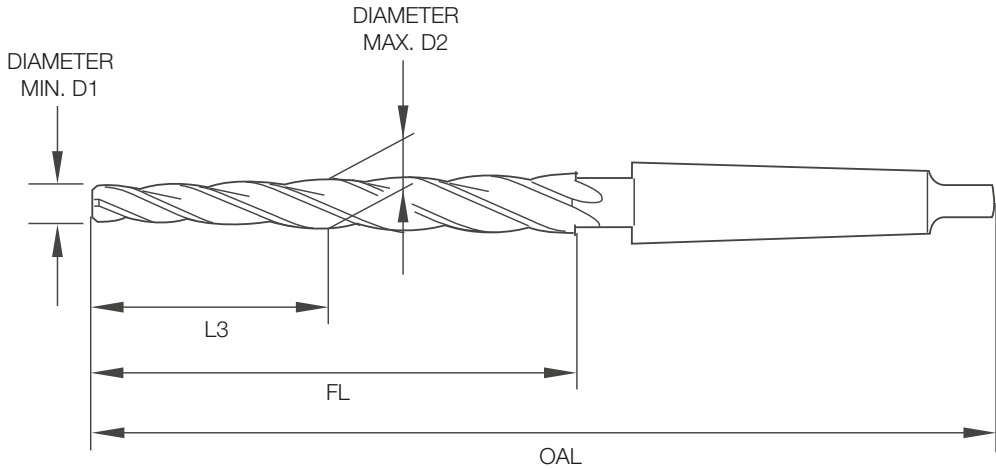
Coolant or cutting tool lubricant should be utilitised when possible. Benefits include better finishes, superior tool life and the ability to increase speeds and feeds.

Bridge reamers should be run at half the R.P.M. suggested for a corresponding twist drill size.



GROUP	REAM
MATERIAL	HSS
FLUTE TYPE	SPIRAL
PACKAGING	SINGLE

SIZE MM	MIN DIA. D1 MM	MAX DIA. D2 MM	TAPER LENGTH L3 MM	FL MM	OAL MM	MTS #	PACK QTY	\$ EACH	PART NUMBER
METRIC									
13.00	8.80	13.00	42.00	105.00	199.00	2	1	218.81	6335-13.00
14.00	9.40	14.00	46.00	115.00	209.00	2	1	232.56	6335-14.00
16.00	10.60	16.00	54.00	135.00	229.00	2	1	259.47	6335-16.00
17.00	11.60	17.00	54.00	135.00	251.00	3	1	264.85	6335-17.00
18.00	12.20	18.00	58.00	145.00	261.00	3	1	270.22	6335-18.00
19.00	13.20	19.00	58.00	145.00	261.00	3	1	322.24	6335-19.00
20.00	13.80	20.00	62.00	155.00	271.00	3	1	333.00	6335-20.00
21.00	14.80	21.00	62.00	155.00	271.00	3	1	341.97	6335-21.00
22.00	15.40	22.00	66.00	165.00	281.00	3	1	346.75	6335-22.00
23.00	16.40	23.00	66.00	165.00	281.00	3	1	346.75	6335-23.00
24.00	16.80	24.00	72.00	180.00	296.00	3	1	382.62	6335-24.00
25.00	17.80	25.00	72.00	180.00	296.00	3	1	382.62	6335-25.00
26.00	18.80	26.00	72.00	180.00	296.00	3	1	382.62	6335-26.00
28.00	20.20	28.00	78.00	195.00	311.00	3	1	431.64	6335-28.00
30.00	22.20	30.00	78.00	195.00	311.00	3	1	502.18	6335-30.00



# Radius Burrs

HIGH PERFORMANCE VERSATILITY





### RADIUS BURRS

With their exclusive inverted curve design, the innovative new Radius Burr range now allows you to create a smooth radius on sharp corners with ease. Incorporating a unique guide system which will always centre the burr when working on edges, the Radius Burrs enable significantly enhanced control to guarantee faster and easier removal of material.

With these handy new tools, you'll no longer have to worry about scoring the surface you're working on - whatever the application.

The new Radius Burrs are truly a great alternative to traditional grinding or flap discs which are commonly used to finish external edges.

Ideal for the production of internal and external chamfers, the new Radius Burrs' unique designs give them a versatility for use across a wide range of jobs and reduces the need for consumable and tool changes, saving you time as well as money.

CNC machined for consistently high quality, and offering the latest cut technology, the new Radius Burrs are suitable for use on a wide range of metals, alloys and other materials including titanium, bronze, stainless steel, cast iron and brass. Manufactured and inspected to strict standards from sintered tungsten carbide, their innovative designs cut better and last longer, giving you a more cost effective and efficient solution for difficult to machine materials.

GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	RADIUS CORNER CYLINDER + END CUT	RADIUS CYLINDER + END CUT
TYPE	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK



HEAD DIA MM	FL MM	OAL MM	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>RADIUS CORNER CYLINDER</b>			<b>1/4</b>	<b>RADIUS</b>					
<b>6</b>	18	50	1/4	—	1	<b>55.79</b>	6400-38578		
<b>9.6</b>	19	64	1/4	—	1	<b>72.17</b>	6400-38592		
<b>12.7</b>	25	70	1/4	—	1	<b>112.67</b>	6400-38608		
<b>16</b>	25	70	1/4	—	1	<b>141.90</b>	6400-38615		
<b>RADIUS CYLINDER</b>			<b>1/4</b>	<b>RADIUS</b>					
<b>12.7</b>	25	70	1/4	—	1			<b>214.06</b>	6400-37349



GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	RADIUS BALL NOSE	RADIUS BALL NOSE + END CUT
TYPE	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK



HEAD DIA MM	FL MM	OAL MM	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>RADIUS BALL NOSE</b>			<b>1/4</b>	<b>RADIUS</b>					
<b>12.7</b>	25	70	1/4	—	1	<b>185.64</b>	6400-37108		
<b>RADIUS BALL NOSE + END CUT</b>			<b>1/4</b>	<b>RADIUS</b>					
<b>12.7</b>	25	70	1/4	—	1			<b>185.64</b>	6400-37363







GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	RADIUS BALL NOSED TREE	RADIUS TREE
TYPE	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK



HEAD DIA MM	FL MM	OAL MM	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
RADIUS BALL NOSED TREE			1/4	RADIUS					
12.7	35	80	1/4	—	1	221.17	6400-37370		
RADIUS TREE			1/4	RADIUS					
12.7	35	80	1/4	—	1			167.51	6400-37387

**EXPRESS CUT  
BURRS**  
(Double Cut Burrs)

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Express Cut Burrs are ideal for use in carbon steel, cast iron, high strength steel, stainless steel, steel castings, steel welds, titanium alloy and fibreglass composite.

**USAGE**

- Harder materials require slower running speeds.
- Smaller burrs require faster running speeds.
- Long shank burrs require slower speeds for safety reasons.
- Apply constant movement and light pressure when using the burr.
- Running below the optimum speed will cause chipping.
- Running above optimum speed will cause premature tooth wear.
- Allowing the burr to become too hot may cause the brize to soften, and cause the head to become detached from the shank.
- Using tools and collets which have become worn will cause chipping.
- Do not sink the burr for more than one third of its periphery.

GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	RADIUS CYLINDER COUNTERSINK	RADIUS BALL NOSE CONE
TYPE	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK



HEAD DIA MM	FL MM	OAL MM	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
RADIUS CYLINDER COUNTERSINK			1/4	RADIUS					
12.7	28	73	1/4	—	1	166.05	6400-37400		
RADIUS BALL NOSE CONE			1/4	RADIUS					
12.7	35	80	1/4	—	1			180.40	6400-37417





GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	CYLINDRICAL	CYLINDRICAL + END CUT
TYPE	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CYLINDRICAL</b>									
			<b>1/8</b>	<b>SA</b>					
<b>1/16</b>	1/4	1-1/2	1/8	SA-41	1	<b>24.83</b>	6400-95013		
<b>3/32</b>	7/16	1-1/2	1/8	SA-42	1	<b>24.83</b>	6400-95014		
<b>1/8</b>	9/16	1-1/2	1/8	SA-43	1	<b>24.83</b>	6400-95016		
<b>5/32</b>	1/2	1-1/2	1/8	SA-52	1	<b>59.85</b>	6400-95024		
<b>3/16</b>	1/2	1-1/2	1/8	SA-53	1	<b>59.85</b>	6400-95026		
<b>1/4</b>	3/16	1-7/16	1/8	SA-51	1	<b>40.71</b>	6400-95020		
<b>1/4</b>	1/2	1-1/2	1/8	SA-51	1	<b>40.71</b>	6400-95022		
<b>CYLINDRICAL</b>									
			<b>1/4</b>	<b>SA</b>					
<b>1/8</b>	1/2	2	1/4	SA-11	1	<b>41.78</b>	6400-95003		
<b>3/16</b>	5/8	2	1/4	SA-14	1	<b>41.78</b>	6400-95005		
<b>1/4</b>	5/8	2	1/4	SA-1	1	<b>45.29</b>	6400-95000		
<b>5/16</b>	3/4	2-1/2	1/4	SA-2	1	<b>54.64</b>	6400-95006		
<b>3/8</b>	3/4	2-1/2	1/4	SA-3	1	<b>58.76</b>	6400-95008		
<b>7/16</b>	1	2-3/4	1/4	SA-4	1	<b>85.06</b>	6400-95011		
<b>1/2</b>	1	2-3/4	1/4	SA-5	1	<b>91.63</b>	6400-95018		
<b>5/8</b>	1	2-3/4	1/4	SA-6	1	<b>115.60</b>	6400-95028		
<b>3/4</b>	1	2-3/4	1/4	SA-7	1	<b>171.90</b>	6400-95030		
<b>1</b>	1	2-3/4	1/4	SA-9	1	<b>240.42</b>	6400-95032		
<b>CYLINDRICAL WITH END CUT</b>									
			<b>1/8</b>	<b>SB</b>					
<b>1/4</b>	3/16	1-7/16	1/8	SB-51	1			<b>40.71</b>	6400-95051
<b>1/4</b>	1/2	1-3/4	1/8	SB-51	1			<b>40.71</b>	6400-95052
<b>CYLINDRICAL WITH END CUT</b>									
			<b>1/4</b>	<b>SB</b>					
<b>1/8</b>	1/2	2	1/4	SB-11	1			<b>45.14</b>	6400-95037
<b>3/16</b>	5/8	2	1/4	SB-14	1			<b>45.14</b>	6400-95039
<b>1/4</b>	5/8	2	1/4	SB-1	1			<b>48.96</b>	6400-95034
<b>5/16</b>	3/4	2-1/2	1/4	SB-2	1			<b>60.05</b>	6400-95040
<b>3/8</b>	3/4	2-1/2	1/4	SB-3	1			<b>64.74</b>	6400-95042
<b>7/16</b>	1	2-3/4	1/4	SB-4	1			<b>93.81</b>	6400-95044
<b>1/2</b>	1	2-3/4	1/4	SB-5	1			<b>100.97</b>	6400-95048
<b>5/8</b>	1	2-3/4	1/4	SB-6	1			<b>126.85</b>	6400-95054
<b>3/4</b>	1	2-3/4	1/4	SB-7	1			<b>189.12</b>	6400-95055



GROUP	BURS	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	CYLINDRICAL BALL NOSE	BALL	OVAL
TYPE	EXPRESS CUT	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK	HANG PACK



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CYLINDRICAL BALL NOSE</b>				<b>1/8</b>	<b>SC</b>						
3/32	7/16	1-1/2	1/8	SC-41	1	<b>24.83</b>	6400-95068				
1/8	9/16	1-1/2	1/8	SC-42	1	<b>24.83</b>	6400-95070				
5/32	1/2	1-1/2	1/8	SC-52	1	<b>59.85</b>	6400-95077				
3/16	1/2	1-1/2	1/8	SC-53	1	<b>59.85</b>	6400-95079				
1/4	1/2	1-3/4	1/8	SC-51	1	<b>40.71</b>	6400-95074				
<b>CYLINDRICAL BALL NOSE</b>				<b>1/4</b>	<b>SC</b>						
1/8	1/2	2	1/4	SC-11	1	<b>48.61</b>	6400-95058				
3/16	5/8	2	1/4	SC-14	1	<b>48.61</b>	6400-95061				
1/4	5/8	2	1/4	SC-1	1	<b>52.63</b>	6400-95056				
5/16	3/4	2-1/2	1/4	SC-2	1	<b>59.48</b>	6400-95062				
3/8	3/4	2-1/2	1/4	SC-3	1	<b>65.33</b>	6400-95065				
7/16	1	2-3/4	1/4	SC-4	1	<b>93.37</b>	6400-95066				
1/2	1	2-3/4	1/4	SC-5	1	<b>102.89</b>	6400-95072				
5/8	1	2-3/4	1/4	SC-6	1	<b>129.36</b>	6400-95081				
3/4	1	2-3/4	1/4	SC-7	1	<b>185.74</b>	6400-95082				
<b>BALL</b>				<b>1/8</b>	<b>SD</b>						
3/32	—	1-1/2	1/8	SD-41	1			<b>24.83</b>	6400-95206		
1/8	—	1-1/2	1/8	SD-42	1			<b>24.83</b>	6400-95208		
3/16	—	1-1/2	1/8	SD-53	1			<b>59.85</b>	6400-95214		
1/4	—	1-15/32	1/8	SD-51	1			<b>40.71</b>	6400-95211		
<b>BALL</b>				<b>1/4</b>	<b>SD</b>						
1/8	—	2	1/4	SD-11				<b>48.38</b>	6400-95196		
3/16	—	2	1/4	SD-14	1			<b>48.38</b>	6400-95197		
1/4	—	2	1/4	SD-1	1			<b>48.38</b>	6400-95194		
5/16	—	2-1/32	1/4	SD-2	1			<b>47.93</b>	6400-95199		
3/8	—	2-5/64	1/4	SD-3	1			<b>53.62</b>	6400-95201		
7/16	—	2-9/64	1/4	SD-4	1			<b>62.11</b>	6400-95204		
1/2	—	2-13/64	1/4	SD-5	1			<b>72.46</b>	6400-95209		
5/8	—	2-5/8	1/4	SD-6	1			<b>89.74</b>	6400-95216		
3/4	—	2-7/16	1/4	SD-7	1			<b>123.95</b>	6400-95218		
1	—	2-11/16	1/4	SD-9	1			<b>212.79</b>	6400-95219		
<b>OVAL</b>				<b>1/8</b>	<b>SE</b>						
1/8	7/32	1-1/2	1/8	SE-41	1					<b>24.83</b>	6400-95162
3/16	9/32	1-1/2	1/8	SE-53	1					<b>59.85</b>	6400-95169
1/4	3/8	1-5/8	1/8	SE-51	1					<b>40.71</b>	6400-95166
<b>OVAL</b>				<b>1/4</b>	<b>SE</b>						
1/4	3/8	2	1/4	SE-1	1					<b>59.20</b>	6400-95159
3/8	5/8	2-3/8	1/4	SE-3	1					<b>65.33</b>	6400-95161
1/2	7/8	2-5/8	1/4	SE-5	1					<b>95.72</b>	6400-95164
5/8	1	2-3/4	1/4	SE-6	1					<b>133.17</b>	6400-95170
3/4	1	2-3/4	1/4	SE-7	1					<b>178.66</b>	6400-95173

**EXPRESS CUT  
BURRS**  
(Double Cut Burrs)

Express Cut Burrs are general purpose burrs designed for rapid stock removal and improved operator control. Chip size is reduced and lower tool speeds can be used compared with standard cut burrs.

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**USAGE**

- Harder materials require slower running speeds.
- Smaller burrs require faster running speeds.
- Long shank burrs require slower speeds for safety reasons.
- Apply constant movement and light pressure when using the burr.
- Running below the optimum speed will cause chipping.
- Running above optimum speed will cause premature tooth wear.
- Allowing the burr to become too hot may cause the burr to become detached from the shank.
- Using tools and collets which have become worn will cause chipping.
- Do not sink the burr for more than one third of its periphery.

# BURRS CARBIDE

EXPRESS CUT

HANG SELL



GROUP	BURS	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	TREE RADIUS NOSE	TREE POINTED NOSE	FLAME
TYPE	EXPRESS CUT	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK	HANG PACK

## EXPRESS CUT BURRS

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- Using tools and collets which have become worn will cause chipping.
- Do not sink the burr for more than one third of its periphery.

   											
HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
TREE RADIUS NOSE			1/8	SF							
1/8	1/4	1-1/2	1/8	SF-41	1	24.83	6400-95096				
1/8	1/2	1-1/2	1/8	SF-42	1	24.83	6400-95098				
3/16	1/2	1-1/2	1/8	SF-53	1	59.85	6400-95104				
1/4	1/2	1-3/4	1/8	SF-51	1	40.71	6400-95102				
TREE RADIUS NOSE			1/4	SF							
1/4	5/8	2	1/4	SF-1	1	54.95	6400-95085				
3/8	3/4	2-1/2	1/4	SF-3	1	64.01	6400-95092				
7/16	1	2-3/4	1/4	SF-4	1	89.02	6400-95094				
1/2	1	2-3/4	1/4	SF-5	1	94.73	6400-95100				
1/2	3/4	2-1/2	1/4	SF-13	1	94.73	6400-95087				
5/8	1	2-3/4	1/4	SF-6	1	166.42	6400-95107				
3/4	1-1/4	3	1/4	SF-14	1	216.44	6400-95089				
3/4	1	2-3/4	1/4	SF-7	1	171.90	6400-95108				
3/4	1-1/2	3-1/4	1/4	SF-15	1	254.00	6400-95091				
TREE POINTED NOSE			1/8	SG							
1/8	1/4	1-1/2	1/8	SG-41	1			24.83	6400-95119		
1/8	5/16	1-1/2	1/8	SG-42	1			24.83	6400-95121		
1/8	3/8	1-1/2	1/8	SG-43	1			24.83	6400-95122		
1/8	1/2	1-1/2	1/8	SG-44	1			24.83	6400-95125		
3/16	1/2	1-1/2	1/8	SG-53	1			59.85	6400-95131		
1/4	1/2	1-3/4	1/8	SG-51	1			40.71	6400-95128		
TREE POINTED NOSE			1/4	SG							
1/4	5/8	2	1/4	SG-1	1			54.95	6400-95110		
5/16	3/4	2-1/2	1/4	SG-2	1			61.67	6400-95115		
3/8	3/4	2-1/2	1/4	SG-3	1			68.26	6400-95117		
1/2	3/4	2-1/2	1/4	SG-13	1			92.81	6400-95113		
1/2	1	2-3/4	1/4	SG-5	1			92.81	6400-95126		
5/8	1	2-3/4	1/4	SG-6	1			129.19	6400-95133		
3/4	1	2-3/4	1/4	SG-7	1			171.90	6400-95135		
FLAME			1/8	SH							
1/8	1/4	1-1/2	1/8	SH-41	1					24.83	6400-95223
3/16	3/8	1-1/2	1/8	SH-53	1					59.85	6400-95227
FLAME			1/4	SH							
5/16	3/4	2-1/2	1/4	SH-2	1					67.08	6400-95221
1/2	1-1/4	3	1/4	SH-5	1					137.06	6400-95225
5/8	1-7/16	3-3/16	1/4	SH-6	1					189.25	6400-95230
3/4	1-5/8	3-3/8	1/4	SH-7	1					240.42	6400-95232



GROUP	BURS	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	14° INCLUDED ANGLE	POINTED CONE	INVERTED TAPER
TYPE	EXPRESS CUT	EXPRESS CUT	EXPRESS CUT
PACKAGING	HANG PACK	HANG PACK	HANG PACK



HEAD DIA INCH	FL INCH	OAL INCH	ANGLE DEG.	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>14° INCLUDED ANGLE</b>				<b>1/8</b>	<b>SL</b>							
1/8	3/8	1-1/2	8°	1/8	SL-41	1	<b>24.83</b>	6400-95183				
1/8	1/2	1-1/2	8°	1/8	SL-42	1	<b>24.83</b>	6400-95184				
3/16	1/2	1-1/2	14°	1/8	SL-53	1	<b>59.85</b>	6400-95186				
<b>14° INCLUDED ANGLE</b>				<b>1/4</b>	<b>SL</b>							
1/4	5/8	2	14°	1/4	SL-1	1	<b>56.26</b>	6400-95174				
5/16	7/8	2-3/4	14°	1/4	SL-2	1	<b>68.09</b>	6400-95177				
3/8	1-1/16	2-15/16	14°	1/4	SL-3	1	<b>81.86</b>	6400-95179				
1/2	1-1/8	3	14°	1/4	SL-4	1	<b>99.98</b>	6400-95180				
5/8	1-5/16	3-3/16	14°	1/4	SL-6	1	<b>196.71</b>	6400-95189				
3/4	1-1/2	3-3/8	14°	1/4	SL-7	1	<b>259.55</b>	6400-95190				
<b>POINTED CONE</b>				<b>1/8</b>	<b>SM</b>							
1/8	3/8	1-1/2	12°	1/8	SM-41	1			<b>24.83</b>	6400-95145		
1/8	7/16	1-1/2	14°	1/8	SM-42	1			<b>24.83</b>	6400-95146		
1/8	5/8	1-1/2	7°	1/8	SM-43	1			<b>24.83</b>	6400-95148		
3/16	1/2	1-1/2	16°	1/8	SM-53	1			<b>59.85</b>	6400-95154		
1/4	1/2	1-7/8	22°	1/8	SM-51	1			<b>40.71</b>	6400-95153		
<b>POINTED CONE</b>				<b>1/4</b>	<b>SM</b>							
1/4	1/2	2	22°	1/4	SM-1	1			<b>49.21</b>	6400-95136		
1/4	3/4	2	14°	1/4	SM-2	1			<b>56.26</b>	6400-95138		
1/4	1	2	10°	1/4	SM-3	1			<b>55.44</b>	6400-95141		
3/8	5/8	2-1/2	28°	1/4	SM-4	1			<b>81.95</b>	6400-95143		
1/2	7/8	2-3/4	28°	1/4	SM-5	1			<b>102.67</b>	6400-95151		
5/8	1	2-7/8	31°	1/4	SM-6	1			<b>137.01</b>	6400-95156		
<b>INVERTED TAPER</b>				<b>1/8</b>	<b>SN</b>							
1/8	3/16	1-1/2	10°	1/8	SN-42	1					<b>24.83</b>	6400-95237
3/16	1/4	1-1/2	10°	1/8	SN-53	1					<b>59.85</b>	6400-95242
1/4	1/4	1-1/2	10°	1/8	SN-51	1					<b>40.71</b>	6400-95239
<b>INVERTED TAPER</b>				<b>1/4</b>	<b>SN</b>							
1/4	5/16	2	10°	1/4	SN-1	1					<b>53.62</b>	6400-95233
1/2	1/2	2-1/4	16°	1/4	SN-3	1					<b>87.73</b>	6400-95243

**EXPRESS CUT  
BURRS**  
(Double Cut Burrs)

Express Cut Burrs are general purpose burrs designed for rapid stock removal and improved operator control. Chip size is reduced and lower tool speeds can be used compared with standard cut burrs.

Express Cut Burrs are ideal for use in carbon steel, cast iron, high strength steel, stainless steel, steel castings, steel welds, titanium alloy and fibreglass composite.

**USAGE**

- Harder materials require slower running speeds.
- Smaller burrs require faster running speeds.
- Long shank burrs require slower speeds for safety reasons.
- Apply constant movement and light pressure when using the burr.
- Running below the optimum speed will cause chipping.
- Running above optimum speed will cause premature tooth wear.
- Allowing the burr to become too hot may cause the burr to soften, and cause the head to become detached from the shank.
- Using tools and collets which have become worn will cause chipping.
- Do not sink the burr for more than one third of its periphery.



# BURRS CARBIDE

NON-FERROUS

HANG SELL



## NON-FERROUS CUT BURRS

Non-Ferrous Cut Burrs are for use on non-ferrous and non-metallic materials such as aluminium, brass, copper, bronze, coarse plastic, hard rubber, reinforced plastic and fibreglass composites. They are designed for rapid stock removal with minimum chip loading resulting in longer life and reduced clogging.

## USAGE

- Harder materials require slower running speeds.
- Smaller burrs require faster running speeds.
- Long shank burrs require slower speeds for safety reasons.
- Apply constant movement and light pressure when using the burr.
- Running below the optimum speed will cause chipping.
- Running above optimum speed will cause premature tooth wear.
- Allowing the burr to become too hot may cause the braise to soften, and cause the head to become detached from the shank.
- Using tools and collets which have become worn will cause chipping.
- Do not sink the burr for more than one third of its periphery.

GROUP	BURS	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	CYLINDRICAL	CYLINDRICAL BALL NOSE	BALL
TYPE	NON-FERROUS CUT	NON-FERROUS CUT	NON-FERROUS CUT
PACKAGING	HANG PACK	HANG PACK	HANG PACK



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CYLINDRICAL</b>				<b>1/4</b>	<b>SA</b>						
<b>1/4</b>	<b>3/4</b>	<b>2</b>	<b>1/4</b>	SA-1NF	1	<b>56.78</b>	6401-95289				
<b>3/8</b>	<b>3/4</b>	<b>2-1/2</b>	<b>1/4</b>	SA-3NF	1	<b>85.12</b>	6401-95293				
<b>1/2</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SA-5NF	1	<b>124.78</b>	6401-95299				
<b>5/8</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SA-6NF	1	<b>153.00</b>	6401-95305				
<b>3/4</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SA-7NF	1	<b>210.05</b>	6401-95311				
<b>CYLINDRICAL WITH BALL NOSE</b>				<b>1/4</b>	<b>SC</b>						
<b>1/4</b>	<b>3/4</b>	<b>2</b>	<b>1/4</b>	SC-1NF	1			<b>63.45</b>	6401-95290		
<b>3/8</b>	<b>3/4</b>	<b>2-1/2</b>	<b>1/4</b>	SC-3NF	1			<b>85.12</b>	6401-95294		
<b>1/2</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SC-5NF	1			<b>124.78</b>	6401-95300		
<b>5/8</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SC-6NF	1			<b>190.29</b>	6401-95306		
<b>3/4</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SC-7NF	1			<b>260.99</b>	6401-95312		
<b>BALL</b>				<b>1/4</b>	<b>SD</b>						
<b>1/4</b>	—	<b>2</b>	<b>1/4</b>	SD-1NF	1					<b>62.55</b>	6401-95291
<b>3/8</b>	—	<b>2-5/64</b>	<b>1/4</b>	SD-3NF	1					<b>67.69</b>	6401-95295
<b>1/2</b>	—	<b>2-13/64</b>	<b>1/4</b>	SD-5NF	1					<b>100.33</b>	6401-95301
<b>5/8</b>	—	<b>2-5/16</b>	<b>1/4</b>	SD-6NF	1					<b>181.35</b>	6401-95307

STYLE	OVAL	TREE RADIUS NOSE	14° INCLUDED ANGLE
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HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>OVAL</b>				<b>1/4</b>	<b>SE</b>						
<b>3/8</b>	<b>5/8</b>	<b>2-3/8</b>	<b>1/4</b>	SE-3NF	1	<b>92.13</b>	6401-95296				
<b>1/2</b>	<b>7/8</b>	<b>2-5/8</b>	<b>1/4</b>	SE-5NF	1	<b>113.38</b>	6401-95302				
<b>5/8</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SE-6NF	1	<b>204.56</b>	6401-95308				
<b>TREE RADIUS NOSE</b>				<b>1/4</b>	<b>SF</b>						
<b>1/4</b>	<b>3/4</b>	<b>2</b>	<b>1/4</b>	SF-1NF	1			<b>63.45</b>	6401-95292		
<b>3/8</b>	<b>3/4</b>	<b>2-1/2</b>	<b>1/4</b>	SF-3NF	1			<b>89.97</b>	6401-95297		
<b>1/2</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SF-5NF	1			<b>126.33</b>	6401-95303		
<b>5/8</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	SF-6NF	1			<b>181.35</b>	6401-95309		
<b>14° INCLUDED ANGLE</b>				<b>1/4</b>	<b>SL</b>						
<b>3/8</b>	<b>1-1/16</b>	<b>2-15/16</b>	<b>1/4</b>	SL-3NF	1					<b>115.37</b>	6401-95298
<b>1/2</b>	<b>1-1/8</b>	<b>3</b>	<b>1/4</b>	SL-4NF	1					<b>159.09</b>	6401-95304
<b>5/8</b>	<b>1-5/16</b>	<b>3-3/16</b>	<b>1/4</b>	SL-6NF	1					<b>289.48</b>	6401-95310



GROUP	BURS	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
STYLE	CYLINDRICAL	CYLINDRICAL BALL NOSE	BALL
TYPE	EXPRESS CUT	EXPRESS CUT	EXPRESS CUT
PACKAGING	TELEPACK	TELEPACK	TELEPACK



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CYLINDRICAL</b>			<b>1/4</b>	<b>SA</b>							
1/4	5/8	6-5/8	1/4	SA-1L6	1	<b>64.18</b>	6402-95247				
3/8	3/4	6-3/4	1/4	SA-3L6	1	<b>90.41</b>	6402-95249				
1/2	1	7	1/4	SA-5L6	1	<b>141.25</b>	6402-95251				
<b>CYLINDRICAL WITH BALL NOSE</b>			<b>1/4</b>	<b>SC</b>							
1/4	5/8	6-5/8	1/4	SC-1L6	1			<b>74.76</b>	6402-95253		
3/8	3/4	6-3/4	1/4	SC-3L6	1			<b>100.71</b>	6402-95255		
1/2	1	7	1/4	SC-5L6	1			<b>158.46</b>	6402-95257		
<b>BALL</b>			<b>1/4</b>	<b>SD</b>							
1/4	—	6-13/64	1/4	SD-1L6	1					<b>68.92</b>	6402-95259
3/8	—	6-21/64	1/4	SD-3L6	1					<b>82.87</b>	6402-95261
1/2	—	6-29/64	1/4	SD-5L6	1					<b>111.62</b>	6402-95263

**EXPRESS CUT  
BURRS**  
(Double Cut Burrs)

Express Cut Burrs are general purpose burrs designed for rapid stock removal and improved operator control. Chip size is reduced and lower tool speeds can be used compared with standard cut burrs.

Express Cut Burrs are ideal for use in carbon steel, cast iron, high strength steel, stainless steel, steel castings, steel welds, titanium alloy and fibreglass composite.

**USAGE**

- Harder materials require slower running speeds.
- Smaller burrs require faster running speeds.
- Long shank burrs require slower speeds for safety reasons.
- Apply constant movement and light pressure when using the burr.
- Running below the optimum speed will cause chipping.
- Running above optimum speed will cause premature tooth wear.
- Allowing the burr to become too hot may cause the brize to soften, and cause the head to become detached from the shank.
- Using tools and collets which have become worn will cause chipping.
- Do not sink the burr for more than one third of its periphery.

STYLE	TREE RADIUS NOSE	14° INCLUDED ANGLE
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HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>TREE RADIUS NOSE</b>			<b>1/4</b>	<b>SF</b>					
1/4	5/8	6-5/8	1/4	SF-1L6	1	<b>77.92</b>	6402-95265		
3/8	3/4	6-3/4	1/4	SF-3L6	1	<b>98.74</b>	6402-95267		
1/2	1	7	1/4	SF-5L6	1	<b>145.63</b>	6402-95269		
<b>14° INCLUDED ANGLE</b>			<b>1/4</b>	<b>SL</b>					
1/4	5/8	6-5/8	1/4	SL-1L6	1			<b>79.82</b>	6402-95271
3/8	1-1/16	7-3/16	1/4	SL-3L6	1			<b>125.82</b>	6402-95273
1/2	1-1/8	7-1/4	1/4	SL-4L6	1			<b>154.16</b>	6402-95275



GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK DIAMETER	1/4"	1/4"
TYPE	EXPRESS CUT*	EXPRESS CUT
PACKAGING	BLOW MOULDED CASE	BLOW MOULDED CASE



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
#3 – 1/4" CUT DIAMETER BURRS, 8 PCS	427.92	6400-S6		
#4 – 1/2" CUT DIAMETER BURRS, 8 PCS			752.89	6400-S4

SET CONTENTS	HEAD DIA INCH	STYLE	DESCRIPTION	PART NUMBER	HEAD DIA INCH	STYLE	DESCRIPTION	PART NUMBER
	1/4	SA-1	CYLINDRICAL	6400-95000	1/2	SA-5	CYLINDRICAL	6400-95018
	1/4	SC-1	CYLINDRICAL BALL	6400-95056	1/2	SC-5	CYLINDRICAL BALL	6400-95072
	1/4	SD-1	BALL	6400-95194	1/2	SD-5	BALL	6400-95209
	1/4	SE-1	OVAL	6400-95159	1/2	SE-5	OVAL	6400-95164
	1/4	SF-1	TREE RADIUS	6400-95085	1/2	SF-5	TREE RADIUS	6400-95100
	1/4	SG-1	TREE POINTED	6400-95110	1/2	SG-5	TREE POINTED	6400-95126
	1/4	SL-1	14° INCLUDED ANGLE	6400-95174	1/2	SL-4	14° INCLUDED ANGLE	6400-95180
	1/4	SM-2	POINTED CONE	6400-95138	1/2	SM-5	POINTED CONE	6400-95151



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
#10 – AUTOMOTIVE, 8 PCS*	533.49	6400-S10		
#11 – 3/8" CUT DIAMETER BURRS, 8 PCS			545.11	6400-S11

SET CONTENTS	HEAD DIA INCH	STYLE	DESCRIPTION	PART NUMBER	HEAD DIA INCH	STYLE	DESCRIPTION	PART NUMBER
	1/4	SA-1	CYLINDRICAL	6400-95000	3/8	SB-3	CYLINDRICAL END CUT	6400-95042
	3/8	SB-3	CYLINDRICAL END CUT	6400-95042	3/8	SC-3	CYLINDRICAL BALL	6400-95065
	1/2	SB-5	CYLINDRICAL END CUT	6400-95048	3/8	SD-3	BALL	6400-95201
	1/4	SC-1	CYLINDRICAL BALL	6400-95056	3/8	SE-3	OVAL	6400-95161
	1/4	SD-1	BALL	6400-95194	3/8	SF-3	TREE RADIUS	6400-95092
	3/8	SE-3	OVAL	6400-95161	3/8	SG-3	TREE POINTED	6400-95117
	3/8	SF-3	TREE RADIUS	6400-95092	3/8	SL-3	14° INCLUDED ANGLE	6400-95179
	3/8	SE-3NF	OVAL – NON-FERROUS	6401-95296	3/8	SM-4	POINTED CONE	6400-95143

\* #10 Set Automotive contains 7 x Express Cut Burrs and 1 x Non-Ferrous Burr



GROUP	BURS	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK DIAMETER	1/4"	1/4"	1/4"
TYPE	EXPRESS CUT	EXPRESS CUT	NON-FERROUS CUT
PACKAGING	SET	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
#5 – EXPRESS CUT BURRS, 5 PCS	391.71	6400-S5				
S3 – EXPRESS CUT BURRS, 3 PCS			267.61	6400-S3		
NF S3 – NON-FERROUS CUT BURRS, 3 PCS					329.34	6401-S3

SET CONTENTS	STYLE	DESCRIP.	PART NUMBER	STYLE	DESCRIP.	PART NUMBER	STYLE	DESCRIP.	PART NUMBER
	SB-3	CYL. END CUT	6400-95042	SB-3	CYL. END CUT	6400-95042	SA-3NF	CYLINDRICAL	6401-95293
	SC-3	CYL. BALL	6400-95065	SC-5	CYL. BALL	6400-95072	SC-3NF	CYL. BALL	6401-95294
	SC-5	CYL. BALL	6400-95072	SL-4	14° INC. ANG.	6400-95180	SL-4NF	14° INC. ANG.	6401-95304
	SF-3	TREE RADIUS	6400-95092						
	SF-5	TREE RADIUS	6400-95100						



GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK DIAMETER	1/4"	1/4"
TYPE	RADIUS	RADIUS CORNER
PACKAGING	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
RADIUS – EXPRESS CUT, 3 PCS	620.86	6400-S1		
CORNER RADIUS – EXPRESS CUT, 3 PCS			240.63	6400-S2

SET CONTENTS	DESCRIP.	PART NUMBER	DESCRIP.	PART NUMBER
	RAD. BALL NOSED TREE	6400-37370	RADIUS CORNER CYL.	6400-38578
	RAD. CYL. BALL NOSED	6400-37363	RADIUS CORNER CYL.	6400-38592
	RADIUS CYLINDER E/C	6400-37349	RADIUS CORNER CYL.	6400-38608





GROUP	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK DIAMETER	1/4"	1/4"
TYPE	EXPRESS CUT & NON-FERROUS CUT	EXPRESS CUT & NON-FERROUS CUT
PACKAGING	BENCH MERCHANDISER	BENCH MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
D2 BURR MERCHANDISER – 27 PCS	<b>2,343.62</b>	6404-D2		
D3 BURR MERCHANDISER – 54 PCS			<b>4,895.04</b>	6404-D3

MERCHANDISER CONTENTS	QTY EACH	STYLE	PART NUMBER	QTY EACH	STYLE	PART NUMBER
	1	RADIUS	6400-38592	1	RADIUS	6400-38592
	1	RADIUS	6400-37370	1	RADIUS	6400-38608
	1	RADIUS	6400-37363	1	RADIUS	6400-37370
	1	SB-1	6400-95034	1	RADIUS	6400-37363
	1	SB-3	6400-95042	1	RADIUS	6400-37417
	1	SB-5	6400-95048	1	RADIUS	6400-37400
	1	SC-1	6400-95056	1	SA-1	6400-95000
	1	SC-2	6400-95062	1	SA-2	6400-95006
	1	SC-3	6400-95065	1	SA-3	6400-95008
	1	SC-5	6400-95072	1	SA-5	6400-95018
	1	SD-1	6400-95194	1	SA-6	6400-95028
	1	SD-3	6400-95201	1	SB-1	6400-95034
	1	SE-3	6400-95161	1	SB-2	6400-95040
	1	SE-5	6400-95164	1	SB-3	6400-95042
	1	SF-1	6400-95085	1	SB-5	6400-95048
	1	SF-3	6400-95092	1	SB-6	6400-95054
	1	SF-5	6400-95100	1	SC-1	6400-95056
	1	SG-3	6400-95117	1	SC-2	6400-95062
	1	SG-5	6400-95126	1	SC-3	6400-95065
	1	SH-2	6400-95221	1	SC-5	6400-95072
	1	SH-5	6400-95225	1	SC-6	6400-95081
	1	SL-2	6400-95177	1	SH-2	6400-95221
	1	SL-3	6400-95179	1	SH-5	6400-95225
	1	SL-4	6400-95180	1	SD-1	6400-95194
	1	SM-5	6400-95151	1	SD-3	6400-95201
	1	SC-3NF	6401-95294	1	SD-5	6400-95209
	1	SF-3NF	6401-95297	1	SE-1	6400-95159
				1	SE-3	6400-95161
				1	SE-5	6400-95164
				1	SF-1	6400-95085
				1	SF-3	6400-95092
				1	SF-5	6400-95100
				1	SF-6	6400-95107
				1	SG-1	6400-95110
				1	SG-2	6400-95115
				1	SG-3	6400-95117
				1	SG-5	6400-95126
				1	SL-1	6400-95174
				1	SL-2	6400-95177
				1	SL-3	6400-95179
				1	SL-4	6400-95180
				1	SM-1	6400-95136
				1	SM-3	6400-95141
				1	SM-4	6400-95143
				1	SM-5	6400-95151
				1	SM-6	6400-95156
				1	SA-1NF	6401-95289
				1	SA-3NF	6401-95293
				1	SA-5NF	6401-95299
				1	SC-1NF	6401-95290
				1	SC-3NF	6401-95294
				1	SF-3NF	6401-95297
				1	SF-5NF	6401-95303
				1	SL-4NF	6401-95304



GROUP	BURS	BURS	BURS
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK DIAMETER	1/4"	1/4"	1/4"
TYPE	EXPRESS CUT & NON-FERROUS CUT	EXPRESS CUT & NON-FERROUS CUT	EXPRESS CUT & NON-FERROUS CUT
PACKAGING	MERCHANDISER	MERCHANDISER	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
D6 BURR MERCHANDISER – 18 PCS	1,717.26	6404-D6				
D7 BURR MERCHANDISER – 36 PCS			3,320.94	6404-D7		
D8 BURR MERCHANDISER – 54 PCS					4,934.79	6404-D8

MERCHANDISER CONTENTS	QTY EACH	STYLE	PART NUMBER	QTY EACH	STYLE	PART NUMBER	QTY EACH	STYLE	PART NUMBER
	1	SC-5	6400-95072	1	SC-5	6400-95072	1	SC-5	6400-95072
	1	SC-3	6400-95065	1	SC-3	6400-95065	1	SC-3	6400-95065
	1	SL-4	6400-95180	1	SL-4	6400-95180	1	SL-4	6400-95180
	1	SF-5	6400-95100	1	SF-5	6400-95100	1	SF-5	6400-95100
	1	SF-3	6400-95092	1	SF-3	6400-95092	1	SF-3	6400-95092
	1	SB-5	6400-95048	1	SB-5	6400-95048	1	SB-5	6400-95048
	1	SB-3	6400-95042	1	SB-3	6400-95042	1	SA-5	6400-95018
	1	SL-3	6400-95179	1	SL-3	6400-95179	1	SB-3	6400-95042
	1	SH-5	6400-95225	1	SH-5	6400-95225	1	SA-1	6400-95000
	1	SC-1	6400-95056	1	SC-1	6400-95056	1	SL-3	6400-95179
	1	SB-1	6400-95034	1	SF-5NF	6401-95303	1	SH-5	6400-95225
	1	SE-5	6400-95164	1	SB-1	6400-95034	1	SC-1	6400-95056
	1	RADIUS	6400-37108	1	SC-2	6400-95062	1	SA-3	6400-95008
	1	SG-3	6400-95117	1	SE-5	6400-95164	1	SF-5NF	6401-95303
	1	SC-3NF	6401-95294	1	RADIUS	6400-37108	1	SB-1	6400-95034
	1	SE-3	6400-95161	1	SG-5	6400-95126	1	SC-2	6400-95062
	1	SF-3NF	6401-95297	1	SC-6	6400-95081	1	SE-5	6400-95164
	1	SF-1	6400-95085	1	SF-1	6400-95085	1	RADIUS	6400-37108
	1	SL-4NF	6401-95304	1	SL-4NF	6401-95304	1	SG-5	6400-95126
	1	SM-5	6400-95151	1	SM-5	6400-95151	1	SC-6	6400-95081
	1	SG-3	6400-95117	1	SG-3	6400-95117	1	SF-1	6400-95085
	1	SC-3NF	6401-95294	1	SC-3NF	6401-95294	1	SL-4NF	6401-95304
	1	SE-3	6400-95161	1	SE-3	6400-95161	1	SM-5	6400-95151
	1	SF-3NF	6401-95297	1	SF-3NF	6401-95297	1	SG-3	6400-95117
	1	SB-2	6400-95040	1	SB-2	6400-95040	1	SC-3NF	6401-95294
	1	SH-2	6400-95221	1	SH-2	6400-95221	1	SE-3	6400-95161
	1	SL-2	6400-95177	1	SL-2	6400-95177	1	SF-3NF	6401-95297
	1	SD-3	6400-95201	1	SD-3	6400-95201	1	SB-2	6400-95040
	1	SD-1	6400-95194	1	SD-1	6400-95194	1	SA-2	6400-95006
	1	SB-6	6400-95054	1	SB-6	6400-95054	1	SA-6	6400-95028
	1	SA-3NF	6401-95293	1	SA-3NF	6401-95293	1	SH-2	6400-95221
	1	SL-1	6400-95174	1	SL-1	6400-95174	1	SL-2	6400-95177
	1	SM-3	6400-95141	1	SM-3	6400-95141	1	SD-3	6400-95201
	1	SD-5	6400-95209	1	SD-5	6400-95209	1	SD-1	6400-95194
	1	RADIUS	6400-37349	1	RADIUS	6400-37349	1	SB-6	6400-95054
	1	RADIUS	6400-37363	1	RADIUS	6400-37363	1	SA-3NF	6401-95293
							1	SL-1	6400-95174
							1	SM-3	6400-95141
							1	SD-5	6400-95209
							1	SG-2	6400-95115
							1	SF-6	6400-95107
							1	SM-4	6400-95143
							1	SG-1	6400-95110
							1	SA-1NF	6401-95289
							1	RADIUS	6400-95087
							1	RADIUS	6400-95156
							1	SE-1	6400-95159
							1	SM-1	6400-95136
							1	RADIUS	6401-95299
							1	SD-2	6400-95199
							1	SE-3NF	6401-95296
							1	RADIUS	6400-37349
							1	RADIUS	6400-37363
							1	RADIUS	6400-37370

# HOLE SAWS

BI-METAL

HANG SELL



GROUP	BMHS
MATERIAL	Vx COBALT BI-METAL
TYPE	4/6 VARIABLE PITCH
INTERNAL DEPTH	48MM
PACKAGING	HANG BOX



DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
14.00	9/16	1	28.57	7010-14
16.00	5/8	1	21.37	7010-16
17.00	11/16	1	21.37	7010-17
19.00	3/4	1	21.37	7010-19
20.00	—	1	21.37	7010-20
21.00	13/16	1	21.37	7010-21
22.00	7/8	1	21.37	7010-22
24.00	15/16	1	22.63	7010-24
25.00	1	1	24.01	7010-25
27.00	1-1/16	1	24.01	7010-27
29.00	1-1/8	1	24.33	7010-29
30.00	1-3/16	1	24.87	7010-30
32.00	1-1/4	1	25.52	7010-32
33.00	1-5/16	1	26.10	7010-33
35.00	1-3/8	1	27.48	7010-35
37.00	1-7/16	1	27.48	7010-37
38.00	1-1/2	1	27.74	7010-38
40.00	1-9/16	1	28.85	7010-40
41.00	1-5/8	1	28.85	7010-41
43.00	1-11/16	1	30.55	7010-43
44.00	1-3/4	1	31.66	7010-44
45.00	—	1	31.78	7010-45
46.00	1-13/16	1	31.88	7010-46
48.00	1-7/8	1	32.69	7010-48
50.00	—	1	32.69	7010-50
51.00	2	1	32.69	7010-51
52.00	2-1/16	1	37.04	7010-52
54.00	2-1/8	1	37.04	7010-54
55.00	—	1	37.04	7010-55
57.00	2-1/4	1	37.04	7010-57
59.00	2-5/16	1	37.54	7010-59
60.00	2-3/8	1	37.66	7010-60
64.00	2-1/2	1	39.98	7010-64
65.00	2-9/16	1	43.65	7010-65
67.00	2-5/8	1	43.55	7010-67
68.00	—	1	43.75	7010-68
70.00	2-3/4	1	44.15	7010-70
73.00	2-7/8	1	44.97	7010-73
75.00	—	1	45.86	7010-75
76.00	3	1	46.12	7010-76
79.00	3-1/8	1	47.10	7010-79

GROUP	BMHS
MATERIAL	Vx COBALT BI-METAL
TYPE	4/6 VARIABLE PITCH
INTERNAL DEPTH	48MM
PACKAGING	HANG BOX



DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
83.00	3-1/4	1	47.10	7010-83
86.00	3-3/8	1	49.64	7010-86
89.00	3-1/2	1	49.84	7010-89
92.00	3-5/8	1	54.98	7010-92
95.00	3-3/4	1	57.46	7010-95
98.00	3-7/8	1	60.66	7010-98
100.00 *	—	1	63.03	7010-100
102.00 *	4	1	63.03	7010-102
105.00 *	4-1/8	1	67.27	7010-105
108.00 *	4-1/4	1	72.13	7010-108
111.00 *	4-3/8	1	72.13	7010-111
114.00 *	4-1/2	1	77.00	7010-114
121.00 *	4-3/4	1	88.15	7010-121
127.00 *	5	1	92.01	7010-127
140.00 *	5-1/2	1	100.99	7010-140
146.00 *	5-3/4	1	111.35	7010-146
152.00 *	6	1	120.63	7010-152
160.00 *	6-5/16	1	126.14	7010-160
168.00 *	6-5/8	1	135.15	7010-168
177.00 *	7	1	144.16	7010-177
210.00 *	8-1/4	1	153.19	7010-210

## BI-METAL HOLE SAWS

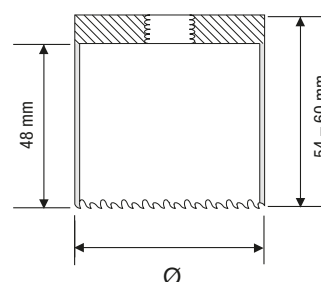
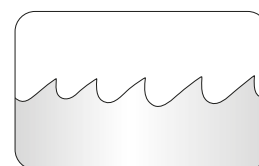
Bordo hole saws are premium quality, general purpose saws suitable for a wide variety of materials and applications. The high-speed steel cutting edge provides shock resistant teeth and resists tooth stripping. 4/6 positive tooth configuration allows for fast, smooth cuts and less vibration.

### FEATURES

- 4/6 variable tooth configuration.
- 48mm (1-7/8") depth of cut.
- 5mm (3/16") thick heavy-duty backing plate eliminates need for drive plate.

### APPLICATIONS

- Creates holes for pipe and tubing installations, door lock installations, electrical conduit, hoses and antennas.
- Ideal for plumbing, construction, aircraft, electrical, maintenance and automotive applications.
- Use in steel, aluminium, brass, cast iron, plastic, wood and a wide variety of other materials.
- Can be used in stainless steel with use of a cutting lubricant, reduced spindle speed and sufficient feed pressure to produce chips. Repetition hole cutting in stainless steel is best suited to Bordo XP and XP2 hole saws.



\* Large diameter hole saws should be used with high feed pressure and lower speeds.



GROUP	BMKT	BMKT
MATERIAL	Vx COBALT BI-METAL	Vx COBALT BI-METAL
TYPE	4/6 VARIABLE PITCH	4/6 VARIABLE PITCH
INTERNAL DEPTH	48MM	48MM
PACKAGING	BLOW MOULDED KIT BOX	BLOW MOULDED KIT BOX



KIT TYPE	\$ KIT	PART NUMBER	\$ KIT	PART NUMBER
ELECTRICIAN'S MASTER KIT – 8 SAWS	357.28	7010-S1		
CHIPPY'S MASTER KIT – 11 SAWS			522.93	7010-S2

KIT CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	SPADE BIT 16MM	2670-16	BI-METAL HOLE SAW 16MM	7010-16
	SPADE BIT 20MM	2670-20	BI-METAL HOLE SAW 20MM	7010-20
	SPADE BIT 25MM	2670-25	BI-METAL HOLE SAW 22MM	7010-22
	BI-METAL HOLE SAW 16MM	7010-16	BI-METAL HOLE SAW 25MM	7010-25
	BI-METAL HOLE SAW 20MM	7010-20	BI-METAL HOLE SAW 32MM	7010-32
	BI-METAL HOLE SAW 25MM	7010-25	BI-METAL HOLE SAW 40MM	7010-40
	BI-METAL HOLE SAW 32MM	7010-32	BI-METAL HOLE SAW 50MM	7010-50
	BI-METAL HOLE SAW 40MM	7010-40	BI-METAL HOLE SAW 54MM	7010-54
	BI-METAL HOLE SAW 50MM	7010-50	BI-METAL HOLE SAW 64MM	7010-64
	BI-METAL HOLE SAW 54MM	7010-54	BI-METAL HOLE SAW 92MM	7010-92
	BI-METAL HOLE SAW 64MM	7010-64	BI-METAL HOLE SAW 114MM	7010-114
	3/8 HEX MANDREL	7050-5519	3/8-7/16 HEX QC EXT. 300MM (12")	5750-38716X300
	7/16" HEX POSI-LOCK QC MANDREL	7050-5548	3/8 HEX MANDREL	7050-5519
	1/4" PILOT DRILL 3-1/2L	7060-8534	7/16" HEX POSI-LOCK QC MANDREL	7050-5548
			1/4" PILOT DRILL 3-1/2L	7060-8534

**Mandrels,  
Pilot Drills  
and  
Accessories**

page  
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# HOLE SAWS

BI-METAL

KITS

## BI-METAL HOLE SAWS

Bordo hole saws are premium quality, general purpose saws suitable for a wide variety of materials and applications. The high-speed steel cutting edge provides shock resistant teeth and resists tooth strippage. 4/6 positive tooth configuration allows for fast, smooth cuts and less vibration.

### FEATURES

- 4/6 variable tooth configuration.
- 48mm (1-7/8") depth of cut.
- 5mm (3/16") thick heavy-duty backing plate eliminates need for drive plate.

### APPLICATIONS

- Creates holes for pipe and tubing installations, door lock installations, electrical conduit, hoses and antennas.
- Ideal for plumbing, construction, aircraft, electrical, maintenance and automotive applications.
- Use in steel, aluminium, brass, cast iron, plastic, wood and a wide variety of other materials.
- Can be used in stainless steel with use of a cutting lubricant, reduced spindle speed and sufficient feed pressure to produce chips. Repetition hole cutting in stainless steel is best suited to Bordo XP and XP2 hole saws.



GROUP	BMKT	BMKT
MATERIAL	Vx COBALT BI-METAL	Vx COBALT BI-METAL
TYPE	4/6 VARIABLE PITCH	4/6 VARIABLE PITCH
INTERNAL DEPTH	48MM	48MM
PACKAGING	BLOW MOULDED KIT BOX	BLOW MOULDED KIT BOX



KIT TYPE	\$ KIT	PART NUMBER	\$ KIT	PART NUMBER
PLUMBER'S PIPE KIT – 12 SAWS	548.02	7010-S3		
SPARKY'S KIT – 6 SAWS			243.98	7010-S4

KIT CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	BI-METAL HOLE SAW 16MM	7010-16	BI-METAL HOLE SAW 16MM	7010-16
	BI-METAL HOLE SAW 19MM	7010-19	BI-METAL HOLE SAW 20MM	7010-20
	BI-METAL HOLE SAW 22MM	7010-22	BI-METAL HOLE SAW 25MM	7010-25
	BI-METAL HOLE SAW 25MM	7010-25	BI-METAL HOLE SAW 32MM	7010-32
	BI-METAL HOLE SAW 27MM	7010-27	BI-METAL HOLE SAW 40MM	7010-40
	BI-METAL HOLE SAW 30MM	7010-30	BI-METAL HOLE SAW 50MM	7010-50
	BI-METAL HOLE SAW 35MM	7010-35	3/8 HEX MANDREL	7050-5519
	BI-METAL HOLE SAW 44MM	7010-44	7/16" HEX POSI-LOCK QC MANDREL	7050-5548
	BI-METAL HOLE SAW 57MM	7010-57	1/4" PILOT DRILL 3-1/2L	7060-8534
	BI-METAL HOLE SAW 73MM	7010-73		
	BI-METAL HOLE SAW 92MM	7010-92		
	BI-METAL HOLE SAW 114MM	7010-114		
	3/8~7/16 HEX QC EXT. 300MM (12")	5750-38716X300		
	3/8 HEX MANDREL	7050-5519		
	7/16" HEX POSI-LOCK QC MANDREL	7050-5548		
	1/4" PILOT DRILL 3-1/2L	7060-8534		

### PLUMBER'S PIPE SET 7010-S3

16mm	1/2" Copper
19mm	1/2" Lagged Copper and 16mm PEX
22mm	3/4" (20mm) Copper and 20mm PEX
25mm	3/4" (20mm) Lagged Copper
27mm	1" (25mm) Copper and 25mm PEX
30mm	25mm Lagged Copper
35mm	1-1/4" (32mm) Copper and 32mm PEX
44mm	40mm PVC
57mm	50mm PVC
73mm	65mm PVC
92mm	90mm PVC Stormwater
114mm	100mm PVC



GROUP	BMKT	BMKT
MATERIAL	Vx COBALT BI-METAL	Vx COBALT BI-METAL
TYPE	4/6 VARIABLE PITCH	4/6 VARIABLE PITCH
INTERNAL DEPTH	48MM	48MM
PACKAGING	BLOW MOULDED KIT BOX	BLOW MOULDED KIT BOX



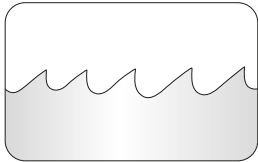
KIT TYPE	\$ KIT	PART NUMBER	\$ KIT	PART NUMBER
LOCKSMITH'S KIT – 4 SAWS	267.02	7010-S5		
INDUSTRIAL KIT – 16 SAWS			739.70	7010-S6

KIT CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	25MM CHISEL	–	BI-METAL HOLE SAW 16MM	7010-16
	SPADE BITS-10MM	2670-10	BI-METAL HOLE SAW 20MM	7010-20
	SPADE BITS-22MM	2670-22	BI-METAL HOLE SAW 22MM	7010-22
	SPADE BITS-25MM	2670-25	BI-METAL HOLE SAW 25MM	7010-25
	SPADE BITS-32MM	2670-32	BI-METAL HOLE SAW 32MM	7010-32
	SPADE BITS-35MM	2670-35	BI-METAL HOLE SAW 38MM	7010-38
	BI-METAL HOLE SAW 22MM	7010-22	BI-METAL HOLE SAW 40MM	7010-40
	BI-METAL HOLE SAW 25MM	7010-25	BI-METAL HOLE SAW 51MM	7010-51
	BI-METAL HOLE SAW 32MM	7010-32	BI-METAL HOLE SAW 54MM	7010-54
	BI-METAL HOLE SAW 54MM	7010-54	BI-METAL HOLE SAW 60MM	7010-60
	3/8 HEX MANDREL	7050-5519	BI-METAL HOLE SAW 64MM	7010-64
	7/16" HEX POSI-LOCK QC MANDREL	7050-5548	BI-METAL HOLE SAW 70MM	7010-70
	1/4" PILOT DRILL 3-1/2L	7060-8534	BI-METAL HOLE SAW 89MM	7010-89
			BI-METAL HOLE SAW 92MM	7010-92
			BI-METAL HOLE SAW 100MM	7010-100
			BI-METAL HOLE SAW 114MM	7010-114
			7/16" HEX POSI-LOCK QC MANDREL	7050-5548
			3/8 HEX MANDREL	7050-5519
			3/8-7/16 HEX QC EXT. 300MM (12")	5750-38716X300
			1/4" PILOT DRILL 3-1/2L	7060-8534

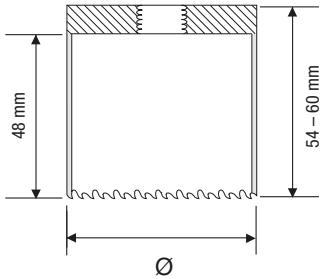
# HOLE SAWS

BI-METAL

KITS



GROUP	BMKT
MATERIAL	Vx COBALT BI-METAL
TYPE	4/6 VARIABLE PITCH
INTERNAL DEPTH	48MM
PACKAGING	BLOW MOULDED KIT BOX



## BI-METAL HOLE SAWS

Bordo hole saws are premium quality, general purpose saws suitable for a wide variety of materials and applications. The high-speed steel cutting edge provides shock resistant teeth and resists tooth strippage. 4/6 positive tooth configuration allows for fast, smooth cuts and less vibration.

### FEATURES

- 4/6 variable tooth configuration.
- 48mm (1-7/8") depth of cut.
- 5mm (3/16") thick heavy-duty backing plate eliminates need for drive plate.

### APPLICATIONS

- Creates holes for pipe and tubing installations, door lock installations, electrical conduit, hoses and antennas.
- Ideal for plumbing, construction, aircraft, electrical, maintenance and automotive applications.
- Use in steel, aluminium, brass, cast iron, plastic, wood and a wide variety of other materials.
- Can be used in stainless steel with use of a cutting lubricant, reduced spindle speed and sufficient feed pressure to produce chips. Repetition hole cutting in stainless steel is best suited to Bordo XP and XP2 hole saws.



KIT TYPE	\$ KIT	PART NUMBER
TRADESMAN'S SET – 9 SAWS	541.40	7030-S1
KIT CONTENTS	DESCRIPTION	PART NUMBER
	BI-METAL HOLE SAW 16MM	7010-16
	BI-METAL HOLE SAW 20MM	7010-20
	BI-METAL HOLE SAW 22MM	7010-22
	BI-METAL HOLE SAW 25MM	7010-25
	BI-METAL HOLE SAW 32MM	7010-32
	BI-METAL HOLE SAW 40MM	7010-40
	BI-METAL HOLE SAW 51MM	7010-51
	BI-METAL HOLE SAW 54MM	7010-54
	BI-METAL HOLE SAW 60MM	7010-60
	POWER-HEX QC ADAPTOR	5750-1438X70
	1/4" PILOT DRILL 3-1/2L	7060-8534
	MANDRELS X 4	7050-5519
	MANDRELS X 5	7050-5558



GROUP	-	
MATERIAL	Vx COBALT BI-METAL	Vx COBALT BI-METAL
TYPE	4/6 VARIABLE PITCH	4/6 VARIABLE PITCH
INTERNAL DEPTH	48MM	48MM
PACKAGING	MERCHANDISER	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
D1 MERCHANDISER – 27 SAWS	1,248.88	7010-D1		
D3 MERCHANDISER – 58 SAWS			2,985.69	7010-D3

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	BI-METAL HOLE SAW - 16MM	7010-16	ALL BI-METAL HOLE SAWS 14-152MM	7010-XXX
	BI-METAL HOLE SAW - 19MM	7010-19	3/8 HEX MANDREL	7050-5519
	BI-METAL HOLE SAW - 20MM	7010-20	1/4 ROUND MANDREL	7050-5514
	BI-METAL HOLE SAW - 22MM	7010-22	7/16 HEX MANDREL	7050-5520
	BI-METAL HOLE SAW - 25MM	7010-25	7/16 HEX QUICK CHANGE MANDREL	7050-5545
	BI-METAL HOLE SAW - 29MM	7010-29	3/8 HEX QUICK CHANGE MANDREL	7050-5546
	BI-METAL HOLE SAW - 30MM	7010-30	3/8" HEX SNAP-LOCK QC MANDREL	7050-5547
	BI-METAL HOLE SAW - 32MM	7010-32	7/16" HEX POSI-LOCK QC MANDREL	7050-5548
	BI-METAL HOLE SAW - 35MM	7010-35	1/4" PILOT DRILL 3-1/2L	7060-8534
	BI-METAL HOLE SAW - 38MM	7010-38	1/4" PILOT DRILL 4-1/2L	7060-8535
	BI-METAL HOLE SAW - 40MM	7010-40	CARBIDE TIPPED DRILL	7060-8537CT
	BI-METAL HOLE SAW - 41MM	7010-41	3/8-7/16 HEX QC EXT. 300MM (12")	5750-38716X300
	BI-METAL HOLE SAW - 44MM	7010-44		
	BI-METAL HOLE SAW - 48MM	7010-48		
	BI-METAL HOLE SAW - 50MM	7010-50		
	BI-METAL HOLE SAW - 51MM	7010-51		
	BI-METAL HOLE SAW - 54MM	7010-54		
	BI-METAL HOLE SAW - 57MM	7010-57		
	BI-METAL HOLE SAW - 60MM	7010-60		
	BI-METAL HOLE SAW - 64MM	7010-64		
	BI-METAL HOLE SAW - 70MM	7010-70		
	BI-METAL HOLE SAW - 76MM	7010-76		
	BI-METAL HOLE SAW - 83MM	7010-83		
	BI-METAL HOLE SAW - 89MM	7010-89		
	BI-METAL HOLE SAW - 92MM	7010-92		
	BI-METAL HOLE SAW - 102MM	7010-102		
	BI-METAL HOLE SAW - 114MM	7010-114		
	1/4 ROUND MANDREL	7050-5514		
	3/8 HEX MANDREL	7050-5519		
	7/16 HEX MANDREL	7050-5520		
	7/16 HEX QUICK CHANGE MANDREL	7050-5545		
	3/8 HEX SNAP-LOCK QC MANDREL	7050-5547		
	1/4" PILOT DRILL 3-1/2L	7060-8534		
	1/4" PILOT DRILL 4-1/2L	7060-8535		
	3/8-7/16 HEX QC EXT.- 300MM (12")	5750-38716X300		



# HOLE SAWS RIPPER

TCT

HANG SELL

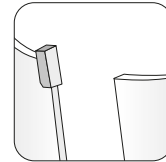
## RIPPER HEAVY DUTY TUNGSTEN CARBIDE TIPPED HOLE SAWS

### FEATURES

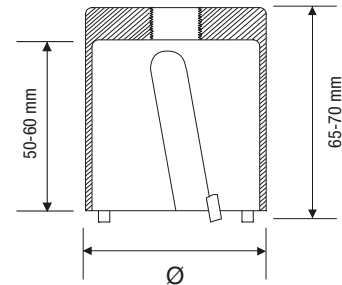
- Heavy duty abrasion resistant tungsten carbide teeth will cut materials that quickly dull normal hole saws.
- Heavy duty construction for long life with large gullets for easy slug removal.

### APPLICATIONS

- Ideal for cutting timber and all types of composite board, particularly MDF.
- Ripper hole saws are also suitable for cutting wood laminates, plywood, insulation and fibre cement sheet.



GROUP	CTHS
MATERIAL	TUNGSTEN CARBIDE TIPPED
TYPE	2 PIECE
INTERNAL DEPTH	50-60MM
PACKAGING	HANG BOX



DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
16.00	5/8	1	16.28	7075-16
20.00	—	1	16.28	7075-20
22.00	7/8	1	16.28	7075-22
25.00	1	1	18.27	7075-25
27.00	1-1/16	1	19.47	7075-27
30.00	1-3/16	1	20.81	7075-30
32.00	1-1/4	1	21.07	7075-32
35.00	1-3/8	1	21.34	7075-35
38.00	1-1/2	1	21.62	7075-38
40.00	1-9/16	1	22.14	7075-40
44.00	1-3/4	1	24.13	7075-44
50.00	—	1	27.74	7075-50
54.00	2-1/8	1	29.21	7075-54
57.00	2-1/4	1	30.81	7075-57
60.00	2-3/8	1	32.28	7075-60
64.00	—	1	34.81	7075-64
68.00	—	1	36.41	7075-68
73.00	2-7/8	1	39.51	7075-73
76.00	3	1	40.42	7075-76
80.00	—	1	42.43	7075-80
83.00	3-1/4	1	42.80	7075-83
89.00	3-1/2	1	44.23	7075-89
92.00	3-5/8	1	45.92	7075-92
102.00	4	1	53.77	7075-102
111.00	4-3/8	1	58.29	7075-111
114.00	4-1/2	1	59.89	7075-114
125.00	—	1	65.36	7075-125
152.00	6	1	84.04	7075-152



**RIPPER HEAVY DUTY TUNGSTEN CARBIDE TIPPED HOLE SAWS**

**FEATURES**

- Heavy duty abrasion resistant tungsten carbide teeth will cut materials that quickly dull normal hole saws.
- Heavy duty construction for long life with large gullets for easy slug removal.

**APPLICATIONS**

- Ideal for cutting timber and all types of composite board, particularly MDF.
- Ripper hole saws are also suitable for cutting wood laminates, plywood, insulation and fibre cement sheet.

GROUP	CTHS	CTHS
MATERIAL	TUNGSTEN CARBIDE TIPPED	TUNGSTEN CARBIDE TIPPED
TYPE	2 PIECE	2 PIECE
INTERNAL DEPTH	50-60MM	50-60MM
PACKAGING	BLOW MOULDED KIT BOX	BLOW MOULDED KIT BOX



KIT TYPE	\$ KIT	PART NUMBER	\$ KIT	PART NUMBER
RIPPER S1 HOLE SAW KIT - 9 SAWS	354.56	7075-S1		
RIPPER PLUMBER'S PIPE KIT - 12 SAWS			507.88	7075-S3

KIT CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	TCT HOLE SAW 25MM	7075-25	TCT HOLE SAW 16MM	7075-16
	TCT HOLE SAW 32MM	7075-32	TCT HOLE SAW 20MM	7075-20
	TCT HOLE SAW 35MM	7075-35	TCT HOLE SAW 22MM	7075-22
	TCT HOLE SAW 38MM	7075-38	TCT HOLE SAW 25MM	7075-25
	TCT HOLE SAW 44MM	7075-44	TCT HOLE SAW 27MM	7075-27
	TCT HOLE SAW 50MM	7075-50	TCT HOLE SAW 30MM	7075-30
	TCT HOLE SAW 54MM	7075-54	TCT HOLE SAW 35MM	7075-35
	TCT HOLE SAW 57MM	7075-57	TCT HOLE SAW 44MM	7075-44
	TCT HOLE SAW 64MM	7075-64	TCT HOLE SAW 57MM	7075-57
	7/16" POSI-LOCK QC MANDREL	7050-5548	TCT HOLE SAW 73MM	7075-73
	3/8" HEX MANDREL	7050-5519	TCT HOLE SAW 92MM	7075-92
	PILOT DRILL – HSS	7060-8534	TCT HOLE SAW 114MM	7075-114
	PILOT DRILL – TCT	7060-8537CT	3/8~7/16 HEX QC EXT. 300MM (12")	5750-38716X300
			3/8" HEX MANDREL	7050-5519
			7/16" HEX POSI-LOCK QC MANDREL	7050-5548
			PILOT DRILL – TCT	7060-8537CT

**PLUMBER'S TCT PIPE SET 7075-S3**

16mm	1/2" Copper
20mm	1/2" Lagged Copper and 16mm PEX
22mm	3/4" (20mm) Copper and 20mm PEX
25mm	3/4" (20mm) Lagged Copper
27mm	1" (25mm) Copper and 25mm PEX
30mm	25mm Lagged Copper
35mm	1-1/4" (32mm) Copper and 32mm PEX
44mm	40mm PVC
57mm	50mm PVC
73mm	65mm PVC
92mm	90mm PVC Stormwater
114mm	100mm PVC

# HOLE SAWS RIPPER

TCT

KITS

## RIPPER HEAVY DUTY TUNGSTEN CARBIDE TIPPED HOLE SAWS

### FEATURES

- Heavy duty abrasion resistant tungsten carbide teeth will cut materials that quickly dull normal hole saws.
- Heavy duty construction for long life with large gullets for easy slug removal.

### APPLICATIONS

- Ideal for cutting timber and all types of composite board, particularly MDF.
- Ripper hole saws are also suitable for cutting wood laminates, plywood, insulation and fibre cement sheet.



GROUP	CTHS
MATERIAL	TUNGSTEN CARBIDE TIPPED
TYPE	1 PIECE
INTERNAL DEPTH	50-60MM
PACKAGING	BLOW MOULDED KIT BOX



KIT TYPE	\$ KIT	PART NUMBER
RIPPER TRADESMAN'S KIT - 9 SAWS	536.72	7075-S2

KIT CONTENTS	DESCRIPTION	PART NUMBER
	TCT HOLE SAW 16MM	7075-16
	TCT HOLE SAW 20MM	7075-20
	TCT HOLE SAW 22MM	7075-22
	TCT HOLE SAW 25MM	7075-25
	TCT HOLE SAW 32MM	7075-32
	TCT HOLE SAW 40MM	7075-40
	TCT HOLE SAW 50MM	7075-50
	TCT HOLE SAW 54MM	7075-54
	TCT HOLE SAW 60MM	7075-60
	1/4 & 3/8 QUICK CHANGE ADAPTOR	5750-1438X70
	PILOT DRILL – TCT	7060-8537CT
	MANDRELS X 4	7050-5519
	MANDRELS X 5	7050-5558



GROUP	CTHS
MATERIAL	TUNGSTEN CARBIDE TIPPED
TYPE	2 PIECE
INTERNAL DEPTH	50-60MM
PACKAGING	MERCHANDISER

**RIPPER HEAVY DUTY TUNGSTEN CARBIDE TIPPED HOLE SAWS**

**FEATURES**

- Heavy duty abrasion resistant tungsten carbide teeth will cut materials that quickly dull normal hole saws.
- Heavy duty construction for long life with large gullets for easy slug removal.



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
RIPPER – 17 SAWS	429.90	7075-D1		
RIPPER – 24 SAWS			877.99	7075-D2

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	RIPPER HOLE SAW 16MM	7075-16	RIPPER HOLE SAW 16MM	7075-16
	RIPPER HOLE SAW 20MM	7075-20	RIPPER HOLE SAW 20MM	7075-20
	RIPPER HOLE SAW 22MM	7075-22	RIPPER HOLE SAW 22MM	7075-22
	RIPPER HOLE SAW 25MM	7075-25	RIPPER HOLE SAW 25MM	7075-25
	RIPPER HOLE SAW 30MM	7075-30	RIPPER HOLE SAW 30MM	7075-30
	RIPPER HOLE SAW 32MM	7075-32	RIPPER HOLE SAW 32MM	7075-32
	RIPPER HOLE SAW 35MM	7075-35	RIPPER HOLE SAW 35MM	7075-35
	RIPPER HOLE SAW 38MM	7075-38	RIPPER HOLE SAW 38MM	7075-38
	RIPPER HOLE SAW 40MM	7075-40	RIPPER HOLE SAW 40MM	7075-40
	RIPPER HOLE SAW 44MM	7075-44	RIPPER HOLE SAW 44MM	7075-44
	RIPPER HOLE SAW 50MM	7075-50	RIPPER HOLE SAW 50MM	7075-50
	RIPPER HOLE SAW 54MM	7075-54	RIPPER HOLE SAW 54MM	7075-54
	RIPPER HOLE SAW 57MM	7075-57	RIPPER HOLE SAW 57MM	7075-57
	RIPPER HOLE SAW 60MM	7075-60	RIPPER HOLE SAW 60MM	7075-60
	RIPPER HOLE SAW 64MM	7075-64	RIPPER HOLE SAW 64MM	7075-64
	RIPPER HOLE SAW 68MM	7075-68	RIPPER HOLE SAW 68MM	7075-68
	RIPPER HOLE SAW 76MM	7075-76	RIPPER HOLE SAW 76MM	7075-76
			RIPPER HOLE SAW 80MM	7075-80
			RIPPER HOLE SAW 83MM	7075-83
			RIPPER HOLE SAW 89MM	7075-89
			RIPPER HOLE SAW 92MM	7075-92
			RIPPER HOLE SAW 102MM	7075-102
			RIPPER HOLE SAW 111MM	7075-111
			RIPPER HOLE SAW 114MM	7075-114
			3/8 HEX QC MANDREL	7050-5546CT
			CARBIDE PILOT DRILL	7060-8537CT

**APPLICATIONS**

- Ideal for cutting timber and all types of composite board, particularly MDF.
- Ripper hole saws are also suitable for cutting wood laminates, plywood, insulation and fibre cement sheet.



# CORE DRILLS BRILLIANT

DIAMOND

HANG & SET



## DIAMOND CORE DRILLS

### USAGE

Suitable for drilling tiles, ceramics, vitrified products, porcelain, natural and composite / engineered stone, monocottura, fibreglass, graphite, carbon fibre, FRP's, and other highly abrasive materials. The wax filled core lubricates the cutting edge allowing dry, water free, drilling.



### GUIDELINES

- Apply spinning core drill to workpiece at an angle so that only the edge is engaged.
- As a small groove begins to form gradually move the drill until the saw is flat and fully engaged with the workpiece.
- Alternatively position the saw using a Bordo adjustable drilling template and commence drilling with the saw flat against the workpiece.

### IMPORTANT

Drilling using Bordo Brilliant Diamond Wax Filled Drills can be done dry however the use of water cooling may extend tool life.

**Water and electricity are a dangerous combination always maintain a safe working environment.**



GROUP	DIHS
MATERIAL	VACUUM BRAZED DIAMOND
TYPE	1 PIECE; HEX SHANK
	WAX FILLED
INTERNAL DEPTH	30MM
PACKAGING	CLAM SHELL

DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
5.00	3/16	1	18.89	7084-5H
6.00	15/64	1	18.89	7084-6H
6.50	1/4	1	19.52	7084-6.5H
8.00	5/16	1	21.16	7084-8H
10.00	3/8	1	23.18	7084-10H
12.00	—	1	25.19	7084-12H

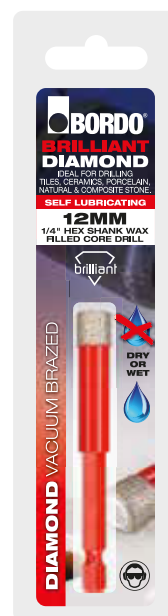
SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
DIAMOND CORE DRILL SET	5	101.64	7084-S1

5, 6, 6.5, 8, 10mm

GROUP	DIHS
MATERIAL	VACUUM BRAZED DIAMOND
TYPE	M14 THREAD
	WAX FILLED
INTERNAL DEPTH	40MM
PACKAGING	BLOW MOULDED BOX

SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
DIAMOND HOLE SAW SET	5	101.64	7084-S2

6, 6.5, 8, 10, 12mm saws plus mandrel for use in pistol drill



**DIAMOND HOLE SAWS**

**USAGE**

Suitable for drilling tiles, ceramics, vitrified products, porcelain, natural and composite / engineered stone, monocottura, fibreglass, graphite, carbon fibre, FRP's, and other highly abrasive materials.

Sizes up to and including 25mm feature a wax filled core that lubricates the cutting edge allowing dry, water free, drilling.

Bordo Brilliant diamond hole saws are manufactured using vacuum brazing to "adhere" the diamond material to the saw.

- Vacuum brazing provides the strongest bond between the diamond particles and the holesaw.

**GUIDELINES**

- Apply spinning core drill to workpiece at an angle so that only the edge is engaged.
- As a small groove begins to form gradually move the drill until the saw is flat and fully engaged with the workpiece.
- Alternatively position the saw using a Bordo adjustable drilling template and commence drilling with the saw flat against the workpiece.

Drilling using Bordo Brilliant Diamond Wax Filled Drills can be done dry however the use of water cooling may extend tool life.

**IMPORTANT**

Sizes greater than 25mm do not have paraffin wax lubricant and should be used wet to improve cutting efficiency and increase tool life.

**Water and electricity are a dangerous combination always maintain a safe working environment.**



Brilliant diamond hole saws achieve optimal cutting efficiency when used at high speeds in an angle grinder. The saws feature an M14 thread which is suitable for use with most popular angle grinders.

Brilliant saws may be used in pistol and pedestal drills using the three jaw chuck adaptor mandrel – Part # 7084-1420



GROUP	DIHS
MATERIAL	VACUUM BRAZED DIAMOND
TYPE	M14 THREAD
	6-25MM WAX FILLED
INTERNAL DEPTH	40MM
PACKAGING	HANG BOX

DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
6.00	15/64	1	42.94	7084-6
6.50	—	1	43.56	7084-6.5
8.00	5/16	1	44.73	7084-8
10.00	—	1	46.51	7084-10
12.00	—	1	48.18	7084-12
16.00	—	1	46.51	7084-16
19.00	3/4	1	52.60	7084-19
20.00	—	1	54.90	7084-20
22.00	7/8	1	60.36	7084-22
25.00	1	1	68.55	7084-25
32.00	1-1/4	1	73.92	7084-32
35.00	1-3/8	1	80.53	7084-35
38.00	1-1/2	1	87.44	7084-38
42.00	—	1	96.27	7084-42
45.00	—	1	102.99	7084-45
50.00	—	1	115.37	7084-50
63.00	—	1	145.19	7084-63
68.00	—	1	156.53	7084-68
75.00	—	1	172.16	7084-75
105.00	4-1/8	1	206.68	7084-105
110.00	—	1	216.53	7084-110
124.00	—	1	252.27	7084-124
128.00	—	1	265.42	7084-128



**Adjustable  
Holesaw Drilling  
Template 4-83mm**

page 274

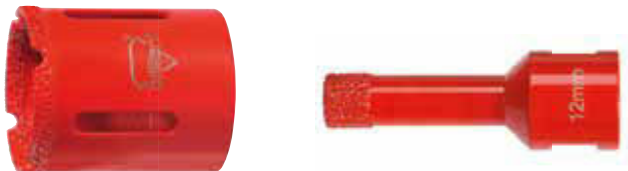


GROUP	DIHS
SHANK	HEX SHANK
THREAD	M14
PACKAGING	HANG BOX

DESCRIPTION	\$ EACH	PART NUMBER
MANDREL – TO SUIT M14 THREADED SAWS	22.96	7084-1420

**HOLE SAWS**  
**BRILLIANT**

DIAMOND  
MERCHANDISER



GROUP	DIHS
MATERIAL	VACUUM BRAZED DIAMOND
TYPE	HEX SHANK & M14 THREAD
	6-25MM WAX FILLED
PACKAGING	MERCHANDISER

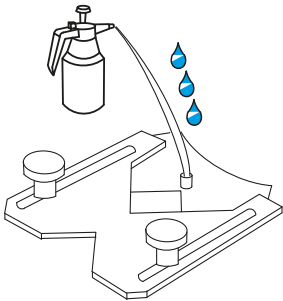
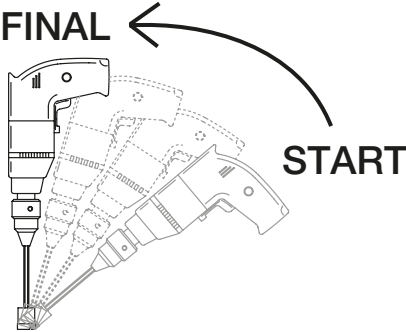


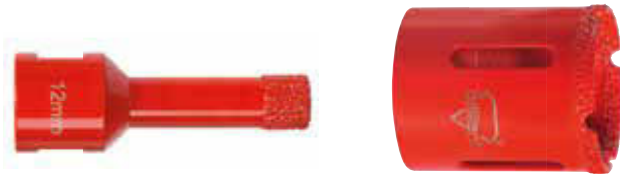
MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
BRILLIANT D1 MERCH – 21 SAWS	1,093.27	7084-D1

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER
	6MM DIAMETER – HEX SHANK	7084-6H
	6.5MM DIAMETER – HEX SHANK	7084-6.5H
	8MM DIAMETER – HEX SHANK	7084-8H
	10MM DIAMETER – HEX SHANK	7084-10H
	12MM DIAMETER – HEX SHANK	7084-12H
	6MM DIAMETER – M14 THREAD	7084-6
	6.5MM DIAMETER – M14 THREAD	7084-6.5
	8MM DIAMETER – M14 THREAD	7084-8
	10MM DIAMETER – M14 THREAD	7084-10
	12MM DIAMETER – M14 THREAD	7084-12
	16MM DIAMETER – M14 THREAD	7084-16
	19MM DIAMETER – M14 THREAD	7084-19
	20MM DIAMETER – M14 THREAD	7084-20
	22MM DIAMETER – M14 THREAD	7084-22
	25MM DIAMETER – M14 THREAD	7084-25
	32MM DIAMETER – M14 THREAD	7084-32
	35MM DIAMETER – M14 THREAD	7084-35
	38MM DIAMETER – M14 THREAD	7084-38
	42MM DIAMETER – M14 THREAD	7084-42
	45MM DIAMETER – M14 THREAD	7084-45
	50MM DIAMETER – M14 THREAD	7084-50
	HEX SHANK MANDREL	7084-1420

Apply spinning hole saw to workpiece at an angle so that only the edge is engaged.  
As a small groove begins to form gradually move the grinder/drill until the saw is flat and fully engaged with the workpiece.  
Alternatively position the saw using Bordo adjustable drilling template and commence drilling with the saw flat against the workpiece

**IMPORTANT**  
Drilling using diamond abrasive is a wet process. Ensure adequate water to keep the saw edge cool. Water and electricity are a dangerous combination - maintain a safe working environment.





GROUP	DIHS
MATERIAL	VACUUM BRAZED DIAMOND
TYPE	HEX SHANK & M14 THREAD
	6-25MM WAX FILLED
PACKAGING	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
BRILLIANT D2 MERCH – 28 SAWS	2,611.04	7084-D2

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER
	6MM DIAMETER – HEX SHANK	7084-6H
	6.5MM DIAMETER – HEX SHANK	7084-6.5H
	8MM DIAMETER – HEX SHANK	7084-8H
	10MM DIAMETER – HEX SHANK	7084-10H
	12MM DIAMETER – HEX SHANK	7084-12H
	6MM DIAMETER – M14 THREAD	7084-6
	6.5MM DIAMETER – M14 THREAD	7084-6.5
	8MM DIAMETER – M14 THREAD	7084-8
	10MM DIAMETER – M14 THREAD	7084-10
	12MM DIAMETER – M14 THREAD	7084-12
	16MM DIAMETER – M14 THREAD	7084-16
	19MM DIAMETER – M14 THREAD	7084-19
	20MM DIAMETER – M14 THREAD	7084-20
	22MM DIAMETER – M14 THREAD	7084-22
	25MM DIAMETER – M14 THREAD	7084-25
	32MM DIAMETER – M14 THREAD	7084-32
	35MM DIAMETER – M14 THREAD	7084-35
	38MM DIAMETER – M14 THREAD	7084-38
	42MM DIAMETER – M14 THREAD	7084-42
	45MM DIAMETER – M14 THREAD	7084-45
	50MM DIAMETER – M14 THREAD	7084-50
	50MM DIAMETER – M14 THREAD	7084-63
	68MM DIAMETER – M14 THREAD	7084-68
	75MM DIAMETER – M14 THREAD	7084-75
	105MM DIAMETER – M14 THREAD	7084-105
	110MM DIAMETER – M14 THREAD	7084-110
	124MM DIAMETER – M14 THREAD	7084-124
	128MM DIAMETER – M14 THREAD	7084-128
	HEX SHANK MANDREL	7084-1420



# HOLE SAWS GRIT EDGE

TC GRIT EDGE

HANG SELL

## GRIT EDGE HOLE SAWS

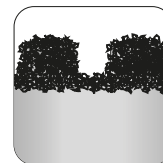
The tungsten carbide Grit Edge on each Grit Edge product equips it to handle the toughest materials, from ceramic tile to marble and glass. Thousands of carbide particles are permanently bonded to the cutting edge precisely for specific cutting and drilling needs.

### FEATURES

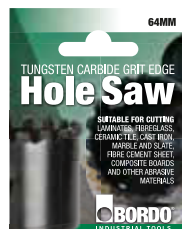
- 29mm (1-1/8") depth of cut.
- No teeth to dull or chip.
- High heat and abrasion resistance.
- Resists snagging.
- Smooth cutting.
- High wear resistance.
- 5mm (3/16") thick heavy duty backing plate eliminates the need for drive plate.
- Uses standard hole saw mandrel, usually in conjunction with carbide tipped pilot drill.

### APPLICATIONS

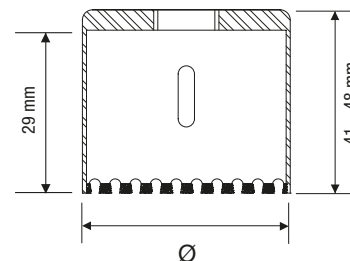
- Recommended for cutting laminates, fibreglass, ceramic tile, marble and slate, cast iron, fibre cement sheet and composites.
- Not suitable for monocottura or vitrified products – these products are best cut by Bordo Brilliant diamond hole saws. See page 186.



GROUP	REMG
MATERIAL	TUNGSTEN CARBIDE GRIT
TYPE	2 PIECE
INTERNAL DEPTH	29MM
PACKAGING	HANG BOX

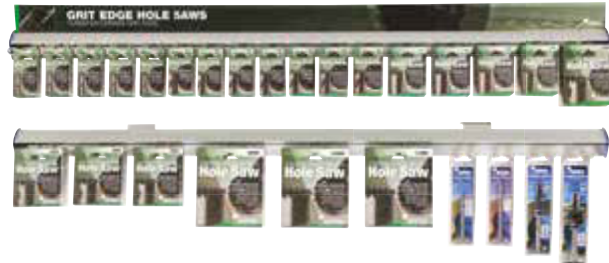
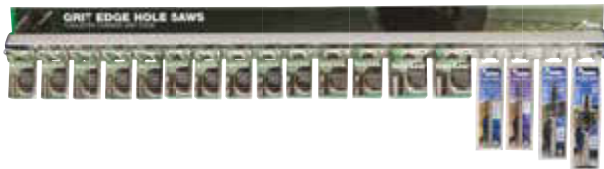


DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
16.00	—	1	43.62	7090-16
19.00	3/4	1	43.62	7090-19
20.00	—	1	44.40	7090-20
22.00	7/8	1	44.40	7090-22
25.00	1	1	44.40	7090-25
29.00	1-1/8	1	46.19	7090-29
32.00	1-1/4	1	48.82	7090-32
35.00	1-3/8	1	50.55	7090-35
38.00	1-1/2	1	54.13	7090-38
44.00	1-3/4	1	59.33	7090-44
48.00	1-7/8	1	59.33	7090-48
51.00	2	1	59.33	7090-51
54.00	2-1/8	1	59.33	7090-54
57.00	2-1/4	1	60.28	7090-57
60.00	2-3/8	1	61.95	7090-60
64.00	2-1/2	1	62.83	7090-64
70.00	2-3/4	1	75.03	7090-70
76.00	3	1	77.77	7090-76
83.00	3-1/4	1	80.27	7090-83
86.00	3-3/8	1	80.94	7090-86
95.00	3-3/4	1	82.80	7090-95
102.00	4	1	83.62	7090-102
114.00	4-1/2	1	98.52	7090-114





GROUP	-	
MATERIAL	TUNGSTEN CARBIDE GRIT	TUNGSTEN CARBIDE GRIT
TYPE	2 PIECE	2 PIECE
CUTTING DEPTH	29MM	29MM
PACKAGING	MERCHANDISER	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
GRIT EDGE D1 MERCH – 14 SAWS	897.77	7090-D1		
GRIT EDGE D2 MERCH – 23 SAWS			1,601.50	7090-D2

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	GRIT EDGE HOLE SAW 16MM	7090-16	GRIT EDGE HOLE SAW 16MM	7090-16
	GRIT EDGE HOLE SAW 19MM	7090-19	GRIT EDGE HOLE SAW 19MM	7090-19
	GRIT EDGE HOLE SAW 20MM	7090-20	GRIT EDGE HOLE SAW 20MM	7090-20
	GRIT EDGE HOLE SAW 22MM	7090-22	GRIT EDGE HOLE SAW 22MM	7090-22
	GRIT EDGE HOLE SAW 25MM	7090-25	GRIT EDGE HOLE SAW 25MM	7090-25
	GRIT EDGE HOLE SAW 29MM	7090-29	GRIT EDGE HOLE SAW 29MM	7090-29
	GRIT EDGE HOLE SAW 32MM	7090-32	GRIT EDGE HOLE SAW 32MM	7090-32
	GRIT EDGE HOLE SAW 35MM	7090-35	GRIT EDGE HOLE SAW 35MM	7090-35
	GRIT EDGE HOLE SAW 38MM	7090-38	GRIT EDGE HOLE SAW 38MM	7090-38
	GRIT EDGE HOLE SAW 44MM	7090-44	GRIT EDGE HOLE SAW 44MM	7090-44
	GRIT EDGE HOLE SAW 48MM	7090-48	GRIT EDGE HOLE SAW 48MM	7090-48
	GRIT EDGE HOLE SAW 51MM	7090-51	GRIT EDGE HOLE SAW 51MM	7090-51
	GRIT EDGE HOLE SAW 54MM	7090-54	GRIT EDGE HOLE SAW 54MM	7090-54
	GRIT EDGE HOLE SAW 57MM	7090-57	GRIT EDGE HOLE SAW 57MM	7090-57
	PILOT BIT - CARBIDE TIPPED 89MM	7060-8537CT	GRIT EDGE HOLE SAW 60MM	7090-60
	PILOT BIT - CARBIDE TIPPED 114MM	7060-8538CT	GRIT EDGE HOLE SAW 64MM	7090-64
	11/32" HEX MANDREL	7050-5519CT	GRIT EDGE HOLE SAW 70MM	7090-70
	11/32" HEX QC MANDREL	7050-5546CT	GRIT EDGE HOLE SAW 76MM	7090-76
			GRIT EDGE HOLE SAW 83MM	7090-83
			GRIT EDGE HOLE SAW 86MM	7090-86
			GRIT EDGE HOLE SAW 95MM	7090-95
			GRIT EDGE HOLE SAW 102MM	7090-102
			GRIT EDGE HOLE SAW 114MM	7090-114
			PILOT BIT - CARBIDE TIPPED 89MM	7060-8537CT
			PILOT BIT - CARBIDE TIPPED 114MM	7060-8538CT
			11/32" HEX MANDREL	7050-5519CT
			11/32" HEX QC MANDREL	7050-5546CT

# HOLE SAWS DOWNLIGHT

TC GRIT EDGE

HANG SELL

## DOWNLIGHT CUTTERS

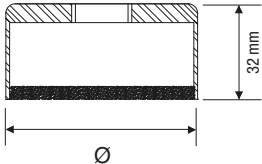
The tungsten carbide Grit Edge on each Bordo Downlight Cutter provides an extremely hard wearing, smooth cutting edge - even in the most abrasive materials.

### FEATURES

- 22mm (7/8") depth of cut.
- No teeth to dull or chip.
- High heat and abrasion resistance.
- Resists snagging.
- Smooth cutting.
- High wear resistance.

### APPLICATIONS

- Recommended for cutting plasterboard, fibre cement sheet and composites.



GROUP	REMG
MATERIAL	TUNGSTEN CARBIDE GRIT
TYPE	2 PIECE
INTERNAL DEPTH	26MM
PACKAGING	CLAM SHELL



DIAMETER MM	DIAMETER INCH	PACK QTY	\$ EACH	PART NUMBER
72.00	—	1	76.57	7095-72
75.00	—	1	76.57	7095-75
89.00	3-1/2	1	85.97	7095-89
92.00	3-5/8	1	85.97	7095-92
95.00	3-3/4	1	85.97	7095-95



GROUP	—	
MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
DOWNLIGHT CUTTER – 10 SAWS	1,181.59	7095-D1

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	2	DOWNLIGHT CUTTER - 72MM	7095-72
	2	DOWNLIGHT CUTTER - 75MM	7095-75
	2	DOWNLIGHT CUTTER - 89MM	7095-89
	2	DOWNLIGHT CUTTER - 92MM	7095-92
	2	DOWNLIGHT CUTTER - 95MM	7095-95
	3	7/16 HEX MANDREL	7050-5546
	3	300MM QUICK CHANGE EXT.	5750-38716X300



GROUP	ADHC
CUTTING BLADE	TUNGSTEN CARBIDE
CUTTING DEPTH	50MM MAX.
COWL – 220A AND 285A ONLY	IMPACT RESISTANT POLYCARBONATE
TYPE	ADJUSTABLE WITH BALANCE BAR
SHANK	FLATTED
PACKAGING	BLOW MOULDED KIT BOX

**ADJUSTABLE  
HOLE CUTTERS**

Quickly and safely cut large diameter holes in a wide variety of materials.

**FEATURES**

- Simple to adjust and built to last.
- Supplied with two replaceable tungsten carbide blades.
- Adjustable cutting thickness from 5mm to 50mm.
- Impact resistant cowl collects dust and debris whilst protecting the operator from flying material.
- Balance bar ensures minimal vibration when cutting large diameter holes.
- **7096-WDB Blade**  
Suitable for cutting veneer, plywood, composite board, plasterboard, fibre cement sheet and acrylic sheet.
- **7096-SMB Blade**  
Suitable for cutting sheet metal up to 1mm thick – including brass & aluminium using tungsten carbide spear tip blade included.



7096-200A



MAX. DIA MM	MIN. DIA MM	PACK QTY	\$ EACH	PART NUMBER
200	40	1	128.01	7096-200A
220	30	1	258.66	7096-220A
290	30	1	310.37	7096-285A

7096-WDB



7096-SMB



ACCESSORIES FOR 220A AND 285A ADJUSTABLE HOLE CUTTERS	\$ EACH	PART NUMBER
REPLACEMENT BLADE	21.56	7096-WDB
REPLACEMENT BLADE - SPEAR TIP	23.72	7096-SMB
HSS PILOT DRILL	15.38	7096-HSSD
CARBIDE TIPPED PILOT DRILL	20.02	7096-CTD



**HOLE SAWS  
MANDRELS**

HANG SELL

**7050-5547  
SNAP-LOCK  
MANDREL**

The Bordo Snap-Lock mandrel features a spring loaded collar to quickly engage and disengage the dual locking pins that prevent mandrel and saw binding.

**7050-5548  
POSI-LOCK  
MANDREL**

The Bordo Posi-Lock mandrel tightens to create a positive lock to minimise saw runout and wobble. Locking pins prevent mandrel and saw binding.



GROUP	MAND
PACKAGING	CLAM SHELL

5514	5519	5519CT	5558	5520	5545	5546	5546CT	5547	5548
14-30MM HOLE SAWS			32-100MM HOLE SAWS		32-152MM HOLE SAWS			32-210MM HOLE SAWS	

HOLE SAW MM	CHUCK INCH	SHANK INCH	SUITS	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
14 - 30	1/4"	1/4" RND	●	MOST ECONOMICAL	1	21.97	7050-5514
14 - 30	3/8"-1/2"	11/32" HEX	● ●	FITS 3/8" AND 1/2" DRILLS	1	32.08	7050-5519
14 - 30	3/8"-1/2"	11/32" HEX	● ● ●	5519 WITH CARBIDE BIT	1	55.09	7050-5519CT
32 - 100	1/2"	7/16" HEX	● ● ●	FITS 1/2" DRILLS	1	37.72	7050-5520
32 - 100	3/8"-1/2"	11/32" HEX	● ● ●	FITS 3/8" AND 1/2" DRILLS	1	32.08	7050-5558
32 - 152	1/2"	7/16" HEX	● ● ●	SCREW IN PINS (QUICK CHANGE)	1	55.84	7050-5545
32 - 152	3/8"-1/2"	11/32" HEX	● ● ●	SCREW IN PINS (QUICK CHANGE)	1	55.84	7050-5546
32 - 152	3/8"-1/2"	11/32" HEX	● ● ● ●	5546 WITH CARBIDE BIT	1	76.57	7050-5546CT
32 - 210	1/2"	11/32" HEX	● ● ●	SNAP-LOCK MANDREL	1	55.84	7050-5547
32 - 210	1/2"	7/16" HEX	● ● ●	POSI-LOCK MANDREL	1	55.09	7050-5548

- BI-METAL HOLE SAW

● GRIT EDGE TUNGSTEN CARBIDE HOLE SAW
- RIPPER CARBIDE TIPPED HOLE SAW

● DOWNLIGHT CUTTER



GROUP	ACES	
DESCRIPTION	\$ EACH	PART NUMBER
EXTENSION 300MM (12") – FOR USE WITH 5520, 5545, 5548	43.27	7060-5500
MANDREL ADAPTOR – FOR SMALL THREAD MANDRELS TO FIT HOLE SAWS >30MM	8.76	7060-5511
SET SCREWS – FOR USE WITH 5514, 5519, 5520	6.07	7060-SS1
SET SCREWS – FOR USE WITH 5545, 5546, 5547	6.07	7060-SS2
SET SCREWS – FOR USE WITH 5548	6.27	7060-SS4



GROUP	ACES	ACES
PRODUCT	PILOT DRILL	PILOT DRILL
MATERIAL	HSS	TUNGSTEN CARBIDE TIP
DIAMETER	1/4"	1/4"
PACKAGING	CLAM SHELL	CLAM SHELL



LENGTH MM	INCH	FOR USE WITH MANDRELS	QTY PACK	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
89.00	3-1/2	5519, 5546, 5558, 5547, 5548 MANDRELS	1	10.32	7060-8534		
114.00	4-1/2	5514, 5520, 5545 MANDRELS	1	10.32	7060-8535		
89.00	3-1/2	5519CT, 5546CT, 5547, 5548 MANDRELS	1			24.19	7060-8537CT
114.00	4-1/2	5514, 5520, 5545 MANDRELS	1			24.19	7060-8538CT

## HOLE SAW HOLE ENLARGER

RE-CUT YOUR HOLE USING  
A NEW SIZE HOLE SAW.  
ANY HOLE BETWEEN 52MM  
AND 92MM CAN BE ENLARGED.  
MINIMUM STARTING HOLE  
SIZE 52MM.

### USAGE

Select jaw set to suit existing  
hole. Small set suits holes from  
52–72mm. Large set suits holes  
from 72–92mm.

Screw jaw set in to enlarger body  
ensuring L and R markings are  
matched correctly.

Wind body in direction of  
tightening arrow until secured in  
hole. Use a screwdriver to ensure  
assembly is tight and can not  
rotate.

The pilot drill guide hole must be  
vertical to ensure correct hole  
saw engagement.

Position pilot drill in guide hole  
before starting drill.

### GUIDELINES

- Read and follow safety  
instructions supplied in  
your owner's manual before  
operating any power tool.
- Wear eye and hearing  
protection.



GROUP	SPEC
MINIMUM STARTING HOLE SIZE	52MM
MAXIMUM STARTING HOLE SIZE	92MM
MINIMUM ENLARGEMENT	15MM
PILOT DRILL	1/4", 6.35MM
PACKAGING	CLAM SHELL

MIN. STARTING HOLE DIA. MM	MAX. STARTING HOLE DIA. MM	PACK QTY	\$ EACH	PART NUMBER
52	92	1	53.51	7060-HES1

# HOLE SAWS SHEETMETAL

THINWALL

HANG SELL

## THINWALL SHEETMETAL HOLE SAWS

Ideal for the electrical and plumbing tradesman. Hole saw has a thin 0.65mm sidewall blade thickness, which allows for faster cutting and longer battery life. Ideal for chargeable impact drivers.

### FEATURES

- Variable pitch, M42 material with 8° positive rake for fast, smooth cuts in sheet metal and plastic.
- Self ejecting plug removal.
- 5/32" pilot drill for easy centre locating and quicker cutting penetration.
- 1/4" quick change shank, ideal for use with battery operated impact drivers.
- Safety collar stop helps prevent cutting too deep.

### BENEFITS

- Smooth and fast cutting – especially designed tooth geometry assures increased performance and better wear resistance.
- Lightweight blades maximize the use of chargeable impact drivers by using a reduced motor and operation load.
- Safety collar stop helps prevent damage to wires when drilling into electrical boxes.

### IDEAL FOR CREATING PENETRATIONS IN

Distribution boards, meter enclosures, data cabinets, rigid conduit, trunking and skirting ducts.

### SUITABLE FOR USE IN

Stainless steel, mild steel, brass, aluminium and plastic.



GROUP	BMSM
MATERIAL	M42 BI-METAL – 8% COBALT
TEETH	VARIABLE PITCH, 8° POSITIVE RAKE
SIDEWALL	0.65MM
TYPE	1 PIECE
SHANK	1/4"
PACKAGING	HANG BOX



DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
16.00	5/8	1	23.54	7040-16
19.00	3/4	1	23.61	7040-19
20.00	—	1	23.68	7040-20
22.00	7/8	1	23.77	7040-22
25.00	1	1	23.81	7040-25
27.00	1-1/16	1	23.89	7040-27
29.00	1-1/8	1	24.25	7040-29
30.00	1-3/16	1	24.82	7040-30
32.00	1-1/4	1	25.62	7040-32
35.00	1-3/8	1	26.32	7040-35
38.00	1-1/2	1	27.11	7040-38
40.00	1-9/16	1	30.49	7040-40
44.00	1-3/4	1	34.31	7040-44
51.00	2	1	41.99	7040-51



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
THINWALL SHEETMETAL SET - 8 SAWS	197.46	7040-S1		
THINWALL SHEETMETAL SET - 5 SAWS			123.20	7040-S2

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	THINWALL HOLE SAW 16MM	7040-16	THINWALL HOLE SAW 20MM	7040-20
	THINWALL HOLE SAW 19MM	7040-19	THINWALL HOLE SAW 22MM	7040-22
	THINWALL HOLE SAW 20MM	7040-20	THINWALL HOLE SAW 25MM	7040-25
	THINWALL HOLE SAW 22MM	7040-22	THINWALL HOLE SAW 32MM	7040-32
	THINWALL HOLE SAW 25MM	7040-25	THINWALL HOLE SAW 35MM	7040-35
	THINWALL HOLE SAW 32MM	7040-32		
	THINWALL HOLE SAW 35MM	7040-35		
	THINWALL HOLE SAW 38MM	7040-38		





GROUP	BMSM
MATERIAL	M42 BI-METAL – 8% COBALT
TEETH	VARIABLE PITCH, 8° POSITIVE RAKE
SIDEWALL	0.5MM
TYPE	1 PIECE
SHANK	1/4"
PACKAGING	HANG SELL MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
SHEETMETAL HOLE SAWS– 11 SAWS	270.42	7040-D1

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	1	THINWALL SAW 16MM	7040-16
	1	THINWALL SAW 19MM	7040-19
	1	THINWALL SAW 20MM	7040-20
	1	THINWALL SAW 22MM	7040-22
	1	THINWALL SAW 25MM	7040-25
	1	THINWALL SAW 27MM	7040-27
	1	THINWALL SAW 29MM	7040-29
	1	THINWALL SAW 30MM	7040-30
	1	THINWALL SAW 32MM	7040-32
	1	THINWALL SAW 35MM	7040-35
	1	THINWALL SAW 38MM	7040-38



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
SHEETMETAL HOLE SAWS– 20 SAWS	527.29	7040-D2

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	2	THINWALL SAW 16MM	7040-16
	1	THINWALL SAW 19MM	7040-19
	2	THINWALL SAW 20MM	7040-20
	1	THINWALL SAW 22MM	7040-22
	2	THINWALL SAW 25MM	7040-25
	1	THINWALL SAW 27MM	7040-27
	1	THINWALL SAW 29MM	7040-29
	1	THINWALL SAW 30MM	7040-30
	2	THINWALL SAW 32MM	7040-32
	2	THINWALL SAW 35MM	7040-35
	2	THINWALL SAW 38MM	7040-38
	1	THINWALL SAW 40MM	7040-40
	1	THINWALL SAW 44MM	7040-44
	1	THINWALL SAW 51MM	7040-51



# HOLE SAWS

XP & XP2

TCT

HANG SELL

## XP TUNGSTEN CARBIDE HOLE SAWS

XP TCT hole saws are ideal for repetition cutting in steel plate, stainless steel plate and synthetic resin plates up to 4mm thick.

## XP2 TUNGSTEN CARBIDE HOLE SAWS

XP2 TCT hole saws feature 3 edged cutters which balance the cutting effort for smoother boring, greater control and reduced drag. The deep body makes them ideal for use with curved surfaces such as metal pipes.

### FEATURES

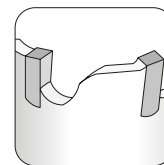
- Non-uniform separation of the tungsten carbide teeth and integrated mandrel virtually eliminates vibration due to resonance.
- Extremely long service life.
- No need for messy cutting fluids.
- Heavy duty plug ejector spring.

### APPLICATIONS

- Repetition cutting in steel plate, stainless steel plate, sheet metal and other hard or abrasive materials.

### Cutting Depth (mm)

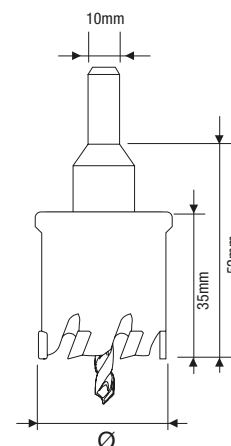
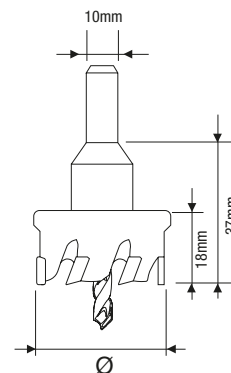
	XP	XP2
Steel	4.5	23
S/Steel	3	3+
Aluminium	3	3+



GROUP	SMCC	SMCC
TYPE	XP	XP2 - DEEP CUT
TOOTH MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
MANDREL	BUILT-IN	BUILT-IN
CUTTING DEPTH	4.5MM	25.0MM
PACKAGING	CLAM SHELL	CLAM SHELL



DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
16.00	5/8	1	69.09	7080-16	100.87	7081-16
17.00	11/16	1	69.09	7080-17		
18.00	—	1	69.09	7080-18	100.87	7081-18
19.00	3/4	1	69.09	7080-19	100.87	7081-19
20.00	—	1	69.09	7080-20	103.91	7081-20
21.00	13/16	1	69.09	7080-21		
22.00	7/8	1	69.09	7080-22	103.91	7081-22
23.00	—	1	69.09	7080-23		
24.00	15/16	1	69.09	7080-24	103.91	7081-24
25.00	1	1	69.09	7080-25	103.91	7081-25
26.00	—	1	79.87	7080-26	112.81	7081-26
27.00	1-1/16	1	79.87	7080-27	112.81	7081-27
28.00	—	1	79.87	7080-28	112.81	7081-28
29.00	1-1/8	1	79.87	7080-29		
30.00	1-3/16	1	79.87	7080-30	112.81	7081-30
31.00	—	1	89.16	7080-31		
32.00	1-1/4	1	89.16	7080-32	135.89	7081-32
33.00	1-5/16	1	89.16	7080-33	135.89	7081-33
34.00	—	1	89.16	7080-34	135.89	7081-34
35.00	1-3/8	1	89.16	7080-35	135.89	7081-35
36.00	—	1	99.80	7080-36	146.88	7081-36
38.00	1-1/2	1	99.80	7080-38	146.88	7081-38
40.00	1-9/16	1	99.80	7080-40	146.88	7081-40
42.00	—	1	109.39	7080-42	165.14	7081-42
43.00	1-11/16	1	109.39	7080-43		
45.00	—	1	109.39	7080-45	165.14	7081-45
48.00	1-7/8	1	114.20	7080-48		
50.00	—	1	114.20	7080-50	165.14	7081-50
55.00	—	1	138.61	7080-55	228.41	7081-55
60.00	2-3/8	1	172.51	7080-60	236.35	7081-60
65.00	2-9/16	1	187.97	7080-65	236.35	7081-65
70.00	2-3/4	1	193.74	7080-70	265.19	7081-70
75.00	—	1	221.50	7080-75	265.19	7081-75
80.00	—	1	221.50	7080-80	302.87	7081-80
90.00	—	1	278.20	7080-90	340.55	7081-90
100.00	—	1	330.65	7080-100	406.49	7081-100



# HOLE SAWS XP & XP2

TCT

KITS, ACC.

## XP TUNGSTEN CARBIDE HOLE SAWS

XP TCT hole saws are ideal for repetition cutting in steel plate, stainless steel plate and synthetic resin plates up to 4mm thick.

## XP2 TUNGSTEN CARBIDE HOLE SAWS

XP2 TCT hole saws feature 3 edged cutters which balance the cutting effort for smoother boring, greater control and reduced drag. The deep body makes them ideal for use with curved surfaces such as metal pipes.

### FEATURES

- Non-uniform separation of the tungsten carbide teeth and integrated mandrel virtually eliminates vibration due to resonance.
- Extremely long service life.
- No need for messy cutting fluids.
- Heavy duty plug ejector spring.

### APPLICATIONS

- Repetition cutting in steel plate, stainless steel plate, sheet metal and other hard or abrasive materials.

### Cutting Depth (mm)

	XP	XP2
Steel	4.5	23
S/Steel	3	3+
Aluminium	3	3+



GROUP	SMCC	SMCC
TYPE	XP	XP2 - DEEP CUT
TOOTH MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
MANDREL	BUILT-IN	BUILT-IN
CUTTING DEPTH	4.5MM	25.0MM
PACKAGING	BLOW MOULDED KIT BOX	BLOW MOULDED KIT BOX



KIT TYPE	\$ KIT	PART NUMBER	\$ KIT	PART NUMBER
XP CARBIDE CUTTER – 5 SAWS	404.46	7080-S1		
XP2 CARBIDE CUTTER – 5 SAWS			598.95	7081-S1

KIT CONTENTS	QTY	DESCRIPTION	PART NUMBER	QTY	DESCRIPTION	PART NUMBER
	1	XP SAW 16MM	7080-16	1	XP2 SAW 16MM	7081-16
	1	XP SAW 20MM	7080-20	1	XP2 SAW 20MM	7081-20
	1	XP SAW 25MM	7080-25	1	XP2 SAW 25MM	7081-25
	1	XP SAW 32MM	7080-32	1	XP2 SAW 32MM	7081-32
	1	XP SAW 40MM	7080-40	1	XP2 SAW 40MM	7081-40
	2	XP PILOT DRILL	7080-6PD	2	XP2 PILOT DRILL	7081-6PD
	2	XP SPRING	7080-SPRING	2	XP2 SPRING	7081-SPRING

GROUP	SMCC	SMCC
TYPE	XP	XP2 - DEEP CUT
PACKAGING	CLAM SHELL	CLAM SHELL



ACCESSORIES	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
PILOT DRILL – 6MM X 47MM TO SUIT XP	10.11	7080-6PDS		
PILOT DRILL – 6MM X 75MM TO SUIT XP2			10.11	7081-6PDS

GROUP	SMCC	SMCC
TYPE	XP	XP2 - DEEP CUT
PACKAGING	BULK	BULK



ACCESSORIES	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
EJECTOR SPRING TO SUIT XP	5.54	7080-SPRING		
EJECTOR SPRING TO SUIT XP2			5.54	7081-SPRING

HOLE SAWS  
XP & XP2

TCT  
MERCHANDISERS

XP  
TUNGSTEN  
CARBIDE HOLE  
SAWS

XP TCT hole saws are ideal for repetition cutting in steel plate, stainless steel plate and synthetic resin plates up to 4mm thick.

XP2  
TUNGSTEN  
CARBIDE HOLE  
SAWS

XP2 TCT hole saws feature 3 edged cutters which balance the cutting effort for smoother boring, greater control and reduced drag. The deep body makes them ideal for use with curved surfaces such as metal pipes.

FEATURES

- Non-uniform separation of the tungsten carbide teeth and integrated mandrel virtually eliminates vibration due to resonance.
- Extremely long service life.
- No need for messy cutting fluids.
- Heavy duty plug ejector spring.

APPLICATIONS

- Repetition cutting in steel plate, stainless steel plate, sheet metal and other hard or abrasive materials.

Cutting Depth (mm)

	XP	XP2
Steel	4.5	23
S/Steel	3	3+
Aluminium	3	3+



GROUP	SMCC	SMCC
TYPE	XP	XP2 - DEEP CUT
TOOTH MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
MANDREL	BUILT-IN	BUILT-IN
CUTTING DEPTH	4.5MM	25.0MM
PACKAGING	MERCHANDISER	MERCHANDISER



7080-D2



7081-D2



7080-D2FLT



7081-D2FLT

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
XP CARBIDE CUTTER – 14 SAWS	1,337.19	7080-D2		
XP CARBIDE CUTTER – 14 SAWS	1,337.19	7080-D2FLT		
XP2 CARBIDE CUTTER – 14 SAWS			1,906.57	7081-D2
XP2 CARBIDE CUTTER – 14 SAWS			1,906.57	7081-D2FLT

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	XP CUTTER 16MM	7080-16	XP2 CUTTER 16MM	7081-16
	XP CUTTER 18MM	7080-18	XP2 CUTTER 18MM	7081-18
	XP CUTTER 19MM	7080-19	XP2 CUTTER 19MM	7081-19
	XP CUTTER 20MM	7080-20	XP2 CUTTER 20MM	7081-20
	XP CUTTER 22MM	7080-22	XP2 CUTTER 22MM	7081-22
	XP CUTTER 25MM	7080-25	XP2 CUTTER 25MM	7081-25
	XP CUTTER 28MM	7080-28	XP2 CUTTER 28MM	7081-28
	XP CUTTER 30MM	7080-30	XP2 CUTTER 30MM	7081-30
	XP CUTTER 32MM	7080-32	XP2 CUTTER 32MM	7081-32
	XP CUTTER 35MM	7080-35	XP2 CUTTER 35MM	7081-35
	XP CUTTER 38MM	7080-38	XP2 CUTTER 38MM	7081-38
	XP CUTTER 50MM	7080-50	XP2 CUTTER 50MM	7081-50
	XP CUTTER 60MM	7080-60	XP2 CUTTER 60MM	7081-60
	XP CUTTER 65MM	7080-65	XP2 CUTTER 65MM	7081-65
	XP CUTTER PILOT DRILL	7080-6PD	XP2 CUTTER PILOT DRILL	7081-6PD



GROUP	SMCC
TYPE	XP & XP2
TOOTH MATERIAL	TUNGSTEN CARBIDE
MANDREL	BUILT-IN
PACKAGING	MERCHANDISER

**XP  
TUNGSTEN  
CARBIDE HOLE  
SAWS**

XP TCT hole saws are ideal for repetition cutting in steel plate, stainless steel plate and synthetic resin plates up to 4mm thick.

**XP2  
TUNGSTEN  
CARBIDE HOLE  
SAWS**

XP2 TCT hole saws feature 3 edged cutters which balance the cutting effort for smoother boring, greater control and reduced drag. The deep body makes them ideal for use with curved surfaces such as metal pipes.



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
XP & XP2 CARBIDE CUTTER – 17 SAWS	1,688.47	7080-D3

**FEATURES**

- Non-uniform separation of the tungsten carbide teeth and integrated mandrel virtually eliminates vibration due to resonance.
- Extremely long service life.
- No need for messy cutting fluids.
- Heavy duty plug ejector spring.

**APPLICATIONS**

- Repetition cutting in steel plate, stainless steel plate, sheet metal and other hard or abrasive materials.

**Cutting Depth (mm)**

	XP	XP2
Steel	4.5	23
S/Steel	3	3+
Aluminium	3	3+

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	XP CUTTER 16MM	7080-16	XP2 CUTTER 16MM	7081-16
	XP CUTTER 19MM	7080-19	XP2 CUTTER 19MM	7081-19
	XP CUTTER 20MM	7080-20	XP2 CUTTER 20MM	7081-20
	XP CUTTER 22MM	7080-22	XP2 CUTTER 22MM	7081-22
	XP CUTTER 25MM	7080-25	XP2 CUTTER 25MM	7081-25
	XP CUTTER 30MM	7080-30	XP2 CUTTER 30MM	7081-30
	XP CUTTER 32MM	7080-32	XP2 CUTTER 32MM	7081-32
	XP CUTTER 38MM	7080-38	XP2 CUTTER 38MM	7081-38
	XP CUTTER PILOT DRILL	7080-6PD	XP2 CUTTER 50MM	7081-50
			XP2 CUTTER PILOT DRILL	7081-6PD



# ANNULAR CUTTERS

HSS

HANG SELL

## MULTI-CUT GEOMETRY

SMOOTH AND FAST CUTTING

## HSS ANNULAR CUTTERS

Annular Cutters achieve burr-free finished holes without the need for pre-drilling or step drilling. Faster and more accurate than using standard HSS twist drills.

Bordo Annular Cutters are CNC ground and feature multi-cut geometry for smooth and fast cutting. The precision ground flutes run the entire length of the cutter providing efficient chip removal.

### FEATURES

- Increased cutting speed.
- Reduced tooth load.
- Minimized tool wear.
- Extended tool life.
- Close tolerance drilling without runout.
- Reamed quality, burr free finished holes.
- Resharpenable.

Bordo Annular Cutters feature a 3/4" multi-fit shank with 2 flats and 3 dimples that suits most standard machines including Hougén®, Slugger®, Rotabroach®, Rotabest® and Nitto®.

Trademarks remain the property of their respective owners.



GROUP	ANLR	ANLR
DESCRIPTION	HSS ANNULAR CUTTER	HSS ANNULAR CUTTER
MATERIAL	HSS-M2 AL	HSS-M2 AL
CUTTING DEPTH	25.0MM	50.0MM
PACKAGING	HANG SELL	HANG SELL

DIAMETER MM	PACK QTY	\$ EACH	CUTTER PART NUMBER	PIN PART NUMBER	\$ EACH	PART NUMBER	PIN PART NUMBER
12.00	1	51.97	7400-12X25	7400-1/4X77	68.56	7400-12X50	7400-1/4X103
13.00	1	51.97	7400-13X25	7400-1/4X77	68.56	7400-13X50	7400-1/4X103
14.00	1	54.42	7400-14X25	7400-1/4X77	69.92	7400-14X50	7400-1/4X103
15.00	1	54.42	7400-15X25	7400-1/4X77	69.92	7400-15X50	7400-1/4X103
16.00	1	56.44	7400-16X25	7400-1/4X77	71.42	7400-16X50	7400-1/4X103
17.00	1	56.44	7400-17X25	7400-1/4X77	71.42	7400-17X50	7400-1/4X103
18.00	1	59.63	7400-18X25	7400-1/4X77	75.79	7400-18X50	7400-1/4X103
19.00	1	59.63	7400-19X25	7400-1/4X77	77.55	7400-19X50	7400-1/4X103
20.00	1	64.96	7400-20X25	7400-1/4X77	81.59	7400-20X50	7400-1/4X103
21.00	1	65.96	7400-21X25	7400-1/4X77	81.59	7400-21X50	7400-1/4X103
22.00	1	74.09	7400-22X25	7400-1/4X77	91.83	7400-22X50	7400-1/4X103
23.00	1	76.42	7400-23X25	7400-1/4X77	94.15	7400-23X50	7400-1/4X103
24.00	1	78.80	7400-24X25	7400-1/4X77	99.96	7400-24X50	7400-1/4X103
25.00	1	79.97	7400-25X25	7400-1/4X77	99.96	7400-25X50	7400-1/4X103
26.00	1	83.46	7400-26X25	7400-1/4X77	103.17	7400-26X50	7400-1/4X103
27.00	1	83.46	7400-27X25	7400-1/4X77	106.11	7400-27X50	7400-1/4X103
28.00	1	89.53	7400-28X25	7400-1/4X77	110.47	7400-28X50	7400-1/4X103
29.00	1	91.52	7400-29X25	7400-1/4X77	113.89	7400-29X50	7400-1/4X103
30.00	1	92.81	7400-30X25	7400-1/4X77	120.64	7400-30X50	7400-1/4X103
31.00	1	98.80	7400-31X25	7400-1/4X77	130.46	7400-31X50	7400-1/4X103
32.00	1	101.76	7400-32X25	7400-1/4X77	131.34	7400-32X50	7400-1/4X103
33.00	1	106.68	7400-33X25	7400-1/4X77	136.05	7400-33X50	7400-1/4X103
34.00	1	111.75	7400-34X25	7400-1/4X77	142.94	7400-34X50	7400-1/4X103
35.00	1	113.60	7400-35X25	7400-1/4X77	144.46	7400-35X50	7400-1/4X103
36.00	1	120.64	7400-36X25	7400-1/4X77	154.07	7400-36X50	7400-1/4X103
37.00	1	125.01	7400-37X25	7400-1/4X77	159.79	7400-37X50	7400-1/4X103
38.00	1	130.19	7400-38X25	7400-1/4X77	166.21	7400-38X50	7400-1/4X103
39.00	1	134.29	7400-39X25	7400-1/4X77	170.94	7400-39X50	7400-1/4X103
40.00	1	138.65	7400-40X25	7400-1/4X77	183.13	7400-40X50	7400-1/4X103
41.00	1	149.00	7400-41X25	7400-1/4X77	190.38	7400-41X50	7400-1/4X103
42.00	1	152.57	7400-42X25	7400-1/4X77	202.05	7400-42X50	7400-1/4X103
43.00	1	162.20	7400-43X25	7400-1/4X77	202.05	7400-43X50	7400-1/4X103
44.00	1	176.63	7400-44X25	7400-1/4X77	218.54	7400-44X50	7400-1/4X103
45.00	1	176.97	7400-45X25	7400-1/4X77	218.54	7400-45X50	7400-1/4X103
46.00	1	184.19	7400-46X25	7400-1/4X77	235.67	7400-46X50	7400-1/4X103
47.00	1	189.25	7400-47X25	7400-1/4X77	235.67	7400-47X50	7400-1/4X103
48.00	1	194.82	7400-48X25	7400-1/4X77	249.68	7400-48X50	7400-1/4X103
49.00	1	200.00	7400-49X25	7400-1/4X77	249.68	7400-49X50	7400-1/4X103
50.00	1	212.15	7400-50X25	7400-1/4X77	274.63	7400-50X50	7400-1/4X103
51.00	1	218.38	7400-51X25	7400-1/4X77	274.63	7400-51X50	7400-1/4X103
52.00	1	229.67	7400-52X25	7400-1/4X77	289.17	7400-52X50	7400-1/4X103
53.00	1						
54.00	1						
55.00	1				302.28	7400-55X50	7400-1/4X103
56.00	1						
57.00	1						
58.00	1						
59.00	1						
60.00	1						



GROUP	ANLL	ANLL
DESCRIPTION	HSS ANNULAR CUTTER	HSS ANNULAR CUTTER
MATERIAL	HSS-M2 AL	HSS-M2 AL
CUTTING DEPTH	75.0MM	100.0MM
PACKAGING	HANG SELL	HANG SELL

DIAMETER MM	PACK QTY	\$ EACH	PART NUMBER	PIN PART NUMBER	\$ EACH	PART NUMBER	PIN PART NUMBER
12.00	1						
13.00	1						
14.00	1						
15.00	1						
16.00	1						
17.00	1						
18.00	1	119.17	7400-18X75	7400-8X130	192.89	7400-18X100	7400-8X160
19.00	1	119.17	7400-19X75	7400-8X130	236.23	7400-19X100	7400-8X160
20.00	1	124.25	7400-20X75	7400-8X130	208.30	7400-20X100	7400-8X160
21.00	1	127.21	7400-21X75	7400-8X130	217.93	7400-21X100	7400-8X160
22.00	1	132.21	7400-22X75	7400-8X130	222.80	7400-22X100	7400-8X160
23.00	1	134.69	7400-23X75	7400-8X130	228.59	7400-23X100	7400-8X160
24.00	1	147.39	7400-24X75	7400-8X130	236.23	7400-24X100	7400-8X160
25.00	1	148.99	7400-25X75	7400-8X130	263.22	7400-25X100	7400-8X160
26.00	1	155.61	7400-26X75	7400-8X130	271.90	7400-26X100	7400-8X160
27.00	1	160.19	7400-27X75	7400-8X130	280.59	7400-27X100	7400-8X160
28.00	1	167.02	7400-28X75	7400-8X130	294.16	7400-28X100	7400-8X160
29.00	1	178.07	7400-29X75	7400-8X130	311.41	7400-29X100	7400-8X160
30.00	1	189.31	7400-30X75	7400-8X130	322.99	7400-30X100	7400-8X160
31.00	1	201.40	7400-31X75	7400-8X130	333.65	7400-31X100	7400-8X160
32.00	1	213.76	7400-32X75	7400-8X130	368.29	7400-32X100	7400-8X160
33.00	1	226.10	7400-33X75	7400-8X130	378.95	7400-33X100	7400-8X160
34.00	1	236.57	7400-34X75	7400-8X130	405.02	7400-34X100	7400-8X160
35.00	1	246.04	7400-35X75	7400-8X130	427.15	7400-35X100	7400-8X160
36.00	1	254.66	7400-36X75	7400-8X130	438.74	7400-36X100	7400-8X160
37.00	1	263.10	7400-37X75	7400-8X130	447.43	7400-37X100	7400-8X160
38.00	1	274.01	7400-38X75	7400-8X130	454.15	7400-38X100	7400-8X160
39.00	1	279.52	7400-39X75	7400-8X130	463.76	7400-39X100	7400-8X160
40.00	1	287.74	7400-40X75	7400-8X130	469.56	7400-40X100	7400-8X160
41.00	1	296.71	7400-41X75	7400-8X130	483.11	7400-41X100	7400-8X160
42.00	1	305.67	7400-42X75	7400-8X130	491.79	7400-42X100	7400-8X160
43.00	1	314.65	7400-43X75	7400-8X130	502.34	7400-43X100	7400-8X160
44.00	1	323.62	7400-44X75	7400-8X130	522.61	7400-44X100	7400-8X160
45.00	1	332.56	7400-45X75	7400-8X130	539.06	7400-45X100	7400-8X160
46.00	1	341.54	7400-46X75	7400-8X130	554.47	7400-46X100	7400-8X160
47.00	1	350.51	7400-47X75	7400-8X130	574.75	7400-47X100	7400-8X160
48.00	1	359.47	7400-48X75	7400-8X130	594.91	7400-48X100	7400-8X160
49.00	1	368.45	7400-49X75	7400-8X130	605.57	7400-49X100	7400-8X160
50.00	1	377.41	7400-50X75	7400-8X130	615.18	7400-50X100	7400-8X160
51.00	1				625.84	7400-51X100	7400-8X160
52.00	1				630.60	7400-52X100	7400-8X160
53.00	1				649.93	7400-53X100	7400-8X160
54.00	1				677.86	7400-54X100	7400-8X160
55.00	1				682.71	7400-55X100	7400-8X160
56.00	1				710.64	7400-56X100	7400-8X160
57.00	1				735.66	7400-57X100	7400-8X160
58.00	1				755.93	7400-58X100	7400-8X160
59.00	1				776.22	7400-59X100	7400-8X160
60.00	1				799.38	7400-60X100	7400-8X160

**HSS  
ANNULAR  
CUTTER PINS**

Annular Cutter Pins perform three functions:

**Centering**

The pilot pin accurately centres the cutter over the area to be drilled.

**Cutting Lubricant**

During drilling, the pilot pin retracts and allows internal coolant to reach the cutting teeth.

**Slug Ejection**

When hole cutting is complete, the slug is automatically ejected from the cutter.



**PINS SOLD  
SEPARATELY**

See page 216

# ANNULAR CUTTERS

TCT

HANG SELL

## MULTI-CUT GEOMETRY

SMOOTH AND FAST CUTTING

## HSS ANNULAR CUTTERS

Annular Cutters achieve burr-free finished holes without the need for pre-drilling or step drilling. Faster and more accurate than using standard HSS twist drills.

Bordo Annular Cutters are CNC ground and feature multi-cut geometry for smooth and fast cutting. The precision ground flutes run the entire length of the cutter providing efficient chip removal.

### FEATURES

- Increased cutting speed.
- Reduced tooth load.
- Minimized tool wear.
- Extended tool life.
- Close tolerance drilling without runout.
- Reamed quality, burr free finished holes.
- Resharpenable.

Bordo Annular Cutters feature a 3/4" universal shank that suits most standard machines including Hougen®, Slugger®, Rotabroach®, Rotabest® and Nitto®.

Trademarks remain the property of their respective owners.



GROUP	ANLR	ANLR
DESCRIPTION	TCT RAIL CUTTER	TCT ANNULAR CUTTER
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
CUTTING DEPTH	25.0MM	50.0MM
PACKAGING	HANG SELL	HANG SELL

DIAMETER MM	PACK QTY	\$ EACH	PART NUMBER	PIN PART NUMBER	\$ EACH	PART NUMBER	PIN PART NUMBER
12.00	1						
13.00	1						
14.00	1				108.34	7402-14X50	7400-1/4X103
15.00	1				108.61	7402-15X50	7400-1/4X103
16.00	1				112.99	7402-16X50	7400-1/4X103
17.00	1				117.25	7402-17X50	7400-1/4X103
18.00	1	120.77	7402-18x25	7402-8X77	119.46	7402-18X50	7400-8X108
19.00	1	122.70	7402-19x25	7402-8X77	122.64	7402-19X50	7400-8X108
20.00	1	124.23	7402-20x25	7402-8X77	126.91	7402-20X50	7400-8X108
21.00	1	124.23	7402-21x25	7402-8X77	128.99	7402-21X50	7400-8X108
22.00	1	124.23	7402-22x25	7402-8X77	129.98	7402-22X50	7400-8X108
23.00	1	136.60	7402-23x25	7402-8X77	129.98	7402-23X50	7400-8X108
24.00	1	136.60	7402-24x25	7402-8X77	136.59	7402-24X50	7400-8X108
25.00	1	136.60	7402-25x25	7402-8X77	146.96	7402-25X50	7400-8X108
26.00	1	147.52	7402-26x25	7402-8X77	146.96	7402-26X50	7400-8X108
27.00	1	147.52	7402-27x25	7402-8X77	148.54	7402-27X50	7400-8X108
28.00	1	147.52	7402-28x25	7402-8X77	148.54	7402-28X50	7400-8X108
29.00	1	147.52	7402-29x25	7402-8X77	168.80	7402-29X50	7400-8X108
30.00	1	147.52	7402-30x25	7402-8X77	168.80	7402-30X50	7400-8X108
31.00	1	158.16	7402-31x25	7402-8X77	183.72	7402-31X50	7400-8X108
32.00	1	158.16	7402-32x25	7402-8X77	183.72	7402-32X50	7400-8X108
33.00	1	164.75	7402-33x25	7402-8X77	193.37	7402-33X50	7400-8X108
34.00	1	164.75	7402-34x25	7402-8X77	193.37	7402-34X50	7400-8X108
35.00	1	164.75	7402-35x25	7402-8X77	206.97	7402-35X50	7400-8X108
36.00	1				217.85	7402-36X50	7400-8X108
37.00	1				217.85	7402-37X50	7400-8X108
38.00	1				217.85	7402-38X50	7400-8X108
39.00	1				217.85	7402-39X50	7400-8X108
40.00	1				217.85	7402-40X50	7400-8X108
41.00	1				264.38	7402-41X50	7400-8X108
42.00	1				264.38	7402-42X50	7400-8X108
43.00	1				264.38	7402-43X50	7400-8X108
44.00	1				264.38	7402-44X50	7400-8X108
45.00	1				264.38	7402-45X50	7400-8X108
46.00	1				271.69	7402-46X50	7400-8X108
47.00	1				271.69	7402-47X50	7400-8X108
48.00	1				271.69	7402-48X50	7400-8X108
49.00	1				271.69	7402-49X50	7400-8X108
50.00	1				271.69	7402-50X50	7400-8X108
51.00	1				285.25	7402-51X50	7400-8X108
52.00	1				285.25	7402-52X50	7400-8X108
53.00	1						
54.00	1						
55.00	1				285.25	7402-55X50	7400-8X108
56.00	1						
57.00	1						
58.00	1						
59.00	1				301.33	7402-59X50	7400-8X108
60.00	1				301.33	7402-60X50	7400-8X108





GROUP	ANLL	ANLL
DESCRIPTION	TCT ANNULAR CUTTER	TCT ANNULAR CUTTER
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
CUTTING DEPTH	75.0MM	100.0MM
PACKAGING	HANG SELL	HANG SELL

DIAMETER MM	PACK QTY	\$ EACH	PART NUMBER	PIN PART NUMBER	\$ EACH	PART NUMBER	PIN PART NUMBER
12.00	1						
13.00	1						
14.00	1						
15.00	1						
16.00	1						
17.00	1						
18.00	1	225.34	7402-18X75	7400-8X130	256.73	7402-18X100	7400-8X160
19.00	1	225.34	7402-19X75	7400-8X130	256.73	7402-19X100	7400-8X160
20.00	1	225.34	7402-20X75	7400-8X130	256.73	7402-20X100	7400-8X160
21.00	1	225.34	7402-21X75	7400-8X130	256.73	7402-21X100	7400-8X160
22.00	1	233.56	7402-22X75	7400-8X130	261.57	7402-22X100	7400-8X160
23.00	1	233.56	7402-23X75	7400-8X130	261.57	7402-23X100	7400-8X160
24.00	1	233.56	7402-24X75	7400-8X130	265.86	7402-24X100	7400-8X160
25.00	1	252.78	7402-25X75	7400-8X130	280.36	7402-25X100	7400-8X160
26.00	1	252.78	7402-26X75	7400-8X130	294.85	7402-26X100	7400-8X160
27.00	1	252.78	7402-27X75	7400-8X130	309.32	7402-27X100	7400-8X160
28.00	1	252.78	7402-28X75	7400-8X130	309.32	7402-28X100	7400-8X160
29.00	1	252.78	7402-29X75	7400-8X130	314.55	7402-29X100	7400-8X160
30.00	1	263.44	7402-30X75	7400-8X130	314.55	7402-30X100	7400-8X160
31.00	1	263.44	7402-31X75	7400-8X130	314.55	7402-31X100	7400-8X160
32.00	1	277.89	7402-32X75	7400-8X130	314.55	7402-32X100	7400-8X160
33.00	1	282.34	7402-33X75	7400-8X130	329.03	7402-33X100	7400-8X160
34.00	1	291.15	7402-34X75	7400-8X130	331.92	7402-34X100	7400-8X160
35.00	1	300.18	7402-35X75	7400-8X130	331.92	7402-35X100	7400-8X160
36.00	1	311.24	7402-36X75	7400-8X130	345.82	7402-36X100	7400-8X160
37.00	1	316.03	7402-37X75	7400-8X130	345.82	7402-37X100	7400-8X160
38.00	1	318.16	7402-38X75	7400-8X130	345.82	7402-38X100	7400-8X160
39.00	1	318.16	7402-39X75	7400-8X130	345.82	7402-39X100	7400-8X160
40.00	1	318.16	7402-40X75	7400-8X130	345.82	7402-40X100	7400-8X160
41.00	1	359.81	7402-41X75	7400-8X130	354.86	7402-41X100	7400-8X160
42.00	1	359.81	7402-42X75	7400-8X130	363.89	7402-42X100	7400-8X160
43.00	1	359.81	7402-43X75	7400-8X130	372.93	7402-43X100	7400-8X160
44.00	1	365.67	7402-44X75	7400-8X130	381.97	7402-44X100	7400-8X160
45.00	1	368.67	7402-45X75	7400-8X130	391.00	7402-45X100	7400-8X160
46.00	1	374.75	7402-46X75	7400-8X130	400.05	7402-46X100	7400-8X160
47.00	1	381.30	7402-47X75	7400-8X130	409.08	7402-47X100	7400-8X160
48.00	1	387.40	7402-48X75	7400-8X130	414.41	7402-48X100	7400-8X160
49.00	1	392.36	7402-49X75	7400-8X130	419.74	7402-49X100	7400-8X160
50.00	1	397.66	7402-50X75	7400-8X130	425.07	7402-50X100	7400-8X160
51.00	1	401.99	7402-51X75	7400-8X130	430.40	7402-51X100	7400-8X160
52.00	1	404.49	7402-52X75	7400-8X130	435.73	7402-52X100	7400-8X160
53.00	1	404.49	7402-53X75	7400-8X130	441.06	7402-53X100	7400-8X160
54.00	1	404.49	7402-54X75	7400-8X130	446.38	7402-54X100	7400-8X160
55.00	1	404.49	7402-55X75	7400-8X130	451.71	7402-55X100	7400-8X160
56.00	1	409.67	7402-56X75	7400-8X130	457.04	7402-56X100	7400-8X160
57.00	1	414.84	7402-57X75	7400-8X130	465.16	7402-57X100	7400-8X160
58.00	1	420.03	7402-58X75	7400-8X130	470.47	7402-58X100	7400-8X160
59.00	1	425.20	7402-59X75	7400-8X130	487.85	7402-59X100	7400-8X160
60.00	1	430.38	7402-60X75	7400-8X130	505.24	7402-60X100	7400-8X160

**HSS  
ANNULAR  
CUTTER PINS**

Annular Cutter Pins perform three functions:

**Centering**

The pilot pin accurately centres the cutter over the area to be drilled.

**Cutting Lubricant**

During drilling, the pilot pin retracts and allows internal coolant to reach the cutting teeth.

**Slug Ejection**

When hole cutting is complete, the slug is automatically ejected from the cutter.



**PINS SOLD  
SEPARATELY**

See page 216



# ANNULAR CUTTERS

HSS & TCT

ACCESSORIES

## HSS ANNULAR CUTTER PINS

Annular Cutter Pins perform three functions:

### Centering

The pilot pin accurately centres the cutter over the area to be drilled.

### Cutting Lubricant

During drilling, the pilot pin retracts and allows internal coolant to reach the cutting teeth.

### Slug Ejection

When hole cutting is complete, the slug is automatically ejected from the cutter.



PINS TO SUIT  
HSS CUTTERS

GROUP	ANLR	ANLR	ANLR	ANLR
TO SUIT	HSS ANNULAR CUTTER	HSS ANNULAR CUTTER	HSS ANNULAR CUTTER	HSS ANNULAR CUTTER
CUTTER DEPTH	25.0MM	50.0MM	75.0MM	100.0MM
CUTTER SIZE RANGE	12.0 – 52.0MM	12.0 – 55.0MM	18.0 – 50.0MM	18.0 – 60.0MM
PACKAGING	BULK & HANG SELL	BULK & HANG SELL	BULK	BULK

ANNULAR CUTTER PINS	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
77MM – BULK	7.21	7400-1/4X77						
77MM – CLAM SHELL	8.52	7400-1/4X77S						
103MM – BULK			9.59	7400-1/4X103				
103MM – CLAM SHELL			10.92	7400-1/4X103S				
130MM – BULK					12.91	7400-8X130		
160MM – BULK							15.35	7400-8X160



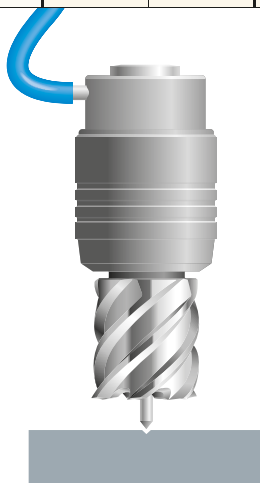
PINS TO SUIT  
TCT CUTTERS

GROUP	ANLR	ANLR	ANLR	ANLR
TO SUIT	TCT RAIL CUTTER	TCT ANNULAR CUTTER	TCT ANNULAR CUTTER	TCT ANNULAR CUTTER
CUTTER DEPTH	25.0MM	50.0MM	75.0MM	100.0MM
CUTTER SIZE RANGE	18.0 – 35.0MM	14.0 – 17.0MM	18.0 – 60.0MM	18.0 – 60.0MM
PACKAGING	BULK	BULK & HANG SELL	BULK	BULK

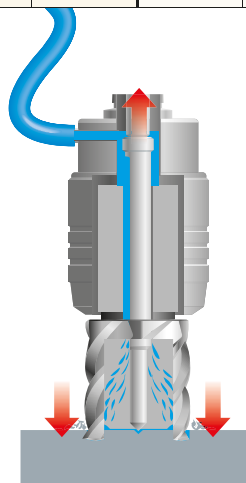
ANNULAR CUTTER PINS	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
77MM – BULK	12.91	7402-8X77								
103MM – BULK			9.59	7400-1/4X103						
103MM – CLAM SHELL			10.92	7400-1/4X103S						
108MM – BULK					12.98	7400-8X108				
130MM – BULK							12.91	7400-8X130		
160MM – BULK									15.35	7400-8X160



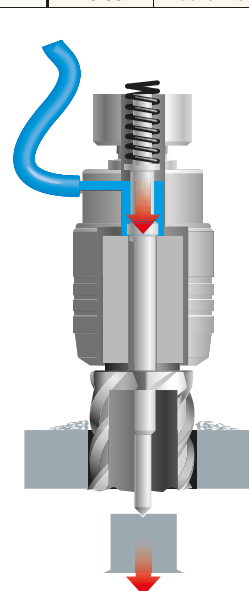
**Goliath**  
semi synthetic  
water soluble  
cutting fluid  
see page 153



Pin helps to centre cutter.



Retraction of pin allows cutting lubricant to flow to cutting edge.



Pin ejects plug from cutter.



GROUP	ANLL
DESCRIPTION	ANNULAR CUTTER ACCESSORIES
SHANK	3/4" WITH TWO FLATS
PACKAGING	HANG SELL

HSS DRILL – UNIVERSAL SHANK	\$ EACH	PART NUMBER
6.00MM – HSS 118° SPLIT POINT	43.11	7404-6
8.00MM – HSS 118° SPLIT POINT	46.99	7404-8
10.00MM – HSS 118° SPLIT POINT	48.14	7404-10
12.00MM – HSS 118° SPLIT POINT	54.21	7404-12
16.00MM – HSS 118° SPLIT POINT	64.23	7404-16

HSS COUNTERSINK – UNIVERSAL SHANK	\$ EACH	PART NUMBER
30MM 90° 3 FLUTE HSS COUNTERSINK	117.60	7405-30
40MM 90° 3 FLUTE HSS COUNTERSINK	156.99	7405-40
55MM 90° 3 FLUTE HSS COUNTERSINK	261.37	7405-55



GROUP	ANLL
DESCRIPTION	ANNULAR CUTTER ACCESSORIES
SHANK	UNIVERSAL
PACKAGING	HANG SELL

ADAPTORS AND EXTENSIONS	\$ EACH	PART NUMBER
ADAPTOR 3/4" UNIVERSAL MALE TO 1/2-20 MALE	34.34	7400-A3/4U-1/2
ADAPTOR 3/4" UNIVERSAL MALE TO 3/4" WELDON FEMALE 6MM PIN	38.23	7400-A3/4U-3/4W6
ADAPTOR 3/4" UNIVERSAL MALE TO 3/4" WELDON FEMALE 8MM PIN	38.23	7400-A3/4U-3/4W8
50MM EXTENSION 3/4" UNIVERSAL	39.97	7400-EXTX50
75MM EXTENSION 3/4" UNIVERSAL	45.46	7400-EXTX75
100MM EXTENSION 3/4" UNIVERSAL	54.43	7400-EXTX100

GROUP	ANLR
DESCRIPTION	ANNULAR CUTTER ACCESSORIES
PACKAGING	HANG SELL



ACCESSORY	\$ EACH	PART NUMBER
DRILL CHUCK	66.13	7400-DRILLCHUCK

34MM  
FLUTE  
LENGTH

# ANNULAR CUTTERS

HSS

SETS

MULTI-CUT GEOMETRY  
SMOOTH AND FAST CUTTING

## HSS ANNULAR CUTTERS

Annular Cutters achieve burr-free finished holes without the need for pre-drilling or step drilling. Faster and more accurate than using standard HSS twist drills.

Bordo Annular Cutters are CNC ground and feature multi-cut geometry for smooth and fast cutting. The precision ground flutes run the entire length of the cutter providing efficient chip removal.

### FEATURES

- Increased cutting speed.
- Reduced tooth load.
- Minimized tool wear.
- Extended tool life.
- Close tolerance drilling without runout.
- Reamed quality, burr free finished holes.
- Resharpenable.

Bordo Annular Cutters feature a 3/4" universal shank that suits most standard machines including Hougén®, Slugger®, Rotabroach®, Rotabest® and Nitto®.

NEW SETS



GROUP	ANLR	ANLR
TYPE	HSS ANNULAR CUTTER	HSS ANNULAR CUTTER
MATERIAL	HSS-M2 AL	HSS-M2 AL
CUTTING DEPTH	25.0MM	50.0MM
PACKAGING	BLOW MOULDED SET BOX	BLOW MOULDED SET BOX



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
25MM ANNULAR CUTTER SET – 7 PCE	400.21	7400-S1X25		
50MM ANNULAR CUTTER SET – 7 PCE			503.33	7400-S1X50

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	HSS ANNULAR CUTTER 14MM	7400-14X25	HSS ANNULAR CUTTER 14MM	7400-14X50
	HSS ANNULAR CUTTER 16MM	7400-16X25	HSS ANNULAR CUTTER 16MM	7400-16X50
	HSS ANNULAR CUTTER 18MM	7400-18X25	HSS ANNULAR CUTTER 18MM	7400-18X50
	HSS ANNULAR CUTTER 20MM	7400-20X25	HSS ANNULAR CUTTER 20MM	7400-20X50
	HSS ANNULAR CUTTER 22MM	7400-22X25	HSS ANNULAR CUTTER 22MM	7400-22X50
	HSS ANNULAR CUTTER 26MM	7400-26X25	HSS ANNULAR CUTTER 26MM	7400-26X50
	PIN TO SUIT 25MM DEEP CUTTERS	7400-1/4X77	PIN TO SUIT 50MM DEEP CUTTERS	7400-1/4X103



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
25MM ANNULAR CUTTER SET – 4 PCE	195.35	7400-S2X25		
50MM ANNULAR CUTTER SET – 4 PCE			247.13	7400-S2X50

SET CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	HSS ANNULAR CUTTER 14MM	7400-14X25	HSS ANNULAR CUTTER 14MM	7400-14X50
	HSS ANNULAR CUTTER 18MM	7400-18X25	HSS ANNULAR CUTTER 18MM	7400-18X50
	HSS ANNULAR CUTTER 22MM	7400-22X25	HSS ANNULAR CUTTER 22MM	7400-22X50
	PIN TO SUIT 25MM DEEP CUTTERS	7400-1/4X77	PIN TO SUIT 50MM DEEP CUTTERS	7400-1/4X103

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GROUP	ANLR
MATERIAL	HSS-M2 AL
CUTTING DEPTH	25.0MM & 50.0MM
PACKAGING	BENCH AND HANG SELL MERCHANDISERS



MERCHANDISER TYPE	\$ MERCH.	PART NUMBER	\$ MERCH.	PART NUMBER	\$ MERCH.	PART NUMBER	\$ MERCH.	PART NUMBER
BENCH MERCH – 25 & 50MM	2,324.54	7400-D2						
BENCH MERCH – 25MM			1,011.96	7400-D4				
BENCH MERCH – 50MM					1,312.58	7400-D5		
HANG SELL MERCH – 25 & 50MM							1,609.23	7400-D1

MERCHANDISER CONTENTS	DESC.	PART NUMBER	DESC.	PART NUMBER	DESC.	PART NUMBER	DESC.	PART NUMBER
	12MM X 25MM	7400-12X25	12MM X 25MM	7400-12X25	12MM X 50MM	7400-12X50	14MM X 25MM	7400-14X25
	13MM X 25MM	7400-13X25	13MM X 25MM	7400-13X25	13MM X 50MM	7400-13X50	16MM X 25MM	7400-16X25
	14MM X 25MM	7400-14X25	14MM X 25MM	7400-14X25	14MM X 50MM	7400-14X50	18MM X 25MM	7400-18X25
	16MM X 25MM	7400-16X25	16MM X 25MM	7400-16X25	16MM X 50MM	7400-16X50	20MM X 25MM	7400-20X25
	17MM X 25MM	7400-17X25	17MM X 25MM	7400-17X25	17MM X 50MM	7400-17X50	22MM X 25MM	7400-22X25
	18MM X 25MM	7400-18X25	18MM X 25MM	7400-18X25	18MM X 50MM	7400-18X50	24MM X 25MM	7400-24X25
	19MM X 25MM	7400-19X25	19MM X 25MM	7400-19X25	20MM X 50MM	7400-20X50	26MM X 25MM	7400-26X25
	20MM X 25MM	7400-20X25	20MM X 25MM	7400-20X25	22MM X 50MM	7400-22X50	30MM X 25MM	7400-30X25
	22MM X 25MM	7400-22X25	22MM X 25MM	7400-22X25	24MM X 50MM	7400-24X50	32MM X 25MM	7400-32X25
	24MM X 25MM	7400-24X25	24MM X 25MM	7400-24X25	25MM X 50MM	7400-25X50	14MM X 50MM	7400-14X50
	26MM X 25MM	7400-26X25	26MM X 25MM	7400-26X25	26MM X 50MM	7400-26X50	16MM X 50MM	7400-16X50
	28MM X 25MM	7400-28X25	28MM X 25MM	7400-28X25	28MM X 50MM	7400-28X50	18MM X 50MM	7400-18X50
	30MM X 25MM	7400-30X25	30MM X 25MM	7400-30X25	30MM X 50MM	7400-30X50	20MM X 50MM	7400-20X50
	32MM X 25MM	7400-32X25	32MM X 25MM	7400-32X25	32MM X 50MM	7400-32X50	22MM X 50MM	7400-22X50
	12MM X 50MM	7400-12X50	5 X PINS 77MM	7400-1/4X77	5 X PINS 103MM	7400-1/4X103	24MM X 50MM	7400-24X50
	13MM X 50MM	7400-13X50					26MM X 50MM	7400-26X50
	14MM X 50MM	7400-14X50					30MM X 50MM	7400-30X50
	16MM X 50MM	7400-16X50					32MM X 50MM	7400-32X50
	17MM X 50MM	7400-17X50					5 X PINS 103MM	7400-1/4X103S
	18MM X 50MM	7400-18X50					5 X PINS 77MM	7400-1/4X77S
	20MM X 50MM	7400-20X50						
	22MM X 50MM	7400-22X50						
	24MM X 50MM	7400-24X50						
	25MM X 50MM	7400-25X50						
	26MM X 50MM	7400-26X50						
	28MM X 50MM	7400-28X50						
	30MM X 50MM	7400-30X50						
	32MM X 50MM	7400-32X50						
	5 X PINS 103MM	7400-1/4X103						
	5 X PINS 77MM	7400-1/4X77						



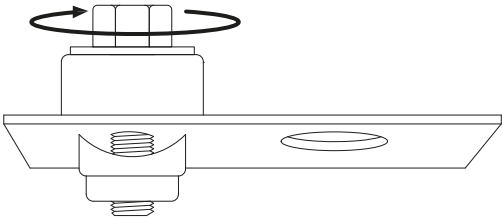
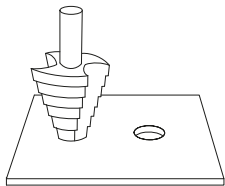
# SCREW PUNCHES

CHASSIS

HANG SELL



GROUP	SCWP
MATERIAL	CHROME ALLOY STEEL
CAPACITY - PLASTIC	8.0MM
CAPACITY - MILD STEEL	3.0MM
CAPACITY - STAINLESS STEEL	1.5MM
PACKAGING	CLAM SHELL



## SCREW (CHASSIS) PUNCH

A screw punch, also known as a chassis punch or a knockout punch, is used to punch a hole through sheet metal.

### USAGE

First drill a pilot hole in the sheet metal the same size as the bolt in the punch. For sizes 13mm and under a jobber drill may be used. For larger sizes use a Bordo step drill.

Place the die on to the bolt and then insert this assembly through the pilot hole. Wind the punch onto the bolt and tighten by hand until firm. Turn hex head of bolt with a socket, spanner or wrench until the punch is drawn completely through the sheet metal.

DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
12.70	1/2	1	63.46	7086-12.7
16.00	5/8	1	63.46	7086-16.0
19.00	3/4	1	70.36	7086-19.0
20.00	—	1	70.36	7086-20.0
22.00	7/8	1	77.24	7086-22.0
22.50	—	1	77.24	7086-22.5
25.00	—	1	77.24	7086-25.0
25.40	1	1	77.24	7086-25.4
28.30	—	1	77.24	7086-28.3
30.00	—	1	86.90	7086-30.0
32.00	1-1/4	1	86.90	7086-32.0
32.50	—	1	86.90	7086-32.5
35.00	1-3/8	1	106.21	7086-35.0
38.00	1-1/2	1	106.21	7086-38.0
40.00	—	1	131.05	7086-40.0
45.00	—	1	151.73	7086-45.0
48.00	1-7/8	1	158.65	7086-48.0
50.00	—	1	172.43	7086-50.0
51.00	2	1	172.43	7086-51.0

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
CHASSIS PUNCH – 6 PUNCHES	742.89	7086-D1

MERCHANDISER CONTENTS	DESCRIPTION	PART NUMBER
	PUNCH 20MM	7086-20.0
	PUNCH 22.5MM	7086-22.5
	PUNCH 25MM	7086-25.0
	PUNCH 32.5MM	7086-32.5
	PUNCH 40MM	7086-40.0
	PUNCH 50MM	7086-50.0
	M2 STEP DRILL	2602-M2





**tradecut®**  
**rapidcut®**  
**rapidcut®**  
**opticut®**  
**multicut®**  
**alucut®**  
**enduro® diamond PCD**

TIMBER – ALL TYPES, GENERAL PURPOSE, COMPETITIVE PRICE POINT.  
TIMBER – ALL TYPES, THIN KERF, FAST CUT.  
FIBRE CEMENT SHEET, TCT, LONG LIFE.  
TIMBER, THIN KERF, PRECISION PLATE, PREMIUM QUALITY TABLE SAW BLADES.  
TITANIUM CARBIDE, MULTIPLE MATERIALS, EXTREME PERFORMANCE.  
IDEAL FOR ALUMINIUM AND NON-FERROUS METALS.  
POLYCRYSTALLINE DIAMOND FOR FIBRE CEMENT SHEET – EXTREME BLADE LIFE.



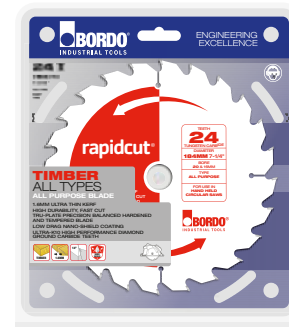
# **rapidcut**

High performance, ultra thin kerf timber blades from 140mm to 305mm.

Nano-shield coating reduces friction for reducing saw load, resists gumming keeping blade cooler and extending blade life, protects blade from corrosion.

Tru-plate fully hardened and tempered steel body is precision balanced to run truer.

Ultra K-10 high density, high performance diamond ground carbide teeth for extreme durability and cutting life.



GROUP	RSAW
PRODUCT	<b>RAPIDCUT</b>
SUITABLE FOR CUTTING	<b>TIMBER</b>
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	CLAM SHELL

DIAMETER MM INCH		TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
140	5-1/2	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
140	5-1/2	18	1.5	1.0	20	16, 10	FRAMING, RIPPING & CROSS CUTTING	1	31.71	7452-14018
140	5-1/2	24	1.5	1.0	20	16, 10	ALL PURPOSE	1	32.57	7452-14024
160	6-1/4	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
160	6-1/4	20	1.6	1.0	20	16	FRAMING, RIPPING & CROSS CUTTING	1	39.02	7452-16020
160	6-1/4	40	1.6	1.0	20	16	ALL PURPOSE	1	43.37	7452-16040
160	6-1/4	60	1.6	1.0	20	16	FINE CUT	1	47.72	7452-16060
184	7-1/4	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
184	7-1/4	16	1.6	1.0	20	16	FRAMING, RIPPING & CROSS CUTTING	1	34.54	7452-18416
184	7-1/4	20	1.6	1.0	20	16	FRAMING, RIPPING & CROSS CUTTING	1	37.02	7452-18420
184	7-1/4	24	1.6	1.0	20	16	ALL PURPOSE	1	38.36	7452-18424
184	7-1/4	40	1.6	1.0	20	16	ALL PURPOSE	1	46.27	7452-18440
184	7-1/4	60	1.6	1.0	20	16	FINE CUT	1	50.62	7452-18460
210	8-1/4	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
210	8-1/4	24	1.7	1.2	25	16	FRAMING, RIPPING & CROSS CUTTING	1	56.93	7452-21024
210	8-1/4	40	1.7	1.2	25	16	ALL PURPOSE	1	67.36	7452-21040
210	8-1/4	60	1.7	1.2	25	16	FINE CUT	1	73.46	7452-21060
235	9-1/4	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
235	9-1/4	20	1.9	1.4	25	16	FRAMING, RIPPING & CROSS CUTTING	1	73.82	7452-23520
235	9-1/4	40	1.9	1.4	25	16	ALL PURPOSE	1	83.39	7452-23540
235	9-1/4	60	1.9	1.4	25	16	FINE CUT	1	86.86	7452-23560
254	10	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
254	10	24	2.0	1.5	30	1", 25, 16	FRAMING, RIPPING & CROSS CUTTING	1	81.57	7452-25424
254	10	40	2.0	1.5	30	1", 25, 16	ALL PURPOSE	1	89.38	7452-25440
254	10	60	2.0	1.5	30	1", 25, 16	FINE CUT	1	100.70	7452-25460
254	10	80	2.0	1.5	30	1", 25, 16	FINE CUT, TRIM/FINISH	1	106.78	7452-25480
305	12	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
305	12	40	2.2	1.7	30	1", 25, 16	FRAMING, RIPPING & CROSS CUTTING	1	116.16	7452-30540
305	12	60	2.2	1.7	30	1", 25, 16	ALL PURPOSE	1	131.83	7452-30560
305	12	100	2.2	1.7	30	1", 25, 16	FINE CUT, TRIM/FINISH	1	142.68	7452-305100



GROUP	RSAW
PRODUCT	<b>RAPIDCUT</b>
SUITABLE FOR CUTTING	<b>TIMBER</b>
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	CLAM SHELL

**rapidcut**

High performance, ultra thin kerf timber blades from 140mm to 305mm. Nano-shield coating reduces friction for reducing saw load, resists gummying keeping blade cooler and extending blade life, protects blade from corrosion.

Tru-plate fully hardened and tempered steel body is precision balanced to run truer.

Ultra K-10 high density, high performance diamond ground carbide teeth for extreme durability and cutting life.

DIAMETER MM    INCH		TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
184	7-1/4	RAPIDCUT								
184	7-1/4	24 X 2	1.6	1.0	20	16	TWIN PACK 7452-18424 ALL PURPOSE BLADES X 2	1	72.89	7452-184S2
184	7-1/4	16/24	1.6	1.0	20	16	MULTI PACK - 2 BLADES 7452-18416 FRAMING, RIPPING, CROSS CUT 7452-18424 ALL PURPOSE	1	69.26	7452-184S1
184	7-1/4	40/60	1.6	1.0	20	16	MULTI PACK - 2 BLADES 7452-18440 ALL PURPOSE 7452-18460 FINE CUT	1	92.05	7452-184S4
184	7-1/4	16/24/40	1.6	1.0	20	16	MULTI PACK - 3 BLADES 7452-18416 FRAMING, RIPPING, CROSS CUT 7452-18424 ALL PURPOSE 7452-18440 ALL PURPOSE	1	105.64	7452-184S3
184	7-1/4	16/24/40/60	1.6	1.0	20	16	MULTI PACK - 4 BLADES 7452-18416 FRAMING, RIPPING, CROSS CUT 7452-18424 ALL PURPOSE 7452-18440 ALL PURPOSE 7452-18460 FINE CUT	1	147.36	7452-184S5



GROUP	RSAW
PRODUCT	<b>RAPIDCUT</b>
SUITABLE FOR CUTTING	<b>TIMBER</b>
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	10 PIECE DISPLAY BOX

DIAMETER		TEETH	KERF	BODY	BORE	BUSHES	DESCRIPTION	BOX QTY	\$ BOX	PART NUMBER
MM	INCH	#	MM	MM	MM	MM / INCH				
—	—	RAPIDCUT THIN KERF BLADE. TIMBER – ALL TYPES								
160	6-1/4	20	1.6	1.0	20	16	FRAMING, RIPPING & CROSS CUTTING	10	362.87	7452-16020T
184	7-1/4	24	1.6	1.0	20	16	ALL PURPOSE	10	356.71	7452-18424T
184	7-1/4	40	1.6	1.0	20	16	ALL PURPOSE	10	430.34	7452-18440T
235	9-1/4	20	1.9	1.4	25	16	FRAMING, RIPPING & CROSS CUTTING	10	686.52	7452-23520T



**tradecut**

High performance, tungsten carbide tipped timber blades from 160mm to 305mm.

Heavy duty anti-kickback tooth shoulders provide optimum support to the cutting tips ensuring maximum performance, extended blade life and safer cutting.

Fully hardened and tempered steel body resists warping even in the most demanding applications.

High performance diamond ground carbide teeth for improved cutting efficiency.



GROUP	TSAW
PRODUCT	<b>TRADECUT</b>
SUITABLE FOR CUTTING	<b>TIMBER</b>
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	CLAM SHELL

DIAMETER		TEETH	KERF	BODY	BORE	BUSHES	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
MM	INCH	#	MM	MM	MM	MM / INCH				
135	5-3/8	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
135	5-3/8	24	2.0	1.2	20	16, 10	ALL PURPOSE	1	14.45	7451-13524
160	6-1/4	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
160	6-1/4	24	2.5	1.5	20	19, 16	FRAMING, RIPPING & CROSS CUTTING	1	14.91	7451-16024
160	6-1/4	40	2.5	1.5	20	19, 16	ALL PURPOSE	1	19.12	7451-16040
184	7-1/4	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
184	7-1/4	16	2.5	1.5	20	16	FRAMING, RIPPING & CROSS CUTTING	1	18.21	7451-18416
184	7-1/4	24	2.5	1.5	20	16	ALL PURPOSE	1	18.46	7451-18424
184	7-1/4	40	2.5	1.5	20	16	ALL PURPOSE	1	21.68	7451-18440
184	7-1/4	60	2.5	1.5	20	16	FINE CUT	1	25.72	7451-18460
210	8-1/4	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
210	8-1/4	24	2.5	1.5	30	25, 20, 16	FRAMING, RIPPING & CROSS CUTTING	1	23.99	7451-21024
210	8-1/4	40	2.5	1.5	30	25, 20, 16	ALL PURPOSE	1	27.22	7451-21040
210	8-1/4	60	2.5	1.5	30	25, 20, 16	FINE CUT	1	31.70	7451-21060
216	8-1/2	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
216	8-1/2	40	2.4	1.6	30	25, 20, 16	ALL PURPOSE	1	27.90	7451-21640
216	8-1/2	60	2.4	1.6	30	25, 20, 16	FINE CUT	1	32.51	7451-21660
235	9-1/4	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
235	9-1/4	20	2.8	1.8	25	20, 16	FRAMING, RIPPING & CROSS CUTTING	1	30.80	7451-23520
235	9-1/4	40	2.8	1.8	25	20, 16	ALL PURPOSE	1	33.08	7451-23540
235	9-1/4	60	2.8	1.8	25	20, 16	FINE CUT	1	38.06	7451-23560
254	10	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
254	10	40	2.8	1.8	30	1", 25, 16	ALL PURPOSE	1	36.91	7451-25440
254	10	60	2.8	1.8	30	1", 25, 16	FINE CUT	1	41.76	7451-25460
254	10	80	2.8	1.8	30	1", 25, 16	FINE CUT, TRIM/FINISH	1	47.41	7451-25480
254	10	100	2.8	1.8	30	1", 25, 16	FINE CUT, TRIM/FINISH	1	52.24	7451-254100
260	10-1/4	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
260	10-1/4	40	2.6	1.8	30	1", 25, 16	ALL PURPOSE	1	37.71	7451-26040
260	10-1/4	60	2.6	1.8	30	1", 25, 16	FINE CUT	1	42.60	7451-26060
305	12	TRADECUT TCT BLADE. TIMBER – ALL TYPES								
305	12	60	3.2	2.2	30	1", 25, 16	FRAMING, RIPPING & CROSS CUTTING	1	62.80	7451-30560
305	12	80	3.2	2.2	30	1", 25, 16	ALL PURPOSE	1	69.26	7451-30580
305	12	100	3.2	2.2	30	1", 25, 16	FINE CUT, TRIM/FINISH	1	75.70	7451-305100



GROUP	TSAW
PRODUCT	TRADECUT
SUITABLE FOR CUTTING	TIMBER
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	CLAM SHELL

**tradecut**

High performance, tungsten carbide tipped timber blades from 160mm to 305mm.

Heavy duty anti-kickback tooth shoulders provide optimum support to the cutting tips ensuring maximum performance, extended blade life and safer cutting.

Fully hardened and tempered steel body resists warping even in the most demanding applications.

High performance diamond ground carbide teeth for improved cutting efficiency.

DIAMETER MM INCH		TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
184	7-1/4	TRADECUT MULTI PACKS TCT BLADE. TIMBER – ALL TYPES								
184	7-1/4	24/40	1.6	1.0	20	16	MULTI PACK - 2 BLADES	1	66.50	7451-184S2
							7451-18424 ALL PURPOSE			
							7451-18440 ALL PURPOSE			
184	7-1/4	16/24/40	1.6	1.0	20	16	MULTI PACK - 3 BLADES	1	82.24	7451-184S1
							7451-18416 FRAMING, RIPPING, CROSS CUT			
							7451-18424 ALL PURPOSE			
							7451-18440 ALL PURPOSE			



GROUP	TSAW
PRODUCT	TRADECUT
SUITABLE FOR CUTTING	TIMBER
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	10 PIECE DISPLAY BOX

DIAMETER		TEETH	KERF	BODY	BORE	BUSHES	DESCRIPTION	BOX QTY	\$ BOX	PART NUMBER
MM	INCH	#	MM	MM	MM	MM / INCH				
–	–	TRADECUT BULK DISPLAY BOXES TCT BLADE. TIMBER – ALL TYPES								
160	6-1/4	24	2.5	1.5	20	19, 16	FRAMING, RIPPING & CROSS CUTTING	10	123.89	7451-16024T
160	6-1/4	40	2.5	1.5	20	19, 16	ALL PURPOSE	10	159.40	7451-16040T
184	7-1/4	24	2.5	1.5	20	16	ALL PURPOSE	10	151.72	7451-18424T
184	7-1/4	40	2.5	1.5	20	16	ALL PURPOSE	10	184.02	7451-18440T
235	9-1/4	20	2.8	1.8	25	20, 16	FRAMING, RIPPING & CROSS CUTTING	10	248.63	7451-23520T
235	9-1/4	40	2.8	1.8	25	20, 16	ALL PURPOSE	10	274.41	7451-23540T

# CIRCULAR SAW BLADES

RAPIDCUT  
OPTICUT

## rapidcut cement sheet

High speed, low dust cutting in fibre cement and blue board. Available in 184mm.

Thin kerf design combined with a low tooth count ensures high speed cutting and reduced dust compared with continuous rim diamond blades.

Anti-kickback shoulders for extended blade life and safer cutting.

Designed to cut fibre cement sheet products as well as plasterboard, MDF, chipboard, plywood and plastic.

**rapidcut**

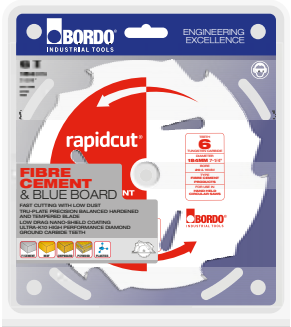
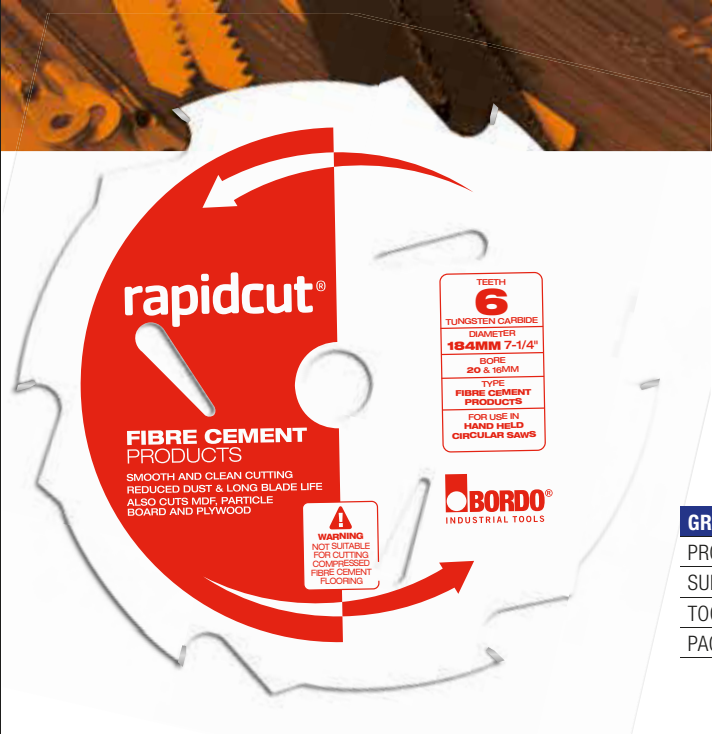
Optimum cutting thin kerf timber blades in 254mm and 305mm.

Thin kerf for fast, effortless cuts with reduced stock wastage.

High performance tooth geometries produce crisp, smooth cuts both with and across the grain, low feed resistance.

Tru-plate fully hardened and tempered steel body is precision balanced to run truer.

Ultra K-10 high density, high performance diamond ground carbide teeth for extreme durability and cutting life.



GROUP	RSAW
PRODUCT	RAPIDCUT
SUITABLE FOR CUTTING	CEMENT SHEET
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	CLAM SHELL

DIAMETER MM INCH		TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
184	7-1/4	RAPIDCUT THIN KERF BLADE, FIBRE CEMENT SHEET AND COMPOSITE TIMBER								
184	7-1/4	6	2.1	1.2	20	16	FIBRE CEMENT SHEET, BLUE BOARD, MDF, PARTICLE BOARD AND PLYWOOD	1	45.85	7456-1846



GROUP	OSAW
PRODUCT	OPTICUT
SUITABLE FOR CUTTING	TIMBER
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	CLAM SHELL

DIAMETER		TEETH	KERF	BODY	BORE	BUSHES	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
MM	INCH	#	MM	MM	MM	MM / INCH				
254	10	OPTICUT PRECISION THIN KERF BLADE. TIMBER – ALL TYPES								
254	10	24	2.4	1.8	30	1", 25, 16	FRAMING, RIPPING & CROSS CUTTING	1	89.57	7453-25424
254	10	40	2.4	1.8	30	1", 25, 16	ALL PURPOSE	1	107.83	7453-25440
254	10	60	2.4	1.8	30	1", 25, 16	FINE CUT	1	125.08	7453-25460
254	10	80	2.4	1.8	30	1", 25, 16	FINE CUT, TRIM/FINISH	1	142.32	7453-25480
305	12	OPTICUT PRECISION THIN KERF BLADE. TIMBER – ALL TYPES								
305	12	40	2.4	1.8	30	1", 25, 16	FRAMING, RIPPING & CROSS CUTTING	1	171.54	7453-30540
305	12	72	2.4	1.8	30	1", 25, 16	ALL PURPOSE	1	204.01	7453-30572
305	12	80	2.4	1.8	30	1", 25, 16	FINE CUT, TRIM/FINISH	1	209.08	7453-30580





GROUP	MSAW
PRODUCT	MULTICUT
SUITABLE FOR CUTTING	MULTIPLE MATERIALS
TOOTH TYPE	TITANIUM CARBIDE
PACKAGING	CLAM SHELL

### multicut

Fast clean cuts in timber, ferrous and non-ferrous metals, plastic, plaster and fibreglass from 103mm to 355mm.

Titanium carbide metal cutting teeth provide long blade life in the most demanding applications.

Heavy duty anti-kickback tooth shoulders provide optimum support to the cutting tips ensuring maximum performance, extended blade life and safer cutting.

Cool cutting with no heat, no burrs or dust and minimal sparks when cutting metal.

DIAMETER MM INCH	TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
<b>103</b>	<b>4</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
103	4	20	1.8	1.2	16	TIMBER, STEEL & ALUMINIUM	1	<b>47.51</b>	7450-10320
<b>115</b>	<b>4-1/2</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
115	4-1/2	20	1.8	1.2	22.2	TIMBER, STEEL & ALUMINIUM	1	<b>55.41</b>	7450-11520
<b>127</b>	<b>5</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
127	5	20	1.8	1.2	22.2	TIMBER, STEEL & ALUMINIUM	1	<b>54.91</b>	7450-12720
<b>135</b>	<b>5-1/2</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
135	5-1/2	30	1.8	1.2	20	TIMBER, STEEL & ALUMINIUM	1	<b>76.20</b>	7450-13530
<b>160</b>	<b>6-1/4</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
160	6-1/4	30	1.8	1.4	20	TIMBER, STEEL & ALUMINIUM	1	<b>93.67</b>	7450-16030
<b>184</b>	<b>7-1/4</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
184	7-1/4	36	1.8	1.4	20	TIMBER, STEEL & ALUMINIUM	1	<b>142.76</b>	7450-18436
184	7-1/4	60	1.8	1.4	20	TIMBER, STEEL & ALUMINIUM	1	<b>185.64</b>	7450-18460
<b>210</b>	<b>8-1/4</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
210	8-1/4	40	1.8	1.4	25	TIMBER, STEEL & ALUMINIUM	1	<b>189.68</b>	7450-21040
<b>230</b>	<b>9</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
230	9	48	1.8	1.4	25	TIMBER, STEEL & ALUMINIUM	1	<b>193.93</b>	7450-23048
230	9	60	1.8	1.4	25	TIMBER, STEEL & ALUMINIUM	1	<b>213.19</b>	7450-23060
<b>250</b>	<b>10</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
250	10	60	1.8	1.4	30	TIMBER, STEEL & ALUMINIUM	1	<b>216.45</b>	7450-25060
<b>300</b>	<b>12</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
300	12	60	2.2	1.8	30	TIMBER, STEEL & ALUMINIUM	1	<b>289.16</b>	7450-30060
<b>355</b>	<b>14</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
355	14	80	2.4	2.0	30	TIMBER, STEEL & ALUMINIUM	1	<b>412.41</b>	7450-35580



GROUP	MSAW
PRODUCT	MULTICUT
SUITABLE FOR CUTTING	MULTIPLE MATERIALS
TOOTH TYPE	TITANIUM CARBIDE
PACKAGING	10 PIECE DISPLAY BOX

DIAMETER MM INCH	TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	BOX QTY	\$ BOX	PART NUMBER
<b>127</b>	<b>5</b>	<b>MULTICUT</b> TIMBER, STEEL, ALUMINIUM – FERROUS & NON-FERROUS METALS, PLASTIC, TIMBER, PLASTER & FIBREGLASS							
127	5	20	1.8	1.2	22.2	TIMBER, STEEL & ALUMINIUM	10	<b>510.69</b>	7450-12720T



**WARNING  
BEWARE  
KICKBACK**

Use according to power tool manufacturer's instructions. Use of power tools with a blade guard and clutch is strongly recommended.



# CIRCULAR SAW BLADES

ALUCUT

HANG SELL

## alucut

Fast clean cuts in aluminium and non-ferrous metals including copper, brass, plastic and timber from 160mm to 355mm.

Triple chip tungsten carbide teeth for high performance smooth cutting.

Heavy duty thick steel plate hardened and tempered to ensure accurate cuts.

Smooth and fast cutting with solid stock in stationary and semi-stationary saws.

Negative rake angle eliminates self-feeding and reduces blade grab.



GROUP	ASAW
PRODUCT	ALUCUT
SUITABLE FOR CUTTING	NON-FERROUS METAL
TOOTH TYPE	TUNGSTEN CARBIDE
PACKAGING	CLAM SHELL

DIAMETER MM INCH		TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
160	6-1/4	ALUCUT ALUMINIUM CUTTING – NON-FERROUS METALS INCLUDING COPPER & BRASS, PLASTIC AND TIMBER								
160	6-1/4	60	2.0	1.4	20	16	ALUMINIUM & NON-FERROUS METALS	1	70.18	7454-16060
184	7-1/4	ALUCUT ALUMINIUM CUTTING – NON-FERROUS METALS INCLUDING COPPER & BRASS, PLASTIC AND TIMBER								
184	7-1/4	60	2.2	1.6	20	16	ALUMINIUM & NON-FERROUS METALS	1	86.78	7454-18460
216	8-1/2	ALUCUT ALUMINIUM CUTTING – NON-FERROUS METALS INCLUDING COPPER & BRASS, PLASTIC AND TIMBER								
216	8-1/2	80	2.2	1.6	30	25, 16	ALUMINIUM & NON-FERROUS METALS	1	126.98	7454-21680
235	9-1/4	ALUCUT ALUMINIUM CUTTING – NON-FERROUS METALS INCLUDING COPPER & BRASS, PLASTIC AND TIMBER								
235	9-1/4	80	2.6	2	25	20, 16	ALUMINIUM & NON-FERROUS METALS	1	136.86	7454-23580
254	10	ALUCUT ALUMINIUM CUTTING – NON-FERROUS METALS INCLUDING COPPER & BRASS, PLASTIC AND TIMBER								
254	10	60	2.8	2.2	30	1", 25, 16	ALUMINIUM & NON-FERROUS METALS	1	197.75	7454-25460
254	10	80	2.8	2.2	30	1", 25, 16	ALUMINIUM & NON-FERROUS METALS	1	155.04	7454-25480
254	10	100	2.8	2.2	30	1", 25, 16	ALUMINIUM & NON-FERROUS METALS	1	278.92	7454-254100
305	12	ALUCUT ALUMINIUM CUTTING – NON-FERROUS METALS INCLUDING COPPER & BRASS, PLASTIC AND TIMBER								
305	12	80	2.8	2.2	30	1", 25, 16	ALUMINIUM & NON-FERROUS METALS	1	195.74	7454-30580
305	12	100	2.8	2.2	30	1", 25, 16	ALUMINIUM & NON-FERROUS METALS	1	213.99	7454-305100
355	14	ALUCUT ALUMINIUM CUTTING – NON-FERROUS METALS INCLUDING COPPER & BRASS, PLASTIC AND TIMBER								
355	14	100	3.0	2.4	30	1", 25, 16	ALUMINIUM & NON-FERROUS METALS	1	290.46	7454-355100



## ALWAYS

Use a suitable lubricant when cutting aluminium.

GROUP	GCFL		
PRODUCTS	CUTTING LUBRICANTS		
DESCRIPTION	SIZE	\$ STICK	PART NUMBER
RELTON STICK-KUT			
WAX LUBRICANT FOR GRINDING WHEELS, SANDING BELTS & SAW BLADES	15 OUNCE	24.34	CFSK150Z





GROUP	PSAW
PRODUCT	ENDURO PCD
SUITABLE FOR CUTTING	FIBRE CEMENT SHEET (FCS)
TOOTH TYPE	DIAMOND
PACKAGING	CLAM SHELL

### enduro PCD fibre cement

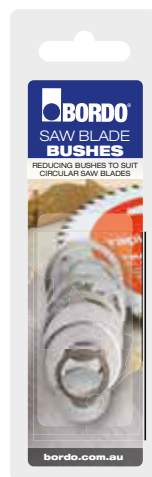
High speed, low dust cutting in fibre cement and blue board. Available in 160mm to 305mm.

Extremely hard and durable polycrystalline diamond (PCD) teeth for extreme blade life.

Thin kerf design combined with a low tooth count ensures high speed cutting and reduced dust compared with continuous rim diamond blades.

Designed to cut fibre cement products, plasterboard, MDF, chipboard, plywood and plastic.

DIAMETER MM INCH	TEETH #	KERF MM	BODY MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
160 6-1/4	<b>ENDURO POLYCRYSTALLINE DIAMOND</b> CEMENT SHEET – PLASTERBOARD, MDF, CHIPBOARD, PLYWOOD & PLASTIC								
160 6-1/4	4	1.8	1.2	20	16	CEMENT SHEET	1	<b>128.37</b>	7455-1604
184 7-1/4	<b>ENDURO POLYCRYSTALLINE DIAMOND</b> CEMENT SHEET – PLASTERBOARD, MDF, CHIPBOARD, PLYWOOD & PLASTIC								
184 7-1/4	4	1.8	1.2	20	16	CEMENT SHEET	1	<b>134.71</b>	7455-1844
235 9-1/4	<b>ENDURO POLYCRYSTALLINE DIAMOND</b> CEMENT SHEET – PLASTERBOARD, MDF, CHIPBOARD, PLYWOOD & PLASTIC								
235 9-1/4	6	2.2	1.6	25	20, 16	CEMENT SHEET	1	<b>207.40</b>	7455-2356
254 10	<b>ENDURO POLYCRYSTALLINE DIAMOND</b> CEMENT SHEET – PLASTERBOARD, MDF, CHIPBOARD, PLYWOOD & PLASTIC								
254 10	6	2.2	1.6	30	1", 25, 16	CEMENT SHEET	1	<b>212.42</b>	7455-2546
305 12	<b>ENDURO POLYCRYSTALLINE DIAMOND</b> CEMENT SHEET – PLASTERBOARD, MDF, CHIPBOARD, PLYWOOD & PLASTIC								
305 12	8	2.4	1.6	30	1", 25, 16	CEMENT SHEET	1	<b>286.17</b>	7455-3058



GROUP	RSAW
SUITS	ALL CIRCULAR SAW BLADES
PACKAGING	CLAM SHELL

DESCRIPTION	\$ PACK	PART NUMBER
<b>SAW BLADE BUSHES</b> REDUCING BUSHES TO SUIT CIRCULAR SAW BLADES		
30MM–1", 30MM–25MM, 30MM–16MM, 25MM–22.2MM, 25MM–20MM, 25MM–16MM, 20MM–16MM, 20MM–10MM	<b>6.79</b>	7452-BA



# enduro diamond®

## BLADE SELECTION

MATERIAL	TRADECUT	BLADE COLOUR / TYPE			
		BLACK	BLUE	GREEN	RED
ASPHALT	—	—	—	✓✓✓	—
BLUESTONE BASALT	✓✓	✓✓	✓✓	—	✓✓✓
BRICK HARD CLAY	✓✓	✓✓	✓✓	—	✓✓✓
BRICK FIRE	✓✓	✓	✓✓	—	✓✓✓
CEMENT SHEET	✓✓	✓	✓✓	✓✓✓	—
CONCRETE CURED	✓✓✓	✓	✓✓✓	—	✓✓
CONCRETE GREEN	—	—	—	✓✓✓	—
CONCRETE LIGHT WEIGHT	✓	—	—	✓✓✓	—
CONCRETE BLOCK (BESSER)	✓✓	✓	✓✓	✓✓✓	✓✓
CONCRETE REINFORCED	✓✓✓	✓✓	✓✓✓	✓✓	—
CONCRETE HEBEL®	✓✓✓	✓	✓✓✓	✓✓	—
CONCRETE PIPE	✓✓✓	✓✓	✓✓✓	✓✓	—
FIBREGLOSS	✓✓✓	✓✓	✓✓✓	—	—
GRANITE	✓✓	✓	✓✓	—	✓✓✓
LIMESTONE	✓	—	—	✓✓✓	—
MARBLE	✓✓	✓	✓✓	—	✓✓✓
PLASTIC REINFORCED	✓✓✓	✓✓	✓✓✓	—	—
PORCELAIN	✓✓✓	✓✓	✓✓✓	—	—
SANDSTONE	✓	—	—	✓✓✓	—
SLATE	✓✓✓	✓✓	✓✓✓	✓✓	—
TILES CONCRETE	✓✓	—	✓✓	✓✓✓	—
TILES TERRACOTTA	✓✓✓	✓✓	✓✓✓	—	—
TILES CERAMIC	✓✓✓	✓✓	✓✓✓	✓✓	—
WALL CHASING BRICK	✓✓	✓✓✓	—	✓✓	—
WALL CHASING CONCRETE	✓✓✓	✓✓	✓✓✓	—	—
WALL CHASING RENDERED	✓✓	✓	✓✓	✓✓✓	—

GOOD  
BETTER  
BEST



PRO **HD** BLADE  
HIGH DIAMOND DENSITY



GROUP	SDIA
PRODUCT	ENDURO DIAMOND
TYPE	GENERAL PURPOSE
RIM TYPE	CONTINUOUS
PACKAGING	CLAM SHELL

**DIAMOND SAW  
BLADE TYPES****SEGMENTED**

Segmented blades typically have medium to hard bonds for a range of wet and dry cutting applications. These blades offer a relatively smooth cut combined with a fast cutting speed however some chipping may occur. They are durable and have a long blade life compared to other blades.

The spaces between the segments (gullets) improve air flow, dissipate heat, and remove slurry from the cut, helping to optimise the blade's cutting performance. The size and shape of the gullets vary from blade to blade and will depend on the type of material the blade is designed to cut.

**CONTINUOUS RIM**

Continuous rim blades have softer bonds for cutting hard materials such as tile, porcelain, granite, stone, glass, and other materials that can chip easily. These blades don't have individual segments but instead have a solid, continuous rim or edge. Most continuous rim blades are designed for wet cutting applications, providing the smoothest, chip free cuts.

**TURBO RIM**

Turbo blades typically have soft to medium bonds for a variety of general purpose to specific cutting applications. Turbo blades feature a continuous rim with an edge that is serrated. This serrated edge is designed to give the blade faster cutting speeds while maintaining a smooth cut, combining the best qualities from both segmented and continuous rim blades.

DIAMETER MM INCH	RIM TYPE	SEG. HEIGHT MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
103 4	CONTINUOUS	7	20	—	CONTINUOUS RIM GENERAL PURPOSE	1	28.79	7460-103
115 4-1/2	CONTINUOUS	7	22.2	—	CONTINUOUS RIM GENERAL PURPOSE	1	32.40	7460-115
125 5	CONTINUOUS	7	22.2	—	CONTINUOUS RIM GENERAL PURPOSE	1	39.71	7460-125
150 6	CONTINUOUS	7	20	—	CONTINUOUS RIM GENERAL PURPOSE	1	64.00	7460-150
180 7	CONTINUOUS	7	22.2	20	CONTINUOUS RIM GENERAL PURPOSE	1	72.56	7460-180
200 8	CONTINUOUS	7	25	22.2	CONTINUOUS RIM GENERAL PURPOSE	1	88.18	7460-200
230 9	CONTINUOUS	7	25	22.2	CONTINUOUS RIM GENERAL PURPOSE	1	116.19	7460-230
250 10	CONTINUOUS	7	25	—	CONTINUOUS RIM GENERAL PURPOSE	1	152.41	7460-250



GROUP	SDIA
PRODUCT	ENDURO DIAMOND
TYPE	ULTRA THIN 1.2MM
RIM TYPE	TURBO ACTION
PACKAGING	CLAM SHELL

DIAMETER MM INCH	RIM TYPE	SEG. HEIGHT MM	BORE MM	BUSHES MM / INCH	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
103 4	TURBO ACTION	12	16	—	CONTINUOUS RIM GENERAL PURPOSE	1	33.63	7461-103
125 5	TURBO ACTION	12	22.2	—	CONTINUOUS RIM GENERAL PURPOSE	1	48.71	7461-125



DIAMOND  
SAW BLADES

GENERAL  
INFORMATION

Diamond blades do not cut, they actually grind through the material by exposing new diamond at the right moment just before the old diamond wears away. The newly exposed diamonds again will wear, chip, or break out of the metal bond in the segment, while the metal bond gradually wears away to expose new diamond. This process is repeated over and over until there is no diamond remaining and the blade is worn out. Ideally and to get the maximum life out of a diamond blade, the metal should wear away at just the right time to expose new diamond for optimum cutting performance.

- If the metal wears away too quickly, the diamonds are exposed to soon and get torn out of the metal bond before they are fully worn. The result is a very short blade life.
- If the metal wears away too slowly, the diamonds wear away before new diamond is exposed. This is often referred to as a "glazed blade". Without exposed diamond the blade will not cut.

Abrasive materials like green concrete and asphalt will wear the metal bond very fast, so blades for these materials have a much harder metal bond to resist this abrasion. The opposite occurs on a hard clay paver. The clay paver is not abrasive enough to wear the metal bond fast enough to expose fresh diamond, therefore a different and much softer alloy is needed for cutting these types of materials.

The single most important factor for the life of the blade is to match it to the job application and the type of equipment it is being used on.



GROUP	SDIA
PRODUCT	ENDURO DIAMOND
TYPE	GENERAL PURPOSE
RIM TYPE	SUPER TURBO
PACKAGING	CLAM SHELL

DIAMETER MM	INCH	RIM TYPE	SEG. HEIGHT MM	BORE MM	BUSHES MM	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
103	4	SUPER TURBO	7	16	—	SUPER TURBO FAST CUT GENERAL PURPOSE	1	31.16	7462-103
115	4-1/2	SUPER TURBO	7	22.2	—	SUPER TURBO FAST CUT GENERAL PURPOSE	1	37.91	7462-115
125	5	SUPER TURBO	7	22.2	—	SUPER TURBO FAST CUT GENERAL PURPOSE	1	45.44	7462-125
180	7	SUPER TURBO	7	22.2	20	SUPER TURBO FAST CUT GENERAL PURPOSE	1	73.11	7462-180
230	9	SUPER TURBO	7	25	22.2	SUPER TURBO FAST CUT GENERAL PURPOSE	1	105.27	7462-230



GROUP	LDIA
PRODUCT	ENDURO DIAMOND
TYPE	HARD BRICK/MASONRY
RIM TYPE	SEGMENTED
BORE WITH PIN HOLE	YES
PACKAGING	CLAM SHELL

DIAMETER MM	INCH	RIM TYPE	SEG. HEIGHT MM	BORE INCH	BUSHES MM	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
350	14	SEGMENTED	10	1"	20	SEGMENTED RIM HARD BRICK & MASONRY	1	505.25	7468-350



GROUP	SDIA
PRODUCT	ENDURO DIAMOND
TYPE	GENERAL PURPOSE
RIM TYPE	SEGMENTED
PACKAGING	CLAM SHELL

**DIAMOND SAW  
BLADE TYPES****SEGMENTED**

Segmented blades typically have medium to hard bonds for a range of wet and dry cutting applications. These blades offer a relatively smooth cut combined with a fast cutting speed however some chipping may occur. They are durable and have a long blade life compared to other blades.

The spaces between the segments (gullets) improve air flow, dissipate heat, and remove slurry from the cut, helping to optimise the blade's cutting performance. The size and shape of the gullets vary from blade to blade and will depend on the type of material the blade is designed to cut.

**CONTINUOUS RIM**

Continuous rim blades have softer bonds for cutting hard materials such as tile, porcelain, granite, stone, glass, and other materials that can chip easily. These blades don't have individual segments but instead have a solid, continuous rim or edge. Most continuous rim blades are designed for wet cutting applications, providing the smoothest, chip free cuts.

**TURBO RIM**

Turbo blades typically have soft to medium bonds for a variety of general purpose to specific cutting applications. Turbo blades feature a continuous rim with an edge that is serrated. This serrated edge is designed to give the blade faster cutting speeds while maintaining a smooth cut, combining the best qualities from both segmented and continuous rim blades.

DIAMETER MM INCH	RIM TYPE	SEG. HEIGHT MM	BORE MM	BUSHES MM	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
103 4	SEGMENTED	7	16	—	SEGMENTED RIM GENERAL PURPOSE	1	31.16	7464-103
115 4-1/2	SEGMENTED	7	22.2	—	SEGMENTED RIM GENERAL PURPOSE	1	37.91	7464-115
125 5	SEGMENTED	7	22.2	—	SEGMENTED RIM GENERAL PURPOSE	1	45.44	7464-125
150 6	SEGMENTED	7	20	—	SEGMENTED RIM GENERAL PURPOSE	1	73.11	7464-150
230 9	SEGMENTED	7	25	22.2	SEGMENTED RIM GENERAL PURPOSE	1	105.27	7464-230



GROUP	LDIA
PRODUCT	ENDURO DIAMOND
TYPE	GENERAL PURPOSE
RIM TYPE	SEGMENTED
BORE WITH PIN HOLE	YES
PACKAGING	CLAM SHELL

DIAMETER MM INCH	RIM TYPE	SEG. HEIGHT MM	BORE INCH	BUSHES MM	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
300 12	SEGMENTED	10	1"	20	SEGMENTED RIM GENERAL PURPOSE	1	284.57	7467-300
350 14	SEGMENTED	10	1"	20	SEGMENTED RIM GENERAL PURPOSE	1	380.74	7467-350
400 16	SEGMENTED	10	1"	20	SEGMENTED RIM GENERAL PURPOSE	1	507.73	7467-400
450 18	SEGMENTED	10	1"	20	SEGMENTED RIM GENERAL PURPOSE	1	593.88	7467-450
500 20	SEGMENTED	10	1"	20	SEGMENTED RIM GENERAL PURPOSE	1	735.15	7467-500



DIAMOND  
SAW BLADES

GENERAL  
INFORMATION

Diamond blades do not cut, they actually grind through the material by exposing new diamond at the right moment just before the old diamond wears away. The newly exposed diamonds again will wear, chip, or break out of the metal bond in the segment, while the metal bond gradually wears away to expose new diamond. This process is repeated over and over until there is no diamond remaining and the blade is worn out. Ideally and to get the maximum life out of a diamond blade, the metal should wear away at just the right time to expose new diamond for optimum cutting performance.

- If the metal wears away too quickly, the diamonds are exposed to soon and get torn out of the metal bond before they are fully worn. The result is a very short blade life.
- If the metal wears away too slowly, the diamonds wear away before new diamond is exposed. This is often referred to as a "glazed blade". Without exposed diamond the blade will not cut.

Abrasive materials like green concrete and asphalt will wear the metal bond very fast, so blades for these materials have a much harder metal bond to resist this abrasion. The opposite occurs on a hard clay paver. The clay paver is not abrasive enough to wear the metal bond fast enough to expose fresh diamond, therefore a different and much softer alloy is needed for cutting these types of materials.

The single most important factor for the life of the blade is to match it to the job application and the type of equipment it is being used on.



GROUP	SDIA
PRODUCT	ENDURO DIAMOND
TYPE	GREEN CONCRETE/ASPHALT
RIM TYPE	SEGMENTED
PACKAGING	CLAM SHELL

DIAMETER MM	INCH	RIM TYPE	SEG. HEIGHT MM	BORE MM	BUSHES MM	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
103	4	SEGMENTED	8	16	—	SEGMENTED RIM GREEN CONCRETE	1	37.23	7465-103
125	5	SEGMENTED	8	22.2	—	SEGMENTED RIM GREEN CONCRETE	1	61.75	7465-125
150	6	SEGMENTED	8	20	—	SEGMENTED RIM GREEN CONCRETE	1	93.36	7465-150
180	7	SEGMENTED	8	22.2	20	SEGMENTED RIM GREEN CONCRETE	1	110.12	7465-180
230	9	SEGMENTED	8	25	22.2	SEGMENTED RIM GREEN CONCRETE	1	151.85	7465-230



GROUP	LDIA
PRODUCT	ENDURO DIAMOND
TYPE	GREEN CONCRETE/ASPHALT
RIM TYPE	SEGMENTED
BORE WITH PIN HOLE	YES
PACKAGING	CLAM SHELL

DIAMETER MM	INCH	RIM TYPE	SEG. HEIGHT MM	BORE INCH	BUSHES MM	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
300	12	SEGMENTED	10	1"	20	SEGMENTED RIM GREEN CONCRETE	1	332.94	7466-300
350	14	SEGMENTED	10	1"	20	SEGMENTED RIM GREEN CONCRETE	1	427.42	7466-350
400	16	SEGMENTED	10	1"	20	SEGMENTED RIM GREEN CONCRETE	1	573.64	7466-400
450	18	SEGMENTED	10	1"	20	SEGMENTED RIM GREEN CONCRETE	1	708.61	7466-450
500	20	SEGMENTED	10	1"	20	SEGMENTED RIM GREEN CONCRETE	1	877.33	7466-500



GROUP	CDIA	CDIA	CDIA
PRODUCT	ENDURO DIAMOND	ENDURO DIAMOND	ENDURO DIAMOND
TYPE	CUP WHEEL	CUP WHEEL	CUP WHEEL
STYLE	SINGLE ROW	DOUBLE ROW (UNIVERSAL)	TURBO
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL

**ENDURO  
DIAMOND  
CUP WHEELS**

**SINGLE ROW**

Economical cup wheel for flat grinding with fast material removal – ideal for removing imperfections in cured concrete. 103, 125 & 180mm diameters.

- Extreme diamond count.
- Maximum material removal.
- Dry grinding.

**UNIVERSAL  
(DOUBLE ROW)**

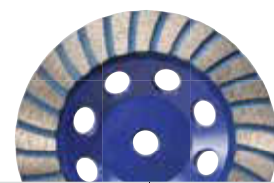
Long life cup wheel for flat grinding with a smooth high quality finish – ideal for removing imperfections in cured concrete. 103, 125 & 180mm diameters.

- Extreme diamond count.
- Smooth high quality finish.
- Dry grinding.

**TURBO**

For light grinding, shaping and finishing in concrete, stone and general masonry. Improved cooling for increased cup life. 103, 125 & 180mm diameters.

- Extreme diamond count.
- Ideal for removing formwork seams and imperfections in concrete and stone.



DIAMETER MM	DIAMETER INCH	BORE TYPE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
103	4	M10	1	76.48	7469-103SR	105.73	7469-103DR	94.48	7469-103T
125	5	M14	1	107.98	7469-125SR	146.22	7469-125DR	150.72	7469-125T
180	7	M14	1	184.46	7469-180SR	263.20	7469-180DR	191.21	7469-180T



GROUP	TSAW
PRODUCT	ENDURO DIAMOND
TYPE	TRADECUT
RIM TYPE	SEGMENTED
PACKAGING	CLAM SHELL

DIAMETER MM	DIAMETER INCH	RIM TYPE	SEG. HEIGHT MM	BORE INCH	BUSHES MM	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
350	14	SEGMENTED	10	1"	20	TRADECUT GENERAL PURPOSE	1	199.78	7470-350
400	16	SEGMENTED	10	1"	20	TRADECUT GENERAL PURPOSE	1	266.41	7470-400



GROUP	—	
TYPE	CIRCULAR SAW BLADE	DIAMOND CIRCULAR SAW BLADE
BLADE TYPE	TUNGSTEN CARBIDE / PCD	DIAMOND
PACKAGING	HANG SELL MERCHANDISER	HANG SELL MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
TCT / PCD MERCH – 60 SAW BLADES	4,404.24	7450-D1		
DIAMOND MERCH – 30 SAW BLADES			4,537.73	7460-D1

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER	QTY	DESCRIPTION	PART NUMBER
	2	MULTICUT 103MM 20T	7450-10320	2	DIA. CONT. RIM 103MM	7460-103
	2	MULTICUT 115MM 20T	7450-11520	2	DIA. CONT. RIM 125MM	7460-125
	2	MULTICUT 127MM 20T	7450-12720	1	DIA. CONT. RIM 180MM	7460-180
	2	MULTICUT 184MM 36T	7450-18436	1	DIA. CONT. RIM 230MM	7460-230
	2	ALUCUT 184MM 60T	7454-18460	2	DIA. ULTRA THIN 103MM	7461-103
	2	RAPIDCUT 140MM 24T	7452-14024	2	DIA. ULTRA THIN 125MM	7461-125
	2	RAPIDCUT 160MM 20T	7452-16020	2	DIA. SUPER TURBO 103MM	7462-103
	2	RAPIDCUT 160MM 40T	7452-16040	2	DIA. SUPER TURBO 125MM	7462-125
	4	RAPIDCUT 184MM 16T	7452-18416	1	DIA. SUPER TURBO 180MM	7462-180
	4	RAPIDCUT 184MM 24T	7452-18424	1	DIA. SUPER TURBO 230MM	7462-230
	4	RAPIDCUT 184MM 40T	7452-18440	1	DIA. SEG. RIM 230MM	7464-230
	4	RAPIDCUT 184MM 60T	7452-18460	1	DIA. SEG. RIM 300MM	7467-300
	2	RAPIDCUT 184MM SET 3	7452-184S3	1	DIA. SEG. RIM 350MM	7467-350
	2	RAPIDCUT 184MM SET 5	7452-184S5	1	DIA. SEG. RIM 400MM	7467-400
	2	RAPIDCUT 210MM 24T	7452-21024	1	DIA. SEG. RIM GREEN 230MM	7465-230
	2	RAPIDCUT 210MM 40T	7452-21040	1	DIA. SEG. RIM GREEN 300MM	7466-300
	2	RAPIDCUT 235MM 20T	7452-23520	1	DIA. SEG. RIM GREEN 350MM	7466-350
	2	RAPIDCUT 235MM 40T	7452-23540	1	DIA. SEG. RIM GREEN 400MM	7466-400
	2	RAPIDCUT 254MM 40T	7452-25440	1	DIA. CUP DBL ROW 103MM	7469-103DR
	2	RAPIDCUT 254MM 60T	7452-25460	1	DIA. CUP DBL ROW 125MM	7469-125DR
	2	RAPIDCUT 305MM 60T	7452-30560	1	DIA. CUP DBL ROW 180MM	7469-180DR
	2	RAPIDCUT 305MM 100T	7452-305100	1	DIA. CUP TURBO 103MM	7469-103TR
	4	RAPIDCUT 184MM FCS	7456-1846	1	DIA. CUP TURBO 125MM	7469-125TR
	4	PCD 184MM FCS	7455-1844	1	DIA. CUP TURBO 180MM	7469-180TR

GROUP	—
TYPE	CIRCULAR SAW BLADE
BLADE TYPE	TUNGSTEN CARBIDE / PCD
PACKAGING	HANG SELL MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
TCT / PCD MERCH – 80 SAW BLADES	9,182.37	7450-D2

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER	QTY	DESCRIPTION	PART NUMBER
	2	MULTICUT 103MM 20T	7450-10320	2	RAPIDCUT 210MM 24T	7452-21024
	2	MULTICUT 115MM 20T	7450-11520	2	RAPIDCUT 210MM 40T	7452-21040
	2	MULTICUT 127MM 20T	7450-12720	2	RAPIDCUT 210MM 60T	7452-21060
	2	MULTICUT 184MM 36T	7450-18436	2	RAPIDCUT 235MM 20T	7452-23520
	2	MULTICUT 230MM 48T	7450-23048	2	RAPIDCUT 235MM 40T	7452-23540
	2	MULTICUT 250MM 60T	7450-25060	2	RAPIDCUT 235MM 60T	7452-23560
	2	MULTICUT 300MM 60T	7450-30060	2	RAPIDCUT 254MM 24T	7452-25424
	2	MULTICUT 355MM 80T	7450-35580	2	RAPIDCUT 254MM 40T	7452-25440
	1	ALUCUT 184MM 60T	7454-18460	2	RAPIDCUT 254MM 60T	7452-25460
	1	ALUCUT 254MM 80T	7454-25480	2	RAPIDCUT 254MM 80T	7452-25480
	2	ALUCUT 305MM 100T	7454-305100	2	RAPIDCUT 305MM 40T	7452-30540
	2	ALUCUT 355MM 100T	7454-355100	2	RAPIDCUT 305MM 60T	7452-30560
	2	RAPIDCUT 140MM 18T	7452-14018	2	RAPIDCUT 305MM 100T	7452-305100
	2	RAPIDCUT 140MM 24T	7452-14024	2	OPTICUT 254MM 60T	7453-25460
	2	RAPIDCUT 160MM 20T	7452-16020	2	OPTICUT 254MM 80T	7453-25480
	2	RAPIDCUT 160MM 40T	7452-16040	2	OPTICUT 305MM 72T	7453-30572
	2	RAPIDCUT 184MM 16T	7452-18416	2	OPTICUT 305MM 80T	7453-30580
	2	RAPIDCUT 184MM 24T	7452-18424	1	PCD 160MM FCS	7455-1604
	2	RAPIDCUT 184MM 40T	7452-18440	1	PCD 184MM FCS	7455-1844
	2	RAPIDCUT 184MM 60T	7452-18460	1	PCD 254MM FCS	7455-2546
	2	RAPIDCUT 184MM SET 3	7452-184S3	1	RAPIDCUT 184MM FCS	7456-1846
	2	RAPIDCUT 184MM SET 5	7452-184S5			

GROUP	TSAW	TSAW
TYPE	TRADECUT CIRCULAR SAW BLADE	TRADECUT CIRCULAR SAW BLADE
BLADE TYPE	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
PACKAGING	HANG SELL MERCHANDISER	HANG SELL MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
TRADECUT MERCH – 58 SAW BLADES	1,908.35	7451-D1		
TRADECUT MERCH – 36 SAW BLADES			1,069.35	7451-D2

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER	QTY	DESCRIPTION	PART NUMBER
	2	TRADECUT 160MM 24T	7451-16024	3	TRADECUT 160MM 24T	7451-16024
	2	TRADECUT 160MM 40T	7451-16040	3	TRADECUT 160MM 40T	7451-16040
	3	TRADECUT 184MM 16T	7451-18416	3	TRADECUT 184MM 24T	7451-18424
	3	TRADECUT 184MM 24T	7451-18424	3	TRADECUT 184MM 40T	7451-18440
	3	TRADECUT 184MM 40T	7451-18440	3	TRADECUT 184MM 60T	7451-18460
	3	TRADECUT 184MM 60T	7451-18460	3	TRADECUT 210MM 24T	7451-21024
	2	TRADECUT 210MM 24T	7451-21024	3	TRADECUT 210MM 40T	7451-21040
	2	TRADECUT 210MM 40T	7451-21040	3	TRADECUT 235MM 20T	7451-23520
	2	TRADECUT 210MM 60T	7451-21060	3	TRADECUT 235MM 40T	7451-23540
	2	TRADECUT 235MM 20T	7451-23520	3	TRADECUT 254MM 40T	7451-25440
	2	TRADECUT 235MM 40T	7451-23540	3	TRADECUT 254MM 60T	7451-25460
	2	TRADECUT 235MM 60T	7451-23560	3	TRADECUT 305MM 60T	7451-30560
	2	TRADECUT 254MM 40T	7451-25440			
	2	TRADECUT 254MM 60T	7451-25460			
	2	TRADECUT 254MM 80T	7451-25480			
	2	TRADECUT 254MM 100T	7451-254100			
	2	TRADECUT 305MM 60T	7451-30560			
	2	TRADECUT 305MM 80T	7451-30580			
	2	TRADECUT 305MM 100T	7451-305100			
	3	TRADECUT 3 PACK 184MM	7451-184S1			
	3	TRADECUT 2 PACK 184MM	7451-184S2			
	2	RAPIDCUT 305MM 100T	7452-305100			
	4	RAPIDCUT 184MM FCS	7456-1846			
	4	PCD 184MM FCS	7455-1844			





GROUP	HACK	HACK	HACK	HACK
MATERIAL	BI-METAL, M42 EDGE	BI-METAL, M3 EDGE	HIGH SPEED STEEL	HIGH CARBON
BI-METAL MATERIAL	8% COBALT	HSS	—	—
TOOTH CONFIGURATION	REGULAR PITCH	REGULAR PITCH	REGULAR PITCH	REGULAR PITCH
HEIGHT	13MM (1/2")	13MM (1/2")	13MM (1/2")	13MM (1/2")
THICKNESS	0.65MM (0.025")	0.65MM (0.025")	0.65MM (0.025")	0.65MM (0.025")
PACKAGING	TELEPACK	TELEPACK	TELEPACK	TELEPACK



LENGTH MM	INCH	TPI	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
300	12	18	100	6.45	7255-18	5.20	7250-1218UL	4.44	7251-18	1.99	7260-18
300	12	24	100	6.45	7255-24	5.20	7250-1224UL	4.44	7251-24	1.99	7260-24
300	12	32	100	6.45	7255-32	5.20	7250-1232UL	4.44	7251-32	1.99	7260-32



MATERIAL	BI-METAL, M42 EDGE	BI-METAL, M3 EDGE
BI-METAL MATERIAL	8% COBALT	HSS
PACKAGING	10 PACK CLAM SHELL	10 PACK CLAM SHELL

LENGTH MM	INCH	TPI	PACK QTY	\$ PACK	PART NUMBER	\$ PACK	PART NUMBER
300	12	18	10	65.55	7255-18T	62.04	7250-1218ULT
300	12	24	10	65.55	7255-24T	62.04	7250-1224ULT
300	12	32	10	65.55	7255-32T	62.04	7250-1232ULT

#### REGULAR PITCH

A standard tooth configuration that produces an efficient cut on all types of materials.

#### BI-METAL M42 EDGE 5% COBALT FLEXIBLE SHATTERPROOF

High speed steel cutting edge with 5% Cobalt welded to tough flexible alloy steel producing a blade with superior cutting life and resistance to breakage. Will cut any metals including alloys, steels and stainless steels. Long lasting, and hard wearing.

#### BI-METAL M3 EDGE FLEXIBLE SHATTERPROOF

High speed steel cutting edge welded to tough flexible alloy steel producing a blade with superior cutting life and resistance to breakage.

#### HIGH SPEED STEEL FLEXIBLE

Flexible high speed steel blade for increased wear resistance and superior cutting life.

#### HIGH CARBON FLEXIBLE

Professional quality blade manufactured from flexible hi-carbon steel for general purpose cutting in a wide range of materials.





INDUSTRIAL TOOLS

**BI-METAL** Flexible Shatterproof

300 x 13 x 0.65mm

**32TPI**

ITEM NO. 7250-1232UL



GROUP	HACK	HACK
MATERIAL	BI-METAL M3 EDGE	BI-METAL & COBALT BI-METAL
TOOTH CONFIGURATION	REGULAR PITCH	REGULAR PITCH
HEIGHT	13MM (1/2")	13MM (1/2")
THICKNESS	0.65MM (0.025")	0.65MM (0.025")
PACKAGING	BENCH MERCHANDISER	BENCH MERCHANDISER

**BI-METAL  
M42 EDGE  
5% COBALT  
FLEXIBLE  
SHATTERPROOF**

High speed steel cutting edge with 5% Cobalt welded to tough flexible alloy steel producing a blade with superior cutting life and resistance to breakage. Will cut any metals including alloys, steels and stainless steels. Long lasting, and hard wearing.

**BI-METAL  
M3 EDGE  
FLEXIBLE  
SHATTERPROOF**

High speed steel cutting edge welded to tough flexible alloy steel producing a blade with superior cutting life and resistance to breakage.



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
BI-METAL – 300 BLADES	<b>1,560.00</b>	7250-D2		
BI-METAL & COBALT – 300 BLADES			<b>1,747.50</b>	7250-D3

MERCHANDISER CONTENTS	QTY	PART NUMBER	QTY	PART NUMBER
	100	7250-1218UL	50	7250-1218UL
	100	7250-1224UL	50	7250-1224UL
	100	7250-1232UL	50	7250-1232UL
			50	7255-18
			50	7255-24
			50	7255-32

GROUP	HACK	HACK	HACK
MATERIAL	BI-METAL M3 EDGE	BI-METAL M3 EDGE	BI-METAL M3 EDGE
TEETH PER INCH	<b>18 TPI</b>	<b>24 TPI</b>	<b>32 TPI</b>
TOOTH CONFIGURATION	REGULAR PITCH	REGULAR PITCH	REGULAR PITCH
HEIGHT	13MM (1/2")	13MM (1/2")	13MM (1/2")
THICKNESS	0.65MM (0.025")	0.65MM (0.025")	0.65MM (0.025")
PACKAGING	TRIPLE HOOK WITH HEADER	TRIPLE HOOK WITH HEADER	TRIPLE HOOK WITH HEADER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
BI-METAL – 100 BLADES	<b>520.00</b>	7250-D6/18	<b>520.00</b>	7250-D6/24	<b>520.00</b>	7250-D6/32

MERCHANDISER CONTENTS	QTY	PART NUMBER	QTY	PART NUMBER	QTY	PART NUMBER
	100	7250-1218UL	100	7250-1224UL	100	7250-1232UL



GROUP	HACK	HACK
TYPE	HI-TENSION FRAME	HEAVY DUTY FRAME
SIZE	300MM (12")	300MM (12")
PACKAGING	DISPLAY BOX	DISPLAY BOX



DESCRIPTION	QTY PER OUTER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
HI-TENSION FRAME	10	55.19	7268-1		
HEAVY DUTY FRAME	10			81.86	7268-2

GROUP	HACK
MATERIAL	BI-METAL M3 EDGE
TOOTH CONFIGURATION	REGULAR PITCH
HEIGHT	13MM (1/2")
THICKNESS	0.65MM (0.025")
PACKAGING	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
BI-METAL BLADE AND FRAME MERCH	2,378.60	7250-D5

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	100	BI-METAL BLADE 18TPI	7250-1218UL
	100	BI-METAL BLADE 24TPI	7250-1224UL
	100	BI-METAL BLADE 32TPI	7250-1232UL
	10	HEAVY DUTY HACKSAW FRAME	7268-2

SAW  
BLADES

RECIPROCATING  
HANG SELL

XTREME  
RECIPROCATING  
SAW BLADES

Bi-Metal with Cobalt Demolition Saw Blades are extra thick for heavy duty cutting and long life.

14 TPI Fire, Rescue and Extrication Saw Blades

- For cutting pipe, angle iron, nail embedded wood and structural steel.
- Wider (25mm – 1") and thicker (1.1mm – .042") blades for demolition work.
- Available in 152mm (6"), 229mm (9") and 305mm (12") lengths with 1/2" universal shanks.

6 TPI Wrecking and Demolition Saw Blades

- For cutting wood, sleepers and other tough materials.
- Wider (22mm – 7/8") and thicker (1.6mm – .062") blades for demolition work.
- Available in 152mm (6"), 229mm (9") and 305mm (12") lengths with 1/2" universal shanks and structural steel.



GROUP	AGRS	AGRS
TYPE	XTREME	XTREME
MATERIAL	BI-METAL 8% COBALT	BI-METAL 8% COBALT
PACKAGING	TELEPACK	CLAM SHELL

LENGTH MM	INCH	TPI	THICKNESS MM	USAGE	PACK QTY	\$ EACH	PART NUMBER	PACK QTY	\$ CLAM	PART NUMBER
FIRE, RESCUE AND EXTRICATION										
150	6	14	1.1	FIRE, RESCUE & EXTRICATION	10	10.29	7202-0614	2	21.34	7202-0614C
230	9	14	1.1	FIRE, RESCUE & EXTRICATION	10	13.93	7202-0914	2	28.89	7202-0914C
305	12	14	1.1	FIRE, RESCUE & EXTRICATION	10	17.28	7202-1214	2	35.84	7202-1214C
WRECKING AND DEMOLITION										
150	6	6	1.6	WRECKING & DEMOLITION	10	10.99	7202-0606	2	22.79	7202-0606C
230	9	6	1.6	WRECKING & DEMOLITION	10	15.99	7202-0906	2	33.16	7202-0906C
305	12	6	1.6	WRECKING & DEMOLITION	10	22.47	7202-1206	2	46.62	7202-1206C

GROUP	AGRS
TYPE	XTREME
MATERIAL	BI-METAL 8% COBALT
PACKAGING	BENCH MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
XTREME RECIPS – 60 BLADES	909.50	7202-D1

MERCHANDISER CONTENTS	QTY	DESCRIPTION	PART NUMBER
	10	150MM FIRE, RESCUE & EXTRICATION	7202-0614
	10	230MM FIRE, RESCUE & EXTRICATION	7202-0914
	10	305MM FIRE, RESCUE & EXTRICATION	7202-1214
	10	150MM WRECKING & DEMOLITION	7202-0606
	10	230MM WRECKING & DEMOLITION	7202-0906
	10	305MM WRECKING & DEMOLITION	7202-1206



GROUP	AGRS	AGRS
TYPE	HEAVY DUTY	HEAVY DUTY
MATERIAL	BI-METAL	BI-METAL
PACKAGING	TELEPACK	CLAM SHELL



LENGTH MM	INCH	TPI	THICKNESS MM	USAGE	PACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
<b>WOOD – FAST CUT / ROUGHING IN</b>										
150	6	6	1.3	NAIL EMBEDDED WOOD UP TO 100MM	10	9.82	7200-0606	2	20.38	7200-0606C
230	9	6	1.3	NAIL EMBEDDED WOOD UP TO 180MM	10	13.28	7200-0906	2	27.54	7200-0906C
305	12	6	1.3	NAIL EMBEDDED WOOD UP TO 205MM	10	16.24	7200-1206	2	33.70	7200-1206C
<b>WOOD, COMPOSITES &amp; PLASTICS</b>										
150	6	10	1.3	NAIL EMBEDDED WOOD UP TO 100MM	10	9.82	7200-0610	2	20.38	7200-0610C
<b>METAL</b>										
150	6	14	0.9	THICK SHEETMETAL & TUBE	10	8.12	7200-0614	2	16.85	7200-0614C
150	6	18	0.9	MEDIUM SHEETMETAL & TUBE	10	8.12	7200-0618	2	16.85	7200-0618C
150	6	24	0.9	THIN SHEETMETAL & TUBE	10	8.12	7200-0624	2	16.85	7200-0624C
230	9	18	0.9	MEDIUM SHEETMETAL & TUBE	10	12.18	7200-0918	2	25.29	7200-0918C
<b>MULTI-PURPOSE – METALS, WOOD &amp; PLASTIC</b>										
230	9	10/14	0.9	WIDE RANGE OF METALS, WOOD & PLASTICS	10	12.18	7200-091014	2	25.29	7200-091014C
305	12	10/14	0.9	WIDE RANGE OF METALS, WOOD & PLASTICS	10	15.03	7200-121014	2	31.20	7200-121014C

GROUP	AGRS	AGRS
TYPE	GRIT EDGE	GRIT EDGE
MATERIAL	TUNGSTEN CARBIDE GRIT	TUNGSTEN CARBIDE GRIT
PACKAGING	TELEPACK	CLAM SHELL



LENGTH MM	INCH	TPI	THICKNESS MM	USAGE	PACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
<b>CERAMICS, STONE, TILES, MASONRY &amp; COMPOSITES</b>										
150	6	—	1.3	HARD & ABRASIVE MATERIALS UP TO 100MM	10	14.92	7200-06G	1	15.59	7200-06GC
305	12	—	1.3	HARD & ABRASIVE MATERIALS UP TO 250MM	10	25.33	7200-12G	1	26.34	7200-12GC

GROUP	AGRS
TYPE	ARBORIST
MATERIAL	HCS
PACKAGING	TELEPACK



LENGTH MM	INCH	TPI	THICKNESS MM	USAGE	PACK QTY	\$ EACH	PART NUMBER
240	9-1/2	5	1.5	GREEN WOOD & TIMBER	5	10.83	7201-0905
300	12	5	1.5	GREEN WOOD & TIMBER	5	13.05	7201-1205

**TC GRIT EDGE  
RECIPROCATING  
SAW BLADES**

Carbide grit particles are permanently bonded to an alloy steel blade. TCG reciprocating saw blades are designed to cut materials that standard blades won't even scratch. They are ideal for cutting hardened steel chain and bolts as well as ceramic tiles, stranded cable, hydraulic hose and even concrete block and pavers.

When using TCG reciprocating blades to cut masonry products it is best to use a sawing action to help clear material from the cut to maximise blade efficiency.

**ARBORIST  
RECIPROCATING  
SAW BLADES**

Suitable for use in all green timber. Aggressive cutting in softwoods. Ideal for pruning, cutting tree branches and roots.







GROUP	AGRS
MATERIAL	BI-METAL
PACKAGING	TELEPACK



ASSORTMENT TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
TIMBER CUTTING - 4 BLADES	47.63	7200-S2				
METAL CUTTING - 4 BLADES			35.41	7200-S1		
EXTREME - 6 BLADES					88.12	7202-S1

ASSORTMENT CONTENTS	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION	PART NUMBER
	152MM 6TPI	7200-0606	152MM 14TPI	7200-0614	152MM 14TPI	7202-0614
	228MM 6TPI	7200-0906	152MM 18TPI	7200-0618	228MM 14TPI	7202-0914
	304MM 6TPI	7200-1206	152MM 24TPI	7200-0624	304MM 14TPI	7202-1214
	152MM 10TPI	7200-0610	228MM 18TPI	7200-0918	152MM 6TPI	7202-0606
					228MM 6TPI	7202-0906
					304MM 6TPI	7202-1206



ASSORTMENT TYPE	\$ SET	PART NUMBER
SET POUCH - 7 BLADES	79.62	7200-S3

ASSORTMENT CONTENTS	DESCRIPTION	PART NUMBER
	150MM 6TPI XTREME WRECKING & DEMOLITION	7202-0606
	150MM 14TPI XTREME FIRE, RESCUE & EXTRICATION	7202-0614
	152MM 18TPI METAL CUTTING BLADE	7200-0618
	152MM 24TPI THIN METAL CUTTING BLADE	7200-0624
	230MM 6TPI XTREME WRECKING & DEMOLITION	7202-0906
	230MM 14TPI XTREME FIRE, RESCUE & EXTRICATION	7202-0914
	228MM 18TPI METAL CUTTING BLADE	7200-0918



NEW  
SET



GROUP	AGRS
TYPE	HEAVY DUTY
MATERIAL	BI-METAL AND BI-METAL 8% COBALT



MERCHANDISER TYPE	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
RECIPROCATING BLADE BULK MERCHANDISER – 180 BLADES	2,441.10	7200-D1		
RECIPROCATING BLADE CLAM SHELL MERCHANDISER – 36 BLADE PKTS			929.80	7200-D2

MERCHANDISER CONTENTS	BLADE TYPE	QTY BLADES	PART NUMBER	QTY PKTS	PART NUMBER
	150MM FIRE, RESCUE & EXTRICATION	10	7202-0614	2	7202-0614C
	230MM FIRE, RESCUE & EXTRICATION	10	7202-0914	2	7202-0914C
	305MM FIRE, RESCUE & EXTRICATION	10	7202-1214	2	7202-1214C
	150MM WRECKING & DEMOLITION	10	7202-0606	2	7202-0606C
	230MM WRECKING & DEMOLITION	10	7202-0906	2	7202-0906C
	305MM WRECKING & DEMOLITION	10	7202-1206	2	7202-1206C
	150MM 6TPI WOOD - FAST CUT	10	7200-0606	2	7200-0606C
	150MM 10TPI WOOD - WOOD & COMPOSITES	10	7200-0610	2	7200-0610C
	230MM 6TPI WOOD - FAST CUT	10	7200-0906	2	7200-0906C
	305MM 6TPI WOOD - FAST CUT	10	7200-1206	2	7200-1206C
	230MM 10/14TPI MULTIPURPOSE	10	7200-091014	2	7200-091014C
	305MM 10/14TPI MULTIPURPOSE	10	7200-121014	2	7200-121014C
	150MM THICK SHEETMETAL & TUBE	10	7200-0614	2	7200-0614C
	150MM MEDIUM SHEETMETAL & TUBE	10	7200-0618	2	7200-0618C
	150MM THIN SHEETMETAL & TUBE	10	7200-0624	2	7200-0624C
	230MM MEDIUM SHEETMETAL & TUBE	10	7200-0918	2	7200-0918C
	150MM TUNGSTEN CARBIDE GRIT EDGE	10	7200-06G	2	7200-06GC
	305MM TUNGSTEN CARBIDE GRIT EDGE	10	7200-12G	2	7200-12GC

#### XTREME RECIPROCATING SAW BLADES

Bi-Metal with Cobalt Demolition Saw Blades are extra thick for heavy duty cutting and long life.

#### 14 TPI Fire, Rescue and Extrication Saw Blades

- For cutting pipe, angle iron, nail embedded wood and structural steel.
- Wider (25mm – 1") and thicker (1.1mm – .042") blades for demolition work.
- Available in 152mm (6"), 229mm (9") and 305mm (12") lengths with 1/2" universal shanks.

#### 6 TPI Wrecking and Demolition Saw Blades

- For cutting wood, sleepers and other tough materials.
- Wider (22mm – 7/8") and thicker (1.6mm – .062") blades for demolition work.
- Available in 152mm (6"), 229mm (9") and 305mm (12") lengths with 1/2" universal shanks and structural steel.

#### TUNGSTEN CARBIDE RECIPROCATING SAW BLADES

Carbide grit particles are permanently bonded to an alloy steel blade. TCG reciprocating saw blades are designed to cut materials that standard blades won't even scratch. They are ideal for cutting hardened steel chain and bolts as well as ceramic tiles, stranded cable, hydraulic hose and even concrete block and pavers.

When using TCG reciprocating blades to cut masonry products it is best to use a sawing action to help clear material from the cut to maximise blade efficiency.



## GROUP

SHANK

TYPE

PACKAGING

## JIGS

T-SHANK (EURO)

TIMBER

HANG CARD

SOLID TIMBER MM	PLYWOOD MM	CHIPBOARD AND MDF MM	LAMINATED PARTICLE BOARD MM	PVC MM	ACRYLIC MM	FAST CUT	CLEAN CUT	ROUGH CUT	STRAIGHT CUT	CURVED CUT	DOWN CUT	BLADE MATERIAL	LENGTH MM	PITCH	BOSCH EQUIVALENT	2 PACK \$ PACK	2 PACK PART #	5 PACK \$ PACK	5 PACK PART #
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## T-SHANK (EURO SHANK) - TIMBER &amp; SYNTHETICS

≤30	≤30	≤30	≤30	≤30	-	-	✓	-	✓	-	-	ALLOY	100	2.5	T101B	7.42	7110-31113	16.83	7110-30970
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TIMBER UP TO 30MM. IDEAL FOR PRECISE, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, CHIPBOARD, MDF AND SYNTHETICS.



≤30	≤30	≤30	≤30	≤30	-	-	✓	-	✓	-	✓	ALLOY	100	2.5	T101BR	7.89	7110-31120	18.00	7110-30987
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TIMBER UP TO 30MM. IDEAL FOR PRECISE, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, CHIPBOARD, MDF AND SYNTHETICS. DOWN CUT.



≤60	≤60	≤60	≤60	≤60	-	✓	✓	-	✓	-	-	ALLOY	100	4.0	T101D	7.42	7110-31137	16.83	7110-30994
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TIMBER UP TO 60MM. IDEAL FOR FAST, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD, MDF AND SYNTHETICS.



≤100	≤100	≤100	-	≤100	-	✓	✓	-	✓	-	-	ALLOY	132	4.0	T301DL	9.38	7110-31144	21.71	7110-31007
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TIMBER UP TO 100MM. IDEAL FOR FAST, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD, MDF AND SYNTHETICS.



≤60	≤60	≤60	≤60	-	-	✓	-	-	✓	-	-	ALLOY	100	4.0	T144D	6.23	7110-31151	13.82	7110-31014
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TIMBER UP TO 60MM. HIGH SPEED, STRAIGHT CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD AND MDF.



≤60	≤60	≤60	≤60	-	-	✓	-	-	✓	-	-	ALLOY	100	4.0	T244D	6.64	7110-31175	14.85	7110-31021
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TIMBER UP TO 60MM. HIGH SPEED, CURVED CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD AND MDF.



≤60	≤60	-	-	≤60	-	✓	-	✓	✓	-	-	ALLOY	100	3.0	T111C	4.97	7110-31182	10.67	7110-31038
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TIMBER UP TO 60MM. FOR FAST, STRAIGHT, ROUGH CUTS IN HARDWOOD, SOFTWOOD AND PLASTIC.



≤30	≤30	-	-	≤30	≤30	-	-	-	✓	-	-	ALLOY	75	2.0	T119B	4.65	7110-31199	-	-
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TIMBER &amp; ACRYLIC UP TO 30MM. FOR STRAIGHT CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.



≤50	≤50	-	-	≤50	≤50	-	-	-	✓	-	-	ALLOY	100	2.0	-	5.35	7110-31205	-	-
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TIMBER &amp; ACRYLIC UP TO 50MM. FOR STRAIGHT CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.



≤20	≤20	≤20	-	≤20	≤20	-	-	-	-	✓	-	ALLOY	75	2.0	T119B0	5.11	7110-31212	-	-
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TIMBER &amp; ACRYLIC UP TO 20MM. FOR CURVED CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.





GROUP	JIGS
SHANK	T-SHANK (EURO)
TYPE	METAL
PACKAGING	HANG CARD

FERROUS (STEEL) MM	NON-FERROUS MM	ALUMINIUM MM	SANDWICH MATERIAL MM	PVC MM	ACRYLIC MM	FAST CUT	CLEAN CUT	ROUGH CUT	STRAIGHT CUT	CURVED CUT	DOWN CUT	BLADE MATERIAL	LENGTH MM	PITCH	BOSCH EQUIVALENT	2 PACK \$ PACK	2 PACK PART #	5 PACK \$ PACK	5 PACK PART #
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**T-SHANK (EURO SHANK) - METAL, SYNTHETICS & MISCELLANEOUS**

1.2	1.2	1.2	-	-	-	-	-	-	✓	-	-	HSS	75	0.9	T118G	7.17	7110-31229	-	-
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**THIN METALS 0.9 TO 1.2MM.** STRAIGHT CUTS IN EXTRA THIN METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



3	3	3	-	-	-	-	-	-	✓	-	-	HSS	75	1.2	T118A	7.17	7110-31236	16.40	7110-31045
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**THIN METALS 1.5 TO 3.0MM.** STRAIGHT CUTS IN THIN METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



3	3	3	-	-	-	-	-	-	✓	-	-	HSS	75	1.2	T218A	-	-	17.23	7110-31069
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**THIN METALS 1.5 TO 3.0MM.** CURVED CUTS IN THIN METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



3	3	3	-	-	3	-	-	-	✓	-	-	BiM	75	1.2	T118AF	8.34	7110-31243	19.31	7110-31052
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**THIN METALS 1.5 TO 3.0MM.** STRAIGHT CUTS. BI-METAL FLEXIBLE & SHATTERPROOF BLADE. FERROUS, NON-FERROUS, STAINLESS, ALUMINIUM & ACRYLIC.



6	6	6	-	-	-	-	-	-	✓	-	-	HSS	75	2.0	T118B	7.17	7110-31250	16.40	7110-31076
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**METALS 3.0 TO 6.0MM.** STRAIGHT CUTS IN MEDIUM-THICK METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



3	3	3	65	-	-	-	-	-	✓	-	-	HSS	132	1.2	T318A	10.90	7110-31267	25.69	7110-31083
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**METALS 1.5-3.0MM, SANDWICH 1.5-65.0MM.** STRAIGHT CUTS IN METALS & SANDWICH MATERIALS. FERROUS, NON-FERROUS, SHEET METAL & ALUMINIUM.



6	6	6	85	85	85	-	-	-	✓	-	-	BiM	132	2.0	T318BF	12.54	7110-31274	29.82	7110-31090
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**METALS 2.0-6.0MM, SANDWICH 2.0-85.0MM.** SAME AS 7110-31267 ABOVE WITH BI-METAL FLEXIBLE & SHATTERPROOF BLADE.



-	20	20	-	20	-	✓	-	-	✓	-	-	HSS	100	3.0	T127D	8.46	7110-31281	19.61	7110-31106
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**ALUMINIUM 2.0-20.0MM.** FAST, STRAIGHT CUTS IN ALUM., NON-FERROUS METALS, FIBREGLASS REINFORCED SYNTHETICS, FIBRE CEMENT SHEET & PLASTIC.



PERFECT  
FOR FIBRE  
CEMENT  
SHEET

**T-SHANK (EURO SHANK) - CERAMICS, GLASS, FIBRE CEMENT SHEET**

-	-	-	-	-	-	-	-	-	✓	-	-	TCG	75	-	T130RIF	8.26	7110-31298	-	-
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**ABRASIVE 1.0-15.0MM.** PRECISE, STRAIGHT CUTS IN CERAMICS, GLASS, FIBRE CEMENT SHEET AND FIBREGLASS REINFORCED SYNTHETICS.



PERFECT FOR  
CERAMICS  
AND FIBRE  
CEMENT  
SHEET





GROUP	JIGS
SHANK	UNIVERSAL SHANK (B&D)
TYPE	TIMBER
PACKAGING	HANG CARD

SOLID TIMBER MM	PLYWOOD MM	CHIPBOARD AND MDF MM	LAMINATED PARTICLE BOARD MM	PVC MM	ACRYLIC MM	FAST CUT	CLEAN CUT	ROUGH CUT	STRAIGHT CUT	CURVED CUT	DOWN CUT	BLADE MATERIAL	LENGTH MM	PITCH	BOSCH EQUIVALENT	2 PACK \$ PACK	2 PACK PART #	5 PACK \$ PACK	5 PACK PART #
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UNIVERSAL SHANK - TIMBER & SYNTHETICS

≤30	≤30	≤30	≤30	≤30	-	-	✓	-	✓	-	-	ALLOY	100	2.5	U101B	7.42	7110-31373	16.83	7110-31304
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TIMBER UP TO 30MM. IDEAL FOR PRECISE, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, CHIPBOARD, MDF AND SYNTHETICS.



≤30	≤30	≤30	≤30	≤30	-	-	✓	-	✓	-	✓	ALLOY	100	2.5	U101BR	7.89	7110-31380	18.00	7110-31311
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TIMBER UP TO 30MM. IDEAL FOR PRECISE, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, CHIPBOARD, MDF AND SYNTHETICS. DOWN CUT.



≤60	≤60	≤60	≤60	≤60	-	✓	✓	-	✓	-	-	ALLOY	100	4.0	U101D	7.42	7110-31397	16.83	7110-31328
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TIMBER UP TO 60MM. IDEAL FOR FAST, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD, MDF AND SYNTHETICS.



≤100	≤100	≤100	-	≤100	-	✓	✓	-	✓	-	-	ALLOY	132	4.0	U301DL	9.38	7110-31403	-	-
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TIMBER UP TO 100MM. IDEAL FOR FAST, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD, MDF AND SYNTHETICS.



≤60	≤60	≤60	≤60	-	-	✓	-	-	✓	-	-	ALLOY	100	4.0	U144D	6.23	7110-31410	13.82	7110-31335
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TIMBER UP TO 60MM. HIGH SPEED, STRAIGHT CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD AND MDF.



≤60	≤60	≤60	≤60	-	-	✓	-	-	✓	-	-	ALLOY	100	4.0	U244D	6.64	7110-31427	-	-
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TIMBER UP TO 60MM. HIGH SPEED, CURVED CUTS IN HARDWOOD, SOFTWOOD, CHIPBOARD AND MDF.



≤60	≤60	-	-	≤60	-	✓	-	✓	✓	-	-	ALLOY	100	3.0	U111C	4.97	7110-31434	10.67	7110-31342
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TIMBER UP TO 60MM. FOR FAST, STRAIGHT, ROUGH CUTS IN HARDWOOD, SOFTWOOD AND PLASTIC.



≤30	≤30	-	-	≤30	≤30	-	-	-	✓	-	-	ALLOY	75	2.0	U119B	4.65	7110-31441	-	-
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TIMBER & ACRYLIC UP TO 30MM. FOR STRAIGHT CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.



≤50	≤50	-	-	≤50	≤50	-	-	-	✓	-	-	ALLOY	100	2.0	-	5.35	7110-31458	-	-
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TIMBER & ACRYLIC UP TO 50MM. FOR STRAIGHT CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.



≤20	≤20	≤20	-	≤20	≤20	-	-	-	✓	-	-	ALLOY	75	2.0	U119B0	5.11	7110-31465	-	-
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TIMBER & ACRYLIC UP TO 20MM. FOR CURVED CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.





GROUP	JIGS
SHANK	UNIVERSAL SHANK (B&D)
TYPE	METAL
PACKAGING	HANG CARD

FERROUS (STEEL) MM	NON-FERROUS MM	ALUMINIUM MM	SANDWICH MATERIAL MM	PVC MM	ACRYLIC MM	FAST CUT	CLEAN CUT	ROUGH CUT	STRAIGHT CUT	CURVED CUT	DOWN CUT	BLADE MATERIAL	LENGTH MM	PITCH	BOSCH EQUIVALENT	2 PACK \$ PACK	2 PACK PART #	5 PACK \$ PACK	5 PACK PART #
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**UNIVERSAL SHANK - METAL, SYNTHETICS & MISCELLANEOUS**

3	3	3	-	-	-	-	-	-	✓	-	-	HSS	75	1.2	U118A	7.17	7110-31472	16.40	7110-31359
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**THIN METALS 1.5 TO 3.0MM.** STRAIGHT CUTS IN THIN METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



3	3	3	-	-	-	-	-	-	✓	-	-	HSS	75	1.2	U218A	8.34	7110-31496	-	-
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**THIN METALS 1.5 TO 3.0MM.** CURVED CUTS IN THIN METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



3	3	3	-	-	3	-	-	-	✓	-	-	BiM	75	1.2	U118AF	7.17	7110-31489	-	-
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**THIN METALS 1.5 TO 3.0MM.** STRAIGHT CUTS. BI-METAL FLEXIBLE & SHATTERPROOF BLADE. FERROUS, NON-FERROUS, STAINLESS, ALUMINIUM & ACRYLIC.



6	6	6	-	-	-	-	-	-	✓	-	-	HSS	75	2.0	U118B	7.17	7110-31502	16.40	7110-31366
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**METALS 3.0 TO 6.0MM.** STRAIGHT CUTS IN MEDIUM-THICK METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



3	3	3	65	-	-	-	-	-	✓	-	-	HSS	132	1.2	U318A	10.90	7110-31519	-	-
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**METALS 1.5-3.0MM, SANDWICH 1.5-65.0MM.** STRAIGHT CUTS IN METALS & SANDWICH MATERIALS. FERROUS, NON-FERROUS, SHEET METAL & ALUMINIUM.



6	6	6	85	85	85	-	-	-	✓	-	-	BiM	132	2.0	U318BF	12.54	7110-31526	-	-
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**METALS 2.0-6.0MM, SANDWICH 2.0-85.0MM.** SAME AS 7110-31519 ABOVE WITH BI-METAL FLEXIBLE & SHATTERPROOF BLADE.



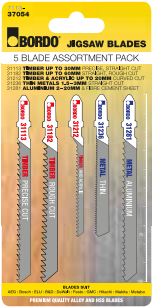
-	20	20	-	20	-	✓	-	-	✓	-	-	HSS	100	3.0	U127D	8.46	7110-31533	-	-
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**ALUMINIUM 2.0-20.0MM.** FAST, STRAIGHT CUTS IN ALUM., NON-FERROUS METALS, FIBREGLASS REINFORCED SYNTHETICS, FIBRE CEMENT SHEET & PLASTIC.



PERFECT  
FOR FIBRE  
CEMENT  
SHEET

GROUP	JIGS
PACKAGING	HANG CARD



ASSORTMENT	\$ ASSORTMENT	PART NUMBER
T-SHANK – 5 BLADES	16.58	7110-37054



**T-SHANK (EURO SHANK) - ASSORTMENT PACK**

**TIMBER UP TO 30MM.** IDEAL FOR PRECISE, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, CHIPBOARD, MDF AND SYNTHETICS.



**TIMBER UP TO 60MM.** FOR FAST, STRAIGHT, ROUGH CUTS IN HARDWOOD, SOFTWOOD AND PLASTIC.



**TIMBER & ACRYLIC UP TO 20MM.** FOR CURVED CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.



**THIN METALS 1.5 TO 3.0MM.** STRAIGHT CUTS IN THIN METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



**ALUMINIUM 2.0–20.0MM.** FAST, STRAIGHT CUTS IN ALUM., NON-FERROUS METALS, FIBREGLASS REINFORCED SYNTHETICS, FIBRE CEMENT SHEET & PLASTIC.



ASSORTMENT	\$ ASSORTMENT	PART NUMBER
UNIVERSAL SHANK – 5 BLADES	16.58	7110-37061



**UNIVERSAL SHANK (B&D SHANK) - ASSORTMENT PACK**

**TIMBER UP TO 30MM.** IDEAL FOR PRECISE, STRAIGHT, CLEAN CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, CHIPBOARD, MDF AND SYNTHETICS.



**TIMBER UP TO 60MM.** FOR FAST, STRAIGHT, ROUGH CUTS IN HARDWOOD, SOFTWOOD AND PLASTIC.



**TIMBER & ACRYLIC UP TO 20MM.** FOR CURVED CUTS IN HARDWOOD, SOFTWOOD, PLYWOOD, INSULATION MATERIALS, PLASTIC AND ACRYLIC GLASS.



**THIN METALS 1.5 TO 3.0MM.** STRAIGHT CUTS IN THIN METALS. FERROUS, NON-FERROUS, SHEET METAL AND ALUMINIUM.



**ALUMINIUM 2.0–20.0MM.** FAST, STRAIGHT CUTS IN ALUM., NON-FERROUS METALS, FIBREGLASS REINFORCED SYNTHETICS, FIBRE CEMENT SHEET & PLASTIC.



GROUP	JIGS	JIGS	JIGS
PACKAGING	MERCHANDISER	MERCHANDISER	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
D1 T-SHANK MERCHANDISER – 5 PACKS	564.02	7110-D1				
D2 T-SHANK MERCHANDISER – 2 PACKS			380.43	7110-D2		
D3 UNI. SHANK MERCHANDISER – 2 PACKS					380.43	7110-D3

MERCHANDISER CONTENTS	PACK QTY	PART NUMBER	PACK QTY	PART NUMBER	PACK QTY	PART NUMBER
		<b>WOOD BLADES</b>		<b>WOOD BLADES</b>		<b>WOOD BLADES</b>
	2	7110-30970 (5 PACK)	3	7110-31113 (2 PACK)	3	7110-31373 (2 PACK)
	2	7110-30987 (5 PACK)	3	7110-31120 (2 PACK)	3	7110-31380 (2 PACK)
	2	7110-30994 (5 PACK)	3	7110-31137 (2 PACK)	3	7110-31397 (2 PACK)
	2	7110-31007 (5 PACK)	3	7110-31144 (2 PACK)	3	7110-31403 (2 PACK)
	2	7110-31014 (5 PACK)	3	7110-31151 (2 PACK)	3	7110-31410 (2 PACK)
	2	7110-31021 (5 PACK)	3	7110-31175 (2 PACK)	3	7110-31427 (2 PACK)
	2	7110-31038 (5 PACK)	3	7110-31182 (2 PACK)	3	7110-31434 (2 PACK)
		<b>METAL BLADES</b>	3	7110-31199 (2 PACK)	3	7110-31441 (2 PACK)
	2	7110-31045 (5 PACK)	3	7110-31205 (2 PACK)	3	7110-31458 (2 PACK)
	2	7110-31052 (5 PACK)	3	7110-31212 (2 PACK)	3	7110-31465 (2 PACK)
	2	7110-31069 (5 PACK)		<b>METAL BLADES</b>		<b>METAL BLADES</b>
	2	7110-31076 (5 PACK)	3	7110-31229 (2 PACK)	3	7110-31472 (2 PACK)
	2	7110-31083 (5 PACK)	3	7110-31236 (2 PACK)	3	7110-31489 (2 PACK)
	2	7110-31090 (5 PACK)	3	7110-31243 (2 PACK)	3	7110-31496 (2 PACK)
	2	7110-31106 (5 PACK)	3	7110-31250 (2 PACK)	3	7110-31502 (2 PACK)
		<b>ASSORTMENT PACK</b>	3	7110-31267 (2 PACK)	3	7110-31519 (2 PACK)
	2	7110-37054	3	7110-31274 (2 PACK)	3	7110-31526 (2 PACK)
		<b>TUNGSTEN CARBIDE GRIT EDGE</b>	3	7110-31281 (2 PACK)	3	7110-31533 (2 PACK)
	2	7110-31298 (2 PACK)				

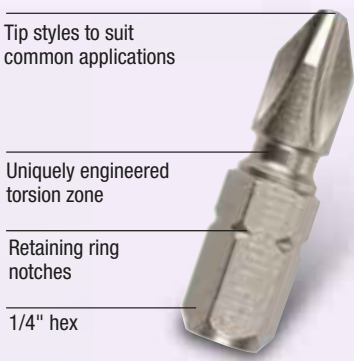




**BORDO IMPACT BITS**

Bordo Impact Bits are designed and manufactured for optimum performance in modern impact drivers. Not only do they offer significantly increased bit life in impact applications but they also offer exceptional performance in standard driving usage. The impact driver action places high peak torque demands on both insert and power bits. Our range features a uniquely engineered torsion zone with multi-stage hardening and tempering to dissipate damaging peak loads.

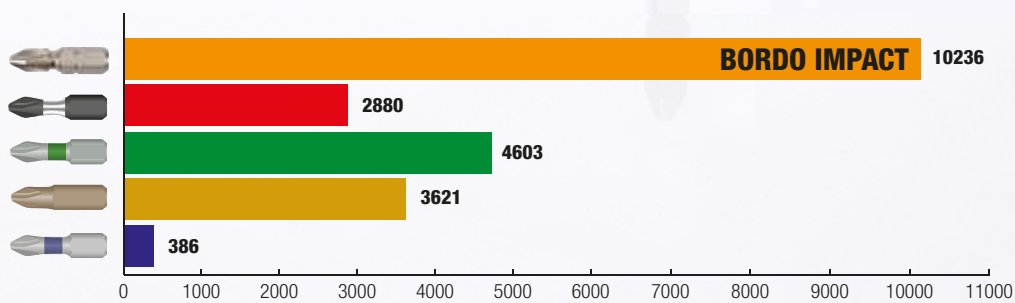
Many manufacturers spruik the benefits of their “high torque”, “torsion” and “impact” bits. The vast majority do not live up to the hype. Bordo Impact Bits significantly outperform those of our competitors.



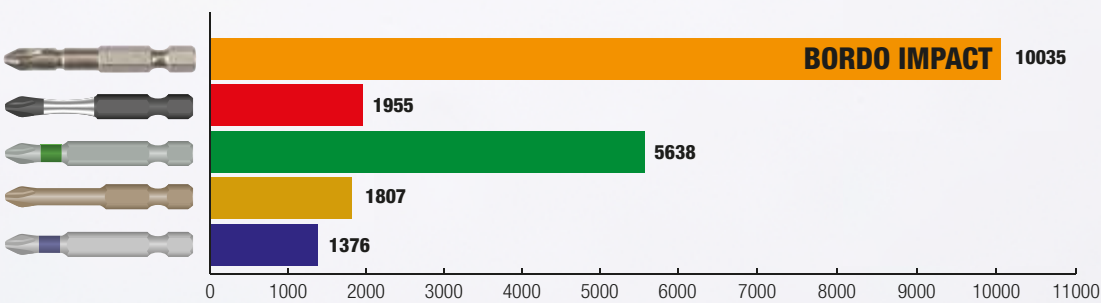
Uniquely engineered torsion zone with multi-stage hardening and tempering to dissipate damaging peak loads



**PH2x25MM CYCLES BEFORE FAILURE** average impact 10.3 Nm at 100% loading



**PH2x50MM CYCLES BEFORE FAILURE** average impact 10.3 Nm at 100% loading





# IMPACT DRIVER SET PAGE 268



GROUP						SCIM	
TYPE – IMPACT	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER	
PHILLIPS®	#1	25	10	SLEEVE	1.39	5305-PH1X25	
PHILLIPS®	#2	25	10	SLEEVE	1.39	5305-PH2X25	
PHILLIPS®	#3	25	10	SLEEVE	1.39	5305-PH3X25	
GRIPPA®	2	25	10	SLEEVE	1.39	5305-PH2GX25	
POZIDRIV®	#2	25	10	SLEEVE	1.39	5305-PZ2X25	
HEX	5MM	25	10	SLEEVE	1.83	5305-HX5X25	
SQUARE RECESS	#1	25	10	SLEEVE	1.39	5305-SR1X25	
SQUARE RECESS	#2	25	10	SLEEVE	1.39	5305-SR2X25	
SQUARE RECESS	#3	25	10	SLEEVE	1.39	5305-SR3X25	
SLOTTED	#6	25	10	SLEEVE	1.39	5305-SL6X25	

LARGER  
RANGE



IMPACT  
SECURITY  
INSERT  
BITS

TYPE – IMPACT	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER	
TORX® TR	T20	25	10	SLEEVE	7.33	5305-TX20TRX25	
TORX® TR	T25	25	10	SLEEVE	7.33	5305-TX25TRX25	
TORX® TR	T27	25	10	SLEEVE	9.21	5305-TX27TRX25	
TORX® TR	T30	25	10	SLEEVE	9.21	5305-TX30TRX25	
TORX® TR	T40	25	10	SLEEVE	9.21	5305-TX40TRX25	

NEW  
PRODUCT

Torx TR (Tamper Resistant) bits can be used with both standard Torx fasteners AND Torx security fasteners.



**BONUS**  
5350-MH1/4x50  
bit holder in every  
insert bit trade pack



GROUP						SCIM	
TYPE – IMPACT	SIZE	OAL MM	BITS PER PACK	PACK TYPE	ORDER QTY	\$ PER PACK	PART NUMBER
PHILLIPS®	#2	25	25	BOX	5 PACKS	42.46	5305-PH2X25TP
POZIDRIV®	#2	25	25	BOX	5 PACKS	42.46	5305-PZ2X25TP
SQUARE RECESS	#2	25	25	BOX	5 PACKS	42.46	5305-SR2X25TP



## GROUP

## SCIM

TYPE – IMPACT	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
⊕ PHILLIPS®	#1	50	10	SLEEVE	2.49	5405-PH1X50
⊕ PHILLIPS®	#2	50	10	SLEEVE	2.49	5405-PH2X50
⊕ PHILLIPS®	#2	75	10	SLEEVE	4.12	5405-PH2X75
⊕ PHILLIPS®	#2	100	10	SLEEVE	5.71	5405-PH2X100
⊕ PHILLIPS®	#2	150	10	SLEEVE	7.00	5405-PH2X150
⊕ PHILLIPS®	#3	50	10	SLEEVE	2.49	5405-PH3X50
⊕ GRIPPA®	2	50	10	SLEEVE	2.49	5405-PH2GX50
⊕ GRIPPA®	2	75	10	SLEEVE	4.12	5405-PH2GX75
⊕ GRIPPA®	2	100	10	SLEEVE	5.71	5405-PH2GX100
⊕ GRIPPA®	2	150	10	SLEEVE	7.00	5405-PH2GX150
⊕ POZIDRIV®	#2	50	10	SLEEVE	2.49	5405-PZ2X50
⊕ POZIDRIV®	#2	100	10	SLEEVE	5.71	5405-PZ2X100
⊖ HEX	5MM	50	10	SLEEVE	3.29	5405-HX5X50
⊖ HEX	6MM	50	10	SLEEVE	3.29	5405-HX6X50
⊖ HEX	8MM	50	10	SLEEVE	3.29	5405-HX8X50
⊖ SQUARE RECESS	#1	50	10	SLEEVE	2.49	5405-SR1X50
⊖ SQUARE RECESS	#1	75	10	SLEEVE	4.12	5405-SR1X75
⊖ SQUARE RECESS	#1	100	10	SLEEVE	5.71	5405-SR1X100
⊖ SQUARE RECESS	#1	150	10	SLEEVE	7.00	5405-SR1X150
⊖ SQUARE RECESS	#2	50	10	SLEEVE	2.49	5405-SR2X50
⊖ SQUARE RECESS	#2	75	10	SLEEVE	4.12	5405-SR2X75
⊖ SQUARE RECESS	#2	100	10	SLEEVE	5.71	5405-SR2X100
⊖ SQUARE RECESS	#2	150	10	SLEEVE	7.00	5405-SR2X150
⊖ SQUARE RECESS	#3	50	10	SLEEVE	2.49	5405-SR3X50
⊖ SQUARE RECESS	#3	75	10	SLEEVE	4.12	5405-SR3X75
⊖ SQUARE RECESS	#3	100	10	SLEEVE	5.71	5405-SR3X100
⊖ SQUARE RECESS	#3	150	10	SLEEVE	7.00	5405-SR3X150
⊖ SLOTTED	#6	50	10	SLEEVE	2.49	5405-SL6X50
⊖ TORX	T20	50	10	SLEEVE	2.85	5405-TX20X50
⊖ TORX	T25	50	10	SLEEVE	2.85	5405-TX25X75



## GROUP

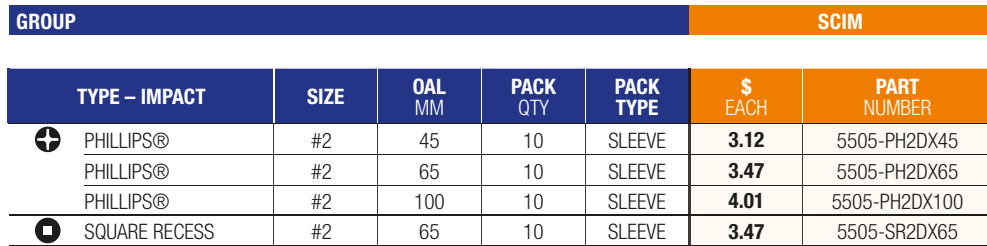
## SCIM

TYPE – IMPACT	SIZE	OAL MM	BITS PER PACK	PACK TYPE	ORDER QTY	\$ PER PACK	PART NUMBER
⊕ PHILLIPS®	#2	50	25	BOX	5 PACKS	60.57	5405-PH2X50TP
⊕ POZIDRIV®	#2	50	25	BOX	5 PACKS	60.57	5405-PZ2X50TP
⊖ SQUARE RECESS	#2	50	25	BOX	5 PACKS	60.57	5405-SR2X50TP
⊖ HEX	5MM	50	25	BOX	5 PACKS	73.05	5405-HX5X50TP
⊖ TORX	T20	50	25	BOX	5 PACKS	73.05	5405-TX20X50TP
⊖ TORX	T25	50	25	BOX	5 PACKS	73.05	5405-TX25X50TP

# IMPACT DRIVER SET


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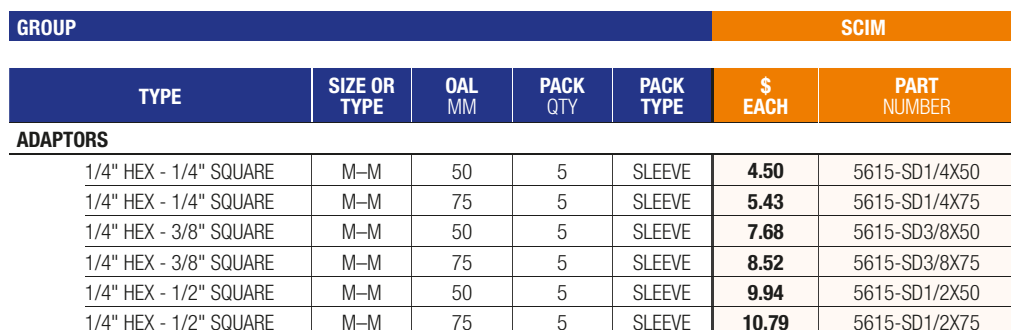


**NEW  
PRODUCT**

## LARGER RANGE



GROUP						SCIM		
TYPE – IMPACT		SIZE	OAL MM	BITS PER PACK	PACK TYPE	ORDER QTY	\$ PER PACK	PART NUMBER
	NUTSETTER	5/16"	65	5	BOX	5 PACKS	53.22	5605-NS5/16X65TP

**NEW  
PRODUCT**



**BORDO STANDARD SERIES  
SCREWDRIVER BITS, NUTSETTERS,  
BIT HOLDERS AND QUICK CHANGE  
EXTENSIONS**

The Bordo standard series of screwdriver bits includes an extensive range of insert bits, power bits, nutsetters, magnetic bit holders, quick change bit holders and quick change extensions. Insert bits and power bits are available in a large range of tip styles and lengths to suit all common applications and most security fasteners. All bits are packaged in individual sleeves, in strips of 5 or 10 pieces, which are marked with the part number and barcode. All bit tips are precision formed to ensure optimum engagement ensuring maximum tool life and minimising damage to screw heads. Each bit is manufactured using high grade alloy material and heat tempered for high durability in all general purpose applications. Bordo standard series provides professional quality bits that are suitable for use in all common fastening applications.

Today's modern impact drivers place a unique set of demands on screwdriver bits. Bordo Impact Bits have been specifically engineered to provide industry leading performance in impact applications – see page 252.

Tip styles to suit all  
common applications

Tough alloy material  
with high Rockwell  
hardness

Retaining ring  
notches

1/4" hex





**GROUP** **SCRW**



TYPE – STANDARD	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
PHILLIPS®	#0	25	10	SLEEVE	1.04	5300-PH0X25
PHILLIPS®	#1	25	10	SLEEVE	1.04	5300-PH1X25
PHILLIPS®	#2	25	10	SLEEVE	1.04	5300-PH2X25
PHILLIPS®	#3	25	10	SLEEVE	1.04	5300-PH3X25
PHILLIPS® 5/16" HEX	#4	30	10	SLEEVE	2.74	5300-PH4X30



GRIPPA®	1	25	10	SLEEVE	1.04	5300-PH1GX25
GRIPPA®	2	25	10	SLEEVE	1.04	5300-PH2GX25
GRIPPA®	3	25	10	SLEEVE	1.04	5300-PH3GX25



POZIDRIV®	#1	25	10	SLEEVE	1.04	5300-PZ1X25
POZIDRIV®	#2	25	10	SLEEVE	1.04	5300-PZ2X25
POZIDRIV®	#3	25	10	SLEEVE	1.04	5300-PZ3X25



HEX	2MM	25	10	SLEEVE	1.36	5300-HX2X25
HEX	3MM	25	10	SLEEVE	1.36	5300-HX3X25
HEX	4MM	25	10	SLEEVE	1.36	5300-HX4X25
HEX	5MM	25	10	SLEEVE	1.36	5300-HX5X25



SQUARE RECESS	#0	25	10	SLEEVE	1.04	5300-SR0X25
SQUARE RECESS	#1	25	10	SLEEVE	1.04	5300-SR1X25
SQUARE RECESS	#2	25	10	SLEEVE	1.04	5300-SR2X25
SQUARE RECESS	#3	25	10	SLEEVE	1.04	5300-SR3X25



SLOTTED	#4	25	10	SLEEVE	1.04	5300-SL4X25
SLOTTED	#5	25	10	SLEEVE	1.04	5300-SL5X25
SLOTTED	#6	25	10	SLEEVE	1.04	5300-SL6X25



TORX®	T10	25	10	SLEEVE	3.77	5300-TX10X25
TORX®	T15	25	10	SLEEVE	3.77	5300-TX15X25
TORX®	T20	25	10	SLEEVE	3.77	5300-TX20X25
TORX®	T25	25	10	SLEEVE	3.77	5300-TX25X25
TORX®	T27	25	10	SLEEVE	4.80	5300-TX27X25
TORX®	T30	25	10	SLEEVE	4.80	5300-TX30X25
TORX®	T40	25	10	SLEEVE	4.80	5300-TX40X25
TORX® 5/16" HEX	T45	30	10	SLEEVE	4.80	5300-TX45X25



PHILLIPS® DRYWALL PLASTERBOARD	#2	25	10	SLEEVE	2.98	5300-PH2DWX25
PHILLIPS® REDUCED NOSE	#2	25	10	SLEEVE	1.29	5300-PH2RNX25

**PHILLIPS #2  
DRYWALL /  
PLASTERBOARD  
BITS**

Phillips® Drywall/  
Plasterboard bits  
convert any standard  
cordless (or corded)  
drill into a screwgun.  
These bits drive the  
screw to an ideal  
preset depth and  
evenly draw in the  
plasterboard paper  
without tearing.

**PHILLIPS #2  
REDUCED  
NOSE**

Phillips® Reduced  
Nose insert bits are  
designed for use in  
screws with poorly  
formed or damaged  
screw heads.



Bordo IMPACT power bits are engineered for optimum performance in impact drivers – see page 252




See page 262 for the complete range of high performance magnetic bit holders.






## GROUP


## SCRW

TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
 TORX® TR	T10	25	10	SLEEVE	<b>5.86</b>	5300-TX10TRX25
TORX® TR	T15	25	10	SLEEVE	<b>5.86</b>	5300-TX15TRX25
TORX® TR	T20	25	10	SLEEVE	<b>5.86</b>	5300-TX20TRX25
TORX® TR	T25	25	10	SLEEVE	<b>5.86</b>	5300-TX25TRX25
TORX® TR	T27	25	10	SLEEVE	<b>7.37</b>	5300-TX27TRX25
TORX® TR	T30	25	10	SLEEVE	<b>7.37</b>	5300-TX30TRX25
TORX® TR	T40	25	10	SLEEVE	<b>7.37</b>	5300-TX40TRX25
TORX® TR 5/16" HEX	T45	30	10	SLEEVE	<b>7.37</b>	5300-TX45TRX25
TORX® TR 5/16" HEX	T50	30	10	SLEEVE	<b>7.37</b>	5300-TX50TRX25




 TRI-WING®	#0	25	10	SLEEVE	<b>7.00</b>	5300-TW0X25
TRI-WING®	#1	25	10	SLEEVE	<b>7.00</b>	5300-TW1X25
TRI-WING®	#2	25	10	SLEEVE	<b>7.00</b>	5300-TW2X25
TRI-WING®	#3	25	10	SLEEVE	<b>7.00</b>	5300-TW3X25
TRI-WING®	#4	25	10	SLEEVE	<b>7.00</b>	5300-TW4X25
TRI-WING®	#5	25	10	SLEEVE	<b>7.00</b>	5300-TW5X25




 IN-HEX	3/32"	25	10	SLEEVE	<b>5.20</b>	5300-IH3/32X25
IN-HEX	1/8"	25	10	SLEEVE	<b>5.20</b>	5300-IH1/8X25
IN-HEX	5/32"	25	10	SLEEVE	<b>5.20</b>	5300-IH5/32X25
IN-HEX	3/16"	25	10	SLEEVE	<b>5.20</b>	5300-IH3/16X25
IN-HEX	7/32"	25	10	SLEEVE	<b>5.20</b>	5300-IH7/32X25
IN-HEX	3MM	25	10	SLEEVE	<b>5.20</b>	5300-IH3X25
IN-HEX	4MM	25	10	SLEEVE	<b>5.20</b>	5300-IH4X25
IN-HEX	5MM	25	10	SLEEVE	<b>5.20</b>	5300-IH5X25
IN-HEX	6MM	25	10	SLEEVE	<b>5.20</b>	5300-IH6X25





 PIN DRIVE	#4	25	10	SLEEVE	<b>5.20</b>	5300-PD4X25
PIN DRIVE	#6	25	10	SLEEVE	<b>5.20</b>	5300-PD6X25
PIN DRIVE	#8	25	10	SLEEVE	<b>5.20</b>	5300-PD8X25
PIN DRIVE	#10	25	10	SLEEVE	<b>5.20</b>	5300-PD10X25



 TRI-LOBULAR	—	25	10	SLEEVE	<b>7.29</b>	5300-TLX25
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TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
 IN-HEX	6MM	100	10	SLEEVE	<b>6.17</b>	5400-IH6X100
 TORX® TR	T20	100	10	SLEEVE	<b>8.52</b>	5400-TX20TRX100
TORX® TR	T25	100	10	SLEEVE	<b>8.52</b>	5400-TX25TRX100
TORX® TR	T27	100	10	SLEEVE	<b>8.52</b>	5400-TX27TRX100
TORX® TR	T40	100	10	SLEEVE	<b>8.52</b>	5400-TX40TRX100

**SECURITY**  
POWERBIT RANGE


TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
DRIVER FOR ACOUSTIC LAG SCREWS	—	62	10	SLEEVE	<b>20.25</b>	5400-LAG1/4X62



## BIT SETS

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GROUP					SCRW		
	TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
⊕	PHILLIPS®	#1	50	10	SLEEVE	1.85	5400-PH1X50
	PHILLIPS®	#1	100	10	SLEEVE	4.21	5400-PH1X100
	PHILLIPS®	#2	50	10	SLEEVE	1.85	5400-PH2X50
	PHILLIPS®	#2	75	10	SLEEVE	2.85	5400-PH2X75
	PHILLIPS®	#2	100	10	SLEEVE	4.21	5400-PH2X100
	PHILLIPS®	#2	150	10	SLEEVE	5.18	5400-PH2X150
	PHILLIPS®	#3	50	10	SLEEVE	1.85	5400-PH3X50
	PHILLIPS®	#3	100	10	SLEEVE	4.21	5400-PH3X100
PHILLIPS®	#4	100	10	SLEEVE	6.17	5400-PH4X100	
⊗	GRIPPA®	2	50	10	SLEEVE	1.85	5400-PH2GX50
	GRIPPA®	2	75	10	SLEEVE	2.85	5400-PH2GX75
	GRIPPA®	2	100	10	SLEEVE	4.21	5400-PH2GX100
	GRIPPA®	2	150	10	SLEEVE	5.18	5400-PH2GX150
⊕	POZIDRIV®	#1	50	10	SLEEVE	1.85	5400-PZ1X50
	POZIDRIV®	#2	50	10	SLEEVE	1.85	5400-PZ2X50
	POZIDRIV®	#2	100	10	SLEEVE	4.21	5400-PZ2X100
	POZIDRIV®	#2	150	10	SLEEVE	5.18	5400-PZ2X150
	POZIDRIV®	#3	50	10	SLEEVE	1.85	5400-PZ3X50
○	HEX	5MM	50	10	SLEEVE	2.44	5400-HX5X50
	HEX	5MM	100	10	SLEEVE	4.21	5400-HX5X100
	HEX	6MM	50	10	SLEEVE	2.44	5400-HX6X50
	HEX	6MM	150	10	SLEEVE	5.18	5400-HX6X150
	HEX	8MM	50	10	SLEEVE	3.00	5400-HX8X50
	HEX	10MM	50	10	SLEEVE	4.71	5400-HX10X50
	HEX	12MM	50	10	SLEEVE	5.40	5400-HX12X50
◐	SQUARE RECESS	#0	50	10	SLEEVE	1.70	5400-SR0X50
	SQUARE RECESS	#1	50	10	SLEEVE	1.70	5400-SR1X50
	SQUARE RECESS	#1	75	10	SLEEVE	2.85	5400-SR1X75
	SQUARE RECESS	#1	100	10	SLEEVE	4.21	5400-SR1X100
	SQUARE RECESS	#1	150	10	SLEEVE	5.18	5400-SR1X150
	SQUARE RECESS	#2	50	10	SLEEVE	1.70	5400-SR2X50
	SQUARE RECESS	#2	75	10	SLEEVE	2.85	5400-SR2X75
	SQUARE RECESS	#2	100	10	SLEEVE	4.21	5400-SR2X100
	SQUARE RECESS	#2	150	10	SLEEVE	5.18	5400-SR2X150
	SQUARE RECESS	#3	50	10	SLEEVE	1.70	5400-SR3X50
	SQUARE RECESS	#3	75	10	SLEEVE	2.85	5400-SR3X75
	SQUARE RECESS	#3	100	10	SLEEVE	4.21	5400-SR3X100
	SQUARE RECESS	#3	150	10	SLEEVE	5.18	5400-SR3X150
◑	SLOTTED	#3	50	10	SLEEVE	1.85	5400-SL3X50
	SLOTTED	#4	50	10	SLEEVE	1.85	5400-SL4X50
	SLOTTED	#4	100	10	SLEEVE	4.21	5400-SL4X100
	SLOTTED	#5	50	10	SLEEVE	1.85	5400-SL5X50
	SLOTTED	#6	50	10	SLEEVE	1.85	5400-SL6X50
	SLOTTED	#6	100	10	SLEEVE	4.21	5400-SL6X100
	SLOTTED	#8	50	10	SLEEVE	2.85	5400-SL8X50












GROUP					SCRW		
TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER	
 GRIPPA®	2	50	10	BOX	<b>37.89</b>	5400-PH2GX100T	
GRIPPA®	2	100	10	BOX	<b>16.59</b>	5400-PH2GX50T	



TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER	
 PHILLIPS®	#1	45	10	SLEEVE	<b>2.63</b>	5500-PH1DX45	
PHILLIPS®	#2	45	10	SLEEVE	<b>2.63</b>	5500-PH2DX45	
PHILLIPS®	#2	65	10	SLEEVE	<b>2.79</b>	5500-PH2DX65	
PHILLIPS®	#2	100	10	SLEEVE	<b>3.02</b>	5500-PH2DX100	
PHILLIPS®	#2	150	10	SLEEVE	<b>7.15</b>	5500-PH2DX150	
PHILLIPS®	#2	200	10	SLEEVE	<b>7.99</b>	5500-PH2DX200	
 POZIDRIV®	#2	45	10	SLEEVE	<b>2.63</b>	5500-PZ2DX45	
POZIDRIV®	#2	65	10	SLEEVE	<b>2.79</b>	5500-PZ2DX65	
 SQUARE RECESS	#1	45	10	SLEEVE	<b>2.63</b>	5500-SR1DX45	
SQUARE RECESS	#2	45	10	SLEEVE	<b>2.63</b>	5500-SR2DX45	
SQUARE RECESS	#2	65	10	SLEEVE	<b>2.79</b>	5500-SR2DX65	
 PHILLIPS®  SLOTTED	#2/5MM	45	10	SLEEVE	<b>2.97</b>	5500-PH2SL5X45	



GROUP					SCRW		
TYPE	SIZE OR TYPE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER	
ADAPTORS							
1/4" HEX - 3/8" SQUARE	M-M	50	5	SLEEVE	5.69	5610-SD3/8X50	
1/4" HEX - 3/8" SQUARE	M-M	75	5	SLEEVE	6.31	5610-SD3/8X75	
1/4" HEX - 1/2" SQUARE	M-M	50	5	SLEEVE	7.36	5610-SD1/2X50	
1/4" HEX - 1/2" SQUARE	M-M	75	5	SLEEVE	7.99	5610-SD1/2X75	
1/4" HEX - 1/4" SQUARE	M-M	51	5	SLEEVE	3.33	5610-SD1/4X50	
1/4" HEX - 1/4" SQUARE	M-M	100	5	SLEEVE	6.03	5610-SD1/4X100	
1/4" HEX - 1/4" SQUARE	M-M	150	5	SLEEVE	7.47	5610-SD1/4X150	
1/4" HEX - 1/4" SQUARE	F-F	25	5	SLEEVE	17.38	5620-FSD1/4X25	
1/4" HEX - 3/8" SQUARE	F-F	25	5	SLEEVE	21.79	5620-FSD3/8X25	
FEMALE QUICK CHANGE ADAPTORS							
1/4" SQUARE - 1/4" HEX	F-F	32	1	POUCH	10.79	5620-FSD1/4-1/4	
3/8" SQUARE - 1/4" HEX	F-F	54	1	POUCH	36.29	5620-FSD3/8-1/4	
1/2" SQUARE - 1/4" HEX	F-F	54	1	POUCH	42.65	5620-FSD1/2-1/4	
1/2" SQUARE - 7/16" HEX	F-F	50	1	POUCH	46.64	5620-FSD1/2-7/16	
DRILL CHUCK							
DRILL CHUCK – UP TO 7MM	1/4"	75	1	CLAM	18.95	5350-DCX75	



5350-DCX75

**NEW  
PRODUCTS**



5350-SDSX75



**Standard Nutsetters**  
feature a small internal chamfer to facilitate quick screw engagement. The chamfer also reduces marking of the head—shoulder junction when using painted hex head screws.



**Flat Nutsetters**  
provide maximum screw engagement and minimise cam-out when using hex screws with small head heights.



**Impact Absorbing Nutsetters**  
include a plastic bumper around the magnet to reduce impact damage to the neodymium magnet. They also feature a small internal chamfer to facilitate quick screw engagement. The chamfer also reduces marking of the head—shoulder junction when using painted hex head screws.

All Bordo Nutsetters are manufactured from premium heat treated alloy steel and feature powerful magnets.

GROUP						SCRW	
TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER	
●	NUTSETTER	1/4"	42	10	SLEEVE	<b>6.66</b>	5600-NS1/4X42
	NUTSETTER	1/4"	65	10	SLEEVE	<b>7.57</b>	5600-NS1/4X65
	NUTSETTER	1/4"	100	10	SLEEVE	<b>11.86</b>	5600-NS1/4X100
	NUTSETTER	1/4"	150	10	SLEEVE	<b>17.31</b>	5600-NS1/4X150
●	NUTSETTER - IMPACT ABS.	1/4"	45	10	SLEEVE	<b>6.76</b>	5600-NS1/4X45P
	NUTSETTER - IMPACT ABS.	1/4"	69	10	SLEEVE	<b>7.67</b>	5600-NS1/4X69P
●	NUTSETTER	3/16"	42	10	SLEEVE	<b>7.00</b>	5600-NS3/16X42
●	NUTSETTER	5/16"	42	10	SLEEVE	<b>6.66</b>	5600-NS5/16X42
	NUTSETTER	5/16"	65	10	SLEEVE	<b>7.20</b>	5600-NS5/16X65
	NUTSETTER	5/16"	100	10	SLEEVE	<b>12.25</b>	5600-NS5/16X100
	NUTSETTER	5/16"	150	10	SLEEVE	<b>17.86</b>	5600-NS5/16X150
	NUTSETTER	5/16"	200	10	SLEEVE	<b>25.64</b>	5600-NS5/16X200
	NUTSETTER	5/16"	300	10	SLEEVE	<b>32.49</b>	5600-NS5/16X300
●	NUTSETTER - IMPACT ABS.	5/16"	45	10	SLEEVE	<b>6.76</b>	5600-NS5/16X45P
	NUTSETTER - IMPACT ABS.	5/16"	69	10	SLEEVE	<b>7.30</b>	5600-NS5/16X69P
●	NUTSETTER - FLAT	5/16"	42	10	SLEEVE	<b>7.00</b>	5600-NS5/16X42F
	NUTSETTER - FLAT	5/16"	65	10	SLEEVE	<b>7.57</b>	5600-NS5/16X65F
●	NUTSETTER	3/8"	42	10	SLEEVE	<b>7.57</b>	5600-NS3/8X42
	NUTSETTER	3/8"	65	10	SLEEVE	<b>9.18</b>	5600-NS3/8X65
	NUTSETTER	3/8"	100	10	SLEEVE	<b>20.49</b>	5600-NS3/8X100
	NUTSETTER	3/8"	150	10	SLEEVE	<b>28.39</b>	5600-NS3/8X150
	NUTSETTER	3/8"	200	10	SLEEVE	<b>24.49</b>	5600-NS3/8X200
●	NUTSETTER - IMPACT ABS.	3/8"	45	10	SLEEVE	<b>7.67</b>	5600-NS3/8X45P
	NUTSETTER - IMPACT ABS.	3/8"	69	10	SLEEVE	<b>9.28</b>	5600-NS3/8X69P
●	NUTSETTER	10MM	65	10	SLEEVE	<b>10.38</b>	5600-NS10X65
●	NUTSETTER	7/16"	65	10	SLEEVE	<b>14.15</b>	5600-NS7/16X65
	NUTSETTER	7/16"	150	10	SLEEVE	<b>25.83</b>	5600-NS7/16X150



GROUP					SCRW	
TYPE	SIZE OR TYPE	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
MAGNETIC HOLDERS						
STANDARD BIT HOLDER	1/4"	50	5	SLEEVE	9.74	5350-MH1/4X50
STANDARD BIT HOLDER	1/4"	54	5	SLEEVE	9.74	5350-MH1/4X54
STANDARD BIT HOLDER	1/4"	75	5	SLEEVE	10.61	5350-MH1/4X75
STANDARD BIT HOLDER	1/4"	100	5	SLEEVE	11.68	5350-MH1/4X100
STANDARD BIT HOLDER	1/4"	150	5	SLEEVE	18.43	5350-MH1/4X150
STANDARD BIT HOLDER	1/4"	200	5	SLEEVE	15.31	5350-MH1/4X200
STANDARD BIT HOLDER	1/4"	254	5	SLEEVE	17.64	5350-MH1/4X254
STANDARD BIT HOLDER	1/4"	305	5	SLEEVE	18.90	5350-MH1/4X305
C-RING HOLDER S/STEEL	1/4"	75	5	SLEEVE	26.54	5350-MHC1/4X75
5/16" BIT HOLDER	5/16"	75	5	SLEEVE	16.00	5350-MH5/16BDX75
SDS PLUS BIT HOLDER	1/4"	75	5	SLEEVE	24.67	5350-SDSX75

SCREWDRIVER  
BITS

QUICK CHANGE  
BIT HOLDERS

MAG+ USAGE

Ensure an insert bit is engaged in the holder. Loosen the small locking sleeve and wind the guide sleeve and locking sleeve down to expose the end of the insert bit.

Place the screw on the insert bit and wind the guide sleeve up until the head of the screw is held flat on the annular magnet. Wind the locking sleeve up firmly to lock the position.

To change bits hold the locking sleeve in position and wind off the guide sleeve. Insert and new insert bit and wind the guide sleeve back on and tighten firmly against the locking sleeve.

Check for positive screw engagement and adjust if necessary. The MAG+ screw grip magnetic bit holder is ideally suited for use with PH2, PH3, PZ2 and T30 screws as the annular magnet is optimally sized for their head diameter.



GROUP						PHEX	
TYPE	SUITS HEX	OAL MM	SHANK SIZE	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
QUICK CHANGE							
QUICK CHANGE HOLDER	1/4"	65	1/4"	1	CLAM	15.18	5750-14X65
QUICK CHANGE HOLDER	1/4" & 3/8"	70	3/8"	1	CLAM	28.55	5750-1438X70
QUICK CHANGE EXT.	1/4"	150	1/4"	1	HANG CARD	20.54	5750-14X150
QUICK CHANGE EXT.	1/4"	300	1/4"	1	HANG CARD	22.75	5750-14X300
QUICK CHANGE EXT.	1/4"	450	1/4"	1	HANG CARD	48.67	5750-14X450
QUICK CHANGE EXT.	1/4"	600	1/4"	1	HANG CARD	55.90	5750-14X600

HANDLE

QUICK CHANGE HANDLE	1/4"	—	—	10	DISPLAY	27.86	5750-14DH	
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**Quick Change Handle**  
Bordo quick change screwdriver bit handle is machined from a solid aluminium billet with fine knurling for the ultimate non-slip grip. Each handle features two click-in quick change sockets to suit all standard 1/4" hex shank accessories.

Ideal for use with any of the extensive range of Bordo premium quality power bits.



5750-14X150



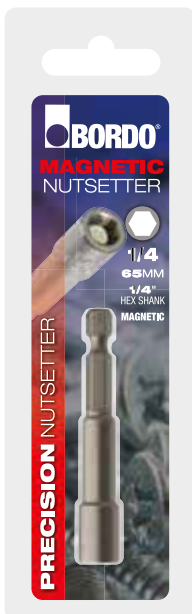
TYPE	SHANK INCH	OAL MM	PACK QTY	PACK TYPE	\$ EACH	PART NUMBER
MAGNETIC GUIDE SLEEVE BIT HOLDER	1/4	80	1	SLEEVE	11.25	5350-MH1/4SLX80
QUICK RELEASE BIT HOLDER	1/4	65	1	CLAM	28.09	5360-QR1/4X65
SWIVEL HEAD BIT HOLDER	1/4	85	1	CLAM	38.44	5360-SW1/4X75
MP-QR+ BIT HOLDER	1/4	70	1	CLAM	31.36	5360-MPQR1/4X70
MAG+ BIT HOLDER	1/4	60	1	CLAM	23.57	5360-MP1/4X60
90 DEGREE ANGLE BIT HOLDER	1/4	—	1	CLAM	100.52	5360-AD

**MP-QR+ Screw Grip Quick Change Magnetic Bit Holder** – The MP-QR+ screw grip quick change magnetic bit holder features a strong annular magnet which firmly grips the screw head and ensures a positive engagement with the insert bit. The screw is held securely on the holder and can be fastened at any angle without tilting or slipping, enabling precise fixing and one-handed operation. The MP-QR+ holder can be used with any type of standard 25mm insert bit. Insert bits click into the holder without retracting the sleeve. To remove the bit simply retract the sleeve and it automatically disengages from the holder for quick and simple replacement. Bits are held in place by a strong neodymium magnet and a retaining ring to ensure safe clamping. This strong “locking” action prevents the bit slipping from the holder or becoming jammed in a screw head.

**MAG+ Screw Grip Magnetic Bit Holder**  
The MAG+ screw grip magnetic bit holder features a strong annular magnet which firmly grips the screw head and ensures a positive engagement with the insert bit. The screw is held securely on the holder and can be fastened at any angle without tilting or slipping, enabling precise fixing and one-handed operation. The MAG+ holder can be used with any type of standard 25mm insert bit.







GROUP						SCRW	
TYPE - STANDARD	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ CLAM	PART NUMBER	
PHILLIPS®	#1	25	2	CLAM	3.99	5300-PH1X25S	
	#2	25	2	CLAM	3.99	5300-PH2X25S	
	#3	25	2	CLAM	3.99	5300-PH3X25S	
POZIDRIV®	#1	25	2	CLAM	3.99	5300-PZ1X25S	
	#2	25	2	CLAM	3.99	5300-PZ2X25S	
	#3	25	2	CLAM	3.99	5300-PZ3X25S	
HEX	5	25	2	CLAM	3.99	5300-HX5X25S	
SLOTTED	#4	25	2	CLAM	3.99	5300-SL4X25S	
	#5	25	2	CLAM	3.99	5300-SL5X25S	
	#6	25	2	CLAM	3.99	5300-SL6X25S	
SQUARE RECESS	#1	25	2	CLAM	2.94	5300-SR1X25S	
	#2	25	2	CLAM	2.94	5300-SR2X25S	
PHILLIPS® DRYWALL	#2	25	1	CLAM	4.31	5300-PH2DWX25S	
TORX	T15	25	2	CLAM	8.62	5300-TX15X25S	
	T20	25	2	CLAM	8.62	5300-TX20X25S	
	T30	25	2	CLAM	8.62	5300-TX30X25S	



GROUP						SCRW	
TYPE - STANDARD	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ CLAM	PART NUMBER	
NUTSETTER	1/4"	42	1	CLAM	8.54	5600-NS1/4X42S	
	1/4"	65	1	CLAM	10.05	5600-NS1/4X65S	
	5/16"	42	1	CLAM	8.54	5600-NS5/16X42S	
	5/16"	65	1	CLAM	10.05	5600-NS5/16X65S	
	5/16"	150	1	CLAM	15.77	5600-NS5/16X150S	
	3/8"	42	1	CLAM	10.05	5600-NS3/8X42S	
NUTSETTER	3/8"	65	1	CLAM	11.94	5600-NS3/8X65S	

**MAGNETIC HOLDERS**

STANDARD BIT HOLDER	1/4"	75	1	CLAM	9.73	5350-MH1/4X75S	
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SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
NUTSETTER MULTI-PACK	2	20.41	5600-SET1
5/16 AND 3/8 NUTSETTERS X 65MM			



GROUP						SCRW	
TYPE	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ CLAM	PART NUMBER	
ADAPTORS							
1/4" HEX - 3/8" SQUARE	M-M	50	1	CLAM	7.00	5610-SD3/8X50S	
1/4" HEX - 1/2" SQUARE	M-M	50	1	CLAM	8.70	5610-SD1/2X50S	
1/4" HEX - 1/4" SQUARE	M-M	50	1	CLAM	4.55	5610-SD1/4X50S	

SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
SOCKET ADAPTOR MULTI-PACK	3	18.74	5610-SDX50S
1/4, 3/8 AND 1/2 X 50MM			

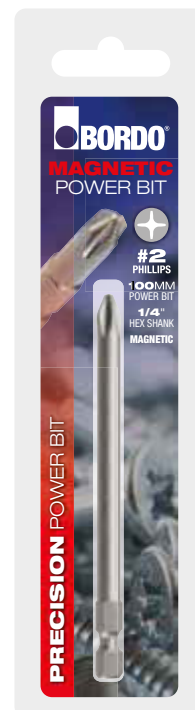




GROUP					SCRW		
TYPE – STANDARD		SIZE	OAL MM	PACK QTY	PACK TYPE	\$ CLAM	PART NUMBER
⊕	PHILLIPS®	#1	50	1	CLAM	3.17	5400-PH1X50S
	PHILLIPS®	#2	50	1	CLAM	3.17	5400-PH2X50S
	PHILLIPS®	#2	75	1	CLAM	3.87	5400-PH2X75S
	PHILLIPS®	#2	100	1	CLAM	7.55	5400-PH2X100S
	PHILLIPS®	#2	150	1	CLAM	8.68	5400-PH2X150S
	PHILLIPS®	#3	50	1	CLAM	3.17	5400-PH3X50S
⊕	POZIDRIV®	#1	50	1	CLAM	3.17	5400-PZ1X50S
	POZIDRIV®	#2	50	1	CLAM	3.17	5400-PZ2X50S
	POZIDRIV®	#2	100	1	CLAM	7.55	5400-PZ2X100S
	POZIDRIV®	#2	150	1	CLAM	8.68	5400-PZ2X150S
	POZIDRIV®	#3	50	1	CLAM	3.17	5400-PZ3X50S
○	HEX	5MM	50	1	CLAM	3.78	5400-HX5X50S
⊖	SQUARE RECESS	#1	50	1	CLAM	3.04	5400-SR1X50S
	SQUARE RECESS	#1	100	1	CLAM	7.55	5400-SR1X100S
	SQUARE RECESS	#1	150	1	CLAM	8.68	5400-SR1X150S
	SQUARE RECESS	#2	50	1	CLAM	3.04	5400-SR2X50S
	SQUARE RECESS	#2	100	1	CLAM	7.55	5400-SR2X100S
	SQUARE RECESS	#2	150	1	CLAM	8.68	5400-SR2X150S
	SQUARE RECESS	#3	50	1	CLAM	3.04	5400-SR3X50S
⊖	SLOTTED	#3	50	1	CLAM	3.17	5400-SL3X50S
	SLOTTED	#4	50	1	CLAM	3.17	5400-SL4X50S
	SLOTTED	#5	50	1	CLAM	3.17	5400-SL5X50S
	SLOTTED	#6	50	1	CLAM	3.17	5400-SL6X50S
	SLOTTED	#8	50	1	CLAM	4.05	5400-SL8X50S
	DOUBLE ENDED						
⊕	PHILLIPS®	#1	45	1	CLAM	3.97	5500-PH1DX45S
	PHILLIPS®	#2	45	1	CLAM	2.79	5500-PH2DX45S
	PHILLIPS®	#2	65	1	CLAM	3.17	5500-PH2DX65S
	PHILLIPS®	#2	100	1	CLAM	3.38	5500-PH2DX100S
⊕	POZIDRIV®	#2	45	1	CLAM	2.79	5500-PZ2DX45S
	POZIDRIV®	#2	65	1	CLAM	3.17	5500-PZ2DX65S
⊖	SQUARE RECESS	#1	45	1	CLAM	2.79	5500-SR1DX45S
	SQUARE RECESS	#2	45	1	CLAM	3.97	5500-SR2DX45S
	SQUARE RECESS	#2	65	1	CLAM	2.79	5500-SR2DX65S
⊕	PHILLIPS® ⊖ SLOTTED	#2/5MM	5	1	CLAM	3.31	5500-PH2SL5X45S



GROUP					SCRW		
TYPE – SCREWGUN	SIZE	OAL MM	PACK QTY	PACK TYPE	SUITS MAKITA MODEL	\$ CLAM	PART NUMBER
⊕ PH2 SCREWGUN BIT	#2	117	1	CLAM	6831D	8.31	5550-PH2X117S
PH2 SCREWGUN BIT	#2	122	1	CLAM	BFR440 / AR440	8.31	5550-PH2X122S
PH2 SCREWGUN BIT	#2	132	1	CLAM	6832 / 6833 / 6836 / 6835D / BFR450R	8.31	5550-PH2X132S
PH2 SCREWGUN BIT	#2	146	1	CLAM	6834	10.53	5550-PH2X146S
PH2 SCREWGUN BIT	#2	157	1	CLAM	AR550	10.53	5550-PH2X157S
PH2 SCREWGUN BIT	#2	162	1	CLAM	BFR450 / BFR550 / 6842 / 6843	13.18	5550-PH2X162S



**SCREWGUN  
PH2 RANGE**



GROUP					SCIM	
TYPE – STANDARD	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ CLAM	PART NUMBER
PHILLIPS®	#2	50	1	CLAM	3.82	5405-PH2X50S
POZIDRIV®	#2	50	1	CLAM	3.82	5405-PZ2X50S
SQUARE RECESS	#1	50	1	CLAM	3.64	5405-SR1X50S
SQUARE RECESS	#2	50	1	CLAM	3.64	5405-SR2X50S
SQUARE RECESS	#3	50	1	CLAM	3.64	5405-SR3X50S



GROUP					SCIM	
TYPE – STANDARD	SIZE	OAL MM	PACK QTY	PACK TYPE	\$ CLAM	PART NUMBER
NUTSETTER	5/16"	65	1	CLAM	12.17	5605-NS5/16X65S



GROUP					SCIM	
SET CONTENTS				PIECES QTY	\$ SET	PART NUMBER
IMPACT POWER BIT SET				6	30.95	5405-SET1
50MM POWER BITS - PH2 X 2, PH1, SR1, SR2 AND A 75MM BIT HOLDER						

SCREWDRIVER  
BITS

BORDO STD

HANG SELL



GROUP	SCRW
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MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
SCREWDRIVER MERCHANDISER	1,094.41	5300-D1

MERCHANDISER CONTENTS	STYLE	QTY PIECES	PART NUMBER	STYLE	QTY PIECES	PART NUMBER
	INSERT BITS			POWER BITS		
	HEX 5MM	8	5300-HX5X25S	PHILLIPS #1	8	5400-PH1X50S
	PHILLIPS #1	8	5300-PH1X25S	PHILLIPS #2	8	5400-PH2X50S
	PHILLIPS #2	8	5300-PH2X25S	PHILLIPS #2	8	5400-PH2X75S
	PHILLIPS #3	8	5300-PH3X25S	PHILLIPS #2	8	5400-PH2X100S
	POZIDRIV #1	8	5300-PZ1X25S	PHILLIPS #2	8	5400-PH2X150S
	POZIDRIV #2	8	5300-PZ2X25S	PHILLIPS #3	8	5400-PH3X50S
	SLOT 5MM	8	5300-SL5X25S	POZIDRIV #1	8	5400-PZ1X50S
	NUTSETTERS			POZIDRIV #2	8	5400-PZ2X50S
	1/4" X 42	5	5600-NS1/4X42S	POZIDRIV #3	8	5400-PZ3X50S
	1/4" X 65	5	5600-NS1/4X65S	SLOT 6MM	8	5400-SL6X50S
	3/8" X 42	5	5600-NS3/8X42S	SLOT 8MM	8	5400-SL8X50S
	3/8" X 65	5	5600-NS3/8X65S	DOUBLE ENDED		
	5/16" X 42	5	5600-NS5/16X42S	PHILLIPS #2	8	5500-PH2DX45S
	5/16" X 65	5	5600-NS5/16X65S	PHILLIPS #2	8	5500-PH2DX65S
	BIT HOLDER			PHILLIPS #2	8	5500-PH2DX100S
	1/4" X 75	8	5350-MH1/4X75S	PH #2 / SL 5MM	8	5500-PH2SL5X45S
				POZIDRIV #2	8	5500-PZ2DX65S



GROUP	SCRW
SHANK	1/4" HEX
BODY	POWER GROOVE



SET	SETS PER OUTER	PCS	\$ SET	PART NUMBER	PCS	\$ SET	PART NUMBER	PCS	\$ SET	PART NUMBER
INSERT BIT SET	12	31	<b>63.71</b>	5300-S1						
POWER BIT SET	6				34	<b>75.19</b>	5400-S1			
POWER BIT SET	5							11	<b>114.84</b>	5400-S2

SET CONTENTS	STYLE	OAL MM	QTY	PART NUMBER	STYLE	OAL MM	QTY	PART NUMBER	STYLE	OAL MM	QTY	PART NUMBER
	PHILLIPS #1	25	1	5300-PH1X25	PHILLIPS #1	50	2	5400-PH1X50	PHILLIPS #1	100	1	5400-PH1X100
	PHILLIPS #2	25	2	5300-PH2X25	PHILLIPS #2	50	3	5400-PH2X50	PHILLIPS #2	75	1	5400-PH2X75
	PH GRIPPA #2	25	1	5300-PH2GX25	PH GRIPPA #2	50	3	5400-PH2GX50	PHILLIPS #2	100	1	5400-PH2X100
	PHILLIPS #3	25	1	5300-PH3X25	PHILLIPS #3	50	2	5400-PH3X50	PHILLIPS #2	150	1	5400-PH2X150
	SLOT 4MM	25	1	5300-SL4X25	POZIDRIV #1	50	2	5400-PZ1X50	PHILLIPS #3	100	1	5400-PH3X100
	SLOT 5MM	25	1	5300-SL5X25	POZIDRIV #2	50	2	5400-PZ2X50	POZIDRIV #2	100	1	5400-PZ2X100
	SLOT 6MM	25	1	5300-SL6X25	POZIDRIV #3	50	2	5400-PZ3X50	HEX 5MM	100	1	5400-HX5X100
	HEX 5MM	25	1	5300-HX5X25	SLOT 3MM	50	2	5400-SL3X50	SQ RECESS #2	100	1	5400-SR2X100
	TRI LOBULAR	25	1	5300-TLX25	SLOT 4MM	50	2	5400-SL4X50	SLOT 4MM	100	1	5400-SL4X100
	POZIDRIV #1	25	1	5300-PZ1X25	SLOT 5MM	50	2	5400-SL5X50	SLOT 6MM	100	1	5400-SL6X100
	POZIDRIV #2	25	1	5300-PZ2X25	SLOT 6MM	50	2	5400-SL6X50	QC HANDLE	-	1	5750-14DH
	POZIDRIV #3	25	1	5300-PZ3X25	SLOT 8MM	50	2	5400-SL8X50				
	TORX T10	25	1	5300-TX10X25	HEX 5MM	50	2	5400-HX5X50				
	TORX T15	25	1	5300-TX15X25	SQ RECESS #1	50	2	5400-SR1X50				
	TORX T20	25	1	5300-TX20X25	SQ RECESS #2	50	2	5400-SR2X50				
	TORX T25	25	1	5300-TX25X25	N/SETTER 5/16"	42	1	5600-NS5/16X42				
	TORX T27	25	1	5300-TX27X25	QC ADAPTOR	65	1	5750-14X65				
	TORX T30	25	1	5300-TX30X25								
	TORX T40	25	1	5300-TX40X25								
	SQ RECESS #1	25	1	5300-SR1X25								
	SQ RECESS #2	25	1	5300-SR2X25								
	SQ RECESS #3	25	1	5300-SR3X25								
	TORX T10 TR	25	1	5300-TX10TRX25								
	TORX T15 TR	25	1	5300-TX15TRX25								
	TORX T20 TR	25	1	5300-TX20TRX25								
	TORX T25 TR	25	1	5300-TX25TRX25								
	TORX T27 TR	25	1	5300-TX27TRX25								
	TORX T30 TR	25	1	5300-TX30TRX25								
	TORX T40 TR	25	1	5300-TX40TRX25								
	QC ADAPTOR	65	1	5750-14X65								





NEW  
PRODUCTS

GROUP	SCIM	SCRW
SHANK TYPE	1/4" HEX	1/4" HEX
PACKAGING	BLOW MOULDED KIT BOX	BLOW MOULDED KIT BOX



KIT	\$ KIT	PART NUMBER	\$ KIT	PART NUMBER
IMPACT INSERT & POWER BIT SET	187.93	5405-S1		
INSERT & POWER BIT SET #3			114.88	5400-S3

KIT	QTY	SIZE MM	DESCRIPTION	PART NUMBER	QTY	SIZE MM	DESCRIPTION	PART NUMBER
	1	25	PHILLIPS #1 INSERT BIT	5305-PH1X25	1	25	PHILLIPS #0 INSERT BIT	5300-PH0X25
	2	25	PHILLIPS #2 INSERT BIT	5305-PH2X25	1	25	GRIPPA PH #1 INSERT BIT	5300-PH1GX25
	1	25	PHILLIPS #3 INSERT BIT	5305-PH3X25	1	25	GRIPPA PH #2 INSERT BIT	5300-PH2GX25
	1	25	HEX 5MM INSERT BIT	5305-HX5X25	1	25	GRIPPA PH #3 INSERT BIT	5300-PH3GX25
	1	25	SQ RECESS #1 INSERT BIT	5305-SR1X25	1	25	POZIDRIV #2 INSERT BIT	5300-PZ2X25
	1	25	SQ RECESS #2 INSERT BIT	5305-SR2X25	1	25	HEX 5MM INSERT BIT	5300-HX5X25
	1	25	SQ RECESS #3 INSERT BIT	5305-SR3X25	1	25	SQ RECESS #1 INSERT BIT	5300-SR1X25
	1	25	SLOT 6MM INSERT BIT	5305-SL6X25	1	25	SQ RECESS #2 INSERT BIT	5300-SR2X25
	1	50	PHILLIPS #1 POWER BIT	5405-PH1X50	1	25	SLOT 4MM INSERT BIT	5300-SL4X25
	1	50	PHILLIPS #2 POWER BIT	5405-PH2X50	1	25	SLOT 5MM INSERT BIT	5300-SL5X25
	1	75	PHILLIPS #2 POWER BIT	5405-PH2X75	1	25	SLOT 6MM INSERT BIT	5300-SL6X25
	1	100	PHILLIPS #2 POWER BIT	5405-PH2X100	1	25	TORX T10 INSERT BIT	5300-TX10X25
	1	150	PHILLIPS #2 POWER BIT	5405-PH2X150	1	25	TORX T15 INSERT BIT	5300-TX15X25
	1	150	GRIPPA PH #2 POWER BIT	5405-PH2GX150	1	25	TORX T20 INSERT BIT	5300-TX20X25
	1	50	PHILLIPS #3 POWER BIT	5405-PH3X50	1	25	TORX T25 INSERT BIT	5300-TX25X25
	1	50	HEX 5MM POWER BIT	5405-HX5X50	1	25	TORX T27 INSERT BIT	5300-TX27X25
	1	50	HEX 6MM POWER BIT	5405-HX6X50	1	25	TORX T30 INSERT BIT	5300-TX30X25
	1	50	SQ RECESS #1 POWER BIT	5405-SR1X50	1	25	TORX T40 INSERT BIT	5300-TX40X25
	1	150	SQ RECESS #1 POWER BIT	5405-SR1X150	1	50	PHILLIPS #1 POWER BIT	5400-PH1X50
	1	50	SQ RECESS #2 POWER BIT	5405-SR2X50	1	50	PHILLIPS #2 POWER BIT	5400-PH2X50
	1	75	SQ RECESS #2 POWER BIT	5405-SR2X75	1	50	PHILLIPS #3 POWER BIT	5400-PH3X50
	1	150	SQ RECESS #2 POWER BIT	5405-SR2X150	1	50	HEX 5MM POWER BIT	5400-HX5X50
	1	50	SQ RECESS #3 POWER BIT	5405-SR3X50	1	50	HEX 6MM POWER BIT	5400-HX6X50
	1	150	SQ RECESS #3 POWER BIT	5405-SR3X150	1	50	SQ RECESS #1 POWER BIT	5400-SR1X50
	1	50	SLOT 6MM POWER BIT	5405-SL6X50	1	50	SQ RECESS #2 POWER BIT	5400-SR2X50
	1	50	SLOT 6MM POWER BIT	5405-SL6X50	1	50	SQ RECESS #3 POWER BIT	5400-SR3X50
	1	65	NUTSETTER 1/4"	5605-NS1/4X65	1	50	SLOT 6MM POWER BIT	5400-SL6X50
	1	65	NUTSETTER 5/16"	5605-NS5/16X65	1	100	PHILLIPS #1 POWER BIT	5400-PH1X100
	1	150	NUTSETTER 5/16"	5605-NS5/16X150	1	100	PHILLIPS #2 POWER BIT	5400-PH2X100
	1	65	NUTSETTER 3/8"	5605-NS3/8X65	1	100	PHILLIPS #3 POWER BIT	5400-PH3X100
	1	65	NUTSETTER 7/16"	5605-NS7/16X65	1	100	POZIDRIV #2 POWER BIT	5400-PZ2X100
	1	70	MP-QR+ INSERT BIT HOLDER	5360-MPQR1/4X70	1	100	HEX 5MM POWER BIT	5400-HX5X100
					1	100	SQ RECESS #1 POWER BIT	5400-SR1X100
					1	100	SQ RECESS #2 POWER BIT	5400-SR2X100
					1	100	SQ RECESS #3 POWER BIT	5400-SR3X100
					1	100	SLOT 6MM POWER BIT	5400-SL6X100
					1	65	NUTSETTER 1/4"	5600-NS1/4X65
					1	65	NUTSETTER 5/16"	5600-NS5/16X65
					1	65	NUTSETTER 3/8"	5600-NS3/8X65
					1	75	SWIVEL HEAD BIT HOLDER	5360-SW1/4X75
					1	80	SLEEVE INSERT BIT HOLDER	5350-MH1/4SLX80

**NEW  
PRODUCT**

GROUP	SCRW
SHANK TYPE	1/4" HEX
PACKAGING	BLOW MOULDED KIT BOX



KIT	\$ KIT	PART NUMBER
INSERT & POWER BIT SET #4	270.41	5400-S4

KIT	QTY	SIZE MM	DESCRIPTION	PART NUMBER	QTY	SIZE MM	DESCRIPTION	PART NUMBER
	STANDARD INSERT BITS				TAMPER RESISTANT INSERT BITS			
	1	25	PHILLIPS #0 INSERT BIT	5300-PH0X25	1	25	TORX T10 TR INSERT BIT	5300-TX10TRX25
	1	25	GRIPPA PH #1 INSERT BIT	5300-PH1GX25	1	25	TORX T15 TR INSERT BIT	5300-TX15TRX25
	1	25	GRIPPA PH #2 INSERT BIT	5300-PH2GX25	1	25	TORX T20 TR INSERT BIT	5300-TX20TRX25
	1	25	GRIPPA PH #3 INSERT BIT	5300-PH3GX25	1	25	TORX T25 TR INSERT BIT	5300-TX25TRX25
	1	25	POZIDRIV #2 INSERT BIT	5300-PZ2X25	1	25	TORX T27 TR INSERT BIT	5300-TX27TRX25
	1	25	HEX 5MM INSERT BIT	5300-HX5X25	1	25	TORX T30 TR INSERT BIT	5300-TX30TRX25
	1	25	SQ RECESS #1 INSERT BIT	5300-SR1X25	1	25	TORX T40 TR INSERT BIT	5300-TX40TRX25
	1	25	SQ RECESS #2 INSERT BIT	5300-SR2X25	1	25	TRI-WING #0 INSERT BIT	5300-TW0X25
	1	25	SLOT 4MM INSERT BIT	5300-SL4X25	1	25	TRI-WING #1 INSERT BIT	5300-TW1X25
	1	25	SLOT 5MM INSERT BIT	5300-SL5X25	1	25	TRI-WING #2 INSERT BIT	5300-TW2X25
	1	25	SLOT 6MM INSERT BIT	5300-SL6X25	1	25	TRI-WING #3 INSERT BIT	5300-TW3X25
	1	25	TORX T10 INSERT BIT	5300-TX10X25	1	25	TRI-WING #4 INSERT BIT	5300-TW4X25
	1	25	TORX T15 INSERT BIT	5300-TX15X25	1	25	TRI-WING #5 INSERT BIT	5300-TW5X25
	1	25	TORX T20 INSERT BIT	5300-TX20X25	1	25	IN-HEX 3/32" INSERT BIT	5300-IH3/32X25
	1	25	TORX T25 INSERT BIT	5300-TX25X25	1	25	IN-HEX 1/8" INSERT BIT	5300-IH1/8X25
	1	25	TORX T27 INSERT BIT	5300-TX27X25	1	25	IN-HEX 5/32" INSERT BIT	5300-IH5/32X25
	1	25	TORX T30 INSERT BIT	5300-TX30X25	1	25	IN-HEX 3/16" INSERT BIT	5300-IH3/16X25
	1	25	TORX T40 INSERT BIT	5300-TX40X25	1	25	IN-HEX 7/32" INSERT BIT	5300-IH7/32X25
	50MM POWER BITS				1	25	IN-HEX 3MM INSERT BIT	5300-IH3X25
	1	50	PHILLIPS #1 POWER BIT	5400-PH1X50	1	25	IN-HEX 4MM INSERT BIT	5300-IH4X25
	1	50	PHILLIPS #2 POWER BIT	5400-PH2X50	1	25	IN-HEX 5MM INSERT BIT	5300-IH5X25
	1	50	PHILLIPS #3 POWER BIT	5400-PH3X50	1	25	IN-HEX 6MM INSERT BIT	5300-IH6X25
	1	50	HEX 5MM POWER BIT	5400-HX5X50	1	25	PIN DRIVE #4 INSERT BIT	5300-PD4X25
	1	50	HEX 6MM POWER BIT	5400-HX6X50	1	25	PIN DRIVE #6 INSERT BIT	5300-PD6X25
	1	50	SQ RECESS #1 POWER BIT	5400-SR1X50	1	25	PIN DRIVE #8 INSERT BIT	5300-PD8X25
	1	50	SQ RECESS #2 POWER BIT	5400-SR2X50	1	25	PIN DRIVE #10 INSERT BIT	5300-PD10X25
	1	50	SQ RECESS #3 POWER BIT	5400-SR3X50	1	25	TRI-LOBULAR INSERT BIT	5300-TLX25
	1	50	SLOT 6MM POWER BIT	5400-SL6X50	INSERT BIT HOLDER			
	NUTSETTERS				1	80	SLEEVE INSERT BIT HOLDER	5350-MH1/4SLX80
	1	65	NUTSETTER 1/4"	5600-NS1/4X65				
	1	65	NUTSETTER 5/16"	5600-NS5/16X65				
	1	65	NUTSETTER 3/8"	5600-NS3/8X65				
	1	65	NUTSETTER 7/16"	5600-NS7/16X65				

# SCREWDRIVER BITS

BORDO IMPACT  
MERCHANDISER



GROUP	SCRW	SCIM / SBHD
TYPE	STANDARD	IMPACT
SHANK	1/4" HEX	1/4" HEX
BODY	POWER GROOVE	POWER GROOVE



MERCHANDISER TYPE	PIECES TOTAL	\$ MERCHANDISER	PART NUMBER	PIECES TOTAL	\$ MERCHANDISER	PART NUMBER
SCREWDRIVER BIT MERCH.	255	911.60	5300-D2			
IMPACT BIT MERCHANDISER				187	1,036.02	5305-D2

MERCHANDISER CONTENTS	STYLE	OAL MM	QTY	PART NUMBER	STYLE	OAL MM	QTY	PART NUMBER
INSERT BITS	PHILLIPS #2	25	10	5300-PH2X25	PHILLIPS #2	25	10	5305-PH2X25
	HEX 5MM	25	10	5300-HX5X25	HEX 5MM	25	10	5305-HX5X25
	PHILLIPS #2 DRYWALL	25	10	5300-PH2DWX25	SQUARE #2	25	10	5305-SR2X25
	POZIDRIV #2	25	10	5300-PZ2X25	POZIDRIV #2	25	10	5305-PZ2X25
POWER BITS	PHILLIPS #1	50	10	5400-PH1X50	PHILLIPS #2	50	10	5405-PH2X50
	PHILLIPS #2	50	10	5400-PH2X50	PHILLIPS #2	75	10	5405-PH2X75
	PHILLIPS #2	75	10	5400-PH2X75	PHILLIPS #2	100	10	5405-PH2X100
	PHILLIPS #2	100	10	5400-PH2X100	PHILLIPS #2	150	10	5405-PH2X150
	PHILLIPS #2	150	10	5400-PH2X150	POZIDRIV #2	50	10	5405-PZ2X50
	PHILLIPS #3	50	10	5400-PH3X50	SQ RECESS #1	50	10	5405-SR1X50
	POZIDRIV #2	50	10	5400-PZ2X50	SQ RECESS #2	50	10	5405-SR2X50
	SQ RECESS #1	50	10	5400-SR1X50	SQ RECESS #2	100	10	5405-SR2X100
	SQ RECESS #2	50	10	5400-SR2X50	SQ RECESS #2	150	10	5405-SR2X150
	SQ RECESS #2	100	10	5400-SR2X100	SQ RECESS #3	50	10	5405-SR3X50
	SQ RECESS #3	50	10	5400-SR3X50	HEX 5MM	50	10	5405-HX5X50
	HEX 5MM	50	10	5400-HX5X50				
	HEX 6MM	50	10	5400-HX6X50				
	HEX 8MM	50	10	5400-HX8X50				
	SLOTTED 8MM	50	10	5400-SL8X50				
DOUBLE ENDED	PHILLIPS #2	65	10	5500-PH2DX65				
	PHILLIPS #2	100	10	5500-PH2DX100				
NUTSETTERS	NUTSETTER 1/4"	42	5	5600-NS1/4X42	NUTSETTER 1/4"	65	5	5605-NS1/4X65
	NUTSETTER 5/16"	65	5	5600-NS5/16X65	NUTSETTER 5/16"	65	5	5605-NS5/16X65
	NUTSETTER 5/16"	150	5	5600-NS5/16X150	NUTSETTER 5/16"	150	5	5605-NS5/16X150
	NUTSETTER 3/8"	65	5	5600-NS3/8X65	NUTSETTER 3/8"	65	5	5605-NS3/8X65
					NUTSETTER 7/16"	65	5	5605-NS7/16X65
ADAPTORS	SQUARE DRIVE 1/4"	50	5	5610-SD1/4X50				
	SQUARE DRIVE 3/8"	50	5	5610-SD3/8X50				
	SQUARE DRIVE 1/2"	50	5	5610-SD1/2X50				
BIT HOLDERS	MAGNETIC HOLDER	75	10	5350-MH1/4X75	MAGNETIC HOLDER	75	10	5350-MH1/4X75
					QC MAG HOLDER	70	2	5360-MQP01/4X70





GROUP	SCRW
TYPE	STANDARD
SHANK	1/4" HEX
BODY	POWER GROOVE



MERCHANDISER TYPE	PIECES TOTAL	\$ MERCHANTISER	PART NUMBER
SCREWDRIVER BIT MERCH.	340	1,558.20	5300-D4

MERCHANDISER CONTENTS	STYLE	OAL MM	QTY	PART NUMBER	STYLE	OAL MM	QTY	PART NUMBER
INSERT BITS	PHILLIPS #2	25	10	5300-PH2X25	STAR 20 TO SUIT TORX	25	10	5300-TX20X25
	HEX 5MM	25	10	5300-HX5X25	STAR 25 TO SUIT TORX	25	10	5300-TX25X25
	PHILLIPS #2 DRYWALL	25	10	5300-PH2DWX25	STAR 27 TO SUIT TORX	25	10	5300-TX27X25
	SQUARE #2	25	10	5300-SR2X25	STAR 30 TO SUIT TORX	25	10	5300-TX30X25
					STAR 40 TO SUIT TORX	25	10	5300-TX40X25
POWER BITS	PHILLIPS #1	50	10	5400-PH1X50	SQ RECESS #1	50	10	5400-SR1X50
	PHILLIPS #2	50	10	5400-PH2X50	SQ RECESS #2	50	10	5400-SR2X50
	PHILLIPS #2	75	10	5400-PH2X75	SQ RECESS #2	150	10	5400-SR2X150
	PHILLIPS #2	100	10	5400-PH2X100	HEX 5MM	50	10	5400-HX5X50
	PHILLIPS #2	150	10	5400-PH2X150	HEX 6MM	50	10	5400-HX6X50
	PHILLIPS #3	50	10	5400-PH3X50	HEX 8MM	50	10	5400-HX8X50
	POZIDRIV #1	50	10	5400-PZ1X50	SLOTTED 6MM	50	10	5400-SL6X50
	POZIDRIV #2	50	10	5400-PZ2X50	SLOTTED 8MM	50	10	5400-SL8X50
DOUBLE ENDED	PHILLIPS #2	65	10	5500-PH2DX65				
	PHILLIPS #2	100	10	5500-PH2DX100				
NUTSETTERS	NUTSETTER 1/4"	42	5	5600-NS1/4X42	NUTSETTER 3/8"	42	5	5605-NS3/8X42
	NUTSETTER 5/16"	42	5	5600-NS5/16X42	NUTSETTER 3/8"	65	5	5605-NS3/8X65
	NUTSETTER 5/16"	65	5	5600-NS5/16X65	NUTSETTER 7/16"	65	5	5605-NS7/16X65
	NUTSETTER 5/16"	150	5	5600-NS5/16X150	NUTSETTER 10MM	65	5	5600-NS10X65
	NUTSETTER 5/16"	200	5	5600-NS5/16X200				
ADAPTORS	SQUARE DRIVE 3/8"	50	5	5610-SD3/8X50				
	SQUARE DRIVE 1/2"	50	5	5610-SD1/2X50				
BIT HOLDERS	MAGNETIC HOLDER	75	10	5350-MH1/4X75				
	MAGNETIC HOLDER	150	5	5350-MH1/4X150				



SCREWDRIVER  
BITS

BORDO STD  
MERCHANDISER



GROUP	SCRW
SHANK	1/4" HEX
BODY	POWER GROOVE



MERCHANDISER TYPE	PIECES TOTAL	\$ MERCHANDISER	PART NUMBER
PH2 X 25MM INSERT BITS	500	520.00	5300-PH2X25-D1



MERCHANDISER TYPE	PIECES TOTAL	\$ MERCHANDISER	PART NUMBER
PH2 X 50MM POWER BITS	500	925.00	5400-PH2X50-D1



MERCHANDISER TYPE	PIECES TOTAL	\$ MERCHANDISER	PART NUMBER
5/16 X 65MM NUTSETTERS	100	720.00	5600-NS5/16X65-D1

GROUP	SCRW / SCIM
SHANK	1/4" HEX
BODY	POWER GROOVE



MERCHANDISER TYPE	PIECES TOTAL	\$ MERCHANDISER	PART NUMBER
BULK CABINET MERCHANDISER	1285	6,062.50	5300-D3

MERCHANDISER CONTENTS	STYLE	OAL MM	QTY	PART NUMBER	STYLE	OAL MM	QTY	PART NUMBER
	INSERT BITS				POWER BITS			
	PHILLIPS #1	25	10	5300-PH1X25	SQUARE RECESS #1	50	10	5400-SR1X50
	PHILLIPS #2	25	40	5300-PH2X25	SQUARE RECESS #1	100	10	5400-SR1X100
	PHILLIPS #3	25	10	5300-PH3X25	SQUARE RECESS #1	150	10	5400-SR1X150
	PHILLIPS #2 GRIPPA	25	30	5300-PH2GX25	SQUARE RECESS #2	50	10	5400-SR2X50
	PHILLIPS #2 DRYWALL	25	10	5300-PH2DWX25	SQUARE RECESS #2	100	10	5400-SR2X100
	PHILLIPS #2 R/NOSE	25	10	5300-PH2RNX25	SQUARE RECESS #2	150	10	5400-SR2X150
	SLOT 4MM	25	10	5300-SL4X25	DOUBLE ENDED			
	SLOT 5MM	25	10	5300-SL5X25	PHILLIPS #2	45	20	5500-PH2DX45
	SLOT 6MM	25	10	5300-SL6X25	PHILLIPS #2	65	20	5500-PH2DX65
	HEX 5MM	25	30	5300-HX5X25	PHILLIPS #2	100	10	5500-PH2DX100
	POZIDRIV #1	25	10	5300-PZ1X25	POZIDRIV #2	45	10	5500-PZ2DX45
	POZIDRIV #2	25	30	5300-PZ2X25	POZIDRIV #2	65	10	5500-PZ2DX65
	POZIDRIV #3	25	10	5300-PZ3X25	PHILLIPS #2 SLOT 5MM	45	10	5500-PH2SL5X45
	SQUARE RECESS #1	25	10	5300-SR1X25	NUTSETTERS			
	SQUARE RECESS #2	25	10	5300-SR2X25	NUTSETTER 1/4"	42	20	5600-NS1/4X42
	SQUARE RECESS #3	25	10	5300-SR3X25	NUTSETTER 1/4"	65	20	5600-NS1/4X65
	TORX T10	25	10	5300-TX10X25	NUTSETTER 5/16"	42	20	5600-NS5/16X42
	TORX T15	25	10	5300-TX15X25	NUTSETTER 5/16"	65	20	5600-NS5/16X65
	TORX T20	25	10	5300-TX20X25	NUTSETTER 5/16"	150	20	5600-NS5/16X150
	TORX T25	25	10	5300-TX25X25	NUTSETTER 5/16"	200	10	5600-NS5/16X200
	TORX T27	25	10	5300-TX27X25	NUTSETTER 3/8"	42	20	5600-NS3/8X42
	TORX T30	25	10	5300-TX30X25	NUTSETTER 3/8"	65	20	5600-NS3/8X65
	TORX T40	25	10	5300-TX40X25	NUTSETTER 7/16"	65	10	5600-NS7/16X65
	INSERT BITS – SECURITY				SQUARE DRIVE			
	TORX T10 TR	25	10	5300-TX10TRX25	SQUARE DRIVE 3/8"	50	10	5610-SD3/8X50
	TORX T15 TR	25	10	5300-TX15TRX25	SQUARE DRIVE 3/8"	75	10	5610-SD3/8X75
	TORX T20 TR	25	10	5300-TX20TRX25	SQUARE DRIVE 1/2"	50	10	5610-SD1/2X50
	TORX T125 TR	25	10	5300-TX25TRX25	SQUARE DRIVE 1/2"	75	10	5610-SD1/2X75
	TORX T27 TR	25	10	5300-TX27TRX25	BIT HOLDERS			
	TORX T30 TR	25	10	5300-TX30TRX25	5350-MH1/4X50	50	20	5350-MH1/4X50
	TORX T40 TR	25	10	5300-TX40TRX25	5350-MH1/4X75	75	20	5350-MH1/4X75
	TRI-LOBULAR	25	10	5300-TLX25	5350-MH1/4X150	150	10	5350-MH1/4X150
	POWER BITS				MPQR PLUS BIT HOLDER	70	5	5360-MPQR1/4X70
	PHILLIPS #1	50	20	5400-PH1X50				
	PHILLIPS #2	50	30	5400-PH2X50	IMPACT INSERT BITS			
	PHILLIPS #2	75	30	5400-PH2X75	PHILLIPS #2	25	10	5305-PH2X25
	PHILLIPS #2	100	30	5400-PH2X100	HEX 5MM	25	10	5305-HX5X25
	PHILLIPS #2	150	20	5400-PH2X150	SQUARE RECESS #2	25	10	5305-SR2X25
	PHILLIPS #3	50	10	5400-PH3X50	IMPACT POWER BITS			
	PHILLIPS #2 GRIPPA	50	30	5400-PH2GX50	PHILLIPS #2	50	10	5405-PH2X50
	PHILLIPS #2 GRIPPA	75	10	5400-PH2GX75	PHILLIPS #2	100	10	5405-PH2X100
	PHILLIPS #2 GRIPPA	100	10	5400-PH2GX100	PHILLIPS #2	150	10	5405-PH2X150
	PHILLIPS #2 GRIPPA	150	10	5400-PH2GX150	POZIDRIV #2	50	10	5405-PZ2X50
	HEX 5MM	50	20	5400-HX5X50	HEX 5MM	50	10	5405-HX5X50
	HEX 6MM	50	10	5400-HX6X50	SQUARE RECESS #2	50	10	5405-SR2X50
	HEX 8MM	50	10	5400-HX8X50	SQUARE RECESS #2	150	10	5405-SR2X150
	SLOT 4MM	50	10	5400-SL4X50	IMPACT NUTSETTERS			
	SLOT 5MM	50	10	5400-SL5X50	NUTSETTER 1/4"	65	10	5605-NS1/4X65
	SLOT 6MM	50	10	5400-SL6X50	NUTSETTER 5/16"	65	10	5605-NS5/16X65
	SLOT 8MM	50	10	5400-SL8X50	NUTSETTER 5/16"	150	10	5605-NS5/16X150
	POZIDRIV #1	50	20	5400-PZ1X50	NUTSETTER 3/8"	65	10	5605-NS3/8X65
	POZIDRIV #2	50	30	5400-PZ2X50				
	POZIDRIV #2	150	10	5400-PZ2X150				
	POZIDRIV #3	50	10	5400-PZ3X50				

DUST BOWLS  
TEMPLATES

PENCILS

SHARPENERS

GROUP	REMG
MATERIAL	FLEXIBLE POLYMER
APERTURE RE-INFORCING	HEAVY DUTY PLASTIC
PACKAGING	HANG SELL



DIAMETER		DEPTH	PACK	\$	PART
MM	INCH	MM	QTY	EACH	NUMBER
265	10-1/2	115	1	47.10	7095-DB1



GROUP	DIMD	DIMD	PENC	PENC
PRODUCT	HOLESAW TEMPLATE	DRILLING TEMPLATE	CARPENTER'S PENCIL	PENCIL SHARPENER
PENCIL HARDENESS			MEDIUM	
HOLDING METHOD	SUCTION CUP	SUCTION CUP		
SUITS DRILL/HOESAW SIZES	4MM TO 83MM	4 TO 13MM, 5/32 TO 1/2"		
SUITS DRILL/HOESAW TYPE	BRILLIANT DIAMOND	DIAMOND MIST, AQUA SHOT		
PACKAGING	HANG SELL	HANG SELL	DISPLAY BOX	COUNTER DISPLAY



DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
HOLESAW TEMPLATE	1	86.23	2715-HT						
DRILLING TEMPLATE	1			53.11	2715-DT				
CARPENTER'S PENCIL	72					1.24	7170-BPM		
PENCIL SHARPENER	25							5.36	7170-BPS



GROUP				PHEX		PHEX		PHEX		PHEX	
ACCEPTS ø inch	LENGTH ADAPTOR	SHANK INCH	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
1/4	65	1/4	1	15.18	5750-14X65						
1/4	150	1/4	1	20.54	5750-14X150						
1/4	300	1/4	1	22.75	5750-14X300						
1/4	450	1/4	1	48.67	5750-14X450						
1/4	600	1/4	1	55.90	5750-14X600						
1/4 and 3/8*	70	3/8	1			28.55	5750-1438X70				
3/8*	300	3/8	1					36.35	5750-38X300		
3/8* and 7/16	300	7/16	1							63.99	5750-38716X300
3/8* and 7/16	600	7/16	1							82.37	5750-38716X600

\* These Power-Hex Adaptors suit 11/32" (nominal 3/8")





# SURFACE FINISHING

## FLAP DISCS

### HANG SELL

#### FLAP DISCS ZIRCONIA (ZIRCONIUM OXIDE)

Flap discs are available in a wide range of sizes and grits and are used for applications including weld seam removal, surface blending, edge grinding and weld preparation on ferrous and non-ferrous metals. Their main advantage over other types of abrasives is that they grind and finish in one operation, thereby, reducing both finishing time and finishing costs. Flap discs produce very little vibration and noise during use.

Zirconia is significantly tougher than aluminium oxide abrasives which makes zirconia well suited to high pressure machining and grinding applications. Zirconia has a good heat resistance and is commonly used in general steel fabrication for the grinding and finishing of steel, and stainless steel.

**NEW  
PRODUCT**



GROUP	FLAP	FLAP
TYPE	FLAP DISC	FLAP DISC
STYLE	TYPE 29	TYPE 29
MATERIAL	ZIRCONIA	ZIRCONIA
PACKAGING	BULK	CLAM SHELL



DIAMETER		BORE		GRIT	PACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
MM	INCH	MM	INCH							
100	4	16	5/8	40	10	14.76	7500-FD100Z40	1	16.11	7500-FD100Z40S
100	4	16	5/8	60	10	14.76	7500-FD100Z60	1	16.11	7500-FD100Z60S
100	4	16	5/8	80	10	14.76	7500-FD100Z80	1	16.11	7500-FD100Z80S
100	4	16	5/8	120	10	14.76	7500-FD100Z120	1	16.11	7500-FD100Z120S
115	4-1/2	22	7/8	40	10	16.21	7500-FD115Z40	1	17.56	7500-FD115Z40S
115	4-1/2	22	7/8	60	10	16.21	7500-FD115Z60	1	17.56	7500-FD115Z60S
115	4-1/2	22	7/8	80	10	16.21	7500-FD115Z80	1	17.56	7500-FD115Z80S
115	4-1/2	22	7/8	120	10	16.21	7500-FD115Z120	1	17.56	7500-FD115Z120S
127	5	22	7/8	40	10	17.55	7500-FD127Z40	1	18.90	7500-FD127Z40S
127	5	22	7/8	60	10	17.55	7500-FD127Z60	1	18.90	7500-FD127Z60S
127	5	22	7/8	80	10	17.55	7500-FD127Z80	1	18.90	7500-FD127Z80S
127	5	22	7/8	120	10	17.55	7500-FD127Z120	1	18.90	7500-FD127Z120S
180	7	22	7/8	40	10	28.20	7500-FD180Z40			
180	7	22	7/8	60	10	28.20	7500-FD180Z60			
180	7	22	7/8	80	10	28.20	7500-FD180Z80			
180	7	22	7/8	120	10	28.20	7500-FD180Z120			

MERCHANDISER TYPE	\$ MERCHANDISER		PART NUMBER
FLAP DISC BULK	1,265.60		7500-D2
MERCHANDISER CONTENTS	QTY EACH	SIZE/GRIT MM / G	PART NUMBER
	10	100/40	7500-FD100Z40
	10	100/60	7500-FD100Z60
	10	100/80	7500-FD100Z80
	10	100/120	7500-FD100Z120
	5	115/40	7500-FD115Z40
	5	115/60	7500-FD115Z60
	5	115/80	7500-FD115Z80
	5	115/120	7500-FD115Z120
	5	127/40	7500-FD127Z40
	5	127/40	7500-FD127Z60
	5	127/40	7500-FD127Z80
	5	127/40	7500-FD127Z120



**Flap Disc, Clean & Strip Disc and Wool Felt Buffing Disc Merchandiser see page 281**



**FLAP WHEELS  
ALUMINIUM  
OXIDE**

Flap wheels are ideal for stock removal, deburring, cleaning, blending and finishing in a variety of applications, including stainless steel pipe fabrication and stainless steel vessels.

A flap wheel is an abrasive wheel made from abrasive strips (flaps) radiating from a center hub. Bordo flap wheels come in many different diameters, widths and grits. The outside diameter of the wheel can range from 30mm to 80mm.

Bordo flap wheels use Aluminium Oxide ( $Al_2O_3$ ) as the abrasive material which is bonded to the strips of the wheel. Aluminium oxide is a fused, hard synthetic crystalline abrasive. Within the abrasive compound the Aluminium and Oxygen elements are held very close together causing these two relatively light elements to make a hard, dense crystal. On the MOHS scale of hardness Aluminium Oxide is 9.0. This hard crystal structure has a tendency to slowly dull or round and is hard to fracture.

GROUP	FLWH
TYPE	1 PIECE INCLUDING SPINDLE
MATERIAL	ALUMINIUM OXIDE
SPINDLE DIAMETER	6MM
PACKAGING	BULK

DIA. MM	WIDTH MM	GRIT	PACK QTY	\$ EACH	PART NUMBER
30.00	15	40	1	9.84	7510-30X15X40G
30.00	15	60	1	9.84	7510-30X15X60G
30.00	15	80	1	9.84	7510-30X15X80G
30.00	15	120	1	9.84	7510-30X15X120G
30.00	15	180	1	9.84	7510-30X15X180G
30.00	15	240	1	9.84	7510-30X15X240G

40.00	10	40	1	10.09	7510-40X10X40G
40.00	10	60	1	10.09	7510-40X10X60G
40.00	10	80	1	10.09	7510-40X10X80G
40.00	10	120	1	10.09	7510-40X10X120G
40.00	10	180	1	10.09	7510-40X10X180G
40.00	10	240	1	10.09	7510-40X10X240G
40.00	15	40	1	10.57	7510-40X15X40G
40.00	15	60	1	10.57	7510-40X15X60G
40.00	15	80	1	10.57	7510-40X15X80G
40.00	15	120	1	10.57	7510-40X15X120G
40.00	15	180	1	10.57	7510-40X15X180G
40.00	15	240	1	10.57	7510-40X15X240G
40.00	20	40	1	11.79	7510-40X20X40G
40.00	20	60	1	11.79	7510-40X20X60G
40.00	20	80	1	11.79	7510-40X20X80G
40.00	20	120	1	11.79	7510-40X20X120G
40.00	20	180	1	11.79	7510-40X20X180G
40.00	20	240	1	11.79	7510-40X20X240G
40.00	25	40	1	13.06	7510-40X25X40G
40.00	25	60	1	13.06	7510-40X25X60G
40.00	25	80	1	13.06	7510-40X25X80G
40.00	25	120	1	13.06	7510-40X25X120G
40.00	25	180	1	13.06	7510-40X25X180G
40.00	25	240	1	13.06	7510-40X25X240G

50.00	20	40	1	14.45	7510-50X20X40G
50.00	20	60	1	14.45	7510-50X20X60G
50.00	20	80	1	14.45	7510-50X20X80G
50.00	20	120	1	14.45	7510-50X20X120G
50.00	20	180	1	14.45	7510-50X20X180G
50.00	20	240	1	14.45	7510-50X20X240G
50.00	25	40	1	17.52	7510-50X25X40G
50.00	25	60	1	17.52	7510-50X25X60G
50.00	25	80	1	17.52	7510-50X25X80G
50.00	25	120	1	17.52	7510-50X25X120G
50.00	25	180	1	17.52	7510-50X25X180G
50.00	25	240	1	17.52	7510-50X25X240G

GROUP	FLWH
TYPE	1 PIECE INCLUDING SPINDLE
MATERIAL	ALUMINIUM OXIDE
SPINDLE DIAMETER	6MM
PACKAGING	BULK

DIA. MM	WIDTH MM	GRIT	PACK QTY	\$ EACH	PART NUMBER
60.00	15	40	1	14.32	7510-60X15X40G
60.00	15	60	1	14.32	7510-60X15X60G
60.00	15	80	1	14.32	7510-60X15X80G
60.00	15	120	1	14.32	7510-60X15X120G
60.00	15	180	1	14.32	7510-60X15X180G
60.00	15	240	1	14.32	7510-60X15X240G
60.00	30	40	1	17.75	7510-60X30X40G
60.00	30	60	1	17.75	7510-60X30X60G
60.00	30	80	1	17.75	7510-60X30X80G
60.00	30	120	1	17.75	7510-60X30X120G
60.00	30	180	1	17.75	7510-60X30X180G
60.00	30	240	1	17.75	7510-60X30X240G
60.00	40	40	1	21.75	7510-60X40X40G
60.00	40	60	1	21.75	7510-60X40X60G
60.00	40	80	1	21.75	7510-60X40X80G
60.00	40	120	1	21.75	7510-60X40X120G
60.00	40	180	1	21.75	7510-60X40X180G
60.00	40	240	1	21.75	7510-60X40X240G

80.00	30	40	1	26.04	7510-80X30X40G
80.00	30	60	1	26.04	7510-80X30X60G
80.00	30	80	1	26.04	7510-80X30X80G
80.00	30	120	1	26.04	7510-80X30X120G
80.00	30	180	1	26.04	7510-80X30X180G
80.00	30	240	1	26.04	7510-80X30X240G
80.00	50	40	1	36.67	7510-80X50X40G
80.00	50	60	1	36.67	7510-80X50X60G
80.00	50	80	1	36.67	7510-80X50X80G
80.00	50	120	1	36.67	7510-80X50X120G
80.00	50	180	1	36.67	7510-80X50X180G
80.00	50	240	1	36.67	7510-80X50X240G



GROUP	FLWH
TYPE	1 PIECE INCLUDING SPINDLE
MATERIAL	ALUMINIUM OXIDE
SPINDLE DIAMETER	6MM
PACKAGING	BULK



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
FLAP WHEEL	979.23	7510-D1

MERCHANDISER CONTENTS	QTY	DIA MM	WIDTH MM	GRIT	PART NUMBER
	3	30	15	60	7510-30X15X60G
	3	30	15	80	7510-30X15X80G
	3	30	15	120	7510-30X15X120G
	3	40	15	60	7510-40X15X60G
	3	40	15	80	7510-40X15X80G
	3	40	15	120	7510-40X15X120G
	2	50	20	60	7510-50X20X60G
	2	50	20	80	7510-50X20X80G
	2	50	20	120	7510-50X20X120G
	2	60	30	60	7510-60X30X60G
	2	60	30	80	7510-60X30X80G
	2	60	30	120	7510-60X30X120G
	2	60	40	180	7510-60X40X40G
	2	60	40	60	7510-60X40X60G
	2	60	40	80	7510-60X40X80G
	2	60	40	120	7510-60X40X120G
	2	80	30	40	7510-80X30X40G
	2	80	30	60	7510-80X30X60G
	2	80	30	80	7510-80X30X80G
	2	80	30	120	7510-80X30X120G
	2	80	50	60	7510-80X50X60G
	2	80	50	80	7510-80X50X80G
	2	80	50	120	7510-80X50X120G





GROUP	STDC	STDC
TYPE	CLEAN & STRIP DISC	CLEAN & STRIP DISC
STYLE	PHENOLIC DISC	PHENOLIC DISC
MATERIAL	SILICON CARBIDE	SILICON CARBIDE
PACKAGING	BULK	CLAM SHELL



DIAMETER		BORE		PACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
MM	INCH	MM	INCH						
100	4	16	5/8	10	29.12	5232-100	1	31.38	5232-100S
115	4-1/2	22	7/8	10	39.95	5232-115	1	42.22	5232-115S
125	5	22	7/8	10	47.27	5232-125	1	49.53	5232-125S
178	7	22	7/8	10	86.09	5232-178			



GROUP	STDC	STDC
TYPE	CLEAN & STRIP WHEEL	CLEAN & STRIP WHEEL
SECTIONS	SINGLE	DOUBLE
MATERIAL	SILICON CARBIDE	SILICON CARBIDE
PACKAGING	CLAM SHELL	CLAM SHELL



DIAMETER MM	SHANK	CLAM QTY	\$ CLAM	PART NUMBER	\$ CLAM	PART NUMBER
50	1/4" HEX	1	17.09	5232-50X1H	30.42	5232-50X2H
75	1/4" HEX	1	21.76	5232-75X1H	39.77	5232-75X2H
100	1/4" HEX	1	32.03	5232-100X1H	59.79	5232-100X2H

**CLEAN AND STRIP DISCS  
SILICON CARBIDE**

Silicon carbide and non-woven nylon fibres are bonded together using resin to create these versatile discs. Silicon carbide is a synthetic mineral that is very sharp and commonly used for low-pressure applications such as preparation prior to painting and general surface cleaning. While silicon carbide breaks down faster than aluminium oxide, it produces a superior finish with a sharp, consistent cut without gouging or damaging the surface of the workpiece.

As the disc wears the resin bonds break down gradually revealing new fibers and sharp abrasive, giving a consistent cut over the life of the disc. Additionally the open weave of the nylon fibers permits air flow and prevents clogging. The sharp-cutting nature of silicon carbide in conjunction with the open web make this product well suited for removing surface coatings, sealants, rust removal, weld cleaning, and paint removal.

**Flap Disc, Clean & Strip Disc and Wool Felt Buffing Disc  
Merchandiser see page 281**



# SURFACE FINISHING

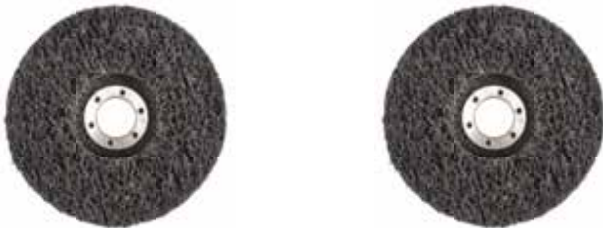
## CLEAN & STRIP

### HANG SELL

#### CLEAN AND STRIP DISCS SILICON CARBIDE

Silicon carbide and non-woven nylon fibres are bonded together using resin to create these versatile discs. Silicon carbide is a synthetic mineral that is very sharp and commonly used for low-pressure applications such as preparation prior to painting and general surface cleaning. While silicon carbide breaks down faster than aluminium oxide, it produces a superior finish with a sharp, consistent cut without gouging or damaging the surface of the workpiece.

As the disc wears the resin bonds breaks down gradually revealing new fibers and sharp abrasive, giving a consistent cut over the life of the disc. Additionally the open weave of the nylon fibers permits air flow and prevents clogging. The sharp-cutting nature of silicon carbide in conjunction with the open web make this product well suited for removing surface coatings, sealants, rust removal, weld cleaning, and paint removal.



GROUP	STDC	STDC
TYPE	CLEAN & STRIP DISC	CLEAN & STRIP DISC
STYLE	PHENOLIC DISC	PHENOLIC DISC
MATERIAL	SILICON CARBIDE	SILICON CARBIDE
PACKAGING	BULK	CLAM SHELL



DIAMETER		BORE		PACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ EACH	PART NUMBER
MM	INCH	MM	INCH						
100	4	16	5/8	10	27.60	5230-100	1	29.87	5230-100S
115	4-1/2	22	7/8	10	37.69	5230-115	1	39.96	5230-115S
125	5	22	7/8	10	42.72	5230-125	1	45.00	5230-125S



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
CLEAN AND STRIP BULK	931.32	5230-D1

MERCHANDISER CONTENTS	QTY	DIA MM	COLOUR	PART NUMBER
	3	100	BLUE	5232-100
	3	115	BLUE	5232-115
	3	125	BLUE	5232-125
	3	178	BLUE	5232-178
	3	100	BLACK	5230-100
	3	115	BLACK	5230-115
	3	125	BLACK	5230-125



GROUP	MOPS
TYPE	<b>BUFFING DISC</b>
STYLE	PHENOLIC DISC
MATERIAL	WOOL FELT
PACKAGING	CLAM SHELL



**NEW  
PRODUCT**

**BUFFING DISC  
WOOL FELT**

Medium hardness wool felt buffing discs are ideal for general purpose buffing, or polishing and cutting with any compound. They hold an edge well making them ideal for angles and corners.

DIAMETER		BORE		CLAM	\$	PART
MM	INCH	MM	INCH	QTY	EACH	NUMBER
100	4	16	5/8	1	<b>8.86</b>	5206-100
115	4-1/2	22	7/8	1	<b>10.20</b>	5206-115
127	5	22	7/8	1	<b>11.29</b>	5206-127

**GROUP**



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
FLAP, CLEAN & STRIP AND WOOL FELT BUFFING DISC MERCH	<b>936.78</b>	7500-D3

MERCHANDISER CONTENTS	QTY	DIA MM	GRIT/ COLOUR	DESCRIPTION	PART NUMBER
	2	100		WOOL FELT BUFFING DISC	5206-100
	2	127		WOOL FELT BUFFING DISC	5206-127
	2	100	40	FLAP DISC	7500-FD100Z40S
	2	100	60	FLAP DISC	7500-FD100Z60S
	2	100	80	FLAP DISC	7500-FD100Z80S
	2	100	120	FLAP DISC	7500-FD100Z120S
	2	115	40	FLAP DISC	7500-FD115Z40S
	2	115	60	FLAP DISC	7500-FD115Z60S
	2	115	80	FLAP DISC	7500-FD115Z80S
	2	115	120	FLAP DISC	7500-FD115Z120S
	2	127	40	FLAP DISC	7500-FD127Z40S
	2	127	60	FLAP DISC	7500-FD127Z60S
	2	127	80	FLAP DISC	7500-FD127Z80S
	2	127	120	FLAP DISC	7500-FD127Z120S
	2	100	BLACK	CLEAN & STRIP DISC	5230-100S
	2	115	BLACK	CLEAN & STRIP DISC	5230-115S
	2	125	BLACK	CLEAN & STRIP DISC	5230-125S
	2	100	BLUE	CLEAN & STRIP DISC	5232-100S
	2	115	BLUE	CLEAN & STRIP DISC	5232-115S
	2	125	BLUE	CLEAN & STRIP DISC	5232-125S

**NEW  
MERCH**

# SURFACE FINISHING

POLISHING

HANG SELL

## MOPS

For use on bench grinders fitted with a tapered spindle.

## CALICO

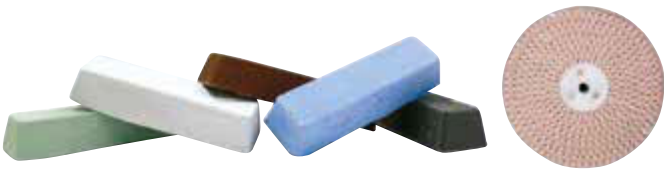
Calico mops are used to create a lustrous, highly reflective polished finish, using either green, white or blue polishing compounds.

## STITCHED RAG

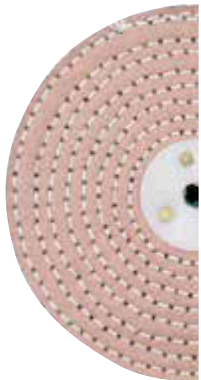
Stitched rag mops are used for fast cutting and a medium to high finish. Use brown or white compounds on soft metals such as aluminium, copper and brass. Use green compound for final cut and initial polish on stainless steel.

## SISAL

Sisal mops rough cut to remove scratches, belt marks, and drawing marks. When used with grey compound this mop has a high rate of surface removal. Fast and economical.



GROUP	MOPS	MOPS	MOPS
TYPE	CALICO - LOOSE LEAF	STITCHED RAG	SISAL
USAGE	HIGH GLOSS POLISHING	GENERAL PURPOSE	CUTTING BACK
BORE	TAPERED	TAPERED	TAPERED
PACKAGING	CLAM SHELL	CLAM SHELL	CLAM SHELL



DIAMETER MM	CALICO MOPS FOLDS	STICHED BAG & SISAL SECTIONS	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
50	50 FOLD	1 SECTION	1	19.18	5200-50X50	13.29	5202-50X1	15.14	5204-50X1
75	50 FOLD	1 SECTION	1	26.34	5200-75X50	21.76	5202-75X1	15.14	5204-75X1
100	50 FOLD	1 SECTION	1	26.10	5200-100X50	22.32	5202-100X1	23.03	5204-100X1
150	50 FOLD	1 SECTION	1	35.28	5200-150X50	22.88	5202-150X1	24.08	5204-150X1
150	100 FOLD	2 SECTION	1	47.76	5200-150X100	31.80	5202-150X2	30.21	5204-150X2
200	50 FOLD	1 SECTION	1	54.19	5200-200X50	26.10	5202-200X1	27.14	5204-200X1
200	100 FOLD	2 SECTION	1	76.27	5200-200X100	40.19	5202-200X2	35.04	5204-200X2

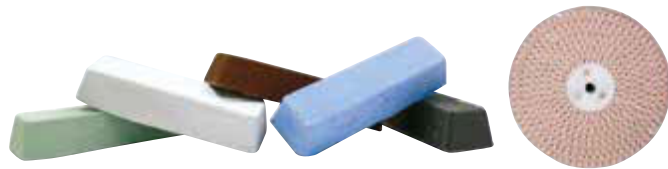


DIAMETER MM	CALICO MOPS HEAD STYLE	SHANK	PACK QTY	\$ EACH	PART NUMBER
90	MUSHROOM	HEX	1	18.11	5200-MS
70	TAPER	HEX	1	21.97	5200-TS



SET CONTENTS	\$ SET	PART NUMBER
<b>CALICO POLISHING KIT</b>	<b>54.51</b>	<b>5200-S1</b>
5200-MS MUSHROOM HEAD CALICO POLISHING MOP		
5200-TS TAPER HEAD CALICO POLISHING MOP		
5220-2 GREEN POLISHING COMPOUND		





GROUP	COMP
PACKAGING	CLAM SHELL



**COMPOUNDS**

**WHITE**  
COMBINED CUTTING & FINISHING COMPOUND  
Fast cutting with medium to high finish.  
Use on calico or stitched rag mop  
- can be used on sisal mops for extra cut.

**GREEN**  
FINISHING COMPOUND  
Creates a lustrous surface. This compound achieves a superior finish on chrome, stainless steel, decorative copper and brass. Best used with a calico mop.

**BLUE**  
FINISHING COMPOUND  
Used to produce a lustrous, smear free, high reflective surface on all metals that are suitable for lacquering. Best used with a loose leaf calico polishing mop.

**BROWN**  
COMBINED CUTTING AND FINISHING COMPOUND  
General purpose tripoli. Use on sisal, stitched rag and calico mops. Easy to remove prior to electroplating.

**GREY**  
CUTTING COMPOUND  
Rough cut to remove scratches, belt marks and drawing marks. Maximum abrasive content with high rate of surface removal. Fast and economical.

COLOUR	DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
WHITE	FOR HIGH GLOSS FINISH ON ALUMINIUM & ALUMINIUM ALLOYS	1	14.42	5220-1
LIGHT GREEN	FOR HIGH GLOSS FINISH ON COPPER, BRASS & STAINLESS STEEL	1	14.42	5220-2
LIGHT BLUE	FOR HIGH GLOSS FINISH ON MOST PLASTICS, SILVER, GOLD & DIE CAST METALS	1	14.42	5220-3
BROWN	FOR GENERAL PURPOSE USE ON COPPER, BRASS, ALUMINIUM & MOST METALS	1	8.28	5220-4
DARK GREY	FOR LIGHT SCRATCHES ON COPPER, BRASS, S/STEEL BEFORE HIGH GLOSS POLISHING	1	11.97	5220-5

GROUP	SPIN	SPIN
TYPE	LEFT HAND TAPERED SPINDLE	RIGHT HAND TAPERED SPINDLE
USAGE	CLAM SHELL	CLAM SHELL



THREAD / SHANK MM INCH	TYPE	USE IN	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
12 -	MC	BENCH GRINDER	1	33.82	5240-12L	33.82	5240-12R
16 -	MC	BENCH GRINDER	1	33.82	5240-16L	33.82	5240-16R
- 1/2	BSW	BENCH GRINDER	1	33.82	5240-1/2L	33.82	5240-1/2R
- 5/8	BSW	BENCH GRINDER	1	33.82	5240-5/8L	33.82	5240-5/8R



WITH SHANK							
6 -	-	USE IN A PISTOL DRILL WITH MOPS <100MM	1	-	-	22.34	5240-6S



**GROUP**

PACKAGING

**MERCHANDISER**



**MERCHANDISER TYPE**

**\$**  
MERCHANDISER

**PART**  
NUMBER

**POLISHING**

**1,379.86**

5200-D1

**MERCHANDISER CONTENTS**

**QTY**  
EACH

**DESCRIPTION**

**PART**  
NUMBER

2	Calico 150mm x 100 fold	5200-150X100
2	Calico 200mm x 100 fold	5200-200X100
2	Stitch Rag 150mm x 2 section	5202-150X2
2	Stitch Rag 200mm x 2 section	5202-200X2
2	Sisal 150mm x 2 section	5204-150X2
2	Sisal 200mm x 2 section	5204-200X2
2	Calico mushroom mop	5200-MS
2	Calico tapered mop	5200-TS
2	White Compound	5220-1
2	Light Green Compound	5220-2
2	Light Blue Compound	5220-3
2	Brown Compound	5220-4
2	Dark Grey Compound	5220-5
2	Spindle Left Handed 12mm	5240-12L
2	Spindle Left Handed 16mm	5240-16L
2	Spindle Left Handed 1/2"	5240-1/2L
2	Spindle Left Handed 5/8"	5240-5/8L
2	Spindle Right Handed 12mm	5240-12R
2	Spindle Right Handed 16mm	5240-16R
2	Spindle Right Handed 1/2"	5240-1/2R
2	Spindle Right Handed 5/8"	5240-5/8R
2	Polishing kit	5200-S1

# Brushware

CUP, WHEEL, BEVEL, PIPELINE, END, SCRATCH & TUBE





BRUSHWARE

CUP BRUSHES

CUP BRUSHES  
TWIST KNOT

Twist knot cup brushes are designed for use with electric or pneumatic high speed grinders for heavy duty cleaning of large surfaces, and also for removal of weld scale, rust, old paint, and corrosion.

These brushes are constructed using hi-tensile wire to ensure superior performance and a long life. They are available with either carbon steel wire or stainless steel wire.

Bordo twist knot cup brushes 100mm and over are bridle banded to reduce flare for a faster cutting action. Bands can easily be removed as the wire wears.



GROUP							WBRS		WBRS	
TYPE							TWIST KNOT CUP BRUSH		TWIST KNOT CUP BRUSH	
PACKAGING							CLAM SHELL		BOX	



DIAMETER MM	NO. OF ROWS	THREAD	THREAD ADAPTOR	WIRE DIA MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
STEEL WIRE										
50	1	6MM SPINDLE	—	0.50	6,000	1	21.73	5100-50.5S		
65	1	M14 X 2.00	M10 X 1.5	0.50	12,500	1	23.11	5100-65-3.5		
70	1	M14 X 2.00	M10 X 1.5	0.35	12,500	1	28.15	5100-70-3.35		
70	1	M14 X 2.00	M10 X 1.5	0.50	12,500	1	28.15	5100-70-3.5		
90	1	M14 X 2.00	—	0.50	8,500	1	44.67	5100-90-3.5		
100	1	M14 X 2.00	—	0.35	8,500	1	52.64	5100-100-3.35		
100	1	M14 X 2.00	—	0.50	8,500	1	52.64	5100-100-3.5		
125	1	M14 X 2.00	—	0.50	6,500	1	81.93	5100-125-3.5		
125	2	M14 X 2.00	—	0.50	6,500	1			104.88	5100-125-3.5/2R
125	1	M14 X 2.00	—	0.80	6,500	1			81.93	5100-125-3.8
316 STAINLESS STEEL WIRE										
65	1	M14 X 2.00	M10 X 1.5	0.50	12,500	1	49.49	5101-65-3.5		
70	1	M14 X 2.00	M10 X 1.5	0.35	12,500	1	54.54	5101-70-3.35		
70	1	M14 X 2.00	M10 X 1.5	0.50	12,500	1	47.52	5101-70-3.5		
100	1	M14 X 2.00	—	0.50	8,500	1	103.28	5101-100-3.5		



CUP BRUSHES  
CRIMP WIRE

Crimp wire cup brushes are designed for use with electric or pneumatic high speed grinders for removing scale, rust, and paint, and other surface preparation including deburring and polishing. Crimp wire brushes are not as aggressive as their twist knot equivalents.

These brushes are constructed using hi-tensile wire to ensure superior performance and a long life. They are manufactured from carbon steel or 316 stainless steel wire.



GROUP							WBRS			
TYPE							CRIMP WIRE CUP BRUSH			
PACKAGING							CLAM SHELL			

DIAMETER MM	NO. OF ROWS	THREAD	THREAD ADAPTOR	WIRE DIA MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER
STEEL WIRE								
60	—	M14 X 2.00	M10 X 1.5	0.30	12,500	1	21.24	5104-60-3.3
75	—	M14 X 2.00	M10 X 1.5	0.30	12,500	1	29.33	5104-75-3.3
80	—	M14 X 2.00	—	0.30	8,500	1	37.23	5104-80-3.3
100	—	M14 X 2.00	—	0.30	8,500	1	47.04	5104-100-3.3
120	—	M14 X 2.00	—	0.30	6,500	1	61.48	5104-120-3.3
316 STAINLESS STEEL WIRE								
75	—	M14 X 2.00	M10 X 1.5	0.30	12,500	1	44.87	5105-75-3.3

**BEVEL BRUSHES**  
**TWIST KNOT**

Twist knot bevel brushes are designed for use with electric or pneumatic high speed grinders for heavy duty cleaning of hard to reach areas including internal edges and corners. They are also ideal for the removal of weld scale, rust, old paint, and corrosion.

These brushes are constructed using hi-tensile wire to ensure superior performance and a long life. They are available with either carbon steel wire or stainless steel wire.



GROUP	WBR
TYPE	<b>TWIST KNOT BEVEL</b>
PACKAGING	<b>CLAM SHELL</b>



DIAMETER MM	NO. OF ROWS	THREAD OR SPINDLE	THREAD ADAPTOR	WIRE DIA MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER
<b>STEEL WIRE</b>								
75	1	1/4" SPINDLE	—	0.50	15,000	1	<b>21.64</b>	5112-75.5S
100	1	1/4" SPINDLE	—	0.50	12,500	1	<b>22.01</b>	5112-100.5S
100	1	M14 X 2.00	M10 X 1.5	0.50	12,500	1	<b>29.33</b>	5112-100-3.5
115	1	M14 X 2.00	—	0.50	12,500	1	<b>35.04</b>	5112-115-3.5
125	1	M14 X 2.00	—	0.50	10,000	1	<b>46.59</b>	5112-125-3.5
<b>316 STAINLESS STEEL WIRE</b>								
100	1	M14 X 2.00	M10 X 1.5	0.50	12,500	1	<b>61.71</b>	5113-100-3.5
115	1	M14 X 2.00	—	0.50	12,500	1	<b>83.80</b>	5113-115-3.5



GROUP	WBR
TYPE	<b>CRIMP WIRE BEVEL</b>
PACKAGING	<b>CLAM SHELL</b>



DIAMETER MM	NO. OF ROWS	THREAD OR SPINDLE	THREAD ADAPTOR	WIRE DIA MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER
<b>STEEL WIRE</b>								
100	1	M14 X 2.00	M10 X 1.5	0.30	12,500	1	<b>19.21</b>	5110-100-3.3
<b>316 STAINLESS STEEL WIRE</b>								
100	1	M14 X 2.00	M10 X 1.5	0.30	12,500	1	<b>51.43</b>	5111-100-3.3

**BEVEL BRUSHES**  
**CRIMP WIRE**

Crimp wire bevel brushes are designed for use with electric or pneumatic high speed grinders for removing scale, rust, and paint, and other surface preparation including deburring and polishing. They are ideal for hard to reach areas including internal edges and corners. Crimp wire brushes are not as aggressive as their twist knot equivalents.

These brushes are constructed using hi-tensile wire to ensure superior performance and a long life. They are manufactured from carbon steel or 316 stainless steel wire.



## BRUSHWARE

### WHEEL BRUSHES

#### WHEEL BRUSHES TWIST KNOT

Twist knot wheel brushes are designed for use with electric or pneumatic high speed grinders as well as bench mounted electric grinders. They are ideal for heavy duty cleaning of large surfaces, and also for removal of weld scale, rust, old paint, and corrosion.

These wheels are constructed using hi-tensile wire to ensure superior performance and a long life. They are available with either carbon steel wire or stainless steel wire.



GROUP	WBR
TYPE	TWIST KNOT WHEEL
PACKAGING	CLAM SHELL



DIAMETER MM	NO. OF KNOTS	BORE OR SPINDLE	THREAD/BORE ADAPTOR	WIRE DIA MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER
<b>STEEL WIRE</b>								
85	15	1/4" SPINDLE	—	0.50	20,000	1	<b>27.48</b>	5106-85.5S
100	20	16MM	1/2"	0.50	12,500	1	<b>32.56</b>	5106-100.5
100	20	M14 X 2.00	M10 X 1.5	0.50	12,500	1	<b>34.54</b>	5106-100-3.5
125	20	22.2MM	5/8"	0.50	12,500	1	<b>40.24</b>	5106-125.5
125	20	M14 X 2.00	M10 X 1.5	0.50	12,500	1	<b>36.05</b>	5106-125-3.5
150	24	22.2MM	5/8" & 1/2"	0.50	9,000	1	<b>42.33</b>	5106-150.5
200	34	22.2MM	5/8" & 1/2"	0.50	8,500	1	<b>61.17</b>	5106-200.5
<b>316 STAINLESS STEEL WIRE</b>								
125	20	22.2MM	5/8"	0.50	12,500	1	<b>80.68</b>	5107-125.5

#### PIPELINE BRUSHES TWIST KNOT

High impact cutting and cleaning for tough applications especially for weld passes.

Narrow face for hard to reach areas is specially suited for groove and weld bead, corners, and t-connections.

Stiff and long lasting knots for rapid removal of build-up and cleaning of weld passes.



GROUP	WBR
TYPE	TWIST KNOT PIPELINE
PACKAGING	BOX



DIAMETER MM	NO. OF KNOTS	BORE OR SPINDLE	THREAD/BORE ADAPTOR	WIRE DIA MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER
<b>STEEL WIRE PIPELINE BRUSHES</b>								
125	39	22.2MM	—	0.50	10,000	1	<b>51.87</b>	5120-125/39.5
125	39	M14 X 2.00	—	0.50	10,000	1	<b>56.02</b>	5120-125/39-3.5
150	52	22.2MM	—	0.50	9,000	1	<b>74.55</b>	5120-150/52.5
178	60	22.2MM	—	0.50	9,000	1	<b>97.44</b>	5120-178/60.5
178	60	M14 X 2.00	—	0.50	9,000	1	<b>101.33</b>	5120-178/60-3.5
178	76	22.2MM	—	0.50	9,000	1	<b>126.86</b>	5120-178/76.5

**WHEEL BRUSHES**  
CRIMPED WIRE

Crimped wire wheel brushes are designed for use with electric or pneumatic high speed grinders as well as bench mounted electric grinders. They are ideal for removing scale, rust, and paint, and other surface preparation including deburring and polishing. Crimped wire wheels are not as aggressive as their twist knot equivalents.

These wheels are constructed using hi-tensile wire to ensure superior performance and a long life. They are manufactured from carbon steel or stainless steel wire.



GROUP	WBRS	WBRS
TYPE	CRIMP WIRE WHEEL	CRIMP WIRE WHEEL
PACKAGING	CLAM SHELL	BOX



DIAMETER MM	BORE	BORE ADAPTOR	WIRE DIA MM	THICKNESS MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>STEEL WIRE</b>										
100	20MM	5/8" & 1/2"	0.30	16	8,000	1	31.37	5108-100/16.3		
100	20MM	5/8" & 1/2"	0.30	25	8,000	1			37.27	5108-100/25.3
125	20MM	5/8" & 1/2"	0.30	18	6,000	1	32.80	5108-125/18.3		
125	20MM	5/8" & 1/2"	0.30	25	6,000	1			42.18	5108-125/25.3
150	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	18	6,000	1	39.65	5108-150/18.3		
150	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	25	6,000	1	42.92	5108-150/25.3		
200	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	20	4,500	1	43.65	5108-200/20.3		
200	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	25	4,500	1	50.51	5108-200/25.3		
250	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	25	3,000	1			102.16	5108-250/25.3
250	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	40	3,000	1			124.04	5108-250/40.3
250	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	50	3,000	1			152.93	5108-250/50.3
300	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	40	3,000	1			202.72	5108-300/40.3
<b>316 STAINLESS STEEL WIRE</b>										
150	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	18	6,000	1	133.68	5109-150/18.3		
150	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	25	6,000	1			147.21	5109-150/25.3
200	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	20	4,500	1	160.96	5109-200/20.3		
200	32MM	1, 7/8, 3/4, 5/8, 1/2"	0.30	25	4,500	1			180.30	5109-200/25.3



GROUP	WBRS
TYPE	ADAPTORS
PACKAGING	CLAM SHELL



DESCRIPTION	PACK QTY	\$ EACH	PART NUMBER
<b>THREAD ADAPTORS</b>			
THREAD ADAPTOR TWIN PACK: M14X2 TO M10X1.25 & M14X2 TO M10X1.5	2	7.81	5100-TA1

# BRUSHWARE

HIGH SPEED

BRUSHES



GROUP	WBRS	WBRS
TYPE	<b>HIGH SPEED CRIMP WIRE END BRUSH</b>	<b>HIGH SPEED TWIST KNOT END BRUSH</b>
PACKAGING	CLAM SHELL	CLAM SHELL



**HIGH  
SPEED**

DIAMETER MM	SHANK	STYLE	WIRE DIA MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>STEEL WIRE – HIGH SPEED</b>									
12	1/4" ROUND	SOLID END	0.30	20,000	1	<b>8.92</b>	5114-12.3		
19	1/4" ROUND	SOLID END	0.30	20,000	1	<b>11.16</b>	5114-19.3		
25	1/4" ROUND	SOLID END	0.30	20,000	1	<b>14.05</b>	5114-25.3		
25	1/4" ROUND	REDUCED FLARE	0.30	18,000	1	<b>14.99</b>	5114-25P.3		
19	1/4" ROUND	SOLID END	0.50	20,000	1			<b>17.15</b>	5119-19.5
25	1/4" ROUND	SOLID END	0.50	20,000	1			<b>26.37</b>	5119-25.5
<b>316 STAINLESS STEEL WIRE – HIGH SPEED</b>									
25	1/4" ROUND	SOLID END	0.50	20,000	1			<b>59.18</b>	5120-25.5

GROUP	WBRS	WBRS
TYPE	<b>HIGH SPEED CRIMP WIRE WHEEL</b>	<b>HIGH SPEED CRIMP WIRE WHEEL</b>
PACKAGING	CLAM SHELL	BULK BOX OF 10



**HIGH  
SPEED**

DIAMETER MM	SHANK	WIRE DIA MM	THICKNESS MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>STEEL WIRE – HIGH SPEED</b>									
20	1/4" ROUND	0.20	6	20,000	10			<b>12.23</b>	5116-2006.2B
30	1/4" ROUND	0.20	9	20,000	10			<b>14.12</b>	5116-3009.2B
40	1/4" ROUND	0.20	11	18,000	10			<b>14.12</b>	5116-4011.2B
50	1/4" ROUND	0.30	10	15,000	10			<b>13.11</b>	5116-5010.3B
50	1/4" ROUND	0.30	17	15,000	10			<b>16.39</b>	5116-5017.3B
50	1/4" ROUND	0.30	17	15,000	1	<b>17.98</b>	5116-5017.3		
50	1/4" ROUND	0.30	23	15,000	10			<b>19.66</b>	5116-5023.3B
70	1/4" ROUND	0.30	18	15,000	10			<b>27.10</b>	5116-7018.3B
70	1/4" ROUND	0.30	18	15,000	1	<b>28.69</b>	5116-7018.3		
<b>316 STAINLESS STEEL WIRE – HIGH SPEED</b>									
50	1/4" ROUND	0.30	17	15,000	10			<b>26.22</b>	5117-5017.3B
70	1/4" ROUND	0.30	18	15,000	10			<b>48.78</b>	5117-7018.3B
<b>BRASS WIRE – HIGH SPEED</b>									
70	1/4" ROUND	0.30	18	15,000	10			<b>59.11</b>	5118-7018.2B



**BRUSHES  
NYLON GRIT**

Bordo Nylon Grit brushes are constructed using grit-impregnated nylon fibres that are self-replenishing as the brush ages.

**BENEFITS**

- Maintain shape and will not rust.
- Will not shed bristles under normal conditions.
- Abrasive grit is impregnated throughout each bristle.
- Safer to use, will not puncture skin.

**APPLICATIONS**

- Removing paints, corrosion, weld scale, surface rust and burns from metals.
- Prepare plastic, fiberglass, and rubber surfaces for adhesives.
- Preparing metal surfaces for primers and paint.
- Cleaning unfinished tile, stone, cement, and brick mortar.
- Removing old paint and finishes from wood.
- Cleaning and sanding wood turnings, railings, banisters, trim and moulding.
- Rounding and blending edges, cutouts and joints.

GROUP	WBRS	WBRS
TYPE	CUP BRUSH	END BRUSH
PACKAGING	CLAM SHELL	CLAM SHELL



DIAMETER MM	SHANK	WIRE DIA MM	TRIM MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CRIMP STEEL WIRE</b>									
50	1/4" HEX	0.30	16	4,500	1	8.90	5130-50S		
65	1/4" HEX	0.30	18	4,500	1	10.22	5130-65S		
75	1/4" HEX	0.30	10	4,500	1	11.09	5130-75S		
25	1/4" HEX	0.30	25	4,500	1			11.09	5134-25S
DIAMETER MM	SHANK	GRIT	TRIM MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>NYLON GRIT FILAMENT</b>									
50	1/4" HEX	80G	25	4,500	1	30.31	5150-50S		
75	1/4" HEX	80G	25	4,500	1	37.07	5150-75S		
25	1/4" HEX	80G	25	4,500	1			30.31	5154-25S

GROUP	WBRS	WBRS
TYPE	WHEEL	FLAPPER
PACKAGING	CLAM SHELL	CLAM SHELL



DIAMETER MM	SHANK	WIRE DIA MM	THICKNESS MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CRIMP STEEL WIRE</b>									
50	1/4" HEX	0.30	7	4,500	1	7.88	5132-50S		
75	1/4" HEX	0.30	10	4,500	1	9.62	5132-75S		
100	1/4" HEX	0.30	12	4,500	1	12.54	5132-100S		
DIAMETER MM	SHANK	GRIT	THICKNESS MM	MAX RPM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>NYLON GRIT FILAMENT</b>									
50	1/4" HEX	80G	7	4,500	1	28.41	5152-50S		
75	1/4" HEX	80G	10	4,500	1	32.62	5152-75S		
100	1/4" HEX	80G	12	4,500	1	37.07	5152-100S		
100	1/4" HEX	80G	—	3,500	1			32.34	5156-100S



BRUSHWARE

CONDENSOR TUBE

BRUSHES

CONDENSOR  
TUBE AND  
BOILER TUBE  
TWISTED  
BRUSHES

Twisted in wire brushes are known by many names, such as spiral, tube, bottle, pipe and more, but generally they are manufactured using the same construction technique. A piece of wire is doubled over and bristle material is inserted between the fold of the wire stem, the wire stem is then twisted into a brush.

The most common brush "fills" are steel wire, stainless steel wire, brass wire, and nylon.

All Bordo condensor tube and boiler tube brushes feature a BSW male threaded ferrule. They may be used by hand or with power equipment.

All brushes are available as single or double spiral. The double spiral are a heavier construction with a more dense brush face for more aggressive brushing and are ideally suited to use with a power tool.



GROUP	WBRS	
TYPE	CONDENSOR TUBE BRUSH	CONDENSOR TUBE BRUSH
TWIST	SINGLE	DOUBLE
PACKAGING	BAG	BAG



DIAMETER MM	FERRULE THREAD	FILL DIA. MM	FILL LENGTH MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
STEEL WIRE								
13	5/16" BSW	0.30	85	1	14.75	5124-13.3		
14	5/16" BSW	0.30	85	1	14.75	5124-14.3		
25	5/16" BSW	0.30	130	1			25.59	5127-25.3
32	5/16" BSW	0.30	130	1			29.87	5127-32.3



BRASS WIRE								
6	3/16" BSW	0.30	75	1	23.61	5125-6.3		
8	3/16" BSW	0.30	75	1	23.61	5125-8.3		
9	3/16" BSW	0.30	85	1	23.61	5125-9.3		
10	5/16" BSW	0.30	85	1	23.61	5125-10.3		
13	5/16" BSW	0.30	85	1	23.61	5125-13.3		
14	5/16" BSW	0.30	85	1	23.61	5125-14.3		
19	5/16" BSW	0.30	130	1			38.12	5128-19.3
25	5/16" BSW	0.30	130	1			23.29	5128-25.3
32	5/16" BSW	0.30	130	1			47.80	5128-32.3



NYLON								
6	3/16" BSW	0.30	75	1	14.01	5126-6.3		
8	3/16" BSW	0.30	75	1	14.01	5126-8.3		
9	3/16" BSW	0.30	85	1	14.01	5126-9.3		
13	5/16" BSW	0.40	85	1	14.01	5126-13.4		
16	5/16" BSW	0.40	130	1			20.97	5129-16.4
19	5/16" BSW	0.40	130	1			22.64	5129-19.4
25	5/16" BSW	0.40	130	1			23.61	5129-25.4
32	5/16" BSW	0.40	130	1			28.38	5129-32.4

**CONDENSOR  
TUBE AND  
BOILER TUBE  
TWISTED  
BRUSHES**

Twisted in wire brushes are known by many names, such as spiral, tube, bottle, pipe and more, but generally they are manufactured using the same construction technique. A piece of wire is doubled over and bristle material is inserted between the fold of the wire stem, the wire stem is then twisted into a brush.

The most common brush "fills" are steel wire, stainless steel wire, brass wire, and nylon.

All Bordo condensor tube and boiler tube brushes feature a BSW male threaded ferrule. They may be used by hand or with power equipment.

All brushes are available as single or double spiral. The double spiral are a heavier construction with a more dense brush face for more aggressive brushing and are ideally suited to use with a power tool.

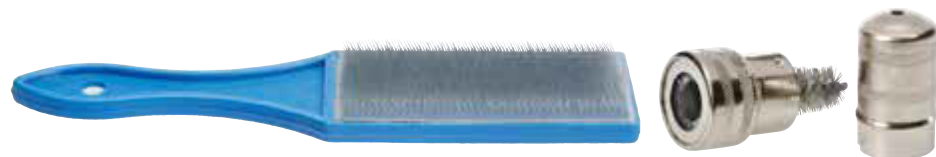


GROUP	WBRS	WBRS
TYPE	BOILER TUBE BRUSH	BOILER TUBE BRUSH
SPIRAL	SINGLE	DOUBLE
MATERIAL	STEEL WIRE	STEEL WIRE
PACKAGING	BAG	BAG



DIAMETER MM	FERRULE THREAD	LENGTH MM	OAL MM	BOX QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>STEEL CRIMP WIRE</b>								
25	1/2" BSW	100	160	1	<b>16.01</b>	5122-25.3	<b>25.59</b>	5123-25.3
28	1/2" BSW	100	160	1	<b>16.89</b>	5122-28.3	<b>27.10</b>	5123-28.3
30	1/2" BSW	100	160	1	<b>17.77</b>	5122-30.3	<b>28.48</b>	5123-30.3
32	1/2" BSW	100	160	1	<b>18.65</b>	5122-32.3	<b>29.87</b>	5123-32.3
38	1/2" BSW	100	160	1	<b>19.66</b>	5122-38.3	<b>31.51</b>	5123-38.3
40	1/2" BSW	100	160	1	<b>20.42</b>	5122-40.3	<b>32.77</b>	5123-40.3
44	1/2" BSW	100	160	1	<b>21.93</b>	5122-44.3	<b>35.17</b>	5123-44.3
50	1/2" BSW	100	160	1	<b>23.82</b>	5122-50.3	<b>38.06</b>	5123-50.3
57	1/2" BSW	100	160	1	<b>25.71</b>	5122-57.3	<b>41.09</b>	5123-57.3
60	1/2" BSW	100	160	1	<b>26.47</b>	5122-60.3	<b>42.35</b>	5123-60.3
63	1/2" BSW	100	160	1	<b>27.23</b>	5122-63.3	<b>43.61</b>	5123-63.3
69	1/2" BSW	100	160	1	<b>29.37</b>	5122-69.3	<b>46.89</b>	5123-69.3
75	1/2" BSW	100	160	1	<b>31.13</b>	5122-75.3	<b>49.78</b>	5123-75.3
82	1/2" BSW	100	160	1	<b>33.02</b>	5122-82.3	<b>52.81</b>	5123-82.3
90	1/2" BSW	100	160	1	<b>34.92</b>	5122-90.3	<b>55.83</b>	5123-90.3
101	1/2" BSW	100	160	1	<b>38.57</b>	5122-101.3	<b>61.76</b>	5123-101.3

GROUP	WBRS	WBRS
TYPE	FILE CARD	BATTERY TERMINAL BRUSH
PACKAGING	HANG PACK	HANG PACK



TYPE	OAL MM	WIDTH MM	LENGTH MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
FILE CARD	235	40	115	1	<b>9.90</b>	5198-FC1		
BATTERY TERMINAL BRUSH	85	15/25	35	1			<b>8.75</b>	5196-BTMB

BRUSHWARE

SCRATCH BRUSHES

HANG SELL



GROUP	WBRS	WBRS	WBRS
MATERIAL	STEEL WIRE	STAINLESS WIRE	BRASS WIRE



TYPE	WIRE DIA MM	ROWS	COLOUR	BOX QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
UNIVERSAL HAND	0.3	—	RED	24	11.69	5174-SW-R				
UNIVERSAL HAND	0.3	—	GREEN	24			16.04	5174-SS-G		
UNIVERSAL HAND	0.3	—	YELLOW	24					16.04	5174-BW-Y



TYPE	WIRE DIA MM	ROWS	COLOUR	BOX QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
PLASTIC HANDLE LONG	0.33	4X18	BLUE	12	17.67	5175-SW-4R				
PLASTIC HANDLE LONG	0.35	4X18	GREEN	12			22.40	5175-SS-4R		

NEW  
PRODUCT







GROUP	WBRS	WBRS
MATERIAL	STEEL WIRE	STAINLESS WIRE



TYPE	WIRE DIA MM	ROWS	COLOUR	BOX QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
WOODEN HANDLE	0.3	4	—	20	4.08	5172-SW-4R		
LONG WOODEN HANDLE	0.33	3X19	—	12	6.76	5170-SW-3R		
LONG WOODEN HANDLE	0.35	3X19	—	12			14.58	5170-SS-3R
LONG WOODEN HANDLE	0.33	4X19	—	20	8.27	5170-SW-4R		
LONG WOODEN HANDLE	0.35	4X19	—	20			15.67	5170-SS-4R

**BRUSHES  
SCRATCH**  
**STEEL WIRE**  
These brushes are suitable for a range of general applications in the paint, welding, and automotive trades. They are constructed using tempered steel wire and are the most economical general purpose brush.

**STAINLESS STEEL WIRE**  
Stainless steel wire scratch brushes are primarily used for metal finishing on smooth surfaces such as plating. The stainless steel wire is non-corrosive and suitable where hygiene requirements are a consideration or where moisture is present. Stainless steel wire scratch brushes are predominantly used in the welding or painting industries. Stainless steel wire resists oxidation and rusting.

**BRASS WIRE**  
Brass bristles remove residues from metal without severely scratching the surface and are ideal for use in tooling production and aluminum welding. They may also be used for cleaning grills and some ovens. Brass wire scratch brushes are softer than tempered steel and will not scratch enamelled surfaces.

5170-SW-3R and 5170-SS-3R are supplied in plain unprinted boxes.





BRUSHWARE

SCRATCH BRUSHES

HANG SELL

BRUSHES  
SCRATCH

STEEL WIRE

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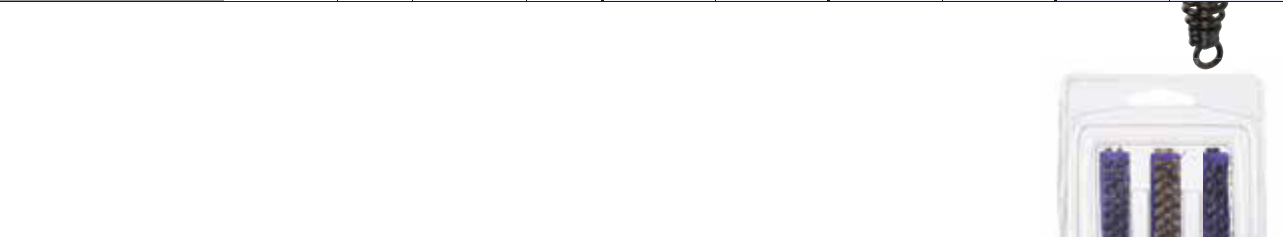
GROUP	WBRS	WBRS	WBRS
MATERIAL	STEEL WIRE	STEEL WIRE	STAINLESS WIRE



TYPE	WIRE DIA MM	ROWS	COLOUR	BOX QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
LONG W/HANDLE CONVEX	0.35	3X14	—	12	7.43	5170-SW-3RC				
PLASTIC SHOE HANDLE	0.35	4X16	—	12			8.68	5171-SW-4RSH		



WITH SCRAPER										
LONG WOODEN HANDLE	0.33	3X19	—	12	8.67	5170-SW-3RSC				
PLASTIC HANDLE	0.35	4X11	—	12			10.93	5171-SW-4RSC		
WELDING										
WELDING HMR & BRUSH	0.40	3X15	—	12					18.24	5173-SS-WHB



GROUP	WBRS
TYPE	MINI SCRATCH BRUSH SET
PACKAGING	CLAM SHELL

DESCRIPTION	CLAM QTY	\$ EACH	PART NUMBER
MINIATURE SCRATCH BRUSH 3 PIECE SET			
0.15MM STAINLESS STEEL WIRE BRUSH	3	12.53	5171-S1
0.15MM BRASS WIRE BRUSH			
0.50MM NYLON FILAMENT BRUSH			



GROUP	WBRS
PACKAGING	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
BRUSHWARE IMPACT DRIVER HEX SHANK	299.47	5100-D3

MERCHANDISER CONTENTS	QTY EACH	DESCRIPTION	PART NUMBER
	1	50mm CWW 0.3mm Steel 1/4" Hex Shk	5132-50S
	1	75mm CWW 0.3mm Steel 1/4" Hex Shk	5132-75S
	1	100mm CWW 0.3mm Steel 1/4" Hex Shk	5132-100S
	1	50mm CWC 0.3mm Steel 1/4" Hex Shk	5130-50S
	1	65mm CWC 0.3mm Steel 1/4" Hex Shk	5130-65S
	1	75mm CWC 0.3mm Steel 1/4" Hex Shk	5130-75S
	1	25mm CWE 0.3mm Steel 1/4" Hex Shk	5134-25S
	1	50mm NylonGrit Wheel 1/4" Hex Shk	5152-50S
	1	75mm NylonGrit Wheel 1/4" Hex Shk	5152-75S
	1	100mm NylonGrit Wheel 1/4" Hex Shk	5152-100S
	1	50mm NylonGrit Cup 1/4" Hex Shk	5150-50S
	1	75mm NylonGrit Cup 1/4" Hex Shk	5150-75S
	1	25mm NylonGrit End 1/4" Hex Shk	5154-25S
	1	100mm NylonGrit Flapper 1/4" Hex Shk	5156-100S

GROUP	WBRS
PACKAGING	MERCHANDISER



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
BRUSHWARE	768.03	5100-D1

MERCHANDISER CONTENTS	QTY EACH	DESCRIPTION	PART NUMBER
	1	3 Pce Mini Brush Set	5171-S1
	1	4 Row Steel Long Wooden Scratch Brush	5170-SW-4R
	1	Long Wood. Convex Scratch-Steel 3R	5170-SW-3RC
	1	4 Row SS Long Wooden Scratch Brush	5170-SS-4R
	1	Plastic Handle Scratch-Steel 4 Row + Scraper	5171-SW-4RSC
	1	SS Wire Universal Scratch Brush	5174-SS-G
	1	Brass Wire Universal Scratch Brush	5174-BW-Y
	1	Steel Wire Universal Scratch Brush	5174-SW-R
	1	100mm NylonGrit Flapper Brush - 1/4" Hex Shank	5156-100S
	1	75mm NylonGrit Cup Brush - 1/4" Hex Shank	5150-75S
	1	75mm NylonGrit Wheel Brush - 1/4" Hex Shank	5152-75S
	1	75mm Crimped Wire Cup Brush - 1/4" Hex Shank	5130-75S
	1	75mm Crimped Wire Wheel Brush - 1/4" Hex Shank	5132-75S
	1	Thread Adaptor Set M10x1.25 M10x1.5 to M14x2.00	5100-TA1
	1	70mm High Speed Crimped Wire Wheel Brush	5116-7018.3
	1	25mm High Speed Twist Knot End Brush	5119-25.5
	1	25mm High Speed Crimped Wire End Brush	5114-25.3
	1	200 x 25mm Crimped Wire Wheel Brush	5108-200/25.3
	1	150 x 25mm Crimped Wire Wheel Brush	5108-150/25.3
	1	125mm Twist Knot Bevel Brush	5112-125-3.5
	1	100mm Twist Knot Bevel Brush - MultiThread	5112-100-3.5
	1	125mm Twist Knot Wheel Brush - MultiThread	5106-125-3.5
	1	85mm Twist Knot Wheel Brush with Shank	5106-85.5S
	1	75mm Crimped Wire Cup Brush	5104-75-3.3
	1	125mm Twist Knot Cup Brush - 0.5mm Wire	5100-125-3.5
	1	100mm Twist Knot Cup Brush - 0.5mm Wire	5100-100-3.5
	1	70mm Twist Knot Cup Brush - 0.5mm Wire	5100-70-3.5
	1	70mm Twist Knot Cup Brush - 0.5mm Wire	5100-65-3.5
	1	50mm Twist Knot Cup Brush with Shank - 0.5mm wire	5100-50.5S



GROUP	WBRS	
PACKAGING	MERCHANDISER	
MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
BRUSHWARE	2,090.40	5100-D2

MERCHANDISER CONTENTS	QTY EACH	DESCRIPTION	PART NUMBER
	1	50mm TKC 0.5mm Steel with 1/4" spindle	5100-50.5S
	1	65mm TKC 0.5mm Steel M14X2 MultiThread	5100-65-3.5
	1	70mm TKC 0.35mm Steel M14X2 MultiThread	5100-70-3.35
	1	70mm TKC 0.5mm Steel M14X2 MultiThread	5100-70-3.5
	1	90mm TKC 0.5mm Steel M14X2	5100-90-3.5
	1	100mm TKC 0.5mm Steel M14X2	5100-100-3.5
	1	125mm TKC 0.5mm Steel M14X2	5100-125-3.5
	1	70mm TKC 0.5mm 316 SS M14X2 MultiThread	5101-70-3.5
	1	60mm CWC 0.3mm Steel M14X2 MultiThread	5104-60-3.3
	1	75mm CWC 0.3mm Steel M14X2 MultiThread	5104-75-3.3
	1	80mm CWC 0.3mm Steel M14X2	5104-80-3.3
	1	100mm CWC 0.3mm Steel M14X2	5104-100-3.3
	1	75mm CWC 0.3mm 316 SS M14X2 MultiThread	5105-75-3.3
	1	85mm TKW 0.5mm Steel 6mm shank	5106-85.5S
	1	100mm TKW 0.5mm Steel M14x2 MultiThread	5106-100-3.5
	1	125mm TKW 0.5mm Steel M14x2 MultiThread	5106-125-3.5
	1	200mm TKW 0.5mm Steel 22.2mm Multibore	5106-200.5
	1	125mm TKW 0.5mm 316 SS 22.2mm Multibore	5107-125.5
	1	100mm CWB (Bevel) 0.3mm Steel M14X2 MultiThread	5110-100-3.3
	1	100mm CWB (Bevel) 0.3mm 316 SS M14X2 MultiThread	5111-100-3.3
	1	100mm TKB (Bevel) 0.5mm Steel M14X2 MultiThread	5112-100-3.5
	1	115mm TKB (Bevel) 0.5mm Steel M14X2	5112-115-3.5
	1	125mm TKB (Bevel) 0.5mm Steel M14X2	5112-125-3.5
	1	100mm TKB (Bevel) 0.5mm 316 SS M14X2 MultiThread	5113-100-3.5
	1	115mm TKB (Bevel) 0.5mm 316 SS M14X2 MultiThread	5113-115-3.5
	1	150mm CWW 0.3mm Steel 18mm Width 32mm Multibore	5108-150/18.3
	1	150mm CWW 0.3mm Steel 25mm Width 32mm Multibore	5108-150/25.3
	1	200mm CWW 0.3mm Steel 20mm Width 32mm Multibore	5108-200/20.3
	1	200mm CWW 0.3mm Steel 25mm Width 32mm Multibore	5108-200/25.3
	1	12mm HS Crimped Wire End Brush Steel 1/4" Shk	5114-12.3
	1	19mm HS Crimped Wire End Brush Steel 1/4" Shk	5114-19.3
	1	25mm HS Crimped Wire End Brush Steel 1/4" Shk	5114-25.3
	1	25mm HS Crimped Wire Pointed End Brush Steel 1/4" Shk	5114-25P.3
	1	19mm HS Twist Knot End Brush Steel 1/4" Shk	5119-19.5
	1	25mm HS Twist Knot End Brush Steel 1/4" Shk	5119-25.5
	1	25mm SS High Speed Twist Knot End Brush 1/4" Shk	5120-25.5
	1	50mm HS Crimped Wheel 17mm Face 0.3mm Steel 1/4" Shk	5116-5017.3
	1	70mm HS Crimped Wheel 18mm Face 0.3mm Steel 1/4" Shk	5116-7018.3
	1	Twin pack of adaptors M14x2 to M10x1.5 and M10x1.25	5100-TA1
	1	50mm CWW 0.3mm Steel 1/4" Hex Shk	5132-50S
	1	75mm CWW 0.3mm Steel 1/4" Hex Shk	5132-75S
	1	100mm CWW 0.3mm Steel 1/4" Hex Shk	5132-100S
	1	50mm CWC 0.3mm Steel 1/4" Hex Shk	5130-50S
	1	65mm CWC 0.3mm Steel 1/4" Hex Shk	5130-65S
	1	75mm CWC 0.3mm Steel 1/4" Hex Shk	5130-75S
	1	25mm CWE 0.3mm Steel 1/4" Hex Shk	5134-25S
	1	50mm NylonGrit Wheel 1/4" Hex Shk	5152-50S
	1	75mm NylonGrit Wheel 1/4" Hex Shk	5152-75S
	1	NylonGrit Wheel Brush-100mm	5152-100S
	1	Crimp Nylon Cup w/shank 50mm	5150-50S
	1	75mm NylonGrit Cup 1/4" Hex Shk	5150-75S
	1	25mm NylonGrit End 1/4" Hex Shk	5154-25S
	1	100mm NylonGrit Flapper 1/4" Hex Shk	5156-100S
	3	Univ Scratch Brush-Steel Wire-0.3mm	5174-SW-R
	3	Univ Scratch Brush-Brass Wire-0.3mm	5174-BW-Y
	3	Univ Scratch Brush-SS Wire-0.3mm	5174-SS-G
	2	Welding Hammer with Brush	5173-SW-WHB
	3	Plastic Shoe Handle Scratch-Steel 4 Row	5171-SW-4RSH
	3	Plastic Handle Scratch-Steel 4 Row + Scraper	5171-SW-4RSC
	3	Long Wood. Scratch-SS Wire 4x19	5170-SS-4R
	3	Long Wood. Convex Scratch-Steel 3R	5170-SW-3RC
	3	Long Wood. Scratch-Steel Wire 4x19	5170-SW-4R
	1	3 Pce Mini Brush Set	5171-S1





SELECTED CLAM SHELL PACK  
DEBURRERS ARE SUPPLIED IN  
COUNTER DISPLAY BOXES WHEN  
ORDERED IN MULTIPLES OF 5.  
SEE PAGE 312 FOR DETAILS.



**GROUP**

**DBUR**

**STANDARD SWIVEL DEBURRER**

INCLUDES 6 BLADES

PACKAGING	\$	PART #
CLAM SHELL	46.84	6410-SWS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SE BLADE ADAPTOR	6410-SEAdaptor
NB BLADE ADAPTOR	6410-NBAdaptor
SE #10 BLADE	6411-SE10
SE #20 BLADE	6411-SE20
SE #30 BLADE	6411-SE30
NB #10 BLADE	6411-NB10
NB #20 BLADE	6411-NB20
NB #30 BLADE	6411-NB30



**TELESCOPIC SWIVEL DEBURRER**

INCLUDES 6 BLADES

PACKAGING	\$	PART #
CLAM SHELL	66.69	6410-TSS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SE & NB EXTENSION	6412-M
SE #10 BLADE	6411-SE10
SE #20 BLADE	6411-SE20
SE #30 BLADE	6411-SE30
NB #10 BLADE	6411-NB10
NB #20 BLADE	6411-NB20
NB #30 BLADE	6411-NB30



**SCRAPER DEBURRER**

INCLUDES 4MM AND 8MM SCRAPER BLADES

PACKAGING	\$	PART #
CLAM SHELL	105.15	6410-SCS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SCRAPER EXTENSION	6412-C
4MM SCRAPER BLADE	6411-C40
8MM SCRAPER BLADE	6411-C42
BLADE CHANGING TOOL	9931-BC



**GROUP**

**DBUR**

**COUNTERSINK DEBURRER**

INCLUDES 20MM HSS COUNTERSINK

PACKAGING	\$	PART #
CLAM SHELL	95.26	6410-CSS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
THREADED EXTENSION	6412-F
20MM HSS COUNTERSINK	6411-F20



**EXTERNAL PIPE DEBURRER**

MAXIMUM DIAMETER 26MM

PACKAGING	\$	PART #
CLAM SHELL	132.30	6410-EPS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
THREADED EXTENSION	6412-F
EXT. PIPE BLADE Ø26MM	6411-F26X



**SHEETMETAL EDGE DEBURRER**

TUNGSTEN CARBIDE BLADE

PACKAGING	\$	PART #
CLAM SHELL	62.67	6410-SHS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
EDGE EXTENSION	6412-D
CARBIDE BLADE	6411-D80



**SLOT EDGE DEBURRER**

15MM HSS 8 EDGE BLADE

PACKAGING	\$	PART #
CLAM SHELL	73.49	6410-SES

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SLOT EDGE EXTENSION	6412-G
HSS SLOT EDGE BLADE	6411-G10



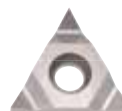
**GROUP DBUR**

**CORNER CLEANER DEBURRER**

TUNGSTEN CARBIDE 3 CORNER BLADE

PACKAGING	\$	PART #
CLAM SHELL	81.61	6410-CCS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
CORNER CLEANER EXTENSION	6412-G3
3 EDGED BLADE	6411-G30C



**HEAVY DUTY SHEETMETAL CLEANER**

FOR SHEETMETAL UP TO 14MM THICK

PACKAGING	\$	PART #
CLAM SHELL	60.57	6410-HSS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
HD SHEETMETAL HOLDER	6412-BR
ROUND BLADES (PAIR)	6411-R10

**APPLICATIONS / MATERIALS**

DEBURR STRAIGHT EDGES AND SHEET ALUMINIUM, COPPER, BRASS, CAST IRON, STAINLESS STEEL & PLASTICS.  
SIDE A DEBURRS MATERIALS WITH SPIRAL CHIPS SUCH AS STEEL, ALUMINIUM AND COPPER.  
SIDE B DEBURRS MATERIALS WITH POWDERY CHIPS SUCH AS BRASS AND CAST IRON.



SIDE A

SIDE B

**RATCHET EXTENSION**

FOR USE WITH COUNTERSINKS & EXTERNAL PIPE DEBURRERS

PACKAGING	\$	PART #
CLAM SHELL	50.05	6412-FRS

**DESCRIPTION**

RATCHET EXTENSION TO SUIT HSS COUNTERSINKS AND EXTERNAL PIPE DEBURRER BLADES



**STANDARD SWIVEL DEBURRER PEN**

INCLUDES SE10 HEAVY DUTY BLADE

PACKAGING	\$	PART #
CLAM SHELL	18.00	6411-A12SWS

DESCRIPTION	PART #
SE #10 BLADE	6411-SE10



DISPLAY BOX  
RANGE SEE  
PAGE 294



**GROUP DBUR**

**STANDARD SWIVEL DEBURRER**

INCLUDES 3 BLADES – SE



PACKAGING	\$	PART #
<b>BOXED</b>	<b>30.23</b>	6410-SWSE

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SE BLADE ADAPTOR	6410-SEAdaptor
SE #10 BLADE	6411-SE10
SE #20 BLADE	6411-SE20
SE #30 BLADE	6411-SE30

**STANDARD SWIVEL DEBURRER**

INCLUDES 3 BLADES – NB



PACKAGING	\$	PART #
<b>BOXED</b>	<b>28.08</b>	6410-SWNB

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
NB BLADE ADAPTOR	6410-NBAdaptor
NB #10 BLADE	6411-NB10
NB #20 BLADE	6411-NB20
NB #30 BLADE	6411-NB30

**TELESCOPIC SWIVEL DEBURRER**

INCLUDES 3 BLADES – SE



PACKAGING	\$	PART #
<b>BOXED</b>	<b>47.84</b>	6410-TSSE

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SE BLADE EXTENSION	6412-E
SE #10 BLADE	6411-SE10
SE #20 BLADE	6411-SE20
SE #30 BLADE	6411-SE30

**TELESCOPIC SWIVEL DEBURRER**

INCLUDES 3 BLADES – NB



PACKAGING	\$	PART #
<b>BOXED</b>	<b>40.30</b>	6410-TSNB

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
NB BLADE EXTENSION	6412-B
NB #10 BLADE	6411-NB10
NB #20 BLADE	6411-NB20
NB #30 BLADE	6411-NB30







GROUP	DBUR
-------	------

**SCRAPER DEBURRER**

INCLUDES 4MM SCRAPER BLADE

PACKAGING	\$	PART #
BOXED	55.48	6410-SC40
DESCRIPTION	PART #	
HANDLE – SOFT GRIP	–	
SCRAPER EXTENSION	6412-C	
4MM SCRAPER BLADE	6411-C40	
BLADE CHANGING TOOL	–	


**SCRAPER DEBURRER**

INCLUDES 8MM SCRAPER BLADE

PACKAGING	\$	PART #
BOXED	75.45	6410-SC42
DESCRIPTION	PART #	
HANDLE – SOFT GRIP	–	
SCRAPER EXTENSION	6412-C	
8MM SCRAPER BLADE	6411-C42	
BLADE CHANGING TOOL	–	


**COUNTERSINK DEBURRER**

INCLUDES 20MM HSS COUNTERSINK

PACKAGING	\$	PART #
BOXED	93.84	6410-CSF20
DESCRIPTION	PART #	
HANDLE – SOFT GRIP	–	
THREADED EXTENSION	6412-F	
20MM HSS COUNTERSINK	6411-F20	


**RATCHET COUNTERSINK DEBURRER**

INCLUDES 20MM HSS COUNTERSINK

PACKAGING	\$	PART #
BOXED	141.83	6410-CSF20FR
DESCRIPTION	PART #	
HANDLE – SOFT GRIP	–	
RATCHET EXTENSION	6412-FRS	
20MM HSS COUNTERSINK	6411-F20	



**GROUP DBUR**

**COUNTERSINK DEBURRER**

INCLUDES 30MM HSS COUNTERSINK



PACKAGING	\$	PART #
<b>BOXED</b>	<b>136.07</b>	6410-CSF30

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
THREADED EXTENSION	6412-F
30MM HSS COUNTERSINK	6411-F30

**RATCHET COUNTERSINK DEBURRER**

INCLUDES 30MM HSS COUNTERSINK



PACKAGING	\$	PART #
<b>BOXED</b>	<b>184.06</b>	6410-CSF30FR

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
RATCHET EXTENSION	6412-FRS
30MM HSS COUNTERSINK	6411-F30

**EXTERNAL PIPE DEBURRER**

MAXIMUM DIAMETER 26MM



PACKAGING	\$	PART #
<b>BOXED</b>	<b>130.89</b>	6410-EPF26X

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
THREADED EXTENSION	6412-F
EXT. PIPE BLADE Ø26MM	6411-F26X

**RATCHET EXTERNAL PIPE DEBURRER**

MAXIMUM DIAMETER 26MM



PACKAGING	\$	PART #
<b>BOXED</b>	<b>160.67</b>	6410-EPF26XFR

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
RATCHET EXTENSION	6412-FRS
EXT. PIPE BLADE Ø26MM	6411-F26X





**GROUP DBUR**

**SHEETMETAL EDGE DEBURRER**

TUNGSTEN CARBIDE BLADE WITH 6 CUTTING EDGES

PACKAGING	\$	PART #
BOXED	61.14	6410-SH

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
EDGE EXTENSION	6412-D
CARBIDE BLADE	6411-D80



**SLOT EDGE CLEANER DEBURRER**

15MM HSS BLADE WITH 8 CUTTING EDGES

PACKAGING	\$	PART #
BOXED	72.07	6410-SE

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SLOT EDGE EXTENSION	6412-G
HSS SLOT EDGE BLADE	6411-G10



**CORNER CLEANER DEBURRER**

TUNGSTEN CARBIDE 3 CORNER BLADE

PACKAGING	\$	PART #
BOXED	80.06	6410-CC

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
CORNER CLEANER EXTENSION	6412-G3
3 EDGED BLADE	6411-G30C



COUNTER DISPLAY BOX RANGES  
SEE **PAGE 312**



BENCH AND WALL MOUNTED MERCHANDISERS  
SEE **PAGE 311**



GROUP

DBUR

SURFACE SCRAPER

TWO EDGED TUNGSTEN CARBIDE BLADE



PACKAGING	\$	PART #
BOXED	106.89	6410-SS

DESCRIPTION	PART #
HANDLE – SOFT GRIP	–
SURFACE SCRAPER HOLDER	6412-K
CARBIDE BLADE	6411-K10

APPLICATIONS / MATERIALS

TWO EDGED FLAT SURFACE SCRAPER BLADE. CLEANS WITH A PULLING OR PUSHING ACTION. IDEAL FOR SMOOTHING/CLEANING FLAT METAL AND PLASTIC SURFACES AS WELL AS REMOVING PAINT AND VARNISH. SUITABLE FOR USE ON STEEL, ALUMINIUM, COPPER, BRASS, CAST IRON, STAINLESS STEEL AND PLASTICS.





# DEBURRER BLADES

CLAM SHELL

AND BULK

## GROUP

DBUR

### SE10 SWIVEL BLADE

HSS HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	27.32	6411-SE10S
BULK – PER BLADE	4.82	6411-SE10



APPLICATIONS	MATERIALS
STRAIGHT EDGE AND HOLE EDGE	STEEL, ALUMINIUM, COPPER & PLASTICS

HEAVY  
DUTY  
3.2MM



### SE10 SWIVEL BLADE TiN COATED

HSS TITANIUM NITRIDE COATED HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	56.78	6411-SE10TINS
BULK – PER BLADE	10.71	6411-SE10TIN



APPLICATIONS	MATERIALS
STRAIGHT EDGE AND HOLE EDGE	STEEL, ALUMINIUM, COPPER, STAINLESS & PLASTICS

HEAVY  
DUTY  
3.2MM



### SE10 SWIVEL BLADE COBALT

HSS-Co HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	35.35	6411-SE10COS
BULK – PER BLADE	6.43	6411-SE10CO



APPLICATIONS	MATERIALS
STRAIGHT EDGE AND HOLE EDGE	STEEL, ALUMINIUM, COPPER, STAINLESS & PLASTICS

HEAVY  
DUTY  
3.2MM



### SE10 SWIVEL BLADE LEFT HAND

HSS HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	69.09	6411-SE10LS
BULK – PER BLADE	13.17	6411-SE10L



APPLICATIONS	MATERIALS
STRAIGHT EDGE AND HOLE EDGE	STEEL, ALUMINIUM, COPPER & PLASTICS

HEAVY  
DUTY  
3.2MM



### SE111 SWIVEL BLADE THIN NOSE

HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	35.35	6411-SE111S
BULK – PER BLADE	6.43	6411-SE111



APPLICATIONS	MATERIALS
STRAIGHT EDGE & HOLE EDGE MIN. DIA. 1.5MM	STEEL, ALUMINIUM, COPPER, STAINLESS & PLASTICS

HEAVY  
DUTY  
3.2MM



### SE20 SWIVEL BLADE LEFT & RIGHT HAND

HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	27.32	6411-SE20S
BULK – PER BLADE	4.82	6411-SE20



APPLICATIONS	MATERIALS
STRAIGHT EDGE AND HOLE EDGE	BRASS, CAST IRON AND PLASTICS

HEAVY  
DUTY  
3.2MM



### SE30 SWIVEL BLADE BOTH EDGES

HSS HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	27.32	6411-SE30S
BULK – PER BLADE	4.82	6411-SE30



APPLICATIONS	MATERIALS
CROSS HOLE BOTH EDGES MATERIALS UP TO 6MM	STEEL, ALUMINIUM AND COPPER

HEAVY  
DUTY  
3.2MM



### SE35 SWIVEL BLADE LEFT & RIGHT HAND

HSS HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
CLAM SHELL – 5 PACK	33.75	6411-SE35S
BULK – PER BLADE	6.10	6411-SE35



APPLICATIONS	MATERIALS
STRAIGHT EDGE	BRASS, CAST IRON AND PLASTICS

HEAVY  
DUTY  
3.2MM



GROUP DBUR

**HEAVY  
DUTY  
3.2MM**



APPLICATIONS	MATERIALS
HOLE BACK EDGE MAX. DEPTH 20MM	STEEL, ALUMINIUM, COPPER & PLASTICS



**SE60 SWIVEL BLADE BACK EDGE**

HSS HEAVY DUTY 3.2MM

PACKAGING	\$	PART #
<b>CLAM SHELL – 5 PACK</b>	<b>62.13</b>	6411-SE60S
<b>BULK – PER BLADE</b>	<b>11.78</b>	6411-SE60



APPLICATIONS	MATERIALS
STRAIGHT EDGE AND HOLE EDGE	STEEL, ALUMINIUM, COPPER & PLASTICS



**NB10 SWIVEL BLADE**

HSS STANDARD 2.6MM

PACKAGING	\$	PART #
<b>CLAM SHELL – 5 PACK</b>	<b>24.64</b>	6411-NB10S
<b>BULK – PER BLADE</b>	<b>4.29</b>	6411-NB10



APPLICATIONS	MATERIALS
STRAIGHT EDGE AND HOLE EDGE	BRASS, CAST IRON AND PLASTICS



**NB20 SWIVEL BLADE LEFT & RIGHT HAND**

HSS STANDARD 2.6MM

PACKAGING	\$	PART #
<b>CLAM SHELL – 5 PACK</b>	<b>24.64</b>	6411-NB20S
<b>BULK – PER BLADE</b>	<b>4.29</b>	6411-NB20



APPLICATIONS	MATERIALS
CROSS HOLE BOTH EDGES MATERIALS UP TO 4MM	STEEL, ALUMINIUM, COPPER & PLASTICS



**NB30 SWIVEL BLADE BOTH EDGES**

HSS STANDARD 2.6MM

PACKAGING	\$	PART #
<b>CLAM SHELL – 5 PACK</b>	<b>28.39</b>	6411-NB30S
<b>BULK – PER BLADE</b>	<b>5.03</b>	6411-NB30



APPLICATIONS	MATERIALS
HOLE BACK EDGE MAX. DEPTH 20MM	STEEL, ALUMINIUM, COPPER & PLASTICS



**NB60 SWIVEL BLADE BACK EDGE**

HSS STANDARD 2.6MM

PACKAGING	\$	PART #
<b>CLAM SHELL – 5 PACK</b>	<b>60.53</b>	6411-NB60S
<b>BULK – PER BLADE</b>	<b>11.46</b>	6411-NB60



APPLICATIONS	MATERIALS
HOLE BACK EDGE, INNER HOLE SURFACE AND FLAT SURFACES	STEEL, ALUMINIUM, COPPER, BRASS, STAINLESS, CAST IRON & PLASTICS



**C40 TRIANGULAR SCRAPER BLADE 4MM**

HSS PRECISION SCRAPER

PACKAGING	\$	PART #
<b>CLAM SHELL – 1 PACK</b>	<b>31.07</b>	6411-C40S
<b>BULK – PER BLADE</b>	<b>28.09</b>	6411-C40

INCLUDES BLADE  
CHANGING TOOL



APPLICATIONS	MATERIALS
HOLE BACK EDGE, INNER HOLE SURFACE AND FLAT SURFACES	STEEL, ALUMINIUM, COPPER, BRASS, STAINLESS, CAST IRON & PLASTICS



**C42 TRIANGULAR SCRAPER BLADE 8MM**

HSS PRECISION SCRAPER

PACKAGING	\$	PART #
<b>CLAM SHELL – 1 PACK</b>	<b>51.42</b>	6411-C42S
<b>BULK – PER BLADE</b>	<b>48.08</b>	6411-C42

INCLUDES BLADE  
CHANGING TOOL

## GROUP

## DBUR

**F20 COUNTERSINK BLADE 20MM**

HSS COUNTERSINK



PACKAGING	\$	PART #
<b>BULK – PER BLADE</b>	<b>66.46</b>	6411-F20

## APPLICATIONS / MATERIALS

COUNTERSINK HOLE EDGES UP TO 20MM DIA.  
IN STEEL, ALUMINIUM, COPPER, BRASS,  
CAST IRON, STAINLESS STEEL & PLASTICS

**F30 COUNTERSINK BLADE 30MM**

HSS COUNTERSINK



PACKAGING	\$	PART #
<b>BULK – PER BLADE</b>	<b>108.69</b>	6411-F30

## APPLICATIONS / MATERIALS

COUNTERSINK HOLE EDGES UP TO 30MM DIA.  
IN STEEL, ALUMINIUM, COPPER, BRASS,  
CAST IRON, STAINLESS STEEL & PLASTICS

**D80 SHEETMETAL EDGE DEBURRER BLADE**

TUNGSTEN CARBIDE – 6 CUTTING EDGES



PACKAGING	\$	PART #
<b>BULK – PER BLADE</b>	<b>26.78</b>	6411-D80

## APPLICATIONS / MATERIALS

SOLID TUNGSTEN CARBIDE BLADE FOR USE ON  
STEEL, ALUMINIUM, COPPER, BRASS, CAST IRON,  
STAINLESS STEEL, HARDENED STEEL & PLASTICS

**F26X EXTERNAL PIPE DEBURRER**

MAXIMUM DIAMETER 26MM



PACKAGING	\$	PART #
<b>BULK – PER BLADE</b>	<b>103.50</b>	6411-F26X

## APPLICATIONS / MATERIALS

EXT. CHAMFERING OF PIPES & TUBES TO MAX. DIA.  
OF 26MM IN STEEL, ALUMINIUM, COPPER, BRASS,  
CAST IRON, STAINLESS STEEL & PLASTICS

**G10 SLOT EDGE CLEANER BLADE**

HSS MAXIMUM WIDTH 15MM – 8 CUTTING EDGES



PACKAGING	\$	PART #
<b>BULK – PER BLADE</b>	<b>30.00</b>	6411-G10

## APPLICATIONS / MATERIALS

DEBURR INT. & EXT. EDGES OF KEYWAYS AND  
SLOTS IN STEEL, ALUMINIUM, COPPER,  
BRASS, CAST IRON, STAINLESS & PLASTICS

**G30C CORNER CLEANER BLADE**

TUNGSTEN CARBIDE – 3 CUTTING CORNERS



PACKAGING	\$	PART #
<b>BULK – PER BLADE</b>	<b>40.71</b>	6411-G30C

## APPLICATIONS / MATERIALS

CLEAN INTERNAL CORNERS & REMOVE RADII  
IN STEEL, ALUMINIUM, COPPER, BRASS, CAST  
IRON, STAINLESS & HARDENED STEELS, PLASTICS

**R10 TWO SIDED ROUND CLEANER BLADES**

HSS



SIDE A



SIDE B



PACKAGING	\$	PART #
<b>BULK – PAIR</b>	<b>15.00</b>	6411-R10

## APPLICATIONS / MATERIALS

DEBURR STRAIGHT EDGES ON STEEL,  
ALUMINIUM, COPPER, BRASS, CAST IRON,  
STAINLESS STEEL AND PLASTICS.  
SIDE A DEBURRS MATERIALS WITH SPIRAL CHIPS  
SUCH AS STEEL, ALUMINIUM AND COPPER.  
SIDE B DEBURRS MATERIALS WITH POWDERY  
CHIPS SUCH AS BRASS AND CAST IRON.

**K10 TWO EDGED SURFACE SCRAPER BLADE**

TUNGSTEN CARBIDE 50MM WIDE



PACKAGING	\$	PART #
<b>BULK – PER BLADE</b>	<b>40.71</b>	6411-K10

## APPLICATIONS / MATERIALS

TWO EDGED FLAT SURFACE SCRAPER BLADE.  
CLEANS WITH A PULLING OR PUSHING ACTION.  
IDEAL FOR SMOOTHING/CLEANING FLAT METAL  
AND PLASTIC SURFACES AS WELL AS REMOVING  
PAINT AND VARNISH.

SUITABLE FOR USE ON STEEL, ALUMINIUM,  
COPPER, BRASS, CAST IRON, STAINLESS STEEL  
AND PLASTICS.



**GROUP**

**DBUR**

**DEBURRER COUNTER DISPLAY STAND**

THE 5 MOST POPULAR DEBURRERS AND BLADES



MERCHANDISER TYPE	\$	PART #
<b>COUNTER DISPLAY</b>	<b>515.35</b>	6410-D3

**MERCHANDISER CONTENTS**

QTY	DESCRIPTION	PART #
1	Swivel Deburrer with SE & NB Blades	6410-SWS
1	Telescopic Swivel Deburrer with SE & NB Blades	6410-TSS
1	Scraper Deburrer with 4mm & 8mm Triangular Blades	6410-SCS
1	Countersink Deburrer with 20mm Countersink	6410-CSS
1	Sheetmetal Edge Deburrer	6410-SHS
1	Heavy Duty 3.2mm Swivel Blades SE10 5Pk	6411-SE10S
1	Heavy Duty 3.2mm Swivel Blades SE30 5Pk	6411-SE30S
1	Standard 2.6mm Swivel Blades NB10 5Pk	6411-NB10S
1	Standard 2.6mm Swivel Blades NB30 5Pk	6411-NB30S
1	Scraper Blade 4mm Triangular C40 Blade and changer	6411-C40S

**DEBURRER SINGLE TIER DISPLAY**

THE 6 MOST POPULAR DEBURRERS AND TELESCOPIC RATCHET EXTENSION



MERCHANDISER TYPE	\$	PART #
<b>1 TIER WALL MOUNT</b>	<b>558.96</b>	6410-D1

**MERCHANDISER CONTENTS**

QTY	DESCRIPTION	PART #
1	Swivel Deburrer with SE & NB Blades	6410-SWS
1	Telescopic Swivel Deburrer with SE & NB Blades	6410-TSS
1	Scraper Deburrer with 4mm & 8mm Triangular Blades	6410-SCS
1	Countersink Deburrer with 20mm Countersink	6410-CSS
1	Sheetmetal Edge Deburrer	6410-SHS
1	External Pipe Deburrer	6410-EPS
1	Telescopic Ratchet- suits Csnk & Ext. Pipe Deburrer	6412-FRS

**DEBURRER TWO TIER DISPLAY**

THE 8 MOST POPULAR DEBURRERS AND BLADES



MERCHANDISER TYPE	\$	PART #
<b>2 TIER WALL MOUNT</b>	<b>852.80</b>	6410-D2

**MERCHANDISER CONTENTS**

QTY	DESCRIPTION	PART #
1	Swivel Deburrer with SE & NB Blades	6410-SWS
1	Telescopic Swivel Deburrer with SE & NB Blades	6410-TSS
1	Scraper Deburrer with 4mm & 8mm Triangular Blades	6410-SCS
1	Countersink Deburrer with 20mm Countersink	6410-CSS
1	Sheetmetal Edge Deburrer	6410-SHS
1	External Pipe Deburrer	6410-EPS
1	Slot Edge Cleaner	6410-SES
1	Corner Cleaner	6410-CCS
1	Telescopic Ratchet- suits Csnk & Ext. Pipe Deburrer	6412-FRS
1	Heavy Duty 3.2mm Swivel Blades SE10 5Pk	6411-SE10S
1	Heavy Duty 3.2mm Swivel Blades SE30 5Pk	6411-SE30S
1	Standard 2.6mm Swivel Blades NB10 5Pk	6411-NB10S
1	Standard 2.6mm Swivel Blades NB30 5Pk	6411-NB30S
1	Scraper Blade 4mm Triangular C40 Blade and changer	6411-C40S



GROUP	DBUR
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**STANDARD SWIVEL DEBURRER**  
COUNTER DISPLAY BOX

PACKAGING	\$	PART #
DISPLAY BOX	160.68	6410-SWSE10T
CONTAINS 10 X DEBURRER TOOLS WITH SE10 BLADES		
DESCRIPTION	PART #	
HANDLE – SOFT GRIP	–	
SE BLADE ADAPTOR	6410-SEAdaptor	
SE #10 BLADE	6411-SE10B	



**X10**  
PER BOX



**CLAM SHELL DEBURRERS**  
SUPPLIED IN COUNTER DISPLAY BOX

WHEN ORDERED IN MULTIPLES OF 5 PIECES  
6410-SWS, 6410-TSS, 6410-SCS AND 6411-A12SWS  
DEBURRERS ARE SUPPLIED IN COUNTER DISPLAY  
BOXES. FOR PRICING SEE PAGES 306 - 308

PACKAGING	QTY PER BOX	PART #
DISPLAY BOX	5 PIECES	6410-SWS
CONTAINS 5 X 6410-SWS DEBURRER TOOLS		

PACKAGING	QTY PER BOX	PART #
DISPLAY BOX	5 PIECES	6410-TSS
CONTAINS 5 X 6410-TSS DEBURRER TOOLS		

PACKAGING	QTY PER BOX	PART #
DISPLAY BOX	5 PIECES	6410-SCS
CONTAINS 5 X 6410-SCS DEBURRER TOOLS		

PACKAGING	QTY PER BOX	PART #
DISPLAY BOX	5 PIECES	6411-A12SWS
CONTAINS 5 X 6411-A12WS DEBURRER TOOLS		



**X5**  
PER BOX



**X5**  
PER BOX



**X5**  
PER BOX



**X5**  
PER BOX

GROUP

DBUR

**SE HEAVY DUTY BLADE PLASTIC ADAPTOR**

SUITS ALL SE HEAVY DUTY SWIVEL BLADES



PACKAGING	\$	PART #
<b>BAGGED</b>	<b>1.07</b>	6410-SEAdaptor

**NB STANDARD BLADE PLASTIC ADAPTOR**

SUITS ALL NB STANDARD SWIVEL BLADES



PACKAGING	\$	PART #
<b>BAGGED</b>	<b>1.07</b>	6410-NBAdaptor

**DEBURRER HANDLE**

INCLUDES SE AND NB ADAPTORS



PACKAGING	\$	PART #
<b>BOXED</b>	<b>16.07</b>	6410-H1

**SE & NB UNIVERSAL EXTENSION**

SUITS ALL SE HEAVY DUTY BLADES AND NB STANDARD BLADES



PACKAGING	\$	PART #
<b>BAGGED</b>	<b>31.07</b>	6412-M

**SE HEAVY DUTY BLADE EXTENSION**

SUITS ALL SE HEAVY DUTY BLADES



PACKAGING	\$	PART #
<b>BAGGED</b>	<b>26.78</b>	6412-E

**NB STANDARD BLADE EXTENSION**

SUITS ALL NB STANDARD BLADES



PACKAGING	\$	PART #
<b>BAGGED</b>	<b>20.36</b>	6412-B

**SCRAPER BLADE EXTENSION**

SUITS ALL TRIANGULAR SCRAPER BLADES



PACKAGING	\$	PART #
<b>BAGGED</b>	<b>20.36</b>	6412-C

GROUP

DBUR

**COUNTERSINK AND EXTERNAL PIPE DEBURRER EXTENSION**

SUITS ALL COUNTERSINKS AND EXTERNAL PIPE DEBURRER

PACKAGING	\$	PART #
<b>BAGGED</b>	<b>20.36</b>	6412-F

**SHEETMETAL EDGE DEBURRER EXTENSION**

SUITS D80 TUNGSTEN CARBIDE BLADES

PACKAGING	\$	PART #
<b>BAGGED</b>	<b>25.71</b>	6412-D

**SLOT EDGE CLEANER EXTENSION**

SUITS G10 SLOT EDGE CLEANER BLADES

PACKAGING	\$	PART #
<b>BAGGED</b>	<b>39.63</b>	6412-G

**CORNER CLEANER EXTENSION**

SUITS G30C TUNGSTEN CARBIDE CORNER CLEANER BLADES

PACKAGING	\$	PART #
<b>BAGGED</b>	<b>31.07</b>	6412-G3

**HEAVY DUTY SHEETMETAL CLEANER ASSEMBLY**

SUITS R10 ROUND CLEANER BLADES

PACKAGING	\$	PART #
<b>BAGGED</b>	<b>43.92</b>	6412-BR



BLADES SOLD SEPARATELY.

**SURFACE SCRAPER EXTENSION**

SUITS K10 TUNGSTEN CARBIDE SURFACE SCRAPER BLADES
























PACKAGING	\$	PART #
<b>BAGGED</b>	<b>59.99</b>	6412-K

**UNIVERSAL HANDGUARD**

SUITABLE FOR USE WITH ALL EXTENSIONS

PACKAGING	\$	PART #
<b>BAGGED</b>	<b>22.49</b>	6412-Handguard

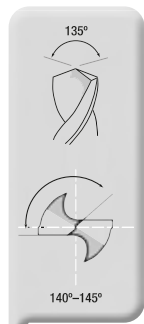


Part# prefix <b>6411-</b>	Description	Blade image includes work direction	Straight Edge	Hole Edge	Tube External Edge	Cross Hole Both Edges	Hole Back Edge	Hole Inner Surface	Flat Surface	Sheet Edge	Slot and Keyway	Inner Straight Corners	Steel	Aluminium	Copper	Brass	Cast Iron	Stainless Steel	Hardened Steel	Plastics
SE10	Heavy duty HSS blade for deburring materials with spiral chips.		•	•									•	•	•					•
SE10TIN	Heavy duty HSS blade for deburring materials with spiral chips. TiN coated for extended life.		•	•									•	•				•		•
SE10C0	Long life heavy duty Cobalt HSS blade for deburring materials with spiral chips.		•	•									•	•	•			•		•
SE10L	Heavy duty HSS blade for deburring materials with spiral chips. <b>For left hand use.</b>		•	•									•	•	•					•
SE111	Thin nosed HSS blade for use in holes with a minimum diameter of 1.5mm.		•	•									•	•	•			•		•
SE20	Heavy duty HSS blade for deburring materials with powdery chips. <b>Right and left hand use.</b>		•	•												•	•			•
SE30	Heavy duty HSS blade for materials with spiral chips. Simultaneously deburrs the inside and outside edges of holes up to 6mm thick.				•								•	•	•					
SE35	Heavy duty HSS blade for deburring materials with powdery chips. <b>Right and left hand use.</b>		•													•	•			•
SE60	Heavy duty HSS blade for materials with spiral chips. Removes burrs from back edges of holes up to 20mm thick.					•							•	•	•					•
NB10	HSS blade for deburring materials with spiral chips.		•	•									•	•	•					•
NB20	HSS blade for deburring materials with powdery chips. <b>Right and left hand use.</b>		•	•												•	•			•
NB30	HSS blade for materials with spiral chips. Simultaneously deburrs the inside and outside edges of holes up to 4mm thick.				•								•	•	•					•
NB60	HSS blade for materials with spiral chips. Removes burrs from back edges of holes up to 20mm thick.					•							•	•	•					•
C40	Small 4mm HSS triangular scraper for precision cleaning and deburring.						•	•	•				•	•	•	•	•	•		•
C42	Medium 8mm HSS triangular scraper for precision cleaning and deburring.						•	•	•				•	•	•	•	•	•		•
F20	HSS two flute countersink for deburring and chamfering holes up to 20mm max. diameter.		•										•	•	•	•	•	•		•
F30	HSS two flute countersink for deburring and chamfering holes up to 30mm max. diameter.		•										•	•	•	•	•	•		•
D80	Solid tungsten carbide with 6 cutting edges. Deburrs the hardest sheet metals up to 3mm in thickness.							•	•				•	•	•	•	•	•	•	•
F26X	External chamfering of pipe, tubing and other round materials to a maximum diameter of 26mm.			•									•	•	•	•	•	•		•
G10	HSS with 8 cutting edges. Deburrs slots, channels and keyways up to 15mm wide.									•			•	•	•	•	•	•		•
G30C	Solid tungsten carbide with 3 cutting corners. Cleans internal corners and removes radii for flush mating of adjoining material faces.										•		•	•	•	•	•	•	•	•
R10	Two sided round HSS blade set. Side A deburrs materials with spiral chips and Side B is for materials with powdery chips.		•						•				A	A	A	B	B	A		AB
K10	50mm wide, two edged, solid tungsten carbide blade for deburring and cleaning flat surfaces.							•					•	•	•	•	•	•		•



**savage**  
**PERFORMANCE**

TYPE	JOBBER - METRIC	JOBBER - METRIC
SURFACE FINISH	GOLD COLOURED	GOLD COLOURED
MATERIAL	HSS TIN COATED	HSS TIN COATED
POINT TYPE	<b>135° SPLIT POINT</b>	<b>135° SPLIT POINT</b>
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	<b>BULK TELEPACK</b>	<b>CLAM SHELL</b>



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

**DRILL BIT SURFACE TREATMENT**

**GOLD FINISH (TiN)**  
(Titanium Nitride)  
A very hard gold coloured surface finish a few microns thick is achieved by Physical Vapour Deposition (PVD). As with all surface coated tools, performance will deteriorate after resharpening.  
*The coating helps to dissipate heat and reduces friction and cold welding. Higher speed and feed rates can be achieved and tool life is greatly increased.*



DIAMETER MM	FL MM	OAL MM	TELEPACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
1.00	12.00	34.00	10	1.86	10-1.00	2	8.02	10-1.00S
1.50	18.00	40.00	10	1.93	10-1.50	2	7.23	10-1.50S
2.00	24.00	49.00	10	2.10	10-2.00	2	6.82	10-2.00S
2.50	30.00	57.00	10	2.21	10-2.50	2	6.82	10-2.50S
3.00	33.00	61.00	10	2.69	10-3.00	2	6.43	10-3.00S
3.20	36.00	65.00	10	2.77	10-3.20			
3.30	36.00	65.00	10	2.88	10-3.30			
3.50	39.00	70.00	10	2.88	10-3.50	1	3.61	10-3.50S
3.70	39.00	70.00	10	3.13	10-3.70			
3.90	43.00	75.00	10	3.21	10-3.90			
4.00	43.00	75.00	10	3.21	10-4.00	1	4.02	10-4.00S
4.10	43.00	75.00	10	3.61	10-4.10			
4.20	43.00	75.00	10	3.79	10-4.20			
4.50	47.00	80.00	10	4.17	10-4.50	1	4.41	10-4.50S
4.70	47.00	80.00	10	4.35	10-4.70			
4.90	52.00	86.00	10	4.41	10-4.90			
5.00	52.00	86.00	10	4.41	10-5.00	1	5.01	10-5.00S
5.10	52.00	86.00	10	4.61	10-5.10			
5.20	52.00	86.00	10	4.73	10-5.20			
5.50	57.00	93.00	10	5.07	10-5.50	1	5.82	10-5.50S
6.00	57.00	93.00	10	6.01	10-6.00	1	6.82	10-6.00S
6.20	63.00	101.00	10	6.43	10-6.20			
6.50	63.00	101.00	10	6.50	10-6.50	1	7.42	10-6.50S
6.60	63.00	101.00	10	6.61	10-6.60			
6.80	69.00	109.00	10	7.03	10-6.80			
6.90	69.00	109.00	10	7.23	10-6.90			
7.00	69.00	109.00	5	7.32	10-7.00	1	8.83	10-7.00S
7.20	69.00	109.00	5	8.24	10-7.20			
7.50	69.00	109.00	5	8.74	10-7.50	1	9.62	10-7.50S
7.80	75.00	117.00	5	10.44	10-7.80			
7.90	75.00	117.00	5	10.64	10-7.90			
8.00	75.00	117.00	5	10.64	10-8.00	1	10.64	10-8.00S
8.50	75.00	117.00	5	12.44	10-8.50	1	12.05	10-8.50S
8.80	81.00	125.00	5	13.26	10-8.80			

**savage**  
PERFORMANCE

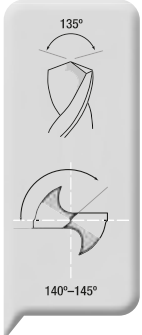


TYPE	JOBBER - METRIC	JOBBER - METRIC
SURFACE FINISH	GOLD COLOURED	GOLD COLOURED
MATERIAL	HSS TIN COATED	HSS TIN COATED
POINT TYPE	<b>135° SPLIT POINT</b>	<b>135° SPLIT POINT</b>
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	<b>BULK TELEPACK</b>	<b>CLAM SHELL</b>



DIAMETER MM	FL MM	OAL MM	TELEPACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
9.00	81.00	125.00	5	13.65	10-9.00	1	13.26	10-9.00S
9.20	81.00	125.00	5	14.25	10-9.20			
9.30	81.00	125.00	5	14.25	10-9.30			
9.40	81.00	125.00	5	14.37	10-9.40			
9.50	81.00	125.00	5	14.45	10-9.50	1	14.45	10-9.50S
9.90	87.00	133.00	5	14.77	10-9.90			
10.00	87.00	133.00	1	14.84	10-10.00	1	16.06	10-10.00S
10.20	87.00	133.00	1	16.24	10-10.20			
10.50	87.00	133.00	1	16.85	10-10.50	1	17.26	10-10.50S
10.80	94.00	142.00	1	18.05	10-10.80			
11.00	94.00	142.00	1	18.46	10-11.00	1	19.65	10-11.00S
11.50	94.00	142.00	1	19.27	10-11.50	1	21.69	10-11.50S
11.80	94.00	142.00	1	20.47	10-11.80			
12.00	101.00	151.00	1	20.86	10-12.00	1	24.46	10-12.00S
12.20	101.00	151.00	1	22.08	10-12.20			
12.50	101.00	151.00	1	23.28	10-12.50	1	26.88	10-12.50S
12.80	101.00	151.00	1	25.29	10-12.80			
12.90	101.00	151.00	1	25.68	10-12.90			
13.00	101.00	151.00	1	26.08	10-13.00	1	30.50	10-13.00S

METRIC  
JOBBER DRILLS  
DIN338



#### 135° Split Point

(crankshaft point)

Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

#### DRILL BIT SURFACE TREATMENT

##### GOLD FINISH (TiN)

(Titanium Nitride)

A very hard gold coloured surface finish a few microns thick is achieved by Physical Vapour Deposition (PVD). As with all surface coated tools, performance will deteriorate after resharpening.

The coating helps to dissipate heat and reduces friction and cold welding. Higher speed and feed rates can be achieved and tool life is greatly increased.

**savage**  
PERFORMANCE



TYPE	JOBBER - FRACTIONAL	JOBBER - FRACTIONAL
SURFACE FINISH	GOLD COLOURED	GOLD COLOURED
MATERIAL	HSS TIN COATED	HSS TIN COATED
POINT TYPE	<b>135° SPLIT POINT</b>	<b>135° SPLIT POINT</b>
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	<b>BULK TELEPACK</b>	<b>CLAM SHELL</b>

**FRACTIONAL**  
**JOBBER DRILLS**  
**ANSI**  
**B94-11**



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

**DRILL BIT**  
**SURFACE**  
**TREATMENT**

**GOLD FINISH (TiN)**

(Titanium Nitride)  
A very hard gold coloured surface finish a few microns thick is achieved by Physical Vapour Deposition (PVD). As with all surface coated tools, performance will deteriorate after resharpening.  
*The coating helps to dissipate heat and reduces friction and cold welding. Higher speed and feed rates can be achieved and tool life is greatly increased.*



DIAMETER INCH	DIAMETER MM	FL MM	OAL MM	TELEPACK QTY	\$ EACH	PART NUMBER	CLAM QTY	\$ CLAM	PART NUMBER
1/16	1.59	22.00	48.00	10	1.99	11-1/16	2	7.23	11-1/16S
5/64	1.98	25.00	51.00	10	2.10	11-5/64	2	6.82	11-5/64S
3/32	2.38	32.00	57.00	10	2.21	11-3/32	2	6.82	11-3/32S
7/64	2.78	38.00	67.00	10	2.33	11-7/64	2	6.43	11-7/64S
1/8	3.17	41.00	70.00	10	2.69	11-1/8	2	6.61	11-1/8S
9/64	3.57	44.00	73.00	10	3.02	11-9/64	1	4.02	11-9/64S
5/32	3.97	51.00	79.00	10	3.27	11-5/32	1	4.02	11-5/32S
11/64	4.37	54.00	83.00	10	4.17	11-11/64	1	4.41	11-11/64S
3/16	4.76	59.00	89.00	10	4.41	11-3/16	1	4.81	11-3/16S
13/64	5.16	62.00	92.00	10	4.61	11-13/64	1	5.21	11-13/64S
7/32	5.56	64.00	95.00	10	5.09	11-7/32	1	6.01	11-7/32S
15/64	5.95	67.00	98.00	10	5.54	11-15/64	1	6.61	11-15/64S
1/4	6.35	70.00	102.00	10	6.47	11-1/4	1	7.03	11-1/4S
17/64	6.75	73.00	105.00	10	6.94	11-17/64	1	8.43	11-17/64S
9/32	7.14	75.00	108.00	10	8.52	11-9/32	1	9.25	11-9/32S
19/64	7.54	78.00	111.00	5	9.62	11-19/64	1	10.02	11-19/64S
5/16	7.94	81.00	114.00	5	9.69	11-5/16	1	10.44	11-5/16S
21/64	8.33	84.00	117.00	5	12.05	11-21/64	1	12.47	11-21/64S
11/32	8.73	87.00	121.00	5	13.85	11-11/32	1	14.97	11-11/32S
23/64	9.13	89.00	124.00	5	14.45	11-23/64	1	14.91	11-23/64S
3/8	9.52	92.00	127.00	5	14.66	11-3/8	1	15.10	11-3/8S
25/64	9.92	95.00	130.00	5	14.77	11-25/64	1	16.06	11-25/64S
13/32	10.32	98.00	133.00	1	17.46	11-13/32	1	17.98	11-13/32S
27/64	10.72	100.00	137.00	1	19.27	11-27/64	1	19.68	11-27/64S
7/16	11.11	103.00	140.00	1	20.07	11-7/16	1	20.48	11-7/16S
29/64	11.51	106.00	143.00	1	24.07	11-29/64	1	24.51	11-29/64S
15/32	11.91	110.00	146.00	1	24.46	11-15/32	1	25.00	11-15/32S
31/64	12.30	111.00	149.00	1	26.69	11-31/64	1	27.06	11-31/64S
1/2	12.70	114.00	152.00	1	27.27	11-1/2	1	27.69	11-1/2S

**savage**  
PERFORMANCE



TYPE	JOBBER - METRIC	JOBBER - FRACTIONAL
SURFACE FINISH	GOLD COLOURED	GOLD COLOURED
MATERIAL	HSS TIN COATED	HSS TIN COATED
POINT TYPE	<b>135° SPLIT POINT</b>	<b>135° SPLIT POINT</b>
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	<b>CLAM SHELL</b>	<b>CLAM SHELL</b>



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
<b>METRIC</b> – 113 CLAM SHELLS	<b>1,208.02</b>	10-D1		
<b>FRACTIONAL</b> – 129 CLAM SHELLS			<b>1,393.48</b>	11-D1

MERCHANDISER CONTENTS	QTY CLAM	PART NUMBER	QTY CLAM	PART NUMBER
	5	10-1.00S	5	11-1/16S
	5	10-1.50S	5	11-5/64S
	5	10-2.00S	5	11-3/32S
	5	10-2.50S	5	11-7/64S
	5	10-3.00S	5	11-1/8S
	5	10-3.50S	5	11-9/64S
	5	10-4.00S	5	11-5/32S
	5	10-4.50S	5	11-11/64S
	5	10-5.00S	5	11-3/16S
	5	10-5.50S	5	11-13/64S
	5	10-6.00S	5	11-7/32S
	5	10-6.50S	5	11-15/64S
	5	10-7.00S	5	11-1/4S
	5	10-7.50S	5	11-17/64S
	5	10-8.00S	5	11-9/32S
	5	10-8.50S	5	11-19/64S
	5	10-9.00S	5	11-5/16S
	5	10-9.50S	5	11-21/64S
	5	10-10.00S	5	11-11/32S
	3	10-10.50S	5	11-23/64S
	3	10-11.00S	5	11-3/8S
	3	10-11.50S	3	11-25/64S
	3	10-12.00S	3	11-13/32S
	3	10-12.50S	3	11-27/64S
	3	10-13.00S	3	11-7/16S
			3	11-29/64S
			3	11-15/32S
			3	11-31/64S
			3	11-1/2S

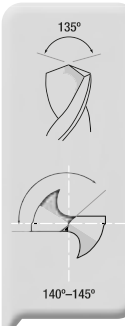
## DRILLS JOBBER

CLAM SHELL

MERCHANDISERS

**METRIC  
JOBBER DRILLS**  
**DIN338**

**FRACTIONAL  
JOBBER DRILLS**  
**ANSI  
B94-11**



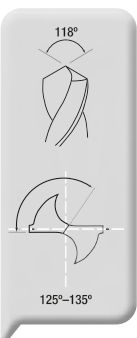
**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

### DRILL BIT SURFACE TREATMENT

**GOLD FINISH (TiN)**  
(Titanium Nitride)  
A very hard gold coloured surface finish a few microns thick is achieved by Physical Vapour Deposition (PVD). As with all surface coated tools, performance will deteriorate after resharpening. The coating helps to dissipate heat and reduces friction and cold welding. Higher speed and feed rates can be achieved and tool life is greatly increased.



**savage**  
PERFORMANCE



**Standard Point**  
(chisel point)  
Standard point is suitable for general purpose drilling.

**DRILL BIT  
SURFACE  
TREATMENT**

**GOLD FINISH (TiN)**  
(Titanium Nitride)  
A very hard gold coloured surface finish a few microns thick is achieved by Physical Vapour Deposition (PVD). As with all surface coated tools, performance will deteriorate after resharpening. *The coating helps to dissipate heat and reduces friction and cold welding. Higher speed and feed rates can be achieved and tool life is greatly increased.*

**BRIGHT FINISH**  
A bright finish tool has no surface treatment and is supplied in the as-ground condition. *These tools are suitable for general purpose use, particularly for non-ferrous applications.*

**BRONZE FINISH**  
(gold oxide)  
This metallic brown coloured low temperature temper treatment is normally only used on cobalt tools for identification purposes. *Cobalt HSS drills are extremely hard and provide superior performance and increased tool life especially in stainless steel and high tensile steel.*

TYPE	JOBBER	JOBBER
SURFACE FINISH	GOLD COLOURED	BRONZE COLOURED
MATERIAL	HSS TIN COATED	HSS-Co5
POINT TYPE	<b>135° SPLIT POINT</b>	<b>135° SPLIT POINT</b>
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	<b>SET</b>	<b>SET</b>



SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER	\$ SET	PART NUMBER
<b>METRIC M3 – ABS CASE</b>	25	<b>247.06</b>	10-M3P	<b>465.78</b>	10-CM3
1.0 - 13.0 x 0.5mm rises					
<b>FRACTIONAL F3 – ABS CASE</b>	29	<b>301.39</b>	11-F3P	<b>565.43</b>	11-CF3
1/16" - 1/2" x 1/64" rises					

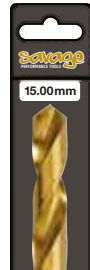


SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER
<b>METRIC M3 – METAL CASE</b>	25	<b>228.76</b>	10-M3
1.0 - 13.0 x 0.5mm rises			
<b>FRACTIONAL F3 – METAL CASE</b>	29	<b>271.19</b>	11-F3
1/16" - 1/2" x 1/64" rises			

**savage**  
PERFORMANCE



TYPE	REDUCED SHANK
SURFACE FINISH	GOLD COLOURED
MATERIAL	HSS TIN COATED
POINT TYPE	<b>118° SPLIT POINT</b>
FLUTE TYPE	30° HELIX
SHANK DIAMETER	<b>1/2"</b>
PACKAGING	<b>BULK POUCH</b>



DIA. MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
13.00	89.00	152.00	1	46.35	15-13.00
13.50	89.00	152.00	1	46.35	15-13.50
14.00	89.00	152.00	1	46.35	15-14.00
14.50	89.00	152.00	1	51.56	15-14.50
15.00	89.00	152.00	1	55.13	15-15.00
15.50	89.00	152.00	1	55.95	15-15.50
16.00	89.00	152.00	1	56.16	15-16.00
16.50	89.00	152.00	1	56.89	15-16.50
17.00	89.00	152.00	1	58.71	15-17.00
17.50	89.00	152.00	1	60.48	15-17.50
18.00	89.00	152.00	1	64.45	15-18.00
18.50	89.00	152.00	1	68.55	15-18.50
19.00	89.00	152.00	1	69.34	15-19.00
19.50	89.00	152.00	1	73.11	15-19.50
20.00	89.00	152.00	1	77.91	15-20.00
21.00	89.00	152.00	1	81.03	15-21.00
22.00	89.00	152.00	1	85.29	15-22.00
23.00	89.00	152.00	1	89.54	15-23.00
24.00	89.00	152.00	1	96.86	15-24.00
25.00	89.00	152.00	1	105.53	15-25.00



SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER
<b>REDUCED SHANK</b>	4	311.42	15-MS1
16, 18, 22, 25mm			

TYPE	REDUCED SHANK
SURFACE FINISH	GOLD COLOURED
MATERIAL	HSS TIN COATED
POINT TYPE	<b>118° SPLIT POINT</b>
FLUTE TYPE	30° HELIX
SHANK DIAMETER	<b>1/2"</b>
PACKAGING	<b>BULK POUCH</b>



DIA. INCH	DIA. MM	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
9/16	14.29	86.00	152.00	1	48.13	15-9/16
19/32	15.08	86.00	152.00	1	51.61	15-19/32
5/8	15.88	86.00	152.00	1	51.16	15-5/8
21/32	16.67	86.00	152.00	1	55.38	15-21/32
11/16	17.46	86.00	152.00	1	59.79	15-11/16
23/32	18.26	86.00	152.00	1	64.20	15-23/32
3/4	19.05	86.00	152.00	1	68.22	15-3/4
25/32	19.84	86.00	152.00	1	73.83	15-25/32
13/16	20.64	86.00	152.00	1	78.25	15-13/16
27/32	21.43	86.00	152.00	1	81.06	15-27/32
7/8	22.23	86.00	152.00	1	82.67	15-7/8
29/32	23.02	86.00	152.00	1	85.52	15-29/32
15/16	23.81	86.00	152.00	1	92.30	15-15/16
31/32	24.61	86.00	152.00	1	96.31	15-31/32
1	25.40	86.00	152.00	1	100.32	15-1



SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER
<b>REDUCED SHANK</b>	4	302.36	15-FS1
5/8", 3/4", 7/8", 1"			

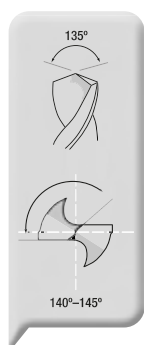
**DRILL BIT  
SURFACE  
TREATMENT**

**GOLD FINISH (TiN)**  
(Titanium Nitride)  
A very hard gold coloured surface finish a few microns thick is achieved by Physical Vapour Deposition (PVD). As with all surface coated tools, performance will deteriorate after resharping. The coating helps to dissipate heat and reduces friction and cold welding. Higher speed and feed rates can be achieved and tool life is greatly increased.

**savage**  
**PERFORMANCE**



TYPE	PANEL DRILL	PANEL DRILL
SURFACE FINISH	GOLD COLOURED	GOLD COLOURED
MATERIAL	HSS TIN COATED	HSS TIN COATED
POINT TYPE	135° SPLIT POINT	135° SPLIT POINT
END TYPE	<b>SINGLE ENDED</b>	<b>DOUBLE ENDED</b>
PACKAGING	<b>BULK TELEPACK</b>	<b>BULK TELEPACK</b>



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

#### USAGE

#### PANEL DRILLS

Panel drills are principally used during sheet metal fabrication to drill holes for rivets. They are designed to drill shallow holes that do not exceed 1.25 x drill diameter. When using double ended panel drills ensure the drill chuck jaws are tight to prevent damage to the back of the chuck.

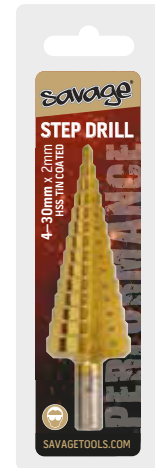


DIA GAUGE	DIA MM / INCH	RIVET DIA.	FL MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
—	1/8"	3mm	14	51	10			<b>2.88</b>	40-1/8
<b>30</b>	3.26mm	1/8"	14	51	10	<b>2.88</b>	42-30	<b>3.08</b>	40-30
<b>20</b>	4.09mm	5/32"	14	55	10	<b>3.61</b>	42-20	<b>4.88</b>	40-20
<b>11</b>	4.85mm	3/16"	17	62	10	<b>4.88</b>	42-11	<b>5.09</b>	40-11

**savage**  
PERFORMANCE



TYPE	STEP DRILL
SURFACE FINISH	GOLD COLOURED
MATERIAL	HSS TIN COATED
FLUTE TYPE	STRAIGHT
FLUTES	2
PACKAGING	CLAM SHELL



**HSS SPIRAL  
FLUTE TIN  
COATED  
STEP DRILLS**

Spiral Flute Titanium Nitride (TiN) coated step drills offer additional benefits over the standard range of two flute bright finish drills.

- New high performance point for faster starting and reduced bit wander.
- TiN coating extends tool life, helps to dissipate heat, reduces friction and cold welding.

DIAMETER MIN MAX	INCREMENT MM	STEP DEPTH MM	SHANK DIA. MM	OAL MM	PACK QTY	\$ EACH	PART NUMBER
4 - 12	1.0	5.0	6.0	70.5	1	38.50	30-M1
4 - 20	2.0	5.5	8.0	75.0	1	61.31	30-M2
6 - 30	2.0	5.0	10.0	100.0	1	125.49	30-M3

DIAMETER MIN MAX	INCREMENT INCH	STEP DEPTH MM	SHANK DIA. INCH	OAL MM	PACK QTY	\$ EACH	PART NUMBER
1/8" - 1/2"	1/32	3.4	1/4	74.0	1	38.50	30-F1
1/4" - 3/4"	1/16	4.0	3/8	71.5	1	64.72	30-F2



SET DESCRIPTION SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER
<b>METRIC STEP DRILL SET – METAL CASE</b>	3	225.31	30-S1
30-M1, 30-M2, 30-M3			



### CROSS HOLE COUNTERSINKS

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The intersection of the hole and cone form the cutting edge on the tool. The cone is not truly symmetrical as it is essential that the cone retreats away from the cutting edge as the tool rotates. If this does not occur the cutting edge will lack clearance and rub rather than bite into the material. This clearance is referred to as cutting relief. The radially relieved single cutting edge provides fast stock removal with low vibration for chatter-free operation ensuring the smoothest finish. These tools are best used as deburring tools, where a burr, or sharp edge, from a previous machining operation needs to be removed for cosmetic and safety reasons. They also may be used in softer materials (such as wood or plastic) to create a countersunk hole for a screw.

### TRIPLE FLUTE COUNTERSINKS

For countersinking and deburring in a wide range of materials including ferrous and non-ferrous metals. The three fluted countersink is self centering with wide flutes and is used to provide a heavy chamfer in the entrance to a drilled hole. This may be required to allow the correct seating for a countersunk head screw or to provide the lead in for a second machining operation such as tapping. Use on medium to hard materials. Resharpenable.

**savage**  
PERFORMANCE



TYPE	CROSS HOLE	TRIPLE FLUTE
SURFACE FINISH	GOLD COLOURED	GOLD COLOURED
MATERIAL	HSS-Co5 – TIN COATED	HSS-Co5 – TIN COATED
FLUTE TYPE	CROSS HOLE	TRIPLE FLUTE
ANGLE	90°	90°
PACKAGING	SINGLE	SINGLE

DIAMETER MM INCH	CAPACITY MIN - MAX	SHANK TYPE MM INCH	OAL MM	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CROSS HOLE</b>								
10.0 –	4.0 - 9.0	6 –	45	1	40.55	32-10		
15.0 –	6.0 - 14.0	8 –	48	1	55.43	32-15		
21.0 –	8.0 - 18.0	10 –	65	1	99.52	32-21		
28.0 –	10.0 - 23.0	12 –	85	1	159.43	32-28		
35.0 –	12.0 - 28.0	12 –	102	1	270.91	32-35		
<b>TRIPLE FLUTE</b>								
10.0 –	2.2 - 10.0	6 –	50	1			37.92	34-10
16.0 –	3.0 - 16.0	8 –	60	1			69.66	34-16
20.0 –	4.0 - 20.0	10 –	63	1			85.92	34-20
25.0 –	4.0 - 25.0	10 –	67	1			105.25	34-25
31.0 –	5.0 - 31.0	12 –	71	1			173.38	34-31
40.0 –	6.0 - 40.0	16 –	80	1			387.01	34-40



SET DESCRIPTION	QTY	\$ SET	PART NUMBER	\$ SET	PART NUMBER
SET CONTENTS					
COUNTERSINK SET – CROSS HOLE	3	314.38	32-S1		
15, 21 AND 28MM					
COUNTERSINK SET – TRIPLE FLUTE	3			260.83	34-S1
16, 20 AND 25MM					

MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
PERSPEX BENCH MERCHANDISER	2,202.50	32-D1

MERCHANDISER CONTENTS	QTY	PART NUMBER	QTY	PART NUMBER	QTY	PART NUMBER
		STEP DRILLS		CROSS HOLE		TRIPLE FLUTE
	1	30-F1	2	32-10	2	34-10
	1	30-F2	2	32-15	2	34-16
	1	30-M1	2	32-21	2	34-20
	1	30-M2	1	32-28	1	34-25
	1	30-M3	1	32-35	1	34-31
	–	–	–	–	1	34-40



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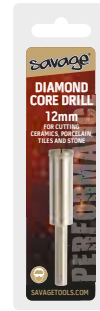
TYPE	DIAMOND HOLE SAWS
MATERIAL	DIAMOND
TYPE	1 PIECE
INTERNAL DEPTH	50MM
PACKAGING	CLAM SHELL



SET DESCRIPTION SET CONTENTS	DRILL QTY	\$ SET	PART NUMBER
CORE DRILL KIT	5	123.63	62-S1

5, 6, 6.5, 8 & 10MM DRILLS PLUS SUCTION DRILLING TEMPLATE

TYPE	DIAMOND HOLE SAWS
MATERIAL	DIAMOND
TYPE	1 PIECE
INTERNAL DEPTH	50MM
PACKAGING	CLAM SHELL



DIAMETER MM	DIAMETER INCH EQUIV.	PACK QTY	\$ EACH	PART NUMBER
<b>CORE DRILLS</b>				
4.00	5/32	1	10.48	62-4
5.00	13/64	1	10.48	62-5
6.00	15/64	1	10.48	62-6
6.50	—	1	11.31	62-6.5
8.00	5/16	1	13.53	62-8
10.00	25/64	1	16.58	62-10
12.00	—	1	19.70	62-12
<b>HOLE SAWS</b>				
16.00	5/8	1	36.45	62-16
19.00	3/4	1	36.45	62-19
22.00	7/8	1	42.80	62-22
25.00	1	1	44.38	62-25
32.00	1-1/4	1	50.73	62-32
35.00	1-3/8	1	53.89	62-35
38.00	1-1/2	1	55.48	62-38
42.00	—	1	58.65	62-42
45.00	—	1	61.82	62-45
50.00	—	1	63.40	62-50
63.00	—	1	71.32	62-63
68.00	—	1	95.10	62-68
105.00	4-1/8	1	142.65	62-105
110.00	—	1	150.58	62-110
124.00	—	1	158.51	62-124
128.00	—	1	165.71	62-128

#### DIAMOND HOLE SAWS

Diamond core drills and hole saws require the use of proper lubrication, correct drill speed and proper pressure. Drilling methods and techniques vary significantly depending upon the material being drilled.

To achieve optimum cutting performance and maximum core drill life use a slow to very slow drill speed, low drill pressure, and plenty of water for lubrication. Variable speed drills work best since the correct speed can be selected.

Diamond core drills only drill out a portion of the resulting hole so they drill much faster than conventional blunt nose drills. Core drills can be used on most non-ferrous hard materials such as glass, ceramic, porcelain, fiberglass, slate, marble, granite and other natural and manufactured stone materials.

The life of any type of diamond drill depends upon the hardness, abrasiveness and thickness of the material being drilled and the specific drilling techniques used.

Using diamond core drills in hard materials is not difficult, however drilling the hole takes time. You should consider that they aren't "drilling" a hole – they are "grinding" a hole.

#### SPEEDS IN RPM

Fibreglass – 1200

Glass, Ceramic and China – 800

Limestone and Marble – 600

Ceramic Tile – 600

Porcelain – 500

Granite and Comp. Stone – 400

**DO NOT USE HAMMER ACTION. NOT FOR DRILLING BEYOND 13MM.**



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER
DIAMOND CORE DRILL	524.94	62-D1

MERCHANDISER CONTENTS	QTY CLAM	PART NUMBER
	3	62-4
	3	62-5
	3	62-6
	3	62-6.5
	3	62-8
	3	62-10
	3	62-12
	2	62-S1

# TAPS & DIES

TUNGSTEN STEEL

SETS

**CREATE NEW THREADS IN ALUMINIUM AND MILD STEEL**

**CLEAN AND REPAIR EXISTING THREADS**

Savage Tap and Die Sets are great value, high quality sets that include various combinations of metric and SAE taps and button dies. Manufactured from premium quality tungsten steel they are packaged in tough, compact, blow moulded cases.



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TYPE	TAP & DIE SETS
TAP AND DIE MATERIAL	TUNGSTEN STEEL
TYPE	SETS
PACKAGING	BLOW MOULDED CASE



SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
<b>S1 TAP AND DIE SET – METRIC &amp; SAE</b>	115	<b>528.77</b>	50-S1

## 48 INTERMEDIATE LEAD TAPS AND 48 BUTTON DIES

4GX40, 5GX40, 6GX32, 8GX32, 10GX24, 10GX32, 12GX24, 1/4"X20, 1/4"X28, 5/16"X18, 5/16"X24, 3/8"X16, 3/8"X24, 7/16"X14, 7/16"X20, 1/2"X13, 1/2"X20, 9/16"X12, 9/16"X18, 5/8"X11, 5/8"X18, 3/4"X10, 3/4"X16, 2X0.4, 3X0.5, 4X0.7, 5X0.8, 6X1.0, 7X1.0, 8X1.0, 8X1.25, 9X1.25, 10X1.0, 10X1.25, 10X1.5, 11X1.5, 12X1.75, 12X1.25, 14X2.0, 14X1.5, 16X2.0, 16X1.5, 18X2.5, 18X1.5, NPT1/8"X27, NPT1/4"X18, BSP1/8"X28, BSP1/4"X19

## 5 HSS JOBBER DRILLS 2.5MM, 3.3MM, 4.2MM, 5.0MM, 6.8MM

5 X SCREW EXTRACTORS #1, #2, #3, #4, #5  
2 X SCREW PITCH GAUGES  
2 X DIE HOLDERS  
3 X TAP WRENCHES  
1 X SCREWDRIVER  
1 X CENTRE PUNCH



SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
<b>S2 TAP AND DIE SET – METRIC, UNC/UNF + 1/8" NPT</b>	60	<b>228.70</b>	50-S2

## 27 INTERMEDIATE LEAD TAPS AND 27 BUTTON DIES

3X0.5, 4X0.7, 5X0.8, 6X1.0, 7X1.0, 8X1.25, 9X1.25, 10X1.0, 10X1.5, 12X1.75, 4GX40, 6GX32, 8GX32, 10GX24, 10GX32, 12GX24, 1/4"X20, 1/4"X28, 5/16"X18, 5/16"X24, 3/8"X16, 3/8"X24, 7/16"X14, 7/16"X20, 1/2"X13, 1/2"X20, NPT1/8"X27

2 X SCREW PITCH GAUGES  
1 X DIE HOLDER  
2 X TAP WRENCHES  
1 X SCREWDRIVER



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## SETS

**CREATE NEW  
THREADS IN  
ALUMINIUM AND  
MILD STEEL**

**CLEAN AND  
REPAIR EXISTING  
THREADS**

Savage Tap and Die Sets are great value, high quality sets that include various combinations of metric and SAE taps and button dies. Manufactured from premium quality tungsten steel they are packaged in tough, compact, blow moulded cases.

TYPE	TAP & DIE SETS
TAPS AND DIE MATERIAL	TUNGSTEN STEEL
TYPE	SETS
PACKAGING	BLOW MOULDED CASE



SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
<b>S3 TAP AND DIE SET – UNC/UNF + 1/8" NPT</b>	39	<b>139.52</b>	50-S3
<b>17 INTERMEDIATE LEAD TAPS AND 17 BUTTON DIES</b>			
4GX40, 6GX32, 8GX32, 10GX24, 10GX32, 12GX24, 1/4"X20, 1/4"X28, 5/16"X18, 5/16"X24, 3/8"X16, 3/8"X24, 7/16"X14, 7/16"X20, 1/2"X13, 1/2"X20, NPT1/8"X27			
1 X SCREW PITCH GAUGE 1 X DIE HOLDER 2 X TAP WRENCHES 1 X SCREWDRIVER			



SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
<b>S4 TAP AND DIE SET – METRIC + 1/8" NPT</b>	39	<b>139.52</b>	50-S4
<b>17 INTERMEDIATE LEAD TAPS AND 17 BUTTON DIES</b>			
3X0.5, 3X0.6, 4X0.7, 4X0.75, 5X0.8, 5X0.9, 6X1.0, 6X0.75, 7X1.0, 7X0.75, 8X1.0, 8X1.25, 10X1.25, 10X1.5, 12X1.5, 12X1.75, NPT1/8"X27			
1 X SCREW PITCH GAUGE 1 X DIE HOLDER 2 X TAP WRENCHES 1 X SCREWDRIVER			



TYPE	DRILL & TAP SET
TAP MATERIAL	TUNGSTEN STEEL
DRILL MATERIAL	HSS
PACKAGING	METAL CASE

SET DESCRIPTION SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
<b>DRILL &amp; TAP SET – METRIC COARSE</b>	14	<b>105.11</b>	50-S5
<b>7 INTERMEDIATE LEAD TAPS</b> M12X1.75, M10X1.50, M8X1.25, M6X1.00, M5X0.80, M4X0.70, M3X0.50			
<b>7 HSS JOBBER DRILLS</b> 2.5MM, 3.3MM, 4.2MM, 5.0MM, 6.8MM, 8.50MM, 10.20MM			



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GROUP	SB10
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	<b>135° SPLIT POINT*</b>
FLUTE TYPE	30° HELIX
PACKAGING	<b>CLAM SHELL</b>

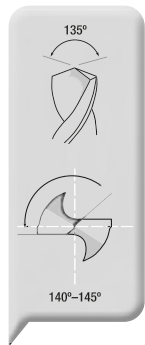
DIA MM	FL MM	OAL MM	CLAM QTY	\$ EACH	PART NUMBER
1.00	12	34	2	<b>4.69</b>	10-SB1.00S
1.50	18	40	2	<b>4.69</b>	10-SB1.50S
2.00	24	49	2	<b>4.80</b>	10-SB2.00S
2.50	30	57	2	<b>5.13</b>	10-SB2.50S
3.00	33	61	2	<b>5.86</b>	10-SB3.00S
3.50	39	70	1	<b>4.85</b>	10-SB3.50S
4.00	43	75	1	<b>5.03</b>	10-SB4.00S
4.50	47	80	1	<b>5.18</b>	10-SB4.50S
5.00	52	86	1	<b>5.35</b>	10-SB5.00S
5.50	57	93	1	<b>5.66</b>	10-SB5.50S
6.00	57	93	1	<b>5.83</b>	10-SB6.00S
6.50	63	101	1	<b>6.46</b>	10-SB6.50S
7.00	69	109	1	<b>6.84</b>	10-SB7.00S
7.50	69	109	1	<b>7.17</b>	10-SB7.50S
8.00	75	117	1	<b>7.71</b>	10-SB8.00S
8.50	75	117	1	<b>8.05</b>	10-SB8.50S
9.00	81	125	1	<b>8.58</b>	10-SB9.00S
9.50	81	125	1	<b>9.05</b>	10-SB9.50S
10.00	87	133	1	<b>10.18</b>	10-SB10.00S
10.50	87	133	1	<b>11.00</b>	10-SB10.50S
11.00	94	142	1	<b>11.75</b>	10-SB11.00S
11.50	94	142	1	<b>12.35</b>	10-SB11.50S
12.00	101	151	1	<b>13.37</b>	10-SB12.00S
12.50	101	151	1	<b>14.20</b>	10-SB12.50S
13.00	101	151	1	<b>15.05</b>	10-SB13.00S

\* 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.



GROUP	SB10
SURFACE FINISH	BRIGHT
MATERIAL	HSS
POINT TYPE	<b>135° SPLIT POINT*</b>
FLUTE TYPE	30° HELIX
PACKAGING	<b>CLAM SHELL</b>

DIA INCH	MM	FL MM	OAL MM	CLAM QTY	\$ EACH	PART NUMBER
1/16	1.59	22	48	2	4.69	11-SB1/16S
5/64	1.98	25	51	2	4.80	11-SB5/64S
3/32	2.38	32	57	2	5.13	11-SB3/32S
7/64	2.78	38	67	2	5.24	11-SB7/64S
1/8	3.17	41	70	2	6.09	11-SB1/8S
9/64	3.57	44	73	1	4.86	11-SB9/64S
5/32	3.97	51	79	1	5.04	11-SB5/32S
11/64	4.37	54	83	1	5.16	11-SB11/64S
3/16	4.76	59	89	1	5.29	11-SB3/16S
13/64	5.16	62	92	1	5.51	11-SB13/64S
7/32	5.56	64	95	1	5.65	11-SB7/32S
15/64	5.95	67	98	1	5.84	11-SB15/64S
1/4	6.35	70	102	1	6.40	11-SB1/4S
17/64	6.75	73	105	1	6.70	11-SB17/64S
9/32	7.14	75	108	1	7.05	11-SB9/32S
19/64	7.54	78	111	1	7.20	11-SB19/64S
5/16	7.94	81	114	1	7.64	11-SB5/16S
21/64	8.33	84	117	1	7.93	11-SB21/64S
11/32	8.73	87	121	1	8.27	11-SB11/32S
23/64	9.13	89	124	1	8.74	11-SB23/64S
3/8	9.52	92	127	1	9.04	11-SB3/8S
25/64	9.92	95	130	1	9.63	11-SB25/64S
13/32	10.32	98	133	1	10.66	11-SB13/32S
27/64	10.72	100	137	1	11.39	11-SB27/64S
7/16	11.11	103	140	1	11.93	11-SB7/16S
29/64	11.51	106	143	1	12.31	11-SB29/64S
15/32	11.91	110	146	1	13.19	11-SB15/32S
31/64	12.30	111	149	1	14.15	11-SB31/64S
1/2	12.70	114	152	1	14.90	11-SB1/2S



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

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GROUP	SB10	SB10
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	HSS	HSS
POINT TYPE	135° SPLIT POINT*	135° SPLIT POINT*
FLUTE TYPE	30° HELIX	30° HELIX
PACKAGING	CLAM SHELL	CLAM SHELL



MERCHANDISER TYPE	\$ MERCH	PART NUMBER	\$ MERCH	PART NUMBER
METRIC	198.83	10-SBD1		
FRACTIONAL			230.43	11-SBD1

MERCHANDISER CONTENTS	QTY EACH	PART NUMBER	QTY EACH	PART NUMBER
	1	10-SB1.00S	1	11-SB1/16S
	1	10-SB1.50S	1	11-SB5/64S
	1	10-SB2.00S	1	11-SB3/32S
	1	10-SB2.50S	1	11-SB7/64S
	1	10-SB3.00S	1	11-SB1/8S
	1	10-SB3.50S	1	11-SB9/64S
	1	10-SB4.00S	1	11-SB5/32S
	1	10-SB4.50S	1	11-SB11/64S
	1	10-SB5.00S	1	11-SB3/16S
	1	10-SB5.50S	1	11-SB13/64S
	1	10-SB6.00S	1	11-SB7/32S
	1	10-SB6.50S	1	11-SB15/64S
	1	10-SB7.00S	1	11-SB1/4S
	1	10-SB7.50S	1	11-SB17/64S
	1	10-SB8.00S	1	11-SB9/32S
	1	10-SB8.50S	1	11-SB19/64S
	1	10-SB9.00S	1	11-SB5/16S
	1	10-SB9.50S	1	11-SB21/64S
	1	10-SB10.00S	1	11-SB11/32S
	1	10-SB10.50S	1	11-SB23/64S
	1	10-SB11.00S	1	11-SB3/8S
	1	10-SB11.50S	1	11-SB25/64S
	1	10-SB12.00S	1	11-SB13/32S
	1	10-SB12.50S	1	11-SB27/64S
	1	10-SB13.00S	1	11-SB7/16S
			1	11-SB29/64S
			1	11-SB15/32S
			1	11-SB31/64S
			1	11-SB1/2S

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METRIC  
JOBBER DRILLS  
DIN338

FRACTIONAL  
JOBBER DRILLS  
ANSI  
B94-11



**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

GROUP	SB10	SB10	SB10
SURFACE FINISH	BRIGHT	BRIGHT	BRIGHT
MATERIAL	HSS	HSS	HSS
POINT TYPE	135° SPLIT POINT†	118° CHISEL POINT*	135° SPLIT POINT†
FLUTE TYPE	30° HELIX	30° HELIX	30° HELIX
PACKAGING	ABS CASE	METAL BOX	ABS CASE



SET DESCRIPTION	SET CONTENTS	DRILLS QTY	\$ SET	PART NUMBER	\$ SET	PART NUMBER	\$ SET	PART NUMBER
M3 JOBBER	1.0 - 13.0 x 0.5mm rises	25	145.12	10-SBM3P	119.40	10-SBM3		
M5 JOBBER	1.0 - 6.5 x 0.5mm rises 7.0 - 13.0 x 1.0mm rises	19	118.56	10-SBM5P				
F3 JOBBER	1/16" - 1/2" x 1/64" rises	29			126.07	11-SBF3	160.20	11-SBF3P

SET DESCRIPTION	DRILLS QTY	\$ SET	PART NUMBER
SET CONTENTS			
METRIC ASSORTMENT 1-10mm	105	280.26	10-SBMA1
1.0 - 4.0 x 0.5mm rises : 10 each			
4.5 - 6.5 x 0.5mm rises : 5 each			
8.0 & 10.0mm : 5 each			



\* Sizes 3.00mm, 1/8" and below are 118° standard chisel point. † 1.00mm, 1.50mm and 1/16" are 135° standard chisel point.

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GROUP	SB30
SURFACE FINISH	BRIGHT
MATERIAL	M2-HSS
FLUTE TYPE	SPIRAL
FLUTES	2
PACKAGING	HANG SELL



DIAMETER MM MAX	INCREMENT MM	STEP DEPTH MM	SHANK	OAL MM	PACK QTY	\$ EACH	PART NUMBER
4 - 12	1.0	4.0	1/4" HEX	65.0	1	24.63	31-SBM1
4 - 20	2.0	5.0	1/4" HEX	74.0	1	48.09	31-SBM2
4 - 30	2.0	5.0	1/4" HEX	100.0	1	109.90	31-SBM3



SET CONTENTS	PIECES QTY	\$ SET	PART NUMBER
METRIC STEP DRILL SET M2-HSS BRIGHT 31-SBM1, 31-SBM2, 31-SBM3	3	182.62	31-SBS1

DRILLS  
STEP

HANG SELL

NEW  
PRODUCT





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GROUP	SB20
SURFACE FINISH	BRIGHT
MATERIAL	TUNGSTEN CARBIDE
TYPE	DOUBLE CUT
PACKAGING	HANG PACK



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CYLINDRICAL</b>			1/4	SA							
1/4	5/8	2	1/4	SA-1	1	29.50	20-SB-SA-1				
5/16	3/4	2-1/2	1/4	SA-2	1	36.57	20-SB-SA-2				
3/8	3/4	2-1/2	1/4	SA-3	1	42.10	20-SB-SA-3				
1/2	1	2-3/4	1/4	SA-5	1	67.87	20-SB-SA-5				
5/8	1	2-3/4	1/4	SA-6	1	87.94	20-SB-SA-6				
<b>CYLINDRICAL WITH END CUT</b>			1/4	SB							
1/4	5/8	2	1/4	SB-1	1			31.61	20-SB-SB-1		
5/16	3/4	2-1/2	1/4	SB-2	1			39.38	20-SB-SB-2		
3/8	3/4	2-1/2	1/4	SB-3	1			45.61	20-SB-SB-3		
1/2	1	2-3/4	1/4	SB-5	1			67.87	20-SB-SB-5		
5/8	1	2-3/4	1/4	SB-6	1			87.94	20-SB-SB-6		
<b>CYLINDRICAL BALL NOSE</b>			1/4	SC							
1/4	5/8	2	1/4	SC-1	1					33.71	20-SB-SC-1
5/16	3/4	2-1/2	1/4	SC-2	1					39.38	20-SB-SC-2
3/8	3/4	2-1/2	1/4	SC-3	1					45.61	20-SB-SC-3
1/2	1	2-3/4	1/4	SC-5	1					67.87	20-SB-SC-5
5/8	1	2-3/4	1/4	SC-6	1					87.94	20-SB-SC-6



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>BALL</b>			1/4	SD							
1/4	—	2	1/4	SD-1	1	33.76	20-SB-SD-1				
3/8	—	2-5/64	1/4	SD-3	1	38.59	20-SB-SD-3				
1/2	—	2-13/64	1/4	SD-5	1	52.21	20-SB-SD-5				
<b>OVAL</b>			1/4	SE							
1/4	3/8	2	1/4	SE-1	1			35.82	20-SB-SE-1		
3/8	5/8	2-3/8	1/4	SE-3	1			45.61	20-SB-SE-3		
1/2	7/8	2-5/8	1/4	SE-5	1			67.87	20-SB-SE-5		
<b>TREE RADIUS NOSE</b>			1/4	SF							
1/4	5/8	2	1/4	SF-1	1					33.71	20-SB-SF-1
3/8	3/4	2-1/2	1/4	SF-3	1					45.61	20-SB-SF-3
1/2	1	2-3/4	1/4	SF-5	1					67.87	20-SB-SF-5
5/8	1	2-3/4	1/4	SF-6	1					102.60	20-SB-SF-6

**saber**



GROUP	SB20
SURFACE FINISH	BRIGHT
MATERIAL	TUNGSTEN CARBIDE
TYPE	DOUBLE CUT
PACKAGING	HANG PACK



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
TREE POINTED NOSE			1/4	SG					
1/4	5/8	2	1/4	SG-1	1	31.61	20-SB-SG-1		
5/16	3/4	2-1/2	1/4	SG-2	1	39.38	20-SB-SG-2		
3/8	3/4	2-1/2	1/4	SG-3	1	45.61	20-SB-SG-3		
1/2	1	2-3/4	1/4	SG-5	1	62.65	20-SB-SG-5		
FLAME			1/4	SH					
5/16	3/4	2-1/2	1/4	SH-2	1			42.19	20-SB-SH-2
1/2	1-1/4	3	1/4	SH-5	1			83.54	20-SB-SH-5



HEAD DIA INCH	FL INCH	OAL INCH	ANGLE DEG.	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
14° INCLUDED ANGLE				1/4	SL					
1/4	5/8	2	14°	1/4	SL-1	1	33.71	20-SB-SL-1		
5/16	7/8	2-3/4	14°	1/4	SL-2	1	42.19	20-SB-SL-2		
3/8	1-1/16	2-15/16	14°	1/4	SL-3	1	52.63	20-SB-SL-3		
1/2	1-1/8	3	14°	1/4	SL-4	1	67.87	20-SB-SL-4		
POINTED CONE				1/4	SM					
1/4	1/2	2	22°	1/4	SM-1	1			29.50	20-SB-SM-1
1/4	1	2	10°	1/4	SM-3	1			32.12	20-SB-SM-3
3/8	5/8	2-1/2	28°	1/4	SM-4	1			49.12	20-SB-SM-4
1/2	7/8	2-3/4	28°	1/4	SM-5	1			67.87	20-SB-SM-5



**saber**

GROUP	SB20
SURFACE FINISH	BRIGHT
MATERIAL	TUNGSTEN CARBIDE
TYPE	NON-FERROUS CUT
PACKAGING	HANG PACK

### NON-FERROUS CUT BURRS

Non-Ferrous Cut Burrs are for use on non-ferrous and non-metallic materials such as aluminium, brass, copper, bronze, coarse plastic, hard rubber, reinforced plastic and fibreglass composites. They are designed for rapid stock removal with minimum chip loading resulting in longer life and reduced clogging.

### USAGE

- It may be necessary to alter the running speeds from those shown in the speed chart in order to achieve optimum performance.
- Harder materials require slower running speeds.
- Smaller burrs require faster running speeds.
- Long shank burrs require slower speeds for safety reasons.
- Apply constant movement and light pressure when using the burr.
- Running below the optimum speed will cause chipping.
- Running above optimum speed will cause premature tooth wear.
- Allowing the burr to become too hot may cause the braze to soften, and cause the head to become detached from the shank.
- Using tools and collets which have become worn will cause chipping.
- Do not sink the burr for more than one third of its periphery.



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>CYLINDRICAL</b>			<b>1/4</b>	<b>SA</b>							
<b>1/4</b>	<b>3/4</b>	<b>2</b>	<b>1/4</b>	<b>SA-1NF</b>	<b>1</b>	<b>33.71</b>	<b>20-SB-SA-1NF</b>				
<b>3/8</b>	<b>3/4</b>	<b>2-1/2</b>	<b>1/4</b>	<b>SA-3NF</b>	<b>1</b>	<b>53.48</b>	<b>20-SB-SA-3NF</b>				
<b>1/2</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	<b>SA-5NF</b>	<b>1</b>	<b>77.31</b>	<b>20-SB-SA-5NF</b>				
<b>CYL. WITH BALL NOSE</b>			<b>1/4</b>	<b>SC</b>							
<b>1/4</b>	<b>3/4</b>	<b>2</b>	<b>1/4</b>	<b>SC-1NF</b>	<b>1</b>			<b>38.53</b>	<b>20-SB-SC-1NF</b>		
<b>3/8</b>	<b>3/4</b>	<b>2-1/2</b>	<b>1/4</b>	<b>SC-3NF</b>	<b>1</b>			<b>57.30</b>	<b>20-SB-SC-3NF</b>		
<b>BALL</b>			<b>1/4</b>	<b>SD</b>							
<b>1/2</b>	<b>7/16</b>	<b>2-3/16</b>	<b>1/4</b>	<b>SD-5NF</b>	<b>1</b>					<b>82.83</b>	<b>20-SB-SD-5NF</b>



HEAD DIA INCH	FL INCH	OAL INCH	SHANK INCH	STYLE	PACK QTY	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
<b>TREE RADIUS NOSE</b>			<b>1/4</b>	<b>SF</b>					
<b>3/8</b>	<b>3/4</b>	<b>2-1/2</b>	<b>1/4</b>	<b>SF-3NF</b>	<b>1</b>	<b>66.27</b>	<b>20-SB-SF-3NF</b>		
<b>1/2</b>	<b>1</b>	<b>2-3/4</b>	<b>1/4</b>	<b>SF-5NF</b>	<b>1</b>	<b>82.83</b>	<b>20-SB-SF-5NF</b>		
<b>14° INCLUDED ANGLE</b>			<b>1/4</b>	<b>SL</b>					
<b>1/2</b>	<b>1-1/8</b>	<b>3</b>	<b>1/4</b>	<b>SL-4NF</b>	<b>1</b>			<b>99.17</b>	<b>20-SB-SL-4NF</b>

# saber



**BURRS**  
CARBIDE

DOUBLE CUT

HANG SELL

GROUP	SB20	SB20
SURFACE FINISH	BRIGHT	BRIGHT
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK DIAMETER	1/4"	1/4"
TYPE	DOUBLE CUT	DOUBLE CUT
PACKAGING	SET	SET



SET TYPE	\$ SET	PART NUMBER	\$ SET	PART NUMBER
SET 1 – DOUBLE CUT BURRS, 5 PCS	220.39	20-SBS1		
SET 2 – DOUBLE CUT BURRS, 3 PCS			149.79	20-SBS2

SET CONTENTS	STYLE	DESCRIP.	PART NUMBER	STYLE	DESCRIP.	PART NUMBER
	SB-3	CYL END CUT	20-SB-SB-3	SB-3	CYL END CUT	20-SB-SB-3
	SC-3	CYL BALL	20-SB-SC-3	SC-3	CYL BALL	20-SB-SC-3
	SC-5	CYL BALL	20-SB-SC-5	SF-3	TREE RADIUS	20-SB-SF-3
	SF-3	TREE RADIUS	20-SB-SF-3			
	SF-5	TREE RADIUS	20-SB-SF-5			





**saber**

GROUP	SB20	SB20
MATERIAL	TUNGSTEN CARBIDE	TUNGSTEN CARBIDE
SHANK DIAMETER	1/4"	1/4"
TYPE	DOUBLE CUT & NON-FERROUS CUT	DOUBLE CUT & NON-FERROUS CUT



MERCHANDISER TYPE	\$ MERCHANDISER	PART NUMBER	\$ MERCHANDISER	PART NUMBER
D1 BURR MERCHANDISER – 23 PCS	<b>1,302.27</b>	20-D1		
D2 BURR MERCHANDISER – 49 PCS			<b>2,755.76</b>	20-D2

MERCHANDISER CONTENTS	QTY EACH	STYLE	PART NUMBER	QTY EACH	STYLE	PART NUMBER
	1	SB-1	20-SB-SB-1	1	SA-1	20-SB-SA-1
	1	SB-3	20-SB-SB-3	1	SA-2	20-SB-SA-2
	1	SB-5	20-SB-SB-5	1	SA-3	20-SB-SA-3
	1	SC-1	20-SB-SC-1	1	SA-5	20-SB-SA-5
	1	SC-3	20-SB-SC-3	1	SA-6	20-SB-SA-6
	1	SC-5	20-SB-SC-5	1	SB-1	20-SB-SB-1
	1	SD-1	20-SB-SD-1	1	SB-2	20-SB-SB-2
	1	SD-3	20-SB-SD-3	1	SB-3	20-SB-SB-3
	1	SE-3	20-SB-SE-3	1	SB-5	20-SB-SB-5
	1	SE-5	20-SB-SE-5	1	SB-6	20-SB-SB-6
	1	SF-1	20-SB-SF-1	1	SC-1	20-SB-SC-1
	1	SF-3	20-SB-SF-3	1	SC-2	20-SB-SC-2
	1	SF-5	20-SB-SF-5	1	SC-3	20-SB-SC-3
	1	SG-3	20-SB-SG-3	1	SC-5	20-SB-SC-5
	1	SG-5	20-SB-SG-5	1	SC-6	20-SB-SC-6
	1	SH-2	20-SB-SH-2	1	SD-1	20-SB-SD-1
	1	SH-5	20-SB-SH-5	1	SD-3	20-SB-SD-3
	1	SL-3	20-SB-SL-3	1	SD-5	20-SB-SD-5
	1	SL-4	20-SB-SL-4	1	SE-1	20-SB-SE-1
	1	SM-4	20-SB-SM-4	1	SE-3	20-SB-SE-3
	1	SC-3NF	20-SB-SC-3NF	1	SE-5	20-SB-SE-5
	1	SF-3NF	20-SB-SF-3NF	1	SF-1	20-SB-SF-1
	1	SET	20-SBS2	1	SF-3	20-SB-SF-3
				1	SF-5	20-SB-SF-5
				1	SF-6	20-SB-SF-6
				1	SG-1	20-SB-SG-1
				1	SG-2	20-SB-SG-2
				1	SG-3	20-SB-SG-3
				1	SG-5	20-SB-SG-5
				1	SH-2	20-SB-SH-2
				1	SH-5	20-SB-SH-5
				1	SL-1	20-SB-SL-1
				1	SL-2	20-SB-SL-2
				1	SL-3	20-SB-SL-3
				1	SL-4	20-SB-SL-4
				1	SM-1	20-SB-SM-1
				1	SM-3	20-SB-SM-3
				1	SM-4	20-SB-SM-4
				1	SM-5	20-SB-SM-5
				1	SA-1NF	20-SB-SA-1NF
				1	SA-3NF	20-SB-SA-3NF
				1	SA-5NF	20-SB-SA-5NF
				1	SC-1NF	20-SB-SC-1NF
				1	SC-3NF	20-SB-SC-3NF
				1	SD-5NF	20-SB-SD-5NF
				1	SF-3NF	20-SB-SF-3NF
				1	SF-5NF	20-SB-SF-5NF
				1	SL-4NF	20-SB-SL-4NF
				1	SET	20-SBS2

# Knives & Blades

PRO-SERIES KNIVES AND PREMIUM SK-5 BLADES



MAVERICK  
PRO-SERIES  
KNIVES

THESE PREMIUM QUALITY, HEAVY DUTY UTILITY KNIVES HAVE BEEN DESIGNED FOR MAXIMUM DURABILITY AND OPTIMUM PERFORMANCE.  
**WE GUARANTEE IT!**

MAVERICK  
PRO-SERIES  
AUTO LOADING  
UTILITY KNIFE

FEATURES

- Quick change auto load mechanism.
- Professional quality.
- Heavy duty Tradesman Tough.
- Magazine contains 5 premium quality SK5 blades.
- 3 preset blade depth positions.
- MaxGrip coating.

MAVERICK  
PRO-SERIES  
AUTO  
RETRACTING  
SAFETY KNIFE

FEATURES

- Automatic blade retraction.
- Professional quality.
- Heavy duty die cast construction.
- Contoured non-slip grip.
- Non-slip thumb slide.

MAVERICK  
PRO-SERIES  
AUTO LOAD  
SNAP BLADE  
KNIVES

FEATURES

- Quick change auto load system
- Professional quality
- Heavy duty die cast aluminium body
- Heavy gauge stainless steel blade sleeve
- Dual blade locks
- Magazine contains 5 X 8 point SK5 blades
- Includes snap off tool

TYPE	MVRK
PACKAGING	CLAM SHELL



DESCRIPTION	BLADE TYPE SHAPE	NO. BLADES INCLUDED	BOX QTY PIECES	\$ EACH	PART NUMBER
AUTO LOAD UTILITY KNIFE	TRAPEZOIDAL	5	5	27.99	11001
AUTO RETRACTING SAFETY KNIFE	TRAPEZOIDAL	1	10	15.37	11080



DESCRIPTION	BLADE TYPE SIZE	NO. BLADES INCLUDED	BOX QTY PIECES	\$ EACH	PART NUMBER
AUTOLOAD 18MM SNAP BLADE KNIFE	18MM SNAP	5	10	33.72	12260
AUTOLOAD 9MM SNAP BLADE KNIFE	9MM SNAP	3	10	22.50	12060

TYPE	MVRK
PACKAGING	HANG SELL



#### WHAT IS SK-5 STEEL?

SK-5 is the Japanese equivalent of American 1080, a high carbon steel with carbon between 0.75%-0.85% and 0.60%-0.90% manganese. As quenched, it has a hardness near Rc 65 and produces a mixture of carbon rich martensite with some small un-dissolved carbides. The excess carbide increases abrasion resistance and allows the steel to achieve an ideal balance of very good blade toughness with superior edge holding ability.

DESCRIPTION	BLADE TYPE	NO. BLADES PER PACK	POINTS PER BLADE	BOX QTY PIECES	\$ EACH	PART NUMBER
10 PIECE SAFETY DISPENSER	TRAPEZOIDAL	10	—	10	6.71	21022
100 PIECE SAFETY DISPENSER	TRAPEZOIDAL	100	—	5	49.40	21051
9MM SNAP BLADES – 13 POINT	9MM SNAP	10	13	10	5.79	25123
18MM SNAP BLADES – 8 POINT	18MM SNAP	10	8	10	7.02	26123



DESCRIPTION	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER	\$ EACH	PART NUMBER
BENCHTOP MERCHANDISER 01	594.00	31001						
BENCHTOP MERCHANDISER 02			760.50	31002				
BENCHTOP MERCHANDISER 03					681.55	31003		
BENCHTOP MERCHANDISER 04							607.75	31004
MERCHANDISER CONTENTS	QTY	PART NUMBER	QTY	PART NUMBER	QTY	PART NUMBER	QTY	PART NUMBER
	10	11001	10	12260	5	11001	5	11001
	10	21022	10	12060	10	12260	10	11080
	5	21051	20	26123	20	21022	10	21022
			10	25123	10	26123	5	21051



BORDO MERCHANDISING SYSTEM COMPONENTS



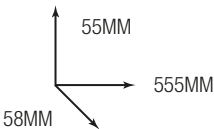
HANGING BRACKET FOR SLATWALL  
PART # 9981-SLATBRACKET



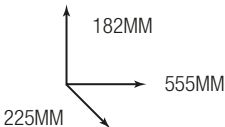
HANGING BRACKET FOR PEG BOARD  
PART # 9981-PEGBRACKET



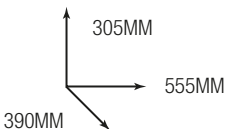
SINGLE TIER RACK  
PART # 9980-1T



TWO TIER RACK  
PART # 9980-2T



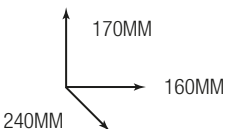
THREE TIER RACK  
PART # 9980-3T



SELF ADHESIVE PRICING STRIP TO SUIT 30MM INSERT  
TO SUIT SINGLE, TWO AND 3 TIER RACKS PART # 9981-PS540



CLEAR ACRYLIC  
POS DISPLAY BOX  
PART # 9980-POSBOX



## BORDO MERCHANDISING SYSTEM COMPONENTS



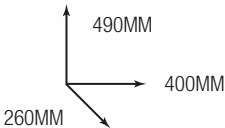
SELF ADHESIVE PRICING STRIP TO SUIT 30MM INSERT  
TO SUIT SINGLE, TWO AND 3 TIER FLT RACKS PART # 9981-PS1098



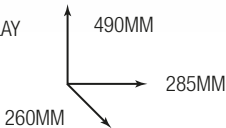
BORDO MERCHANDISING SYSTEM COMPONENTS



DEBURRER BENCH DISPLAY  
PART # 6410-D3E



HACKSAW/RECIP. BLADE DISPLAY  
PART # 7202-D1E



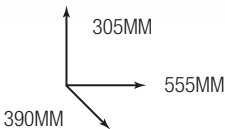
SELF ADHESIVE PRICING STRIP TO SUIT 30MM INSERT  
TO DEBURRER BENCH DISPLAY PART # 9981-PS390



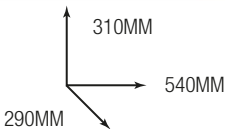
SELF ADHESIVE PRICING STRIP TO SUIT 30MM INSERT  
TO HACKSAW/RECIP. BENCH DISPLAY PART # 9981-PS275



SHELF DISPLAY  
PART # 9980-SHELF



DRILL SET SHELF DISPLAY  
PART # 9980-DRILLKIT



## BORDO MERCHANDISING SYSTEM COMPONENTS



SPOKE ARM  
L 200MM  
PART # 9980-SA



HACKSAW FRAME BRACKET  
HOLDS 5 FRAMES  
PART # 9981-HF

SELF ADHESIVE PRICING STRIP TO SUIT 30MM INSERT  
TO SUIT SPOKE ARM PART # 9981-PS218



LARGE HOOK BRACKET  
IDEAL FOR HOLESAW SETS  
AND TAP & DIE SETS  
PART # 9981-LHB



DOUBLE HOOK – L 100MM  
PART # 9981-DH100

DOUBLE HOOK – L 115MM  
PART # 9981-DH126

DOUBLE HOOK FOR SPOKE ARM – L 115MM  
PART # 9981-DH126BAR

DOUBLE HOOK LONG – L 205MM  
PART # 9981-DH200



SINGLE HOOK – L 75MM  
PART # 9981-SH-75MM

SINGLE HOOK – L 86MM  
PART # 9981-SH86-BT

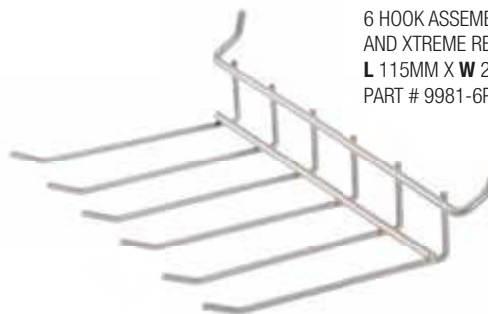
SINGLE HOOK – L 115MM  
PART # 9981-SH126

SINGLE HOOK LONG – L 180MM  
PART # 9981-SH180

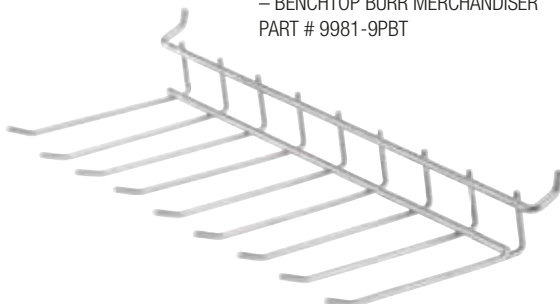
3 HOOK ASSEMBLY – BULK HACKSAW BLADES  
L 115MM X W 56MM  
PART # 9981-3P



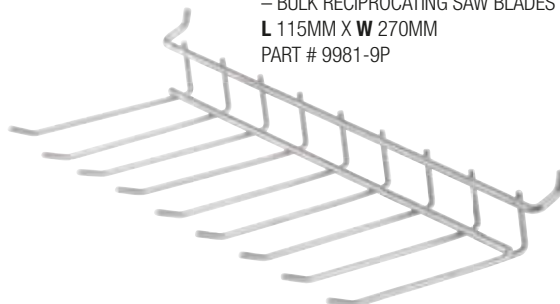
6 HOOK ASSEMBLY – BULK HACKSAW BLADES  
AND XTREME RECIPROCATING SAW BLADES  
L 115MM X W 270MM  
PART # 9981-6P



9 HOOK ASSEMBLY  
– BENCHTOP BURR MERCHANDISER  
PART # 9981-9PBT



9 HOOK ASSEMBLY  
– BULK RECIPROCATING SAW BLADES  
L 115MM X W 270MM  
PART # 9981-9P





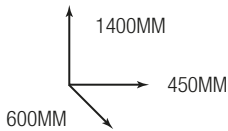
BORDO MERCHANDISING SYSTEM COMPONENTS

ALSO AVAILABLE BRANDED SAVAGE  
PART # 9200-SAVAGE

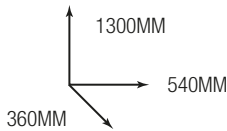
**Savage**  
PERFORMANCE TOOLS



CARDBOARD DISPLAY STAND  
PART # 9200-DRILLSTAND



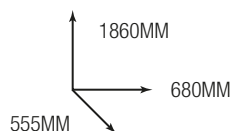
CARDBOARD DISPLAY BIN  
PART # 9200-BORDO



BORDO MERCHANDISING SYSTEM COMPONENTS



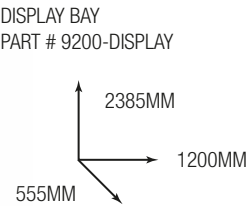
NARROW MERCHANDISER STAND  
PART # 9200-HALFDISPLAY-2



NARROW MERCHANDISER STAND  
PART # 9200-HALFDISPLAY-3



BORDO MERCHANDISING SYSTEM COMPONENTS



## BORDO MERCHANDISING EXAMPLES





BORDO MERCHANDISING EXAMPLES

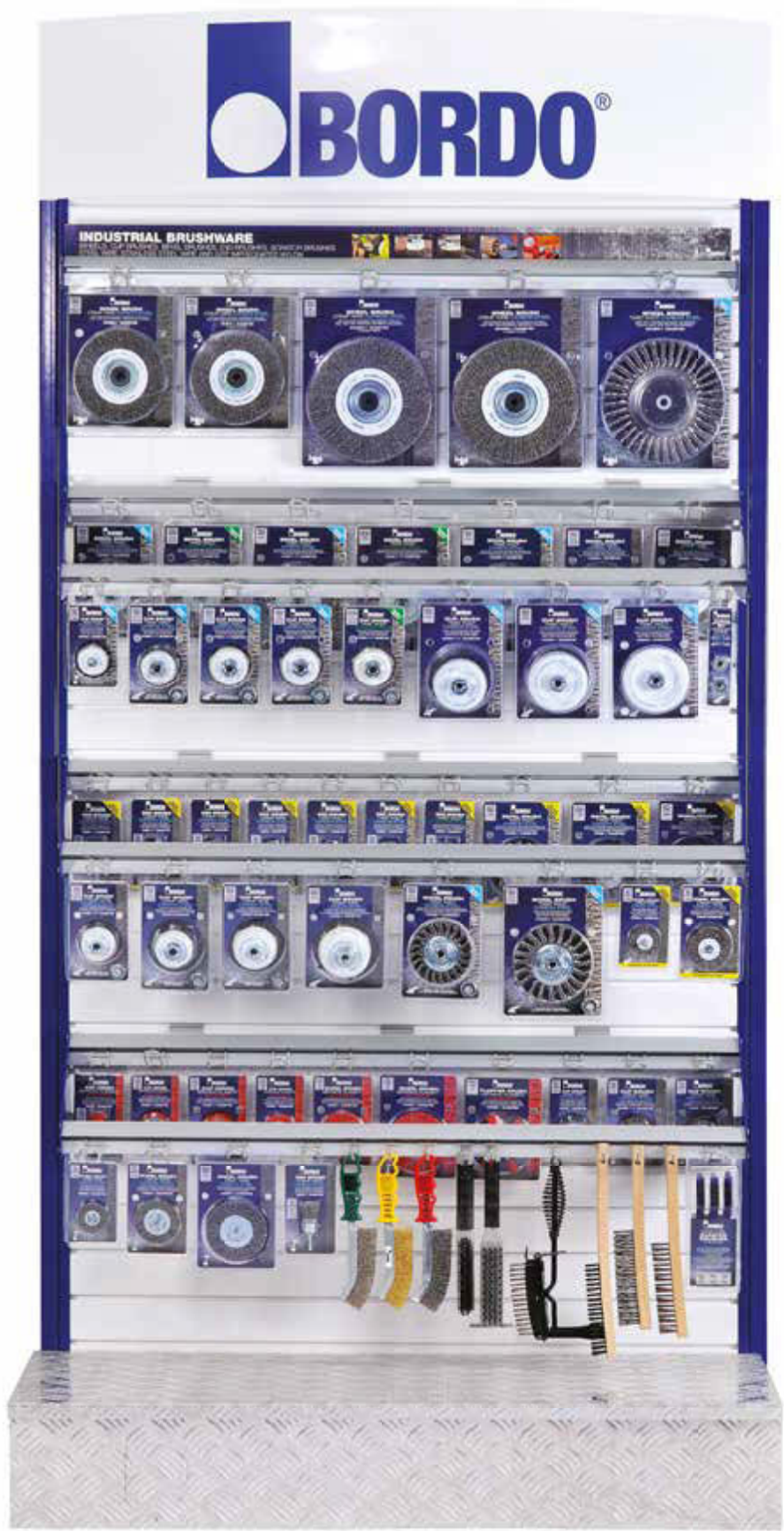


## BORDO MERCHANDISING EXAMPLES





BORDO MERCHANDISING EXAMPLES



## BORDO MERCHANDISING EXAMPLES





BORDO MERCHANDISING EXAMPLES



## BORDO MERCHANDISING EXAMPLES



# RELATIVE CUTTING SURFACE SPEEDS, FEEDS, THRUSTS AND CUTTING FLUIDS FOR M2 HSS DRILLS BY MATERIAL



		SURFACE SPEED M / MIN	FEED “F” (MM PER REVOLUTION)							CUTTING FLUID
			THRUST “T” (KG)							
			NOMINAL HOLE DIAMETER (MM)							
MATERIAL	CONDITION / TREATMENT			1.5	3.0	6.0	13.0	25.0	50.0	
BRINELL HARDNESS NO.										
CARBON STEELS	Annealed or Cold Drawn	23	F	0.03	0.08	0.13	0.23	0.36	0.56	Light Oil or Soluble Oil
1020 1025			T	17	62	162	206	1096	2808	
		21	F	0.03	0.08	0.13	0.23	0.36	0.56	
1040 1045 1050 1055			T	17	62	162	433	1096	2808	
	174 to 241	20	F	0.03	0.08	0.13	0.23	0.36	0.51	
1060 1090			T	17	62	162	433	1096	2644	
ALLOY STEELS		18	F	0.03	0.08	0.15	0.25	0.41	0.58	Light Oil or Soluble Oil
4132 4140 4615 5140			T	18	67	200	505	1299	3130	
TOOL STEELS	Annealed	14	F	0.03	0.05	0.10	0.18	0.30	0.46	Medium Oil, Sulphurized
4132 4140 4615 5140			T	17	47	139	365	990	2476	
HIGH SPEED	197 to 225	14	F	0.03	0.05	0.08	0.13	0.20	0.30	Mineral Oil
M1 M2 T1			T	22	60	149	377	991	2515	
STAINLESS STEELS	Cold Drawn	15	F	0.03	0.05	0.10	0.18	0.30	0.46	Medium Oil, Sulphurized Mineral Oil
304 310 316 321	120 to 240		T	17	47	139	365	990	2476	
203 303		30	F	0.03	0.08	0.15	0.25	0.43	0.64	
			T	17	62	185	466	1250	3050	
403 405 410 416	Annealed	18	F	0.03	0.05	0.10	0.18	0.30	0.46	
420 430 440	174 to 183		T	17	47	140	365	990	2476	
CAST IRON - GREY	Annealed	37	F	0.03	0.08	0.15	0.25	0.41	0.64	Sulphurized or Medium Oil
	190 to 225		T	17	47	139	365	990	2476	
CAST IRON - DUCTILE	As Cast	21	F	0.03	0.08	0.15	0.25	0.41	0.64	Sulphurized or Medium Oil
	190 to 225		T	11	41	123	311	799	2033	
CAST IRON - MALLEABLE	Malleablized & Heat Treated	27	F	0.03	0.05	0.10	0.18	0.25	0.33	Sulphurized or Medium Oil
	202 to 225		T	11	31	93	243	587	1359	
ALUMINIUM ALLOYS	As Cast	61	F	0.03	0.08	0.18	0.28	0.46	0.71	Soluble Oil
- CAST	40 to 100 (500kg)		T	5	18	60	145	379	958	Kerosene
DIE CASTINGS	As Cast	76	F	0.05	0.10	0.20	0.30	0.46	0.64	Soluble Oil
ZINC ALLOYS	80 to 100 (500kg)		T	5	16	47	110	270	635	Kerosene
COPPER ALLOYS	As Cast	37	F	0.03	0.08	0.15	0.30	0.41	0.64	Soluble Oil
	60 to 90		T	14	52	154	215	999	2541	Kerosene
BRASSES & BRONZES	As Cast	61	F	0.03	0.08	0.18	0.33	0.46	0.71	Light Mineral Oil
- SOFT	60 to 90		T	5	18	60	164	379	958	
HIGH TENSILE	As Cast or Heat Treated	27	F	0.03	0.05	0.10	0.18	0.25	0.33	Heavy Sulphurized Oil
	100 to 170		T	11	31	35	243	587	1359	
PLASTICS, THERMO-PLASTICS,	Extruded, Moulded or Cast	15	F	0.05	0.08	0.13	0.25	0.51	0.76	Medium Oil, Sulphurized Mineral Oil
POLYETHYLENE			T	5	13	34	97	291	716	
NYLON, ACRYLICS,		30	F	0.05	0.08	0.13	0.20	0.30	0.41	—
POLYCARBONATES			T	5	13	34	83	206	480	
THERMOSETTING PLASTICS,	Cast, Moulded or Filled	18	F	0.05	0.08	0.13	0.20	0.30	0.38	—
RE-INFORCED FIBREGLASS			T	5	13	34	97	206	462	

CUTTING SPEED CHART IN REVOLUTIONS PER MINUTE (RPM)  
CALCULATED FROM SURFACE SPEED AND DRILL DIAMETER

DIAMETER		SURFACE SPEED M / MIN													
MM	INCH	3	4	5	6	8	10	12	15	18	20	25	30	35	40
RPM (REVOLUTIONS PER MINUTE)															
2	5/64	480	640	800	960	1270	1590	1910	2390	2870	3180	3980	4780	5570	6370
3	1/8	320	420	530	640	850	1060	1270	1590	1910	2120	2650	3180	3720	4250
4	5/32	240	320	400	480	640	800	960	1190	1430	1590	1990	2390	2790	3180
5	13/64	190	250	320	380	510	640	760	960	1150	1270	1590	1910	2230	2550
6	15/64	160	210	270	320	420	530	640	800	960	1060	1330	1590	1860	2120
8	5/16	120	160	200	240	320	400	480	600	720	800	1000	1190	1390	1590
10	25/64	95	130	160	190	250	320	380	480	570	640	800	960	1110	1270
12	15/32	80	110	130	160	210	270	320	400	480	530	660	800	930	1060
14	35/64	70	90	110	140	180	230	270	340	410	450	570	680	800	910
16	5/8	60	80	100	120	160	200	240	300	360	400	500	600	700	800
18	23/32	55	70	90	110	140	180	210	270	320	350	440	530	620	710
20	25/32	50	65	80	100	130	160	190	240	290	320	400	480	560	640
22	7/8	45	60	70	85	120	140	170	220	260	290	360	430	510	580
24	15/16	40	55	65	80	110	130	160	200	240	270	330	400	460	530
27	–	35	45	60	70	95	120	140	180	210	240	290	350	410	470
30	1-1/8	30	40	55	65	85	110	130	160	190	210	270	320	370	420
32	1-1/4	30	40	50	60	80	100	120	150	180	200	250	300	350	400
34	1-3/8	30	35	45	55	75	95	110	140	170	190	230	280	330	370
36	–	25	35	45	55	70	90	110	130	160	180	220	270	310	350
38	1-1/2	25	35	40	50	65	85	100	130	150	170	210	250	290	340
40	1-9/16	25	30	40	50	65	80	100	120	140	160	200	240	280	320
42	–	25	30	40	45	60	75	90	110	140	150	190	230	270	300
44	1-3/4	20	30	35	45	60	70	85	110	130	140	180	220	250	290
46	1-13/16	20	30	35	40	55	70	85	100	120	140	170	210	240	280
48	1-7/8	20	25	35	40	55	65	80	100	120	130	170	200	230	270
50	–	20	25	30	40	50	65	75	100	110	13	160	190	220	250



**COBALT DRILLS**  
(HSS-Co5)

Cobalt drills were developed to tackle the drilling of tough materials like stainless steel, inconel, tool steels, titanium alloys, etc.

Cobalt tools are also used to increase productivity for machining normal steels and other regular materials where increased tool life and faster drilling speeds may offer significant benefits.

When using cobalt drills we recommend up to a 20% increase in cutting speed over standard HSS drills. Increases in speeds of up to 40% or more may be possible in some machining applications.



Use these two charts to calculate the correct cutting parameters for drilling using an M2 HSS drill bit.

**FOR EXAMPLE**

When drilling a 8mm hole into 1060 Carbon Steel first check the chart opposite where you can see the correct surface speed is 20 metres per minute (m/min). To convert this to RPM use the chart above. The intersection of the 20 m/min surface speed with an 8mm drill diameter shows an optimum speed of 800 RPM.

In addition to speed, the table opposite also shows FEED rate in mm per revolution and THRUST pressure in kg. To maximise cutting efficiency and bit life a suitable cutting fluid (lubricant) should also be used.





TIPS FOR SUCCESSFUL DRILLING

- Ensure workpiece is firmly and securely fastened.
- Avoid excess lateral loads.
- Ensure collets and drill chucks are in good condition and will not allow drill slippage. Both drill and component damage can occur.
- When using taper shank drills ensure all taper sleeves are clean and in good condition. Never allow the drill to drive off the tang. This is an indication that either the drill, the sleeve, or both are damaged. Use only soft faced hammers to drive the taper shank into the sleeve. Use a proper drift key to remove the shank from the sleeve.
- Ensure drill is kept sharp, and sharpen before point of failure. If allowed to become blunt extra grinding will be needed to bring the drill back to optimum performance.
- Keep the flutes free from swarf. Clogged flutes will hamper drill performance.
- Use adequate coolant, particularly at the drill point, wherever possible.
- Avoid excessive speed and feed rates. Use the charts in this catalogue. If unsure of the correct speed or feed rate to use, it is generally better to start at low speeds and feeds, and build up as appropriate.
- When resharpening it is important that all wear is removed, and the correct point geometry is maintained. Do not overheat or burn the drill when grinding.
- If the hole is deeper than 3 times its diameter it is considered a deep hole. When drilling deep holes peck drilling is needed in order for the coolant to reach the point of the drill, and also to aid chip clearance.

RECOMMENDED SPEEDS AND FEEDS FOR DEEP HOLE DRILLING

SPEEDS	
3 x Diameter of Drill	10% speed reduction
4 x Diameter of Drill	20% speed reduction
5 x Diameter of Drill	30% speed reduction
>6 x Diameter of Drill	40% speed reduction
FEEDS	
3 x Diameter of Drill	10% feed reduction
4 x Diameter of Drill	10% feed reduction
5-8 x Diameter of Drill	20% feed reduction

CAUSES AND SOLUTIONS FOR COMMON DRILLING PROBLEMS

CHIPPING OR BREAKING OF LIPS

CAUSE Excessive lip clearance angles behind cutting edge.  
SOLUTION Reduce lip clearance as per charts.

WORN OUTER CORNERS

CAUSE Peripheral speed too great for material being drilled.  
SOLUTION Reduce cutting speed to correct speed. Increase feed rate. Improve coolant flow. Check clearance and alignment. Add corner break.

BROKEN OUTER CORNERS

CAUSES Drilling thin material that is insufficiently supported. Using a two flute drill to enlarge the diameter of an existing hole.  
SOLUTIONS Use a sheet metal drill and clamp the workpiece securely. Ream the hole to correct size.

DRILL SPLITS UP WEB

CAUSES Feed rate too great. Not enough lip clearance behind cutting edge. Excessive web thinning. Using hard object to seat the drill in sleeve.  
SOLUTIONS Reduce feed to correct rate (see charts). Ensure lip clearance is correct. Ensure web thickness is not less than 10% of the drill diameter.  
Use soft object to seat the drill in sleeve (e.g. copper or wood).

OVERSIZE OR OUT-OF-ROUND HOLES

CAUSES Unequal point angles. Flutes are congested with chips. Loose spindle or worn drill sleeve. Unsecured workpiece which moves during drilling.  
SOLUTIONS Ensure points are resharpened accurately. Ensure flutes are kept free from swarf. Ensure spindle or drill sleeve is in good condition. Secure workpiece.

ROUGH HOLE FINISH

CAUSES Drill is blunt. Insufficient coolant supply to drill point. Feed rate too great. Possible chip congestion in flutes.  
SOLUTIONS Sharpen the drill. Ensure coolant is reaching the drill point. Use correct feed rate (see charts). Ensure flutes are kept free from swarf.

BROKEN OR DAMAGED TANG

CAUSE Poor fit between drill sleeve and the drill shank.  
SOLUTIONS Only use sleeves that are in good condition. Ensure both drill shank and sleeve are clean.

DRILL RUBBING AND NOT ENTERING WORKPIECE

CAUSES Insufficient lip clearance. Web too thick. Chisel angle too high.  
SOLUTIONS Increase lip clearance (see charts). Reduce web thickness as per charts. Sharpen drill correctly to ensure correct chisel angle.

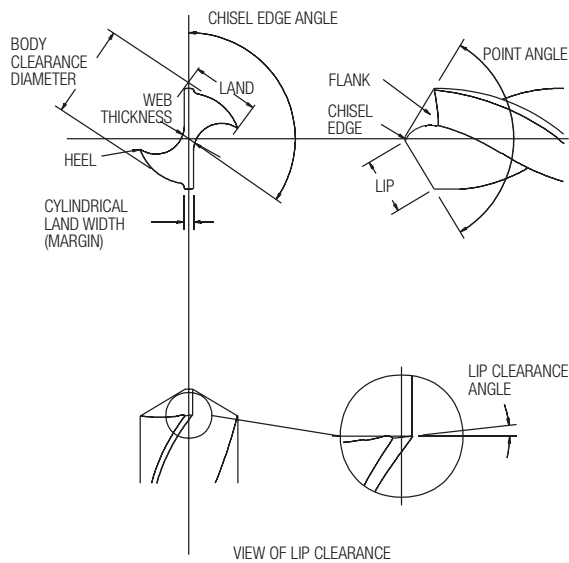
CRACKS IN CUTTING EDGES

CAUSE Point was overheated and cooled too quickly when resharpened.  
SOLUTION Use coolant when grinding, and quench frequently in soluble oil.

DRILL BREAKS AT FLUTE RUNOUT

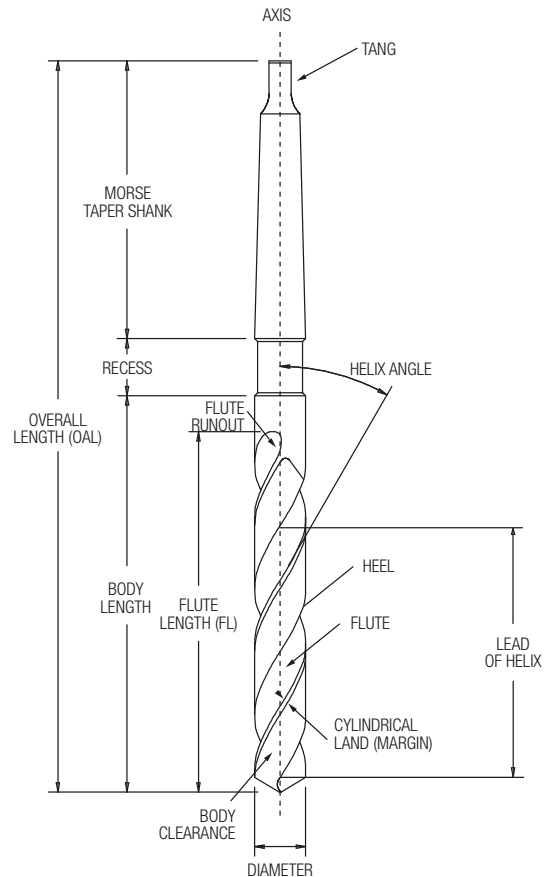
CAUSES Workpiece moved during drilling. Flutes clogged with swarf. Incorrect drill for application.  
SOLUTIONS Secure workpiece. Maintain clear flutes by peck drilling. Use correct drill for application.

## DRILL NOMENCLATURE AND POINT STYLES

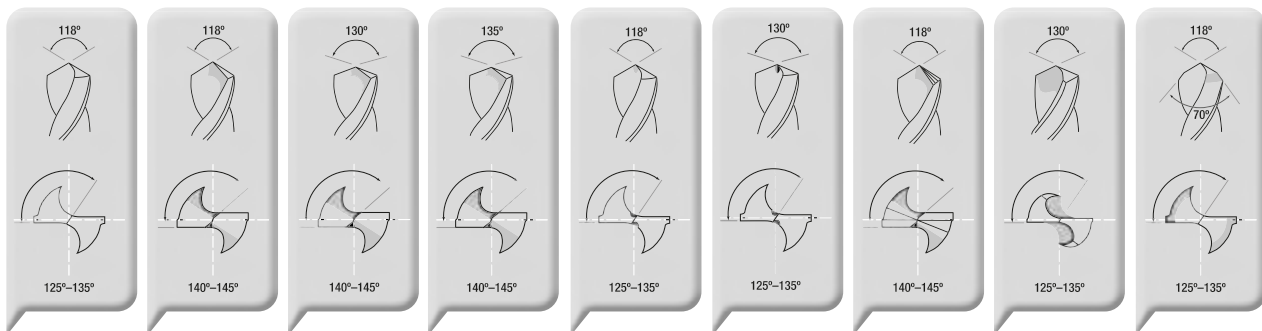


### LIP CLEARANCE ANGLE

DRILL SIZE (MM)	ANGLE (DEGREES)
0.3 to 3.0	18 – 24
3.1 to 6.0	14 – 18
6.1 to 12.0	10 – 14
12.1 to 20.0	8 – 12
20.1 and over	6 – 10



## DRILL POINT STYLES



**Standard Point**  
(chisel point)  
Standard point is suitable for general purpose drilling.

**118° Split Point**  
(crankshaft point)  
Split point is self centering and reduces the need for end thrust. Friction at workpiece is reduced. 118° point angles are ideal for use in materials such as mild steel and cast iron. The 118° point creates easily controlled chips which are wide and thin.

**Split Point**  
The 130° Split Point provides self centering and easier penetration. The 33° helix open profile flute design has reinforced web for high rigidity under extreme conditions.

**135° Split Point**  
(crankshaft point)  
Split point is self centering and the short distance from the drill axis to the outer corners results in faster penetration, reducing the need for end thrust. The 135° point should be used to cut harder steel materials especially in deep hole applications. In these situations it will produce thicker chips minimising work hardening of the cavity. Faster penetration reduces abrasion and friction along the cutting edges.

**Notched Point**  
A variation on standard chisel point providing faster starting and reduced drill wander. Suitable for general purpose drilling.

**130° Thinned Point**  
The thinned point reduces the need for end thrust and optimizes centre cutting efficiency with chisel strength.

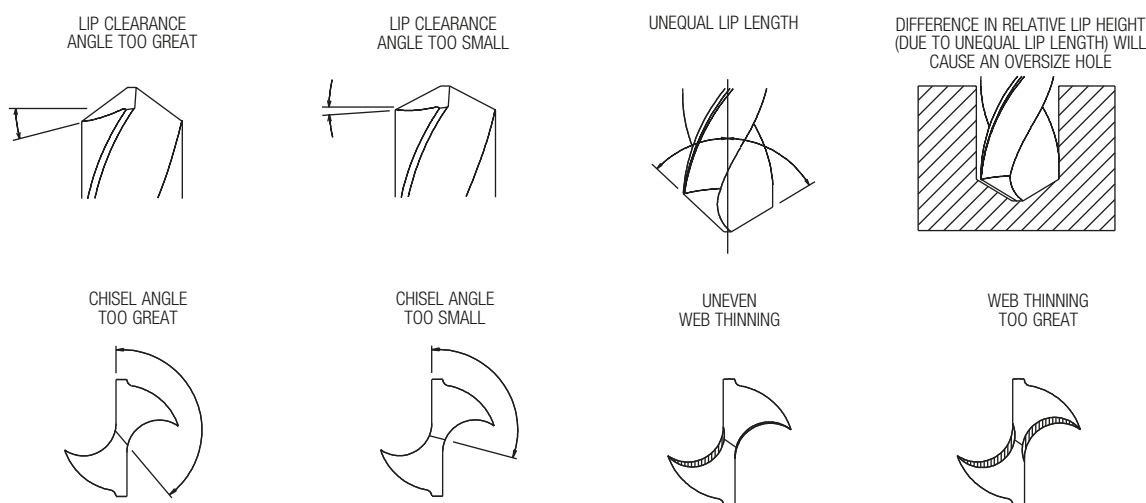
**Multi Faceted Point**  
The multi faceted point was specifically developed to enable higher load carrying capacity and to enhance feed rates during the machining of difficult materials such as stainless steel.

**UX Point**  
The notched UX point provides self centering, easier penetration, improved hole accuracy and improved load distribution. The special notch geometry gives a corrected rake angle of 15°, which provides a strong point for harder materials, as well as preventing snagging with materials such as Aluminium, Brass, Bronze and Plastics.

**DX Point**  
The double angled DX Point (118°/70°) minimises wear on the outer corners of the drill point in highly abrasive materials such as Cast Iron and Reinforced Plastics. The point is web thinned to enable easier penetration.



## COMMON RESHARPENING ERRORS ON STANDARD POINTS

**WEB THINNING IS RECOMMENDED FOR**

- RESTORING CHISEL EDGE TO THE ORIGINAL LENGTH AFTER MULTIPLE REGRINDS
- LARGER DRILLS WHERE MACHINE THRUST IS LIMITED
- DIFFICULT MATERIALS.

## DRILL NOMENCLATURE AND DEFINITIONS

<b>AXIS</b>	The longitudinal centre line of the drill.
<b>BACK TAPER</b>	The slight decrease in diameter from the front to the back in the drill body.
<b>BODY</b>	The portion of the drill extending from the cutting lips to the shank.
<b>BODY CLEARANCE</b>	The portion of the land that has been cut away to provide diametrical clearance.
<b>CHISEL EDGE</b>	The edge formed by the intersection of the cutting lips.
<b>CHISEL EDGE ANGLE</b>	The included angle between the chisel edge and the cutting lip when viewed from the point end of the drill.
<b>CYLINDRICAL LAND (MARGIN)</b>	The cylindrical portion of the land that is not cut away to provide clearance.
<b>CYLINDRICAL LAND WIDTH</b>	The distance between the leading edge and the heel of the land, measured at a right angle (Margin Width) to the leading edge.
<b>DIAMETER</b>	The measurement across the cylindrical lands (margin) at the outer corners of the drill.
<b>FLANK</b>	The surface of the drill point extending behind the lip to follow the flute.
<b>FLUTE LENGTH</b>	The axial length from the extreme end of the point to the termination of the flutes at the shank end of the drill. As this includes the flute runout, flute length does not indicate the usable length of the drill.
<b>FLUTE RUNOUT</b>	The end of the flutes near the shank where they join the drill body.
<b>FLUTES</b>	The grooves in the body of a drill which provide the cutting lips, allow swarf and chip ejection, and permit cutting fluid to reach the cutting lips.
<b>HEEL</b>	The edge formed by the intersection of the body clearance and the flute surface.
<b>HELIX ANGLE</b>	The angle formed by the leading edge of the land and the plane containing the axis of the drill.
<b>LAND</b>	The peripheral portion of the body between adjacent flutes.
<b>LEAD OF HELIX</b>	The distance measured parallel to the axis between corresponding points on the leading edge of the land in one turn of the drill.
<b>LIP CLEARANCE ANGLE</b>	The angle formed between the outer corner of the lip and a plane at right angles to the axis of the drill, and usually measured at the periphery of the drill.
<b>LIPS</b>	The cutting edges of a two flute drill extending from the chisel edge to the periphery of the drill.
<b>OVERALL LENGTH</b>	The total length measured from the extreme point to the end of the shank.
<b>POINT</b>	The sharpened end of the drill comprising the cutting lips, chisel edge, lands and the web.
<b>POINT ANGLE</b>	The included angle between the cutting lips.
<b>RELATIVE LIP HEIGHT</b>	The relative position of the lips measured at the outer corners in a direction parallel to the drill axis.
<b>RECESS</b>	The section of reduced diameter between the shank and the body of a drill.
<b>SHANK</b>	The part of the drill by which it is held and driven.
<b>TANG</b>	The flattened end of a taper shank intended to fit into a driving slot in a socket.
<b>WEB (CORE)</b>	The central portion of the drill that joins the land. The end of the web forms the chisel edge on a two flute drill.
<b>WEB (CORE) THICKNESS</b>	The minimum dimension of the web measured at the point of the drill.

## CUTTING SPEEDS (RPM) AND FEEDS FOR M2 HSS BRIGHT FINISH STEP DRILLS

MATERIAL TO BE CUT	FEED (MM/MIN)	STEP DRILL SIZE RANGE					
			4 - 12MM	4 - 20MM	6 - 30MM	1/8 - 1/2"	1/4 - 3/4"
MILD STEEL (<700 N/MM2)	20 - 25	SPEED (RPM)	1900 - 600	1900 - 400	1900 - 250	1900 - 600	1900 - 400
MILD STEEL (>700 N/MM2)	16 - 20	SPEED (RPM)	1500 - 500	1500 - 320	1500 - 250	1500 - 500	1500 - 320
ALLOY STEEL (1000 N/MM2)	10 - 16	SPEED (RPM)	1500 - 500	1500 - 320	1500 - 250	1500 - 500	1500 - 320
CAST IRON (<250 N/MM2)	12 - 25	SPEED (RPM)	1190 - 400	1190 - 240	800 - 130	1190 - 400	1190 - 240
CAST IRON (>250 N/MM2)	8 - 12	SPEED (RPM)	800 - 230	800 - 160	400 - 250	800 - 230	800 - 160
STAINLESS STEEL	5 - 12	SPEED (RPM)	500 - 300	400 - 250	400 - 250	500 - 300	400 - 250
AL ALLOY (<11% Si)	10 - 16	SPEED (RPM)	1990 - 550	1900 - 400	1990 - 270	1990 - 550	1900 - 400
THERMOPLASTIC	12 - 25	SPEED (RPM)	1590 - 450	1590 - 320	1590 - 210	1590 - 450	1590 - 320
WOOD	40 - 100	SPEED (RPM)	3000 - 1000	2800 - 1000	1500 - 800	3000 - 1000	2800 - 1000

HSS-Co5 (Cobalt) TiAIN Coated Step Drills are significantly more heat resistant than standard HSS Step Drills. Titanium Aluminium Nitride coated cobalt drills offer higher temperature resistance, as well as higher hardness and especially higher hot hardness (i.e. the hardness at high temperatures). They are primarily used in machining tough steels including stainless steel and high tensile steel. This TiAIN coating works by forming a thin surface layer of Alumina (Al<sub>2</sub>O<sub>3</sub>), or Aluminium Oxide ceramic. As the layer wears it continuously reforms.



## CUTTING SPEEDS (RPM) AND FEEDS FOR HSS-Co5 BRIGHT FINISH COUNTERSINKS

MATERIAL TO BE CUT		SURFACE SPEED / FEED / RPM BY COUNTERSINK DIAMETER (MM)											
		SMM	Ø10	Ø20	Ø30	SMM	Ø10	Ø20	Ø30	SMM	Ø10	Ø20	Ø30
STEEL ≤500 N/MM2	FEED	35-45	275	138	90	35-45	275	138	90	17-22	210	100	75
	RPM		1250	625	430		1250	625	420		620	310	210
STEEL 500-800 N/MM2	FEED	20-30	136	68	45	20-30	136	68	45	10-15	150	76	50
	RPM		800	400	260		800	400	260		480	240	160
STEEL 800-1000 N/MM2	FEED	15-20	68	34	23	15-20	68	34	23	8-12	100	50	36
	RPM		520	260	180		520	260	180		380	190	130
STAINLESS STEEL 1000-1300 N/MM2	FEED	12-15	45	25	17	12-15	45	25	17	6-8	32	16	11
	RPM		380	200	140		380	200	140		320	160	110
STAINLESS STEEL ICONEL-NIMONIC	FEED		-	-	-		-	-	-	4-6	15	8	5
	RPM		-	-	-		-	-	-		180	90	65
CAST IRON	FEED		-	-	-	20-40	150	130	100	15-25	80	60	50
	RPM		-	-	-		1200	550	430		630	320	210
ALUMINIUM	FEED	50-60	400	200	150	0-60	400	200	150	35-45	375	190	130
	RPM		1600	800	600		1600	800	600		1250	625	430
BRASS - BRONZE	FEED		-	-	-	30-40	300	150	90	20-30	240	120	80
	RPM		-	-	-		1200	600	370		800	400	260
COPPER	FEED	20-30	200	100	65	20-30	200	100	65	35-70	-	-	-
	RPM		800	400	260		800	400	260		-	-	-
LAMINATES	FEED		-	-	-	50-100	1600	800	250		720	360	240
	RPM		-	-	-		3200	1600	1000		1600	800	530
PLASTICS	FEED	50-100	1600	800	250	500	1600	800	250	35-70	720	360	240
	RPM		3200	1600	1000		3200	1600	1000		1600	800	530

SMM – RELATIVE SURFACE SPEED IN M/MIN  
FEED IS SHOWN IN MM/MIN

**EXAMPLE**

If you are countersinking in Stainless Steel (1000-1300 N/mm<sup>2</sup>) using a 20mm diameter Single Flute countersink; The SMM (Relative Surface Speed in Metres per Minute) is 12-15 m/min, the Feed Rate is 25 mm/min and the Speed in RPM is 200.





## TAPPING DRILL TABLES



METRIC COARSE (ISO)				
DIA.		PITCH	OAL	DRILL
1.00	x	0.25	38.50	0.75
1.20	x	0.25	38.50	0.95
1.40	x	0.30	40.00	1.10
1.60	x	0.35	41.00	1.25
1.80	x	0.35	41.00	1.45
2.00	x	0.40	41.00	1.60
2.50	x	0.45	44.50	2.05
3.00	x	0.50	48.00	2.50
3.50	x	0.60	50.00	2.90
4.00	x	0.70	53.00	3.30
4.50	x	0.75	53.00	3.70
5.00	x	0.80	58.00	4.20
6.00	x	1.00	66.00	5.00
7.00	x	1.00	66.00	6.00
8.00	x	1.25	72.00	6.80
9.00	x	1.25	72.00	7.80
10.00	x	1.50	80.00	8.50
12.00	x	1.75	89.00	10.20
14.00	x	2.00	95.00	12.00
16.00	x	2.00	102.00	14.00
18.00	x	2.50	112.00	15.50
20.00	x	2.50	112.00	17.50
22.00	x	2.50	118.00	19.50
24.00	x	3.00	130.00	21.00
30.00	x	3.50	138.00	26.50
33.00	x	3.50	151.00	29.50
36.00	x	4.00	162.00	32.00
39.00	x	4.00	170.00	35.00
42.00	x	4.50	170.00	37.50
45.00	x	4.50	187.00	40.50
48.00	x	5.00	187.00	43.00
52.00	x	5.00	200.00	47.00
56.00	x	5.50	200.00	50.50

METRIC FINE (ISO)				
DIA.		PITCH	OAL	DRILL
2.00	x	0.45	41.00	1.55
3.00	x	0.35	48.00	2.65
4.00	x	0.50	53.00	4.00
4.50	x	0.50	53.00	4.00
6.00	x	0.75	66.00	5.20
7.00	x	0.75	66.00	6.20
8.00	x	0.75	69.00	7.20
8.00	x	1.00	69.00	7.00
9.00	x	1.00	69.00	8.00
10.00	x	0.75	76.00	9.20
10.00	x	1.00	76.00	9.00
10.00	x	1.25	76.00	8.80
12.00	x	1.00	84.00	11.00
12.00	x	1.25	84.00	10.80
12.00	x	1.50	89.00	10.50
14.00	x	1.00	90.00	13.00
14.00	x	1.25	90.00	12.80
14.00	x	1.50	95.00	12.50
16.00	x	1.00	95.00	15.00
16.00	x	1.25	95.00	14.75
16.00	x	1.50	102.00	14.50
18.00	x	1.00	104.00	17.00
18.00	x	1.25	104.00	16.80
18.00	x	1.50	104.00	16.50
20.00	x	1.50	104.00	18.50
20.00	x	2.00	112.00	18.00
22.00	x	1.50	113.00	20.50
22.00	x	2.00	118.00	20.00
24.00	x	1.50	120.00	22.50
24.00	x	2.00	120.00	22.00
25.00	x	1.50	120.00	23.50
27.00	x	2.00	127.00	25.00
30.00	x	2.00	127.00	28.00
32.00	x	1.50	137.00	30.50

SPARK PLUG (ISO)				
DIA.		PITCH	OAL	DRILL
10.00	x	1.00	76.00	9.00
12.00	x	1.25	84.00	10.80
14.00	x	1.25	90.00	12.80
18.00	x	0.50	104.00	16.50

OVERSIZE / GALVANISING (ISO)				
DIA.		PITCH	OAL	DRILL
10.00+0.4	x	1.50	80.00	8.90
12.00+0.4	x	1.75	89.00	10.60
16.00+0.4	x	2.00	102.00	14.40
20.00+0.4	x	2.50	112.00	17.90
24.00+0.4	x	3.00	130.00	21.40

OVERSIZE / GALVANISING (ISO)				
DIA.		PITCH	OAL	DRILL
16.00	x	1.50	102.00	14.50
20.00	x	1.50	104.00	18.50

BSPF (BRITISH STANDARD PIPE G-SERIES)				
DIA.		TPI	OAL	DRILL
1/8	x	28	59.00	8.80
1/4	x	19	67.00	11.80
3/8	x	19	75.00	15.25
1/2	x	14	87.00	19.00
5/8	x	14	91.00	21.00
3/4	x	14	96.00	24.50
7/8	x	14	102.00	28.25
1	x	11	109.00	30.75
1-1/4	x	11	119.00	39.50
1-1/2	x	11	125.00	45.50
1-3/4	x	11	132.00	51.00
2	x	11	140.00	57.00
2-1/4	x	11	142.00	62.70
2-1/2	x	11	153.00	72.10
3	x	11	164.00	84.80

BSPT (BRITISH STANDARD PIPE TAPER)				
DIA.		TPI	OAL	DRILL
1/8	x	28	59.00	8.40
1/4	x	19	67.00	11.20
3/8	x	19	75.00	14.75
1/2	x	14	87.00	18.25
3/4	x	14	96.00	23.75
1	x	11	109.00	30.00
1-1/4	x	11	119.00	38.50
1-1/2	x	11	125.00	44.50
2	x	11	140.00	56.00

NPT (NATIONAL PIPE THREAD TAPERED)				
DIA.		TPI	OAL	DRILL
1/8	x	27	59.00	8.70
1/4	x	18	67.00	11.10
3/8	x	18	75.00	14.50
1/2	x	14	87.00	18.00
3/4	x	14	96.00	23.25
1	x	11.5	109.00	29.00
1-1/4	x	11.5	119.00	38.00
1-1/2	x	11.5	125.00	44.00
2	x	11.5	140.00	56.00

## TAPPING DRILL TABLES

UNC (UNIFIED NATIONAL COARSE)				
DIA.		TPI	OAL	DRILL
5G	x	40	48.00	2.65
6G	x	32	50.00	2.85
8G	x	32	53.00	3.50
10G	x	24	58.00	3.90
12G	x	24	62.00	4.50
3/16	x	24 UNS	58.00	3.70
1/4	x	20	66.00	5.10
5/16	x	18	72.00	6.60
3/8	x	16	80.00	8.00
7/16	x	14	85.00	9.40
1/2	x	13	89.00	10.80
9/16	x	12	95.00	12.20
5/8	x	11	102.00	13.50
3/4	x	10	112.00	16.50
7/8	x	9	118.00	19.50
1	x	8	130.00	22.25
1-1/8	x	7	138.00	25.00
1-1/4	x	7	151.00	28.00
1-1/2	x	6	170.00	34.00
1-3/4	x	5	187.00	39.50
2	x	4.5	200.00	45.00

UNF (UNIFIED NATIONAL FINE)				
DIA.		TPI	OAL	DRILL
4G	x	48	48.00	2.40
5G	x	44	48.00	2.70
6G	x	40	50.00	2.95
8G	x	36	53.00	3.50
10G	x	32	58.00	4.10
12G	x	28	62.00	4.70
3/16	x	32 UNS	58.00	4.00
1/4	x	28	66.00	5.50
5/16	x	24	69.00	6.90
3/8	x	24	76.00	8.50
7/16	x	20	82.00	9.90
1/2	x	20	84.00	11.50
9/16	x	18	90.00	12.90
5/8	x	18	95.00	14.50
3/4	x	16	104.00	17.50
7/8	x	14	113.00	20.40
1	x	12	120.00	23.25
1	x	14 UNS	120.00	23.25
1-1/8	x	12	127.00	26.50
1-1/4	x	12	137.00	29.50
1-1/2	x	12	149.00	36.00

BSW (BRITISH STANDARD WHITWORTH)				
DIA.		TPI	OAL	DRILL
1/16	x	60	41.00	1.20
3/32	x	48 Whit	44.50	1.85
1/8	x	40	48.00	2.55
5/32	x	32 Whit	53.00	3.20
3/16	x	24	58.00	3.70
7/32	x	24 Whit	62.00	4.50
1/4	x	20	66.00	5.10
5/16	x	18	72.00	6.50
3/8	x	16	80.00	7.90
7/16	x	14	85.00	9.30
1/2	x	12	89.00	10.50
9/16	x	12	95.00	12.10
5/8	x	11	102.00	13.50
3/4	x	10	112.00	16.25
7/8	x	9	118.00	19.25
1	x	8	130.00	22.00
1-1/8	x	7	138.00	24.75
1-1/4	x	7	151.00	28.00
1-3/8	x	6	162.00	30.25
1-1/2	x	6	170.00	33.50
1-3/4	x	5	187.00	39.00
2	x	4.5	200.00	44.50



NPSF (DRYSEAL)				
DIA.		TPI	OAL	DRILL
1/8	x	27	59.00	8.70
1/4	x	18	67.00	11.10
3/8	x	18	75.00	14.50
1/2	x	14	87.00	18.00

NPTF (DRYSEAL TAPER)				
DIA.		TPI	OAL	DRILL
1/8	x	27	59.00	8.40
1/4	x	18	67.00	11.10
3/8	x	18	75.00	14.50
1/2	x	14	87.00	18.00

UNEF (UNIFIED NATIONAL EXTRA FINE)				
DIA.		TPI	OAL	DRILL
1/4	x	32	66.00	5.60
5/16	x	32	69.00	7.20
3/8	x	32	76.00	8.80
1/2	x	28	84.00	11.80
5/8	x	24	95.00	14.75
3/4	x	20	104.00	18.00
1	x	20	120.00	24.20

BSF (BRITISH STANDARD FINE)				
DIA.		TPI	OAL	DRILL
3/16	x	32	58.00	4.00
1/4	x	26	66.00	5.30
5/16	x	22	72.00	6.80
3/8	x	20	80.00	8.30
7/16	x	18	85.00	9.70
1/2	x	16	89.00	11.10
5/8	x	14	102.00	14.00
3/4	x	12	112.00	16.75
7/8	x	11	118.00	19.75
1	x	10	130.00	22.75

## TUNGSTEN CARBIDE BURR SPEEDS



BURR HEAD DIAMETER	MAXIMUM OPERATING SPEED	ALL QUOTED SPEEDS X 1000 RPM							
		ALUMINIUM AND PLASTIC		BRASS, COPPER, CAST IRON AND BRONZE		UNHARDENED STEEL		HARDENED STEEL, STAINLESS STEEL, NIMONIC ALLOYS	
		SPEED RANGE	REC. STARTING SPEED	SPEED RANGE	REC. STARTING SPEED	SPEED RANGE	REC. STARTING SPEED	SPEED RANGE	REC. STARTING SPEED
3MM (1/8")	100	60-80	65	45-80	65	60-80	80	60-80	80
6MM (1/4")	65	15-60	40	22-60	45	45-60	50	30-45	40
10MM (3/8")	55	10-50	25	15-40	30	30-40	30	19-30	25
12MM (1/2")	35	7-30	20	11-30	25	22-30	25	15-22	20
16MM (5/8")	25	6-20	15	9-20	20	18-20	20	12-18	15
20MM (3/4")	20	5-17	10	8-17	12	15-17	15	10-15	10
25MM (1")	15	4-13	8	6-13	10	10-13	10	7-11	8

RECOMMENDED SPEEDS ARE BASED ON STANDARD SHANK LENGTH OF 45MM / (1-3/4") MAX OVERHANG OF 10MM (3/8")

**MAXIMUM RECOMMENDED OPERATING SPEEDS FOR EXTENDED LENGTH SHANKS IS 15,000RPM**

## XP AND XP2 TUNGSTEN CARBIDE CUTTER SPEEDS



MATERIAL	XP AND XP2 CUTTER DIAMETER (MM) – SPEEDS IN RPM					
	18 – 21 MM	22 – 30 MM	32 – 40 MM	41 – 50 MM	51 – 60 MM	60 – 76 MM
STEEL	700 – 1000	500 – 800	300 – 600	200 – 500	200 – 400	150 – 300
STAINLESS STEEL	300 – 700	200 – 450	175 – 315	120 – 225	95 – 195	80 – 150

## TUNGSTEN CARBIDE GRIT EDGE HOLE SAW SPEEDS



GRIT EDGE HOLE SAWS (TUNGSTEN CARBIDE GRIT)		ALL QUOTED SPEEDS RPM			
DIA. MM	DIA. INCHES	BRICK CERAMIC	SLATE	REINFORCED PLASTICS	FIBRE
16	-	620	1540	2140	920
19	3/4	510	1280	1790	770
20	-	470	1180	1660	715
22	7/8	430	1090	1530	660
25	1	380	960	1340	580
29	1-1/8	340	850	1190	510
32	1-1/4	310	770	1070	460
35	1-3/8	280	700	980	420
38	1-1/2	260	640	890	390
44	1-3/4	220	550	770	330
48	1-7/8	200	510	720	310
51	2	190	480	670	290
54	2-1/8	180	450	630	280
57	2-1/4	170	430	600	270
60	2-3/8	160	400	570	250
64	2-1/2	150	380	540	230
70	2-3/4	140	350	500	210
76	3	130	320	450	190
83	3-1/4	120	295	415	180
86	3-3/8	115	285	400	175
95	3-3/4	102	255	350	160
102	4	95	240	330	150
114	4-1/2	82	215	290	125

# Vx COBALT BI-METAL HOLE SAW SPEEDS



Vx COBALT BI-METAL HOLE SAWS DIA. MM      DIA. INCHES		ALL QUOTED SPEEDS RPM				
		MILD STEEL	TOOL STEEL S/STEEL	CAST IRON	BRASS	ALUMINIUM
14	9/16	580	300	400	790	900
16	5/8	550	275	365	730	825
17	11/16	500	250	330	665	750
19	3/4	460	230	300	600	690
20	-	440	220	290	580	660
21	13/16	425	210	280	560	635
22	7/8	390	195	260	520	585
24	15/16	370	185	245	495	555
25	1	350	175	235	470	525
27	1-1/16	325	160	215	435	480
29	1-1/8	300	150	200	400	450
30	1-3/16	285	145	190	380	425
32	1-1/4	275	140	180	360	410
33	1-5/16	260	135	175	345	390
35	1-3/8	250	125	165	330	375
37	1-7/16	240	120	160	315	360
38	1-1/2	230	115	150	300	345
40	1-9/16	220	110	145	290	330
41	1-5/8	210	105	140	280	315
43	1-11/16	205	100	135	270	305
44	1-3/4	195	95	130	260	295
46	1-3/16	190	95	125	250	285
48	1-7/8	180	90	120	240	270
51	2	170	85	115	230	255
52	2-1/16	165	80	110	220	245
54	2-1/8	160	80	105	210	240
57	2-1/4	150	75	100	200	225
59	2-5/16	145	75	95	195	225
60	2-3/8	140	70	90	190	220
64	2-1/2	135	65	85	180	205
65	2-9/16	130	65	85	175	200
67	2-5/8	130	65	85	170	195
68	-	130	65	80	175	190
70	2-3/4	125	60	80	160	185
73	2-7/8	120	60	75	160	180
76	3	115	55	70	150	170
79	3-1/8	110	55	70	140	165
83	3-1/4	105	50	65	140	155
86	3-3/8	100	50	65	130	150
89	3-1/2	95	45	60	130	145
92	3-5/8	90	45	60	120	140
95	3-3/4	90	45	60	120	135
98	3-7/8	90	45	60	120	135
102	4	85	40	55	110	130
104	4-1/8	80	40	55	110	120
108	4-1/4	80	40	55	110	120
111	4-3/8	80	40	50	100	120
114	4-1/2	75	35	50	100	105
121	4-3/4	75	35	50	92	95
127	5	65	30	45	90	90
140	5-1/2	60	25	40	85	85
146	5-3/4	55	25	35	75	75
152	6	55	25	35	75	75
160	6-5/16	50	25	30	70	80
168	6-5/8	50	25	30	70	80
177	7	50	25	30	70	80
210	8-1/4	40	25	20	60	70





## ANNULAR CUTTER SPEEDS IN SURFACE METRES PER MINUTE

MATERIAL		ALL QUOTED SPEEDS IN SMM	
		HARDNESS BRINELL	CUTTING SPEED SURFACE METRES/MIN
ALUMINIUM	WROUGHT & CAST	30-150	150 – 300
	DIE CAST 360, 380	40-125	135 – 180
	DIE CAST 383, 413	40-125	135 – 180
	DIE CAST 390, 392	40-125	20 – 30
BRASS & BRONZE			90 – 180
CAST IRON	SOFT	120-150	20 – 38
	MEDIUM	160-220	15 – 30
	CHILLED	230-300	10 – 15
MALLEABLE IRON	FERRITIC	110-160	30 – 40
	PEARLITIC	160-220	22 – 30
MAGNESIUM		50-90	120 – 240
NICKEL ALLOYS	200-230	80-170	18 – 25
	MONEL 400-404	115-240	10 – 15
STEEL - FREE MACHINING	RESULPHURISED/LEADED		32 – 90
CARBON STEEL	10XX, 12XX, XX10, XX20	125-160	27 – 34
STEEL ALLOYS - SOFT	10XX, 12XX, XX10, XX20	170-210	20 – 27
	41XX, 51XX, XX30, XX40		
	52XX, 93XX, XX50, X100		
STEEL ALLOYS - MEDIUM	10XX, 12XX, XX10, XX20	220-250	17 – 23
	41XX, 51XX, XX30, XX40		
	52XX, 93XX, XX50, X100		
STEEL ALLOYS - HARD		260-300	11 – 15
TOOL STEEL	T15, M42, D2	210-250	11 – 18
	M2, A2		
	S6, H13		
FORGINGS			12 – 15
ARMOUR PLATE		200-250	12 – 17
STAINLESS STEEL - FERRITIC	430/405, 430F	135-185	27 – 38
STAINLESS STEEL - AUSTENITIC	LOWER BHN	135-185	17 – 23
	HIGHER BHN 309/316	225-275	12 – 21
	HIGHER BHN 301/304		
	HIGHER BHN 303/203EZ		
STAINLESS STEEL - MARTENSITIC		135-185	21 – 38
		185-240	14 – 34
STAINLESS STEEL - PRECIPITATION HARDENING		150-200	14 – 17
INCONEL	600/HASTELLOY B, C, X, S	140-220	3 – 5
INCONEL	718/WASPELLO	200-300	3 – 4
INCONEL	700/RENE 41	225-300	3 – 4

## REAMER SPEEDS AND FEEDS

## SPEEDS

The most efficient speed for machine reaming is closely related to the type of material being reamed, the rigidity of the set up, and the tolerance or finish required. Quite often the best speed is found to approximate one half of the speed used for drilling the same material. The following table may be used for a guide for high speed steel reamers. Carbide reamers or diamond tipped reamers may be run considerably faster. When close tolerances and a fine finish are required, it is usually found necessary to finish reaming at considerably slower speeds.

## FEEDS

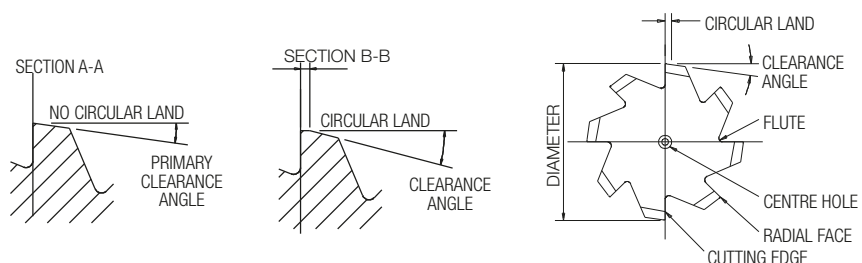
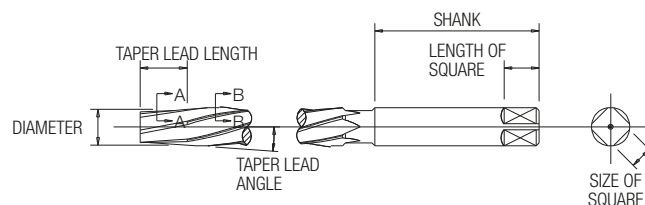
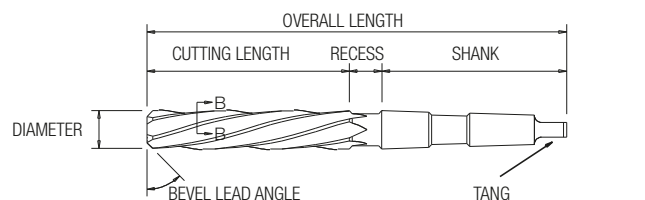
In reaming, feeds are usually higher than those used for drilling. The amount of feed may vary with the material, but a good starting point would be between 0.04MM (.0015") and 0.10MM (.004") per flute per revolution. Too low a feed may result in glazing, excessive wear, and chatter. Too high a feed tends to reduce the accuracy of the hole and may also lower the quality of the finish. The basic idea is to use as high a feed as possible and still produce the required finish and accuracy.

## REAMER TOLERANCES

Bordo reamers are manufactured to produce holes to H7 tolerance. The tolerance limits in the table below are added to the nominal reamer diameter.

REAMER DIAMETER (MM)	CUTTING DIAMETER TOLERANCE		HOLE DIAMETER TOLERANCE H7
	MM	MM	MM
> 1.0 – 3.0	+0.004	+0.008	+0.010
> 3.0 – 6.0	+0.005	+0.010	+0.012
> 6.0 – 10.0	+0.006	+0.012	+0.015
> 10.0 – 18.0	+0.008	+0.015	+0.018
> 18.0 – 30.0	+0.009	+0.017	+0.021
> 30.0 – 50.0	+0.012	+0.021	+0.025

MATERIAL	ALL QUOTED SPEEDS SMM
	SPEEDS
MAGNESIUM AND ITS ALLOYS	50 – 82
ALUMINIUM AND ITS ALLOYS	40 – 60
BAKELITE	21 – 30
BRASS AND BRONZE, ORDINARY	39 – 61
BRONZE, HIGH TENSILE	15 – 21
MONEL METAL	7 – 11
CAST IRON, SOFT	21 – 30
CAST IRON, HARD	15 – 21
CAST IRON, CHILLED	6 – 9
MALLEABLE IRON	15 – 18
STEEL, PLAIN CARBON BR 150 - 225	17 – 20
STEEL, PLAIN CARBON BR 230 - 325	12 – 15
STEEL, PLAIN CARBON BR 330 - 425	7 – 11
STEEL ALLOY BR 150 - 225	4 – 20
STEEL ALLOY BR 230 - 325	10 – 14
STEEL ALLOY BR 330 - 425	6 – 9
STEEL, TOOL BR 150 - 250	12 – 15
STEEL, TOOL BR 255 - 375	6 – 9
STEEL, FREE MACHINING STAINLESS	12 – 15
STEEL, HARD STAINLESS & P.H.	6 – 9



## CONDITIONS OF SALE

1. **PRICES:** All prices quoted exclude GST and are subject to change without notice. Export shipments are not subject to GST. All prices quoted in Australian Dollars unless otherwise stated.
2. **FREIGHT TERMS:** Bordo International Pty Ltd ("Bordo") has no minimum invoice value. All orders over \$250 nett exclusive of GST are freight-free — prices are ex-warehouse. Bordo reserves the right to despatch freight-free orders by a carrier and method of its choosing. Freight-free orders are calculated on a \$250 nett exclusive of GST basis per order for each warehouse dispatch. Drop-shipments incur freight charges. Where the order is under \$250 nett exclusive of GST the customer is responsible for all costs associated with delivery. Any period for delivery of goods stated by Bordo is an estimate only and not a contractual commitment. Bordo will use its reasonable endeavours to meet any estimated dates for delivery of the goods but will not be liable for any loss or damage suffered by the customer or any third party for failure to meet an estimated date. The customer indemnifies Bordo against any loss or damage suffered by Bordo, its subcontractors or employees as a result of delivery, except where the customer is a "consumer" as defined in the Australian Consumer Schedule of the Competition and Consumer Act 2010 (Cth) as amended ("ACL") and Bordo has not used due care and skill.
3. **PAYMENT TERMS:** Unless otherwise agreed in writing payment for the goods or services must be made in full within 30 days from the end of the month of the date of Bordo's invoice. Bordo reserves the right to require payment in full on delivery of the goods. Payment by cheque is not deemed made until the proceeds of the cheque have cleared. Payment terms may be revoked or amended at Bordo's sole discretion immediately upon giving the customer written or verbal notice. The time for payment is of the essence.
4. **DAMAGE, DEFECTS AND LOSS IN TRANSIT:** Bordo will not be liable for any shortages or non compliance with the specifications in these Terms and Conditions unless the customer notifies Bordo with full details and description within 10 working days of delivery to the customer. Where any shortages, claim for damaged goods or non compliance with the agreement specifications is accepted by Bordo, Bordo may, at its option, repair or replace the goods or refund or credit the portion of the purchase price. Bordo will not under any circumstances accept goods for return that have been specifically produced, imported or acquired to fulfil the agreement, that are discontinued goods or no longer stocked by Bordo, that have been altered in any way, that have been used, or that are not in their original condition and packaging. If the customer is a consumer, nothing in this clause limits any remedy available for a failure of the statutory guarantees in the ACL.
5. **CREDIT INFORMATION:**
  - 5.1. Bordo may seek consumer credit information (section 18K(1)(b), Privacy Act 1988). If Bordo considers it relevant to assessing the customer's application for commercial credit the customer agrees to Bordo obtaining from a credit reporting agency a credit report containing personal credit information about the customer and to conducting a search of the Personal Property Securities Register for the purpose of assessing the customer's application for commercial credit.
  - 5.2. Exchanging information with other credit providers (Section 18N(1)(b), Privacy Act 1988). The customer agrees to Bordo obtaining personal information about the customer from other credit providers whose names the customer may have provided for Bordo or that may be named in a credit report, and from the Personal Property Securities Register, for the purpose of assessing the customer's application for commercial credit.
  - 5.3. Agreement to a credit provider being given a consumer credit report to collect overdue payments on commercial credit (Section 18K(1)(h) Privacy Act 1988). The customer agrees that Bordo may obtain a consumer credit report about the customer from a credit reporting agency for the purpose of collecting overdue payments relating to commercial credit owed by the customer.
6. **RETENTION OF TITLE:**
  - 6.1. Until Bordo receives full payment in cleared funds for all goods supplied by it to the customer, as well as all other amounts owing to Bordo by the customer:
    - (a) title and property in all goods remains vested in Bordo and does not pass to the customer;
    - (b) the customer must hold the goods as fiduciary bailee and agent for Bordo;
    - (c) the customer must keep the goods separate from its own goods and maintain Bordo's labelling and packaging;
    - (d) the customer must hold the proceeds of sale of the goods on trust for Bordo in a separate account with a bank to whom the customer has not given security however failure to do so will not affect the customer's obligation as trustee;
    - (e) in addition to its rights under the Personal Property Securities Act 2009 (Cth) ("PPSA"), Bordo may without notice, enter any premises where it suspects the goods are and remove them, notwithstanding that they may have been attached to other goods not the property of Bordo, and for this purpose the customer irrevocably licences Bordo to enter such premises and also indemnifies Bordo from and against all costs, claims, demands or actions by any party arising from such action.
  - 6.2. The customer warrants that it is not at the time of placing an order for goods or services insolvent and knows of no circumstances which would entitle any creditor to appoint a receiver or to petition for winding up or to exercise any other rights over or against its assets.
  - 6.3. If any of these retention of title provisions are construed to be invalid or not enforceable in accordance with their terms all other provisions which are self-sustaining and capable of separate enforcement without regard to the invalid provisions shall be and continue to be valid and enforceable in accordance with their terms.
7. **PERSONAL PROPERTY SECURITIES ACT:**
  - 7.1. Notwithstanding anything to the contrary contained in these Terms and Conditions, the PPSA applies to these Terms and Conditions.
  - 7.2. For the purposes of the PPSA:
    - (a) terms used in this clause 7 that are defined in the PPSA have the same meaning as in the PPSA;
    - (b) these Terms and Conditions are a security agreement and Bordo has a Purchase Money Security Interest in all present and future goods supplied by Bordo to the customer and the proceeds of the goods;
    - (c) the security interest is a continuing interest irrespective of whether there are monies or obligation owing by the customer at any particular time; and
    - (d) the customer must do whatever is necessary in order to give a valid security interest over the goods and their proceeds which is able to be registered by Bordo on the Personal Property Securities Register.
  - 7.3. The security interest arising under this clause 7 attaches to the goods when the goods are collected or dispatched from Bordo's premises and not at any later time.
  - 7.4. Where permitted by the PPSA, the customer waives any rights to receive the notifications, verifications, disclosures or other documentation specified under sections 95, 118, 121(4), 130, 132(3)(d), 132(4), 135 and 157 of the PPSA.
  - 7.5. Bordo and the customer agree to contract out of and nothing in the provisions of sections 96, 125, 129, 142 and 143 of the PPSA will apply to these Terms and Conditions.
  - 7.6. To the extent permitted by the PPSA, the customer agrees that:
    - (a) the provisions of Chapter 4 of the PPSA which are for the benefit of the customer or which place obligations on Bordo will apply only to the extent that they are mandatory or Bordo agrees to their application in writing; and
    - (b) where Bordo has rights in addition to those in Chapter 4 of the PPSA, those rights will continue and apply.
  - 7.7. The customer must immediately upon Bordo's request:
    - (a) do all things and execute all documents necessary to give effect to the security interest created under these Terms and Conditions; and
    - (b) procure from any person considered by Bordo to be relevant to its security position such agreements and waivers (including as equivalent to those above) as Bordo may at any time require.
  - 7.8. Bordo may allocate amounts received from the customer in any manner Bordo determines, including in any manner required to preserve any Purchase Money Security Interest it has in goods supplied by Bordo.
8. **CREDITS/RETURNS:** Except to the extent of any liability imposed by the ACL, authorisation must be obtained before returning goods for credit. No goods will be accepted for credit that are correctly supplied and invoiced if not returned freight paid within 14 days and delivery freight will be charged. Also a 15% restocking fee will be charged for any goods supplied correctly. Goods forwarded in error will be replaced no charge freight paid. Goods incorrectly sent must be held by the customer pending our further instruction.
9. **LIABILITY:**
  - 9.1. Except as these Terms and Conditions specifically state, these Terms and Conditions do not include by implication any other term, condition or warranty in respect of the quality, merchantability, acceptability, fitness for purpose, condition, description, assembly, manufacture, design or performance of the goods or services or any contractual remedy for their failure.
  - 9.2. If the customer is a consumer nothing in these Terms and Conditions restricts, limits or modifies the customer's rights or remedies against Bordo for failure of a statutory guarantee under the ACL.
  - 9.3. If the customer on-supplies the goods to a consumer:
    - (a) if the goods or services are not of a kind ordinarily acquired for personal, domestic or household use or consumption, then the amount specified in section 276A(1) of the ACL is the absolute limit of Bordo's liability to the customer;
    - (b) if the goods are of a kind ordinarily acquired for personal, domestic or household use or consumption, then payment of any amount required under section 274 of the ACL is the absolute limit of Bordo's liability to the customer howsoever arising under or in connection with the sale, installation, use of, storage or any other dealings with the goods by the customer or any third party.
  - 9.4. If clause 9.2 or 9.3 does not apply, then other than as stated in these Terms and Conditions Bordo is not liable to the customer in any way howsoever arising under or in connection with the sale, installation, use of, storage or any other dealings with the goods or services by the customer or any third party.
  - 9.5. Bordo is not liable for any indirect or consequential losses or expenses suffered by the customer or any third party, howsoever caused, including but not limited to loss of turnover, profits, business or goodwill or any liability to any other party, except to the extent of any liability imposed by the ACL.
  - 9.6. The customer acknowledges that:
    - (a) it has not relied on any service involving skill and judgement, or on any advice, recommendation, information or assistance provided by Bordo in relation to the goods or their use or application;
    - (b) it has not made known, either expressly or by implication, to Bordo any purpose for which it requires the goods and it has the sole responsibility of satisfying itself that the goods are suitable for the use of the customer.
  - 9.7. Nothing in these Terms and Conditions is to be interpreted as excluding, restricting or modifying the application of any State or Federal legislation applicable to the sale of goods which cannot be so excluded, restricted or modified.
10. **TRADING TERMS AND CONDITIONS:** Are subject to change without notice. Trading terms and conditions appear on the Account Application Form, our web site ([www.bordo.com.au](http://www.bordo.com.au)), or are available on request.

**DISCLAIMER** Whilst every effort has been made to ensure the accuracy of the information contained herein, Bordo International Pty Ltd accepts no liability for any loss or damage either direct or consequential arising out of, or in relation to, the use or application of the said information or products referred to herein. All information is believed to be correct at time of printing. E.&O.E.

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## CREDITS/RETURNS POLICY

8. CREDITS/RETURNS: Except to the extent of any liability imposed by the ACL, authorisation must be obtained before returning goods for credit. No goods will be accepted for credit that are correctly supplied and invoiced if not returned freight paid within 14 days and delivery freight will be charged. Also a 15% restocking fee will be charged for any goods supplied correctly. Goods forwarded in error will be replaced no charge freight paid. Goods incorrectly sent must be held by the customer pending our further instruction.

## CREDITS/RETURNS PROCEDURE

### RETURNED FOR WARRANTY

1. All goods returned to Bordo International MUST be accompanied by a Return Authorisation Number. Goods returned to Bordo International without an RA will not be processed.
2. All RA returns are to be delivered to Bordo International Pty Ltd 3 Kingston Park Court Scoresby Victoria 3179 Australia.
3. Cost of returning all goods under warranty including transport and insurance, is the CUSTOMER'S responsibility.
4. Goods must be properly packaged for return, goods damaged in transit will void warranty.
5. Goods returned for warranty will be repaired or replaced at Bordo International's discretion.
6. Whilst Bordo International will endeavour to return warrantied goods to customers as quickly as possible, temporary replacement items will not be supplied.
7. A copy of the original invoice must accompany all warranty returns.
8. Goods returned with NO FAULT FOUND may be charged a minimum administration fee of \$25.00 +GST per item.

### RETURNED FOR CREDIT

1. All credit requests must be made to your account/sales representative OR to Bordo Customer Service.
2. All goods returned to Bordo International MUST be accompanied by a Return Authorisation Number. Goods returned to Bordo International without an RA will not be processed.
3. Specifically ordered non-stock items will not be accepted for credit.
4. Credit will be issued at Bordo International's discretion and, where applicable, re-stocking fees will apply.
5. All RA returns are to be delivered to Bordo International Pty Ltd 3 Kingston Park Court Scoresby Victoria 3179 Australia.
6. Goods may be considered as eligible for credit return provided that ALL of the following criteria are met:
  - a) a credit Return Authorisation number (RA) is obtained prior to sending the returned goods; and
  - b) the goods are returned unopened, undamaged and in original packaging, and as such must not have additional price, warranty, freight and/or other sticker, tags or labels attached; and
  - c) the returned goods are received by Bordo International within 14 days of receipt of goods by the customer.
7. If returned goods are deemed by Bordo International NOT to be in a re-saleable condition, credit will be denied and it will be the customer's responsibility to arrange the collection of the goods.
8. Unless Bordo International have incorrectly shipped products, transport charges will be paid by the customer unless otherwise agreed by Bordo International in writing.





# powercoil®

wire thread insert system



## M2 – M12 (1/8" – 1/2")

*PowerCoil Thread Repair Kits include all the necessary components to successfully repair damaged threads. Kits include Drill, STI Tap, Inserts, Installation Tool and Tang Break-Off Tool.*

*The PowerCoil Wire Thread Insert System includes a complete range of over 140 Thread Repair Kits in all popular thread forms; Free Running and Screw Locking inserts; Strip Feed Inserts; STI Hand and Machine Taps; Installation, Tang Break and Removal Tools.*

## merchandising and marketing benefits

- **Sold to Distributors Only**
- **Tough and Good Looking** – Clean, modern, slim-line design of robust construction.
- **Stackable** – Subtly integrated feet interlock top and bottom of cases for secure vertical stacking.
- **Full Color Label** – In protective recess on front of box for strong in-store presence. Instruction label included on inside of lid to aid user. Rear identification label also included on base of case for warehousing and product coding.
- **Flexible Rubber Tool Holder** – This provides a neater overall kit appearance, and prevents tools from rattling around inside the box.
- **Hanger Slide Latch** – Locks the lid positively and easily, with integrated hang point for in-store display.
- **Insert Storage** – Internal ribs prevent inserts from moving to other areas of the box. "Exit Ramps" to assist in removal of smaller inserts from compartments.
- **Flexible merchandising solutions.**

## wire thread insert system features & benefits

- Lighter and Cheaper than any other equivalent type of thread insert.
- Can generally be introduced into existing designs where no previous provision has been made.
- Increase quality and performance whilst reducing overall product cost.
- Their introduction may result in the use of thinner sections or lighter parent materials without sacrificing thread strength.
- Create internal threads with greatly improved distribution of residual stress loading
- Compensate for pitch and flank angle errors
- Create internal threads in which wear due to thread friction is virtually eliminated.
- Providing threads that stay tight.

PowerCoil military standards available:

MA3279, MA3280, MA3281, NASM122076-124850, MA3329, MA3330, MA3331 and NASM21209

PowerCoil is a registered trademark of Bordo International Pty Ltd 3 Kingston Park Court Scoresby Victoria 3179 Australia



## OUR CORPORATE PHILOSOPHY

Bordo International is synonymous with excellence in industrial cutting tools, accessories, and threading products. Bordo's head office is located in the Eastern suburbs of Melbourne and uses a comprehensive distribution network throughout Australia. Founded in 1987, Bordo remains a 100% family-owned Australian company with offices and warehouses in Europe and the USA.

Reflecting our total commitment to excellence, our mission is to provide a complete cutting tool range of a quality and reliability that exceeds our customers' expectations and requirements, and a service level second-to-none in the market.

## PRODUCTS

As Industrial Cutting Tool and Power Tool Accessory specialists, our extensive product range is one of the most comprehensive in the industry. Our continually expanding range of precision cutting tools ensures you need look no further for all your industrial cutting needs. All of our products have been carefully selected and determined to be the best quality of their kind in the world.

## SERVICE

Bordo International is committed to working with our suppliers and customers to improve and expand our range of cutting tools and power tool accessories, whilst continuing to provide the highest levels of service. We are supported by a team of technical and production experts who ensure that all specialised tooling requirements are met to our customers' exacting specifications.

## VISION

The Bordo Quality Commitment exists throughout all levels of our company – products, service, vision. We source our products from the world's finest manufacturers, maintaining our 'quality without compromise' ethos. Our commitment results in the most reliable and competitive package available – when you use our tools you can be assured you are getting the very best the world has to offer.



**INDUSTRIAL TOOLS**

**Bordo International Pty Ltd** ABN 96 005 125 833

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**100% AUSTRALIAN  
OWNED FAMILY COMPANY**

Part No. 9910-BORCAT0319

