

NEW ZEALAND
Evacut[®]
EXPORT CATALOGUE



PATIENCE & NICHOLSON (NZ) LTD

Leading manufacturer of quality precision cutting tools



BUY NEW ZEALAND MADE

When you buy the Jobber Drills, Reduced Shank Drills and Taper Shank Drills that we make here in New Zealand you are getting some of the best cutting tools available in the world. You are not only supporting our business and its employees you are also supporting a wide range of other New Zealand companies that we rely on. We invest many millions of dollars in the New Zealand economy and we appreciate your support and hope that you will continue supporting all things "NZ Made".










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Evacut Professional Quality Cutting Tools

Including Jobber Drills, Stub & Panel Drills, Long Series Drills, Reduced Shank Drills, Drill Sets, Taper Shank Drills, Masonry Drills, Spade Bits, Auger Bits, Hacksaw Blades & Router Bits
Brand Overview: The Evacut range of professional

quality cutting tools includes a comprehensive selection of precision cutting tools. The range of Silver, Black Jet and Cobalt Jobber Drills, Stub and panel drills and Reduced Shank drills are Manufactured in Kaiapoi, New Zealand.

EVACUT

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JOBBER DRILLS



*Up to 5.0mm - 10 pieces, 5.1mm to 5.4mm - 5 pieces, 5.5mm - 10mm pieces, 5.6mm to 5.9mm - 5 pieces, 6mm - 10 pieces, 6.1mm to 6.4mm - 5 pieces, 6.5mm - 10 pieces, 6.6mm to 13.0mm - 5 pieces. Up to 17/64" - 10 pieces, 9/32 to 1/2" - 5 pieces



SURFACE FINISH		SILVER	BLACK JET	SILVER	COBALT
PACKAGING		BULK	BULK	PREPACK	PREPACK
MATERIAL		HSS	HSS	HSS	HSS CO.5
ORDER QTY		*AS ABOVE	*AS ABOVE	1	1
DIA (INCH)	DIA (MM)	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
1/64	0.35	104635			
		101016			
	0.40	104640			
	0.45	104645			
	0.50	104650			
	0.55	104655			
	0.60	104817			
	0.65	104826			
	0.70	104833			
	0.75	104850			
1/32		101028			
	0.80	104868			
	0.85	104876			
	0.90	104884			
	0.95	104892			
	1.00	105007	113573	106593	108011
	1.05	105015	113576		
	1.10	105023	113579		
	1.15	105031	113581		
		101036	101389		102507
3/64	1.20	105058	113583		
	1.25	105066	113586		
	1.30	105074	113589		
	1.35	105082	113592		
	1.40	105090	113595		
	1.45	105104	113598		
	1.50	105112	113646	106658	108020
	1.55	105120	113650		
		101044	101397	102083	102511
	1.60	105139	113653		
1/16	1.65	105147	113656		
	1.70	105155	113659		
	1.75	105163	113662		
	1.80	105171	113665		
	1.85	105198	113668		
	1.90	105201	113671		
	1.95	105228	113674		
		101052	101400	102091	102520
	2.00	105236	113697	106704	108029
	2.05	105244	113699		
5/64	2.10	105252	113701		



SILVER IMPERIAL - PREPACK



SILVER METRIC - PREPACK



COBALT - PREPACK



BULK PACKED



JOBBER DRILLS

*Up to 5.0mm - 10 pieces, 5.1mm to 5.4mm - 5 pieces, 5.5mm - 10mm pieces, 5.6mm to 5.9mm - 5 pieces, 6mm -10 pieces, 6.1mm to 6.4mm - 5 pieces, 6.5mm - 10 pieces, 6.6mm to 13.0mm - 5 pieces. Up to 17/64" - 10 pieces, 9/32 to 1/2" - 5 pieces

SURFACE FINISH		SILVER	BLACK JET	SILVER	COBALT
PACKAGING		BULK	BULK	PREPACK	PREPACK
MATERIAL		HSS	HSS	HSS	HSS CO.5
ORDER QTY		*AS ABOVE	*AS ABOVE	1	1
DIA (INCH)	DIA (MM)	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
3/32	2.15	105260	113704		
	2.20	105279	113707		
	2.25	105287	113710		
	2.30	105295	113713		
	2.35	105309	113716		
		101060	101419	102105	102523
	2.40	105317	113719		
	2.45	105325	113722		
	2.50	105333	113743	106755	108038
	2.55	105341	113746		
7/64	2.60	105368	113749		
	2.65	105376	113752		
	2.70	105384	113755		
	2.75	105392	113758		
		101079	101427	102113	102526
	2.80	105406	113761		
	2.85	105414	113764		
	2.90	105422	113767		
	2.95	105430	113770		
	3.00	105449	113808	106828	108047
1/8	3.10	105457	113811		
		101087	101435	102121	102529
	3.20	105465	113810		
	3.30	105473	113814		
	3.40	105481	113820		
9/64	3.50	105503	113859	106879	108056
		101095	101443	102148	102538
	3.60	105511	113862		
	3.70	105538	113867		
	3.80	105546	113873		
5/32	3.90	105554	113878		
		101109	101451	102156	102547
	4.00	105562	113905	106925	108065
	4.10	105570	113908		
	4.20	105589	113913		
11/64	4.25		113921		
	4.30	105597	113924		
	4.40	105600	113933		
		101117	101478	102164	102556
	4.50	105619	113964	106984	108074
	4.60	105627	113969		
	4.70	105635	113973		

JOBBER DRILLS



*Up to 5.0mm - 10 pieces, 5.1mm to 5.4mm - 5 pieces, 5.5mm - 10mm pieces, 5.6mm to 5.9mm - 5 pieces, 6mm - 10 pieces, 6.1mm to 6.4mm - 5 pieces, 6.5mm - 10 pieces, 6.6mm to 13.0mm - 5 pieces. Up to 17/64" - 10 pieces, 9/32 to 1/2" - 5 pieces



SURFACE FINISH		SILVER	BLACK JET	SILVER	COBALT
PACKAGING		BULK	BULK	PREPACK	PREPACK
MATERIAL		HSS	HSS	HSS	HSS CO.5
ORDER QTY		*AS ABOVE	*AS ABOVE	1	1
DIA (INCH)	DIA (MM)	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
3/16		101125	101486	102172	102565
	4.80	105643	113978		
	4.90	105651	113984		
	5.00	105678	114014	107042	108083
	5.10	105686	114017		
13/64		101133	101494	102180	102574
	5.20	105694	114020		
	5.30	105708	114023		
	5.40	105716	114027		
	5.50	105724	114065	107093	108092
7/32		101141	101508	102199	102583
	5.60	105732	114068		
	5.70	105740	114071		
	5.80	105759	114074		
	5.90	105767	114077		
15/64		101168	101516	102202	102592
	6.00	105775	114138	107158	108101
	6.10	105783	114141		
	6.20	105791	114144		
	6.30	105805	114147		
1/4		101176	101524	102210	102601
	6.40	105813	114150		
	6.50	105821	114189	107204	108110
	6.60	105848	114192		
	6.70	105856	114196		
17/64		101184	101532	102229	102610
	6.80	105864	114200		
	6.90	105872	114203		
	7.00	105880	114235	107255	108119
	7.10	105899	114239		
9/32		101192	101540	102237	102619
	7.20	105902	114242		
	7.30	105910	114245		
	7.40	105929	114248		
	7.50	105937	114294	107328	108128
19/64		101206	101559	102245	102628
	7.60	105945	114301		
	7.70	105953	114304		
	7.80	105961	114307		
	7.90	105988	114311		
5/16		101214	101567	102253	102637



SILVER IMPERIAL - PREPACK



SILVER METRIC - PREPACK



COBALT - PREPACK



BULK PACK



JOBBER DRILLS

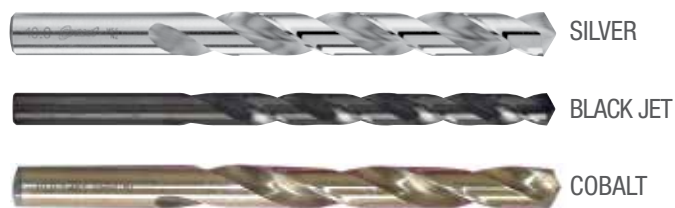
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SURFACE FINISH		SILVER	BLACK JET	SILVER	COBALT
PACKAGING		BULK	BULK	PREPACK	PREPACK
MATERIAL		HSS	HSS	HSS	HSS CO.5
ORDER QTY		*AS ABOVE	*AS ABOVE	1	1
DIA (INCH)	DIA (MM)	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
21/64	8.00	105996	114340	107379	108137
	8.10	106003	114343		
	8.20	106011	114346		
	8.30	106038	114349		
		101222	101575	102261	102646
11/32	8.40	106046	114352		
	8.50	106054	114391	107425	108146
	8.60	106062	114394		
	8.70	106070	114397		
		101230	101583	102288	102655
23/64	8.80	106089	114402		
	8.90	106097	114406		
	9.00	106100	114456	107484	108155
	9.10	106119	114460		
		101249	101591	102296	102664
3/8	9.20	106127	114463		
	9.30	106135	114468		
	9.40	106143	114472		
	9.50	106151	114502	107530	108164
		101257	101605	102318	102673
25/64	9.60	106178	114505		
	9.70	106186	114508		
	9.80	106194	114512		
	9.90	106208	114516		
		101265	101613	102326	102682
13/32	10.00	106216	114553	107581	108173
	10.10	106224	114557		
	10.20	106232	114560		
	10.30	106240	114564		
		101273	101621	102334	102691
27/64	10.40	106259	114569		
	10.50	106267	114626	107654	108182
	10.60	106275	114630		
	10.70	106283	114633		
		101281	101648	102342	102700
7/16	10.80	106291	114637		
	10.90	106305	114640		
	11.00	106313	114677	107700	108191
	11.10	106321	114681		
		101303	101656	102350	102709
	11.20	106348	114684		
	11.20	106348	114684		

JOBBER DRILLS



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SURFACE FINISH		SILVER	BLACK JET	SILVER	COBALT
PACKAGING		BULK	BULK	PREPACK	PREPACK
MATERIAL		HSS	HSS	HSS	HSS CO.5
ORDER QTY		*AS ABOVE	*AS ABOVE	1	1
DIA (INCH)	DIA (MM)	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
29/64	11.30	106356	114692		
	11.40	106364	114699		
	11.50	106372	114723	107751	108200
		101311	101664	102369	102718
	11.60	106380	114727		
15/32	11.70	106399	114732		
	11.80	106402	114735		
	11.90	106410	114738		
		101338	101672	102377	102727
	12.00	106429	114782	107816	108209
31/64	12.10	106437	114786		
	12.20	106445	114791		
	12.30	106453	114797		
		101346	101680	102385	102736
	12.40	106461	114804		
1/2	12.50	106488	114839	107867	108218
	12.60	106496	114844		
	12.70	106518	114848		
		101354	101699	102393	102745
	12.80	106526	114853		
	12.90	106534	114859		
	13.00	106542	114898	107913	108227

*Bulk and prepack merchandiser options available.



Bulk merchandiser



Prepack merchandiser



DOUBLE END



SINGLE END



STUB & PANEL DRILLS

SURFACE FINISH		SILVER	BLACK JET
DIA (INCH)	DIA (MM)	ITEM NO.	ITEM NO.
STUB DRILL			
	1.00		117899
3/64			111345
	1.50		117902
1/16			111347
3/64			111349
	2.00		117905
3/32			111351
	2.50		117907
7/64			111353
	3.00		117910
1/8		116769	111355
	3.30		117912
	3.50		117913
9/64			111357
5/32			111359
	4.00		117916
	4.10	116866	117917
11/64			111361
	4.50		117919
3/16			111363
	4.90	116947	117921
	5.00		117922
13/64			111365
	5.50		117925
7/32			111367
15/64			111369
	6.00		117928
1/4			111371
	6.50		117931
17/64			111373
	7.00		117934
9/32			111375
	7.50		117937
5/16			111379
	8.00		117940
21/64			111381

SURFACE FINISH		BLACK JET
DIA (INCH)	DIA (MM)	ITEM NO.
	8.50	117943
11/32		111383
	9.00	117946
23/64		111385
3/8		111387
13/32		111391
	10.50	117955
27/64	11.00	117958
7/16	11.50	117961
15/32	12.00	117964
31/64	12.50	117967
1/2		111403
	13.00	117970

PANEL DRILLS

SURFACE FINISH		SILVER
DIA (INCH)	MM	ITEM NO.
SINGLE END PANEL DRILLS		
1/8		111805
3.3	#30	115878
4.1	#20	115894
4.9	#11	115916
DOUBLE END PANEL DRILLS		
1/8		111821
3.3	#30	115975
4.1	#20	115991
4.9	#11	116017
TWIN PACK DOUBLE END PANEL DRILLS		
1/8		111872
3.3	#30	116300
4.1	#20	116327
4.9	#11	116343
TWIN PACK SINGLE PANEL DRILLS		
1/8		111856
3.3	#30	116297
4.1	#20	116319
4.9	#11	116335
10 PACK PANEL DRILLS		
1/8	#10	111838
3.3	#30	116127
4.1	#20	116143
4.9	#11	116155

*Prepack Merchandiser option available

LONG SERIES DRILLS



IMPERIAL PREPACK



METRIC PREPACK



SURFACE FINISH	BLACK JET			
PACKAGING	PREPACK			
MATERIAL	HSS			
ORDER QTY	1			
DIA (INCH)	OAL (METRIC)	MM	OAL (METRIC)	ITEM NO.
3/64	76.5	1.00	57	122002
		1.50	76	121029
				122011
1/16	76.5	2.00	109	121037
5/64	96			121045
3/32	109			122020
	118	118	121053	
			122029	
7/76	118	3.00	131.8	121061
1/8	131.5			122038
	139	3.50		121088
			122047	
9/64	139	4.00	148	121096
5/32	139			121118
11/64	148			122056
	148	4.50	121126	
			122065	
3/16	148	4.50	148	127604
		5.00	154	121134
				122074
13/64	154	5.00	300	127825
		5.50	154	121142
				122083
7/32	154	5.50	300	128066
		159	159	121150
				121169
15/64	159	6.00	159	122092
		163	163	128287
				121177
1/4	163	6.50	163	122101
		163	163	128503
				121185
17/64	163	7.00	163	122110
		166	166	128724
				121193
9/32	163	7.00	300	122119
		166	166	128937
				121207
19/64	166	7.50	300	121215
5/16	166	7.50		



IMPERIAL PREPACK



METRIC PREPACK



LONG SERIES DRILLS

SURFACE FINISH	BLACK JET			
PACKAGING	PREPACK			
MATERIAL	HSS			
ORDER QTY	1			
DIA (INCH)	OAL (METRIC)	MM	OAL (METRIC)	ITEM NO.
21/64	166	8.00	169	122128
		8.00	300	129151
				121223
11/32	169	8.50	169	122137
		8.50	300	129313
				121231
23/64	176	9.00	176	122146
		9.00	300	129488
				121258
3/8	176	9.50	176	122155
		9.50	300	129666
				121266
25/64	183			121274
		10.00	176	122164
		10.00	300	129844
13/32	183			121282
		10.50	183	122173
		10.50	300	130001
27/64	189			121290
		11.00	189	122182
		11.00	300	130184
7/16	189			121304
		11.50	196	122191
		11.50	300	130354
29/64	196			121312
				121320
		12.00	203	122200
31/64	203	12.00	300	130516
				121339
		12.50	203	122209
1/2	203	12.50	300	130672
				121347
		13.00	210	122218
		13.00	300	130842

*Prepack Merchandiser option available



REDUCED SHANK DRILLS

3/8" SHANK



PACKAGING	PREPACK	
MATERIAL	HSS	
ORDER QTY	1	
DIA (INCH)	DIA (MM)	ITEM NO.
3/8" SHANK		
	10.00	162957
13/32		161284
	11.00	162965
7/16		161152
	11.50	162970
15/32		161306
	12.00	162973
	12.50	162981
1/2		161179
	13.00	162987
17/32		161310
	13.50	162992
	14.00	163007
9/16		161195
	14.50	163012
	15.00	163016
19/32		161316
	15.50	163019
5/8		161217
	16.00	163023
	16.50	163030
21/32		161322
	17.00	163036
	17.50	163041
	18.00	163058
23/32		161328
	18.50	163062
	19.00	163067
3/4		161268
	19.50	163071
	20.00	163074



REDUCED SHANK DRILLS

1/2" SHANK

REDUCED SHANK DRILLS

PACKAGING	PREPACK	
MATERIAL	HSS	
ORDER QTY	1	
DIA (INCH)	DIA (MM)	ITEM NO.
1/2" SHANK		
33/64		151009
17/32		151017
	13.50	155004
35/64		151025
	14.00	155012
9/16		151033
	14.50	155020
37/64		151041
	15.00	155039
19/32		151068
39/64		151076
	15.50	155047
5/8		151084
	16.00	155055
41/64		151092
	16.50	155063
21/32		151106
	17.00	155071
43/64		151114
11/16		151122
	17.50	155098
45/64		151130
	18.00	155101
23/32		151149
	18.50	155128
47/64		151157
	19.00	155136
3/4		151165
49/64		151173
	19.50	155144
25/32		151181
	20.00	155152
51/64		151203
	20.50	155160
13/16		151211
	21.00	155179
53/64		151238
27/32		151246

REDUCED SHANK DRILLS

1/2" SHANK



PACKAGING	PREPACK		
MATERIAL	HSS		
ORDER QTY	1		
DIA (INCH)	DIA (MM)	ITEM NO.	
1/2" SHANK			
	21.50	155187	
55/64		151254	
	22.00	155195	
7/8		151262	
	22.50	155209	
57/64		151270	
	23.00	155217	
29/32		151289	
59/64		151297	
	23.50	155225	
15/16		151300	
	24.00	155233	
61/64		151319	
	24.50	155241	
31/32		151327	
	25.00	155268	
63/64		151335	
1"		151343	
	25.50	155276	
1 1/32		151357	
	26.00	155284	
	26.50	155292	
1 1/16		151394	
	27.00	155306	
	27.50	155314	
	28.00	155322	
	28.50	155330	
1 1/8		151432	
	29.00	155349	
	29.50	155357	
1 3/16		151475	
	30.00	155365	
	30.50	155367	
	31.00	155370	
	31.50	155373	
1 1/4		151513	
	32.00	155376	
*Merchandise option available			



DRILL SET GUIDE



No 4 & No 4M
171182 & 175129



DD13M & DD19M
175307 & 175330



DD13 & DD21
171298 & 171301



No 4RM
176794



No 8RM
176801



E2
170941



E3
170968



E1
170933



E2M
174963



E3M
174971



E1M
174955



G3M
175097



50M
175137



51M
175188



2M
175056



3M
175099



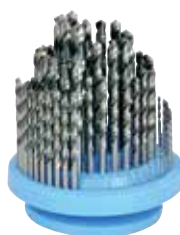
No 2
171050



No 3
171115



H1 & H1M REFILL KITS
172405 & 176405 (SILVER) & 176456 (BLACK JET)



M99
175340



EM22R
174974



H2 & H2M REFILL KITS
175340 & 176448 (SILVER) & 176462 (BLACK JET)



DRILL SETS



SURFACE FINISH				SILVER	BLACKJ ET	COBALT
MATERIAL				HSS		HSS C0.5
SET NO.	RANGE & RISES	NO.DRILLS	CASE	ITEM NO.	ITEM NO.	ITEM NO.
IMPERIAL						
No.2	1/16-3/8x64ths	21	Metal	171050		
No.3	1/16-1/2x64ths	29	Metal	171115	172898	
E1	1/16-1/4x64ths	13	ABS	170933	172820	
E2	1/16-3/8x64ths	21	ABS	170941	172839	170927
E3	1/16-1/2x64ths	29	ABS	170968	172847	
No.4	1/16-1/4x64ths	13	Plastic	171182		
DD13	1/16-1/4x64ths	13	Plastic Dial-a-Drill	171298		
DD21	1/16-3/8x64ths	21	Plastic Dial-a-Drill	171301		
H1	1/16-1/8x64ths	5	Plastic Tray	172405		
H2	1/16-3/16x32nds	5	Plastic Tray	172448		
METRIC						
No.2M	1.00-10.00mmx.5mm	19	Metal	175056	172936	175204
No.3M	1.00-13.00mmx.5mm	25	Metal	175099	172928	175206
50M	1.00-5.90mmx.1mm	50	Metal	175137	175190	
51M	6.00-10.00mmx.1mm	41	Metal	175188	175193	
E1M	1.0-6.5mmx.5mm	12	ABS	174955	172957	
E2M	1.0-10.0mmx.5mm	19	ABS	174963	172963	175238
E3M	1.0-13.0mmx.5mm	25	ABS	174971	172979	
G3M	1.0-13.0mm x.5mm	25	Metal	175097		
No.4M	1.0-6.5mmx.5mm	12	Plastic	175129		
DD13M	1.00-7.00mmx.5mm	13	Plastic Dial-a-Drill	175307		
DD19M	1.00-10.00mmx.5mm	19	Plastic Dial-a-Drill	175330		
H1M	1.5,2.0,2.5,3.0,3.5	5	Plastic Tray	176405	176456	
H2M	1.5,2.0,3.0,4.0,5.0	5	Plastic Tray	176448	176462	
M99 ROTARY SET 1mm - 9.9mm by 0.1mm rises 10mm - 13.0mm by 0.5 rises + 10.9, 11.9 & 12.9mm			Plastic	175340		
MISCELLANEOUS						
Ezisizer – Drill & Screw Gauge Card			Plastic Card	340892		
Tip Tool Drill Kit		12		171700		
Imperial Drill Dispenser- Empty			Metal -Counter	171379		
Metric Drill Dispenser - Empty			Metal -Counter	175374		

REDUCED SHANK DRILL SETS

SET NO.	RANGE & RISES	NO.DRILLS	CASE	ITEM NO.
3/8" SHANK				
EM22R	1.0-10.0x0.5mm rises with 11.0,12.0,13.0mm-10.0mm shank	22	Plastic	174974
1/2" SHANK				
4RM	16.0, 18.0, 22.0, 25.0	4	Foam pack	176794
8RM	14.0, 15.0, 16.0, 16.5, 18.0, 20.0, 22.0, 25.0	8	Plastic	176801



MASONRY DRILLS & SET

MASONRY DRILLS & SET

SURFACE FINISH		SILVER (PREPACK)				
MATERIAL		TUNGSTEN CARBIDE TIPPED				
TYPE				(SF) STANDARD FIXING	(SB) SINGLE BRICK	(DB) DOUBLE BRICK
INCH (DIA)	MM (DIA)	MM (OAL)	SHANK SIZE	ITEM NO.	ITEM NO.	ITEM NO.
1/8	3.50	75		182850		
5/32	4.00	75		182877		
3/16	5.00	85		182915		
		150			181412	
	5.50	85		182931		
		150			181417	
	6.00	100		182966		
		150			181420	
1/4	6.50	100		182982		
		150			181439	
		400				191086
9/32	7.00	100		183008		
5/16	8.00	117		183040		
		150			181455	
		400				191108
3/8	10.00	117	10	183067		
		150	10		181471	
		400	10			191124
7/16	11.00	150	10		181501	
	12.00	117	10	183105		
		150	10		181528	
		400	10			191159
1/2	13.00	117	10	183121		
		150	10		181536	
		400	10			191167
5/8	16.00	150	12		181552	
		400	12			191183
23/32	18.00	150	12		181560	
3/4	20.00	150	12		181579	
		400	12			191205
7/8	22.00	150	12		181595	
		400	12			191221
1"	26.00	150	12		181617	
		400	12			191256

*Merchandise option available

MASONRY DRILL SET

DESCRIPTION	CONTENTS	ITEM NO.
MASONRY SET		
SF6	4.0, 5.0, 5.5, 6.5, 8.0, 10.0mm	173400

SPADE BITS & SETS



SURFACE FINISH	BLACK
PACKAGING	PREPACK
MATERIAL	TUNGSTEN CHROME ALLOY
DIA (MM)	ITEM NO.
SPADE BITS	
6.00	177938
8.00	177946
10.00	177954
12.00	177962
13.00	177967
14.00	177970
16.00	177989
18.00	177997
19.00	178004
20.00	178012
22.00	178020
24.00	178039
25.00	178047
28.00	178055
30.00	178063
32.00	178071
35.00	178098
38.00	178101
SPADE BIT EXTENSION SHANKS	
Extension Shanks - Suitable for use with Spade Bits 19mm and larger	
150mm long	178209
300mm long	178217

*Merchandise option available

DESCRIPTION	CONTENTS	ITEM NO.
SPADE BIT SETS		
Evacut SSB-1 Set	Sizes: 14.0,16.0,19.0,22.0,25.0mm	178306
Evacut 4 piece Set	Sizes:16.0,20.0,22.0,25.0mm	178314

AUGER BITS

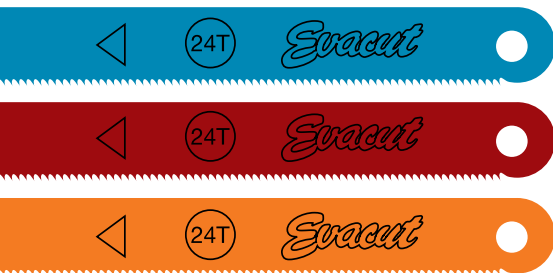


SURFACE FINISH		BRIGHT		
ORDER QTY		1		
SURFACE FINISH		HSS		
SIZE		SHORT	MEDIUM	LONG
DIA (MM)	MM (OVERALL)	ITEM NO.	ITEM NO.	ITEM NO.
6.00	160	179005		
	420			179140
8.00	170	179009		
	225		179096	
10.00	465			179141
	190	179013		
	250		179100	
12.00	500			179143
	190	179017		
	270		179104	
13.00	500			179147
	190	179021		
	500			179148
14.00	200	179025		
	290		179108	
	500			179149
16.00	200	179029		
	290		179112	
	500			179151
18.00	200	179033		
	330		179114	
	500			179153
20.00	210	179037		
	330		179116	
	500			179155
22.00	210	179041		
	330		179118	
	500			179157
25.00	210	179045		
	330		179120	
	500			179159
30.00	500			179163

TOOL BITS



SURFACE FINISH		SILVER			
ORDER QTY		5 (1 FOR > 1/2)			5
MATERIAL		M2 HSS	M2 HSS	M42 COHSS	M42 CO
SHAPE		ROUND	SQUARE	SQUARE	BEVEL
INCH (DIA)	INCH (OAL)	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
3/32	3	245062			
1/8	3	245089			
3/16	2 1/2		245518	242500	
	3			242519	
	4	245127			
1/4	2 1/2		245534	242535	
	3		245539	242543	
	4	245143	245542	242551	
5/16	2 1/2		245550	242578	
	3			242586	
	4	245178	245555	242594	
3/8	3		245577	242608	
	4	245194	245580	242616	
	6		245584	242624	
1/2	4	245232	245593	242640	
	6			242659	
1/2	3/32x4-1/2				241504
5/8	4 1/2		245615	242691	
	6	245245			
5/8	3/32x5				241547
3/4	5			242748	
3/4	1/8x6				241598
7/8	1/8x7				241644
1"	7			242829	
1"	3/16x8				241687



HACKSAWS

HAND HELD BLADES & FRAMES

SURFACE FINISH		GREY	RED
PACKAGING		BULK	PACK
MATERIAL		LOW ALLOY	FLEXIBLE
ORDER QTY		10	10
SIZE	MM	ITEM NO.	ITEM NO.
12x1/2x18	300x13x18	255149	255572
12x1/2x24	300x13x24	255157	255580
12x1/2x32	300x13x32	255165	255599
SURFACE FINISH		BLUE	
PACKAGING		BULK	TWIN PACK
MATERIAL		ALL HARD HSS	
ORDER QTY		10	1
SIZE	MM	ITEM NO.	ITEM NO.
12x1/2x14	300x13x14	255483	
12x1/2x18	300x13x18	255491	255696
12x1/2x24	300x13x24	255505	255718
12X1/2X32	300X13X32	255513	255726
SURFACE FINISH		ORANGE	
PACKAGING		BULK	TWIN PACK
MATERIAL		BI-METAL-HSS	
ORDER QTY		10	1
SIZE	MM	ITEM NO.	ITEM NO.
12x1/2x14	300x13x14	255831	
12x1/2x18	300x13x18	255858	255998
12x1/2x24	300x13x24	255866	256005
12X1/2X32	300X13X32	255874	256013

PROFRAME HACKSAW

DESCRIPTION	ITEM NO.
Proframe Hacksaw Frame & Blade	257656



POWERSAW BLADES

SURFACE FINISH			BLUE	ORANGE
MATERIAL			ALL HARD HSS	BI-METAL HSS
ORDER QTY			10	10
SIZE (INCH)	TEETH/INCH	SIZE (MM)	ITEM NO.	ITEM NO.
12" x 1"	10	300mm	256080	256803
12" x 1"	14	300mm	256099	256811
14" x 1"	10	350mm	256188	256870
14" x 1"	14	350mm	256196	256889
14" x 1.25"	6	350mm	256226	256919
14" x 1.25"	10	350mm	256234	256927
14" x 1.25"	14	350mm	256239	256935
16" x 1.25"	6	400mm	256307	257001
16" x 1.25"	10	400mm	256315	257028
16" x 1.25"	14	400mm	256293	257036
18" x 1.25"	6	450mm	256420	257095
18" x 1.25"	10	450mm	256439	257109
18" x 1.50"	6	450mm	256498	
18" x 1.50"	10	450mm	256501	





ROUTER BITS

ORDER QTY 1

ITEM NO.	DESCRIPTION	OAL (MM)
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STRAIGHT ROUTER BITS 2 FLUTE (6.4MM DIA. X 25MM LONG SHANK.)

RSR364	3mm dia. x 10mm cutting length (Single flute)
RSR464	4mm dia. x 10mm cutting length(Single Flute)
RSR564	5mm dia. x 10mm cutting length(single flute)
RSR664	6mm dia. x 16mm cutting length
RSR6464	6.4mm dia. x 16mm cutting length
RS864	8mm dia. x 19mm cutting length
RS964	9mm dia. x 19mm cutting length
RS9564	9.5mm dia. x 19mm cutting length
RS1064	10mm dia. x 19mm cutting length
RS1264	12mm dia. x 19mm cutting length
RS12764	12.7mm dia. x 19mm cutting length
RS1364	13mm dia. x 19mm cutting length
RS1664	16mm dia. x 19mm cutting length
RS1864	18mm dia. x 19mm cutting length
RS1964	19mm dia. x 19mm cutting length
RS2064	20mm dia. x 19mm cutting length
RS2564	25mm dia. x 19mm cutting length

STRAIGHT ROUTER BITS 2 FLUTE (12.7MM DIA. X 40MM LONG SHANK)

RS6127	6mm dia. x 16mm cutting length
RS64127	6.4mm dia. x 16mm cutting length
RS8127	8mm dia. x 19mm cutting length
RS9127	9mm dia. x 19mm cutting length
RS95127	9.5mm dia. x 19mm cutting length
RS10127	10mm dia. x 19mm cutting length
RS12127	12mm dia. x 32mm cutting length
RS127127	12.7mm dia. x 32mm cutting length
RS13127	13mm dia. x 32mm cutting length
RS16127	16mm dia. x 32mm cutting length
RS18127	18mm dia. x 32mm cutting length
RS19127	19mm dia. x 32mm cutting length
RS20127	20mm dia. x 32mm cutting length
RS22127	22mm dia. x 32mm cutting length
RS25127	25mm dia. x 32mm cutting length

FLUSH TRIM PANEL BITS (6.4MM DIA. SHAFT)

RFT1964	9mm bearing dia. (B9) X 19mm cutter length x 25mm shank length
RFT2064	13mm bearing dia. (B13) X 20mm cutter length x 30mm shank length

ROUNDING OVER BITS BALL BEARING GUIDE 2 FLUTE, 13MM BEARING. (6.4MM DIA. X 25MM LONG SHANK)

RR264	2mm radius x 10mm cutter height(5/64")
RR364	3mm radius x 10mm cutter height(1/8")
RR564	5mm radius x 11mm cutter height(3/16")
RR864	8mm radius x 16mm cutter height(5/16")
RR664	6mm radius x 12mm cutter height(R1/4")
RR1064	10mm radius x 17mm cutter height(R3/8")
RR1364	13mm radius x 21mm cutter height(R1/2")



ROUTER BITS

ORDER QTY 1

ITEM NO. DESCRIPTION OAL (MM)

ROUNDING OVER BITS BALL BEARING GUIDE 2 FLUTE 13MM BEARING. (12.7MM DIA. X 40MM LONG SHANK)

RR06127	6mm radius x 12mm cutter height
RR08127	8mm radius x 16mm cutter height
RR10127	10mm radius x 17mm cutter height
RR13127	13mm radius x 20mm cutter height
RR19127	19mm radius x 26mm cutter height
RR25127	25mm radius x 33mm cutter height

ISOMETRIC ROUNDING OVER BIT, 2 FLUTE, 13MM BEARING. (12.7MM DIA. X 40MM LONG SHANK WITH BEARING)

RIR3064	30mm radius x 24mm cutter height x 52mm cutter dia.
RIR3564	35mm radius x 24mm cutter height x 61mm cutter dia.

BALL NOSE BITS (SINGLE COVE BITS) 2 FLUTE BEARING, 13MM BALL BEARING GUIDE. (6.4MM DIA. X 25MM LONG SHANK)

RBN0664	6mm radius x 12mm cutter height x 25mm cutter dia.
RBN0864	8mm radius x 14mm cutter height x 29mm cutter dia.
RBN1064	10mm radius x 16mm cutter height x 33mm cutter dia.

BALL NOSE BITS (SINGLE COVE BITS) 2 FLUTE, 13MM BALL BEARING GUIDE. (12.7MM DIA. X 40MM LONG SHANK)

RBN10127	10mm radius x 16mm cutter height x 33mm cutter dia.
RBN13127	13mm radius x 16mm cutter height x 39mm cutter dia.

CLASSIC COVING BITS 2 FLUTE, 13MM BALL BEARING GUIDE. (6.4MM DIA. X 25MM LONG SHANK)

RCLC2764	27mm dia. X 13mm cutter height
RCLC3264	32mm dia. X 16mm cutter height

CLASSIC COVING BITS 2 FLUTE, 13MM BALL BEARING GUIDE. (12.7MM DIA. X 40MM LONG SHANK)

RCLC3764	Classic coving bit 37mm cutter dia. X 19mm cutter height
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TRIPLE COVING BITS 2 FLUTE, 13MM BALL BEARING GUIDE. (12.7MM DIA. X 40MM LONG SHANK)

RTC45127	Triple cove bit 2 flute, 13mm ball bearing guide. (12.7mm dia. X 40mm long shank) 45mm dia. X 22mm cutter height
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DOUBLE COVING BITS 2 FLUTE, 13MM BALL BEARING GUIDE. (12.7MM DIA. X 40MM LONG SHANK)

RDC30127	Double cove bit 2 flute, 13mm ball bearing guide, 30mm dia. X 17mm cutting length
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CORE BOX BITS (6.4MM DIA. X 25MM LONG SHANK)

RCB9564	9.5mm dia. x 12mm cutting length
RCB12764	12.7mm dia. x 12mm cutting length
RCB1664	16mm dia. x 12mm cutting length
RCB1964	19mm dia. x 12mm cutting length

CORE BOX BITS (12.7MM DIA. X 40MM LONG SHANK)

RCB16127	16mm dia. x 32mm cutting length
RCB19127	19mm dia. x 32mm cutting length
RCB22127	22.2mm dia. x 32mm cutting length

ROMAN OGEE BITS, 13MM BALL BEARING GUIDE. (6.4MM DIA. X 25MM LONG SHANK)

RR02964	29mm dia. X 16mm cutter height
RR03464	34mm dia. X 19mm cutter height

ROMAN OGEE BITS, 13MM BALL BEARING GUIDE. (12.7MM DIA. X 40MM LONG SHANK)

RR029127	29mm dia. X 16mm cutter height
RR033127	33mm dia. X 19mm cutter height (R5)
RR037127	Roman Ogee bit, 13mm ball bearing guide. (6.4mm dia. X 25mm long shank) 37mm dia. X 17mm cutter height

OGEE BITS, 13MM BALL BEARING GUIDE - 2 FLUTE (6.4MM DIA. X 25MM LONG SHANK)

ROG3064	30mm dia. X 17mm cutter height 30mm dia. X 17mm cutter height 30mm dia. X 17mm cutter height 30mm dia. X 17mm cutter height
ROG3764	37mm dia. X 20mm cutter height (R6)



ROUTER BITS

ORDER QTY 1

ITEM NO. DESCRIPTION OAL (MM)

OGEE BITS, 13MM BALL BEARING GUIDE - 2 FLUTE (12.7MM DIA. X 40MM LONG SHANK)

ROG30127	30mm dia. X 17mm cutter height
ROG37127	37mm dia. X 20mm cutter height

CLASSIC BIT REVERSE PROFILE (6.4MM DIA. X 25MM LONG SHANK)

RCLRP2064	20mm dia. X 10mm cutter height
RCLRP2564	25mm dia. X 17mm cutter height
RCL2564	Classic bit (6.4mm dia. X 25mm long shank) 25mm dia. 10mm cutter height

CHAMFERING BITS (6.4MM DIA. X 25MM LONG SHANK)

RCF451564	15mm bevel length x 16mm cutter height x 45 degree
RCF3064	16mm cutter height x 30 degree angle

CHAMFERING BITS (12.7MM DIA. X 40MM LONG SHANK)

RCF4515127	15mm bevel length x 16mm cutter height x 45 degree
RCF4525127	25mm bevel length x 30mm cutter height x 45 degree

DOVE TAIL BIT (6.4MM SHANK)

RDT141264	Dove tail bit 1/2" cutter dia. X 6.4mm shank dia. X 14 degrees. For Stanley, Liegh machines.
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KEY HOLE CUTTER (6.4MM SHAFT)

RKH9564	Keyhole bit (6.4mm dia. X 35mm long shank) 9.5mm dia. X 9.5mm cutter height x 5mm groove
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REBATING BITS (6.4MM DIA. X 25MM LONG SHANK)

RRE6464	6mm standard rebate x 4mm rebate with 13mm bearing x 13mm cutter height
RRE101264	10mm standard rebate x 12mm rebate with 9mm bearing x 13mm cutter height

REBATING BITS (12.7MM DIA. X 40MM LONG SHANK)

RRE1213127	10mm standard rebate x 12mm rebate with 13mm bearing x 13mm cutter height
RRE1315127	13mm standard rebate x 15mm rebate with 13mm bearing x 16mm cutter height

SLOTING CUTTERS 2 FLUTE, 6.4MM BORE, CARBIDE TIPPED CUTTERS

RSL1564	1.5mm cutter width. X 38mm cutter dia
RSL264	2.0mm cutter width. X 38mm cutter dia
RSL2564	2.5mm cutter width. X 38mm cutter dia
RSL364	3.0mm cutter width. X 38mm cutter dia
RSL464	4.0mm cutter width. X 38mm cutter dia
RSL564	5.0mm cutter width. X 38mm cutter dia
RSL664	6.0mm cutter width. X 38mm cutter dia
RASL64	6.4mm dia shaft slot cutter arbor complete with B16 and B19 bearings

VEE GROOVING CUTTERS (6.4MM DIA. X 25MM LONG SHANK)

RVG12764	12.7mm dia. X 9.5mm bevel length
RVG3264	32mm dia. X 22mm bevel length
RVG2564	25mm dia. X 25mm bevel length
RVG40127	Vee Grooving Cutter (12.7mm dia. X 40mm long shank) 40mm dia. X 32mm bevel length

ROUTER BIT SET

RSZSET6PCE	1/4" Shank Carbide Router Bit Set 6 Piece
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DRILL SELECTION CHART

Drill Size					Drill Size					Drill Size					Drill Size				
Metric	Fractional	Gauge	mm Equiv*	Inches Equiv*	Metric	Fractional	Gauge	mm Equiv*	Inches Equiv*	Metric	Fractional	Gauge	mm Equiv*	Inches Equiv*	Metric	Fractional	Gauge	mm Equiv*	Inches Equiv*
0.35	1/64	79	0.10	.0039	2.20	44	3/32	2.18	.0860	5.40	7/32	4	5.31	.2090	11.00	7/16		10.80	.4252
			0.20	.0079				2.25	.0866				5.40	.2126				11.00	.4331
			0.25	.0098				2.25	.0886				5.41	.2130				11.11	.4375
			0.30	.0118				2.26	.0890				5.50	.2165				11.20	.4409
			0.34	.0135				2.30	.0906				5.56	.2188				11.50	.4528
			0.35	.0138				2.35	.0926				5.60	.2205				11.51	.4531
			0.37	.0145				2.37	.0935				5.60	.2210				11.80	.4646
			0.38	.0150				2.38	.0938				5.70	.2244				11.80	.4688
			0.40	.0156				2.40	.0945				5.70	.2244				12.00	.4724
			0.40	.0157				2.45	.0965				5.80	.2283				12.20	.4803
0.42	78	80	0.41	.0160	2.45	41	1/8	0.42	.0165	5.80	3/8	1	5.80	.2283	12.50	31/64		12.30	.4844
			0.42	.0165				5.90	.2323				12.50	.4921					
			0.45	.0177				5.94	.2340				12.70	.5000					
			0.46	.0180				5.95	.2344				12.80	.5039					
			0.48	.0189				5.95	.2344				13.00	.5118					
			0.50	.0197				6.00	.2362				13.10	.5156					
			0.51	.0200				6.05	.2380				13.20	.5197					
			0.52	.0205				6.10	.2402				13.70	.5312					
			0.53	.0210				6.15	.2420				13.50	.5315					
			0.55	75				84	0.55				.0217	2.65				37	3/16
0.57	.0225	6.30			.2480	13.89	.5469												
0.58	.0228	6.35			.2500	14.00	.5512												
0.60	.0236	6.40			.2520	14.25	.5610												
0.61	.0240	6.40			.2520	14.25	.5610												
0.62	.0243	6.40			.2520	14.25	.5610												
0.63	.0246	6.40			.2520	14.25	.5610												
0.64	.0249	6.40			.2520	14.25	.5610												
0.65	.0252	6.40			.2520	14.25	.5610												
0.66	.0255	6.40			.2520	14.25	.5610												
0.70	70	90	0.66	.0260	2.85	34	1/4	0.67	.0263	6.60	5/8	F	0.68	.0266	14.50	9/16		14.50	.5709
			0.68	.0266				6.63	.2610				14.68	.5781					
			0.70	.0276				6.70	.2638				14.75	.5807					
			0.71	.0280				6.70	.2638				15.00	.5906					
			0.72	.0283				6.75	.2656				15.08	.5937					
			0.74	.0292				6.76	.2660				15.25	.6004					
			0.75	.0295				6.80	.2677				15.48	.6094					
			0.76	.0298				6.80	.2677				15.48	.6094					
			0.77	.0301				6.90	.2717				15.50	.6102					
			0.78	.0304				6.90	.2717				15.50	.6102					
0.80	68	100	0.79	.0310	3.00	31	3/8	0.80	.0312	7.00	3/4	J	0.81	.0315	16.00	5/8		15.88	.6250
			0.81	.0312				7.04	.2770				16.00	.6299					
			0.82	.0315				7.07	.2795				16.27	.6406					
			0.83	.0318				7.10	.2795				16.27	.6406					
			0.84	.0321				7.14	.2810				16.50	.6496					
			0.85	.0324				7.14	.2810				16.50	.6496					
			0.86	.0327				7.18	.2835				16.67	.6562					
			0.87	.0330				7.20	.2835				17.00	.6693					
			0.88	.0333				7.20	.2835				17.00	.6693					
			0.89	.0336				7.25	.2860				17.15	.6744					
0.90	64	110	0.90	.0354	3.30	29	1/2	0.91	.0360	7.30	1	L	0.92	.0366	17.50	3/4		17.50	.6890
			0.92	.0366				7.37	.2900				17.67	.6969					
			0.93	.0370				7.40	.2913				17.86	.7031					
			0.94	.0374				7.49	.2950				18.00	.7087					
			0.95	.0377				7.50	.2953				18.00	.7087					
			0.96	.0380				7.54	.2969				18.26	.7187					
			0.97	.0383				7.60	.2992				18.50	.7284					
			0.98	.0386				7.63	.3010				18.75	.7344					
			0.99	.0389				7.67	.3020				19.00	.7480					
			1.00	.0392				7.70	.3031				19.00	.7480					
1.05	58	120	1.00	.0414	3.80	25	5/8	1.01	.0414	7.80	1 1/8	M	1.02	.0414	19.00	7/8		19.00	.7480
			1.02	.0414				7.80	.3071				19.05	.7500					
			1.03	.0417				7.80	.3071				19.05	.7500					
			1.04	.0420				7.90	.3110				19.45	.7656					
			1.05	.0420				7.90	.3110				19.45	.7656					
			1.06	.0423				7.94	.3125				19.50	.7677					
			1.07	.0426				8.00	.3150				19.84	.7812					
			1.08	.0429				8.00	.3150				19.84	.7812					
			1.09	.0432				8.03	.3160				20.00	.7874					
			1.10	.0435				8.10	.3189				20.24	.7969					
1.10	56	130	1.10	.0433	4.00	22	3/4	1.11	.0433	8.20	1 1/4	P	1.12	.0433	20.50	1 1/8		20.50	.8071
			1.12	.0433				8.20	.3228				20.50	.8071					
			1.13	.0436				8.20	.3228				20.50	.8071					
			1.14	.0439				8.20	.3228				20.50	.8071					
			1.15	.0442				8.20	.3228				20.50	.8071					
			1.16	.0445				8.20	.3228				20.50	.8071					
			1.17	.0448				8.20	.3228				20.50	.8071					
			1.18	.0451				8.20	.3228				20.50	.8071					
			1.19	.0454				8.20	.3228				20.50	.8071					
			1.20	.0457				8.20	.3228				20.50	.8071					
1.25	55	140	1.25	.0492	4.30	19	7/8	1.26	.0492	8.40	1 3/8	Q	1.27	.0492	21.50	1 1/4		21.50	.8465
			1.27	.0492				8.40	.3320				21.50	.8465					
			1.28	.0495				8.40	.3320				21.50	.8465					
			1.29	.0498				8.40	.3320				21.50	.8465					
			1.30	.0501				8.40	.3320				21.50	.8465					
			1.31	.0504				8.40	.3320				21.50	.8465					
			1.32	.0507				8.40	.3320				21.50	.8465					
			1.33	.0510				8.40	.3320				21.50	.8465					
			1.34	.0513				8.40	.3320				21.50	.8465					
			1.35	.0516				8.40	.3320				21.50	.8465					
1.30	54	150	1.30	.0512	4.60	18	1 1/2	1.31	.0512	8.60	1 1/2	R	1.32	.0512	22.00	1 1/2		22.00	.8661
			1.32	.0512				8.60	.3386				22.00	.8661					
			1.33	.0515				8.61	.3390				22.00	.8661					
			1.34	.0518				8.61	.3390				22.00	.8661					
			1.35	.0521				8.61	.3390				22.00	.8661					
			1.36	.0524				8.61	.3390				22.00	.8661					
			1.37	.0527				8.61	.3390				22.00	.8661					
			1.38	.0530				8.61	.3390				22.00	.8661					
			1.39	.0533				8.61	.3390				22.00	.8661					
			1.40	.0536				8.61	.3390				22.00	.8661					
1.45	53	160	1.45	.0571	5.00	17	1 3/4	1.46	.0571	8.70	1 3/4	S	1.47	.0571	23.00	1 3/4		23.00	.9055
			1.47	.0571				8.70	.3425				23.00	.9055					
			1.48	.0574				8.70	.3425				23.00	.9055					
			1.49	.0577				8.70	.3425				23.00	.9055					
			1.50	.0580				8.70	.3425				23.00	.9055					
			1.51	.0583				8.70	.3425				23.00	.9055					
			1.52	.0586				8.70	.3425				23.00	.9055					
			1.53	.0589				8.70	.3425				23.00	.9055					
			1.54	.0592				8.70	.3425				23.00	.9055					
			1.55	.0595				8.70	.3425				23.00	.9055					
1.50	52	170	1.50	.0591	5.30	16	1 7/8	1.51	.0591	8.80	1 7/8	T	1.52	.0591	23.50	1 7/8		23.50	.9252
			1.52	.0591				8.80	.3465				23.50	.9252					
			1.53	.0594				8.80	.3465				23.50	.9252					
			1.54	.0597				8.80	.3465				23.50	.9252					
			1.55	.0600				8.80	.3465				23.50	.9252					
			1.56	.0603				8.80	.3465				23.50	.9252					
			1.57	.0606				8.80	.3465				23.50	.9252					
			1.58	.0609				8.80	.3465				23.50	.9252					
			1.59	.0612				8.80	.3465				23.50	.9252					
			1.60	.0615				8.80	.3465				23.50	.9252					
1.65	51	180	1.65	.0650	5.60	15	2	1.66	.0650	9.00	2	U	1.67	.0650	24.00	2		24.00	.9448
			1.67	.0650				9.00	.3543				24.00	.9448					
			1.68	.0653				9.00	.3543				24.00	.9448					
			1.69	.0656				9.00	.3543				24.00	.9448					
			1.70	.0659				9.00	.3543				24.00	.9448					
			1.71	.0662				9.00	.3543				24.00	.9448					
			1.72	.0665				9.00	.3543				24.00	.9448					
			1.73	.0668				9.00	.3543				24.00	.9448					
			1.74	.0671				9.00	.3543				24.00	.9448					
			1.75	.0674				9.00	.3543				24.00	.9448					
1.70	50	190	1.70	.0670	5.90	14	2 1/8	1.71	.0670	9.10	2 1/8	V	1.72	.0670	24.50	2 1/8		24.50	.9646
			1.72	.0670				9.10	.3594				24.50	.9646					
			1.73	.0673				9.10	.3594				24.50	.9646					
			1.74	.0676				9.10	.3594				24.50	.9646					
			1.75	.0679				9.10	.3594				24.50	.9646					
			1.76	.0682				9.10	.3594				24.50	.9646					
			1.77	.0685				9.10	.3594				24.50	.9646					
			1.78	.0688				9.10	.3594				24.50	.9646					
			1.79	.0691				9.10	.3594				24.50	.9646					
			1.80	.0694				9.10	.3594				24.50	.964					

DRILL & TAPPING CHART

Size inch	Threads per inch	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
1/16"	60	1.2	3/64	1.05	
3/32"	48	1.9		1.75	
1/8"	40	2.55		2.5	3/32
5/32"	32	3.2	1/8	2.95	
3/16"	24	3.7		3.6	9/64
7/32"	24	4.5		4.3	11/64
1/4"	20	5.1		5.0	3/16
5/16"	18	6.5		6.4	1/4
3/8"	16	7.9	5/16	7.8	19/64
7/16"	14	9.5		9.2	23/64
1/2"	12	10.5			13/32
9/16"	12			12.0	15/32
5/8"	11	13.5	17/32		33/64
3/4"	10	16.5	41/64	16.0	5/8
7/8"	9		3/4	19.0	47/64
1	8	22.0	55/64		27/32
1-1/8"	7		31/32	24.5	61/64
1-1/4"	7	28.0	1-3/32	27.5	1-5/64
1-1/2"	6	33.5	1-5/16	33.0	1-19/64
1-3/4"	5	39.0	1-17/32	38.5	1-33/64
2	4 1/2	44.5	1-49/64	44.0	1-3/4

Size inch	Threads per inch	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
No. 2	56	1.85		1.8	
No. 3	48	2.1		2.05	
No. 4	40	2.35	3/32	2.3	5/64
No. 5	40	2.65		2.6	
No. 6	32	2.85		2.8	
No. 8	32	3.5		3.4	
No. 10	24	3.9	5/32	3.8	
No. 12	24	4.5		4.4	11/64
1/8"	40	2.65		2.6	
5/32"	32	3.3		3.1	1/8
3/16"	24	3.8		3.7	
7/32"	24	4.6		4.5	
1/4"	20	5.2	13/64	5.1	
5/16"	18	6.6	17/64	6.5	1/4
3/8"	16	8.1		8.0	5/16
7/16"	14	9.5	3/8		23/64
1/2"	13	11.0		10.8	27/64
9/16"	12	12.2	31/64		17/32
5/8"	11	13.8	35/64	13.5	19/32
11/16"	11	15.25		15.0	41/64
3/4"	10		21/32	16.5	
13/16"	10		23/32	18.0	
7/8"	9	19.5	49/64		
1	8		7/8	22.5	
1-1/8"	7			25.0	63/64
1-1/4"	7		1-7/64	28.0	
1-3/8"	6	31.0	1-7/32		1-13/64
1-1/2"	6		1-11/32	34.0	1-21/64

Size inch	Threads per inch	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
No. 5	44	2.7		2.65	
No. 6	40	2.95		2.9	
No. 8	36	3.6	9/64	3.5	
No. 10	32	4.1		4.0	5/32
No. 12	28	4.7		4.6	
1/8"	40	2.65		2.6	
5/32"	32	3.3		3.1	1/8
3/16"	32	4.1		3.9	5/32
7/32"	32	4.9		4.8	3/16
1/4"	28	5.5	7/32	5.4	
5/16"	24	6.9		6.8	
3/8"	24	8.5		8.4	
7/16"	20	10.0	25/64	9.8	
1/2"	20	11.5	29/64		
9/16"	18		33/64	12.8	
5/8"	18	14.5	37/64		
11/16"	16	16.0	5/8	15.75	
3/4"	16	17.5	11/16		
13/16"	16		3/4	19.0	
7/8"	14		13/16	20.5	
1	12	23.5	59/64		
1*	14		15/16	23.5	
1-1/8"	12	26.5	1-3/64		
1-1/4"	12		1-11/64	29.5	
1-3/8"	12	33.0	1-19/64		
1-1/2"	12	36.0	1-27/64		

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Size mm	Pitch mm	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
2.0	0.40	1.65		1.6	1/16
2.5	0.45	2.1		2.05	
3.0	0.50	2.55		2.5	
3.5	0.60	2.95		2.9	
4.0	0.70	3.4		3.3	
4.5	0.75	3.8		3.7	
5.0	0.80	4.3	11/64	4.2	
6.0	1.00	5.1	13/64	5.0	
7.0	1.00	6.1		6.0	15/64
8.0	1.25	6.9		6.8	17/64
9.0	1.25	7.9	5/16	7.8	
10.0	1.50	8.6	11/32	8.5	
11.0	1.50			9.5	3/8
12.0	1.75		13/32	12.0	
14.0	2.00	12.2	31/64	12.0	15/32
16.0	2.00	14.25	9/16	14.0	35/64
18.0	2.50	15.75		15.5	39/64
20.0	2.50		45/64	17.5	11/16
22.0	2.50		25/32	19.5	49/64
24.0	3.00			21.0	53/64
27.0	3.00		61/64	24.0	15/16
30.0	3.50			26.5	1-3/64
33.0	3.50		1-11/64	29.5	1-5/32
36.0	4.00		1-17/64	32.0	1-1/4

Size mm	Pitch mm	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
8.0	1.00	7.1	9/32	7.0	
10.00	1.25	8.9		8.8	11/32
12.0	1.50		27/64	10.5	
14.0	1.50		1/2	12.5	
16.0	1.50	14.75	37/64	14.5	
18.0	1.50		21/32	16.5	
20.0	1.50		47/64	18.5	
22.0	1.50		13/16	20.5	
24.0	2.00		7/8	22.0	

Size inch	Threads per inch	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
3/16	32	4.0	5/32	3.9	
1/4	26	5.3		5.2	13/64
5/16	22	6.8	17/64	6.7	
3/8	20	8.3	21/64	8.2	5/16
7/16	18			9.5	3/8
1/2	16		7/16	11.0	27/64
9/16	16		1/2	12.5	31/64
5/8	14	14.0	35/64	13.8	17/32
3/4	12			16.5	21/32
7/8	11		25/32	19.5	49/64
1	10		57/64	22.5	7/8
1-1/4	9	28.5	1-1/8		1-7/64
1-1/2	8	34.5	1-23/64		1-11/32
1-3/4	7	40.5	1-19/32	40.0	1-37/64

Size	Pitch mm	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
0	1.00	5.1	13/64	5.0	
1	0.90	4.5		4.4	11/64
2	0.81	4.0	5/32	3.9	
3	0.73	3.4		3.3	
4	0.66	3.0		2.95	
5	0.59	2.7		2.6	
6	0.53	2.35		2.25	
7	0.48	2.1		2.0	5/64
8	0.43	1.8		1.75	
9	0.39	1.55		1.5	
10	0.35	1.4		1.35	
11	0.31	1.2	3/64	1.15	
12	0.28	1.05		1.0	

Size mm	Pitch mm	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
16	1.5		14.75	37/64	14.5
20	1.5			47/64	18.5
25	1.5			23.5	59/64
32	1.5		1-13/64	30.5	
40	1.5			38.5	1-33/64
50	1.5			48.5	1-29/32

Size inch	Threads per inch	Tapping Drill Sizes			
		With Reamer		Without Reamer	
		mm	inch	mm	inch
1/8	28	8.0	5/16	8.4	21/64
1/4	19	10.8	27/64	11.2	7/16
3/8	19	14.25	9/16	14.75	23/64
1/2	14		45/64		23/32
3/4	14	23.0	29/32		15/16
1	11	29.0	1-9/64	30.0	1-11/64
1-1/4	11	37.5	1-15/32	38.5	1-33/64
1-1/2	11	43.5	1-23/32	44.5	1-3/4
2	11		2-5/32		2-3/16

Size inch	Threads per inch	Tapping Drill Sizes			
		Preferred		Alternative	
		mm	inch	mm	inch
1/8	28	8.8		8.7	11/32
1/4	19	11.8	15/32	11.5	29/64
3/8	19	15.25		15.0	19/32
1/2	14	19.0	3/4		47/64
5/8	14	21.0	53/64		13/16
3/4	14	24.5	31/32		61/64
7/8	14		1-7/64	28.0	
1	11		1-7/32	30.5	
1-1/4	11	39.5	1-35/64	39.0	
1-1/2	11	45.5	1-25/32	45.0	1-49/64
2	11		2-1/4		
2-1/2	11		2-27/32		
3	11		Hole size 3.369 - 3.344 inch		

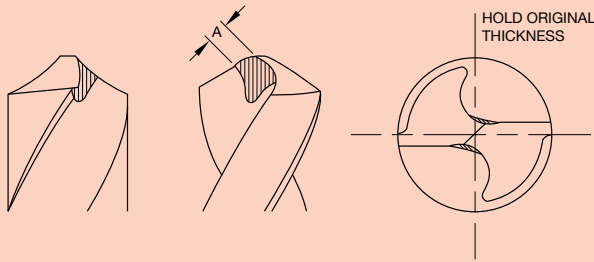
Size inch	Threads per inch	Tapping Drill Sizes			
		With Reamer		Without Reamer	
		mm	inch	mm	inch
1/8	27	8.3	21/64	8.4	
1/4	18	10.8	27/64	11.2	7/16
3/8	18	14.25	9/16	14.25	9/16
1/2	14	17.5	11/16		45/64
3/4	14	22.5	57/64	23.0	29/32
1	11-1/2	28.5	1-1/8	29.0	1-9/64
1-1/4	11-1/2	37.0	1-15/32	37.5	1-31/64
1-1/2	11-1/2	43.5	1-23/32	44.0	1-47/64
2	11-1/2		2-3/16		2-13/64

Size inch	Threads per inch	Tapping Drill Sizes			
		NPSM		NPSM	
		mm	inch	mm	inch
1/8	27	8.7	11/32	9.2	23/64
1/4	18	11.2	7/16	12.0	15/32
3/8	18	14.75	37/64	15.5	39/64
1/2	14	18.0	23/32	19.0	3/4

DRILL USE & MAINTENANCE

WEB THINNING

On most drills the web increases in thickness towards the shank with the result that, as the drill is shortened by repeated sharpening, the chisel edge will become wider. As the chisel edge does not cut but forces the metal out of the way, too wide a chisel edge will result in more pressure required for penetration, leading to greater heat generation and a resultant loss of life.



CUTTING FLUIDS

The use of cutting fluids is an advantage in most drilling operations and essential in some. The two main functions of the cutting fluid are lubrication and cooling.

The purpose of lubrication is to reduce friction by lubricating the surfaces tool and work, to facilitate easier sliding of the chips up the flute and to prevent the chips welding to the cutting edges. In production work, particularly when drilling deep holes, the cooling action of the fluid is often more important than the lubrication. Overheating will shorten the life of the drill. Intermittent feed on deep holes, where possible, not only clears the chips but permits more effective cooling.

SPEEDS

The speed of a drill is the rate at which the periphery of the drill moves in relation to the work being drilled. As a rule, with a drill working within its speed range for a specific material, more holes between sharpenings will be achieved if the speed is reduced and less holes if the speed is increased. Thus, for each production run, a speed must be established which will result in the highest rate of production without excessive breakdown time or drill usage. The factors governing speed are: Component material, hardness of material, depth of hole, quality required, condition of drilling machine, efficiency of cutting fluid.

FEEDS

The feed of the drill is governed by the drill size and the component material.

As with speeds, an increase in feed will lessen the number of holes produced sharpening but it is essential that a constant feed be maintained. If a drill is allowed to dwell, breakdown of the cutting edges will result.

SMALL DRILL FEEDS AND SPEEDS

Breakdown of small drills can most often be attributed to two faults: speed too high and feed too low.

A feed which will produce CHIPS not POWDER, coupled with a speed compatible with the strength of the drill is essential for small hole drilling. Feeds must be based on thickness of chip, not mm/min, and speeds adjusted accordingly. EXAMPLE: A 1 mm drill is to operate at a feed of 0.013mm /rev, drilling steel.

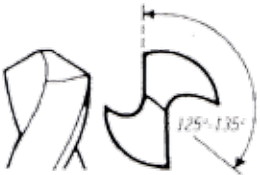
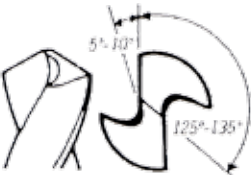
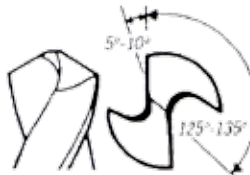

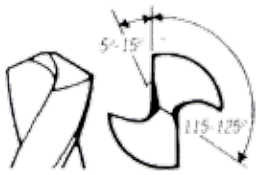
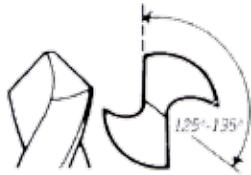
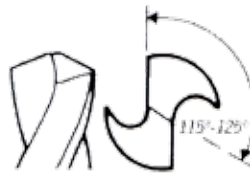
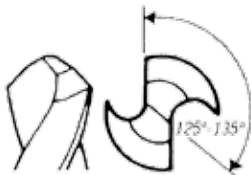
While the material may permit a speed of 30m/min or 9,500 RPM it is obvious that the drill could not withstand a load of 0.013mm feed at this speed; a penetration rate of 124mm/min. The correct procedure is to retain the feed but reduce the speed to obtain a penetration within the capacity of the strength of the drill.

DEEP HOLE DRILLING

When drilling deep holes, speeds and feeds should be reduced as follows:

DEPTH OF HOLE	REDUCTION PER CENT %	
	SPEED	FEED
3 times drill diameter	10	10
4 times drill diameter	30	10
5 times drill diameter	30	20
6 to 8 times drill diameter	35 to 40	20

TWIST DRILL

STANDARD	POINT RELIEVED	POINT THINNED	CENTRE CUTTING (CRANKSHAFT SPLIT STYLE)
 <p>General Purpose</p>	 <p>Improves chisel edge chip flow. Recommended for soft materials.</p>	 <p>Reduces end thrust and improves centre cutting efficiency. Recommended for (1) Restoring chisel edge to original length after several regrinds. (2) For larger drill where the machine thrust is limited. (3) For difficult materials.</p>	 <p>Minimises end thrust. Maximises centre cutting efficiency. Recommended for difficult materials and deep hole drilling.</p>
HEAVY DUTY HIGH TENSILE NOTCH	LONG POINT	FLAT POINT	DOUBLE POINT ANGLE
 <p>Reduces thrust, optimises centre cutting efficiency with chisel strength. Recommended for hard and high strength materials.</p>	 <p>Wood, Bakelite, Hard Rubber and Fibres.</p>	 <p>Hard and Tough Materials (Manganese Steel Rail etc). And thin section material.</p>	 <p>Soft or Open Grained Cast Iron</p>

BLACK JET/BLUE BULLET JOBBER DRILLS

Evacut "Black Jet" and Sutton "Blue Bullet" jobber drills provide ultimate performance and value for money. You get 2-3 times more life when drilling ferrous materials e.g.: stainless steel, high tensile steel, alloy and tool steels and cast iron.

What is the difference: a ferric-oxide (Fe_2O_3) surface coating improves heat dissipation, lowers friction and reduces material build up on the cutting edge, hole accuracy and size is improved in production applications and provides longer tooling life at the same feeds and speeds of conventional bright drills.



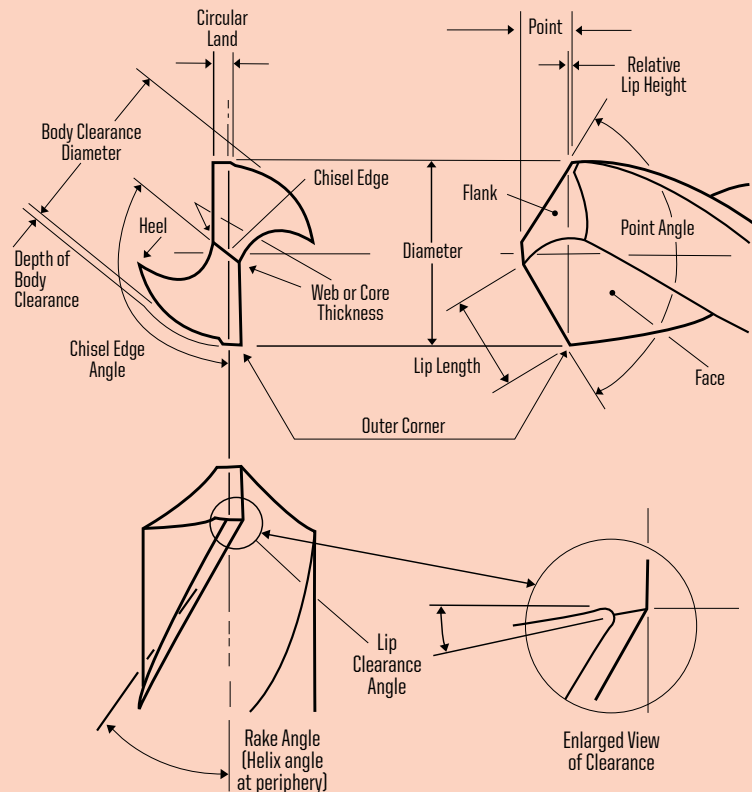
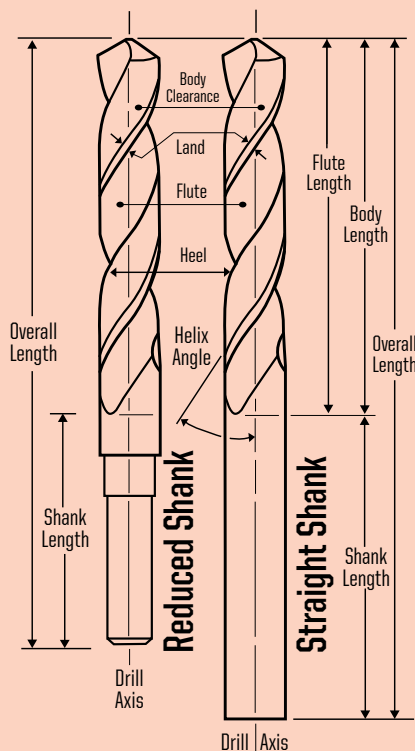
SILVER/BRIGHT FINISH JOBBER DRILLS

The silver or bright finish jobber drills are made from the same quality material as the Black Jet/Blue Bullet drills. The shiny smooth surface finish makes them more suited for repetitive drilling in non-ferrous material like aluminium and brass when the softer sticky material can bind to the cutting edge.



* Tool life and finish quality will be increased by using a suitable coolant/lubricant

TWIST DRILL



THE BODY

The portion of the drill extending from the extreme cutting end to the commencement of the shank.

BODY CLEARANCE

The portion of the body reduced in the diameter to provide diametrical clearance.

CHISEL EDGE ANGLE

The obtuse angle between the tangent to the projection of the chisel edge axis and the projection of the line through either outer corner and corresponding chisel edge corner on a plane normal to the drill axis. This angle lies in a plane normal to the drill axis.

DRILL DIAMETER

The measurement across the cylindrical lands at the outer corners of the drill.

FLUTE LENGTH

The axial length from the outer corners of the cutting lips to the extreme back end of the flutes, including point.

HELIX ANGLE

The acute angle between the tangent to the helical leading edge of the flute at a point in this edge and a plane containing (drill and helix) axis and the point in question. This angle lies in a plane normal to the radius at the point on the edge. The helix angle is usually measured at a point close to or coincident with the outer corner.

LIP CLEARANCE ANGLE

The acute angle between a plane normal to the drill axis and the tangent at a point on the lip to the drill flank, in a plane normal to the radius at the point in question. This angle is specified and measured at the outer corner.

LIP LENGTH

The minimum distance between the outer corner and the chisel edge corner or inner corner. (For a straight lip, it is the true length of the lip).

POINT ANGLE

The included angle between the projections of the lines joining the outer corners and the corresponding chisel edge corners on a plane parallel to one (or both) of these lines and the drill axis.

WEB (CORE) THICKNESS

The diameter of the circle normal to the axis through the roots of the flutes at the point end of the drill.

FLUTES

The grooves in the body of the drill which provide lips and permit the removal of chips and allow cutting fluid to reach the lips.

ENGINEERS FILES

ENGINEERS FILES - PREPACKED							
ORDER QTY	1						
	CUT	FLAT		HALF ROUND	ROUND	SQUARE	MILL SAW-1RE
INCHES	DESC.	ITEM NO.		ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
6"	BASTARD	4907000					
6"	SMOOTH	4907002					
8"	BASTARD	4907006		4907111	4907243	4908220	4907545
8"	SMOOTH	4907010					
10"	BASTARD	4907022		4907146	4907278	4908225	4907561
10"	2ND	4907030		4910244	4910074	4908230	
10"	SMOOTH	4907024					
12"	BASTARD	4907049		4907154			
12"	2ND	4907057		4907162	4907280		
12"	SMOOTH	4907052					
	CUT	SLIM TAPER		EX. SLIM TAPER	HALF ROUND WOOD	MULTIFILE	CONTACT POINT
INCHES	DESC.	ITEM NO.		ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
5"	2ND	4907669		4907812			
6"	2ND	4907685		4907839			
7"	2ND	4907707		4907855			
8"	BASTARD				4907900	4909505	
10"	BASTARD				4908134	4909513	
12"	BASTARD					4909521	
FARMERS OWN SP 10"		4909556	\$28.90				4908444
ENGINEERS FILES - BULK							
ORDER QTY		12 (6 > 12")		12 (6 > 12")	12 (6 > 12")	12 (6 > 12")	12
	CUT	FLAT		HAND	HALF ROUND	ROUND	WARDING
INCHES	DESC.	ITEM NO.		ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
4"	BASTARD	4900001		4900214	4900443	4900885	4901997
4"	2ND	4900028		4900222	4900478	4900907	4902012
4"	SMOOTH	4900036		4900230	4900508	4900923	4902039
6"	BASTARD	4900044		4900249	4900516	4900990	4902101
6"	2ND	4900052		4900257	4900532	4901016	4902136
6"	SMOOTH	4900060		4900265	4900559	4901032	4902152
8"	BASTARD	4900079		4900273	4900575	4901059	4902179
8"	2ND	4900087		4900281	4900591	4901075	4902195
8"	SMOOTH	4900095		4900303	4900613	4901091	4902217
10"	BASTARD	4900109		4900311	4900648	4901113	
10"	2ND	4900117		4900338	4900664	4901148	
10"	SMOOTH	4900125		4900346	4900680	4901164	
12"	BASTARD	4900133		4900354	4900702	4901180	
12"	2ND	4900141		4900362	4900729	4901202	
12"	SMOOTH	4900168		4900370	4900745	4901229	
14"	BASTARD	4900176		4900389	4900761	4901245	
14"	2ND	4900184		4900397	4900796		
14"	SMOOTH				4900826		

ENGINEERS FILES



ENGINEERS FILES - BULK						
ORDER QTY		12 (6 > 12")	12 (6 > 12")	12 (6 > 12")	12 (6 > 12")	
	CUT	SQUARE	3 SQUARE	MILLSAW-1RE	MILLSAW-2SE	
INCHES	DESC	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.	
4"	BASTARD	4901342	4901717			
4"	2ND	4901369	4901725			
4"	SMOOTH	4901385	4901733			
6"	BASTARD	4901393	4901741		4902764	
6"	2ND	4901415	4901776		4902780	
6"	SMOOTH	4901431	4901792			
8"	BASTARD	4901466	4901814	4903094	4902829	
8"	2ND	4901482	4901830	4903116	4902845	
8"	SMOOTH	4901504	4901857			
10"	BASTARD	4901520	4901873	4903132	4902896	
10"	2ND	4901547	4901903	4903159	4902926	
10"	SMOOTH	4901563	4901938			
12"	BASTARD	4901598		4903175	4902969	
12"	2ND	4901628	4901970	4903191	4902985	
ORDER QTY		12	12	12 (6 > 12")	12 (6 > 12")	12
	CUT	SLIM TAPER	EXTRA SLIM TAPER	HALF ROUND WOOD RASP	HALF ROUND CABINET RASP	FARMERS OWN
INCHES	DESC	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.
4"	2ND	4904627	4904813			
5"	2ND	4904678	4904864			
6"	2ND	4904694	4904880			
7"	2ND	4904716	4904902			
8"	BASTARD			4905976		
8"	2ND	4904732	4904929			
10"	BASTARD			4905992		4908991
10"	2ND				4906123	
12"	BASTARD			4906026		
12"	2ND				4906158	
14"	BASTARD			4906042		
ORDER QTY		12	1	12		
		CHAINSAW	TWINPACK CHAINSAW	CONTACT POINT		
INCHES	DESC	ITEM NO.	ITEM NO.	ITEM NO.		
1/8	6" / 150	4905593	4905916			
5/32	8" / 200	4905615	4905917			
3/16	8" / 200	4905631	4905924			
7/32	8" / 200	4905666	4905929			
1/4	8" / 200	4905682	4905934			
5/16	8" / 200	4905720				
				4908762		

ENGINEERS FILES

SIZE	DESCRIPTION	ITEM NO.
FILE HANDLES		
N0.1	4" Rd, 3Sq	4910902
N0.2	4" Sq; 5" Rd, 3Sq, Sq; 6" Rd	4910910
N0.3	4" Fl, Wd, Knf, Hfrd; 6" 3Sq, Sq	4910929
N0.4	6" Fl, Wd, Knf, Hfrd; 8" Rd, 3Sq, Sq	4910937
N0.5	8" Flat, Warding, Knf, Hfrd 10" Rd, Sq; 12" Rd	4910945
N0.6	10" Fl, Wd, Knf, Hfrd, 3Sq 12" 3Sq, Sq	4910953
N0.7	12" Fl, Wd, Hfrd, 14" Rd, Fl, Wd 14" 3Sq, Sq; 16" Rd	4910961
CHAINSAW FILE HANDLE		4911003
ORDER QTY	12	
NEEDLE FILES		
T006-160-2	WARDING	4909653
T007-160-2	3 SQUARE	4909661
T0010-160-2	ROUND	4909718
T0011-160-2	BARRETTE	4909726
T014 -160 -2	SLITTING	4909734
T0016-160-2	PILLAR-ROUND EDGE	4909750
NEEDLE FILE SET		
T020-6 PIECE SET composed of:- T001-T002-T006-T007-T008-T010		4911046
T060-12 PIECE SET composed of:- T001-T002-T003-T005-T006-T007-T008-T009-T010-T011-T015-T016		4911062
FILE SETS		
3 Piece File Set No.1	1 each:- 8" Bast.Flat; 8" Bast.1/2 Rd; 8" Bast.Rd	4911105
5 Piece file set no.1	1 each:- 8" Bast.Flat; 8" 2nd 1/2 Rd; 8" Bast.Rd 8" Bast.Sq; 8" Bast.Millsaw 1RE	4911234
MULTIFILES - SUITABLE FOR ALUMINIUM,BRASS,COPPER		
8"	MULTIFILE	4909300
10"	MULTIFILE	4909327
12"	MULTIFILE	4909343

Abbreviation: Rd = Round; Sq = Square; 3Sq = Three Square; Fl = Flat; Wd = Warding; Knf = Knife; Hfrd = Half Round, Bast = Bastard



Evacut®
PRECISION CUTTING TOOLS

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