

DISTINCTIVE GEOMETRIES , APPLICATION AGILITY AND COATING TOUGHNESS

ALL MAKE **SOMTA TOOLS** PROUD LEADERS OF **WORLD CLASS CUTTING TOOLS**

THAT CAN ENDURE IN ANY MACHINED MATERIAL



P 1 2 C A T A L O G U E



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Manufacturers & Suppliers of Drills, Reamers, End Mills, Bore Cutters, Taps & Dies, Toolbits, Solid Carbide Tooling, Carbide Insert Tooling, Custom Tools and Surface Coatings

Somta Tools was founded in 1954 by Samuel Osborn Ltd of Sheffield, England, through its subsidiaries Osborn Steels and Osborn Mushet Tools. The name Somta was chosen as the acronym for these companies operating in South Africa.

Somta continues to operate from its original site on Moses Mabhida (formerly Edendale) Road in Pietermaritzburg. Somta's expansion has been brought about by the acquisition of two cutting tool companies during the 1980's. Additional growth is realised by continual investment in new plant, with emphasis on state of the art CNC equipment such as Junker, Normac, Rollomatic, Walter, Reinecker and Reishauer machines including new ANCA and Walter CNC grinding machines to further expand solid carbide range manufacturing capacity.

From humble beginnings in 1954 with 20 employees, Somta has grown into one of the largest cutting tool manufacturers in the southern hemisphere, operating from offices and modern manufacturing facilities laid out over 3 hectares with a complement of over 400 employees.

The factory in Pietermaritzburg manufactures 25 000 standard items and a further 6 000 made-to-order items to serve local markets and export markets in over 70 countries worldwide.

Somta Tools specialises in the design and manufacture of standard and custom tools for the industrial and "do it yourself" markets. Product categories can be summarised as drills, cutters, reamers, threading tools and toolbits, which are made in a wide range of sizes, using various materials (HSS and Solid Carbide) and Balzers PVD surface coatings to extend wear life.

The company's vision of "To manufacture and supply superior cutting tools, driven by a culture of service excellence, to global and domestic markets" is supported by ISO 9002 which was achieved in 1991 and ISO 9001 in 2003 and 2008.



Somta has an integrated state of the art Balzers PVD Rapid coating system in its manufacturing programme, offering the innovative range of Balzers BALINIT® high performance coatings on all cutting tools.



ICON

LEGEND & DESCRIPTION

Material	HSS	High Speed Steel	HSS Co5	5% Cobalt High Speed Steel	HSS Co8	8% Cobalt High Speed Steel	HSS Co8e	8% Cobalt HSS, Eccentric Relief Sharpening
	HSS V3	3% Vanadium High Speed Steel	*SOLID CARBIDE	9-10% Cobalt, 0.2-0.8 µm Grain size.	CARBON STEEL	Carbon Steel		
Finish	BLUE FINISH	Steam (HOMO) Temper	BRIGHT FINISH	No Surface Treatment	BRIGHT FINISH WITH TIN TIP	TiN Coated for a length of 4 x diameter	GOLD OXIDE	Steam (HOMO) Temper Straw Colour
	TIAIN	Titanium Aluminium Nitride (Black Finish)	TIN	Titanium Nitride (Gold Finish)	COATED	Oerlikon Balzers coating specially adapted to suit application.		
Type	TYPE N	Type N Standard	TYPE W	Type W For Soft Materials	TYPE H	Type H For Hard Materials	TYPE FS	Parabolic Flute Strong Core
	CBA	Colour Band Application						
Milling Profile		Staggered Teeth Side & Face Cutters		Straight Teeth Side & Face Cutters				
		HR Fine Pitch Knuckle Type Roughing Profile		NR Coarse Pitch Knuckle Type Roughing Profile		HF Fine Pitch Flat Crest Rough Semi-finishing Profile		NF Coarse Pitch Flat Crest Rough Semi-finishing Profile
Standard	ISO 529	ISO Standard 529	DIN 371	DIN Standard 371	WORKS STD.	Factory Specifications		
	RF	Refined Flute	QS	Quick Spiral	H 7	Reamer to produce H7 Tolerance		
Shank		Flatted Shank h6 Tolerance		Plain Shank h7 Tolerance		Threaded Shank h8 Tolerance		Carbide Plain Shank h6 Tolerance
		Morse Taper Shank MT 3 - 5						
Point Angle								Drill Point Angles
		Countersink Angles 60° & 90°						
Lengths		Drills Stub Series		Drills Jobber Series		Drills Long Series		Drills Extra Length Series
		End Mills Regular Series		End Mills Long Series				
Flute Helix Angle								Right hand helix
				Left hand helix				
Centre Drills		Form A Standard		Form B Protected		Form R Radius		
Indi- nation		To Suit 1 in 10 Taper		To Suit 1 in 50 Taper		To Suit 1 in 48 Taper		

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ICON

LEGEND & DESCRIPTION... from previous page

Threads	M	Metric	MF	Metric Fine	BSW	British Standard Whitworth	BSF	British Standard Whitworth Fine		
	UNC	Unified National Coarse	UNF	Unified National Fine	BSPT	British Standard Pipe Taper "F" Series	BSP	British Standard Pipe (Fine) "G" Series		
	NPS	National Pipe Straight	NPT	National Pipe Taper	BA	British Association	BSB	British Standard Brass		
				Thread Form - with 47 1/2°/55°/60° flank angle						
Tolerance							Tolerance on cutting Diameter			
			Woodruff Tolerance					Corner Rounding Tolerance		
Application						Direction of Cut				
		Taper, Through & Blind Hole			Through & Blind Hole			Blind Hole Tapping		Through Hole Tapping
		Left Hand Cutting			Right Hand Cutting					Hand Taps

GENERAL

MATERIAL DESCRIPTIONS

Materials	Code 0	Code 1	Code 2	Code 3	Code 4	Code 5	Code 7
Free Cutting Steels	x	x	x	x	x	x	x
Carbon Steel	x	x	x	x	x	x	x
Alloy Steel	x	x	x	x	x	x	x
Stainless Steel	x	x	x	x	x	x	x
Heat Resisting Alloys		x	x				
Nimonic Alloys				x	x	x	x
Titanium	x	x	x	x	x	x	x
Tool Steel				x	x	x	x
Cast Irons	x	x	x	x	x	x	x
Nickel	x						
Manganese Steels		x	x			x	x
Aluminium Alloys	x	x	x	x	x	x	x
Magnesium Alloys		x	x			x	x
Zinc Alloys						x	x
Copper	x	x	x	x	x	x	x
Synthetics / Plastics	x	x	x	x	x	x	x

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Coolant Feed Solid Carbide Jobber Drills Coated and Uncoated High production drilling.		WORKS STD.	0CJ	6-14	4
Coolant Feed Solid Carbide Stub Drills Coated and Uncoated High production drilling.		WORKS STD.	0CS	6-14	5
Straight Shank Jobber Drills Blue Finish - Split Point - HSS For precision drilling.		DIN 338	101 102	0.2-20 1/64-5/8	6-8
Straight Shank Jobber Drills Bright Finish - Standard Point - HSS For light industrial drilling.		DIN 338	1U1	1-20	9-10
Hi-Cut Straight Shank Jobber Drills Bright Finish - Standard Point - HSS For light industrial drilling.		DIN 338	111	1-13	11
Straight Shank Jobber Drills Gold Oxide Finish - HSS-Co5 For drilling high tensile steels and other difficult materials.		DIN 338	112	1-13 1/16-1/2	12-13
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Straight Shank Stub Drills Blue Finish - Split Point - HSS A robust drill suited to portable drill application.		DIN 1897	140	1-13 3/64-1/2	16-17
Straight Shank Stub Drills Blue Finish - Standard Point - HSS A robust drill suited to portable drill application.		DIN 1897	141	1.5-25	18
Double Ended Sheet Metal / Body Drills - Blue Finish - HSS Double ended self centering drill designed to produce accurate holes in thin materials.		WORKS STD.	151	1.5-8	19
CBA - Yellow Band Quick Spiral Jobber Drills HSS - Bright Finish for drilling Aluminium For drilling materials of low tensile strength.		DIN 338	1AQ	0.9-13	20-21

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MTS Core Drills - Blue Finish - HSS For enlarging diameters of existing holes whether drilled, punched or cast. 	DIN 343	221-224	14-42	62
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MTS Countersinks - HSS-Co5 To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	 DIN 334D DIN 335D	771 - 60° 773 - 90°	16-80 16-80	68 68
Parallel Shank Counterbores - HSS For counterboring holes to suit capscrew heads.	 BS 328 ISO 4206 DIN 373	774	M3-M12	69
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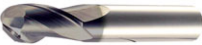
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Solid Carbide 4 Flute Roughing End Mills - Regular Length Flat Crest - Fine Pitch Flatted Shank - Coated  Maximum stock removal at high feed rates in profiling applications.	WORKS STD.	03F	6-20	86
Solid Carbide 6 Flute Finishing End Mills Regular Length - Plain Shank - Coated  Designed for peripheral milling as a finishing operator.	WORKS STD.	03G	6-20	86
NEW Solid Carbide 6 Flute Hi-Feed End Mills Regular Length - Plain Shank - Coated  Designed for peripheral milling of contours and complex shapes in hard materials.	WORKS STD.	03H	6-20	87
Solid Carbide 2 Flute Ball Nose Finishing End Mills Regular Length - Plain Shank - Coated  Designed for peripheral milling of contours and complex shapes in hard materials.	WORKS STD.	03I	4-20	87
Solid Carbide 2 Flute Ball Nose Finishing End Mills Long Series - Plain Shank - Coated  Designed for peripheral milling of contours and complex shapes in hard materials.	WORKS STD.	03J	4-20	88
NEW Solid Carbide 4 Flute VariCut End Mills Regular Length - Plain Shank - Coated  For roughing and finishing with high metal removal rates eliminating the use of multiple tools. Designed for tougher materials including Stainless steel and Titanium.	DIN 6527	03V	5-25	89
NEW Solid Carbide 2 Flute End Mills - Regular Length Plain Shank - Uncoated for Aluminium  Milling keyways and slots to size in one cut. Designed for plunging operations.	WORKS STD.	02A	1-16	90

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NEW Solid Carbide 3 Flute Toroidal End Mills - Regular Length Plain Shank - Uncoated for Aluminium For minimum vibration in heavy profile machining. Faster machining up to 1 x D depth of cut 	WORKS STD.	02U	3-16	91
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Solid Carbide 4 Flute End Mills Regular Length - Plain Shank Coated and Uncoated For profile milling, high tensile steels and other difficult materials. 	WORKS STD.	03K	1-25	93
Solid Carbide 4 Flute End Mills Long Series - Plain Shank Coated and Uncoated For profile milling, high tensile steels and other difficult materials. 	WORKS STD.	03L	3-25	94
Solid Carbide 2 Flute Ball Nose End Mills Regular Length - Plain Shank Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut. 	WORKS STD.	03M	1-25	95
Solid Carbide 2 Flute Ball Nose End Mills Long Series - Plain Shank Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut. 	WORKS STD.	03N	3-25	96
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	BS 122	349	1/16-2"	100
2 Flute End Mills (Slot Drills) Long Series - Threaded Shank HSS-Co8e - TiAlN Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. High tensile steels and other difficult materials.	BS 122	350	2-50	101
2 Flute End Mills (Slot Drills) Regular Length - Flatted Shank HSS-Co8e - TiAlN Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. High tensile steels and other difficult materials.	DIN 327	305	2-25	102
2 Flute End Mills (Slot Drills) Regular Length - Plain Shank HSS-Co8e - TiAlN Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. High tensile steels and other difficult materials.	DIN 327	310	2-25	102
2 Flute Ball Nose End Mills Regular Length - Threaded Shank HSS-Co8e - TiAlN Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut.	DIN 327	340	2-25	103
2 Flute Ball Nose End Mills Regular Length - Flatted Shank HSS-Co8e - TiAlN Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut.	DIN 327	337	2-25	103
2 Flute Ball Nose End Mills Regular Length - Plain Shank HSS-Co8e - TiAlN Coated and Uncoated Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut.	DIN 327	312	2-25	104
3 Flute End Mills Regular Length - Threaded Shank HSS-Co8e - TiAlN Coated and Uncoated Multi-purpose tool used for slotting and profiling. High tensile steels and other difficult materials.	BS 122	342	3-25	104

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Multi-Flute End Mills Regular Length - Threaded Shank HSS-Co8e - TiAlN Coated and Uncoated For profile milling, high tensile steels and other difficult materials.		BS 122	344	2.5-50	107
			345	1/8-3/4	108
Multi-Flute End Mills Long Series - Threaded Shank HSS-Co8e - TiAlN Coated and Uncoated For profile milling, high tensile steels and other difficult materials.		BS 122	346	3-50	108
Multi-Flute End Mills Regular Length - Flatted Shank HSS-Co8e - TiAlN Coated and Uncoated For profile milling, high tensile steels and other difficult materials.		DIN 844	359	3-25	109
Multi-Flute End Mills Regular Length - Plain Shank HSS-Co8e - TiAlN Coated and Uncoated For profile milling, high tensile steels and other difficult materials.		DIN 844	314	3-25	109
Roughing End Mills - Regular Length Threaded Shank - Knuckle Form Coarse Pitch - HSS-Co8 - TiAlN Coated Maximum stock removal at high feed rates in profiling applications.		BS 122	316	6-20	110
Roughing End Mills - Long Series Threaded Shank - Knuckle Form Coarse Pitch - HSS-Co8 - TiAlN Coated Maximum stock removal at high feed rates in profiling applications.		BS 122	318	10-20	110
Roughing End Mills - Regular Length Flatted Shank - Knuckle Form Coarse Pitch - HSS-Co8 Maximum stock removal at high feed rates in profiling applications.		DIN 844	330	6-40	111
Roughing End Mills - Regular Length Flatted Shank - Flat Crest - HSS-Co8 Maximum stock removal at high feed rates in profiling applications.		DIN 844	368	6-40	111
Corner Rounding Cutters Threaded Shank - HSS-Co8 To produce a true radius up to a quarter of a circle application.		DIN 6518 FORM D	363	2-20	112
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Dovetail Cutters - Threaded Shank - HSS-Co5 To produce dovetail slides for machine tool tables, jigs and fixtures.	 BASED ON DIN 1833 ISO 3859	376	16-40	116
Dovetail Cutters - Flatted Shank - HSS-Co5 To produce dovetail slides for machine tool tables, jigs and fixtures.	 DIN 1833 FORM C	386	16-40	116
Inverted Dovetail Cutters Threaded Shank - HSS-Co5 To produce opposite section of dovetail slide to Dovetail cutter.	 BASED ON DIN 1833 ISO 3859	378	16-40	117
Inverted Dovetail Cutters Flatted Shank - HSS-Co5 To produce opposite section of dovetail slide to Dovetail cutter.	 DIN 1833 FORM D	389	16-40	117
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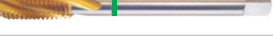
PRODUCT		SPEC.	CODE TYPE	RANGE	PAGE
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35° Spiral Flute Short Machine Taps Metric Coarse - HSSE-V3 For machine tapping of blind holes.		ISO 529	510	M3-M24	124
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		DIN 376	548	M12-M24	125
CBA - Yellow Band 40° Spiral Flute Taps Metric Coarse - Bright Finish - HSSE-V3 For machine tapping of blind holes in soft materials eg. Aluminium.		DIN 371	558	M3-M10	126
		DIN 376	569	M12-M24	126
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Gun Nose Short Machine Taps UNF - HSSE-V3 For machine tapping of through holes.		ISO 529	555	No.4-1"	145
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Note: Red denotes Somta Premium Products

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Note: Red denotes Somta Premium Products

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Carbon Steel Die Nuts - UNC For general purpose repairing or cleaning of threads.		DIN 382	915	1/4-1.3/8	170
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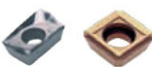
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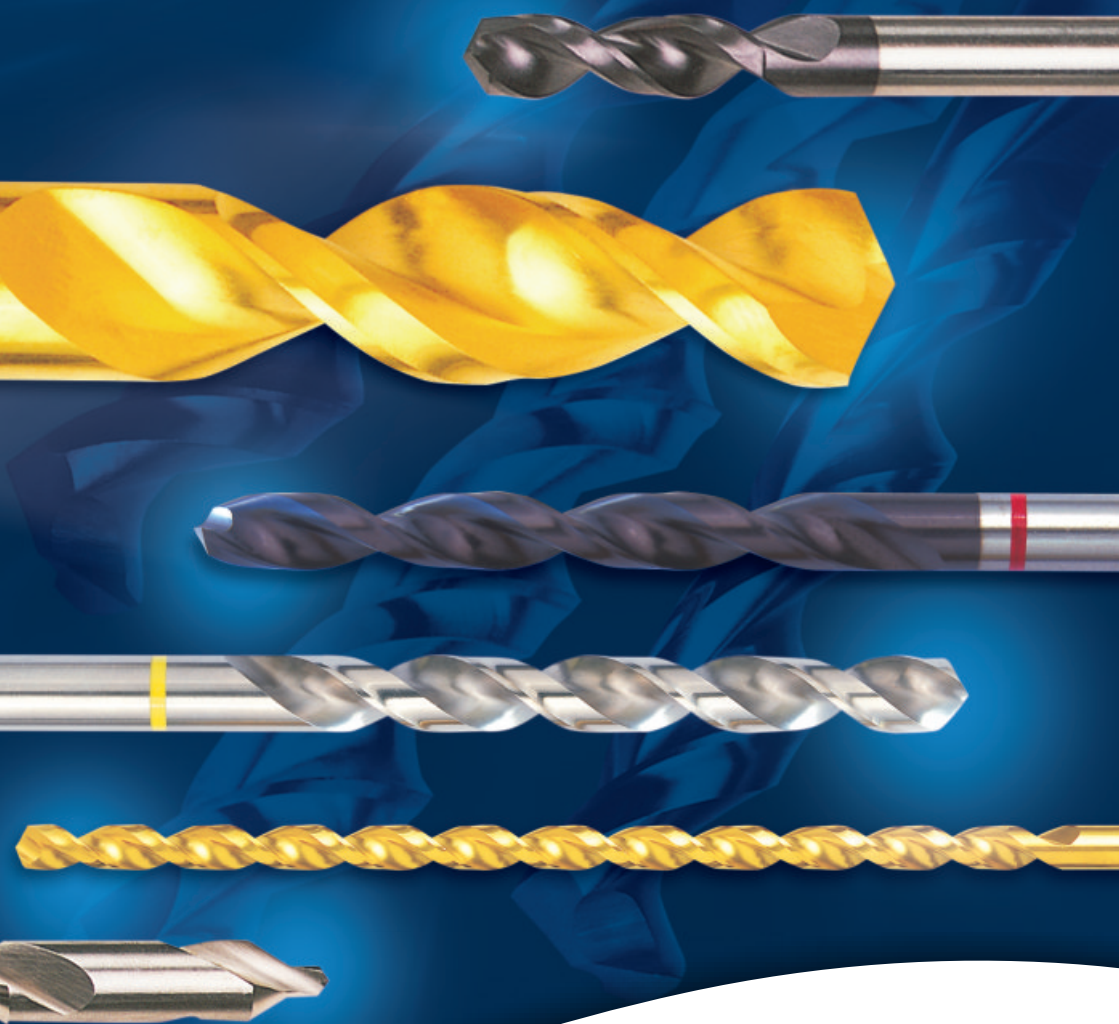
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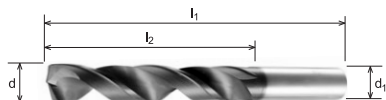




S T R A I G H T S H A N K D R I L L S



Solid Carbide Jobber Drills



* Sub-micron carbide grade of European origin

Code
01J

Properties		
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	TYPE N	
	30°	COATED OR UNCOATED
	SPLIT POINT	

Suited Materials
GENERAL

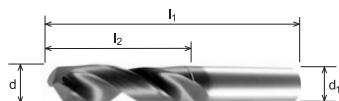
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3	4	45	80	40	01J0300F
3.3	4	45	80	40	01J0330F
3.5	4	45	80	40	01J0350F
4	4	45	80	39	01J0400F
4.2	5	45	80	38	01J0420F
4.5	5	45	80	38	01J0450F
5	5	45	80	38	01J0500F
5.5	6	50	83	41	01J0550F
6	6	50	83	41	01J0600F
6.3	7	53	85	43	01J0630F
6.5	7	53	85	43	01J0650F
6.8	7	53	85	43	01J0680F
7	7	53	85	43	01J0700F
7.5	8	58	90	46	01J0750F
8	8	58	90	46	01J0800F
8.5	9	64	98	51	01J0850F
9	9	64	98	51	01J0900F
9.5	10	68	105	53	01J0950F
10	10	68	105	53	01J1000F
10.2	11	73	110	57	01J1020F
10.5	11	73	110	57	01J1050F
11	11	73	110	57	01J1100F
11.5	12	80	120	62	01J1150F
12	12	80	120	62	01J1200F
12.5	13	90	137	71	01J1250F
12.7	13	90	137	71	01J1270F
13	13	90	137	71	01J1300F
13.5	14	90	137	71	01J1350F
14	14	90	137	71	01J1400F

For uncoated - specify product code excluding "F" at the end.



**STRAIGHT
SHANK
DRILLS**

Solid Carbide Stub Drills



* Sub-micron carbide grade of European origin

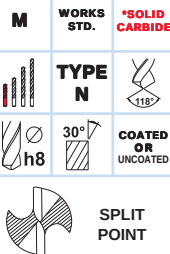
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3	4	20	55	15	01S0300F
3.3	4	20	55	15	01S0330F
3.5	4	20	55	15	01S0350F
4	4	25	55	19	01S0400F
4.2	5	32	62	25	01S0420F
4.5	5	32	62	25	01S0450F
5	5	32	62	25	01S0500F
5.5	6	36	66	27	01S0550F
6	6	36	66	27	01S0600F
6.3	7	42	74	32	01S0630F
6.5	7	42	74	32	01S0650F
6.8	7	42	74	32	01S0680F
7	7	42	74	32	01S0700F
7.5	8	46	79	34	01S0750F
8	8	46	79	34	01S0800F
8.5	9	50	84	37	01S0850F
9	9	50	84	37	01S0900F
9.5	10	53	89	38	01S0950F
10	10	53	89	38	01S1000F
10.2	11	55	95	40	01S1020F
10.5	11	55	95	40	01S1050F
11	11	55	95	40	01S1100F
11.5	12	62	102	44	01S1150F
12	12	62	102	44	01S1200F
12.5	13	62	102	42	01S1250F
12.7	13	62	102	42	01S1270F
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For uncoated - specify product code excluding "F" at the end.

Code

01S

Properties



Suited Materials

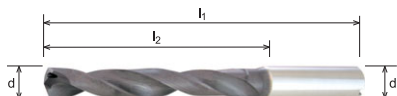
GENERAL



**STRAIGHT
SHANK
DRILLS**



Coolant Feed Solid Carbide Jobber Drills



* Sub-micron carbide grade of European origin

Code
0CJ

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	
	30° V	COATED OR UNCOATED
	SPLIT POINT	

Suited Materials
GENERAL

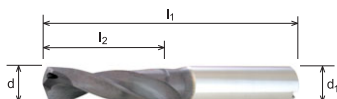
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7.0	8	53	85	43	0CJ0700F
7.5	8	58	90	46	0CJ0750F
8.0	8	58	90	46	0CJ0800F
8.5	10	64	98	51	0CJ0850F
9.0	10	64	98	51	0CJ0900F
9.5	10	64	98	51	0CJ0950F
10.0	10	68	105	53	0CJ1000F
10.2	12	73	110	57	0CJ1020F
10.5	12	73	110	57	0CJ1050F
11.0	12	73	110	57	0CJ1100F
11.5	12	80	120	62	0CJ1150F
12.0	12	80	120	62	0CJ1200F
12.5	14	90	137	71	0CJ1250F
12.7	14	90	137	71	0CJ1270F
13.0	14	90	137	71	0CJ1300F
13.5	14	90	137	71	0CJ1350F
14.0	14	90	137	71	0CJ1400F

For uncoated - specify product code excluding "F" at the end.



**STRAIGHT
SHANK
DRILLS**

Coolant Feed Solid Carbide Stub Drills



* Sub-micron carbide grade of European origin

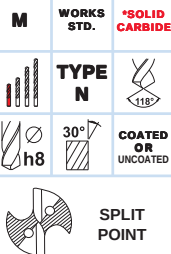
d	d ₁	l ₂	l ₁	Drilling Depth	Code
6.0	6	36	66	27	0CS0600F
6.3	8	42	74	32	0CS0630F
6.5	8	42	74	32	0CS0650F
6.8	8	42	74	32	0CS0680F
7.0	8	42	74	32	0CS0700F
7.5	8	46	79	34	0CS0750F
8.0	8	46	79	34	0CS0800F
8.5	10	50	84	37	0CS0850F
9.0	10	50	84	37	0CS0900F
9.5	10	53	89	38	0CS0950F
10.0	10	53	89	38	0CS1000F
10.2	12	55	95	40	0CS1020F
10.5	12	55	95	40	0CS1050F
11.0	12	55	95	40	0CS1100F
11.5	12	62	102	44	0CS1150F
12.0	12	62	102	44	0CS1200F
12.5	14	62	102	42	0CS1250F
12.7	14	62	102	42	0CS1270F
13.0	14	62	102	42	0CS1300F
13.5	14	62	102	42	0CS1350F
14.0	14	62	102	42	0CS1400F

For uncoated - specify product code excluding "F" at the end.

Code

0CS

Properties



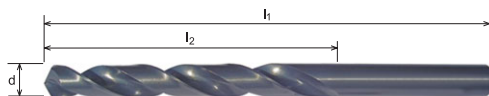
Suited Materials

GENERAL



**STRAIGHT
SHANK
DRILLS**

Straight Shank Jobber Drills



Codes

101, 102

Properties

M **DIN** **HSS**
INCH **338**

TYPE
N

h8 **30°** **BLUE FINISH**

STANDARD POINT
sizes below 3.0 mm

SPLIT POINT
3.0 mm and above

JOBBER DRILL SETS IN METAL CASES



Size Range	No. of drills	Code
1 - 7 x 0.5	13	1060020
1 - 10 x 1	10	1060025
1 - 10 x 0.5	19	1060030
1 - 13 x 1	13	1060035
1 - 13 x 0.5	25	1060040
1 - 6 x 0.1	51	1060070
6 - 10 x 0.1	41	1060080
1/16" - 1/2" x 1/64"	29	1070030
1/16" - 1/2" x 1/32"	15	1070040



COUNTER DISPENSERS

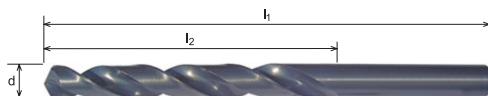
Size Range	Code
10 each of: 1, 2, 3, 3.2, 4, 4.8, 5, 6, 6.5, 7, 8, 9	
5 each of: 1.2, 1.5, 1.8, 2.2, 2.5, 2.8, 3.5, 3.8, 4.2, 4.5, 5.2, 5.5, 5.8, 6.2, 7.5, 8.5, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13	1019000
with Counter Dispenser	
Counter Dispenser only	1019001

d		l2	l1	Code
mm	inch			
0.3		3	19	1010030
0.35		4	19	1010035
0.397	1/64	5	20	1020040
0.4		5	20	1010040
0.45		5	20	1010045
0.5		6	22	1010050
0.55		7	24	1010055
0.6		7	24	1010060
0.62		8	26	1010062
0.7		9	28	1010070
0.75		9	28	1010075
0.794	1/32	10	30	1020079
0.8		10	30	1010080

d		l2	l1	Code
mm	inch			
0.88		11	32	1010088
0.9		11	32	1010090
0.92		11	32	1010092
1		12	34	1010100
1.05		12	34	1010105
1.1		14	36	1010110
1.15		14	36	1010115
1.191	3/64	16	38	1020119
1.2		16	38	1010120
1.25		16	38	1010125
1.3		16	38	1010130
1.35		18	40	1010135
1.4		18	40	1010140
1.45		18	40	1010145
1.5		18	40	1010150
1.55		20	43	1010155
1.587	1/16	20	43	1020159
1.6		20	43	1010160
1.65		20	43	1010165
1.7		20	43	1010170
1.75		22	46	1010175
1.8		22	46	1010180
1.85		22	46	1010185
1.9		22	46	1010190
1.95		24	49	1010195
1.984	5/64	24	49	1020198
2		24	49	1010200
2.05		24	49	1010205
2.1		24	49	1010210
2.15		27	53	1010215
2.2		27	53	1010220
2.25		27	53	1010225
2.3		27	53	1010230
2.35		27	53	1010235
2.381	3/32	30	57	1020238
2.4		30	57	1010240
2.45		30	57	1010245
2.5		30	57	1010250
2.55		30	57	1010255
2.6		30	57	1010260
2.65		30	57	1010265
2.7		33	61	1010270
2.75		33	61	1010275
2.778	7/64	33	61	1020278
2.8		33	61	1010280
2.85		33	61	1010285
2.9		33	61	1010290
2.95		33	61	1010295
3		33	61	1010300
3.1		36	65	1010310

Continued on next page...

Straight Shank Jobber Drills



d		l ₂	l ₁	Code
mm	inch			
... from previous page				
3.175	1/8	36	65	1020318
3.2		36	65	1010320
3.25		36	65	1010325
3.3		36	65	1010330
3.4		39	70	1010340
3.5	9/64	39	70	1010350
3.572		39	70	1020357
3.6		39	70	1010360
3.7		39	70	1010370
3.8		43	75	1010380
3.9	5/32	43	75	1010390
3.969		43	75	1020397
4		43	75	1010400
4.1		43	75	1010410
4.2		43	75	1010420
4.25	11/64	43	75	1010425
4.3		47	80	1010430
4.366		47	80	1020437
4.4		47	80	1010440
4.5		47	80	1010450
4.6	3/16	47	80	1010460
4.7		47	80	1010470
4.762		52	86	1020476
4.8		52	86	1010480
4.9		52	86	1010490
5	13/64	52	86	1010500
5.1		52	86	1010510
5.159		52	86	1020516
5.2		52	86	1010520
5.25		52	86	1010525
5.3	7/32	52	86	1010530
5.4		57	93	1010540
5.5		57	93	1010550
5.556		57	93	1020556
5.6		57	93	1010560
5.7	15/64	57	93	1010570
5.75		57	93	1010575
5.8		57	93	1010580
5.9		57	93	1010590
5.953		57	93	1020595
6	1/4	57	93	1010600
6.1		63	101	1010610
6.2		63	101	1010620
6.25		63	101	1010625
6.3		63	101	1010630
6.350		63	101	1020635
6.4		63	101	1010640
6.5		63	101	1010650
6.6		63	101	1010660

d		l ₂	l ₁	Code
mm	inch			
6.7		63	101	1010670
6.747	17/64	69	109	1020675
6.75		69	109	1010675
6.8		69	109	1010680
6.9		69	109	1010690
7		69	109	1010700
7.1		69	109	1010710
7.144	9/32	69	109	1020714
7.2		69	109	1010720
7.3		69	109	1010730
7.4		69	109	1010740
7.5		69	109	1010750
7.541	19/64	75	117	1020754
7.6		75	117	1010760
7.7		75	117	1010770
7.8		75	117	1010780
7.9		75	117	1010790
7.937	5/16	75	117	1020794
8		75	117	1010800
8.1		75	117	1010810
8.2		75	117	1010820
8.25		75	117	1010825
8.3		75	117	1010830
8.334	21/64	75	117	1020833
8.4		75	117	1010840
8.5		75	117	1010850
8.6		81	125	1010860
8.7		81	125	1010870
8.731	11/32	81	125	1020873
8.75		81	125	1010875
8.8		81	125	1010880
8.9		81	125	1010890
9		81	125	1010900
9.1		81	125	1010910
9.128	23/64	81	125	1020913
9.2		81	125	1010920
9.25		81	125	1010925
9.3		81	125	1010930
9.4		81	125	1010940
9.5		81	125	1010950
9.525	3/8	87	133	1020953
9.6		87	133	1010960
9.7		87	133	1010970
9.75		87	133	1010975
9.8		87	133	1010980
9.9		87	133	1010990
9.922	25/64	87	133	1020992
10		87	133	1011000
10.1		87	133	1011010
10.2		87	133	1011020

Codes

101, 102

Properties

M INCH	DIN 338	HSS
	TYPE N	
		BLUE FINISH
STANDARD POINT sizes below 3.0 mm		
SPLIT POINT 3.0 mm and above		

Suited Materials

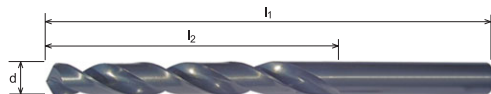
GENERAL



**STRAIGHT
SHANK
DRILLS**

Continued on next page...

Straight Shank Jobber Drills



Codes

101, 102

Properties

M
INCH

DIN
338

HSS



TYPE
N



h8

30°
BLUE
FINISH



STANDARD
POINT
sizes below
3.0 mm



SPLIT POINT
3.0 mm and
above

Suited Materials

GENERAL

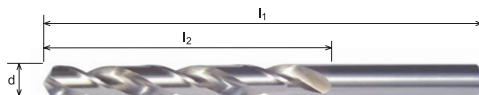


STRAIGHT
SHANK
DRILLS

d		l ₂	l ₁	Code
mm	inch			
... from previous page				
10.25	13/32	87	133	1011025
10.3		87	133	1011030
10.319		87	133	1021032
10.4		87	133	1011040
10.5		87	133	1011050
10.6	27/64	87	133	1011060
10.7		94	142	1011070
10.716		94	142	1021072
10.75		94	142	1011075
10.8		94	142	1011080
10.9	7/16	94	142	1011090
11		94	142	1011100
11.1		94	142	1011110
11.112		94	142	1021111
11.2		94	142	1011120
11.3	29/64	94	142	1011130
11.4		94	142	1011140
11.5		94	142	1011150
11.509		94	142	1021151
11.6		94	142	1011160
11.7	15/32	94	142	1011170
11.8		94	142	1011180
11.9		101	151	1011190
11.906		101	151	1021191
12		101	151	1011200
12.1	31/64	101	151	1011210
12.2		101	151	1011220
12.25		101	151	1011225
12.3		101	151	1011230
12.303		101	151	1021230
12.4	1/2	101	151	1011240
12.5		101	151	1011250
12.6		101	151	1011260
12.7		101	151	1011270
12.700		101	151	1021270

d		l ₂	l ₁	Code
mm	inch			
12.75		101	151	1011275
12.8		101	151	1011280
12.9		101	151	1011290
13		101	151	1011300
13.097	33/64	101	151	1021310
13.1		101	151	1011310
13.2		101	151	1011320
13.25		108	160	1011325
13.3		108	160	1011330
13.4		108	160	1011340
13.494	17/32	108	160	1021349
13.5		108	160	1011350
13.6		108	160	1011360
13.7		108	160	1011370
13.8		108	160	1011380
13.891	35/64	108	160	1021389
14		108	160	1011400
14.25		114	169	1011425
14.287	9.16	114	169	1021429
14.5		114	169	1011450
14.684	37/64	114	169	1021468
14.75		114	169	1011475
15		114	169	1011500
15.25		120	178	1011525
15.5		120	178	1011550
15.75		120	178	1011575
15.875	5/8	120	178	1021588
16		120	178	1011600
16.5		125	184	1011650
17		125	184	1011700
17.5		130	191	1011750
18		130	191	1011800
18.5		135	198	1011850
19		135	198	1011900
19.5		140	205	1011950
20		140	205	1012000

Straight Shank Jobber Drills



JOBBER DRILL SET
IN METAL CASE

Size Range	No. of drills	Code
1 - 13 x 0.5	25	1U10040

d	l ₂	l ₁	Code
1	12	34	1U10100
1.05	12	34	1U10105
1.1	14	36	1U10110
1.15	14	36	1U10115
1.2	16	38	1U10120
1.25	16	38	1U10125
1.3	16	38	1U10130
1.35	18	40	1U10135
1.45	18	40	1U10145
1.5	18	40	1U10150
1.55	20	43	1U10155
1.6	20	43	1U10160
1.7	20	43	1U10170
1.75	22	46	1U10175
1.8	22	46	1U10180
1.85	22	46	1U10185
1.9	22	46	1U10190
1.95	24	49	1U10195
2	24	49	1U10200
2.05	24	49	1U10205
2.1	24	49	1U10210
2.15	27	53	1U10215
2.2	27	53	1U10220
2.25	27	53	1U10225
2.3	27	53	1U10230
2.35	27	53	1U10235
2.4	30	57	1U10240
2.45	30	57	1U10245
2.5	30	57	1U10250
2.6	30	57	1U10260
2.65	30	57	1U10265
2.7	33	61	1U10270
2.75	33	61	1U10275
2.8	33	61	1U10280
2.85	33	61	1U10285
2.9	33	61	1U10290
2.95	33	61	1U10295
3	33	61	1U10300
3.2	36	65	1U10320

d	l ₂	l ₁	Code
3.25	36	65	1U10325
3.3	36	65	1U10330
3.4	39	70	1U10340
3.5	39	70	1U10350
3.6	39	70	1U10360
3.7	39	70	1U10370
3.75	39	70	1U10375
3.8	43	75	1U10380
3.9	43	75	1U10390
4	43	75	1U10400
4.1	43	75	1U10410
4.2	43	75	1U10420
4.25	43	75	1U10425
4.3	47	80	1U10430
4.4	47	80	1U10440
4.5	47	80	1U10450
4.6	47	80	1U10460
4.7	47	80	1U10470
4.75	47	80	1U10475
4.8	52	86	1U10480
4.9	52	86	1U10490
5	52	86	1U10500
5.1	52	86	1U10510
5.2	52	86	1U10520
5.25	52	86	1U10525
5.3	52	86	1U10530
5.4	57	93	1U10540
5.5	57	93	1U10550
5.6	57	93	1U10560
5.7	57	93	1U10570
5.75	57	93	1U10575
5.8	57	93	1U10580
5.9	57	93	1U10590
6	57	93	1U10600
6.1	63	101	1U10610
6.2	63	101	1U10620
6.3	63	101	1U10630
6.4	63	101	1U10640
6.5	63	101	1U10650
6.6	63	101	1U10660
6.7	63	101	1U10670
6.75	69	109	1U10675
6.8	69	109	1U10680
6.9	69	109	1U10690
7	69	109	1U10700
7.1	69	109	1U10710
7.2	69	109	1U10720
7.25	69	109	1U10725
7.3	69	109	1U10730
7.4	69	109	1U10740

Code

1U1

Properties

M	DIN 338	HSS
	TYPE N	
	h8	
	30°	
	BRIGHT FINISH	
	STANDARD POINT	

Suited Materials

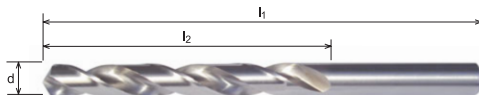
GENERAL



**STRAIGHT
SHANK
DRILLS**

Continued on next page...

Straight Shank Jobber Drills



Code

1U1

Properties

M **DIN 338** **HSS**

TYPE N

h8 **30°** **BRIGHT FINISH**

STANDARD POINT

Suited Materials

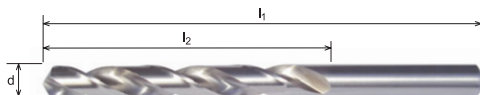
GENERAL



**STRAIGHT
SHANK
DRILLS**

d	l ₂	l ₁	Code	d	l ₂	l ₁	Code
... from previous page				11.4	94	142	1U11140
7.5	69	109	1U10750	11.5	94	142	1U11150
7.6	75	117	1U10760	11.6	94	142	1U11160
7.7	75	117	1U10770	11.7	94	142	1U11170
7.75	75	117	1U10775	11.75	94	142	1U11175
7.8	75	117	1U10780	11.8	94	142	1U11180
7.9	75	117	1U10790	11.9	101	151	1U11190
8	75	117	1U10800	12	101	151	1U11200
8.1	75	117	1U10810	12.1	101	151	1U11210
8.2	75	117	1U10820	12.2	101	151	1U11220
8.25	75	117	1U10825	12.25	101	151	1U11225
8.3	75	117	1U10830	12.3	101	151	1U11230
8.4	75	117	1U10840	12.4	101	151	1U11240
8.5	75	117	1U10850	12.5	101	151	1U11250
8.6	81	125	1U10860	12.6	101	151	1U11260
8.7	81	125	1U10870	12.7	101	151	1U11270
8.75	81	125	1U10875	12.75	101	151	1U11275
8.8	81	125	1U10880	12.8	101	151	1U11280
8.9	81	125	1U10890	12.9	101	151	1U11290
9	81	125	1U10900	13	101	151	1U11300
9.1	81	125	1U10910	13.1	101	151	1U11310
9.2	81	125	1U10920	13.2	101	151	1U11320
9.25	81	125	1U10925	13.25	108	160	1U11325
9.3	81	125	1U10930	13.3	108	160	1U11330
9.4	81	125	1U10940	13.4	108	160	1U11340
9.5	81	125	1U10950	13.5	108	160	1U11350
9.6	87	133	1U10960	13.6	108	160	1U11360
9.7	87	133	1U10970	13.7	108	160	1U11370
9.75	87	133	1U10975	13.75	108	160	1U11375
9.8	87	133	1U10980	13.8	108	160	1U11380
9.9	87	133	1U10990	13.9	108	160	1U11390
10	87	133	1U11000	14	108	160	1U11400
10.1	87	133	1U11010	14.25	114	169	1U11425
10.2	87	133	1U11020	14.5	114	169	1U11450
10.25	87	133	1U11025	14.75	114	169	1U11475
10.3	87	133	1U11030	15	114	169	1U11500
10.4	87	133	1U11040	15.25	120	178	1U11525
10.5	87	133	1U11050	15.5	120	178	1U11550
10.6	87	133	1U11060	15.75	120	178	1U11575
10.7	94	142	1U11070	16	120	178	1U11600
10.75	94	142	1U11075	16.5	125	184	1U11650
10.8	94	142	1U11080	17	125	184	1U11700
10.9	94	142	1U11090	17.5	130	191	1U11750
11	94	142	1U11100	18	130	191	1U11800
11.1	94	142	1U11110	18.5	135	198	1U11850
11.2	94	142	1U11120	19	135	198	1U11900
11.25	94	142	1U11125	19.5	140	205	1U11950
11.3	94	142	1U11130	20	140	205	1U12000

Straight Shank Jobber Drills



**JOBBER DRILL SET
IN METAL CASE**

Size Range	No. of drills	Code
1 - 13 x 0.5	25	1110040

d	l ₂	l ₁	Code
1	12	34	1110100
1.2	16	38	1110120
1.5	18	40	1110150
1.8	22	46	1110180
2	24	49	1110200
2.2	27	53	1110220
2.5	30	57	1110250
2.8	33	61	1110280
3	33	61	1110300
3.2	36	65	1110320
3.3	36	65	1110330
3.5	39	70	1110350
3.7	39	70	1110370
3.8	43	75	1110380
4	43	75	1110400
4.1	43	75	1110410
4.2	43	75	1110420

d	l ₂	l ₁	Code
4.5	47	80	1110450
4.8	52	86	1110480
4.9	52	86	1110490
5	52	86	1110500
5.2	52	86	1110520
5.5	57	93	1110550
5.8	57	93	1110580
6	57	93	1110600
6.2	63	101	1110620
6.5	63	101	1110650
6.8	69	109	1110680
7	69	109	1110700
7.3	69	109	1110730
7.5	69	109	1110750
7.8	75	117	1110780
8	75	117	1110800
8.5	75	117	1110850
9	81	125	1110900
9.5	81	125	1110950
10	87	133	1111000
10.2	87	133	1111020
10.5	87	133	1111050
11	94	142	1111100
11.5	94	142	1111150
12	101	151	1111200
12.5	101	151	1111250
13	101	151	1111300

Hi-Cut

Code

111

Properties

M	DIN 338	HSS
	TYPE N	
		BRIGHT FINISH

Suited Materials

GENERAL



**STRAIGHT
SHANK
DRILLS**

Straight Shank Jobber Drills



Code

112

Properties

M
INCH

DIN
338

HSS
Co5



TYPE
N



h8

GOLD
OXIDE



STANDARD
POINT

Suited Materials

HIGH TENSILE STEELS

GENERAL



JOBBER DRILL SET
IN METAL CASE

Size Range	No. of drills	Code
1 - 13 x 0.5	25	1120040

d		l ₂	l ₁	Code
mm	inch			
1.0		12	34	1120100
1.5		18	40	1120150
1.588	1/16	20	43	1120159
1.6		20	43	1120160
1.7		20	43	1120170
1.8		22	46	1120180
1.9		22	46	1120190
2		24	49	1120200
2.1		24	49	1120210
2.2		27	53	1120220
2.3		27	53	1120230
2.381	3/32	30	57	1120238
2.4		30	57	1120240
2.5		30	57	1120250
2.6		30	57	1120260
2.7		33	61	1120270
2.778	7/64	33	61	1120278
2.8		33	61	1120280
2.9		33	61	1120290
3		33	61	1120300
3.1		36	65	1120310
3.178	1/8	36	65	1120318
3.2		36	65	1120320
3.3		36	65	1120330
3.4		39	70	1120340
3.5		39	70	1120350
3.572	9/64	39	70	1120357
3.6		39	70	1120360
3.7		39	70	1120370
3.969	5/32	43	75	1120397
4		43	75	1120400
4.1		43	75	1120410
4.2		43	75	1120420
4.3		47	80	1120430
4.366	11/64	47	80	1120437
4.4		47	80	1120440
4.5		47	80	1120450
4.6		47	80	1120460
4.7		47	80	1120470

d		l ₂	l ₁	Code
mm	inch			
4.762	3/16	52	86	1120476
4.8		52	86	1120480
4.9		52	86	1120490
5		52	86	1120500
5.1		52	86	1120510
5.159	13/64	52	86	1120516
5.2		52	86	1120520
5.3		52	86	1120530
5.4		57	93	1120540
5.5		57	93	1120550
5.556	7/32	57	93	1120556
5.6		57	93	1120560
5.7		57	93	1120570
5.8		57	93	1120580
5.9		57	93	1120590
5.953	15/64	57	93	1120595
6		57	93	1120600
6.1		63	101	1120610
6.2		63	101	1120620
6.3		63	101	1120630
6.350	1/4	63	101	1120635
6.5		63	101	1120650
6.6		63	101	1120660
6.7		63	101	1120670
6.747	17/64	69	109	1120674
6.8		69	109	1120680
6.9		69	109	1120690
7		69	109	1120700
7.1		69	109	1120710
7.144	9/32	69	109	1120714
7.2		69	109	1120720
7.3		69	109	1120730
7.4		69	109	1120740
7.5		69	109	1120750
7.541	19/64	75	117	1120754
7.6		75	117	1120760
7.7		75	117	1120770
7.8		75	117	1120780
7.9		75	117	1120790
7.938	5/16	75	117	1120794
8		75	117	1120800
8.1		75	117	1120810
8.2		75	117	1120820
8.3		75	117	1120830
8.334	21/64	75	117	1120833
8.4		75	117	1120840
8.5		75	117	1120850
8.6		81	125	1120860
8.7		81	125	1120870
8.731	11/32	81	125	1120873

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Straight Shank Jobber Drills



d		l ₂	l ₁	Code
mm	inch			
... from previous page				
8.8	23/64	81	125	1120880
8.9		81	125	1120890
9		81	125	1120900
9.1		81	125	1120910
9.128		81	125	1120913
9.2		81	125	1120920
9.3		81	125	1120930
9.4		81	125	1120940
9.5		81	125	1120950
9.525		3/8	87	125
9.6	25/64	87	133	1120960
9.7		87	133	1120970
9.8		87	133	1120980
9.9		87	133	1120990
9.922		87	133	1120992
10		87	133	1121000
10.1		87	133	1121010
10.2		87	133	1121020
10.3		87	133	1121030
10.319		13/32	87	133
10.4	27/64	87	133	1121040
10.5		87	133	1121050
10.6		87	133	1121060
10.7		94	133	1121070
10.716		94	142	1121072
10.8		94	142	1121080

d		l ₂	l ₁	Code
mm	inch			
10.9		94	142	1121090
11		94	142	1121100
11.1		94	142	1121110
11.112	7/16	94	142	1121111
11.2		94	142	1121120
11.3		94	142	1121130
11.4		94	142	1121140
11.5		94	142	1121150
11.509	29/64	94	142	1121151
11.6		94	142	1121160
11.7		94	142	1121170
11.8		94	142	1121180
11.9		101	151	1121190
11.906	15/32	101	151	1121191
12		101	151	1121200
12.1		101	151	1121210
12.2		101	151	1121220
12.3		101	151	1121230
12.303	31/64	101	151	1121229
12.4		101	151	1121240
12.5		101	151	1121250
12.6		101	151	1121260
12.7		101	151	1121270
12.700	1/2	101	151	1121271
12.8		101	151	1121280
12.9		101	151	1121290
13		101	151	1121300

Code

112

Properties

M INCH	DIN 338	HSS Co5
	TYPE N	
		GOLD OXIDE
STANDARD POINT		

Suited Materials

HIGH TENSILE STEELS

GENERAL



STRAIGHT
SHANK
DRILLS

NDX Jobber Drills - Heavy Duty



Code

177

Properties

M
INCH

DIN
338

HSS
Co5

TYPE
N

33°
GOLD OXIDE

STANDARD POINT
sizes below
1.5 mm

SPLIT POINT
1.5 mm and
above

Suited Materials

HIGH TENSILE STEELS

GENERAL



**JOBBER DRILL SET
IN METAL CASE**

Size Range	No. of drills	Code
1 - 13 x 0.5	25	1770025

d		l ₂	l ₁	Code
mm	inch			
1		12	34	1770100
1.5		18	40	1770150
1.587	1/16	20	43	1770159
1.6		20	43	1770160
1.7		20	43	1770170
1.8		22	46	1770180
1.9		22	46	1770190
1.984	5/64	24	49	1770198
2		24	49	1770200
2.1		24	49	1770210
2.2		27	53	1770220
2.3		27	53	1770230
2.381	3/32	30	57	1770238
2.4		30	57	1770240
2.5		30	57	1770250
2.6		30	57	1770260
2.7		33	61	1770270
2.778	7/64	33	61	1770278
2.8		33	61	1770280
2.9		33	61	1770290
3		33	61	1770300
3.175	1/8	36	65	1770318
3.2		36	65	1770320
3.3		36	65	1770330
3.4		39	70	1770340
3.5		39	70	1770350
3.572	9/64	39	70	1770357
3.6		39	70	1770360
3.7		39	70	1770370
3.8		43	75	1770380
3.9		43	75	1770390
3.969	5/32	43	75	1770397
4		43	75	1770400
4.1		43	75	1770410
4.2		43	75	1770420
4.3		47	80	1770430
4.366	11/64	47	80	1770437
4.4		47	80	1770440
4.5		47	80	1770450

d		l ₂	l ₁	Code
mm	inch			
4.6		47	80	1770460
4.7		47	80	1770470
4.762	3/16	52	86	1770476
4.8		52	86	1770480
4.9		52	86	1770490
5		52	86	1770500
5.1		52	86	1770510
5.159	13/64	52	86	1770516
5.2		52	86	1770520
5.3		52	86	1770530
5.4		57	93	1770540
5.5		57	93	1770550
5.556	7/32	57	93	1770556
5.6		57	93	1770560
5.7		57	93	1770570
5.8		57	93	1770580
5.9		57	93	1770590
5.953	15/64	57	93	1770595
6		57	93	1770600
6.1		63	101	1770610
6.2		63	101	1770620
6.3		63	101	1770630
6.350	1/4	63	101	1770635
6.4		63	101	1770640
6.5		63	101	1770650
6.6		63	101	1770660
6.7		63	101	1770670
6.747	17/64	69	109	1770675
6.8		69	109	1770680
6.9		69	109	1770690
7		69	109	1770700
7.1		69	109	1770710
7.2		69	109	1770720
7.3		69	109	1770730
7.4		69	109	1770740
7.5		69	109	1770750
7.541	19/64	75	117	1770754
7.6		75	117	1770760
7.7		75	117	1770770
7.8		75	117	1770780
7.9		75	117	1770790
7.937	5/16	75	117	1770794
8		75	117	1770800
8.1		75	117	1770810
8.2		75	117	1770820
8.3		75	117	1770830
8.334	21/64	75	117	1770833
8.4		75	117	1770840
8.5		75	117	1770850
8.6		81	125	1770860

Continued on next page...

NDX Jobber Drills - Heavy Duty



d		l ₂	l ₁	Code
mm	inch			
... from previous page				
8.7	11/32	81	125	1770870
8.731		81	125	1770873
8.8		81	125	1770880
8.9		81	125	1770890
9		81	125	1770900
9.1	3/8	81	125	1770910
9.2		81	125	1770920
9.3		81	125	1770930
9.4		81	125	1770940
9.5		81	125	1770950
9.525		87	133	1770953
9.6		87	133	1770960
9.7		87	133	1770970
9.8		87	133	1770980
9.9		87	133	1770990
10	13/32	87	133	1771000
10.1		87	133	1771010
10.2		87	133	1771020
10.3		87	133	1771030
10.319		87	133	1771032
10.4		87	133	1771040
10.5		87	133	1771050

d		l ₂	l ₁	Code
mm	inch			
10.7		94	142	1771070
10.8		94	142	1771080
11		94	142	1771100
11.1		94	142	1771110
11.112	7/16	94	142	1771111
11.2		94	142	1771120
11.3		94	142	1771130
11.4		94	142	1771140
11.5		94	142	1771150
11.7		94	142	1771170
11.8		94	142	1771180
12		101	151	1771200
12.1		101	151	1771210
12.2		101	151	1771220
12.3		101	151	1771230
12.4		101	151	1771240
12.5		101	151	1771250
12.6		101	151	1771260
12.700	1/2	101	151	1771269
12.7		101	151	1771270
12.8		101	151	1771280
12.9		101	151	1771290
13		101	151	1771300

Code

177

Properties

M INCH	DIN 338	HSS Co5
	TYPE N	
	33°	GOLD OXIDE
	STANDARD POINT sizes below 1.5 mm	
	SPLIT POINT 1.5 mm and above	

Suited Materials

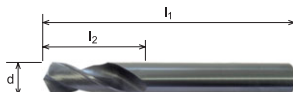
HIGH TENSILE STEELS

GENERAL



STRAIGHT SHANK DRILLS

Straight Shank Stub Drills



Code

140

Properties

M
INCH

DIN
1897

HSS

TYPE
N

h8

30°

BLUE FINISH

STANDARD POINT
sizes below 1.5 mm

SPLIT POINT
1.5 mm and above

Suited Materials

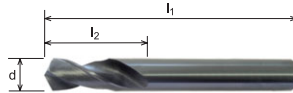
GENERAL

d		l ₂	l ₁	Code
mm	inch			
1		6	26	1400100
1.1		7	28	1400110
1.191	3/64	8	30	1400119
1.2		8	30	1400120
1.3		8	30	1400130
1.4		9	32	1400140
1.5		9	32	1400150
1.588	1/16	10	34	1400159
1.6		10	34	1400160
1.7		10	34	1400170
1.8		11	36	1400180
1.984	5/64	12	38	1400198
2		12	38	1400200
2.1		12	38	1400210
2.2		13	40	1400220
2.25		13	40	1400225
2.3		13	40	1400230
2.381	3/32	14	43	1400238
2.4		14	43	1400240
2.5		14	43	1400250
2.6		14	43	1400260
2.65		14	43	1400265
2.7		16	46	1400270
2.778	7/64	16	46	1400278
2.8		16	46	1400280
2.85		16	46	1400285
2.9		16	46	1400290
3		16	46	1400300
3.1		18	49	1400310
3.175	1/8	18	49	1400318
3.2		18	49	1400320
3.25		18	49	1400325
3.3		18	49	1400330
3.4		20	52	1400340
3.5		20	52	1400350
3.572	9/64	20	52	1400357
3.6		20	52	1400360
3.7		20	52	1400370
3.8		22	55	1400380
3.9		22	55	1400390
3.969	5/32	22	55	1400397
4		22	55	1400400
4.1		22	55	1400410
4.2		22	55	1400420
4.3		24	58	1400430
4.366	11/64	24	58	1400437
4.4		24	58	1400440
4.5		24	58	1400450
4.6		24	58	1400460
4.7		24	58	1400470

d		l ₂	l ₁	Code
mm	inch			
4.762	3/16	26	62	1400476
4.8		26	62	1400480
4.9		26	62	1400490
5		26	62	1400500
5.1		26	62	1400510
5.159	13/64	26	62	1400516
5.2		26	62	1400520
5.3		26	62	1400530
5.4		28	66	1400540
5.5		28	66	1400550
5.556	7/32	28	66	1400556
5.6		28	66	1400560
5.7		28	66	1400570
5.8		28	66	1400580
5.953	15/64	28	66	1400595
6		28	66	1400600
6.1		31	70	1400610
6.350	1/4	31	70	1400635
6.5		31	70	1400650
6.6		31	70	1400660
6.747	17/64	34	74	1400677
6.8		34	74	1400680
6.9		34	74	1400690
7		34	74	1400700
7.144	9/32	34	74	1400714
7.2		34	74	1400720
7.4		34	74	1400740
7.5		34	74	1400750
7.541	19/64	37	79	1400754
7.7		37	79	1400770
7.8		37	79	1400780
7.938	5/16	37	79	1400794
8		37	79	1400800
8.2		37	79	1400820
8.334	21/64	37	79	1400833
8.5		37	79	1400850
8.6		40	84	1400860
8.731	11/32	40	84	1400873
8.8		40	84	1400880
9		40	84	1400900
9.128	23/64	40	84	1400913
9.2		40	84	1400920
9.5		40	84	1400950
9.525	3/8	43	89	1400953
9.8		43	89	1400980
9.922	25/64	43	89	1400992
10		43	89	1401000
10.2		43	89	1401020
10.5		43	89	1401050
10.716	27/64	47	95	1401072

Continued on next page...

Straight Shank Stub Drills



d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			
... from previous page					12		51	102	1401200
11		47	95	1401100	12.5		51	102	1401250
11.112	7/16	47	95	1401111	12.6		51	102	1401260
11.509	29/64	47	95	1401151	12.700	1/2	51	102	1401269
11.906	15/32	51	102	1401191	13		51	102	1401300

Code

140

Properties

M **DIN** **HSS**
INCH **1897**

TYPE **N**

30° **BLUE FINISH**

STANDARD POINT
sizes below
1.5 mm

SPLIT POINT
1.5 mm and
above

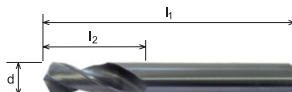
Suited Materials

GENERAL



**STRAIGHT
SHANK
DRILLS**

Straight Shank Stub Drills



Code

141

Properties

M **DIN 1897** **HSS**



TYPE N



h8

30°

BLUE FINISH



STANDARD POINT

Suited Materials

GENERAL

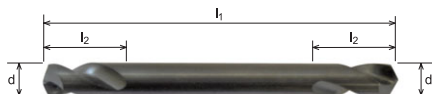


STRAIGHT SHANK DRILLS

d	l ₂	l ₁	Code
1.5	9	32	1410150
1.6	10	34	1410160
1.8	11	36	1410180
2	12	38	1410200
2.1	12	38	1410210
2.2	13	40	1410220
2.3	13	40	1410230
2.4	14	43	1410240
2.5	14	43	1410250
2.6	14	43	1410260
2.7	16	46	1410270
2.8	16	46	1410280
2.9	16	46	1410290
3	16	46	1410300
3.1	18	49	1410310
3.2	18	49	1410320
3.3	18	49	1410330
3.4	20	52	1410340
3.5	20	52	1410350
3.6	20	52	1410360
3.7	20	52	1410370
3.8	22	55	1410380
3.9	22	55	1410390
4	22	55	1410400
4.1	22	55	1410410
4.2	22	55	1410420
4.3	24	58	1410430
4.4	24	58	1410440
4.5	24	58	1410450
4.6	24	58	1410460
4.7	24	58	1410470
4.8	26	62	1410480
4.9	26	62	1410490
5	26	62	1410500
5.1	26	62	1410510
5.2	26	62	1410520
5.3	26	62	1410530
5.4	28	66	1410540
5.5	28	66	1410550
5.6	28	66	1410560
5.7	28	66	1410570
5.8	28	66	1410580
5.9	28	66	1410590
6	28	66	1410600
6.1	31	70	1410610
6.2	31	70	1410620
6.3	31	70	1410630
6.4	31	70	1410640

d	l ₂	l ₁	Code
6.5	31	70	1410650
6.8	34	74	1410680
7	34	74	1410700
7.2	34	74	1410720
7.5	34	74	1410750
7.8	37	79	1410780
8	37	79	1410800
8.2	37	79	1410820
8.5	37	79	1410850
8.8	40	84	1410880
9	40	84	1410900
9.5	40	84	1410950
9.8	43	89	1410980
10	43	89	1411000
10.2	43	89	1411020
10.5	43	89	1411050
10.8	47	95	1411080
11	47	95	1411100
11.2	47	95	1411120
11.5	47	95	1411150
11.8	47	95	1411180
12	51	102	1411200
12.2	51	102	1411220
12.5	51	102	1411250
12.8	51	102	1411280
13	51	102	1411300
13.2	51	102	1411320
13.5	54	107	1411350
13.8	54	107	1411380
14	54	107	1411400
14.5	56	111	1411450
15	56	111	1411500
15.5	58	115	1411550
16	58	115	1411600
16.5	60	119	1411650
17	60	119	1411700
17.5	62	123	1411750
18	62	123	1411800
18.5	64	127	1411850
19	64	127	1411900
19.5	66	131	1411950
20	66	131	1412000
21	68	136	1412100
22	70	141	1412200
23	72	146	1412300
24	75	151	1412400
25	75	151	1412500

Double Ended Sheet Metal / Body Drills



d	l ₂	l ₁	Code
1.5	6	34	1510150
1.8	6	36	1510180
2	6	38	1510200
2.2	7	40	1510220
*2.5	8	43	1510250
2.8	9	46	1510280
3	9	46	1510300
3.2	10	49	1510320
*3.3	10	49	1510330
3.5	11	52	1510350
3.8	12	55	1510380
4	12	55	1510400
*4.1	12	55	1510410
#4.2	12	55	1510420

d	l ₂	l ₁	Code
4.5	13	58	1510450
4.8	14	62	1510480
*4.9	14	62	1510490
#5	14	62	1510500
5.2	14	62	1510520
5.5	15	66	1510550
5.8	15	66	1510580
6	15	66	1510600
6.2	16	70	1510620
*6.5	16	70	1510650
7	18	74	1510700
7.5	19	80	1510750
8	19	80	1510800

* Blind rivet drill sizes

Groove blind rivet drill sizes

Code

151

Properties



Suited Materials

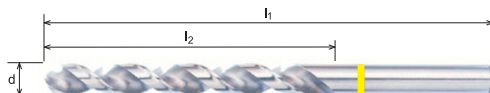
GENERAL



**STRAIGHT
SHANK
DRILLS**



Yellow Band Quick Spiral Jobber Drills for drilling Aluminium



Code

1AQ

Properties

M **DIN 338** **HSS**

CBA **TYPE W**



QS **BRIGHT FINISH**



Suited Materials

ALUMINIUM **COPPER** **BRASS**

FREE CUTTING STEEL



**JOBBER DRILL SET
IN METAL CASE**

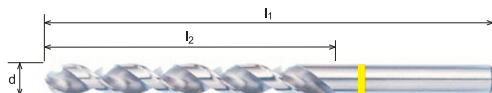
Size Range	No. of drills	Code
1 - 13 x 0.5	25	1AQ0040

d	l ₂	l ₁	Code
0.9	11	32	1AQ0090
1.0	12	34	1AQ0100
1.1	14	36	1AQ0110
1.2	16	38	1AQ0120
1.3	16	38	1AQ0130
1.4	18	40	1AQ0140
1.5	18	40	1AQ0150
1.6	20	43	1AQ0160
1.7	20	43	1AQ0170
1.75	22	46	1AQ0175
1.8	22	46	1AQ0180
1.9	22	46	1AQ0190
2.0	24	49	1AQ0200
2.1	24	49	1AQ0210
2.2	27	53	1AQ0220
2.25	27	53	1AQ0225
2.3	27	53	1AQ0230
2.4	30	57	1AQ0240
2.5	30	57	1AQ0250
2.6	30	57	1AQ0260
2.7	33	61	1AQ0270
2.75	33	61	1AQ0275
2.8	33	61	1AQ0280
2.9	33	61	1AQ0290
3.0	33	61	1AQ0300
3.1	36	65	1AQ0310
3.2	36	65	1AQ0320
3.3	36	65	1AQ0330
3.4	39	70	1AQ0340
3.5	39	70	1AQ0350
3.6	39	70	1AQ0360
3.7	39	70	1AQ0370
3.8	43	75	1AQ0380
3.9	43	75	1AQ0390
4.0	43	75	1AQ0400
4.1	43	75	1AQ0410
4.2	43	75	1AQ0420
4.3	47	80	1AQ0430
4.4	47	80	1AQ0440

d	l ₂	l ₁	Code
4.5	47	80	1AQ0450
4.6	47	80	1AQ0460
4.7	47	80	1AQ0470
4.8	52	86	1AQ0480
4.9	52	86	1AQ0490
5.0	52	86	1AQ0500
5.1	52	86	1AQ0510
5.2	52	86	1AQ0520
5.3	52	86	1AQ0530
5.4	57	93	1AQ0540
5.5	57	93	1AQ0550
5.6	57	93	1AQ0560
5.7	57	93	1AQ0570
5.8	57	93	1AQ0580
5.9	57	93	1AQ0590
6.0	57	93	1AQ0600
6.1	63	101	1AQ0610
6.2	63	101	1AQ0620
6.3	63	101	1AQ0630
6.4	63	101	1AQ0640
6.5	63	101	1AQ0650
6.6	63	101	1AQ0660
6.7	63	101	1AQ0670
6.8	69	109	1AQ0680
6.9	69	109	1AQ0690
7.0	69	109	1AQ0700
7.1	69	109	1AQ0710
7.2	69	109	1AQ0720
7.3	69	109	1AQ0730
7.4	69	109	1AQ0740
7.5	69	109	1AQ0750
7.6	75	117	1AQ0760
7.7	75	117	1AQ0770
7.8	75	117	1AQ0780
7.9	75	117	1AQ0790
8.0	75	117	1AQ0800
8.1	75	117	1AQ0810
8.2	75	117	1AQ0820
8.3	75	117	1AQ0830
8.4	75	117	1AQ0840
8.5	75	117	1AQ0850
8.6	81	125	1AQ0860
8.7	81	125	1AQ0870
8.8	81	125	1AQ0880
8.9	81	125	1AQ0890
9.0	81	125	1AQ0900
9.1	81	125	1AQ0910
9.2	81	125	1AQ0920
9.3	81	125	1AQ0930
9.4	81	125	1AQ0940

Continued on next page...

Yellow Band Quick Spiral Jobber Drills for drilling Aluminium



d	l ₂	l ₁	Code
... from previous page			
9.5	81	125	1AQ0950
9.6	87	133	1AQ0960
9.7	87	133	1AQ0970
9.8	87	133	1AQ0980
9.9	87	133	1AQ0990
10.0	87	133	1AQ1000
10.2	87	133	1AQ1020

d	l ₂	l ₁	Code
10.5	87	133	1AQ1050
11.0	94	142	1AQ1100
11.5	94	142	1AQ1150
12.0	101	151	1AQ1200
12.5	101	151	1AQ1250
12.7	101	151	1AQ1270
13.0	101	151	1AQ1300

Code

1AQ

Properties

M	DIN 338	HSS
	CBA	TYPE W
QS	BRIGHT FINISH	
	THINNED POINT	

Suited Materials

ALUMINIUM COPPER BRASS

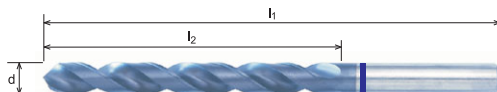
FREE CUTTING STEEL



**STRAIGHT
SHANK
DRILLS**



Blue Band RF Jobber Drills for drilling Stainless Steel (VA)



Code

1BB

Properties

M **DIN 338** **HSS Co5**



TiAIN

RF



STANDARD POINT
1.5mm and below



SPLIT POINT
sizes above 1.5 mm and below 4.0 mm



MULTI-FACET POINT
4.0 mm and above

Suited Materials

STAINLESS STEEL **TITANIUM** **HEAT TREATABLE STEEL**

JOBBER DRILL SET IN METAL CASE



Size Range	No. of drills	Code
1 - 13 x 0.5	25	1BB0040

d	l ₂	l ₁	Code
1	12	34	1BB0100
1.5	18	40	1BB0150
2	24	49	1BB0200
2.5	30	57	1BB0250
3	33	61	1BB0300
3.3	36	65	1BB0330
3.5	39	70	1BB0350
4	43	75	1BB0400
4.2	43	75	1BB0420

d	l ₂	l ₁	Code
4.5	47	80	1BB0450
5	52	86	1BB0500
5.5	57	93	1BB0550
6	57	93	1BB0600
6.5	63	101	1BB0650
6.8	69	109	1BB0680
7	69	109	1BB0700
7.5	69	109	1BB0750
8	75	117	1BB0800
8.5	75	117	1BB0850
9	81	125	1BB0900
9.5	81	125	1BB0950
10	87	133	1BB1000
10.2	87	133	1BB1020
10.5	87	133	1BB1050
11	94	142	1BB1100
11.5	94	142	1BB1150
12	101	151	1BB1200
12.5	101	151	1BB1250
13	101	151	1BB1300



STRAIGHT SHANK DRILLS

Green Band NDX Jobber Drills for drilling Carbon Steels



**JOBBER DRILL SET
IN METAL CASE**

Size Range	No. of drills	Code
1 - 13 x 0.5	25	1G70040

d	l ₂	l ₁	Code
1	12	34	1G70100
1.5	18	40	1G70150
1.7	20	43	1G70170
1.9	22	46	1G70190
2	24	49	1G70200
2.1	24	49	1G70210
2.5	30	57	1G70250
2.6	30	57	1G70260
2.8	33	61	1G70280
2.9	33	61	1G70290
3	33	61	1G70300
3.1	36	65	1G70310
3.2	36	65	1G70320
3.3	36	65	1G70330
3.4	39	70	1G70340
3.5	39	70	1G70350
3.6	39	70	1G70360
3.7	39	70	1G70370
3.8	43	75	1G70380
3.9	43	75	1G70390
4	43	75	1G70400
4.1	43	75	1G70410
4.2	43	75	1G70420
4.3	47	80	1G70430
4.5	47	80	1G70450
4.8	52	86	1G70480
5	52	86	1G70500
5.1	52	86	1G70510
5.2	52	86	1G70520
5.3	52	86	1G70530
5.5	57	93	1G70550
5.8	57	93	1G70580
5.9	57	93	1G70590

d	l ₂	l ₁	Code
6	57	93	1G70600
6.1	63	101	1G70610
6.2	63	101	1G70620
6.3	63	101	1G70630
6.4	63	101	1G70640
6.5	63	101	1G70650
6.8	69	109	1G70680
6.9	69	109	1G70690
7	69	109	1G70700
7.5	69	109	1G70750
7.7	75	117	1G70770
7.8	75	117	1G70780
7.9	75	117	1G70790
8	75	117	1G70800
8.1	75	117	1G70810
8.2	75	117	1G70820
8.4	75	117	1G70840
8.5	75	117	1G70850
8.7	81	125	1G70870
8.8	81	125	1G70880
8.9	81	125	1G70890
9	81	125	1G70900
9.3	81	125	1G70930
9.5	81	125	1G70950
9.6	87	133	1G70960
10	87	133	1G71000
10.1	87	133	1G71010
10.2	87	133	1G71020
10.3	87	133	1G71030
10.5	87	133	1G71050
10.6	87	133	1G71060
10.7	94	142	1G71070
11	94	142	1G71100
11.3	94	142	1G71130
11.5	94	142	1G71150
11.7	94	142	1G71170
11.8	94	142	1G71180
12	101	151	1G71200
12.5	101	151	1G71250
12.7	101	151	1G71270
12.8	101	151	1G71280
12.9	101	151	1G71290
13	101	151	1G71300

Code

1G7

Properties

M	DIN 338	HSS Co5
	CBA	TYPE N
TIN		
	STANDARD POINT sizes below 1.5 mm	
	SPLIT POINT 1.5 mm and above	

Suited Materials

CARBON STEEL	COPPER
FREE CUTTING STEEL	



**STRAIGHT
SHANK
DRILLS**



Red Band UDS Jobber Drills for drilling Tough Treatable Steels



Code

1R5

Properties

M **DIN 338** **HSS Co5**

CBA **TYPE FS**



TIAIN



UX POINT

Suited Materials

TOUGH TREATABLE STEEL

TOOL STEEL (ALLOY)

TITANIUM



**JOBBER DRILL SET
IN METAL CASE**

Size Range	No. of drills	Code
1 - 13 x 0.5	25	1R50040

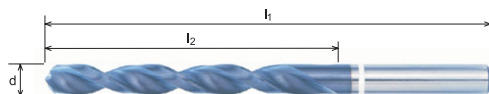
d	l ₂	l ₁	Code
1	12	34	1R50100
1.5	18	40	1R50150
2	24	49	1R50200
2.5	30	57	1R50250
3	33	61	1R50300
3.5	39	70	1R50350
4	43	75	1R50400
4.2	43	75	1R50420
4.5	47	80	1R50450

d	l ₂	l ₁	Code
5	52	86	1R50500
5.5	57	93	1R50550
6	57	93	1R50600
6.5	63	101	1R50650
6.8	69	109	1R50680
7	69	109	1R50700
7.5	69	109	1R50750
8	75	117	1R50800
8.5	75	117	1R50850
9	81	125	1R50900
9.5	81	125	1R50950
10	87	133	1R51000
10.2	87	133	1R51020
10.5	87	133	1R51050
11	94	142	1R51100
11.5	94	142	1R51150
12	101	151	1R51200
12.5	101	151	1R51250
13	101	151	1R51300



**STRAIGHT
SHANK
DRILLS**

White Band UDC Jobber Drills for drilling Cast Iron



d	l ₂	l ₁	Code
4	43	75	1W60400
4.5	47	80	1W60450
5	52	86	1W60500
5.5	57	93	1W60550
6	57	93	1W60600
6.5	63	101	1W60650
7	69	109	1W60700
7.5	69	109	1W60750
8	75	117	1W60800
8.5	75	117	1W60850
9	81	125	1W60900
10	87	133	1W61000
10.5	87	133	1W61050
12	101	151	1W61200

Code

1W6

Properties

M	DIN 338	HSS Co5
	CBA	TYPE FS
TAIIN		
	DX POINT	

Suited Materials

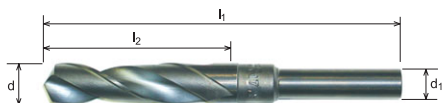
CAST IRON



**STRAIGHT
SHANK
DRILLS**



Reduced Shank (Electricians) Drills



Codes

175, 176

Properties

M
INCH

WORKS
STD.

HSS



TYPE
N



30°

BLUE
FINISH



STANDARD
POINT

Suited Materials

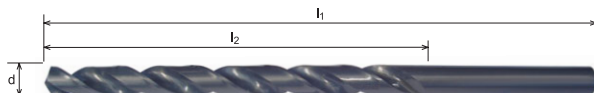
GENERAL

d		d ₁	l ₂	l ₁	Code
mm	inch				
11		10	94	142	1751100
11.5		10	94	142	1751150
12		10	101	151	1751200
12.5		10	101	151	1751250
12.700	1/2	10	101	151	1761270
13		10	80	152	1751300
13.494	17/32	1/2"	80	152	1761349
13.5		10	80	152	1751350
14		10	80	152	1751400
14.287	9/16	1/2"	80	152	1761429
14.5		10	80	152	1751450
15		10	80	152	1751500
15.081	19/32	1/2"	80	152	1761508
15.5		10	80	152	1751550
15.875	5/8	1/2"	80	152	1761588
16		10	80	152	1751600
16.5		12.7	80	152	1751650
16.669	21/32	1/2"	80	152	1761667
17		12.7	80	152	1751700
17.462	11/16	1/2"	80	152	1761746
17.5		12.7	80	152	1751750
18		12.7	80	152	1751800
18.5		12.7	80	152	1751850
19		12.7	80	152	1751900
19.050	3/4	1/2"	80	152	1761905
19.5		12.7	76	152	1751950
20		12.7	76	152	1752000
20.5		12.7	76	152	1752050
20.637	13/16	1/2"	76	152	1762064
21		12.7	76	152	1752100
21.5		12.7	76	152	1752150
22		12.7	76	152	1752200
22.225	7/8	1/2"	76	152	1762223
22.5		12.7	76	152	1752250
23		12.7	76	152	1752300
23.5		12.7	76	152	1752350
23.812	15/16	1/2"	76	152	1762381
24		12.7	76	152	1752400
24.5		12.7	76	152	1752450
25		12.7	76	152	1752500
25.400	1"	1/2"	76	152	1762540



STRAIGHT
SHANK
DRILLS

Straight Shank Long Series Drills



d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			
1		33	56	1160100	5.5		91	139	1160550
1.1		37	60	1160110	5.556	7/32	91	139	1170556
1.2		41	65	1160120	5.6		91	139	1160560
1.3		41	65	1160130	5.7		91	139	1160570
1.4		45	70	1160140	5.8		91	139	1160580
1.5		45	70	1160150	5.9		91	139	1160590
1.587	1/16	50	76	1170159	6		91	139	1160600
1.6		50	76	1160160	6.1		97	148	1160610
1.7		50	76	1160170	6.2		97	148	1160620
1.8		53	80	1160180	6.3		97	148	1160630
1.9		53	80	1160190	6.350	1/4	97	148	1170635
2		56	85	1160200	6.4		97	148	1160640
2.1		56	85	1160210	6.5		97	148	1160650
2.2		59	90	1160220	6.6		97	148	1160660
2.3		59	90	1160230	6.7		97	148	1160670
2.381	3/32	62	95	1170238	6.8		102	156	1160680
2.4		62	95	1160240	6.9		102	156	1160690
2.5		62	95	1160250	7		102	156	1160700
2.6		62	95	1160260	7.1		102	156	1160710
2.7		66	100	1160270	7.144	9/32	102	156	1170714
2.8		66	100	1160280	7.2		102	156	1160720
2.9		66	100	1160290	7.3		102	156	1160730
3		66	100	1160300	7.4		102	156	1160740
3.1		69	106	1160310	7.5		102	156	1160750
3.175	1/8	69	106	1170318	7.6		109	165	1160760
3.2		69	106	1160320	7.7		109	165	1160770
3.3		69	106	1160330	7.8		109	165	1160780
3.4		73	112	1160340	7.9		109	165	1160790
3.5		73	112	1160350	7.937	5/16	109	165	1170794
3.6		73	112	1160360	8		109	165	1160800
3.7		73	112	1160370	8.2		109	165	1160820
3.8		78	119	1160380	8.5		109	165	1160850
3.9		78	119	1160390	8.731	11/32	115	175	1170873
3.969	5/32	78	119	1170397	8.8		115	175	1160880
4		78	119	1160400	9		115	175	1160900
4.1		78	119	1160410	9.2		115	175	1160920
4.2		78	119	1160420	9.5		115	175	1160950
4.3		82	126	1160430	9.525	3/8	121	184	1170953
4.4		82	126	1160440	9.8		121	184	1160980
4.5		82	126	1160450	10		121	184	1161000
4.6		82	126	1160460	10.2		121	184	1161020
4.7		82	126	1160470	10.319	13/32	121	184	1171032
4.762	3/16	87	132	1170476	10.5		121	184	1161050
4.8		87	132	1160480	10.8		128	195	1161080
4.9		87	132	1160490	11		128	195	1161100
5		87	132	1160500	11.112	7/16	128	195	1171111
5.1		87	132	1160510	11.2		128	195	1161120
5.2		87	132	1160520	11.5		128	195	1161150
5.3		87	132	1160530	11.8		128	195	1161180
5.4		91	139	1160540	12		134	205	1161200

Continued on next page...

Codes

116, 117

Properties

M INCH	DIN 340	HSS

Suited Materials

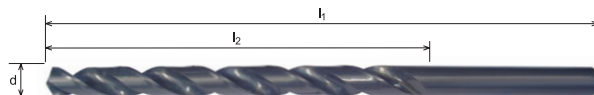
GENERAL



STRAIGHT
SHANK
DRILLS



Straight Shank Long Series Drills



Codes

116, 117

Properties

M
INCH

DIN
340

HSS



TYPE
N



h8

30°

BLUE
FINISH



STANDARD
POINT

Suited Materials

GENERAL

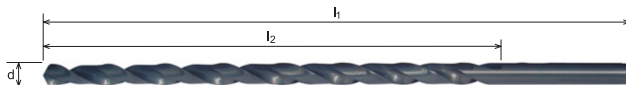
d		l ₂	l ₁	Code
mm	inch			
... from previous page				
12.2		134	205	1161220
12.5		134	205	1161250
12.700	1/2	134	205	1171270
12.8		134	205	1161280
13		134	205	1161300

d		l ₂	l ₁	Code
mm	inch			
14		140	214	1161400
14.287	9/16	144	220	1171429
15		144	220	1161500
15.875	5/8	149	227	1171588
16		149	227	1161600



STRAIGHT
SHANK
DRILLS

Straight Shank Extra Length Drills



d	l ₂ l ₁	80 125	100 160	160 200	200 250	250 315	300 400
1.5		1210150	1220150	-	-	-	-
2		1210200	1220200	1230200	-	-	-
2.5		1210250	1220250	1230250	-	-	-
3		1210300	1220300	1230300	1240300	1250300	-
3.5		-	1220350	1230350	1240350	-	-
4		-	1220400	1230400	1240400	1250400	1260400
4.5		-	1220450	1230450	1240450	-	-
5		-	1220500	1230500	1240500	1250500	1260500
5.5		-	1220550	1230550	1240550	-	-
6		-	1220600	1230600	1240600	1250600	1260600
6.5		-	-	1230650	1240650	-	-
7		-	-	1230700	1240700	1250700	1260700
7.5		-	-	1230750	1240750	-	-
8		-	-	1230800	1240800	1250800	1260800
8.5		-	-	1230850	1240850	-	-
9		-	-	1230900	1240900	1250900	1260900
9.5		-	-	1230950	1240950	-	-
10		-	-	1231000	1241000	1251000	1261000
10.5		-	-	-	1241050	-	-
11		-	-	-	1241100	1251100	1261100
11.5		-	-	-	1241150	-	-
12		-	-	-	1241200	1251200	1261200
12.5		-	-	-	1241250	-	-
13		-	-	-	1241300	1251300	1261300

d	mm Equivalent	l ₂ l ₁	4" 160	6" 200	8" 250	10" 315	12" 400
1/8	3.175		1320318	1330318	1340318	1350318	-
5/32	3.969		1320397	1330397	-	-	-
3/16	4.762		1320476	1330476	1340476	1350476	1360476
7/32	5.556		-	-	-	1350556	-
1/4	6.350		1320635	1330635	1340635	1350635	1360635
9/32	7.144		-	-	-	1350714	-
5/16	7.937		-	1330794	1340794	1350794	1360794
11/32	8.731		-	-	-	1350873	-
3/8	9.525		-	1330953	1340953	1350953	1360953
13/32	10.319		-	-	1341032	-	-
7/16	11.112		-	-	1341111	1351111	1361111
1/2	12.700		-	-	1341270	1351270	1361270

Codes

121 - 126
132 - 136

Properties

M INCH	BASED ON ISO 3292	HSS
	TYPE N	
		BLUE FINISH
 STANDARD POINT		

Suited Materials

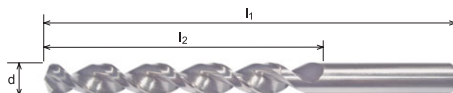
GENERAL



**STRAIGHT
SHANK
DRILLS**



UDL Jobber Drills - Long Chip



Code

154

Properties

M **DIN 338** **HSS Co5**

TYPE FS

h8 **40°** **BRIGHT FINISH**

UX POINT

Suited Materials

CARBON STEEL **ALLOY STEEL** **ALUMINIUM**

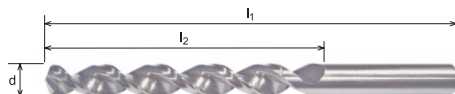
GENERAL

d	l ₂	l ₁	Code
2.0	24	49	1540200
2.5	30	57	1540250
3.0	33	61	1540300
3.2	36	65	1540320
3.3	36	65	1540330
3.4	39	70	1540340
3.5	39	70	1540350
4.0	43	75	1540400
4.2	43	75	1540420
4.5	47	80	1540450
5.0	52	86	1540500
5.5	57	93	1540550
6.0	57	93	1540600
6.5	63	101	1540650
7.0	69	109	1540700
7.5	69	109	1540750
8.0	75	117	1540800
8.5	75	117	1540850
9.0	81	125	1540900
9.5	81	125	1540950
10.0	87	133	1541000



**STRAIGHT
SHANK
DRILLS**

UDL Jobber Drills - Long Chip



**JOBBER DRILL SET
IN METAL CASE**

Size Range	No. of drills	Code
1 - 13 x 0.5	25	1640025

d	mm Equiv	l ₂	l ₁	Code
1.0		12	34	1640100
No.60	1.016	12	34	1640102
No.59	1.041	12	34	1640104
No.58	1.067	14	36	1640107
No.57	1.092	14	36	1640109
1.1		14	36	1640110
No.56	1.181	14	36	1640118
3/64"	1.191	16	38	1640119
1.2		16	38	1640120
1.3		16	38	1640130
No.55	1.321	16	38	1640132
No.54	1.397	18	40	1640139
1.4		18	40	1640140
1.5		18	40	1640150
No.53	1.511	20	43	1640152
1/16"	1.588	20	43	1640159
1.6		20	43	1640160
No.52	1.613	20	43	1640161
No.51	1.702	20	43	1640169
1.7		20	43	1640170
No.50	1.778	22	46	1640178
1.8		22	46	1640180
No.49	1.854	22	46	1640185
1.9		22	46	1640190
No.48	1.930	24	49	1640193
5/64"	1.984	24	49	1640198
No.47	1.994	24	49	1640199
2.0		24	49	1640200
No.46	2.057	24	49	1640206
No.45	2.083	24	49	1640208
2.1		24	49	1640210
No.44	2.184	27	53	1640218
2.2		27	53	1640220
No.43	2.261	27	53	1640226
2.3		27	53	1640230
No.42	2.375	30	57	1640237
3/32"	2.381	30	57	1640238
2.4		30	57	1640240
No.41	2.438	30	57	1640244

d	mm Equiv	l ₂	l ₁	Code
No.40	2.489	30	57	1640249
2.5		30	57	1640250
No.39	2.527	30	57	1640253
No.38	2.578	30	57	1640258
2.6		30	57	1640260
No.37	2.642	30	57	1640264
2.7		33	61	1640270
No.36	2.705	33	61	1640271
7/64"	2.778	33	61	1640278
No.35	2.794	33	61	1640279
2.8		33	61	1640280
No.34	2.819	33	61	1640282
No.33	2.870	33	61	1640287
2.9		33	61	1640290
No.32	2.946	33	61	1640295
3.0		33	61	1640300
No.31	3.048	36	65	1640305
3.1		36	65	1640310
1/8"	3.175	36	65	1640318
3.2		36	65	1640320
No.30	3.264	36	65	1640326
3.3		36	65	1640330
3.4		39	70	1640340
No.29	3.454	39	70	1640345
3.5		39	70	1640350
9/64"	3.572	39	70	1640357
No.26	3.734	39	70	1640373
No.25	3.797	43	75	1640379
3.8		43	75	1640380
No.24	3.861	43	75	1640386
3.9		43	75	1640390
No.23	3.912	43	75	1640391
5/32"	3.969	43	75	1640397
No.22	3.988	43	75	1640399
4.0		43	75	1640400
No.21	4.039	43	75	1640404
No.20	4.089	43	75	1640409
4.1		43	75	1640410
4.2		43	75	1640420
No.19	4.216	43	75	1640422
4.3		47	80	1640430
No.18	4.305	47	80	1640431
11/64"	4.366	47	80	1640437
No.17	4.394	47	80	1640439
4.4		47	80	1640440
No.16	4.496	47	80	1640449
4.5		47	80	1640450
3/16"	4.762	52	86	1640476
No.12	4.800	52	86	1640479
4.8		52	86	1640480

Continued on next page...

Code

164

Properties

M INCH
WIRE
LETTER



DIN
338

HSS
Co5

TYPE
FS



BRIGHT
FINISH



STANDARD
POINT
sizes below
1.5 mm



SPLIT POINT
1.5 mm and
above

Suited Materials

CARBON
STEEL

ALLOY
STEEL

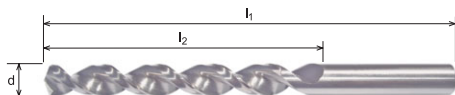
ALUMINIUM

GENERAL



STRAIGHT
SHANK
DRILLS

UDL Jobber Drills - Long Chip



Code

164

Properties

M
INCH
WIRE
LETTER

DIN
338

HSS
Co5

TYPE
FS

h8

STANDARD
POINT
sizes below
1.5 mm

SPLIT POINT
1.5 mm and
above

Suited Materials

CARBON
STEEL

ALLOY
STEEL

ALUMINUM

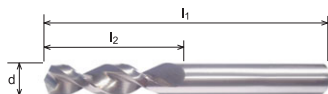
GENERAL

d	mm Equiv	l ₂	l ₁	Code
... from previous page				
No.11	4.851	52	86	1640485
4.9		52	86	1640490
No.10	4.915	52	86	1640492
No.9	4.978	52	86	1640498
5.0		52	86	1640500
No.8	5.055	52	86	1640506
5.1		52	86	1640510
No.7	5.105	52	86	1640511
13/64"	5.159	52	86	1640516
No.6	5.182	52	86	1640518
5.2		52	86	1640520
No.5	5.220	52	86	1640522
5.3		52	86	1640530
No.4	5.309	57	93	1640532
5.4		57	93	1640540
No.3	5.410	57	93	1640541
5.5		57	93	1640550
7/32"	5.556	57	93	1640556
5.6		57	93	1640560
No.2	5.613	57	93	1640561
5.7		57	93	1640570
No.1	5.791	57	93	1640579
5.8		57	93	1640580
5.9		57	93	1640590
LTR.A	5.944	57	93	1640594
15/64"	5.953	57	93	1640595
6.0		57	93	1640600
LTR.B	6.045	63	101	1640605
6.1		63	101	1640610
LTR.C	6.147	63	101	1640615
6.2		63	101	1640620
LTR.D	6.248	63	101	1640625
6.3		63	101	1640630
LTR.E	6.350	63	101	1640634
1/4"	6.350	63	101	1640635
6.4		63	101	1640640
6.5		63	101	1640650
LTR.F	6.528	63	101	1640653
6.6		63	101	1640660
LTR.G	6.629	63	101	1640663
6.7		63	101	1640670

d	mm Equiv	l ₂	l ₁	Code
LTR.H	6.756	69	109	1640676
17/64"	6.747	69	109	1640677
6.8		69	109	1640680
6.9		69	109	1640690
LTR.I	6.909	69	109	1640691
7.0		69	109	1640700
LTR.J	7.036	69	109	1640704
7.1		69	109	1640710
LTR.K	7.137	69	109	1640713
9/32"	7.144	69	109	1640714
7.2		69	109	1640720
7.3		69	109	1640730
LTR.L	7.366	69	109	1640737
7.4		69	109	1640740
LTR.M	7.493	69	109	1640749
7.5		69	109	1640750
19/64"	7.541	75	117	1640754
7.6		75	117	1640760
LTR.N	7.671	75	117	1640767
7.7		75	117	1640770
7.8		75	117	1640780
7.9		75	117	1640790
5/16"	7.938	75	117	1640794
8.0		75	117	1640800
LTR.Q	8.433	75	117	1640843
8.5		75	117	1640850
11/32"	8.731	81	125	1640873
LTR.S	8.839	81	125	1640884
9.0		81	125	1640900
23/64"	9.128	81	125	1640913
LTR.U	9.347	81	125	1640935
9.5		81	125	1640950
3/8"	9.525	87	133	1640953
10.0		87	133	1641000
10.5		87	133	1641050
27/64"	10.716	94	142	1641072
11.0		94	142	1641100
11.5		94	142	1641150
12.0		101	151	1641200
12.5		101	151	1641250
1/2"	12.700	101	151	1641269
13.0		101	151	1641300

STRAIGHT
SHANK
DRILLS

UDL Stub Drills - Long Chip



Code

163

Properties

M INCH
WIRE
LETTER

DIN
1897

HSS
Co5

TYPE
FS

40°

BRIGHT FINISH

STANDARD POINT
 sizes below
 1.5 mm

SPLIT POINT
 1.5 mm and
 above

Suited Materials

CARBON STEEL **ALLOY STEEL** **ALUMINIUM**

GENERAL



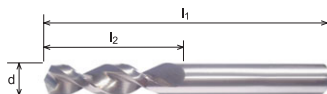
STRAIGHT SHANK DRILLS

d	mm Equiv	l2	l1	Code
1.0		6	26	1630100
No.60	1.016	6	26	1630102
No.59	1.041	6	26	1630104
No.58	1.067	7	28	1630107
No.57	1.092	7	28	1630109
1.1		7	28	1630110
No.56	1.181	8	30	1630118
3/64"	1.191	8	30	1630119
1.2		8	30	1630120
1.3		8	30	1630130
No.55	1.321	8	30	1630132
No.54	1.397	9	32	1630139
1.4		9	32	1630140
1.5		9	32	1630150
No.53	1.511	10	34	1630152
1/16"	1.588	10	34	1630159
1.6		10	34	1630160
No.52	1.613	10	34	1630161
No.51	1.702	10	34	1630169
1.7		10	34	1630170
No.50	1.778	11	36	1630178
1.8		11	36	1630180
No.49	1.854	11	36	1630185
1.9		11	36	1630190
No.48	1.930	12	38	1630193
5/64"	1.984	12	38	1630198
No.47	1.994	12	38	1630199
2.0		12	38	1630200
No.46	2.057	12	38	1630206
No.45	2.083	12	38	1630208
2.1		12	38	1630210
No.44	2.184	13	40	1630218
2.2		13	40	1630220
No.43	2.261	13	40	1630226
2.3		13	40	1630230
No.42	2.375	14	43	1630237
3/32"	2.381	14	43	1630238
2.4		14	43	1630240
No.41	2.438	14	43	1630244
No.40	2.489	14	43	1630249
2.5		14	43	1630250
No.39	2.527	14	43	1630253
No.38	2.578	14	43	1630258
2.6		14	43	1630260
No.37	2.642	14	43	1630264
2.7		16	46	1630270
No.36	2.705	16	46	1630271
7/64"	2.778	16	46	1630278
No.35	2.794	16	46	1630279
2.8		16	46	1630280

d	mm Equiv	l2	l1	Code
No.34	2.819	16	46	1630282
No.33	2.870	16	46	1630287
2.9		16	46	1630290
No.32	2.976	16	46	1630295
3.0		16	46	1630300
No.31	3.048	18	49	1630305
3.1		18	49	1630310
1/8"	3.175	16	46	1630318
3.2		18	49	1630320
No.30	3.264	18	49	1630326
3.3		18	49	1630330
3.4		20	52	1630340
No.29	3.454	18	49	1630345
3.5		20	52	1630350
9/64"	3.572	20	52	1630357
3.6		20	52	1630360
No.27	3.658	20	52	1630366
3.7		20	52	1630370
No.26	3.734	20	52	1630373
No.25	3.797	22	55	1630379
3.8		22	55	1630380
No.24	3.861	22	55	1630386
3.9		22	55	1630390
No.23	3.912	22	55	1630391
5/32"	3.969	22	55	1630397
No.22	3.988	22	55	1630399
4.0		22	55	1630400
No.21	4.039	22	55	1630404
No.20	4.089	22	55	1630409
4.1		22	55	1630410
4.2		22	55	1630420
No.19	4.216	22	55	1630422
4.3		24	58	1630430
No.18	4.305	24	58	1630431
11/64"	4.366	24	58	1630437
No.17	4.394	24	58	1630439
4.4		24	58	1630440
No.16	4.496	24	58	1630449
4.5		24	58	1630450
No.15	4.572	24	58	1630457
4.6		24	58	1630460
3/16"	4.762	26	62	1630476
No.12	4.800	26	62	1630479
4.8		26	62	1630480
No.11	4.851	26	62	1630485
4.9		26	62	1630490
No.10	4.915	26	62	1630492
No.9	4.978	26	62	1630498
5.0		26	62	1630500
No.8	5.055	26	62	1630506

Continued on next page...

UDL Stub Drills - Long Chip



Code

163

Properties

M
INCH
WIRE
LETTER

DIN 1897

HSS Co5



TYPE FS



40°

BRIGHT FINISH



STANDARD POINT
sizes below
1.5 mm



SPLIT POINT
1.5 mm and
above

Suited Materials

CARBON STEEL

ALLOY STEEL

ALUMINUM

GENERAL



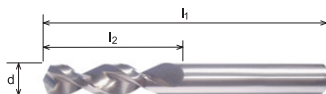
STRAIGHT SHANK DRILLS

d	mm Equiv	l2	l1	Code
... from previous page				
5.1		26	62	1630510
No.7	5.105	26	62	1630511
13/64"	5.159	26	62	1630516
No.6	5.182	26	62	1630518
5.2		26	62	1630520
No.5	5.220	26	62	1630522
5.3		26	62	1630530
No.4	5.309	28	66	1630532
5.4		28	66	1630540
No.3	5.410	28	66	1630541
5.5		28	66	1630550
7/32"	5.556	28	66	1630556
5.6		28	66	1630560
No.2	5.613	28	66	1630561
5.7		28	66	1630570
No.1	5.791	28	66	1630579
5.8		28	66	1630580
5.9		28	66	1630590
LTR.A	5.944	28	66	1630594
15/64"	5.953	28	66	1630595
6.0		28	66	1630600
LTR.B	6.045	31	70	1630605
6.1		31	70	1630610
LTR.C	6.147	31	70	1630615
6.2		31	70	1630620
LTR.D	6.248	31	70	1630625
6.3		31	70	1630630
LTR.E	6.350	31	70	1630634
1/4"	6.350	31	70	1630635
6.4		31	70	1630640
6.5		31	70	1630650
LTR.F	6.528	31	70	1630653
6.6		31	70	1630660
LTR.G	6.629	31	70	1630663
6.7		31	70	1630670
LTR.H	6.756	34	74	1630676
17/64"	6.747	34	74	1630677
6.8		34	74	1630680
6.9		34	74	1630690
LTR.I	6.909	34	74	1630691
7.0		34	74	1630700
LTR.J	7.036	34	74	1630704
7.1		34	74	1630710
LTR.K	7.137	34	74	1630713
9/32"	7.144	34	74	1630714
7.2		34	74	1630720
7.3		34	74	1630730
LTR.L	7.366	34	74	1630737
7.4		34	74	1630740

d	mm Equiv	l2	l1	Code
LTR.M	7.493	34	74	1630749
7.5		34	74	1630750
19/64"	7.541	37	79	1630754
7.6		37	79	1630760
LTR.N	7.671	37	79	1630767
7.7		37	79	1630770
7.8		37	79	1630780
7.9		37	79	1630790
5/16"	7.938	37	79	1630794
8.0		37	79	1630800
LTR.O	8.026	37	79	1630803
8.1		37	79	1630810
8.2		37	79	1630820
LTR.P	8.204	37	79	1630821
8.3		37	79	1630830
21/64"	8.334	37	79	1630833
8.4		37	79	1630840
LTR.Q	8.433	37	79	1630843
8.5		37	79	1630850
8.6		40	84	1630860
LTR.R	8.611	40	84	1630861
8.7		40	84	1630870
11/32"	8.731	40	84	1630873
8.8		40	84	1630880
LTR.S	8.839	40	84	1630884
8.9		40	84	1630890
9.0		40	84	1630900
LTR.T	9.093	40	84	1630909
9.1		40	84	1630910
23/64"	9.128	40	84	1630913
9.2		40	84	1630920
9.3		40	84	1630930
LTR.U	9.347	40	84	1630935
9.4		40	84	1630940
9.5		40	84	1630950
3/8"	9.525	43	89	1630953
LTR.V	9.756	43	89	1630958
9.6		43	89	1630960
9.7		43	89	1630970
9.8		43	89	1630980
LTR.W	9.804	43	89	1630981
9.9		43	89	1630990
25/64"	9.922	43	89	1630992
10.0		43	89	1631000
LTR.X	10.084	43	89	1631008
10.2		43	89	1631020
LTR.Y	10.262	43	89	1631026
13/32"	10.319	43	89	1631032
LTR.Z	10.490	43	89	1631049
10.5		43	89	1631050

Continued on next page...

UDL Stub Drills - Long Chip



d	mm Equiv	l ₂	l ₁	Code
... from previous page				
27/64"	10.716	47	95	1631072
10.8		47	95	1631080
11.0		47	95	1631100
7/16"	11.112	47	95	1631111
11.2		47	95	1631120
11.5		47	95	1631150

d	mm Equiv	l ₂	l ₁	Code
29/64"	11.509	47	95	1631151
12.0		51	102	1631200
31/64"	12.303	51	102	1631229
12.5		51	102	1631250
1/2"	12.700	51	102	1631269
13.0		51	102	1631300

Code

163

Properties

M
INCH
WIRE
LETTER

DIN
1897

HSS
Co5



TYPE
FS



40°

BRIGHT
FINISH



STANDARD
POINT
sizes below
1.5 mm



SPLIT POINT
1.5 mm and
above

Suited Materials

CARBON
STEEL

ALLOY
STEEL

ALUMINIUM

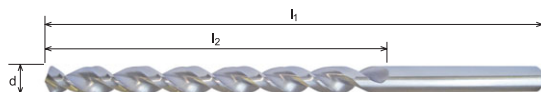
GENERAL



STRAIGHT
SHANK
DRILLS



UDL Long Series Drills - Long Chip



Code

109

Properties

M **DIN 340** **HSS Co5**

TYPE FS

h8 **40°** **BRIGHT FINISH**

UX POINT

Suited Materials

CARBON STEEL **ALLOY STEEL** **ALUMINIUM**

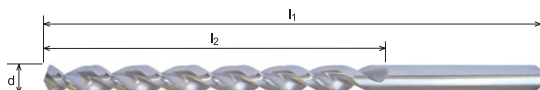
GENERAL

d	l ₂	l ₁	Code	d	l ₂	l ₁	Code
3.0	66	100	1090300	6.1	97	148	1090610
3.1	69	106	1090310	6.3	97	148	1090630
3.2	69	106	1090320	6.4	97	148	1090640
3.3	69	106	1090330	6.5	97	148	1090650
3.5	73	112	1090350	6.8	102	156	1090680
3.6	73	112	1090360	6.9	102	156	1090690
3.9	78	119	1090390	7.0	102	156	1090700
4.0	78	119	1090400	7.1	102	156	1090710
4.1	78	119	1090410	7.5	102	156	1090750
4.2	78	119	1090420	7.9	109	165	1090790
4.5	82	126	1090450	8.0	109	165	1090800
4.6	82	126	1090460	8.4	109	165	1090840
4.8	87	132	1090480	8.5	109	165	1090850
5.0	87	132	1090500	8.6	115	175	1090860
5.1	87	132	1090510	9.0	115	175	1090900
5.2	87	132	1090520	9.1	115	175	1090910
5.4	91	139	1090540	9.5	115	175	1090950
5.5	91	139	1090550	9.6	121	184	1090960
5.8	91	139	1090580	9.8	121	184	1090980
6.0	91	139	1090600	10.0	121	184	1091000



**STRAIGHT
SHANK
DRILLS**

UDL Long Series Drills - Long Chip



d	l ₂	l ₁	Code
1	33	56	1100100
1.1	37	60	1100110
1.2	41	65	1100120
1.3	41	65	1100130
1.4	41	70	1100140
1.5	45	70	1100150
1.6	50	76	1100160
1.7	50	76	1100170
1.8	53	80	1100180
1.9	53	80	1100190
2	56	85	1100200
2.1	56	85	1100210
2.2	59	90	1100220
2.3	59	90	1100230
2.4	62	95	1100240
2.5	62	95	1100250
2.6	66	100	1100260
2.7	66	100	1100270
2.8	66	100	1100280
2.9	66	100	1100290
3	66	100	1100300
3.1	69	106	1100310
3.2	69	106	1100320
3.3	69	106	1100330
3.4	73	112	1100340
3.5	73	112	1100350
3.6	73	112	1100360
3.7	73	112	1100370
3.8	78	119	1100380
3.9	78	119	1100390
4	78	119	1100400
4.1	78	119	1100410
4.2	78	119	1100420
4.3	82	126	1100430
4.4	82	126	1100440
4.5	82	126	1100450
4.6	82	126	1100460
4.7	82	126	1100470
4.8	87	132	1100480
4.9	87	132	1100490
5	87	132	1100500
5.1	87	132	1100510
5.2	87	132	1100520
5.3	87	132	1100530
5.4	91	139	1100540
5.5	91	139	1100550

d	l ₂	l ₁	Code
5.6	91	139	1100560
5.7	91	139	1100570
5.8	91	139	1100580
5.9	91	139	1100590
6	91	139	1100600
6.1	97	148	1100610
6.2	97	148	1100620
6.3	97	148	1100630
6.4	97	148	1100640
6.5	97	148	1100650
6.6	97	148	1100660
6.7	97	148	1100670
6.8	102	156	1100680
6.9	102	156	1100690
7	102	156	1100700
7.1	102	156	1100710
7.2	102	156	1100720
7.3	102	156	1100730
7.4	102	156	1100740
7.5	102	156	1100750
7.6	109	165	1100760
7.7	109	165	1100770
7.8	109	165	1100780
7.9	109	165	1100790
8	109	165	1100800
8.1	109	165	1100810
8.2	109	165	1100820
8.3	109	165	1100830
8.4	109	165	1100840
8.5	109	165	1100850
8.6	115	175	1100860
8.7	115	175	1100870
8.8	115	175	1100880
8.9	115	175	1100890
9	115	175	1100900
9.1	115	175	1100910
9.2	115	175	1100920
9.3	115	175	1100930
9.4	115	175	1100940
9.5	115	175	1100950
9.6	121	184	1100960
9.7	121	184	1100970
9.8	121	184	1100980
9.9	121	184	1100990
10	121	184	1101000

Code

110

Properties

M	DIN 340	HSS Co5
	TYPE FS	
	40°	BRIGHT FINISH
 STANDARD POINT sizes below 1.5 mm		
 SPLIT POINT 1.5 mm and above		

Suited Materials

CARBON STEEL **ALLOY STEEL** **ALUMINIUM**

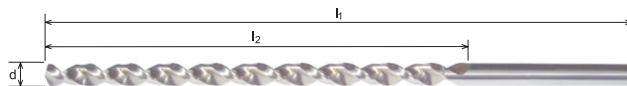
GENERAL



STRAIGHT SHANK DRILLS



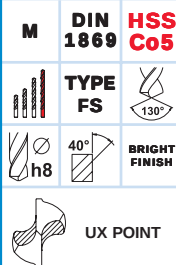
UDL Extra Length Drills - Long Chip



Codes

**118, 119
& 120**

Properties



Suited Materials

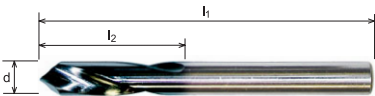


**STRAIGHT
SHANK
DRILLS**

d	l ₂	l ₁	Code	d	l ₂	l ₁	Code
SERIES 1							
2	85	125	1180200	8.5	165	240	1180850
2	90	135	1180201	9	175	250	1180900
2.5	95	140	1180250	9.5	175	250	1180950
3	100	150	1180300	10	185	265	1181000
3	105	155	1180301	*11	195	280	1181100
3.5	115	165	1180350	*11.5	195	280	1181150
4	120	175	1180400	*12	205	295	1181200
4.5	125	185	1180450	*12.5	205	295	1181250
5	135	195	1180500	*13	205	295	1181300
5.5	140	205	1180550	*13.5	220	310	1181350
6	140	205	1180600	*14	220	310	1181400
6.5	150	215	1180650	*14.5	220	310	1181450
7	155	225	1180700	*15	220	310	1181500
7.5	155	225	1180750	*15.5	230	320	1181550
8	165	240	1180800	*16	230	320	1181600
SERIES 2							
3	130	190	1190300	9.5	220	320	1190950
3	135	200	1190301	10	235	340	1191000
3.5	145	210	1190350	*10.5	235	340	1191050
4	150	220	1190400	*11	250	365	1191100
4.5	160	235	1190450	*12	260	375	1191200
5	170	245	1190500	*12.5	260	375	1191250
5.5	180	260	1190550	*13	260	375	1191300
6	180	260	1190600	*13.5	275	380	1191350
6.5	190	275	1190650	*14	275	380	1191400
7	200	290	1190700	*14.5	275	380	1191450
7.5	200	290	1190750	*15	275	380	1191500
8	210	305	1190800	*15.5	290	400	1191550
8.5	210	305	1190850	*16	290	400	1191600
9	220	320	1190900				
SERIES 3							
4	190	280	1200400	9	280	410	1200900
4.5	200	295	1200450	9.5	280	410	1200950
5	210	315	1200500	10	295	430	1201000
5.5	225	330	1200550	*10.5	295	430	1201050
6	225	330	1200600	*11	300	455	1201100
6.5	235	350	1200650	*11.5	300	455	1201150
7	250	370	1200700	*12	300	480	1201200
7.5	250	370	1200750	*12.5	300	480	1201250
8	265	390	1200800	*13	300	480	1201300
8.5	265	390	1200850				

*Works standard.

NC Spotting Drills



d	l ₂	l ₁	Code
3	10	46	1840300
4	12	55	1840400
5	14	62	1840500
6	16	66	1840600
8	21	79	1840800
10	25	89	1841000
12	30	102	1841200
16	38	115	1841600
20	45	131	1842000

Code

184

Properties

M	DIN 1897	HSS Co5
	30°	h8
	TiAlN	
STANDARD POINT		

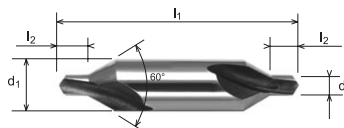
Suited Materials

GENERAL



STRAIGHT SHANK DRILLS

Centre Drills - Form A



Codes

114, 115

Properties

M INCH	DIN 333 METRIC	BS 328 INCH
HSS		FORM A
BRIGHT FINISH		

Suited Materials

GENERAL

d	d ₁	l ₂	l ₁	Code
METRIC				
0.8	3.15	1.1	25	1140080
1	3.15	1.3	31.5	1140100
(1.25)	3.15	1.6	31.5	1140125
1.6	4	2	35.5	1140160
2	5	2.5	40	1140200
2.5	6.3	3.1	45	1140250
3.15	8	3.9	50	1140315
4	10	5	56	1140400
(5)	12.5	6.3	63	1140500
6.3	16	8	71	1140630
(8)	20	10.1	80	1140800
10	25	12.8	100	1141000

Ref. Number	d	d ₁	l ₂	l ₁	Code
INCH					
BS 1	1.19	3.18	1.8	38	1150119
BS 2	1.59	4.76	2.2	45	1150159
BS 3	2.38	6.35	3.6	51	1150238
BS 4	3.18	7.94	4.4	57	1150318
BS 5	4.76	11.11	6.8	64	1150476
BS 6	6.35	15.88	8.7	76	1150635
BS 7	7.94	19.05	11.1	89	1150754

NEW



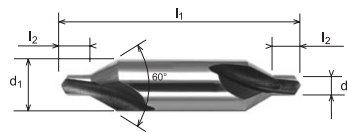
Description	Ref No.	Code
Centre Drill Set - TiN Coated	115S	1150000T
THIS SET CONTAINS:		
BS2 - 1150159T		
BS3 - 1150238T		
BS4 - 1150318T		
BS5 - 1150476T		
BS6 - 1150635T		

() Non-recommended sizes, and should be avoided whenever possible.



**STRAIGHT
SHANK
DRILLS**

Centre Drills - American Standard



Ref. Number	d	d ₁	l ₂	l ₁	Code
No. 1	1.19	3.18	1.2	32	1NA0001
No. 2	1.98	4.76	2.0	48	1NA0002
No. 3	2.78	6.35	2.8	51	1NA0003
No. 4	3.18	7.94	3.2	54	1NA0004
No. 5	4.76	11.11	4.8	70	1NA0005
No. 6	5.56	12.7	5.5	76	1NA0006
No. 7	6.35	15.88	6.4	83	1NA0007

Code
1NA

Properties		
INCH	ANSI	HSS
	FORM A	BRIGHT FINISH

Suited Materials
GENERAL



STRAIGHT
SHANK
DRILLS

Centre Drills - Form B

Code

138

Properties

M

**DIN
333**

HSS

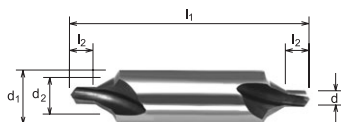


**FORM
B**

**BRIGHT
FINISH**

Suited Materials

GENERAL



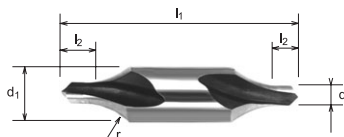
d	d ₁	d ₂	l ₂	l ₁	Code
1	4	2.12	1.3	35.5	1380100
(1.25)	5	2.65	1.6	40	1380125
1.6	6.3	3.35	2	45	1380160
2	8	4.25	2.5	50	1380200
2.5	10	5.3	3.1	56	1380250
3.15	11.2	6.7	3.9	60	1380315
4	14	8.5	5	67	1380400
(5)	18	10.6	6.3	75	1380500
6.3	20	13.2	8	80	1380630
(8)	25	17	10.1	100	1380800
10	31.5	21.2	12.8	125	1381000

() Non-recommended sizes, and should be avoided whenever possible.



**STRAIGHT
SHANK
DRILLS**

Centre Drills - Form R



d	d ₁	r		l ₂	l ₁	Code
		max.	min.			
(1.25)	3.15	4	3.15	3.35	31.5	1390125
1.6	4	5	4	4.25	35.5	1390160
2	5	6.3	5	5.3	40	1390200
2.5	6.3	8	6.3	6.7	45	1390250
3.15	8	10	8	8.5	50	1390315
4	10	12.5	10	10.6	56	1390400
(5)	12.5	16	12.5	13.2	63	1390500
6.3	16	20	16	17	71	1390630
(8)	20	25	20	21.2	80	1390800

() Non-recommended sizes, and should be avoided whenever possible.

Code

139

Properties

M	DIN 333	HSS
	FORM R	BRIGHT FINISH

Suited Materials

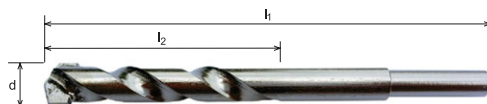
GENERAL



**STRAIGHT
SHANK
DRILLS**



Masonry Drills - Carbide Tipped



Hi-Cut

Codes

186 - 188

Properties

M



Suited Materials

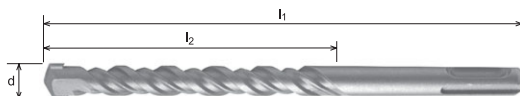
MASONRY

d	l ₂	l ₁	Code	d	l ₂	l ₁	Code
REGULAR LENGTH							
3	28	60	1860300	11	90	150	1861100
3.5	35	70	1860350	12	90	150	1861200
4	40	75	1860400	13	90	150	1861300
4.5	50	85	1860450	14	90	150	1861400
5	50	85	1860500	15	90	150	1861500
5.5	50	85	1860550	16	90	150	1861600
6	60	100	1860600	18	100	160	1861800
6.5	60	100	1860650	19	100	160	1861900
7	60	100	1860700	20	100	160	1862000
8	80	120	1860800	22	100	160	1862200
8.5	80	120	1860850	24	100	160	1862400
9	80	120	1860900	25	100	160	1862500
10	80	120	1861000				
LONG SERIES							
6	250	330	1870600	16	250	330	1871600
10	250	330	1871000	19	250	330	1871900
13	250	330	1871300	25	250	330	1872500
EXTRA LENGTH							
13	350	450	1881300	25	350	450	1882500
19	350	450	1881900				



STRAIGHT
SHANK
DRILLS

Heavy Duty SDS Plus Drills - Carbide Tipped



d	l ₂	l ₁	Code
5	50	110	1900500
5	100	160	1900501
7	200	260	1900703
8	100	160	1900801
8	200	260	1900803
10	50	110	1901000
10	100	160	1901001
10	150	210	1901002
14	100	160	1901401
16	100	160	1901601
16	150	210	1901602
16	200	260	1901603
16	250	310	1901604
20	150	210	1902002
20	200	260	1902003
22	200	260	1902203

Hi-Cut

Code

190

Properties

M

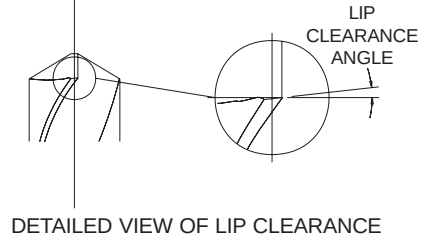
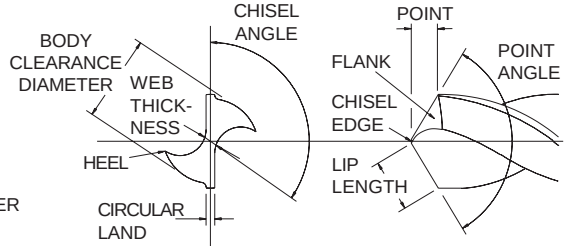
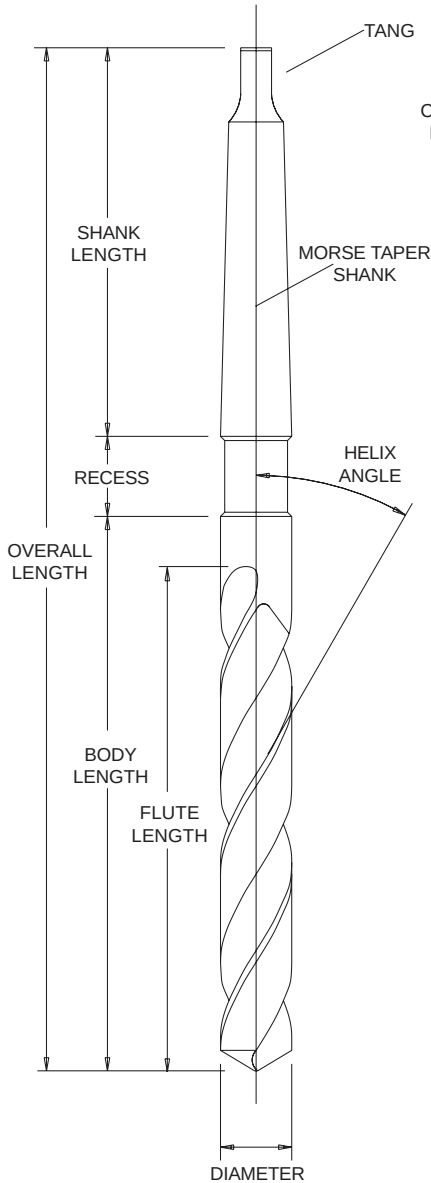
Suited Materials

MASONRY

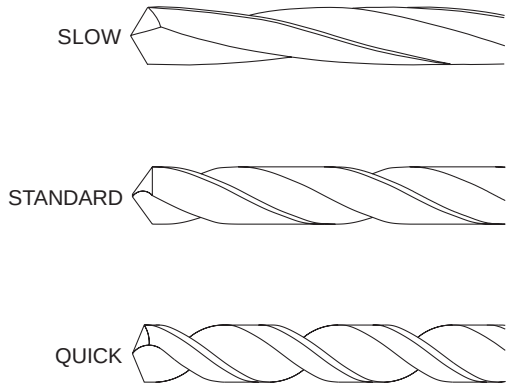


**STRAIGHT
SHANK
DRILLS**

Drill Terminology



TYPES OF SPIRAL (OR HELIX) ANGLES

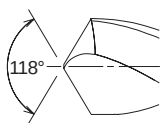


Note : Selecting the correct Drill
Refer to the SOMTA User Guide for detailed information.

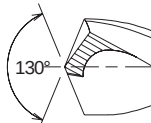
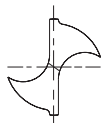
Continued on next page...



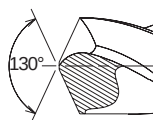
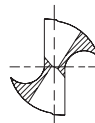
DRILL POINT STYLES



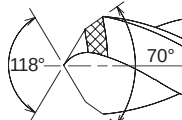
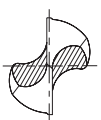
Standard Point



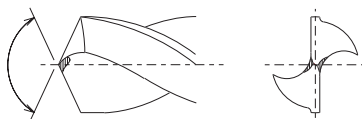
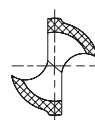
Split Point
Din 1412 Form C



"UX Point"
DIN 1412 TYPE B



Cast Iron Point
"DX Point"
DIN 1412 TYPE D

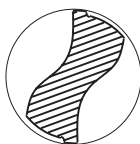


DIN 1412 TYPE A

FLUTE FORMS



● Conventional Web



● Parabolic Flute Form
● Thicker Web



● Chipbreaker

Benefits of the Parabolic Flute Form

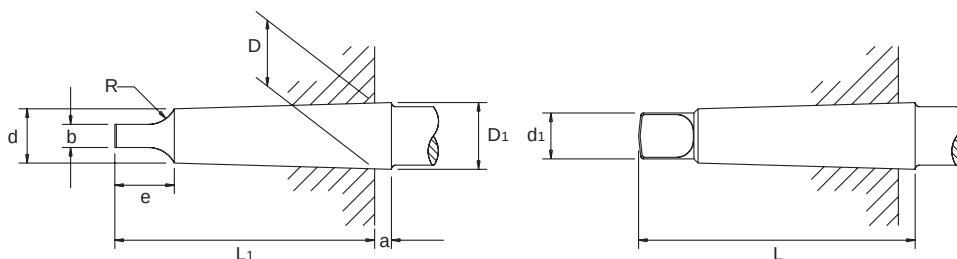
Heavy web construction increases rigidity under torsional load thus eliminating chatter at the cutting edges which cause edge break down and early failure. The Parabolic drill web is 50-90% thicker than the standard drill, depending on drill diameter.

Wider flute form, together with quicker spiral, promotes better chip removal while allowing easier coolant flow to the drill point.

Continued on next page...



STANDARD MORSE TAPER SHANK To I.S.O. 296 DIN228 BS1660



No. of Taper	Fitting line Diameter D	Diameter d	Overall Length Max L	D 1	a	Max L1	Max e	H13 b	Max d1	Taper / mm on Dia	Max R
1	12.065	9.0	65.5	12.2	3.5	62.0	13.5	5.2	8.7	0.04998	5.0
2	17.780	14.0	80.0	18.0	5.0	75.0	16.0	6.3	13.5	0.04995	6.0
3	23.825	19.0	99.0	24.1	5.0	94.0	20.0	7.9	18.5	0.05020	7.0
4	31.267	25.0	124.0	31.6	6.5	117.5	24.0	11.9	24.5	0.05194	8.0
5	44.399	36.0	156.0	44.7	6.5	149.5	29.0	15.9	35.7	0.05263	10.0
6	63.348	52.0	218.0	63.8	8.0	210.0	40.0	19.0	51.0	0.05214	13.0

HOW TO ORDER SPECIALS

MODIFIED STANDARDS

There are many instances when a special tool (a tool not found in the Somta catalogue or price list) can be manufactured from a standard product. We call this a 'modified standard'. Somta has both the capability and capacity to offer this service which, under normal circumstances, means a short delivery time.

The following are typical drill modifications:

Intermediate Diameters

Standard sizes can be ground down to special diameters and tolerances.

Reduced Overall Lengths

Standard drills can be cut to special lengths.

Drill Points

The standard drill point angle is 118° included. This can be modified to any angle required. Many special

Continued on next page...



points are available which include web thinning, notch points, split points, double angle points, spur and brad points etc.

Tangs and Flats

Tangs can be produced to DIN, ASA and ISO, also special whistle notch flats on shanks.

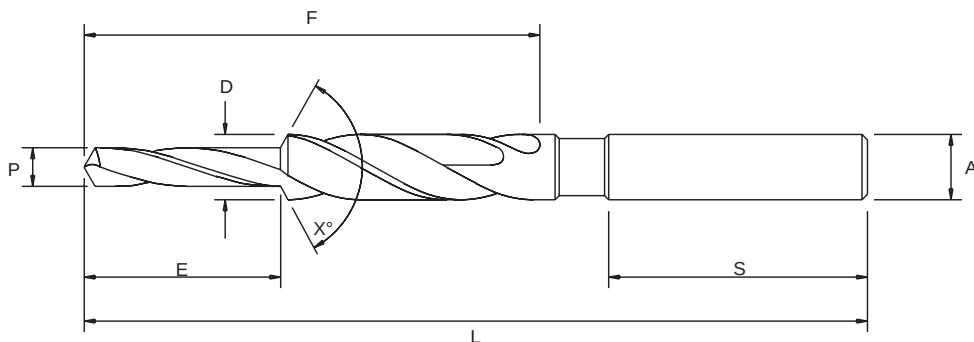
Step Drills

Standard drills can be modified into step drills.

Surface Treatments

A full range of surface treatments including nitriding, stream oxide, chemical blackening, gold oxide and various titanium coatings are available.

MULTIPLE DIAMETER DRILLS



Specify whether drill is to be Step or Subland Type.

D = Diameter of large, fluted section.

P = Diameter of small, fluted section.

A = Shank Diameter.

L = Overall Length.

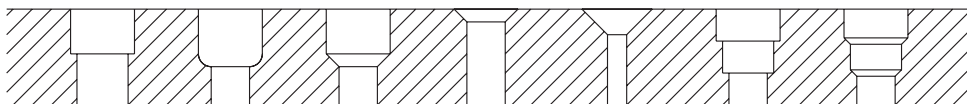
F = Flute Length.

E = Length of Small Diameter. This is measured from the extreme point to the bottom corner of the step angle.

X° = Included angle of the step angle.

S = Shank Length.

It is possible to drill two or more diameters in a hole on one operation with a correctly designed drill and these are often used in mass production engineering.



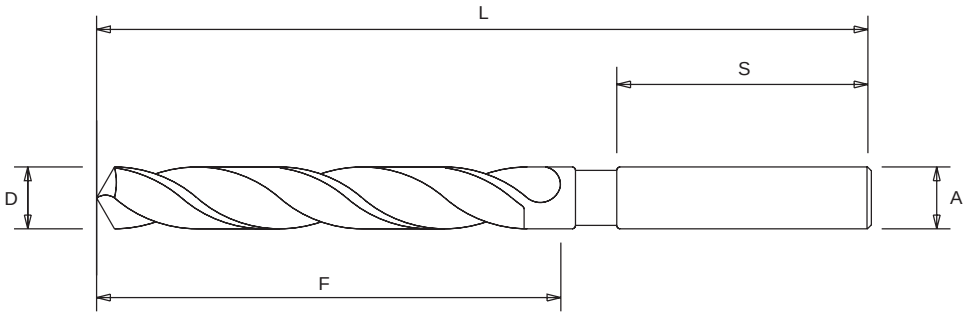
Some of the hole types that can be drilled in a single operation.

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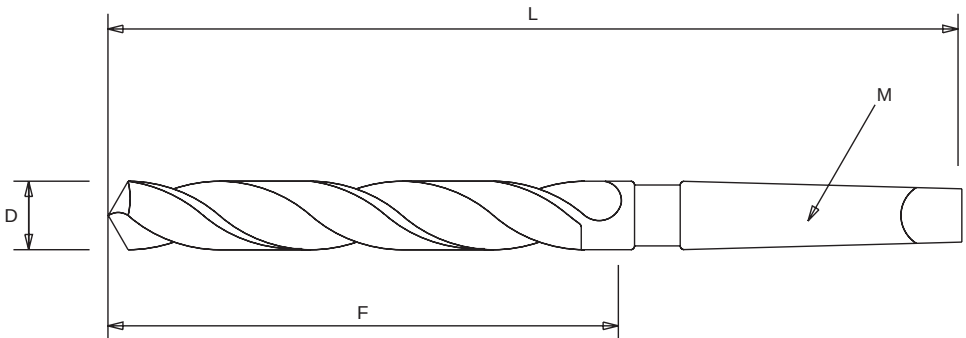
When an intermediate diameter or a non standard length of drill is required, the following diameters and lengths need to be specified.

Straight Shank Drills



D = Drill Diameter
 A = Shank Diameter
 L = Overall Length
 F = Flute Length
 S = Shank Length

Morse Taper Shank Drills



D = Drill Diameter
 L = Overall Length
 F = Flute Length
 M = Morse Taper Size

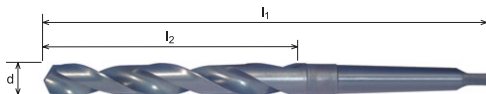




M O R S E T A P E R S H A N K D R I L L S



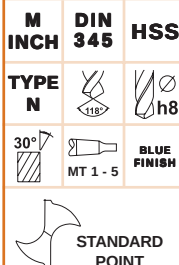
Morse Taper Shank Drills



Codes

201 - 205
211 - 214

Properties



Suited Materials

GENERAL

d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			

No. 1 Morse Taper Shank

3		33	114	2010300	9.922	25/64	87	168	2110992
3.5		39	120	2010350	10		87	168	2011000
4		43	124	2010400	10.319	13/32	87	168	2111032
4.5		47	128	2010450	10.5		87	168	2011050
5		52	133	2010500	10.716	27/64	94	175	2111072
5.5		57	138	2010550	11		94	175	2011100
6		57	138	2010600	11.112	7/16	94	175	2111111
6.350	1/4	63	144	2110635	11.5		94	175	2011150
6.5		63	144	2010650	11.906	15/32	101	182	2111191
7		69	150	2010700	12		101	182	2011200
7.5		69	150	2010750	12.5		101	182	2011250
7.937	5/16	75	156	2110794	12.700	1/2	101	182	2111270
8		75	156	2010800	13		101	182	2011300
8.5		75	156	2010850	13.494	17/32	108	189	2111349
9		81	162	2010900	13.5		108	189	2011350
9.5		81	162	2010950	14		108	189	2011400
9.525	3/8	87	168	2110953					

No. 2 Morse Taper Shank

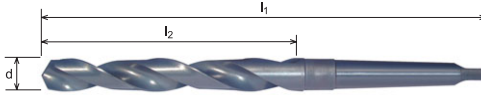
(14)		114	212	2021400	18.256	23/32	135	233	2121826
14.287	9/16	114	212	2121429	18.5		135	233	2021850
14.5		114	212	2021450	18.653	47/64	135	233	2121865
14.684	37/64	114	212	2121468	19		135	233	2021900
15		114	212	2021500	19.050	3/4	140	238	2121905
15.081	19/32	120	218	2121508	19.5		140	238	2021950
15.478	39/64	120	218	2121548	20		140	238	2022000
15.5		120	218	2021550	20.5		145	243	2022050
15.875	5/8	120	218	2121588	20.637	13/16	145	243	2122064
16		120	218	2021600	21		145	243	2022100
16.272	41/64	125	223	2121627	21.431	27/32	150	248	2122143
16.5		125	223	2021650	21.5		150	248	2022150
16.669	21/32	125	223	2121667	22		150	248	2022200
17		125	223	2021700	22.225	7/8	150	248	2122223
17.462	11/16	130	228	2121746	22.5		155	253	2022250
17.5		130	228	2021750	23		155	253	2022300
18		130	228	2021800					

No. 3 Morse Taper Shank

23.5		155	276	2032350	28		170	291	2032800
23.812	15/16	160	281	2132381	28.5		175	296	2032850
24		160	281	2032400	28.575	1.1/8	175	296	2132858
24.5		160	281	2032450	29		175	296	2032900
25		160	281	2032500	29.5		175	296	2032950
25.400	1"	165	286	2132540	30		175	296	2033000
25.5		165	286	2032550	30.162	1.3/16	180	301	2133016
26		165	286	2032600	30.5		180	301	2033050
26.5		165	286	2032650	31		180	301	2033100
26.987	1.1/16	170	291	2132699	31.5		180	301	2033150
27		170	291	2032700	31.750	1.1/4	185	306	2133175
27.5		170	291	2032750	(32)		185	306	2033200

Continued on next page...

Morse Taper Shank Drills



d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			
No. 4 Morse Taper Shank									
... from previous page					41		205	354	2044100
32		185	334	2043200	41.275	1.5/8	205	354	2144128
32.5		185	334	2043250	41.5		205	354	2044150
33		185	334	2043300	42		205	354	2044200
33.337	1.5/16	185	334	2143334	42.5		205	354	2044250
33.5		185	334	2043350	43		210	359	2044300
34		190	339	2043400	43.5		210	359	2044350
34.5		190	339	2043450	44		210	359	2044400
34.925	1.3/8	190	339	2143493	44.450	1.3/4	210	359	2144445
35		190	339	2043500	44.5		210	359	2044450
35.5		190	339	2043550	45		210	359	2044500
36		195	344	2043600	45.5		215	359	2044550
36.5		195	344	2043650	46		215	364	2044600
36.512	1.7/16	195	344	2143651	46.5		215	364	2044650
37		195	344	2043700	47		215	364	2044700
37.5		195	344	2043750	47.5		215	364	2044750
38		200	349	2043800	47.625	1.7/8	220	369	2144763
38.100	1.1/2	200	349	2143810	48		220	369	2044800
38.5		200	349	2043850	48.5		220	369	2044850
39		200	349	2043900	49		220	369	2044900
39.5		200	349	2043950	49.5		220	369	2044950
39.687	1.9/16	200	349	2143969	50		220	369	2045000
40		200	349	2044000	50.5		225	374	2045050
40.5		205	354	2044050	50.800	2"	225	374	2145080
No. 5 Morse Taper Shank									
51		225	412	2055100	60		235	422	2056000
51.5		225	412	2055150	61		240	427	2056100
52		225	412	2055200	62		240	427	2056200
52.5		225	412	2055250	63		240	427	2056300
53		225	412	2055300	64		245	432	2056400
53.5		230	417	2055350	65		245	432	2056500
54		230	417	2055400	66		245	432	2056600
54.5		230	417	2055450	67		245	432	2056700
55		230	417	2055500	68		250	437	2056800
55.5		230	417	2055550	69		250	437	2056900
56		230	417	2055600	70		250	437	2057000
56.5		235	422	2055650	71		250	437	2057100
57		235	422	2055700	72		255	442	2057200
57.5		235	422	2055750	73		255	442	2057300
58		235	422	2055800	74		255	442	2057400
58.5		235	422	2055850	75		255	442	2057500
59		235	422	2055900	76		260	447	2057600
59.5		235	422	2055950					

Codes

201 - 205
211 - 214

Properties

M INCH	DIN 345	HSS
TYPE N		
30°	MT 1 - 5	BLUE FINISH
STANDARD POINT		

Suited Materials

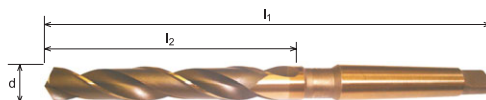
GENERAL



MORSE TAPER
SHANK DRILLS



Heavy Duty MTS Drills



Code
208

Properties			
M	DIN 345	HSS Co5	
TYPE N			
		GOLD OXIDE	
	SPLIT POINT		

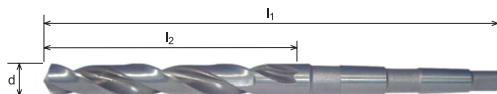
Suited Materials
CARBON & ALLOY STEEL
GENERAL

d	l ₂	l ₁	Code	d	l ₂	l ₁	Code
No. 1 Morse Taper Shank							
14	108	189	2081400				
No. 2 Morse Taper Shank							
14.5	114	212	2081450	18.5	135	233	2081850
15	114	212	2081500	19	135	233	2081900
15.5	120	218	2081550	19.5	140	238	2081950
16	120	218	2081600	20	140	238	2082000
16.5	125	223	2081650	21	145	243	2082100
17	125	223	2081700	22	150	248	2082200
17.5	130	228	2081750	22.5	155	253	2082250
18	130	228	2081800	23	155	253	2082300
No. 3 Morse Taper Shank							
24	160	281	2082400	27	170	291	2082700
24.5	160	281	2082450	28	170	291	2082800
25	160	281	2082500	29	175	296	2082900
25.5	165	286	2082550	30	175	296	2083000
26	165	286	2082600	31	180	301	2083100
No. 4 Morse Taper Shank							
32	185	334	2083200	35	190	339	2083500
33	185	334	2083300	38	200	349	2083800
34	190	339	2083400				



MORSE TAPER
SHANK DRILLS

MTS Chipbreaker Drills



d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			
No. 1 Morse Taper Shank									
10		87	168	2A11000	11.906	15/32	101	182	2A11191
10.2		87	168	2A11020	12		101	182	2A11200
10.25		87	168	2A11025	12.2		101	182	2A11220
10.5		87	168	2A11050	12.303	31/64	101	182	2A11231
10.6		87	168	2A11060	12.5		101	182	2A11250
10.75		94	175	2A11075	12.75		101	182	2A11275
11		94	175	2A11100	13		101	182	2A11300
11.112	7/16	94	175	2A11111	13.494	17/32	108	189	2A11349
11.2		94	175	2A11120	13.5		108	189	2A11350
11.5		94	175	2A11150	13.75		108	189	2A11375
11.7		94	175	2A11170	13.891	35/64	108	189	2A11389
11.8		94	175	2A11180	14		108	189	2A11400
No. 2 Morse Taper Shank									
(14)		114	212	2A11401	18.25		135	233	2A11825
14.2		114	212	2A11420	18.256	23/32	135	233	2A11826
14.25		114	212	2A11425	18.5		135	233	2A11850
14.287	9/16	114	212	2A11429	18.7		135	233	2A11870
14.5		114	212	2A11450	18.75		135	233	2A11875
14.684	37/64	114	212	2A11468	19		135	233	2A11900
14.75		114	212	2A11475	19.050	3/4	140	238	2A11905
15		114	212	2A11500	19.25		140	238	2A11925
15.081	19/32	120	218	2A11508	19.4		140	238	2A11940
15.25		120	218	2A11525	19.447	49/64	140	238	2A11945
15.5		120	218	2A11550	19.5		140	238	2A11950
15.6		120	218	2A11560	19.75		140	238	2A11975
15.75		120	218	2A11575	19.844	25/32	140	238	2A11984
15.875	5/8	120	218	2A11588	20		140	238	2A12000
15.9		120	218	2A11590	20.25		145	243	2A12025
16		120	218	2A11600	20.5		145	243	2A12050
16.1		125	223	2A11610	20.637	13/16	145	243	2A12064
16.25		125	223	2A11625	21		145	243	2A12100
16.3		125	223	2A11630	21.034	53/64	145	243	2A12103
16.5		125	223	2A11650	21.25		150	248	2A12125
16.669	21/32	125	223	2A11667	21.5		150	248	2A12150
16.75		125	223	2A11675	21.828	55/64	150	248	2A12183
17		125	223	2A11700	22		150	248	2A12200
17.25		130	228	2A11725	22.25		150	248	2A12225
17.462	11/16	130	228	2A11746	22.5		155	253	2A12250
17.5		130	228	2A11750	23		155	253	2A12300
18		130	228	2A11800	23.019	29/32	155	253	2A12302
18.2		135	233	2A11820					
No. 3 Morse Taper Shank									
23.25		155	276	2A12325	25		160	281	2A12500
23.416	59/64	155	276	2A12342	25.003	63/64	165	286	2A12499
23.5		155	276	2A12350	25.25		165	286	2A12525
23.75		160	281	2A12375	25.400	1"	165	286	2A12539
23.812	15/16	160	281	2A12381	25.5		165	286	2A12550
24		160	281	2A12400	25.797	1.1/64	165	286	2A12579
24.5		160	281	2A12450	26		165	286	2A12600

Continued on next page...

Code

2A1

Properties

M INCH	DIN 345	HSS
TYPE N		
30°		BLUE FINISH
CHIPBREAKER FORM		

Suited Materials

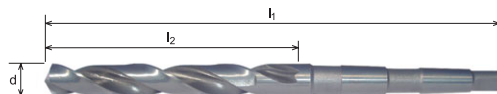
GENERAL



MORSE TAPER
SHANK DRILLS



MTS Chipbreaker Drills



Code

2A1

Properties

M
INCH

DIN
345

HSS

TYPE
N



BLUE
FINISH



CHIPBREAKER
FORM

Suited Materials

GENERAL

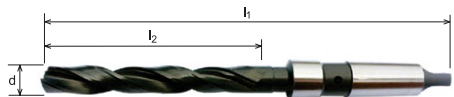
d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			
No. 3 Morse Taper Shank									
... from previous page					29		175	296	2A12900
26.194	1.1/32	165	286	2A12619	29.369	1.5/32	175	296	2A12937
26.5		165	286	2A12650	29.5		175	296	2A12950
26.987	1.1/16	170	291	2A12699	30		175	296	2A13000
27		170	291	2A12700	31		180	301	2A13100
27.5		170	291	2A12750	31.5		180	301	2A13150
28		170	291	2A12800	31.750	1.1/4	185	306	2A13174
28.5		175	296	2A12850	(32)		185	306	2A13200
28.575	1.1/8	175	296	2A12858					
No. 4 Morse Taper Shank									
32		185	334	2A13201	39		200	349	2A13900
32.147	1.17/64	185	334	2A13215	39.5		200	349	2A13950
32.5		185	334	2A13250	40		200	349	2A14000
33		185	334	2A13300	40.5		205	354	2A14050
33.337	1.5/16	185	334	2A13334	41		205	354	2A14100
33.5		185	334	2A13350	42		205	354	2A14200
34		190	339	2A13400	43		210	359	2A14300
34.131	1.11/32	190	339	2A13413	44		210	359	2A14400
34.5		190	339	2A13450	44.450	1.3/4	210	359	2A14445
34.925	1.3/8	190	339	2A13493	44.5		210	359	2A14450
35		190	339	2A13500	45		210	359	2A14500
36		195	344	2A13600	45.5		215	364	2A14550
36.5		195	344	2A13650	46		215	364	2A14600
37		195	344	2A13700	47		215	364	2A14700
38		200	349	2A13800	48		220	369	2A14800
38.100	1.1/2	200	349	2A13809	49		220	369	2A14900
38.5		200	349	2A13850	50		220	369	2A15000



MORSE TAPER
SHANK DRILLS



MTS Oil Tube Chipbreaker Drills, Cross Hole Feed



d		l ₂	l ₁	Code
mm	inch			
No. 3 Morse Taper Shank				
12		111	228	2A21200
14		124	241	2A21400
15.875	5/8	124	244	2A21588
16		124	244	2A21600
18		130	250	2A21800
20		140	260	2A22000
22		149	270	2A22200
24		158	279	2A22400
26		165	286	2A22600

Code

2A2

Properties

M INCH	WORKS STD.	HSS
TYPE N		
		BLUE FINISH
 CHIPBREAKER FORM		

Suited Materials

GENERAL



MORSE TAPER
SHANK DRILLS



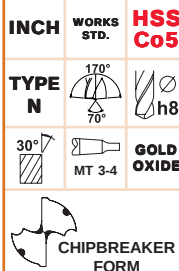
MTS Oil Tube Chipbreaker Drills, Cross Hole Feed



Code

2A7

Properties



Suited Materials

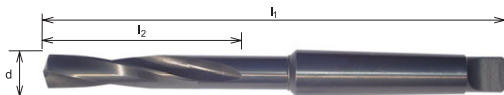
GENERAL

d inch	mm Equiv.	l_2	l_1	Code
No. 3 Morse Taper Shank				
9/16	14.288	124	241	2A71429
11/16	17.462	130	250	2A71746
13/16	20.638	146	266	2A72064
7/8	22.225	149	270	2A72223
15/16	23.812	158	279	2A72381
1.1/16	26.988	168	289	2A72699
No. 4 Morse Taper Shank				
1.1/8	28.575	174	324	2A72858
1.3/16	30.162	181	330	2A73016



MORSE TAPER
SHANK DRILLS

MTS Armour Piercing Drills



d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			
No. 1 Morse Taper Shank									
10		56	140	2611000					
No. 2 Morse Taper Shank									
11		76	175	2611100	15		89	187	2611500
12		81	179	2611200	15.876	5/8	89	187	2611588
12.700	1/2	81	179	2611269	16		89	187	2611600
13		81	179	2611300	17		92	190	2611700
14		86	184	2611400	18		92	190	2611800
14.288	9/16	86	184	2611429					
No. 3 Morse Taper Shank									
19		95	213	2611900	22		105	222	2612200
19.051	3/4	95	213	2611905	22.226	7/8	105	222	2612223
20		95	213	2612000	23.813	15/16	105	222	2612381
20.638	13/16	102	219	2612064	24		105	222	2612400
21		102	219	2612100	25		108	225	2612500
No. 4 Morse Taper Shank									
26		124	270	2612600	36		146	292	2613600
28		124	270	2612800	38		149	295	2613800
30		124	270	2613000	40		152	298	2614000
32		133	280	2613200	45		152	298	2614500
35		136	292	2613500					
No. 5 Morse Taper Shank									
50		152	356	2615000					

Code

261

Properties

M INCH	WORKS STD.	HSS Co8
TYPE H		
		BLUE FINISH
		NOTCHED POINT

Suited Materials

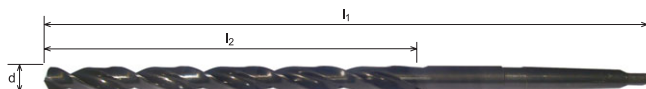
HEAT RESISTING ALLOY	STAINLESS STEEL
MANGANESE STEEL	TITANIUM



MORSE TAPER
SHANK DRILLS



MTS Extra Length Drills



Codes
242, 244 - 245

Properties		
M	WORKS STD.	HSS
TYPE N		
		BLUE FINISH
STANDARD POINT		

Suited Materials
GENERAL

d	l ₂ l ₁	200 315	300 400	300 450	375 500	375 530
---	----------------------------------	------------	------------	------------	------------	------------

No. 1 Morse Taper Shank

10	2421000	-	-	-	-
10.5	2421050	-	-	-	-
11	2421100	2441100	-	-	-
11.5	2421150	-	-	-	-
12	2421200	2441200	-	-	-
13	2421300	2441300	-	-	-
14	2421400	2441400	-	-	-

No. 2 Morse Taper Shank

15	2421500	2441500	-	-	-
16	2421600	2441600	-	2451600	-
17	2421700	2441700	-	2451700	-
18	2421800	2441800	-	2451800	-
19	2421900	2441900	-	2451900	-
20	2422000	2442000	-	2452000	-
21	2422100	2442100	-	2452100	-
22	2422200	2442200	-	2452200	-
23	2422300	2442300	-	2452300	-

No. 3 Morse Taper Shank

24	-	-	2442400	2452400	-
25	-	-	2442500	2452500	-
26	-	-	2442600	2452600	-
27	-	-	2442700	2452700	-
28	-	-	2442800	2452800	-
29	-	-	2442900	2452900	-
30	-	-	2443000	2453000	-

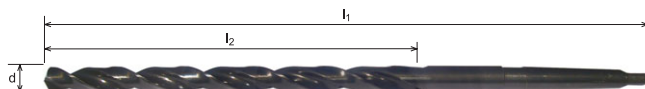
No. 4 Morse Taper Shank

32	-	-	2443200	-	2453200
35	-	-	2443500	-	2453500
38	-	-	2443800	-	2453800
40	-	-	2444000	-	2454000
42	-	-	2444200	-	2454200
45	-	-	2444500	-	2454500
48	-	-	2444800	-	2454800
50	-	-	2445000	-	2455000



**MORSE TAPER
SHANK DRILLS**

MTS Extra Length Drills



d	mm Equivalent	l_2 l_1	8" 315	12" 400	12" 450	15" 500
No. 1 Morse Taper Shank						
1/4	6.350		2520635	2540635	-	-
5/16	7.937		2520794	2540794	-	-
3/8	9.525		2520953	2540953	-	-
7/16	11.112		-	2541111	-	-
1/2	12.700		2521270	-	-	-
No. 2 Morse Taper Shank						
9/16	14.287		2521429	-	-	-
5/8	15.875		2521588	2541588	-	2551588
11/16	17.462		2521746	2541746	-	-
3/4	19.050		2521905	2541905	-	2551905
7/8	22.225		-	2542223	-	-
No. 3 Morse Taper Shank						
1"	25.400		-	-	2542540	-
No. 4 Morse Taper Shank						
1.1/2	38.100		-	-	2543810	-
1.3/4	44.450		-	-	2544445	-

Codes

**252,
254 - 255**

Properties

INCH	WORKS STD.	HSS
TYPE N		
		BLUE FINISH

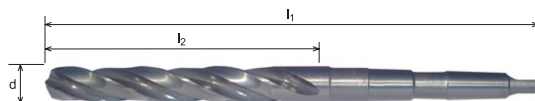
Suited Materials

GENERAL



**MORSE TAPER
SHANK DRILLS**

MTS Core Drills



Codes

221 - 224

Properties

M	DIN 343	HSS
TYPE N		
	BLUE FINISH	
		

Suited Materials

GENERAL

d	l ₂	l ₁	Code	d	l ₂	l ₁	Code
No. 1 Morse Taper Shank							
14	108	189	2211400				
No. 2 Morse Taper Shank							
16	120	218	2221600	20	140	238	2222000
17	125	223	2221700	21	145	243	2222100
18	130	228	2221800	22	150	248	2222200
19	135	233	2221900	23	155	253	2222300
No. 3 Morse Taper Shank							
24	160	281	2232400	28	170	291	2232800
25	160	281	2232500	30	175	296	2233000
26	165	286	2232600	31	180	301	2233100
27	170	291	2232700				
No. 4 Morse Taper Shank							
32	185	334	2243200	37	195	344	2243700
33	185	334	2243300	38	200	349	2243800
34	190	339	2243400	40	200	349	2244000
35	190	339	2243500	41	205	354	2244100
36	195	344	2243600	42	205	354	2244200

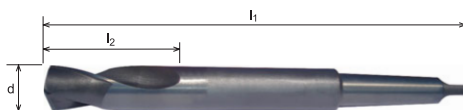
Core drills up to and including 19mm have 3 flutes.

All sizes above 19mm have 4 flutes.



**MORSE TAPER
SHANK DRILLS**

MTS Rail Drills



d	l ₂	l ₁	Code
No. 3 Morse Taper Shank			
22	100	281	2792200
26	100	286	2792600
28	100	291	2792800
32	100	306	2793200
35	100	312	2793500

Code

279

Properties

M	WORKS STD.	HSS Co8
TYPE H		
 MT 3	BLUE FINISH	
	NOTCHED POINT	

Suited Materials

HEAT RESISTING ALLOY	STAINLESS STEEL
MANGANESE STEEL	TITANIUM



**MORSE TAPER
SHANK DRILLS**

Sorgers - For Drilling All Types Of Wood

Codes

**291, 292
& 295**

Properties

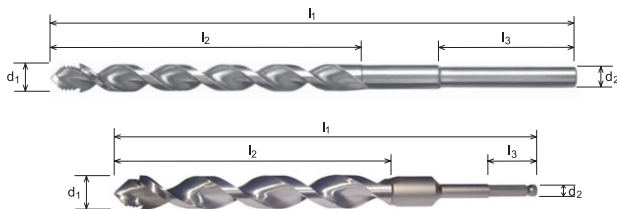
M **WORKS** **HSS**
STD.



BRIGHT
FINISH

Suited Materials

WOOD



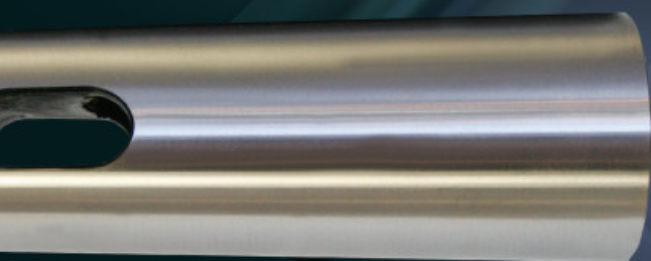
d ₁	l ₁	l ₂	l ₃	d ₂	Code	
					With Flat	Plain Shank
STANDARD						
15	300	180	80	12.3	2911500	-
17.5	300	180	80	12.3	2911750	2911751
19	300	180	80	12.3	2911900	2911901
22	300	200	80	12.3	2912200	2912201

d ₁	l ₁	l ₂	l ₃	d ₂	Code
SORGER WITH HEXAGON SHANK					
17.5	300	180	80	11.11	2921750

d ₁	l ₁	l ₂	l ₃	d ₂	Code
MINING SORGERS					
17.5	310	210	100	16	2951750
19	310	210	100	19	2951900

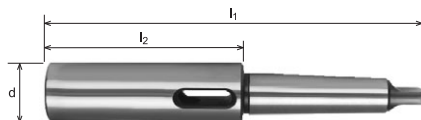


**MORSE TAPER
SHANK DRILLS**



S O C K E T S A N D S L E E V E S

Extension Sockets - Oil Toughened



Code
282

Properties
DIN 228 

Morse Taper Inside	d	l ₁	l ₂	Morse Taper Shank	Code
1	20	145	76	1	2820010
1	20	160	76	2	2820020
1	20	175	76	3	2820023
1	20	200	76	4	2820025
2	30	160	91	1	2820030
2	30	175	91	2	2820070
2	30	194	91	3	2820040
2	30	215	91	4	2820050
2	30	247	91	5	2820060
3	36	196	112	2	2820063
3	36	215	112	3	2820067
3	36	240	112	4	2820075
3	36	268	112	5	2820078
4	48	240	137	3	2820083
4	48	265	137	4	2820087
4	48	300	137	5	2820090
5	63	300	172	4	2820100
5	63	335	172	5	2820110

Code
283

Properties
DIN 228 

Reduction Sleeves - Hardened & Ground



Morse Taper Outside	Morse Taper Inside	Code
1	- 0	2830010
2	- 1	2830020
3	- 1	2830025
3	- 2	2830030
4	- 2	2830035

Morse Taper Outside	Morse Taper Inside	Code
5	- 2	2830038
4	- 3	2830040
5	- 3	2830045
5	- 4	2830050
6	- 5	2830060

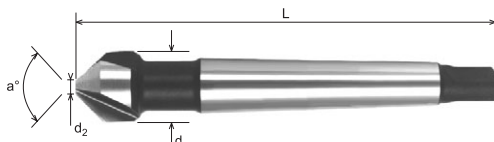


**SOCKETS
& SLEEVES**



REAMERS, COUNTERSINKS & COUNTERBORES

MTS Countersinks



Codes

771, 773

Properties

M	HSS Co5	
DIN 334D 60°	DIN 335D 90°	

Suited Materials

GENERAL

d	Morse Taper	a° = 60°			a° = 90°		
		d ₂	L	Code	d ₂	L	Code
16	1	4	90	7711600	3.2	85	7731600
20	2	5	106	7712000	3.5	100	7732000
25	2	6.3	112	7712500	3.8	106	7732500
31.5	2	10	118	7713150	4.2	112	7733150
40	3	12.5	150	7714000	10	140	7734000
50	3	16	160	7715000	14	150	7735000
63	4	20	190	7716300	16	180	7736300
80	4	25	200	7718000	22	190	7738000

Codes

761, 763

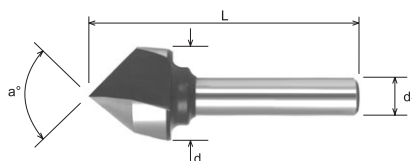
Properties

M	HSS Co5	
DIN 334C 60°	DIN 335C 90°	

Suited Materials

GENERAL

Parallel Shank Countersinks



d	d ₁	a° = 60°		a° = 90°	
		L	Code	L	Code
6.3	5	45	7610630	45	7630630
8	6	50	7610800	50	7630800
10	6	50	7611000	50	7631000
12.5	8	56	7611250	56	7631250
16	10	63	7611600	60	7631600
20	10	67	7612000	63	7632000
25	10	71	7612500	67	7632500

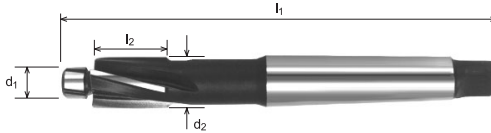
NEW



Description	Ref No.	Code
PS Countersink Set - TiN Coated	763S	7630000T
THIS SET CONTAINS:		
6.3mm - 7630630T		
10.0mm - 7631000T		
12.5mm - 7631250T		
16.0mm - 7631600T		
20.0mm - 7632000T		

**REAMERS,
COUNTERSINKS &
COUNTERBORES**

MTS Counterbores



Code

775

To Suit Capscrew	d ₂	d ₁		l ₂	Morse Taper	l ₁	Code	
		Medium	Fine				Medium	Fine
M8	15	9	8.4	22	2	132	7750800	7750801
M10	18	11	10.5	25	2	140	7751000	7751001
M12	20	14	13	25	2	140	7751200	7751201
M14	24	16	15	30	2	150	7751400	7751401
M16	26	18	17	35	3	180	7751600	7751601
M18	30	20	19	35	3	180	7751800	7751801
M20	33	22	21	40	3	190	7752000	7752001
M22	36	24	23	40	3	190	7752200	7752201
M24	40	26	25	40	3	190	7752400	7752401

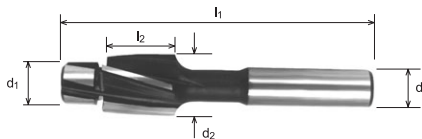
Properties

M	HSS	ISO 4207 DIN 375

Suited Materials

GENERAL

Parallel Shank Counterbores



Code

774

To Suit Capscrew	d ₂	d ₁		d ₃	l ₂	l ₁	Code	
		Medium	Fine				Medium	Fine
M3	6	3.4	3.2	5	14	71	7740300	7740301
M3.5	6.5	3.9	3.7	5	14	71	7740350	7740351
M4	8	4.5	4.3	5	14	71	7740400	7740401
M5	10	5.5	5.3	8	18	80	7740500	7740501
M6	11	6.6	6.4	8	18	80	7740600	7740601
M8	15	9	8.4	12.5	22	100	7740800	7740801
M10	18	11	10.5	12.5	22	100	7741000	7741001
M12	20	14	13	12.5	22	100	7741200	7741201

Properties

M	HSS	BS 328 ISO 4206 DIN 373
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Suited Materials

GENERAL

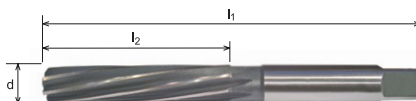


Description	Ref No.	Code
Parallel Shank Counterbore Set	774S	7740000
THIS SET CONTAINS:		
M5 - 7740500		
M6 - 7740600		
M8 - 7740800		
M10 - 7741000		
M12 - 7741200		



**REAMERS,
COUNTERSINKS &
COUNTERBORES**

Parallel Hand Reamers



Codes

701, 702

Properties

M INCH	HSS	BS 328 ISO 236/1 DIN 206
H 7		

Suited Materials

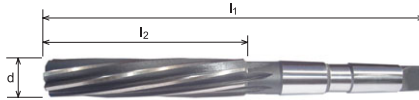
GENERAL

d		l ₂	l ₁	Code
mm	inch			
1.5		20	41	7010150
1.587	1/16	21	44	7020159
2		25	50	7010200
2.381	3/32	29	58	7020238
2.5		29	58	7010250
2.778	7/64	31	62	7020278
3		31	62	7010300
3.175	1/8	33	66	7020318
3.5		35	71	7010350
3.572	9.64	35	71	7020357
3.969	5/32	38	76	7020397
4		38	76	7010400
4.366	11/64	41	81	7020437
4.5		41	81	7010450
4.762	3/16	44	87	7020476
5		44	87	7010500
5.159	13/64	44	87	7020516
5.5		47	93	7010550
5.556	7/32	47	93	7020556
5.953	15/64	47	93	7020595
6		47	93	7010600
6.350	1/4	50	100	7020635
6.5		50	100	7010650
7		54	107	7010700
7.144	9/32	54	107	7020714
7.5		54	107	7010750
7.937	5/16	58	115	7020794
8		58	115	7010800
8.5		58	115	7010850
8.731	11/32	62	124	7020873
9		62	124	7010900
9.5		62	124	7010950
9.525	3/8	66	133	7020953
10		66	133	7011000
10.319	13/32	66	133	7021032
10.5		66	133	7011050
11		71	142	7011100
11.112	7/16	71	142	7021111
11.5		71	142	7011150
11.906	15/32	76	152	7021191
12		76	152	7011200
12.5		76	152	7011250

d		l ₂	l ₁	Code
mm	inch			
12.700	1/2	76	152	7021270
13		76	152	7011300
13.5		81	163	7011350
14		81	163	7011400
14.287	9/16	81	163	7021429
14.5		81	163	7011450
15		81	163	7011500
15.5		87	175	7011550
15.875	5/8	87	175	7021588
16		87	175	7011600
17		87	175	7011700
17.462	11/16	93	188	7021746
18		93	188	7011800
19		93	188	7011900
19.050	3/4	100	201	7021905
20		100	201	7012000
20.637	13/16	100	201	7022064
21		100	201	7012100
22		107	215	7012200
22.225	7/8	107	215	7022223
23		107	215	7012300
23.812	15/16	115	231	7022381
24		115	231	7012400
25		115	231	7012500
25.400	1"	115	231	7022540
26		115	231	7012600
27		115	231	7012700
28		124	247	7012800
28.575	1.1/8	124	247	7022858
29		124	247	7012900
30		124	247	7013000
31		133	265	7013100
31.750	1.1/4	133	265	7023175
32		133	265	7013200
33		133	265	7013300
34		133	265	7013400
34.925	1.3/8	133	265	7023493
35		133	284	7013500
36		142	284	7013600
37		142	284	7013700
38		142	284	7013800
38.100	1.1/2	142	284	7023810

**REAMERS,
COUNTERSINKS &
COUNTERBORES**

MTS Parallel Machine Reamers



d		l ₂	l ₁	Code	d		l ₂	l ₁	Code
mm	inch				mm	inch			
No. 1 Morse Taper Shank									
6		45	127	7110600	11.5		71	151	7111150
8		58	138	7110800	11.906	15/32	76	156	7121191
8.5		58	138	7110850	12		76	156	7111200
9		62	142	7110900	12.5		76	156	7111250
9.5		62	142	7110950	12.700	1/2	76	156	7121270
9.525	3/8	66	146	7120953	13		76	156	7111300
10		66	146	7111000	13.494	17/32	81	161	7121349
10.5		66	146	7111050	13.5		81	161	7111350
11		71	151	7111100	14		81	161	7111400
11.112	7/16	71	151	7121111					
No. 2 Morse Taper Shank									
14.287	9/16	81	181	7121429	19		93	193	7111900
14.5		81	181	7111450	19.050	3/4	100	200	7121905
15		81	181	7111500	19.5		100	200	7111950
15.5		87	187	7111550	19.844	25/32	100	200	7121984
15.875	5/8	87	187	7121588	20		100	200	7112000
16		87	187	7111600	20.5		100	200	7112050
16.5		87	187	7111650	20.637	13/16	100	200	7122064
16.668	21/32	87	187	7121667	21		100	200	7112100
17		87	187	7111700	21.5		107	207	7121150
17.462	11/16	93	193	7121746	22		107	207	7112200
17.5		93	193	7111750	22.225	7/8	107	207	7122223
18		93	193	7111800	22.5		107	207	7112250
18.256	23/32	93	193	7121826	23		107	207	7112300
18.5		93	193	7111850					
No. 3 Morse Taper Shank									
23.812	15/16	115	242	7122381	28		124	251	7112800
24		115	242	7112400	28.5		124	251	7112850
25		115	242	7112500	28.575	1.1/8	124	251	7122858
25.400	1"	115	242	7122540	29		124	251	7112900
25.5		115	242	7112550	29.5		124	251	7112950
26		115	242	7112600	30		124	251	7113000
26.5		115	242	7112650	30.162	1.3/16	133	260	7123016
26.987	1.1/16	124	251	7122699	31		133	260	7113100
27		124	251	7112700	31.750	1.1/4	133	260	7123175
No. 4 Morse Taper Shank									
32		133	293	7113200	41.275	1.5/8	152	312	7124128
33		133	293	7113300	42		152	312	7114200
33.337	1.5/16	133	293	7123334	43		163	323	7114300
34		142	302	7113400	44		163	323	7114400
34.925	1.3/8	142	302	7123493	44.450	1.3/4	163	323	7124445
35		142	302	7113500	45		163	323	7114500
36		142	302	7113600	46		163	323	7114600
37		142	302	7113700	47		163	323	7114700
38		152	312	7113800	47.625	1.7/8	174	334	7124763
38.100	1.1/2	152	312	7123810	48		174	334	7114800
39		152	312	7113900	49		174	334	7114900
40		152	312	7114000	50		174	334	7115000
41		152	312	7114100					

Codes

711, 712

Properties

M INCH	HSS	BS 328 ISO 236/11
MT 1 - 4	H 7	10°
RH		

Suited Materials

GENERAL



**REAMERS,
COUNTERSINKS &
COUNTERBORES**



MTS Taper Bridge Machine Reamer

Code

721

Properties

M

HSS

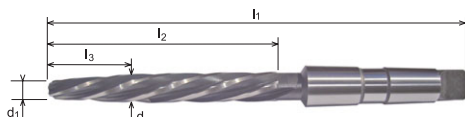
BS 328
ISO 2238
DIN 311



Suited Materials

STRUCTURAL STEELS

GENERAL

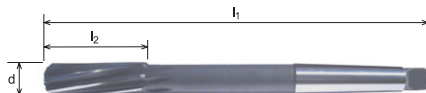


d	d ₁	l ₂	l ₁	l ₃	Code
No. 2 Morse Taper Shank					
13	8.8	105	199	42	7211300
14	9.4	115	209	46	7211400
16	10.6	135	229	54	7211600
No. 3 Morse Taper Shank					
17	11.6	135	251	54	7211700
18	12.2	145	261	58	7211800
20	13.8	155	271	62	7212000
21	14.8	155	271	62	7212100
22	15.4	165	281	66	7212200
23	16.4	165	281	66	7212300
24	16.8	180	296	72	7212400
25	17.8	180	296	72	7212500
26	18.8	180	296	72	7212600
28	20.2	195	311	78	7212800
30	22.2	195	311	78	7213000
No. 4 Morse Taper Shank					
32	23.6	210	354	84	7213200
34	25.2	220	364	88	7213400
38	28.8	230	374	92	7213800



REAMERS,
COUNTERSINKS &
COUNTERBORES

MTS Machine Chucking Reamers



d		l ₂	l ₁	Code
mm	inch			
No. 1 Morse Taper Shank				
6		26	138	7410600
8		33	156	7410800
10		38	168	7411000
12		44	182	7411200
14		47	189	7411400
No. 2 Morse Taper Shank				
14.287	9/16	50	204	7421429
15		50	204	7411500
15.875	5/8	52	210	7421588
16		52	210	7411600
18		56	219	7411800
20		60	228	7412000
21		62	232	7412100
22		64	237	7412200
22.225	7/8	64	237	7422223
No. 3 Morse Taper Shank				
24		68	268	7412400
25		68	268	7412500
26		70	273	7412600
28		71	277	7412800
30		73	281	7413000
No. 4 Morse Taper Shank				
32		77	317	7413200
38.100	1.1/2	81	329	7423810

Codes

741, 742

Properties

M	HSS	DIN
INCH	Co5	208
	H 7	

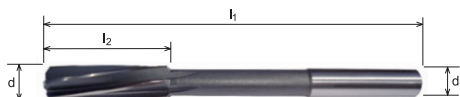
Suited Materials

GENERAL



**REAMERS,
COUNTERSINKS &
COUNTERBORES**

Parallel Shank Machine Chucking Reamers



Codes

751, 752

Properties

M **HSS** **DIN**
INCH **Co5** **212**

H 7



Suited Materials

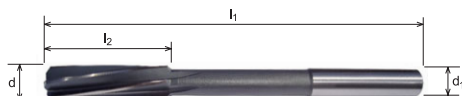
GENERAL

d		d ₁	l ₂	l ₁	Code
mm	inch				
2		2	11	49	7510200
2.4		2.4	14	57	7510240
2.5		2.5	14	57	7510250
2.6		2.6	14	57	7510260
2.7		2.7	15	61	7510270
2.8		2.8	15	61	7510280
3		3	15	61	7510300
3.1		3.1	16	65	7510310
3.175	1/8	3.2	16	65	7520318
3.2		3.2	16	65	7510320
3.4		3.4	18	70	7510340
3.5		3.5	18	70	7510350
3.6		3.6	18	70	7510360
3.8		4	19	75	7510380
4		4	19	75	7510400
4.1		4	19	75	7510410
4.2		4	19	75	7510420
4.3		4.5	21	80	7510430
4.4		4.5	21	80	7510440
4.5		4.5	21	80	7510450
4.762	3/16	5	23	86	7520476
4.8		5	23	86	7510480
4.9		5	23	86	7510490
5		5	23	86	7510500
5.1		5	23	86	7510510
5.2		5	23	86	7510520
5.3		5	23	86	7510530
5.4		5.6	26	93	7510540
5.5		5.6	26	93	7510550
5.6		5.6	26	93	7510560
5.7		5.6	26	93	7510570
5.8		5.6	26	93	7510580
6		5.6	26	93	7510600
6.1		6.3	28	101	7510610
6.2		6.3	28	101	7510620
6.3		6.3	28	101	7510630
6.350	1/4	6.3	28	101	7520635
6.4		6.3	28	101	7510640
6.5		6.3	28	101	7510650
6.6		6.3	28	101	7510660
6.7		6.3	28	101	7510670
6.8		7.1	31	109	7510680
7		7.1	31	109	7510700
7.1		7.1	31	109	7510710
7.2		7.1	31	109	7510720
7.3		7.1	31	109	7510730
7.5		7.1	31	109	7510750
7.8		8	33	117	7510780
7.9		8	33	117	7510790
7.938	5/16	8	33	117	7520794

d		d ₁	l ₂	l ₁	Code
mm	inch				
8		8	33	117	7510800
8.1		8	33	117	7510810
8.2		8	33	117	7510820
8.3		8	33	117	7510830
8.4		8	33	117	7510840
8.5		8	33	117	7510850
8.6		9	36	125	7510860
8.8		9	36	125	7510880
8.9		9	36	125	7510890
9		9	36	125	7510900
9.1		9	36	125	7510910
9.5		9	36	125	7510950
9.525	3/8	10	38	133	7520953
9.6		10	38	133	7510960
9.7		10	38	133	7510970
9.8		10	38	133	7510980
9.9		10	38	133	7510990
10		10	38	133	7511000
10.1		10	38	133	7511010
10.2		10	38	133	7511020
10.3		10	38	133	7511030
10.5		10	38	133	7511050
10.6		10	38	133	7511060
10.7		10	41	142	7511070
10.8		10	41	142	7511080
10.9		10	41	142	7511090
11		10	41	142	7511100
11.1		10	41	142	7511110
11.112	7/16	10	41	142	7521111
11.5		10	41	142	7511150
11.7		10	41	142	7511170
11.8		10	41	142	7511180
11.9		10	44	151	7511190
12		10	44	151	7511200
12.1		10	44	151	7511210
12.2		10	44	151	7511220
12.3		10	44	151	7511230
12.4		10	44	151	7511240
12.5		10	44	151	7511250
12.6		10	44	151	7511260
12.7		10	44	151	7511270
12.700	1/2	10	44	151	7521270
12.8		10	44	151	7511280
12.9		10	44	151	7511290
13		10	44	151	7511300
13.5		12.5	47	160	7511350
14		12.5	47	160	7511400
14.288	9/16	12.5	50	162	7521429
14.5		12.5	50	162	7511450
15		12.5	50	162	7511500

Continued on next page...

Parallel Shank Machine Chucking Reamers



d		d ₁	l ₂	l ₁	Code
mm	inch				
... from previous page					
15.5		12.5	52	170	7511550
15.875	5/8	12.5	52	170	7521588
16		12.5	52	170	7511600

d		d ₁	l ₂	l ₁	Code
mm	inch				
17		14	54	175	7511700
18		14	56	182	7511800
19.050	3/4	16	60	195	7521905
20		16	60	195	7512000

Codes

751, 752

Properties

M **HSS** **DIN**
INCH **Co5** **212**



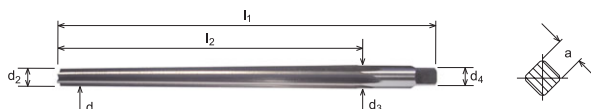
Suited Materials

GENERAL



**REAMERS,
COUNTERSINKS &
COUNTERBORES**

Hand Taper Pin Reamers



d	d ₂	d ₃	d ₄	l ₂	a	l ₁	Code
2	1.9	2.86	3.15	48	2.5	68	7310200
2.5	2.4	3.36	3.15	48	2.5	68	7310250
3	2.9	4.06	4.0	58	3.15	80	7310300
4	3.9	5.26	5.0	68	4	93	7310400
5	4.9	6.36	6.3	73	5	100	7310500
6	5.9	8.0	8.0	105	6.3	135	7310600
8	7.9	10.8	10.0	145	8	180	7310800
10	9.9	13.4	12.5	175	10	215	7311000
12	11.8	16.0	14.0	210	11.2	255	7311200
(13)	12.8	17.0	15.0	210	11.2	255	7311300
(14)	13.8	18.0	16.0	210	12.5	255	7311400
16	15.8	20.4	18.0	230	14	280	7311600
20	19.8	24.8	22.4	250	18	310	7312000
25	24.7	30.7	28.0	300	22.4	370	7312500

() Non-recommended sizes, and should be avoided whenever possible.

Code

732

Properties

M **HSS** **DIN 9**

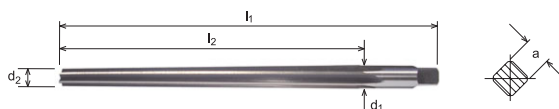
 STRAIGHT FLUTE

1:50

Suited Materials

GENERAL

Hand Taper Pin Reamers



Nominal Diameter	mm Equiv.	a	d ₁	d ₂	l ₂	l ₁	Code
5/64	1.984	1.6	2.03	1.5	25.4	50.8	7320198
3/32	2.381	2	2.41	1.75	31.8	57.2	7320238
7/64	2.778	2.24	2.82	2.03	38.1	63.5	7320278
1/8	3.175	2.5	3.23	2.29	44.5	69.9	7320318
9/64	3.572	2.8	3.63	2.64	47.6	73.0	7320357
5/32	3.969	3.15	4.01	2.95	50.8	76.2	7320397
11/64	4.366	3.55	4.42	3.23	52.2	88.9	7320437
3/16	4.762	4	4.95	3.5	69.9	101.6	7320476
7/32	5.556	4.5	5.59	4.13	69.9	101.6	7320556
1/4	6.350	5	6.43	4.64	85.7	117.5	7320635
9/32	7.144	5.6	7.42	5.23	104.8	142.9	7320714
5/16	7.937	6.3	8.03	5.84	104.8	142.9	7320794
11/32	8.731	7.1	8.81	6.43	114.3	152.4	7320873
3/8	9.525	8	9.68	7.03	127	165.1	7320953
7/16	11.112	9	11.25	8.21	146.1	190.5	7321111
1/2	12.700	10	12.85	9.41	165.1	209.6	7321270
9/16	14.287	11.2	14.5	10.93	171.5	215.9	7321429
5/8	15.875	12.5	16.08	12.11	190.5	235	7321588
3/4	19.050	16	19.3	14.67	222.3	273.1	7321905
7/8	22.225	18	22.48	17.45	241.3	304.8	7322223



**REAMERS,
COUNTERSINKS &
COUNTERBORES**

Hand Taper Pin Reamers



d	d ₂	d ₃	d ₄	l ₂	a	l ₁	Code
4	3.9	5.26	5.0	68	4	93	7330400
5	4.9	6.36	6.3	73	5	100	7330500
6	5.9	8.0	8.0	105	6.3	135	7330600
8	7.9	10.8	10.0	145	8	180	7330800
10	9.9	13.4	12.5	175	10	215	7331000
12	11.8	16.0	14.0	210	11.2	255	7331200
(13)	12.8	17.0	15.0	210	11.2	255	7331300
(14)	13.8	18.0	16.0	210	12.5	255	7331400
16	15.8	20.4	18.0	230	14	280	7331600
20	19.8	24.8	22.4	250	16	310	7332000
25	24.7	30.7	28.0	300	22.4	370	7332500

() Non-recommended sizes, and should be avoided whenever possible.

Code

733

Properties

M

HSS

DIN
9



SPIRAL
FLUTE

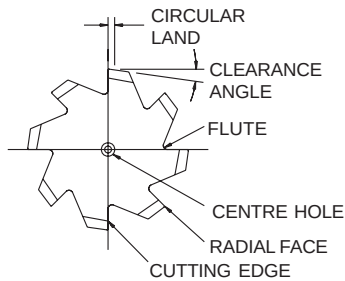
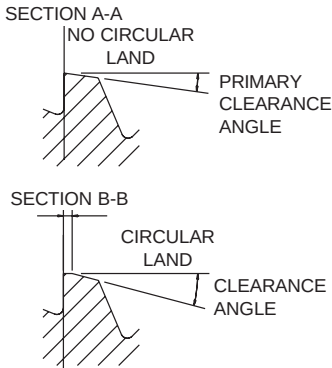
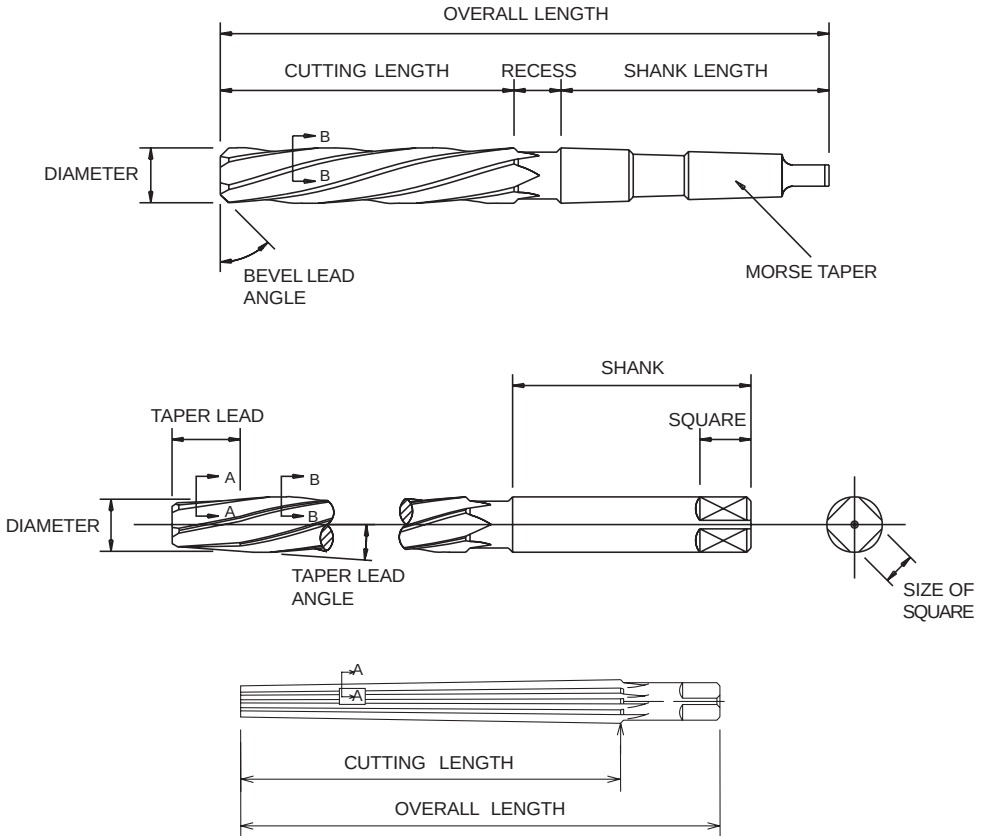
Suited Materials

GENERAL



REAMERS,
COUNTERSINKS &
COUNTERBORES

Reamer Terminology



FRONT END VIEW OF PARALLEL
MACHINE REAMER





B O R E C U T T E R S

Slitting Saws

Codes

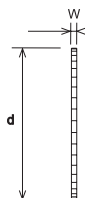
440 - 441

Properties

M	HSS	DIN 1837A
FINE PITCH		

Suited Materials

GENERAL

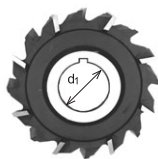
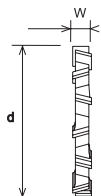


d	W	d1	Z Teeth	Code
32	0.2	8	100*	4400033
32	0.3	8	80	4400035
32	0.6	8	64	4400038
32	0.8	8	64	4400039
32	1.0	8	64	4400040
32	1.2	8	48	4400041
32	1.6	8	48	4400042
32	2.0	8	48	4400043
50	0.5	13	100	4400069
50	0.6	13	100	4400070
50	0.8	13	80	4400071
50	1.0	13	80	4400072
50	1.2	13	80	4400073
50	1.6	13	64	4400074
50	2.0	13	64	4400075
50	2.5	13	64	4400076
50	3.0	13	48	4400077
63	0.8	16	100	4400086
63	1.0	16	100	4400087
63	1.2	16	80	4400088
63	1.5	16	80	4400089
63	1.6	16	80	4400090
63	2.0	16	80	4400091
63	2.5	16	64	4400092
80	0.3	22	160*	4410010
80	0.4	22	160*	4410020
80	0.5	22	128*	4410030
80	0.6	22	128*	4410040
80	0.8	22	128	4410050
80	1.0	22	100	4410060
80	1.2	22	100	4410070
80	1.5	22	100	4410104
80	1.6	22	100	4410080
80	2.0	22	80	4410090
80	2.5	22	80	4410100
80	3.0	22	80	4410110
80	4.0	22	64	4410120
80	5.0	22	64	4410130
80	6.0	22	64	4410140
100	0.5	22	160*	4410150
100	0.6	22	160*	4410160
100	0.6	27	160*	4410115
100	0.8	22	128	4410170

d	W	d1	Z Teeth	Code
100	0.8	27	128	4410117
100	1.0	22	128	4410180
100	1.0	27	127	4410119
100	1.2	22	128	4410190
100	1.5	22	100	4411211
100	1.6	22	100	4410200
100	2.0	22	100	4410210
100	2.5	22	100	4410220
100	3.0	22	80	4410230
100	4.0	22	80	4410240
100	4.0	27	80	4410131
100	5.0	22	80	4410250
100	6.0	22	64	4410260
125	0.6	22	160*	4410270
125	0.8	22	160*	4410280
125	1.0	22	160	4410290
125	1.2	22	128	4410300
125	1.6	22	128	4410310
125	2.0	22	128	4410320
125	2.0	27	128	4410146
125	2.5	22	100	4410330
125	3.0	22	100	4410340
125	4.0	22	100	4410350
125	5.0	22	80	4410360
125	6.0	22	80	4410370
160	1.0	32	160*	4410380
160	1.2	32	160*	4410390
160	1.6	32	160*	4410400
160	2.0	32	128*	4410410
160	2.5	32	128*	4410420
160	3.0	32	128*	4410430
160	4.0	32	100*	4410440
160	5.0	32	100*	4410450
160	6.0	32	100*	4410460
200	1.0	32	200*	4410470
200	1.2	32	200*	4410480
200	1.6	32	160*	4410490
200	2.0	32	160*	4410500
200	2.5	32	160*	4410510
200	3.0	32	128*	4410520
200	4.0	32	128*	4410530
200	5.0	32	128*	4410540
200	6.0	32	100*	4410550

* Denotes sizes which can be supplied with a boss on request.

Side & Face Cutters



d	W	d ₁	Z Teeth	Code
50	4	16	10	4010000
50	5	16	10	4010001
50	6	16	10	4010002
50	8	16	10	4010003
50	10	16	10	4010004
63	4	22	12	4010010
63	5	22	12	4010011
63	6	22	12	4010012
63	8	22	12	4010013
63	10	22	12	4010014
63	12	22	12	4010015
63	18	22	12	4010018
80	5	27	14	4010500
80	6	27	14	4010600
80	8	27	14	4010800
80	10	27	14	4011000
80	12	27	14	4011200
80	14	27	14	4011400
80	16	27	14	4011600
100	6	27	16	4020600
100	8	27	16	4020800
100	10	27	16	4021000
100	12	27	16	4021200
100	14	27	16	4021400

d	W	d ₁	Z Teeth	Code
100	6	32	16	4030600
100	8	32	16	4030800
100	10	32	16	4031000
100	12	32	16	4031200
100	14	32	16	4031400
100	16	32	16	4031600
100	18	32	16	4031800
100	20	32	16	4032000
100	22	32	16	4032200
100	25	32	16	4032500
125	8	32	16	4040800
125	10	32	16	4041000
125	12	32	16	4041200
125	14	32	16	4041400
125	16	32	16	4041600
125	18	32	16	4041800
125	20	32	16	4042000
125	22	32	16	4042200
125	25	32	16	4042500
125	28	32	16	4042800
160	8	40	18	4060800
160	10	40	18	4061000
160	12	40	18	4061200
160	16	40	18	4061600

Codes

**401 - 404
& 406**

Properties

M	HSS Co5	DIN 885A
TYPE N		W=k11

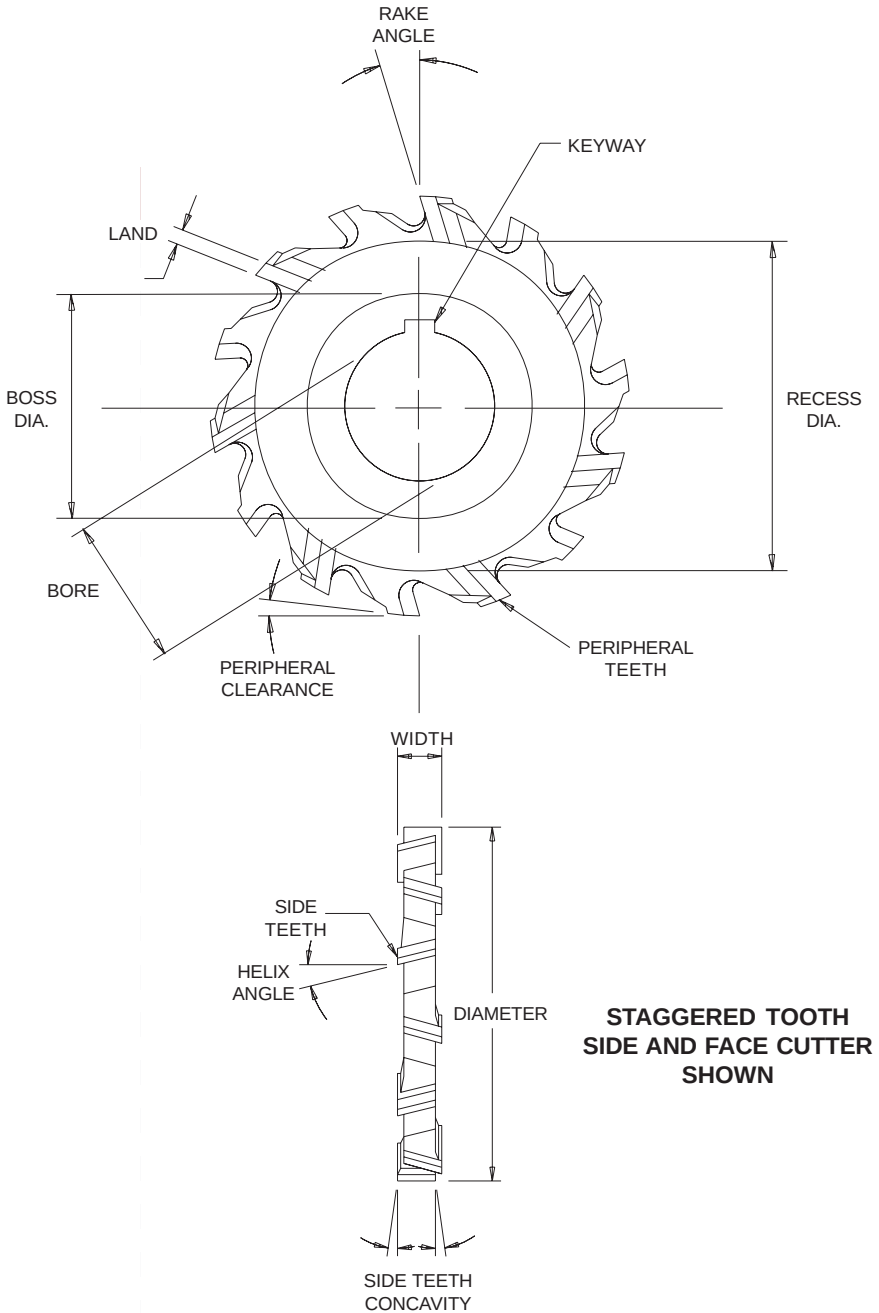
Suited Materials

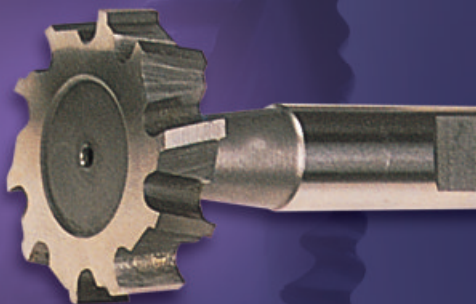
GENERAL



BORE CUTTERS

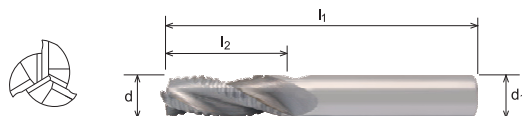
Bore Cutter Terminology





S H A N K C U T T E R S

Solid Carbide 3 Flute Roughing End Mills for Aluminium



* Sub-micron carbide grade of European origin

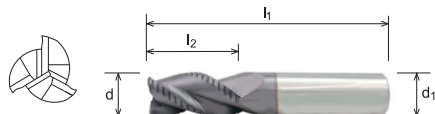
d	l ₂	l ₁	d ₁	Code
6	13	57	6	03C0600
8	16	63	8	03C0800
10	22	72	10	03C1000
12	26	83	12	03C1200
16	32	92	16	03C1600
20	38	104	20	03C2000

Code
03C

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE W	
	Z 3	
	UNCOATED FOR ALUMINIUM	

Suited Materials
ALUMINIUM

Solid Carbide 3 Flute Roughing End Mills



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
6	10	57	6	03D0600X
8	16	63	8	03D0800X
10	19	72	10	03D1000X
12	22	83	12	03D1200X
16	32	92	16	03D1600X
20	38	104	20	03D2000X

Code
03D

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	
	Z 3	
	COATED	

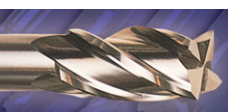
Suited Materials		
CARBON & ALLOY STEEL		STAINLESS STEEL
CAST IRON	HEAT RESISTING ALLOYS	TITANIUM



NEW

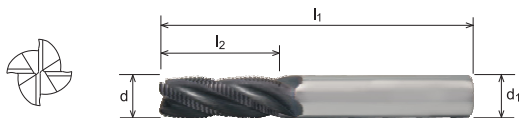
Description	Ref No.	Code
Solid Carbide 3 Flute Roughing End Mill Set - Coated	03DS	03D0000X
THIS SET CONTAINS:		
6.0mm - 03D0600X		
8.0mm - 03D0800X		
10.0mm - 03D1000X		
12.0mm - 03D1200X		
16.0mm - 03D1600X		

Set also available for Aluminium (03C)



SHANK CUTTERS

Solid Carbide 4 Flute Roughing End Mills



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
6	13	57	6	03E0600X
8	16	63	8	03E0800X
10	22	72	10	03E1000X
12	26	83	12	03E1200X
16	32	92	16	03E1600X
20	38	104	20	03E2000X

NEW



Description	Ref No.	Code
Solid Carbide 4 Flute Roughing End Mill Set - Coated	03ES	03E0000X
THIS SET CONTAINS:		
6.0mm - 03E0600X		
8.0mm - 03E0800X		
10.0mm - 03E1000X		
12.0mm - 03E1200X		
16.0mm - 03E1600X		

Code

03E

Properties

M	WORKS STD.	*SOLID CARBIDE
	TYPE N	
	Z 4	
	COATED	

Suited Materials

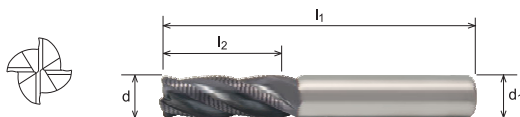
CARBON & ALLOY STEEL

STAINLESS STEEL CAST IRON TITANIUM



SHANK CUTTERS

Solid Carbide 4 Flute Roughing End Mills



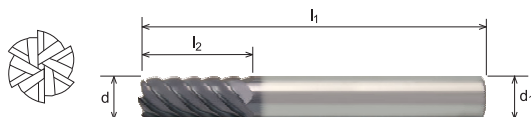
* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
6	13	57	6	03F0600X
8	16	63	8	03F0800X
10	22	72	10	03F1000X
12	26	83	12	03F1200X
16	32	92	16	03F1600X
20	38	104	20	03F2000X

Code		
03F		
Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	
	Z 4	
	COATED	

Suited Materials		
CARBON & ALLOY STEEL	STAINLESS STEEL	
CAST IRON	HEAT RESISTING ALLOYS	TITANIUM

Solid Carbide 6 Flute Finishing End Mills



* Ultra fine carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
6	15	60	6	03G0600W
8	20	75	8	03G0800W
10	25	80	10	03G1000W
12	30	100	12	03G1200W
16	40	110	16	03G1600W
20	45	120	20	03G2000W

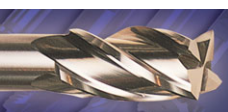
Code		
03G		

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE H	
	Z 6	
COATED		

Suited Materials		
HARDENED STEELS, IRONS		



Description	Ref No.	Code
Solid Carbide 6 Flute Finishing End Mill Set - Coated	03GS	03G0000W
THIS SET CONTAINS:		
6.0mm - 03G0600W		
8.0mm - 03G0800W		
10.0mm - 03G1000W		
12.0mm - 03G1200W		
16.0mm - 03G1600W		

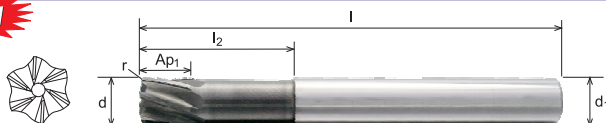


SHANK CUTTERS

Solid Carbide 6 Flute Hi-Feed End Mills



NEW



* Ultra fine carbide grade of European origin

d	l ₂	l ₁	d ₁	Ap ₁	r	Code
6	18	63	6	0.32	0.63	03H0600W
8	24	76	8	0.42	0.83	03H0800W
10	30	89	10	0.53	1.04	03H1000W
12	36	100	12	0.63	1.24	03H1200W
16	48	110	16	0.84	1.66	03H1600W
20	60	125	20	1.05	2.07	03H2000W

Code

03H

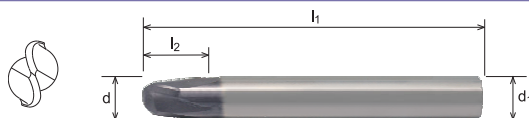
Properties

M	WORKS STD.	*SOLID CARBIDE
	TYPE H	
	Z 6	
COATED		

Suited Materials

HARDENED STEELS, IRONS

Solid Carbide 2 Flute Ball Nose Finishing End Mills



* Ultra fine carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
4	4	50	4	03I0400W
6	6	50	6	03I0600W
8	8	63	8	03I0800W
10	10	76	10	03I1000W
12	12	76	12	03I1200W
16	16	89	16	03I1600W
20	20	104	20	03I2000W

Code

03I

Properties

M	WORKS STD.	*SOLID CARBIDE
	TYPE H	
	Z 2	
COATED		

Suited Materials

HARDENED STEELS, IRONS

NEW



Description	Ref No.	Code
Solid Carbide 2 Flute Ball Nose End Mill Set - Coated	03IS	03I0000W
THIS SET CONTAINS:		
6.0mm - 03I0600W		
8.0mm - 03I0800W		
10.0mm - 03I1000W		
12.0mm - 03I1200W		
16.0mm - 03I1600W		
Set also available in Long Series (03J)		



SHANK CUTTERS

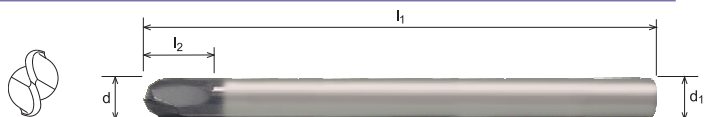


Solid Carbide 2 Flute Ball Nose Finishing End Mills

Code
03J

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE H	
15°	Z 2	Ø h6
COATED		

Suited Materials
HARDENED STEELS, IRONS

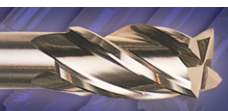


* Ultra fine carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
4	4	76	6	03J0400W
6	6	76	6	03J0600W
8	8	100	8	03J0800W
10	10	100	10	03J1000W
12	12	125	12	03J1200W
16	16	125	16	03J1600W
20	20	150	20	03J2000W

Please Note:

Solid Carbide specials can also be manufactured according to customer samples/ drawings. Contact our carbide representative for enquiries.

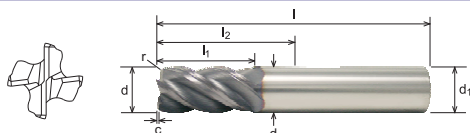


SHANK
CUTTERS

Solid Carbide 4 Flute VariCut End Mills



NEW



* Sub-micron carbide grade of European origin

d	l ₁	l	d ₁	c	Code
CORNER CHAMFER					
5	13	57	6	0.4 x 45°	03V0500X
6	13	57	6	0.4 x 45°	03V0600X
8	19	63	8	0.5 x 45°	03V0800X
10	22	72	10	0.5 x 45°	03V1000X
12	26	83	12	0.75 x 45°	03V1200X
16	32	92	16	0.75 x 45°	03V1600X
20	38	104	20	0.75 x 45°	03V2000X
25	45	121	25	0.75 x 45°	03V2500X

d	l ₁	l ₂	l	d ₁	d ₂	r	Code
CORNER RADIUS							
5	13	25	57	6	4.8	0.5	03V0505X
5	13	25	57	6	4.8	1	03V0510X
6	13	25	57	6	5.8	0.5	03V0605X
6	13	25	57	6	5.8	1	03V0610X
8	19	31	63	8	7.8	0.5	03V0805X
8	19	31	63	8	7.8	1	03V0810X
10	22	34	72	10	9.8	0.5	03V1005X
10	22	34	72	10	9.8	1	03V1010X
12	26	38	83	12	11.8	0.5	03V1205X
12	26	38	83	12	11.8	1	03V1210X
16	32	44	92	16	15.8	1	03V1610X
16	32	44	92	16	15.8	2	03V1620X
20	38	50	104	20	19.8	1	03V2010X
20	38	50	104	20	19.8	2	03V2020X
25	45	57	121	25	24.8	1	03V2510X
25	45	57	121	25	24.8	2	03V2520X

Note: A neck can be added according to customer request.

Code

03V

Properties

M **DIN 6527** *SOLID CARBIDE



TYPE N



Z 4



COATED

Suited Materials

CARBON & ALLOY STEEL

STAINLESS STEEL

CAST IRON

HEAT RESISTING ALLOYS

TITANIUM

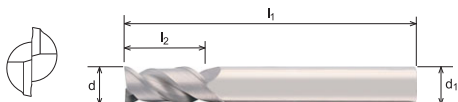


SHANK CUTTERS



Solid Carbide 2 Flute End Mills for Aluminium

NEW



* Sub-micron carbide grade of European origin

Code
02A

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE W	e8
	45°	Z 2
	UNCOATED FOR ALUMINIUM	
h6		

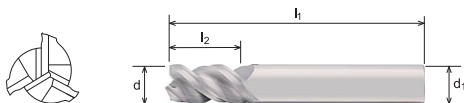
d	l ₂	l ₁	d ₁	Code
1	3	50	6	02A0100
2	6	50	6	02A0200
3	8	57	6	02A0300
4	11	57	6	02A0400
5	13	57	6	02A0500
6	13	57	6	02A0600
8	19	63	8	02A0800
10	22	75	10	02A1000
12	26	83	12	02A1200
16	32	92	16	02A1600

Suited Materials
ALUMINIUM

Code
02R

Solid Carbide 3 Flute End Mills for Aluminium

NEW

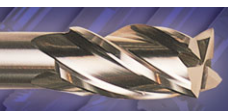


* Sub-micron carbide grade of European origin

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE W	e8
	45°	Z 3
	UNCOATED FOR ALUMINIUM	
h6		

d	l ₂	l ₁	d ₁	Code
2	3	50	6	02R0200
3	6	50	6	02R0300
4	8	57	6	02R0400
5	11	57	6	02R0500
6	13	57	6	02R0600
8	13	57	6	02R0800
10	19	63	8	02R1000
12	22	75	10	02R1200
16	26	83	12	02R1600

Suited Materials
ALUMINIUM

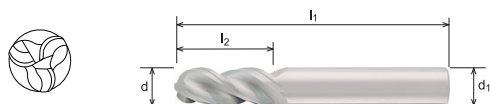


SHANK CUTTERS

Solid Carbide 3 Flute Ball Nose End Mills for Aluminium



NEW



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
3	12	38	3	02S0300
4	15	51	4	02S0400
5	20	64	5	02S0500
6	20	64	6	02S0600
8	20	64	8	02S0800
10	25	70	10	02S1000
12	25	76	12	02S1200
16	35	89	16	02S1600

Code

02S

Properties

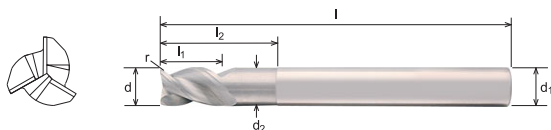
M	WORKS STD.	*SOLID CARBIDE
	TYPE W	e8
	40°	Z 3
	UNCOATED FOR ALUMINIUM	
h6		

Suited Materials

ALUMINIUM

Solid Carbide 3 Flute Toroidal End Mills for Aluminium

NEW



* Sub-micron carbide grade of European origin

d	l ₁	l ₂	l	d ₁	d ₂	r	Code
3	4.5	12	55	3	2.8	0.2	02U0300
3	4.5	12	55	3	2.8	0.5	02U0301
4	6	12	55	4	3.8	0.2	02U0400
4	6	12	55	4	3.8	0.5	02U0401
5	7.5	15	58	5	4.8	0.2	02U0500
5	7.5	15	58	5	4.8	0.5	02U0501
6	9	18	63	6	5.8	0.2	02U0600
6	9	18	63	6	5.8	0.5	02U0601
6	9	18	63	6	5.8	1	02U0602
8	12	24	76	8	7.7	0.5	02U0800
8	12	24	76	8	7.7	1	02U0801
10	15	30	89	10	9.7	0.5	02U1000
10	15	30	89	10	9.7	1	02U1001
12	18	36	100	12	11.6	0.5	02U1200
12	18	36	100	12	11.6	1	02U1201
16	24	48	110	16	15.5	1	02U1600
16	24	48	110	16	15.5	2	02U1601

Code

02U

Properties

M	WORKS STD.	*SOLID CARBIDE
	TYPE W	e8
	39/40/41°	Z 3
	UNCOATED FOR ALUMINIUM	
h6		

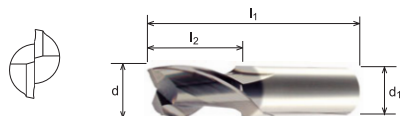
Suited Materials

ALUMINIUM



SHANK CUTTERS

Solid Carbide 2 Flute End Mills



* Sub-micron carbide grade of European origin

Code
03A

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	 e8
		
	COATED OR UNCOATED	
		

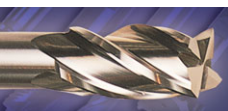
Suited Materials
GENERAL

NEW



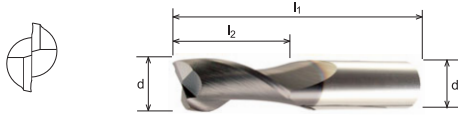
Description	Ref No.	Code
Solid Carbide 2 Flute End Mill Set - X.TREME	03AS	03A0000X
THIS SET CONTAINS:		
4.0mm - 03A0400X		
5.0mm - 03A0500X		
6.0mm - 03A0600X		
8.0mm - 03A0800X		
10.0mm - 03A1000X		
12.0mm - 03A1200X		

For uncoated - specify product code excluding "X" at the end.



SHANK CUTTERS

Solid Carbide 2 Flute End Mills



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code	d	l ₂	l ₁	d ₁	Code
3	19	57	3	03B0300X	12	51	102	12	03B1200X
4	19	57	4	03B0400X	14	57	127	14	03B1400X
5	25	64	5	03B0500X	16	57	127	16	03B1600X
6	28	76	6	03B0600X	18	57	127	18	03B1800X
8	29	76	8	03B0800X	20	57	127	20	03B2000X
10	32	102	10	03B1000X	25	57	127	25	03B2500X

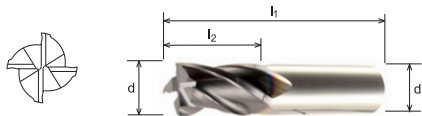
For uncoated - specify product code excluding "X" at the end.

Code
03B

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	
	COATED OR UNCOATED	

Suited Materials
GENERAL

Solid Carbide 4 Flute End Mills



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code	d	l ₂	l ₁	d ₁	Code
1	3	39	3	03K0100X	10	22	76	10	03K1000X
1.5	5	39	3	03K0150X	12	25	76	12	03K1200X
2	7	39	3	03K0200X	14	30	89	14	03K1400X
2.5	7	39	3	03K0250X	16	32	89	16	03K1600X
3	9	39	3	03K0300X	18	35	102	18	03K1800X
4	14	51	4	03K0400X	20	38	102	20	03K2000X
5	16	51	6	03K0500X	22	38	102	22	03K2200X
6	19	51	6	03K0600X	25	38	102	25	03K2500X
8	21	63	8	03K0800X					

Code
03K

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	
	COATED OR UNCOATED	

Suited Materials
GENERAL



Description	Ref No.	Code
Solid Carbide 4 Flute End Mill Set - X.TREME	03KS	03K0000X
THIS SET CONTAINS:		
4.0mm - 03K0400X		
5.0mm - 03K0500X		
6.0mm - 03K0600X		
8.0mm - 03K0800X		
10.0mm - 03K1000X		
12.0mm - 03K1200X		

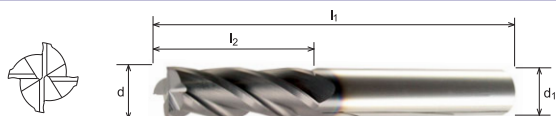
For uncoated - specify product code excluding "X" at the end.



SHANK CUTTERS



Solid Carbide 4 Flute End Mills



* Sub-micron carbide grade of European origin

Code
03L

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	
	30°	Z 4
	COATED OR UNCOATED	
h6		

Suited Materials
GENERAL

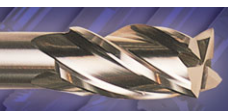
d	l ₂	l ₁	d ₁	Code
3	19	57	3	03L0300X
4	19	57	4	03L0400X
5	25	64	5	03L0500X
6	28	76	6	03L0600X
8	29	76	8	03L0800X
10	32	102	10	03L1000X

d	l ₂	l ₁	d ₁	Code
12	51	102	12	03L1200X
14	57	127	14	03L1400X
16	57	127	16	03L1600X
18	57	127	18	03L1800X
20	57	127	20	03L2000X
25	57	127	25	03L2500X



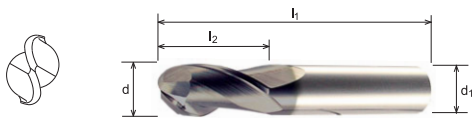
Description	Ref No.	Code
Solid Carbide 4 Flute End Mill Set - X.TREME	03LS	03L0000X
THIS SET INCLUDES:		
4.0mm - 03L0400X		
5.0mm - 03L0500X		
6.0mm - 03L0600X		
8.0mm - 03L0800X		
10.0mm - 03L1000X		
12.0mm - 03L1200X		

For uncoated - specify product code excluding "X" at the end.



SHANK CUTTERS

Solid Carbide 2 Flute Ball Nose End Mills



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
1	3	39	3	03M0100X
1.5	5	39	3	03M0150X
2	7	39	3	03M0200X
2.5	7	39	3	03M0250X
3	9	39	3	03M0300X
4	14	51	4	03M0400X
5	16	51	6	03M0500X
6	19	51	6	03M0600X
8	21	63	8	03M0800X

d	l ₂	l ₁	d ₁	Code
10	22	76	10	03M1000X
12	25	76	12	03M1200X
14	30	89	14	03M1400X
16	32	89	16	03M1600X
18	35	102	18	03M1800X
20	38	102	20	03M2000X
22	38	102	22	03M2200X
25	38	102	25	03M2500X

NEW



Description	Ref No.	Code
Solid Carbide 2 Flute Ball Nose End Mill Set - X.TREME	03MS	03M0000X
THIS SET INCLUDES:		
4.0mm - 03M0400X		
5.0mm - 03M0500X		
6.0mm - 03M0600X		
8.0mm - 03M0800X		
10.0mm - 03M1000X		
12.0mm - 03M1200X		

For uncoated - specify product code excluding "X" at the end.

Code
03M

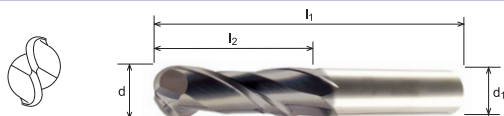
Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	 e8
	30°	Z 2
	COATED OR UNCOATED	
	h6	

Suited Materials
GENERAL



SHANK CUTTERS

Solid Carbide 2 Flute Ball Nose End Mills



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
3	19	57	3	03N0300X
4	19	57	4	03N0400X
5	25	64	5	03N0500X
6	28	76	6	03N0600X
8	29	76	8	03N0800X
10	32	102	10	03N1000X

d	l ₂	l ₁	d ₁	Code
12	51	102	12	03N1200X
14	57	127	14	03N1400X
16	57	127	16	03N1600X
18	57	127	18	03N1800X
20	57	127	20	03N2000X
25	57	127	25	03N2500X

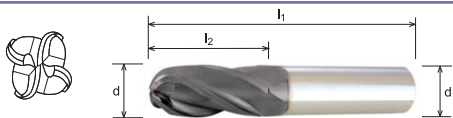
For uncoated - specify product code excluding "X" at the end.

Code
03N

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	 e8
		Z 2
	COATED OR UNCOATED	
		

Suited Materials
GENERAL

Solid Carbide 4 Flute Ball Nose End Mills



* Sub-micron carbide grade of European origin

d	l ₂	l ₁	d ₁	Code
1	3	39	3	03P0100X
1.5	5	39	3	03P0150X
2	7	39	3	03P0200X
2.5	7	39	3	03P0250X
3	9	39	3	03P0300X
4	14	51	4	03P0400X
5	16	51	6	03P0500X
6	19	51	6	03P0600X
8	21	63	8	03P0800X

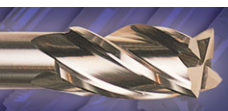
d	l ₂	l ₁	d ₁	Code
10	22	76	10	03P1000X
12	25	76	12	03P1200X
14	30	89	14	03P1400X
16	32	89	16	03P1600X
18	35	102	18	03P1800X
20	38	102	20	03P2000X
22	38	102	22	03P2200X
25	38	102	25	03P2500X

For uncoated - specify product code excluding "X" at the end.

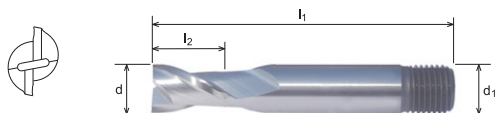
Code
03P

Properties		
M	WORKS STD.	*SOLID CARBIDE
	TYPE N	 h10
	30° 	Z 4
	COATED OR UNCOATED	
Ø h6		

Suited Materials
GENERAL



SHANK CUTTERS



d	l ₂	l ₁	d ₁	Code
14	16	73	12	3211400
15	16	73	12	3211500
16	19	79	16	3211600
17	19	79	16	3211700
18	19	79	16	3211800
19	19	79	16	3211900
*20	19	79	16	3212000
*22	26	102	25	3212200
24	26	102	25	3212400
25	26	102	25	3212500
26	26	102	25	3212600
28	26	102	25	3212800
30	26	102	25	3213000
32	32	112	32	3213200
35	32	112	32	3213500
36	32	112	32	3213600
38	38	118	32	3213800
*40	38	118	32	3214000
*42	38	118	32	3214200
*45	38	118	32	3214500
*50	45	125	32	3215000

Code
321

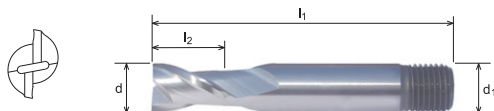
Properties		
M	DIN 327	HSS
	TYPE N	 e8
		Z 2
		

GENERAL



SOMTA P12 CATALOGUE

2 Flute End Mills (Slot Drills) - Regular Length



Code
323

Properties		
INCH	BS 122	HSS
	TYPE N	 ϕ e8
		Z 2
		

Suited Materials
GENERAL

d	l ₂	l ₁	d ₁	Code
1/4	11	56	1/4	3230635
3/8	14	60	3/8	3230953

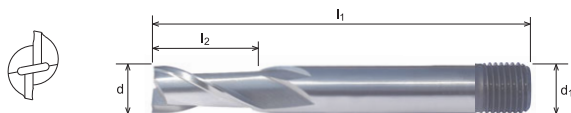
d	l ₂	l ₁	d ₁	Code
1/2	19	67	1/2	3231270
3/4	25	77	5/8	3231905

Code
326

Properties		
M	BS 122	HSS
	TYPE N	 ϕ e8
		Z 2
		

Suited Materials
GENERAL

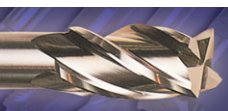
2 Flute End Mills (Slot Drills) - Long Series



d	l ₂	l ₁	d ₁	Code
2	4	51	6	3260200
2.5	6.5	54	6	3260250
3	11	60.5	6	3260300
3.5	12.5	66.5	6	3260350
4	12.5	66.5	6	3260400
4.5	12.5	66.5	6	3260450
5	12.5	70	6	3260500
5.5	16	76	6	3260550
6	16	76	6	3260600
6.5	16	76	10	3260650
7	16	76	10	3260700
7.5	16	76	10	3260750
8	19	79.5	10	3260800
8.5	22	82.5	10	3260850

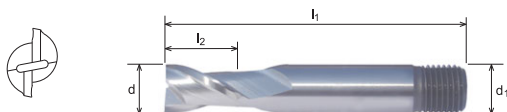
d	l ₂	l ₁	d ₁	Code
9	22	82.5	10	3260900
9.5	22	82.5	10	3260950
10	22	82.5	10	3261000
11	22	89	12	3261100
12	25.5	95	12	3261200
13	25.5	95	12	3261300
14	28.5	101.5	12	3261400
*15	31.5	108	12	3261500
16	31.5	108	16	3261600
17	35	114.5	16	3261700
18	35	114.5	16	3261800
19	38	120.5	16	3261900
20	38	120.5	16	3262000

* Not to BS 122



SHANK CUTTERS

2 Flute End Mills (Slot Drills) - Regular Length



d	l ₂	l ₁	d ₁	Code	d	l ₂	l ₁	d ₁	Code
1.5	2.5	48	6	3480150	13	16	73	12	3481300
2	4	48	6	3480200	14	16	73	12	3481400
2.5	5	49	6	3480250	15	16	73	12	3481500
3	5	49	6	3480300	16	19	79	16	3481600
3.5	6	50	6	3480350	17	19	79	16	3481700
4	7	51	6	3480400	18	19	79	16	3481800
4.5	7	51	6	3480450	19	19	79	16	3481900
5	8	52	6	3480500	*20	19	79	16	3482000
5.5	8	52	6	3480550	*22	26	102	25	3482200
6	8	52	6	3480600	24	26	102	25	3482400
6.5	10	60	10	3480650	25	26	102	25	3482500
7	10	60	10	3480700	26	26	102	25	3482600
7.5	10	60	10	3480750	28	26	102	25	3482800
8	11	61	10	3480800	30	26	102	25	3483000
8.5	11	61	10	3480850	32	32	112	32	3483200
9	11	61	10	3480900	35	32	112	32	3483500
9.5	11	61	10	3480950	36	32	112	32	3483600
10	13	63	10	3481000	38	38	118	32	3483800
10.5	13	70	12	3481050	*40	38	118	32	3484000
11	13	70	12	3481100	*42	38	118	32	3484200
11.5	13	70	12	3481150	*45	38	118	32	3484500
12	16	73	12	3481200	*50	45	125	32	3485000

TiALN coated product also available - specify code with "A" at the end.

* Lengths not to DIN 327

Code

348

Properties

M	DIN 327	HSS Co8e
	TYPE N	e8
	30°	Z 2
h8	UNCOATED OR TiALN	

Suited Materials

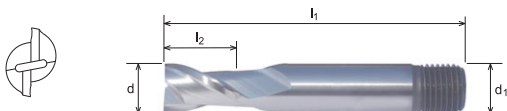
GENERAL



SHANK CUTTERS



2 Flute End Mills (Slot Drills) - Regular Length



Code
349

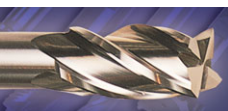
Properties			
INCH	BS 122	HSS Co8e	
	TYPE N		e8
	30°	Z 2	
	UNCOATED OR TiAlN		
h8			

d	l ₂	l ₁	d ₁	Code
1/16	2.5	48	1/4	3490159
1/8	8	51	1/4	3490318
3/16	10	52	1/4	3490476
1/4	11	56	1/4	3490635
5/16	13	60	3/8	3490794
3/8	14	60	3/8	3490953
7/16	17	65	1/2	3491111
1/2	19	67	1/2	3491270
9/16	22	69	1/2	3491429
5/8	22	72	5/8	3491588
3/4	25	77	5/8	3491905

d	l ₂	l ₁	d ₁	Code
7/8	25	100	1"	3492223
1"	27	95	1"	3492540
1.1/8	30	95	1"	3492858
1.1/4	35	117	1.1/4	3493175
1.3/8	40	111	1.1/4	3493493
1.1/2	43	115	1.1/4	3493810
1.5/8	48	118	1.1/4	3494128
1.3/4	48	118	1.1/4	3494445
1.7/8	51	118	1.1/4	3494763
2"	51	118	1.1/4	3495080

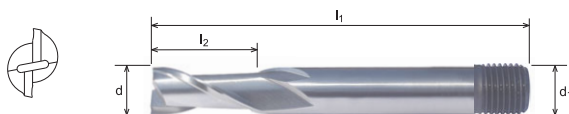
TiAlN coated product also available - specify code with "A" at the end.

Suited Materials
GENERAL



SHANK CUTTERS

2 Flute End Mills (Slot Drills) - Long Series



d	l ₂	l ₁	d ₁	Code	d	l ₂	l ₁	d ₁	Code
2	4	51	6	3500200	*15	31.5	108	12	3501500
2.5	6.5	54	6	3500250	16	31.5	108	16	3501600
3	11	60.5	6	3500300	17	35	114.5	16	3501700
3.5	12.5	66.5	6	3500350	18	35	114.5	16	3501800
4	12.5	66.5	6	3500400	19	38	120.5	16	3501900
4.5	12.5	66.5	6	3500450	20	38	120.5	16	3502000
5	12.5	70	6	3500500	22	41.5	140	25	3502200
5.5	16	76	6	3500550	24	41.5	152.5	25	3502400
6	16	76	6	3500600	25	44.5	159	25	3502500
6.5	16	76	10	3500650	26	44.5	159	25	3502600
7	16	76	10	3500700	28	47.5	159	25	3502800
7.5	16	76	10	3500750	30	51	159	25	3503000
8	19	79.5	10	3500800	32	51	159	32	3503200
8.5	22	82.5	10	3500850	35	54	159	32	3503500
9	22	82.5	10	3500900	36	54	159	32	3503600
9.5	22	82.5	10	3500950	38	57	159	32	3503800
10	22	82.5	10	3501000	40	63.5	159	32	3504000
11	22	89	12	3501100	42	63.5	159	32	3504200
12	25.5	95	12	3501200	45	63.5	159	32	3504500
13	25.5	95	12	3501300	50	63.5	159	32	3505000
14	28.5	101.5	12	3501400					

TiALN coated product also available - specify code with "A" at the end.

* Not to BS 122

Code

350

Properties

M	BS 122	HSS Co8e
	TYPE N	
	30°	Z 2
	UNCOATED OR TiALN	

Suited Materials

GENERAL

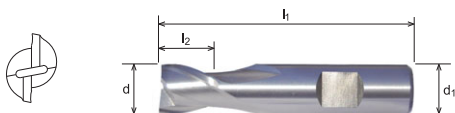


SHANK CUTTERS



305

GENERAL



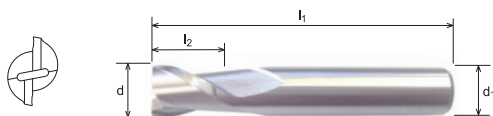
d	l_2	l_1	d_1	Code
2	4	48	6	3050200
2.5	5	49	6	3050250
3	5	49	6	3050300
3.5	6	50	6	3050350
4	7	51	6	3050400
4.5	7	51	6	3050450
5	8	52	6	3050500
5.5	8	52	6	3050550
6	8	52	6	3050600
6.5	10	60	10	3050650
7	10	60	10	3050700
7.5	10	60	10	3050750
8	11	61	10	3050800
8.5	11	61	10	3050850
9	11	61	10	3050900

d	l ₂	l ₁	d ₁	Code
9.5	11	61	10	3050950
10	13	63	10	3051000
11	13	70	12	3051100
12	16	73	12	3051200
13	16	73	12	3051300
14	16	73	12	3051400
15	16	73	12	3051500
16	19	79	16	3051600
17	19	79	16	3051700
18	19	79	16	3051800
19	19	79	16	3051900
20	22	88	20	3052000
22	22	88	20	3052200
24	26	102	25	3052400
25	26	102	25	3052500

TiALN coated product also available - specify code with "A" at the end.

310

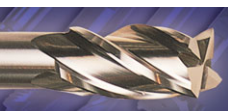
2 Flute End Mills (Slot Drills) - Regular Length



d	l_2	l_1	d_1	Code
2	4	48	6	3100200
2.5	5	49	6	3100250
3	5	49	6	3100300
3.5	6	50	6	3100350
4	7	51	6	3100400
4.5	7	51	6	3100450
5	8	52	6	3100500
5.5	8	52	6	3100550
6	8	52	6	3100600
6.5	10	60	10	3100650
7	10	60	10	3100700
7.5	10	60	10	3100750
8	11	61	10	3100800
8.5	11	61	10	3100850
9	11	61	10	3100900

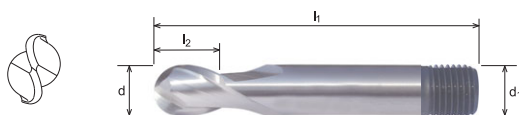
d	l_2	l_1	d_1	Code
9.5	11	61	10	3100950
10	13	63	10	3101000
11	13	70	12	3101100
12	16	73	12	3101200
13	16	73	12	3101300
14	16	73	12	3101400
15	16	73	12	3101500
16	19	79	16	3101600
17	19	79	16	3101700
18	19	79	16	3101800
19	19	79	16	3101900
20	22	88	20	3102000
22	22	88	20	3102200
24	26	102	25	3102400
25	26	102	25	3102500

TiALN coated product also available - specify code with "A" at the end.



SHANK CUTTERS

2 Flute Ball Nose End Mills - Regular Length



d	l ₂	l ₁	d ₁	Code	d	l ₂	l ₁	d ₁	Code
2	4	48	6	3400200	12	16	73	12	3401200
3	5	49	6	3400300	13	16	73	12	3401300
4	7	51	6	3400400	14	16	73	12	3401400
5	8	52	6	3400500	15	16	73	12	3401500
6	8	52	6	3400600	16	19	79	16	3401600
7	10	60	10	3400700	18	19	79	16	3401800
8	11	61	10	3400800	*20	19	79	16	3402000
9	11	61	10	3400900	*22	26	102	25	3402200
10	13	63	10	3401000	24	26	102	25	3402400
11	13	70	12	3401100	25	26	102	25	3402500

TiAlN coated product also available - specify code with "A" at the end.

* Lengths not to DIN 327

Code

340

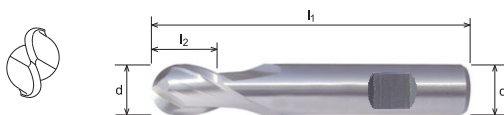
Properties

M	DIN 327	HSS Co8e
	TYPE N	
		Z 2
	UNCOATED OR TiAlN	

Suited Materials

GENERAL

2 Flute Ball Nose End Mills - Regular Length



d	l ₂	l ₁	d ₁	Code	d	l ₂	l ₁	d ₁	Code
2	4	48	6	3370200	10	13	63	10	3371000
2.5	5	49	6	3370250	11	13	70	12	3371100
3	5	49	6	3370300	12	16	73	12	3371200
3.5	6	50	6	3370350	14	16	73	12	3371400
4	7	51	6	3370400	16	19	79	16	3371600
5	8	52	6	3370500	18	19	79	16	3371800
6	8	52	6	3370600	20	22	88	20	3372000
7	10	60	10	3370700	22	22	88	20	3372200
8	11	61	10	3370800	24	26	102	25	3372400
9	11	61	10	3370900	25	26	102	25	3372500

TiAlN coated product also available - specify code with "A" at the end.

Code

337

Properties

M	DIN 327	HSS Co8e
	TYPE N	
		Z 2
	UNCOATED OR TiAlN	

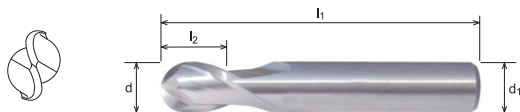
Suited Materials

GENERAL



SHANK CUTTERS

2 Flute Ball Nose End Mills - Regular Length



Code
312

Properties			
M	DIN 327	HSS Co8e	
	TYPE N		
	30°		Z 2
	UNCOATED OR TiAlN		
	h7		

Suited Materials
GENERAL

d	l ₂	l ₁	d ₁	Code
2	4	48	6	3120200
3	5	49	6	3120300
4	7	51	6	3120400
5	8	52	6	3120500
6	8	52	6	3120600
7	10	60	10	3120700
8	11	61	10	3120800
9	11	61	10	3120900
10	13	63	10	3121000
11	13	70	12	3121100

d	l ₂	l ₁	d ₁	Code
12	16	73	12	3121200
13	16	73	12	3121300
14	16	73	12	3121400
15	16	73	12	3121500
16	19	79	16	3121600
18	19	79	16	3121800
20	22	88	20	3122000
22	22	88	20	3122200
24	26	102	25	3122400
25	26	102	25	3122500

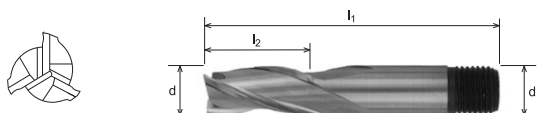
TiAlN coated product also available - specify code with "A" at the end.

Code
342

Properties			
M	BS 122	HSS Co8e	
	TYPE N		
	30°		Z 3
	UNCOATED OR TiAlN		
	h8		

Suited Materials
GENERAL

3 Flute End Mills - Regular Length

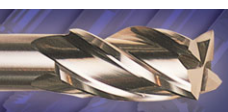


d	l ₂	l ₁	d ₁	Code
3	9.5	54	6	3420300
4	12.5	57	6	3420400
5	16	60.5	6	3420500
6	16	60.5	6	3420600
7	15	60.5	10	3420700
8	18	63.5	10	3420800
9	21	66.5	10	3420900
10	21	66.5	10	3421000
11	19	66.5	12	3421100
12	24	70	12	3421200

d	l ₂	l ₁	d ₁	Code
13	24.5	70	12	3421300
14	28.5	73	12	3421400
*15	26.5	71	12	3421500
16	26.5	77	16	3421600
18	35	80	16	3421800
19	38	83.5	16	3421900
20	38	83.5	16	3422000
22	41.5	98.5	25	3422200
25	44.5	101.5	25	3422500

TiAlN coated product also available - specify code with "A" at the end.

* Not to BS 122



SHANK CUTTERS

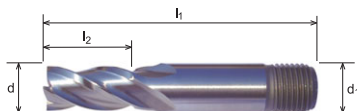
Multi-Flute End Mills - Regular Length



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
2.5	6.5	51	6	4	3010250
3	9.5	54	6	4	3010300
3.5	12.5	57	6	4	3010350
4	12.5	57	6	4	3010400
4.5	12.5	57	6	4	3010450
5	16	60.5	6	4	3010500
5.5	16	60.5	6	4	3010550
6	16	60.5	6	4	3010600
6.5	16	60.5	10	4	3010650
7	15	60.5	10	4	3010700
7.5	18	63.5	10	4	3010750
8	18	63.5	10	4	3010800
8.5	21	66.5	10	4	3010850
9	21	66.5	10	4	3010900
9.5	21	66.5	10	4	3010950
10	21	66.5	10	4	3011000
10.5	19	66.5	12	4	3011050
11	19	66.5	12	4	3011100
12	24	70	12	4	3011200

d	l ₂	l ₁	d ₁	Z Teeth	Code
13	24.5	70	12	4	3011300
14	28.5	73	12	4	3011400
*15	26.5	71	12	4	3011500
16	26.5	77	16	4	3011600
18	35	80	16	4	3011800
19	38	83.5	16	4	3011900
20	38	83.5	16	4	3012000
22	41.5	98.5	25	6	3012200
24	41.5	98.5	25	6	3012400
25	44.5	101.5	25	6	3012500
28	46	104.5	25	6	3012800
30	46	104.5	25	6	3013000
32	51	112.5	32	6	3013200
35	54	116	32	6	3013500
38	54	116	32	6	3013800
40	55.5	117.5	32	6	3014000
45	57	119	32	6	3014500
50	65	127	32	8	3015000

* Not to BS 122

Code

301

Properties

M	BS 122	HSS
	TYPE N	
		Z 4 - 8

Suited Materials

GENERAL



**SHANK
CUTTERS**

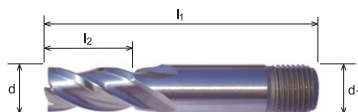
Multi-Flute End Mills - Regular Length



CENTRE CUT
3/4" and below



CENTRE HOLE
sizes above 3/4"



Code

303

Properties

INCH	BS 122	HSS
	TYPE N	
	Z 4 - 8	
		

Suited Materials

GENERAL

d	l ₂	l ₁	d ₁	Z Teeth	Code
1/8	10	54	1/4	4	3030318
3/16	13	57	1/4	4	3030476
7/32	16	60	1/4	4	3030556
1/4	16	60	1/4	4	3030635
9/32	16	60	3/8	4	3030714
5/16	18	64	3/8	4	3030794
3/8	22	67	3/8	4	3030953
7/16	22	67	1/2	4	3031111
1/2	24	70	1/2	4	3031270
9/16	29	73	1/2	4	3031429
5/8	32	77	5/8	4	3031588
11/16	35	80	5/8	4	3031746
3/4	38	83	5/8	4	3031905

d	l ₂	l ₁	d ₁	Z Teeth	Code
13/16	38	95	1"	6	3032064
7/8	41	98	1"	6	3032223
15/16	41	98	1"	6	3032381
1"	43	102	1"	6	3032540
1.1/8	46	105	1"	6	3032858
1.1/4	51	113	1.1/4	8	3033175
1.3/8	54	116	1.1/4	8	3033493
1.1/2	54	116	1.1/4	8	3033810
1.5/8	54	116	1.1/4	8	3034128
1.3/4	57	119	1.1/4	8	3034445
1.7/8	62	124	1.1/4	8	3034763
2"	65	127	1.1/4	8	3035080

Code

306

Properties

M	BS 122	HSS
	TYPE N	
	Z 4 - 8	
		

Suited Materials

GENERAL

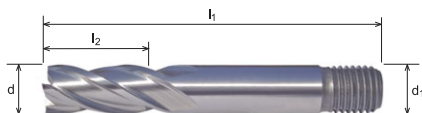
Multi-Flute End Mills - Long Series



CENTRE CUT
20.0 mm and below



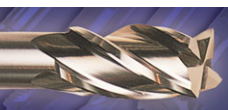
CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
3	19	63.5	6	4	3060300
4	25.5	70	6	4	3060400
5	31.5	76	6	4	3060500
6	31.5	76	6	4	3060600
7	34	79.5	10	4	3060700
8	34	79.5	10	4	3060800
9	37	82.5	10	4	3060900
10	37	82.5	10	4	3061000
11	41.5	89	12	4	3061100
12	49.5	95	12	4	3061200
13	50	95	12	4	3061300
14	57	101.5	12	4	3061400
*15	58.5	103	12	4	3061500
16	58.5	108.5	16	4	3061600

d	l ₂	l ₁	d ₁	Z Teeth	Code
18	70	115	16	4	3061800
19	76	121.5	16	4	3061900
20	76	121.5	16	4	3062000
22	85.5	143	25	6	3062200
24	92	149	25	6	3062400
25	100	157	25	6	3062500
28	98.5	157	25	6	3062800
30	98.5	157	25	6	3063000
32	101.5	163.5	32	6	3063200
35	101.5	163.5	32	6	3063500
38	101.5	163.5	32	6	3063800
40	101.5	163.5	32	6	3064000
45	101.5	163.5	32	8	3064500
50	101.5	163.5	32	8	3065000

* Not to BS 122



SHANK CUTTERS

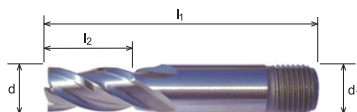
Multi-Flute End Mills - Regular Length



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
2.5	6.5	51	6	4	3440250
3	9.5	54	6	4	3440300
3.5	12.5	57	6	4	3440350
4	12.5	57	6	4	3440400
4.5	12.5	57	6	4	3440450
5	16	60.5	6	4	3440500
5.5	16	60.5	6	4	3440550
6	16	60.5	6	4	3440600
6.5	16	60.5	10	4	3440650
7	15	60.5	10	4	3440700
7.5	18	63.5	10	4	3440750
8	18	63.5	10	4	3440800
8.5	21	66.5	10	4	3440850
9	21	66.5	10	4	3440900
9.5	21	66.5	10	4	3440950
10	21	66.5	10	4	3441000
10.5	19	66.5	12	4	3441050
11	19	66.5	12	4	3441100
12	24	70	12	4	3441200

d	l ₂	l ₁	d ₁	Z Teeth	Code
13	24.5	70	12	4	3441300
14	28.5	73	12	4	3441400
*15	26.5	71	12	4	3441500
16	26.5	77	16	4	3441600
18	35	80	16	4	3441800
19	38	83.5	16	4	3441900
20	38	83.5	16	4	3442000
22	41.5	98.5	25	6	3442200
24	41.5	98.5	25	6	3442400
25	44.5	101.5	25	6	3442500
28	46	104.5	25	6	3442800
30	46	104.5	25	6	3443000
32	51	112.5	32	6	3443200
35	54	116	32	6	3443500
38	54	116	32	6	3443800
40	55.5	117.5	32	8	3444000
45	57	119	32	8	3444500
50	65	127	32	8	3445000

TiALN coated product also available - specify code with "A" at the end.

* Not to BS 122

Code

344

Properties

M	BS 122	HSS Co8e
	TYPE N	
	30°	Z 4 - 8
	UNCOATED OR TiALN	

Suited Materials

GENERAL



SHANK CUTTERS



Multi-Flute End Mills - Regular Length

Code
345

Properties		
INCH	BS 122	HSS Co8e
	TYPE N	
	30°	Z 4
	UNCOATED OR TiAlN	
h8		

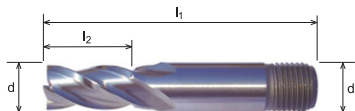
Suited Materials
GENERAL



CENTRE CUT
3/4" and below



CENTRE HOLE
sizes above 3/4"



d	l ₂	l ₁	d ₁	Z Teeth	Code
1/8	10	54	1/4	4	3450318
1/4	16	60	1/4	4	3450635
5/16	18	64	3/8	4	3450794
3/8	22	67	3/8	4	3450953

d	l ₂	l ₁	d ₁	Z Teeth	Code
7/16	22	67	1/2	4	3451111
1/2	24	70	1/2	4	3451270
5/8	32	77	5/8	4	3451588
3/4	38	83	5/8	4	3451905

TiAlN coated product also available - specify code with "A" at the end.

Code
346

Properties		
M	BS 122	HSS Co8e
	TYPE N	
	30°	Z 4 - 8
	UNCOATED OR TiAlN	
h8		

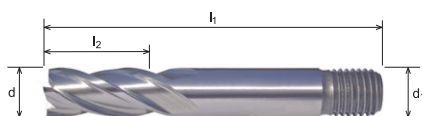
Suited Materials
GENERAL



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm

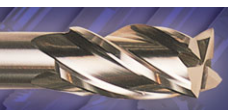


d	l ₂	l ₁	d ₁	Z Teeth	Code
3	19	63.5	6	4	3460300
4	25.5	70	6	4	3460400
5	31.5	76	6	4	3460500
6	31.5	76	6	4	3460600
7	34	79.5	10	4	3460700
8	34	79.5	10	4	3460800
9	37	82.5	10	4	3460900
10	37	82.5	10	4	3461000
11	41.5	89	12	4	3461100
12	49.5	95	12	4	3461200
13	50	95	12	4	3461300
14	57	101.5	12	4	3461400
*15	58.5	103	12	4	3461500
16	58.5	108.5	16	4	3461600

d	l ₂	l ₁	d ₁	Z Teeth	Code
18	70	115	16	4	3461800
19	76	121.5	16	4	3461900
20	76	121.5	16	4	3462000
22	85.5	143	25	6	3462200
24	92	149	25	6	3462400
25	100	157	25	6	3462500
28	98.5	157	25	6	3462800
30	98.5	157	25	6	3463000
32	101.5	163.5	32	6	3463200
35	101.5	163.5	32	6	3463500
38	101.5	163.5	32	6	3463800
40	101.5	163.5	32	8	3464000
45	101.5	163.5	32	8	3464500
50	101.5	163.5	32	8	3465000

TiAlN coated product also available - specify code with "A" at the end.

* Not to BS 122



SHANK
CUTTERS

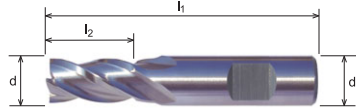
Multi-Flute End Mills - Regular Length



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
3	8	52	6	4	3590300
4	11	55	6	4	3590400
5	13	57	6	4	3590500
6	13	57	6	4	3590600
7	16	66	10	4	3590700
8	19	69	10	4	3590800
9	19	69	10	4	3590900
10	22	72	10	4	3591000
11	22	79	12	4	3591100

d	l ₂	l ₁	d ₁	Z Teeth	Code
12	26	83	12	4	3591200
13	26	83	12	4	3591300
14	26	83	12	4	3591400
15	26	83	12	4	3591500
16	32	92	16	4	3591600
18	32	92	16	4	3591800
20	38	104	20	4	3592000
22	38	104	20	6	3592200
25	45	121	25	6	3592500

TiAlN coated product also available - specify code with "A" at the end.

Code

359

Properties

M	DIN 844	HSS Co8e
	TYPE N	
	30°	Z 4 - 6
	UNCOATED OR TiAlN	

Suited Materials

GENERAL

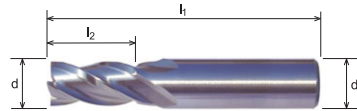
Multi-Flute End Mills - Regular Length



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
3	8	52	6	4	3140300
4	11	55	6	4	3140400
5	13	57	6	4	3140500
6	13	57	6	4	3140600
7	16	66	10	4	3140700
8	19	69	10	4	3140800
9	19	69	10	4	3140900
10	22	72	10	4	3141000
11	22	79	12	4	3141100
12	26	83	12	4	3141200

d	l ₂	l ₁	d ₁	Z Teeth	Code
13	26	83	12	4	3141300
14	26	83	12	4	3141400
15	26	83	12	4	3141500
16	32	92	16	4	3141600
18	32	92	16	4	3141800
19	32	92	16	4	3141900
20	38	104	20	4	3142000
22	38	104	20	6	3142200
25	45	121	25	6	3142500

TiAlN coated product also available - specify code with "A" at the end.

Code

314

Properties

M	DIN 844	HSS Co8e
	TYPE N	
	30°	Z 4 - 6
	UNCOATED OR TiAlN	

Suited Materials

GENERAL



SHANK CUTTERS

Roughing End Mills - TiAlN Coated

Code
316

Properties		
M	BS 122	HSS Co8
		
	Z 4	
	TIAlN	

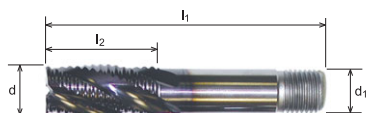
Suited Materials
GENERAL



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
6	16	60.5	6	4	3160600
8	18	63.5	10	4	3160800
10	21	66.5	10	4	3161000
12	24	70	12	4	3161200

d	l ₂	l ₁	d ₁	Z Teeth	Code
14	28.5	73	12	4	3161400
16	26.5	77	16	4	3161600
20	38	83.5	16	4	3162000

Roughing End Mills - TiAlN Coated

Code
318

Properties		
M	BS 122	HSS Co8
		
	Z 4	
	TIAlN	

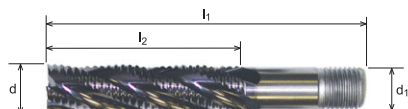
Suited Materials
GENERAL



CENTRE CUT
20.0 mm and below

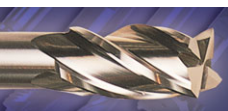


CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
10	37	82.5	10	4	3181000
12	49.5	95	12	4	3181200
14	57	101.5	12	4	3181400

d	l ₂	l ₁	d ₁	Z Teeth	Code
16	58.5	108.5	16	4	3181600
20	76	121.5	16	4	3182000



**SHANK
CUTTERS**

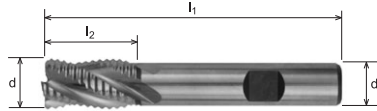
Roughing End Mills



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
6	13	57	6	4	3300600
8	19	69	10	4	3300800
10	22	72	10	4	3301000
12	26	83	12	4	3301200
14	26	83	12	4	3301400
16	32	92	16	4	3301600
18	32	92	16	4	3301800
20	38	104	20	4	3302000

d	l ₂	l ₁	d ₁	Z Teeth	Code
22	38	104	20	5	3302200
25	45	121	25	5	3302500
28	45	121	25	5	3302800
30	45	121	25	5	3303000
32	53	133	32	6	3303200
35	53	133	32	6	3303500
*38	63	155	32	6	3303800
*40	63	155	32	6	3304000

* Not to DIN 844

Code

330

Properties

M	DIN 844	HSS Co8
		
		
		
		

Suited Materials

GENERAL

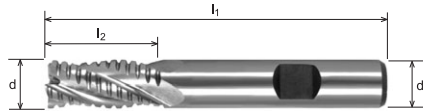
Roughing End Mills



CENTRE CUT
20.0 mm and below



CENTRE HOLE
sizes above 20.0 mm



d	l ₂	l ₁	d ₁	Z Teeth	Code
6	13	57	6	4	3680600
8	19	69	10	4	3680800
10	22	72	10	4	3681000
12	26	83	12	4	3681200
14	26	83	12	4	3681400
16	32	92	16	4	3681600
18	32	92	16	4	3681800
20	38	104	20	4	3682000

d	l ₂	l ₁	d ₁	Z Teeth	Code
22	38	104	20	5	3682200
25	45	121	25	5	3682500
30	45	121	25	5	3683000
32	53	133	32	6	3683200
35	53	133	32	6	3683500
38	63	155	32	6	3683800
40	63	155	32	6	3684000

Code

368

Properties

M	DIN 844	HSS Co8
		
		
		
		

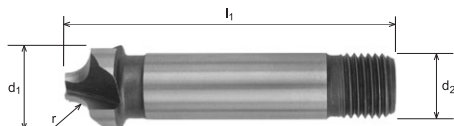
Suited Materials

GENERAL



**SHANK
CUTTERS**

Corner Rounding Cutters



Code
363

Properties
M DIN 6518 FORM D HSS Co8
 $r = H11$ $d1 = js14$
Z 4

Suited Materials
GENERAL

r	d ₁	d ₂	l ₁	Code
2	10	10	60	3630200
3	12	12	60	3630300
4	14	12	60	3630400
5	16	12	60	3630500
6	20	16	67	3630600
8	24	16	71	3630800

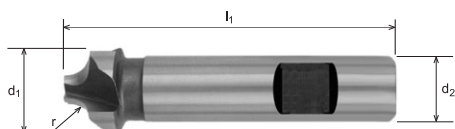
r	d ₁	d ₂	l ₁	Code
10	28	25	85	3631000
12	34	25	90	3631200
14	44	25	100	3631400
16	48	25	100	3631600
20	52	32	112	3632000

Code
363

Properties
M DIN 6518 FORM B HSS Co8
 $r = H11$ $d1 = js14$
Z 4

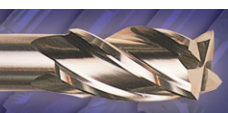
Suited Materials
GENERAL

Corner Rounding Cutters



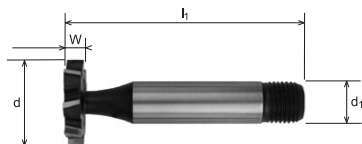
r	d ₁	d ₂	l ₁	Code
2	10	10	60	3630201
3	12	12	60	3630301
4	14	12	60	3630401
5	16	12	60	3630501
6	20	16	67	3630601
8	24	16	71	3630801

r	d ₁	d ₂	l ₁	Code
10	28	25	85	3631001
12	34	25	90	3631201
14	44	25	100	3631401
16	48	25	100	3631601
18	54	32	112	3631801
20	56	32	112	3632001



SHANK
CUTTERS

Woodruff Cutters



d	W	l ₁	d ₁	Z Teeth	Code
10.5	2	56	12	8	3660010
10.5	2.5	56	12	8	3660020
10.5	3	56	12	8	3660030
13.5	3	56	12	8	3660060
13.5	4	56	12	8	3660070
16.5	3	56	12	8	3660090
16.5	4	56	12	8	3660100
16.5	5	56	12	8	3660110
19.5	4	57	12	8	3660130
19.5	5	57	12	8	3660140
19.5	6	57	12	8	3660145

d	W	l ₁	d ₁	Z Teeth	Code
22.5	5	64	12	8	3660160
22.5	6	64	12	8	3660170
22.5	8	64	12	8	3660175
25.5	6	70	12	8	3660190
28.5	6	70	12	8	3660230
28.5	8	70	12	8	3660250
28.5	10	70	12	8	3660255
32.5	7	70	12	8	3660280
32.5	8	70	12	8	3660290
32.5	10	70	12	8	3660295
45.5	10	76	12	12	3660380

Code

366

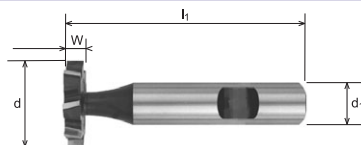
Properties

M	BASED ON DIN 850 TO SUIT DIN 6888 KEY	HSS Co5
		
	Z 8-12	

Suited Materials

GENERAL

Woodruff Cutters



d	W	l ₁	d ₁	Z Teeth	Code
10.5	2	50	6	8	3741050
10.5	2.5	50	6	8	3741051
10.5	3	50	6	8	3741052
13.5	3	56	10	8	3741350
13.5	4	56	10	8	3741351
16.5	3	56	10	8	3741650
16.5	4	56	10	8	3741651
16.5	5	56	10	8	3741652
19.5	4	63	10	8	3741950
19.5	5	63	10	8	3741951
19.5	6	63	10	8	3741952

d	W	l ₁	d ₁	Z Teeth	Code
22.5	5	63	10	8	3742250
22.5	6	63	10	8	3742251
22.5	8	63	10	8	3742252
25.5	6	63	12	8	3742550
28.5	6	63	12	8	3742850
28.5	8	63	12	8	3742851
28.5	10	71	12	8	3742852
32.5	8	71	12	8	3743250
32.5	10	71	12	8	3743251
45.5	10	71	12	12	3744550

Code

374

Properties

M	DIN 850	HSS Co5
		
	Z 8-12	

Suited Materials

GENERAL



**SHANK
CUTTERS**

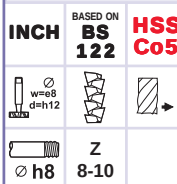


Woodruff Cutters

Code

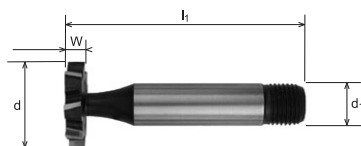
367

Properties

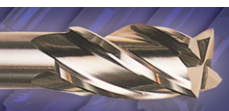


Suited Materials

GENERAL

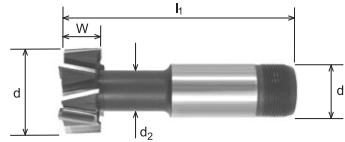


Size	d	W	l ₁	d ₁	Z Teeth	Code
204	1/2	1/16	56	1/2	8	3670010
304	1/2	3/32	56	1/2	8	3670020
404	1/2	1/8	56	1/2	8	3670030
305	5/8	3/32	56	1/2	8	3670040
405	5/8	1/8	56	1/2	8	3670050
505	5/8	5/32	56	1/2	8	3670060
406	3/4	1/8	56	1/2	8	3670070
506	3/4	5/32	56	1/2	8	3670080
606	3/4	3/16	56	1/2	8	3670090
507	7/8	5/32	64	1/2	8	3670100
607	7/8	3/16	64	1/2	8	3670110
807	7/8	1/4	64	1/2	8	3670130
608	1"	3/16	70	1/2	8	3670140
808	1"	1/4	70	1/2	8	3670160
1008	1"	5/16	70	1/2	8	3670170
609	1.1/8	3/16	70	1/2	8	3670180
809	1.1/8	1/4	70	1/2	8	3670200
1009	1.1/8	5/16	70	1/2	8	3670210
810	1.1/4	1/4	70	1/2	8	3670240
1010	1.1/4	5/16	70	1/2	8	3670250
1210	1.1/4	3/8	70	1/2	8	3670260
811	1.3/8	1/4	76	1/2	10	3670270
1011	1.3/8	5/16	76	1/2	10	3670280
1211	1.3/8	3/8	76	1/2	10	3670290
812	1.1/2	1/4	76	1/2	10	3670300
1012	1.1/2	5/16	76	1/2	10	3670340
1212	1.1/2	3/8	76	1/2	10	3670350



SHANK
CUTTERS

T-Slot Cutters



Bolt Size	d	W	d ₁	d ₂	l ₁	Z Teeth	Code
6	12.5	6	10	5	55	6	3710600
8	16	8	10	7	60	6	3710800
10	18	8	12	8	62	6	3711000
12	21	9	12	10	68	6	3711200
14	25	11	16	12	70	8	3711400
*16	28	12	16	13	75	8	3711600
18	32	14	25	15	90	8	3711800
*20	36	16	25	17	95	10	3712000
22	40	18	25	19	100	10	3712200

* Sizes not to DIN or ISO

Code

371

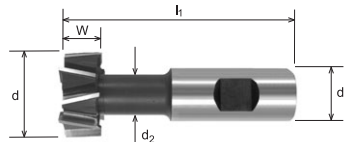
Properties

M	BASED ON ISO 3337 DIN 851	HSS Co5
	Z 6-10	

Suited Materials

GENERAL

T-Slot Cutters



Bolt Size	d	W	d ₁	d ₂	l ₁	Z Teeth	Code
6	12.5	6	10	5	57	6	3850600
8	16	8	10	7	62	6	3850800
10	18	8	12	8	70	6	3851000
12	21	9	12	10	74	6	3851200
14	25	11	16	12	82	8	3851400
16	28	12	16	13	85	8	3851600
18	32	14	16	15	90	8	3851800
20	36	16	25	17	103	10	3852000
22	40	18	25	19	108	10	3852200

Code

385

Properties

M	DIN 851	HSS Co5
	Z 6-10	

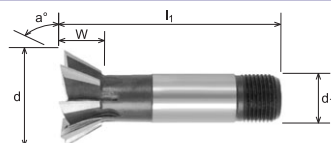
Suited Materials

GENERAL



**SHANK
CUTTERS**

Dovetail Cutters



Code

376

Properties

M

BASED ON
DIN 1833
ISO 3859

**HSS
Co5**



Ø h8

Z
6-14

Suited Materials

GENERAL

d	d ₁	Z Teeth	a° = 45°			a° = 60°		
			W	l ₁	Code	W	l ₁	Code
16	12	6	4	60	3760020	6.3	60	3760120
20	12	8	5	63	3760030	8	63	3760130
25	12	10	6.3	67	3760040	10	67	3760140
32	16	12	8	71	3760050	12.5	71	3760150
*40	16	14	10	71	3760060	16	80	3760160

* Sizes not to DIN or ISO

Code

386

Properties

M

DIN 1833
FORM C

**HSS
Co5**



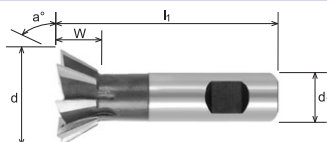
Ø h6

Z
6-14

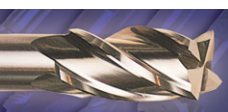
Suited Materials

GENERAL

Dovetail Cutters

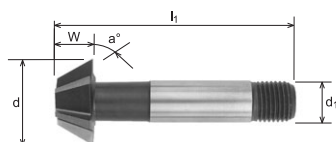


d	d ₁	Z Teeth	a° = 45°			a° = 60°		
			W	l ₁	Code	W	l ₁	Code
16	12	6	4	60	3861600	6.3	60	3861601
20	12	8	5	63	3862000	8	63	3862001
25	12	10	6.3	67	3862500	10	67	3862501
32	16	12	8	71	3863200	12.5	71	3863201
40	16	14	10	71	3864000	16	80	3864001



**SHANK
CUTTERS**

Inverted Dovetail Cutters



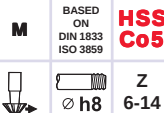
d	d ₁	Z Teeth	a° = 45°			a° = 60°		
			W	l ₁	Code	W	l ₁	Code
16	12	6	4	60	3780010	6.3	60	3780110
20	12	8	5	63	3780020	8	63	3780120
25	12	10	6.3	67	3780030	10	67	3780130
32	16	12	8	71	3780040	12.5	71	3780140
*40	16	14	10	71	3780050	16	80	3780150

* Sizes not to DIN or ISO

Code

378

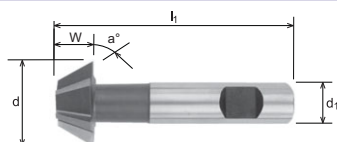
Properties



Suited Materials

GENERAL

Inverted Dovetail Cutters

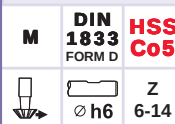


d	d ₁	Z Teeth	a° = 45°			a° = 60°		
			W	l ₁	Code	W	l ₁	Code
16	12	6	4	60	3891600	6.3	60	3891601
20	12	8	5	63	3892000	8	63	3892001
25	12	10	6.3	67	3892500	10	67	3892501
32	16	12	8	71	3893200	12.5	71	3893201
40	16	14	10	71	3894000	16	80	3894001

Code

389

Properties



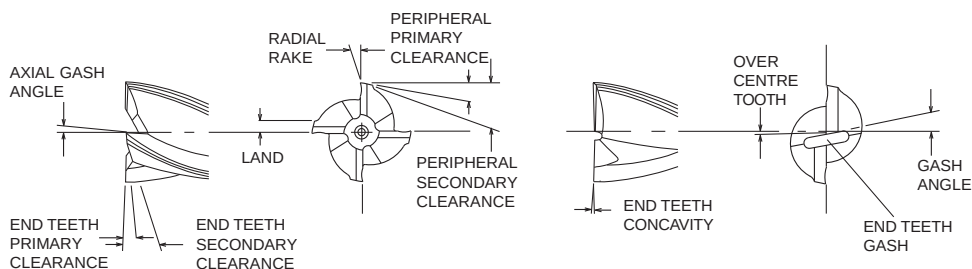
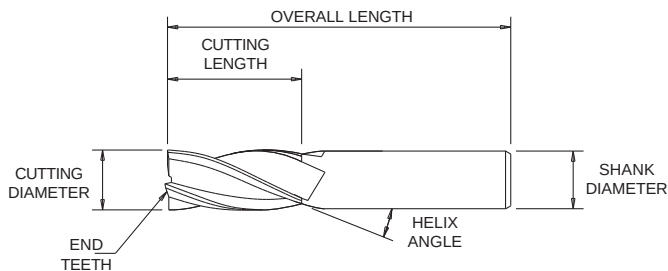
Suited Materials

GENERAL



SHANK
CUTTERS

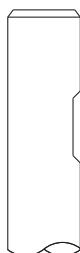
Shank Cutter Terminology



THREADED
SHANK:
ALL DIAMETERS
20 TPI
WHITWORTH
FORM



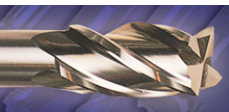
THREADED
SHANK
TOLERANCE h8

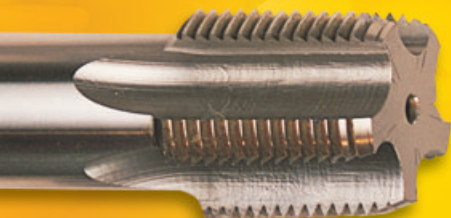


FLATTED
SHANK
TOLERANCE h6
DIN 1835 - B



PLAIN SHANK
TOLERANCE
h7

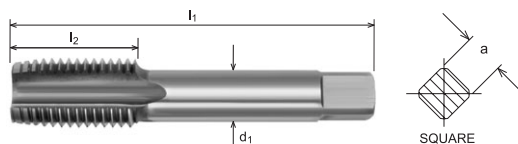




T H R E A D I N G T O O L S



Short Hand Taps



Code

501

Properties

M

ISO 529

HSS



ISO 2 6H

STRAIGHT FLUTE



Suited Materials

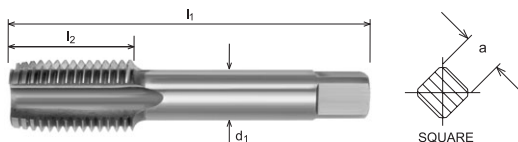
GENERAL

Size	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
							Tap Set	Taper	Second	Bottom
M1	0.25	38.5	5.5	2.5	2	3	5010100	5010101	5010102	5010103
M1.1	0.25	38.5	5.5	2.5	2	3	5010110	5010111	5010112	5010113
M1.2	0.25	38.5	5.5	2.5	2	3	5010120	5010121	5010122	5010123
M1.4	0.3	40	7	2.5	2	3	5010140	5010141	5010142	5010143
M1.6	0.35	41	8	2.5	2	3	5010160	5010161	5010162	5010163
M1.8	0.35	41	8	2.5	2	3	5010180	5010181	5010182	5010183
M2	0.4	41	8	2.5	2	3	5010200	5010201	5010202	5010203
M2.2	0.45	44.5	9.5	2.8	2.24	3	5010220	5010221	5010222	5010223
M2.5	0.45	44.5	9.5	2.8	2.24	3	5010250	5010251	5010252	5010253
M3	0.5	48	11	3.15	2.5	3	5010300	5010301	5010302	5010303
M3.5	0.6	50	13	3.55	2.8	3	5010350	5010351	5010352	5010353
M4	0.7	53	13	4.0	3.15	3	5010400	5010401	5010402	5010403
M4.5	0.75	53	13	4.5	3.55	3	5010450	5010451	5010452	5010453
M5	0.8	58	16	5.0	4	3	5010500	5010501	5010502	5010503
M6	1.0	66	19	6.3	5	3	5010600	5010601	5010602	5010603
M7	1.0	66	19	7.1	5.6	4	5010700	5010701	5010702	5010703
M8	1.25	72	22	8.0	6.3	4	5010800	5010801	5010802	5010803
M9	1.25	72	22	9.0	7.1	4	5010900	5010901	5010902	5010903
M10	1.5	80	24	10.0	8	4	5011000	5011001	5011002	5011003
M11	1.5	85	25	8	6.3	4	5011100	5011101	5011102	5011103
M12	1.75	89	29	9.0	7.1	4	5011200	5011201	5011202	5011203
M14	2.0	95	30	11.2	9	4	5011400	5011401	5011402	5011403
M16	2.0	102	32	12.5	10	4	5011600	5011601	5011602	5011603
M18	2.5	112	37	14.0	11.2	4	5011800	5011801	5011802	5011803
M20	2.5	112	37	14	11.2	4	5012000	5012001	5012002	5012003
M22	2.5	118	38	16	12.5	4	5012200	5012201	5012202	5012203
M24	3.0	130	45	18	14	4	5012400	5012401	5012402	5012403
M27	3.0	135	45	20	16	4	5012700	5012701	5012702	5012703
M30	3.5	138	48	20	16	4	5013000	5013001	5013002	5013003
M33	3.5	151	51	22.4	18	4	5013300	5013301	5013302	5013303
M36	4.0	162	57	25	20	4	5013600	5013601	5013602	5013603
M39	4.0	170	60	28	22.4	6	5013900	5013901	5013902	5013903
M42	4.5	170	60	28	22.4	6	5014200	5014201	5014202	5014203
M45	4.5	187	67	31.5	25	6	5014500	5014501	5014502	5014503
M48	5.0	187	67	31.5	25	6	5014800	5014801	5014802	5014803
M52	5.0	200	70	35.5	28	6	5015200	5015201	5015202	5015203
M56	5.5	200	70	35.5	28	6	5015600	5015601	5015602	5015603
M60	5.5	221	76	40	31.5	6	5016000	5016001	5016002	5016003
M64	6.0	224	79	40	31.5	6	5016400	5016401	5016402	5016403
M68	6.0	234	79	45	35.5	8	5016800	5016801	5016802	5016803



**THREADING
TOOLS**

Left Hand Short Hand Taps



Code

519

Size	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
							Tap Set	Taper	Second	Bottom
M3	0.5	48	11	3.15	2.5	3	5190300	5190301	5190302	5190303
M4	0.7	53	13	4	3.15	3	5190400	5190401	5190402	5190403
M5	0.8	58	16	5	4	3	5190500	5190501	5190502	5190503
M6	1	66	19	6.3	5	3	5190600	5190601	5190602	5190603
M8	1.25	72	22	8	6.3	4	5190800	5190801	5190802	5190803
M10	1.5	80	24	10	8	4	5191000	5191001	5191002	5191003
M12	1.75	89	29	9	7.1	4	5191200	5191201	5191202	5191203
M14	2	95	30	11.2	9	4	5191400	5191401	5191402	5191403
M16	2	102	32	12.5	10	4	5191600	5191601	5191602	5191603
M18	2.5	112	37	14	11.2	4	5191800	5191801	5191802	5191803
M20	2.5	112	37	14	11.2	4	5192000	5192001	5192002	5192003
M22	2.5	118	38	16	12.5	4	5192200	5192201	5192202	5192203
M24	3	130	45	18	14	4	5192400	5192401	5192402	5192403
M27	3	135	45	20	16	4	-	-	5192702	-
M30	3.5	138	48	20	16	4	-	-	5193002	-
M33	3.5	151	51	22.4	18	4	-	-	5193302	-
M36	4	162	57	25	20	4	-	-	5193602	-

Properties

M	ISO 529	HSS
	ISO 2 6H	STRAIGHT FLUTE

Suited Materials

GENERAL





Serial Hand Taps

Code

518

Properties

M

**DIN
352**

**HSSE
V3**



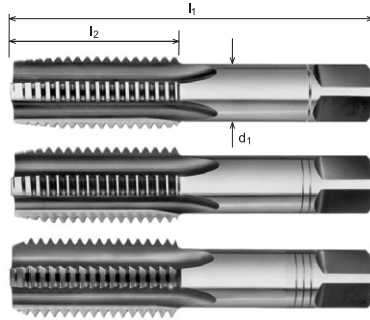
**ISO 2
6H**

**STRAIGHT
FLUTE**



Suited Materials

GENERAL

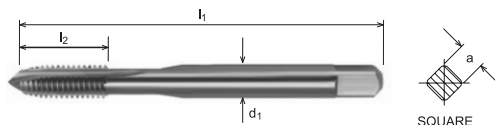


Size	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
							Tap Set	Rougher	Intermediate	Finisher
M3	0.5	40	11	3.5	2.7	3	5180300	5180301	5180302	5180303
M3.5	0.6	45	13	4	3	3	5180350	5180351	5180352	5180353
M4	0.7	45	13	4.5	3.4	3	5180400	5180401	5180402	5180403
M4.5	0.75	50	16	6	4.9	3	5180450	5180451	5180452	5180453
M5	0.8	50	16	6	4.9	3	5180500	5180501	5180502	5180503
M6	1	50	19	6	4.9	3	5180600	5180601	5180602	5180603
M7	1	50	19	6	4.9	4	5180700	5180701	5180702	5180703
M8	1.25	56	22	6	4.9	4	5180800	5180801	5180802	5180803
M9	1.25	63	22	7	5.5	4	5180900	5180901	5180902	5180903
M10	1.5	70	24	7	5.5	4	5181000	5181001	5181002	5181003
M12	1.75	75	29	9	7	4	5181200	5181201	5181202	5181203
M14	2	80	30	11	9	4	5181400	5181401	5181402	5181403
M16	2	80	32	12	9	4	5181600	5181601	5181602	5181603
M18	2.5	95	40	14	11	4	5181800	5181801	5181802	5181803
M20	2.5	95	40	16	12	4	5182000	5182001	5182002	5182003
M22	2.5	100	40	18	14.5	4	5182200	5182201	5182202	5182203
M24	3	110	50	18	14.5	4	5182400	5182401	5182402	5182403



THREADING
TOOLS

Gun Nose Short Machine Taps



Code

508

Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M2	0.4	41	8	2.5	2	3	5080200
M3	0.5	48	11	3.15	2.5	3	5080300
M3.5	0.6	50	13	3.55	2.8	3	5080350
M4	0.7	53	13	4.0	3.15	3	5080400
M5	0.8	58	16	5.0	4	3	5080500
M6	1.0	66	19	6.3	5	3	5080600
M7	1.0	66	19	7.1	5.6	3	5080700
M8	1.25	72	22	8.0	6.3	3	5080800
M9	1.25	72	22	9.0	7.1	3	5080900
M10	1.5	80	24	10.0	8	3	5081000
M11	1.5	85	25	8.0	6.3	3	5081100
M12	1.75	89	29	9.0	7.1	3	5081200
M14	2.0	95	30	11.2	9	3	5081400
M16	2.0	102	32	12.5	10	4	5081600
M18	2.5	112	37	14.0	11.2	4	5081800
M20	2.5	112	37	14.0	11.2	4	5082000
M22	2.5	118	38	16.0	12.5	4	5082200
M24	3.0	130	45	18.0	14	4	5082400
M27	3.0	135	45	20.0	16	4	5082700
M30	3.5	138	48	20.0	16	4	5083000
M33	3.5	151	51	22.4	18	4	5083300
M36	4.0	162	57	25.0	20	4	5083600

Properties

M	ISO 529	HSSE V3
	ISO 2 6H	GUN NOSE SPIRAL POINT
	RH	

Suited Materials

GENERAL





Spiral Flute Short Machine Taps

Code

509

Properties

M

ISO 529

HSSE V3



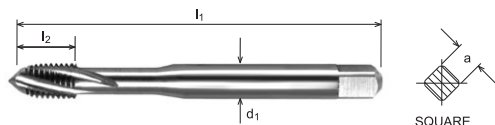
ISO 2 6H



RH

Suited Materials

GENERAL



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	48	11	3.15	2.5	3	5090300
M3.5	0.6	50	13	3.55	2.8	3	5090350
M4	0.7	53	13	4.0	3.15	3	5090400
M5	0.8	58	16	5.0	4	3	5090500
M6	1.0	66	19	6.3	5	3	5090600
M7	1.0	66	19	7.1	5.6	3	5090700
M8	1.25	72	22	8.0	6.3	3	5090800
M9	1.25	72	22	9.0	7.1	3	5090900
M10	1.5	80	24	10.0	8	3	5091000
M11	1.5	85	25	8.0	6.3	3	5091100
M12	1.75	89	29	9.0	7.1	3	5091200
M14	2.0	95	30	11.2	9	3	5091400
M16	2.0	102	32	12.5	10	3	5091600
M18	2.5	112	37	14.0	11.2	4	5091800
M20	2.5	112	37	14.0	11.2	4	5092000
M22	2.5	118	38	16.0	12.5	4	5092200
M24	3.0	130	45	18.0	14	4	5092400

Code

510

Properties

M

ISO 529

HSSE V3



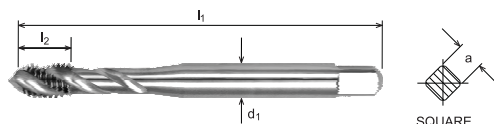
ISO 2 6H



RH

Suited Materials

GENERAL

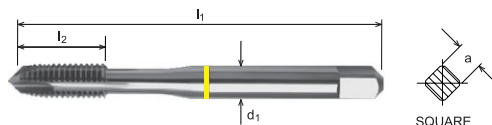


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	48	11	3.15	2.5	3	5100300
M3.5	0.6	50	13	3.55	2.8	3	5100350
M4	0.7	53	13	4.0	3.15	3	5100400
M5	0.8	58	16	5.0	4	3	5100500
M6	1.0	66	19	6.3	5	3	5100600
M7	1.0	66	19	7.1	5.6	3	5100700
M8	1.25	72	22	8.0	6.3	3	5100800
M9	1.25	72	22	9.0	7.1	3	5100900
M10	1.5	80	24	10.0	8	3	5101000
M11	1.5	85	25	8.0	6.3	3	5101100
M12	1.75	89	29	9.0	7.1	3	5101200
M14	2.0	95	30	11.2	9	3	5101400
M16	2.0	102	32	12.5	10	3	5101600
M18	2.5	112	37	14.0	11.2	4	5101800
M20	2.5	112	37	14.0	11.2	4	5102000
M22	2.5	118	38	16.0	12.5	4	5102200
M24	3.0	130	45	18.0	14	4	5102400



THREADING
TOOLS

Yellow Band Gun Nose Taps for tapping Aluminium



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	11	3.5	2.7	2	5380300
M4	0.7	63	13	4.5	3.4	2	5380400
M5	0.8	70	16	6	4.9	2	5380500
M6	1.0	80	19	6	4.9	2	5380600
M8	1.25	90	22	8	6.2	2	5380800
M10	1.5	100	24	10	8	3	5381000

Code

538

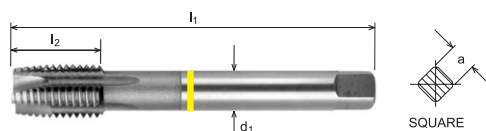
Properties

M	DIN 371	HSSE V3
ISO 2 6H		GUN NOSE SPIRAL POINT
CBA		BRIGHT FINISH

Suited Materials

ALUMINIUM	COPPER	SOFT BRASS
FREE CUTTING STEEL		

Yellow Band Gun Nose Taps for tapping Aluminium



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M12	1.75	110	29	9	7	3	5481200
M14	2	110	30	11	9	3	5481400
M16	2	110	32	12	9	3	5481600
M18	2.5	125	34	14	11	3	5481800
M20	2.5	140	34	16	12	3	5482000
M22	2.5	140	34	18	14.5	3	5482200
M24	3	160	38	18	14.5	3	5482400

Code

548

Properties

M	DIN 376	HSSE V3
ISO 2 6H		GUN NOSE SPIRAL POINT
CBA		BRIGHT FINISH

Suited Materials

ALUMINIUM	COPPER	SOFT BRASS
FREE CUTTING STEEL		



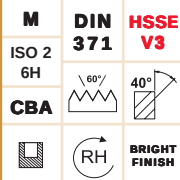


Yellow Band Spiral Flute Taps for tapping Aluminium

Code

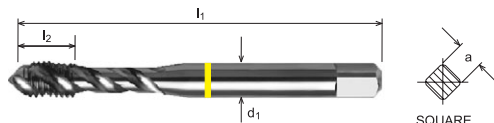
558

Properties



Suited Materials

ALUMINIUM COPPER SOFT BRASS
FREE CUTTING STEEL

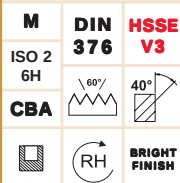


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	5	3.5	2.7	2	5580300
M4	0.7	63	7	4.5	3.4	2	5580400
M5	0.8	70	8	6	4.9	2	5580500
M6	1.0	80	10	6	4.9	2	5580600
M8	1.25	90	12.5	8	6.2	2	5580800
M10	1.5	100	15	10	8	3	5581000

Code

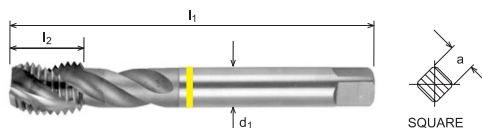
569

Properties



Suited Materials

ALUMINIUM COPPER SOFT BRASS
FREE CUTTING STEEL

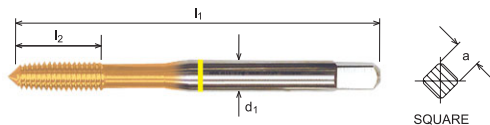


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M12	1.75	110	17.5	9	7	3	5691200
M14	2	110	20	11	9	3	5691400
M16	2	110	20	12	9	3	5691600
M18	2.5	125	25	14	11	3	5691800
M20	2.5	140	25	16	12	3	5692000
M22	2.5	140	25	18	14.5	3	5692200
M24	3	160	30	18	14.5	3	5692400



THREADING
TOOLS

Yellow Band Fluteless Taps for threading Aluminium



Size	Pitch	l_1	l_2	d_1	a	Code
M3	0.5	56	11	3.5	2.7	5120300
M4	0.7	63	13	4.5	3.4	5120400
M5	0.8	70	16	6	4.9	5120500
M6	1.0	80	19	6	4.9	5120600
M8	1.25	90	22	8	6.2	5120800
M10	1.5	100	24	10	8	5121000
*M12	1.75	110	29	9	7	5121200

* DIN 376

Code

512

Properties

M **DIN 371** **HSSE V3**

6HX

CBA

FLUTE-LESS



TIN

Suited Materials

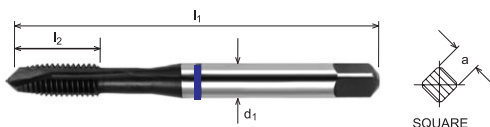
ALUMINIUM COPPER SOFT BRASS

FREE CUTTING STEEL





Blue Band Gun Nose Taps for tapping Stainless Steel



Code

539

Properties

M	DIN 371	HSSE V3
ISO 2 6H		GUN NOSE SPIRAL POINT
CBA		TIAIN

Suited Materials

STAINLESS STEEL	TITANIUM ALLOYS
HEAT TREATABLE STEEL	

Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	11	3.5	2.7	3	5390300
M4	0.7	63	13	4.5	3.4	3	5390400
M5	0.8	70	16	6	4.9	3	5390500
M6	1.0	80	19	6	4.9	3	5390600
M8	1.25	90	22	8	6.2	3	5390800
M10	1.5	100	24	10	8	3	5391000

Code

549

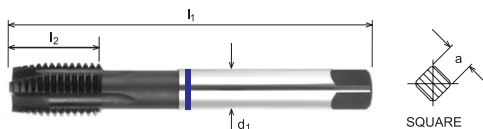
Properties

M	DIN 376	HSSE V3
ISO 2 6H		GUN NOSE SPIRAL POINT
CBA		TIAIN

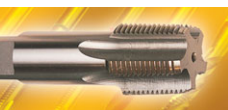
Suited Materials

STAINLESS STEEL	TITANIUM ALLOYS
HEAT TREATABLE STEEL	

Blue Band Gun Nose Taps for tapping Stainless Steel

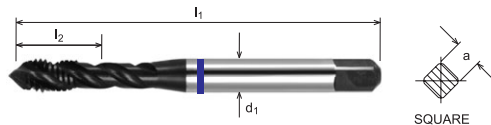


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M12	1.75	110	29	9	7	3	5491200
M14	2	110	30	11	9	3	5491400
M16	2	110	32	12	9	3	5491600
M18	2.5	125	34	14	11	4	5491800
M20	2.5	140	34	16	12	4	5492000
M22	2.5	140	34	18	14.5	4	5492200
M24	3	160	38	18	14.5	4	5492400



THREADING
TOOLS

Blue Band Spiral Flute Taps for tapping Stainless Steel



Size	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code
M3	0.5	56	5	3.5	2.7	3	5590300
M4	0.7	63	7	4.5	3.4	3	5590400
M5	0.8	70	8	6	4.9	3	5590500
M6	1.0	80	10	6	4.9	3	5590600
M8	1.25	90	12.5	8	6.2	3	5590800
M10	1.5	100	15	10	8	3	5591000

Code

559

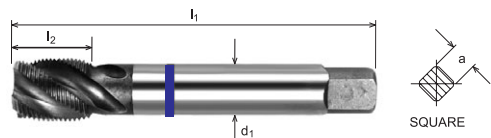
Properties

M	DIN 371	HSSE V3
ISO 2 6H	60°	40°
CBA		
		TiAlN

Suited Materials

STAINLESS STEEL	TITANIUM ALLOYS
HEAT TREATABLE STEEL	

Blue Band Spiral Flute Taps for tapping Stainless Steel



Size	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code
M12	1.75	110	17.5	9	7	3	5701200
M14	2	110	20	11	9	3	5701400
M16	2	110	20	12	9	3	5701600
M18	2.5	125	25	14	11	3	5701800
M20	2.5	140	25	16	12	3	5702000
M22	2.5	140	25	18	14.5	3	5702200
M24	3	160	30	18	14.5	4	5702400

Code

570

Properties

M	DIN 376	HSSE V3
ISO 2 6H	60°	40°
CBA		
		TiAlN

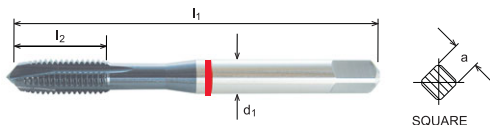
Suited Materials

STAINLESS STEEL	TITANIUM ALLOYS
HEAT TREATABLE STEEL	





Red Band Gun Nose Taps for tapping Tough Treatable Steels



Code
540

Properties			
M	DIN 371	HSSE V3	
ISO 2 6H			
CBA			
	TIAIN		

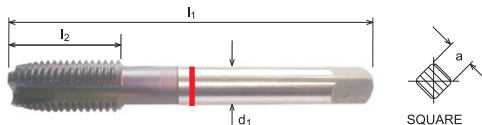
Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	11	3.5	2.7	3	5400300
M4	0.7	63	13	4.5	3.4	3	5400400
M5	0.8	70	16	6	4.9	3	5400500
M6	1.0	80	19	6	4.9	3	5400600
M8	1.25	90	22	8	6.2	3	5400800
M10	1.5	100	24	10	8	4	5401000

Suited Materials	
TOUGH TREATABLE STEEL	
TOOL STEEL (ALLOY)	TITANIUM

Code
550

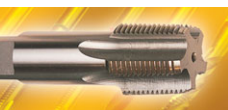
Properties			
M	DIN 376	HSSE V3	
ISO 2 6H			
CBA			
	TIAIN		

Red Band Gun Nose Taps for tapping Tough Treatable Steels



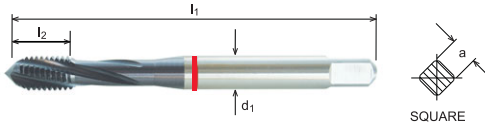
Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M12	1.75	110	29	9	7	4	5501200
M14	2	110	30	11	9	4	5501400
M16	2	110	32	12	9	4	5501600
M18	2.5	125	34	14	11	4	5501800
M20	2.5	140	34	16	12	4	5502000
M22	2.5	140	34	18	14.5	4	5502200
M24	3	160	38	18	14.5	4	5502400

Suited Materials	
TOUGH TREATABLE STEEL	
TOOL STEEL (ALLOY)	TITANIUM



THREADING
TOOLS

Red Band Spiral Flute Taps for tapping Tough Treatable Steels



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	5	3.5	2.7	3	5640300
M4	0.7	63	7	4.5	3.4	3	5640400
M5	0.8	70	8	6	4.9	3	5640500
M6	1.0	80	10	6	4.9	3	5640600
M8	1.25	90	12.5	8	6.2	3	5640800
M10	1.5	100	15	10	8	4	5641000

Code

564

Properties

M	DIN 371	HSSE V3
ISO 2 6H		
CBA		
		TIAIN

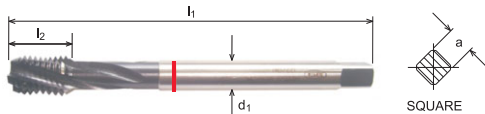
Suited Materials

TOUGH TREATABLE STEEL

TOOL STEEL
(ALLOY)

TITANIUM

Red Band Spiral Flute Taps for tapping Tough Treatable Steels



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M12	1.75	110	17.5	9	7	4	5761200
M14	2	110	20	11	9	4	5761400
M16	2	110	20	12	9	4	5761600
M18	2.5	125	25	14	11	4	5761800
M20	2.5	140	25	16	12	4	5762000
M22	2.5	140	25	18	14.5	4	5762200
M24	3	160	30	18	14.5	4	5762400

Code

576

Properties

M	DIN 376	HSSE V3
ISO 2 6H		
CBA		
		TIAIN

Suited Materials

TOUGH TREATABLE STEEL

TOOL STEEL
(ALLOY)

TITANIUM



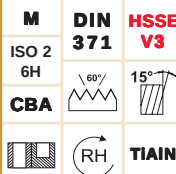


White Band Spiral Flute Taps for tapping Cast Iron

Code

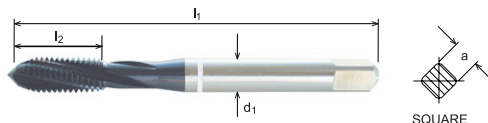
578

Properties



Suited Materials

CAST IRON

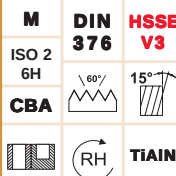


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	11	3.5	2.7	3	5780300
M4	0.7	63	13	4.5	3.4	3	5780400
M5	0.8	70	16	6.0	4.9	3	5780500
M6	1.0	80	19	6.0	4.9	3	5780600
M8	1.25	90	22	8.0	6.2	3	5780800
M10	1.5	100	24	10.0	8	4	5781000

Code

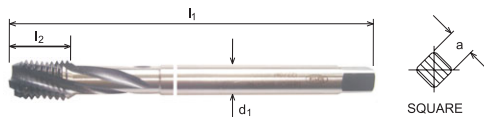
579

Properties

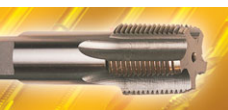


Suited Materials

CAST IRON

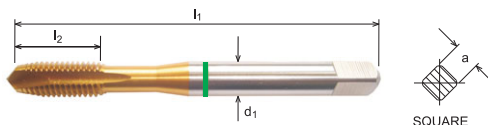


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M12	1.75	110	20	9	7	4	5791200
M14	2	110	20	11	9	4	5791400
M16	2	110	20	12	9	4	5791600
M18	2.5	125	20	14	11	4	5791800
M20	2.5	140	20	16	12	4	5792000
M22	2.5	140	20	18	14.5	4	5792200
M24	3	160	30	18	14.5	4	5792400



THREADING
TOOLS

Green Band Gun Nose Taps for tapping Carbon Steels



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	11	3.5	2.7	3	5610300
M4	0.7	63	13	4.5	3.4	3	5610400
M5	0.8	70	16	6.0	4.9	3	5610500
M6	1.0	80	19	6.0	4.9	3	5610600
M7	1.0	80	19	7.0	5.5	3	5610700
M8	1.25	90	22	8.0	6.2	3	5610800
M10	1.5	100	24	10.0	8	3	5611000

Code

561

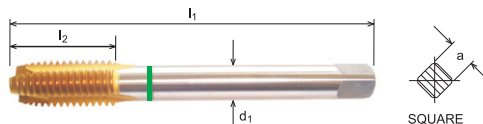
Properties

M	DIN 371	HSSE V3
ISO 2 6H		GUN NOSE SPIRAL POINT
CBA		
	TIN	

Suited Materials

CARBON STEEL	CAST IRON	COPPER
FREE CUTTING STEEL		

Green Band Gun Nose Taps for tapping Carbon Steels



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3.5	0.6	56	13	2.5	2.1	3	5660350
M4	0.7	63	13	2.8	2.1	3	5660400
M5	0.8	70	16	3.5	2.7	3	5660500
M6	1.0	80	19	4.5	3.4	3	5660600
M8	1.25	90	22	6.0	4.9	3	5660800
M10	1.5	100	24	7.0	5.5	3	5661000
M12	1.75	110	29	9.0	7	3	5661200
M14	2.0	110	30	11.0	9	3	5661400
M16	2.0	110	32	12.0	9	4	5661600
M18	2.5	125	34	14.0	11	4	5661800
M20	2.5	140	34	16.0	12	4	5662000
M22	2.5	140	34	18.0	14.5	4	5662200
M24	3.0	160	38	18.0	14.5	4	5662400

Code

566

Properties

M	DIN 376	HSSE V3
ISO 2 6H		GUN NOSE SPIRAL POINT
CBA		
	TIN	

Suited Materials

CARBON STEEL	CAST IRON	COPPER
FREE CUTTING STEEL		



THREADING TOOLS

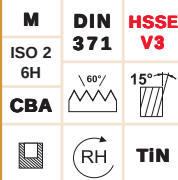


Green Band Spiral Flute Taps for tapping Carbon Steels

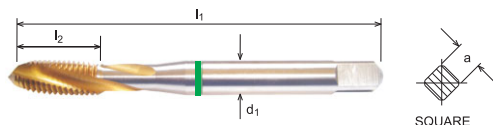
Code

562

Properties



Suited Materials

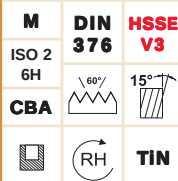


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	11	3.5	2.7	3	5620300
M4	0.7	63	13	4.5	3.4	3	5620400
M5	0.8	70	16	6.0	4.9	3	5620500
M6	1.0	80	19	6.0	4.9	3	5620600
M7	1.0	80	19	7.0	5.5	3	5620700
M8	1.25	90	22	8.0	6.2	3	5620800
M10	1.5	100	24	10.0	8	3	5621000

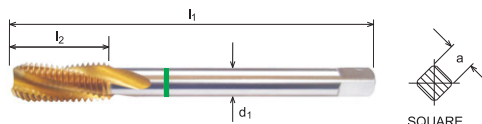
Code

567

Properties



Suited Materials

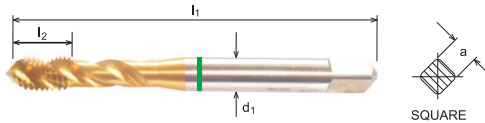


Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3.5	0.6	56	13	2.5	2.1	3	5670350
M4	0.7	63	13	2.8	2.1	3	5670400
M5	0.8	70	16	3.5	2.7	3	5670500
M6	1.0	80	19	4.5	3.4	3	5670600
M8	1.25	90	22	6.0	4.9	3	5670800
M10	1.5	100	24	7.0	5.5	3	5671000
M12	1.75	110	29	9.0	7	3	5671200
M14	2.0	110	30	11.0	9	3	5671400
M16	2.0	110	32	12.0	9	3	5671600
M18	2.5	125	34	14.0	11	4	5671800
M20	2.5	140	34	16.0	12	4	5672000
M22	2.5	140	34	18.0	14.5	4	5672200
M24	3.0	160	38	18.0	14.5	4	5672400



THREADING
TOOLS

Green Band Spiral Flute Taps for tapping Carbon Steels



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3	0.5	56	5	3.5	2.7	3	5630300
M4	0.7	63	7	4.5	3.4	3	5630400
M5	0.8	70	8	6.0	4.9	3	5630500
M6	1.0	80	10	6.0	4.9	3	5630600
M7	1.0	80	10	7.0	5.5	3	5630700
M8	1.25	90	12.5	8.0	6.2	3	5630800
M10	1.5	100	15	10.0	8	3	5631000

Code

563

Properties

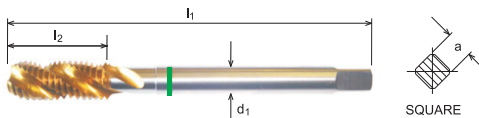
M	DIN 371	HSSE V3
ISO 2 6H		
CBA		
		TIN

Suited Materials

CARBON STEEL **CAST IRON** **COPPER**

FREE CUTTING STEEL

Green Band Spiral Flute Taps for tapping Carbon Steels



Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
M3.5	0.6	56	6	2.5	2.1	3	5680350
M4	0.7	63	7	2.8	2.1	3	5680400
M5	0.8	70	8	3.5	2.7	3	5680500
M6	1.0	80	10	4.5	3.4	3	5680600
M8	1.25	90	12.5	6.0	4.9	3	5680800
M10	1.5	100	15	7.0	5.5	3	5681000
M12	1.75	110	17.5	9.0	7	3	5681200
M14	2.0	110	20	11.0	9	3	5681400
M16	2.0	110	20	12.0	9	3	5681600
M18	2.5	125	25	14.0	11	4	5681800
M20	2.5	140	25	16.0	12	4	5682000
M22	2.5	140	25	18.0	14.5	4	5682200
M24	3.0	160	30	18.0	14.5	4	5682400

Code

568

Properties

M	DIN 376	HSSE V3
ISO 2 6H		
CBA		
		TIN

Suited Materials

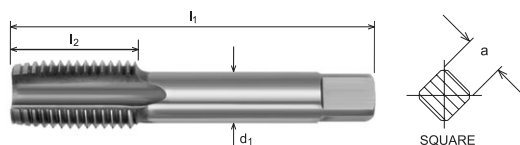
CARBON STEEL **CAST IRON** **COPPER**

FREE CUTTING STEEL





Short Hand Taps



Code

511

Properties

MF **ISO 529** **HSS**



Suited Materials

GENERAL

Size	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code		
							Tap Set	Taper	Bottom
MF3	0.35	48	11	3.15	2.5	3	5110300	5110301	5110303
MF4	0.5	53	13	4.0	3.15	3	5110400	5110401	5110403
MF4.5	0.5	53	13	4.5	3.55	3	5110450	5110451	5110453
MF5	0.5	58	16	5.0	4	3	5110500	5110501	5110503
MF5	0.75	58	16	5.0	4	3	5110510	5110511	5110513
MF5.5	0.5	62	17	5.6	4.5	3	5110550	5110551	5110553
MF6	0.75	66	19	6.3	5	3	5110600	5110601	5110603
MF7	0.75	66	19	7.1	5.6	4	5110700	5110701	5110703
MF8	0.75	69	19	8.0	6.3	4	5110790	5110791	5110793
MF8	1.0	69	19	8.0	6.3	4	5110800	5110801	5110803
MF9	0.75	69	19	9.0	7.1	4	5110890	5110891	5110893
MF9	1.0	69	19	9.0	7.1	4	5110900	5110901	5110903
MF10	0.75	76	20	10.0	8	4	5110990	5110991	5110993
#MF10	1.0	76	20	10.0	8	4	5111000	5111001	5111003
MF10	1.25	76	20	10.0	8	4	5111010	5111011	5111013
MF11	1.0	82	22	8.0	6.3	4	5111110	5111111	5111113
MF11	1.25	82	22	8.0	6.3	4	5111120	5111121	5111123
MF12	1.0	84	24	9.0	7.1	4	5111190	5111191	5111193
*MF12	1.25	84	24	9.0	7.1	4	5111200	5111201	5111203
MF12	1.5	89	29	9.0	7.1	4	5111210	5111211	5111213
MF14	1.0	90	25	11.2	9	4	5111390	5111391	5111393
*MF14	1.25	90	25	11.2	9	4	5111400	5111401	5111403
MF14	1.5	95	30	11.2	9	4	5111410	5111411	5111413
MF15	1.0	95	30	11.2	9	4	5111490	5111491	5111493
MF15	1.5	95	30	11.2	9	4	5111500	5111501	5111503
MF16	1.0	95	25	12.5	10	4	5111590	5111591	5111593
#MF16	1.5	102	32	12.5	10	4	5111600	5111601	5111603
MF17	1.5	102	32	12.5	10	4	5111700	5111701	5111703
MF18	1.0	104	29	14.0	11.2	4	5111780	5111781	5111783
MF18	1.25	104	29	14	11.2	4	5111790	5111791	5111793
*MF18	1.5	104	29	14	11.2	4	5111800	5111801	5111803
MF18	2.0	112	37	14	11.2	4	5111810	5111811	5111813
MF20	1.0	104	29	14	11.2	4	5111990	5111991	5111993
#MF20	1.5	104	29	14	11.2	4	5112000	5112001	5112003
MF20	2.0	112	37	14	11.2	4	5112010	5112011	5112013
MF22	1.0	113	33	16	12.5	4	5112190	5112191	5112193
MF22	1.5	113	33	16	12.5	4	5112200	5112201	5112203
MF22	2.0	118	38	16	12.5	4	5112210	5112211	5112213
MF24	1.0	120	35	18	14	4	5112390	5112391	5112393
MF24	1.5	120	35	18	14	4	5112400	5112401	5112403
MF24	2.0	120	35	18	14	4	5112410	5112411	5112413
MF25	1.0	120	35	18	14	4	5112490	5112491	5112493
#MF25	1.5	120	35	18	14	4	5112500	5112501	5112503
MF25	2.0	120	35	18	14	4	5112510	5112511	5112513
MF27	1.5	127	37	20	16	4	5112700	5112701	5112703
MF27	2.0	127	37	20	16	4	5112710	5112711	5112713
MF28	1.5	127	37	20	16	4	5112800	5112801	5112803

* Spark Plug

Conduit

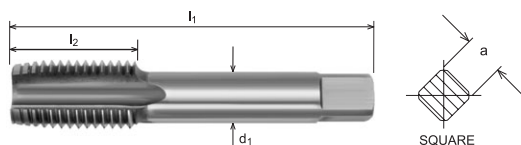
Continued on next page...

THREADING
TOOLS

136

SOMTA P12 CATALOGUE

Short Hand Taps



Code

511

Size	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code		
							Tap Set	Taper	Bottom
... from previous page									
MF28	2.0	127	37	20	16	4	5112810	5112811	5112813
MF30	1.0	127	37	20	16	4	5112990	5112991	5112993
MF30	1.5	127	37	20	16	4	5113000	5113001	5113003
MF30	2.0	127	37	20	16	4	5113010	5113011	5113013
MF30	3.0	138	48	20	16	4	5113020	5113021	5113023
#MF32	1.5	137	37	22.4	18	4	5113200	5113201	5113203
MF32	2.0	137	37	22.4	18	4	5113210	5113211	5113213
MF33	1.5	137	37	22.4	18	4	5113300	5113301	5113303
MF33	2.0	137	37	22.4	18	4	5113310	5113311	5113313
MF33	3.0	151	51	22.4	18	4	5113320	5113321	5113323
MF35	1.5	144	39	25.0	20	4	5113500	5113501	5113503
MF36	1.5	144	39	25.0	20	4	5113600	5113601	5113603
MF36	2.0	144	39	25.0	20	4	5113610	5113611	5113613
MF36	3.0	162	57	25.0	20	4	5113620	5113621	5113623
MF38	1.5	149	39	28	22.4	6	5113810	5113811	5113813
MF38	2.0	149	39	28	22.4	6	5113820	5113821	5113823
MF39	1.5	149	39	28	22.4	6	5113900	5113901	5113903
MF39	2.0	149	39	28	22.4	6	5113910	5113911	5113913
MF39	3.0	170	60	28	22.4	6	5113920	5113921	5113923
MF40	2.0	149	39	28	22.4	6	5114010	5114011	5114013
MF40	3.0	170	60	28	22.4	6	5114020	5114021	5114023
MF42	1.5	149	39	28	22.4	6	5114200	5114201	5114203
MF42	2.0	149	39	28	22.4	6	5114210	5114211	5114213
MF42	3.0	170	60	28	22.4	6	5114220	5114221	5114223
MF42	4.0	170	60	28	22.4	6	5114230	5114231	5114233
MF45	1.5	165	45	31.5	25	6	5114500	5114501	5114503
MF45	2.0	165	45	31.5	25	6	5114510	5114511	5114513
MF45	3.0	187	67	31.5	25	6	5114520	5114521	5114523
MF48	1.5	165	45	31.5	25	6	5114800	5114801	5114803
MF48	2.0	165	45	31.5	25	6	5114810	5114811	5114813
MF48	3.0	187	67	31.5	25	6	5114820	5114821	5114823
MF48	4.0	187	67	31.5	25	6	5114830	5114831	5114833
MF50	3.0	187	67	31.5	25	6	5115020	5115021	5115023
MF52	2.0	175	45	35.5	28	6	5115210	5115211	5115213
MF52	3.0	200	70	35.5	28	6	5115220	5115221	5115223
MF52	4.0	200	70	35.5	28	6	5115230	5115231	5115233

* Spark Plug

Conduit

Properties		
MF	ISO 529	HSS
	ISO 2 6H	STRAIGHT FLUTE

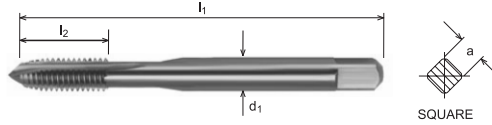
Suited Materials

GENERAL



THREADING
TOOLS

Gun Nose Short Machine Taps



Code

515

Properties

MF

**ISO
529**

**HSSE
V3**



**ISO 2
6H**

**GUN
NOSE
SPIRAL
POINT**



RH

Suited Materials

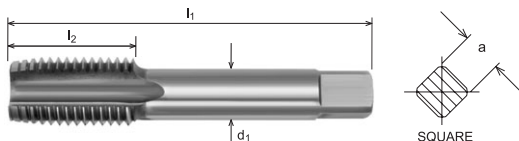
GENERAL

Size	Pitch	l_1	l_2	d_1	a	No. of Flutes	Code
MF4	0.5	53	13	4	3.15	3	5150400
MF5	0.75	58	16	5	4	3	5150500
MF6	0.75	66	19	6.3	5	3	5150600
MF8	1.0	69	19	8	6.3	3	5150800
MF9	1.0	69	19	9	7.1	3	5150900
MF10	1.0	76	20	10	8	3	5151000
MF10	1.25	76	20	10	8	3	5151010
MF12	1.0	84	24	9	7.1	3	5151190
MF12	1.25	84	24	9	7.1	3	5151200
MF12	1.5	89	29	9	7.1	3	5151210
MF14	1.0	90	25	11.2	9	3	5151390
MF14	1.25	90	25	11.2	9	3	5151400
MF14	1.5	95	30	11.2	9	3	5151410
MF16	1.5	102	32	12.5	10	4	5151600
MF18	1.5	104	29	14	11.2	4	5151800
MF20	1.5	104	29	14	11.2	4	5152000
MF22	1.5	113	33	16	12.5	4	5152200
MF24	1.5	120	35	18	14	4	5152400



**THREADING
TOOLS**

Short Hand Taps



Code

521

Size	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
							Tap Set	Taper	Second	Bottom
1/16	60	41	8	2.5	2	3	5210160	5210161	5210162	5210163
3/32	48	44.5	9.5	2.8	2.24	3	5210240	5210241	5210242	5210243
1/8	40	48	11	3.15	2.5	3	5210320	5210321	5210322	5210323
5/32	32	53	13	4	3.15	3	5210400	5210401	5210402	5210403
3/16	24	58	16	5	4	3	5210480	5210481	5210482	5210483
1/4	20	66	19	6.3	5	3	5210640	5210641	5210642	5210643
5/16	18	72	22	8	6.3	4	5210790	5210791	5210792	5210793
3/8	16	80	24	10	8	4	5210950	5210951	5210952	5210953
7/16	14	85	25	8	6.3	4	5211110	5211111	5211112	5211113
1/2	12	89	29	9	7.1	4	5211270	5211271	5211272	5211273
9/16	12	95	30	11.2	9	4	5211430	5211431	5211432	5211433
5/8	11	102	32	12.5	10	4	5211590	5211591	5211592	5211593
3/4	10	112	37	14	11.2	4	5211910	5211911	5211912	5211913
7/8	9	118	38	16	12.5	4	5212220	5212221	5212222	5212223
1"	8	130	45	18	14	4	5212540	5212541	5212542	5212543
1.1/8	7	138	48	20	16	4	5212860	5212861	5212862	5212863
1.1/4	7	151	51	22.4	18	4	5213170	5213171	5213172	5213173
1.1/2	6	170	60	28	22.4	6	5213810	5213811	5213812	5213813
1.3/4	5	187	67	31.5	25	6	5214450	5214451	5214452	5214453
2"	4.5	200	70	35.5	28	6	5215080	5215081	5215082	5215083

Properties

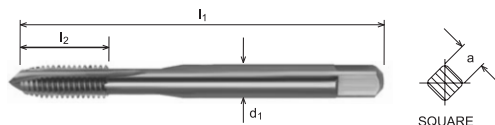
BSW	ISO 529	HSS
	CLASS 2	STRAIGHT FLUTE

Suited Materials

GENERAL



Gun Nose Short Machine Taps



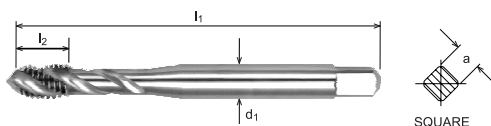
Code
526

Properties		
BSW	ISO 529	HSSE V3
	CLASS 2	GUN NOSE SPIRAL POINT
		

Suited Materials
GENERAL

Size	TPI	l_1	l_2	d_1	a	No. of Flutes	Code
1/8	40	48	11	3.15	2.5	3	5260320
5/32	32	53	13	4	3.15	3	5260400
3/16	24	58	16	5	4	3	5260480
1/4	20	66	19	6.3	5	3	5260640
5/16	18	72	22	8	6.3	3	5260790
3/8	16	80	24	10	8	3	5260950
7/16	14	85	25	8	6.3	3	5261110
1/2	12	89	29	9	7.1	3	5261270
9/16	12	95	30	11.2	9	3	5261430
5/8	11	102	32	12.5	10	4	5261590
3/4	10	112	37	14	11.2	4	5261910
7/8	9	118	38	16	12.5	4	5262220
1"	8	130	45	18	14	4	5262540

Spiral Flute Short Machine Taps



Code
528

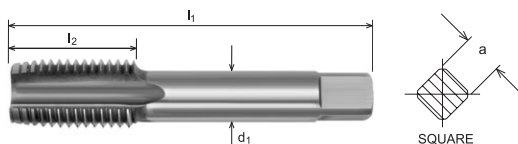
Properties		
BSW	ISO 529	HSSE V3
	CLASS 2	
		

Suited Materials
GENERAL

Size	TPI	l_1	l_2	d_1	a	No. of Flutes	Code
1/8	40	48	11	3.15	2.5	3	5280320
5/32	32	53	13	4	3.15	3	5280400
3/16	24	58	16	5	4	3	5280480
1/4	20	66	19	6.3	5	3	5280640
5/16	18	72	22	8	6.3	3	5280790
3/8	16	80	24	10	8	3	5280950
7/16	14	85	25	8	6.3	3	5281110
1/2	12	89	29	9	7.1	3	5281270
9/16	12	95	30	11.2	9	3	5281430
5/8	11	102	32	12.5	10	3	5281590
3/4	10	112	37	14	11.2	4	5281910
7/8	9	118	38	16	12.5	4	5282220
1"	8	130	45	18	14	4	5282540



Short Hand Taps



Code

531

Size	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
							Tap Set	Taper	Second	Bottom
3/16	32	58	16	5	4	3	5310480	5310481	5310482	5310483
1/4	26	66	19	6.3	5	3	5310640	5310641	5310642	5310643
5/16	22	72	22	8	6.3	4	5310790	5310791	5310792	5310793
3/8	20	80	24	10	8	4	5310950	5310951	5310952	5310953
7/16	18	85	25	8	6.3	4	5311110	5311111	5311112	5311113
1/2	16	89	29	9	7.1	4	5311270	5311271	5311272	5311273
9/16	16	95	30	11.2	9	4	5311430	5311431	5311432	5311433
5/8	14	102	32	12.5	10	4	5311590	5311591	5311592	5311593
3/4	12	112	37	14	11.2	4	5311910	5311911	5311912	5311913
7/8	11	118	38	16	12.5	4	5312220	5312221	5312222	5312223
1"	10	130	45	18	14	4	5312540	5312541	5312542	5312543
1.1/8	9	138	48	20	16	4	5312860	5312861	5312862	5312863
1.1/4	9	151	51	22.4	18	4	5313180	5313181	5313182	5313183
1.3/8	8	162	57	25	20	4	5313490	5313491	5313492	5313493
1.1/2	8	170	60	28	22.4	6	5313810	5313811	5313812	5313813
1.5/8	8	170	60	28	22.4	6	5314120	5314121	5314122	5314123
1.3/4	7	187	67	31.5	25	6	5314450	5314451	5314452	5314453
2"	7	200	70	35.5	28	6	5315080	5315081	5315082	5315083

Properties

BSF	ISO 529	HSS
	CLASS 2	STRAIGHT FLUTE

Suited Materials

GENERAL



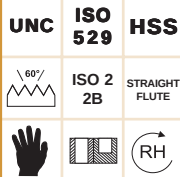


Short Hand Taps

Code

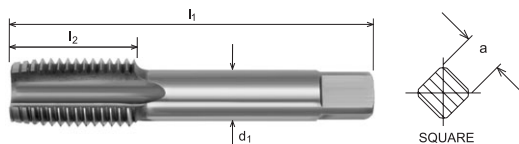
541

Properties



Suited Materials

GENERAL

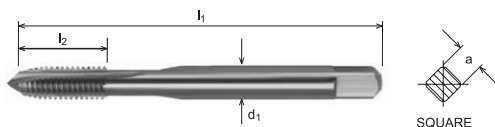


Size	Nom. Dia.	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
								Tap Set	Taper	Second	Bottom
No.4	2.84	40	48	11	3.15	2.5	3	5410280	5410281	5410282	5410283
No.5	3.18	40	48	11	3.15	2.5	3	5410320	5410321	5410322	5410323
No.6	3.51	32	50	13	3.55	2.8	3	5410350	5410351	5410352	5410353
No.8	4.17	32	53	13	4.5	3.55	3	5410420	5410421	5410422	5410423
No.10	4.83	24	58	16	5	4	3	5410480	5410481	5410482	5410483
No.12	5.49	24	62	17	5.6	4.5	3	5410550	5410551	5410552	5410553
1/4	20	66	19	6.3	5	3	3	5410640	5410641	5410642	5410643
5/16	18	72	22	8	6.3	4	4	5410790	5410791	5410792	5410793
3/8	16	80	24	10	8	4	4	5410950	5410951	5410952	5410953
7/16	14	85	25	8	6.3	4	4	5411110	5411111	5411112	5411113
1/2	13	89	29	9	7.1	4	4	5411270	5411271	5411272	5411273
9/16	12	95	30	11.2	9	4	4	5411430	5411431	5411432	5411433
5/8	11	102	32	12.5	10	4	4	5411590	5411591	5411592	5411593
3/4	10	112	37	14	11.2	4	4	5411910	5411911	5411912	5411913
7/8	9	118	38	16	12.5	4	4	5412220	5412221	5412222	5412223
1"	8	130	45	18	14	4	4	5412540	5412541	5412542	5412543
1.1/8	7	138	48	20	16	4	4	5412860	5412861	5412862	5412863
1.1/4	7	151	51	22.4	18	4	4	5413180	5413181	5413182	5413183
1.3/8	6	162	57	25	20	4	4	5413490	5413491	5413492	5413493
1.1/2	6	170	60	28	22.4	6	6	5413810	5413811	5413812	5413813
1.3/4	5	187	67	31.5	25	6	6	5414450	5414451	5414452	5414453
2"	4.1/2	200	70	35.5	28	6	6	5415080	5415081	5415082	5415083



THREADING
TOOLS

Gun Nose Short Machine Taps



Code

545

Size	Nominal Dia.	TPI	l_1	l_2	d_1	a	No. of Flutes	Code
No.6	3.51	32	50	13	3.55	2.8	3	5450350
No.8	4.17	32	53	13	4.5	3.55	3	5450420
No.10	4.83	24	58	16	5	4	3	5450480
No.12	5.49	24	62	17	5.6	4.5	3	5450550
1/4		20	66	19	6.3	5	3	5450640
5/16		18	72	22	8	6.3	3	5450790
3/8		16	80	24	10	8	3	5450950
7/16		14	85	25	8	6.3	3	5451110
1/2		13	89	29	9	7.1	3	5451270
9/16		12	95	30	11.2	9	3	5451430
5/8		11	102	32	12.5	10	4	5451590
3/4		10	112	37	14	11.2	4	5451910
7/8		9	118	38	16	12.5	4	5452220
1"		8	130	45	18	14	4	5452540

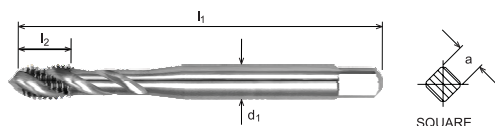
Properties

UNC	ISO 529	HSSE V3
	ISO 2 2B	GUN NOSE SPIRAL POINT
	RH	

Suited Materials

GENERAL

Spiral Flute Short Machine Taps



Code

546

Size	Nominal Dia.	TPI	l_1	l_2	d_1	a	No. of Flutes	Code
No.6	3.51	32	50	13	3.55	2.8	3	5460350
No.8	4.17	32	53	13	4.5	3.55	3	5460420
No.10	4.83	24	58	16	5	4	3	5460480
No.12	5.49	24	62	17	5.6	4.5	3	5460550
1/4		20	66	19	6.3	5	3	5460640
5/16		18	72	22	8	6.3	3	5460790
3/8		16	80	24	10	8	3	5460950
7/16		14	85	25	8	6.3	3	5461110
1/2		13	89	29	9	7.1	3	5461270
9/16		12	95	30	11.2	9	3	5461430
5/8		11	102	32	12.5	10	3	5461590
3/4		10	112	37	14	11.2	4	5461910
7/8		9	118	38	16	12.5	4	5462220
1"		8	130	45	18	14	4	5462540

Properties

UNC	ISO 529	HSSE V3
	ISO 2 2B	35°
	RH	

Suited Materials

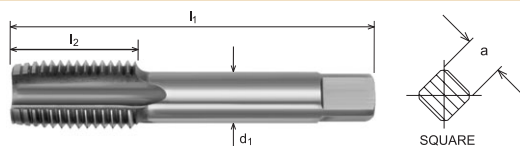
GENERAL



**THREADING
TOOLS**



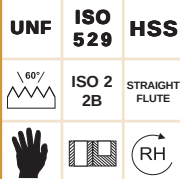
Short Hand Taps



Code

551

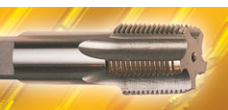
Properties



Suited Materials

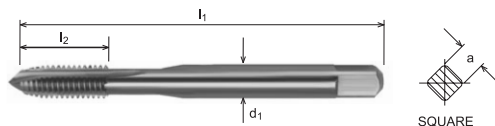
GENERAL

Size	Nom. Dia.	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
								Tap Set	Taper	Second	Bottom
No.4	2.85	48	48	11	3.15	2.5	3	5510280	5510281	5510282	5510283
No.5	3.18	44	48	11	3.15	2.5	3	5510320	5510321	5510322	5510323
No.6	3.51	40	50	13	3.55	2.8	3	5510350	5510351	5510352	5510353
No.8	4.17	36	53	13	4.5	3.55	3	5510420	5510421	5510422	5510423
No.10	4.83	32	58	16	5	4	3	5510480	5510481	5510482	5510483
No.12	5.49	28	62	17	5.6	4.5	3	5510550	5510551	5510552	5510553
1/4		28	66	19	6.3	5	3	5510640	5510641	5510642	5510643
5/16		24	69	19	8	6.3	4	5510790	5510791	5510792	5510793
3/8		24	76	20	10	8	4	5510950	5510951	5510952	5510953
7/16		20	82	22	8	6.3	4	5511110	5511111	5511112	5511113
1/2		20	84	24	9	7.1	4	5511270	5511271	5511272	5511273
9/16		18	90	25	11.2	9	4	5511430	5511431	5511432	5511433
5/8		18	95	25	12.5	10	4	5511590	5511591	5511592	5511593
3/4		16	104	29	14	11.2	4	5511910	5511911	5511912	5511913
7/8		14	113	33	16	12.5	4	5512220	5512221	5512222	5512223
1"		12	120	35	18	14	4	5512540	5512541	5512542	5512543
1.1/8		12	127	37	20	16	4	5512860	5512861	5512862	5512863
1.1/4		12	137	37	22.4	18	4	5513180	5513181	5513182	5513183
1.3/8		12	144	39	25	20	4	5513490	5513491	5513492	5513493
1.1/2		12	149	39	28	22.4	6	5513810	5513811	5513812	5513813



THREADING
TOOLS

Gun Nose Short Machine Taps



Code

555

Properties

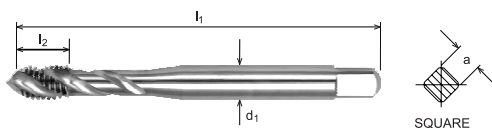
UNF	ISO 529	HSSE V3
	ISO 2 2B	GUN NOSE SPIRAL POINT
	RH	

Suited Materials

GENERAL

Size	Nominal Dia.	TPI	l_1	l_2	d_1	a	No. of Flutes	Code
No.4	2.85	48	48	11	3.15	2.5	3	5550280
No.5	3.18	44	48	11	3.15	2.5	3	5550320
No.6	3.51	40	50	13	3.55	2.8	3	5550350
No.8	4.17	36	53	13	4.5	3.55	3	5550420
No.10	4.83	32	58	16	5	4	3	5550480
No.12	5.49	28	62	17	5.6	4.5	3	5550550
1/4		28	66	19	6.3	5	3	5550640
5/16		24	69	19	8	6.3	3	5550790
3/8		24	76	20	10	8	3	5550950
7/16		20	82	22	8	6.3	3	5551110
1/2		20	84	24	9	7.1	3	5551270
9/16		18	90	25	11.2	9	3	5551430
5/8		18	95	25	12.5	10	4	5551590
3/4		16	104	29	14	11.2	4	5551910
7/8		14	113	33	16	12.5	4	5552220
1"		12	120	35	18	14	4	5552540

Spiral Flute Short Machine Taps



Code

556

Properties

UNF	ISO 529	HSSE V3
	ISO 2 2B	
	RH	

Suited Materials

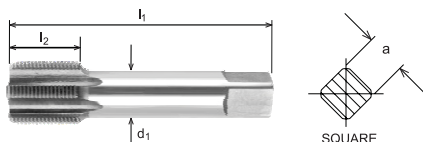
GENERAL

Size	Nominal Dia.	TPI	l_1	l_2	d_1	a	No. of Flutes	Code
No.4	2.85	48	48	11	3.15	2.5	3	5560280
No.5	3.18	44	48	11	3.15	2.5	3	5560320
No.6	3.51	40	50	13	3.55	2.8	3	5560350
No.8	4.17	36	53	13	4.5	3.55	3	5560420
No.10	4.83	32	58	16	5	4	3	5560480
No.12	5.49	28	62	17	5.6	4.5	3	5560550
1/4		28	66	19	6.3	5	3	5560640
5/16		24	69	19	8	6.3	3	5560790
3/8		24	76	20	10	8	3	5560950
7/16		20	82	22	8	6.3	3	5561110
1/2		20	84	24	9	7.1	3	5561270
9/16		18	90	25	11.2	9	3	5561430
5/8		18	95	25	12.5	10	3	5561590
3/4		16	104	29	14	11.2	4	5561910
7/8		14	113	33	16	12.5	4	5562220
1"		12	120	35	18	14	4	5562540



**THREADING
TOOLS**

Parallel Pipe Taps



Code

571

Properties

BSP **G** **ISO**
SERIES **2284**

HSS  **BS 949**
1982
PART 3

STRAIGHT  **FLUTE** 

Suited Materials

GENERAL

Size	Nom. Dia.	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code		
								Tap Set	Taper	Bottom
1/8	9.728	28	59	15	8	6.3	4	5710320	5710321	5710323
1/4	13.157	19	67	19	10	8	4	5710640	5710641	5710643
3/8	16.662	19	75	21	12.5	10	4	5710950	5710951	5710953
1/2	20.955	14	87	26	16	12.5	4	5711270	5711271	5711273
5/8	22.911	14	91	26	18	14	4	5711590	5711591	5711593
3/4	26.441	14	96	28	20	16	4	5711910	5711911	5711913
7/8	30.201	14	102	29	22.4	18	4	5712220	5712221	5712223
1"	33.249	11	109	33	25	20	6	5712540	5712541	5712543
1.1/4	41.910	11	119	36	31.5	25	6	5713170	5713171	5713173
1.1/2	47.803	11	125	37	35.5	28	6	5713810	5713811	5713813
1.3/4	53.746	11	132	39	35.5	28	6	5714450	5714451	5714453
2"	59.614	11	140	41	40	31.5	6	5715080	5715081	5715083
2.1/4	65.710	11	142	42	40	31.5	6	5715720	5715721	5715723
2.1/2	75.184	11	153	45	45	35.5	6	5716350	5716351	5716353
3"	87.884	11	164	48	50	40	6	5717620	5717621	5717623

Code

573

Properties

BSP **G** **ISO**
SERIES **2284**

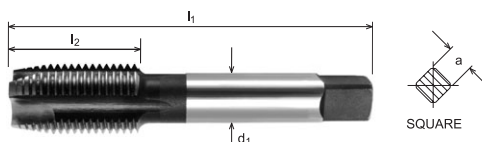
HSSE  **BS 949**
V3 **1982**
PART 3

GUN  **NOSE** 

Suited Materials

GENERAL

Gun Nose Short Machine Taps

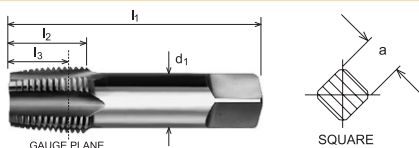


Size	Nominal Dia.	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code
1/8	9.728	28	59	15	8	6.3	3	5730320
1/4	13.157	19	67	19	10	8	3	5730640
3/8	16.662	19	75	21	12.5	10	4	5730950
1/2	20.955	14	87	26	16	12.5	4	5731270
3/4	26.441	14	96	28	20	16	4	5731910



THREADING
TOOLS

Taper Pipe Hand Taps



Size	Nom. Dia. at Gauge Plane	TPI	l ₁	l ₂	l ₃	d ₁	a	No. of Flutes	Code		
									Tap Set	Taper	Bottom
1/8	9.728	28	59	15	10.1	8	6.3	3	5750320	5750321	5750323
1/4	13.157	19	67	19	15	10	8	5	5750640	5750641	5750643
3/8	16.662	19	75	21	15.4	12.5	10	5	5750950	5750951	5750953
1/2	20.955	14	87	26	20.5	16	12.5	5	5751270	5751271	5751273
3/4	26.441	14	96	28	21.8	20	16	5	5751910	5751911	5751913
1"	33.249	11	109	33	26	25	20	5	5752540	5752541	5752543
1.1/4	41.910	11	119	36	28.3	31.5	25	7	5753170	5753171	5753173
1.1/2	47.803	11	125	37	28.3	35.5	28	7	5753810	5753811	5753813
2"	59.614	11	140	41	32.7	40	31.5	7	5755080	5755081	5755083

Code

575

Properties

BSPT	Rc SERIES	ISO 2284
HSS	55°	BS 949 1982 PART 3
STRAIGHT FLUTE		

Suited Materials

GENERAL

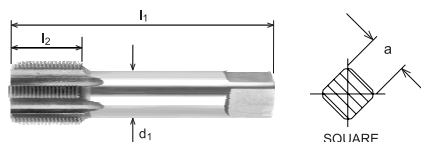




Parallel Pipe Taps

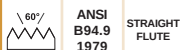
Code

581



Properties

NPS ISO 2284 HSS



ANSI B94.9 1979

STRAIGHT FLUTE



Suited Materials

GENERAL

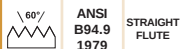
Size	Nom. Dia.	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code		
								Tap Set	Taper	Bottom
1/8	10.272	27	59	15	8.0	6.3	4	5810320	5810321	5810323
1/4	13.571	18	67	19	10	8.0	4	5810640	5810641	5810643
3/8	17.054	18	75	21	12.5	10	4	5810950	5810951	5810953
1/2	21.224	14	87	26	16	12.5	4	5811270	5811271	5811273
3/4	26.568	14	96	28	20	16	4	5811910	5811911	5811913
1"	33.228	11.1/2	109	33	25	20	6	5812540	5812541	5812543
1.1/4	41.986	11.1/2	119	36	31.5	25	6	5813170	5813171	5813173
1.1/2	48.054	11.1/2	125	37	35.5	28	6	5813810	5813811	5813813
2"	60.091	11.1/2	140	41	40	31.5	6	5815080	5815081	5815083

Code

585

Properties

NPT ISO 2284 HSS



ANSI B94.9 1979

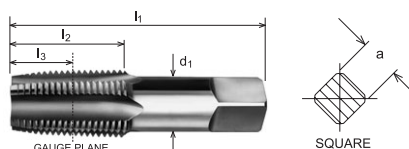
STRAIGHT FLUTE



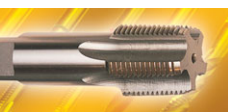
Suited Materials

GENERAL

Taper Pipe Taps

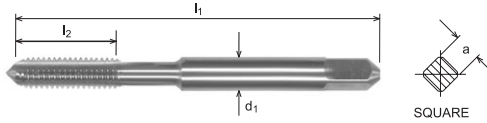


Size	Nom. Dia. at Gauge Plane	TPI	l ₁	l ₂	l ₃	d ₁	a	No. of Flutes	Code		
									Tap Set	Taper	Bottom
1/8	10.272	27	59	15	7.9	8.0	6.3	3	5850320	5850321	5850323
1/4	13.571	18	67	19	11.7	10	8.0	5	5850640	5850641	5850643
3/8	17.054	18	75	21	11.5	12.5	10	5	5850950	5850951	5850953
1/2	21.224	14	87	26	14.7	16	12.5	5	5851270	5851271	5851273
3/4	26.568	14	96	28	14.4	20	16	5	5851910	5851911	5851913
1"	33.228	11.1/2	109	33	17.2	25	20	5	5852540	5852541	5852543
1.1/4	41.986	11.1/2	119	36	17.4	31.5	25	7	5853170	5853171	5853173
1.1/2	48.054	11.1/2	125	37	17.8	35.5	28	7	5853810	5853811	5853813
2"	60.091	11.1/2	140	41	16.9	40	31.5	7	5855080	5855081	5855083



THREADING
TOOLS

Short Hand Taps



Code

591

Size	Nom. Dia.	Pitch	l ₁	l ₂	d ₁	a	No. of Flutes	Code			
								Tap Set	Taper	Second	Bottom
No.12	1.3	0.28	40	7	2.5	2	3	5910130	5910131	5910132	5910133
No.10	1.7	0.35	41	8	2.5	2	3	5910170	5910171	5910172	5910173
No.9	1.9	0.39	41	8	2.5	2	3	5910190	5910191	5910192	5910193
No.8	2.2	0.43	44.5	9.5	2.8	2.24	3	5910220	5910221	5910222	5910223
No.7	2.5	0.48	44.5	9.5	2.8	2.24	3	5910250	5910251	5910252	5910253
No.6	2.8	0.53	44.5	9.5	2.8	2.24	3	5910280	5910281	5910282	5910283
No.5	3.2	0.59	48	11	3.15	2.5	3	5910320	5910321	5910322	5910323
No.4	3.6	0.66	50	13	3.55	2.8	3	5910360	5910361	5910362	5910363
No.3	4.1	0.73	53	13	4.5	3.55	3	5910410	5910411	5910412	5910413
No.2	4.7	0.81	58	16	5	4	3	5910470	5910471	5910472	5910473
No.1	5.3	0.9	62	17	5.6	4.5	3	5910530	5910531	5910532	5910533
No.0	6.0	1	66	19	6.3	5	3	5910600	5910601	5910602	5910603

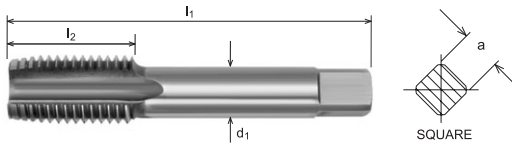
Properties

BA	ISO 529	HSS
	MED	STRAIGHT FLUTE

Suited Materials

GENERAL

Short Hand Taps



Code

595

Size	TPI	l ₁	l ₂	d ₁	a	No. of Flutes	Code		
							Tap Set	Taper	Bottom
1/4	26	66	19	6.3	5	3	5950640	5950641	5950643
5/16	26	72	22	8	6.3	4	5950790	5950791	5950793
3/8	26	80	24	10	8	4	5950950	5950951	5950953
7/16	26	85	25	8	6.3	4	5951110	5951111	5951113
1/2	26	89	29	9	7.1	4	5951270	5951271	5951273
5/8	26	102	32	12.5	10	4	5951590	5951591	5951593
3/4	26	112	37	14	11.2	4	5951910	5951911	5951913
1"	26	130	45	18	14	4	5952540	5952541	5952543

Properties

BSB	ISO 529	HSS
	STRAIGHT FLUTE	

Suited Materials

GENERAL



**THREADING
TOOLS**

Circular Solid Dies

Code

580

Properties

M

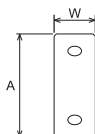
**DIN
223**

HSS



**DIN
13**

6G



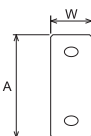
Size	Pitch	A	W	Code
M1	0.25	16	5	5800100
M1.1	0.25	16	5	5800110
M1.2	0.25	16	5	5800120
M1.4	0.30	16	5	5800140
M1.6	0.35	16	5	5800160
M1.7	0.35	16	5	5800170
M1.8	0.35	16	5	5800180
M1.9	0.35	16	5	5800190
M2	0.4	16	5	5800200
M2.2	0.45	16	5	5800220
M2.3	0.45	16	5	5800230
M2.5	0.45	16	5	5800250
M2.6	0.45	16	5	5800260
M3	0.5	20	5	5800300
M3.5	0.6	20	5	5800350
M4	0.7	20	5	5800400
M4.5	0.75	20	7	5800450
M5	0.8	20	7	5800500
M6	1	20	7	5800600
M7	1	20	7	5800700

Size	Pitch	A	W	Code
M8	1.25	25	9	5800800
M9	1.25	25	9	5800900
M10	1.5	30	11	5801000
M11	1.5	30	11	5801100
M12	1.75	38	14	5801200
M14	2	38	14	5801400
M16	2	45	18	5801600
M18	2.5	45	18	5801800
M20	2.5	45	18	5802000
M22	2.5	55	22	5802200
M24	3	55	22	5802400
M27	3	65	25	5802700
M30	3.5	65	25	5803000
M33	3.5	65	25	5803300
M36	4	65	25	5803600
M39	4	75	30	5803900
M42	4.5	75	30	5804200
M45	4.5	90	36	5804500
M48	5	90	36	5804800



THREADING
TOOLS

Circular Solid Dies



Code

582

Properties

MF	DIN 223	HSS
	DIN 13	6G

Size	Pitch	A	W	Code
MF2	0.25	16	5	5820200
MF2.2	0.25	16	5	5820220
MF2.3	0.25	16	5	5820230
MF2.5	0.25	16	5	5820250
MF2.6	0.25	16	5	5820259
MF2.6	0.35	16	5	5820260
MF3	0.35	20	5	5820300
MF3.5	0.35	20	5	5820350
MF4	0.35	20	5	5820390
MF4	0.5	20	5	5820400
MF5	0.5	20	5	5820500
MF5	0.75	20	7	5820510
MF6	0.5	20	5	5820600
MF6	0.75	20	7	5820610
MF7	0.75	25	9	5820700
MF8	0.5	25	9	5820789
MF8	0.75	25	9	5820790
MF8	1.0	25	9	5820800
MF9	0.75	25	9	5820890
MF9	1.0	25	9	5820900
MF10	0.5	30	11	5820989
MF10	0.75	30	11	5820990
MF10	1.0	30	11	5821000
MF10	1.25	30	11	5821010
MF11	1.0	30	11	5821110
MF12	0.75	38	10	5821189
MF12	1.0	38	10	5821190
MF12	1.25	38	10	5821200
MF12	1.5	38	10	5821210
MF13	1.0	38	10	5821290
MF13	1.5	38	10	5821300
MF14	0.75	38	10	5821389
MF14	1.0	38	10	5821390
MF14	1.25	38	10	5821400
MF14	1.5	38	10	5821410
MF15	1.0	38	10	5821490
MF15	1.5	38	10	5821500
MF16	1.0	45	14	5821590
MF16	1.5	45	14	5821600
MF18	1.0	45	14	5821780
MF18	1.5	45	14	5821800
MF18	2.0	45	14	5821810
MF20	1.0	45	14	5821990
MF20	1.5	45	14	5822000
MF20	2.0	45	14	5822010
MF22	1.0	55	16	5822190
MF22	1.5	55	16	5822200

Size	Pitch	A	W	Code
MF22	2.0	55	16	5822220
MF24	1.0	55	16	5822390
MF24	1.5	55	16	5822400
MF24	2.0	55	16	5822410
MF25	1.0	55	16	5822490
MF25	1.5	55	16	5822500
MF26	1.5	55	16	5822600
MF27	1.5	65	18	5822700
MF27	2.0	65	18	5822710
MF28	1.0	65	18	5822790
MF28	1.5	65	18	5822800
MF28	2.0	65	18	5822810
MF30	1.0	65	18	5822990
MF30	1.5	65	18	5823000
MF30	2.0	65	18	5823010
MF32	1.5	65	18	5823190
MF32	2.0	65	18	5823200
MF33	1.5	65	18	5823290
MF33	2.0	65	18	5823300
MF34	1.5	65	18	5823400
MF35	1.5	65	18	5823500
MF36	1.5	65	18	5823590
MF36	2.0	65	18	5823600
MF36	3.0	65	25	5823610
MF38	1.5	75	20	5823800
MF39	1.5	75	20	5823890
MF39	2.0	75	20	5823900
MF39	3.0	75	20	5823910
MF40	1.5	75	20	5823990
MF40	2.0	75	20	5824000
MF40	3.0	75	20	5824010
MF42	1.5	75	20	5824190
MF42	2.0	75	20	5824200
MF42	3.0	75	20	5824210
MF44	1.5	90	22	5824400
MF45	1.5	90	22	5824490
MF45	2.0	90	22	5824500
MF45	3.0	90	22	5824510
MF48	1.5	90	22	5824790
MF48	2.0	90	22	5824800
MF48	3.0	90	22	5824810
MF50	1.5	90	22	5824990
MF50	2.0	90	22	5825000
MF50	3.0	90	22	5825010
MF52	1.5	90	22	5825190
MF52	2.0	90	22	5825200
MF52	3.0	90	22	5825210

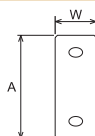


THREADING
TOOLS

Circular Solid Dies

Code
587

Properties		
BSP	DIN 223	HSS
	ISO 228	MEDIUM CLASS BOLT

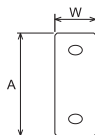


Size	TPI	A	W	Code
1/8	28	38	10	5870320
1/4	19	38	10	5870640
3/8	19	45	14	5870950
1/2	14	45	14	5871270
5/8	14	55	16	5871590
3/4	14	65	18	5871910
7/8	14	65	18	5872220

Size	TPI	A	W	Code
1"	11	65	18	5872540
1.1/8	11	75	20	5872858
1.1/4	11	75	20	5873170
1.3/8	11	90	22	5873493
1.1/2	11	90	22	5873810
1.3/4	11	90	22	5874445
2"	11	105	22	5875080

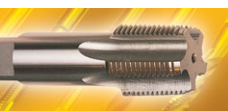
Code
590

Properties		
NPT	DIN 223	HSS
	ANSI B1.20.1	CLASS 2A BOLT

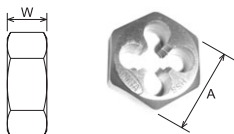


Size	TPI	A	W	Code
1/8	27	30	11	5900320
1/4	18	38	14	5900640
3/8	18	45	14	5900950
1/2	14	45	18	5901270
3/4	14	55	22	5901910

Size	TPI	A	W	Code
1"	11.1/2	65	25	5902540
1.1/4	11.1/2	75	26	5903170
1.1/2	11.1/2	90	27	5903810
2"	11.1/2	105	28	5905080



Die Nuts



Code

507

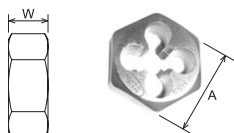
Properties

M	DIN 382	HSS
	DIN 13	6G

Size	Pitch	A	W	Code
M3	0.5	19	5	5070300
M4	0.7	19	5	5070400
M5	0.8	19	7	5070500
M6	1	19	7	5070600
M7	1	22	9	5070700
M8	1.25	22	9	5070800
M9	1.25	22	9	5070900
M10	1.5	27	11	5071000
M11	1.5	27	11	5071100
M12	1.75	36	14	5071200

Size	Pitch	A	W	Code
M14	2	36	14	5071400
M16	2	41	18	5071600
M18	2.5	41	18	5071800
M20	2.5	41	18	5072000
M22	2.5	50	22	5072200
M24	3	50	22	5072400
M27	3	60	25	5072700
M30	3.5	60	25	5073000
M33	3.5	60	25	5073300
M36	4	60	25	5073600

Die Nuts



Code

577

Properties

MF	DIN 382	HSS
	DIN 13	6G

Size	Pitch	A	W	Code
MF3	0.35	19	5	5770300
MF4	0.5	19	5	5770400
MF6	0.75	19	7	5770610
MF8	0.75	22	9	5770790
MF8	1.0	22	9	5770800
MF10	0.75	27	11	5770990
MF10	1.0	27	11	5771000
MF10	1.25	27	11	5771010
MF12	1.0	36	10	5771190
MF12	1.25	36	10	5771200
MF12	1.5	36	10	5771210
MF14	1.0	36	10	5771390
MF14	1.25	36	10	5771400
MF14	1.5	36	10	5771410
MF16	1.0	41	14	5771590
MF16	1.5	41	14	5771600

Size	Pitch	A	W	Code
MF18	1.0	41	14	5771780
MF18	1.5	41	14	5771800
MF18	2.0	41	14	5771810
MF20	1.0	41	14	5771990
MF20	1.5	41	14	5772000
MF20	2.0	41	14	5772010
MF22	1.0	50	16	5772190
MF22	1.5	50	16	5772200
MF24	1.5	50	16	5772400
MF24	2.0	50	16	5772410
MF25	1.5	50	16	5772500
MF27	1.5	60	18	5772700
MF30	1.5	60	18	5773000
MF32	1.5	60	18	5773300
MF33	1.5	60	18	5773310
MF36	1.5	60	18	5773600



**THREADING
TOOLS**

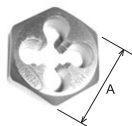
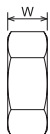
Die Nuts

Code

527

Properties

BSW	DIN 382	HSS
	BS 84	MEDIUM CLASS BOLT



Size	TPI	A	W	Code
1/8	40	19	5	5270320
3/16	24	19	7	5270480
1/4	20	19	7	5270640
5/16	18	22	9	5270790
3/8	16	27	11	5270950
7/16	14	27	11	5271110
1/2	12	36	14	5271270
9/16	12	36	14	5271430
5/8	11	41	18	5271590

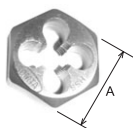
Size	TPI	A	W	Code
3/4	10	41	18	5271910
7/8	9	50	22	5272220
1"	8	50	22	5272540
1.1/8	7	60	25	5272860
1.1/4	7	60	25	5273170
1.3/8	6	60	25	5273493
1.1/2	6	70	30	5273810
1.3/4	5	85	36	5274450
2"	4.1/2	85	36	5275080

Code

537

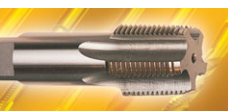
Properties

BSF	DIN 382	HSS
	BS 84	MEDIUM CLASS BOLT



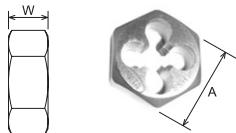
Size	TPI	A	W	Code
1/4	26	19	7	5370640
5/16	22	22	9	5370790
3/8	20	27	11	5370950
7/16	18	27	11	5371110
1/2	16	36	14	5371270
9/16	16	36	14	5371430
5/8	14	41	18	5371590

Size	TPI	A	W	Code
3/4	12	41	18	5371910
7/8	11	50	22	5372220
1"	10	50	22	5372540
1.1/8	9	60	25	5372860
1.1/4	9	60	25	5373180
1.1/2	8	70	30	5373810
2"	7	85	36	5375080



THREADING
TOOLS

Die Nuts



Code

547

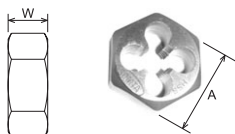
Size	TPI	A	W	Code
1/4	20	19	7	5470640
5/16	18	22	9	5470790
3/8	16	27	11	5470950
7/16	14	27	11	5471110
1/2	13	36	14	5471270
9/16	12	36	14	5471430
5/8	11	41	18	5471590

Size	TPI	A	W	Code
3/4	10	41	18	5471910
7/8	9	50	22	5472220
1"	8	50	22	5472540
1.1/8	7	60	25	5472860
1.1/4	7	60	25	5473180
1.1/2	6	70	30	5473810

Properties

UNC	DIN 382	HSS
	ANSI B1.1 1982	2A BOLT

Die Nuts



Code

557

Size	TPI	A	W	Code
1/4	28	19	7	5570640
5/16	24	22	9	5570790
3/8	24	27	11	5570950
7/16	20	27	11	5571110
1/2	20	36	10	5571270
9/16	18	36	10	5571430
5/8	18	41	14	5571590

Size	TPI	A	W	Code
3/4	16	41	14	5571910
7/8	14	50	16	5572220
1"	12	50	16	5572540
1.1/8	12	60	18	5572860
1.1/4	12	60	18	5573180
1.1/2	12	70	20	5573810

Properties

UNF	DIN 382	HSS
	ANSI B1.1 1982	2A BOLT



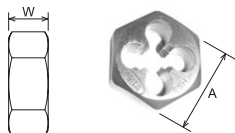
Die Nuts

Code

574

Properties

BSP	DIN 382	HSS
	ISO 228	MEDIUM CLASS BOLT



Size	On Nominal Diameter	TPI	A	W	Code
1/8	9.73	28	36	10	5740320
1/4	13.16	19	36	10	5740640
3/8	16.66	19	41	14	5740950
1/2	20.96	14	41	14	5741270
5/8	22.91	14	50	16	5741590
3/4	26.44	14	60	18	5741910
7/8	30.20	14	60	18	5742220
1"	33.25	11	60	18	5742540
1.1/8	37.90	11	70	20	5742860
1.1/4	41.91	11	70	20	5743170
1.3/8	44.32	11	85	22	5743493
1.1/2	47.80	11	85	22	5743810
1.3/4	53.75	11	100	22	5744445
2"	59.61	11	100	22	5745080



THREADING
TOOLS

Adjustable Tap Wrenches



Code

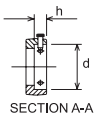
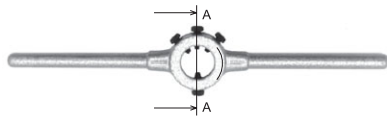
588

Properties

**DIN
1814**

Ref.	Type	mm	Range Inches	Pipe	Code
T1	T	3-6	1/8 - 1/4	-	5880003
T2	T	8-12	5/16 - 1/2	1/8 - 1/4	5880004
TL3	T LONG REACH	2-6	1/16 - 1/4	-	5880005
TL4	T LONG REACH	8-12	5/16 - 1/2	1/8 - 1/4	5880006
TW1	BAR	2-6	1/16 - 1/4	-	5880001
TW2	BAR	3-12	1/8 - 1/2	1/8 - 1/2	5880002
TW3	BAR	3-12	1/8 - 1/2	1/8 - 1/4	5880007
TW4	BAR	6-20	1/4 - 3/4	1/8 - 3/8	5880008
TW5	BAR	12-27	1/2 - 1"	1/4 - 5/8	5880009
TW6	BAR	20-32	3/4 - 1.1/4	3/8 - 1"	5880010

Die Stocks



Code

589

Properties

**DIN
225**

Ref.	d	h	Code	Ref.	d	h	Code
0	16	5	5890000	6A	45	14	5890060
1	20	5	5890010	6	45	18	5890065
2	20	7	5890020	7A	55	16	5890070
3	25	9	5890030	7	55	22	5890075
4	30	11	5890040	8A	65	18	5890080
5A	38	10	5890050	8	65	25	5890085
5	38	14	5890055	9A	75	20	5890090



**THREADING
TOOLS**

Tap & Die Cased Sets

Code

5A1

Properties

HSS

See appropriate
Catalogue Pages

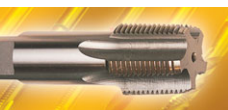
Suited Materials

GENERAL



Description of Set	Ref No.	Code
1/8 - 1/2 BSW	HS 3	5A10003
THIS SET CONTAINS:		
TAPS (code 521)	DIES	
TAPER, BOTTOM		
1/8	1/8 x 13/16 O/D	
3/16	3/16 x 13/16 O/D	
1/4	1/4 x 13/16 O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1" O/D	
1/2	1/2 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS1, DS2		
3/16 - 1/2 BSF	HS 7	5A10007
THIS SET CONTAINS:		
TAPS (code 531)	DIES	
TAPER, BOTTOM		
3/16	3/16 x 13/16 O/D	
1/4	1/4 x 13/16 O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1" O/D	
1/2	1/2 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS1, DS2		
1/4 - 1/2 UNC	HS 10	5A10010
THIS SET CONTAINS:		
TAPS (code 541)	DIES	
TAPER, BOTTOM		
1/4	1/4 x 1" O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1" O/D	
1/2	1/2 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS2		

Hexagonal Die Nut Case Sets available on request.



THREADING
TOOLS

Tap & Die Cased Sets



Code

5A1

Properties

HSS

See appropriate
Catalogue Pages

Suited Materials

GENERAL

Description of Set	Ref No.	Code
1/4 - 1/2 UNF	HS 13	5A10013
THIS SET CONTAINS:		
TAPS (code 551)	DIES	
TAPER, BOTTOM		
1/4	1/4 x 1" O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1" O/D	
1/2	1/2 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS2		
M2 - M6	HS 16	5A10016
THIS SET CONTAINS:		
TAPS (code 501)	DIES	
TAPER, BOTTOM		
2 x 0.4	2 x 13/16 O/D	
3 x 0.5	3 x 13/16 O/D	
4 x 0.7	4 x 13/16 O/D	
5 x 0.8	5 x 13/16 O/D	
6 x 1	6 x 13/16 O/D	
TAP WRENCH TW1		
DIESTOCK DS1		
M2 - M12	HS 17	5A10017
THIS SET CONTAINS:		
TAPS (code 501)	DIES	
TAPER, BOTTOM		
2 x 0.4	2 x 13/16 O/D	
3 x 0.5	3 x 13/16 O/D	
4 x 0.7	4 x 13/16 O/D	
5 x 0.8	5 x 13/16 O/D	
6 x 1	6 x 13/16 O/D	
7 x 1	7 x 1" O/D	
8 x 1.25	8 x 1" O/D	
9 x 1.25	9 x 1" O/D	
10 x 1.5	10 x 1" O/D	
11 x 1.5	11 x 1" O/D	
12 x 1.75	12 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS1, DS2		

Hexagonal Die Nut Case Sets available on request.



**THREADING
TOOLS**

Tap & Die Cased Sets

Code

5A1

Properties

HSS

See appropriate
Catalogue Pages

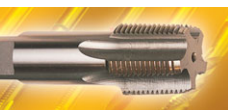
Suited Materials

GENERAL



Description of Sets	Ref No.	Code
M6 - M12	HS 19	5A10019
THIS SET CONTAINS:		
TAPS (code 501)	DIES	
TAPER, BOTTOM		
6 x 1	6 x 1" O/D	
7 x 1	7 x 1" O/D	
8 x 1.25	8 x 1" O/D	
9 x 1.25	9 x 1" O/D	
10 x 1.5	10 x 1" O/D	
11 x 1.5	11 x 1" O/D	
12 x 1.75	12 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS2		
M6 - M24	HS 21	5A10021
THIS SET CONTAINS:		
TAPS (code 501)	DIES	
TAPER, BOTTOM		
6 x 1	6 x 1" O/D	
7 x 1	7 x 1" O/D	
8 x 1.25	8 x 1" O/D	
9 x 1.25	9 x 1" O/D	
10 x 1.5	10 x 1" O/D	
11 x 1.5	11 x 1-1/12 O/D	
12 x 1.75	12 x 1-1/12 O/D	
14 x 2	14 x 1-1/12 O/D	
16 x 2	16 x 1-1/12 O/D	
18 x 2.5	18 x 2" O/D	
20 x 2.5	20 x 2" O/D	
22 x 2.5	22 x 2" O/D	
24 x 3	24 x 2" O/D	
TAP WRENCH TW2, TW5		
DIESTOCK DS2, DS4, DS5		

Hexagonal Die Nut Case Sets available on request.



THREADING
TOOLS

Colour Band Jobber Drill and Gun Nose Tap Sets



**BLUE BAND
DRILL AND
TAP SET**



**GREEN BAND
DRILL AND
TAP SET**



**RED BAND
DRILL AND
TAP SET**

Code

**5BB
5G7
5R5**

Properties

See appropriate
Catalogue Pages

Suited Materials

See appropriate
Catalogue Pages

Description		Ref No.	Code
Blue Band Drill and Tap Set - TiAlN Coated		5BBS	5BB0000
THIS SET CONTAINS:			
JOBBER DRILLS	SPIRAL POINT TAPS		
4.2mm - 1BB0420	M5 - 5390500		
5.0mm - 1BB0500	M6 - 5390600		
6.8mm - 1BB0680	M8 - 5390800		
8.5mm - 1BB0850	M10 - 5391000		
10.2mm - 1BB1020	M12 - 5491200		
Green Band Drill and Tap Set - TiN Coated		5G7S	5G70000
THIS SET CONTAINS:			
JOBBER DRILLS	SPIRAL POINT TAPS		
4.2mm - 1G70420	M5 - 5610500		
5.0mm - 1G70500	M6 - 5610600		
6.8mm - 1G70680	M8 - 5610800		
8.5mm - 1G70850	M10 - 5611000		
10.2mm - 1G71020	M12 - 5661200		
Red Band Drill and Tap Set - TiAlN Coated		5R5S	5R50000
THIS SET CONTAINS:			
JOBBER DRILLS	SPIRAL POINT TAPS		
4.2mm - 1R50420	M5 - 5400500		
5.0mm - 1R50500	M6 - 5400600		
6.8mm - 1R50680	M8 - 5400800		
8.5mm - 1R50850	M10 - 5401000		
10.2mm - 1R51020	M12 - 5501200		

Sets also available with Spiral Flute Taps



**THREADING
TOOLS**



Drill and Tap Sets in Metal Index Cases

Code

598



Properties

M HSS

See appropriate
Catalogue Pages

Suited Materials

See appropriate
Catalogue Pages

Description	Code
M3 - M12 Second Short Hand Taps (code 501)	5980501
M3 - M12 Gun Nose Machine Taps (code 508)	5980503
M3 - M12 Spiral Flute Machine Taps (code 510)	5980504
M3 - M12 Short Hand Tap Sets (code 501)	5980506
M3 - M12 Short Hand Tap Sets (code 501) plus 2.5, 3.3, 4.2, 5.0, 6.8, 8.5 and 10.2 mm Straight Shank Drills (code 101)	5980511

Note: The above sets contain tap sizes M3, M4, M5, M6, M8, M10 and M12.

Code

5DT

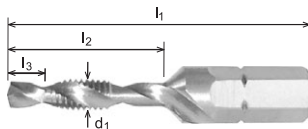
Properties

M HSS

Suited Materials

GENERAL

Combination Drill and Tap



Size	Pitch	d ₁	l ₃	l ₂	l ₁	Code
M3	0.5	2.5	6	12	35	5DT0300
M4	0.7	3.3	6	14	38	5DT0400
M5	0.8	4.2	7	18	40	5DT0500
M6	1.0	5	9	18	43	5DT0600
M8	1.25	6.8	13	23	51	5DT0800
M10	1.5	8.5	16	32	59	5DT1000

Code

5AU

Somta Tapping, Reaming and Drilling Fluid

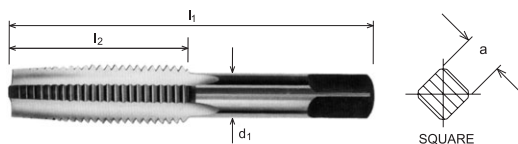


Description	Code
300 ml	5AU0010



THREADING
TOOLS

Carbon Steel Short Hand Tap Sets



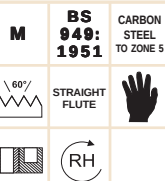
Hi-Cut

Code

901

Size	Pitch	l_1	l_2	d_1	a	Tap Set Code
M2	0.4	42.9	9.5	3.3	2.7	9010200
M3	0.5	47.6	14.3	3.3	2.7	9010300
M4	0.7	54	19.1	4.2	3.4	9010400
M5	0.8	60.3	22.2	5.4	4.2	9010500
M6	1.0	63.5	25.4	6.1	4.8	9010600
M7	1.0	63.5	25.4	7.2	5.6	9010700
M8	1.25	69.9	28.6	8.2	6.3	9010800
M9	1.25	74.6	31.8	9.1	7	9010900
M10	1.5	74.6	31.8	10.3	7.8	9011000
M11	1.5	80.2	36.5	8.2	6.1	9011100
M12	1.75	85.7	42.1	9.3	7	9011200
M14	2.0	91.3	42.1	10.9	8.2	9011400
M16	2.0	96.8	46	12.2	9.1	9011600
M18	2.5	102.4	46	13.8	10.3	9011800
M20	2.5	108	50.8	15	11.2	9012000
M22	2.5	119.1	56.4	17.7	13.3	9012200
M24	3.0	124.6	56.4	19.3	14.5	9012400
M27	3.0	130.2	63.5	20.3	15.2	9012700
M30	3.5	138.1	65.1	22.8	17.1	9013000
M33	3.5	146.1	65.1	25.9	19.5	9013300
M36	4.0	154	76.2	28.1	21.1	9013600

Properties



Suited Materials

GENERAL





Carbon Steel Short Hand Tap Sets

Hi-Cut

Code

902

Properties

MF

**BS
949:
1951**

CARBON
STEEL
TO ZONE 5

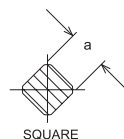
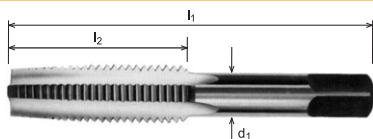


STRAIGHT
FLUTE



Suited Materials

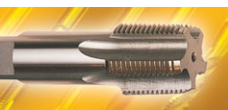
GENERAL



Size	Pitch	l_1	l_2	d_1	a	Tap Set Code
MF4	0.5	54	19.1	4.2	3.4	9020390
MF4	0.75	54	19.1	4.2	3.4	9020400
MF5	0.9	60.3	22.2	5.4	4.2	9020500
MF8	1.0	69.9	28.6	8.2	6.3	9020800
*MF10	1.0	74.6	31.8	10.3	7.8	9021000
MF10	1.25	74.6	31.8	10.3	7.8	9021010
MF12	1.0	76.2	31.8	9.3	7	9021200
*MF12	1.25	76.2	31.8	9.3	7	9021210
MF12	1.5	76.2	31.8	9.3	7	9021220
*MF14	1.25	76.2	31.8	10.9	8.2	9021400
MF14	1.5	76.2	31.8	10.9	8.2	9021410
#MF16	1.5	76.2	31.8	12.2	9.1	9021600
*MF18	1.5	76.2	31.8	13.8	10.3	9021800
#MF20	1.5	82.6	38.1	15	11.2	9022000
*MF22	1.5	82.6	38.1	17.7	13.3	9022200
MF24	1.5	82.6	38.1	19.3	14.5	9022400

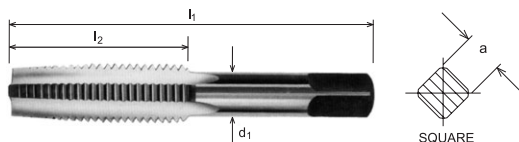
* Spark Plug

Conduit



THREADING
TOOLS

Carbon Steel Short Hand Tap Sets



Size	TPI	l_1	l_2	d_1	a	Tap Set Code
1/8	40	49.2	15.9	3.3	2.7	9030320
5/32	32	54	19.1	4	3.1	9030400
7/32	24	60.3	22.2	5.6	4.4	9030560
1/4	20	63.5	25.4	6.4	5	9030640
5/16	18	69.9	28.6	8	6.1	9030790
3/8	16	74.6	31.8	9.6	7.5	9030950
7/16	14	80.2	36.5	8.2	6.1	9031110
1/2	12	85.7	42.1	9.3	7	9031270
9/16	12	91.3	42.1	10.9	8.2	9031430
5/8	11	96.8	46	12.2	9.1	9031590
3/4	10	108	50.8	15	11.2	9031910
7/8	9	119.1	56.4	17.7	13.3	9032220
1"	8	130.2	63.5	20.3	15.2	9032540
1.1/4	7	146.1	65.1	25.9	19.5	9033170

Hi-Cut

Code

903

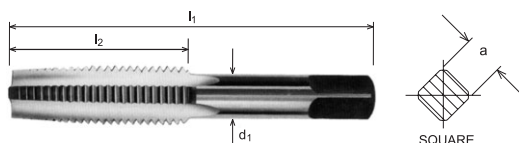
Properties

BSW	BS 949: 1951	CARBON STEEL TO ZONE 5
	STRAIGHT FLUTE	

Suited Materials

GENERAL

Carbon Steel Short Hand Tap Sets



Size	TPI	l_1	l_2	d_1	a	Tap Set Code
3/16	32	60.3	22.2	4.8	3.8	9040480
1/4	26	63.5	25.4	6.4	5	9040640
5/16	22	69.9	28.6	8	6.1	9040790
9/16	16	91.3	42.1	10.9	8.2	9041430
7/8	11	119.1	56.4	17.7	13.3	9042220
1"	10	130.2	63.5	20.3	15.2	9042540

Code

904

Properties

BSF	BS 949: 1951	CARBON STEEL TO ZONE 5
	STRAIGHT FLUTE	

Suited Materials

GENERAL



Carbon Steel Short Hand Tap Sets

Hi-Cut

Code

905

Properties

UNC

**BS
949:
1951**

CARBON
STEEL
TO ZONE 5



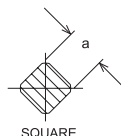
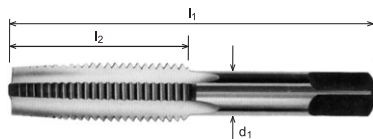
STRAIGHT
FLUTE



RH

Suited Materials

GENERAL



Size	TPI	l_1	l_2	d_1	a	Tap Set Code
1/4	20	63.5	25.4	6.5	4.9	9050640
5/16	18	69.1	28.6	8.1	6	9050790
3/8	16	74.6	31.8	9.7	7.3	9050950
7/16	14	80.2	36.5	8.2	6.1	9051110
1/2	13	85.7	42.1	9.3	7	9051270
9/16	12	91.3	42.1	10.9	8.2	9051430
5/8	11	96.8	46	12.2	9.1	9051590
3/4	10	108	50.8	15	11.2	9051910
7/8	9	119.1	56.4	17.7	13.3	9052220
1"	8	130.2	63.5	20.3	15.2	9052540

Code

906

Properties

UNF

**BS
949:
1951**

CARBON
STEEL
TO ZONE 5



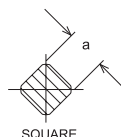
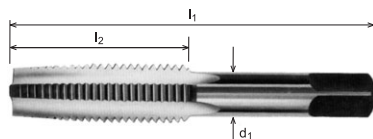
STRAIGHT
FLUTE



RH

Suited Materials

GENERAL

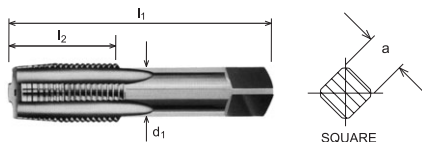


Size	TPI	l_1	l_2	d_1	a	Tap Set Code
1/4	28	63.5	25.4	6.5	4.9	9060640
5/16	24	69.1	28.6	8.1	6	9060790
3/8	24	74.6	31.8	9.7	7.3	9060950
7/16	20	80.2	36.5	8.2	6.1	9061110
1/2	20	85.7	42.1	9.3	7	9061270
9/16	18	91.3	42.1	10.9	8.2	9061430
5/8	18	96.8	46	12.2	9.1	9061590
3/4	16	108	50.8	15	11.2	9061910
7/8	14	119.1	56.4	17.7	13.3	9062220
1"	12	130.2	63.5	20.3	15.2	9062540



**THREADING
TOOLS**

Carbon Steel Parallel Pipe Tap Sets



Size	Nom. Dia.	TPI	l ₁	l ₂	d ₁	a	Tap Set Code
1/8	9.728	28	54	19.1	8.1	6	9070320
1/4	13.157	19	61.9	27	10.9	8.2	9070640
3/8	16.662	19	65.1	27	13.8	10.3	9070950
1/2	20.955	14	79.4	34.9	17.4	13.1	9071270
5/8	22.911	14	81	34.9	20.3	15.2	9071590
3/4	26.441	14	82.6	34.9	23	17.2	9071910
1"	33.249	11	88.9	44.5	28.6	21.4	9072540
1.1/2	47.803	11	108	44.5	38.1	28.6	9073810
2"	59.614	11	114.3	44.5	47.6	35.7	9075080

Hi-Cut

Code

907

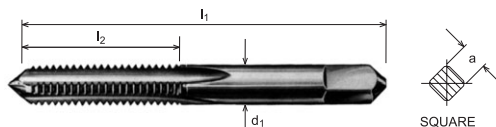
Properties

BSP	G SERIES	BS 949: 1951
CARBON STEEL TO ZONE 5	55°	STRAIGHT FLUTE

Suited Materials

GENERAL

Carbon Steel Short Hand Tap Sets



Size	Nom. Dia.	Pitch	l ₁	l ₂	d ₁	a	Tap Set Code
No.6	2.8	0.53	47.6	14.3	3.3	2.7	9080600
No.5	3.2	0.59	49.2	15.9	3.3	2.7	9080500
No.4	3.6	0.66	50.8	17.5	3.7	2.9	9080400
No.3	4.1	0.73	54	19.1	4.2	3.4	9080300
No.2	4.7	0.81	60.3	22.2	4.8	3.8	9080200
No.1	5.3	0.9	60.3	22.2	5.4	4.2	9080100

Code

908

Properties

BA	BS 949: 1951	CARBON STEEL TO ZONE 5
47°/5°	STRAIGHT FLUTE	

Suited Materials

GENERAL



Carbon Steel Die Nuts

Hi-Cut

Code

911

Properties

M

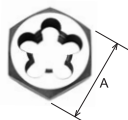
**BS
1127:
1974**

CARBON
STEEL
CUT
THREAD



**DIN
13**

6G



Size	Pitch	A	W	Code
M4	0.7	18	5	9110400
M5	0.8	18	7	9110500
M6	1	18	7	9110600
M7	1	20.8	9	9110700
M8	1.25	20.8	9	9110800
M9	1.25	23.4	9	9110900
M10	1.5	23.4	11	9111000
M11	1.5	25.7	11	9111100
M12	1.75	27.9	14	9111200
M14	2	33	14	9111400

Size	Pitch	A	W	Code
M16	2	33	18	9111600
M18	2.5	37.6	18	9111800
M20	2.5	37.6	18	9112000
M22	2.5	42.4	22	9112200
M24	3	52.1	22	9112400
M27	3	56.4	25	9112700
M30	3.5	56.4	25	9113000
M33	3.5	65.5	25	9113300
M36	4	70.1	25	9113600
M39	4	70.1	30	9113900

Code

912

Properties

MF

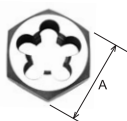
**BS
1127:
1974**

CARBON
STEEL
CUT
THREAD



**DIN
13**

6G



Size	Pitch	A	W	Code
MF8	1	20.8	9	9120800
MF10	1	23.4	11	9121000
MF10	1.25	23.4	11	9121010
MF12	1.25	27.9	10	9121210
MF12	1.5	27.9	10	9121220
MF14	1.25	33	10	9121400

Size	Pitch	A	W	Code
MF14	1.5	33	10	9121410
MF16	1.5	33	14	9121600
MF18	1.5	37.6	14	9121800
MF20	1.5	37.6	14	9122000
MF22	1.5	42.4	16	9122200
MF24	1.5	52.1	16	9122400



THREADING
TOOLS

Carbon Steel Die Nuts



Size	TPI	A	W	Code
5/32	32	18	6	9130400
7/32	24	18	7	9130560
1/4	20	18	7	9130640

Size	TPI	A	W	Code
5/8	11	33	18	9131590
3/4	10	37.6	18	9131910
1.1/8	7	56.4	25	9132860

Hi-Cut

Code

913

Properties

BSW	BS 1127: 1974	CARBON STEEL CUT THREAD
	BS 84	MEDIUM CLASS BOLT

Carbon Steel Die Nuts



Size	TPI	A	W	Code
1/4	26	18	7	9140640
1/2	16	27.9	11	9141270
1"	10	52.1	22	9142540

Size	TPI	A	W	Code
1.1/8	9	56.4	25	9142860
1.1/4	9	56.4	25	9143170

Code

914

Properties

BSF	BS 1127: 1974	CARBON STEEL CUT THREAD
	BS 84	MEDIUM CLASS BOLT



Carbon Steel Die Nuts

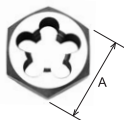
Hi-Cut

Code

915

Properties

UNC	BS 1127: 1974	CARBON STEEL CUT THREAD
	ANSI B1.1 1982	2A BOLT



Size	TPI	A	W	Code
1/4	20	18	7	9150640
1/2	13	27.9	14	9151270
5/8	11	33	18	9151590
3/4	10	37.6	18	9151910

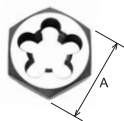
Size	TPI	A	W	Code
1.1/8	7	56.4	25	9152860
1.1/4	7	56.4	25	9153170
1.3/8	6	65.5	25	9153490

Code

916

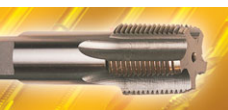
Properties

UNF	BS 1127: 1974	CARBON STEEL CUT THREAD
	ANSI B1.1 1982	2A BOLT



Size	TPI	A	W	Code
3/8	24	23.4	11	9160950
7/16	20	25.7	11	9161110
1/2	20	27.9	14	9161270

Size	TPI	A	W	Code
5/8	18	33	18	9161590
3/4	16	37.6	18	9161910
1.1/2	12	70.1	30	9163810



THREADING
TOOLS

Carbon Steel Die Nuts



Hi-Cut



Size	On Nominal Diameter	TPI	A	W	Code
1/8	9.728	28	23.4	10	9170320
1/4	13.157	19	27.9	14	9170640
1/2	20.955	14	42.4	19	9171270
3/4	26.441	14	52.1	20	9171910
1"	33.249	11	65.5	24	9172540

Code

917

Properties

BSP	BS 1127: 1974	CARBON STEEL CUT THREAD
55° 	ISO 228	MEDIUM CLASS BOLT

Carbon Steel Die Nuts



Size	Pitch	A	W	Code	Size	Pitch	A	W	Code
0	1	18	6.4	9180000	4	0.66	18	6.4	9180400
1	0.9	18	6.4	9180100	5	0.59	18	6.4	9180500
3	0.73	18	6.4	9180300	6	0.53	18	6.4	9180600

Code

918

Properties

BA	BS 1127: 1974	CARBON STEEL CUT THREAD
MEDIUM CLASS BOLT		



Carbon Steel Tap Wrenches

Hi-Cut

Code

980

Properties

CARBON
STEEL



Reference	Tap Range	mm	Pipe	Code
BAR TYPE				
TW 1 / No. 0	1/16 - 1/4	2 - 6	-	9800001
TW 2 / No. 1.5	1/8 - 1/2	3 - 12	1/8 - 1/4	9800002
TW 3 / No. 2	1/8 - 1/2	3 - 12	1/8 - 1/4	9800007
TW 4 / No. 3	1/4 - 3/4	6 - 20	1/8 - 3/8	9800008
TW 5 / No. 4	1/2 - 1"	12 - 27	1/4 - 5/8	9800009
TW 6 / No. 5	3/4 - 1.1/4	20 - 32	3/8 - 1"	9800010
T-TYPE				
T 1	1/8 - 1/4	3 - 6	-	9800003
T 2	5/16 - 1/2	8 - 12	1/8 - 1/4	9800004
T-TYPE LONG REACH				
TL 3	1/16 - 1/4	2 - 6	-	9800005
TL 4	5/16 - 1/2	8 - 12	1/8 - 1/4	9800006

Code

976

Properties

CARBON
STEEL



Metric Conduit Circular Solid Sets

Description	Ref No.	Code
THIS SET CONTAINS:	CSM 185	9760185
20 X 1.5/8 O/D DIE		
25 X 1.5/8 O/D DIE		
CS1 DIESTOCK		
20 X 1.5/8 O/D GUIDE		
25 X 1.5/8 O/D GUIDE		



THREADING
TOOLS

Carbon Steel Tap & Die Cased Sets



Hi-Cut

Codes

970 - 975

Properties

**CARBON
STEEL**

Suited Materials

GENERAL



Description of Set	Ref No.	Code
M2 - M6	C 111	9700111
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
2 x 0.4	2 x 13/16 O/D	
3 x 0.5	3 x 13/16 O/D	
4 x 0.7	4 x 13/16 O/D	
5 x 0.8	5 x 13/16 O/D	
6 x 1	6 x 13/16 O/D	
TAP WRENCH TW1		
DIESTOCK DS1		
M2 - M12	C114	9700114
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
2 x 0.4	2 x 13/16 O/D	
3 x 0.5	3 x 13/16 O/D	
4 x 0.7	4 x 13/16 O/D	
5 x 0.8	5 x 13/16 O/D	
6 x 1	6 x 13/16 O/D	
7 x 1	7 x 1" O/D	
8 x 1.25	8 x 1" O/D	
9 x 1.25	9 x 1" O/D	
10 x 1.5	10 x 1" O/D	
11 x 1.5	11 x 1" O/D	
12 x 1.75	12 x 1" O/D	
TAP WRENCH TW2		
DIESTOCKS DS1, DS2		
M6 - M12	C118	9700118
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
6 x 1	6 x 1" O/D	
7 x 1	7 x 1" O/D	
8 x 1.25	8 x 1" O/D	
9 x 1.25	9 x 1" O/D	
10 x 1.5	10 x 1" O/D	
11 x 1.5	11 x 1" O/D	
12 x 1.75	12 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS2		



**THREADING
TOOLS**

Carbon Steel Tap & Die Cased Sets

Hi-Cut

Codes

970 - 975

Properties

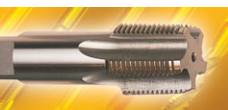
**CARBON
STEEL**

Suited Materials

GENERAL



Description of Set	Ref No.	Code
M6 - M20	C119	9700119
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
6 x 1	6 x 1" O/D	
7 x 1	7 x 1" O/D	
8 x 1.25	8 x 1" O/D	
9 x 1.25	9 x 1" O/D	
10 x 1.5	10 x 1" O/D	
11 x 1.5	11 x 1.1/12 O/D	
12 x 1.75	12 x 1.1/12 O/D	
14 x 2	14 x 1.1/12 O/D	
16 x 2	16 x 1.1/12 O/D	
18 x 2.5	18 x 1.1/12 O/D	
20 x 2.5	20 x 1.1/12 O/D	
TAP WRENCH TW4		
DIESTOCKS DS2, DS4		
M6 - M24	C 120	9700120
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
6 x 1	6 x 1" O/D	
7 x 1	7 x 1" O/D	
8 x 1.25	8 x 1" O/D	
9 x 1.25	9 x 1" O/D	
10 x 1.5	10 x 1" O/D	
11 x 1.5	11 x 1.1/12 O/D	
12 x 1.75	12 x 1.1/12 O/D	
14 x 2	14 x 1.1/12 O/D	
16 x 2	16 x 1.1/12 O/D	
18 x 2.5	18 x 2" O/D	
20 x 2.5	20 x 2" O/D	
22 x 2.5	22 x 2" O/D	
24 x 3	24 x 2" O/D	
TAP WRENCH TW2, TW5		
DIESTOCKS DS2, DS4, DS5		



**THREADING
TOOLS**

Carbon Steel Tap & Die Cased Sets



Hi-Cut

Codes

970 - 975

Properties

**CARBON
STEEL**

Suited Materials

GENERAL



Description of Set	Ref No.	Code
M6 - M20	CT 100	9701000
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
6 x 1	6 x 1" O/D	
8 x 1.25	8 x 1" O/D	
10 x 1.5	10 x 1" O/D	
12 x 1.75	12 x 1" O/D	
14 x 2	14 x 1.1/12 O/D	
16 x 2	16 x 1.1/12 O/D	
18 x 2.5	18 x 1.1/12 O/D	
20 x 2.5	20 x 1.1/12 O/D	
TAP WRENCH TW4		
DIESTOCKS DS2, DS4		
M6 - M24	CT 101	9701010
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM	6 x 1.5/16 O/D	
6 x 1	8 x 1.5/16 O/D	
8 x 1.25	10 x 1.5/16 O/D	
10 x 1.5	12 x 1.5/16 O/D	
12 x 1.75	14 x 1.5/16 O/D	
14 x 2	16 x 2" O/D	
16 x 2	18 x 2" O/D	
18 x 2.5	20 x 2" O/D	
20 x 2.5	22 x 2" O/D	
22 x 2.5	24 x 2" O/D	
24 x 3		
TAP WRENCH TW3, TW5		
DISTOCKS DS3, DS5		



**THREADING
TOOLS**

Carbon Steel Tap & Die Cased Sets

Hi-Cut

Codes

970 - 975

Properties

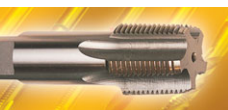
**CARBON
STEEL**

Suited Materials

GENERAL



Description of Set		Ref No.	Code
M6 - M24		CT 101F	9701011
THIS SET CONTAINS:			
TAPS		DIES	
TAPER, BOTTOM			
6 x 0.75	6 x 1.5/16 O/D		
8 x 1	8 x 1.5/16 O/D		
10 x 1.25	10 x 1.5/16 O/D		
12 x 1.5	12 x 1.5/16 O/D		
14 x 1.5	14 x 1.5/16 O/D		
16 x 1.5	16 x 2" O/D		
18 x 1.5	18 x 2" O/D		
20 x 1.5	20 x 2" O/D		
22 x 1.5	22 x 2" O/D		
24 x 1.5	24 x 2" O/D		
TAP WRENCH TW3, TW5			
DIESTOCKS DS3, DS5			
1/8 - 1/2 BSW		C 31	9710031
THIS SET CONTAINS:			
TAPS		DIES	
TAPER, BOTTOM			
1/8	1/8 x 13/16 O/D		
3/16	3/16 x 13/16 O/D		
1/4	1/4 x 13/16 O/D		
5/16	5/16 x 1" O/D		
3/8	3/8 x 1" O/D		
7/16	7/16 x 1" O/D		
1/2	1/2 x 1" O/D		
TAP WRENCH TW2			
DIESTOCKS DS1, DS2			
1/4 - 1/2 BSW		C 36	9710036
THIS SET CONTAINS:			
TAPS		DIES	
TAPER, BOTTOM			
1/4	1/4 x 1" O/D		
5/16	5/16 x 1" O/D		
3/8	3/8 x 1" O/D		
7/16	7/16 x 1" O/D		
1/2	1/2 x 1" O/D		
TAP WRENCH TW2			
DIESTOCK DS2			



**THREADING
TOOLS**

Carbon Steel Tap & Die Cased Sets



Hi-Cut



Codes

970 - 975

Properties

**CARBON
STEEL**

Suited Materials

GENERAL

Description of Set	Ref No.	Code
1/4 - 3/4 BSW	C 37	9710037
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
1/4	1/4 x 1" O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1.1/2 O/D	
1/2	1/2 x 1.1/2 O/D	
5/8	5/8 x 1.1/2 O/D	
3/4	3/4 x 1.1/2 O/D	
TAP WRENCH TW4		
DIESTOCKS DS2, DS4		
1/4 - 1" BSW	C 39	9710039
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
1/4	1/4 x 1" O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1.1/2 O/D	
1/2	1/2 x 1.1/2 O/D	
5/8	5/8 x 1.1/2 O/D	
3/4	3/4 x 2" O/D	
7/8	7/8 x 2" O/D	
1"	1" x 2" O/D	
TAP WRENCH TW2, TW5		
DIESTOCKS DS2, DS4, DS5		
3/16 - 1/2 BSF	C 52	9720052
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
3/16	3/16 x 13/16 O/D	
1/4	1/4 x 13/16 O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1" O/D	
1/2	1/2 x 1" O/D	
TAP WRENCH TW2		
DIESTOCKS DS1, DS2		



**THREADING
TOOLS**

Carbon Steel Tap & Die Cased Sets

Hi-Cut

Codes

970 - 975

Properties

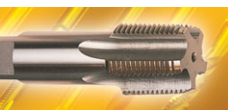
**CARBON
STEEL**

Suited Materials

GENERAL



Description of Set		Ref No.	Code
1/4 - 1" BSF		C 58	9720058
THIS SET CONTAINS:			
TAPS	DIES		
TAPER, BOTTOM			
1/4	1/4 x 13/16 O/D		
5/16	5/16 x 1" O/D		
3/8	3/8 x 1" O/D		
7/16	7/16 x 1.1/2 O/D		
1/2	1/2 x 1.1/2 O/D		
5/8	5/8 x 1.1/2 O/D		
3/4	3/4 x 2" O/D		
7/8	7/8 x 2" O/D		
1"	1" x 2" O/D		
TAP WRENCH TW2, TW5			
DIESTOCKS DS2, DS4, DS5			
1/4 - 1/2 UNC		C 82	9730082
THIS SET CONTAINS:			
TAPS	DIES		
TAPER, BOTTOM			
1/4	1/4 x 1" O/D		
5/16	5/16 x 1" O/D		
3/8	3/8 x 1" O/D		
7/16	7/16 x 1" O/D		
1/2	1/2 x 1" O/D		
TAP WRENCH TW2			
DIESTOCK DS2			
1/4 - 1" UNC		C 85	9730085
THIS SET CONTAINS:			
TAPS	DIES		
TAPER, BOTTOM			
1/4	1/4 x 1" O/D		
5/16	5/16 x 1" O/D		
3/8	3/8 x 1" O/D		
7/16	7/16 x 1.1/2 O/D		
1/2	1/2 x 1.1/2 O/D		
5/8	5/8 x 1.1/2 O/D		
3/4	3/4 x 2" O/D		
7/8	7/8 x 2" O/D		
1"	1" x 2" O/D		
TAP WRENCH TW2, TW5			
DIESTOCKS DS2, DS4, DS5			



**THREADING
TOOLS**

Carbon Steel Tap & Die Cased Sets



Hi-Cut



Codes

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Properties

**CARBON
STEEL**

Suited Materials

GENERAL

Description of Set	Ref No.	Code
1/4 - 1/2 UNF	C 92	9740092
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
1/4	1/4 x 1" O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1" O/D	
1/2	1/2 x 1" O/D	
TAP WRENCH TW2		
DIESTOCK DS2		
1/4 - 1" UNF	C 95	9740095
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
1/4	1/4 x 1" O/D	
5/16	5/16 x 1" O/D	
3/8	3/8 x 1" O/D	
7/16	7/16 x 1.1/2 O/D	
1/2	1/2 x 1.1/2 O/D	
5/8	5/8 x 1.1/2 O/D	
3/4	3/4 x 2" O/D	
7/8	7/8 x 2" O/D	
1"	1" x 2" O/D	
TAP WRENCH TW2, TW5		
DIESTOCKS DS2, DS4, DS5		
0 - 10 BA	C 3	9750003
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
0	0 x 13/16 O/D	
1	1 x 13/16 O/D	
2	2 x 13/16 O/D	
3	3 x 13/16 O/D	
4	4 x 13/16 O/D	
5	5 x 13/16 O/D	
6	6 x 13/16 O/D	
7	7 x 13/16 O/D	
8	8 x 13/16 O/D	
9	9 x 13/16 O/D	
10	10 x 13/16 O/D	
TAP WRENCH TW1		
DIESTOCK DS1		



**THREADING
TOOLS**

Carbon Steel Tap & Die Cased Sets

Hi-Cut

Codes

970 - 975

Properties

**CARBON
STEEL**

Suited Materials

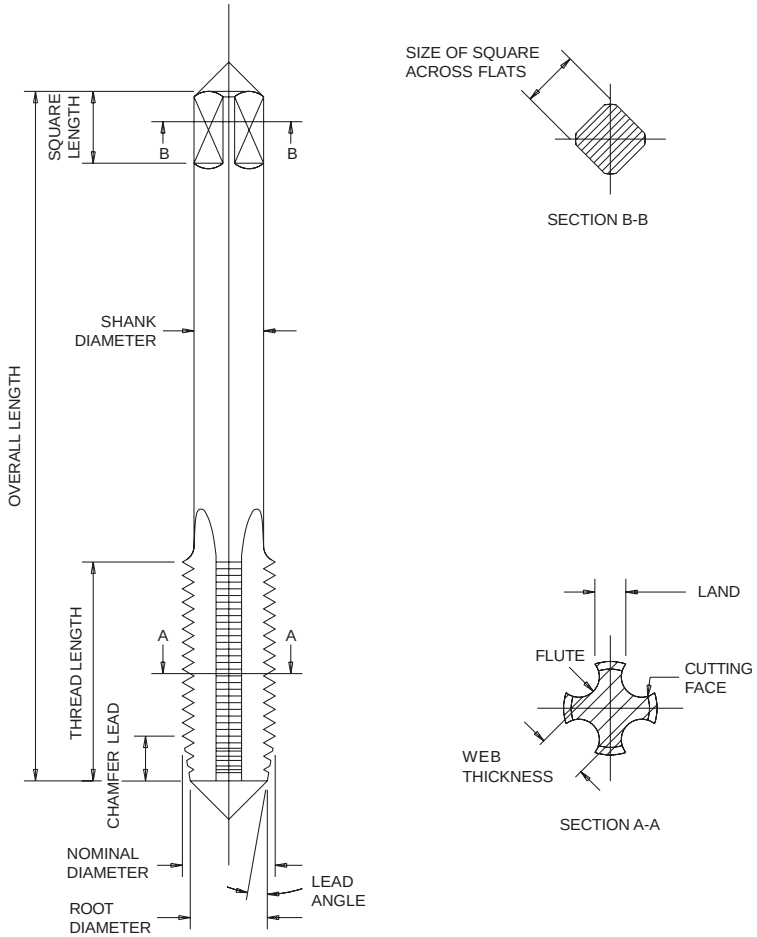
GENERAL



Description of Set	Ref No.	Code
0 - 6 BA	C 7	9750007
THIS SET CONTAINS:		
TAPS	DIES	
TAPER, BOTTOM		
0	0 x 13/16 O/D	
1	1 x 13/16 O/D	
2	2 x 13/16 O/D	
3	3 x 13/16 O/D	
4	4 x 13/16 O/D	
5	5 x 13/16 O/D	
6	6 x 13/16 O/D	
TAP WRENCH TW1		
DIESTOCK DS1		



**THREADING
TOOLS**



GENERAL SPECIFICATIONS

THREAD

METRIC
METRIC LONG SERIES
METRIC
UNC, UNF
BSW, BSF, BA, BSB
BSP, BSPT
NPS, NPT

GENERAL SPECIFICATIONS

ISO 529
ISO 2283
DIN 371 / DIN 374 / DIN 376
ISO 529
ISO 529
ISO 2284
ANSI 94.9 1979

THREADS GROUND TO

ISO 2857 - 1973, CLASS 2
ISO 2857 - 1973 CLASS 2
DIN 802 CLASS 6H
ANSI B1.1 1982 2B
BS 949: 1976 CLASS 2
BS 949: 1976 1976-G SERIES
ANSI 94.9 1979



TAP THREAD TOLERANCE

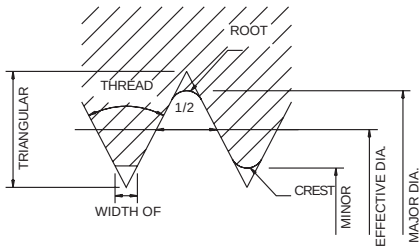
Basic sizes and tolerance classes

To allow for clearance between mating internal and external threads, taps are manufactured with oversize allowances added to the basic diameters.

These basic diameters plus the oversize allowances establish:

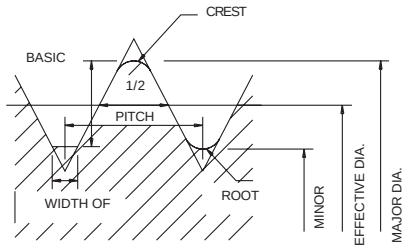
a) the minimum effective diameter; and

NUT



b) the minimum major diameter.

BOLT



Limits of Tolerance

Effective Diameter - The tolerance is the amount of variation allowed in the manufacture of the tap. This tolerance is added to the minimum effective diameter to establish the maximum effective diameter.

It follows that:

Basic Effective + Oversize = Minimum Effective

Basic Effective + Oversize + tolerance = Maximum Effective.

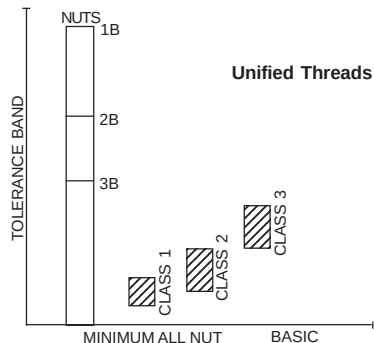
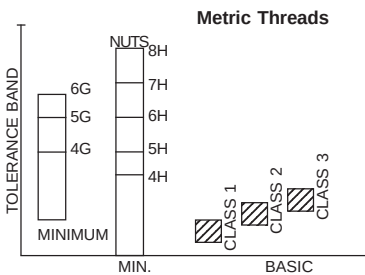
The effective diameter can only be measured with special tap measuring equipment.

Major Diameter - The minimum major diameter is established by adding the oversize allowance to the basic major diameter (the nominal thread size). Therefore, on measurement, the major diameter of the tap is larger than the nominal thread size, and must not be used to judge the size of the tap.

The maximum major diameter of the tap is governed by the thread form and is therefore not subject to a tolerance.

Tap Tolerance Classes

Relationships of Tap Classes to Nut Tolerances.



Class 1 Tap

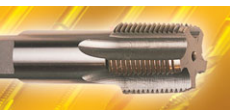
This is the closest to basic, having little oversize allowance, and is normally specified for "close" fit threads, eg. Unified 3B, Metric 4H, 5H.

Class 2 Tap

This is normally specified for "medium" fit threads, eg. Unified 2B, Metric 6H, 4G, 5G.

Class 3 Tap

This is furthestmost above basic size and used for "free" fit threads, eg. Unified 1B, Metric 7H, 8H, 6G.



TAP THREAD TOLERANCE

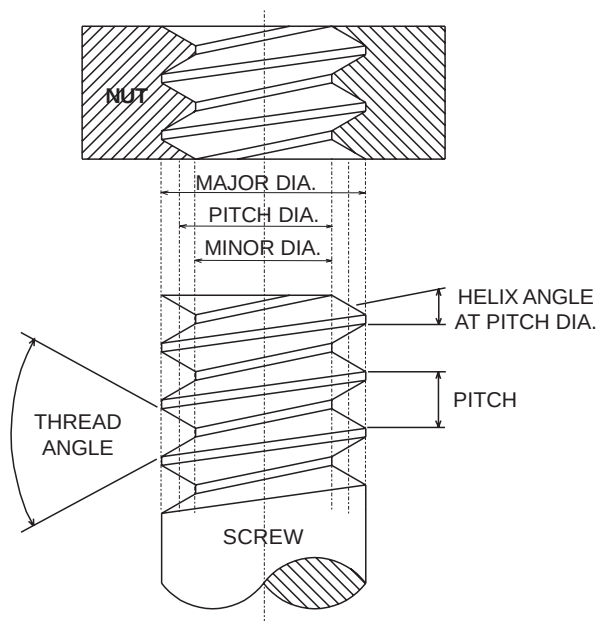
Under favourable working conditions, the following thread tolerances should be produced by the new class taps.

	Class 1	Class 2	Class 3
Metric	4H, 5H	6H, 4G, 5G	7H, 8H, 6G
Unified	3B	2B	1B
Whitworth Form	Close Class	Medium Class	Free Class
BA	Close Class	Medium Class	Free Class

All Somta HSS taps are supplied to Class 2, 6H unless otherwise specified.

BASIC THREAD FORMS

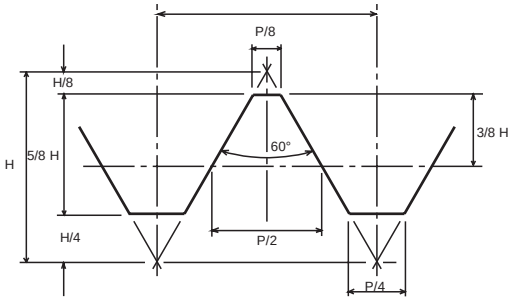
COMPONENT ELEMENTS



BASIC THREAD FORMS

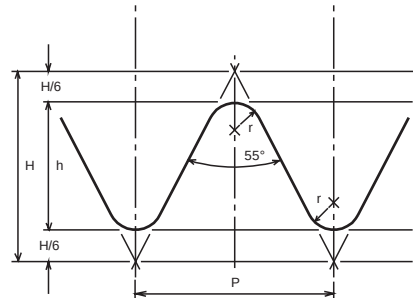
BASIC FORM OF ISO METRIC AND UNIFIED THREAD FORMS

$$\begin{aligned} H &= 0.86603 \times P \\ H/4 &= 0.21651 \times P \\ H/8 &= 0.10825 \times P \\ 3/8 H &= 0.32476 \times P \\ 5/8 H &= 0.54127 \times P \end{aligned}$$



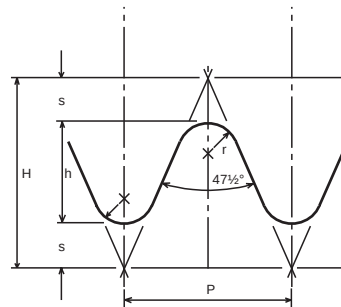
BASIC FORM OF WHITWORTH THREAD

$$\begin{aligned} H &= 0.96049 \times P \\ h &= 2/3 H = 0.64033 \times P \\ H/6 &= 0.16008 \times P \\ r &= 0.13733 \times P \end{aligned}$$



BASIC FORM OF BA THREAD

$$\begin{aligned} H &= 1.13630 \times P \\ h &= 0.60000 \times P \\ r &= 0.18083 \times P \\ s &= 0.26817 \times P \end{aligned}$$



MAIN TYPES OF TAPS

HAND TAPS (SHORT MACHINE)

This regular type is the basic tap designed as a general purpose tool for hand and machine operation.

As this basic tap will give acceptable performance in most materials and for short production runs, it is usually the most economical tap to use. However, it performs best in materials where the cutting action results in chips which break up readily and do not present problems of chip disposal.

The regular hand tap has four flutes in sizes larger than 1/4 inch diameter. These taps may not be suitable because of inadequate chip space when deep or blind holes have to be tapped in soft stringy materials. This applies particularly to the coarser pitch threads such as BSW and UNC.

If a gun tap or spiral fluted tap cannot be used, a three fluted tap which permits extra chip space, is recommended.

PIPE TAPS

Pipe taps are supplied with PARALLEL threads or with TAPER threads.

These taps are shorter than a similar size of regular hand tap, but the design features are the same. They are suitable for hand or machine use.

GUN NOSE TAPS. (SPIRAL POINT) FOR MACHINE USE ONLY

Gun nose taps have straight flutes supplemented by angular cutting faces at the point. These faces cut with a shearing action which propels the chips ahead of the tap leaving the flutes clear for the free flow of coolant to the point.

Primarily designed for use in through holes, these taps can be used in blind holes providing that there is ample clearance beyond the threaded section to accommodate the chips. The advantages of a gun nose tap are, the shearing action of the angular cutting faces which produce a fine finish on the threads and, shallower flutes which permit a stronger cross section throughout the tap.

SPIRAL FLUTE TAPS. FOR MACHINE USE ONLY

These taps are designed primarily for machine tapping of blind holes, are used to the best advantage in materials which produce long stringy chips. The shearing action provided by the spiral flutes produces a better finish on difficult to machine metals and causes the chips to be drawn back, eliminating clogging at the cutting chamfer.

SERIAL TAPS

Serial taps comprise of one or more undersized roughing taps which remove most of the material before final sizing with a finishing tap.

Some reasons for using serial taps are:

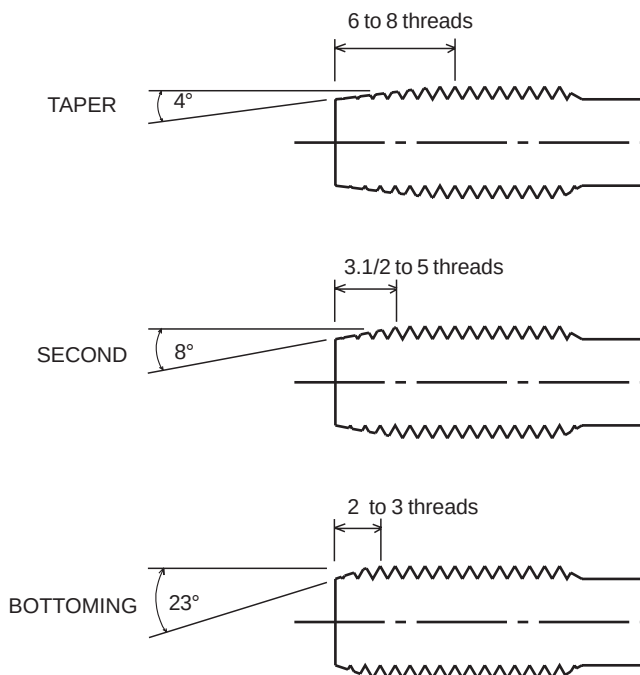
- (a) The toughness of the material being tapped.
- (b) The amount of material to be removed could cause swarf choking with a single tap.
- (c) The very small tolerance on pitch diameter.
- (d) An extremely good finish required.

FLUTELESS (ROLL) TAPS (Fluteless Chipless Tapping)

These taps are designed for machine tapping in ductile materials, "Fluteless" taps have no flutes or cutting faces, but have special roll forming lobes with circular lands and have long or short taper leads for through or blind holes.



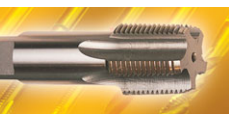
STANDARD LEAD (CHAMFER ANGLES)

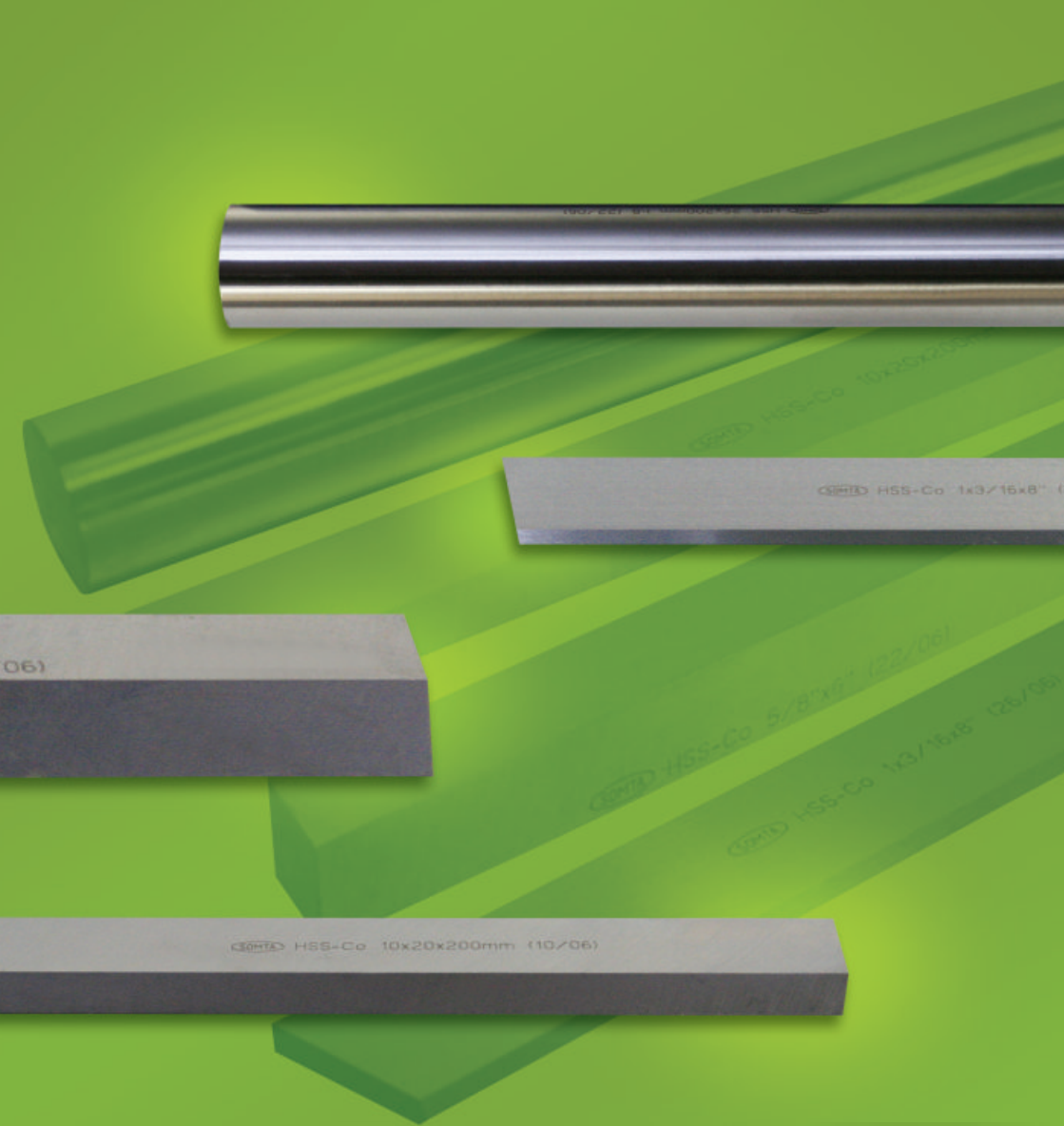


In some countries the name "PLUG" is commonly used to indicate a Bottoming tap.

In America it is used to indicate a Second tap. To avoid confusion with American terms, the terminology adopted by British Standard 949 1979 as shown above, should be used.

Short Hand and Machine, Long Shank Machine and Pipe Taps	4° (6-8 threads) Taper 8° (3.1/2-5 threads) Second 23° (2-3 threads) Bottoming
Spiral Point Taps	8° (4-5 threads)
Spiral Flute Taps	23° (2-3 threads)
Fluteless Taps	23° (2-3 threads)





T O O L B I T S



Square Toolbits



Code
601

Properties		
M	HSS	BASED ON ISO 5421
W h 13	10° Bevel	

W	L	Code	W	L	Code
4	63	6010025	16	100	6010200
5	63	6010034	8	160	6010120
6	63	6010050	10	160	6010150
8	63	6010090	12	160	6010191
10	63	6010125	16	160	6010220
6	80	6010060	20	160	6010256
8	80	6010100	6	200	6010085
10	80	6010130	8	200	6010122
12	80	6010160	10	200	6010152
6	100	6010070	12	200	6010192
8	100	6010110	16	200	6010222
10	100	6010140	20	200	6010267
12	100	6010170	25	200	6010290

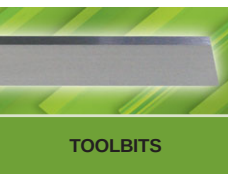
Code
602

Properties		
INCH	HSS	BASED ON ISO 5421
W h 13	10° Bevel	

Square Toolbits



W	L	Code	W	L	Code
3/16	2.1/2"	6020010	7/16	3.1/2"	6020110
1/4	2.1/2"	6020020	1/2	4"	6020120
1/4	3"	6020025	1/2	6"	6020130
1/4	4"	6020030	1/2	8"	6020140
5/16	2.1/2"	6020050	5/8	4.1/2"	6020155
5/16	3"	6020052	5/8	6"	6020160
5/16	4"	6020060	5/8	8"	6020170
3/8	3"	6020080	3/4	5"	6020180
3/8	4"	6020090	3/4	6"	6020190
3/8	6"	6020095			



Square Toolbits



W	L	Code	W	L	Code
5	40	6210030	12	80	6210160
6	100	6210070	12	100	6210170
6	200	6210085	12	160	6210180
8	100	6210110	12	200	6210195
8	160	6210120	16	100	6210200
8	200	6210122	16	160	6210220
10	63	6210125	16	200	6210224
10	100	6210140	20	160	6210258
10	160	6210150	20	200	6210290
10	200	6210152	25	200	6210300

Code

621

Properties

M	HSS Co8	BASED ON ISO 5421
W h 13	10° Bevel	

Square Toolbits



W	L	Code	W	L	Code
3/16	2.1/2"	6220010	3/8	8"	6220100
1/4	2.1/2"	6220020	1/2	4"	6220120
1/4	3"	6220022	1/2	6"	6220130
1/4	4"	6220030	1/2	8"	6220140
5/16	2.1/2"	6220050	5/8	4"	6220150
5/16	4"	6220060	5/8	6"	6220160
5/16	8"	6220070	3/4	5"	6220180
3/8	3"	6220080	3/4	6"	6220190
3/8	4"	6220085	1"	8"	6220250
3/8	6"	6220095			

Code

622

Properties

INCH	HSS Co8	BASED ON ISO 5421
W h 13	10° Bevel	



Round Toolbits



Code
605

Properties		
M	HSS	BASED ON ISO 5421
∅ h8 (d)		

d	L	Code	d	L	Code
4	100	6050032	12	100	6050170
5	100	6050037	16	100	6050200
6	100	6050070	10	160	6050150
8	100	6050110	6	200	6050085
10	100	6050140	20	200	6050258

Code
606

Properties		
INCH	HSS	BASED ON ISO 5421
∅ h8 (d)		

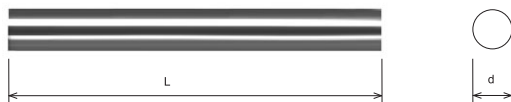
Round Toolbits



d	L	Code	d	L	Code
1/4	4"	6060070	1/2	4"	6060170
5/16	4"	6060110	5/8	4"	6060200
3/8	4"	6060140			



Round Toolbits



d	L	Code	d	L	Code
4	100	6250032	10	160	6250145
5	100	6250038	10	200	6250150
6	100	6250070	12	100	6250170
6	200	6250085	12	200	6250192
8	100	6250110	16	160	6250240
8	160	6250120	20	200	6250253
8	200	6250122	25	200	6250255
10	100	6250140			

Code

625

Properties

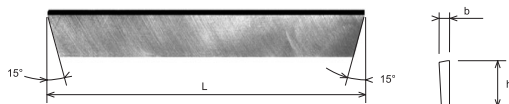
M

**HSS
Co8**

BASED ON
**ISO
5421**

h8 (d)

Double Bevel Parting Blades



b	h	L	Code	b	h	L	Code
3	12	120	6440010	3/32	1/2	4.1/2	6470005
3	16	140	6440030	3/32	5/8	5"	6470008
4	18	140	6440060	1/8	5/8	6"	6470010
3	20	140	6440070	1/8	3/4	6"	6470020
4	20	140	6440080	1/8	7/8	6"	6470030
				1/8	7/8	7"	6470035
				3/16	1"	8"	6470060

Codes

644, 647

Properties

**M
INCH**

**HSS
Co8**

**ISO
5421**

h13

Chassis Punches

Hi-Cut

Code

990



Size	Code	Size	Code
12.7	9901270	30	9903000
16	9901600	32.5	9903250
19	9901900	35	9903500
20	9902000	37.5	9903750
22.5	9902250	40	9904000
25	9902500	45	9904500
29	9902900	51	9905100

Core Drill Cutters



Hi-Cut

Code

9RB

Properties

M

HSS



Size	Cutter Length	Code	Size	Cutter Length	Code
12	35	9RB1200	35	35	9RB3500
13	35	9RB1300	36	35	9RB3600
14	35	9RB1400	37	35	9RB3700
15	35	9RB1500	39	35	9RB3900
16	35	9RB1600	40	35	9RB4000
17	35	9RB1700	41	35	9RB4100
18	35	9RB1800	43	35	9RB4300
19	35	9RB1900	44	35	9RB4400
20	35	9RB2000	46	35	9RB4600
21	35	9RB2100	47	35	9RB4700
22	35	9RB2200	49	35	9RB4900
23	35	9RB2300	51	35	9RB5100
24	35	9RB2400	52	35	9RB5200
25	35	9RB2500	53	35	9RB5300
26	35	9RB2600	54	35	9RB5400
27	35	9RB2700	56	35	9RB5600
30	35	9RB3000	57	35	9RB5700
32	35	9RB3200	58	35	9RB5800
33	35	9RB3300	59	35	9RB5900
34	35	9RB3400	60	35	9RB6000

Size	Pilot Pin Dia (mm) * Length	Annular Cutter Dia (mm) * Length	Pilot Type	Code
8 M2 Pilot Pin	5.5 x 79	12 x 35	With Step	9PP0800
9 M2 Pilot Pin	5.5 x 102	12 x 50	With Step	9PP0900
11 M2 Pilot Pin	6.35 x 79	(13-14) x 35	With Step	9PP1100
12 M2 Pilot Pin	6.35 x 102	(13-14) x 50	With Step	9PP1200
14 M2 Pilot Pin	6.35 x 79	(15-60) x 35	Parallel	9PP1400
15 M2 Pilot Pin	6.35 x 102	(15-60) x 50	Parallel	9PP1500
16 M2 Pilot Pin	6.35 x 161	(18-35) x 110	Parallel	9PP1600

Core Drill Cutters

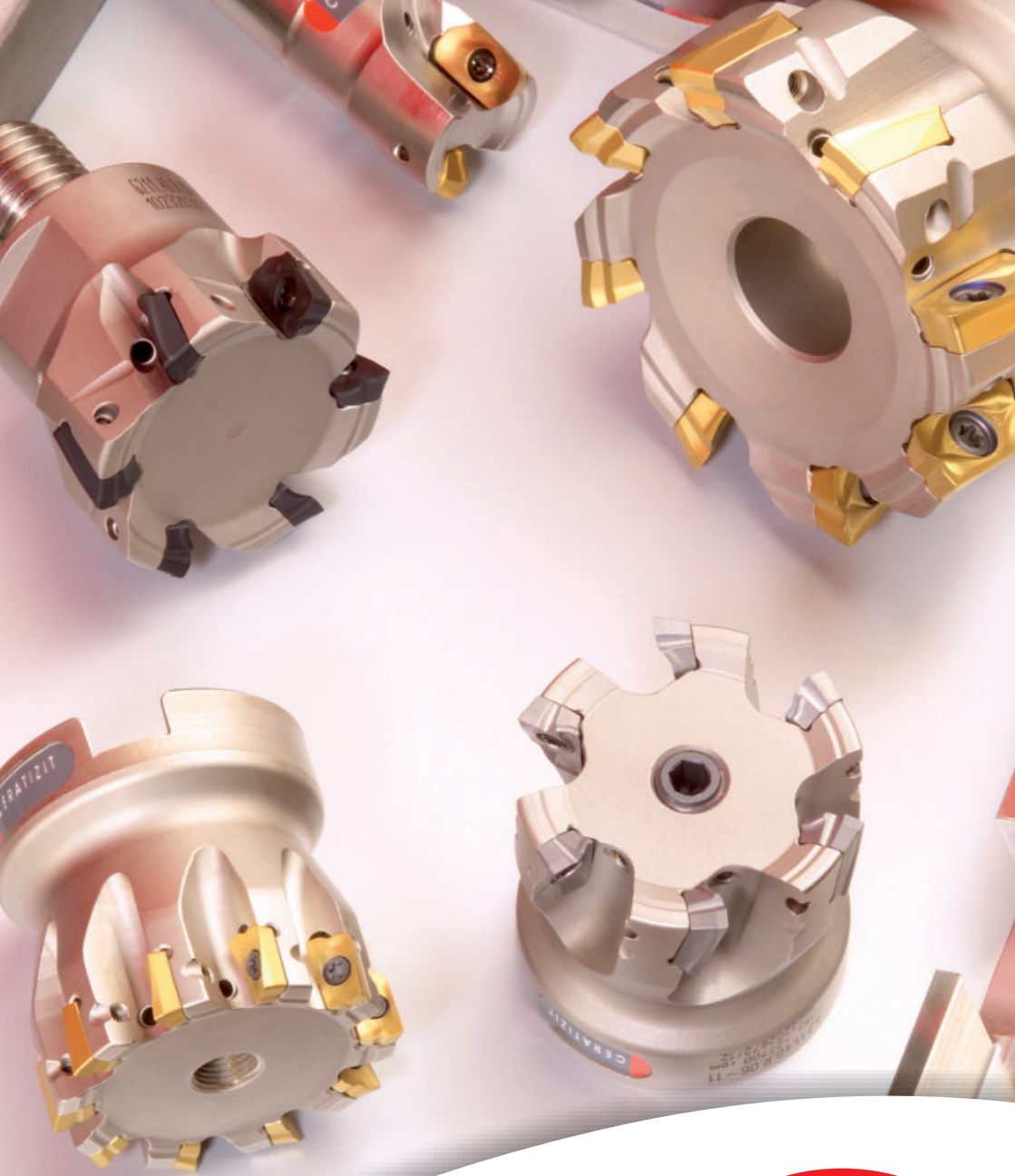
Hi-Cut

Code
9RB

Properties
M HSS 



Size	Cutter Length	Code	Size	Cutter Length	Code
12	50	9RB1201	37	50	9RB3701
13	50	9RB1301	39	50	9RB3901
14	50	9RB1401	40	50	9RB4001
16	50	9RB1601	42	50	9RB4201
18	50	9RB1801	43	50	9RB4301
20	50	9RB2001	44	50	9RB4401
21	50	9RB2101	45	50	9RB4501
22	50	9RB2201	46	50	9RB4601
23	50	9RB2301	47	50	9RB4701
24	50	9RB2401	48	50	9RB4801
25	50	9RB2501	49	50	9RB4901
26	50	9RB2601	51	50	9RB5101
27	50	9RB2701	52	50	9RB5201
28	50	9RB2801	53	50	9RB5301
29	50	9RB2901	54	50	9RB5401
30	50	9RB3001	55	50	9RB5501
31	50	9RB3101	56	50	9RB5601
32	50	9RB3201	57	50	9RB5701
33	50	9RB3301	58	50	9RB5801
34	50	9RB3401	59	50	9RB5901
35	50	9RB3501	60	50	9RB6001



C E R A T I Z I T

HOW TO ORDER INSERTS

Included angle rhombus	35°	V
	55°	D
	75°	E
	80°	C
	86°	M
Included angle rhomboid	55°	K
	82°	B
	85°	A
	90°	L
	108°	P
Other shapes	120°	H
	135°	O
	~	R
	90°	S
	60°	T
	80°	W

Insert shape

3°	A	25°	F
5°	B	30°	G
7°	C	0°	N
15°	D	11°	P
20°	E		

Clearance angles not included within the standard for which particular information is necessary } O

Clearance angles

	d ±	m ±	s ±
A	0,025	0,005	0,025
F	0,013	0,005	0,025
C	0,025	0,013	0,025
H	0,013	0,013	0,025
E	0,025	0,025	0,025
G	0,025	0,025	0,13
J	0,05-0,15*	0,005	0,025
K	0,05-0,15*	0,013	0,025
L	0,05-0,15*	0,025	0,025
M	0,05-0,15*	0,08-0,20	0,13
N	0,05-0,15*	0,08-0,20	0,025
U	0,08-0,25*	0,13-0,38	0,13

Tolerances

N	
R	
F	
A	
M, P	
G, P	
W	
T	
Q	
U	
B	
H	
C	
J	
X	Special version

Form of top surface

T	P	U	N
1	2		

Tolerances in inches			
	d s	m s	s s
A	0,0010	0,0002	0,001
F	0,0005	0,0002	0,001
C	0,0010	0,0005	0,001
H	0,0005	0,0005	0,001
E	0,0010	0,0010	0,001
G	0,0010	0,0010	0,005
J	0,002-0,006*	0,0002	0,001
K	0,002-0,006*	0,0005	0,001
L	0,002-0,006*	0,0010	0,001
M	0,002-0,006*	0,003-0,008*	0,005
N	0,002-0,006*	0,003-0,008*	0,001
U	0,003-0,010*	0,005-0,015*	0,005

* Depends on insert size

Form of top surface	
Symbols as above, Changes at inscribed circle IK < 1/4"	
IK > 1/4"	IK < 1/4"
N / R / F	E
A / M / G	D
X	X



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ASA and BHMA deviation with regard to ISO
X = special version not according to ISO

Please contact a technical representative for further queries.

HOW TO ORDER INSERTS

d mm			
	06	16	
	08	20	
	10	25	
	12	32	
mm	Inches	mm	mm
06	5/32	3,96	03
09	7/32	5,56	05
11	1/4	6,35	06
16	3/8	9,52	09
22	1/2	12,7	12
27	5/8	15,8	15
33	3/4	19,0	19
44	1	25,4	25

Cutting edge length

Inches	mm	Index
1/16	1,59	01
3/32	2,38	02
1/8	3,18	03
5/32	3,97	T3
3/16	4,76	04
7/32	5,56	05
1/4	6,35	06
5/16	7,94	07
3/8	9,52	09

Insert thickness

Code	Corner radius mm
00	≤ 0,05
01	0,1
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
24	2,4
32	3,2
	RN 00 RC MO

Corner radius

	Sharp
	Honed
	Chamfered
	Chamfered and honed
	Double chamfered
	Double chamfered & honed

Cutting edge

	R
	L
	N

Cutting direction

22	04	12	
4	3	3	025B

Code	Inches
2	1/4
3	3/8
4	1/2
5	5/8
6	3/4
8	1

Cutting edge length

Code	Inches
1	1/16
2	1/8
3	3/16
4	1/4
5	5/16
6	3/8

Insert thickness

Code	Corner radius inches
X0	.0015
0	.004
.5	.008
1	1/64
2	1/32
3	3/64
4	1/16
5	5/64
6	3/32
7	1/64
8	1/8
	RN 00 RC MO

Corner radius

T / S	K / P 1)
015	0,15 mm A 05°
020	0,20 mm B 10°
025	0,25 mm C 15°
050	0,50 mm D 20°
075	0,75 mm E 25°
100	1,00 mm F 30°

Chamfer type

1) For double chamfered cutting edges two letters are used.

for example:
BE = BE = chamfer angle 1 = 10°
chamfer angle 2 = 25°



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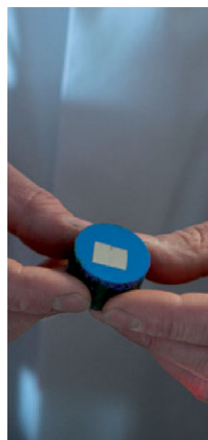
Please contact a technical representative for further queries.

Who is CERATIZIT?

The premium carbide company

A privately owned company founded in Reutte, Austria in 1921. It is the fourth largest carbide producer worldwide and has 21 production sites in Europe, North and South America and Asia, with headquarters in Luxembourg. CERATIZIT has over 5,500 employees, 100 of which are in Research and Development.

- Manufacturing process:
 - Powder metallurgy
- Hard material products for:
 - Metal cutting tools
 - Wear parts
 - Wood and stone working
- From powder to coated product: 1 partner
- Driven by people and emotions
- Our environment matters: recycling, water-spray technology, ...
- Corporate values are based on management principles
- More than 400 patents worldwide



South Africa Only



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CTCP115 / CTCP125

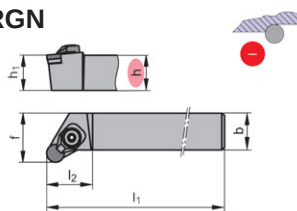
CTCP115 is the first choice for highly productive steel machining under stable conditions. This grade guarantees maximum tool life and optimum process security for all applications with highest demands on both heat and wear resistance.

Look no further - CTCP125 inserts show unbeatable performance.

CTCP125 satisfies the demands of steel machining better in terms of productivity and reliability and also offers a broader application range than all previous P25 grades. This is the **universal steel turning grade**. It may be applied in all industries and for all applications from one-off components to high volume production and the manufacture of small parts or heavy duty machining.

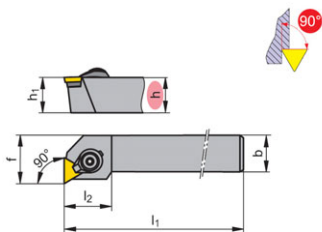
hard material matters

CRGN



h (mm)	Type, description	L N R	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
25	CRGNR 2525 M09	R	25	25	150	21	32	0ZH54108
25	CRGNL 2525 M09	L	25	25	150	21	32	0ZH55186

CTFP



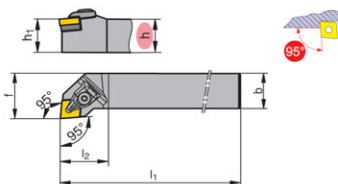
h (mm)	Type, description	L N R	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
25	CTFPL 2525 M16	L	25	25	150	32	32	0ZH3965



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DCLN



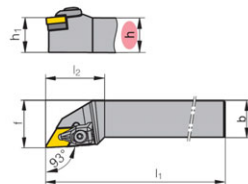
h (mm)	Type, description	L N R	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	R 2020 K12	R	20	20	125	32	25	0ZH11224617
25	R 2525 M12		25	25	150	32	32	0ZH11224619
32	R 3232 P19		32	32	170	42	40	0ZH11226557
25	L 2525 M12	L	25	25	150	32	32	0ZH11224618
32	L 3232 P19		32	32	170	42	40	0ZH11226556

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TOOL HOLDERS FOR EXTERNAL MACHINING



DDJN



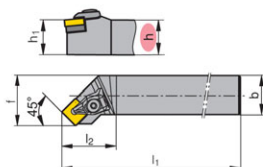
h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
25	DDJNR 2525 M15	R	25	25	150	40	32	OZH11224628
25	DDJNL 2525 M15	L	25	25	150	40	32	OZH11224627



South Africa Only



DSSN

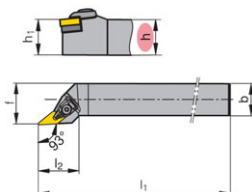


h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
25	DSSNR 2525 M12	R	25	25	150	35	32	OZH11224636

CERATIZIT



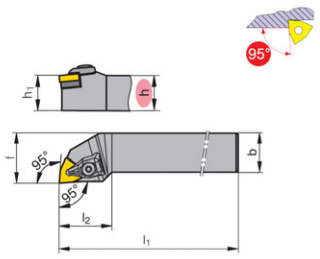
DVJN



h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
25	DVJNR 2525 M16	R	25	25	150	39	32	OZH11226591
25	DVJNL 2525 M16	L	25	25	150	39	32	OZH11226590

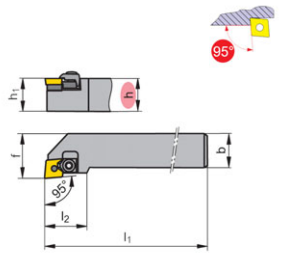


DWLN



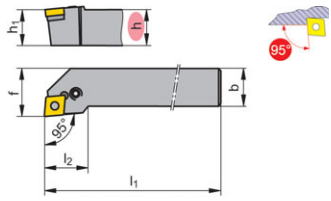
h (mm)	Type, description		h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	DWLNK 2020 K08	R	20	20	125	34	25	OZH11224646
25	DWLNK 2525 M06		25	25	150	27	32	OZH11226587
25	DWLNK 2525 M08		25	25	150	34	32	OZH11224648
25	DWLNK 2525 M08	L	25	25	150	34	32	OZH11224647

MCLC



h (mm)	Type, description		h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	MCLCR 2020 K12	R	20	20	125	35	25	OZH4577
25	MCLCR 2525 M12		25	25	150	35	32	OZH4578
25	MCLCL 2525 M12	L	25	25	150	35	32	OZH4581

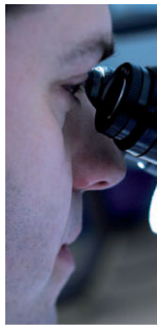
PCLN



h (mm)	Type, description		h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
16	R 1616 H12-T	R	16	16	100	26.1	20	OZH152559



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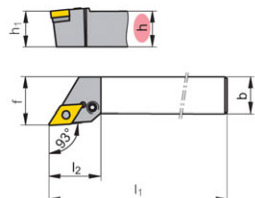


CERATIZIT

TOOL HOLDERS FOR EXTERNAL MACHINING



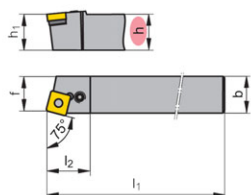
PDJN



h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	PDJNR 2020 K11	R	20	20	125	30	25	0ZH293112
25	PDJNR 2525 M11		25	25	150	30	32	0ZH293114
20	PDJNL 2020 K11	L	20	20	125	30	25	0ZH293111
25	PDJNL 2525 M11		25	25	150	30	32	0ZH293113



PSBN

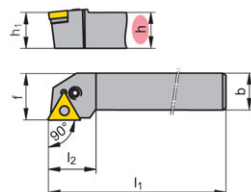


h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	R 2020 K12-T	R	20	20	125	27.5	17	0ZH61043

CERATIZIT

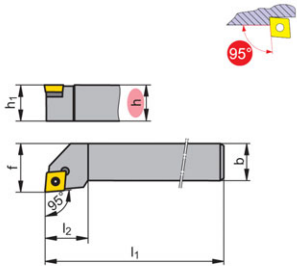


PTGN



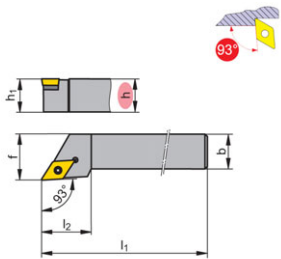
h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	R 2020 K16-T	R	20	20	125	20	25	0ZH61000
25	R 2525 M16-T		25	25	150	22.2	32	0ZH61004
16	L 1616 H16-T	L	16	16	100	20	20	0ZH152593

SCLC



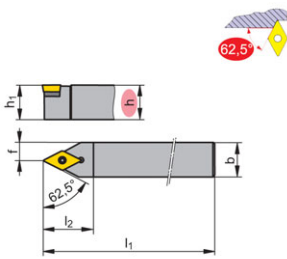
h (mm)	Type, description		h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
8	R 0808 D06	R	8	8	60	9	10	0ZH77338
16	R 1616 H09	R	16	16	100	17	20	0ZH77346
12	L 1212 F09	L	12	12	80	15	16	0ZH77345

SDJC

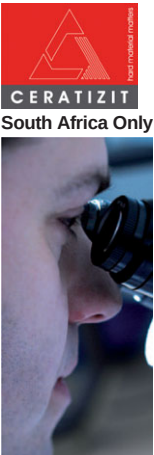


h (mm)	Type, description		h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	SDJCR 2020 K11	R	20	20	125	20.5	25	0ZH24625
25	SDJCR 2525 M11	R	25	25	150	21.5	32	0ZH24628

SDNC



h (mm)	Type, description		h ₁ (mm)	b (mm)	l ₁ (mm)	f (mm)	Code
10	SDNCN 1010 E07	N	10	10	70	5	0ZH41809

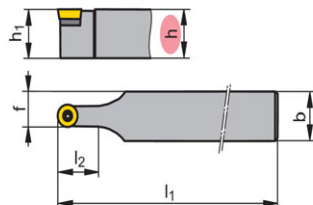


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CERATIZIT

TOOL HOLDERS FOR EXTERNAL MACHINING

SRDC



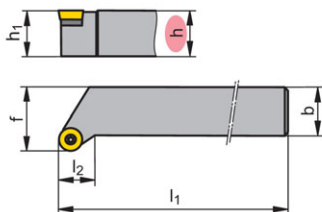
h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	SRDCN 2020 K08	N	20	20	125	16.4	14	OZH77440



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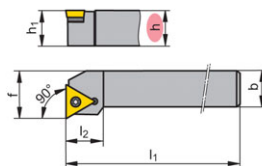


SRGC



h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
20	SRGCR 2020 K08	R	20	20	125	13	25	OZH77443

STFC

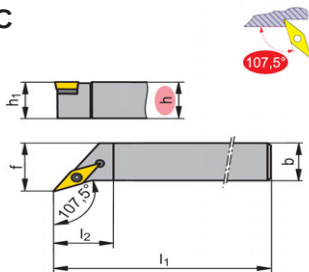


h (mm)	Type, description	LNR	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
25	STFCL 2525 M16	R	25	25	150	20	32	OZH79065

CERATIZIT



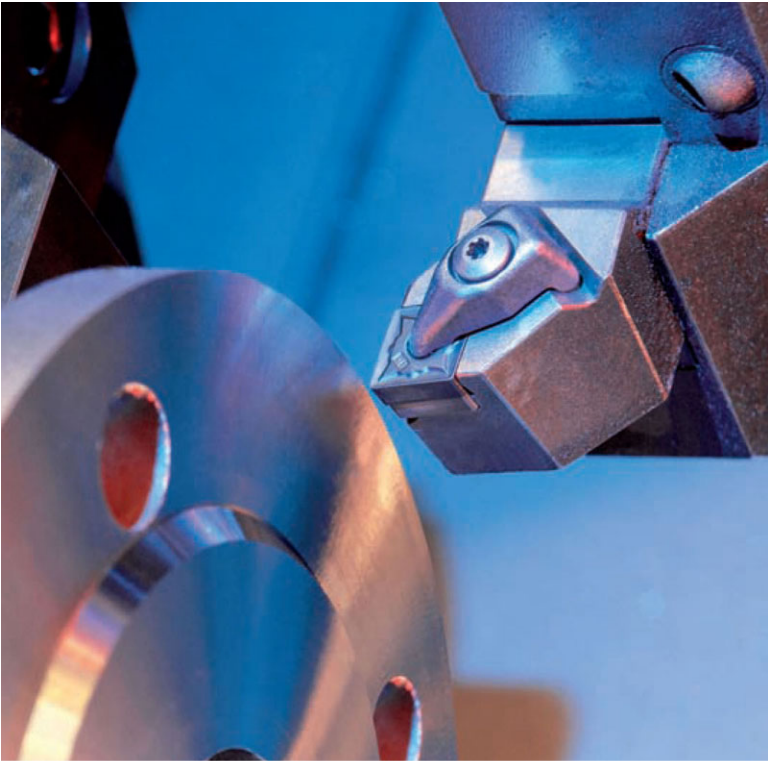
SVHC



h (mm)	Type, description		h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	Code
25	SVHCR 2525 M16	N	25	25	150	19.6	32	0ZH34095



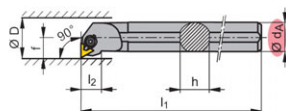
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CERATIZIT



CTFP



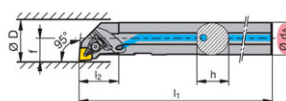
d_A (mm)	Type, description	LN R	h (mm)	l_1 (mm)	l_2 (mm)	f (mm)	D_{min} (mm)	Code
12	S12Q CTFPR 11	R	11	180	15	9	16	OZH4466
16	S16R CTFPR 11		14.5	200	15	11	20	OZH4467
25	S25T CTFPR 16		23	300	20	17	32	OZH4469
32	S32U CTFPR 16		30	350	20	22	40	OZH4470



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DCLN

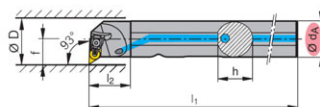


d_A (mm)	Type, description	LN R	h (mm)	l_1 (mm)	l_2 (mm)	f (mm)	D_{min} (mm)	Code
32	A32S DCLNR 12	R	31	250	40	22	40	OZH11224652
40	A40T DCLNR 12		39	300	45	27	50	OZH11224655

CERATIZIT



DDUN

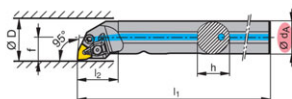


d_A (mm)	Type, description	LN R	h (mm)	l_1 (mm)	l_2 (mm)	f (mm)	D_{min} (mm)	Code
32	A32S DDUNR 11	R	31	250	40	22	40	OZH11224657
40	A40T DDUNR 15		39	300	45	27	50	OZH11224660

TOOL HOLDERS FOR INTERNAL MACHINING



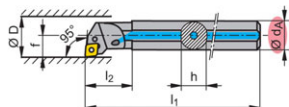
DWLN



- Version A with coolant hole
- Version S without coolant hole

d _A (mm)	Type, description	L N R	h (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	D _{min} (mm)	Code
25	S25T DWLNR 08	R	23	300	40	17	32	0ZH11269797
32	S32U DWLNR 08		30	350	40	22	40	0ZH11269798

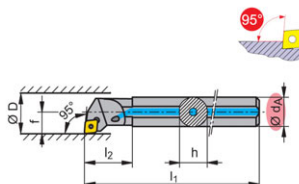
PCLN



- Version A with coolant hole
- Version S without coolant hole

d _A (mm)	Type, description	L N R	h (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	D _{min} (mm)	Code
25	S25T PCLNR 12	R	23	300	22	17	32	0ZH61146
32	S32U PCLNR 12		30	350	24.1	22	40	0ZH61148

SCLC



- Version A with coolant hole
- Version S without coolant hole

d _A (mm)	Type, description	L N R	h (mm)	l ₁ (mm)	l ₂ (mm)	f (mm)	D _{min} (mm)	Code
8	S08H SCLCR 06	R	7.2	100	8	5	11	0ZH77429
10	S10K SCLCR 06		9	125	10	7	13	0ZH77431
12	S12Q SCLCR 06		11	180	10	9	16	0ZH77433
16	S16R SCLCR 09		14.5	200	16	11	20	0ZH77435
16	A16M SCLCL 09	L	15	150	29	11	20	0ZH229239
16	S16R SCLCL 09		14.5	200	16	11	20	0ZH77436



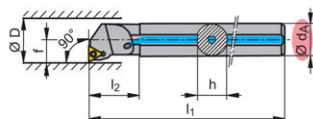
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CERATIZIT



STFC



-  Version A with coolant hole
-  Version S without coolant hole

d_A (mm)	Type, description		h (mm)	l_1 (mm)	l_2 (mm)	f (mm)	D_{min} (mm)	Code
16	S16R STFCR 11	R	14.5	200	13	11	20	0ZH79070
20	S20S STFCR 11		18	250	13	13	25	0ZH79073



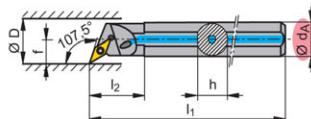
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CERATIZIT



SVQC



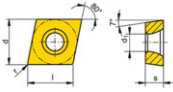
d_A (mm)	Type, description		h (mm)	l_1 (mm)	l_2 (mm)	f (mm)	D_{min} (mm)	Code
16	A16M SVQCR 11	R	15	150	29	11	20	0ZH229224
25	A25R SVQCR		23	200	36	17	32	0ZH229355
40	A40T SVQCR 16		38	300	60	27	50	0ZH229408



INSERTS FOR TURNING



CCGT



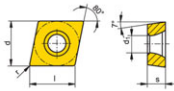
-25P

-27

r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.20	120402FN-25P H210T	N	○	○	○	●	●	12.90	12.70	4.76	5.50	0ZN11137218
	120402FN-27 H10T		○	○	○	●	●					0ZN60993
0.40	120404FN-25P H210T		○	○	○	●	●					0ZN11108609
	120408FN-25P AMZ		○	○	○	●	○					0ZN354761
0.80	120408FN-27 H10T		○	○	○	●	○					0ZN60990

- Main Application
- Extended Application

CCMT



-F43

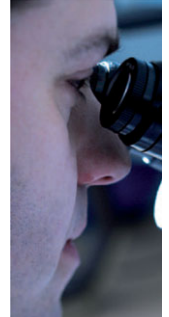
-SM

r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	060204EN-SM CTC1135	N	●	○	○	○	○	6.40	6.35	2.38	2.80	0ZN11162892
	060204EN-SM CTC2135		○	○	○	○	○					0ZN11172228
	120404EN-SM CTC1130		●	○	●	○	○	12.90	12.70	4.76	5.50	0ZN11225067
	09T308EN-F43 CTC2135		○	○	○	○	○					0ZN11168424
	09T308EN-SM CTC2135		○	○	○	○	○	9.70	9.52	3.97	4.40	0ZN11172231
0.80	120408EN-SM CTC1130		●	○	●	○	○	12.90	12.70	4.76	5.50	0ZN11225070

- Main Application
- Extended Application

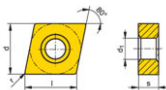


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CERATIZIT

CNMA



CN..A

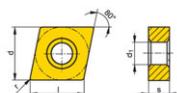
r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	Hard materials	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.80	120408EN CTC3110	N	○	○	●				12.90	12.70	4.76	5.16	0ZN11221527
1.20	120412EN CTC3110		○	○	●								0ZN11221537

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

INSERTS FOR TURNING

CNMG



r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	120404EN-M50 CTC115	N	●	○	●		12.90	12.70	4.76	5.16	0ZN11695577
	120404EN-M50 CTC125		●	○	●						0ZN11534379
	120404EN-TF CTC115		●	○	●						0ZN11695578
	120404EN-TFQ CTC1110		●	○	●	○					0ZN11168376
	120404EN-TFQ CTC125		●	○	●						0ZN11542033
	120404EN-TMF CTC115		●	○	●						0ZN11695579
	120404EN-TMF CTC125		●	○	●						0ZN11529961
	120404EN-TMF CTC1130		●	○	●						0ZN11279755
0.80	120404EN-TMF CTC1135	N	●	○	●	○	12.90	12.70	4.76	5.16	0ZN11163109
	120408EN-TM CTC1115		●	○	○	○					0ZN287167
	120408EN-M50 CTC115		●	○	●						0ZN11695587
	120408EN-M50 CTC125		●	○	●						0ZN11513798
	120408EN-TF CTC125		●	○	●						0ZN11542036
	120408EN-TFQ CTC115		●	○	●						0ZN11695594
	120408EN-TFQ CTC125		●	○	●						0ZN11542069
	120408EN-TM CTC1130		●	○	●						0ZN11225098
	120408EN-TM CTC1135		●	○	○	○					0ZN11116050
	120408EN-TM CTC2135		○	●		○					0ZN11172160
	120408EN-TMF CTC1110		●	○	●	○					0ZN11014770
	120408EN-TMF CTC1125		●	○	○						0ZN11171248
1.20	120408EN-TMF CTC1130	N	●	○	●		16.10	15.88	6.35	6.35	0ZN11279768
	120408EN-TMF CTC1135		●	○	●						0ZN11279768
	120408EN-TMR CTC2135		○	●		○					0ZN11172185
	120412EN-M52 CTP2120		●	○	○	○					0ZN11167502
	120412EN-TMR CTC1120		●	○	●						0ZN11695247
	120412EN-TM CTC1115		●	○	○	○					0ZN287286
0.80	120412EN-TM CTC1125	N	●	○	○		19.30	19.05	6.35	7.94	0ZN11154929
	120412EN-TM CTC1130		●	○	●						0ZN11224250
	120412EN-TM CTC1135		●	○		○					0ZN11163119
	120412EN-TMR CTC2135		●	○		○					0ZN11172188
1.20	160608EN-TM CTC1135	N	●	○	○		16.10	15.88	6.35	6.35	0ZN11163121
	160612EN-TMR CTC1115		●	○	○	○					0ZN309640
	160612EN-TMR CTC1125		●	○	○						0ZN11154933
	160612EN-TMR CTC1130		●	○	●						0ZN11279770
1.60	160616EN-TRM CTC1130	N	●	○	●						0ZN11245972
1.20	190612EN-TMR CTC1125	N	●	○	○		19.30	19.05	6.35	7.94	0ZN11171482
1.20	190612EN-TMR CTC2135	N	○	●		○					0ZN11172190
1.60	190616EN-TMR CTC2135	N	○	●		○					0ZN11172192

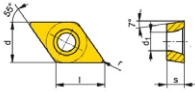
- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

INSERTS FOR TURNING



DCGT



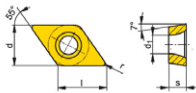
-25P

-27

r (mm)	Type, description		Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.20	11T302FN-25P H210T	N		○	○	●	●	11.60	9.52	3.97	4.40	0ZN11137224
	11T302FN-27 H10T				●	●	0ZN122203					
	11T304FN-25P H210T			○	○	●	●					0ZN11108610
0.40	11T304FN-27 H10T				●	●		7.75	6.35	2.38	2.80	0ZN80223
	070204FN-27 H10T				●	●	0ZN80215					
	11T308FN-25P H210T			○	○	●	●					0ZN11108611
0.80	11T308FN-27 H10T				●	●		11.60	9.52	3.97	4.40	0ZN70188

- Main Application
- Extended Application

DCMT



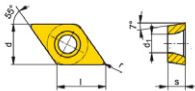
-SF

-SMF

r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	070204EN-SF CTC1135	N	●	○		○	7.75	6.35	2.38	2.80	0ZN11162917
	11T304EN-SF CTC1135		●	○		○	11.60	9.52	3.97	4.40	0ZN11162920
	11T304EN-SMF CTC1130		●	○	●						0ZN11280062
0.80	11T308EN-SMF CTC1135		●	○		○					0ZN11162989

- Main Application
- Extended Application

DNMA

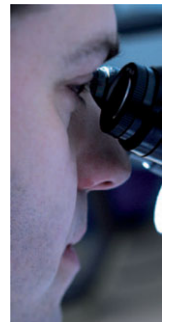


DN..A

r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.80	150608EN CTC3110	N	○	●		15.50	12.70	6.35	5.16	0ZN11221756
1.20	150612EN CTC3110		○	●						0ZN11221767

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.



CERATIZIT

INSERTS FOR TURNING

DNMG

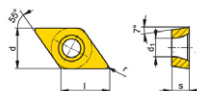


-TMR

-TMF

-M42

-TM



r (mm)	Type, description	L N R			Steel	Stainless	Cast Iron	Heat resistant	l (mm)	d (mm)	s (mm)	d1 (mm)	Code
0.40	110404EN-TMF CTC1125	N	●	○	○	○	○	○	11.60	9.52	4.76	3.81	0ZN11171616
	110408EN-M42 CTC2135		○	●	○	○	○	○					0ZN11168408
	150604EN-TMF CTC1110		●	○	●	○	○	○					0ZN11040617
	150604EN-TMF CTC1130		●	○	○	○	○	○					0ZN11279780
	150604EN-TMF CTC1135		●	○	○	○	○	○					0ZN11163160
0.80	150608EN-TM CTC1115		●	○	○	○	○	○	15.50	12.70	6.35	5.16	0ZN309648
	150608EN-TM CTC1130		●	○	●	○	○	○					0ZN11220330
	150608EN-TM CTC1135		●	○	○	○	○	○					0ZN11116064
	150608EN-TM CTC2135		○	●	○	○	○	○					0ZN11172196
	150608EN-TMR CTC1125		●	○	○	○	○	○					0ZN11154939
1.20	150612EN-TM CTC1135		●	○	○	○	○	○					0ZN11163176

- Main Application
- Extended Application



South Africa Only

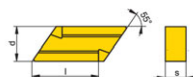


KNUX



-11

-12



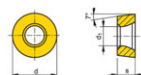
r (mm)	Type, description	L N R			Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	Code
0.50	160405EL-12 CTC1135	L	●	○	○	○	○	○	○	16.00	9.52	4.76	0ZN11171151
	160405ER-11 CTC1135	R	●	○	○	○	○	○	○				0ZN11170947
	160405ER-12 CTC1135		●	○	○	○	○	○	○				0ZN11171130

- Main Application
- Extended Application

RCGT



-SM



d (mm)	Type, description	L N R			Steel	Stainless	Cast Iron	Non Ferrous metals	s (mm)	d1 (mm)	Code
8.00	0803MOEN-SM CTC1125	N			●	○	○	○	3.18	3.40	0ZN11171486

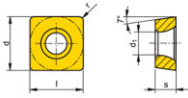
- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

INSERTS FOR TURNING



SCGT



-25P

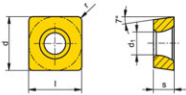


-27P

r (mm)	Type, description	LN R	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.80	120408FN-25P H210T	N	○	○	●	●	12.70	12.70	4.76	5.50	0ZN11137229
	120408FN-27 H10T		●	●	●	●					0ZN112460

- Main Application
- Extended Application

SCMT



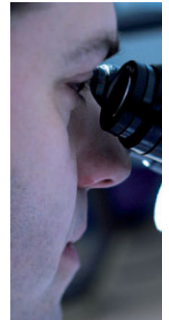
-SMF



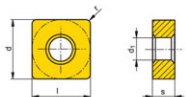
-SM

r (mm)	Type, description	LN R	Steel	Stainless	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	09T304EN-SM CTC1135	N	●	○	○	9.52	9.52	3.97	4.40	0ZN11163043
0.80	120408EN-SMF CTC1135		●	○	○	12.70	12.70	4.76	5.50	0ZN11163052

- Main Application
- Extended Application



SNMA



EN

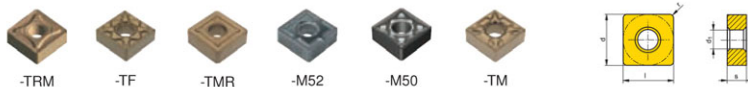
r (mm)	Type, description	LN R	Steel	Stainless	Cast Iron	Non Ferrous metals	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.80	120408EN CTC3110	N	○	○	●	○	12.70	12.70	4.76	5.16	0ZN11221773
1.20	120412EN CTC3110		○	○	●	○					0ZN11221561

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

INSERTS FOR TURNING

SNMG



r (mm)	Type, description		Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant					Code
								l (mm)	d (mm)	s (mm)	d ₁ (mm)	
0.40	120404EN-TF CTC1115	N	●	○	○		○	12.70	12.70	4.76	5.16	0ZN312873
	120404EN-TF CTC1125		●	○	○		○					0ZN11171699
120408EN-M52 CTP2120			●	○	○	○	0ZN11167524					
120408EN-TM CTC1130	●		○	●			0ZN11225119					
120408EN-TM CTC1135	●		○			○	0ZN11163179					
120408EN-TMR CTC1115	●		○	○		○	0ZN313015					
120408EN-TMR CTC1130	●		○	●			0ZN11279849					
120408EN-TMR CTC2135	○		●			○	0ZN11172216					
120412EN-TM CTC1135	○		●			○	0ZN11163184					
120412EN-TMR CTC1115	●		○	○	○	○	0ZN312880					
120412EN-TMR CTC1125	●		○	○			0ZN11171691					
120412EN-TMR CTC2135	○		●			○	0ZN11172218					
120412EN-TMR CTC3110	○		●				0ZN11221564					
150612EN-TMR CTC1125	●		○	○			0ZN11171689					
120416EN-TRM CTC1130	○		●	○	●		0ZN11246070					
190616EN-TMR CTC2135	○		●				0ZN11172219					

- Main Application
- Extended Application



South Africa Only



CERATIZIT

SPUN



r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	Code
0.80	120308EN CTC3110	N	○	○	●	○	○	12.70	12.70	3.18	0ZN11222440

- Main Application
- Extended Application

TCGT

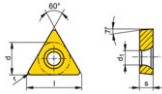


r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.20	110202EN-SM CTC1135	N	●	○	○	○	○	11.00	6.35	2.38	2.80	0ZN11163053
0.80	16T308FN-27 H10T		○	○	●	●	○	16.50	9.52	3.97	4.40	0ZN112454

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

INSERTS FOR TURNING



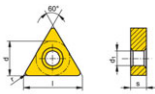
TCMT



-SM

r (mm)	Type, description	L N R				l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
			Steel	Stainless	Hard materials					
0.40	110204EN-SM CTC1135	N	●	○	○	11.00	6.35	2.38	2.80	0ZN11163055
	110208EN-SM CTC1135		●	○	○					0ZN11163057
0.80	220408EN-SM CTC1135		●	○	○	22.00	12.70	4.76	5.30	0ZN11163069

- Main Application
- Extended Application



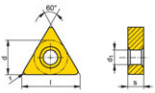
TCMX



TC..X

r (mm)	Type, description	L N R				l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
			Steel	Stainless	Cast Iron Heat resistant					
0.40	220404EN CTC1135	N	●	○	○	22.00	12.70	4.76	5.16	0ZN11163098

- Main Application
- Extended Application



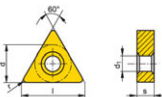
TNMA



TN..A

r (mm)	Type, description	L N R				l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
			Steel	Stainless	Cast Iron Heat resistant					
0.80	160408EN CTC3110	N	○	●	○	16.50	9.52	4.76	3.81	0ZN11221784
1.20	160412EN CTC3110		○	●	○					0ZN11221787

- Main Application
- Extended Application



TNMM

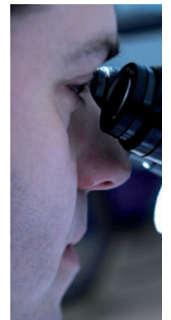


-TR

r (mm)	Type, description	L N R				l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
			Steel	Stainless	Cast Iron Heat resistant					
0.80	160408EN-TR CTC1115	N	●	○	○	16.50	9.52	4.76	3.81	0ZN309656

- Main Application
- Extended Application

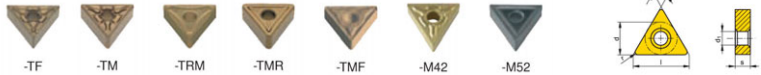
Note: Inserts are sold in boxes of 10 only.



CERATIZIT

INSERTS FOR TURNING

TNMG



r (mm)	Type, description		Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant					Code
								l (mm)	d (mm)	s (mm)	d ₁ (mm)	
0.40	160404EN-M42 CTC2135	N	○	●			○	16.50	9.52	4.76	3.81	0ZN11168416
	160404EN-M42 CTP2120			●	○	○	○					0ZN11167482
	160404EN-TF CTC1125		●	○	○							0ZN11171677
	160404EN-TMF CTC1115		●	○	○		○					0ZN11005521
	160404EN-TMF CTC1135		●	○			○					0ZN11163196
0.80	160408EN-M52 CTP2120		●	○		○	○					0ZN11167526
	160408EN-TF CTC1130		●	○	●							0ZN11225128
	160408EN-TM CTC1135		○	●			○					0ZN11163200
	160408EN-TMF CTC1115		●	○	○		○					0ZN11005524
	160408EN-TMF CTC1125		●	○	○		○					0ZN11171649
1.20	160408EN-TMR CTC2135		○	○	○		○					0ZN11172221
	160412EN-TF CTC1115		●	○	○		○					0ZN312949
	160412EN-TM CTC1125		●	○	○							0ZN11171646
	160412EN-TM CTC1130		●	○	●							0ZN11225132
	160412EN-TM CTC1135		●	○			○					0ZN11163205
0.80	220408EN-TM CTC1135	●	○			○	22.00	12.70	4.76	5.16	0ZN11163207	
	220408EN-TM CTC1125	●	○	○		○					0ZN11171642	
1.20	220412EN-TM CTC1135	●	○	○							0ZN11163209	
1.60	220416EN-TM CTC1135	●	○			○					0ZN11163214	

- Main Application
- Extended Application



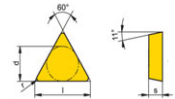
South Africa Only



TPMR



TPMR



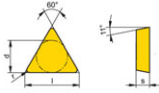
r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	110304EN CTC1135	N	●	○	○	○	11.00	6.35			0ZN11171114
0.80	110308EN CTC1135		●	○	○	○					0ZN11171123
0.40	160304EN CTC1135		●	○	○	○					0ZN11171035
0.80	160304ER CTC1135	R	●	○	○	○	16.50	9.52	3.18		0ZN11171113
	160308EN CTC1135	N	●	○	○	○					0ZN11171121

- Main Application
- Extended Application

CERATIZIT

Note: Inserts are sold in boxes of 10 only.

INSERTS FOR TURNING

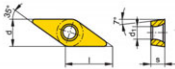


TPUN



r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	Code
0.40	160304EN CTC1135	N	●	○			○	16.50	9.52	3.18	0ZN11171135
0.80	220408EN CTC1135		●	○			○	22.00	12.70	4.76	0ZN11171122

- Main Application
- Extended Application

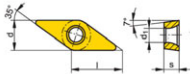


VCGT



r (mm)	Type, description							l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	110304FR-25Q H210T	R	○	○	●	●	11.10	6.35	3.18	2.90	0ZN11156925	
	160404FN-25P H210T		○	○	●	●	16.60	9.52	4.76	4.40	0ZN11137234	
	160404FN-27 H10T	○	○	●	●	0ZN80175						
0.80	160408FN-25P H210T	N	○	○	●	●	16.60	9.52	4.76	4.40	0ZN11137236	
	160408FN-27 H10T		○	○	●	●					0ZN80179	

- Main Application
- Extended Application

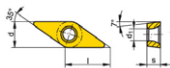


VCMT



r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	110304EN-SMF CTC1135	N	●	○		○	11.10	6.35	3.18	2.90	0ZN11163080
	110304EN-SMF CTC1130		●	○	●						0ZN11280092
0.80	160408EN-SMF CTC1130		●	○	●		16.60	9.52	4.76	4.40	0ZN11280103

- Main Application
- Extended Application



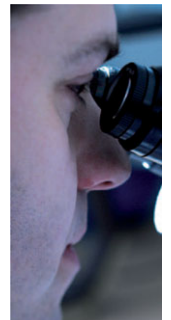
VCMW



r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	160404FN U17T	N	●	○	○		○	16.60	9.52	4.76	4.40	0ZN124169

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

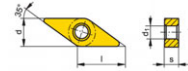


CERATIZIT

INSERTS FOR TURNING



VNMG



-M40

r (mm)	Type, description	LNR	Steel	Stainless	Cast Iron	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	160404EN-M40 CTC1125	N	●	○	○	16.60	9.52	4.76	3.81	0ZN11168402
0.80	160408EN-M40 CTC1125		●	○	○					0ZN11168403

- Main Application
- Extended Application

WNMG



r (mm)	Type, description	LNR	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.40	060404EN-TMF CTC1135	N	●	○			○	6.50	9.52	4.76	3.81	0ZN11163215
0.80	060408EN-TMM CTC1110		●	○	●		○					0ZN11059594
	060408EN-TRM CTC1110		●	○	●		○					0ZN11040621
	080404EN-TF CTC1115		●	○	○		○					0ZN309659
0.40	080404EN-TFQ CTC1125		●	○	○		○	8.69	12.70	4.76	5.16	0ZN11201401
	080404EN-TMF CTC1110		●	○	●		○					0ZN11040624
	080404EN-TMF CTC1135		●	○			○					0ZN11163217
	080408EN-M42 CTP2120			●	○	○	○					0ZN11167488
	080408EN-M52 CTP2120			●	○	○	○					0ZN11167549
	080408EN-TM CTC1135		●	○			○					0ZN11116073
	080408EN-TM CTC2135		○	●			○					0ZN11172224
0.80	080408EN-TMF CTC1110		●	○	●		○					0ZN11014829
	080408EN-TMF CTC1130		●	○	●							0ZN11280039
	080408EN-TMR CTC1125		●	○	○							0ZN11171603
	080408EN-TMR CTC1130		●	○	●							0ZN11224253
	080408EN-TMR CTC1135		●	○			○					0ZN11163220
	080408EN-TRM CTC1115		●	○	○		○					0ZN11004263
	080412EN-TM CTC2135		○	●			○					0ZN11172226
	080412EN-TMF CTC1115		●	○	○		○					0ZN11018204
1.20	080412EN-TMR CTC1115		●	○	○	○						0ZN287511
	080412EN-TMR CTC1125		●	○	○							0ZN11171723
	080412EN-TMR CTC1130		●	○	●							0ZN11225136
1.60	080416EN-TMR CTC1115		●	○	○		○					0ZN323331
0.80	060408EN-TRM CTC125	N	●	○	●			22.00	12.70	4.76	5.16	0ZN11513978
	060412EN-M50 CTC115		●	○	●			6.50	9.52	4.76	3.81	0ZN11695776
	060412EN-M50 CTC125		●	○	●							0ZN11528773
	080408EN-M50 CTC115		●	○	●			8.69	12.70	4.76	5.16	0ZN11695783
	080408EN-M50 CTC125		●	○	●							0ZN11525879
	080408EN-TFQ CTC1115		●	○	○							0ZN11695785
	080408EN-TFQ CTC125		●	○	○							0ZN11544188
0.80	080408EN-TM CTC1115		●	○	●							0ZN11695787
	080408EN-TM CTC125		●	○	○							0ZN11513982
	080408EN-TMF CTC1115		●	○	●							0ZN11695790
	080408EN-TMF CTC125		●	○	○							0ZN11544195
	080408EN-TMR CTCK120		●	○	●							0ZN11695254
	080408EN-TMR CTC125		●	○	●							0ZN11530169

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.



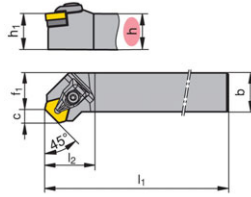
South Africa Only



CERATIZIT

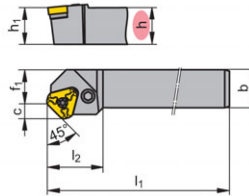
DOUBLE EDGE

DE-DTSN

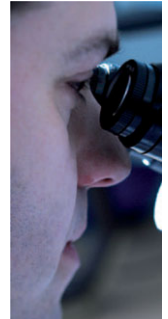


h (mm)	Type, description	L N R	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f ₁ (mm)	c (mm)	Code
25	DE-DTSNR 2525 M22	R	25	25	150	32	23.5	8.5	0ZH11224644

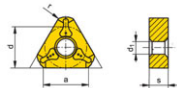
DE-PTSN



h (mm)	Type, description	L N R	h ₁ (mm)	b (mm)	l ₁ (mm)	l ₂ (mm)	f ₁ (mm)	c (mm)	Code
25	DE-PTSNR 2525 M16	R	25	25	150	23.3	25	7.0	0ZH11106838



DE-TNMG



-RM

r (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Heat resistant	l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
0.80	160408-RM CTC1125		●	○	○		9.53	9.90	4.76	3.81	0ZN11171606
1.20	220412Q-RM CTC1115	N	●	○	○	○	12.70	12.00	4.76	5.16	0ZN11105505
	220412Q-RM CTC1125		●	○	○		12.70	12.00	4.76	5.16	0ZN11171610

- Main Application
- Extended Application

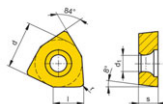
Note: Inserts are sold in boxes of 10 only.

MAXI DRILL

WCGT



-SN



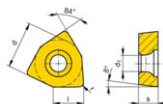
l (mm)	Type, description	L N R			Steel	Stainless	Cast Iron	d (mm)	l (mm)	s (mm)	r (mm)	d ₁ (mm)	Code
03	030204SN-29 CTC1435	N			●	○	○	6.00	3.97	2.50	0.40	2.50	0ZN11166021
05	050304SN-29 CTC1435				●	○	○	8.00	5.29	3.00	0.40	2.80	0ZN11166705

- Main Application
- Extended Application

XOMT



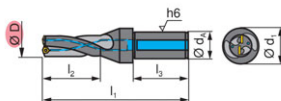
-SN



l (mm)	Type, description	L N R			Steel	Stainless	Cast Iron	Non Ferrous metals	d (mm)	l (mm)	s (mm)	r (mm)	d ₁ (mm)	Code
02	020204SN GM40	N			●	●			5.50	3.39	2.30	0.40	2.25	0ZN299740
03	030204SN GM40				●	●			6.00	3.97	2.50	0.40	2.50	0ZN299760
05	050304SN GM40				●	●			8.00	5.29	3.00	0.40	2.80	0ZN299787
06	060304SN GM40				●	●			10.00	6.26	3.00	0.40	4.40	0ZN299799

- Main Application
- Extended Application

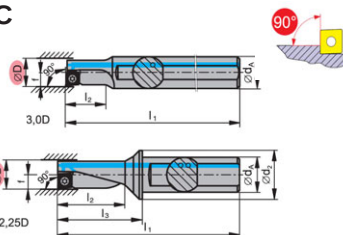
3D



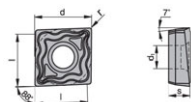
D (mm)	Type, description	d _A (mm)	d ₁ (mm)	l ₁ (mm)	l ₂ (mm)	l ₃ (mm)	Code
14	3D.140.R.02	25	32	128	44	54	0ZS11042526
15	3D.150.R.02	25	32	131	47	54	0ZS11042527
16	3D.160.R.02	25	32	134	50	54	0ZS11042548
18	3D.180.R.03	25	32	140	56	54	0ZS342387
20	3D.200.R.03	25	32	146	62	54	0ZS342391
22	3D.220.R.03	25	32	152	68	54	0ZS342395
24	3D.240.R.05	25	32	158	74	54	0ZS342400
25	3D.250.R.05	25	32	161	77	54	0ZS342402
26	3D.260.R.05	25	32	164	80	54	0ZS342404
28	3D.280.R.05	25	32	170	86	54	0ZS342407
30	3D.300.R.06	32	49	180	92	58	0ZS342409
32	3D.320.R.06	32	49	186	98	58	0ZS342411
34	3D.340.R.06	32	49	192	104	58	0ZS342413
35	3D.350.R.06	32	49	195	107	58	0ZS342414
36	3D.360.R.06	32	49	198	110	58	0ZS342415

Note: Inserts are sold in boxes of 10 only.

EC



D (mm)	Type, description	L R	d _A (mm)	d ₂ (mm)	l ₁ (mm)	l ₂ (mm)	l ₃ (mm)	f (mm)	Code
20	EC 20R-2.25D 10	R	25	32	111	45	55.0	10	0ZH307299
16	EC 16R-3.0D 08 H		20		110	48		8	0ZH11126132
18	EC 18R-3.0D 09 H		25		125	54		9	0ZH11126134
20	EC 20R-3.0D 10 H		25		130	60		10	0ZH11126135



XCET



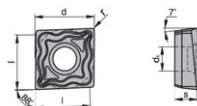
-27P



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l (mm)	Type, description	L N R	Cast Iron metals	d (mm)	l (mm)	s (mm)	r (mm)	d ₁ (mm)	Code
06	060204FN-27P H216T	N	●	6.50	6.00	2.38	0.40	2.50	0ZN11038706

- Main Application
- Extended Application



XCNT



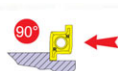
EN

l (mm)	Type, description	L N R	Steel	Stainless	Cast Iron	Non Ferrous metals	Heat resistant	d (mm)	l (mm)	s (mm)	r (mm)	d ₁ (mm)	Code
06	060204EN CTC1425	N	●	●	●	○	○	6.5	6.0	2.38	0.4	2.5	0ZN11219230
08	080304EN CTP2440		●	●	○	○	○	8.5	8.0	3.18	0.4	3.4	0ZN11219450
09	09T304EN CTP2440		●	●	○	○	○	9.6	9.0	3.97	0.4	3.4	0ZN11219451
10	10T304EN CTC1435		●	○	○	○	○	10.6	10.0	3.97	0.8	4.4	0ZN11219360
10	10T304EN CTP2440		●	●	○	○	○	10.6	10.0	3.97	0.8	4.4	0ZN11219452
17	170508EN CTC1435		●	○	○	○	○	17.5	16.0	5.56	0.8	5.3	0ZN11219393

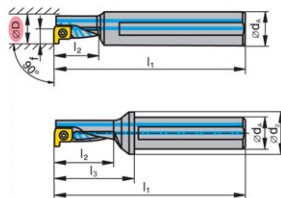
- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

ECO CUT / PROFILE MASTER



PM



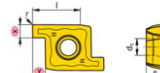
D (mm)	Type, description	L N R	dA (mm)	d2 (mm)	l1 (mm)	l2 (mm)	h1 (mm)	f (mm)	Code
12	PM 12R-2.25D	R	16	20	78	27	33	6	0ZN11185306
16	PM 16R-2.25D	R	20	25	96.5	36	46.5	8	0ZN11163532



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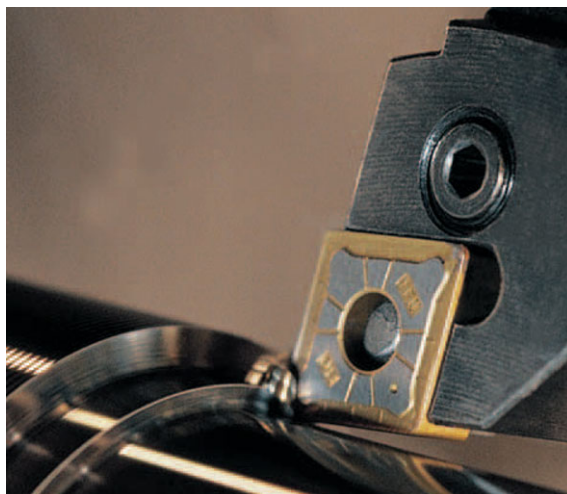
PM



Size	Type, description	L N R	Steel	Stainless Non Ferrous metals	Heat resistant	x (mm)	y (mm)	l (mm)	s (mm)	d1 (mm)	r (mm)	Code
16	16RG 252004-M20 CTP2440	N	●	○	○	2.5	2.0	8.0	2.8	3.4	0.4	0ZN11164808

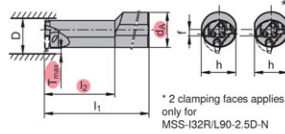
- Main Application
- Extended Application

CERATIZIT



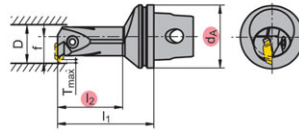
Note: Inserts are sold in boxes of 10 only.

Boring Bar 90°

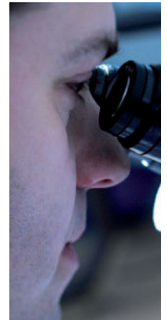


D (mm)	Type, description	L N R	dA (mm)	l2 (mm)	T _{max} (mm)	h (mm)	l1 (mm)	D (mm)	f (mm)	Code
25	MSS-I25R90-2.5D-N	R	32	63	6	31	250	32	7.00	OZH11009118

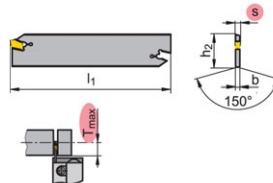
TC Monobloc Boring Bars



Type, description	L N R	dA (mm)	l2 (mm)	l1 (mm)	D _{min} (mm)	f (mm)	T _{max} (mm)	Code
UT40-MSS-I16R90-2D-TC16	R	40	32	50	20	14	4	OZH269449



SX BLADES

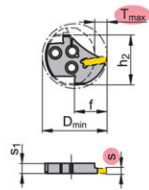
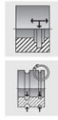


h2 (mm)	Type, description	L N R	S (mm)	T _{max} (mm)	b (mm)	l1 (mm)	Code
32	XLCFN 3203 M31	N	3.1	50	2.40	150	OZS154284
	XLCFN 3204 M41		4.1	50	3.20	150	OZS154285
	XLCFN 3205 M51		5.1	55	4.00	150	OZS154287

CERATIZIT

MAXILOCK MSS

GX MODULE - INTERNAL

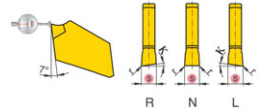


Bgr.	Type, description	LNR	S _{min} (mm)	S _{min} (mm)	T _{max} (mm)	h ₂ (mm)	D _{min} (mm)	f (mm)	S ₁ (mm)	Code
25	MSS-I25R06-GX09-2	R	2.76	3.75	6	24.9	32	15.50	3.8	0ZH349193



-M1

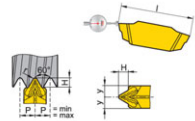
FX INSERTS



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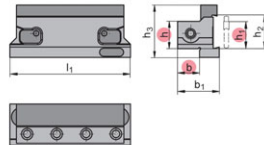
s (mm)	Type, description	R M F	LNR	Steel	Stainless	r (mm)	K (°)	Code
3.1	FX 3.1N0.15-M1 GM40	M	N	●	●	0.15	6	0ZN172545
	FX 3.1N0.15-M1 GM740			●	●			0ZN11040715
	FX 4.1N0.20-M1 GM40			●	●			0ZN172773
	FX 4.1N0.20-M1 GM740			●	●			0ZN11040717
4.1	FX 4.1R6-M1 GM40	R	N	●	●	0.20	6	0ZN172774
	FX 4.1R6-M1 GM740			●	●			0ZN11040750
5.1	FX 5.1N0.25-M1 GM740	N	N	●	●	0.25		

TC Threading Inserts



Type, description	Steel	Stainless	P _{min} (mm)	P _{max} (mm)	P _{min} (TPI)	P _{max} (TPI)	l (mm)	r (mm)	H (mm)	y (mm)	Code
TC16-2 EI-G60 GM240	●	●	0.50	1.50	48	16	16.0	0.05	1.28	1.05	0ZN11039212

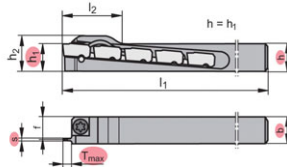
Clamping Blocks



h ₂ (mm)	h=h ₁ (mm)	b (mm)	Type, description	l ₁ (mm)	b ₁ (mm)	h ₃ (mm)	Code
26	20	20	SBN 2020-26 KS	90	37	43	0ZH11078515
32	25	20	SBN 2520-32 KS	110	38	49	0ZH11078516

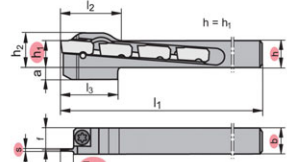
Note: Inserts are sold in boxes of 10 only.

MC 05



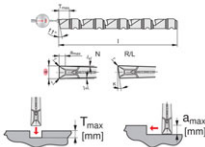
Type, description	L N R	h (mm)	b (mm)	Smin (mm)	Smax (mm)	Tmax (mm)	h2 (mm)	l1 (mm)	l2 (mm)	f (mm)	Code
MC05R-1616K	R	16	16	1.00	1.50	5	19.0	125	23	14.50	OZS11197754

MC 10



Type, description	L N R	h (mm)	b (mm)	Smin (mm)	Smax (mm)	Tmax (mm)	h2 (mm)	l1 (mm)	l2 (mm)	f (mm)	Code
MC10R-2020K	R	20	20	1.50	2.50	10	23.0	125	28	18.50	OZS11197785

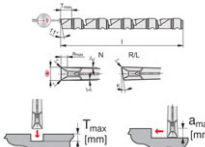
MC 05



-F2

s (mm)	Type, description	L N R	Steel	Stainless	Non Ferrous	Heat resistant	l (mm)	r (mm)	amax (mm)	Tmax (mm)	Code
1.00	5-1.00N0.10-F2 CTP1340	N	●	●	○	○	59.2	0.10	0.5	5	OZN11200599
1.50	5-1.50N0.10-F2 CTP1340	N	●	●	○	○	59.2	0.10	0.7	5	OZN11200614

MC 10

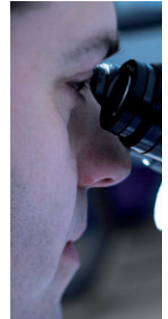


-F2

s (mm)	Type, description	L N R	Steel	Stainless	Non Ferrous	Heat resistant	l (mm)	r (mm)	amax (mm)	Tmax (mm)	Code
1.50	4-1.50N0.10-F2 CTP1340	N	●	●	○	○	59.2	0.10	1.0	10	OZN11200620
2.00	4-2.00N0.10-F2 CTP1340	N	●	●	○	○	59.2	0.10	1.2	10	OZN11200628

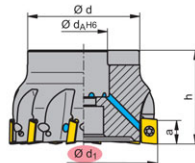
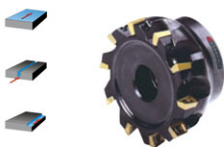
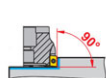


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A210



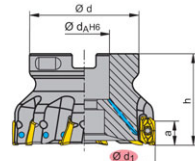
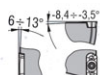
d ₁ (mm)	Type, description	h (mm)	d (mm)	d _A (mm)	a (mm)	Code
63	A210.63.R.10	40	48	22	8	0ZH327350
80	A210.80.R.12	40	58	27	8	0ZH11057991



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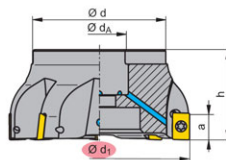
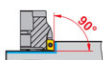


A211



d ₁ (mm)	Type, description	h (mm)	d (mm)	d _A (mm)	a (mm)	n _{max} (mm)	Code
40	A211.40.R.06-11	40	38	16	10	27700	0ZH11244503
50	A211.50.R.08-11	40	43	22	10	25400	0ZH11244516

A241

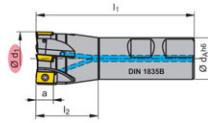


d ₁ (mm)	Type, description	h (mm)	d (mm)	d _A (mm)	a (mm)	Code
100	A241.100.R.08	50	75	32	13	0ZH327344
80	A241.80.R.07	50	78	27	13	0ZH327343

MAXIMILL END MILLS



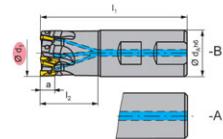
C210



d ₁ (mm)	Type, description	h (mm)	d (mm)	d _A (mm)	a (mm)	Code
16	C210.16.R.02	80	32	16	8	OZH323481
20	C210.20.R.03	90	40	20	8	OZH323480
25	C210.25.R.04	100	44	25	8	OZH323477
32	C210.32.R.05	95	38	25	8	OZH323484



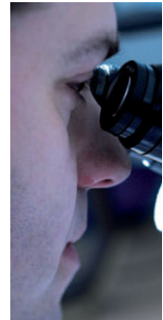
C211



d ₁ (mm)	Type, description	h (mm)	d (mm)	d _A (mm)	a (mm)	Code
16	R.02-11-A-32-165	165	32	16	14800	OZH11245302
20	R.02-11-A-40-200	200	40	20	10500	OZH11289708
20	R.03-11-A-32-165	165	32	20	15800	OZH11244058
25	R.03-11-A-50-225	225	50	25	9400	OZH11289709
32	R.02-11-A-64-250	250	64	32	8500	OZH11343229
32	R.04-11-A-64-250	250	64	32	8500	OZH11289710



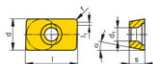
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INSERTS FOR MILLING

ADKT



-29

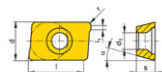
l (mm)	Type, description											Code
		Steel	Stainless	Cast Iron	d (mm)	l (mm)	s (mm)	h1 (mm)	r (mm)	d1 (mm)	α (°)	
15	1505PDSR-29 GM43+	●	○		9.57	15.20	5.65	1.2	0.80	4.40	15	0ZN11090583
	1505PDSR-29 SR226+	●	○	●								0ZN11090586

- Main Application
- Extended Application

APHT



-27P



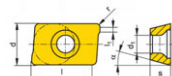
l (mm)	Type, description										Code
		Cast Iron	Non Ferrous metals	d (mm)	l (mm)	s (mm)	h1 (mm)	r (mm)	d1 (mm)	α (°)	
10	100302FR-27P H216T	●	●	6.65	9.80	3.50	1.7	0.20	2.80	11	0ZN11105462

- Main Application
- Extended Application

APKT



-29M



l (mm)	Type, description										Code
		Steel	Stainless	d (mm)	l (mm)	s (mm)	h1 (mm)	r (mm)	d1 (mm)	α (°)	
10	1003PDSR-29 GM43+	●	○	6.65	9.80	3.50	1.0	0.50	2.80	11	0ZN11092044
16	1604PDSR-29 GM43+	●	○	9.52	16.39	5.26	1.4	0.80	4.40	11	0ZN11090589

- Main Application
- Extended Application

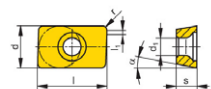
LDFT



-33



-29



l (mm)	Type, description										Code
		Steel	Stainless	d (mm)	l (mm)	s (mm)	h1 (mm)	r (mm)	d1 (mm)	α (°)	
15	150416SR-33 GM246	○	●		15.00	4.76	0.9	1.60	4.40	15	0ZN11007896
	1504PDSR-29 GM43+	●	○	9.52			1.2	0.80			0ZN11090592
	1504PDSR-33 GM246	○	●				0.8	1.20			0ZN293738

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

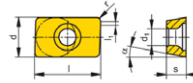


INSERTS FOR MILLING



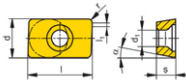
-29

LEHT



l (mm)	Type, description										Code
		Steel	Stainless	Cast Iron	d (mm)	l (mm)	s (mm)	r (mm)	d ₁ (mm)	α (°)	
08	08T104ER-29 GM43+	●	○		5.56	8.00	1.98	0.40	2.50	20	OZN11090886

- Main Application
- Extended Application



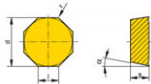
LEHW



LEHW

l (mm)	Type, description										Code
		Steel	Stainless	Non Ferrous metals	d (mm)	l (mm)	s (mm)	r (mm)	d ₁ (mm)	α (°)	
08	08T104ER GM43+	●	○		5.56	8.00	1.98	0.40	2.50	20	OZN11099047

- Main Application
- Extended Application



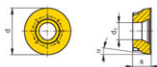
OFHR



OFHR...33

l (mm)	Type, description										Code
		Steel	Stainless	Cast Iron	d (mm)	l (mm)	s (mm)	l ₁ (mm)	r (mm)	α (°)	
08	070410SN-33 GM246	○	●		18.18	7.00	4.97	1.50	1.00	25	OZN357867

- Main Application
- Extended Application



RPNX

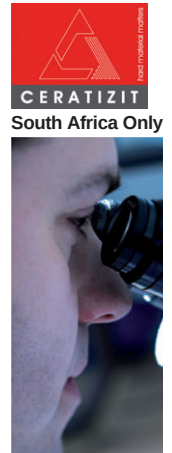


-29

d (mm)	Type, description							Code
		Steel	Stainless	Cast Iron	d ₁ (mm)	s (mm)	α (°)	
10	10T3MOSN-29 GM43+	●	○		3.40	3.97	11	OZN11091198
12	1204MOSN-29 SR226+	●	○	●	4.76	4.40		OZN11114206

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

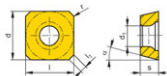


South Africa Only

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INSERTS FOR MILLING

SDHT



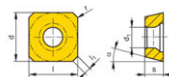
SD..T

l (mm)	Type, description										Code
		Steel	Stainless	d (mm)	l (mm)	s (mm)	l ₁ (mm)	r (mm)	d ₁ (mm)	α (°)	
12	1204AESN-R GM43+	●	○	12.70	12.70	4.76	1.74	1.00	5.50	15	0ZN11091226

- Main Application
- Extended Application



SDNT



-29

l (mm)	Type, description	Steel	Stainless								α (°)	Code
				d (mm)	l (mm)	s (mm)	l ₁ (mm)	r (mm)	d ₁ (mm)			
09	0903AESN-29 GM43+	●	○	9.52	9.52	3.18	1.68	1.00	3.40	15	0ZN11091318	

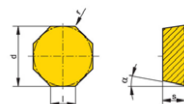
- Main Application
- Extended Application



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SEKR

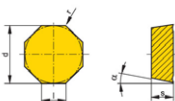


SEKR...29

l (mm)	Type, description										Code
		Steel	Stainless	d (mm)	l (mm)	s (mm)	h (mm)	r (mm)	α (°)		
12	1203AFSN-29 GM43+	●	○	12.70	12.70	3.18	1.85	2.40	20	0ZN11091376	

- Main Application
- Extended Application

SPKN



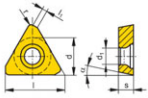
SPKN

l (mm)	Type, description										α (°)	Code
		Steel	Stainless	d (mm)	l (mm)	s (mm)	l ₁ (mm)	r (mm)	d ₁ (mm)			
12	1203EDSR GM43+	●	○	12.70	12.70	3.18	1.40			11	0ZN11195967	

- Main Application
- Extended Application

Note: Inserts are sold in boxes of 10 only.

INSERTS FOR MILLING



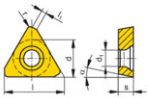
TPKN



TPKN

l (mm)	Type, description								Code
		Steel	Stainless	d (mm)	l (mm)	s (mm)	l ₁ (mm)	α (°)	
16	1603PPSR GM43+	●	○	9.52	15.50	3.18	1.40	11	0ZN11196041
22	2204PDSR GM43+	●	○	12.70	22	4.76	1.40		0ZN11196029

- Main Application
- Extended Application



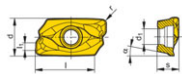
TPKR



TPKR...-29

l (mm)	Type, description	Steel	Stainless	Non Ferrous metals						Code
					d (mm)	l (mm)	s (mm)	l ₁ (mm)	α (°)	
16	1603PPSR-29 GM43+	●	○		9.52	15.50	3.18	1.20	11	0ZN11091430
22	2204PDSR-29 GM43+	●	○		12.70	20.70	4.76	1.40	11	0ZN11091432

- Main Application
- Extended Application



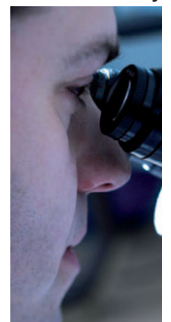
XDKT



-R50

l (mm)	Type, description	Steel	Stainless	Cast iron							Code
					d (mm)	l (mm)	s (mm)	l ₁ (mm)	d ₁ (mm)	α (°)	
0.40	11T304SR-R50 GM43+	●	○		6.80	10.00	3.80	1.8	2.80	15	0ZN11274545

- Main Application
- Extended Application



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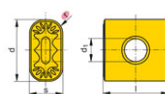
Note: Inserts are sold in boxes of 10 only.

INSERTS FOR HEAVY MACHINING

LNUX



R70



r (mm)	Type, description			l (mm)	d (mm)	s (mm)	d ₁ (mm)	Code
		Steel	Stainless					
4	191940SN-R70 CTC1115	●	○	19	19	10	6.35	0ZN309662

- Main Application
- Extended Application



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Note: Inserts are sold in boxes of 10 only.

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All deliveries of goods will be made in terms of our General Terms and Conditions of Sale, which are available in detail, on request.

No modifications or allowances will be accepted unless agreed to in writing by the Company.

Delivery Terms

All deliveries inside the Republic of South Africa will be free of charge. The Company however reserves the right to charge a fee for special deliveries of small quantities.

For all deliveries outside the Republic of South Africa, the cost of delivery will be for the customer's account unless otherwise agreed to in writing by the Company.

Terms of Payment

All payments will be made in accordance with our General Terms and Conditions of Sale, and other terms agreed to in writing by the Company.

Special Tooling

Our delivery programme is based mainly on the standard tooling in this catalogue.

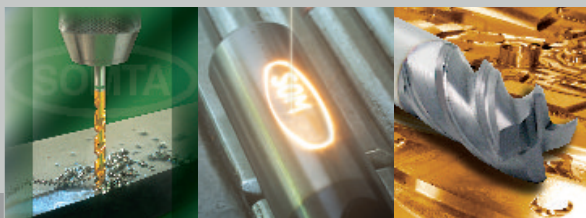
Special tooling can be provided on request, based on other international standards or customer's specifications and drawings.

Deliveries of such tooling will be subject to a quantity variation of +/- 10% of the order quantity, with a minimum quantity variation of one piece.

Request for tooling to customer specification will only be put into production against a signed copy of the customer's drawings and specifications, or a copy of our customer approval drawing.

No special tooling orders can be cancelled or returned.

Note : All terms and conditions may be changed at the discretion of the Company.



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