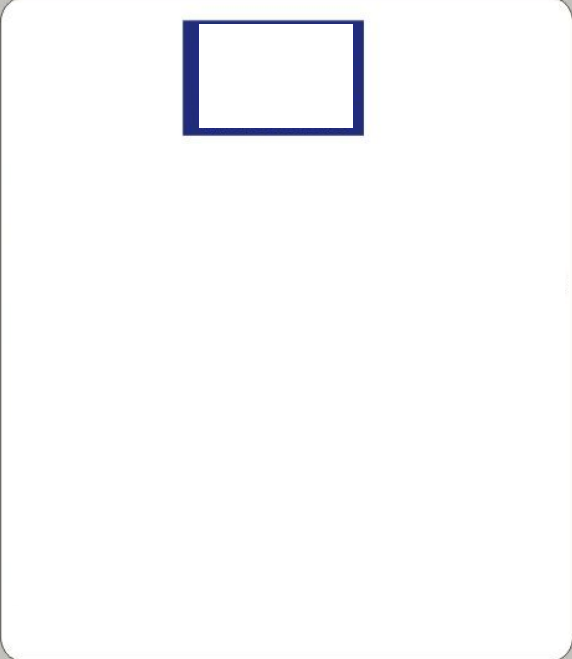


Distributor:


















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SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
M802	Annular Cutter, HSS 	For drilling most of mild and structure steel .	Works Standard	Dia 12mm~100mm 1/2"-4" Cutting depth 30mm~150mm 1"-6"
M602	Annular Cutter, HSS Cobalt 	For drilling most of mild and structure steel .	Works Standard	Dia 12mm~100mm 1/2"-4" Cutting depth 30mm~150mm 1"-6"
M402	Annular Cutter, Powder Metal (M42) 	For drilling most of mild and structure steel .	Works Standard	Dia 12mm~100mm 1/2"-4" Cutting depth 30mm~150mm 1"-6"
M902	Annular Cutter, Tungsten Carbide Tipped 	For drilling variety of materials from mild steel to cast iron .	Works Standard	Dia 12mm~100mm 1/2"-8" Cutting depth 30mm~300mm 1"-12"
M902CS	Annular Cutter, Tungsten Carbide Tipped 	For drilling variety of materials from mild steel to cast iron .	Works Standard	Dia 12mm~100mm 1/2"-8" Cutting depth 30mm~300mm 1"-12"
MR702	Railway Cutter, HSS Cobalt 	For general rail drilling .	Works Standard	Dia 19mm~32mm 3/4"-1-11/16" Cutting depth 25mm~50mm 7/8"-2"
MR902	Railway Cutter, Tungsten Carbide Tipped 	For drilling variety of materials from non-hardened steels to super alloys.	Works Standard	Dia 19mm~32mm 3/4"-1-11/16" Cutting depth 25mm~50mm 7/8"-2"
M802B	Annular Cutter Blanks 	For your brand finished products .	In according to drawing	Dia 12mm~100mm 1/2"-4" Cutting depth 30mm~150mm 1"-6"
MA100	Ejector pins for core drills 	Locate the hole center point .	Works Standard	Dia 6.35 Dia 7.98
MA200	Adapter for magnetic-stand drilling machine 	For annular cutter with different shank .	Works Standard	M18X6-3/4" weldon 3/4"weldon-Quick in Quick in-M18X6 Nitto-weldon shank
MA300	Arbor holders for annular cutter 	For annular cutter with morse taper shank .	Works Standard	MT2,MT3
M802	Solid drills with weldon 3/4" shank 	For use in magnetic stand and pillar drilling machine.	Works Standard	Dia 6.0~27.5mm
Mc500	Countersink with 3/4" weldon shank 	For all standard industrial materials	Works Standard	Dia 20~Dia 80

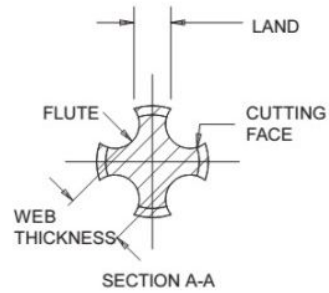
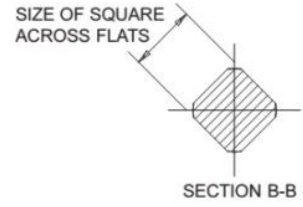
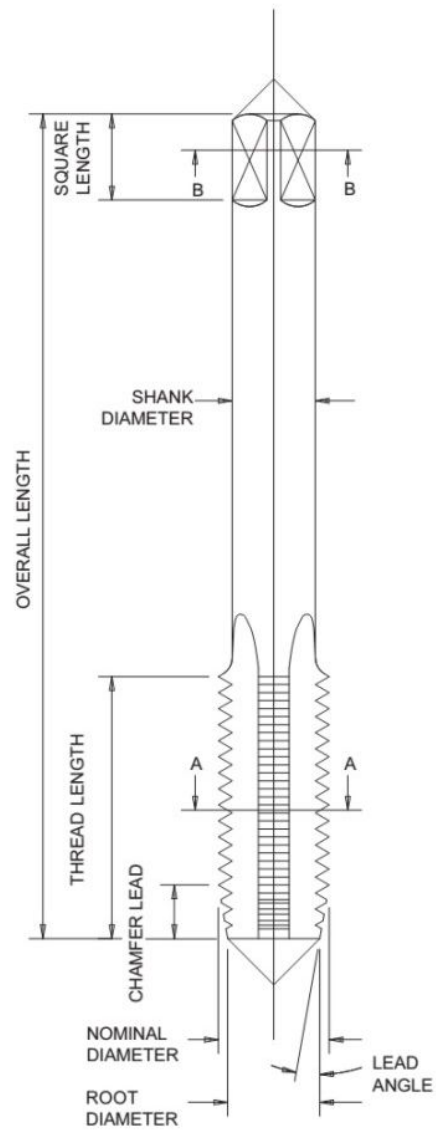
* The special specifications products, we can production according to drawings or samples provided by the customers.



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
1000 1001	Machine & Hand Straight Flute Taps HSS/HSS CO 	For hand or machine tapping of through or blind holes .Available in different teeth form of Metric coarse ,Metric Fine ,UNC ,UNF ,BSW ,BSF	ISO529 ANSI DIN371 DIN374/376 DIN351/352 DIN2181/2182/2183	M1~M180 1/8"-4"
1010 1011	Machine & Hand Sprial Point Taps HSS/HSS CO 	Spiral point taps are used to solve the problem of tap breakage in through hole tapping in a wide variety of materials .	ISO529 ANSI DIN371 DIN374/376 DIN2182/2183	M2~M36 1/8"-1.1/2"
1020 1021	Machine & Hand Sprial Flute Taps HSS/HSS CO 	For though hole tapping on free machining steels .	ISO529 ANSI DIN371 DIN374/376 DIN2182/2183	M3~M52 1/8"-2"
1030 1031	Forming (Fluteless) Taps HSS/HSS CO 	For hand or machine tapping of through or blind holes .Forming Taps permit faster tapping speed .	ISO529 ANSI DIN371 DIN374/376	M3~M16 1/4"-5/8"
1040 1041	Screw Thread Insert (STI) Tap HSS/HSS CO 	STI Taps have the same pitch but a larger diameter than a standard tap .Spiral point and Spiral flute taps are available .	ISO ANSI	M2~M36 #2~7/16"
1050 1051	Taper & Parallel Pipe (Interrupted) Taps HSS/HSS CO 	Taper pipe taps are utilized to thread pipe fittings hence their nominal size is of the pipe being threaded .	ISO2284 BS949 ANSI DIN353 DIN5156/5157	1/16"-4"
1060 1061	Machine Nut Taps ,HSS/HSS CO 	Primarily used for threading nuts ,Shank of taps is small ther and I.D ,of nut allowing nuts to accumulate on the shank .Also used for long reach .	ANSI BS949 DIN357	M2~M52 1/4"-1.1/2"
1070 1071	Pulley Tap , HSS/HSS CO 	For tapping in places normally inaccessible ,long shanks permit extra reach .	ANSI	#6-#10 1/4"-1"
1080 1081	Combined Tap and drills HSS/HSS CO 	Designed to drill and tap though holes in a single pass up to two times the tap diameter .Hex & Square shank both available .	ANSI DIN	M3~M12 1/16"-1"
1090 1091	ACME Tandem Taps HSS/HSS CO 	For producing threads from a 10° to 30° included angle in a single pass without a lead-screw .	ANSI	3/8"-2"



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
1100 1101	Round Dies (Solid & Adjustable) CS/HSS 	For cutting external screw threads by hand with a dies stock or by machine with a floating die holder .	ISO2568 DIN223 BS1127 ANSI	M1~M68 13/16"-6"
1100 1101	Pipe Round Dies CS/HSS 	For hand or machine production of components .BSP ,BSPT ,NPT ,NPS	DIN5158/5159 ANSI ISO4230/4231	M1~M68 1/4"-2.3/4"
1120 1121	Hexagon Rethreading Die Nuts CS/HSS 	For repairing ,damaged ,jammed or cleanning the rusty threads .No special holders is required for these dies .Any wrench large enough will suffice .	DIN382 ANSI	M3~M115 1/8"-4.1/2"
1130 1131	NPT Hexagon Rethreading Dies CS/HSS 	For general purpose repairing or cleaning of threads BSPwrench large enough will suffice .	DIN382 ANSI	1/8"-3"
1140 1141	Solid Square Pipe Dies NPT CS/HSS 	Left hand threads ,special square size and HSS material are available .	ANSI	1/8"-2"
1191	Adjustable Tap Wrench 	Hardened and tempered jaws used for Taps or reamers .	DIN1814 ANSI	M1~M42
1190	T-Type Wrenches (Ratchet & Fixed type) 	For hand tapping and for driving screw extractors ,heavy hnurled cap for better grip .	ANSI	1/16"-1/2"
1192	Die stock 	For directly holding round dies .	DIN225 ANSI	13/16"-6"OD
1193	Screw Extractors (Spiral & Straight flute) 	For removing broken screws ,studs ,pipe fittings ,without damaging the threads .	ANSI	No.1~No.12



THREAD

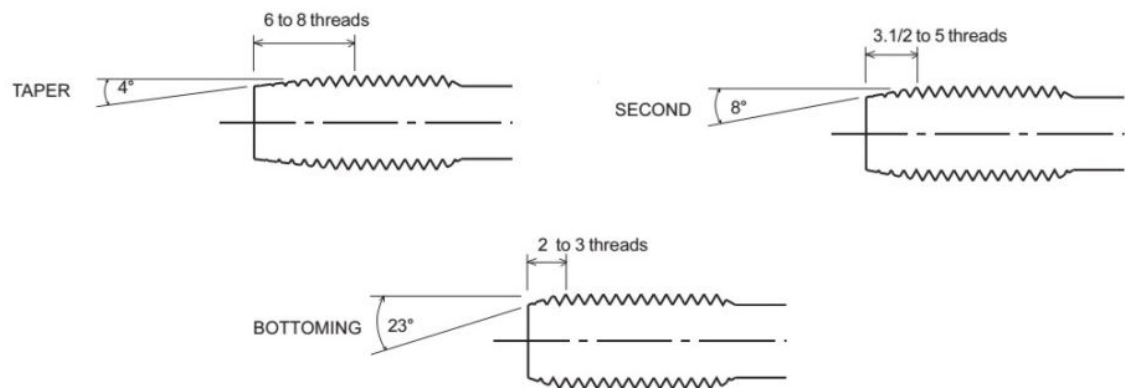
METRIC
METRIC LONG SERIES
METRIC
UNC, UNF
BSW, BSF, BA, BSB
BSP, BSPT
NPS, NPT

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

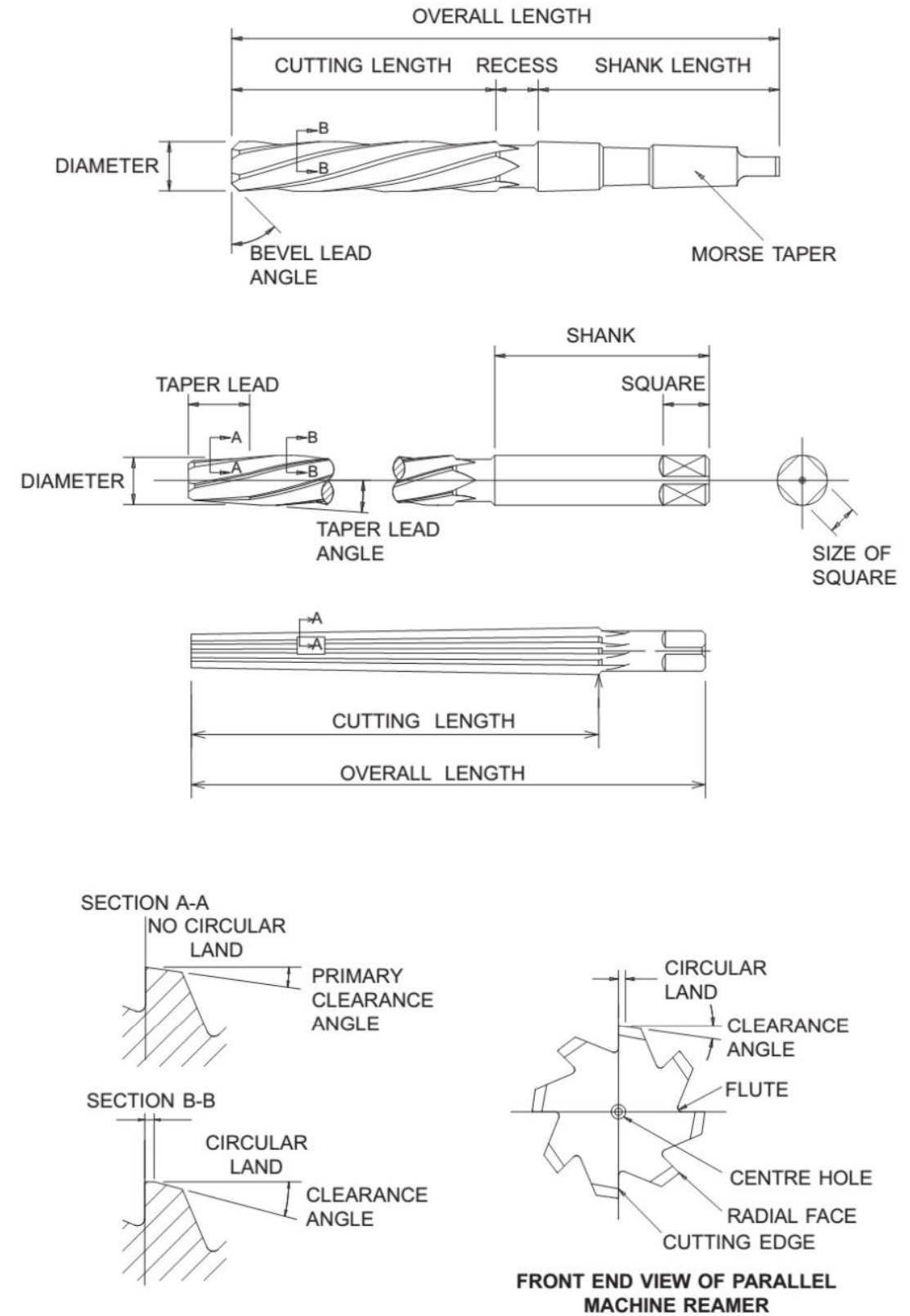
ISO 2857 - 1973, CLASS 2
ISO 2857 - 1973 CLASS 2
DIN 802 CLASS 6H
ANSI B1.1 1982 2B
BS 949: 1976 CLASS 2
BS 949: 1976 1976-G SERIES
ANSI 94.9 1979



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
2000 2001	Parallel Hand Reamers HSS/HSS CO 	General hand reaming .	ISO 236/1 DIN 206 BS 328	1.5~50mm 1/16"~2"
2002 2003	MTS Parallel Machine Reamers - HSS/HSS CO 	General machine reaming .	ISO 236/1 BS 328	3.0~50mm 1/8"~2"
2010 2011	Straight Shank Machine Chucking Reamers HSS/HSS CO 	General machine reaming .	ISO 521 DIN 212 BS 328	2.0~16.0mm 1/8"~9/16"
2012 2013	MTS Machine Chucking Reamers HSS/HSS CO 	General machine reaming .	ISO 521 DIN 208 BS 328	4.0~50.0mm
2020 2021	Hand Taper Pin Reamers, Straight Flute HSS/HSS CO 	Reaming holes to suit standard taper pins .	BS 328 ISO 3465 DIN 9	2.0~20mm 1/16"~7/8"
2022 2023	Hand Taper Pin Reamers, Spiral Flute HSS/HSS CO 	Reaming holes to suit standard taper pins .	BS 328 ISO 3465 DIN 9	2.0~20mm 1/16"~7/8"
2024 2025	Hand Taper Pin Reamers, Spiral Flute HSS/HSS CO 	Reaming holes to suit standard taper pins .	ISO 3465 DIN 9 TAPER 1:50	2.0~20mm 1/16"~7/8"
2030 2031	MTS Taper Bridge Machine Reamers HSS/HSS CO 	For opening out existing holes for alignment on structural steel work .	BS 328 ISO 2238 DIN 311	6.0~29.0mm 9/16"~1.1/4"
2040 2041	Hand Expansion Reamers HSS/HSS CO 	Straight flute for most jobs, Spiral flute for holes with keyways or other interruptions .	DIN 859 ANSI	6.0~30.0mm 1/4"~2"
2050 2051	Expansion Machine Reamers HSS/HSS CO 	An economical, general purpose high production reamer designed to maintain initial size by compensating for wear on the cutting edge .	Works Standard	3/8"~2.1/2"
2052	Morse Machine Reamers 	Each morse taper reamer set consists of one finishing and one roughing reamer .	Works Standard	MT0~MT6
2060	Hex Shank Taper Car Reamers - HSS 	High Speed Steel, 5 Flute , Left Hand Spiral, Right Hand Cut .	Works Standard	11/16"~1.1/16"
2090	Straight Shank Adjustable Hand Reamers - HSS 	Expandable reamer . Allows reaming of a longer range of size economically .	Works Standard	H1~H16






SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
2092	Repairman's tapered reamers - HSS 	Hand reamers have T shank .	Works Standard	
2070	Brow & Sharpe Taper Finishig Reamers - HSS 	Hand reamers have straight shank and square siving area .	Works Standard	B&S Taper #1~#12
2080	Taper PIPE Reamers - HSS 	Designed for reaming holes to be tapped with American Standard Taper Pipe Taps .	ANSI	1/16"-3"
2100	Shell reamers - HSS 	Designed as a siazing or finishing reamer , can be held on an arbor which complete with driving lugs .	Works Standard	20.0~60.0mm 3/4"-4"
2200	Shell reamers Arbors 	Reamers Arbors	DIN 217 ANSI	23-23-85-101.6 #4-#12








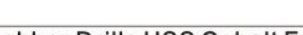



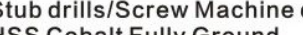
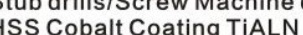




SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
3001	Countersinks HSS 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	DIN334C 60° DIN335C 90°	4.3~50
3002	Countersinks HSS Co 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	DIN334C 60° DIN335C 90°	4.3~50
3003	Countersinks HSS Tin 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	DIN334C 60° DIN335C 90°	4.3~50
3004	MTS Countersinks HSS 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	DIN334C 60° DIN335C 90°	16.5~80
3009	Single Flute Countersinks 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.°	ASME/ANSI 60° ,82° , 90° ,100°	1/4"~2"
3005	3- flutes Countersinks 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	ASME/ANSI 60° ,82° , 90° ,100°	1/4"~2"
3006	6-Flutes Countersinks 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	ASME/ANSI 60° ,82° , 90° ,100°	1/4"~2"
3010	Countersink with Hole 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	DIN standard	2~35mm
301	Countersink with Hole 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	ASME/ANSI	#0,1,2,3,4,5,6,7





























SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
3020	Counterbore 	To counterboring holes to suit capscrew heads	DIN373/BS3 28/ISO4207 ASME/ANSI	M3~M12
3030	MTS Counterbore 	To counterboring holes to suit capscrew heads	DIN373/BS3 28/ISO4207 ASME/ANSI	M8~M24
3040	Aircraft counter bore 	To counterboring holes to suit capscrew heads	ASME/ANSI	3/16"~1.1/2"
3050	Pilot for Counterbore 	Pilot	Works Standard	1/8"~2"
3060	Interchangeable Pilot Counterbore 	Interchangeable Pilot Counterbore	ASME/ANSI	3/16"~3"












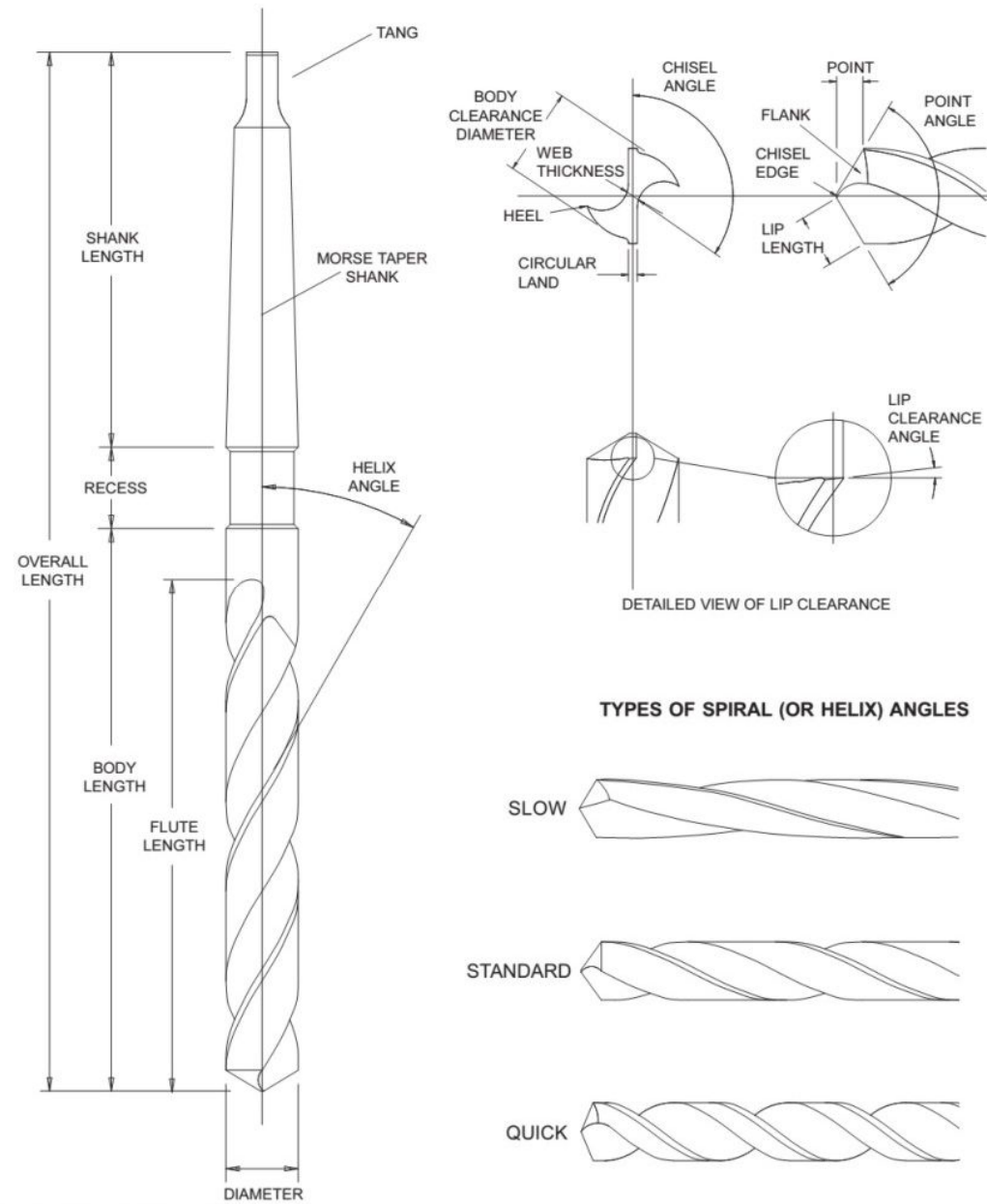
SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
5001	Jobber Drills HSS Rolled Forged 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN338 BS328 ISO235 ANSI94	3~13mm 1/8"~1/2"
5011	Jobber Drills HSS Milled Flute 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN338 BS328 ISO235 ANSI94	3~13mm 1/8"~1/2"
5101	Jobber Drills HSS Fully Ground 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN338 BS328 ISO235 ANSI94	0.5~20mm 1/32"~5/8"
5105	Jobber Drills HSS Fully Ground, Fast Spiral 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling,significant performance	DIN338 BS328 ISO235 ANSI94	0.5~13mm 1/32"~1/2"
5103	Jobber Drills HSS Coating TiN 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN338 BS328 ISO235 ANSI94	0.5~20mm 1/32"~5/8"
5104	Jobber Drills HSS Coating TiALN 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN338 BS328 ISO235 ANSI94	0.5~20mm 1/32"~5/8"
5201	Jobber Drills HSS Cobalt Fully Ground 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling, for stainless steel	DIN338 BS328 ISO235 ANSI94	0.5~20mm 1/32"~5/8"
5202	Jobber Drills HSS Cobalt Coating TiALN,Parabolic Spiral 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling, for accurate holes required	DIN338 BS328 ISO235 ANSI94	0.5~13mm 1/32"~1/2"
5301	Stub drills/Screw Machine drills HSS Fully Ground 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN1897 ANSI94	0.5~20mm 1/32"~5/8"
5303	Stub drills/Screw Machine drills HSS Coating TiN 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN1897 ANSI94	0.5~20mm 1/32"~5/8"
5304	Stub drills/Screw Machine drills HSS Cobalt Fully Ground 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling, for stainless steel	DIN1897 ANSI94	0.5~20mm 1/32"~5/8"
5305	Stub drills/Screw Machine drills HSS Cobalt Coating TiALN 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling, for stainless steel	DIN1897 ANSI94	0.5~20mm 1/32"~5/8"
5401	Long Series Drills/Taper Length Drills HSS Rolled Forged 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN340 BS328 ISO494 ANSI94	1.5~13mm 1/16"~1/2"



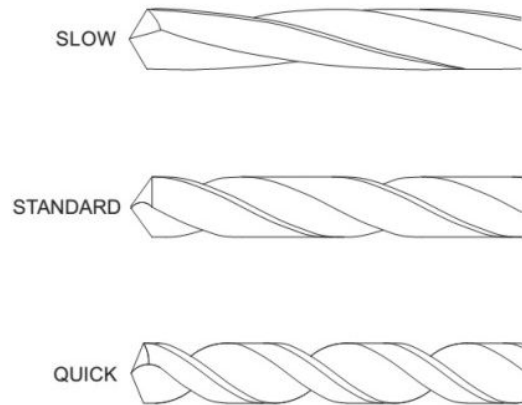
SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
5411	Long Series Drills/Taper Length Drills HSS Milled Flute 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN340 BS328 ISO494 ANSI94	1.5~13mm 1/16"~1/2"
5421	Long Series Drills/Taper Length Drills HSS Fully Ground 	118 deg.drill point for general purpose drilling , 135 deg.split point for heavy duty drilling	DIN340 BS328 ISO494 ANSI94	1.5~13mm 1/16"~1/2"
5500	Hexagonal Shank Twist Drills,short and long , quick change and normal , HSS 	For cordless drill	DIN3126	3~10mm
5501	Double Ended Sheet metal Drills HSS 	Self centering drill designed to produce accurate holes in thin materials	popular dimension	1.5~10mm 1/8"~3/8"
5701	Reduced Shank Drills/Silver & Deming Drills 	General Purpose Drilling	DIN338 ANSI94	13~50mm 1/2"~2"
5601	Extra Length Drills Straight Drills HSS 	For long reach drilling	DIN1869 ANSI94	3~13mm 1/8"~1.1/4"
5602	Extra Length Drills Straight Drills HSS Cobalt 	For long reach drilling	DIN1869 ANSI94	3~13mm 1/8"~1.1/4"
5611	Hollow section twist Drill bit HSS 	Planking , window construction	Works Standard	3~5.8mm
5711	Center Drills HSS for all type 	For general centering operations	DIN333A,B,R BS328	1~10mm
5712	Combined Drills & Countersinks 	For general centering operations	ANSI94	#00 ~ #10
5721	NC Spotting Drills HSS & HSS Cobalt 	For accurate positioning of holes of CNC Lathes	DIN1897 ANSI94	6~20mm 1/4"~1"
5451	Taper Shank Drills HSS & HSS Cobalt 	For general purpose Drilling	DIN345 ISO235 BS328 ANSI94	6~70mm 1/4"~3"
5452	Extra Length Taper shank Drills HSS& HSS Cobalt 	For extra deep hole drilling	DIN311 ANSI94	13~70mm 1/2"~3"

SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
5730	Straight Shank Core Drills HSS & HSS Cobalt – 3 and 4 Flute 	For exlarging diameter of existing holes	DIN345 ISO235 BS328 ANSI94	6~50mm 1/4"~2"
5453	Taper Shank Core Drills HSS & HSS Cobalt – 3 and 4 Flute 	For exlarging diameter of existing holes	DIN345 ISO235 BS328 ANSI94	6~50mm 1/4"~2"
5454	Taper Shank Rail Drills HSS & HSS CobaltFlute 	For drilling manganese Rails and other Tough steel	Works Standard	22~35mm
5740	Weld Spot Drills HSS & HSS Cobalt Flute 	Reboring of weld spots , Burr free and clean	Works Standard	6~10mm
5750	Milling Drill bit HSSFlute 	For milling any type of contour in different material	Works Standard	6~8mm
5700	Jobber length Step drills HSS & HSS CobaltFlute 	For drilling and Counterboring cap screw clearance holes	Works Standard	M3~M12 #5~40 1/2"~20
5710	Straight Flute Step drill HSS & HSS Cobalt 	For drilling sheet metal pipe and profiles and steel	Works Standard	4~60mm 1/8"~1.3/8"
5720	Spiral Flute Step drill HSS & HSS Cobalt Flute 	For drilling sheet metal pipe and profiles and steel	Works Standard	4~60mm 1/8"~1.3/8"
5730	Sheet and Tube Drills HSS & HSS Cobalt 	For drilling sheet metal pipe and profiles and steel	Works Standard	3~60mm
5800	Rotary Hammer Drills bit with SDS Plus Shank Flute 	For drilling concrete,masonry and natural stone	Works Standard	3~17mm 5/32"~1.1/8"
5801	Concrete DrillFlute 	For drilling concrete , masonry and natural stone	Works Standard	3~20mm 1/8"~1"
5802	Masonry Drill Flute 	For drilling masonry and natural stone	Works Standard	3~20mm 1/8"~1"
5803	Universal Concrete Drill Flute 	For drilling wood, metal , Plastic , Brick ,Plaster board , tiles and ceramic and autoclaved aerated concrete	Works Standard	3~14mm 1/8"~1/2"

SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
5810	Glass Drill bit (+)point and (-) point 	For drilling glass ,tiles, ceramic, Mirror glass and porcelain	Works Standard	3~12mm 1/8"~5/8"
5820	Machine wood drill bit 	For drilling soft wood, non coated Chipboards	Works Standard	3~20mm 1/8"~1"
5830	Machine wood flat drill bit 	For drilling hard wood and plasterboard	Works Standard	6~40mm
5840	Machine wood Auger drill bit 	For drilling accurate hole in soft and hard wood	Works Standard	6~30mm
5850	Form work Auger drill bit 	For drilling board , beam, Shuttering , metal sheet	DIN7490	6~30mm
5860	Forstner drill bit 	For drilling soft wood and veneered wooden board	DIN7483G	10~50mm
8100	Bi-Metall How Saw 	Including wood , wood with nails , plastic, fiber glass , drywall , fiberboard and composite materials .	Works Standard	14~210mm
8200	T.C.T How Saw 	Including Steel, Stainless steel, Cast iron, Aluminium, Copper	Works Standard	16~54mm
8110	How Saw Arbor with Center Drills 	The Hole saw arbor	Works Standard	

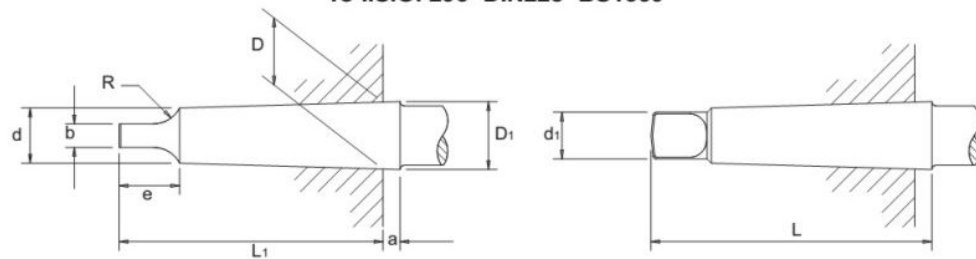


TYPES OF SPIRAL (OR HELIX) ANGLES



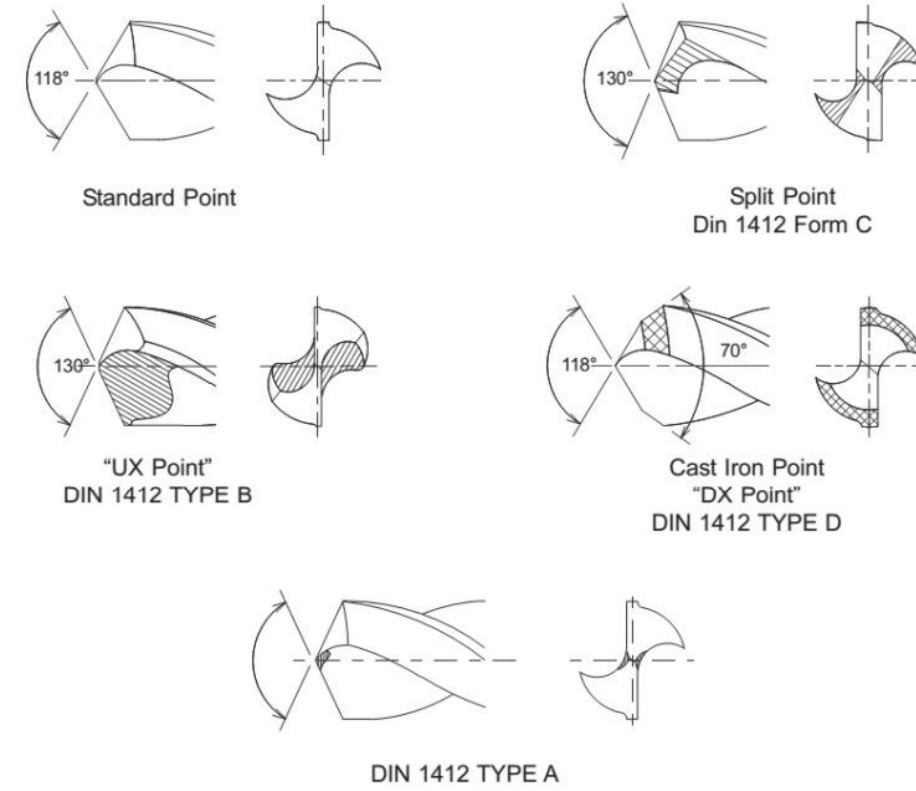
Note : Selecting the correct Drill

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

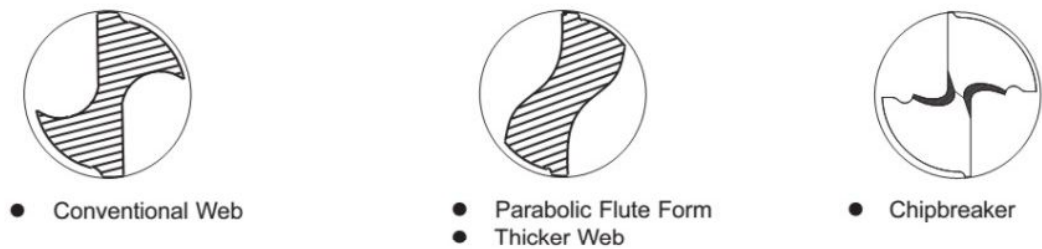


No. of Taper	Fitting line Diameter D	Diameter d	Overall Length Max L	D ₁	a	Max L ₁	Max e	H13 b	Max d ₁	Taper / mm on Dia	Max R
1	12.065	9.0	65.5	12.2	3.5	62.0	13.5	5.2	8.7	0.04998	5.0
2	17.780	14.0	80.0	18.0	5.0	75.0	16.0	6.3	13.5	0.04995	6.0
3	23.825	19.0	99.0	24.1	5.0	94.0	20.0	7.9	18.5	0.05020	7.0
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

DRILL POINT STYLES



FLUTE FORMS



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.

SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
6000 6001 6002	2 Flute End Mills, Thread Shank 	For profile milling	DIN 327 ISO 1641	2.0~50.0mm
6010 6011 6012	2 Flute End Mills, Long Series, Round Shank 	For profile milling	DIN 844	2.0~50.0mm
6004 6005 6006	Multi Flute End Mills, Flatted Shank 	For profile milling	DIN 327 BS 122	2.0~50.0mm
6014 6015 6016	Multi Flute End Mills, Long Series 	For profile milling	DIN 844	2.0~50.0mm
6020 6021 6022	Ball Nose End Mills 	Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut.	DIN 327	2.0~50.0mm
6030 6031 6032	Ball Nose End Mills, Long Series 	Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut.	DIN 844	2.0~50.0mm
6024 6025 6026	Multi Flute Ball Nose End Mills, Long Series, Flat Shank 	Milling keyways and slots to size in one cut. Designed for plunging operations. Produces a radius at the bottom of the cut.	DIN 844	2.0~50.0mm
6100	End Mills, Taper Shank 	For profile milling	DIN 844 ISO 1641	6.0~50.0mm
6044 6045 6046	Roughing End Mills, Coarse Pitch 	Maximum stock removal at high feed rates in profiling application.	DIN 844	2.0~50.0mm
6054 6055 6056	Roughing End Mills, Coarse Pitch, Long Series 	Maximum stock removal at high feed rates in profiling application.	DIN 844	2.0~50.0mm
6040 6041 6042	Roughing End Mills, Fine Pitch 	Maximum stock removal at high feed rates in profiling application.	DIN 844	2.0~50.0mm
6050 6051 6052	Roughing End Mills, Fine Pitch, Long Series 	Maximum stock removal at high feed rates in profiling application.	DIN 844	2.0~50.0mm
6052	Roughing End Mills, Threaded Shank 	Maximum stock removal at high feed rates in profiling application.	BS 122	2.0~50.0mm

* End Mill can supply 3 type shank (Flatted Shank , Round Shank , Thread Shank)

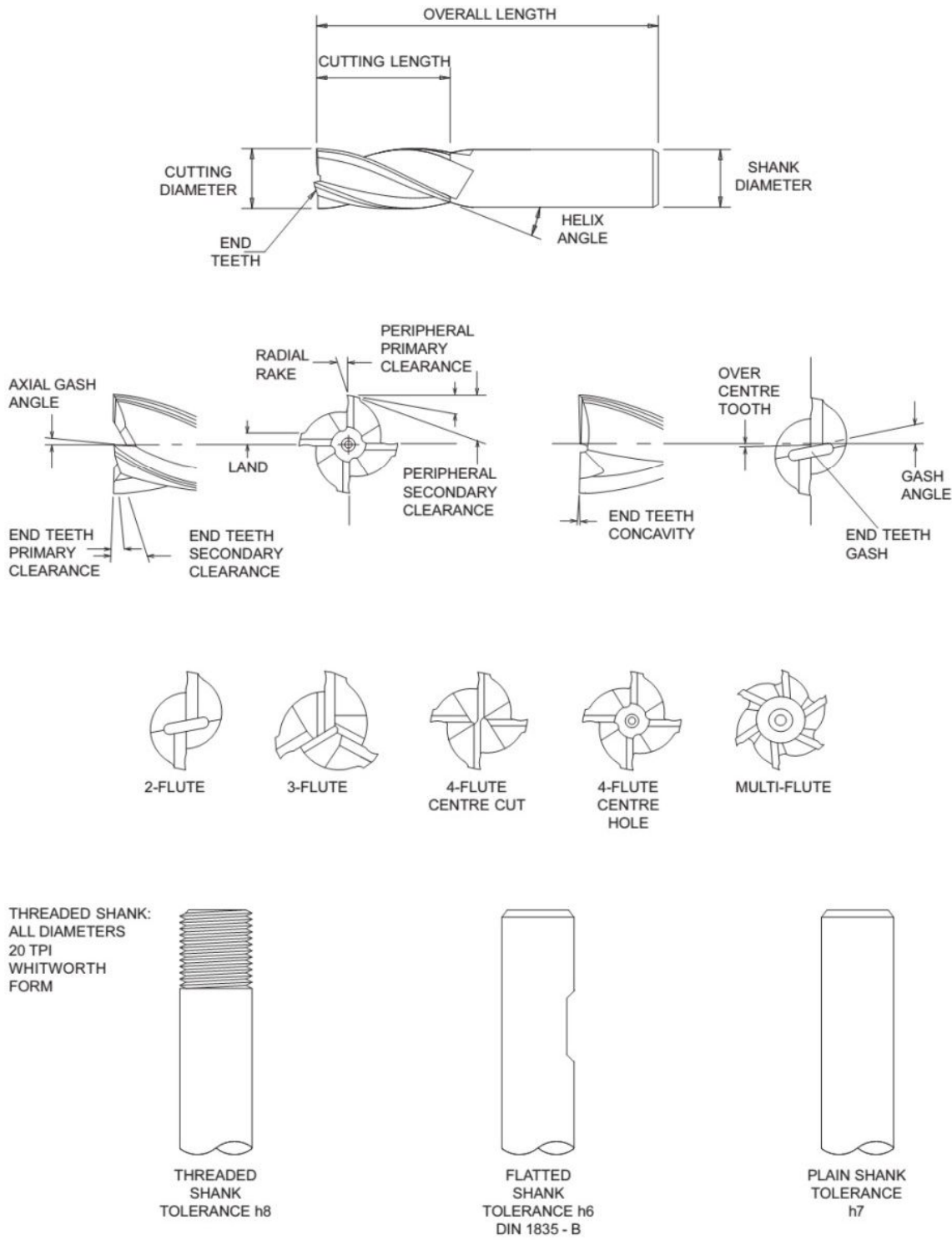
SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
6023	2 Flute Ball Nose Roughing End Mills, Flat Shank 	Maximum stock removal at high feed rates in profiling application. Produces a radius at the bottom of the cut.	DIN844	2.0~50.0mm
6100	Double End, End Mills 	For profile milling, double end, center cutting.	ANSI	2.0~50.0mm 1/8"~1"
6110	Double End, Ball Nose, End Mills 	Designed for plunging operations. Produces a radius at the bottom of the cut.	ANSI	2.0~50.0mm
6200	HSS Spot Weld Miller with Hex Shank 	Fully ground, suitable for thin steel sheet, stainless steel sheet and aluminum sheet.	Works Standard	3/8" 10mm
6300	T-Slot Cutter, Threaded Shank 	For opening out the bottom of previously milled slot to form a T-slot.	ISO3337 DIN851	5~36mm 1/4"~1"
6301	T-Slot Cutter, Flat Shank 	For opening out the bottom of previously milled slot to form a T-slot.	DIN851	5~36mm 1/4"~1.1/2"
6310	Roughing T-Slot Cutter, Flat Shank 	For opening out the bottom of previously milled slot to form a T-slot.	ANSI	1/2"~1.1/2"
6320	Long Shank T-Slot Cutter 	For opening out the bottom of previously milled slot to form a T-slot.	ANSI	1"~2.1/2"
6333	Corner Rounding End Mills, Threaded Shank 	To produce a true radius up to a quarter of a circle application.	DIN6518	1.0~20.0mm
6332	Corner Rounding End Mills, Flat Shank 	To produce a true radius up to a quarter of a circle application.	DIN6518	1/32"~1"
6331	Corner Rounding End Mills, Plain Shank 	To produce a true radius up to a quarter of a circle application.	DIN6518	1.0~20.0mm
6341	Dovetail Cutters 	To produce dovetail slides for machine tool tables, jigs and fixtures.	DIN1833 ANSI	13~32mm 3/8"~2.1/4"
6343	Dovetail Cutters, Threaded Shank 	To produce dovetail slides for machine tool tables, jigs and fixtures.	DIN1833 ISO3859 ANSI	13~38mm 1/2"~1.1/2"






















SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
6344	Inverted Dovetail Cutters, Threaded Shank 	To produce dovetail slides for machine tool tables, jigs and fixtures.	DIN1833 ISO3859	13~32mm 1"~1.1/2"
6350	Concave Cutter Shank Type 	Full radius design with a weldon shank.	Works Standard	1/32"~3/8"
6351	Convex Cutter Shank Type 	Full radius design with a weldon shank.	Works Standard	1/32"~3/8"
6360	Single Angle Cutters Shank Type, 45° &60° 	For all dovetail work, production & tool room work, RH 45° or 60° , weldon flats, straight tooth.	Works Standard	1/2"~1.1/2"
6361	Double Angle Cutters Shank Type, 60° &90° 	For all dovetail work, production & tool room work, RH 60° or 90° , weldon flats, straight tooth.	Works Standard	3/4"~2.1/4"
6362	Face Angle Cutters Shank Type 	Use during angular machine operations on a wide variety of materials, available in 60° and 90°	Works Standard	3/4"~1.5/8"
6370	Woodruff Cutters, Threaded Shank 	To produce a seat to suit woodruff keys.	DIN850 BS122	202~1212 10.5~45.5
6371	Woodruff Cutters, 1/2 " Shank 	To produce a seat to suit woodruff keys.	DIN850 BS122	202~1212 10.5~45.5
6400	Arbor Type Concave Milling Cutters 	Arbor Type, Concave cutter produce a convex half circle and are form relieved.	DIN855 ANSI 94.19-1977	1.0~20.0mm 1/16"~2"
6410	Arbor Type Convex Milling Cutters 	Arbor Type, Convex cutter produce a concave half circle and are form relieved.	DIN855 ANSI 94.19-1977	1.0~20.0mm 1/16"~2"
6420	Arbor Type Corner Rounding Milling Cutters 	Arbor Type, RH & LH, Designed for radius milling on arbor type milling machines. They have form relieved, straight gashed teeth and can be resharpened by grinding the faces without changing the form.	DIN855 ANSI 94.19-1977	1.0~20.0mm 1/8"~1"
6430	Arbor Type Single Angle Milling Cutters 	Arbor Type, supplied with Corner Radius, for cutting dovetails and angles, RH & LH, 45° &60°	DIN842	32.0~160.0mm 2.1/2"~4"
6440	Arbor Type Double Angle Milling Cutters 	Arbor Type, import supplied with Corner Radius, 45° , 60° , 90°	DIN842	50.0~100.0mm 2.3/4"~4"



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
6450	Side & Face Cutters, Straight Tooth 	General purpose use, extends tool life, used for aggressive machining of steels.	BS122	50.0~100.0mm 2"~10"
6460	Side & Face Cutters, Staggered Tooth 	General purpose use, extends tool life, used for aggressive machining of steels.	DIN855A	50.0~100.0mm 2.1/2"~10"
6470	Side & Face Cutters, Staggered Tooth 	General purpose use, extends tool life, used for aggressive machining of steels.	DIN855A	50.0~100.0mm 2.1/2"~10"
6500	Plain Mills, Right Hand Helix 	For heavier cuts and slud milling, Heavy duty.	DIN844 BS122	50.0~100.0mm 2.1/4"~4.1/2"
6501	Shell End Mills 	General purpose, manufactured from High Speed Steel.	BS122 DIN1880	40.0~160.0mm 1.1/4"~6"
6511	Shell Roughing End Mills 	High performance applications, extremely hard wear resistant, used for very aggressive machining of stainless steel and nonferrous material, provides increase of 35% to 50% in machining speeds.	BS122 DIN1880	40.0~160.0mm 2"~6"



SERIE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
T7100	Carbide Inserts, TPG Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of steel	ANSI C2/C5/C6/TiN	221~431 I.C. 1/4~I.C. 1/2
T7101	Carbide Inserts, TPU Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of steel	ANSI C2/C5/C6/TiN	212~544 I.C. 1/4~I.C. 5/8
T7102	Carbide Inserts, TCMT Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of steel	ANSI C2/C5/C6/TiN	21.51 32.51 32.52
T7103	Carbide Inserts, TNMG Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of steel	ANSI C2/C5/C6/TiN	222~666 I.C. 1/4~I.C. 3/4
T7104	Carbide Inserts, TNMA Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of steel	ANSI C2/C5/C6/TiN	322~544 I.C. 3/8~I.C. 5/8
T7105	Carbide Inserts, CCMT Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	21.51 32.51 32.52
T7106	Carbide Inserts, CNMG Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	431 432 433
T7107	Carbide Inserts, DNMG Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	432 442
T7108	Carbide Inserts, DCMT Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	21.51 32.51 32.52
T7109	Carbide Inserts, DNMA Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	431 432 433
T7110	Carbide Inserts, WNMG Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	431 432 433
T7111	Carbide Inserts, SNMG Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	431 432 433
T7112	Carbide Inserts, SCMT Series 	This Carbide inserts fit our indexable turning tool, medium to rough turning of cast iron, non-ferrous and all kinds of	ANSI C2/C5/C6/TiN	32.51 32.52

SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
M7200	Carbide Inserts,SPG Series 	This Carbide inserts fit our indexable turning tool,medium to rough turning of cast iron,non-ferrous and all kinds of	ANSI C2/C5/C6/TIN	321~634 I.C.3/8~I.C.3/4
M7210	Carbide Milling Inserts,APKT series 	CVD or PVD coated carbide,For Milling Cast Iron,Steel and Stainless Steel	ISO	1604
M7211	Carbide Milling Inserts,SEKT series 	CVD or PVD coated carbide,For Milling Cast Iron,Steel and Stainless Steel	ISO	12T3
M7212	Carbide Milling Inserts,SEKN series 	CVD or PVD coated carbide,For Milling Cast Iron,Steel and Stainless Steel	ISO	1203 1204 1504
TH7213	Carbide Threading Inserts 	This Carbide inserts fit our indexable Threading tool	ISO	I.C.3.97~I.C.15.87 5mm
P7400	Carbide Parting Inserts 	CVD or PVD coated carbide,For parting	ISO	16~25mm
G7500	Carbide Grooving Inserts 	CVD or PVD coated carbide,For Grooving	ISO	16~32mm

Symbol	Shape
H	120°Hexagon
O	135°Octagon
P	108°Pentagon
S	90°Square
T	60°Triangle
C	80°Rhombic
D	55°Rhombic
E	75°Rhombic
F	50°Rhombic
M	86°Parallelogram
V	35°Rhombic
W	80°Trigon
L	90°Rectangle
A	85°Parallelogram
B	82°Parallelogram
K	55°Parallelogram
R	Round

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

Tolerance						
Class	B (+/-)		IC (+/-)		T (+/-)	
	ANSI (in)	ISO (mm)	ANSI (in)	ISO (mm)	ANSI (in)	ISO (mm)
A	.0002	.005	.001	.025	.001	.025
B	.0002	.005	.001	.025	.005	.13
C	.0005	.013	.001	.025	.001	.025
D	.0005	.013	.001	.025	.005	.13
E	.001	.025	.001	.025	.001	.025
F	.0002	.005	.0005	.013	.001	.025
G	.001	.025	.001	.025	.005	.13
J*	.002	.05	.002	.05	.001	.025
K*	.005	.013	.002	.05	.001	.025
L*	.001	.025	.002	.05	.001	.025
M*	.003	.08	.002	.05	.005	.13
N*	.003	.08	.002	.05	.001	.025
U*	.005	.13	.003	.075	.005	.13

Symbol	Hole	Hole Shape	Inserts Chipbreaker	Shape
N	No	-	No	
R	No	-	One Side	
F	No	-	Two Sides	
A	With Hole	With Hole	No	
M	With Hole	With Hole	One Side	
G	With Hole	With Hole	Two Sides	
W	With Hole and One Countersink 40°-50°	With Hole and One Countersink 40°-50°	No	
T	With Hole and One Countersink 40°-50°	With Hole and One Countersink 40°-50°	One Side	
Q	With Hole and Two Countersink 40°-50°	With Hole and Two Countersink 40°-50°	No	
U	With Hole and Two Countersink 40°-50°	With Hole and Two Countersink 40°-50°	Two Sides	
B	With Hole and One Countersink 70°-90°	With Hole and One Countersink 70°-90°	No	
H	With Hole and One Countersink 70°-90°	With Hole and One Countersink 70°-90°	One Side	
C	With Hole and Two Countersink 70°-90°	With Hole and Two Countersink 70°-90°	No	
J	With Hole and Two Countersink 70°-90°	With Hole and Two Countersink 70°-90°	Two Sides	
X	-	-	-	-

ISO (metric) **C** **N** **M** **G** **12** **04** **08** **PS**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

ANSI (inch) **C** **N** **M** **G** **4** **3** **2** **PS**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

⑤ Edge Length Symbol (ISO)					
C	D	R	S	A	W
03	04		03	06	
04	05		04	08	08
		05			
05	06		05	09	
		06			
06	07		06	11	11
08	09		07	13	
		08			
09	11	09	09	16	16
12	10				
		12			
12	15	12	12	22	22
16	19	15	15	27	27
		16			
19	23	19	19	33	33
		20			
22	27		22	38	
		25			
25	31	25	25	44	44
32	38	31	31	54	54
		32			

I.C. Size (mm)		I.C. Size (ANSI)	
IC Size (mm)	Symbol	IC Size (inch)	Symbol
3.97	5/32	1.2	
4.76	3/16	1.5	
5			
5.56	7/32	1.8	
6			
6.35	1/4	2	
7.94	5/16	2.5	
8			
9.525	3/8	3	
10			
12			
12.7	1/2	4	
15.875	5/8	5	
16			
19.05	3/4	6	
20			
22.225	7/8	7	
25			
25.4	1	8	
31.75	1-1/4	10	
32			

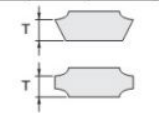
⑥ Thickness Symbol			
ISO		ANSI	
Thickness (mm)	Symbol	Thickness (inch)	Symbol
1.59	01	1/16	1(2)
2.38	02	3/32	1.5(3)
2.78	T2	-	-
3.18	03	1/8	2
3.97	T3	5/32	2.5
4.76	04	3/16	3
5.56	05	7/32	3.5
6.35	06	1/4	4
7.94	07	5/16	5
9.525	09	3/8	6

⑦ Corner-R(rε) Symbol			
ISO		ANSI	
Corner-R (rε:mm)	Symbol	Corner-R (rε:inch)	Symbol
Sharp Corner	00	.000	00
0.03	003	.001	0.1
0.1	01	.004	0.2
0.2	02	.008	0.5
0.4	04	1/64	1
0.8	08	1/32	2
1.2	12	3/64	3
1.6	16	1/16	4
2.0	20	5/64	5
2.4	24	3/32	6
2.8	28	7/64	7
3.2	32	1/8	8
Round Insert	00 (inch) or M0 (metric)	Round Insert	0

⑧ Manufacturer's Option
Hand Symbol, Chipbreaker Symbol, etc.

* Expressed as edge length for ISO.
* ANSI expresses the inscribed circle diameter in inches.







Thickness displayed as the distance between bottom surface and highest point on cutting edge.











SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
M7290	Carbide Indexable End Mills 	For Milling	ANSI	1",2",3"
M7291	Carbide Indexable Facing Mills 	For Milling	ANSI	"2"" ,2-1/2" "3"" ,4"" ,5""
M7292	R8 Shank Face Milling Cutter 	For Milling	ANSI	1",1-1/2",2"
T7190	Indexable Countersink 	A conical hole cut into a manufactured object Or the cutter used to cut such a	ANSI	"1/4""-3/4" "1/2""-1.3/4" "1.1/4""-2.1/2"
T7191	Indexable Turning Tool 	For turning	Works Standard	1/4",3/8",1/2"
B7690	Indexable Boring Bars 	For boring	ANSI	3/8",1/2",1"
D7790	Indexable Drills 	For Drilling,with SPMG Inserts	ISO	1/2"~2"



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8000	Plain Metal HSS Slitting Saws 	Used for medium,deep cutting,and cut off operations, type A tooth.	DIN1837A	1.1/4""~12" "30~300mm
8001	Slitting Saws – HSS Co 8% 	For processing the high precision products,such as the accessories of the car, type B tooth.	DIN1840	1.1/4"~12"
8010	Carbide Tipped Slitting Saws 	For Stainless Steel,Non-Ferrous,Cast Iron,Steel	ANSI	3"~16"
8020	Screw Slotting Saws – HSS 	For Slotting screw heads and shallow cuts	ANSI	1.3/4"~3"
8030	Jewelers Saws – HSS 	For processing Jewelry	ANSI	1~2"
8040	Plain Solid Carbide Slitting Saw 	For processing the steel and stainless steel	ANSI	1/4"~6"



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8300	Square Tool Bits HSS/HSS-E 	Tool bits for turning ,square section	ISO5421 DIN4964 ANSI	3~40mm 1/8~1.1/2"
8310	Round Tool Bits HSS/HSS-E 	Tool bits for turning ,circular section	ISO5421 DIN4964 ANSI	3~32mm 1/8~1"
8320	Rectangular Tool Bits HSS/HSS-E 	Tool bits for turning ,trapezoidal section	ISO5421 DIN4964 ANSI	2~16mm 3/32~1"
8330	Double Bevel Parting Blades HSS/HSS-E 	For parting off and slotting applications ,with increased wear resistance	ISO5421 DIN4964 ANSI	2~6mm 1/16~1/2"
8340	"P" Type Cut-Off Blades HSS/HSS-E 	Produces a chip narrower than the blades itself and is suited for cutting off ,grooving .Increase clearance angles on each size of the blades ,reduce friction	ANSI Standard Long Extra long	0.04"~5/16"
8400	Carbide Tipped Tool Bits 	Different style was suited for different machining applications ,such as turning ,boring ,facing and chamfering and other miscellaneous machining operations .	DIN4971/72/73/75/76/77/78/80/81 ,DIN282 ,DIN283 ,DIN263 ,ISO1/2/3/4/5/6/7/8/10/11/12/13, ANSI	8~32mm 1/32~1"



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8500	5C Collet 	Holding device It may be used to hold a workpiece or a tool	ISO	1/32"~1.1/8" 2~29.5mm
8510	R8 Collet 	Holding device It may be used to hold a workpiece or a tool	ISO	1/8"~9/16" 3~14mm
8520	5C Emergency Collet 	Holding device It may be used to hold a workpiece or a tool	ISO	Steel Brass Nylon
8530	3C Collet 	Holding device It may be used to hold a workpiece or a tool	ISO	3/64"~13/64" 1~7mm
8540	ER Collets 	Holding device It may be used to hold a workpiece or a tool	ISO	ER11~ER40 1/32"~1.1/64"
8550	Straight Shank ER Collet Chucks 	For ER Collet	ISO	5/8~1~1/4
8560	R8 Shank ER Collet Chucks 	For ER Collet	ISO	ER16ER32ER40
8570	Morse Taper Shank ER Collet Chuck 	For ER Collet	ISO	MT2~MT5
8580	CAT40 Shank ER Collet Shank 	For ER Collet	ISO	MT2~MT5
8590	ER Collets Set and Chuck 	Holding device It may be used to hold a workpiece or a tool	ISO	ER11 ER16 ER20 ER25 ER32 ER40
8600	Piston Type Quick Change Tool Post 	It can finish the processes of lathing external circle,lathing sections, cutting, rolling, drilling, counter-boring, boring, milling, reaming etc.	ANSI	251~100 251~200 251~300












SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8601	Wedge Type Quick Change Tool Post 	It can finish the processes of lathing external circle, lathing sections, cutting, rolling, drilling, counter-boring, boring, milling, reaming etc.	ANSI	251-111 251-222 251-333
8602	OXA MINI Wedge Type Quick Change Tool Post 6-9" 	It can finish the processes of lathing external circle, lathing sections, cutting, rolling, drilling, counter-boring, boring, milling, reaming etc.	ANSI	251-000 6-9
8610	40 POSITION QUICK CHANGE TOOL POST 	It can finish the processes of lathing external circle, lathing sections, cutting, rolling, drilling, counter-boring, boring, milling, reaming etc.	European style	A0 A1 E5 B2 C3 D1
8620	Round Permanent Magnetic Chuck 	Including standard pole and fine pole	ANSI	4"-12"
8630	Rectangular Permanent Magnetic Chuck 	Including standard pole and fine pole	ANSI	4"-12"
8640	Flange Nut 	The nuts are the correct size for many mill drills	ANSI	5/16"-1"
8641	T-Slot Nut 	The nuts are the correct size for many mill drills	ANSI	1/4"-1.1/4"
8649	58 PC Clamping Sets 	This clamping kit fits on many mill/drills.	ANSI	5/16"-5/8"
8650	Rotary Tables 	This horizontal / vertical rotary table is for indexing, circular cutting, angle setting, boring, and spot facing operations	ANSI	6", 8", 10"



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8670	Plain Angle Plate with webs 	Ground finish - square and parallel within 0.0005" per 6" · Machined finish - square and parallel within 0.002"	ANSI	2"-12"
8670	Open End slotted angle plate 	Ground finish - square and parallel within 0.0005" per 6" · Machined finish - square and parallel within 0.002"	ANSI	4"-12"
8670	Webbed & slotted angle plate 	Ground finish - square and parallel within 0.0005" per 6" · Machined finish - square and parallel within 0.002"	ANSI	4"-12"
8670	Universal Right Angle 	Useful for clamping work in multiple positions Ideal for squaring operations"	ANSI	3"-8"
8670	Precision Angle Plate 	Solid one-piece steel construction Ground flat, square and parallel to .0002"	ANSI	3"-4"
8680	Thread Back Plate/Chuck Adapter 	For Plain Back Lath Chucks	ANSI	4"-8"
8685	3-Jaw self-centering lathe 	This 3 inch 3-Jaw self-centering lathe chuck is the one that comes on the mini lathe. It includes a chuck key, inside and outside jaws, and mounting bolts.	ANSI	4"-40"
8655	Machinest Levels 	The main level vial is graduated to 10 second accuracy. The body of the level is made of cast iron and hand scraped	ANSI	6", 8"





SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8660	28 Pc.Set Transfer Punch Sets 	Transfer Punches are used to make the center of an existing hole onto a workpiece below.	ANSI	3/32" thru 1/2" by 64ths and 17/32.
8660	33 Pc.Set Transfer Punch Sets 	Transfer Punches are used to make the center of an existing hole onto a workpiece below.	ANSI	1/2" thru 1" by 64ths
8685	4-Jaw independent chuck 	This 4 inch 4-Jaw independent chuck includes an adapter to fit the mini lathe spindle. It includes a chuck key and reversible jaws. Each jaw is independently adjustable and	ISO K72Series	4"-40"
8688	Drill Chuck, keyless 	No chuck key is required with this self-tightening design. The chuck is made from hardened tool steel to ensure accuracy and extended life.	ANSI	1~10mm 1~13mm 3~16mm
8688	Drill Chuck 	Drill chuck designed for bench and floor drill presses, mills, lathes. Hardened ground center jaw improves durability and ensures straight alignment. Key included	ANSI	0.6~6mm 3~16mm
8700	Precision CNC Milling Vise 	This vise is designed for CNC milling machines where a swivel base is never required. The compact size allows you to mount multiple vises on the CNC mill table so you can machine several items in one setup.	ISO	6", 8"
8701	Precision Milling Machine Vise 	The replaceable jaws can be mounted on either end of the fixed and movable jaw supports providing a wide range of clamping distances.	ISO	4"-8"
8702	Precision Screwless Tool Vise 	There are horizontal and vertical vees on the inside face of the movable jaw to hold round objects	ISO	1"-6"
8703	Precision Sine Screwless Tool Vises 	Jaw can be opened or closed without unbolting vise from work surface	ISO	2"-4"










SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
870	Tilting Table 	Perfect for setting work at any angle during milling or other operations	ISO	5x7"
8705	Power Feed 	X,Y,Z-Axis Fits many popular mills Automatic shut-off at end of cut	ISO	X.Y.Z
8910	Steel Parallels 	For measuring parallelism	ANSI	1/8" 10PAIRS 1/4" 9PAIRS
8910	Thin Parallels 	For measuring parallelism	ANSI	1/2" 10PAIRS 1/2" 20PAIRS
8920	Block 	They are quite useful around the shop for various clamping and setup operations, particularly on the mill table	ISO	1-2-3-4-6
8920	Steel Gage Block Set 	For measuring and calibration	ANSI ISO	36PCS/SET 81PCS/SET
8920	Pin Gage Set 	For measuring and calibration	ANSI ISO	M0-M7







SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8800	Electronic Digital Caliper 	Used to measure the distance between two opposite sides of an object	ISO	150~300mm
8801	Vernier Caliper 	Used to measure the distance between two opposite sides of an object	ISO	70~1000mm
8802	Dial Caliper 	Used to measure the distance between two opposite sides of an object	ISO	6"~12"
8830	Outside Micrometer 	Typically used to measure wires, spheres, shafts and blocks	ISO	1"~12"
8840	Inside Micrometer 	Used to measure the diameter of holes.	ISO	0.2"~12"
8810	Dial Indicator 	Used to accurately measure small distances and angles	ISO	0.05"~2"
8811	Digital Indicator 	Used to accurately measure small distances and angles	ISO	0.5"~2"
8820	Dial Test Indicator, Interapid Style 	Used to accurately measure small distances and angles	ISO	0.008"~0.03"
8850	Dial Bore Gage 	Measures a bore directly	ISO	0.24"~0.4" "10"~16"



SERISE NO.	PRODUCTS	APPLICATION	STANDARD	SIZE RANGE
8860	Co-Ax Indicator (Center indicator) 	Use this indicator to quickly center work pieces or fixtures on your mill The indicator remains stationary while the spindle rotates Can be used to center internal and external diameters	ISO	0~3mm
8870	4pc/set Combination Square set 	Used for multiple purposes in woodWorks, stonemasonry and metalworkin	ISO	12" 300mm 500mm
8880	Squares 	Squares have accurate right angles both inside and outside	ISO	"12"~24" 300~600mm" 60KGS
8890	Height Gages 	Measuring the height	ISO	"12"~24" 300~600mm"
8900	Magnetic Base 	A magnetic fixture based on a magnet that can effectively be turned "on" and "off" at will; they are often used in optics and metalWorks, e.g., to hold a dial indicator	ANSI	60KGS 80KGS
8900	Mini Magnetic Stand 	Used in optics and metalWorks, e.g., to hold a dial indicator	ANSI	1"
8900	Precision DIAL Z-AXIS SETTER 	Set zero point quickly with built-in indicator	ANSI	2" & 4"









SERISE NO.	PRODUCTS	APPLICATION	STANDARD
M8S1	<p>Annular Cutter 7 pcs/set, HSS</p> 	HSS Annular Cutter 7 pcs/set, metal case	Works Standard
M8S2 M8CS2	<p>HSS/HSS Co Annular Cutter 12 pcs/set</p> 	HSS Annular Cutter 12 pcs/set, plastic case	Works Standard
M8S3 M8CS3	<p>HSS/HSS Co Annular Cutter 7 pcs/set</p> 	HSS Annular Cutter 7 pcs/set, plastic case	Works Standard
M9S1	<p>TCT Annular Cutter 7 pcs/set</p> 	TCT Annular Cutter 7 pcs/set, plastic case	Works Standard










SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
1901	<p>14-Piece Spiral Point Tap and Drill Sets, DIN371/DIN376</p> 	HSS or CS, Taps and Drills, Spiral Point.	M3-M12, 2.5MM-10.2MM
1902	<p>14-Piece Spiral fluted Tap and Drill Sets, DIN371/DIN376</p> 	HSS or CS, Taps and Drills, Spiral fluted.	M3-M12, 2.5MM-10.2MM
1903	<p>14-Piece Spiral Fluted Tap and Spiral Point tap Set, DIN371/DIN376</p> 	HSS or CS, Spiral fluted taps & Spiral point taps	M3-M12
1904	<p>28-Piece Metric Sets, DIN352</p> 	HSS or CS, 21pcs taps, 7pcs drills	M3-M12
1906	<p>190640-Piece Tap & Die Set</p> 	Set comes in plastic carrying case and contains: One each of taps hex dies, sizes 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20 and 1/8-inch pipe tap One T-handle tap wrench, Long handle adjustable tap wrench, Die handle, Screwdriver, Screw pitch gage	
1911	<p>39-Piece Whitworth Tap & Die Set</p> 	High carbon steel set comes in a plastic case and contains the following: Tap and die sizes 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-26, 5/16-18, 5/16-22, 3/8-16, 3/8-20, 7/16-14, 7/16-18, 1/2-12, 1/2-16 (BSW) and 1/8-28 (BSP). Also die holder, tap wrench, T-type tap wrench and screwdriver.	



SERISE NO.	PRODUCTS	APPLICATION
1907	190745-Piece SAE Tap & Die Set 	Set includes carrying case and contains: One each of both taps and dies in NC and NF series: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8 and 1 inch. 1-1/2 and 2-inch drop forged die stock. Two drop forged tap wrenches, nos. 5 and 6. One screwdriver
1908	190851-Piece Combo SAE & Metric Tap & Die Set 	Drop forged die handles and tap wrenches. Set contains: 20 taps in sizes 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 3 x .5, 4 x .7, 5 x .8, 6 x 1.0, 8 x 1.25 20 1-inch outside diameter round dies (same sizes as taps) Five screw extractors in sizes #1, #2, #3, #4, #5 1-inch outside diameter die holder #5 tap wrench T-handle tap wrench SAE screw pitch gage Metric screw pitch gage Storage case
1909	190960-Piece Combo SAE & Metric Tap & Die Set 	Drop forged die handles and tap wrenches. Includes storage case. Set contains: One each of metric taps and dies, sizes 3 x 0.5, 4 x 0.7, 5 x 0.8, 6 x 1.0, 7 x 1.0, 8 x 1.25, 9 x 1.25, 10 x 1.5, 10 x 1.0, 12 x 1.75 One each UC taps and dies, sizes 4-40, 6-32, 8-32, 10-24, 12-24, 1/4, 5/16, 3/8, 7/16, 1/2 One each of UF taps and dies, sizes: 10-32, 1/4, 5/16, 3/8, 7/16, 1/2 One NPT tap and die size 1/8-27 One tap wrench, American pattern, 1/2-inch capacity T-type tap wrench, 1/4-inch capacity Die handle, 1-inch OD Screwdriver Two screw pitch gages
1910	1910110-Piece SAE & Metric Tap & Die Set 	Drop forged die handles and tap wrenches. Includes storage case. The set contains one die and two taps each of the following: SAE, 4-40, 6-32, 8-32, 10-24, 12-24, 1/4-20, 1/4-24, 1/4-28, 1/4-32, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16; metric, M6 x 1.0, M8 x 1.0, M10 x 1.5, M11 x 1.5, M12 x 1.25, M12 x 1.75, M14 x 1.25, M18 x 1.5; and 1/8-27 and 1/4-18 NPT. Also includes two die stocks, two tap wrenches and one T-handle tap wrench.
1905	110-Piece Metric Set 	HSS or CS, 35pcs round dies, 70pcs taps, 2pcs dies stock, 2pcs taps wrench, 1pc T-type wrench
1912	18PC 135 Split Point NC Drill & Tap Set 	135° Split Point Drills Features Combined with super premium gold spiral point taps. Gold finish for maximum lubricity and torsional strength. 30° standard helix angle. Benefits Spiral point drives chips ahead of the tap permitting higher speeds and faster cutting with less torque. Includes (9) Drills: #36, #29, #25, #21, #7, #F, #5/16, #U, #27/64 (9) Taps: #6-32NC, #8-32NC, #10-24NC, #10-32NC, 1/4"-20NC, 5/16"-18NC, 3/8"-16NC, 7/16"-14NC, 1/2"-13NC






SERISE NO.	PRODUCTS	APPLICATION
1913	18PC 135 Split Point Metric Drill & Tap Set 	135° Split Point Drills Features Combined with super premium gold spiral point taps. Gold finish for maximum lubricity and torsional strength. 30° standard helix angle. Benefits Spiral point drives chips ahead of the tap permitting higher speeds and faster cutting with less torque. Includes (9) Drills: 2.05mm, 2.50mm, 2.90mm, 3.30mm, 4.20mm, 5.00mm, 6.7mm, 8.5mm, 10.2mm (9) Taps: M2.5 x 0.45, M3.0 x 0.5, M3.5 x 0.6, M4.0 x 0.7, M5.0 x 0.8, M6.0 x 1.0, M8.0 x 1.25, M10 x 1.5, M12 x 1.75
1914	18PC 135 Split Point NF Drill & Tap Set 	135° Split Point Drills Features Combined with super premium gold spiral point taps. Gold finish for maximum lubricity and torsional strength. 30° standard helix angle. Benefits Spiral point drives chips ahead of the tap permitting higher speeds and faster cutting with less torque. Includes (9) Drills: #33, #29, #25, #21, #3, #1, #Q, #25/64, #29/64 (9) Taps: #6-40NF, #8-36NF, #10-24NF, #10-32NF, 1/4"-28NF, 5/16"-24NF, 3/8"-24NF, 7/16"-20NF, 1/2"-20NF
1915	6-Piece NPT Tap & Die Set 	High quality carbon steel. Sizes are all NPT Die Size: 1/4-18 x 1-1/2" OD; 3/8-18 x 1-1/2" OD; 1/2-14 x 2" OD Tap Size: 1/4-18, 3/8-18, 1/2-14
1916	54Pcs Master Thread Repair Kit 	Repair damaged or stripped threads with ease.
1917	UNC Master Thread Repair Kit 	Repair damaged or stripped threads with ease. Five UNC sizes. Each size also includes installation abd punch tools, high speed drill bit, high speed STI tap, inserts, and hex key. Includes carrying case. 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13
1918	5-Piece Screw Extractor Set 	Includes storage case. #1-#5 3/16"-3/4"
1919	8-Piece Screw Extractor Set 	Includes plastic case. #1-#8



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
5901	13-Piece HSS Jobber Drill Set 	High speed steel. Includes plastic case or storage box.	1/16"~1/4" x 64ths 1.5~6.5 x 0.5mm
5902	29-Piece HSS Jobber Drill Sets 	High speed steel. Black finished, Includes box.	1/16"~1/2" x 64ths 1.0~13.0 x 0.5mm
5903	29-Piece HSS Jobber Drill Set 	High speed steel. Bright finished, Includes box.	1/16"~1/2" x 64ths 1.0~13.0 x 0.5mm
5904	21-Piece TiN Coated Fractional Jobber Set 	High speed steel, gold titanium nitride (TiN) coated. Includes storage box.	1/16"~3/8" x 64ths
5905	29-Piece HSS Co Jobber Drill Set 	HSS-E material. Includes storage box.	1/16"~1/2" x 64ths 1.0~13.0 x 0.5mm
5906	29-Piece TiN Coated Jobber Set 	HSS, gold titanium nitride (TiN) coated. Includes storage box.	1/16"~1/2" x 64ths 1.0~13.0 x 0.5mm




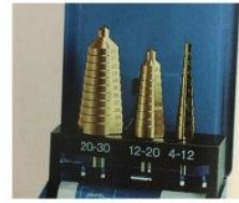




SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
5907	29-Piece TiN Coated Fractional Jobber Set 	High speed steel, gold titanium nitride (TiN) coated. Includes storage box. Note: Shanks are the same diameter as the drill up to 3/8 inch. Sizes greater than 3/8 inch have 3/8-inch shanks. Use with 3/8-inch drill chucks	1/16"~1/2" x 64ths
5908	29-Piece Cobalt Fractional Split Point Jobber Set 	M42 cobalt, split point. Includes box.	1/16"~1/2" x 64ths 1.0~13.0 x 0.5mm
5909	25-piece High Speed Metric Jobber Drill Set 	Shop grade high speed steel; 25-piece set with metal box.	1~13 mm x 0.5 mm
5910	115-Piece HSS Jobber Drill Set 	High speed steel, shop grade. Includes metal storage box. Fractional, letter and number sizes.	A~Z; 1~60; 1/16"~1/2" x 64ths
5911	115-Piece Gold TiN Coated Jobber Drill Set 	High speed steel, titanium nitride (TiN) coated. Includes plastic storage box. Fractional, letter and number sizes.	A~Z; 1~60; 1/16"~1/2" x 64ths
5912	HSS Letter Size Jobber Drill Set 	High speed steel, jobber length, in standard letter sizes. Includes metal storage box.	A ~ Z



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
5913	60-Piece Bright Number Jobber Set 	High speed steel, bright polished. Standard number sizes. Includes metal storage box.	#1~#60
5914	29-Piece Screw Machine Drill Set 	High speed steel. Includes wood stand.	1/16"~1/2" x 64ths
5915	5-Piece Center Drill set 		#1~#5
5920	3-Piece TiN Coated Step Drill Set 	Drills cut perfectly round holes in sheet metal, plastic, wood and other thin materials without center punching. Includes wood case.	1/8"~1/2" 3/16"~1/2" 1/4"~3/4"
5921	Straight Flute Step Drill Set 	HSS & HSS-E. Straight flute	4~30
5922	Straight Flute Step Drill Set, TiN coated 	HSS & HSS-E. TiN coated. Straight flute	4~30



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
5923	Spiial Flute Step Drill Set 	HSS & HSS-E. Spiial flute	4~30
5924	Spiial Flute Step Drill Set, TiN coated 	HSS & HSS-E. TiN coated. Spiial flute	4~30
5925	HSS Step Drill 	HSS & HSS-E. Straight flute	4~30
5926	HSS Step Drill, TiN coated. 	HSS & HSS-E. TiN coated. Straight flute	4~30
5927	HSS Sheet Metal Cone Drill Bits. 	HSS & HSS-E. Straight flute	3~30.5
5928	HSS Sheet Metal Cone Drill Bits. 	HSS & HSS-E. Straight flute	3~30






SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
5929	HSS Sheet Metal Cone Drill Bits, TiN coated. 	HSS & HSS-E. TiN coated. Straight flute	3~30
5930	DIN335C Countersink Set HSS/HSS Co 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	6.3, 8.3, 10.4, 12.4, 16.5, 20.5mm
5931	DIN335C Carbide Countersink Set 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool. It can working on Titanium alloy & Aluminum alloy.	6.3, 8.3, 10.4, 12.4, 16.5, 20.5mm
5932	Zero Flute countersinks 4Pcs/Set 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool. DIN standard	DIN standard 2~20
5933	Zero Flute countersinks 5Pcs/Set 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	ASME/ANSI 60° ,82° ,90° 0#~8#
5934	Single Flute Countersinks Set 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	ASME/ANSI 60° ,82° ,90° , 100° 1/4"~2"



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
5940	8-Piece □" Shank Drill Set 	Includes wood stand.	9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"
5941	8-Piece 1/2" Shank Larger Sizes Drill Set  <small>Picture For Reference Only Actual Product Appearance May Vary</small>	Includes wooden stand.	1-1/16", 1-1/8", 1-3/16", 1-1/4", 1-5/16", 1-3/8", 1-7/16", 1-1/2"
5942	8-Piece 1/2" Shank Cobalt Drill Set 	Includes case.	9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"
5943	5-Piece □" Shank Drill Set 	Includes wood stand.	1", 1-1/8", 1-1/4", 1-3/8", 1-1/2"
5944	9-Piece □" Shank Drill Bits 	High speed steel.	1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1"



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
5945	7-Piece 12" Long Boy Drill Sets 	To produce a countersink suitable for countersunk head screws, also used as a deburring tool.	1/8"-1/2" x 16ths
5946	25-Piece 12" Long Boy Drill Sets 	High speed steel, 12 inches OAL. Includes stand.	High speed steel, 12 inches OAL. Includes stand.
5950	6-Piece Auger Bit Set 	Consists of following sizes: 1/4 x 3/16, 3/8 x 1/4, 1/2 x 1/4, 5/8 x 1/4, 3/4 x 5/16 and 1 x 3/8 inch.	Flute Length 6"
5951	Wood Drill Bit Set 	Brad point, heat treated steel. Jobber length. In plastic pouch.	5/32", 3/16", 1/4", 5/16", 3/8"
5952	16-Piece Forstner Wood Bit Set 	High speed steel. Includes fitted wood case.	1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8", 1-3/4", 1-7/8", 2", 2-1/8"



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
6901	6-Piece 2-Flute 3/8" Shank End Mill Set 	High speed steel. Includes stand.	1/8", 3/16", 1/4", 5/16", 3/8", 1/2"
6902	6-Piece 4-Flute 3/8" Shank End Mill Set 	High speed steel, single end. Wooden stand included.	1/8", 3/16", 1/4", 5/16", 3/8", 1/2"
6903	6-Piece 3/8" Shank TiN Coated End Mill Set 	Single end, 4 Flutes, center cutting. Titanium nitride coated. Includes wood stand.	1/8", 3/16" 1/4", 5/16", 3/8", 1/2"
6904	20-Piece TiN Coated End Mill Set 	Single end, center cutting. Each size comes in two- and four-flute. Includes wooden storage case.	3/16" x 3/8", 1/4" x 3/8", 5/16" x 3/8", 3/8" x 3/8", 7/16" x 3/8", 1/2" x 1/2", 9/16" x 1/2", 5/8" x 5/8", 11/16" x 5/8", 3/4" x 3/4"
6905	9-Piece Double End Mini Mill Set 	High speed steel, regular length.	1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16"
6910	8-Piece 3/4" Shank Corner Rounding End Mill Set 	High speed steel. Includes wood stand.	3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4"






SERISE NO.	PRODUCTS	APPLICATION
6911	5-Piece 45° Dovetail Cutter Set 	Single angle, high speed steel Dimensions are as follows:Cutter diameter, 3/8"; shank, 3/8", OAL, 2-1/8"; width, 1/8"Cutter diameter, 1/2"; shank, 3/8", OAL, 2-1/8"; width, 5/32"Cutter diameter, 3/4"; shank, 3/8", OAL, 2-1/8"; width, 1/4"Cutter diameter, 1-3/8"; shank, 5/8", OAL, 2-7/8"; width, 7/16"Cutter diameter, 1-7/8"; shank, 7/8", OAL, 3-1/4"; width, 5/8"
6912	5-Piece 60° Dovetail Cutter Set 	Single angle, high speed steel Dimensions are as follows:Cutter diameter, 3/8"; shank, 3/8", OAL, 2-1/8"; width, 1/8"Cutter diameter, 1/2"; shank, 3/8", OAL, 2-1/8"; width, 5/32"Cutter diameter, 3/4"; shank, 3/8", OAL, 2-1/8"; width, 1/4"Cutter diameter, 1-3/8"; shank, 5/8", OAL, 2-7/8"; width, 7/16"Cutter diameter, 1-7/8"; shank, 7/8", OAL, 3-1/4"; width, 5/8"
6913	10-Piece Woodruff Key Seat Cutter Set 	High speed steel; 1/2-by-2-inch shanks. With wood stand. 403 (3/8" diameter, 1/8" face width)204 (1/2" diameter, 1/16" face width)404 (1/2" diameter, 1/8" face width)305 (5/8" diameter, 3/32" face width)505 (5/8" diameter, 5/32" face width)406 (3/4" diameter, 1/8" face width)606 (3/4" diameter, 3/16" face width)806 (3/4" diameter, 1/4" face width)608 (1" diameter, 3/16" face width)808 (1" diameter, 1/4" face width)
6920	9-Piece 1/4" Shank Carbide Burr Set 	Set contains sizes SA-1, SA-3, SA-5, SC-1, SC-3, SC-5, SF-1, SF-3 and SF-5. Includes block stand.
6921	8-Piece 1/4" Shank Nonferrous Carbide Burr Set 	Nonferrous use. Packaged in blow molded plastic case. Eight-piece set contains: SA-3NF, SA-5NF, SC-3NF, SC-5NF, SD-5NF, SF-3NF, SF-5NF and SL-3NF.
6922	112-Piece 1/8" Shank Carbide Burr Set 	Double cut. Packaged in a blow-molded case. Set contains SA-51, SA-53, SB-51, SC-51, SC-53, SD-51, SE-51, SF-51, SF-53, SG-51, SM-51 and SN-51.



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
2901	7-Piece Cap Screw Counterbore Set 	High speed steel. Includes wood box.	#6, #8, #10, 1/4", 5/16", 3/8", 1/2"
2902	4-Piece Morse Taper Reamer Set 	High speed steel. For finishing.	Mt1, MT2, MT3, MT4
2903	29-Piece Chucking Reamer Set 	High speed steel, straight shank and flute. Fractional sizes in case.	1/16"-1/2" x 64ths
3901	5-Piece Cap Screw Counterbore Set 	High speed steel. Includes wood stand.	#10, 1/4", 5/16", 3/8", 1/2"
2904	11-Piece Adjustable Reamer Set 	Standard sizes from A to K, covering range of 15/32 to 1-1/2 inches. Includes fitted wooden box.	



SERISE NO.	PRODUCTS	APPLICATION	SIZE RANGE
T7199	5-Piece Indexable Carbide Tool Bit Set 	Consists of AR, AL, BR, BL and E style tools. AL and AR are straight turning; BR and BL are 15-degree lead angle. E for threading.	Shank:1/2" Insert Type:TCMT 32.52
B7699	5-Piece Indexable Boring Bar Set 	Bars include inserts (TCMT) and are the following sizes:STFCR 09, 5/16" x 4" shank; 7/16" boring range; TCMT 090204STFCR 11, 3/8" x 5" shank; 1/2" boring range; TCMT 110204STFCR 11, 1/2" x 6" shank; 5/8" boring range; TCMT 110204STFCR 11, 5/8" x 8" shank; 3/4" boring range; TCMT 110204STFCR 15, 3/4" x 10" shank; 1" boring range; TCMT 16T304	
7799	Carbide Tipped Boring Bar Set 	Precision ground shanks Three lengths for each minimum bore size High quality alloy steel for greater rigidity Carbide tip ground square with shank for flat bottom boring Offset taper to provide greater rigidity at cutting point	Min. Bore: 5/8" - 1-11/16" Max Bore: 3-1/16" - 7-1/2" Shank:1"