

DORMER PRAMET

THREADING



2024




 **DORMER**


 **UNION
BUTTERFIELD**

THREADING – GENERAL CONTENT

 6	TAPS	WMG & ISO 13399
 10		INSTRUCTIONS
 18		SOLID CARBIDE TAPS
 23		MATERIAL SPECIFIC SHARK TAPS
 102		HSS HAND & MACHINE TAPS
 331		THREAD MILLS
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PRODUCT FAMILY		PRODUCT FAMILY		PRODUCT FAMILY		PRODUCT FAMILY	
1		E006	220	E287	156	E629	60
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1500(UNS)	196	E011	264	E290	262	E650	252
1500S(UNC)	126	E013	271	E292	246	E651	157
1500S(UNF)	165	E016	263	E293	248	E653	285
1500L(UNC)	129	E018	270	E294	250	E654	192
1500L(UNF)	166	E021	144	E295	247	E708	291
1500OV(UNC)	128	E023	153	E296	249	E709	289
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1519(UNC)	127	E026	143	E298	78	E711	280
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1534NE(UNC)	138	E035	177	E335	82	E764	96
1534NR(UNC)	136	E036	178	E382	101	E765	88
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1544(NPT)	281	E038	187	E384	95	E767	89
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1572(UNC)	315	E071	158	E422	228	E771	93
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1585NR(UNC)	137	E105	257	E473	86	E809	37
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1785NR	217	E239	84	E538	304	E910	54
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WORKPIECE MATERIAL GROUPS (WGM)

ISO To select a cutting grade and geometry for a broad range of workpiece materials

General definition
i.e. Steel, Stainless Steel...

P M K N S H

Subgroup To navigate and select a tool by suitability for a more specific range of workpiece materials

Definition by structure/composition
i.e. Plain Carbon Steel, Alloy Steel...

P M K N S H

P1

P2

P3

P4

WGM To select and provide cutting conditions within a bandwidth of $\pm 10\%$

Definition by hardness/ultimate tensile strength
i.e. $160 < 220$ HB, $620 < 900$ N/mm² ...

P			
P1	P1.1	P1.2	P1.3
P2	P2.1	P2.2	P2.3
P3	P3.1	P3.2	P3.3
P4	P4.1	P4.2	P4.3

ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece Material Groups (WGM) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.

Dormer Pramet classifies workpiece materials into six different colored groups;

- **Blue:** Steel and cast steel (P-group)
- **Yellow:** Stainless steel (M-group)
- **Red:** Cast iron (K-group)
- **Green:** Non-ferrous metals (N-group)
- **Brown:** High-temperature alloys (S-group)
- **Grey:** Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.

The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

WMG (WORK MATERIAL GROUP)

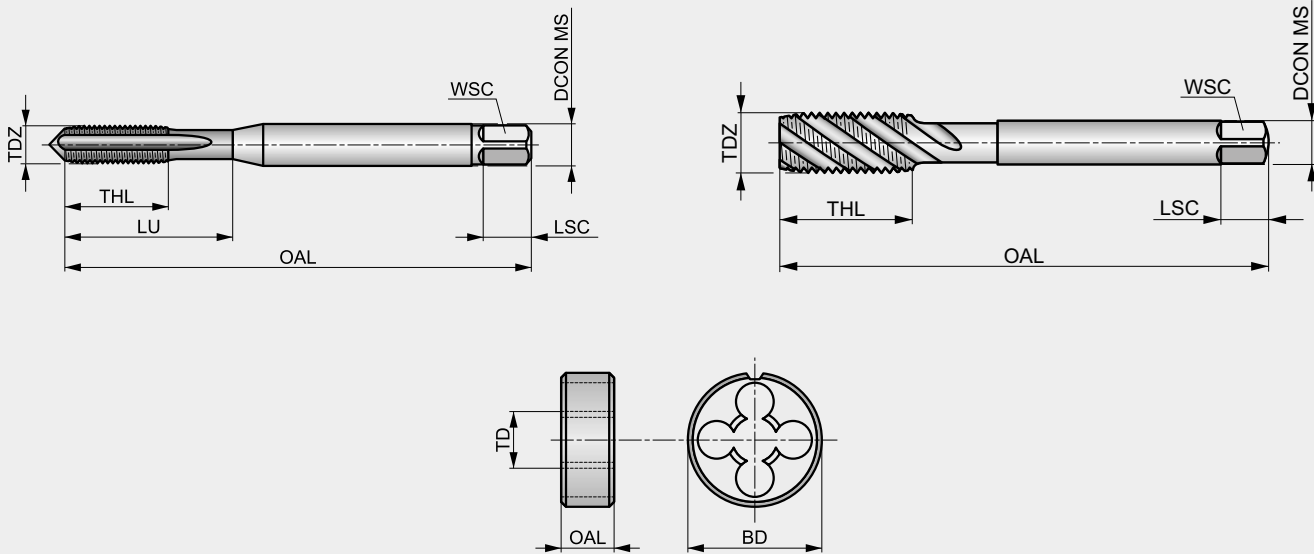
ISO group	WMG (Work Material Group)	Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)	
P	P1 P1.1 Free machining steel P1.2 (carbon steels with increased machinability) P1.3	Sulfurized	< 240 HB ≤ 830	
		Sulfurized and phosphorized	< 180 HB ≤ 620	
		Sulfurized/phosphorized and leaded	< 180 HB ≤ 620	
	P2 P2.1 Plain carbon steel P2.2 (steels comprised of mainly iron and carbon) P2.3	Containing <0.25 % C	< 180 HB ≤ 620	
		Containing <0.55 % C	< 240 HB ≤ 830	
		Containing >0.55 % C	< 300 HB ≤ 1030	
	P3 P3.1 Alloy steel P3.2 (carbon steels with an alloying content ≤ 10%) P3.3	Annealed	< 180 HB ≤ 620	
		Hardened and tempered	180 – 260 HB > 620 ≤ 900	
			260 – 360 HB > 900 ≤ 1240	
	P4 P4.1 Tool steel P4.2 (special alloy steel for tools, dies and molds) P4.3	Annealed	< 26 HRC ≤ 900	
Hardened and tempered		26 – 39 HRC > 900 ≤ 1240		
		39 – 45 HRC > 1240 ≤ 1450		
M	M1 M1.1 Ferritic stainless steel M1.2 (straight chromium non-hardenable alloys)	< 160 HB	≤ 520	
		160 – 220 HB	> 520 ≤ 700	
	M2 M2.1 Martensitic stainless steel M2.2 (straight chromium hardenable alloys) M2.3	Annealed	< 200 HB ≤ 670	
		Quenched and tempered	200 – 280 HB > 670 ≤ 950	
		Precipitation-hardened	280 – 380 HB > 950 ≤ 1300	
	M3 M3.1 Austenitic stainless steel M3.2 (chromium-nickel and chromium-nickel-manganese alloys) M3.3	< 200 HB	≤ 750	
		200 – 260 HB	> 750 ≤ 870	
		260 – 300 HB	> 870 ≤ 1040	
	M4 M4.1 Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel	< 300 HB	≤ 990	
		M4.2 Precipitation hardening austenitic stainless steel	300 – 380 HB	≤ 1320
K	K1 K1.1 Gray iron or Automotive Gray iron (GG) K1.2 (iron-carbon castings with a lamellar graphite microstructure) K1.3	Ferritic or ferritic-pearlitic	< 180 HB ≤ 190	
		Ferritic-pearlitic or pearlitic	180 – 240 HB > 190 ≤ 310	
		Pearlitic	240 – 280 HB > 310 ≤ 390	
	K2 K2.1 Malleable iron (GTS/GTW) K2.2 (iron-carbon castings with a graphite-free microstructure) K2.3	Ferritic	< 160 HB ≤ 400	
		Ferritic or pearlitic	160 – 200 HB > 400 ≤ 550	
		Pearlitic	200 – 240 HB > 550 ≤ 660	
	K3 K3.1 Ductile iron (GGG) K3.2 (iron-carbon castings with a nodular graphite microstructure) K3.3	Ferritic	< 180 HB ≤ 560	
		Ferritic or pearlitic	180 – 220 HB > 560 ≤ 680	
		Pearlitic	220 – 260 HB > 680 ≤ 800	
	K4 K4.1 Austenitic gray iron (ASTM A436) K4.2 (iron-carbon alloy castings with an austenitic lamellar graphite microstructure)	< 180 HB	≤ 190	
		K4.2 Austenitic ductile iron (ASTM A439 or ASTM A571) K4.3 (iron-carbon alloy castings with an austenitic nodular graphite microstructure)	< 240 HB	≤ 740
	K4.4 Austempered ductile iron (ASTM A897) K4.5 (iron-carbon alloy castings with an ausferrite microstructure)	< 280 HB	> 840 ≤ 980	
		280 – 320 HB	> 980 ≤ 1130	
		320 – 360 HB	> 1130 ≤ 1280	
	K5 K5.1 Compacted graphite iron CGI (ASTM A842) K5.2 (iron-carbon castings with a vermicular graphite structure) K5.3	Ferritic	< 180 HB ≤ 400	
Ferritic-pearlitic		180 – 220 HB > 400 ≤ 450		
Pearlitic		220 – 260 HB > 450 ≤ 500		
N	N1 N1.1 Commercially pure wrought aluminum N1.2 Wrought aluminum alloys N1.3	Half hard tempered	60 – 100 HB > 240 ≤ 400	
		Full hard tempered	100 – 150 HB > 400 ≤ 590	
		N2 N2.1 Cast aluminum alloys N2.2 N2.3	< 75 HB	≤ 240
	N2.2 Cast aluminum alloys	75 – 90 HB	> 240 ≤ 270	
		90 – 140 HB	> 270 ≤ 440	
		N3.1 Free-cutting copper-alloys materials with excellent machining properties	–	–
	N3 N3.2 Short-chip copper-alloys with good to moderate machining properties	–	–	
		N3.3 Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	–	–
	N4 N4.1 Thermoplastic polymers N4.2 Thermosetting polymers N4.3 Reinforced polymers or composites	–	–	
		–	–	
	N5 N5.1 Graphite	–	–	
	S	S1 S1.1 Titanium or titanium alloys S1.2 S1.3	< 200 HB	≤ 660
			200 – 280 HB	> 660 ≤ 950
			280 – 360 HB	> 950 ≤ 1200
		S2 S2.1 Fe-based high-temperature alloys S2.2	< 200 HB	≤ 690
200 – 280 HB			> 690 ≤ 970	
S3 S3.1 Ni-based high-temperature alloys S3.2		< 280 HB	≤ 940	
		280 – 360 HB	> 940 ≤ 1200	
S4 S4.1 Co-based high-temperature alloys S4.2		< 240 HB	≤ 800	
	240 – 320 HB	> 800 ≤ 1070		
H	H1 H1.1 Chilled cast iron H2.1 Hardened cast iron H2.2	< 440 HB	–	
		< 55 HRC	–	
	H2 H2.1 Hardened cast iron H2.2	> 55 HRC	–	
		< 51 HRC	–	
	H3 H3.1 Hardened steel < 55 HRC H3.2	51 – 55 HRC	–	
		55 – 59 HRC	–	
	H4 H4.1 Hardened steel > 55 HRC H4.2	> 59 HRC	–	
		–	–	

CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

All cutting tools are defined by a number of parameters according to the standard ISO 13399. This list contains all the parameters used in this catalog and their definitions.

ISO 13399 is an international cutting tool information standard. It provides dimensions and parameters in a neutral format that is independent of any particular system or company nomenclature. When cutting tools are clearly defined according to a global standard, all types of software can process the electronic data more quickly, improving the quality of communication and helping to make the exchange of information run smoothly. Supporting a common language in our cutting tool descriptions this will assist system to system communication. It will save you a significant amount of time, providing an easier gathering of high-quality data across our 40,000 solid and indexable tools. By using an ISO 13399 compliant system, there will be no need to manually interpret data and key-enter it into your system.

EXAMPLES ONLY!



ISO 13399 code	Description
BD	Body diameter
DCON MS	Connection diameter
DRVS	Drive size
LDP	Drill part length
LSC	Clamping length
LU	Usable length
NOF	Flute count
OAL	Overall length
PHD	Premachined hole diameter
PRAT_HEADER	Description

ISO 13399 code	Description
TCL	Tap chamfer length
TD	Thread diameter
TDZ	Thread diameter size
THL	Threading length
TP	Thread pitch
TPI	Threads per inch
WSC	Clamping width
WSCN	Clamping width minimum
WSCX	Clamping width maximum

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RE-TWEET

**SOLID CARBIDE,
MATERIAL SPECIFIC & HSS TAPS**



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GENERAL TECHNICAL INFORMATION

SOLID CARBIDE TAPS – HSS TAPS – PAGE OVERVIEW



1 E200



2

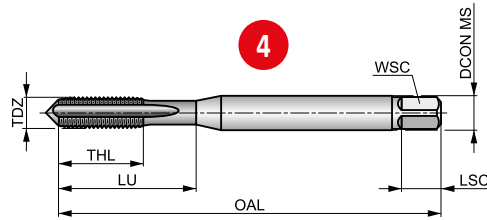
HSS-E-PM Straight Flute Machine Tap, Metric, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.

3

	DIN 371	6H
	1.5xD	HSS-E PM
A 6-8 C 2-3		
Bright		

5



Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■11	■12	■12	■9	■8	■7	■7	■6	■4	■13	■10	■8	■14	■11
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.2	
■12	■9	■12	■9	■12	■10	■12	■15	■14	■11	■21	■14	■8	

6

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
E200M2	2	0.40	45.0	6	2.80	2.10	5	3	1.60	9.00
E200M2.5	2.5	0.45	50.0	8	2.80	2.10	5	3	2.05	12.50
E200M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E200M3N01	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00
E200M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E200M4N01	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00
E200M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E200M5N01	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00
E200M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00
E200M6N01	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00

7

8

Pos.	Description
1	Designation of taps
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions




Typical page with tap holder displayed – specific page details will differ.

SOLID CARBIDE TAPS – HSS TAPS – ICONS OVERVIEW

General icons

	Primary use		Possible use
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Basic standard group (BSG)

ANSI B94.9	ANSI B94.9 – Tap Standard	DIN 352	DIN 352 – Thread Form Standard	DIN 5157	DIN 5157 – Pipe Thread Standard
ANSI	ANSI – Tap Standard	DIN 357	DIN 357 – Nut Tap Standard	DIN 	DIN Dormer Standard
ANSI 	ANSI Dormer Standard	DIN 371	DIN 371 – Thread Form Standard	DIN 371/376	DIN Thread Standard (based on size range) DIN 371 if $\varnothing \leq 10$ mm / DIN 376 if $\varnothing \geq 12$ mm
DIN 2174	DIN 2174 – Forming Tap Standard	DIN 374	DIN 374 – MF Thread Standard	ISO 2283	ISO 2283 – Long Shank Tap Standard
DIN 2181	DIN 2181 – Hand Tap Standard	DIN 376	DIN 376 – Thread Form Standard	ISO 2284	ISO 2284 – Pipe Tap Standard
DIN 2184-1	DIN 2184-1 – Tap Standard	DIN 40432	DIN 40432 – PG Thread Standard	ISO 529	ISO 529 – Tap Standard
DIN 351	DIN 351 – Straight Flute Tap Standard	DIN 5156	DIN 5156 – Thread Form Standard	ISO 	ISO Dormer Standard

Material code (BMC)

HSS-E PM	High Speed Cobalt Powder Metal Tool Material
HSS-E	High Speed Cobalt Steel Tool Material
HSS	High Speed Steel Tool Material
HM	Hard Material (Solid Carbide)

Coating

	Bright (uncoated)		Titanium Aluminum Nitride Coating (with smoothing process)
	Combination Bright and Steam Tempered		Titanium Aluminum Nitride Coating
	Flash Chrome (Hard Chrome) Plating		Titanium Nitride Coating
	Special TiAlN Coating (+ WC/C)		Titanium Carbon Nitride Coating
	Steam Tempered (Steam Oxide) Surface Treatment		

Coolant exit style code (CXSC)




	Through Tool Coolant – Radial Exit
	Through Tool Coolant – Axial Exit



Flute helix angle (FHA)

λ 15°	15° Helix Angle (Flute)	λ 40°	40° Helix Angle (Flute)
λ 27°	27° Helix Angle (Flute)	λ 45°	45° Helix Angle (Flute)
λ 30°	30° Helix Angle (Flute)	λ 48°	48° Helix Angle (Flute)
λ 35°	35° Helix Angle (Flute)		



SOLID CARBIDE TAPS – HSS TAPS – ICONS OVERVIEW

Flute geometry (FDC)

	Fluteless Geometry (Threadforming)
	Oil Grooves Geometry (Threadforming)
	Spiral Flute Geometry

	Spiral Point Geometry
	Straight Flute Geometry

Hand (Cutting direction)

	Left Hand Rotation/Cutting
	Right Hand Rotation/Cutting

Tap chamfer style (TCS)

E 1.5-2	Full Bottoming Tap Chamfer (1.5 – 2 Pitch Lead)
B 3.5-5	Plug Tap Chamfer (3.5 – 5 Pitch Lead)

C 2-3	Semi-Bottoming Tap Chamfer (2 – 3 Pitch Lead)
C 2-3.5	Semi-Bottoming Tap Chamfer (2 – 3.5 Pitch Lead)

A 6-8 C 2-3	Tap Chamfers: A = Taper (6 – 8 Pitch Lead) & C = Semi-Bottoming (2 – 3 Pitch Lead)
C 2-3 D 18-20	Tap Chamfers: C = Semi-Bottoming (2 – 3 Pitch Lead) & D = Nut Style (18 – 20 Pitch Lead)

Thread form type (THFT)

NPSF	Thread Form, American National Pipe Straight Fuel (Dryseal)
NPSM	Thread Form, American National Pipe Straight Mechanical
NPT	Thread Form, American National Pipe Taper
NPTF	Thread Form, American National Pipe Taper Fuel (Dryseal)
BA	Thread Form, British Association Screw Threads
BSF	Thread Form, British Standard Fine

G	Thread Form, British Standard Pipe (BSP)
Rc	Thread Form, British Standard Taper Pipe, 1:16 Taper (BSPT)
BSW	Thread Form, British Standard Whitworth
M	Thread Form, Metric Coarse
MF	Thread Form, Metric Fine
EGM	Thread Form, Metric ISO (Screw Thread Insert Type)

PG	Thread Form, Steel Conduit DIN 40430 (electrical)
UNC	Thread Form, Unified Coarse
UNF	Thread Form, Unified Fine
UN	Thread Form, Unified National




Thread tolerance zone class (TCTR)

6H	DIN Thread Pitch Diameter Tolerance Zone (high basic pitch diameter)
6G	DIN Thread Pitch Diameter Tolerance Zone (low basic pitch diameter)
6HX	DIN Thread Pitch Diameter Tolerance Zone (with increased pitch diameter)

6GX	DIN Thread Pitch Diameter Tolerance Zone (with increased pitch diameter)
2B	Internal Inch Thread Medium Class of Fit
2BX	Internal Inch Thread Medium Class of Fit (with increased pitch diameter)


Medium	Medium Inch Thread Class of Fit
Normal	Normal Fit Class for Pipe Thread

SOLID CARBIDE TAPS – HSS TAPS – ICONS OVERVIEW


Threading application		Usable length diameter ratio (ULDR)			
	Blind Hole Application	1.5×D	1.5×D Useable Tool Depth to Diameter Ratio	3.5×D	3.5×D Useable Tool Depth to Diameter Ratio
	Through Hole Application	2.5×D	2.5×D Useable Tool Depth to Diameter Ratio	3×D	3×D Useable Tool Depth to Diameter Ratio
	Through or Blind Hole Application	2×D	2×D Useable Tool Depth to Diameter Ratio		

SOLID CARBIDE TAPS – TOOL MATERIAL NAVIGATOR



Carbide materials

Carbide Materials (or Hard Materials)		<p>A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together.</p> <p>Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.</p>
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Surface Treatments

Bright (uncoated)		<p>Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.</p>
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Surface Coatings

Titanium Carbon Nitride Coating (TiCN)		<p>Titanium Carbon Nitride is a ceramic coating applied by PVD coating technology. TiCN is harder than TiN and has a lower coefficient of friction. Its hardness and toughness in combination with good wear resistance ensures that it finds its principal application in the field of milling to enhance the performance of milling cutters.</p>
Super-B Coating (TiAlN/WC/C)		<p>Super B is a Titanium Aluminum Nitride + Tungsten Carbide + Carbon Coating used for wet and minimal lubrication machining in drilling, milling and tapping applications. Very effective for cast iron, hardened steels and heat resistant super alloys.</p>



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Thread form (THFT)																				
Basic standard group (BSG)	DIN 371/376	DIN 371	DIN 371/376	DIN 2174																
Thread tolerance class (TCTR)	6H	6HX	6H	6HX																
Threading application																				
Usable length (ULDR)	2xD	2xD	2xD	3xD																
Material code (BMC)	HM	HM	HM	HM																
Tap chamfer style (TCS)	C 2-3	C 2-3	C 2-3	C 2-3.5																
Flute Geometry (FDC)																				
Flute helix angle (FHA)			λ 15°																	
Hand (Cutting direction)																				
Coating			Bright																	
Coolant exit style (CXSC)																				
Product Family Code	T200	T210	T205	T215																
PSF cutting diameters range	M3 - M12	M4 - M12	M3 - M12	M3 - M10																
	19	20	21	22																
P	P1			■																
	P2			■																
	P3			■																
	P4			■																
M	M1			■																
	M2			■																
	M3			■																
	M4			■																
K	K1	■		■																
	K2			■																
	K3			■																
	K4			■																
	K5			■																
N	N1			■																
	N2			■																
	N3			■																
	N4	■		■																
	N5			■																
S	S1																			
	S2																			
	S3																			
	S4																			
H	H1	■	■																	
	H2	■	■																	
	H3	■	■																	
	H4	■	■																	

■ Primary use ■ Possible use

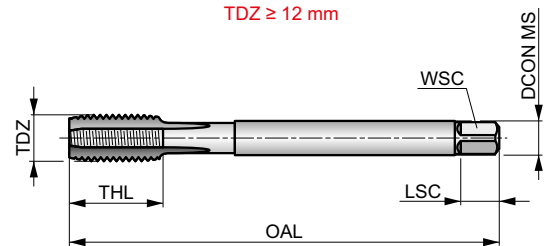
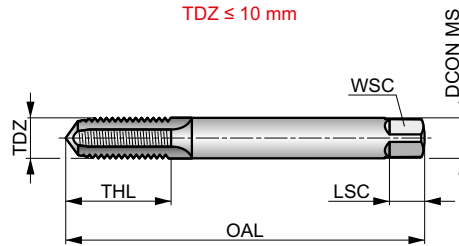
T200



Carbide Straight Flute Machine Tap, Metric, with TiCN Coating, DIN Standard

Superior performance and great tool life at high speeds. Suitable for machine tapping in tool steels, high silicon aluminium and other hardened and abrasive materials. The straight flute design makes the taps ideal for threading both through and blind holes. TiCN coated to improve performance and extend tool life.

M	DIN 371/376	6H
2xD		HM
C 2-3		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1	K1.2	K1.3	N2.3	N3.2	N4.2	N4.3	H1.1	H2.1	H2.2	H3.1	H3.2	H4.1	H4.2
197	144	108	197	23	164	98	36	23	16	23	20	13	10

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
T200M3 ¹⁾	3	0.50	56.0	10	3.50	2.70	6	3	2.60	–	1	7182352
T200M4 ¹⁾	4	0.70	63.0	13	4.50	3.40	6	3	3.40	–	1	7182353
T200M5 ¹⁾	5	0.80	70.0	16	6.00	4.90	8	3	4.30	–	1	7182354
T200M6	6	1.00	80.0	19	6.00	4.90	8	3	5.10	30.00	1	7182355
T200M8	8	1.25	90.0	22	8.00	6.20	9	3	6.90	35.00	1	7182356
T200M10	10	1.50	100.0	24	10.00	8.00	11	3	8.70	39.00	1	7182357
T200M12	12	1.75	110.0	23	9.00	7.00	10	3	10.40	–	1	7182358

¹⁾ Without neck.

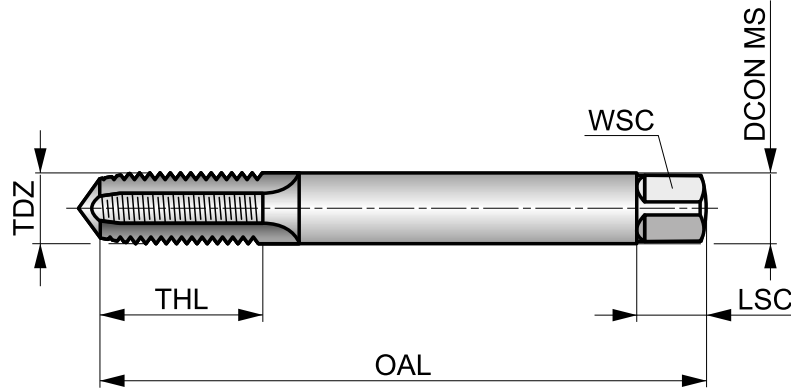
T210



Carbide Straight Flute Machine Tap, Metric, DIN Standard

Superior performance and great tool life at high speeds. Suitable for machine tapping of hardened steel. The straight flute design makes the taps ideal for threading both through and blind holes. TiCN coated to improve performance and extend the tool life.

	DIN 371	6HX
	2xD	HM



Workpiece material group suitability and starting values for cutting speed (ft/min).

H1.1 ■ 36	H2.1 ■ 23	H2.2 ■ 16	H3.1 ■ 23	H3.2 ■ 20	H4.1 ■ 13	H4.2 ■ 10
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
T210M4 ¹⁾	4	0.70	63.0	11	4.50	3.40	6	5	3.40	1	7182378
T210M5 ¹⁾	5	0.80	70.0	13.5	6.00	4.90	8	5	4.30	1	7182379
T210M6 ¹⁾	6	1.00	80.0	16.5	6.00	4.90	8	5	5.10	1	7182380
T210M8 ¹⁾	8	1.25	90.0	21.5	8.00	6.20	9	5	6.90	1	7182381
T210M10 ¹⁾	10	1.50	100.0	27	10.00	8.00	11	5	8.70	1	7182382
T210M12 ¹⁾	12	1.75	110.0	32	12.00	9.00	12	6	10.40	1	7182383

¹⁾ Without neck.

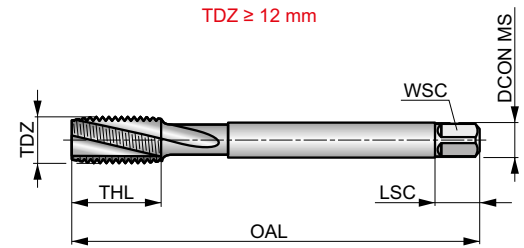
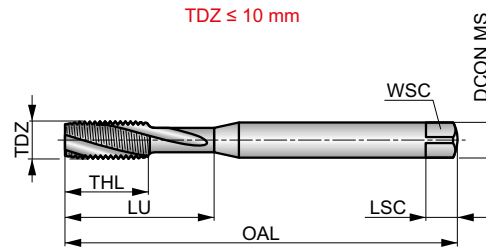
T205



Carbide 15° Spiral Flute Machine Tap, Metric, DIN Standard

Suitable for machine tapping in abrasive materials, such as cast iron and high silicon aluminium, making them a very versatile choice. The 15° spiral flute makes it great for threading holes which do not go all the way through the workpiece (blind holes). The bright finish ensures a clean and accurate result.

M	DIN 371/376	6H
	2×D	HM
C 2-3		λ 15°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 131	K1.2 ■ 98	K1.3 ■ 72	K2.1 ■ 102	K2.2 ■ 82	K2.3 ■ 66	K3.1 ■ 89	K3.2 ■ 69	K3.3 ■ 56	K4.1 ■ 82	K4.2 ■ 62	K4.3 ■ 46	K4.4 ■ 39	K4.5 ■ 33
K5.1 ■ 95	K5.2 ■ 69	K5.3 ■ 56	N2.1 ■ 177	N2.2 ■ 157	N2.3 ■ 115	N4.2 ■ 82	N4.3 ■ 49						

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
T205M3 ¹⁾	3	0.50	56.0	10	3.50	2.70	6	3	2.60	–	1	7182365
T205M4 ¹⁾	4	0.70	63.0	13	4.50	3.40	6	3	3.40	–	1	7182366
T205M5 ¹⁾	5	0.80	70.0	16	6.00	4.90	8	3	4.30	–	1	7182367
T205M6	6	1.00	80.0	19	6.00	4.90	8	3	5.10	30.00	1	7182368
T205M8	8	1.25	90.0	22	8.00	6.20	9	3	6.90	35.00	1	7182369
T205M10	10	1.50	100.0	24	10.00	8.00	11	3	8.70	39.00	1	7182370
T205M12	12	1.75	110.0	23	9.00	7.00	10	3	10.40	–	1	7182371

¹⁾ Without neck.

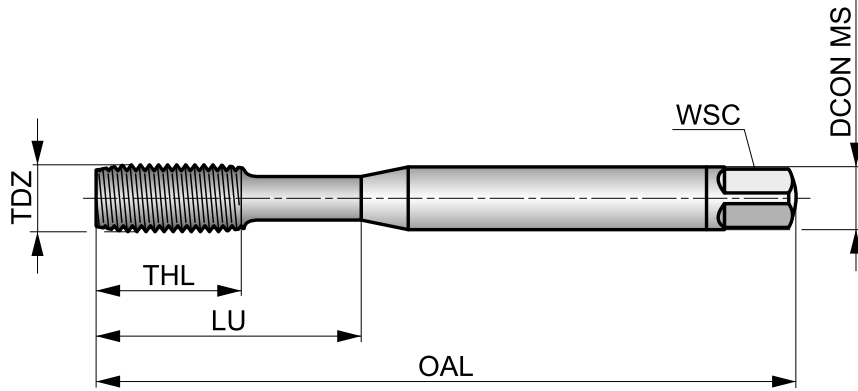
T215



Carbide Thread Forming Tap, Metric, DIN Standard

Forming tap for blind and through holes. Provides a strong, clean, chip free and accurate thread with excellent tolerance. The carbide material gives high process security and excellent tool life when forming threads in mild to medium strength steels, medium strength stainless steel and non-ferrous materials. TiCN coated.

	DIN 2174	6HX
	3xD	HM
C 2-3.5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 197	P1.2 ■ 223	P1.3 ■ 223	P2.1 ■ 223	P2.2 ■ 197	P2.3 ■ 148	P3.1 ■ 144	P3.2 ■ 118	P3.3 ■ 98	P4.1 ■ 85	P4.2 ■ 72	M1.1 ■ 112	M1.2 ■ 95	M2.1 ■ 102
M2.2 ■ 82	M2.3 ■ 69	M3.1 ■ 95	M3.2 ■ 82	M3.3 ■ 75	M4.1 ■ 82	M4.2 ■ 72	N1.1 ■ 230	N1.2 ■ 174	N1.3 ■ 115	N2.1 ■ 322	N2.2 ■ 322	N2.3 ■ 262	N3.1 ■ 164
N3.2 ■ 164	N3.3 ■ 125												

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
T215M3 ¹⁾	3	0.50	56.0	10	3.50	2.70	6	4	2.80	-	1	7174123
T215M4 ¹⁾	4	0.70	63.0	13	4.50	3.40	6	5	3.70	-	1	7174124
T215M5 ¹⁾	5	0.80	70.0	16	6.00	4.90	8	5	4.60	-	1	7174125
T215M6	6	1.00	80.0	19	6.00	4.90	8	5	5.50	30.00	1	7174126
T215M8	8	1.25	90.0	22	8.00	6.20	9	5	7.40	35.00	1	7174127
T215M10	10	1.50	100.0	24	10.00	8.00	11	5	9.30	39.00	1	7174128

¹⁾ Without neck.

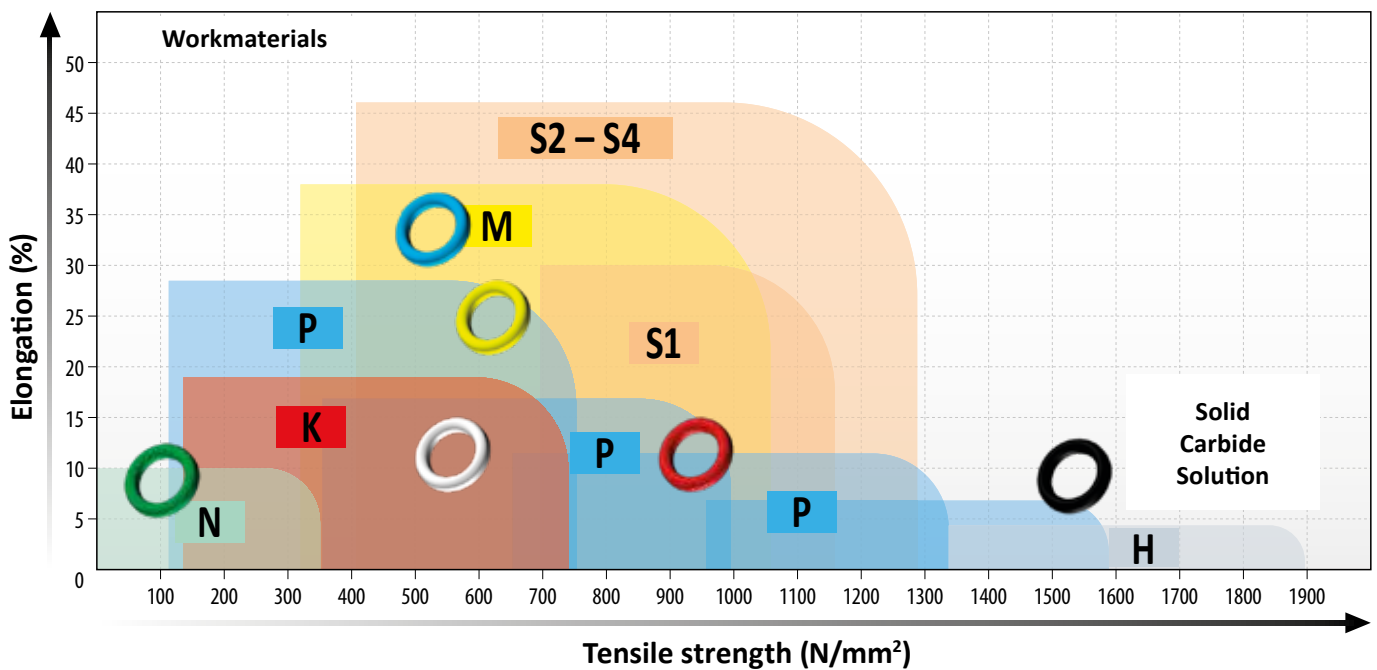


MATERIAL SPECIFIC TAPS

SHARK

MATERIAL SPECIFIC APPLICATION TAPS

Dormer's application-based ranges of DIN taps, branded Shark Line, are renowned for their high performance and are easily recognizable by their colored rings, denoting recommendation for use on specific materials.



FEATURES AND BENEFITS

COLOR RING CODING

- The color ring on the tool shank identifies suitability for specific materials and enables **quick and easy tool selection**.

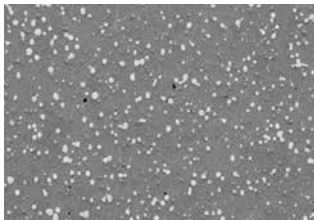
EDGE TREATMENT

(Black, Red, Yellow, Blue Shark)

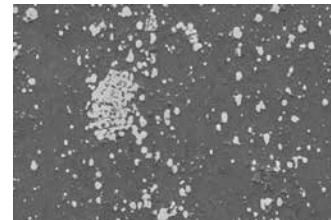
- Spiral flute taps incorporate a special edge treatment to increase strength and reduce the chance of micro-chipping on the cutting edges. This considerably improves **performance and tool life** as well as process security.

MATERIAL

Shark taps are manufactured from a unique powder metallurgy tool steel different from any other HSS-E-PM. This provides an unbeatable combination of toughness and edge strength, allowing the taps to perform at higher cutting temperatures while offering excellent performance and longer tool life.



Unique HSS-E-PM material used for **SHARK TAPS**
(note the evenly dispersed grain structure).



Traditional
HSS-E (M35) material.





STRUCTURAL, PLAIN CARBON & LOW ALLOY STEELS

YELLOW SHARK



- **SURFACE TREATMENT**
Hard chrome plating (Cr) with an additional edge treatment prevents built up edge when tapping in materials prone to sticking to the cutting edges.
- **FLUTE GEOMETRY**
Available in spiral point for through holes and spiral flute (40° angle) for blind holes. Special flute geometry on Yellow Shark spiral flute taps prevents nest formation of chips, reducing the risk of re-cutting chips on reversal.
- **THREAD FORMS**
Metric and Metric Fine
- **PRODUCT CODES**
E297, E298, E299, E300

YELLOW SHARK

3xD



- **SURFACE TREATMENT**
TiAlN-Top coating with an additional edge treatment.
- **FLUTE GEOMETRY**
Spiral flute angle of 48° facilitates smooth and fast chip evacuation, making it suitable for threading deep blind holes (3xD). The increased thread relief also enables higher cutting speeds in high strength steels.
- **CUTTING GEOMETRY**
The special three radii profile with a constant rake angle along the flute length leads to a better control of cutting properties and prevents nest formation of chips.
- **BACK TAPERED**
Back taper further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- **TAPPING ATTACHMENT (RECOMMENDATION)**
When using 48° spiral flute Yellow Shark taps, it is recommended to use a tool holder with minimal float or soft start.
- **THREAD FORMS**
Metric
- **PRODUCT CODE**
E412



STAINLESS STEELS

BLUE SHARK



- SURFACE TREATMENT**
 Steam-tempered or Super-B (TiAlN + WC/C) coated with an additional edge treatment.
- FLUTE GEOMETRY**
 Available in spiral point for through holes and spiral flute (40° angle) for blind holes.
- BACK TAPERED**
 Back taper on spiral flute taps further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- THREAD FORMS**
 Metric, Metric Fine and G(BSP)
- PRODUCT CODES**
 E238, E239, E240, E241, E382, E383, E384

BLUE SHARK

3xD



- SURFACE TREATMENT**
 Super-B (TiAlN + WC/C) coating with an additional edge treatment.
- FLUTE GEOMETRY**
 Spiral flute angle of 48° facilitates smooth and fast chip evacuation, making it suitable for threading deep blind holes (3xD). The increased thread relief ensures process security when tapping resilient materials such as stainless steel.
- CUTTING GEOMETRY**
 The special three radii profile with a constant rake angle along the flute length leads to a better control of cutting properties and prevents nest formation of chips.
- BACK TAPERED**
 Back taper further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- TAPPING ATTACHMENT (RECOMMENDATION)**
 When using 48° spiral flute Blue Shark taps, it is recommended to use a tool holder with minimal float or soft start.
- THREAD FORMS**
 Metric
- PRODUCT CODE**
 E414



ALLOY STEELS

HIGH STRENGTH STEELS

RED SHARK



BLACK SHARK



- **SURFACE TREATMENT**
Bright or TiAlN-Top coated with an additional edge treatment.
- **FLUTE GEOMETRY**
Available in spiral point for through holes and spiral flute (45° angle) for blind holes.
- **BACK TAPERED**
Back taper on spiral flute taps further facilitates chip evacuation, reducing chipping on the last threads of the taps and also reducing torque when the tap reverses.
- **CUTTING GEOMETRY (SPIRAL FLUTE TAPS)**
The special three-radii profile with a constant rake angle along the flute length leads to better control of cutting properties and prevents nest formation of chips.
- **TAPPING ATTACHMENT (RECOMMENDATION)**
When using spiral flute Red Shark taps, it is recommended to use a tool holder with minimal float or soft start.
- **THREAD FORMS**
Metric
- **PRODUCT CODES**
E255, E256, E260, E261

- **SURFACE TREATMENT**
TiAlN-Top coating with an additional edge treatment.
- **FLUTE GEOMETRY**
Spiral point or low helix spiral flute geometries with low rake angle for good chip control and edge strength.
- **CUTTING GEOMETRY (SPIRAL FLUTE TAPS)**
The special three-radii profile with a constant rake angle along the flute length leads to better control of cutting properties and prevents nest formation of chips.
- **TAPPING ATTACHMENT (RECOMMENDATION)**
When using Black Shark taps, it is recommended to use synchronized (rigid) tapping.
- **THREAD FORMS**
Metric
- **PRODUCT CODES**
E334, E335



NON-FERROUS MATERIALS

CAST IRONS

GREEN SHARK




- **SURFACE TREATMENT**
Bright or Super-B (TiAlN + WC/C) coated.
- **FLUTE GEOMETRY**
Available in spiral point for through holes and spiral flute (35° angle) for blind holes.
- **CUTTING GEOMETRY (SPIRAL FLUTE TAPS)**
The special three radii profile with a constant rake angle along the flute length leads to a better control of cutting properties and prevents nest formation of chips.
- **THREAD FORMS**
Metric
- **PRODUCT CODES**
E471, E472, E473, E474

WHITE SHARK





- **SURFACE TREATMENT**
Steam-tempered or TiAlN-Top coated.
- **FLUTE GEOMETRY**
Straight flute design gives excellent performance when threading both through and blind holes in short chipping materials.
- **THREAD FORMS**
Metric
- **PRODUCT CODES**
E201, E252, E390




Tool materials

Sintered Cobalt High Speed Steel		<p>HSS-E-PM is a Cobalt High Speed Powder Metal substrate which has been produced using powder metal technology. High speed steel produced by this method exhibits superior toughness and grindability due to the uniform and consistent grain structure. High performance taps and end mills have a particular advantage when manufactured from this substrate.</p>
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Surface Treatments

Bright (uncoated)		<p>Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.</p>
Steam Tempering		<p>Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.</p>

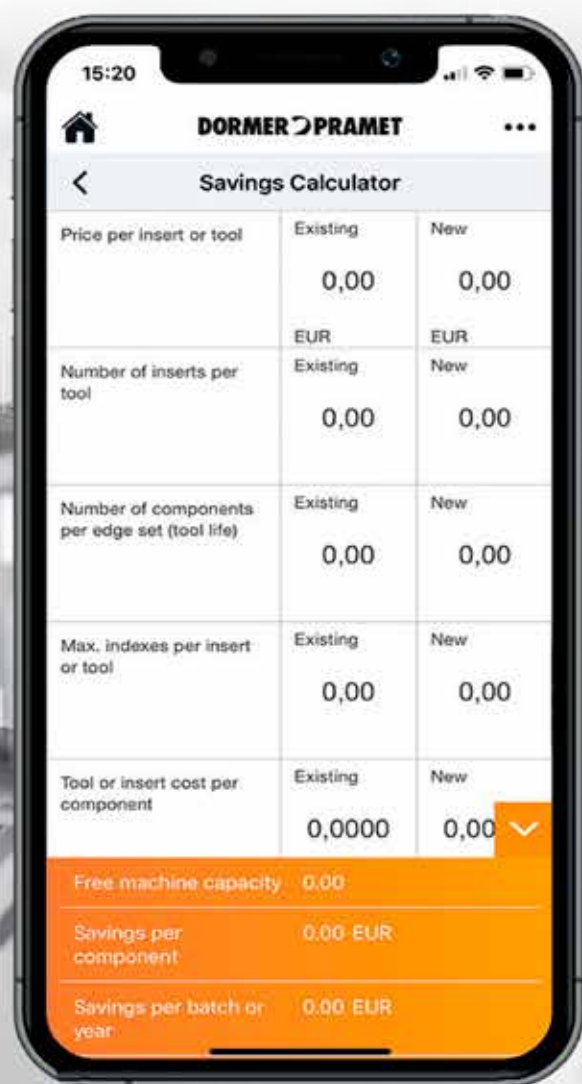
Surface Coatings

Titanium Aluminum Nitride Coatings (TiAlN & TiAlN-Top)		<p>Titanium Aluminum Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant. TiAlN-Top coating is the same as TiAlN but with a post-coating process designed to smooth out imperfections, enhance chip flow and reduce built up edge.</p>
Super-B Coating (TiAlN/WC/C)		<p>Super B is a Titanium Aluminum Nitride + Tungsten Carbide + Carbon Coating used for wet and minimal lubrication machining in drilling, milling and tapping applications. Very effective for cast iron, hardened steels and heat resistant super alloys.</p>
Chromium Nitride Coating (CrN)		<p>Hard chromium (Cr) for cutting tool applications provides excellent wear and abrasion resistance due to lowering the coefficient of friction. Only designed for machining soft and gummy materials to promote chip flow and to prevent workpiece materials from sticking to the tool. Hard chromium increases the surface hardness of the tool and is especially effective for tapping soft structural steels, copper and brass materials.</p>














































































POCKET SAVER

Our machining calculator allows you to measure the savings based on different products and applications. A useful pocket-sized tool, which will help keep cash in your pockets! **Simply Reliable.**



Thread form (THFT)													
Basic standard group (BSG)	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI
Thread tolerance class (TCTR)	2B	2B	2BX	2B 3B	2BX	2BX	2B	2B	2BX	2B 3B	2B	2B	2BX
Threading application													
Usable length (ULDR)	2.5xD	2.5xD	2.5xD	2.5xD	2xD	2.5xD	2xD	2.5xD	1.5xD	2.5xD	2.5xD	2.5xD	2.5xD
Material code (BMC)	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
Tap chamfer style (TCS)	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	E 1.5-2	C 2-3	C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	B 3.5-5
Flute Geometry (FDC)													
Flute helix angle (FHA)							λ 40°	λ 45°	λ 15°	λ 40°			
Hand (Cutting direction)													
Coating													
Product Family Code	E809	E811	E816	E813	E814	E815	E808	E810	E805	E812	E909	E911	E916
PSF cutting diameters range	No.4 - 1"	No.4 - 1"	No.4 - 3/4	No.4 - 1"	1/4 - 1"	1/4 - 1"	No.4 - 1"	No.4 - 1"	No.4 - 3/4	No.4 - 1"	No.10 - 7/8	No.10 - 1"	No.10 - 3/4
P	P1	■					■				■		
	P2	■	■		■		■	■		■	■	■	
	P3	■	■	■	■		■	■	■	■	■	■	■
	P4	■	■	■	■		■	■	■	■	■	■	■
M	M1				■					■			
	M2				■					■			
	M3				■					■			
	M4				■					■			
K	K1					■	■						
	K2					■	■						
	K3					■	■						
	K4					■	■						
	K5					■	■						
N	N1												
	N2					■	■						
	N3	■				■	■	■			■		
	N4					■	■						
	N5												
S	S1		■	■				■	■			■	■
	S2		■	■				■	■			■	■
	S3		■	■				■	■			■	■
	S4		■	■				■	■			■	■
H	H1												
	H2												
	H3			■						■			■
	H4												■

■ Primary use ■ Possible use

	UNF DIN ANSI 2B 3B  2.5xD HSS-E PM B 3.5-5  R  Super B	UNF DIN ANSI 2BX  2xD HSS-E PM C 2-3  R  TiAIN Top	UNF DIN ANSI 2BX  2.5xD HSS-E PM E 1.5-2  R  TiAIN Top	UNF DIN ANSI 2B  2xD HSS-E PM C 2-3  R  TiAIN Top λ 40°	UNF DIN ANSI 2B  2.5xD HSS-E PM C 2-3  R  TiAIN Top λ 45°	UNF DIN ANSI 2BX 2B 3B  1.5xD HSS-E PM C 2-3  R  TiAIN Top λ 15°	UNF DIN ANSI 2B 3B  2.5xD HSS-E PM C 2-3  R  Super B λ 40°	M DIN ANSI 6H  2.5xD HSS-E PM B 3.5-5  R  TiAIN Top	M DIN ANSI 6H  2.5xD HSS-E PM B 3.5-5  R  TiAIN Top	M DIN ANSI 6HX  2.5xD HSS-E PM B 3.5-5  R  TiAIN Top	M DIN ANSI 6H  2.5xD HSS-E PM B 3.5-5  R  Super B	M DIN ANSI 6HX  2xD HSS-E PM C 2-3  R  TiAIN Top	M DIN ANSI 6HX  2.5xD HSS-E PM E 1.5-2  R  TiAIN Top	M DIN 371/376 6H  2.5xD HSS-E PM B 3.5-5  R  Cr	M DIN 371/376 6HX  2.5xD HSS-E PM B 3.5-5  R  Bright
															
	E913	E914	E915	E908	E910	E905	E912	E625	E627	E817	E629	E630	E631	E297	E255
	No.10 - 1"	No.10 - 7/8	5/16 - 3/4	No.10 - 3/4	No.10 - 1"	No.10 - 5/8	No.10 - 1"	M4 - M24	M3 - M24	M3 - M12	M4 - M24	M6 - M16	M6 - M24	M3 - M30	M3 - M20
	 50	 51	 52	 53	 54	 55	 56	 57	 58	 59	 60	 61	 62	 63	 64
P1				■				■							
P2	■			■	■		■	■	■		■			■	■
P3	■			■	■	■	■	■	■	■	■			■	■
P4	■			■	■	■	■	■	■	■	■			■	■
M1	■						■				■				
M2	■						■				■				
M3	■						■				■				
M4	■						■				■				
K1		■	■									■	■		
K2		■	■									■	■		
K3		■	■									■	■		
K4		■	■									■	■		
K5		■	■									■	■		
N1															
N2		■	■									■	■		
N3		■	■	■								■	■	■	
N4		■	■									■	■		
N5															
S1					■	■			■	■					■
S2					■	■			■	■					■
S3					■	■			■	■					■
S4					■	■			■	■					■
H1															
H2															
H3						■				■					
H4															

■ Primary use ■ Possible use

Thread form (THFT)												
Basic standard group (BSG)	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371	DIN 376	DIN 371/376	DIN 371/376	DIN 371/376	DIN ANSI	DIN ANSI	DIN ANSI
Thread tolerance class (TCTR)	6HX	6HX	6H	6H	6HX	6HX	6HX	6H	6H	6H	6H	6HX
Threading application												
Usable length (ULDR)	2.5xD	2.5xD	2.5xD	2.5xD	2xD	2xD	2xD	2.5xD	2.5xD	2xD	2.5xD	1.5xD
Material code (BMC)	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
Tap chamfer style (TCS)	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3
Flute Geometry (FDC)												
Flute helix angle (FHA)										λ 40°	λ 45°	λ 15°
Hand (Cutting direction)												
Coating	TIAIN Top	TIAIN Top	ST	Super B	ST	ST	TIAIN	Bright	Super B	TIAIN Top	TIAIN Top	Super B
	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK
Product Family Code	E256	E334	E240	E241	E201	E252	E390	E471	E472	E624	E626	E806
PSF cutting diameters range	M3 - M20	M3 - M12	M3 - M30	M3 - M20	M3 - M10	M8 - M24	M3 - M20	M3 - M20	M3 - M20	M4 - M24	M3 - M24	M3 - M12
	65	66	67	68	69	70	71	72	73	74	75	76
P	P1											
	P2	■		■	■			■	■	■	■	■
	P3	■	■	■	■					■	■	■
	P4	■	■	■	■					■	■	■
M	M1			■	■							■
	M2			■	■							■
	M3			■	■							■
	M4			■	■							■
K	K1					■	■	■				
	K2					■	■	■				
	K3					■	■	■				
	K4					■	■	■				
	K5					■	■	■				
N	N1								■	■		
	N2								■	■		
	N3					■	■	■	■	■		
	N4					■	■	■	■	■		
	N5					■	■	■	■	■		
S	S1	■	■								■	■
	S2	■	■								■	■
	S3	■	■								■	■
	S4	■	■								■	■
H	H1											
	H2											
	H3		■									■
	H4											■

■ Primary use ■ Possible use

	M	M	M	M	M	M	M	M	M	M	MF	MF	MF	MF	MF
	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI	DIN ANSI
	6H	6H	6HX	6HX	6HX	6H	6H	6H	6H	6H	6H	6H	6HX	6H	6HX
	2xD	3xD	2.5xD	2.5xD	1.5xD	2.5xD	2.5xD	3xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3
	λ 40°	λ 48°	λ 45°	λ 45°	λ 15°	λ 40°	λ 40°	λ 48°	λ 35°	λ 35°					
	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK
	E298	E412	E260	E261	E335	E238	E239	E414	E473	E474	E765	E767	E917	E769	E770
	M3 - M30	M3 - M30	M3 - M20	M3 - M20	M3 - M12	M3 - M30	M3 - M20	M3 - M20	M3 - M20	M3 - M16	M8 - M14	M8 - M14	M12	M8 - M18	M10 - M14
P1	■	■	■	■		■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■		■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M1		■													
M2		■													
M3		■													
M4		■													
K1															■
K2															■
K3															■
K4															■
K5															■
N1		■							■	■					
N2		■							■	■					■
N3	■	■							■	■	■				■
N4									■	■					■
N5															
S1			■	■	■							■	■		
S2			■	■	■							■	■		
S3			■	■	■							■	■		
S4			■	■	■							■	■		
H1															
H2															
H3					■								■		
H4															

Thread form (THFT)																				
Basic standard group (BSG)	DIN ANSI	DIN 374	DIN 374	DIN ANSI	DIN ANSI	DIN ANSI	DIN 374	DIN 374	DIN 5156											
Thread tolerance class (TCTR)	6HX	6H	6H	6H	6H	6H	6H	6H	Normal											
Threading application																				
Usable length (ULDR)	2.5xD	2.5xD	2.5xD	2xD	2.5xD	2.5xD	2xD	2xD	2xD											
Material code (BMC)	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM											
Tap chamfer style (TCS)	E 1.5-2	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3											
Flute Geometry (FDC)																				
Flute helix angle (FHA)				λ 40°	λ 45°	λ 40°	λ 40°	λ 40°	λ 40°											
Hand (Cutting direction)																				
Coating																				
	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK	SHARK											
Product Family Code	E771	E299	E384	E764	E766	E768	E300	E383	E382											
PSF cutting diameters range	M12 - M14	M4 - M30	M6 - M20	M8 - M16	M8 - M14	M8 - M18	M4 - M30	M6 - M20	1/8 - 1"											
	93	94	95	96	97	98	99	100	101											
P	P1	■		■	■	■	■	■	■											
	P2	■	■	■	■	■	■	■	■											
	P3	■	■	■	■	■	■	■	■											
	P4	■	■	■	■	■	■	■	■											
M	M1		■																	
	M2			■																
	M3			■																
	M4			■																
K	K1	■																		
	K2	■																		
	K3	■																		
	K4	■																		
	K5	■																		
N	N1																			
	N2	■																		
	N3	■	■		■				■											
	N4	■																		
	N5																			
S	S1					■														
	S2					■														
	S3					■														
	S4					■														
H	H1																			
	H2																			
	H3																			
	H4																			

■ Primary use ■ Possible use

E809

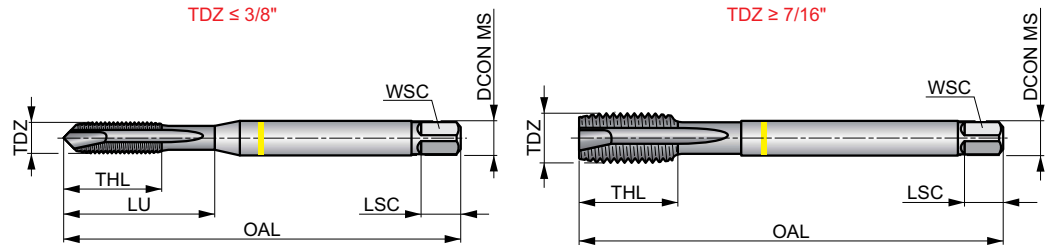


Yellow SHARK Spiral Point Tap, UNC, DIN/ANSI Standard

Spiral point tap for through holes only. Designed for low carbon, alloyed steel and non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2B
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■ 157	■ 180	■ 187	■ 138	■ 121	■ 108	■ 82	■ 66	■ 49	■ 207	■ 125	■ 52

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E8094-40	4	40	2.205	.354	.141	.108	.190	3	2.35	N43	H2	.709	1	7350469
E8096-32	6	32	2.205	.433	.141	.108	.190	3	2.85	N36	H2	.787	1	7350470
E8098-32	8	32	2.480	.512	.168	.129	.250	3	3.50	N29	H3	.827	1	7350471
E80910-24	10	24	2.756	.551	.194	.150	.250	3	3.90	N25	H3	1.102	1	7350472
E8091/4	1/4	20	3.150	.591	.255	.189	.310	3	5.10	N7	H5	.984	1	7350473
E8095/16	5/16	18	3.543	.709	.318	.236	.380	3	6.60	F	H5	1.339	1	7350474
E8093/8	3/8	16	3.937	.787	.381	.284	.440	3	8.00	5/16	H4	1.535	1	7350475
E8097/16	7/16	14	3.937	.787	.323	.240	.410	3	9.40	U	H5	—	1	7350476
E8091/2	1/2	13	4.331	.906	.367	.273	.440	3	10.80	27/64	H5	—	1	7350477
E8095/8	5/8	11	4.331	.906	.480	.358	.560	3	13.50	17/32	H5	—	1	7350478
E8093/4	3/4	10	4.921	1.181	.590	.439	.690	3	16.50	21(32)	H5	—	1	7350479
E8097/8	7/8	9	5.512	1.339	.697	.520	.750	4	19.50	49/64	H6	—	1	7350480
E8091	1"	8	6.299	1.417	.800	.597	.810	4	22.25	7/8	H6	—	1	7350481

E811

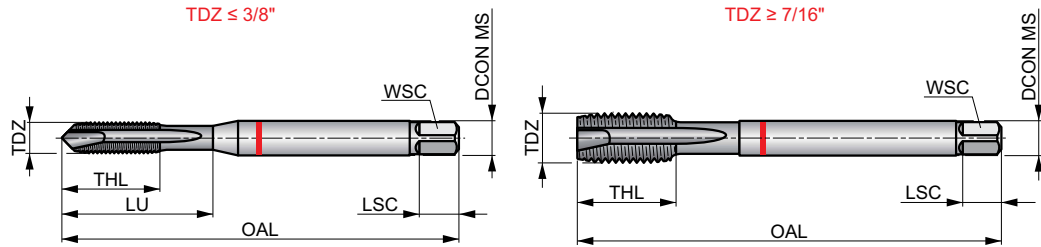


Red SHARK, Spiral Point Tap, UNC, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for high strength steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2B
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■ 89	■ 66	■ 56	■ 49	■ 43	■ 33	■ 10	■ 13	■ 10	■ 10

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E8114-40	4	40	2.205	.354	.141	.108	.190	3	2.35	N43	H2	.709	1	7350391
E8116-32	6	32	2.205	.433	.141	.108	.190	3	2.85	N36	H2	.787	1	7350392
E8118-32	8	32	2.480	.512	.168	.129	.250	3	3.50	N29	H3	.827	1	7350393
E81110-24	10	24	2.756	.551	.194	.150	.250	3	3.90	N25	H3	1.102	1	7350394
E8111/4	1/4	20	3.150	.591	.255	.189	.310	3	5.10	N7	H5	.984	1	7350395
E8115/16	5/16	18	3.543	.709	.318	.236	.380	3	6.60	F	H5	1.339	1	7350396
E8113/8	3/8	16	3.543	.787	.381	.284	.440	3	8.00	5/16	H4	1.535	1	7350397
E8117/16	7/16	14	3.937	.787	.323	.240	.410	3	9.40	U	H5	-	1	7350398
E8111/2	1/2	13	4.331	.906	.367	.273	.440	3	10.80	27/64	H5	-	1	7350399
E8115/8	5/8	11	4.331	.906	.480	.358	.560	3	13.50	17/32	H5	-	1	7350400
E8113/4	3/4	10	4.921	1.181	.590	.439	.690	4	16.50	21/32	H5	-	1	7350401
E8117/8	7/8	9	5.512	1.339	.697	.520	.750	4	19.50	49/64	H6	-	1	7350402
E8111	1"	8	6.299	1.417	.800	.597	.810	4	22.25	7/8	H6	-	1	7350403

E816

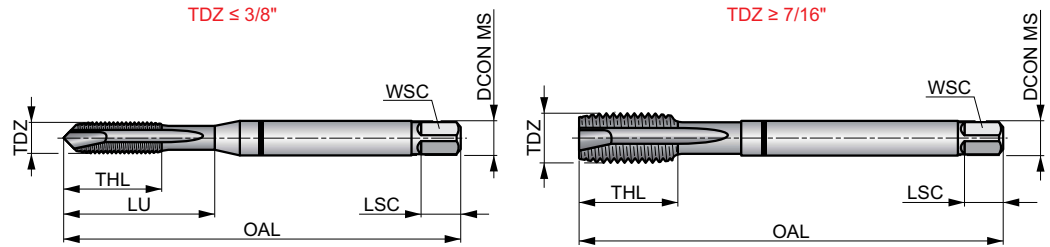


Black SHARK Spiral Point Tap, UNC, DIN/ANSI Standard

High performance spiral point tap for through holes only, specifically for high strength steel and titanium alloys. HSS-E-PM to improve tool life, predictability, speed and reduce chipping. TiAlN-Top coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2BX
	2.5xD	HSS-E-PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 56	■ 43	■ 33	■ 43	■ 26	■ 16	■ 10	■ 23

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E8164-40	4	40	2.205	.472	.141	.108	.190	3	2.35	N43	H2	.827	1	7812046
E8166-32	6	32	2.480	.551	.168	.129	.250	3	2.85	N36	H3	.866	1	7812047
E8168-32	8	32	2.756	.610	.194	.150	.250	3	3.50	N29	H3	1.102	1	7812048
E81610-24	10	24	3.150	.669	.255	.189	.310	3	3.90	N25	H3	1.024	1	7812049
E8161/4	1/4	20	3.543	.807	.318	.236	.380	3	5.10	N7	H5	1.378	1	7812100
E8165/16	5/16	18	3.937	.906	.381	.236	.440	3	6.60	F	H5	1.535	1	7812101
E8163/8	3/8	16	3.937	.787	.381	.236	.440	3	8.00	5/16	H5	1.535	1	7812102
E8167/16	7/16	14	3.937	.787	.323	.240	.410	4	9.40	U	H5	—	1	7812103
E8161/2	1/2	13	4.331	.906	.367	.273	.440	4	10.80	27/64	H5	—	1	7812104
E8165/8	5/8	11	4.331	.906	.480	.358	.560	4	13.50	17/32	H5	—	1	7812105
E8163/4	3/4	10	4.921	1.181	.590	.440	.690	4	16.50	21/32	H5	—	1	7812106

E813

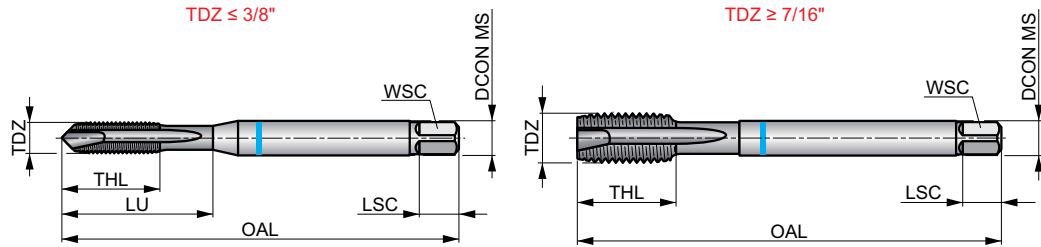


Blue SHARK Spiral Point Tap, UNC, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for stainless steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2B 3B
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
■52	■46	■36	■30	■62	■52	■56	■46	■39	■39	■33	■30	■20	■16

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E8134-40	4	40	2.205	.354	.141	.108	.190	3	2.35	N43	H2	.709	1	7350278
E8136-32	6	32	2.205	.433	.141	.108	.190	3	2.85	N36	H3	.787	1	7350279
E8138-32	8	32	2.480	.512	.168	.129	.250	3	3.50	N29	H3	.827	1	7350280
E81310-24	10	24	2.756	.551	.194	.150	.250	3	3.90	N25	H3	1.102	1	7350281
E8131/4H5	1/4	20	3.150	.591	.255	.189	.310	3	5.10	N7	H5	.984	1	7350282
E8131/4H3	1/4	20	3.150	.591	.255	.189	.310	3	5.10	N7	H3	.984	1	7350283
E8135/16H5	5/16	18	3.543	.709	.318	.236	.380	3	6.60	F	H5	1.339	1	7350284
E8135/16H3	5/16	18	3.543	.709	.318	.236	.380	3	6.60	F	H3	1.339	1	7350285
E8133/8H5	3/8	16	3.937	.787	.381	.284	.440	3	8.00	5/16	H5	1.535	1	7350286
E8133/8H3	3/8	16	3.937	.787	.381	.284	.440	3	8.00	5/16	H3	1.535	1	7350287
E8137/16	7/16	14	3.937	.787	.323	.240	.410	4	9.40	U	H5	-	1	7350288
E8131/2H5	1/2	13	4.331	.906	.367	.273	.440	4	10.80	27/64	H5	-	1	7350289
E8131/2H3	1/2	13	4.331	.906	.367	.273	.440	4	10.80	27/64	H3	-	1	7350290
E8135/8H5	5/8	11	4.331	.906	.480	.358	.560	4	13.50	17/32	H5	-	1	7350291
E8135/8H3	5/8	11	4.331	.906	.480	.358	.560	4	13.50	17/32	H3	-	1	7350292
E8133/4H5	3/4	10	4.921	1.181	.590	.439	.690	4	16.50	21/32	H5	-	1	7350293
E8133/4H3	3/4	10	4.921	1.181	.590	.439	.690	4	16.50	21/32	H3	-	1	7350294
E8137/8H6	7/8	9	5.512	1.339	.697	.520	.750	4	19.50	49/64	H6	-	1	7350295
E8131H6	1"	8	6.299	1.417	.800	.597	.810	4	22.25	7/8	H6	-	1	7350297
E8131H4	1"	8	6.299	1.417	.800	.597	.810	4	22.25	7/8	H4	-	1	7350298

E814

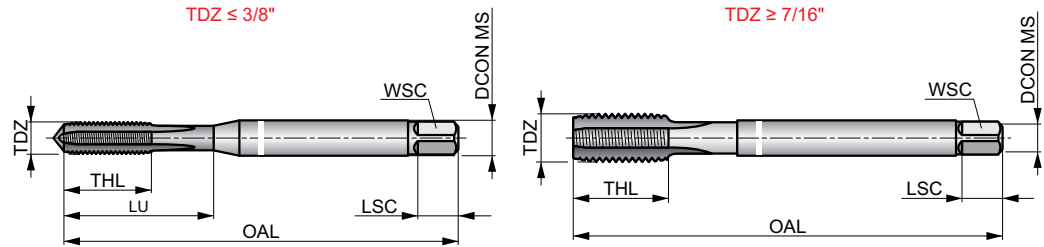


White SHARK Straight Flute Tap, UNC, DIN/ANSI Standard

High performance straight flute tap. Designed for cast iron and high strength non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating for superior result, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2BX
	2xD	HSS-E PM
C 2-3		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 98	K1.2 ■ 72	K1.3 ■ 56	K2.1 ■ 141	K2.2 ■ 115	K2.3 ▣ 92	K3.1 ■ 125	K3.2 ■ 95	K3.3 ▣ 79	K4.1 ■ 115	K4.2 ■ 89	K4.3 ▣ 66	K4.4 ▣ 56	K4.5 ▣ 46
K5.1 ■ 131	K5.2 ■ 98	K5.3 ▣ 75	N2.3 ▣ 66	N3.2 ▣ 98	N4.2 ■ 49								

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E8141/4	1/4	20	3.150	.591	.255	.189	.310	4	5.10	N7	H5	.984	1	7350203
E8145/16	5/16	18	3.543	.709	.318	.236	.380	4	6.60	F	H5	1.339	1	7350204
E8143/8	3/8	16	3.937	.787	.381	.284	.440	4	8.00	5/16	H5	1.535	1	7350205
E8147/16	7/16	14	3.937	.787	.323	.240	.410	4	9.40	U	H5	-	1	7350206
E8141/2	1/2	13	4.331	.906	.367	.273	.440	4	10.80	27/64	H5	-	1	7350207
E8145/8	5/8	11	4.331	.906	.480	.358	.560	4	13.50	17/32	H5	-	1	7350208
E8143/4	3/4	10	4.921	1.181	.590	.439	.690	4	16.50	21/32	H5	-	1	7350209
E8147/8	7/8	9	5.512	1.339	.697	.520	.750	4	19.50	49/64	H6	-	1	7350220
E8141	1"	8	6.299	1.417	.800	.597	.810	4	22.25	7/8	H6	-	1	7350221

E815

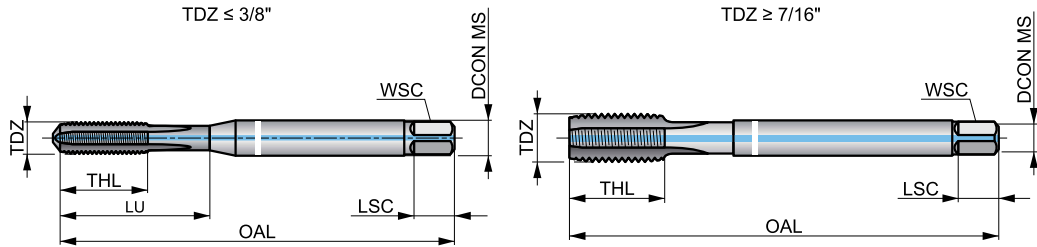


White SHARK Straight Flute Tap, UNC, DIN/ANSI Standard, Through Coolant

High performance straight flute tap for highly productive applications in cast iron and high strength non-ferrous material. Similar to the E814 series, but in coolant thru design which allows even higher tapping speeds and eliminates the problems associated with inadequate coolant in horizontal or deep hole applications.

SHARK

	DIN ANSI	2BX
	2.5xD	HSS-E PM
E 1.5-2		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 95	K1.2 ■ 69	K1.3 ■ 52	K2.1 ■ 135	K2.2 ■ 105	K2.3 ▣ 89	K3.1 ■ 118	K3.2 ■ 92	K3.3 ▣ 75	K4.1 ■ 108	K4.2 ■ 85	K4.3 ▣ 62	K4.4 ▣ 52	K4.5 ▣ 43
K5.1 ■ 125	K5.2 ■ 92	K5.3 ▣ 72	N2.3 ▣ 62	N3.2 ▣ 92	N4.2 ■ 46								

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E8151/4	1/4	20	3.150	.591	.255	.189	.310	4	5.10	N7	H5	.984	1	7350231
E8155/16	5/16	18	3.543	.787	.318	.236	.380	4	6.60	F	H5	1.339	1	7350232
E8153/8	3/8	16	3.937	.787	.381	.284	.440	4	8.00	5/16	H5	1.535	1	7350233
E8157/16	7/16	14	3.937	.787	.323	.240	.410	4	9.40	U	H5	—	1	7350234
E8151/2	1/2	13	4.331	.906	.367	.273	.440	4	10.80	27/64	H5	—	1	7350235
E8155/8	5/8	11	4.331	.906	.480	.358	.560	4	13.50	17/32	H5	—	1	7350236
E8153/4	3/4	10	4.921	1.181	.590	.439	.690	4	16.50	21/32	H5	—	1	7350237
E8151	1"	8	6.299	1.417	.800	.597	.810	4	22.25	7/8	H6	—	1	7350239

E808

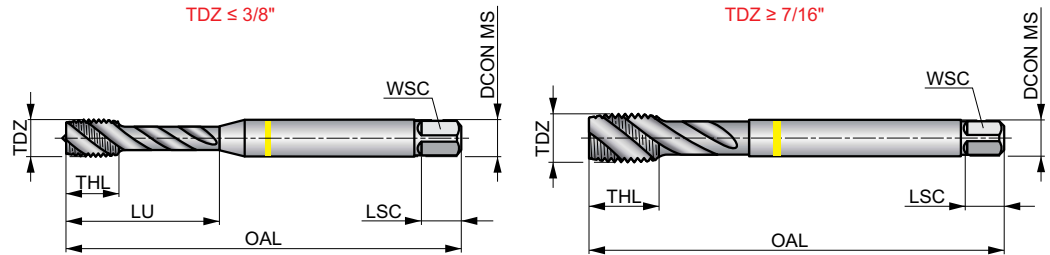


Yellow SHARK 40° Spiral Flute Tap, UNC, DIN/ANSI Standard

Spiral flute tap for low carbon, alloyed steel and non-ferrous material. With a constant rake angle to prevent nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	2B
	2xD	HSS-E PM
C 2-3		
λ 40°	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 151	P1.2 ■ 171	P1.3 ■ 177	P2.1 ■ 131	P2.2 ■ 115	P2.3 ■ 102	P3.1 ■ 79	P3.2 ■ 62	P4.1 ■ 46	N3.1 ■ 197	N3.2 ■ 118	N3.3 ■ 49
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Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E8084-40	4	40	2.205	.256	.141	.108	.236	3	2.35	N43	H2	.709	1	7350510
E8086-32	6	32	2.205	.256	.141	.108	.190	3	2.85	N36	H2	.787	1	7350511
E8088-32	8	32	2.480	.276	.168	.129	.250	3	3.50	N29	H3	.827	1	7350512
E80810-24	10	24	2.756	.315	.194	.150	.250	3	3.90	N25	H3	1.102	1	7350513
E8081/4	1/4	20	3.150	.394	.255	.189	.310	3	5.10	N7	H5	.984	1	7350514
E8085/16	5/16	18	3.543	.472	.318	.236	.380	3	6.60	F	H5	1.339	1	7350515
E8083/8	3/8	16	3.937	.591	.381	.284	.440	3	8.00	5/16	H4	1.535	1	7350516
E8087/16	7/16	14	3.937	.591	.323	.240	.410	3	9.40	U	H5	—	1	7350517
E8081/2	1/2	13	4.331	.709	.367	.273	.440	3	10.80	27/64	H5	—	1	7350518
E8085/8	5/8	11	4.331	.787	.480	.358	.560	4	13.50	17/32	H5	—	1	7350519
E8083/4	3/4	10	4.921	.984	.590	.439	.690	4	16.50	21/32	H5	—	1	7350520
E8087/8	7/8	9	5.512	.984	.697	.520	.750	4	19.50	49/64	H6	—	1	7350521
E8081	1"	8	6.299	1.181	.800	.597	.810	4	22.25	7/8	H6	—	1	7350522

E810

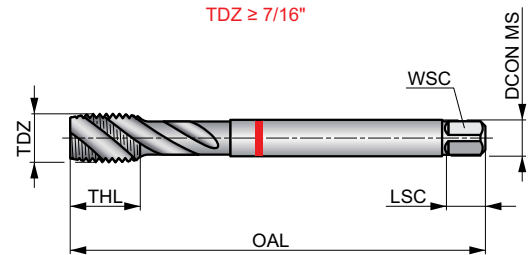
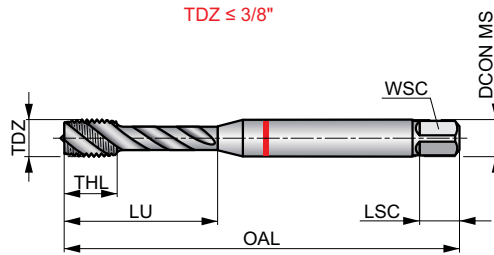


Red SHARK 45° Spiral Flute Tap, UNC, DIN/ANSI Standard

High performance spiral flute tap for high strength steel, with back taper and constant rake to avoid jamming and nesting in blind hole applications. HSS-E-PM improves tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	2B
	2.5xD	HSS-E PM



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■ 85	■ 62	■ 52	■ 46	■ 39	■ 30	■ 7	■ 10	■ 7	■ 7

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E8104-40	4	40	2.205	.256	.141	.108	.236	3	2.35	N43	H2	.709	1	7350430
E8106-32	6	32	2.205	.256	.141	.108	.190	3	2.85	N36	H2	.787	1	7350431
E8108-32	8	32	2.480	.276	.168	.129	.250	3	3.50	N29	H3	.827	1	7350432
E81010-24	10	24	2.756	.315	.194	.150	.250	3	3.90	N25	H3	1.102	1	7350433
E8101/4	1/4	20	3.150	.394	.255	.189	.310	3	5.10	N7	H5	.984	1	7350434
E8105/16	5/16	18	3.543	.472	.318	.236	.380	3	6.60	F	H5	1.339	1	7350435
E8103/8	3/8	16	3.937	.591	.381	.284	.440	3	8.00	5/16	H4	1.535	1	7350436
E8107/16	7/16	14	3.937	.591	.323	.240	.410	3	9.40	U	H5	–	1	7350437
E8101/2	1/2	13	4.331	.709	.367	.273	.440	3	10.80	27/64	H5	–	1	7350438
E8105/8	5/8	11	4.331	.787	.480	.358	.560	4	13.50	17/32	H5	–	1	7350439
E8103/4	3/4	10	4.921	.984	.590	.439	.690	4	16.50	21/32	H5	–	1	7350440
E8107/8	7/8	9	5.512	.984	.697	.520	.750	4	19.50	49/64	H6	–	1	7350441
E8101	1"	8	6.299	1.181	.800	.597	.810	4	22.25	7/8	H6	–	1	7350442

E805

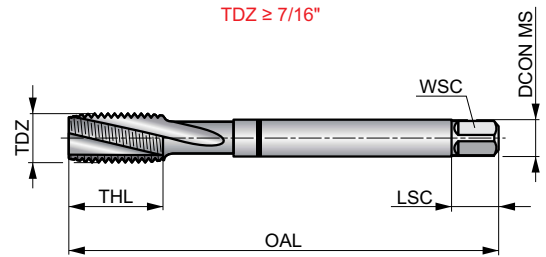
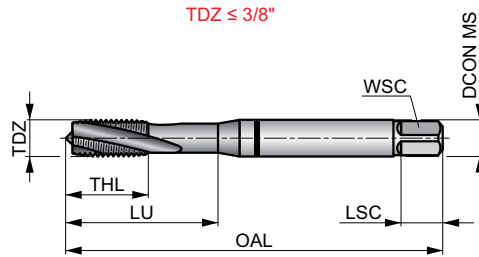


Black SHARK 15° Spiral Flute Tap, UNC, DIN/ANSI Standard

High performance spiral flute tap for efficient blind hole tapping in high strength steels and titanium alloys. The 15° slow spiral draws chips out of the hole, yet without weakening the cutting edge, as higher spiral taps would. HSS-E-PM substrate with TiAlN-Top coating for superior results in highly productive applications.

SHARK

	DIN ANSI	2BX
	1.5×D	HSS-E PM
	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 52	■ 39	■ 30	■ 39	■ 23	■ 13	■ 7	■ 20

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E8054-40	4	40	2.205	.472	.141	.108	.190	3	2.35	N43	H2	.827	1	7812126
E8056-32	6	32	2.480	.551	.168	.129	.250	3	2.85	N36	H2	.866	1	7812127
E8058-32	8	32	2.756	.610	.194	.150	.250	3	3.50	N29	H3	1.102	1	7812128
E80510-24	10	24	3.150	.669	.255	.189	.310	3	3.90	N25	H3	1.024	1	7812129
E8051/4	1/4	20	3.543	.807	.318	.236	.380	3	5.10	N7	H5	1.378	1	7812130
E8055/16	5/16	18	3.937	.906	.381	.236	.440	3	6.60	F	H5	1.535	1	7812131
E8053/8	3/8	16	3.937	.787	.381	.236	.440	3	8.00	5/16	H5	1.535	1	7812132
E8057/16	7/16	14	3.937	.787	.323	.240	.410	4	9.40	U	H5	—	1	7812133
E8051/2	1/2	13	4.331	.906	.367	.273	.440	4	10.80	27/64	H5	—	1	7812134
E8055/8	5/8	11	4.331	.906	.480	.358	.560	4	13.50	17/32	H5	—	1	7812135
E8053/4	3/4	10	4.921	1.181	.590	.440	.690	4	16.50	21/32	H5	—	1	7812136

E812

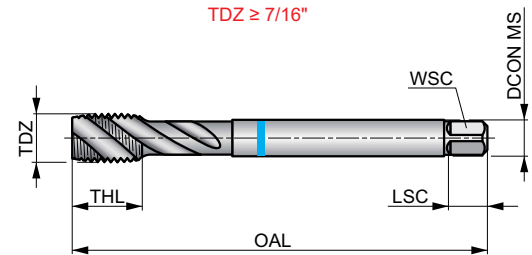
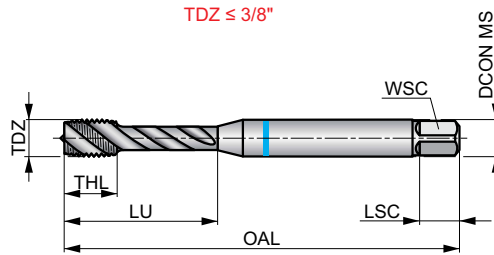


Blue SHARK 40° Spiral Flute Tap, UNC, DIN/ANSI Standard

High performance spiral flute tap for stainless steel, with back taper and constant rake angle to avoid jamming and nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	2B 3B
	2.5xD	HSS-E PM



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
■49	■43	■33	■26	■59	■49	■52	■43	■36	■36	■30	■26	■16	■13

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E8124-40	4	40	2.205	.256	.141	.108	.236	3	2.35	N43	H2	.709	1	7350335
E8126-32	6	32	2.205	.256	.141	.108	.190	3	2.80	N36	H3	.787	1	7350336
E8128-32	8	32	2.480	.276	.168	.129	.250	3	3.50	N29	H3	.827	1	7350337
E81210-24	10	24	2.756	.315	.194	.150	.250	3	3.90	N25	H3	1.102	1	7350338
E8121/4H5	1/4	20	3.150	.394	.255	.189	.310	3	5.10	N7	H5	.984	1	7350339
E8121/4H3	1/4	20	3.150	.394	.255	.189	.310	3	5.10	N7	H3	.984	1	7350340
E8125/16H5	5/16	18	3.543	.472	.318	.236	.380	3	6.60	F	H5	1.339	1	7350341
E8125/16H3	5/16	18	3.543	.472	.318	.236	.380	3	6.60	F	H3	1.339	1	7350342
E8123/8H5	3/8	16	3.937	.591	.381	.284	.440	3	8.00	5/16	H5	1.535	1	7350343
E8123/8H3	3/8	16	3.937	.591	.381	.284	.440	3	8.00	5/16	H3	1.535	1	7350344
E8127/16	7/16	14	3.937	.591	.323	.240	.410	4	9.40	U	H5	-	1	7350345
E8121/2H5	1/2	13	4.331	.709	.367	.273	.440	4	10.70	27/64	H5	-	1	7350346
E8121/2H3	1/2	13	4.331	.709	.367	.273	.440	4	10.70	27/64	H3	-	1	7350347
E8125/8H5	5/8	11	4.331	.787	.480	.358	.560	4	13.50	17/32	H5	-	1	7350348
E8125/8H3	5/8	11	4.331	.787	.480	.358	.560	4	13.50	17/32	H3	-	1	7350349
E8123/4H5	3/4	10	4.921	.984	.590	.439	.690	4	16.50	21/32	H5	-	1	7350350
E8123/4H3	3/4	10	4.921	.984	.590	.439	.690	4	16.50	21/32	H3	-	1	7350351
E8127/8H6	7/8	9	5.512	.984	.697	.520	.750	4	19.50	49/64	H6	-	1	7350352
E8127/8H4	7/8	9	5.512	.984	.697	.520	.750	4	19.50	49/64	H4	-	1	7350353
E8121H6	1"	8	6.299	1.181	.800	.597	.810	4	22.25	7/8	H6	-	1	7350354
E8121H4	1"	8	6.299	1.181	.800	.597	.810	4	22.25	7/8	H4	-	1	7350355

E909

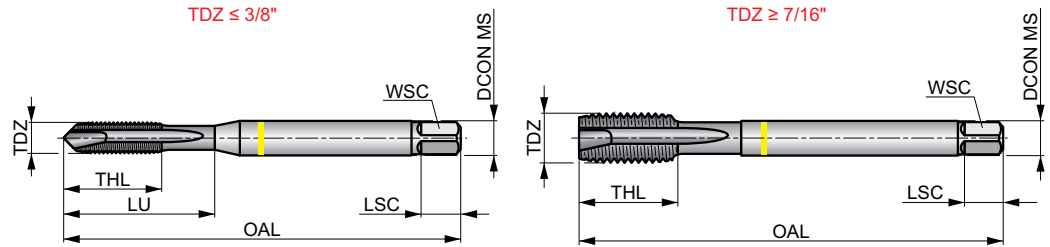


Yellow SHARK Spiral Point Tap, UNF, DIN/ANSI Standard

Spiral point tap for through holes only. Designed for low carbon, alloyed steel and non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2B
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 157	P1.2 ■ 180	P1.3 ■ 187	P2.1 ■ 138	P2.2 ■ 121	P2.3 ■ 108	P3.1 ■ 82	P3.2 ■ 66	P4.1 ■ 49	N3.1 ■ 207	N3.2 ■ 125	N3.3 ■ 52
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Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E90910-32	10	32	2.756	.551	.194	.150	.250	3	4.10	N21	H3	1.102	1	7350482
E9091/4	1/4	28	3.150	.591	.255	.189	.310	3	5.50	N3	H4	.984	1	7350483
E9095/16	5/16	24	3.543	.709	.318	.236	.380	3	6.90	I	H4	1.339	1	7350484
E9093/8	3/8	24	3.543	.787	.381	.284	.440	3	8.50	Q	H4	1.476	1	7350485
E9097/16	7/16	20	3.937	.787	.323	.240	.410	3	9.90	25/64	H5	—	1	7350486
E9091/2	1/2	20	3.937	.827	.367	.273	.440	3	11.50	29/64	H5	—	1	7350487
E9095/8	5/8	18	3.937	.827	.480	.358	.560	3	14.50	37/64	H5	—	1	7350488
E9093/4	3/4	16	4.331	.906	.590	.439	.690	3	17.50	11/16	H5	—	1	7350489
E9097/8	7/8	14	4.921	.906	.697	.520	.750	4	20.40	13/16	H6	—	1	7350490

E911

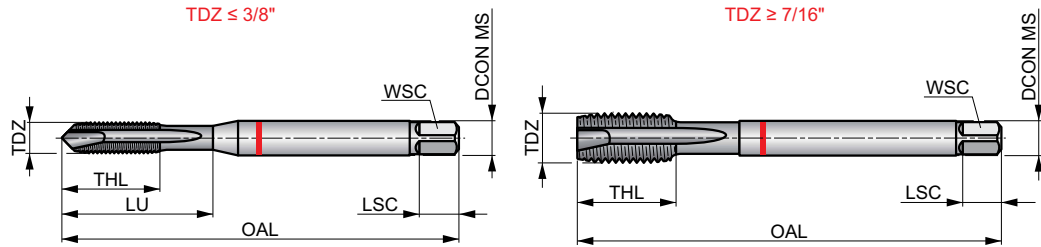


Red SHARK, Spiral Point Tap, UNF, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for high strength steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2B
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■ 89	■ 66	■ 56	■ 49	■ 43	■ 33	■ 10	■ 13	■ 10	■ 10

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E91110-32	10	32	2.756	.551	.194	.150	.250	3	4.10	N21	H3	1.102	1	7350404
E91111/4	1/4	28	3.150	.591	.255	.189	.310	3	5.50	N3	H4	.984	1	7350405
E91115/16	5/16	24	3.543	.709	.318	.236	.380	3	6.90	I	H4	1.339	1	7350406
E91113/8	3/8	24	3.543	.787	.318	.284	.440	3	8.50	Q	H4	1.476	1	7350407
E91117/16	7/16	20	3.937	.787	.323	.240	.410	3	9.90	25/64	H5	-	1	7350408
E91111/2	1/2	20	3.937	.827	.367	.273	.440	3	11.50	29/64	H5	-	1	7350409
E91115/8	5/8	18	3.937	.827	.480	.358	.560	3	14.50	37/64	H5	-	1	7350410
E91113/4	3/4	16	4.331	.906	.590	.439	.690	4	17.50	11/16	H5	-	1	7350411
E91117/8	7/8	14	4.921	.906	.697	.520	.750	4	20.40	13/16	H6	-	1	7350412
E9111	1"	12	5.512	1.063	.800	.597	.810	4	23.25	59/64	H6	-	1	7350413

E916

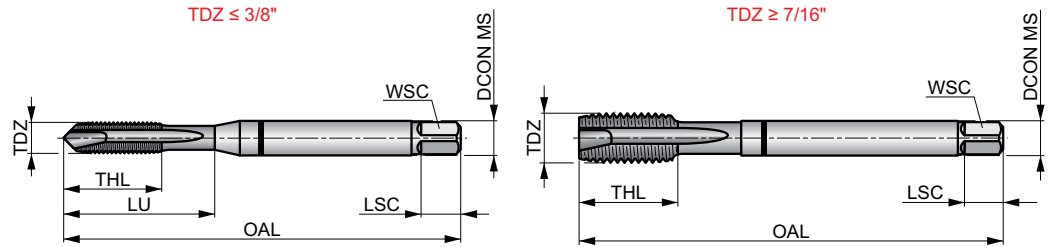


Black SHARK Spiral Point Tap, UNF, DIN/ANSI Standard

High performance spiral point tap for through holes only, specifically for high strength steel and titanium alloys. HSS-E-PM to improve tool life, predictability, speed and reduce chipping. TiAlN-Top coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2BX
	2.5xD	HSS-E-PM
	B 3.5-5	
	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 56	■ 43	■ 33	■ 43	■ 26	■ 16	■ 10	■ 23

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E91610-32	10	32	3.150	.669	.255	.189	.310	3	4.10	N21	H3	1.024	1	7812107
E9161/4	1/4	28	3.543	.807	.318	.236	.380	3	5.50	N3	H4	1.339	1	7812108
E9165/16	5/16	24	3.937	.906	.381	.284	.440	3	6.90	I	H4	1.535	1	7812109
E9163/8	3/8	24	3.937	.787	.381	.284	.440	3	8.50	Q	H4	1.535	1	7812110
E9161/2	1/2	20	4.331	.906	.367	.273	.440	4	11.50	29/64	H5	-	1	7812112
E9165/8	5/8	18	4.331	.906	.480	.358	.560	4	14.50	37/64	H5	-	1	7812113
E9163/4	3/4	16	4.921	1.181	.590	.440	.690	4	17.50	11/16	H5	-	1	7812114

E913

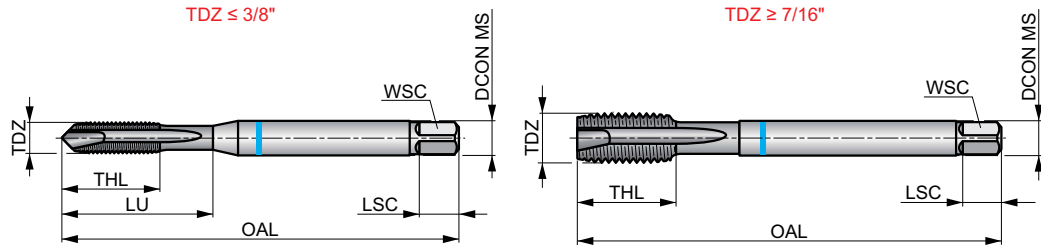


Blue SHARK Spiral Point Tap, UNF, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for stainless steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2B 3B
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ■52	P3.3 ■46	P4.1 ■36	P4.2 ■30	M1.1 ■62	M1.2 ■52	M2.1 ■56	M2.2 ■46	M2.3 ■39	M3.1 ■39	M3.2 ■33	M3.3 ■30	M4.1 ■20	M4.2 ■16
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Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E91310-32	10	32	2.756	.551	.194	.150	.250	3	4.10	N21	H3	1.102	1	7350299
E9131/4H5	1/4	28	3.150	.591	.255	.189	.310	3	5.50	N3	H5	.984	1	7350300
E9131/4H3	1/4	28	3.150	.591	.255	.189	.310	3	5.50	N3	H3	.984	1	7350301
E9135/16H4	5/16	24	3.543	.709	.318	.236	.380	3	6.90	I	H4	1.339	1	7350302
E9135/16H3	5/16	24	3.543	.709	.318	.236	.380	3	6.90	I	H3	1.339	1	7350303
E9133/8H4	3/8	24	3.543	.787	.381	.284	.440	3	8.50	Q	H4	1.476	1	7350304
E9133/8H3	3/8	24	3.543	.787	.381	.284	.440	3	8.50	Q	H3	1.476	1	7350305
E9137/16	7/16	20	3.937	.787	.323	.240	.410	4	9.90	25/64	H5	-	1	7350306
E9131/2H5	1/2	20	3.937	.827	.367	.273	.440	4	11.50	29/64	H5	-	1	7350307
E9131/2H3	1/2	20	3.937	.827	.367	.273	.440	4	11.50	29/64	H3	-	1	7350308
E9135/8H3	5/8	18	3.937	.827	.480	.358	.560	4	14.50	37/64	H3	-	1	7350310
E9133/4H3	3/4	16	4.331	.906	.590	.439	.690	4	17.50	11/16	H3	-	1	7350312
E9137/8H6	7/8	14	4.921	.906	.697	.520	.750	4	20.40	13/16	H6	-	1	7350313
E9131H6	1"	12	5.512	1.063	.800	.597	.810	4	23.25	59/64	H6	-	1	7350315

E914

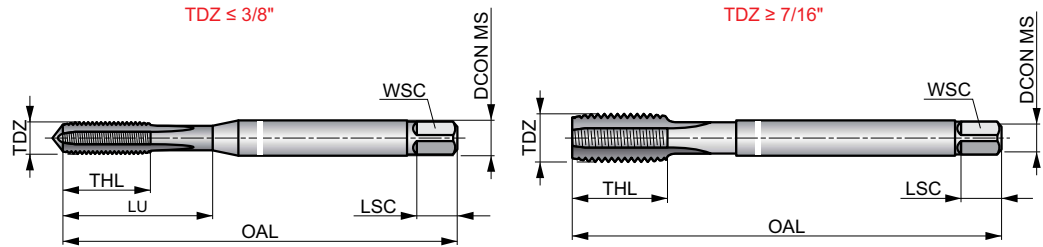


White SHARK Straight Flute Tap, UNF, DIN/ANSI Standard

High performance straight flute tap. Designed for cast iron and high strength non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating for superior result, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	2BX
	2xD	HSS-E PM
C 2-3		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 98	K1.2 ■ 72	K1.3 ■ 56	K2.1 ■ 141	K2.2 ■ 115	K2.3 ▣ 92	K3.1 ■ 125	K3.2 ■ 95	K3.3 ▣ 79	K4.1 ■ 115	K4.2 ■ 89	K4.3 ▣ 66	K4.4 ▣ 56	K4.5 ▣ 46
K5.1 ■ 131	K5.2 ■ 98	K5.3 ▣ 75	N2.3 ▣ 66	N3.2 ▣ 98	N4.2 ■ 49								

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E91410-32	10	32	2.756	.551	.194	.150	.250	4	4.10	N21	H4	1.102	1	7350222
E9141/4	1/4	28	3.150	.591	.255	.189	.310	4	5.50	N3	H5	.984	1	7350223
E9145/16	5/16	24	3.543	.709	.318	.236	.380	4	6.90	I	H5	1.339	1	7350224
E9143/8	3/8	24	3.543	.787	.381	.284	.440	4	8.50	Q	H5	1.476	1	7350225
E9147/16	7/16	20	3.937	.787	.323	.240	.410	4	9.90	25/64	H5	-	1	7350226
E9141/2	1/2	20	3.937	.827	.367	.273	.440	4	11.50	29/64	H5	-	1	7350227
E9145/8	5/8	18	3.937	.827	.480	.358	.560	4	14.50	37/64	H5	-	1	7350228
E9143/4	3/4	16	4.331	.906	.590	.439	.690	4	17.50	11/16	H6	-	1	7350229
E9147/8	7/8	14	4.921	.906	.697	.520	.750	4	20.40	13/16	H6	-	1	7350230

E915

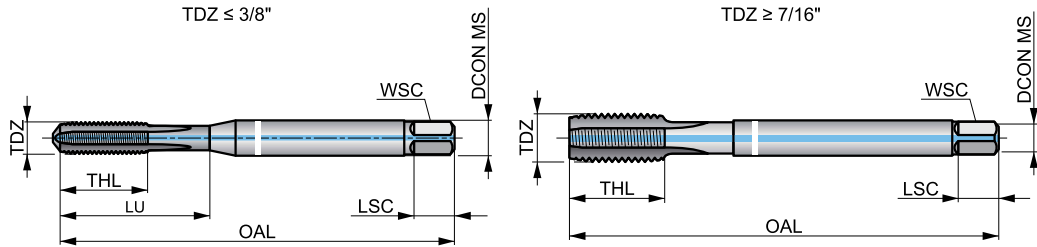


White SHARK Straight Flute Tap, UNF, DIN/ANSI Standard, Through Coolant

High performance straight flute tap for highly productive applications in cast iron and high strength non-ferrous material. Similar to the E914 series, but in coolant thru design which allows even higher tapping speeds and eliminates the problems associated with inadequate coolant in horizontal or deep hole applications.

SHARK

	DIN ANSI	2BX
	2.5xD	HSS-E PM
E 1.5-2		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 95	K1.2 ■ 69	K1.3 ■ 52	K2.1 ■ 135	K2.2 ■ 105	K2.3 ▣ 89	K3.1 ■ 118	K3.2 ■ 92	K3.3 ▣ 75	K4.1 ■ 108	K4.2 ■ 85	K4.3 ▣ 62	K4.4 ▣ 52	K4.5 ▣ 43
K5.1 ■ 125	K5.2 ■ 92	K5.3 ▣ 72	N2.3 ▣ 62	N3.2 ▣ 92	N4.2 ■ 46								

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E9155/16	5/16	24	3.543	.787	.318	.236	.380	4	6.90	I	H5	1.339	1	7350241
E9153/8	3/8	24	3.543	.787	.381	.284	.440	4	8.50	Q	H5	1.476	1	7350242
E9157/16	7/16	20	3.937	.787	.323	.240	.410	4	9.90	25/64	H5	—	1	7350243
E9151/2	1/2	20	3.937	.827	.367	.273	.440	4	11.50	29/64	H5	—	1	7350244
E9155/8	5/8	18	3.937	.827	.480	.358	.560	4	14.50	37/64	H5	—	1	7350245
E9153/4	3/4	16	4.331	.906	.590	.439	.690	4	17.50	11/16	H5	—	1	7350246

E908

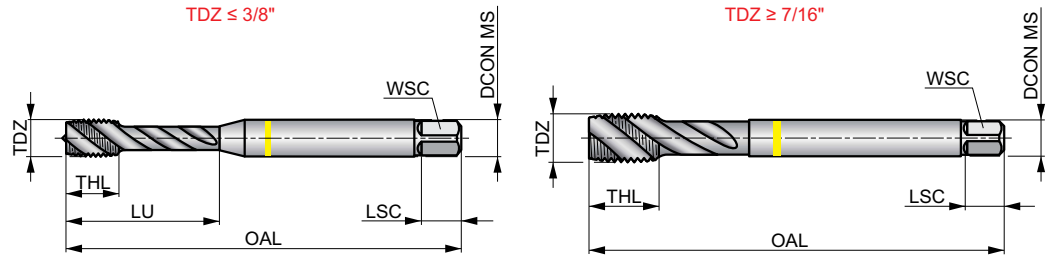


Yellow SHARK 40° Spiral Flute Tap, UNF, DIN/ANSI Standard

Spiral flute tap for low carbon, alloyed steel and non-ferrous material. With a constant rake angle to prevent nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	2B
	2xD	HSS-E PM
	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 151	P1.2 ■ 171	P1.3 ■ 177	P2.1 ■ 131	P2.2 ■ 115	P2.3 ▣ 102	P3.1 ▣ 79	P3.2 ▣ 62	P4.1 ▣ 46	N3.1 ■ 197	N3.2 ■ 118	N3.3 ▣ 49
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Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E90810-32	10	32	2.756	.315	.194	.150	.250	3	4.10	N21	H3	1.102	1	7350523
E9081/4	1/4	28	3.150	.394	.255	.189	.310	3	5.50	N3	H4	.984	1	7350524
E9085/16	5/16	24	3.543	.472	.318	.236	.380	3	6.90	I	H4	1.339	1	7350525
E9083/8	3/8	24	3.543	.591	.381	.284	.440	3	8.50	Q	H4	1.476	1	7350526
E9087/16	7/16	20	3.937	.591	.323	.240	.410	3	9.90	25/64	H5	—	1	7350527
E9081/2	1/2	20	3.937	.709	.367	.273	.440	3	11.50	29/64	H5	—	1	7350528
E9085/8	5/8	18	3.937	.591	.480	.358	.560	4	14.50	37/64	H5	—	1	7350529
E9083/4	3/4	16	4.331	.984	.590	.439	.690	4	17.50	11/16	H5	—	1	7350530

E910

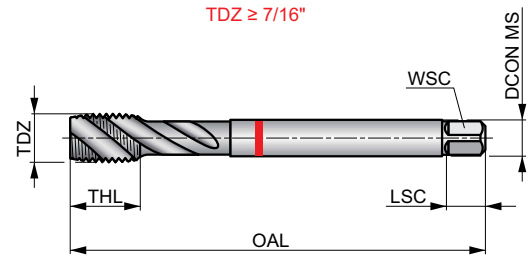
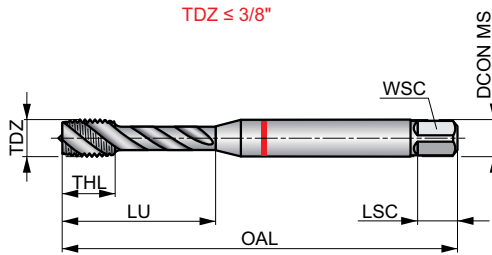


Red SHARK 45° Spiral Flute Tap, UNF, DIN/ANSI Standard

High performance spiral flute tap for high strength steel, with back taper and constant rake to avoid jamming and nesting in blind hole applications. HSS-E-PM improves tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	2B
	2.5xD	HSS-E PM
C 2-3		R
λ 45°		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■ 85	■ 62	■ 52	■ 46	■ 39	▣ 30	▣ 7	▣ 10	▣ 7	▣ 7

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E91010-32	10	32	2.756	.315	.194	.150	.250	3	4.10	N21	H3	1.102	1	7350443
E9101/4	1/4	28	3.150	.394	.255	.189	.310	3	5.50	N3	H4	.984	1	7350444
E9105/16	5/16	24	3.543	.472	.318	.236	.380	3	6.90	I	H4	1.339	1	7350445
E9103/8	3/8	24	3.543	.591	.381	.284	.440	3	8.50	Q	H4	1.476	1	7350446
E9107/16	7/16	20	3.937	.591	.323	.240	.410	3	9.90	25/64	H5	-	1	7350447
E9101/2	1/2	20	3.937	.709	.367	.273	.440	3	11.50	29/64	H5	-	1	7350448
E9105/8	5/8	18	3.937	.591	.480	.358	.560	4	14.50	37/64	H5	-	1	7350449
E9103/4	3/4	16	4.331	.984	.590	.439	.690	4	17.50	11/16	H5	-	1	7350450
E9107/8	7/8	14	4.921	.984	.697	.520	.750	4	20.40	13/16	H6	-	1	7350451
E9101	1"	12	5.512	1.063	.800	.597	.810	4	23.25	59/64	H6	-	1	7350452

E905

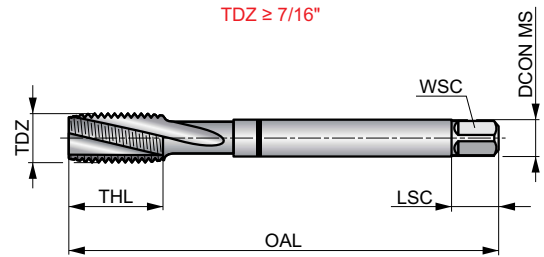
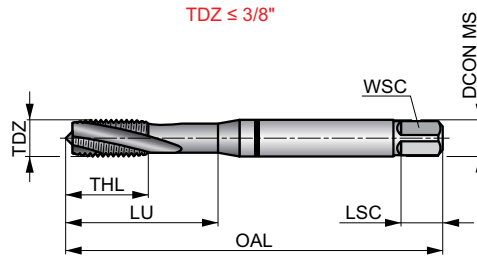


Black SHARK 15° Spiral Flute Tap, UNF, DIN/ANSI Standard

High performance spiral flute tap for efficient blind hole tapping in high strength steels and titanium alloys. The 15° slow spiral draws chips out of the hole, yet without weakening the cutting edge, as higher spiral taps would. HSS-E-PM substrate with TiAlN-Top coating for superior results in highly productive applications.

SHARK

	DIN ANSI	2BX
	1.5×D	HSS-E PM
	C 2-3	
	λ 15°	TiAlN Top



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 52	■ 39	■ 30	■ 39	■ 23	■ 13	■ 7	■ 20

Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)		
E90510-32	10	32	3.150	.669	.255	.189	.310	3	4.10	N21	H3	1.024	1	7812137
E9051/4	1/4	28	3.543	.807	.318	.236	.380	3	5.50	N3	H4	1.339	1	7812138
E9055/16	5/16	24	3.937	.906	.381	.284	.440	3	6.90	I	H4	1.535	1	7812139
E9053/8	3/8	24	3.937	.787	.381	.284	.440	3	8.50	Q	H4	1.535	1	7812140
E9057/16	7/16	20	3.937	.787	.325	.240	.440	4	9.90	25/64	H5	—	1	7812141
E9051/2	1/2	20	4.331	.906	.367	.273	.440	4	11.50	29/64	H5	—	1	7812142
E9055/8	5/8	18	4.331	.906	.480	.358	.560	4	14.50	37/64	H5	—	1	7812143

E912

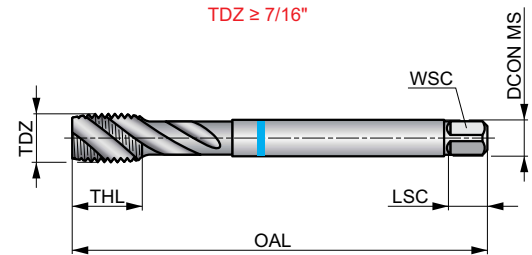
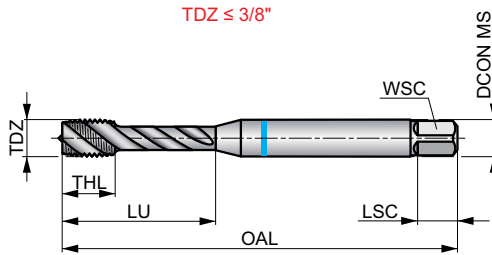


Blue SHARK 40° Spiral Flute Tap, UNF, DIN/ANSI Standard

High performance spiral flute tap for stainless steel, with back taper and constant rake angle to avoid jamming and nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	2B 3B
	2.5xD	HSS-E PM



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ■49	P3.3 ■43	P4.1 ■33	P4.2 ■26	M1.1 ■59	M1.2 ■49	M2.1 ■52	M2.2 ■43	M2.3 ■36	M3.1 ■36	M3.2 ■30	M3.3 ■26	M4.1 ■16	M4.2 ■13
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Sizes up to 3/8" have male centers on both ends. Sizes over 3/8" have female centers on both ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E91210-32	10	32	2.756	.315	.194	.150	.250	3	4.10	N21	H3	1.102	1	7350356
E9121/4H5	1/4	28	3.150	.394	.255	.189	.310	3	5.50	N3	H5	.984	1	7350357
E9121/4H3	1/4	28	3.150	.394	.255	.189	.310	3	5.50	N3	H3	.984	1	7350358
E9125/16H4	5/16	24	3.543	.472	.318	.236	.380	3	6.90	I	H4	1.339	1	7350359
E9125/16H3	5/16	24	3.543	.472	.318	.236	.380	3	6.90	I	H3	1.339	1	7350360
E9123/8H4	3/8	24	3.543	.591	.318	.284	.440	3	8.50	Q	H4	1.476	1	7350361
E9123/8H3	3/8	24	3.543	.591	.318	.284	.440	3	8.50	Q	H3	1.476	1	7350362
E9127/16	7/16	20	3.937	.591	.323	.240	.410	4	9.90	25/64	H5	-	1	7350363
E9121/2H5	1/2	20	3.937	.709	.367	.273	.440	4	11.50	29/64	H5	-	1	7350364
E9121/2H3	1/2	20	3.937	.709	.367	.273	.440	4	11.50	29/64	H3	-	1	7350365
E9125/8H5	5/8	18	3.937	.591	.480	.358	.560	4	14.50	37/64	H5	-	1	7350366
E9125/8H3	5/8	18	3.937	.591	.480	.358	.560	4	14.50	37/64	H3	-	1	7350367
E9123/4H5	3/4	16	4.331	.984	.590	.439	.690	4	17.50	11/16	H5	-	1	7350368
E9123/4H3	3/4	16	4.331	.984	.590	.439	.690	4	17.50	11/16	H3	-	1	7350369
E9121H6	1"	12	5.512	1.063	.800	.597	.810	4	23.25	59/64	H6	-	1	7350372

E625

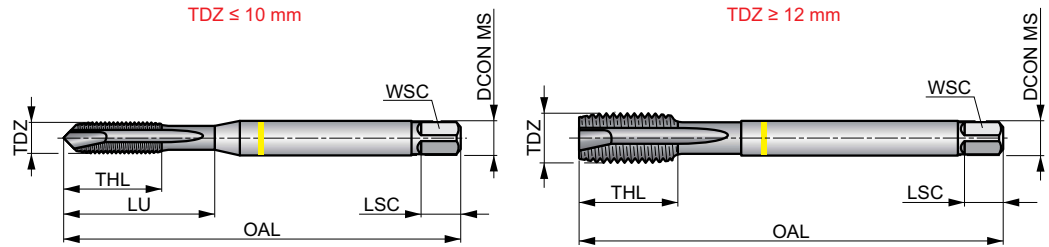


Yellow SHARK Spiral Point Tap, Metric, DIN/ANSI Standard

Spiral point tap for through holes only. Designed for low carbon, alloyed steel and non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5×D	HSS-E PM
	3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 157	P1.2 ■ 180	P1.3 ■ 187	P2.1 ■ 138	P2.2 ■ 121	P2.3 ■ 108	P3.1 ■ 82	P3.2 ■ 66	P4.1 ■ 49	N3.1 ■ 207	N3.2 ■ 125	N3.3 ■ 52
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Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E625M4	4	0.70	63.0	12	.168	.129	6	3	3.30	N30	D4	21.00	1	7350492
E625M5	5	0.80	70.0	13	.194	.150	6	3	4.20	N19	D4	25.00	1	7350493
E625M6	6	1.00	80.0	15	.255	.189	8	3	5.00	N9	D5	30.00	1	7350494
E625M8	8	1.25	90.0	18	.318	.236	10	3	6.80	H	D5	35.00	1	7350495
E625M10	10	1.50	100.0	20	.381	.284	11	3	8.50	Q	D6	39.00	1	7350496
E625M12	12	1.75	110.0	23	.367	.273	11	3	10.30	Y	D6	—	1	7350497
E625M16	16	2.00	110.0	23	.480	.358	14	3	14.00	35/64	D7	—	1	7350499
E625M20	20	2.50	140.0	30	.652	.487	18	3	17.50	11/16	D7	—	1	7350501
E625M24	24	3.00	160.0	38	.760	.567	19	4	21.00	53/64	D8	—	1	7350502

E627

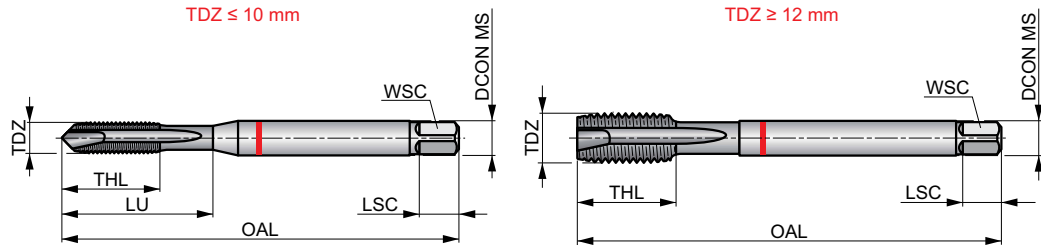


Red SHARK, Spiral Point Tap, Metric, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for high strength steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■ 89	■ 66	■ 56	■ 49	■ 43	■ 33	■ 10	■ 13	■ 10	■ 10

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E627M3	3	0.50	56.0	9	.141	.108	5	3	2.50	N40	D3	18.00	1	7350414
E627M4	4	0.70	63.0	12	.168	.129	6	3	3.30	N30	D4	21.00	1	7350415
E627M5	5	0.80	70.0	13	.194	.150	6	3	4.20	N19	D4	25.00	1	7350416
E627M6	6	1.00	80.0	15	.255	.189	8	3	5.00	N9	D5	30.00	1	7350417
E627M8	8	1.25	90.0	18	.318	.236	10	3	6.80	H	D5	35.00	1	7350418
E627M10	10	1.50	100.0	20	.381	.284	11	3	8.50	Q	D6	39.00	1	7350419
E627M12	12	1.75	110.0	23	.367	.273	11	3	10.30	Y	D6	—	1	7350420
E627M14	14	2.00	110.0	23	.429	.320	13	3	12.00	15/32	D7	—	1	7350421
E627M16	16	2.00	110.0	23	.480	.358	14	3	14.00	35/64	D7	—	1	7350422
E627M18	18	2.50	125.0	30	.542	.404	16	4	15.50	39/64	D7	—	1	7350423
E627M20	20	2.50	140.0	30	.652	.487	18	4	17.50	11/16	D7	—	1	7350424
E627M24	24	3.00	160.0	38	.760	.567	19	4	21.00	53/64	D8	—	1	7350425

E817

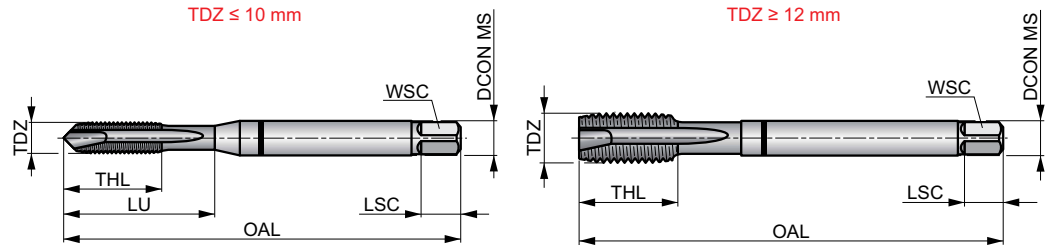


Black SHARK Spiral Point Tap, Metric, DIN/ANSI Standard

High performance spiral point tap for through holes only, specifically for high strength steel and titanium alloys. HSS-E-PM to improve tool life, predictability, speed and reduce chipping. TiAIN-Top coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6HX
	2.5×D	HSS-E PM
	B 3.5-5	
	TiAIN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 56	■ 43	■ 33	■ 43	■ 26	■ 16	■ 10	■ 23

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E817M3	3	0.50	63.0	15	.168	.129	6.35	3	2.50	N40	D3	22.00	1	7812115
E817M4	4	0.70	70.0	15.5	.194	.150	6.35	3	3.30	N30	D4	28.00	1	7812116
E817M5	5	0.80	80.0	17	.255	.189	7.95	3	4.20	N19	D4	26.00	1	7812117
E817M6	6	1.00	90.0	20.5	.318	.236	9.65	3	5.00	N9	D5	35.00	1	7812118
E817M8	8	1.25	100.0	23	.381	.284	11.1	3	6.80	H	D5	39.00	1	7812119
E817M10	10	1.50	100.0	20	.381	.284	11.1	3	8.50	Q	D6	38.00	1	7812120
E817M12	12	1.75	110.0	23	.367	.273	11.1	4	10.30	Y	D6	-	1	7812121

E629

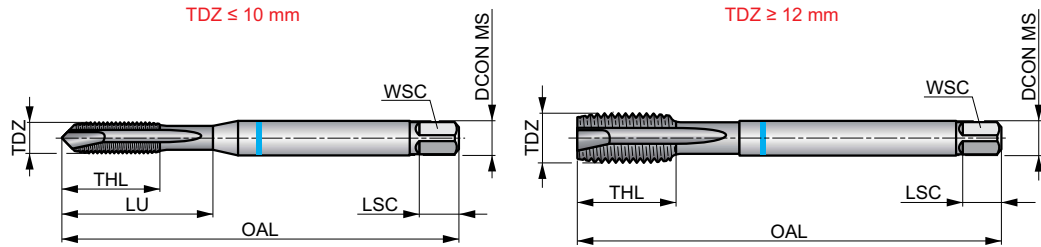


Blue SHARK Spiral Point Tap, Metric, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for stainless steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 52	P3.3 46	P4.1 36	P4.2 30	M1.1 62	M1.2 52	M2.1 56	M2.2 46	M2.3 39	M3.1 39	M3.2 33	M3.3 30	M4.1 20	M4.2 16
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Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E629M4	4	0.70	63.0	12	.168	.129	6	3	3.30	N30	D4	21.00	1	7350317
E629M5	5	0.80	70.0	13	.194	.150	6	3	4.20	N19	D4	25.00	1	7350318
E629M6	6	1.00	80.0	15	.255	.189	8	3	5.00	N9	D5	30.00	1	7350319
E629M8	8	1.25	90.0	18	.318	.236	10	3	6.80	H	D5	35.00	1	7350320
E629M10	10	1.50	100.0	20	.381	.284	11	3	8.50	Q	D6	39.00	1	7350321
E629M12	12	1.75	110.0	23	.367	.273	11	4	10.30	Y	D6	-	1	7350322
E629M16	16	2.00	110.0	23	.480	.358	14	4	14.00	35/64	D7	-	1	7350324
E629M18	18	2.50	125.0	30	.542	.404	16	4	15.50	39/64	D7	-	1	7350325
E629M20	20	2.50	140.0	30	.652	.487	18	4	17.50	11/16	D7	-	1	7350326
E629M24	24	3.00	160.0	38	.760	.567	19	4	21.00	53/64	D8	-	1	7350327

E630

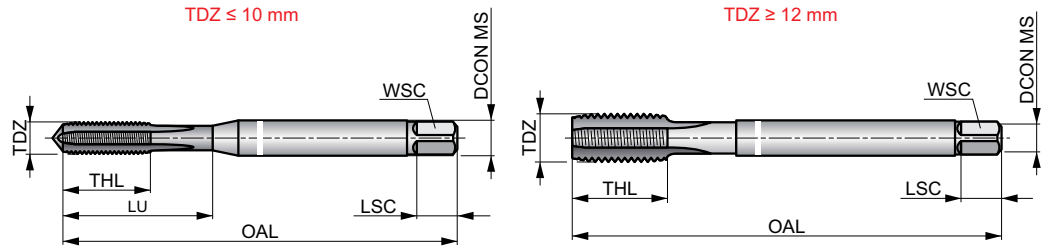


White SHARK Straight Flute Tap, Metric, DIN/ANSI Standard

High performance straight flute tap. Designed for cast iron and high strength non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating for superior result, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6HX
	2xD	HSS-E PM



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 98	K1.2 ■ 72	K1.3 ■ 56	K2.1 ■ 141	K2.2 ■ 115	K2.3 ▣ 92	K3.1 ■ 125	K3.2 ■ 95	K3.3 ▣ 79	K4.1 ■ 115	K4.2 ■ 89	K4.3 ▣ 66	K4.4 ▣ 56	K4.5 ▣ 46
K5.1 ■ 131	K5.2 ■ 98	K5.3 ▣ 75	N2.3 ▣ 66	N3.2 ▣ 98	N4.2 ■ 49								

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E630M6	6	1.00	80.0	15	.255	.189	8	4	5.00	N9	D5	30.00	1	7350250
E630M8	8	1.25	90.0	18	.318	.236	10	4	6.80	H	D5	35.00	1	7350251
E630M10	10	1.50	100.0	20	.381	.284	11	4	8.50	Q	D6	39.00	1	7350252
E630M12	12	1.75	110.0	23	.367	.273	11	4	10.30	Y	D6	—	1	7350253
E630M14	14	2.00	110.0	23	.429	.320	13	4	12.00	15/32	D7	—	1	7350254
E630M16	16	2.00	110.0	23	.480	.358	14	4	14.00	35/64	D7	—	1	7350255

E631

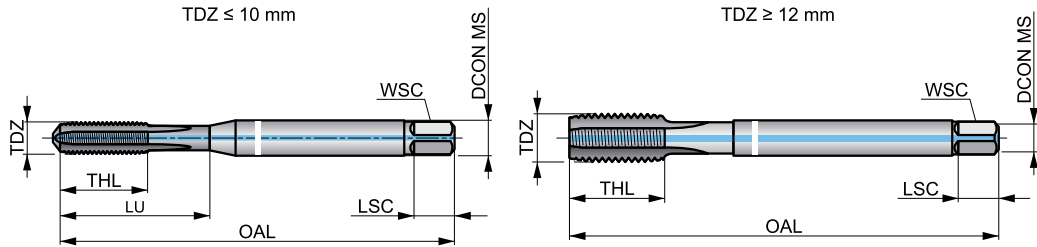


White SHARK Straight Flute Tap, Metric, DIN/ANSI Standard, Through Coolant

High performance straight flute tap for highly productive applications in cast iron and high strength non-ferrous material. Similar to the E630 series, but in coolant thru design which allows even higher tapping speeds and eliminates the problems associated with inadequate coolant in horizontal or deep hole applications.

SHARK

	DIN ANSI	6HX
	2.5xD	HSS-E PM
E 1.5-2		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 95	K1.2 ■ 69	K1.3 ■ 52	K2.1 ■ 135	K2.2 ■ 105	K2.3 ▣ 89	K3.1 ■ 118	K3.2 ■ 92	K3.3 ▣ 75	K4.1 ■ 108	K4.2 ■ 85	K4.3 ▣ 62	K4.4 ▣ 52	K4.5 ▣ 43
K5.1 ■ 125	K5.2 ■ 92	K5.3 ▣ 72	N2.3 ▣ 62	N3.2 ▣ 92	N4.2 ■ 46								

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E631M6	6	1.00	80.0	15	.255	.189	8	4	5.00	N9	D5	25.00	1	7350265
E631M10	10	1.50	100.0	20	.381	.284	11	4	8.50	Q	D6	39.00	1	7350267
E631M12	12	1.75	110.0	23	.367	.273	11	4	10.30	Y	D6	—	1	7350268
E631M16	16	2.00	110.0	23	.480	.358	14	4	14.00	35/64	D7	—	1	7350270
E631M24	24	3.00	160.0	38	.760	.567	19	4	21.00	53/64	D8	—	1	7350273

E297

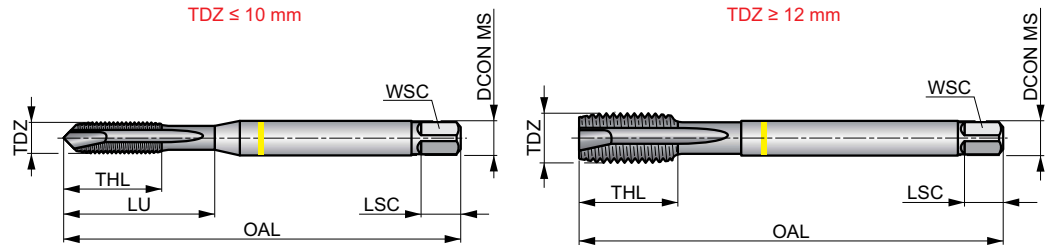


Yellow SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment provides consistency and process security. Hard chrome coated to increase the surface hardness and reduce built-up edge for increased performance and tool life.

SHARK

	DIN 371/376	6H
	2.5xD	HSS-E PM
	B 3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 79	P1.2 ■ 89	P1.3 ■ 92	P2.1 ■ 66	P2.2 ■ 59	P2.3 ■ 52	P3.1 ■ 49	P3.2 ■ 39	P4.1 ■ 30	N3.1 ■ 167	N3.2 ■ 98	N3.3 ■ 49
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Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E297M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6290566
E297M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	6290568
E297M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	6290569
E297M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6290570
E297M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6290571
E297M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6290537
E297M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	—	1	6290538
E297M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	—	1	6290539
E297M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	—	1	6290560
E297M18	18	2.50	125.0	30	14.00	11.00	14	3	15.50	—	1	6290561
E297M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	—	1	6290562
E297M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	—	1	6290563
E297M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	—	1	6290564
E297M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	—	1	6290565
E297M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	—	1	6290567

E255

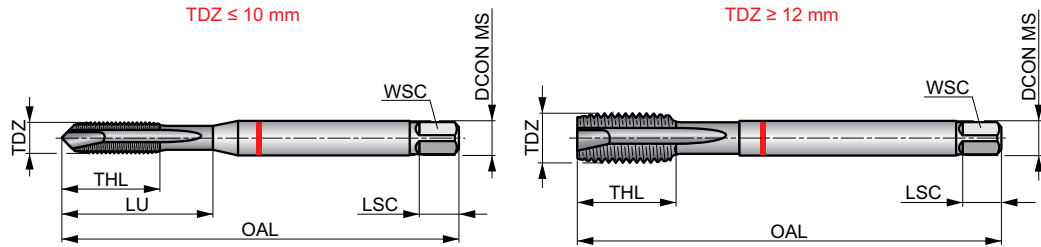


Red SHARK, Spiral Point Metric Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for medium to high strength steels. Unique HSS-E-PM steel with bright surface finish provide consistency and process security.

SHARK

	DIN 371/376	6HX
	2.5xD	HSS-E PM
B 3.5-5		
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ■ 36	P3.1 ■ 33	P3.2 ■ 26	P3.3 ■ 23	P4.1 ■ 20	P4.2 ■ 16	S1.2 ▣ 7	S2.1 ▣ 10	S3.1 ▣ 7	S4.1 ▣ 7
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E255M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6554481
E255M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	6554482
E255M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	6554483
E255M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6554484
E255M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6554485
E255M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6554486
E255M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6554487
E255M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	–	1	6554488
E255M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–	1	6554489
E255M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–	1	6554490

E256

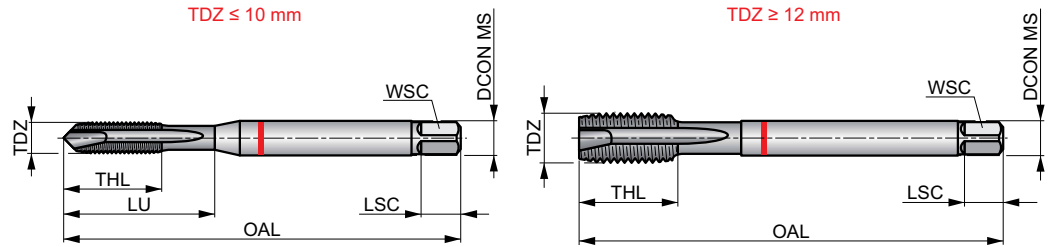


Red SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap with reinforced or reduced shank for medium to high strength steel. Unique HSS-E-PM substrate along with TiAlN-Top coating and edge treatment provide superior performance, consistency, extended tool life and higher process security.

SHARK

	DIN 371/376	6HX
	2.5×D	HSS-E PM
	B 3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ■ 89	P3.1 ■ 82	P3.2 ■ 66	P3.3 ■ 56	P4.1 ■ 49	P4.2 ■ 43	P4.3 ▣ 33	S1.2 ▣ 10	S2.1 ▣ 13	S3.1 ▣ 10	S4.1 ▣ 10
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E256M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6554491
E256M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	6554492
E256M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	6554493
E256M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6554494
E256M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6554495
E256M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6554496
E256M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6554497
E256M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–	1	6554498
E256M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–	1	6554499

E334

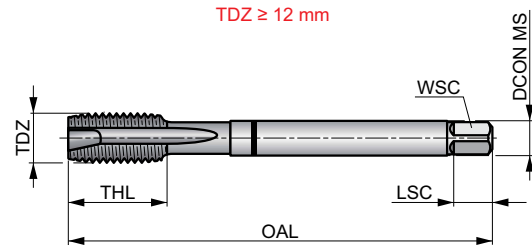
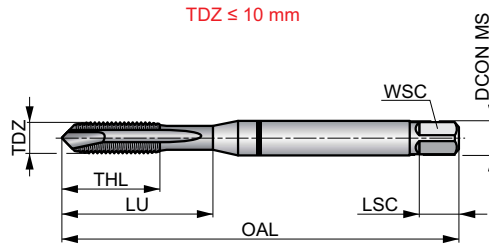


Black SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap with reinforced or reduced shank designed for efficient tapping in high strength steels and titanium alloys. Unique HSS-E-PM substrate, TiAIN-Top coating and an additional edge treatment provide high process security, superior performance, consistency and extended tool life.

SHARK

	DIN 	6HX
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3 ■ 56	P4.2 ■ 43	P4.3 ■ 33	S1.2 ■ 43	S1.3 ■ 26	S3.1 ■ 16	S3.2 ■ 10	H3.1 ■ 23
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E334M3	3	0.50	63.0	12	4.50	3.40	6	3	2.50	12.00	1	7798661
E334M4	4	0.70	70.0	17	6.00	4.90	8	3	3.30	17.00	1	7798662
E334M5	5	0.80	80.0	20	6.00	4.90	8	3	4.20	20.00	1	7798663
E334M6	6	1.00	90.0	24	8.00	6.20	9	3	5.00	24.00	1	7798664
E334M8	8	1.25	100.0	32	10.00	8.00	11	3	6.80	32.00	1	7798665
E334M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	7798666
E334M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–	1	7798667

E240

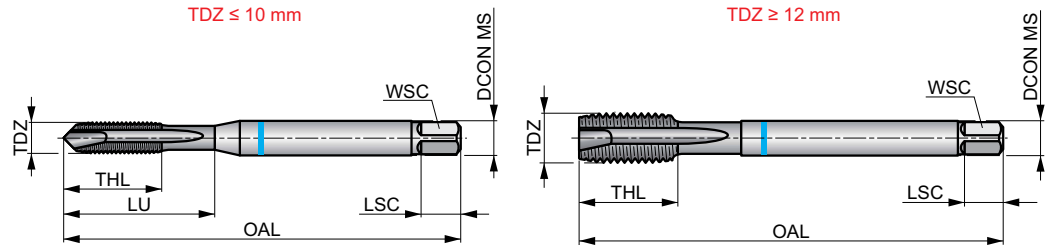


Blue SHARK Spiral Point Metric Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

	DIN 371/376	6H
	2.5xD	HSS-E-PM
	B 3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
■26	■33	■30	■23	■36	■30	■33	■26	■26	■23	■20	■16

Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E240M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6305831
E240M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	6305833
E240M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	6305834
E240M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6305835
E240M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6305836
E240M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6305822
E240M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	—	1	6305823
E240M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00	—	1	6305824
E240M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	—	1	6305825
E240M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	—	1	6305826
E240M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	—	1	6305827
E240M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	—	1	6305828
E240M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	—	1	6305829
E240M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	—	1	6305830
E240M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	—	1	6305832

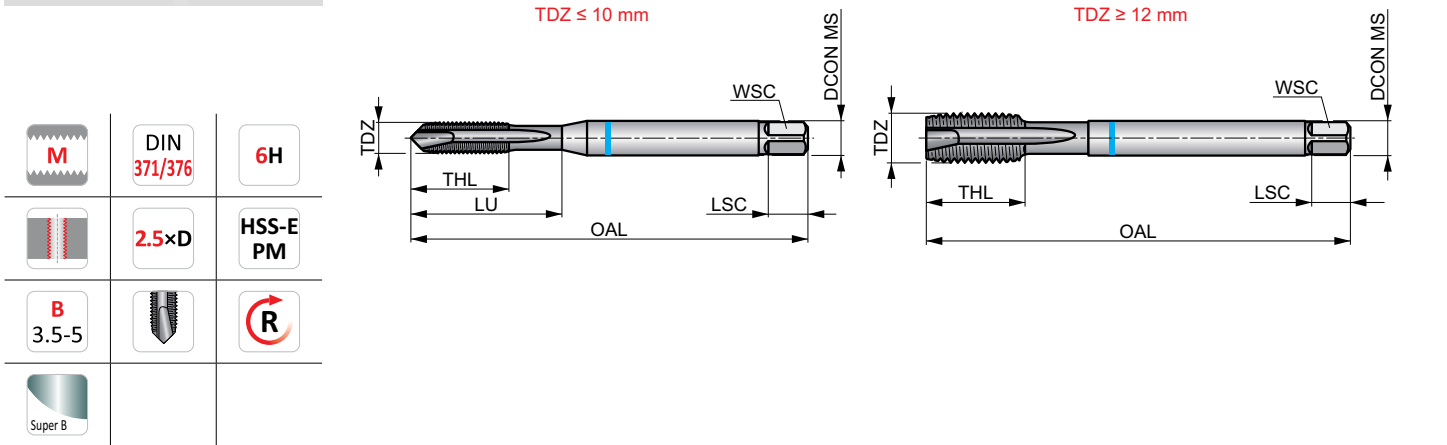
E241



Blue SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate with Super-B coating and additional edge treatment providing superior performance, consistency and extended tool life.

SHARK



	DIN 371/376	6H
	2.5xD	HSS-E PM
B 3.5-5		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 52	P3.3 46	P4.1 36	P4.2 30	M1.1 62	M1.2 52	M2.1 56	M2.2 46	M2.3 39	M3.1 39	M3.2 33	M3.3 30	M4.1 20	M4.2 16
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E241M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6305843
E241M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	6305844
E241M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	6305845
E241M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6305846
E241M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6305847
E241M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6305837
E241M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	-	1	6305838
E241M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00	-	1	6305839
E241M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	-	1	6305840
E241M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	-	1	6305841
E241M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	-	1	6305842

E201

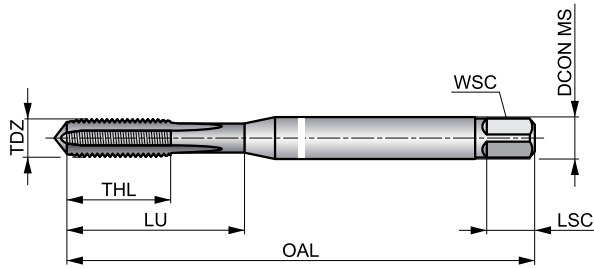


White SHARK Straight Flute Metric Machine Tap, DIN Standard

Straight flute tap with reduced shank for blind and through holes in short chipping cast iron and high strength non-ferrous materials. HSS-E-PM substrate provides superior performance, consistency and extended tool life. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

	DIN 371	6HX
	2xD	HSS-E PM
C 2-3		
ST		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 49	K1.2 ■ 36	K1.3 ■ 26	K2.1 ■ 59	K2.2 ■ 49	K2.3 ▣ 39	K3.1 ■ 52	K3.2 ■ 39	K3.3 ▣ 33	K4.1 ■ 49	K4.2 ■ 36	K4.3 ▣ 26	K4.4 ▣ 23	K4.5 ▣ 20
K5.1 ■ 56	K5.2 ■ 43	K5.3 ▣ 33	N2.3 ▣ 49	N3.2 ▣ 66	N4.2 ■ 33								

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)		
E201M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	D3	18.00	1	5975842
E201M4	4	0.70	63.0	12	4.50	3.40	6	4	3.30	D4	21.00	1	5975692
E201M5	5	0.80	70.0	13	6.00	4.90	8	4	4.20	D4	25.00	1	5975694
E201M6	6	1.00	80.0	15	6.00	4.90	8	4	5.00	D5	30.00	1	5975696
E201M8	8	1.25	90.0	18	8.00	6.20	9	4	6.80	D5	35.00	1	5975698
E201M10	10	1.50	100.0	20	10.00	8.00	11	4	8.50	D6	39.00	1	5975838

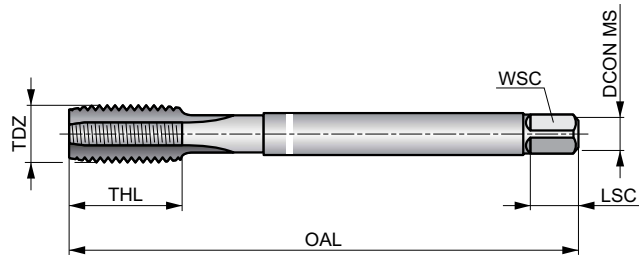
E252



White SHARK Straight Flute Metric Machine Tap, DIN Standard

Straight flute tap with reinforced shank for blind and through holes in short chipping cast iron and high strength non-ferrous materials. HSS-E-PM substrate provides superior performance, consistency and extended tool life. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK



	DIN 376	6HX
	2xD	HSS-E PM
C 2-3		
ST		

Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 49	K1.2 ■ 36	K1.3 ■ 26	K2.1 ■ 59	K2.2 ■ 49	K2.3 ▣ 39	K3.1 ■ 52	K3.2 ■ 39	K3.3 ▣ 33	K4.1 ■ 49	K4.2 ■ 36	K4.3 ▣ 26	K4.4 ▣ 23	K4.5 ▣ 20
K5.1 ■ 56	K5.2 ■ 43	K5.3 ▣ 33	N2.3 ▣ 49	N3.2 ▣ 66	N4.2 ■ 33								

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
E252M8	8	1.25	90.0	18	6.00	4.90	8	4	6.80	D5	1	5975463
E252M10	10	1.50	100.0	20	7.00	5.50	8	4	8.50	D6	1	5975917
E252M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	D6	1	5975921
E252M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00	D7	1	5975929
E252M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	D7	1	5975258
E252M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	D7	1	5975347
E252M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	D8	1	5975449

E390

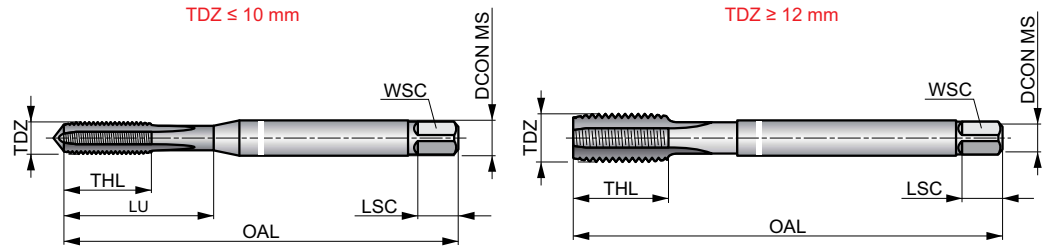


White SHARK Straight Flute Metric Machine Tap, DIN Standard

High performance TiAlN coated tap for blind and through holes in short chipping materials, such as cast iron and non-ferrous metals. Premium HSS-E-PM substrate provides superior performance, consistency and extended tool life. Up to M10 with reinforced and from M12 with reduced shank.

SHARK

M	DIN 371/376	6HX
	2xD	HSS-E PM
C 2-3		R



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 98	K1.2 ■ 72	K1.3 ■ 56	K2.1 ■ 141	K2.2 ■ 115	K2.3 ▣ 92	K3.1 ■ 125	K3.2 ■ 95	K3.3 ▣ 79	K4.1 ■ 115	K4.2 ■ 89	K4.3 ▣ 66	K4.4 ▣ 56	K4.5 ▣ 46
K5.1 ■ 131	K5.2 ■ 98	K5.3 ▣ 75	N2.3 ▣ 66	N3.2 ▣ 98	N4.2 ■ 49								

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E390M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6554557
E390M4	4	0.70	63.0	12	4.50	3.40	6	4	3.30	21.00	1	6554558
E390M5	5	0.80	70.0	13	6.00	4.90	8	4	4.20	25.00	1	6554559
E390M6	6	1.00	80.0	15	6.00	4.90	8	4	5.00	30.00	1	6554580
E390M8	8	1.25	90.0	18	8.00	6.20	9	4	6.80	35.00	1	6554581
E390M10	10	1.50	100.0	20	10.00	8.00	11	4	8.50	39.00	1	6554582
E390M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–	1	6554583
E390M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–	1	6554584
E390M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–	1	6554585

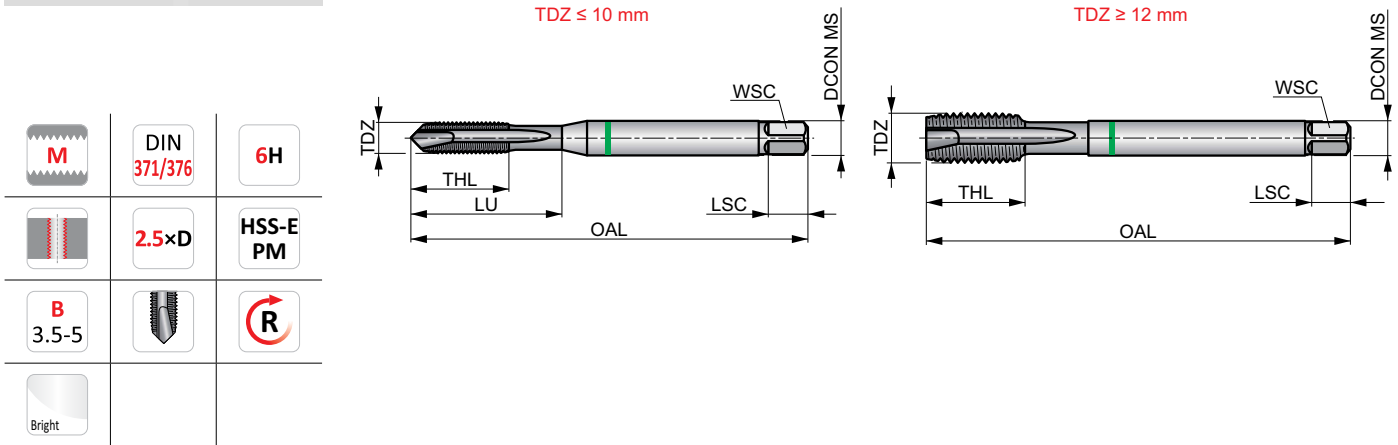
E471



Green SHARK Spiral Point Metric Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with polished flutes to avoid chip sticking, provide consistency and process security.

SHARK



	DIN 371/376	6H
	2.5xD	HSS-E PM
B 3.5-5		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.2	P1.3	P2.1	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1
■75	■79	■52	■52	■39	■26	■102	■92	■66	■167	■98	■49	■82

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E471M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00	1	6554521
E471M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00	1	6554522
E471M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00	1	6554523
E471M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6554524
E471M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6554525
E471M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6554526
E471M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6554527
E471M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–	1	6554528
E471M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–	1	6554529

E472

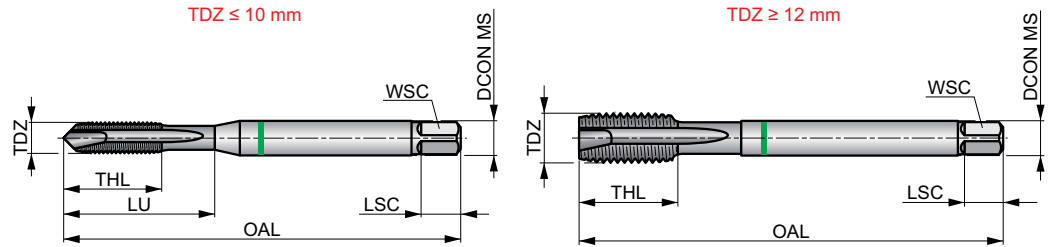


Green SHARK Spiral Point Metric Machine Tap, DIN Standard

High performance through hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with Super-B coating to avoid chip sticking, providing superior performance, consistency and extended tool life.

SHARK

	DIN 371/376	6H
	2.5×D	HSS-E PM
	B 3.5-5	
	Super B	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1
■112	■125	■131	■95	■79	■115	■85	■59	■151	■138	■98	■249	■148	■98

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E472M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00	1	6554530
E472M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00	1	6554531
E472M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00	1	6554532
E472M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6554533
E472M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6554534
E472M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6554535
E472M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6554536
E472M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	–	1	6554537
E472M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–	1	6554538

E624

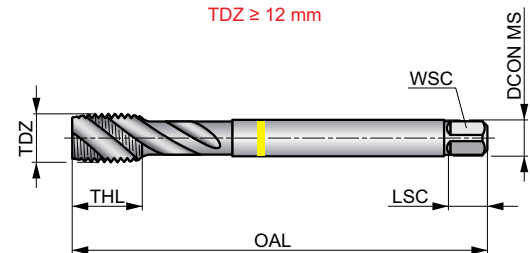
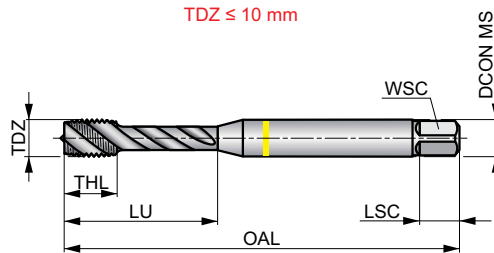


Yellow SHARK 40° Spiral Flute Tap, Metric, DIN/ANSI Standard

Spiral flute tap for low carbon, alloyed steel and non-ferrous material. With a constant rake angle to prevent nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	6H
	2xD	HSS-E PM
	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■ 151	■ 171	■ 177	■ 131	■ 115	▣ 102	▣ 79	▣ 62	▣ 46	■ 197	■ 118	▣ 49

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E624M4	4	0.70	63.0	7	.168	.129	6	3	3.30	N30	D4	21.00	1	7350533
E624M5	5	0.80	70.0	8	.194	.150	6	3	4.20	N19	D4	25.00	1	7350534
E624M6	6	1.00	80.0	10	.255	.189	8	3	5.00	N9	D5	30.00	1	7350535
E624M8	8	1.25	90.0	13	.318	.236	10	3	6.80	H	D5	35.00	1	7350536
E624M10	10	1.50	100.0	15	.381	.284	11	3	8.50	Q	D6	39.00	1	7350537
E624M12	12	1.75	110.0	18	.367	.273	11	3	10.30	Y	D6	—	1	7350538
E624M14	14	2.00	110.0	20	.429	.320	13	3	12.00	15/32	D7	—	1	7350539
E624M16	16	2.00	110.0	20	.480	.358	14	4	14.00	35/64	D7	—	1	7350540
E624M18	18	2.50	125.0	25	.542	.404	16	4	15.50	39/64	D7	—	1	7350541
E624M20	20	2.50	140.0	25	.652	.487	18	4	17.50	11/16	D7	—	1	7350542
E624M24	24	3.00	160.0	30	.760	.567	19	4	21.00	53/64	D8	—	1	7350543

E626

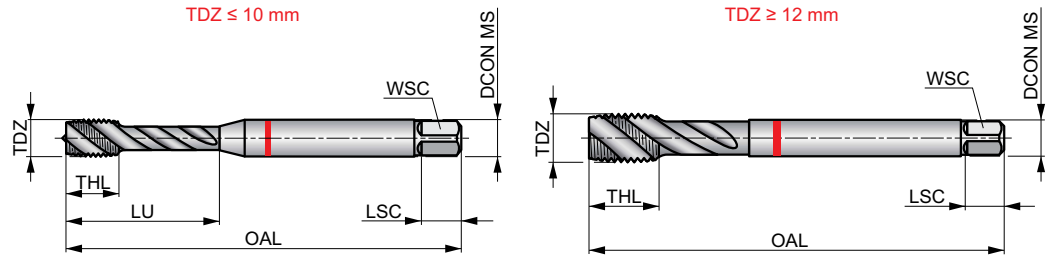


Red SHARK 45° Spiral Flute Tap, Metric, DIN/ANSI Standard

High performance spiral flute tap for high strength steel, with back taper and constant rake to avoid jamming and nesting in blind hole applications. HSS-E-PM improves tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5×D	HSS-E PM
	TiAIN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■ 85	■ 62	■ 52	■ 46	■ 39	▣ 30	▣ 7	▣ 10	▣ 7	▣ 7

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E626M3	3	0.50	56.0	6	.141	.108	5	3	2.50	N40	D3	18.00	1	7350453
E626M4	4	0.70	63.0	7	.168	.129	6	3	3.30	N30	D4	21.00	1	7350454
E626M5	5	0.80	70.0	8	.194	.150	6	3	4.20	N19	D4	25.00	1	7350455
E626M6	6	1.00	80.0	10	.255	.189	8	3	5.00	N9	D5	30.00	1	7350456
E626M8	8	1.25	90.0	13	.318	.236	10	3	6.80	H	D5	35.00	1	7350457
E626M10	10	1.50	100.0	15	.381	.284	11	3	8.50	Q	D6	39.00	1	7350458
E626M12	12	1.75	110.0	18	.367	.273	11	3	10.30	Y	D6	—	1	7350459
E626M14	14	2.00	110.0	20	.429	.320	13	3	12.00	15/32	D7	—	1	7350460
E626M16	16	2.00	110.0	20	.480	.358	14	4	14.00	35/64	D7	—	1	7350461
E626M18	18	2.50	125.0	25	.542	.404	16	4	15.50	39/64	D7	—	1	7350462
E626M20	20	2.50	140.0	25	.652	.487	18	4	17.50	11/16	D7	—	1	7350463
E626M24	24	3.00	160.0	30	.760	.567	19	4	21.00	53/64	D8	—	1	7350464

E806

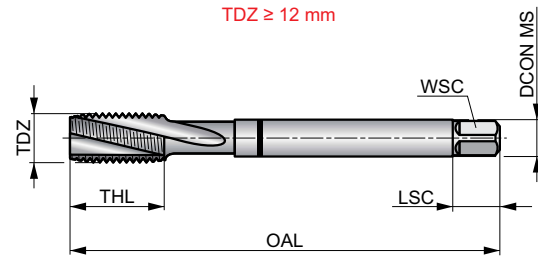
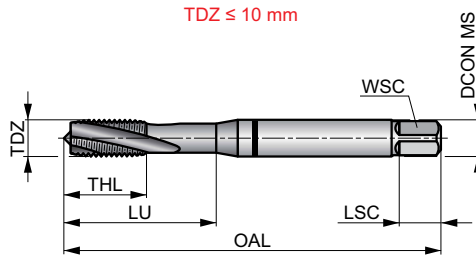


Black SHARK 15° Spiral Flute Tap, Metric, DIN/ANSI Standard

High performance spiral flute tap for efficient blind hole tapping in high strength steels and titanium alloys. The 15° slow spiral draws chips out of the hole, yet without weakening the cutting edge, as higher spiral taps would. HSS-E-PM substrate with TiAlN-Top coating for superior results in highly productive applications.

SHARK

	DIN ANSI	6HX
	1.5×D	HSS-E PM
	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 52	■ 39	■ 30	■ 39	■ 23	■ 13	■ 7	■ 20

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E806M3	3	0.50	63.0	15	.168	.129	6.35	3	2.50	N40	D3	22.00	1	7812145
E806M4	4	0.70	70.0	15.5	.194	.150	6.35	3	3.30	N30	D4	28.00	1	7812146
E806M5	5	0.80	80.0	17	.255	.189	7.95	3	4.20	N19	D4	26.00	1	7812147
E806M6	6	1.00	90.0	20.5	.318	.236	9.65	3	5.00	N9	D5	35.00	1	7812148
E806M8	8	1.25	100.0	23	.381	.284	11.1	3	6.80	H	D5	39.00	1	7812149
E806M10	10	1.50	100.0	20	.381	.284	11.1	3	8.50	Q	D6	38.00	1	7812150
E806M12	12	1.75	110.0	23	.367	.273	11.1	4	10.30	Y	D6	—	1	7812151

E628

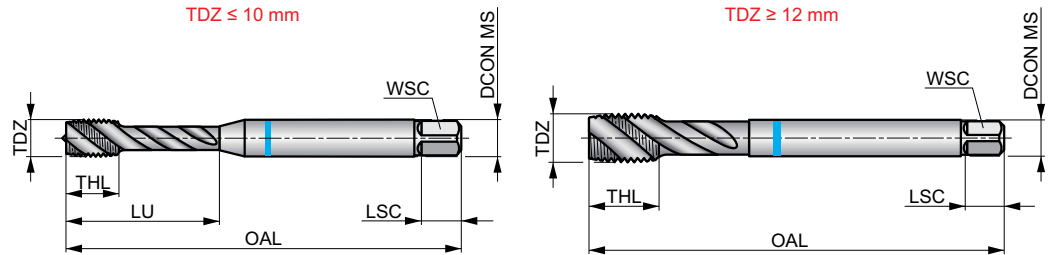


Blue SHARK 40° Spiral Flute Tap, Metric, DIN/ANSI Standard

High performance spiral flute tap for stainless steel, with back taper and constant rake angle to avoid jamming and nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5×D	HSS-E PM
	C 2-3	
	40°	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
49	43	33	26	59	49	52	43	36	36	30	26	16	13

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E628M4	4	0.70	63.0	7	.168	.129	6	3	3.30	N30	D4	21.00	1	7350374
E628M5	5	0.80	70.0	8	.194	.150	6	3	4.20	N19	D4	25.00	1	7350375
E628M6	6	1.00	80.0	10	.255	.189	8	3	5.00	N9	D5	30.00	1	7350376
E628M8	8	1.25	90.0	13	.318	.236	10	3	6.80	H	D5	35.00	1	7350377
E628M10	10	1.50	100.0	15	.381	.284	11	3	8.50	Q	D6	39.00	1	7350378
E628M12	12	1.75	110.0	18	.367	.273	11	4	10.30	Y	D6	—	1	7350379
E628M14	14	2.00	110.0	20	.429	.320	13	4	12.00	15/32	D7	—	1	7350380
E628M16	16	2.00	110.0	20	.480	.358	14	4	14.00	35/64	D7	—	1	7350381
E628M20	20	2.50	140.0	25	.652	.487	18	4	17.50	11/16	D7	—	1	7350383
E628M24	24	3.00	160.0	30	.760	.567	19	4	21.00	53/64	D8	—	1	7350384

E298

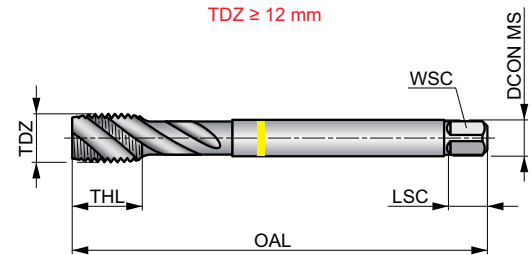
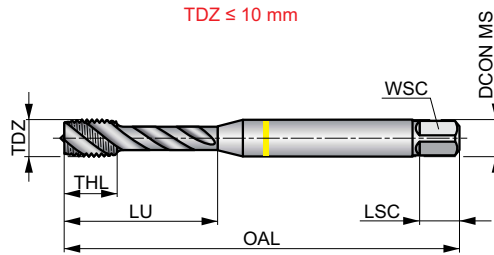


Yellow SHARK 40° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment to provide consistency and process security. Hard chrome coated to increase the surface hardness, reducing built-up edge and extend tool life.

SHARK

	DIN 371/376	6H
	2xD	HSS-E PM
		λ 40°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■ 75	■ 82	■ 85	■ 62	■ 56	▣ 49	■ 46	▣ 36	▣ 26	■ 157	■ 92	▣ 46

Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E298M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	6290581
E298M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	6290583
E298M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	6290584
E298M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00	1	6290585
E298M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00	1	6290586
E298M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	6290572
E298M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	—	1	6290573
E298M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	—	1	6290574
E298M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	—	1	6290575
E298M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	—	1	6290576
E298M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	—	1	6290577
E298M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	—	1	6290578
E298M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	—	1	6290579
E298M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	—	1	6290580
E298M30	30	3.50	160.0	36	22.00	18.00	21	4	26.50	—	1	6290582

E412

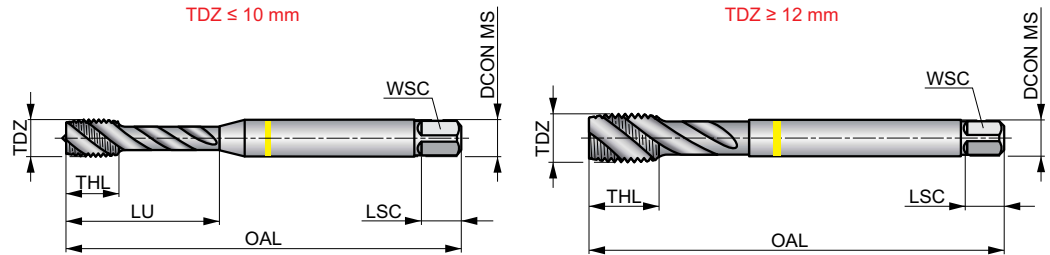


Yellow SHARK 48° Spiral Flute Metric Machine Tap, DIN Standard

High performance quick spiral tap for deep blind holes in medium strength steels. Unique HSS-E-PM substrate with TiAlN-Top coating and additional edge treatment provide superior performance. Extra back taper facilitates chip evacuation and reduces torque on reversal. Recommended for synchronous feed tap holders.

SHARK

M	DIN 371/376	6H
	3×D	HSS-E PM
C 2-3		λ 48°
R		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 151	P1.2 ■ 171	P1.3 ■ 177	P2.1 ■ 131	P2.2 ■ 115	P2.3 ■ 102	P3.1 ■ 79	P3.2 ■ 62	P3.3 ■ 52	P4.1 ■ 46	P4.2 ■ 39	M1.1 ■ 62	M1.2 ■ 52	M2.1 ■ 56
M2.2 ■ 46	M3.1 ■ 39	M3.2 ■ 33	M3.3 ■ 30	M4.1 ■ 20	N1.1 ■ 52	N1.2 ■ 39	N1.3 ■ 26	N2.1 ■ 177	N2.2 ■ 157	N2.3 ■ 115	N3.1 ■ 197		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E412M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	7441116
E412M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	7441117
E412M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	7441118
E412M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00	1	7441119
E412M8	8	1.25	90.0	13	8.00	6.20	9	3	6.80	35.00	1	7441190
E412M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	7441191
E412M12	12	1.75	110.0	18	9.00	7.00	10	3	10.30	–	1	7441192
E412M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–	1	7441193
E412M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–	1	7441194
E412M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–	1	7441195
E412M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	–	1	7441196
E412M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–	1	7441197
E412M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–	1	7441198
E412M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	–	1	7441199

E260

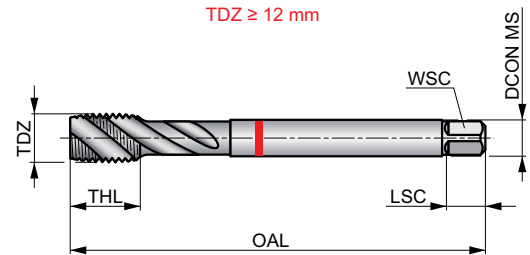
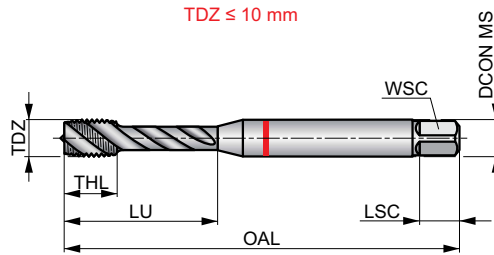


Red SHARK 45° Spiral Flute Metric Machine Tap, DIN Standard

Blind hole tap with reinforced or reduced shank for medium to high strength steels. Unique HSS-E-PM substrate with bright surface finish. Extra back taper to further facilitate chip evacuation, preventing chipping on the last threads of the tap and also reduces torque when the tap reverses.

SHARK

M	DIN 371/376	6HX
	2.5xD	HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	S1.2	S2.1	S3.1	S4.1
■ 33	■ 30	■ 23	■ 20	■ 16	■ 13	▣ 7	▣ 10	▣ 7	▣ 7

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E260M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	6554500
E260M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	6554501
E260M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	6554502
E260M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00	1	6554503
E260M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00	1	6554504
E260M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	6554505
E260M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–	1	6554506
E260M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–	1	6554507
E260M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–	1	6554508
E260M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–	1	6554509

E261

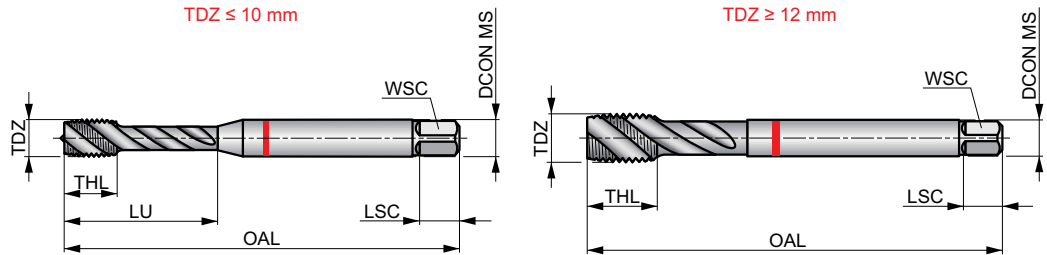


Red SHARK 45° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for medium to high strength steels. Unique HSS-E-PM substrate with TiAlN-Top coating and additional edge treatment provide superior performance, consistency and extended tool life. Extra back taper further facilitates chip evacuation and reduces torque on tap reversal.

SHARK

M	DIN 371/376	6HX
	2.5xD	HSS-E PM
C 2-3		λ 45°
R		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ■ 85	P3.1 ■ 79	P3.2 ■ 62	P3.3 ■ 52	P4.1 ■ 46	P4.2 ■ 39	P4.3 ■ 30	S1.2 ■ 7	S2.1 ■ 10	S3.1 ■ 7	S4.1 ■ 7
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E261M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	6554510
E261M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	6554511
E261M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	6554512
E261M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00	1	6554513
E261M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00	1	6554514
E261M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	6554515
E261M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–	1	6554516
E261M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–	1	6554517
E261M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–	1	6554518

E335

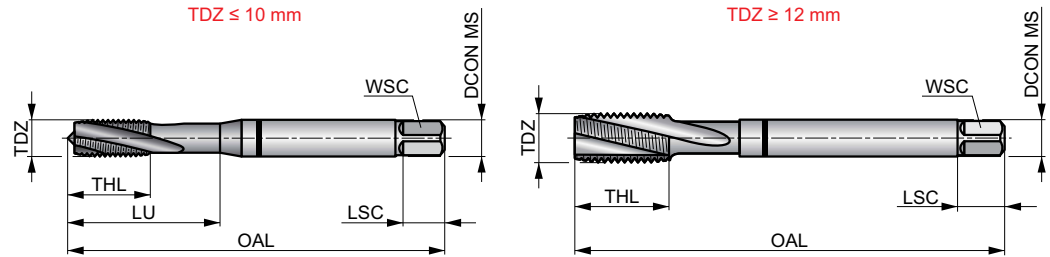


Black SHARK 15° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for efficient tapping in high strength steels and titanium alloys. A 15° slow spiral allows the chips to be pulled slightly upwards, yet without weakening the cutting edge, as higher spiral taps would. Unique HSS-E-PM substrate along with TiAIN-Top coating for superior performance.

SHARK

	DIN DORMER	6HX
	1.5×D	HSS-E PM
C 2-3		λ 15°
R		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 52	■ 39	■ 30	■ 39	■ 23	■ 13	■ 7	■ 20

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E335M3	3	0.50	63.0	12	4.50	3.40	6	3	2.50	12.00	1	7798668
E335M4	4	0.70	70.0	13	6.00	4.90	8	3	3.30	13.00	1	7798669
E335M5	5	0.80	80.0	15	6.00	4.90	8	3	4.20	15.00	1	7798670
E335M6	6	1.00	90.0	18	8.00	6.20	9	3	5.00	18.00	1	7798671
E335M8	8	1.25	100.0	20	10.00	8.00	11	3	6.80	20.00	1	7798672
E335M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	7798673
E335M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	–	1	7798674

E238

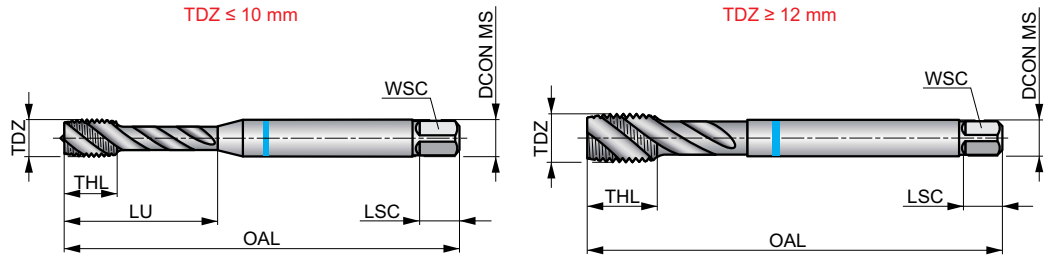


Blue SHARK 40° Spiral Flute Metric Machine Tap, DIN Standard

Blind hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate, along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

	DIN 371/376	6H
	2.5xD	HSS-E PM
		λ 40°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
■23	■30	■26	■23	■33	■26	■30	■23	■23	■20	■16	■13

Products from this series are also available in set with drills. Please see L114.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E238M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	6305806
E238M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	6305808
E238M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	6305809
E238M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00	1	6305810
E238M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	33.00	1	6305811
E238M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	6305777
E238M12	12	1.75	110.0	16	9.00	7.00	10	4	10.30	–	1	6305778
E238M14	14	2.00	110.0	20	11.00	9.00	12	4	12.00	–	1	6305779
E238M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–	1	6305800
E238M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	–	1	6305801
E238M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–	1	6305802
E238M22	22	2.50	140.0	25	18.00	14.50	17	4	19.80	–	1	6305803
E238M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	–	1	6305804
E238M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	–	1	6305805
E238M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	–	1	6305807

E239

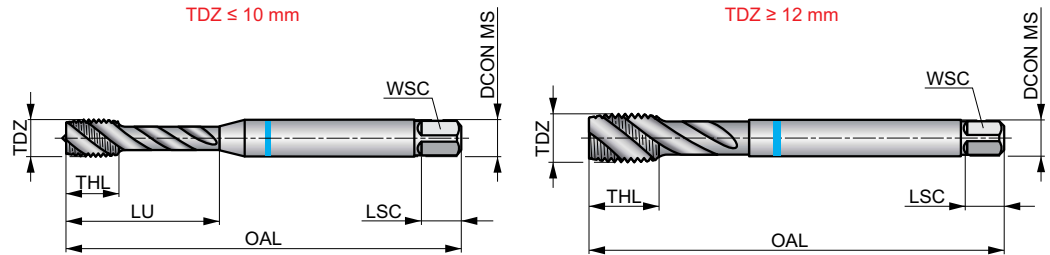


Blue SHARK 40° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap for medium strength stainless steel. Unique HSS-E-PM substrate with Super-B coating and additional edge treatment providing superior performance, consistency and extended tool life. Back taper on spiral flute taps facilitates chip evacuation and reduces torque when the tap reverses.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 40°
R		Super B



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ▣49	P3.3 ▣43	P4.1 ▣33	P4.2 ▣26	M1.1 ■59	M1.2 ■49	M2.1 ■52	M2.2 ■43	M2.3 ▣36	M3.1 ■36	M3.2 ■30	M3.3 ■26	M4.1 ■16	M4.2 ▣13
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E239M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	6305817
E239M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	6305818
E239M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	6305819
E239M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00	1	6305820
E239M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	33.00	1	6305821
E239M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	6305812
E239M12	12	1.75	110.0	16	9.00	7.00	10	4	10.30	–	1	6305813
E239M14	14	2.00	110.0	20	11.00	9.00	12	4	12.00	–	1	6305814
E239M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–	1	6305815
E239M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–	1	6305816

E414

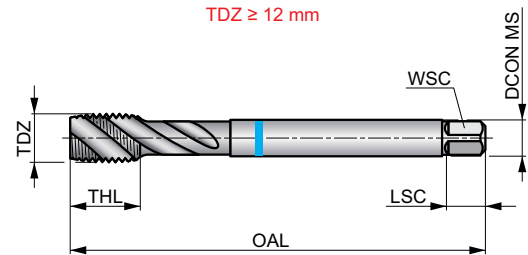
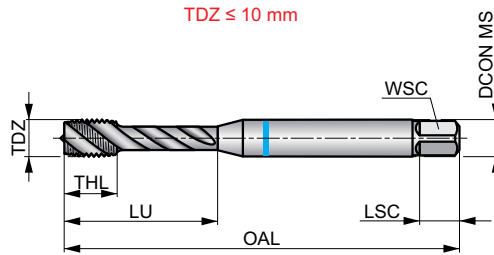


Blue SHARK 48° Spiral Flute Metric Machine Tap, DIN Standard

High performance quick spiral tap for deep blind holes in stainless steels. Unique HSS-E-PM substrate with Super-B coating and additional edge treatment provide superior performance. Extra back taper facilitates chip evacuation and reduces torque on reversal. Recommended to be used with synchronous feed tap holders.

SHARK

	DIN 371/376	6H
	3xD	HSS-E PM
		λ 48°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.2 ■105	P2.3 ■92	P3.2 ■49	P3.3 ■43	P4.1 ■36	P4.2 ■33	M1.1 ■72	M1.2 ■62	M2.1 ■66	M2.2 ■52	M2.3 ■43	M3.1 ■46	M3.2 ■39	M3.3 ■36
M4.1 ■26	M4.2 ■23												

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E414M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	7441200
E414M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	7441201
E414M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	7441202
E414M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	30.00	1	7441203
E414M8	8	1.25	90.0	13	8.00	6.20	9	3	6.80	35.00	1	7441204
E414M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	7441205
E414M12	12	1.75	110.0	18	9.00	7.00	10	3	10.30	–	1	7441206
E414M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–	1	7441207
E414M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–	1	7441208
E414M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–	1	7441209

E473

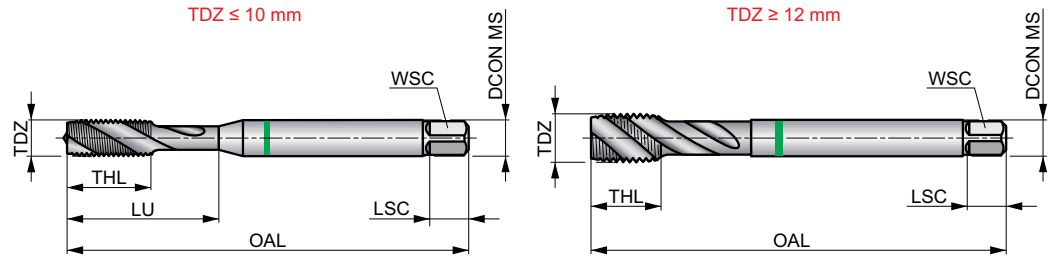


Green SHARK 35° Spiral Flute Metric Machine Tap, DIN Standard

Blind hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with polished flutes provide consistency and process security.

SHARK

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 35°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.2 ■72	P1.3 ■75	P2.1 ■49	N1.1 ■49	N1.2 ■36	N1.3 ■23	N2.1 ■95	N2.2 ■89	N2.3 ■62	N3.1 ■157	N3.2 ■92	N3.3 ■46	N4.1 ■79
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E473M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00	1	6554539
E473M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00	1	6554540
E473M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00	1	6554541
E473M6	6	1.00	80.0	15	6.00	4.90	8	2	5.00	30.00	1	6554542
E473M8	8	1.25	90.0	18	8.00	6.20	9	2	6.80	35.00	1	6554543
E473M10	10	1.50	100.0	20	10.00	8.00	11	2	8.50	39.00	1	6554544
E473M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6554545
E473M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–	1	6554546
E473M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	–	1	6554547

E474

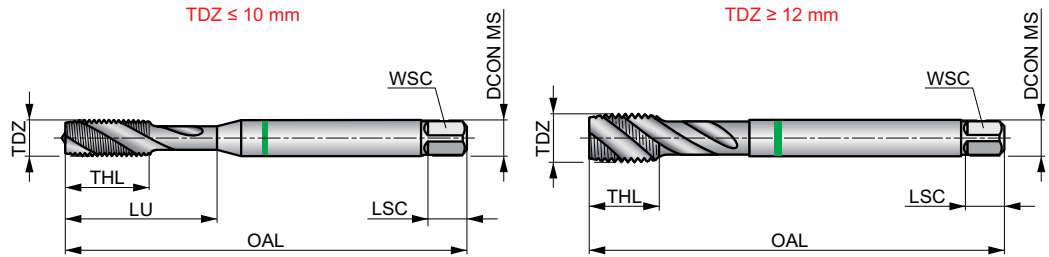


Green SHARK 35° Spiral Flute Metric Machine Tap, DIN Standard

High performance blind hole tap with reinforced or reduced shank for non-ferrous materials. Unique HSS-E-PM substrate with Super-B to avoid chip sticking, providing superior performance, consistency and extended tool life.

SHARK

	DIN 371/376	6H
	2.5×D	HSS-E PM
		λ 35°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣105	P1.2 ▣118	P1.3 ▣125	P2.1 ▣89	P2.2 ▣72	N1.1 ▣108	N1.2 ▣79	N1.3 ■56	N2.1 ■144	N2.2 ■131	N2.3 ■92	N3.1 ▣236	N3.2 ■141	N4.1 ▣92
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E474M3	3	0.50	56.0	9	3.50	2.70	6	2	2.50	18.00	1	6554548
E474M4	4	0.70	63.0	12	4.50	3.40	6	2	3.30	21.00	1	6554549
E474M5	5	0.80	70.0	13	6.00	4.90	8	2	4.20	25.00	1	6554550
E474M6	6	1.00	80.0	15	6.00	4.90	8	2	5.00	30.00	1	6554551
E474M8	8	1.25	90.0	18	8.00	6.20	9	2	6.80	35.00	1	6554552
E474M10	10	1.50	100.0	20	10.00	8.00	11	2	8.50	39.00	1	6554553
E474M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6554554
E474M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–	1	6554555

E765

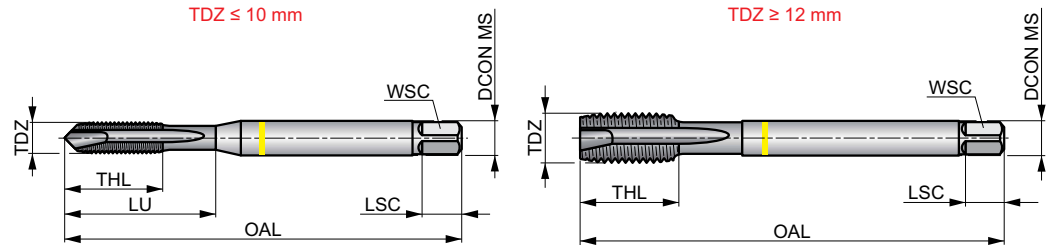


Yellow SHARK Spiral Point Tap, Metric-Fine, DIN/ANSI Standard

Spiral point tap for through holes only. Designed for low carbon, alloyed steel and non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5×D	HSS-E PM
	B 3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 157	P1.2 ■ 180	P1.3 ■ 187	P2.1 ■ 138	P2.2 ■ 121	P2.3 ■ 108	P3.1 ■ 82	P3.2 ■ 66	P4.1 ■ 49	N3.1 ■ 207	N3.2 ■ 125	N3.3 ■ 52
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Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E765M8X1.0	8	1.00	90.0	18	.318	.236	10	3	7.00	J	D5	35.00	1	7350503
E765M10X1.25	10	1.25	100.0	20	.381	.284	11	3	8.80	11/32	D6	39.00	1	7350504
E765M12X1.25	12	1.50	100.0	21	.367	.273	11	3	10.80	27/64	D6	—	1	7350505
E765M12X1.5	12	1.50	100.0	21	.367	.273	11	3	10.50	Z	D6	—	1	7350506
E765M14X1.5	14	1.50	100.0	21	.429	.320	13	3	12.50	31/64	D7	—	1	7350507

E767

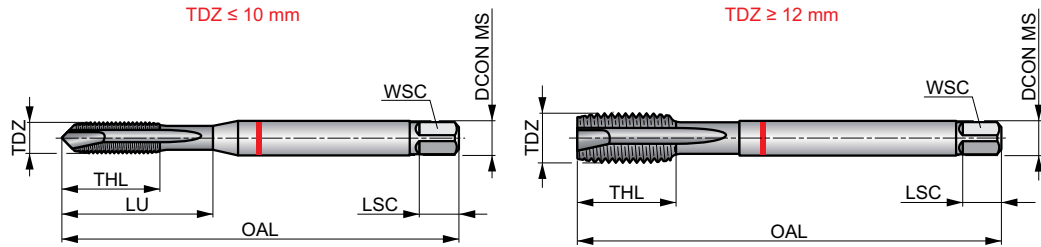


Red SHARK, Spiral Point Tap, Metric-Fine, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for high strength steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ■ 89	P3.2 ■ 66	P3.3 ■ 56	P4.1 ■ 49	P4.2 ■ 43	P4.3 ■ 33	S1.2 ■ 10	S2.1 ■ 13	S3.1 ■ 10	S4.1 ■ 10
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Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E767M8X1.0	8	1.00	90.0	18	.318	.236	10	3	7.00	J	D5	35.00	1	7350426
E767M10X1.25	10	1.25	100.0	20	.381	.284	11	3	8.80	11/32	D6	39.00	1	7350427
E767M12X1.5	12	1.50	100.0	21	.367	.273	11	3	10.50	Z	D6	—	1	7350428
E767M14X1.5	14	1.50	100.0	21	.429	.320	13	3	12.50	31/64	D7	—	1	7350429

E917

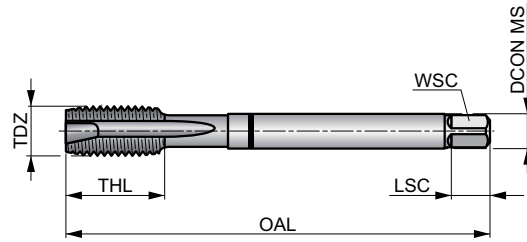


Black SHARK Spiral Point Tap, Metric-Fine, DIN/ANSI Standard

High performance spiral point tap for through holes only, specifically for high strength steel and titanium alloys. HSS-E-PM to improve tool life, predictability, speed and reduce chipping. TiAIN-Top coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

MF	DIN ANSI	6HX
2.5xD	HSS-E PM	
B 3.5-5	R	
TiAIN Top		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P3.3	P4.2	P4.3	S1.2	S1.3	S3.1	S3.2	H3.1
■ 56	■ 43	■ 33	■ 43	■ 26	■ 16	■ 10	■ 23

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)			
E917M12X1.5	12	1.50	110.0	23	.367	.273	11.1	4	10.50	Z	D5	1	7812125

E769

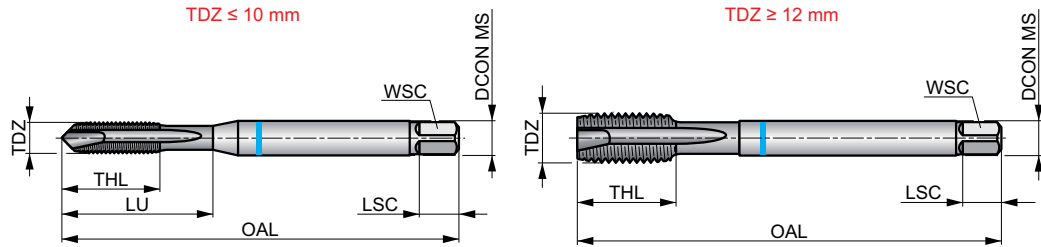


Blue SHARK Spiral Point Tap, Metric-Fine, DIN/ANSI Standard

High performance spiral point machine tap for through holes only, specifically for stainless steel. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment provide superior results, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 52	P3.3 46	P4.1 36	P4.2 30	M1.1 62	M1.2 52	M2.1 56	M2.2 46	M2.3 39	M3.1 39	M3.2 33	M3.3 30	M4.1 20	M4.2 16
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Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E769M8X1.0	8	1.00	90.0	18	.318	.236	10	3	7.00	J	D5	35.00	1	7350328
E769M12X1.25	12	1.25	100.0	21	.367	.273	11	4	10.80	27/64	D6	-	1	7350330
E769M12X1.5	12	1.50	100.0	21	.367	.273	11	4	10.50	Z	D6	-	1	7350331
E769M16X1.5	16	1.50	100.0	21	.480	.358	14	4	14.50	9/16	D7	-	1	7350333
E769M18X1.5	18	1.50	110.0	24	.542	.404	16	4	16.50	41/64	D7	-	1	7350334

E770

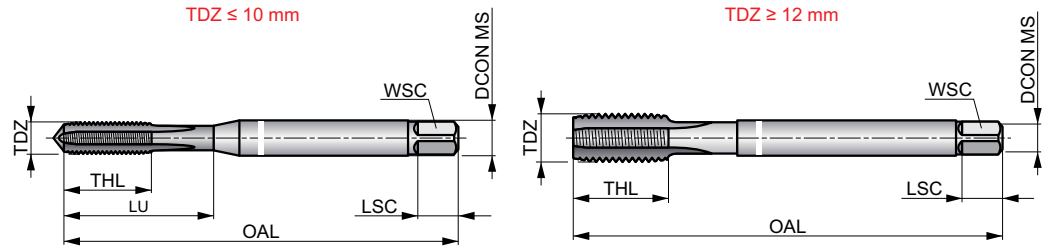


White SHARK Straight Flute Tap, Metric-Fine, DIN/ANSI Standard

High performance straight flute tap. Designed for cast iron and high strength non-ferrous material. Made from HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating for superior result, consistency and process security in highly productive applications.

SHARK

	DIN ANSI	6HX
	2xD	HSS-E PM
C 2-3		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 98	K1.2 ■ 72	K1.3 ■ 56	K2.1 ■ 141	K2.2 ■ 115	K2.3 ▣ 92	K3.1 ■ 125	K3.2 ■ 95	K3.3 ▣ 79	K4.1 ■ 115	K4.2 ■ 89	K4.3 ▣ 66	K4.4 ▣ 56	K4.5 ▣ 46
K5.1 ■ 131	K5.2 ■ 98	K5.3 ▣ 75	N2.3 ▣ 66	N3.2 ▣ 98	N4.2 ■ 49								

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
E770M10X1.25	10	1.25	100.0	20	.381	.284	11	4	8.80	11/32	D6	39.00	1	7350261
E770M12X1.25	12	1.25	100.0	21	.367	.273	11	4	10.80	27/64	D6	-	1	7350262
E770M14X1.5	14	1.50	100.0	21	.429	.320	13	4	12.50	31/64	D7	-	1	7350264

E771

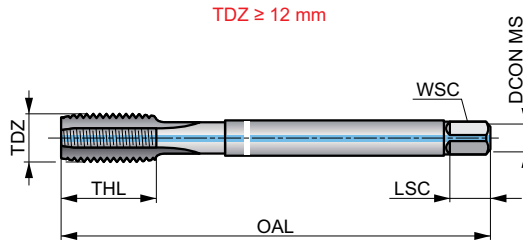


White SHARK Straight Flute Tap, MF, DIN/ANSI Standard, Through Coolant

High performance straight flute tap for highly productive applications in cast iron and high strength non-ferrous material. Similar to the E770 series, but in coolant thru design which allows even higher tapping speeds and eliminates the problems associated with inadequate coolant in horizontal or deep hole applications.

SHARK

	DIN ANSI	6HX
	2.5xD	HSS-E PM
E 1.5-2		



Workpiece material group suitability and starting values for cutting speed (ft/min).

K1.1 ■ 95	K1.2 ■ 69	K1.3 ■ 52	K2.1 ■ 135	K2.2 ■ 105	K2.3 ▣ 89	K3.1 ■ 118	K3.2 ■ 92	K3.3 ▣ 75	K4.1 ■ 108	K4.2 ■ 85	K4.3 ▣ 62	K4.4 ▣ 52	K4.5 ▣ 43
K5.1 ■ 125	K5.2 ■ 92	K5.3 ▣ 72	N2.3 ▣ 62	N3.2 ▣ 92	N4.2 ■ 46								

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)			
E771M12X1.25	12	1.25	100.0	21	.367	.273	11	4	10.80	27/64	D6	1	7350275
E771M14X1.5	14	1.50	100.0	21	.429	.320	13	4	12.50	31/64	D7	1	7350277

E299

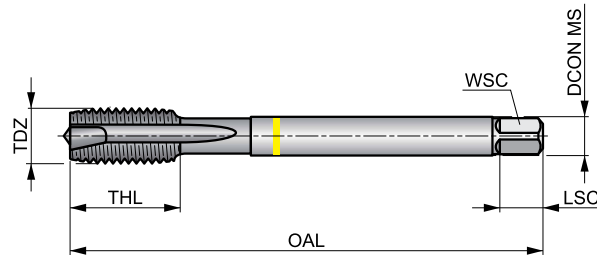


Yellow SHARK Spiral Point Metric-Fine Machine Tap, DIN Standard

High performance through hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment, provide consistency and process security. Hard chrome coated to increase the surface hardness and reduce built-up edge, increasing performance and tool life.

SHARK

MF	DIN 374	6H
2.5xD	HSS-E PM	
B 3.5-5	R	
Cr		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■ 79	■ 89	■ 92	■ 66	■ 59	■ 52	■ 49	■ 39	■ 30	■ 167	■ 98	■ 49

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E299M4X.5	4	0.50	63.0	12	2.80	2.10	5	3	3.50	1	6290606
E299M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50	1	6290607
E299M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30	1	6290608
E299M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30	1	6290609
E299M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00	1	6290610
E299M10X1.0	10	1.00	90.0	20	7.00	5.50	8	3	9.00	1	6290588
E299M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80	1	6290589
E299M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00	1	6290590
E299M12X1.25	12	1.25	100.0	21	9.00	7.00	10	4	10.80	1	6290591
E299M12X1.5	12	1.50	110.0	21	9.00	7.00	10	4	10.50	1	6290592
E299M14X1.0	14	1.00	100.0	21	11.00	9.00	12	4	13.00	1	6290593
E299M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50	1	6290595
E299M16X1.0	16	1.00	100.0	21	12.00	9.00	12	4	15.00	1	6290596
E299M16X1.5	16	1.50	100.0	21	12.00	9.00	12	4	14.50	1	6290597
E299M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00	1	6290598
E299M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50	1	6290599
E299M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50	1	6290600
E299M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50	1	6290601
E299M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50	1	6290602
E299M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00	1	6290603
E299M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00	1	6290604
E299M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00	1	6290605

E384

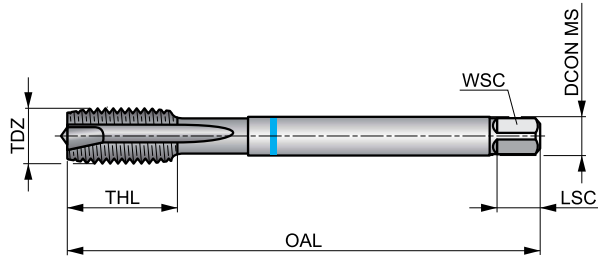


Blue SHARK Spiral Point Metric-Fine Machine Tap, DIN Standard

Through hole tap with reinforced or reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

	DIN 374	6H
	2.5xD	HSS-E PM
B 3.5-5		
ST		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3 ■ 26	P3.1 ■ 49	P3.2 ■ 39	P3.3 ■ 33	P4.1 ■ 30	P4.2 ■ 23	P4.3 ■ 20	M1.1 ■ 36	M1.2 ■ 30	M2.1 ■ 33	M2.2 ■ 26	M2.3 ■ 23	M3.1 ■ 26	M3.2 ■ 23
M3.3 ■ 20	M4.1 ■ 16	M4.2 ■ 13											

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E384M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30	1	6305874
E384M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00	1	6305875
E384M10X1.0	10	1.00	90.0	20	7.00	5.50	8	3	9.00	1	6305865
E384M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80	1	6305866
E384M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00	1	6305867
E384M12X1.25	12	1.25	100.0	21	9.00	7.00	10	4	10.80	1	6305868
E384M12X1.5	12	1.50	100.0	21	9.00	7.00	10	4	10.50	1	6305869
E384M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50	1	6305870
E384M16X1.5	16	1.50	100.0	21	12.00	9.00	12	5	14.50	1	6305871
E384M18X1.5	18	1.50	110.0	24	14.00	11.00	14	5	16.50	1	6305872
E384M20X1.5	20	1.50	125.0	24	16.00	12.00	15	5	18.50	1	6305873

E764

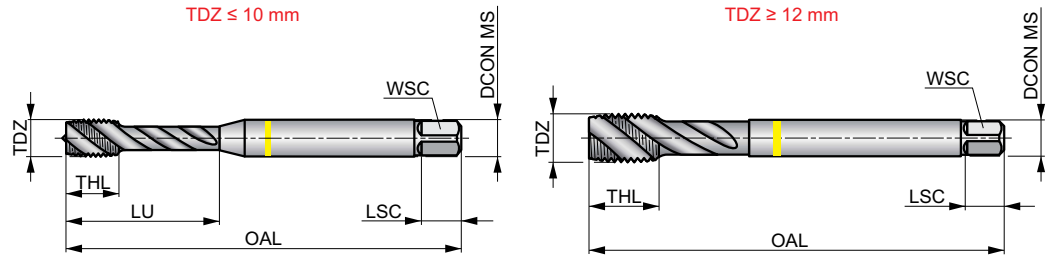


Yellow SHARK 40° Spiral Flute Tap, Metric-Fine, DIN/ANSI Standard

Spiral flute tap for low carbon, alloyed steel and non-ferrous material. With a constant rake angle to prevent nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. TiAlN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	6H
	2xD	HSS-E-PM
C 2-3		
λ 40°	TiAlN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 151	P1.2 ■ 171	P1.3 ■ 177	P2.1 ■ 131	P2.2 ■ 115	P2.3 ■ 102	P3.1 ■ 79	P3.2 ■ 62	P4.1 ■ 46	N3.1 ■ 197	N3.2 ■ 118	N3.3 ■ 49
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Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E764M8X1.0	8	1.00	90.0	13	.318	.236	10	3	7.00	J	D5	35.00	1	7350544
E764M10X1.25	10	1.25	100.0	15	.381	.284	11	3	8.80	11/32	D6	39.00	1	7350545
E764M12X1.25	12	1.25	100.0	15	.367	.273	11	3	10.80	27/64	D6	-	1	7350546
E764M16X1.5	16	1.50	100.0	15	.480	.358	14	4	14.50	9/16	D7	-	1	7350549

E766

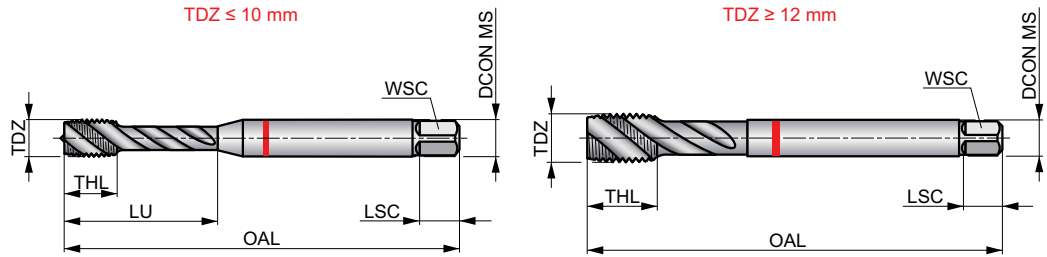


Red SHARK 45° Spiral Flute Tap, Metric-Fine, DIN/ANSI Standard

High performance spiral flute tap for high strength steel, with back taper and constant rake to avoid jamming and nesting in blind hole applications. HSS-E-PM improves tool life, predictability, cutting speed and reduce chipping. TiAIN-Top coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5xD	HSS-E PM
	TiAIN Top	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.2	P3.3	P4.1	P4.2	P4.3	S1.2	S2.1	S3.1	S4.1
■ 85	■ 62	■ 52	■ 46	■ 39	▣ 30	▣ 7	▣ 10	▣ 7	▣ 7

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E766M8X1.0	8	1.00	90.0	13	.318	.236	10	3	7.00	J	D5	35.00	1	7350465
E766M10X1.25	10	1.25	100.0	15	.381	.284	11	3	8.80	11/32	D6	39.00	1	7350466
E766M12X1.25	12	1.25	100.0	15	.367	.273	11	3	10.80	27/64	D6	—	1	7350467
E766M14X1.5	14	1.50	100.0	15	.429	.320	13	3	12.50	31/64	D7	—	1	7350468

E768

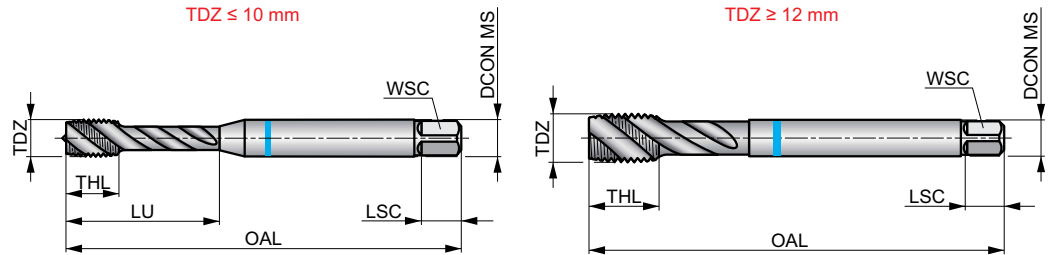


Blue SHARK 40° Spiral Flute Tap, Metric-Fine, DIN/ANSI Standard

High performance spiral flute tap for stainless steel, with back taper and constant rake angle to avoid jamming and nesting in blind hole applications. HSS-E-PM to improve tool life, predictability, cutting speed and reduce chipping. Super-B coating and edge treatment for superior results in highly productive applications.

SHARK

	DIN ANSI	6H
	2.5×D	HSS-E PM
C 2-3		
λ 40°	Super B	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
49	43	33	26	59	49	52	43	36	36	30	26	16	13

Sizes up to M10 have male centers on both ends. Sizes over M10 have female centers on both ends.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	LU	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(inch)	(inch)	(mm)		(mm)	(inch)		(mm)		
E768M8X1.0	8	1.00	90.0	13	.318	.236	10	3	7.00	J	D5	35.00	1	7350385
E768M16X1.5	16	1.50	100.0	15	.480	.358	14	4	14.50	9/16	D7	—	1	7350389
E768M18X1.5	18	1.50	110.0	17	.542	.404	16	4	16.50	41/64	D7	—	1	7350390

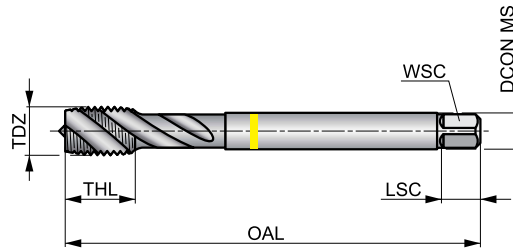
E300



Yellow SHARK 40° Spiral Flute Metric-Fine Machine Tap, DIN Standard

High performance blind hole tap for low carbon and alloyed steel and non-ferrous materials. Unique HSS-E-PM substrate with additional edge treatment, provide consistency and process security. Hard chrome coated to increase the surface hardness, reduces built-up edge, resulting in increased performance and tool life.

SHARK



MF	DIN 374	6H
	2xD	HSS-E PM
C 2-3		λ 40°
R		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	N3.1	N3.2	N3.3
■ 75	■ 82	■ 85	■ 62	■ 56	■ 49	■ 46	■ 36	■ 26	■ 157	■ 92	■ 46

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E300M4X.5	4	0.50	63.0	6.5	2.80	2.10	5	3	3.50	1	6290630
E300M5X.5	5	0.50	70.0	7.5	3.50	2.70	6	3	4.50	1	6290631
E300M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30	1	6290632
E300M8X.75	8	0.75	80.0	13	6.00	4.90	8	3	7.30	1	6290633
E300M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00	1	6290634
E300M10X.75	10	0.75	90.0	13	7.00	5.50	8	3	9.30	1	6290611
E300M10X1.0	10	1.00	90.0	12	7.00	5.50	8	3	9.00	1	6290612
E300M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80	1	6290613
E300M12X1.0	12	1.00	100.0	15	9.00	7.00	10	4	11.00	1	6290614
E300M12X1.25	12	1.25	100.0	13	9.00	7.00	10	4	10.80	1	6290615
E300M12X1.5	12	1.50	100.0	13	9.00	7.00	10	4	10.50	1	6290616
E300M14X1.0	14	1.00	100.0	15	11.00	9.00	12	4	13.00	1	6290617
E300M14X1.25	14	1.25	100.0	15	11.00	9.00	12	4	12.80	1	6290618
E300M14X1.5	14	1.50	100.0	15	11.00	9.00	12	4	12.50	1	6290619
E300M16X1.0	16	1.00	100.0	15	12.00	9.00	12	5	15.00	1	6290620
E300M16X1.5	16	1.50	100.0	15	12.00	9.00	12	5	14.50	1	6290621
E300M18X1.0	18	1.00	110.0	17	14.00	11.00	14	5	17.00	1	6290622
E300M18X1.5	18	1.50	110.0	17	14.00	11.00	14	5	16.50	1	6290623
E300M20X1.5	20	1.50	125.0	17	16.00	12.00	15	5	18.50	1	6290624
E300M22X1.5	22	1.50	125.0	17	18.00	14.50	17	5	20.50	1	6290625
E300M24X1.5	24	1.50	140.0	20	18.00	14.50	17	5	22.50	1	6290626
E300M24X2.0	24	2.00	140.0	20	18.00	14.50	17	5	22.00	1	6290627
E300M27X2.0	27	2.00	140.0	20	20.00	16.00	19	5	25.00	1	6290628
E300M30X2.0	30	2.00	150.0	20	22.00	18.00	21	5	28.00	1	6290629

E383

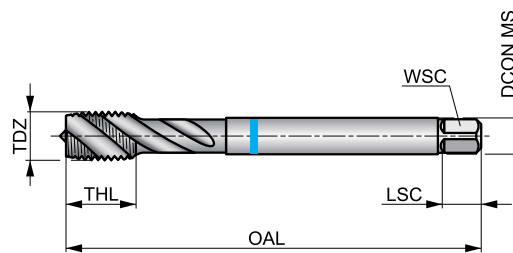


Blue SHARK 40° Spiral Flute Metric-Fine Machine Tap, DIN Standard

Blind hole tap with reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK

MF	DIN 374	6H
2xD	HSS-E PM	
C 2-3	λ 40°	
R	ST	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.3	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1	M2.2	M3.1	M3.2	M3.3	M4.1
■23	■30	■26	■23	■33	■26	■30	■23	■23	■20	■16	■13

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E383M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30	1	6305863
E383M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00	1	6305864
E383M10X1.0	10	1.00	90.0	12	7.00	5.50	8	3	9.00	1	6305854
E383M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80	1	6305855
E383M12X1.0	12	1.00	100.0	13	9.00	7.00	10	4	11.00	1	6305856
E383M12X1.25	12	1.25	100.0	13	9.00	7.00	10	4	10.80	1	6305857
E383M12X1.5	12	1.50	100.0	13	9.00	7.00	10	4	10.50	1	6305858
E383M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50	1	6305859
E383M16X1.5	16	1.50	100.0	21	12.00	9.00	12	5	14.50	1	6305860
E383M18X1.5	18	1.50	110.0	24	14.00	11.00	14	5	16.50	1	6305861
E383M20X1.5	20	1.50	125.0	24	16.00	12.00	15	5	18.50	1	6305862

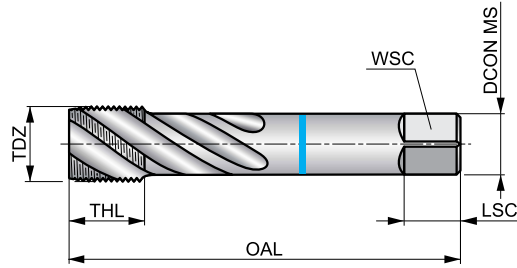
E382



Blue SHARK 40° Spiral Flute G(BSP) Machine Tap, DIN Standard

Blind hole tap with reduced shank for medium strength stainless steel. Unique HSS-E-PM substrate along with additional edge treatment, provide consistency and process security. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

SHARK



	DIN 5156	Normal
	2xD	HSS-E PM
		λ 40°

Workpiece material group suitability and starting values for cutting speed (ft/min).



Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E3821/8	1/8	28	9.73	90.0	12	7.00	5.50	8	3	8.80	1	6305851
E3821/4	1/4	19	13.16	100.0	15	11.00	9.00	12	4	11.80	1	6305850
E3823/8	3/8	19	16.66	100.0	15	12.00	9.00	12	4	15.25	1	6305853
E3821/2	1/2	14	20.96	125.0	24	16.00	12.00	15	4	19.00	1	6305849
E3823/4	3/4	14	26.44	140.0	20	20.00	16.00	19	4	24.50	1	6305852
E3821	1"	11	33.25	160.0	24	25.00	20.00	23	4	30.75	1	6305848






HSS HAND & MACHINE TAPS

HSS HAND & MACHINE TAPS – TOOL MATERIAL NAVIGATOR


Tool materials

High Speed Steel		<p>A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.</p>
Sintered Cobalt High Speed Steel		<p>HSS-E-PM is a Cobalt High Speed Powder Metal substrate which has been produced using powder metal technology. High speed steel produced by this method exhibits superior toughness and grindability due to the uniform and consistent grain structure. High performance taps and end mills have a particular advantage when manufactured from this substrate.</p>

Surface Treatments

Bright (uncoated)		<p>Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.</p>
Combination Bright and Steam Tempered		<p>Combination of bright and steam tempering can be effective as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bright surface assists in chip evacuation. This combination is achieved by grinding the bright surface after tempering.</p>
Steam Tempering		<p>Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.</p>

Surface Coatings

Titanium Nitride (TiN)		<p>Titanium Nitride is a gold colored ceramic coating applied by physical vapor deposition (PVD). High hardness combined with low friction properties ensures considerably longer tool life, or alternatively, better cutting performance from tools which have not been coated. TiN coatings are used mainly for drills and taps.</p>
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Thread form (THFT)										
Basic standard group (BSG)	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ISO 529	DIN 352
Thread tolerance class (TCTR)	2B 3B	2B 3B	2B 3B	2B 3B	2B 3B	3B		3B	2B	2B
Threading application										
Usable length (ULDR)	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D
Material code (BMC)	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Tap chamfer style (TCS)						P	P			C 2-3
Flute Geometry (FDC)										
Flute helix angle (FHA)										
Hand (Cutting direction)										
Coating										
Coolant exit style (CXSC)										
Product Family Code	E061	1528(UNC)	1500(UNC)	1528S(UNC)	1500S(UNC)	1519(UNC)	1500OV(UNC)	1500L(UNC)	E515	E108
PSF cutting diameters range	No.6 - 1.1/2	No.1 - No.12	1/4 - 1.1/2	No.1 - No.12	1/4 - 1.1/2	1/4 - 3/4	1/4 - 5/8	1/4 - 1"	No.1 - 2"	No.5 - 1"
	119	121	123	125	126	127	128	129	130	133
P	P1	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■
M	M1		■	■	■	■	■	■	■	■
	M2		■	■	■	■	■	■	■	■
	M3		■	■	■	■	■	■	■	■
	M4		■	■	■	■	■	■	■	■
K	K1	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■
N	N1	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■
	N4	■	■	■	■	■	■	■	■	■
	N5									
S	S1		■	■	■	■	■	■		
	S2		■	■	■	■	■	■		
	S3		■	■	■	■	■	■		
	S4		■	■	■	■	■	■		
H	H1									
	H2									
	H3									
	H4									

■ Primary use ■ Possible use

	UNC DIN 371 2B ITU 1.5×D HSS-E PM C 2-3 Bright	UNC DIN 376 2B ITU 1.5×D HSS-E PM C 2-3 Bright	UNC ANSI 2B 3B ITU 2.5×D HSS Bright	UNC ANSI 2B 3B ITU 2.5×D HSS Bright	UNC ANSI 3B ITU 2.5×D HSS P Bright	UNC ANSI 2B 3B ITU 2.5×D HSS Bright	UNC ANSI 2B 3B ITU 2.5×D HSS Bright	UNC ANSI 2B 3B ITU 2.5×D HSS Bright	UNC ANSI 3B ITU 2.5×D HSS-E PM B 3.5-5 Bright	UNC ANSI 3B ITU 2.5×D HSS-E PM B 3.5-5 ST	UNC ISO 529 2B ITU 2.5×D HSS-E PM B 3.5-5 ST
	E225	E275	1534NR(UNC)	1585NR(UNC)	1534NE(UNC)	1593(UNC)	TN1534(UNC)	TN1585(UNC)	E025	E026	E021
	No.4 - 1/4	5/16 - 1.1/2	No.1 - No.12	1/4 - Not Set	No.4 - 1/2	No.6 - No.10	No.4 - No.12	1/4 - 1/2	No.6 - 1"	No.2 - 1"	No.2 - 1"
	134	135	136	137	138	139	140	141	142	143	144
P1	■	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■	■
M1			■	■	■	■	■	■		■	■
M2			■	■	■	■	■	■		■	■
M3			■	■	■	■	■	■		■	■
M4			■	■	■	■	■	■		■	■
K1	■	■	■	■	■	■	■	■	■	■	■
K2	■	■	■	■	■	■	■	■	■	■	■
K3	■	■	■	■	■	■	■	■	■	■	■
K4	■	■	■	■	■	■	■	■	■	■	■
K5	■	■	■	■	■	■	■	■	■	■	■
N1	■	■	■	■	■	■	■	■	■	■	■
N2	■	■	■	■	■	■	■	■	■	■	■
N3	■	■	■	■	■	■	■	■	■	■	■
N4	■	■	■	■	■	■	■	■	■	■	■
N5											
S1			■	■	■	■	■	■			
S2			■	■	■	■	■	■			
S3			■	■	■	■	■	■			
S4			■	■	■	■	■	■			
H1											
H2											
H3											
H4											

■ Primary use ■ Possible use

Thread form (THFT)	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC	UNC
Basic standard group (BSG)	DIN 2184-1	DIN 2184-1	ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ISO 529	DIN 2184-1	DIN 2184-1
Thread tolerance class (TCTR)	2B	2B	3B	3B	3B	2B 3B	3B	3B	2B	2B	2B
Threading application											
Usable length (ULDR)	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D
Material code (BMC)	HSS-E PM	HSS-E PM	HSS	HSS	HSS	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
Tap chamfer style (TCS)	B 3.5-5	B 3.5-5					C 2-3	C 2-3	C 2-3	C 2-3	C 2-3
Flute Geometry (FDC)											
Flute helix angle (FHA)			λ 30°	λ 30°	λ 52°	λ 52°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°
Hand (Cutting direction)											
Coating	Bright	ST	Bright	Bright	Bright	Bright	Bright	ST	ST	Bright	ST
Coolant exit style (CXSC)											
Product Family Code	EP20	EP21	1582(UNC)	1586(UNC)	1587(UNC)	1588(UNC)	E027	E028	E023	EX20	EX21
PSF cutting diameters range	No.4 - 1"	No.4 - 1"	No.4 - No.10	1/4 - 1/2	No.4 - No.10	1/4 - 1/2	No.6 - 1"	No.4 - 1"	No.2 - 1"	No.4 - 1"	No.4 - 1"
	145	146	147	148	149	150	151	152	153	154	155
P	P1	■	■	■	■		■	■	■	■	■
	P2	■	■	■	■		■	■	■	■	■
	P3	■	■	■	■		■	■	■	■	■
	P4	■	■	■	■		■	■	■	■	■
M	M1		■	■	■			■	■		■
	M2		■	■	■			■	■		■
	M3		■	■	■			■	■		■
	M4		■	■	■			■	■		■
K	K1		■								
	K2		■								
	K3		■								
	K4		■								
	K5		■								
N	N1	■				■	■	■		■	
	N2	■				■	■	■		■	
	N3	■				■	■	■		■	
	N4	■									
	N5										
S	S1			■	■						
	S2			■	■						
	S3			■	■						
	S4			■	■						
H	H1										
	H2										
	H3										
	H4										

■ Primary use ■ Possible use

	UNC DIN 2184-1 2BX ITU 3.5xD HSS-E C 2-3.5 TIN	UNC DIN DORMER 2B ITU 1.5xD HSS C 2-3 λ 30° ST	UNF ANSI 2B 3B ITU 1.5xD HSS Bright	UNF ANSI 2B 3B ITU 1.5xD HSS Bright	UNF ANSI 2B 3B ITU 1.5xD HSS Bright	UNF ANSI 2B 3B ITU 1.5xD HSS Bright	UNF ANSI 2B 3B ITU 1.5xD HSS Bright	UNF ANSI 3B ITU 1.5xD HSS Bright	UNF ISO 529 2B ITU 1.5xD HSS C 2-3 Bright	UNF DIN 2181 2B ITU 1.5xD HSS C 2-3 Bright	UNF DIN 371 2B ITU 1.5xD HSS-E PM C 2-3 Bright	UNF DIN 374 2B ITU 1.5xD HSS-E PM C 2-3 Bright
	E287	E651	E071	1528(UNF)	1500(UNF)	1528S(UNF)	1500S(UNF)	1500L(UNF)	E524	E111	E229	E278
	No.4 - 1/2	No.6 - 5/8	No.6 - 1.1/2	No.0 - No.12	1/4 - 1.1/2	No.0 - No.12	1/4 - 1.1/2	1/4 - 1"	No.0 - 1.1/2	No.5 - 1"	No.2 - 1/4	5/16 - 1.1/2
	156	157	158	160	162	164	165	166	167	169	170	171
P1	■	■	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■	■	■
M1	■	■	■	■	■	■	■	■	■	■	■	■
M2	■	■	■	■	■	■	■	■	■	■	■	■
M3	■	■	■	■	■	■	■	■	■	■	■	■
M4	■	■	■	■	■	■	■	■	■	■	■	■
K1	■	■	■	■	■	■	■	■	■	■	■	■
K2	■	■	■	■	■	■	■	■	■	■	■	■
K3	■	■	■	■	■	■	■	■	■	■	■	■
K4	■	■	■	■	■	■	■	■	■	■	■	■
K5	■	■	■	■	■	■	■	■	■	■	■	■
N1	■	■	■	■	■	■	■	■	■	■	■	■
N2	■	■	■	■	■	■	■	■	■	■	■	■
N3	■	■	■	■	■	■	■	■	■	■	■	■
N4	■	■	■	■	■	■	■	■	■	■	■	■
N5	■	■	■	■	■	■	■	■	■	■	■	■
S1	■	■	■	■	■	■	■	■	■	■	■	■
S2	■	■	■	■	■	■	■	■	■	■	■	■
S3	■	■	■	■	■	■	■	■	■	■	■	■
S4	■	■	■	■	■	■	■	■	■	■	■	■
H1	■	■	■	■	■	■	■	■	■	■	■	■
H2	■	■	■	■	■	■	■	■	■	■	■	■
H3	■	■	■	■	■	■	■	■	■	■	■	■
H4	■	■	■	■	■	■	■	■	■	■	■	■

■ Primary use ■ Possible use

Thread form (THFT)										
Basic standard group (BSG)		ANSI	ANSI	ANSI	ANSI	ANSI	ANSI	ISO 529	DIN 2184-1	
Thread tolerance class (TCTR)		2B 3B	2B 3B	2B 3B	2B	3B	3B	2B	2B	
Threading application										
Usable length (ULDR)		2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	2.5×D	
Material code (BMC)		HSS	HSS	HSS	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	
Tap chamfer style (TCS)						B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	
Flute Geometry (FDC)										
Flute helix angle (FHA)										
Hand (Cutting direction)										
Coating		Bright	Bright	Bright	TiN	TiN	Bright	ST	Bright	
Coolant exit style (CXSC)										
Product Family Code		1593(UNF)	1534NR(UNF)	1585NR(UNF)	TN1534(UNF)	TN1585(UNF)	E035	E036	E031	EP30
PSF cutting diameters range		No.10	No.0 - No.12	1/4 - 3/4	No.10	1/4 - 1/2	No.6 - 1"	No.10 - 1"	No.8 - 1"	No.8 - 1"
		172	173	174	175	176	177	178	179	180
P	P1	■	■	☑	■	☑	■	☑	■	■
	P2	■	■	☑	■	☑	■	☑	■	■
	P3	■	■	☑	■	☑	■	☑	■	☑
	P4	■	■	☑	■	☑	■	☑	■	☑
M	M1	☑	☑	☑	■	■	■	☑	☑	■
	M2	☑	☑	☑	■	■	■	☑	☑	■
	M3	☑	☑	☑	■	■	■	☑	☑	■
	M4	☑	☑	☑	■	■	■	☑	☑	■
K	K1	☑	☑	■	☑	☑	■	☑	☑	■
	K2	☑	☑	■	☑	☑	■	☑	☑	■
	K3	☑	☑	■	☑	☑	■	☑	☑	■
	K4	☑	☑	■	☑	☑	■	☑	☑	■
	K5	☑	☑	■	☑	☑	■	☑	☑	■
N	N1	☑	☑	☑	■	■	■	■	■	■
	N2	☑	☑	☑	■	■	■	■	■	■
	N3	☑	☑	☑	■	■	■	■	■	■
	N4	☑	☑	☑	■	■	■	■	■	■
	N5	■	■	■	■	■	☑	■	■	☑
S	S1	☑	☑	☑	■	■	■	■	■	■
	S2	☑	☑	☑	■	■	■	■	■	■
	S3	☑	☑	☑	■	■	■	■	■	■
	S4	☑	☑	☑	■	■	■	■	■	■
H	H1									
	H2									
	H3									
	H4									

■ Primary use ☑ Possible use

	UNF DIN 2184-1 2B III 2.5×D HSS-E PM C 2-3 ST	UNF ANSI 3B U 2.5×D HSS λ 30° R Bright	UNF ANSI 3B U 2.5×D HSS λ 30° R Bright	UNF ANSI 3B U 2.5×D HSS λ 52° R Bright	UNF ANSI 2B 3B U 2.5×D HSS λ 52° R Bright	UNF ANSI 3B U 2.5×D HSS-E PM C 2-3 Bright	UNF ANSI 3B U 2.5×D HSS-E PM C 2-3 ST	UNF ISO 529 2B U 2.5×D HSS-E PM C 2-3 ST	UNF DIN 2184-1 2B U 2.5×D HSS-E PM C 2-3 Bright	UNF DIN 2184-1 2B U 2.5×D HSS-E PM C 2-3 ST	UNF DIN 2184-1 2BX IU 3.5×D HSS-E C 2-3.5 R TIN	UNF DIN DORMER Medium III 1.5×D HSS λ 30° R ST	UN ISO 529 2B IU 1.5×D HSS C 2-3 R Bright
	EP31	1582(UNF)	1586(UNF)	1587(UNF)	1588(UNF)	E037	E038	E033	EX30	EX31	E286	E654	E570
	No.8 - 1"	No.10 - No.10	1/4 - 1/2	No.10 - No.10	1/4 - 1/2	No.10 - 1"	No.10 - 1"	No.8 - 1"	No.8 - 1"	No.8 - 1"	No.4 - 1/2	No.8 - 5/8	1/4 - 1.5/16
	181	182	183	184	185	186	187	188	189	190	191	192	193
P1	■	■	■			■	■	■	■	■	■	■	■
P2	■	■	■			■	■	■	■	■	■	■	■
P3	■	■	■			■	■	■	■	■	■	■	■
P4	■	■	■			■	■	■	■	■	■	■	■
M1	■	■	■				■	■	■	■	■	■	
M2	■	■	■				■	■	■	■	■	■	
M3	■	■	■				■	■	■	■	■	■	
M4	■	■	■				■	■	■	■	■	■	
K1	■												■
K2	■												■
K3	■												■
K4	■												■
K5	■												■
N1				■	■	■		■		■	■	■	■
N2				■	■	■		■		■	■	■	■
N3				■	■					■	■	■	■
N4											■	■	■
N5													
S1		■	■										
S2		■	■										
S3		■	■										
S4		■	■										
H1													
H2													
H3													
H4													

■ Primary use ▣ Possible use

Thread form (THFT)												
Basic standard group (BSG)	ANSI	ANSI	ANSI	ANSI	ISO 529	ISO 529	DIN 352	DIN 371	DIN 376	DIN 352	ISO 529	DIN 352
Thread tolerance class (TCTR)	2B	3B	6H	6H	6H	6H	6H	6H	6H	6HX	6H	6H
Threading application												
Usable length (ULDR)	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D	1.5×D
Material code (BMC)	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-E PM	HSS-E PM	HSS-E	HSS	HSS
Tap chamfer style (TCS)							C 2-3	A 6-8 C 2-3	A 6-8 C 2-3	C 2-3		C 2-3
Flute Geometry (FDC)												
Flute helix angle (FHA)												
Hand (Cutting direction)												
Coating	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	Bright	ST	TIN	Bright
Coolant exit style (CXSC)												
Product Family Code	1505(UNS)	1500(UNS)	1700(M)	1700S	E500	E501	E100	E200	E250	E102	E504	E101
PSF cutting diameters range	1.1/8 - 2"	1" - 1"	M1.6 - M36	M2 - M20	M1 - M56	M3 - M24	M1.6 - M52	M2 - M10	M3 - M52	M3 - M30	M3 - M10	M4 - M16
	194	196	197	199	200	204	206	208	209	210	211	212
P	P1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	P2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	P3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	P4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
M	M1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	M2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	M3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	M4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
K	K1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	K2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	K3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	K4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	K5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
N	N1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	N2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	N3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	N4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	N5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
S	S1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	S2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	S3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	S4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
H	H1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	H2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	H3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	H4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

■ Primary use Possible use

	M	M	M	M	M	M	M	M	M	M	M	M	M	M	
	DIN 371	DIN 376	ISO 2283	DIN 357	ANSI	ANSI	ANSI	ANSI	ISO 529	ISO 529	ISO 529	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376
	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6G	6H	6H
	1.5xD	1.5xD	1.5xD	2xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E	HSS	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM
	C 2-3	C 2-3	C 2-3	C 2-3 D 18-20			B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5
	L	L	R	R	R	R	R	R	R	R	R	R	R	R	R
	Bright	Bright	Bright	Bright	Bright	TIN	Bright	ST	Bright	ST	TIN	Bright	Bright	ST	TIN
	E237	E251	E600	E303	1785NR	TN1785	E005	E006	E000	E001	E000TIN	EP006H	EP006G	EP016H	EP00TIN
	M3 - M10	M12 - M24	M3 - M20	M3 - M20	M1.6 - M20	M4 - M12	M4 - M20	M4 - M20	M1.6 - M24	M1.6 - M24	M3 - M20	M2 - M30	M3 - M20	M2 - M30	M3 - M30
P1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M1															
M2															
M3															
M4															
K1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K5	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N5															
S1															
S2															
S3															
S4															
H1															
H2															
H3															
H4															

■ Primary use ■ Possible use

Thread form (THFT)													
Basic standard group (BSG)	DIN 371	DIN 376	ISO 2283	ANSI	ANSI	ANSI	ISO 529	ISO 529	ISO 529	DIN 371/376	DIN 371/376	DIN 371/376	
Thread tolerance class (TCTR)	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6G	6H	
Threading application													
Usable length (ULDR)	3xD	3xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	
Material code (BMC)	HSS-E PM	HSS-E PM	HSS-E PM	HSS	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	
Tap chamfer style (TCS)	B 3.5-5	B 3.5-5	B 3.5-5		C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	
Flute Geometry (FDC)													
Flute helix angle (FHA)				λ 52°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°	λ 45°	
Hand (Cutting direction)													
Coating			Bright	Bright	Bright	ST	Bright	ST	TIN	Bright	Bright	ST	
Coolant exit style (CXSC)													
Product Family Code	E422	E423	E606	1788(M)	E007	E008	E002	E003	E002TIN	EX006H	EX006G	EX016H	EX00TIN
PSF cutting diameters range	M3 - M10	M12 - M24	M3 - M24	M3 - M12	M4 - M20	M4 - M20	M2 - M24	M2 - M24	M3 - M20	M2 - M64	M3 - M20	M2 - M64	M3 - M30
	228	229	230	231	232	233	234	235	236	237	239	240	242
P	P1	■	■	■		■	■	■	■	■	■	■	■
	P2	■	■	■		■	■	■	■	■	■	■	■
	P3	■	■	■		■	■	■	■	■	■	■	■
	P4	■	■	■		■	■	■	■	■	■	■	■
M	M1					■		■	■			■	■
	M2					■		■	■			■	■
	M3					■		■	■			■	■
	M4					■		■	■			■	■
K	K1												
	K2												
	K3												
	K4												
	K5												
N	N1	■	■	■	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■	■	■
	N4	■	■	■	■	■	■	■	■	■	■	■	■
	N5	■	■	■	■	■	■	■	■	■	■	■	■
S	S1												
	S2												
	S3												
	S4												
H	H1												
	H2												
	H3												
	H4												

■ Primary use ■ Possible use

	M	M	M	M	M	M	M	M	M	M	MF	MF	MF	MF	MF	
	DIN 371	DIN 376	ISO 2283	DIN 2174	DIN 2174	DIN 2174	DIN 2174	DIN 2174	DIN 2174	DIN 2174	ISO DORMER	ISO 529	DIN 2181	DIN 374	DIN 371	DIN 374
	6H	6H	6H	6HX	6GX	6HX	6GX	6HX	6HX	6HX	6H	6H	6H	6H	6H	6H
	1.5xD	1.5xD	2xD	3xD	3xD	3xD	3xD	3.5xD	3.5xD	1.5xD	1.5xD	1.5xD	1.5xD	1.5xD	1.5xD	1.5xD
	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS	HSS-E PM	HSS-E PM	HSS-E PM
	C 2-3	C 2-3	C 2-3	C 2-3.5	C 2-3.5	E 1.5-2	E 1.5-2	C 2-3.5	C 2-3.5	C 2-3.5	C 2-3		C 2-3	C 2-3	C 2-3	C 2-3
	λ 15°	λ 15°	λ 40°								λ 30°					
	Bright	Bright	Bright	TiN	TiN	TiN	TiN	TiN	TiN	TiN	ST	Bright	Bright	Bright	Bright	Bright
	E207	E258	E605	E292	E295	E293	E296	E294	E289	E650	E513	E105	E268	E242	E290	
	M2 - M10	M4 - M36	M3 - M20	M1.6 - M16	M3 - M12	M3 - M16	M3 - M10	M3 - M16	M5 - M12	M3 - M16	M3 - M50	M2.5 - M50	M4 - M50	M8 - M10	M12 - M24	
P1			■	■	■	■	■	■	■	■	■	■	■	■	■	
P2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
P3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
P4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
M1				■	■	■	■	■	■							
M2				■	■	■	■	■	■							
M3				■	■	■	■	■	■							
M4				■	■	■	■	■	■							
K1											■	■	■	■	■	
K2											■	■	■	■	■	
K3											■	■	■	■	■	
K4											■	■	■	■	■	
K5											■	■	■	■	■	
N1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
N2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
N3				■	■	■	■	■	■	■	■	■	■	■	■	
N4				■	■	■	■	■	■	■	■	■	■	■	■	
N5				■	■	■	■	■	■	■	■	■	■	■	■	
S1																
S2																
S3																
S4																
H1																
H2																
H3																
H4																

■ Primary use ■ Possible use

Thread form (THFT)													
Basic standard group (BSG)	ANSI	ISO 529	DIN 374	DIN 374	DIN 374	ANSI	ISO 529	DIN 374	DIN 374	DIN 374	DIN 2174	ANSI	ANSI B94.9
Thread tolerance class (TCTR)	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6HX	Normal	Normal
Threading application													
Usable length (ULDR)	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	3xD	1.5xD	1.5xD
Material code (BMC)	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E	HSS	HSS
Tap chamfer style (TCS)	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3	C 2-3.5		C 2-3
Flute Geometry (FDC)													
Flute helix angle (FHA)						λ 45°	λ 45°	λ 45°	λ 45°	λ 45°			
Hand (Cutting direction)													
Coating			Bright					Bright					Bright
Coolant exit style (CXSC)													
Product Family Code	E016	E011	EP10	EP11	EP10TiN	E018	E013	EX10	EX11	EX10TiN	E288	1545A(NPT)	E710
PSF cutting diameters range	M8 - M18	M4 - M24	M4 - M30	M4 - M30	M8 - M20	M8 - M18	M4 - M22	M4 - M30	M4 - M30	M8 - M20	M5 - M12	1/16 - 3/4	1/16 - 2"
	263	264	265	267	269	270	271	272	274	276	277	278	279
P	P1	■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■	■	■
	M3	■	■	■	■	■	■	■	■	■	■	■	■
	M4	■	■	■	■	■	■	■	■	■	■	■	■
K	K1	■	■	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■	■	■
N	N1			■		■		■		■		■	■
	N2			■		■		■		■		■	■
	N3			■		■		■		■		■	■
	N4			■		■		■		■		■	■
	N5			■		■		■		■		■	■
S	S1												
	S2												
	S3												
	S4												
H	H1												
	H2												
	H3												
	H4												

































































■ Primary use ■ Possible use

	NPT	NPT	NPT	NPT	NPT	NPT	NPTF	NPTF	NPTF	NPSF	NPSF	NPSM	G	G	G
	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ANSI B94.9	ISO 2284	DIN 5157	DIN 5156
	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
	1.5xD	1.5xD	1.5xD	1.5xD	2xD	1.5xD	2xD	1.5xD	1.5xD	1.5xD	1.5xD	1.5xD	1.5xD	1.5xD	1.5xD
	HSS	HSS	HSS	HSS-EP PM	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-EP PM
	C 2-3		C 2-3	C 2-3					C 2-3	C 2-3	C 2-3	C 2-3		C 2-3	C 2-3
	Bright		TiN	Bright	Bright	Bright	Bright	TiN	Bright	Bright	TiN	Bright	Bright	Bright	Bright
	E711	1544(NPT)	E721	E714	1548(NPT)	E653	1567(NPTF)	TN1543	E712	E709	E720	E708	E547	E119	E282
	1/8 - 1.1/2	1/16 - 1.1/4	1/8 - 1"	1/8 - 1"	1/16 - 1"	1/8 - 1"	1/8 - 1"	1/8 - 3/4	1/16 - 1.1/4	1/8 - 3/4	1/8 - 3/4	1/8 - 1"	1/8 - 2"	1/8 - 3"	1/8 - 1.1/2
	280	281	282	283	284	285	286	287	288	289	290	291	292	294	295
P1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
P4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
M1															
M2															
M3															
M4															
K1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
K2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
K3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
K4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
K5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
N1						<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
N5															
S1															
S2															
S3															
S4															
H1															
H2															
H3															
H4															

■ Primary use Possible use

Thread form (THFT)													
Basic standard group (BSG)	DIN 5156	DIN 5156	ISO DORMER	DIN 5156	DIN 5156	ISO DORMER	ISO 529	ISO 529	ISO 529	ISO 529	DIN 351	ISO 529	ISO 529
Thread tolerance class (TCTR)	Normal	Normal	Normal	Normal	Normal	Normal	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Threading application													
Usable length (ULDR)	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	1.5xD	2.5xD	2xD	1.5xD	1.5xD	2.5xD	2xD
Material code (BMC)	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS-E PM	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Tap chamfer style (TCS)	B 3.5-5	B 3.5-5	B 3.5-5	C 2-3	C 2-3	C 2-3		B 3.5-5	C 2-3		C 2-3	B 3.5-5	C 2-3
Flute Geometry (FDC)													
Flute helix angle (FHA)				λ 45°	λ 45°	λ 45°			λ 40°				λ 40°
Hand (Cutting direction)													
Coating	Bright	ST	ST	Bright	ST	ST	Bright	ST	Bright ST	Bright	Bright	ST	Bright ST
Coolant exit style (CXSC)													
Product Family Code	EP40	EP41	E041	EX40	EX41	E043	E536	E539	E538	E531	E115	E534	E533
PSF cutting diameters range	1/8 - 1"	1/8 - 1"	1/8 - 3/4	1/8 - 1.1/2	1/8 - 1.1/2	1/8 - 3/4	3/16 - 1"	1/4 - 1/2	1/4 - 1/2	1/8 - 1"	1/8 - 1"	1/8 - 3/4	1/8 - 3/4
	296	297	298	299	300	301	302	303	304	305	307	308	309
P	P1	■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■	■	■
	M3	■	■	■	■	■	■	■	■	■	■	■	■
	M4	■	■	■	■	■	■	■	■	■	■	■	■
K	K1	■	■	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■	■	■
N	N1	■	■	■	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■	■	■
	N4	■	■	■	■	■	■	■	■	■	■	■	■
	N5	■	■	■	■	■	■	■	■	■	■	■	■
S	S1	■	■	■	■	■	■	■	■	■	■	■	■
	S2	■	■	■	■	■	■	■	■	■	■	■	■
	S3	■	■	■	■	■	■	■	■	■	■	■	■
	S4	■	■	■	■	■	■	■	■	■	■	■	■
H	H1	■	■	■	■	■	■	■	■	■	■	■	■
	H2	■	■	■	■	■	■	■	■	■	■	■	■
	H3	■	■	■	■	■	■	■	■	■	■	■	■
	H4	■	■	■	■	■	■	■	■	■	■	■	■

■ Primary use ■ Possible use

	 ISO 2284	 ISO 529	 ISO 529	 ISO 529	 DIN 40432	 ANSI	 ANSI	 ISO DORMER	 ISO DORMER	 ANSI		
	Normal	Normal	Normal	Normal	Normal	3B	3B	6H	6H			
												
	1.5×D	1.5×D	2.5×D	2×D	1.5×D	1.5×D	1.5×D	1.5×D	2×D			
	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS		
	C 2-3		B 3.5-5	C 2-3				C 2-3	C 2-3			
												
			λ 40°					λ 40°	λ 40°			
												
	Bright	Bright	ST	Bright ST	Bright	Bright	Bright	Bright	Bright	Bright		
												
	E550	E542	E545	E544	E243	1572(UNC)	1572(UNF)	E620	E621	229SET	L000	L001
	1/8 - 2"	No.10 - No.0	No.10 - No.2	No.8 - No.2	No.7 - No.36	No.4 - 1/2	No.10 - 1/2	M3 - M16	M3 - M16	Set	Set	Set
	 310	 311	 312	 313	 314	 315	 316	 317	 318	 319	 320	 321
P1	■	■	■	■	■	■	■	■	■			
P2	■	■	■	■	■	■	■	■	■			
P3	■	■	■	■	■	■	■	■	■			
P4	■	■	■	■	■	■	■	■	■			
M1	■	■	■	■	■	■	■	■	■			
M2	■	■	■	■	■	■	■	■	■			
M3	■	■	■	■	■	■	■	■	■			
M4	■	■	■	■	■	■	■	■	■			
K1	■	■	■	■	■	■	■	■	■			
K2	■	■	■	■	■	■	■	■	■			
K3	■	■	■	■	■	■	■	■	■			
K4	■	■	■	■	■	■	■	■	■			
K5	■	■	■	■	■	■	■	■	■			
N1	■	■	■	■	■	■	■	■	■			
N2	■	■	■	■	■	■	■	■	■			
N3	■	■	■	■	■	■	■	■	■			
N4	■	■	■	■	■	■	■	■	■			
N5	■	■	■	■	■	■	■	■	■			
S1												
S2												
S3												
S4												
H1												
H2												
H3												
H4												

Thread form (THFT)									
Basic standard group (BSG)									
Thread tolerance class (TCTR)									
Threading application									
Usable length (ULDR)									
Material code (BMC)									
Tap chamfer style (TCS)									
Flute Geometry (FDC)									
Flute helix angle (FHA)									
Hand (Cutting direction)									
Coating									
Coolant exit style (CXSC)									
Product Family Code		L115	L113	L114	L119	L120	L126	L112	L110
PSF cutting diameters range		Set	Set	Set	Set	Set	Set	BT1 - No.7	16.00 - 4"
		322	323	324	325	326	328	329	330
P	P1								
	P2								
	P3								
	P4								
M	M1								
	M2								
	M3								
	M4								
K	K1								
	K2								
	K3								
	K4								
	K5								
N	N1								
	N2								
	N3								
	N4								
	N5								
S	S1								
	S2								
	S3								
	S4								
H	H1								
	H2								
	H3								
	H4								

■ Primary use Possible use

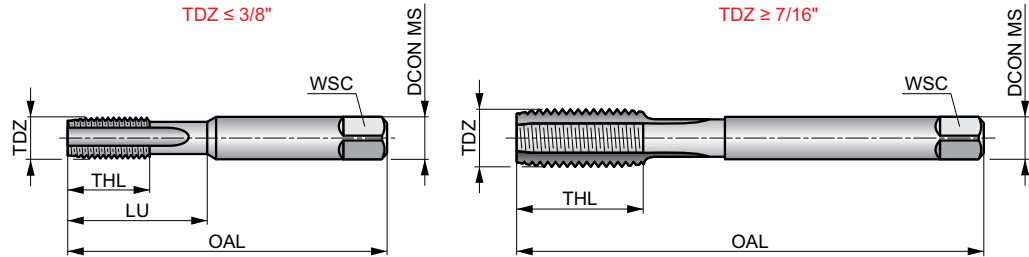
E061



HSS Straight Flute Hand Tap, UNC, ANSI Standard

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.

	ANSI	2B 3B
	1.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ■ 13	P3.1 ■ 13	P3.2 ■ 13	P4.1 ■ 10	K1.1 ■ 39	K1.2 ■ 30	K1.3 ■ 23	K2.1 ■ 39	K2.2 ■ 33
K3.1 ■ 36	K3.2 ■ 26	K4.1 ■ 33	K4.2 ■ 26	K5.1 ■ 36	K5.2 ■ 30	N1.3 ■ 26	N2.1 ■ 36	N2.2 ■ 33	N2.3 ■ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ■ 16	N4.2 ■ 16
N4.3 ■ 10													

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E0616-32N01	6	32	2"	.580	.580	.141	.110	3	2.85	36	H3	T	1	5974286
E0616-32N02	6	32	2"	.580	.580	.141	.110	3	2.85	36	H3	P	1	5974288
E0616-32N03	6	32	2"	.580	.580	.141	.110	3	2.85	36	H3	SB	1	5974290
E0616-32N06	6	32	2"	.580	.580	.141	.110	3	2.85	36	H3	Set	1	5974295
E0618-32N01	8	32	2.1/8	.650	.650	.168	.131	4	3.50	29	H3	T	1	5974326
E0618-32N02	8	32	2.1/8	.650	.650	.168	.131	4	3.50	29	H3	P	1	5974335
E0618-32N03	8	32	2.1/8	.650	.650	.168	.131	4	3.50	29	H3	SB	1	5974337
E0618-32N06	8	32	2.1/8	.650	.650	.168	.131	4	3.50	29	H3	Set	1	5974342
E06110-24N01	10	24	2.3/8	.760	.760	.194	.152	4	3.90	25	H3	T	1	5974292
E06110-24N02	10	24	2.3/8	.760	.760	.194	.152	4	3.90	25	H3	P	1	5974330
E06110-24N03	10	24	2.3/8	.760	.760	.194	.152	4	3.90	25	H3	SB	1	5974387
E06110-24N06	10	24	2.3/8	.760	.760	.194	.152	4	3.90	25	H3	Set	1	5974396
E06112-24N01	12	24	2.3/8	.810	.810	.220	.165	4	4.50	16	H3	T	1	5974402
E06112-24N02	12	24	2.3/8	.810	.810	.220	.165	4	4.50	16	H3	P	1	5974406
E06112-24N03	12	24	2.3/8	.810	.810	.220	.165	4	4.50	16	H3	SB	1	5974412
E06112-24N06	12	24	2.3/8	.810	.810	.220	.165	4	4.50	16	H3	Set	1	5974257
E0611/4N01	1/4	20	2.1/2	.650	1.063	.255	.191	4	5.10	7	H3	T	1	5974924
E0611/4N02	1/4	20	2.1/2	.650	1.063	.255	.191	4	5.10	7	H3	P	1	5974927
E0611/4N03	1/4	20	2.1/2	.650	1.063	.255	.191	4	5.10	7	H3	SB	1	5974930
E0611/4N06	1/4	20	2.1/2	.650	1.063	.255	.191	4	5.10	7	H3	Set	1	5974933
E0615/16N01	5/16	18	2.23/32	.770	1.260	.318	.238	4	6.60	F	H3	T	1	5974272
E0615/16N02	5/16	18	2.23/32	.770	1.260	.318	.238	4	6.60	F	H3	P	1	5974274
E0615/16N03	5/16	18	2.23/32	.770	1.260	.318	.238	4	6.60	F	H3	SB	1	5974275

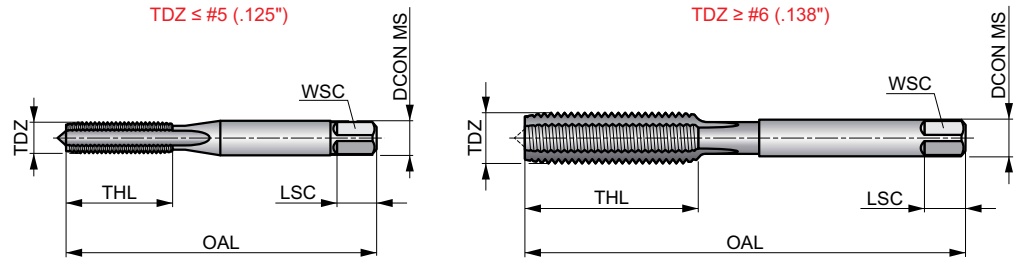
Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E0615/16N06	5/16	18	2.23/32	.770	1.260	.318	.238	4	6.60	F	H3	Set	1	5974277
E0613/8N01	3/8	16	2.15/16	.810	1.378	.381	.286	4	8.00	5/16	H3	T	1	5974267
E0613/8N02	3/8	16	2.15/16	.810	1.378	.381	.286	4	8.00	5/16	H3	P	1	5974269
E0613/8N03	3/8	16	2.15/16	.810	1.378	.381	.286	4	8.00	5/16	H3	SB	1	5974270
E0613/8N06	3/8	16	2.15/16	.810	1.378	.381	.286	4	8.00	5/16	H3	Set	1	5974271
E0617/16N01	7/16	14	3.5/32	.905	—	.323	.242	4	9.40	U	H3	T	1	5974298
E0617/16N02	7/16	14	3.5/32	.905	—	.323	.242	4	9.40	U	H3	P	1	5974300
E0617/16N03	7/16	14	3.5/32	.905	—	.323	.242	4	9.40	U	H3	SB	1	5974303
E0617/16N06	7/16	14	3.5/32	.905	—	.323	.242	4	9.40	U	H3	Set	1	5974307
E0611/2N01	1/2	13	3.3/8	.905	—	.367	.275	4	10.80	27/64	H3	T	1	5974912
E0611/2N02	1/2	13	3.3/8	.905	—	.367	.275	4	10.80	27/64	H3	P	1	5974915
E0611/2N03	1/2	13	3.3/8	.905	—	.367	.275	4	10.80	27/64	H3	SB	1	5974918
E0611/2N06	1/2	13	3.3/8	.905	—	.367	.275	4	10.80	27/64	H3	Set	1	5974921
E0619/16N01	9/16	12	3.19/32	.984	—	.429	.322	4	12.20	27/64	H3	T	1	5974347
E0619/16N02	9/16	12	3.19/32	.984	—	.429	.322	4	12.20	31/64	H3	P	1	5974355
E0619/16N03	9/16	12	3.19/32	.984	—	.429	.322	4	12.20	31/64	H3	SB	1	5974363
E0619/16N06	9/16	12	3.19/32	.984	—	.429	.322	4	12.20	31/64	H3	Set	1	5974368
E0615/8N01	5/8	11	3.13/16	.984	—	.480	.360	4	13.50	17/32	H3	T	1	5974278
E0615/8N02	5/8	11	3.13/16	.984	—	.480	.360	4	13.50	17/32	H3	P	1	5974280
E0615/8N03	5/8	11	3.13/16	.984	—	.480	.360	4	13.50	17/32	H3	SB	1	5974282
E0615/8N06	5/8	11	3.13/16	.984	—	.480	.360	4	13.50	17/32	H3	Set	1	5974284
E0613/4N01	3/4	10	4.1/4	1.181	—	.590	.442	4	16.50	21/32	H3	T	1	5974259
E0613/4N02	3/4	10	4.1/4	1.181	—	.590	.442	4	16.50	21/32	H3	P	1	5974261
E0613/4N03	3/4	10	4.1/4	1.181	—	.590	.442	4	16.50	21/32	H3	SB	1	5974263
E0613/4N06	3/4	10	4.1/4	1.181	—	.590	.442	4	16.50	21/32	H3	Set	1	5974265
E0617/8N01	7/8	9	4.11/16	1.181	—	.697	.523	4	19.50	49/64	H4	T	1	5974310
E0617/8N02	7/8	9	4.11/16	1.181	—	.697	.523	4	19.50	49/64	H4	P	1	5974314
E0617/8N03	7/8	9	4.11/16	1.181	—	.697	.523	4	19.50	49/64	H4	SB	1	5974318
E0617/8N06	7/8	9	4.11/16	1.181	—	.697	.523	4	19.50	49/64	H4	Set	1	5974324
E0611N01	1"	8	5.1/8	1.417	—	.800	.600	4	22.25	7/8	H4	T	1	5974936
E0611N02	1"	8	5.1/8	1.417	—	.800	.600	4	22.25	7/8	H4	P	1	5974942
E0611N03	1"	8	5.1/8	1.417	—	.800	.600	4	22.25	7/8	H4	SB	1	5974255
E0611N06	1"	8	5.1/8	1.417	—	.800	.600	4	22.25	7/8	H4	Set	1	5974273
E0611.1/8N01	1.1/8	7	5.7/16	1.398	—	.895	.671	4	25.00	63/64	H4	T	1	5974878
E0611.1/8N02	1.1/8	7	5.7/16	1.398	—	.895	.671	4	25.00	63/64	H4	P	1	5974883
E0611.1/8N03	1.1/8	7	5.7/16	1.398	—	.895	.671	4	25.00	63/64	H4	SB	1	5974886
E0611.1/8N06	1.1/8	7	5.7/16	1.398	—	.895	.671	4	25.00	63/64	H4	Set	1	5974889
E0611.1/4N01	1.1/4	7	5.3/4	1.634	—	1.021	.765	4	28.00	1.7/64	H4	T	1	5974859
E0611.1/4N02	1.1/4	7	5.3/4	1.634	—	1.021	.765	4	28.00	1.7/64	H4	P	1	5974867
E0611.1/4N03	1.1/4	7	5.3/4	1.634	—	1.021	.765	4	28.00	1.7/64	H4	SB	1	5974871
E0611.1/4N06	1.1/4	7	5.3/4	1.634	—	1.021	.765	4	28.00	1.7/64	H4	Set	1	5974875
E0611.3/8N01	1.3/8	6	6.1/16	1.870	—	1.109	.830	4	30.75	1.7/32	H4	T	1	5974893
E0611.3/8N02	1.3/8	6	6.1/16	1.870	—	1.109	.830	4	30.75	1.7/32	H4	P	1	5974900
E0611.3/8N03	1.3/8	6	6.1/16	1.870	—	1.109	.830	4	30.75	1.7/32	H4	SB	1	5974903
E0611.1/2N01	1.1/2	6	6.3/8	1.870	—	1.233	.952	4	34.00	1.11/32	H4	T	1	5974845
E0611.1/2N02	1.1/2	6	6.3/8	1.870	—	1.233	.952	4	34.00	1.11/32	H4	P	1	5974849
E0611.1/2N03	1.1/2	6	6.3/8	1.870	—	1.233	.952	4	34.00	1.11/32	H4	SB	1	5974852
E0611.1/2N06	1.1/2	6	6.3/8	1.870	—	1.233	.952	4	34.00	1.11/32	H4	Set	1	5974855

1528(UNC)



HSS Straight Flute Hand Tap, UNC, ANSI Standard, Machine Screw Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	2B 3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

Sizes 0 to 3/8 have male centers on thread end. Sizes larger than 3/8 all have female centers - flat ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15281-64H12FLN01	1	64	1.11/16	3/8	.141	.110	3/16	2	H1	T	1	6007370
15281-64H12FLN02	1	64	1.11/16	3/8	.141	.110	3/16	2	H1	P	1	6007371
15281-64H12FLN03	1	64	1.11/16	3/8	.141	.110	3/16	2	H1	B	1	6007167
15282-56H13FLN01	2	56	1.3/4	7/16	.141	.110	3/16	3	H1	T	1	6007341
15282-56H13FLN02	2	56	1.3/4	7/16	.141	.110	3/16	3	H1	P	1	6007350
15282-56H13FLN03	2	56	1.3/4	7/16	.141	.110	3/16	3	H1	B	1	6007354
15283-48H23FLN01	3	48	1.13/16	1/2	.141	.110	3/16	3	H2	T	1	6007178
15283-48H23FLN02	3	48	1.13/16	1/2	.141	.110	3/16	3	H2	P	1	6007180
15283-48H23FLN03	3	48	1.13/16	1/2	.141	.110	3/16	3	H2	B	1	6007190
15284-40H23FLN01	4	40	1.7/8	9/16	.141	.110	3/16	3	H2	T	1	6007260
15284-40H23FLN02	4	40	1.7/8	9/16	.141	.110	3/16	3	H2	P	1	6007265
15284-40H23FLN03	4	40	1.7/8	9/16	.141	.110	3/16	3	H2	B	1	6007270
15285-40H23FLN01	5	40	1.15/16	5/8	.141	.110	3/16	3	H2	T	1	6007298
15285-40H23FLN02	5	40	1.15/16	5/8	.141	.110	3/16	3	H2	P	1	6007303
15285-40H23FLN03	5	40	1.15/16	5/8	.141	.110	3/16	3	H2	B	1	6007307
15286-32H33FLN01	6	32	2"	11/16	.141	.110	3/16	3	H3	T	1	6007114
15286-32H33FLN02	6	32	2"	11/16	.141	.110	3/16	3	H3	P	1	6007116
15286-32H33FLN03	6	32	2"	11/16	.141	.110	3/16	3	H3	B	1	6006947
15288-32H34FLN03	8	32	2.1/8	3/4	.168	.131	1/4	4	H3	B	1	6007039
15288-32H34FLN02	8	32	2.1/8	3/4	.168	.131	1/4	4	H3	P	1	6007037
15288-32H34FLN01	8	32	2.1/8	3/4	.168	.131	1/4	4	H3	T	1	6007034

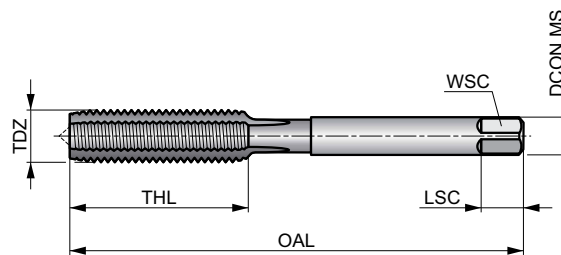
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
152810-24H34FLN03	10	24	2.3/8	7/8	.194	.152	1/4	4	H3	B	1	6007294
152810-24H34FLN01	10	24	2.3/8	7/8	.194	.152	1/4	4	H3	T	1	6007273
152810-24H34FLN02	10	24	2.3/8	7/8	.194	.152	1/4	4	H3	P	1	6007285
152812-24H34FLN03	12	24	2.3/8	15/16	.220	.165	9/32	4	H3	B	1	6007367
152812-24H34FLN02	12	24	2.3/8	15/16	.220	.165	9/32	4	H3	P	1	6007365
152812-24H34FLN01	12	24	2.3/8	15/16	.220	.165	9/32	4	H3	T	1	6007364

1500(UNC)



HSS Straight Flute Hand Tap, UNC, ANSI Standard, Fractional Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	2B 3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 #36	P1.2 #39	P1.3 #39	P2.1 #30	P2.2 #26	P2.3 #23	P3.1 #23	P3.2 #20	P3.3 #16	P4.1 #13	P4.2 #13	P4.3 #10	M1.1 #26	M1.2 #23
M2.1 #23	M2.2 #20	M3.1 #16	M3.2 #13	M3.3 #13	M4.1 #13	K1.1 #39	K1.2 #30	K1.3 #23	K2.1 #33	K2.2 #26	K2.3 #20	K3.1 #30	K3.2 #23
K3.3 #16	K4.1 #26	K4.2 #20	K4.3 #13	K4.4 #13	K4.5 #10	K5.1 #30	K5.2 #23	K5.3 #16	N1.1 #39	N1.2 #30	N1.3 #20	N2.1 #92	N2.2 #82
N2.3 #59	N3.1 #112	N3.2 #66	N3.3 #33	N4.1 #26	N4.2 #13	S1.1 #16	S1.2 #13	S2.1 #10	S3.1 #7	S4.1 #7			

Sizes 0 to 3/8 have male centers on thread end. Sizes larger than 3/8 all have female centers - flat ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15001/4X20H3N01	1/4	20	2.1/2	1"	.255	.191	5/16	4	H3	T	1	6007003
15001/4X20H3N02	1/4	20	2.1/2	1"	.255	.191	5/16	4	H3	P	1	6007007
15001/4X20H3N03	1/4	20	2.1/2	1"	.255	.191	5/16	4	H3	B	1	6007011
15005/16X18H3N01	5/16	18	2.23/32	1.1/8	.318	.238	3/8	4	H3	T	1	6007257
15005/16X18H3N02	5/16	18	2.23/32	1.1/8	.318	.238	3/8	4	H3	P	1	6007262
15005/16X18H3N03	5/16	18	2.23/32	1.1/8	.318	.238	3/8	4	H3	B	1	6007274
15003/8X16H3N01	3/8	16	2.15/16	1.1/4	.381	.286	7/16	4	H3	T	1	6007176
15003/8X16H3N02	3/8	16	2.15/16	1.1/4	.381	.286	7/16	4	H3	P	1	6007182
15003/8X16H3N03	3/8	16	2.15/16	1.1/4	.381	.286	7/16	4	H3	B	1	6007185
15007/16X14H3N01	7/16	14	3.5/32	1.7/16	.323	.242	13/32	4	H3	T	1	6007402
15007/16X14H3N02	7/16	14	3.5/32	1.7/16	.323	.242	13/32	4	H3	P	1	6007406
15007/16X14H3N03	7/16	14	3.5/32	1.7/16	.323	.242	13/32	4	H3	B	1	6007410
15001/2X13H3N01	1/2	13	3.3/8	1.21/32	.367	.275	7/16	4	H3	T	1	6007100
15001/2X13H3N02	1/2	13	3.3/8	1.21/32	.367	.275	7/16	4	H3	P	1	6007103
15001/2X13H3N03	1/2	13	3.3/8	1.21/32	.367	.275	7/16	4	H3	B	1	6007107
15009/16X12H3N01	9/16	12	3.19/32	1.21/32	.429	.322	1/2	4	H3	T	1	6007512
15009/16X12H3N02	9/16	12	3.19/32	1.21/32	.429	.322	1/2	4	H3	P	1	6007517
15009/16X12H3N03	9/16	12	3.19/32	1.21/32	.429	.322	1/2	4	H3	B	1	6007522
15005/8X11H3N01	5/8	11	3.13/16	1.13/16	.480	.360	9/16	4	H3	T	1	6007476
15005/8X11H3N02	5/8	11	3.13/16	1.13/16	.480	.360	9/16	4	H3	P	1	6007532
15005/8X11H3N03	5/8	11	3.13/16	1.13/16	.480	.360	9/16	4	H3	B	1	6007584

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15003/4X10H3N01	3/4	10	4.1/4	2"	.590	.442	11/16	4	H3	T	1	6007344
15003/4X10H3N02	3/4	10	4.1/4	2"	.590	.442	11/16	4	H3	P	1	6007349
15003/4X10H3N03	3/4	10	4.1/4	2"	.590	.442	11/16	4	H3	B	1	6007353
15007/8X9H4N01	7/8	9	4.11/16	2.7/32	.697	.523	3/4	4	H4	T	1	6007492
15007/8X9H4N02	7/8	9	4.11/16	2.7/32	.697	.523	3/4	4	H4	P	1	6007497
15007/8X9H4N03	7/8	9	4.11/16	2.7/32	.697	.523	3/4	4	H4	B	1	6007502
15001X8H4N01	1"	8	5.1/8	2.1/2	.800	.600	13/16	4	H4	T	1	6007084
15001X8H4N02	1"	8	5.1/8	2.1/2	.800	.600	13/16	4	H4	P	1	6007087
15001X8H4N03	1"	8	5.1/8	2.1/2	.800	.600	13/16	4	H4	B	1	6007090
15001.1/8X7H4N01	1.1/8	7	5.7/16	2.9/16	.896	.672	7/8	4	H4	T	1	6007086
15001.1/8X7H4N02	1.1/8	7	5.7/16	2.9/16	.896	.672	7/8	4	H4	P	1	6007089
15001.1/8X7H4N03	1.1/8	7	5.7/16	2.9/16	.896	.672	7/8	4	H4	B	1	6007091
15001.1/4X7H4N01	1.1/4	7	5.3/4	2.9/16	1.021	.766	1"	4	H4	T	1	6007058
15001.1/4X7H4N02	1.1/4	7	5.3/4	2.9/16	1.021	.766	1"	4	H4	P	1	6007061
15001.1/4X7H4N03	1.1/4	7	5.3/4	2.9/16	1.021	.766	1"	4	H4	B	1	6007064
15001.3/8X6H4N01	1.3/8	6	6.1/16	3"	1.100	.831	1.1/16	4	H4	T	1	6007117
15001.3/8X6H4N02	1.3/8	6	6.1/16	3"	1.100	.831	1.1/16	4	H4	P	1	6006937
15001.3/8X6H4N03	1.3/8	6	6.1/16	3"	1.100	.831	1.1/16	4	H4	B	1	6006981
15001.1/2X6H4N01	1.1/2	6	6.3/8	3"	1.230	.925	1.1/8	4	H4	T	1	6007033
15001.1/2X6H4N02	1.1/2	6	6.3/8	3"	1.230	.925	1.1/8	4	H4	P	1	6007036
15001.1/2X6H4N03	1.1/2	6	6.3/8	3"	1.230	.925	1.1/8	4	H4	B	1	6007040

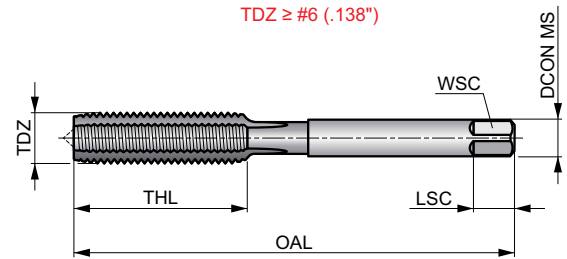
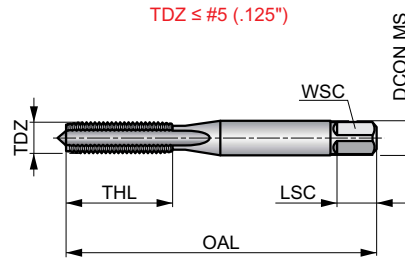
1528S(UNC)



Set of HSS Straight Flute Hand Taps, UNC, ANSI, Machine Screw Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Set including taps with 3 different chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.

	ANSI	2B 3B
	1.5xD	HSS
	R	Bright



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1			

This is a set that includes taper, plug and bottoming taps.

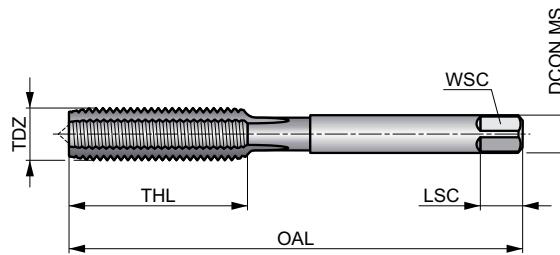
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)				
1528S1-64H1	1	64	1.11/16	3/8	.141	.110	3/16	2	H1	1	6006781
1528S2-56H2	2	56	1.3/4	7/16	.141	.110	3/16	3	H2	1	6006808
1528S3-48H2	3	48	1.13/16	1/2	.141	.110	3/16	3	H2	1	6006817
1528S4-40H2	4	40	1.7/8	9/16	.141	.110	3/16	3	H2	1	6006826
1528S5-40H2	5	40	1.15/16	5/8	.141	.110	3/16	3	H2	1	6006832
1528S6-32H3	6	32	2"	11/16	.141	.110	3/16	3	H3	1	6006848
1528S8-32H3	8	32	2.1/8	3/4	.168	.131	1/4	4	H3	1	6007159
1528S10-24H3	10	24	2.3/8	7/8	.194	.152	1/4	4	H3	1	6006792
1528S12-24H3	12	24	2.3/8	15/16	.220	.165	9/32	4	H3	1	6006802

1500S(UNC)



Set of HSS Straight Flute Hand Taps, UNC, ANSI Standard, Fractional Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Set including taps with 3 different chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	2B 3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1			

This is a set that includes taper, plug and bottoming taps.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Pack Qty	MID
			(inch)	(inch)							
1500S1/4X20	1/4	20	2.1/2	1"	.255	.191	5/16	4	H3	1	6006718
1500S5/16X18	5/16	18	2.23/32	1.1/8	.318	.238	3/8	4	H3	1	6006960
1500S3/8X16	3/8	16	2.15/16	1.1/4	.381	.286	7/16	4	H3	1	6007121
1500S7/16X14	7/16	14	3.5/32	1.7/16	.323	.242	13/32	4	H3	1	6006979
1500S1/2X13	1/2	13	3.3/8	1.21/32	.367	.275	7/16	4	H3	1	6006703
1500S9/16X12	9/16	12	3.19/32	1.21/32	.429	.322	1/2	4	H3	1	6007000
1500S5/8X11	5/8	11	3.13/16	1.13/16	.480	.360	9/16	4	H3	1	6006966
1500S3/4X10	3/4	10	4.1/4	2"	.590	.442	11/16	4	H3	1	6007119
1500S7/8X9	7/8	9	4.11/16	2.7/32	.697	.523	3/4	4	H4	1	6006996
1500S1X8	1"	8	5.1/8	2.1/2	.800	.600	13/16	4	H4	1	6007079
1500S1.1/8X7	1.1/8	7	5.7/16	2.9/16	.896	.672	7/8	4	H4	1	6006691
1500S1.1/4X7	1.1/4	7	5.3/4	2.9/16	1.021	.766	1"	4	H4	1	6006683
1500S1.3/8X6	1.3/8	6	6.1/16	3"	1.100	.831	1.1/16	4	H4	1	6006699
1500S1.1/2X6	1.1/2	6	6.3/8	3"	1.230	.925	1.1/8	4	H4	1	6006677

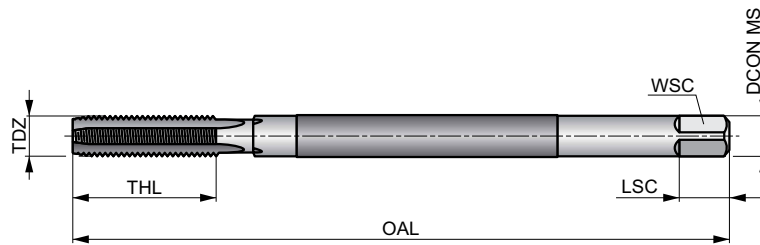
1519(UNC)



HSS Straight Flute Tap, UNC, ANSI Standard

These taps have the same major diameters and pitch diameters as standard fractional size taps, but with extended shanks for reaching locations inaccessible to regular hand taps. Although originally designed for tapping pulley holes, the long shank permits tapping other long reach applications.

	ANSI	3B
	1.5xD	HSS
P		R
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

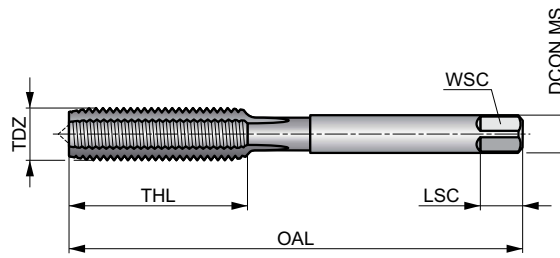
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15191/4X20X6	1/4	20	6"	1.000	.255	.191	5/16	4	H3	P	1	6006701
15191/4X20X8	1/4	20	8"	1.000	.255	.191	5/16	4	H3	P	1	6006705
15195/16X18X6	5/16	18	6"	1.1/8	.318	.238	3/8	4	H3	P	1	6006740
15195/16X18X8	5/16	18	8"	1.1/8	.318	.238	3/8	4	H3	P	1	6006744
15193/8X16X6	3/8	16	6"	1.1/4	.381	.286	7/16	4	H3	P	1	6006725
15193/8X16X8	3/8	16	8"	1.1/4	.381	.286	7/16	4	H3	P	1	6006735
15193/8X16X10	3/8	16	10"	1.1/4	.381	.286	7/16	4	H3	P	1	6006720
15191/2X13X6	1/2	13	6"	1.21/32	.507	.380	9/16	4	H3	P	1	6006693
15191/2X13X8	1/2	13	8"	1.21/32	.507	.380	9/16	4	H3	P	1	6006697
15191/2X13X10	1/2	13	10"	1.21/32	.507	.380	9/16	4	H3	P	1	6006684
15195/8X11X6	5/8	11	6"	1.13/16	.633	.475	11/16	4	H3	P	1	6006755
15195/8X11X8	5/8	11	8"	1.13/16	.633	.475	11/16	4	H3	P	1	6006762
15195/8X11X10	5/8	11	10"	1.13/16	.633	.475	11/16	4	H3	P	1	6006749
15193/4X10X10	3/4	10	10"	2.000	.759	.569	3/4	4	H3	P	1	6006710

1500V(UNC)



HSS Straight Flute Hand Tap, UNC, ANSI Standard, Oversize

Versatile taps for hand use or machine tapping, similar in design to the standard 1500 series, yet with oversize H11 pitch diameter limits, 0.0050" to 0.0055" larger. Used primarily where a part will be plated or treated after tapping. With plug lead for through holes or tapping into blind holes with a long thread run-out.



	ANSI	
1.5xD	HSS	P
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

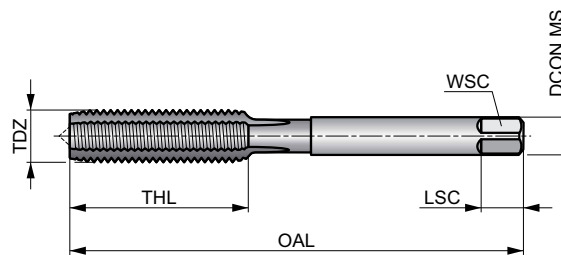
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15001/4	1/4	20	2.1/2	1.000	.255	.191	5/16	4	H11	P	1	6006967
15005/16	5/16	18	2.23/32	1.1/8	.318	.238	3/8	4	H11	P	1	6007239
15003/8	3/8	16	2.15/16	1.1/4	.381	.286	7/16	4	H11	P	1	6007152
15001/2	1/2	13	3.3/8	1.21/32	.367	.275	7/16	4	H11	P	1	6007027
15005/8	5/8	11	3.13/16	1.13/16	.480	.360	9/16	4	H11	P	1	6007375

1500L(UNC)



HSS Straight Flute Hand Tap, UNC, ANSI Standard, Left-Handed

Versatile taps for hand use or machine tapping, similar in design to the standard 1500 series but finished with left hand threads, which when viewed axially, wind in a counter-clockwise and receding direction. Available with plug lead for through hole applications or tapping into blind holes with a long thread run-out.



	ANSI	3B
	1.5xD	HSS
	L	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
1500L1/4X20	1/4	20	2.1/2	1"	.255	.191	5/16	4	H3	P	1	6006635
1500L5/16X18	5/16	18	2.23/32	1.1/8	.318	.238	3/8	4	H3	P	1	6006653
1500L3/8X16	3/8	16	2.15/16	1.1/4	.381	.286	7/16	4	H3	P	1	6006647
1500L7/16X14	7/16	14	3.5/32	1.7/16	.323	.242	13/32	4	H3	P	1	6006661
1500L1/2X13	1/2	13	3.3/8	1.21/32	.367	.275	7/16	4	H3	P	1	6006632
1500L9/16X12	9/16	12	3.19/32	1.21/32	.429	.322	1/2	4	H3	P	1	6006669
1500L5/8X11	5/8	11	3.13/16	1.13/16	.480	.360	9/16	4	H3	P	1	6006657
1500L3/4X10	3/4	10	4.1/4	2"	.590	.442	11/16	4	H3	P	1	6006643
1500L7/8X9	7/8	9	4.11/16	2.7/32	.697	.523	3/4	4	H4	P	1	6006667
1500L1X8	1"	8	5.1/8	2.1/2	.800	.600	13/16	4	H4	P	1	6006641

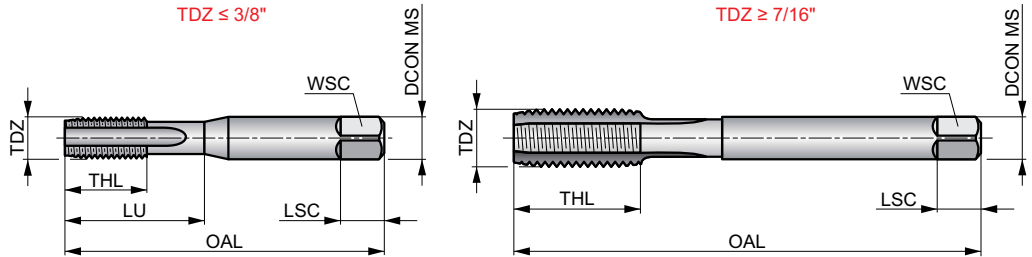
E515



HSS Straight Flute Hand Tap, UNC, ISO Standard

A versatile tool, suitable for hand and machine tapping. With a straight flute design for both through and blind holes. Available as a set of three N06 or as separate taps with taper lead NO1 for short through holes, plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes.

	ISO 529	2B
	1.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

Products from this series are also available in set with dies. Please see L120.

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
E5151-64N03	1	64	1.85	41.0	8	2.50	2.00	4	2	1.55	8.00	B	1	5977014
E5152-56N01	2	56	2.18	44.5	9.5	2.80	2.24	5	3	1.85	9.50	T	1	5977115
E5152-56N02	2	56	2.18	44.5	9.5	2.80	2.24	5	3	1.85	9.50	P	1	5977119
E5152-56N03	2	56	2.18	44.5	9.5	2.80	2.24	5	3	1.85	9.50	B	1	5977123
E5152-56N06	2	56	2.18	44.5	9.5	2.80	2.24	5	3	1.85	9.50	Set of 3	1	5977127
E5153-48N03	3	48	2.52	44.5	9.5	2.80	2.24	5	3	2.10	9.50	B	1	5977152
E5153-48N06	3	48	2.52	44.5	9.5	2.80	2.24	5	3	2.10	9.50	Set of 3	1	5977157
E5154-40N01	4	40	2.85	48.0	12.5	3.15	2.50	5	3	2.35	12.50	T	1	5976800
E5154-40N02	4	40	2.85	48.0	12.5	3.15	2.50	5	3	2.35	12.50	P	1	5976857
E5154-40N03	4	40	2.85	48.0	12.5	3.15	2.50	5	3	2.35	12.50	B	1	5976900
E5154-40N06	4	40	2.85	48.0	12.5	3.15	2.50	5	3	2.35	12.50	Set of 3	1	5976943
E5155-40N01	5	40	3.17	48.0	12.5	3.15	2.50	5	3	2.65	12.50	T	1	5976971
E5155-40N02	5	40	3.17	48.0	12.5	3.15	2.50	5	3	2.65	12.50	P	1	5976975
E5155-40N03	5	40	3.17	48.0	12.5	3.15	2.50	5	3	2.65	12.50	B	1	5976977
E5155-40N06	5	40	3.17	48.0	12.5	3.15	2.50	5	3	2.65	12.50	Set of 3	1	5976979
E5156-32N01	6	32	3.50	50.0	14	3.55	2.80	5	3	2.85	14.00	T	1	5976840
E5156-32N02	6	32	3.50	50.0	14	3.55	2.80	5	3	2.85	14.00	P	1	5976849
E5156-32N03	6	32	3.50	50.0	14	3.55	2.80	5	3	2.85	14.00	B	1	5976853
E5156-32N06	6	32	3.50	50.0	14	3.55	2.80	5	3	2.85	14.00	Set of 3	1	5976861
E5158-32N01	8	32	4.17	53.0	9.5	4.50	3.55	6	3	3.50	17.00	T	1	5976895
E5158-32N02	8	32	4.17	53.0	9.5	4.50	3.55	6	3	3.50	17.00	P	1	5976905
E5158-32N03	8	32	4.17	53.0	9.5	4.50	3.55	6	3	3.50	17.00	B	1	5976906
E5158-32N06	8	32	4.17	53.0	9.5	4.50	3.55	6	3	3.50	17.00	Set of 3	1	5976909

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E51510-24N01	10	24	4.83	58.0	11	5.00	4.00	7	3	3.90	20.00	T	1	5977077
E51510-24N02	10	24	4.83	58.0	11	5.00	4.00	7	3	3.90	20.00	P	1	5977084
E51510-24N03	10	24	4.83	58.0	11	5.00	4.00	7	3	3.90	20.00	B	1	5977088
E51510-24N06	10	24	4.83	58.0	11	5.00	4.00	7	3	3.90	20.00	Set of 3	1	5977091
E51512-24N01	12	24	5.49	62.0	12	5.60	4.50	7	3	4.50	21.00	T	1	5977095
E51512-24N02	12	24	5.49	62.0	12	5.60	4.50	7	3	4.50	21.00	P	1	5977099
E51512-24N03	12	24	5.49	62.0	12	5.60	4.50	7	3	4.50	21.00	B	1	5977107
E51512-24N06	12	24	5.49	62.0	12	5.60	4.50	7	3	4.50	21.00	Set of 3	1	5977111
E5151/4N01	1/4	20	6.35	66.0	13	6.30	5.00	8	3	5.10	26.00	T	1	5977037
E5151/4N02	1/4	20	6.35	66.0	13	6.30	5.00	8	3	5.10	26.00	P	1	5977044
E5151/4N03	1/4	20	6.35	66.0	13	6.30	5.00	8	3	5.10	26.00	B	1	5977048
E5151/4N06	1/4	20	6.35	66.0	13	6.30	5.00	8	3	5.10	26.00	Set of 3	1	5977052
E5155/16N01	5/16	18	7.94	72.0	16	8.00	6.30	9	3	6.60	29.00	T	1	5976981
E5155/16N02	5/16	18	7.94	72.0	16	8.00	6.30	9	3	6.60	29.00	P	1	5976808
E5155/16N03	5/16	18	7.94	72.0	16	8.00	6.30	9	3	6.60	29.00	B	1	5976811
E5155/16N06	5/16	18	7.94	72.0	16	8.00	6.30	9	3	6.60	29.00	Set of 3	1	5976818
E5153/8N01	3/8	16	9.53	80.0	18	10.00	8.00	11	3	8.00	32.00	T	1	5977176
E5153/8N02	3/8	16	9.53	80.0	18	10.00	8.00	11	3	8.00	32.00	P	1	5977186
E5153/8N03	3/8	16	9.53	80.0	18	10.00	8.00	11	3	8.00	32.00	B	1	5977190
E5153/8N06	3/8	16	9.53	80.0	18	10.00	8.00	11	3	8.00	32.00	Set of 3	1	5977197
E5157/16N01	7/16	14	11.11	85.0	19	8.00	6.30	9	3	9.40	—	T	1	5976865
E5157/16N02	7/16	14	11.11	85.0	19	8.00	6.30	9	3	9.40	—	P	1	5976869
E5157/16N03	7/16	14	11.11	85.0	19	8.00	6.30	9	3	9.40	—	B	1	5976873
E5157/16N06	7/16	14	11.11	85.0	19	8.00	6.30	9	3	9.40	—	Set of 3	1	5976877
E5151/2N01	1/2	13	12.70	89.0	22	9.00	7.10	10	3	10.80	—	T	1	5977022
E5151/2N02	1/2	13	12.70	89.0	22	9.00	7.10	10	3	10.80	—	P	1	5977026
E5151/2N03	1/2	13	12.70	89.0	22	9.00	7.10	10	3	10.80	—	B	1	5977030
E5151/2N06	1/2	13	12.70	89.0	22	9.00	7.10	10	3	10.80	—	Set of 3	1	5977034
E5159/16N01	9/16	12	14.29	95.0	24	11.20	9.00	12	4	12.20	—	T	1	5976913
E5159/16N02	9/16	12	14.29	95.0	24	11.20	9.00	12	4	12.20	—	P	1	5976917
E5159/16N03	9/16	12	14.29	95.0	24	11.20	9.00	12	4	12.20	—	B	1	5976920
E5159/16N06	9/16	12	14.29	95.0	24	11.20	9.00	12	4	12.20	—	Set of 3	1	5976924
E5155/8N01	5/8	11	15.88	102.0	24	12.50	10.00	13	4	13.50	—	T	1	5976822
E5155/8N02	5/8	11	15.88	102.0	24	12.50	10.00	13	4	13.50	—	P	1	5976827
E5155/8N03	5/8	11	15.88	102.0	24	12.50	10.00	13	4	13.50	—	B	1	5976832
E5155/8N06	5/8	11	15.88	102.0	24	12.50	10.00	13	4	13.50	—	Set of 3	1	5976835
E5153/4N01	3/4	10	19.05	112.0	29	14.00	11.20	14	4	16.50	—	T	1	5977159
E5153/4N02	3/4	10	19.05	112.0	29	14.00	11.20	14	4	16.50	—	P	1	5977165
E5153/4N03	3/4	10	19.05	112.0	29	14.00	11.20	14	4	16.50	—	B	1	5977167
E5153/4N06	3/4	10	19.05	112.0	29	14.00	11.20	14	4	16.50	—	Set of 3	1	5977171
E5157/8N01	7/8	9	22.23	118.0	29	16.00	12.50	16	4	19.50	—	T	1	5976879
E5157/8N02	7/8	9	22.23	118.0	29	16.00	12.50	16	4	19.50	—	P	1	5976883
E5157/8N03	7/8	9	22.23	118.0	29	16.00	12.50	16	4	19.50	—	B	1	5976887
E5157/8N06	7/8	9	22.23	118.0	29	16.00	12.50	16	4	19.50	—	Set of 3	1	5976892
E5151N03	1"	8	25.40	130.0	35	18.00	14.00	18	4	22.25	—	B	1	5977069
E5151N01	1"	8	25.40	130.0	35	18.00	14.00	18	4	22.25	—	T	1	5977061
E5151N02	1"	8	25.40	130.0	35	18.00	14.00	18	4	22.25	—	P	1	5977064
E5151N06	1"	8	25.40	130.0	35	18.00	14.00	18	4	22.25	—	Set of 3	1	5977073
E5151.1/8N01	1.1/8	7	28.57	138.0	35	20.00	16.00	20	4	25.00	—	T	1	5977221
E5151.1/8N02	1.1/8	7	28.57	138.0	35	20.00	16.00	20	4	25.00	—	P	1	5977225
E5151.1/8N03	1.1/8	7	28.57	138.0	35	20.00	16.00	20	4	25.00	—	B	1	5977009
E5151.1/4N01	1.1/4	7	31.75	151.0	41	22.40	18.00	22	4	28.00	—	T	1	5977215
E5151.1/4N02	1.1/4	7	31.75	151.0	41	22.40	18.00	22	4	28.00	—	P	1	5977217
E5151.1/4N03	1.1/4	7	31.75	151.0	41	22.40	18.00	22	4	28.00	—	B	1	5977219
E5151.3/8N01	1.3/8	6	34.92	162.0	47	25.00	20.00	24	4	30.75	—	T	1	5977194
E5151.3/8N02	1.3/8	6	34.92	162.0	47	25.00	20.00	24	4	30.75	—	P	1	5977200
E5151.3/8N03	1.3/8	6	34.92	162.0	47	25.00	20.00	24	4	30.75	—	B	1	5977203
E5151.1/2N01	1.1/2	6	38.10	170.0	47	28.00	22.40	26	4	34.00	—	T	1	5977208

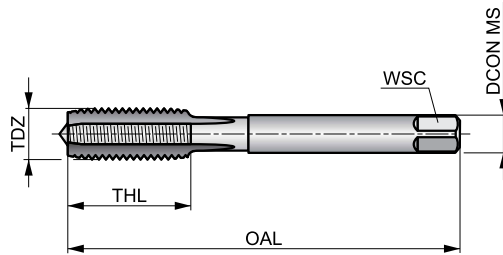
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E5151.1/2N02	1.1/2	6	38.10	170.0	47	28.00	22.40	26	4	34.00	–	P	1	5977211
E5151.1/2N03	1.1/2	6	38.10	170.0	47	28.00	22.40	26	4	34.00	–	B	1	5977213
E5151.3/4N01	1.3/4	5	44.45	187.0	54	31.50	25.00	28	6	39.50	–	T	1	5977056
E5151.3/4N02	1.3/4	5	44.45	187.0	54	31.50	25.00	28	6	39.50	–	P	1	5977103
E5151.3/4N03	1.3/4	5	44.45	187.0	54	31.50	25.00	28	6	39.50	–	B	1	5977146
E5152N01	2"	4.5	50.80	200.0	60	35.50	28.00	31	6	45.00	–	T	1	5977131
E5152N02	2"	4.5	50.80	200.0	60	35.50	28.00	31	6	45.00	–	P	1	5977135

E108



HSS Straight Flute Serial Hand Tap, UNC, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a set of three serial taps, which should be used one after the other to create the full thread.



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3.3	N4.2	N4.3											
■	■	■											

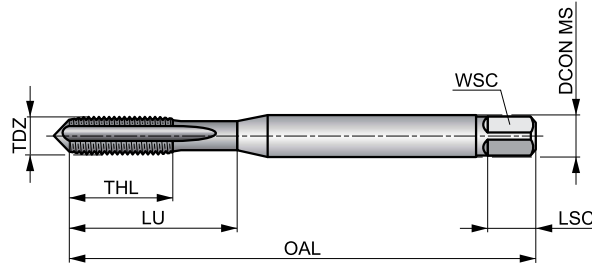
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)						
E1085-40N08	5	40	3.18	45.0	13	4.00	3.00	3	2.65	1	5975670
E1086-32N08	6	32	3.51	45.0	10	4.00	3.00	3	2.85	1	5975522
E1088-32N08	8	32	4.17	50.0	14	6.00	4.90	3	3.50	1	5975542
E10810-24N08	10	24	4.83	50.0	14	6.00	4.90	3	3.90	1	5975253
E10812-24N08	12	24	5.49	56.0	16	6.00	4.90	3	4.50	1	5975256
E1081/4N08	1/4	20	6.35	56.0	17	6.00	4.90	3	5.10	1	5975250
E1085/16N08	5/16	18	7.94	63.0	19	6.00	4.90	3	6.60	1	5975681
E1083/8N08	3/8	16	9.53	70.0	22	7.00	5.50	3	8.00	1	5975583
E1087/16N08	7/16	14	11.11	75.0	30	8.00	6.20	3	9.40	1	5975528
E1081/2N08	1/2	13	12.70	75.0	27	9.00	7.00	3	10.80	1	5975248
E1089/16N08	9/16	12	14.29	80.0	30	11.00	9.00	4	12.20	1	5975547
E1085/8N08	5/8	11	15.88	80.0	32	12.00	9.00	4	13.50	1	5975686
E1083/4N08	3/4	10	19.05	95.0	34	14.00	11.00	4	16.50	1	5975515
E1087/8N08	7/8	9	22.23	110.0	38	18.00	14.50	4	19.50	1	5975535
E1081N08	1"	8	25.40	110.0	38	20.00	16.00	4	22.25	1	5975251

E225



HSS-E-PM Straight Flute Machine Tap, UNC, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.



	DIN 371	2B
	1.5xD	HSS-E PM
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

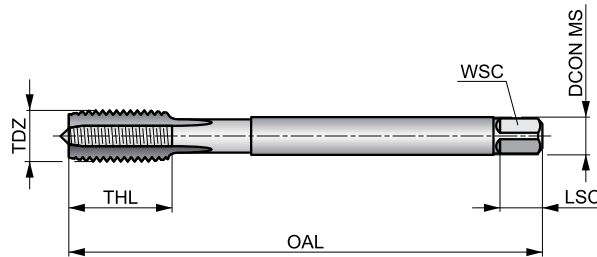
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E2254-40	4	40	2.85	56.0	9	3.50	2.70	6	3	2.35	18.00	1	5976114
E2255-40	5	40	3.17	56.0	10	3.50	2.70	6	3	2.65	18.00	1	5976116
E2256-32	6	32	3.50	56.0	11	4.00	3.00	6	3	2.85	20.00	1	5976120
E2258-32	8	32	4.17	63.0	12	4.50	3.40	8	3	3.50	21.00	1	5976124
E22510-24	10	24	4.83	70.0	13	6.00	4.90	8	3	3.90	25.00	1	5976093
E22512-24	12	24	5.49	80.0	15	6.00	4.90	8	3	4.50	30.00	1	5976096
E2251/4	1/4	20	6.35	80.0	16	7.00	5.50	8	3	5.10	30.00	1	5976082

E275



HSS-E-PM Straight Flute Machine Tap, UNC, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E2755/16	5/16	18	7.94	90.0	18	6.00	4.90	8	3	6.60	1	5975227
E2753/8	3/8	16	9.53	100.0	24	7.00	5.50	8	3	8.00	1	5975225
E2757/16	7/16	14	11.11	110.0	23	9.00	7.00	10	3	9.40	1	5975231
E2751/2	1/2	13	12.70	110.0	23	9.00	7.00	10	3	10.80	1	5975170
E2759/16	9/16	12	14.29	110.0	25	11.00	9.00	12	3	12.20	1	5975040
E2755/8	5/8	11	15.88	110.0	25	12.00	9.00	12	4	13.50	1	5975229
E2753/4	3/4	10	19.05	140.0	34	14.00	11.00	14	4	16.50	1	5975222
E2757/8	7/8	9	22.23	140.0	34	18.00	14.50	17	4	19.50	1	5975035
E2751	1"	8	25.40	160.0	38	20.00	16.00	19	4	22.25	1	5975669
E2751.1/8	1.1/8	7	28.58	180.0	45	22.00	18.00	21	4	25.00	1	5975123
E2751.1/4	1.1/4	7	31.75	180.0	50	25.00	20.00	23	4	28.00	1	5975080
E2751.1/2	1.1/2	6	38.10	200.0	60	32.00	24.00	27	4	34.00	1	5975029

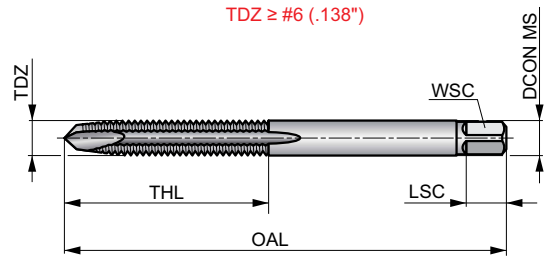
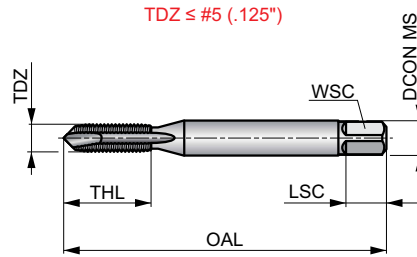
1534NR(UNC)



HSS Spiral Point Tap, UNC, ANSI Standard, Machine Screw Sizes

Feature concentric threads with no pitch diameter relief. These taps are particularly recommended for applications requiring close gauging fits and in older equipment that is not sufficiently rigid to accommodate the free cutting action of the 1534 series. For through hole applications only.

	ANSI	2B 3B
	2.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 52	P1.2 ■ 59	P1.3 ■ 59	P2.1 ■ 46	P2.2 ■ 39	P2.3 ■ 36	P3.1 ■ 39	P3.2 ■ 30	P3.3 ■ 26	P4.1 ■ 23	P4.2 ■ 20	P4.3 ■ 16	M1.1 ■ 39	M1.2 ■ 33
M2.1 ■ 36	M2.2 ■ 30	M3.1 ■ 23	M3.2 ■ 20	M3.3 ■ 16	M4.1 ■ 20	K1.1 ■ 46	K1.2 ■ 33	K1.3 ■ 26	K2.1 ■ 33	K2.2 ■ 26	K2.3 ■ 20	K3.1 ■ 30	K3.2 ■ 23
K3.3 ■ 16	K4.1 ■ 26	K4.2 ■ 20	K4.3 ■ 13	K4.4 ■ 13	K4.5 ■ 10	K5.1 ■ 30	K5.2 ■ 23	K5.3 ■ 16	N1.1 ■ 49	N1.2 ■ 36	N1.3 ■ 26	N2.1 ■ 102	N2.2 ■ 92
N2.3 ■ 66	N3.1 ■ 151	N3.2 ■ 89	N3.3 ■ 46	N4.1 ■ 98	N4.2 ■ 26	S1.1 ■ 20	S1.2 ■ 16	S1.3 ■ 7	S2.1 ■ 13	S3.1 ■ 10	S4.1 ■ 7		

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
1534NR1-64H2N02	1	64	1.11/16	3/8	.141	.110	3/16	2	H2	P	1	6007376
1534NR2-56H2N02	2	56	1.3/4	7/16	.141	.110	3/16	2	H2	P	1	6007459
1534NR3-48H2N02	3	48	1.13/16	1/2	.141	.110	3/16	2	H2	P	1	6007482
1534NR4-40H2N02	4	40	1.7/8	9/16	.141	.110	3/16	2	H2	P	1	6007510
1534NR5-40H2N02	5	40	1.15/16	5/8	.141	.110	3/16	2	H2	P	1	6007537
1534NR6-32H2N02	6	32	2"	11/16	.141	.110	3/16	2	H2	P	1	6007559
1534NR6-32H3N02	6	32	2"	11/16	.141	.110	3/16	2	H3	P	1	6007569
1534NR8-32H2N02	8	32	2.1/8	3/4	.168	.131	1/4	2	H2	P	1	6006818
1534NR8-32H3N02	8	32	2.1/8	3/4	.168	.131	1/4	2	H3	P	1	6006867
1534NR10-24H3N02	10	24	2.3/8	7/8	.194	.152	1/4	2	H3	P	1	6007399
1534NR12-24H3N02	12	24	2.3/8	15/16	.220	.165	9/32	2	H3	P	1	6007435

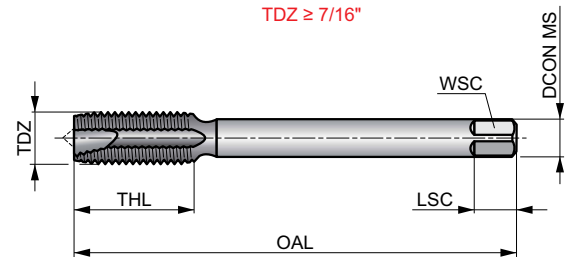
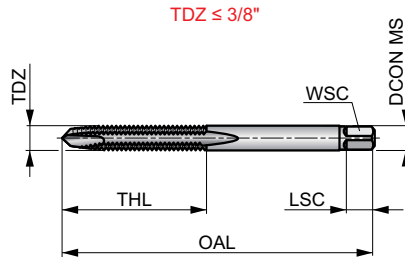
1585NR(UNC)



HSS Spiral Point Tap, UNC, ANSI Standard, Fractional Sizes

Feature concentric threads with no pitch diameter relief. These taps are particularly recommended for applications requiring close gauging fits and in older equipment that is not sufficiently rigid to accommodate the free cutting action of the 1585 series. For through hole applications only.

	ANSI	2B 3B
	2.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣62	P1.2 ▣69	P1.3 ▣72	P2.1 ▣52	P2.2 ▣46	P2.3 ▣39	P3.1 ▣23	P3.2 ▣20	P3.3 ▣16	P4.1 ▣13	P4.2 ▣13	P4.3 ▣10	M1.1 ▣26	M1.2 ▣23
M2.1 ▣23	M2.2 ▣20	M3.1 ▣16	M3.2 ▣13	M3.3 ▣13	M4.1 ▣10	N1.1 ▣33	N1.2 ▣26	N1.3 ▣16	N2.1 ▣66	N2.2 ▣59	N2.3 ▣43	N3.1 ▣112	N3.3 ▣33
N4.1 ▣66	S1.3 ▣10	S2.1 ▣16	S3.1 ▣13	S4.1 ▣10									

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
1585NR1/4X20H32FLN02	1/4	20	2.1/2	1"	.255	.191	5/16	2	H3	P	1	6007811
1585NR5/16X18H32FLN02	5/16	18	2.23/32	1.1/8	.318	.238	3/8	2	H3	P	1	6007696
1585NR3/8X16H33FLN02	3/8	16	2.15/16	1.1/4	.381	.286	7/16	3	H3	P	1	6007652
1585NR7/16X14H33FLN02	7/16	14	3.5/32	1.7/16	.323	.242	13/32	3	H3	P	1	6007781
1585NR1/2X13H33FLN02	1/2	13	3.3/8	1.21/32	.367	.275	7/16	3	H3	P	1	6007768
1585NR5/8X11H33FLN02	5/8	11	3.13/16	1.13/16	.480	.360	9/16	3	H3	P	1	6007761
1585NR3/4X10H33FLN02	3/4	10	4.1/2	2"	.590	.442	11/16	3	H3	P	1	6007862

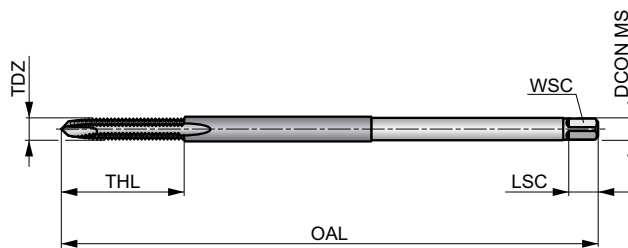
1534NE(UNC)



HSS Spiral Point Tap, UNC, ANSI Standard, Extended Length

Similar in design and thread geometries to the standard 1534NR series, but with a longer shank length. Bright finish improves chip flow in soft or non-ferrous materials. For through hole applications only.

	ANSI	3B
	2.5xD	HSS
P		
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 52	P1.2 ■ 59	P1.3 ■ 59	P2.1 ■ 46	P2.2 ■ 39	P2.3 ■ 36	P3.1 ■ 39	P3.2 ■ 30	P3.3 ■ 26	P4.1 ■ 23	P4.2 ■ 20	P4.3 ■ 16	M1.1 ■ 39	M1.2 ■ 33
M2.1 ■ 36	M2.2 ■ 30	M3.1 ■ 23	M3.2 ■ 20	M3.3 ■ 16	M4.1 ■ 20	K1.1 ■ 46	K1.2 ■ 33	K1.3 ■ 26	K2.1 ■ 33	K2.2 ■ 26	K2.3 ■ 20	K3.1 ■ 30	K3.2 ■ 23
K3.3 ■ 16	K4.1 ■ 26	K4.2 ■ 20	K4.3 ■ 13	K4.4 ■ 13	K4.5 ■ 10	K5.1 ■ 30	K5.2 ■ 23	K5.3 ■ 16	N1.1 ■ 49	N1.2 ■ 36	N1.3 ■ 26	N2.1 ■ 102	N2.2 ■ 92
N2.3 ■ 66	N3.1 ■ 151	N3.2 ■ 89	N3.3 ■ 46	N4.1 ■ 98	N4.2 ■ 26	S1.1 ■ 20	S1.2 ■ 16	S1.3 ■ 7	S2.1 ■ 13	S3.1 ■ 10	S4.1 ■ 7		

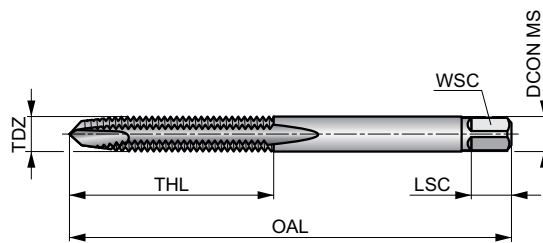
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
1534NE6-32X6	6	32	6"	11/16	.141	.110	3/16	2	H3	P	1	6007462
1534NE8-32X6	8	32	6"	3/4	.168	.131	1/4	2	H3	P	1	6007588
1534NE10-24X6	10	24	6"	7/8	.194	.152	1/4	2	H3	P	1	6007077
1534NE1/4X20X6	1/4	20	6"	1"	.255	.191	5/16	2	H3	P	1	6007062
1534NE5/16X18X6	5/16	18	6"	1.1/8	.318	.238	3/8	2	H3	P	1	6007101
1534NE3/8X16X6	3/8	16	6"	1.1/4	.381	.286	7/16	3	H3	P	1	6007088
1534NE7/16X14X6	7/16	14	6"	1.7/16	.323	.242	13/32	3	H3	P	1	6007515
1534NE1/2X13X6	1/2	13	6"	1.21/32	.367	.275	7/16	3	H3	P	1	6007053

1593(UNC)



HSS Spiral Point Tap, UNC, ANSI Standard, Oversize

Most productive tap design for through hole applications only. With oversize H7 pitch diameter limits, 0.0030" to 0.0035" larger. Used primarily where a part will be plated or treated after tapping.



	ANSI	2B 3B
	2.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 52	P1.2 ■ 59	P1.3 ■ 59	P2.1 ■ 46	P2.2 ■ 39	P2.3 ■ 36	P3.1 ■ 39	P3.2 ■ 30	P3.3 ■ 26	P4.1 ■ 23	P4.2 ■ 20	P4.3 ▣ 16	M1.1 ▣ 39	M1.2 ▣ 33
M2.1 ▣ 36	M2.2 ▣ 30	M3.1 ▣ 23	M3.2 ▣ 20	M3.3 ▣ 16	M4.1 ▣ 20	K1.1 ▣ 46	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 33	K2.2 ▣ 26	K2.3 ▣ 20	K3.1 ▣ 30	K3.2 ▣ 23
K3.3 ▣ 16	K4.1 ▣ 26	K4.2 ▣ 20	K4.3 ▣ 13	K4.4 ▣ 13	K4.5 ▣ 10	K5.1 ▣ 30	K5.2 ▣ 23	K5.3 ▣ 16	N1.1 ▣ 49	N1.2 ▣ 36	N1.3 ▣ 26	N2.1 ▣ 102	N2.2 ▣ 92
N2.3 ▣ 66	N3.1 ▣ 151	N3.2 ▣ 89	N3.3 ▣ 46	N4.1 ■ 98	N4.2 ▣ 26	S1.1 ▣ 20	S1.2 ▣ 16	S1.3 ▣ 7	S2.1 ▣ 13	S3.1 ▣ 10	S4.1 ▣ 7		

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15936-32	6	32	2"	11/16	.141	.110	3/16	2	H7	P	1	6007868
15938-32	8	32	2.1/8	3/4	.168	.131	1/4	2	H7	P	1	6007869
159310-24	10	24	2.3/8	7/8	.194	.152	1/4	2	H7	P	1	6007830

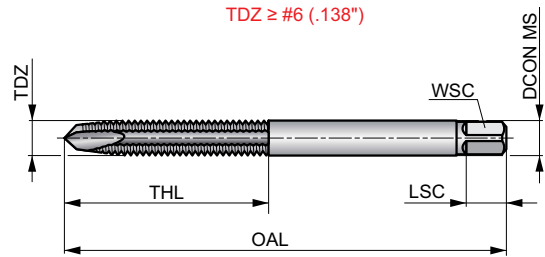
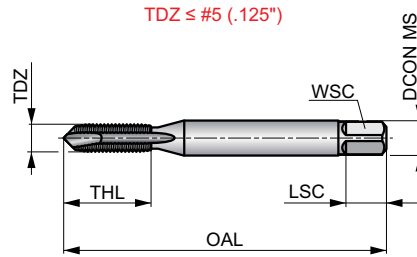
TN1534(UNC)



HSS Spiral Point Tap, UNC, ANSI Standard, TiN-Coated

Most productive tap design for through hole applications only. These taps are extremely free cutting. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	ANSI	2B
	2.5xD	HSS
	R	TiN



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 66	P1.2 ■ 72	P1.3 ■ 75	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 43	P3.2 ■ 36	P3.3 ■ 30	P4.1 ■ 26	P4.2 ■ 23	P4.3 ■ 16	M1.1 ■ 52	M1.2 ■ 46
M2.1 ■ 49	M2.2 ■ 39	M3.1 ■ 30	M3.2 ■ 26	M3.3 ▧ 23	M4.1 ▧ 26	K1.1 ▧ 49	K1.2 ▧ 36	K1.3 ▧ 26	K2.1 ▧ 36	K2.2 ▧ 30	K2.3 ▧ 23	K3.1 ▧ 33	K3.2 ▧ 23
K3.3 ▧ 20	K4.1 ▧ 30	K4.2 ▧ 23	K4.3 ▧ 16	K4.4 ▧ 13	K4.5 ▧ 13	K5.1 ▧ 33	K5.2 ▧ 26	K5.3 ▧ 20	N1.1 ■ 66	N1.2 ■ 49	N1.3 ■ 33	N2.1 ■ 121	N2.2 ■ 108
N2.3 ■ 79	N3.1 ■ 194	N3.2 ■ 115	N3.3 ■ 59	N4.1 ■ 121	N4.2 ■ 30	S2.1 ■ 16	S3.1 ■ 13	S4.1 ■ 10					

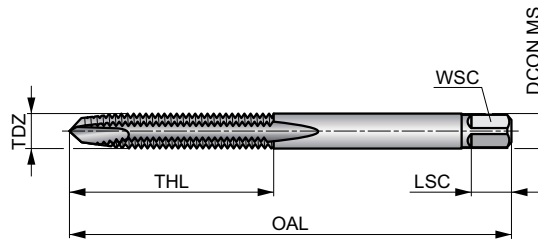
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
TN15344-40	4	40	1.7/8	9/16	.141	.110	3/16	2	H2	P	1	6006775
TN15346-32	6	32	2"	11/16	.141	.110	3/16	2	H3	P	1	6007377
TN15348-32	8	32	2.1/8	3/4	.168	.131	1/4	2	H3	P	1	6007420
TN153410-24	10	24	2.3/8	7/8	.194	.152	1/4	2	H3	P	1	6006759
TN153412-24	12	24	2.3/8	15/16	.220	.165	9/32	2	H3	P	1	6006767

TN1585(UNC)



HSS Spiral Point Tap, UNC, ANSI Standard, TiN-Coated

Most productive tap design for through hole applications only. These taps are extremely free cutting. TiN coated to allow higher cutting speeds, improve performance and extend tool life.



	ANSI	2B 3B
	2.5xD	HSS
	R	TIN

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■66	P1.2 ■72	P1.3 ■75	P2.1 ■56	P2.2 ■49	P2.3 ■43	P3.1 ■43	P3.2 ■36	P3.3 ■30	P4.1 ■26	P4.2 ■23	P4.3 ■16	M1.1 ■52	M1.2 ■46
M2.1 ■49	M2.2 ■39	M3.1 ■30	M3.2 ■26	M3.3 ■23	M4.1 ■26	K1.1 ■49	K1.2 ■36	K1.3 ■26	K2.1 ■36	K2.2 ■30	K2.3 ■23	K3.1 ■33	K3.2 ■23
K3.3 ■20	K4.1 ■30	K4.2 ■23	K4.3 ■16	K4.4 ■13	K4.5 ■13	K5.1 ■33	K5.2 ■26	K5.3 ■20	N1.1 ■66	N1.2 ■49	N1.3 ■33	N2.1 ■121	N2.2 ■108
N2.3 ■79	N3.1 ■194	N3.2 ■115	N3.3 ■59	N4.1 ■121	N4.2 ■30	S2.1 ■16	S3.1 ■13	S4.1 ■10					

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
TN15851/4-20H32FL	1/4	20	2.1/2	1"	.191	.191	5/16	2	H3	P	1	6007401
TN15851/4-20H33FL	1/4	20	2.1/2	1"	.191	.191	5/16	3	H3	P	1	6007405
TN15855/16-18H32FL	5/16	18	2.23/32	1.1/8	.238	.238	3/8	2	H3	P	1	6007443
TN15855/16-18H33FL	5/16	18	2.23/32	1.1/8	.238	.238	3/8	3	H3	P	1	6007446
TN15853/8-16H33FL	3/8	16	2.15/16	1.1/4	.286	.286	7/16	3	H3	P	1	6007425
TN15853/8-16H53FL	3/8	16	2.15/16	1.1/4	.286	.286	7/16	3	H5	P	1	6007432
TN15857/16-14H33FL	7/16	14	3.5/32	1.7/16	.242	.242	13/32	3	H3	P	1	6007457
TN15851/2-13H33FL	1/2	13	3.3/8	1.21/32	.275	.275	7/16	3	H3	P	1	6007393

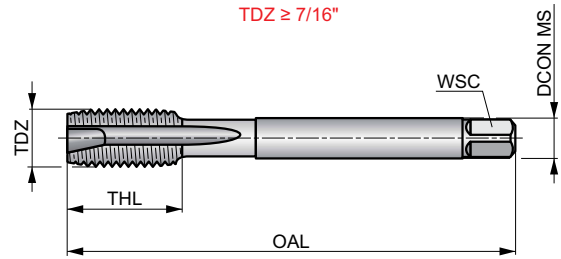
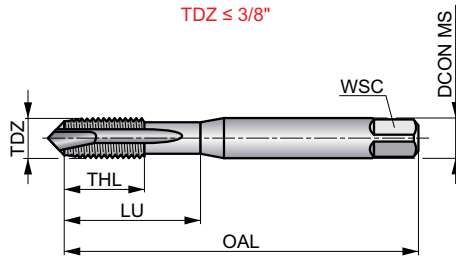
E025



HSS-E-PM Spiral Point Tap, UNC, ANSI Standard

Machine tap with spiral point for through holes only. Made from HSS-E-PM which prolongs tool life, make it more predictable, improve speed performance and reduce chipping. Bright finish to produce more accurate and cleaner threads preventing the work-material from sticking to the cutting edges.

	ANSI	3B
	2.5xD	HSS-E PM
	B 3.5-5	
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ▣ 46	P3.1 ■ 43	P3.2 ▣ 33	P4.1 ▣ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ▣ 89	N3.3 ▣ 43	N4.1 ▣ 72									

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(mm)				
E0256-32	6	32	2"	.261	.594	.141	.110	—	2	2.85	N36	H2	P	1	5974057
E0258-32	8	32	2.1/8	.248	.653	.168	.131	—	2	3.50	N29	H2	P	1	5974068
E02510-24	10	24	2.3/8	.430	.843	.194	.152	—	2	3.90	N25	H3	P	1	5974031
E02512-24	12	24	2.3/8	.417	.885	.220	.165	—	2	4.50	N16	H3	P	1	5974034
E0251/4	1/4	20	2.1/2	.507	1.007	.255	.191	—	2	5.10	N7	H3	P	1	5974027
E0251/43FL	1/4	20	2.1/2	.507	1.007	.255	.191	—	3	5.10	N7	H3	P	1	5974029
E0255/16	5/16	18	2.23/32	.594	1.189	.318	.238	—	2	6.60	F	H3	P	1	5974044
E0255/163FL	5/16	18	2.23/32	.594	1.189	.318	.238	—	3	6.60	F	H3	P	1	5974047
E0253/8	3/8	16	2.15/16	.602	1.292	.381	.286	—	2	8.00	5/16	H3	P	1	5974039
E0253/83FL	3/8	16	2.15/16	.602	1.292	.381	.286	—	3	8.00	5/16	H3	P	1	5974041
E0257/16	7/16	14	3.5/32	.905	—	.323	.242	—	3	9.40	U	H3	P	1	5974060
E0251/2	1/2	13	3.3/8	.905	—	.367	.275	—	2	10.80	27/64	H3	P	1	5974219
E0251/23FL	1/2	13	3.3/8	.905	—	.367	.275	—	3	10.80	27/64	H3	P	1	5974025
E0259/16	9/16	12	3.19/32	.984	—	.429	.322	—	3	12.20	31/64	H3	P	1	5974072
E0255/8	5/8	11	3.13/16	.984	—	.480	.360	—	3	13.50	17/32	H3	P	1	5974053
E0253/4	3/4	10	4.1/4	1.161	—	.590	.442	—	3	16.50	21/32	H4	P	1	5974036
E0257/8	7/8	9	4.11/16	1.161	—	.697	.523	—	3	19.50	49/64	H4	P	1	5974064
E0251	1"	8	5.1/8	1.398	—	.800	.600	—	3	22.25	7/8	H4	P	1	5974215

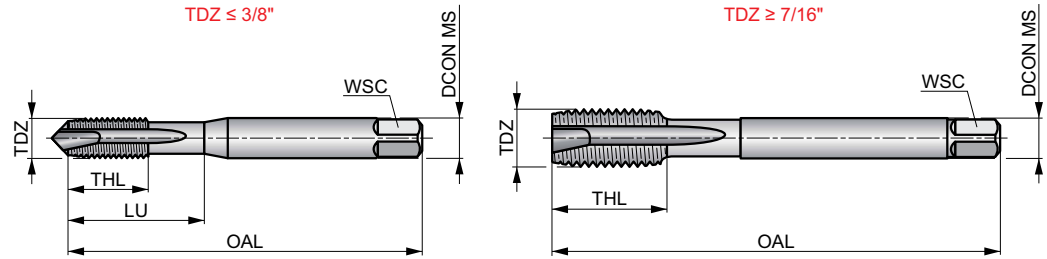
E026



HSS-E-PM Spiral Point Tap, UNC, ANSI Standard, Steam Tempered

Machine tap with spiral point for through holes only, similar in design to the standard E025 series, but with steam tempered surface which acts to retain cutting fluid and prevent chip to tool welding in abrasive and harder ferrous work-materials.

	ANSI	3B
	2.5xD	HSS-E PM
	B 3.5-5	
	ST	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■72	P2.2 ■52	P2.3 ■46	P3.2 ■33	P3.3 ■30	P4.1 ■26	P4.2 ■20	M1.1 ■33	M1.2 ■26	M2.1 ■30	M2.2 ■23	M3.1 ■23	M3.2 ■20	M3.3 ■16
M4.1 ■13	K1.1 ■43	K1.2 ■33	K1.3 ■23	K2.1 ■52	K2.2 ■43	K3.1 ■46	K3.2 ■33	K4.1 ■43	K4.2 ■30	K5.1 ■49	K5.2 ■36		

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(mm)	(inch)				
E0262-56	2	56	1.3/4	.314	.314	.141	.110	—	2	1.80	N50	H2	P	1	5974126
E0264-40	4	40	1.7/8	.609	.609	.141	.110	—	2	2.35	N43	H2	P	1	5974153
E0265-40	5	40	1.15/16	.740	.740	.141	.110	—	2	2.65	N38	H2	P	1	5974159
E0266-32	6	32	2"	.261	.594	.141	.110	—	2	2.85	N36	H2	P	1	5974184
E0268-32	8	32	2.1/8	.248	.653	.168	.131	—	2	3.50	N29	H2	P	1	5974203
E02610-24	10	24	2.3/8	.430	.843	.194	.152	—	2	3.90	N25	H3	P	1	5974116
E02612-24	12	24	2.3/8	.417	.885	.220	.165	—	2	4.50	N16	H3	P	1	5974121
E0261/4	1/4	20	2.1/2	.507	1.007	.255	.191	—	2	5.10	N7	H3	P	1	5974097
E0261/43FL	1/4	20	2.1/2	.507	1.007	.255	.191	—	3	5.10	N7	H3	P	1	5974110
E0261/4H11 ¹⁾	1/4	20	2.1/2	.507	1.007	.255	.191	—	3	5.10	N7	H11	P	1	5974106
E0265/16	5/16	18	2.23/32	.594	1.189	.318	.238	—	2	6.60	F	H3	P	1	5974164
E0265/163FL	5/16	18	2.23/32	.594	1.189	.318	.238	—	3	6.60	F	H3	P	1	5974173
E0265/16H11 ¹⁾	5/16	18	2.23/32	.594	1.189	.318	.238	—	3	6.60	F	H11	P	1	5974169
E0263/8	3/8	16	2.15/16	.602	1.292	.381	.286	—	2	8.00	5/16	H3	P	1	5974135
E0263/83FL	3/8	16	2.15/16	.602	1.292	.381	.286	—	3	8.00	5/16	H3	P	1	5974145
E0263/8H11 ¹⁾	3/8	16	2.15/16	.602	1.292	.381	.286	—	3	8.00	5/16	H11	P	1	5974140
E0267/16	7/16	14	3.5/32	.905	—	.323	.242	—	3	9.40	U	H3	P	1	5974188
E0261/2	1/2	13	3.3/8	.905	—	.367	.275	—	2	10.80	27/64	H3	P	1	5974081
E0261/23FL	1/2	13	3.3/8	.905	—	.367	.275	—	3	10.80	27/64	H3	P	1	5974090
E0261/2H11 ¹⁾	1/2	13	3.3/8	.905	—	.367	.275	—	3	10.80	27/64	H11	P	1	5974085
E0269/16	9/16	12	3.19/32	.984	—	.429	.322	—	3	12.20	31/64	H3	P	1	5974009
E0265/8	5/8	11	3.13/16	.984	—	.480	.360	—	3	13.50	17/32	H3	P	1	5974177
E0265/8H11 ¹⁾	5/8	11	3.13/16	.984	—	.480	.360	—	3	13.50	17/32	H11	P	1	5974181
E0263/4	3/4	10	4.1/4	1.161	—	.590	.442	—	3	16.50	21/32	H4	P	1	5974130
E0267/8	7/8	9	4.11/16	1.161	—	.697	.523	—	3	19.50	49/64	H4	P	1	5974192
E0261	1"	8	5.1/8	1.398	—	.800	.600	—	3	22.25	7/8	H4	P	1	5974078

¹⁾ Tolerance +.005 in, not 35

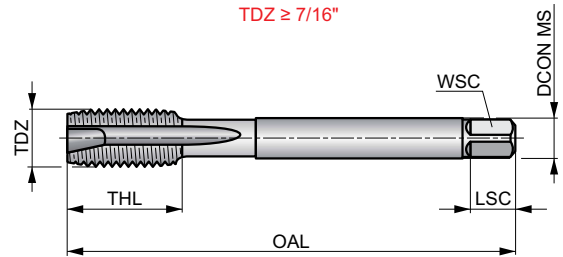
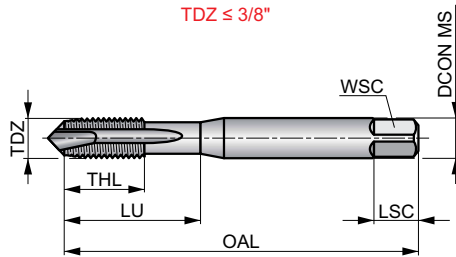
E021



HSS-E-PM Spiral Point Machine Tap, UNC, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	2B
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

ISO shank and square dimensions will necessitate metric holders

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
E0212-56	2	56	2.18	44.5	9.5	2.80	2.24	5	2	1.85	H2	9.50	P	1	5974319
E0214-40	4	40	2.85	48.0	14	3.15	2.50	5	3	2.35	H2	14.00	P	1	5974331
E0215-40	5	40	3.17	48.0	12.5	3.15	2.50	5	3	2.65	H2	12.50	P	1	5974336
E0216-32	6	32	3.50	50.0	16	3.55	2.80	5	3	2.85	H3	16.00	P	1	5974354
E0218-32	8	32	4.17	53.0	9.5	4.50	3.55	6	3	3.50	H3	17.00	P	1	5974369
E02110-24	10	24	4.83	58.0	11	5.00	4.00	7	3	3.90	H3	20.00	P	1	5974311
E02112-24	12	24	5.49	62.0	12	5.60	4.50	7	3	4.50	H3	21.00	P	1	5974315
E0211/4	1/4	20	6.35	66.0	13	6.30	5.00	8	3	5.10	H5	26.00	P	1	5974305
E0215/16	5/16	18	7.94	72.0	16	8.00	6.30	9	3	6.60	H5	29.00	P	1	5974346
E0213/8	3/8	16	9.53	80.0	18	10.00	8.00	11	3	8.00	H5	32.00	P	1	5974327
E0217/16	7/16	14	11.11	85.0	19	8.00	6.30	9	3	9.40	H5	-	P	1	5974359
E0211/2	1/2	13	12.70	89.0	22	9.00	7.10	10	3	10.80	H5	-	P	1	5974301
E0215/8	5/8	11	15.88	102.0	24	12.50	10.00	13	3	13.50	H5	-	P	1	5974350
E0213/4	3/4	10	19.05	112.0	29	14.00	11.20	14	4	16.50	H5	-	P	1	5974323
E0217/8	7/8	9	22.23	118.0	29	16.00	12.50	16	4	19.50	H6	-	P	1	5974364
E0211	1"	8	25.40	130.0	35	18.00	14.00	18	4	22.25	H6	-	P	1	5974297

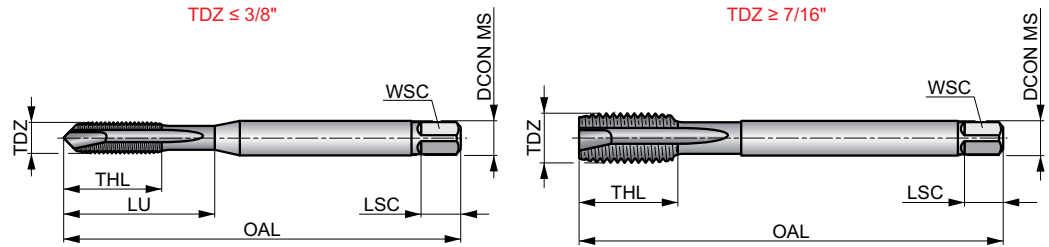
EP20



HSS-E-PM Spiral Point Machine Tap, UNC, DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

	DIN 2184-1	2B
	2.5xD	HSS-E PM
B 3.5-5		
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ■ 46	P3.1 ■ 43	P3.2 ■ 33	P4.1 ■ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ■ 89	N3.3 ■ 43	N4.1 ■ 72									

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				(mm)			
EP204-40	4	40	2.85	56.0	9	3.50	2.70	6	3	2.35	H2	18.00	P	1	5973735
EP205-40	5	40	3.17	56.0	10	3.50	2.70	6	3	2.65	H2	18.00	P	1	5973737
EP206-32	6	32	3.50	56.0	11	4.00	3.00	6	3	2.85	H2	20.00	P	1	5973745
EP208-32	8	32	4.17	63.0	12	4.50	3.40	8	3	3.50	H3	21.00	P	1	5973752
EP2010-24	10	24	4.83	70.0	13	6.00	4.90	8	3	3.90	H3	25.00	P	1	5973723
EP2012-24	12	24	5.49	80.0	15	6.00	4.90	8	3	4.50	H3	30.00	P	1	5973725
EP201/4	1/4	20	6.35	80.0	15	7.00	5.50	8	3	5.10	H5	30.00	P	1	5973720
EP205/16	5/16	18	7.94	90.0	18	8.00	6.20	9	3	6.60	H5	35.00	P	1	5973741
EP203/8	3/8	16	9.53	100.0	20	10.00	8.00	11	3	8.00	H5	39.00	P	1	5973732
EP207/16	7/16	14	11.11	100.0	20	8.00	6.20	9	3	9.40	H5	–	P	1	5973747
EP201/2	1/2	13	12.70	110.0	23	9.00	7.00	10	3	10.80	H5	–	P	1	5973716
EP205/8	5/8	11	15.88	110.0	25	12.00	9.00	12	3	13.50	H5	–	P	1	5973743
EP203/4	3/4	10	19.05	125.0	30	14.00	11.00	14	4	16.50	H5	–	P	1	5973729
EP207/8	7/8	9	22.23	140.0	34	18.00	14.50	17	4	19.50	H6	–	P	1	5973749
EP201	1"	8	25.40	160.0	38	18.00	14.50	17	4	22.25	H6	–	P	1	5973714

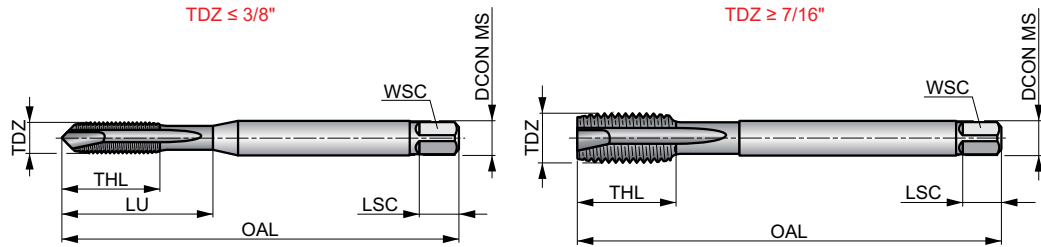
EP21



HSS-E-PM Spiral Point Machine Tap, UNC, DIN Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	DIN 2184-1	2B
	2.5xD	HSS-E PM
B 3.5-5		
ST		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
EP214-40	4	40	2.85	56.0	9	3.50	2.70	6	3	2.35	H2	18.00	P	1	5973914
EP215-40	5	40	3.17	56.0	10	3.50	2.70	6	3	2.65	H2	18.00	P	1	5973957
EP216-32	6	32	3.50	56.0	11	4.00	3.00	6	3	2.85	H2	20.00	P	1	5973995
EP218-32	8	32	4.17	63.0	12	4.50	3.40	8	3	3.50	H3	21.00	P	1	5973818
EP2110-24	10	24	4.83	70.0	13	6.00	4.90	8	3	3.90	H3	25.00	P	1	5973760
EP211/4	1/4	20	6.35	80.0	15	7.00	5.50	8	3	5.10	H5	30.00	P	1	5973758
EP215/16	5/16	18	7.94	90.0	18	8.00	6.20	9	3	6.60	H5	35.00	P	1	5973989
EP213/8	3/8	16	9.53	100.0	20	10.00	8.00	11	3	8.00	H5	39.00	P	1	5973858
EP217/16	7/16	14	11.11	100.0	20	8.00	6.20	9	3	9.40	H5	-	P	1	5973997
EP211/2	1/2	13	12.70	110.0	23	9.00	7.00	10	3	10.80	H5	-	P	1	5973756
EP215/8	5/8	11	15.88	110.0	25	12.00	9.00	12	3	13.50	H5	-	P	1	5973993
EP213/4	3/4	10	19.05	125.0	30	14.00	11.00	14	4	16.50	H5	-	P	1	5973810
EP217/8	7/8	9	22.23	140.0	34	18.00	14.50	17	4	19.50	H6	-	P	1	5973999
EP211	1"	8	25.40	160.0	38	18.00	14.50	17	4	22.25	H6	-	P	1	5973754

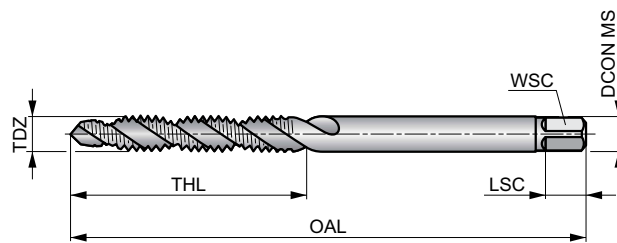
1582(UNC)



HSS 30° Spiral Flute Tap, UNC, ANSI Standard, Machine Screw Sizes

Productive tap design for blind hole applications in a variety of materials. Tapping typically produce long stringy chips which, when not evacuated properly, can cause serious problems especially when threading blind holes. The spiral flute design counters this problem as it draws chips from the hole being tapped.

	ANSI	3B
	2.5×D	HSS
	λ 30°	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣49	P1.2 ▣52	P1.3 ▣56	P2.1 ▣43	P2.2 ▣36	P3.1 ▣33	P3.2 ▣26	P4.1 ▣20	M1.1 ▣36	M1.2 ▣30	M2.1 ▣33	M2.2 ▣26	M3.1 ▣23	M3.2 ▣20
M3.3 ▣16	M4.1 ▣20	S1.1 ▣20	S1.2 ▣16	S1.3 ▣7	S2.1 ▣23	S3.1 ▣16	S4.1 ▣13						

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15824-40N03	4	40	1.7/8	9/16	.141	.110	3/16	2	H2	B	1	6007650
15826-32N03	6	32	2"	11/16	.141	.110	3/16	2	H3	B	1	6007665
15828-32N03	8	32	2.1/8	3/4	.168	.131	1/4	2	H3	B	1	6007680
158210-24N03	10	24	2.3/8	7/8	.194	.152	1/4	2	H3	B	1	6007633

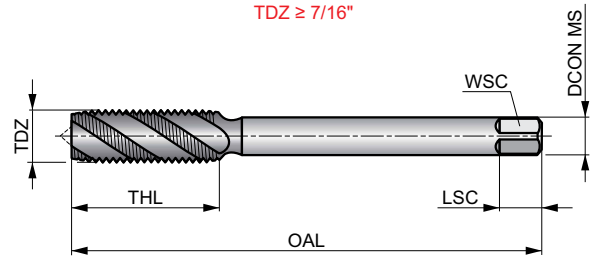
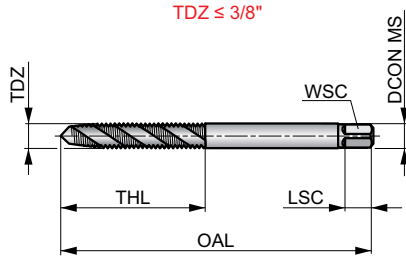
1586(UNC)



HSS 30° Spiral Flute Tap, UNC, ANSI Standard, Fractional Sizes

Productive tap design for blind hole applications in a variety of materials. Tapping typically produce long stringy chips which, when not evacuated properly, can cause serious problems especially when threading blind holes. The spiral flute design counters this problem as it draws chips from the hole being tapped.

	ANSI	3B
	2.5×D	HSS
	λ 30°	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣49	P1.2 ▣52	P1.3 ▣56	P2.1 ▣43	P2.2 ▣36	P3.1 ▣33	P3.2 ▣26	P4.1 ▣20	M1.1 ▣36	M1.2 ▣30	M2.1 ▣33	M2.2 ▣26	M3.1 ▣23	M3.2 ▣20
M3.3 ▣16	M4.1 ▣20	S1.1 ▣20	S1.2 ▣16	S1.3 ▣7	S2.1 ▣23	S3.1 ▣16	S4.1 ▣13						

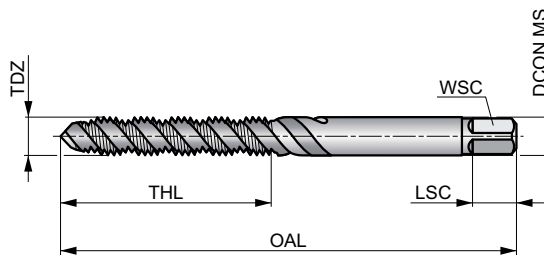
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)								
15861/4X202FLN03	1/4	20	2.1/2	1"	.255	.191	5/16	2	H3	B	1	6007841
15861/4X203FLN03	1/4	20	2.1/2	1"	.255	.191	5/16	3	H3	B	1	6007624
15865/16X183FLN03	5/16	18	2.23/32	1.1/8	.318	.238	3/8	3	H3	B	1	6007662
15863/8X163FLN03	3/8	16	2.15/16	1.1/4	.381	.286	7/16	3	H3	B	1	6007640
15867/16X143FLN03	7/16	14	3.5/32	1.7/16	.323	.242	13/32	3	H3	B	1	6007681
15861/2X133FLN03	1/2	13	3.3/8	1.21/32	.367	.275	7/16	3	H3	B	1	6007816

1587(UNC)



HSS 52° Spiral Flute Tap, UNC, ANSI Standard, Machine Screw Sizes

Productive tap design for blind hole applications in a variety of materials. Similar in design to the standard 1582 series but with higher helix angle. The faster spiral improves the chip drawing action and permits the bridging of larger gapes inside a hole. Recommended to be used with synchronous feed tap holders.



	ANSI	3B
	2.5×D	HSS
	λ 52°	

Workpiece material group suitability and starting values for cutting speed (ft/min).

N1.1 ■ 49	N1.2 ■ 36	N1.3 ■ 26	N2.1 ■ 102	N2.2 ■ 92	N2.3 ■ 66	N3.1 ■ 135	N3.2 ■ 79	N3.3 ■ 39
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Product	TDZ	TPI	OAL (inch)	THL (inch)	DCON MS (inch)	WSC (inch)	LSC (inch)	NOF	Limits	Chamfer	Pack Qty	MID
15874-40N02	4	40	1.7/8	9/16	.141	.110	3/16	2	H2	P	1	6007730
15874-40N03	4	40	1.7/8	9/16	.141	.110	3/16	2	H2	B	1	6007735
15876-32N02	6	32	2"	11/16	.141	.110	3/16	2	H3	P	1	6007750
15876-32N03	6	32	2"	11/16	.141	.110	3/16	2	H3	B	1	6007755
15878-32N02	8	32	2.1/8	3/4	.168	.131	1/4	3	H3	P	1	6007765
15878-32N03	8	32	2.1/8	3/4	.168	.131	1/4	3	H3	B	1	6007770
158710-24N02	10	24	2.3/8	7/8	.194	.152	1/4	3	H3	P	1	6007686
158710-24N03	10	24	2.3/8	7/8	.194	.152	1/4	3	H3	B	1	6007691

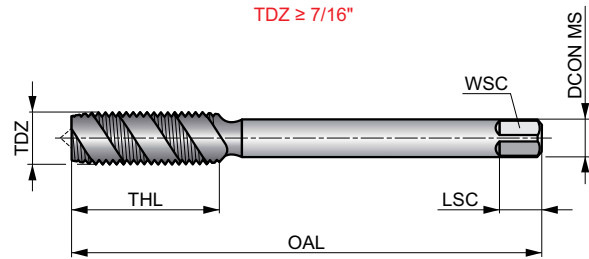
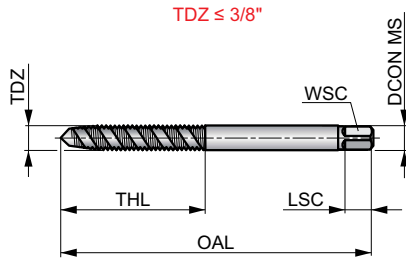
1588(UNC)



HSS 52° Spiral Flute Tap, UNC, ANSI Standard, Fractional Sizes

Productive tap design for blind hole applications in a variety of materials. Similar in design to the standard 1586 series but with higher helix angle. The faster spiral improves the chip drawing action and permits the bridging of larger gapes inside a hole. Recommended to be used with synchronous feed tap holders.

	ANSI	2B 3B
	2.5xD	HSS
	λ 52°	
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

N1.1 ■ 49	N1.2 ■ 36	N1.3 ■ 26	N2.1 ■ 102	N2.2 ■ 92	N2.3 ■ 66	N3.1 ■ 135	N3.2 ■ 79	N3.3 ■ 39
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Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15881/4X20N03	1/4	20	2.1/2	1.000	.255	.191	5/16	3	H3	B	1	6007800
15885/16X18N03	5/16	18	2.23/32	1.1/8	.318	.238	3/8	3	H3	B	1	6007838
15883/8X16N03	3/8	16	2.15/16	1.1/4	.381	.286	7/16	3	H3	B	1	6007628
15887/16X14N03	7/16	14	3.5/32	1.7/16	.323	.242	13/32	3	H3	B	1	6007858
15881/2X13N03	1/2	13	3.3/8	1.21/32	.367	.275	7/16	3	H3	B	1	6007780

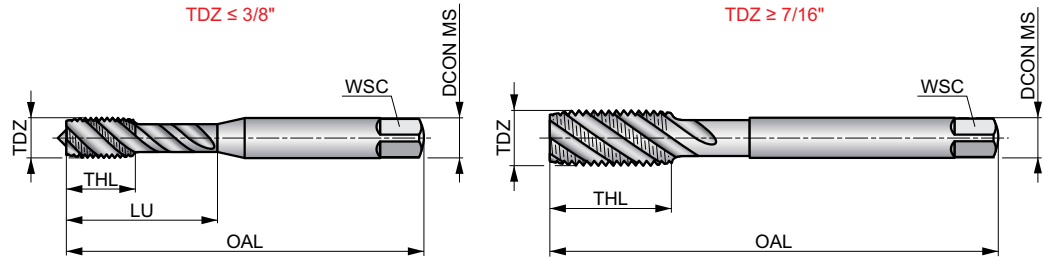
E027



HSS-E-PM 45° Spiral Flute Tap, UNC, ANSI Standard

Spiral flute tap with constant rake angle to prevent nesting in blind hole applications. Made from HSS-E-PM to prolong tool life, make it more predictable, improve speed performance and reduce chipping. Bright finish to produce more accurate cleaner threads preventing work-material from sticking to the cutting edges.

	ANSI	3B
	2.5×D	HSS-E PM
	C 2-3	 λ 45°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E0276-32	6	32	2"	.261	.594	.141	.110	3	2.85	N36	H2	SB	1	5974013
E0278-32	8	32	2.1/8	.248	.653	.168	.131	3	3.50	N29	H2	SB	1	5974017
E02710-24	10	24	2.3/8	.265	.843	.194	.152	3	3.90	N25	H3	SB	1	5974150
E02712-24	12	24	2.3/8	.252	.885	.220	.165	3	4.50	N16	H3	SB	1	5974158
E0271/4	1/4	20	2.1/2	.394	1.099	.255	.191	3	5.10	N7	H3	SB	1	5974095
E0275/16	5/16	18	2.23/32	.457	1.309	.318	.238	3	6.60	F	H3	SB	1	5974171
E0273/8	3/8	16	2.15/16	.531	1.442	.381	.286	3	8.00	5/16	H3	SB	1	5974168
E0277/16	7/16	14	3.5/32	.630	—	.323	.242	3	9.40	U	H3	SB	1	5974015
E0271/2	1/2	13	3.3/8	.689	—	.367	.275	3	10.80	27/64	H3	SB	1	5974052
E0279/16	9/16	12	3.19/32	.709	—	.429	.322	3	12.20	31/64	H3	SB	1	5974018
E0275/8	5/8	11	3.13/16	.709	—	.480	.360	3	13.50	17/32	H3	SB	1	5974011
E0273/4	3/4	10	4.1/4	.886	—	.590	.442	3	16.50	21/32	H4	SB	1	5974163
E0277/8	7/8	9	4.11/16	.984	—	.697	.523	3	19.50	49/64	H4	SB	1	5974016
E0271	1"	8	5.1/8	1.181	—	.800	.600	3	22.25	7/8	H4	SB	1	5974024

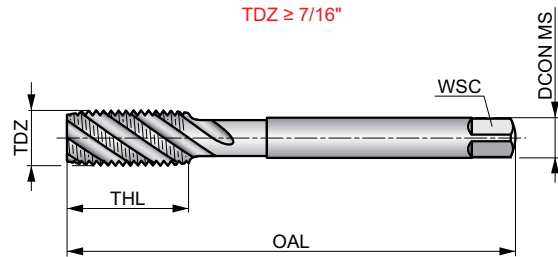
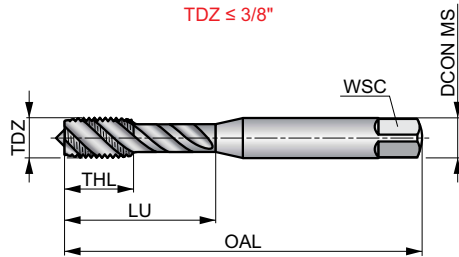
E028



HSS-E-PM 45° Spiral Flute Tap, UNC, ANSI Standard, Steam Tempered

Spiral flute tap with constant rake angle to prevent nesting in blind hole applications, similar in design to the standard E027 series, but with steam tempered surface which acts to retain cutting fluid and prevent chip to tool welding in abrasive and harder ferrous work-materials.

	ANSI	3B
	2.5xD	HSS-E PM
	C 2-3	λ 45°
	R	ST



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣69	P2.2 ▣49	P2.3 ▣43	P3.2 ▣30	P3.3 ▣26	P4.1 ▣23	P4.2 ▣16	M1.1 ▣26	M1.2 ▣20	M2.1 ▣23	M2.2 ▣16	M3.1 ▣16	M3.2 ▣13	M3.3 ▣10
M4.1 ▣10													

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E0284-40	4	40	1.7/8	.609	.609	.141	.110	3	2.35	N43	H2	SB	1	5974035
E0285-40	5	40	1.15/16	.740	.740	.141	.110	3	2.65	N38	H2	SB	1	5974037
E0286-32	6	32	2"	.261	.594	.141	.110	3	2.85	N36	H2	SB	1	5974046
E0288-32	8	32	2.1/8	.248	.653	.168	.131	3	3.50	N29	H2	SB	1	5974058
E02810-24	10	24	2.3/8	.265	.843	.194	.152	3	3.90	N25	H3	SB	1	5974023
E02812-24	12	24	2.3/8	.252	.885	.220	.165	3	4.50	N16	H3	SB	1	5974026
E0281/4	1/4	20	2.1/2	.394	1.099	.255	.191	3	5.10	N7	H3	SB	1	5974021
E0285/16	5/16	18	2.23/32	.457	1.309	.318	.238	3	6.60	F	H3	SB	1	5974040
E0283/8	3/8	16	2.15/16	.531	1.442	.381	.286	3	8.00	5/16	H3	SB	1	5974030
E0283/8H5 ¹⁾	3/8	16	2.15/16	.531	1.442	.381	.286	3	8.00	5/16	H5	SB	1	5974032
E0287/16	7/16	14	3.5/32	.630	—	.323	.242	3	9.40	U	H3	SB	1	5974049
E0281/2	1/2	13	3.3/8	.689	—	.367	.275	3	10.80	27/64	H3	SB	1	5974020
E0289/16	9/16	12	3.19/32	.709	—	.429	.322	3	12.20	31/64	H3	SB	1	5974061
E0285/8	5/8	11	3.13/16	.709	—	.480	.360	3	13.50	17/32	H3	SB	1	5974043
E0283/4	3/4	10	4.1/4	.886	—	.590	.442	3	16.50	21/32	H4	SB	1	5974028
E0287/8	7/8	9	4.11/16	.984	—	.697	.523	3	19.50	49/64	H4	SB	1	5974055
E0281	1"	8	5.1/8	1.181	—	.800	.600	3	22.25	7/8	H4	SB	1	5974019

¹⁾ Class of fit: 2B

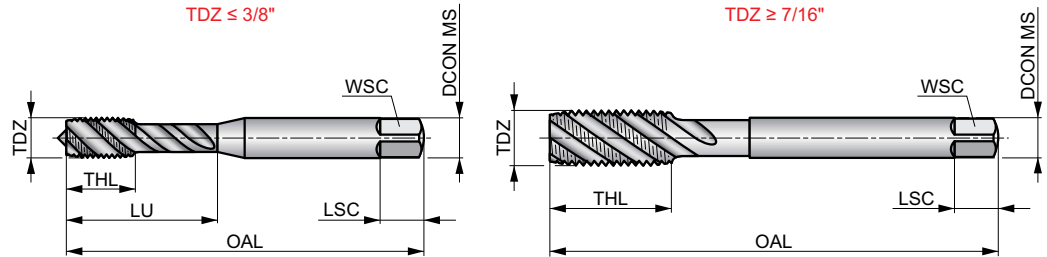
E023



HSS-E-PM Spiral Flute Machine Tap, UNC, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)							
E0232-56	2	56	2.18	44.5	9.5	2.80	2.24	5	2	1.85	H2	9.50	SB	1	5974478
E0234-40	4	40	2.85	48.0	6	3.15	2.50	5	3	2.35	H2	14.00	SB	1	5974490
E0235-40	5	40	3.17	48.0	6	3.15	2.50	5	3	2.65	H2	12.50	SB	1	5974022
E0236-32	6	32	3.50	50.0	6	3.55	2.80	5	3	2.85	H2	16.00	SB	1	5974149
E0238-32	8	32	4.17	53.0	7	4.50	3.55	6	3	3.50	H3	17.00	SB	1	5974211
E02310-24	10	24	4.83	58.0	8	5.00	4.00	7	3	3.90	HH3	20.00	SB	1	5974471
E02312-24	12	24	5.49	62.0	12	5.60	4.50	7	3	4.50	H3	21.00	SB	1	5974475
E0231/4	1/4	20	6.35	66.0	10	6.30	5.00	8	3	5.10	H5	28.00	SB	1	5974466
E0235/16	5/16	18	7.94	72.0	12	8.00	6.30	9	3	6.60	H5	31.00	SB	1	5974050
E0233/8	3/8	16	9.53	80.0	15	10.00	8.00	11	3	8.00	H5	34.00	SB	1	5974484
E0237/16	7/16	14	11.11	85.0	19	8.00	6.30	9	3	9.40	H5	–	SB	1	5974196
E0231/2	1/2	13	12.70	89.0	19	9.00	7.10	10	3	10.80	H5	–	SB	1	5974462
E0235/8	5/8	11	15.88	102.0	24	12.50	10.00	13	4	13.50	H5	–	SB	1	5974093
E0233/4	3/4	10	19.05	112.0	29	14.00	11.20	14	4	16.50	H5	–	SB	1	5974481
E0237/8	7/8	9	22.23	118.0	29	16.00	12.50	16	4	19.50	H6	–	SB	1	5974207
E0231	1"	8	25.40	130.0	35	18.00	14.00	18	4	22.25	H6	–	SB	1	5974458

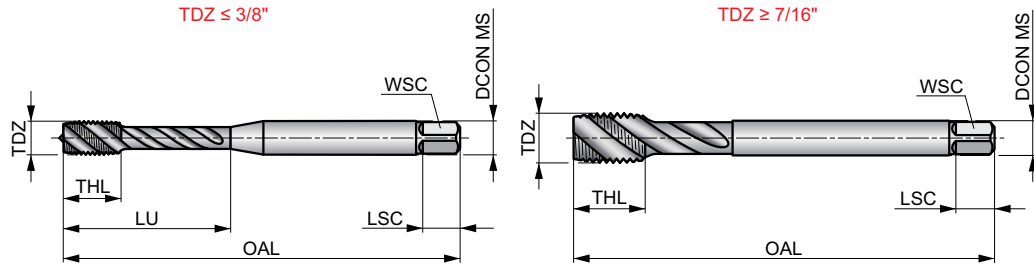
EX20



HSS-E-PM Spiral Flute Machine Tap, UNC, DIN Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

	DIN 2184-1	2B
	2.5xD	HSS-E PM
		λ 45°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
EX204-40	4	40	2.85	56.0	6	3.50	2.70	6	3	2.35	H2	18.00	SB	1	5973704
EX205-40	5	40	3.17	56.0	6	3.50	2.70	6	3	2.65	H2	18.00	SB	1	5973708
EX206-32	6	32	3.50	56.0	7	4.00	3.00	6	3	2.85	H2	20.00	SB	1	5973724
EX208-32	8	32	4.17	63.0	7	4.50	3.40	8	3	3.50	H3	21.00	SB	1	5974132
EX2010-24	10	24	4.83	70.0	8	6.00	4.90	8	3	3.90	H3	25.00	SB	1	5973688
EX2012-24	12	24	5.49	80.0	10	6.00	4.90	8	3	4.50	H3	30.00	SB	1	5973692
EX201/4	1/4	20	6.35	80.0	10	7.00	5.50	8	3	5.10	H5	30.00	SB	1	5973684
EX205/16	5/16	18	7.94	90.0	12	8.00	6.20	9	3	6.60	H5	35.00	SB	1	5973713
EX203/8	3/8	16	9.53	100.0	15	10.00	8.00	11	3	8.00	H5	39.00	SB	1	5973700
EX207/16	7/16	14	11.11	100.0	15	8.00	6.20	9	3	9.40	H5	—	SB	1	5974033
EX201/2	1/2	13	12.70	110.0	18	9.00	7.00	10	3	10.80	H5	—	SB	1	5973680
EX205/8	5/8	11	15.88	110.0	20	12.00	9.00	12	4	13.50	H5	—	SB	1	5973718
EX203/4	3/4	10	19.05	125.0	25	14.00	11.00	14	4	16.50	H5	—	SB	1	5973696
EX207/8	7/8	9	22.23	140.0	25	18.00	14.50	17	4	19.50	H6	—	SB	1	5974074
EX201	1"	8	25.40	160.0	30	18.00	14.50	17	4	22.25	H6	—	SB	1	5973671

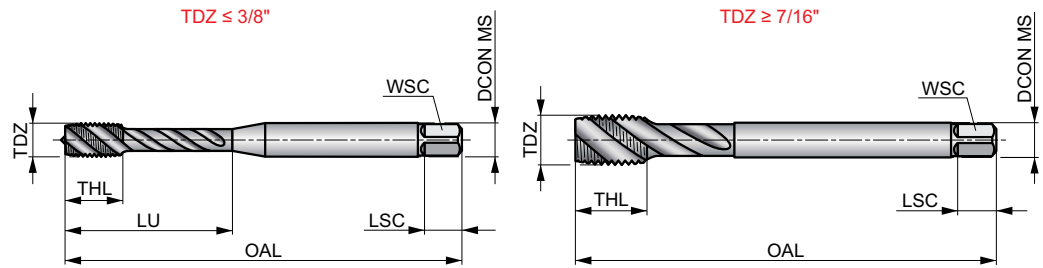
EX21



HSS-E-PM Spiral Flute Machine Tap, UNC, DIN Standard

Machine tap to produce normal fit threads within 2B tolerance. The spiral flute is suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
EX214-40	4	40	2.85	56.0	6	3.50	2.70	6	3	2.35	H2	18.00	SB	1	5974042
EX215-40	5	40	3.17	56.0	6	3.50	2.70	6	3	2.65	H2	18.00	SB	1	5974045
EX216-32	6	32	3.50	56.0	7	4.00	3.00	6	3	2.85	H2	20.00	SB	1	5974054
EX218-32	8	32	4.17	63.0	7	4.50	3.40	8	3	3.50	H3	21.00	SB	1	5974066
EX2110-24	10	24	4.83	70.0	8	6.00	4.90	8	3	3.90	H3	25.00	SB	1	5974238
EX2112-24	12	24	5.49	80.0	10	6.00	4.90	8	3	4.50	H3	30.00	SB	1	5974242
EX211/4	1/4	20	6.35	80.0	10	7.00	5.50	8	3	5.10	H5	30.00	SB	1	5974234
EX215/16	5/16	18	7.94	90.0	12	8.00	6.20	9	3	6.60	H5	35.00	SB	1	5974048
EX213/8	3/8	16	9.53	100.0	15	10.00	8.00	11	3	8.00	H5	39.00	SB	1	5974038
EX217/16	7/16	14	11.11	100.0	15	8.00	6.20	9	3	9.40	H5	–	SB	1	5974056
EX211/2	1/2	13	12.70	110.0	18	9.00	7.00	10	3	10.80	H5	–	SB	1	5974228
EX215/8	5/8	11	15.88	110.0	20	12.00	9.00	12	4	13.50	H5	–	SB	1	5974051
EX213/4	3/4	10	19.05	125.0	25	14.00	11.00	14	4	16.50	H5	–	SB	1	5974245
EX217/8	7/8	9	22.23	140.0	25	18.00	14.50	17	4	19.50	H6	–	SB	1	5974062
EX211	1"	8	25.40	160.0	30	18.00	14.50	17	4	22.25	H6	–	SB	1	5974187

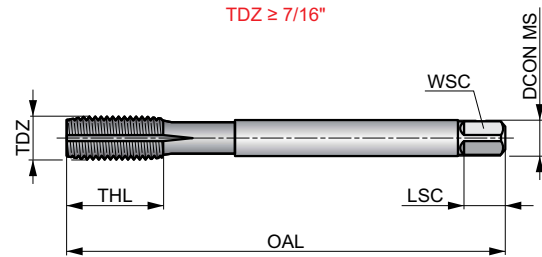
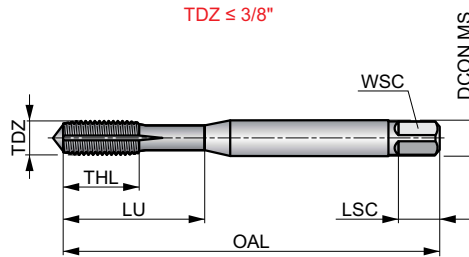
E287



HSS-E Thread Forming TiN Coated Tap, Oil-Grooves, UNC, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, performance and tool life. With oil-grooves for better lubrication in deep holes.

	DIN 2184-1	2BX
	3.5xD	HSS-E
C 2-3.5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ■ 167	P2.2 ■ 148	P2.3 ▣ 131	P3.1 ■ 95	P3.2 ■ 79	P3.3 ■ 66	P4.1 ■ 59	P4.2 ■ 49	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72
M2.2 ■ 59	M2.3 ▣ 39	M3.1 ■ 56	M3.2 ■ 49	M3.3 ■ 46	M4.1 ■ 33	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ▣ 131	N3.3 ▣ 39

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E2874-40	4	40	2.85	56.0	9	3.50	2.70	6	4	2.60	18.00	1	7174105
E2876-32	6	32	3.50	56.0	11	4.00	3.00	6	4	3.20	20.00	1	7174106
E2878-32	8	32	4.17	63.0	12	4.50	3.40	6	5	3.80	21.00	1	7174107
E28710-24	10	24	4.83	70.0	13	6.00	4.90	8	5	4.40	25.00	1	7174108
E2871/4	1/4	20	6.35	80.0	15	7.00	5.50	8	5	5.80	30.00	1	7174109
E2875/16	5/16	18	7.94	90.0	18	8.00	6.20	9	5	7.30	35.00	1	7174110
E2873/8	3/8	16	9.53	100.0	20	10.00	8.00	11	5	8.80	39.00	1	7174111
E2877/16	7/16	14	11.11	100.0	20	8.00	6.20	9	5	10.30	-	1	7174112
E2871/2	1/2	13	12.70	110.0	23	9.00	7.00	10	5	11.90	-	1	7174113

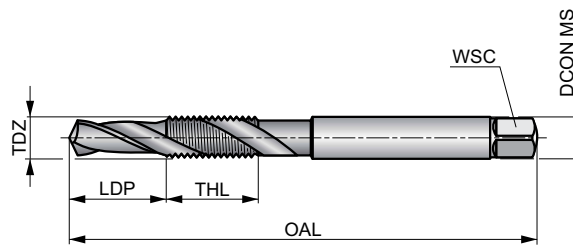
E651



HSS Drill-Tap Combination Tool with 30° Spiral Flute, UNC, DIN Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.

		2B
	1.5×D	HSS
C 2-3		λ 30°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 59	P1.2 ■ 66	P1.3 ■ 72	P2.1 ■ 66	P2.2 ■ 59	P3.1 ■ 49	P3.2 ■ 39	N1.2 ■ 46	N1.3 ■ 30	N3.1 ■ 66	N3.2 ■ 49	N4.1 ■ 82
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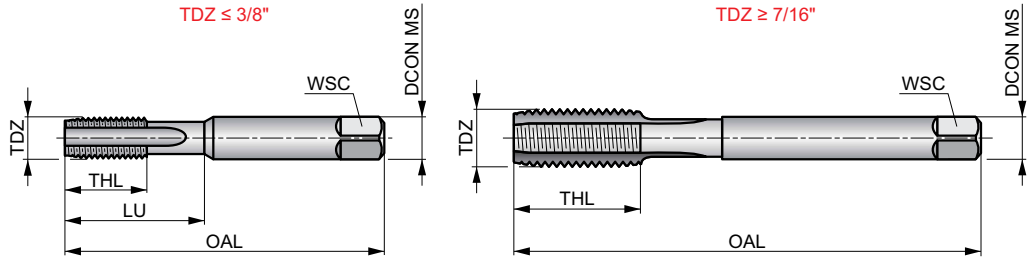
Product	TDZ	TPI	TD	OAL	THL	LDP	DCON MS	WSC	NOF	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
E6516-32	6	32	2.85	56.9	12	6.00	3.50	2.90	2	1	5978374
E6518-32	8	32	3.50	64.0	12	8.00	4.50	3.55	2	1	5978380
E65110-24	10	24	3.90	72.0	15	10.00	5.00	4.00	2	1	5978357
E65112-24	12	24	4.50	77.0	15	11.00	5.60	4.50	2	1	5978360
E6511/4	1/4	20	5.10	83.0	17	13.00	6.30	5.00	2	1	5978353
E6515/16	5/16	18	6.60	94.0	21	16.00	8.00	6.30	2	1	5978365
E6513/8	3/8	16	8.00	107.0	23	19.00	10.00	8.00	2	1	5978362
E6517/16	7/16	14	9.40	107.0	25	22.00	8.00	6.30	2	1	5978377
E6511/2	1/2	13	10.80	114.0	29	25.00	9.00	7.10	2	1	5978350
E6515/8	5/8	11	13.50	134.0	31	32.50	12.50	10.00	2	1	5978368

E071



HSS Straight Flute Hand Tap, UNF, ANSI Standard

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	2B 3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ■ 13	P3.1 ■ 13	P3.2 ■ 13	P4.1 ■ 10	K1.1 ■ 39	K1.2 ■ 30	K1.3 ■ 23	K2.1 ■ 39	K2.2 ■ 33
K3.1 ■ 36	K3.2 ■ 26	K4.1 ■ 33	K4.2 ■ 26	K5.1 ■ 36	K5.2 ■ 30	N1.3 ■ 26	N2.1 ■ 36	N2.2 ■ 33	N2.3 ■ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ■ 16	N4.2 ■ 16
N4.3 ■ 10													

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E0716-40N01	6	40	2"	.580	.580	.141	.110	3	2.90	33	H2	T	1	5974142
E0716-40N02	6	40	2"	.580	.580	.141	.110	3	2.90	33	H2	P	1	5974147
E0716-40N03	6	40	2"	.580	.580	.141	.110	3	2.90	33	H2	SB	1	5974152
E0716-40N06	6	40	2"	.580	.580	.141	.110	3	2.90	33	H2	Set	1	5974162
E0718-36N01	8	36	2.1/8	.650	.650	.168	.131	4	3.50	29	H2	T	1	5974198
E0718-36N02	8	36	2.1/8	.650	.650	.168	.131	4	3.50	29	H2	P	1	5974205
E0718-36N03	8	36	2.1/8	.650	.650	.168	.131	4	3.50	29	H2	SB	1	5974209
E0718-36N06	8	36	2.1/8	.650	.650	.168	.131	4	3.50	29	H2	Set	1	5974213
E07110-32N01	10	32	2.3/8	.760	.760	.194	.152	4	4.10	21	H3	T	1	5974157
E07110-32N02	10	32	2.3/8	.760	.760	.194	.152	4	4.10	21	H3	P	1	5974201
E07110-32N03	10	32	2.3/8	.760	.760	.194	.152	4	4.10	21	H3	SB	1	5974239
E07110-32N06	10	32	2.3/8	.760	.760	.194	.152	4	4.10	21	H3	Set	1	5974244
E07112-28N01	12	28	2.3/8	.810	.810	.220	.165	4	4.70	15	H3	T	1	5974247
E07112-28N02	12	28	2.3/8	.810	.810	.220	.165	4	4.70	15	H3	P	1	5974249
E07112-28N03	12	28	2.3/8	.810	.810	.220	.165	4	4.70	15	H3	SB	1	5974250
E07112-28N06	12	28	2.3/8	.810	.810	.220	.165	4	4.70	15	H3	Set	1	5974063
E0711/4N01	1/4	28	2.1/2	.650	1.063	.255	.191	4	5.50	3	H3	T	1	5974681
E0711/4N02	1/4	28	2.1/2	.650	1.063	.255	.191	4	5.50	3	H3	P	1	5974685
E0711/4N03	1/4	28	2.1/2	.650	1.063	.255	.191	4	5.50	3	H3	SB	1	5974689
E0711/4N06	1/4	28	2.1/2	.650	1.063	.255	.191	4	5.50	3	H3	Set	1	5974694
E0715/16N01	5/16	24	2.23/32	.770	1.260	.318	.238	4	6.90	1	H3	T	1	5974100
E0715/16N02	5/16	24	2.23/32	.770	1.260	.318	.238	4	6.90	1	H3	P	1	5974108
E0715/16N03	5/16	24	2.23/32	.770	1.260	.318	.238	4	6.90	1	H3	SB	1	5974114

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E0715/16N06	5/16	24	2.23/32	.770	1.260	.318	.238	4	6.90	I	H3	Set	1	5974118
E0713/8N01	3/8	24	2.15/16	.810	1.378	.381	.286	4	8.50	Q	H3	T	1	5974082
E0713/8N02	3/8	24	2.15/16	.810	1.378	.381	.286	4	8.50	Q	H3	P	1	5974086
E0713/8N03	3/8	24	2.15/16	.810	1.378	.381	.286	4	8.50	Q	H3	SB	1	5974091
E0713/8N06	3/8	24	2.15/16	.810	1.378	.381	.286	4	8.50	Q	H3	Set	1	5974094
E0717/16N01	7/16	20	3.5/32	.905	—	.323	.242	4	9.90	25/64	H3	T	1	5974166
E0717/16N02	7/16	20	3.5/32	.905	—	.323	.242	4	9.90	25/64	H3	P	1	5974170
E0717/16N03	7/16	20	3.5/32	.905	—	.323	.242	4	9.90	25/640	H3	SB	1	5974175
E0717/16N06	7/16	20	3.5/32	.905	—	.323	.242	4	9.90	25/64	H3	Set	1	5974179
E0711/2N01	1/2	20	3.3/8	.905	—	.367	.275	4	11.50	29/64	H3	T	1	5974659
E0711/2N02	1/2	20	3.3/8	.905	—	.367	.275	4	11.50	29/64	H3	P	1	5974664
E0711/2N03	1/2	20	3.3/8	.905	—	.367	.275	4	11.50	29/64	H3	SB	1	5974668
E0711/2N06	1/2	20	3.3/8	.905	—	.367	.275	4	11.50	29/64	H3	Set	1	5974679
E0719/16N01	9/16	18	3.19/32	.984	—	.429	.322	4	12.90	33/64	H3	T	1	5974217
E0719/16N02	9/16	18	3.19/32	.984	—	.429	.322	4	12.90	22/64	H3	P	1	5974221
E0719/16N03	9/16	18	3.19/32	.984	—	.429	.322	4	12.90	33/64	H3	SB	1	5974224
E0719/16N06	9/16	18	3.19/32	.984	—	.429	.322	4	12.90	33/64	H3	Set	1	5974227
E0715/8N01	5/8	18	3.13/16	.984	—	.480	.360	4	14.50	37/64	H3	T	1	5974123
E0715/8N02	5/8	18	3.13/16	.984	—	.480	.360	4	14.50	37/64	H3	P	1	5974128
E0715/8N03	5/8	18	3.13/16	.984	—	.480	.360	4	14.50	37/64	H3	SB	1	5974133
E0715/8N06	5/8	18	3.13/16	.984	—	.480	.360	4	14.50	37/64	H3	Set	1	5974138
E0713/4N01	3/4	16	4.1/4	1.181	—	.590	.442	4	17.50	11/16	H3	T	1	5974067
E0713/4N02	3/4	16	4.1/4	1.181	—	.590	.442	4	17.50	11/16	H3	P	1	5974071
E0713/4N03	3/4	16	4.1/4	1.181	—	.590	.442	4	17.50	11/16	H3	SB	1	5974075
E0713/4N06	3/4	16	4.1/4	1.181	—	.590	.442	4	17.50	11/16	H3	Set	1	5974079
E0717/8N01	7/8	14	4.11/16	1.181	—	.697	.523	4	20.40	13/16	H4	T	1	5974182
E0717/8N02	7/8	14	4.11/16	1.181	—	.697	.523	4	20.40	13/16	H4	P	1	5974185
E0717/8N03	7/8	14	4.11/16	1.181	—	.697	.523	4	20.40	13/16	H4	SB	1	5974190
E0717/8N06	7/8	14	4.11/16	1.181	—	.697	.523	4	20.40	13/16	H4	Set	1	5974194
E0711X12N01	1"	12	5.1/8	1.417	—	.800	.600	4	23.25	59/64	H4	T	1	5974698
E0711X12N02	1"	12	5.1/8	1.417	—	.800	.600	4	23.50	59/64	H4	P	1	5974702
E0711X12N03	1"	12	5.1/8	1.417	—	.800	.600	4	23.25	59/64	H4	SB	1	5974706
E0711X12N06	1"	12	5.1/8	1.417	—	.800	.600	4	23.25	59/64	H4	Set	1	5974710
E0711X14N01	1"	14	5.1/8	1.417	—	.800	.600	4	23.25	59/64	H4	T	1	5974711
E0711X14N02	1"	14	5.1/8	1.417	—	.800	.600	4	23.50	59/64	H4	P	1	5974723
E0711X14N03	1"	14	5.1/8	1.417	—	.800	.600	4	23.50	59/64	H4	SB	1	5974059
E0711X14N06	1"	14	5.1/8	1.417	—	.800	.600	4	23.50	59/64	H4	Set	1	5974104
E0711.1/8N01	1.1/8	12	5.7/16	1.398	—	.895	.671	4	26.50	1.3/64	H4	T	1	5974614
E0711.1/8N02	1.1/8	12	5.7/16	1.398	—	.895	.671	4	26.50	1.3/64	H4	P	1	5974623
E0711.1/8N03	1.1/8	12	5.7/16	1.398	—	.895	.671	4	26.50	1.3/64	H4	SB	1	5974629
E0711.1/4N01	1.1/4	12	5.3/4	1.634	—	1.021	.765	6	29.50	1.5/32	H4	T	1	5974595
E0711.1/4N02	1.1/4	12	5.3/4	1.634	—	1.021	.765	6	29.50	1.5/32	H4	P	1	5974598
E0711.1/4N03	1.1/4	12	5.3/4	1.634	—	1.021	.765	6	29.50	1.5/32	H4	SB	1	5974604
E0711.3/8N03	1.3/8	12	6.1/16	1.870	—	1.109	.830	6	32.75	1.9/32	H4	SB	1	5974649
E0711.1/2N01	1.1/2	12	6.3/8	1.870	—	1.233	.925	6	36.00	1.27/64	H4	T	1	5974570
E0711.1/2N02	1.1/2	12	6.3/8	1.870	—	1.233	.925	6	36.00	1.27/64	H4	P	1	5974574
E0711.1/2N03	1.1/2	12	6.3/8	1.870	—	1.233	.925	6	36.00	1.27/64	H4	SB	1	5974580

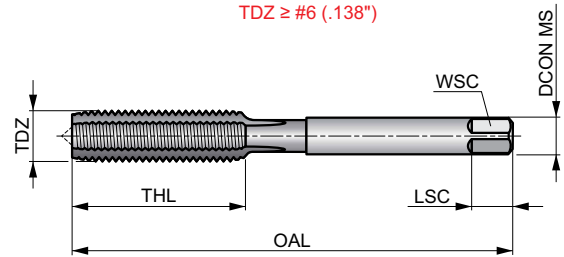
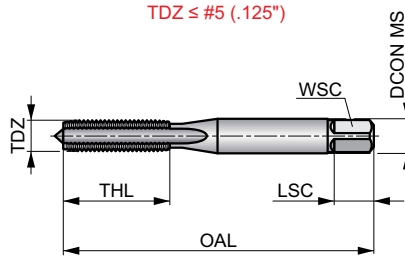
1528(UNF)



HSS Straight Flute Hand Tap, UNF, ANSI Standard, Machine Screw Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.

	ANSI	2B 3B
	1.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 #36	P1.2 #39	P1.3 #39	P2.1 #30	P2.2 #26	P2.3 #23	P3.1 #23	P3.2 #20	P3.3 #16	P4.1 #13	P4.2 #13	P4.3 #10	M1.1 #26	M1.2 #23
M2.1 #23	M2.2 #20	M3.1 #16	M3.2 #13	M3.3 #13	M4.1 #13	K1.1 #39	K1.2 #30	K1.3 #23	K2.1 #33	K2.2 #26	K2.3 #20	K3.1 #30	K3.2 #23
K3.3 #16	K4.1 #26	K4.2 #20	K4.3 #13	K4.4 #13	K4.5 #10	K5.1 #30	K5.2 #23	K5.3 #16	N1.1 #39	N1.2 #30	N1.3 #20	N2.1 #92	N2.2 #82
N2.3 #59	N3.1 #112	N3.2 #66	N3.3 #33	N4.1 #26	N4.2 #13	S1.1 #16	S1.2 #13	S2.1 #10	S3.1 #7	S4.1 #7			

Sizes 0 to 3/8 have male centers on thread end. Sizes larger than 3/8 all have female centers - flat ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15280-80H12FLN03	0	80	1.5/8	5/16	.141	.110	3/16	2	H1	B	1	6007366
15280-80H12FLN02	0	80	1.5/8	5/16	.141	.110	3/16	2	H1	P	1	6007342
15280-80H12FLN01	0	80	1.5/8	5/16	.141	.110	3/16	2	H1	T	1	6007279
15281-72H12FLN03	1	72	1.11/16	3/8	.141	.110	3/16	2	H1	B	1	6007189
15281-72H12FLN02	1	72	1.11/16	3/8	.141	.110	3/16	2	H1	P	1	6007184
15281-72H12FLN01	1	72	1.11/16	3/8	.141	.110	3/16	2	H1	T	1	6007181
15283-56H23FLN03	3	56	1.13/16	1/2	.141	.110	3/16	3	H2	B	1	6007205
15283-56H23FLN02	3	56	1.13/16	1/2	.141	.110	3/16	3	H2	P	1	6007200
15283-56H23FLN01	3	56	1.13/16	1/2	.141	.110	3/16	3	H2	T	1	6007195
15284-48H23FLN03	4	48	1.7/8	9/16	.141	.110	3/16	3	H2	B	1	6007284
15284-48H23FLN02	4	48	1.7/8	9/16	.141	.110	3/16	3	H2	P	1	6007277
15284-48H23FLN01	4	48	1.7/8	9/16	.141	.110	3/16	3	H2	T	1	6007275
15285-44H23FLN03	5	44	1.15/16	5/8	.141	.110	3/16	3	H2	B	1	6007322
15285-44H23FLN02	5	44	1.15/16	5/8	.141	.110	3/16	3	H2	P	1	6007318
15285-44H23FLN01	5	44	1.15/16	5/8	.141	.110	3/16	3	H2	T	1	6007315
15286-40H23FLN03	6	40	2"	11/16	.141	.110	3/16	3	H2	B	1	6006974
15286-40H23FLN02	6	40	2"	11/16	.141	.110	3/16	3	H2	P	1	6006970
15286-40H23FLN01	6	40	2"	11/16	.141	.110	3/16	3	H2	T	1	6006965
15288-36H24FLN03	8	36	2.1/8	3/4	.168	.131	1/4	4	H2	B	1	6007051
15288-36H24FLN02	8	36	2.1/8	3/4	.168	.131	1/4	4	H2	P	1	6007048
15288-36H24FLN01	8	36	2.1/8	3/4	.168	.131	1/4	4	H2	T	1	6007045

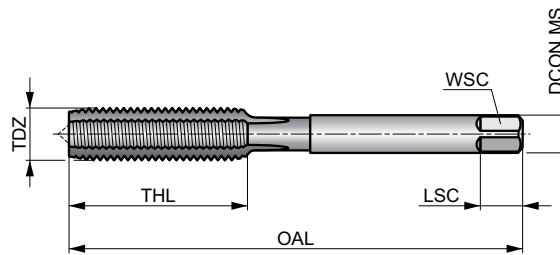
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
152810-32H34FLN03	10	32	2.3/8	7/8	.194	.152	1/4	4	H3	B	1	6007363
152810-32H34FLN02	10	32	2.3/8	7/8	.194	.152	1/4	4	H3	P	1	6007362
152810-32H34FLN01	10	32	2.3/8	7/8	.194	.152	1/4	4	H3	T	1	6007361
152812-28H34FLN03	12	28	2.3/8	15/16	.220	.165	9/32	4	H3	B	1	6007240
152812-28H34FLN02	12	28	2.3/8	15/16	.220	.165	9/32	4	H3	P	1	6007186
152812-28H34FLN01	12	28	2.3/8	15/16	.220	.165	9/32	4	H3	T	1	6007136

1500(UNF)



HSS Straight Flute Hand Tap, UNF, ANSI Standard, Fractional Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	2B 3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

Sizes 0 to 3/8 have male centers on thread end. Sizes larger than 3/8 all have female centers - flat ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15001/4X28H3N01	1/4	28	2.1/2	1"	.255	.191	5/16	4	H3	T	1	6007041
15001/4X28H3N02	1/4	28	2.1/2	1"	.255	.191	5/16	4	H3	P	1	6007044
15001/4X28H3N03	1/4	28	2.1/2	1"	.255	.191	5/16	4	H3	B	1	6007047
15005/16X24H3N01	5/16	24	2.23/32	1.1/8	.318	.238	3/8	4	H3	T	1	6007301
15005/16X24H3N02	5/16	24	2.23/32	1.1/8	.318	.238	3/8	4	H3	P	1	6007306
15005/16X24H3N03	5/16	24	2.23/32	1.1/8	.318	.238	3/8	4	H3	B	1	6007317
15003/8X24H3N01	3/8	24	2.15/16	1.1/4	.381	.286	7/16	4	H3	T	1	6007212
15003/8X24H3N02	3/8	24	2.15/16	1.1/4	.381	.286	7/16	4	H3	P	1	6007222
15003/8X24H3N03	3/8	24	2.15/16	1.1/4	.381	.286	7/16	4	H3	B	1	6007227
15007/16X20H3N01	7/16	20	3.5/32	1.7/16	.323	.242	13/32	4	H3	T	1	6007431
15007/16X20H3N02	7/16	20	3.5/32	1.7/16	.323	.242	13/32	4	H3	P	1	6007436
15007/16X20H3N03	7/16	20	3.5/32	1.7/16	.323	.242	13/32	4	H3	B	1	6007441
15001/2X20H3N01	1/2	20	3.3/8	1.21/32	.367	.275	7/16	4	H3	T	1	6006948
15001/2X20H3N02	1/2	20	3.3/8	1.21/32	.367	.275	7/16	4	H3	P	1	6006953
15001/2X20H3N03	1/2	20	3.3/8	1.21/32	.367	.275	7/16	4	H3	B	1	6006956
15009/16X18H3N01	9/16	18	3.19/32	1.21/32	.429	.322	1/2	4	H3	T	1	6007541
15009/16X18H3N02	9/16	18	3.19/32	1.21/32	.429	.322	1/2	4	H3	P	1	6007546
15009/16X18H3N03	9/16	18	3.19/32	1.21/32	.429	.322	1/2	4	H3	B	1	6007550
15005/8X18H3N01	5/8	18	3.13/16	1.13/16	.480	.360	9/16	4	H3	T	1	6007607
15005/8X18H3N02	5/8	18	3.13/16	1.13/16	.480	.360	9/16	4	H3	P	1	6007380
15005/8X18H3N03	5/8	18	3.13/16	1.13/16	.480	.360	9/16	4	H3	B	1	6007384

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15003/4X16H3N01	3/4	16	4.1/4	2"	.590	.442	11/16	4	H3	T	1	6007133
15003/4X16H3N02	3/4	16	4.1/4	2"	.590	.442	11/16	4	H3	P	1	6007138
15003/4X16H3N03	3/4	16	4.1/4	2"	.590	.442	11/16	4	H3	B	1	6007141
15007/8X14H4N01	7/8	14	4.11/16	2.7/32	.697	.523	3/4	4	H4	T	1	6007468
15007/8X14H4N02	7/8	14	4.11/16	2.7/32	.697	.523	3/4	4	H4	P	1	6007473
15007/8X14H4N03	7/8	14	4.11/16	2.7/32	.697	.523	3/4	4	H4	B	1	6007481
15001X12H4N01	1"	12	5.1/8	2.1/2	.800	.600	13/16	4	H4	T	1	6007057
15001X12H4N02	1"	12	5.1/8	2.1/2	.800	.600	13/16	4	H4	P	1	6007060
15001X12H4N03	1"	12	5.1/8	2.1/2	.800	.600	13/16	4	H4	B	1	6007066
15001.1/8X12H4N01	1.1/8	12	5.7/16	2.9/16	.896	.672	7/8	4	H4	T	1	6007070
15001.1/8X12H4N02	1.1/8	12	5.7/16	2.9/16	.896	.672	7/8	4	H4	P	1	6007073
15001.1/8X12H4N03	1.1/8	12	5.7/16	2.9/16	.896	.672	7/8	4	H4	B	1	6007076
15001.1/4X12H4N01	1.1/4	12	5.3/4	2.9/16	1.021	.766	1"	6	H4	T	1	6007043
15001.1/4X12H4N02	1.1/4	12	5.3/4	2.9/16	1.021	.766	1"	6	H4	P	1	6007049
15001.1/4X12H4N03	1.1/4	12	5.3/4	2.9/16	1.021	.766	1"	6	H4	B	1	6007052
15001.3/8X12H4N01	1.3/8	12	6.1/16	3"	1.100	.831	1.1/16	6	H4	T	1	6007102
15001.3/8X12H4N02	1.3/8	12	6.1/16	3"	1.100	.831	1.1/16	6	H4	P	1	6007105
15001.3/8X12H4N03	1.3/8	12	6.1/16	3"	1.100	.831	1.1/16	6	H4	B	1	6007108
15001.1/2X12H4N01	1.1/2	12	6.3/8	3"	1.230	.925	1.1/8	6	H4	T	1	6007012
15001.1/2X12H4N02	1.1/2	12	6.3/8	3"	1.230	.925	1.1/8	6	H4	P	1	6007016
15001.1/2X12H4N03	1.1/2	12	6.3/8	3"	1.230	.925	1.1/8	6	H4	B	1	6007021

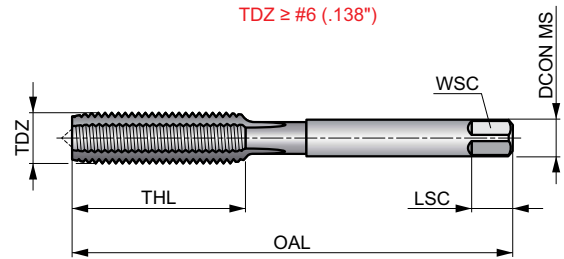
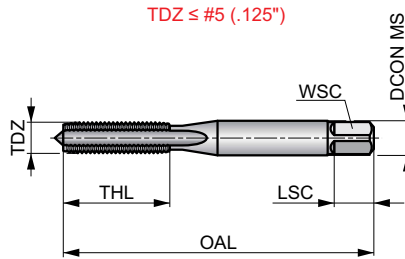
1528S(UNF)



Set of HSS Straight Flute Hand Taps, UNF, ANSI, Machine Screw Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Set including taps with 3 different chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.

	ANSI	2B 3B
	1.5xD	HSS
	R	Bright



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1			
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑			

This is a set that includes taper, plug and bottoming taps.

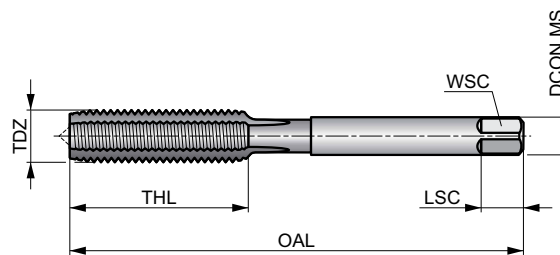
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Pack Qty	MID
			(inch)	(inch)							
1528S0-80H1	0	80	1.5/8	5/16	.141	.110	3/16	2	H1	1	6006774
1528S1-72H1	1	72	1.11/16	3/8	.141	.110	3/16	2	H1	1	6006785
1528S3-56H2	3	56	1.13/16	1/2	.141	.110	3/16	3	H2	1	6006820
1528S4-48H2	4	48	1.7/8	9/16	.141	.110	3/16	3	H2	1	6006829
1528S5-44H2	5	44	1.15/16	5/8	.141	.110	3/16	3	H2	1	6006838
1528S6-40H2	6	40	2"	11/16	.141	.110	3/16	3	H2	1	6006852
1528S8-36H2	8	36	2.1/8	3/4	.168	.131	1/4	4	H2	1	6007221
1528S10-32H3	10	32	2.3/8	7/8	.194	.152	1/4	4	H3	1	6006799
1528S12-28H3	12	28	2.3/8	15/16	.220	.165	9/32	4	H3	1	6006805

1500S(UNF)



Set of HSS Straight Flute Hand Taps, UNF, ANSI Standard, Fractional Sizes

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Set including taps with 3 different chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	2B 3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1			
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑			

This is a set that includes taper, plug and bottoming taps.

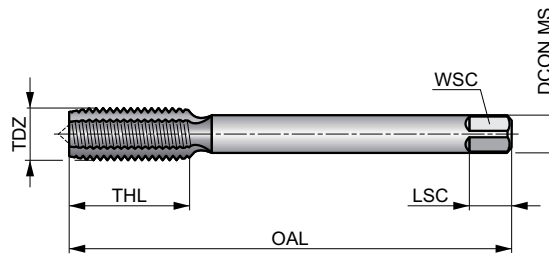
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)				
1500S1/4X28	1/4	28	2.1/2	1"	.255	.191	5/16	4	H3	1	6006949
1500S5/16X24	5/16	24	2.23/32	1.1/8	.318	.238	3/8	4	H3	1	6006964
1500S3/8X24	3/8	24	2.15/16	1.1/4	.381	.286	7/16	4	H3	1	6006957
1500S7/16X20	7/16	20	3.5/32	1.7/16	.323	.242	13/32	4	H3	1	6006990
1500S1/2X20	1/2	20	3.3/8	1.21/32	.367	.275	7/16	4	H3	1	6006707
1500S9/16X18	9/16	18	3.19/32	1.21/32	.429	.322	1/2	4	H3	1	6007008
1500S5/8X18	5/8	18	3.13/16	1.13/16	.480	.360	9/16	4	H3	1	6006975
1500S3/4X16	3/4	16	4.1/4	2"	.590	.442	11/16	4	H3	1	6007120
1500S7/8X14	7/8	14	4.11/16	2.7/32	.697	.523	3/4	4	H4	1	6006994
1500S1X12	1"	12	5.1/8	2.1/2	.800	.600	13/16	4	H4	1	6007004
1500S1.1/8X12	1.1/8	12	5.7/16	2.9/16	.896	.672	7/8	4	H4	1	6006687
1500S1.1/4X12	1.1/4	12	5.3/4	2.9/16	1.021	.766	1"	6	H4	1	6006680

1500L(UNF)



HSS Straight Flute Hand Tap, UNF, ANSI Standard, Left-Handed

Versatile taps for hand use or machine tapping, similar in design to the standard 1500 series but finished with left hand threads, which when viewed axially, wind in a counter-clockwise and receding direction. Available with plug lead for through hole applications or tapping into blind holes with a long thread run-out.



	ANSI	3B
	1.5xD	HSS
	L	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
1500L1/4X28	1/4	28	2.1/2	1"	.255	.191	5/16	4	H3	P	1	6006636
1500L5/16X24	5/16	24	2.23/32	1.1/8	.318	.238	3/8	4	H3	P	1	6006655
1500L3/8X24	3/8	24	2.15/16	1.1/4	.381	.286	7/16	4	H3	P	1	6006649
1500L7/16X20	7/16	20	3.5/32	1.7/16	.323	.242	13/32	4	H3	P	1	6006663
1500L1/2X20	1/2	20	3.3/8	1.21/32	.367	.275	7/16	4	H3	P	1	6006634
1500L9/16X18	9/16	18	3.19/32	1.21/32	.429	.322	1/2	4	H3	P	1	6006671
1500L5/8X18	5/8	18	3.13/16	1.13/16	.480	.360	9/16	4	H3	P	1	6006659
1500L3/4X16	3/4	16	4.1/4	2"	.590	.442	11/16	4	H3	P	1	6006645
1500L7/8X14	7/8	14	4.11/16	2.7/32	.697	.523	3/4	4	H4	P	1	6006665
1500L1X12	1"	12	5.1/8	2.1/2	.800	.600	13/16	4	H4	P	1	6006637

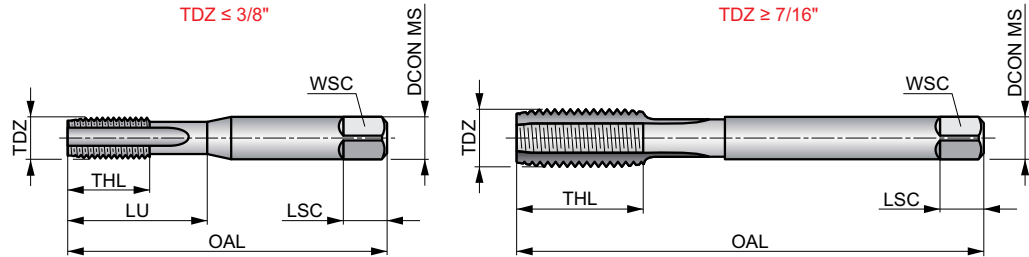
E524



HSS Straight Flute Hand Tap, UNF, ISO Standard

A versatile tool, suitable for hand and machine tapping. With a straight flute design for both through and blind holes. Available as a set of three N06 or as separate taps with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes.

	ISO 529	2B
	1.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ■ 13	P3.1 ■ 13	P3.2 ■ 13	P4.1 ■ 10	K1.1 ■ 39	K1.2 ■ 30	K1.3 ■ 23	K2.1 ■ 39	K2.2 ■ 33
K3.1 ■ 36	K3.2 ■ 26	K4.1 ■ 33	K4.2 ■ 26	K5.1 ■ 36	K5.2 ■ 30	N1.3 ■ 26	N2.1 ■ 36	N2.2 ■ 33	N2.3 ■ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ■ 16	N4.2 ■ 16
N4.3 ■ 10													

Products from this series are also available in set with dies. Please see L120.

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E5240-80N01	0	80	1.52	41.0	7	2.50	2.00	4	2	1.25	7.00	T	1	5976402
E5240-80N02	0	80	1.52	41.0	7	2.50	2.00	4	2	1.25	7.00	P	1	5976405
E5240-80N03	0	80	1.52	41.0	7	2.50	2.00	4	2	1.25	7.00	B	1	5976409
E5241-72N02	1	72	1.85	41.0	8	2.50	2.00	4	2	1.55	8.00	P	1	5976274
E5241-72N03	1	72	1.85	41.0	8	2.50	2.00	4	2	1.55	8.00	B	1	5976279
E5242-64N01	2	64	2.18	44.5	9.5	2.80	2.24	5	3	1.90	9.50	T	1	5976378
E5242-64N02	2	64	2.18	44.5	9.5	2.80	2.24	5	3	1.90	9.50	P	1	5976381
E5242-64N03	2	64	2.18	44.5	9.5	2.80	2.24	5	3	1.90	9.50	B	1	5976387
E5244-48N01	4	48	2.85	48.0	12.5	3.15	2.50	5	3	2.40	12.50	T	1	5976233
E5244-48N02	4	48	2.85	48.0	12.5	3.15	2.50	5	3	2.40	12.50	P	1	5976236
E5244-48N03	4	48	2.85	48.0	12.5	3.15	2.50	5	3	2.40	12.50	B	1	5976071
E5245-44N01	5	44	3.17	48.0	12.5	3.15	2.50	5	3	2.70	12.50	T	1	5976085
E5245-44N02	5	44	3.17	48.0	12.5	3.15	2.50	5	3	2.70	12.50	P	1	5976087
E5245-44N03	5	44	3.17	48.0	12.5	3.15	2.50	5	3	2.70	12.50	B	1	5976090
E5246-40N01	6	40	3.50	50.0	14	3.55	2.80	5	3	2.95	14.00	T	1	5976130
E5246-40N02	6	40	3.50	50.0	14	3.55	2.80	5	3	2.95	14.00	P	1	5976134
E5246-40N03	6	40	3.50	50.0	14	3.55	2.80	5	3	2.95	14.00	B	1	5976138
E5248-36N01	8	36	4.17	53.0	9.5	4.50	3.55	6	3	3.50	17.00	T	1	5976180
E5248-36N02	8	36	4.17	53.0	9.5	4.50	3.55	6	3	3.50	17.00	P	1	5976185
E5248-36N03	8	36	4.17	53.0	9.5	4.50	3.55	6	3	3.50	17.00	B	1	5976190
E52410-32N01	10	32	4.83	58.0	11	5.00	4.00	7	3	4.10	20.00	T	1	5976342
E52410-32N02	10	32	4.83	58.0	11	5.00	4.00	7	3	4.10	20.00	P	1	5976347
E52410-32N03	10	32	4.83	58.0	11	5.00	4.00	7	3	4.10	20.00	B	1	5976355

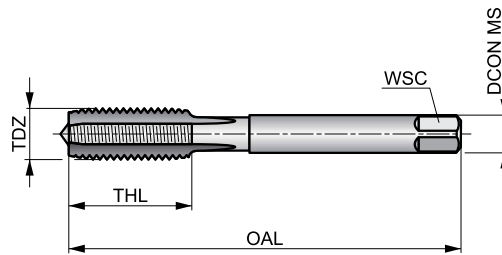
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E52410-32N06	10	32	4.83	58.0	11	5.00	4.00	7	3	4.10	20.00	Set	1	5976359
E52412-28N01	12	28	5.49	62.0	12	5.60	4.50	7	3	4.70	21.00	T	1	5976363
E52412-28N02	12	28	5.49	62.0	12	5.60	4.50	7	3	4.70	21.00	P	1	5976366
E52412-28N03	12	28	5.49	62.0	12	5.60	4.50	7	3	4.70	21.00	B	1	5976370
E52412-28N06	12	28	5.49	62.0	12	5.60	4.50	7	3	4.70	21.00	Set	1	5976374
E5241/4N01	1/4	28	6.35	66.0	13	6.30	5.00	8	3	5.50	26.00	T	1	5976306
E5241/4N02	1/4	28	6.35	66.0	13	6.30	5.00	8	3	5.50	26.00	P	1	5976310
E5241/4N03	1/4	28	6.35	66.0	13	6.30	5.00	8	3	5.50	26.00	B	1	5976314
E5241/4N06	1/4	28	6.35	66.0	13	6.30	5.00	8	3	5.50	26.00	Set	1	5976317
E5245/16N01	5/16	24	7.94	72.0	16	8.00	6.30	9	3	6.90	29.00	T	1	5976098
E5245/16N02	5/16	24	7.94	72.0	16	8.00	6.30	9	3	6.90	29.00	P	1	5976101
E5245/16N03	5/16	24	7.94	72.0	16	8.00	6.30	9	3	6.90	29.00	B	1	5976103
E5245/16N06	5/16	24	7.94	72.0	16	8.00	6.30	9	3	6.90	29.00	Set	1	5976105
E5243/8N01	3/8	24	9.53	80.0	18	10.00	8.00	11	3	8.50	32.00	T	1	5976197
E5243/8N02	3/8	24	9.53	80.0	18	10.00	8.00	11	3	8.50	32.00	P	1	5976225
E5243/8N03	3/8	24	9.53	80.0	18	10.00	8.00	11	3	8.50	32.00	B	1	5976228
E5243/8N06	3/8	24	9.53	80.0	18	10.00	8.00	11	3	8.50	32.00	Set	1	5976231
E5247/16N01	7/16	20	11.11	85.0	19	8.00	6.30	9	3	9.90	—	T	1	5976146
E5247/16N02	7/16	20	11.11	85.0	19	8.00	6.30	9	3	9.90	—	P	1	5976148
E5247/16N03	7/16	20	11.11	85.0	19	8.00	6.30	9	3	9.90	—	B	1	5976155
E5247/16N06	7/16	20	11.11	85.0	19	8.00	6.30	9	3	9.90	—	Set	1	5976160
E5241/2N01	1/2	20	12.70	89.0	22	9.00	7.10	10	3	11.50	—	T	1	5976286
E5241/2N02	1/2	20	12.70	89.0	22	9.00	7.10	10	3	11.50	—	P	1	5976291
E5241/2N03	1/2	20	12.70	89.0	22	9.00	7.10	10	3	11.50	—	B	1	5976294
E5241/2N06	1/2	20	12.70	89.0	22	9.00	7.10	10	3	11.50	—	Set	1	5976298
E5249/16N01	9/16	18	14.29	95.0	24	11.20	9.00	12	4	12.90	—	T	1	5976201
E5249/16N02	9/16	18	14.29	95.0	24	11.20	9.00	12	4	12.90	—	P	1	5976204
E5249/16N03	9/16	18	14.29	95.0	24	11.20	9.00	12	4	12.90	—	B	1	5976208
E5249/16N06	9/16	18	14.29	95.0	24	11.20	9.00	12	4	12.90	—	Set	1	5976210
E5245/8N01	5/8	18	15.88	102.0	24	12.50	10.00	13	4	14.50	—	T	1	5976113
E5245/8N02	5/8	18	15.88	102.0	24	12.50	10.00	13	4	14.50	—	P	1	5976118
E5245/8N03	5/8	18	15.88	102.0	24	12.50	10.00	13	4	14.50	—	B	1	5976121
E5245/8N06	5/8	18	15.88	102.0	24	12.50	10.00	13	4	14.50	—	Set	1	5976127
E5243/4N01	3/4	16	19.05	112.0	29	14.00	11.20	14	4	17.50	—	T	1	5976398
E5243/4N02	3/4	16	19.05	112.0	29	14.00	11.20	14	4	17.50	—	P	1	5976064
E5243/4N03	3/4	16	19.05	112.0	29	14.00	11.20	14	4	17.50	—	B	1	5976108
E5243/4N06	3/4	16	19.05	112.0	29	14.00	11.20	14	4	17.50	—	Set	1	5976151
E5247/8N02	7/8	14	22.23	118.0	29	16.00	12.50	16	4	20.40	—	P	1	5976169
E5247/8N03	7/8	14	22.23	118.0	29	16.00	12.50	16	4	20.40	—	B	1	5976173
E5247/8N06	7/8	14	22.23	118.0	29	16.00	12.50	16	4	20.40	—	Set	1	5976178
E5241N01	1"	12	25.40	130.0	35	18.00	14.00	18	4	23.25	—	T	1	5976321
E5241N02	1"	12	25.40	130.0	35	18.00	14.00	18	4	23.25	—	P	1	5976326
E5241N03	1"	12	25.40	130.0	35	18.00	14.00	18	4	23.25	—	B	1	5976333
E5241N06	1"	12	25.40	130.0	35	18.00	14.00	18	4	23.25	—	Set	1	5976338
E5241.1/8N01	1.1/8	12	28.57	138.0	35	20.00	16.00	20	4	26.50	—	T	1	5976249
E5241.1/8N02	1.1/8	12	28.57	138.0	35	20.00	16.00	20	4	26.50	—	P	1	5976251
E5241.1/8N03	1.1/8	12	28.57	138.0	35	20.00	16.00	20	4	26.50	—	B	1	5976254
E5241.1/4N01	1.1/4	12	31.75	151.0	41	22.40	18.00	22	4	29.50	—	T	1	5976242
E5241.1/4N02	1.1/4	12	31.75	151.0	41	22.40	18.00	22	4	29.50	—	P	1	5976244
E5241.1/4N03	1.1/4	12	31.75	151.0	41	22.40	18.00	22	4	29.50	—	B	1	5976246
E5241.3/8N01	1.3/8	12	34.92	162.0	47	25.00	20.00	24	4	32.75	—	T	1	5976257
E5241.3/8N02	1.3/8	12	34.92	162.0	47	25.00	20.00	24	4	32.75	—	P	1	5976262
E5241.3/8N03	1.3/8	12	34.92	162.0	47	25.00	20.00	24	4	32.75	—	B	1	5976267
E5241.1/2N01	1.1/2	12	38.10	170.0	47	28.00	22.40	26	4	36.00	—	T	1	5976235
E5241.1/2N02	1.1/2	12	38.10	170.0	47	28.00	22.40	26	4	36.00	—	P	1	5976238
E5241.1/2N03	1.1/2	12	38.10	170.0	47	28.00	22.40	26	4	36.00	—	B	1	5976240

E111



HSS Straight Flute Serial Hand Tap, UNF, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it suited for both through and blind holes. Available as a set of two serial taps, which should be used one after the other to create the full thread.



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3.3	N4.2	N4.3											
■	■	■											

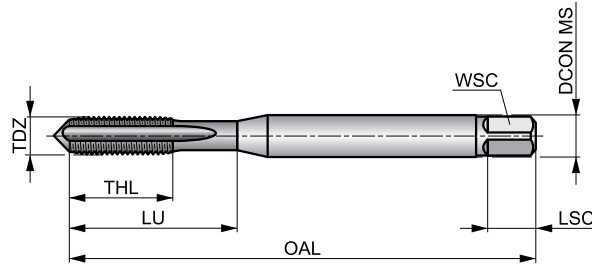
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)						
E1115-44N09	5	44	3.18	45.0	13	4.00	3.00	3	2.70	1	5975598
E1116-40N09	6	40	3.51	45.0	10	4.00	3.00	3	2.95	1	5975622
E1118-36N09	8	36	4.17	50.0	14	6.00	4.90	3	3.50	1	5975647
E11110-32N09	10	32	4.82	50.0	14	6.00	4.90	3	4.10	1	5975574
E1111/4N09	1/4	28	6.35	56.0	17	6.00	4.90	3	5.50	1	5975562
E1115/16N09	5/16	24	7.94	63.0	19	6.00	4.90	3	6.90	1	5975606
E1113/8N09	3/8	24	9.53	63.0	16	7.00	5.50	3	8.50	1	5975590
E1117/16N09	7/16	20	11.11	63.0	15	8.00	6.20	3	9.90	1	5975632
E1111/2N09	1/2	20	12.70	70.0	22	9.00	7.00	3	11.50	1	5975556
E1119/16N09	9/16	18	14.29	70.0	16	11.00	9.00	4	12.90	1	5975658
E1115/8N09	5/8	18	15.88	70.0	16	12.00	9.00	4	14.50	1	5975615
E1113/4N09	3/4	16	19.05	80.0	22	14.00	11.00	4	17.50	1	5975579
E1117/8N09	7/8	14	22.23	90.0	22	18.00	14.50	4	20.40	1	5975640
E1111N09	1"	12	25.40	90.0	22	20.00	16.00	4	23.25	1	5975568

E229



HSS-E-PM Straight Flute Machine Tap, UNF, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.



	DIN 371	2B
	1.5xD	HSS-E PM
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)					
E2292-64	2	64	2.18	45.0	7	2.80	2.10	5	3	1.90	12.00	1	5976140
E2293-56	3	56	2.52	50.0	8	2.80	2.10	5	3	2.15	12.50	1	5976150
E2294-48	4	48	2.85	56.0	9	3.50	2.70	6	3	2.40	18.00	1	5976154
E2295-44	5	44	3.17	56.0	10	3.50	2.70	6	3	2.70	18.00	1	5976158
E2296-40	6	40	3.50	56.0	11	4.00	3.00	6	3	2.95	20.00	1	5976161
E2298-36	8	36	4.17	63.0	12	4.50	3.40	6	3	3.50	21.00	1	5976165
E22910-32	10	32	4.83	70.0	13	6.00	4.90	8	3	4.10	25.00	1	5976132
E22912-28	12	28	5.49	80.0	15	6.00	4.90	8	3	4.70	30.00	1	5976136
E2291/4	1/4	28	6.35	80.0	15	7.00	5.50	8	3	5.50	30.00	1	5976128

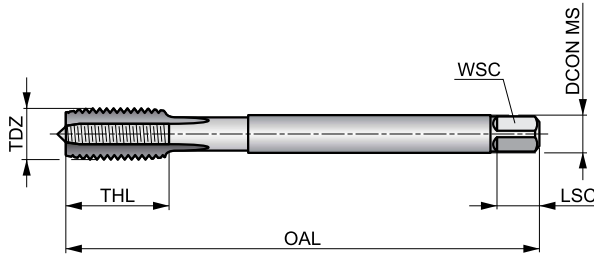
E278



HSS-E-PM Straight Flute Machine Tap, UNF, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

UNF	DIN 374	2B
1.5xD	HSS-E PM	
C 2-3	R	
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
E2785/16	5/16	24	7.94	90.0	18	6.00	4.90	8	3	6.90	1	5975119
E2783/8	3/8	24	9.53	100.0	24	7.00	5.50	8	3	8.50	1	5975115
E2787/16	7/16	20	11.11	100.0	22	9.00	7.00	10	3	9.90	1	5975131
E2781/2	1/2	20	12.70	100.0	21	9.00	7.00	10	3	11.50	1	5975107
E2789/16	9/16	18	14.29	100.0	21	11.00	9.00	12	4	12.90	1	5975138
E2785/8	5/8	18	15.88	100.0	21	12.00	9.00	12	4	14.50	1	5975127
E2783/4	3/4	16	19.05	125.0	25	14.00	11.00	14	4	17.50	1	5975111
E2787/8	7/8	14	22.23	140.0	28	18.00	14.50	17	4	20.40	1	5975135
E2781	1"	12	25.40	140.0	26	18.00	14.50	17	4	23.25	1	5975088
E2781.1/8	1.1/8	12	28.58	150.0	28	22.00	18.00	21	4	26.50	1	5975099
E2781.1/4	1.1/4	12	31.75	150.0	28	25.00	20.00	23	4	29.50	1	5975096
E2781.3/8	1.3/8	12	34.93	170.0	30	28.00	22.00	25	4	32.75	1	5975103
E2781.1/2 ¹⁾	1.1/2	12	38.10	170.0	30	32.00	24.00	27	4	36.00	1	5975092

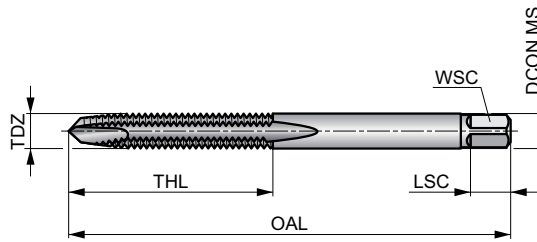
¹⁾ HSS-E.

1593(UNF)



HSS Spiral Point Tap, UNF, ANSI Standard, Oversize

Most productive tap design for through hole applications only. With oversize H7 pitch diameter limits, 0.0030" to 0.0035" larger. Used primarily where a part will be plated or treated after tapping.



	ANSI	2B 3B
	2.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 52	P1.2 ■ 59	P1.3 ■ 59	P2.1 ■ 46	P2.2 ■ 39	P2.3 ■ 36	P3.1 ■ 39	P3.2 ■ 30	P3.3 ■ 26	P4.1 ■ 23	P4.2 ■ 20	P4.3 ▣ 16	M1.1 ▣ 39	M1.2 ▣ 33
M2.1 ▣ 36	M2.2 ▣ 30	M3.1 ▣ 23	M3.2 ▣ 20	M3.3 ▣ 16	M4.1 ▣ 20	K1.1 ▣ 46	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 33	K2.2 ▣ 26	K2.3 ▣ 20	K3.1 ▣ 30	K3.2 ▣ 23
K3.3 ▣ 16	K4.1 ▣ 26	K4.2 ▣ 20	K4.3 ▣ 13	K4.4 ▣ 13	K4.5 ▣ 10	K5.1 ▣ 30	K5.2 ▣ 23	K5.3 ▣ 16	N1.1 ▣ 49	N1.2 ▣ 36	N1.3 ▣ 26	N2.1 ▣ 102	N2.2 ▣ 92
N2.3 ▣ 66	N3.1 ▣ 151	N3.2 ▣ 89	N3.3 ▣ 46	N4.1 ■ 98	N4.2 ▣ 26	S1.1 ▣ 20	S1.2 ▣ 16	S1.3 ▣ 7	S2.1 ▣ 13	S3.1 ▣ 10	S4.1 ▣ 7		

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
159310-32	10	32	2.3/8	7/8	.194	.152	1/4	2	H7	P	1	6007866

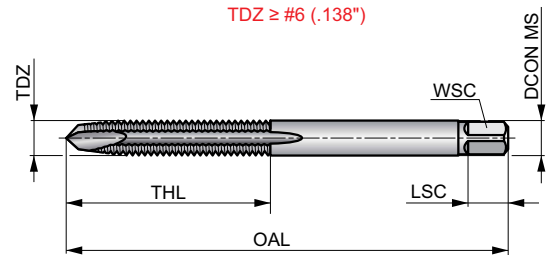
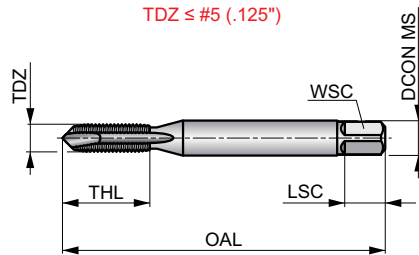
1534NR(UNF)



HSS Spiral Point Tap, UNF, ANSI Standard, Machine Screw Sizes

Feature concentric threads with no pitch diameter relief. These taps are particularly recommended for applications requiring close gauging fits and in older equipment that is not sufficiently rigid to accommodate the free cutting action of the 1534 series. For through hole applications only.

	ANSI	2B 3B
	2.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 52	P1.2 ■ 59	P1.3 ■ 59	P2.1 ■ 46	P2.2 ■ 39	P2.3 ■ 36	P3.1 ■ 39	P3.2 ■ 30	P3.3 ■ 26	P4.1 ■ 23	P4.2 ■ 20	P4.3 ▣ 16	M1.1 ▣ 39	M1.2 ▣ 33
M2.1 ▣ 36	M2.2 ▣ 30	M3.1 ▣ 23	M3.2 ▣ 20	M3.3 ▣ 16	M4.1 ▣ 20	K1.1 ▣ 46	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 33	K2.2 ▣ 26	K2.3 ▣ 20	K3.1 ▣ 30	K3.2 ▣ 23
K3.3 ▣ 16	K4.1 ▣ 26	K4.2 ▣ 20	K4.3 ▣ 13	K4.4 ▣ 13	K4.5 ▣ 10	K5.1 ▣ 30	K5.2 ▣ 23	K5.3 ▣ 16	N1.1 ▣ 49	N1.2 ▣ 36	N1.3 ▣ 26	N2.1 ▣ 102	N2.2 ▣ 92
N2.3 ▣ 66	N3.1 ▣ 151	N3.2 ▣ 89	N3.3 ▣ 46	N4.1 ■ 98	N4.2 ▣ 26	S1.1 ▣ 20	S1.2 ▣ 16	S1.3 ▣ 7	S2.1 ▣ 13	S3.1 ▣ 10	S4.1 ▣ 7		

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
1534NR0-80H2N02	0	80	1.5/8	5/16	.141	.110	3/16	2	H2	P	1	6007598
1534NR1-72H2N02	1	72	1.11/16	3/8	.141	.110	3/16	2	H2	P	1	6007382
1534NR2-64H2N02	2	64	1.3/4	7/16	.141	.110	3/16	2	H2	P	1	6007477
1534NR3-56H2N02	3	56	1.13/16	1/2	.141	.110	3/16	2	H2	P	1	6007495
1534NR4-48H2N02	4	48	1.7/8	9/16	.141	.110	3/16	2	H2	P	1	6007526
1534NR5-44H2N02	5	44	1.15/16	5/8	.141	.110	3/16	2	H2	P	1	6007547
1534NR6-40H2N02	6	40	2"	11/16	.141	.110	3/16	2	H2	P	1	6006685
1534NR8-36H2N02	8	36	2.1/8	3/4	.168	.131	1/4	2	H2	P	1	6006877
1534NR10-32H3N02	10	32	2.3/8	7/8	.194	.152	1/4	2	H3	P	1	6007426
1534NR12-28H3N02	12	28	2.3/8	15/16	.220	.165	9/32	2	H3	P	1	6007445

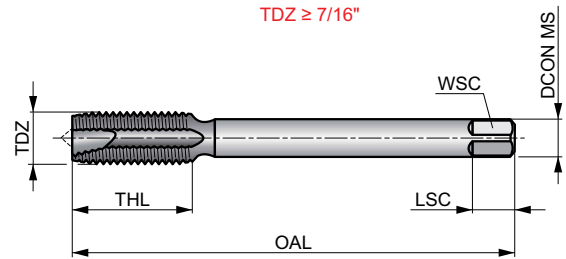
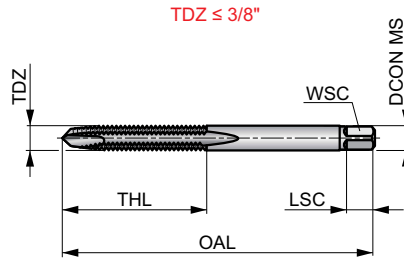
1585NR(UNF)



HSS Spiral Point Tap, UNF, ANSI Standard, Fractional Sizes

Feature concentric threads with no pitch diameter relief. These taps are particularly recommended for applications requiring close gauging fits and in older equipment that is not sufficiently rigid to accommodate the free cutting action of the 1585 series. For through hole applications only.

	ANSI	2B 3B
	2.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 62	P1.2 69	P1.3 72	P2.1 52	P2.2 46	P2.3 39	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 10	N1.1 33	N1.2 26	N1.3 16	N2.1 66	N2.2 59	N2.3 43	N3.1 112	N3.3 33
N4.1 66	S1.3 10	S2.1 16	S3.1 13	S4.1 10									

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
1585NR1/4X28H32FLN02	1/4	28	2.1/2	1"	.255	.191	5/16	2	H3	P	1	6007799
1585NR5/16X24H32FLN02	5/16	24	2.23/32	1.1/8	.318	.238	3/8	2	H3	P	1	6007741
1585NR3/8X24H33FLN02	3/8	24	2.15/16	1.1/4	.381	.286	7/16	3	H3	P	1	6007673
1585NR7/16X20H33FLN02	7/16	20	3.5/32	1.7/16	.323	.242	13/32	3	H3	P	1	6007802
1585NR1/2X20H33FLN02	1/2	20	3.3/8	1.21/32	.367	.275	7/16	3	H3	P	1	6007792
1585NR5/8X18H33FLN02	5/8	18	3.13/16	1.13/16	.480	.360	9/16	3	H3	P	1	6007771
1585NR3/4X16H33FLN02	3/4	16	4.1/2	2"	.590	.442	11/16	3	H3	P	1	6007639

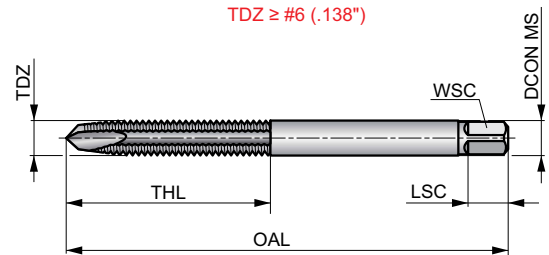
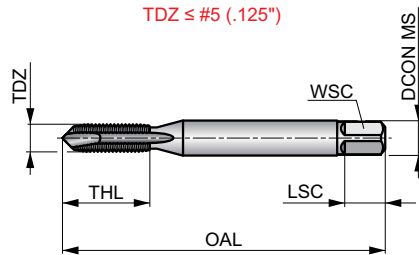
TN1534(UNF)



HSS Spiral Point Tap, UNF, ANSI Standard, TiN-Coated

Most productive tap design for through hole applications only. These taps are extremely free cutting. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	ANSI	2B
	2.5xD	HSS
	R	TiN



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 66	P1.2 ■ 72	P1.3 ■ 75	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 43	P3.2 ■ 36	P3.3 ■ 30	P4.1 ■ 26	P4.2 ■ 23	P4.3 ■ 16	M1.1 ■ 52	M1.2 ■ 46
M2.1 ■ 49	M2.2 ■ 39	M3.1 ■ 30	M3.2 ■ 26	M3.3 ▧ 23	M4.1 ▧ 26	K1.1 ▧ 49	K1.2 ▧ 36	K1.3 ▧ 26	K2.1 ▧ 36	K2.2 ▧ 30	K2.3 ▧ 23	K3.1 ▧ 33	K3.2 ▧ 23
K3.3 ▧ 20	K4.1 ▧ 30	K4.2 ▧ 23	K4.3 ▧ 16	K4.4 ▧ 13	K4.5 ▧ 13	K5.1 ▧ 33	K5.2 ▧ 26	K5.3 ▧ 20	N1.1 ■ 66	N1.2 ■ 49	N1.3 ■ 33	N2.1 ■ 121	N2.2 ■ 108
N2.3 ■ 79	N3.1 ■ 194	N3.2 ■ 115	N3.3 ■ 59	N4.1 ■ 121	N4.2 ■ 30	S2.1 ■ 16	S3.1 ■ 13	S4.1 ■ 10					

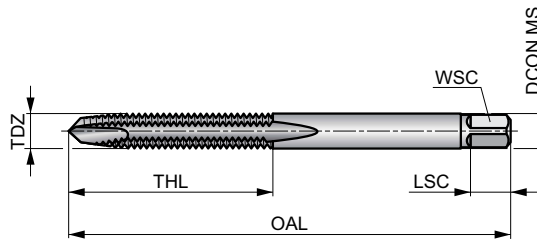
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
TN153410-32	10	32	2.3/8	7/8	.194	.152	1/4	2	H3	P	1	6006763

TN1585(UNF)



HSS Spiral Point Tap, UNF, ANSI Standard, TiN-Coated

Most productive tap design for through hole applications only. These taps are extremely free cutting. TiN coated to allow higher cutting speeds, improve performance and extend tool life.



	ANSI	3B
	2.5xD	HSS
	R	TiN

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣66	P1.2 ▣72	P1.3 ▣75	P2.1 ▣56	P2.2 ▣49	P2.3 ▣43	P3.1 ▣43	P3.2 ▣36	P3.3 ▣30	P4.1 ▣26	P4.2 ▣23	P4.3 ▣16	M1.1 ■52	M1.2 ■46
M2.1 ■49	M2.2 ■39	M3.1 ■30	M3.2 ■26	M3.3 ▣23	M4.1 ▣26	K1.1 ▣49	K1.2 ▣36	K1.3 ▣26	K2.1 ▣36	K2.2 ▣30	K2.3 ▣23	K3.1 ▣33	K3.2 ▣23
K3.3 ▣20	K4.1 ▣30	K4.2 ▣23	K4.3 ▣16	K4.4 ▣13	K4.5 ▣13	K5.1 ▣33	K5.2 ▣26	K5.3 ▣20	N1.1 ■66	N1.2 ■49	N1.3 ■33	N2.1 ■121	N2.2 ■108
N2.3 ■79	N3.1 ■194	N3.2 ■115	N3.3 ■59	N4.1 ■121	N4.2 ■30	S2.1 ■16	S3.1 ■13	S4.1 ■10					

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
TN15853/8-24H33FL	3/8	24	2.15/16	1.1/4	.286	.286	7/16	3	H3	P	1	6007438
TN15857/16-20H33FL	7/16	20	3.5/32	1.7/16	.242	.242	13/32	3	H3	P	1	6007461
TN15851/2-20H33FL	1/2	20	3.3/8	1.21/32	.275	.275	7/16	3	H3	P	1	6007397

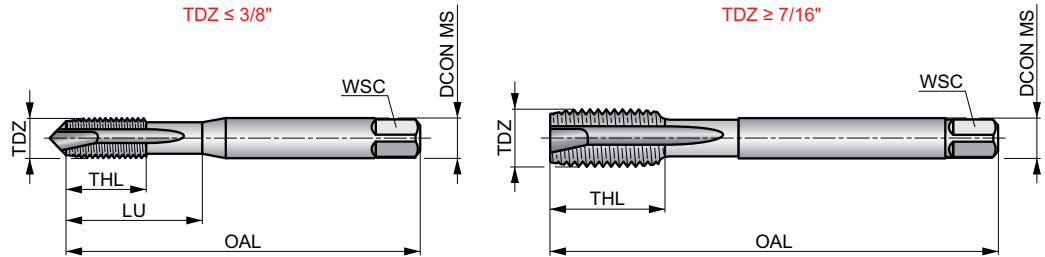
E035



HSS-E-PM Spiral Point Tap, UNF, ANSI Standard

Machine tap with spiral point for through holes only. Made from HSS-E-PM which prolongs tool life, make it more predictable, improve speed performance and reduce chipping. Bright finish to produce more accurate and cleaner threads preventing the work-material from sticking to the cutting edges.

	ANSI	3B
	2.5×D	HSS-E-PM



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ■ 46	P3.1 ■ 43	P3.2 ■ 33	P4.1 ■ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ■ 89	N3.3 ■ 43	N4.1 ■ 72									

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(mm)	(inch)				
E0356-40	6	40	2"	.261	.594	.141	.110	—	2	2.95	N33	H2	P	1	5974546
E0358-36	8	36	2.1/8	.248	.653	.168	.131	—	2	3.50	N29	H2	P	1	5974557
E03510-32	10	32	2.3/8	.430	.843	.194	.152	—	2	4.10	N21	H2	P	1	5974585
E0351/4	1/4	28	2.1/2	.507	1.007	.255	.191	—	2	5.50	N3	H3	P	1	5973974
E0351/43FL	1/4	28	2.1/2	.507	1.007	.255	.191	—	3	5.50	N3	H3	P	1	5974542
E0355/16	5/16	24	2.23/32	.594	1.189	.318	.238	—	2	6.90	I	H3	P	1	5974736
E0355/163FL	5/16	24	2.23/32	.594	1.189	.318	.238	—	3	6.90	I	H3	P	1	5974740
E0353/8	3/8	24	2.15/16	.602	1.292	.381	.286	—	2	8.50	Q	H3	P	1	5974725
E0353/83FL	3/8	24	2.15/16	.602	1.292	.381	.286	—	3	8.50	Q	H3	P	1	5974732
E0357/163FL	7/16	20	3.5/32	.905	—	.323	.242	—	3	9.90	25/64	H3	P	1	5974549
E0351/2	1/2	20	3.3/8	.905	—	.367	.275	—	2	11.50	29/64	H3	P	1	5973965
E0351/23FL	1/2	20	3.3/8	.905	—	.367	.275	—	3	11.50	29/64	H3	P	1	5973968
E0359/16	9/16	18	3.19/32	.984	—	.429	.322	—	3	12.90	33/64	H3	P	1	5974561
E0355/8	5/8	18	3.13/16	.984	—	.480	.360	—	3	14.50	37/64	H3	P	1	5974743
E0353/4	3/4	16	4.1/4	1.161	—	.590	.442	—	3	17.50	11/16	H3	P	1	5974686
E0357/8	7/8	14	4.11/16	1.161	—	.697	.523	—	3	20.40	13/16	H4	P	1	5974553
E0351-14	1"	14	5.1/8	1.398	—	.800	.600	—	3	23.50	59/64	H4	P	1	5973962

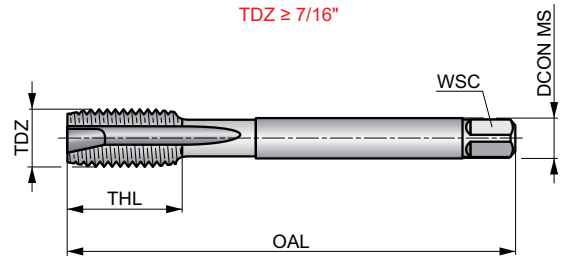
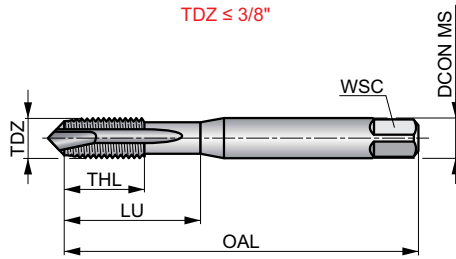
E036



HSS-E-PM Spiral Point Tap, UNF, ANSI Standard, Steam Tempered

Machine tap with spiral point for through holes only, similar in design to the standard E035 series, but with steam tempered surface which acts to retain cutting fluid and prevent chip to tool welding in abrasive and harder ferrous work-materials.

	ANSI	3B
	2.5xD	HSS-E PM
	B 3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▽72	P2.2 ▽52	P2.3 ■46	P3.2 ■33	P3.3 ▽30	P4.1 ■26	P4.2 ▽20	M1.1 ▽33	M1.2 ▽26	M2.1 ▽30	M2.2 ▽23	M3.1 ▽23	M3.2 ▽20	M3.3 ▽16
M4.1 ▽13	K1.1 ▽43	K1.2 ▽33	K1.3 ▽23	K2.1 ▽52	K2.2 ▽43	K3.1 ▽46	K3.2 ▽33	K4.1 ▽43	K4.2 ▽30	K5.1 ▽49	K5.2 ▽36		

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	LSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(mm)	(inch)				
E03610-32	10	32	2.3/8	.430	.843	.194	.152	—	2	4.10	N21	H2	P	1	5974592
E03612-28	12	28	2.3/8	.417	.885	.220	.165	—	2	4.70	N14	H3	P	1	5974596
E0361/4	1/4	28	2.1/2	.507	1.007	.255	.191	—	2	5.50	N3	H3	P	1	5974581
E0361/43FL	1/4	28	2.1/2	.507	1.007	.255	.191	—	3	5.50	N3	H3	P	1	5974589
E0365/16	5/16	24	2.23/32	.594	1.189	.318	.238	—	2	6.90	I	H3	P	1	5974618
E0365/163FL	5/16	24	2.23/32	.594	1.189	.318	.238	—	3	6.90	I	H3	P	1	5974624
E0363/8	3/8	24	2.15/16	.602	1.292	.381	.286	—	2	8.50	Q	H3	P	1	5974608
E0363/83FL	3/8	24	2.15/16	.602	1.292	.381	.286	—	3	8.50	Q	H3	P	1	5974613
E0367/163FL	7/16	20	3.5/32	.905	—	.323	.242	—	3	9.90	25/64	H3	P	1	5974633
E0361/2	1/2	20	3.3/8	.905	—	.367	.275	—	2	11.50	29/64	H3	P	1	5974573
E0361/23FL	1/2	20	3.3/8	.905	—	.367	.275	—	3	11.50	29/64	H3	P	1	5974577
E0369/16	9/16	18	3.19/32	.984	—	.429	.322	—	3	12.90	33/64	H3	P	1	5974648
E0365/8	5/8	18	3.13/16	.984	—	.480	.360	—	3	14.50	37/64	H3	P	1	5974628
E0363/4	3/4	16	4.1/4	1.161	—	.590	.442	—	3	17.50	11/16	H3	P	1	5974605
E0367/8	7/8	14	4.11/16	1.161	—	.697	.523	—	3	20.40	13/16	H4	P	1	5974643
E0361-12	1"	12	5.1/8	1.398	—	.800	.600	—	3	23.25	59/64	H4	P	1	5974565
E0361-14	1"	14	5.1/8	1.398	—	.800	.600	—	3	23.50	59/64	H4	P	1	5974569

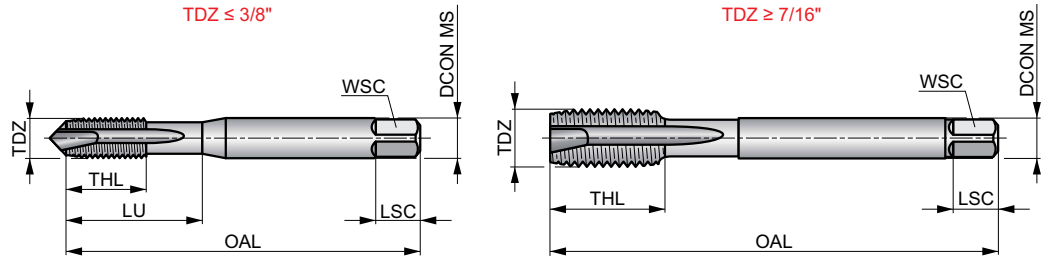
E031



HSS-E-PM Spiral Point Machine Tap, UNF, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	2B
	2.5×D	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣72	P2.2 ▣52	P2.3 ▣46	P3.2 ▣33	P3.3 ▣30	P4.1 ▣26	P4.2 ▣20	M1.1 ▣33	M1.2 ▣26	M2.1 ▣30	M2.2 ▣23	M3.1 ▣23	M3.2 ▣20	M3.3 ▣16
M4.1 ▣13	K1.1 ▣43	K1.2 ▣33	K1.3 ▣23	K2.1 ▣52	K2.2 ▣43	K3.1 ▣46	K3.2 ▣33	K4.1 ▣43	K4.2 ▣30	K5.1 ▣49	K5.2 ▣36		

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)							
E0318-36	8	36	4.17	53.0	9.5	4.50	3.55	6	3	3.50	H3	17.00	P	1	5973839
E03110-32	10	32	4.83	58.0	11	5.00	4.00	7	3	4.10	H3	20.00	P	1	5973806
E03111/4	1/4	28	6.35	66.0	13	6.30	5.00	8	3	5.50	H4	26.00	P	1	5973803
E0315/16	5/16	24	7.94	72.0	16	8.00	6.30	9	3	6.90	H4	29.00	P	1	5973819
E0313/8	3/8	24	9.53	80.0	18	10.00	8.00	11	3	8.50	H4	32.00	P	1	5973815
E0317/16	7/16	20	11.11	85.0	19	8.00	6.30	9	3	9.90	H5	–	P	1	5973827
E03111/2	1/2	20	12.70	89.0	22	9.00	7.10	10	3	11.50	H5	–	P	1	5973800
E0319/16	9/16	18	14.29	95.0	24	11.20	9.00	12	3	12.90	H5	–	P	1	5973842
E0315/8	5/8	18	15.88	102.0	24	12.50	10.00	13	3	14.50	H5	–	P	1	5973823
E0313/4	3/4	16	19.05	112.0	29	14.00	11.20	14	4	17.50	H5	–	P	1	5973813
E0317/8	7/8	14	22.23	118.0	29	16.00	12.50	16	4	20.40	H6	–	P	1	5973831
E0311	1"	12	25.40	130.0	35	18.00	14.00	18	4	23.25	H6	–	P	1	5973798

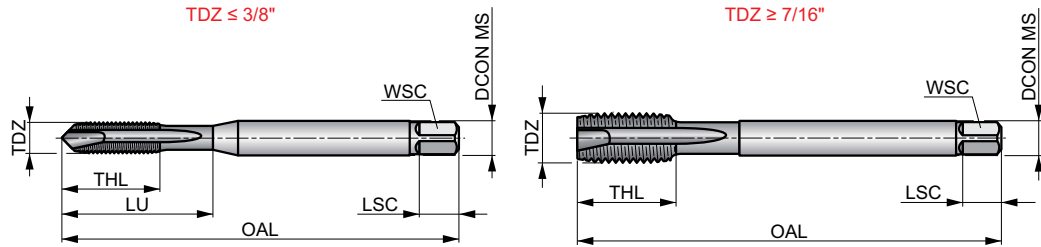
EP30



HSS-E-PM Spiral Point Machine Tap, UNF, DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

	DIN 2184-1	2B
	2.5xD	HSS-E PM



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ■ 46	P3.1 ■ 43	P3.2 ■ 33	P4.1 ■ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ■ 89	N3.3 ■ 43	N4.1 ■ 72									

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
EP308-36	8	36	4.17	63.0	12	4.50	3.40	8	3	3.50	H3	21.00	P	1	5973871
EP3010-32	10	32	4.83	70.0	13	6.00	4.90	8	3	4.10	H3	25.00	P	1	5973834
EP301/4	1/4	28	6.35	80.0	15	7.00	5.50	8	3	5.50	H4	30.00	P	1	5973829
EP305/16	5/16	24	7.94	90.0	18	8.00	6.20	9	3	6.90	H4	35.00	P	1	5973844
EP303/8	3/8	24	9.53	100.0	20	10.00	8.00	11	3	8.50	H4	39.00	P	1	5973841
EP307/16	7/16	20	11.11	100.0	20	8.00	6.20	9	3	9.90	H5	-	P	1	5973853
EP301/2	1/2	20	12.70	110.0	23	9.00	7.00	10	3	11.50	H5	-	P	1	5973826
EP305/8	5/8	18	15.88	110.0	25	12.00	9.00	12	3	14.50	H5	-	P	1	5973848
EP303/4	3/4	16	19.05	125.0	30	14.00	11.00	14	4	17.50	H5	-	P	1	5973837
EP307/8	7/8	14	22.23	140.0	34	18.00	14.50	17	4	20.40	H6	-	P	1	5973866
EP301	1"	12	25.40	160.0	38	18.00	14.50	17	4	23.25	H6	-	P	1	5973822

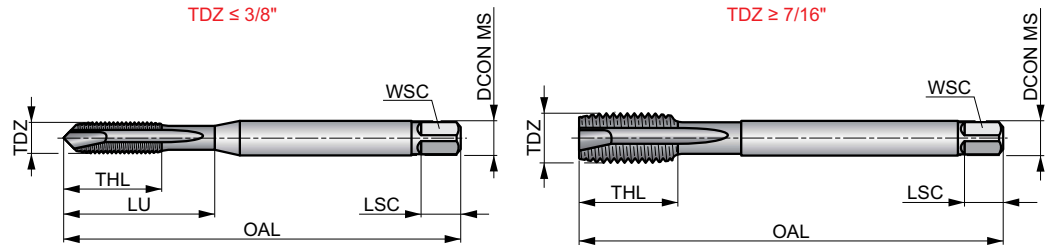
EP31



HSS-E-PM Spiral Point Machine Tap, UNF, DIN Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	DIN 2184-1	2B
	2.5xD	HSS-E PM
C 2-3		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■72	P2.2 ■52	P2.3 ■46	P3.2 ■33	P3.3 ■30	P4.1 ■26	P4.2 ■20	M1.1 ■33	M1.2 ■26	M2.1 ■30	M2.2 ■23	M3.1 ■23	M3.2 ■20	M3.3 ■16
M4.1 ■13	K1.1 ■43	K1.2 ■33	K1.3 ■23	K2.1 ■52	K2.2 ■43	K3.1 ■46	K3.2 ■33	K4.1 ■43	K4.2 ■30	K5.1 ■49	K5.2 ■36		

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
EP318-36	8	36	4.17	63.0	12	4.50	3.40	8	3	3.50	H3	21.00	P	1	5973927
EP3110-32	10	32	4.83	70.0	13	6.00	4.90	8	3	4.10	H3	25.00	P	1	5973889
EP311/4	1/4	28	6.35	80.0	15	7.00	5.50	8	3	5.50	H4	30.00	P	1	5973884
EP315/16	5/16	24	7.94	90.0	18	8.00	6.20	9	3	6.90	H4	35.00	P	1	5973904
EP313/8	3/8	24	9.53	100.0	20	10.00	8.00	11	3	8.50	H4	39.00	P	1	5973899
EP317/16	7/16	20	11.11	100.0	20	8.00	6.20	9	3	9.90	H5	–	P	1	5973919
EP311/2	1/2	20	12.70	110.0	23	9.00	7.00	10	3	11.50	H5	–	P	1	5973879
EP315/8	5/8	18	15.88	110.0	25	12.00	9.00	12	3	14.50	H5	–	P	1	5973909
EP313/4	3/4	16	19.05	125.0	30	14.00	11.00	14	4	17.50	H5	–	P	1	5973894
EP317/8	7/8	14	22.23	140.0	34	18.00	14.50	17	4	20.40	H6	–	P	1	5973923
EP311	1"	12	25.40	160.0	38	18.00	14.50	17	4	23.25	H6	–	P	1	5973874

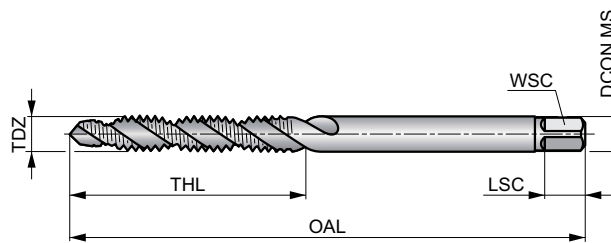
1582(UNF)



HSS 30° Spiral Flute Tap, UNF, ANSI Standard, Machine Screw Sizes

Productive tap design for blind hole applications in a variety of materials. Tapping typically produce long stringy chips which, when not evacuated properly, can cause serious problems especially when threading blind holes. The spiral flute design counters this problem as it draws chips from the hole being tapped.

	ANSI	3B
	2.5xD	HSS
	λ 30°	R
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 49	P1.2 52	P1.3 56	P2.1 43	P2.2 36	P3.1 33	P3.2 26	P4.1 20	M1.1 36	M1.2 30	M2.1 33	M2.2 26	M3.1 23	M3.2 20
M3.3 16	M4.1 20	S1.1 20	S1.2 16	S1.3 7	S2.1 23	S3.1 16	S4.1 13						

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
158210-32N03	10	32	2.3/8	7/8	.194	.152	1/4	2	H3	B	1	6007641

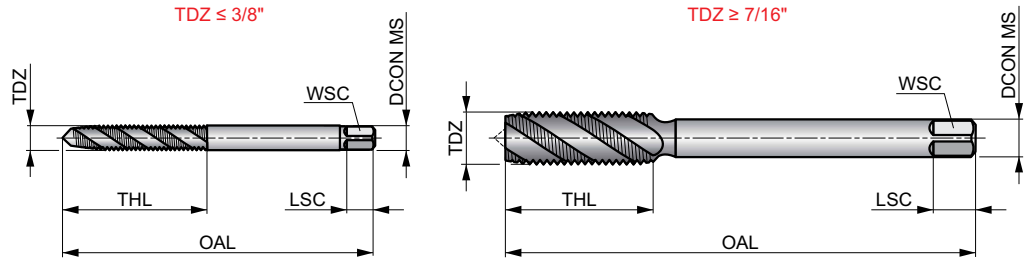
1586(UNF)



HSS 30° Spiral Flute Tap, UNF, ANSI Standard, Fractional Sizes

Productive tap design for blind hole applications in a variety of materials. Tapping typically produce long stringy chips which, when not evacuated properly, can cause serious problems especially when threading blind holes. The spiral flute design counters this problem as it draws chips from the hole being tapped.

	ANSI	3B
	2.5×D	HSS
	λ 30°	
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 49	P1.2 52	P1.3 56	P2.1 43	P2.2 36	P3.1 33	P3.2 26	P4.1 20	M1.1 36	M1.2 30	M2.1 33	M2.2 26	M3.1 23	M3.2 20
M3.3 16	M4.1 20	S1.1 20	S1.2 16	S1.3 7	S2.1 23	S3.1 16	S4.1 13						

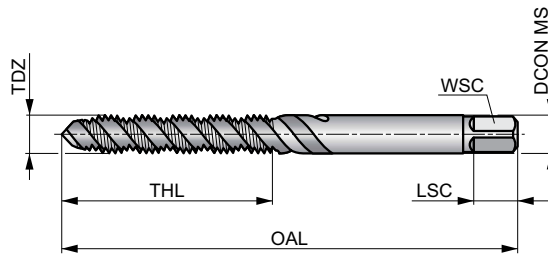
Product	TDZ	TPI	OAL (inch)	THL (inch)	DCON MS (inch)	WSC (inch)	LSC (inch)	NOF	Limits	Chamfer	Pack Qty	MID
15861/4X282FLN03	1/4	28	2.1/2	1"	.255	.191	5/16	2	H3	B	1	6007627
15861/4X283FLN03	1/4	28	2.1/2	1"	.255	.191	5/16	3	H3	B	1	6007632
15865/16X243FLN03	5/16	24	2.23/32	1.1/8	.318	.238	3/8	3	H3	B	1	6007671
15863/8X243FLN03	3/8	24	2.15/16	1.1/4	.381	.286	7/16	3	H3	B	1	6007647
15861/2X203FLN03	1/2	20	3.3/8	1.21/32	.367	.275	7/16	3	H3	B	1	6007831

1587(UNF)



HSS 52° Spiral Flute Tap, UNF, ANSI Standard, Machine Screw Sizes

Productive tap design for blind hole applications in a variety of materials. Similar in design to the standard 1582 series but with higher helix angle. The faster spiral improves the chip drawing action and permits the bridging of larger gapes inside a hole. Recommended to be used with synchronous feed tap holders.



	ANSI	3B
	2.5xD	HSS
	λ 52°	

Workpiece material group suitability and starting values for cutting speed (ft/min).

N1.1 ■ 49	N1.2 ■ 36	N1.3 ■ 26	N2.1 ■ 102	N2.2 ■ 92	N2.3 ■ 66	N3.1 ■ 135	N3.2 ■ 79	N3.3 ■ 39
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Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
158710-32N02	10	32	2.3/8	7/8	.194	.152	1/4	3	H3	P	1	6007694
158710-32N03	10	32	2.3/8	7/8	.194	.152	1/4	3	H3	B	1	6007700

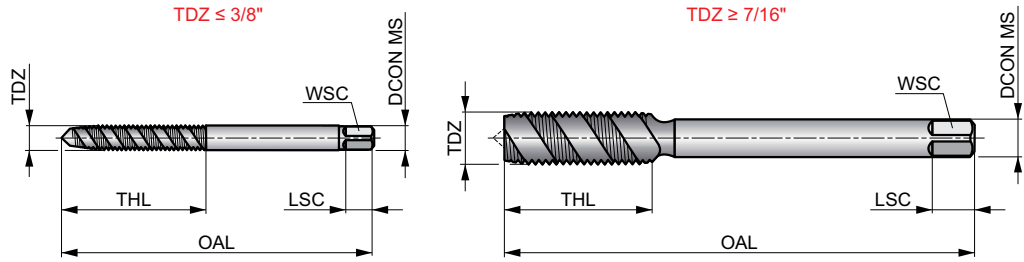
1588(UNF)



HSS 52° Spiral Flute Tap, UNF, ANSI Standard, Fractional Sizes

Productive tap design for blind hole applications in a variety of materials. Similar in design to the standard 1586 series but with higher helix angle. The faster spiral improves the chip drawing action and permits the bridging of larger gapes inside a hole. Recommended to be used with synchronous feed tap holders.

	ANSI	2B 3B
	2.5×D	HSS
	λ 52°	



Workpiece material group suitability and starting values for cutting speed (ft/min).

N1.1 ■ 49	N1.2 ■ 36	N1.3 ■ 26	N2.1 ■ 102	N2.2 ■ 92	N2.3 ■ 66	N3.1 ■ 135	N3.2 ■ 79	N3.3 ■ 39
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Product	TDZ	TPI	OAL (inch)	THL (inch)	DCON MS (inch)	WSC (inch)	LSC (inch)	NOF	Limits	Chamfer	Pack Qty	MID
15881/4X28N03	1/4	28	2.1/2	1.000	.255	.191	5/16	3	H3	B	1	6007810
15885/16X24N03	5/16	24	2.23/32	1.1/8	.318	.238	3/8	3	H3	B	1	6007851
15883/8X24N03	3/8	24	2.15/16	1.1/4	.381	.286	7/16	3	H3	B	1	6007721
15887/16X20N03	7/16	20	3.5/32	1.7/16	.323	.242	13/32	3	H3	B	1	6007634
15881/2X20N03	1/2	20	3.3/8	1.21/32	.367	.275	7/16	3	H3	B	1	6007790

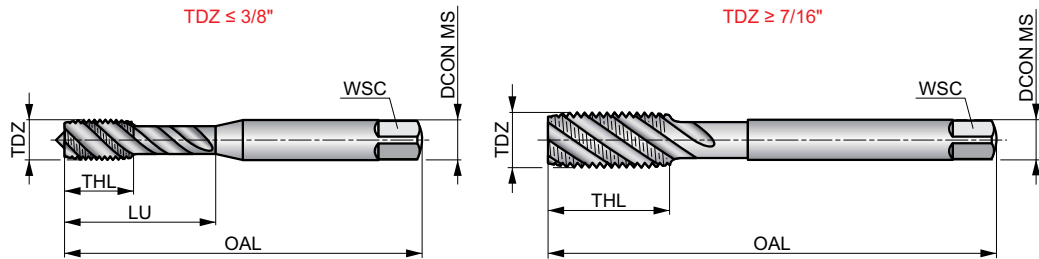
E037



HSS-E-PM 45° Spiral Flute Tap, UNF, ANSI Standard

Spiral flute tap with constant rake angle to prevent nesting in blind hole applications. Made from HSS-E-PM to prolong tool life, make it more predictable, improve speed performance and reduce chipping. Bright finish to produce more accurate cleaner threads preventing work-material from sticking to the cutting edges.

	ANSI	3B
	2.5xD	HSS-E PM
		λ 45°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TPI	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E03710-32	10	32	2.3/8	.265	.843	.194	.152	3	4.10	N21	H2	SB	1	5974670
E0371/4	1/4	28	2.1/2	.394	1.099	.255	.191	3	5.50	N3	H3	SB	1	5974666
E0375/16	5/16	24	2.23/32	.457	1.309	.318	.238	3	6.90	I	H3	SB	1	5974682
E0373/8	3/8	24	2.15/16	.531	1.442	.381	.286	3	8.50	Q	H3	SB	1	5974677
E0377/16	7/16	20	3.5/32	.630	—	.323	.242	3	9.90	25/64	H3	SB	1	5974693
E0371/2	1/2	20	3.3/8	.689	—	.367	.275	3	11.50	29/64	H3	SB	1	5974662
E0379/16	9/16	18	3.19/32	.709	—	.429	.322	3	12.90	33/64	H3	SB	1	5974700
E0375/8	5/8	18	3.13/16	.709	—	.480	.360	3	14.50	37/64	H3	SB	1	5974690
E0373/4	3/4	16	4.1/4	.886	—	.590	.442	3	17.50	11/16	H3	SB	1	5974673
E0377/8	7/8	14	4.11/16	.984	—	.697	.523	3	20.40	13/16	H4	SB	1	5974697
E0371-14	1"	14	5.1/8	1.181	—	.800	.600	3	23.50	59/64	H4	SB	1	5974658

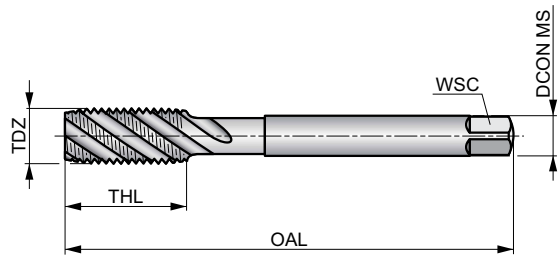
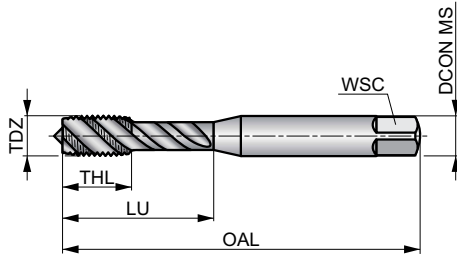
E038



HSS-E-PM 45° Spiral Flute Tap, UNF, ANSI Standard, Steam Tempered

Spiral flute tap with constant rake angle to prevent nesting in blind hole applications, similar in design to the standard E037 series, but with steam tempered surface which acts to retain cutting fluid and prevent chip to tool welding in abrasive and harder ferrous work-materials.

	ANSI	3B
	2.5xD	HSS-E PM
		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	NOF	PHD	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)			
E03810-32	10	32	2.3/8	.265	.194	.152	3	4.10	N21	H2	.843	SB	1	5974718
E0381/4	1/4	28	2.1/2	.394	.255	.191	3	5.50	N3	H3	1.099	SB	1	5974715
E0385/16	5/16	24	2.23/32	.457	.318	.238	3	6.90	I	H3	1.309	SB	1	5973856
E0383/8	3/8	24	2.15/16	.531	.381	.286	3	8.50	Q	H3	1.442	SB	1	5974729
E0387/16	7/16	20	3.5/32	.630	.323	.242	3	9.90	25/64	H3	—	SB	1	5973958
E0381/2	1/2	20	3.3/8	.689	.367	.275	3	11.50	29/64	H3	—	SB	1	5974712
E0389/16	9/16	18	3.19/32	.709	.429	.322	3	12.90	33/64	H3	—	SB	1	5974006
E0385/8	5/8	18	3.13/16	.709	.480	.360	3	14.50	37/64	H3	—	SB	1	5973916
E0383/4	3/4	16	4.1/4	.886	.590	.442	3	17.50	11/16	H3	—	SB	1	5974721
E0387/8	7/8	14	4.11/16	.984	.697	.523	3	20.40	13/16	H4	—	SB	1	5973990
E0381-14	1"	14	5.1/8	1.181	.800	.600	3	23.50	59/64	H4	—	SB	1	5974707

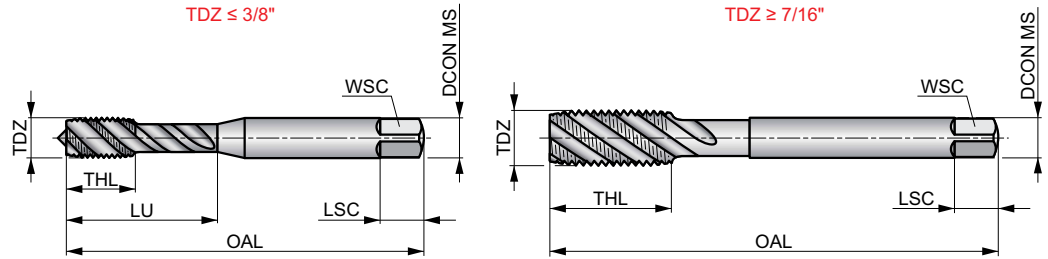
E033



HSS-E-PM Spiral Flute Machine Tap, UNF, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)					
E0338-36	8	36	4.17	53.0	7	4.50	3.55	6	3	3.50	H3	17.00	SB	1	5973953
E03310-32	10	32	4.83	58.0	8	5.00	4.00	7	3	4.10	H3	20.00	SB	1	5973922
E0331/4	1/4	28	6.35	66.0	10	6.30	5.00	8	3	5.50	H4	28.00	SB	1	5973918
E0335/16	5/16	24	7.94	72.0	12	8.00	6.30	9	3	6.90	H4	31.00	SB	1	5973938
E0333/8	3/8	24	9.53	80.0	15	10.00	8.00	11	3	8.50	H4	34.00	SB	1	5973930
E0337/16	7/16	20	11.11	85.0	19	8.00	6.30	9	3	9.90	H5	–	SB	1	5973946
E0331/2	1/2	20	12.70	89.0	22	9.00	7.10	10	3	11.50	H5	–	SB	1	5973913
E0339/16	9/16	18	14.29	95.0	24	11.20	9.00	12	3	12.90	H5	–	SB	1	5973956
E0335/8	5/8	18	15.88	102.0	24	12.50	10.00	13	4	14.50	H5	–	SB	1	5973942
E0333/4	3/4	16	19.05	112.0	29	14.00	11.20	14	4	17.50	H5	–	SB	1	5973926
E0337/8	7/8	14	22.23	118.0	29	16.00	12.50	16	4	20.40	H6	–	SB	1	5973950
E0331	1"	12	25.40	130.0	35	18.00	14.00	18	4	23.25	H6	–	SB	1	5973908

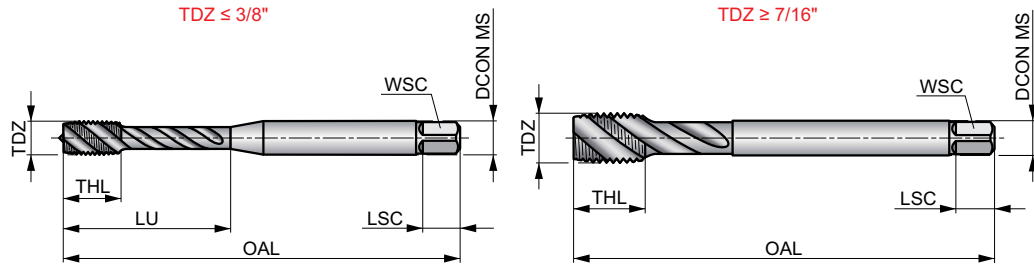
EX30



HSS-E-PM Spiral Flute Machine Tap, UNF, DIN Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

	DIN 2184-1	2B
	2.5xD	HSS-E PM
		λ 45°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
EX308-36	8	36	4.17	63.0	7	4.50	3.40	8	3	3.50	H3	21.00	SB	1	5974125
EX3010-32	10	32	4.83	70.0	8	6.00	4.90	8	3	4.10	H3	25.00	SB	1	5974087
EX301/4	1/4	28	6.35	80.0	10	7.00	5.50	8	3	5.50	H4	30.00	SB	1	5974083
EX305/16	5/16	24	7.94	90.0	12	8.00	6.20	9	3	6.90	H4	35.00	SB	1	5974103
EX303/8	3/8	24	9.53	100.0	15	10.00	8.00	11	3	8.50	H4	39.00	SB	1	5974098
EX307/16	7/16	20	11.11	100.0	15	8.00	6.20	9	3	9.90	H5	—	SB	1	5974115
EX301/2	1/2	20	12.70	110.0	18	9.00	7.00	10	3	11.50	H5	—	SB	1	5974076
EX305/8	5/8	18	15.88	110.0	20	12.00	9.00	12	4	14.50	H5	—	SB	1	5974111
EX303/4	3/4	16	19.05	125.0	25	14.00	11.00	14	4	17.50	H5	—	SB	1	5974092
EX307/8	7/8	14	22.23	140.0	25	18.00	14.50	17	4	20.40	H6	—	SB	1	5974120
EX301	1"	12	25.40	160.0	30	18.00	14.50	17	4	23.25	H6	—	SB	1	5974070

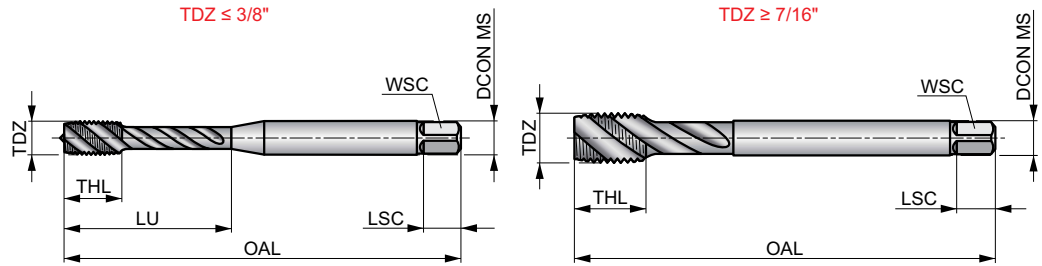
EX31



HSS-E-PM Spiral Flute Machine Tap, UNF, DIN Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	DIN 2184-1	2B
	2.5×D	HSS-E PM
C 2-3		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
EX318-36	8	36	4.17	63.0	7	4.50	3.40	8	3	3.50	H3	21.00	SB	1	5974191
EX3110-32	10	32	4.83	70.0	8	6.00	4.90	8	3	4.10	H3	25.00	SB	1	5974151
EX311/4	1/4	28	6.35	80.0	10	7.00	5.50	8	3	5.50	H4	30.00	SB	1	5974146
EX315/16	5/16	24	7.94	90.0	12	8.00	6.20	9	3	6.90	H4	35.00	SB	1	5974167
EX313/8	3/8	24	9.53	100.0	15	10.00	8.00	11	3	8.50	H4	39.00	SB	1	5974160
EX317/16	7/16	20	11.11	100.0	15	8.00	6.20	9	3	9.90	H5	–	SB	1	5974176
EX311/2	1/2	20	12.70	110.0	18	9.00	7.00	10	3	11.50	H5	–	SB	1	5974141
EX315/8	5/8	18	15.88	110.0	20	12.00	9.00	12	4	14.50	H5	–	SB	1	5974172
EX313/4	3/4	16	19.05	125.0	25	14.00	11.00	14	4	17.50	H5	–	SB	1	5974155
EX317/8	7/8	14	22.23	140.0	25	18.00	14.50	17	4	20.40	H6	–	SB	1	5974180
EX311	1"	12	25.40	160.0	30	18.00	14.50	17	4	23.25	H6	–	SB	1	5974137

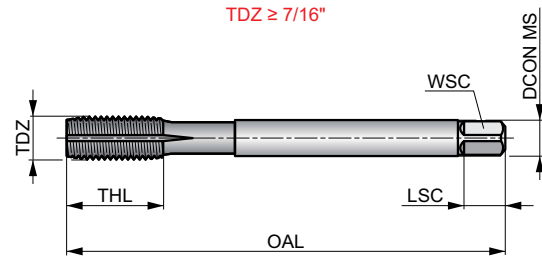
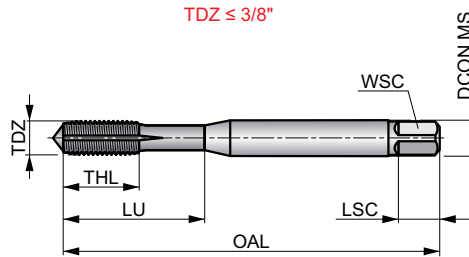
E286



HSS-E Thread Forming TiN Coated Tap, Oil-Grooves, UNF, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds and extend tool life. With oil-grooves for better lubrication in deep holes.

	DIN 2184-1	2BX
	3.5xD	HSS-E
C 2-3.5		
TiN		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ▣ 167	P2.2 ■ 148	P2.3 ▣ 131	P3.1 ■ 95	P3.2 ■ 79	P3.3 ■ 66	P4.1 ■ 59	P4.2 ■ 49	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72
M2.2 ■ 59	M2.3 ▣ 49	M3.1 ■ 56	M3.2 ■ 49	M3.3 ■ 46	M4.1 ■ 33	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ▣ 131	N3.3 ▣ 39

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E2864-48	4	48	2.85	56.0	9	3.50	2.70	6	4	2.60	18.00	1	7174114
E2866-40	6	40	3.50	56.0	11	4.00	3.00	6	4	3.20	20.00	1	7174115
E28610-32	10	32	4.83	70.0	13	6.00	4.90	8	5	4.50	25.00	1	7174117
E2861/4	1/4	28	6.35	80.0	15	7.00	5.50	8	5	6.00	30.00	1	7174118
E2865/16	5/16	24	7.94	90.0	18	8.00	6.20	9	5	7.50	35.00	1	7174119
E2863/8	3/8	24	9.53	100.0	20	10.00	8.00	11	5	9.10	39.00	1	7174120
E2867/16	7/16	20	11.11	100.0	20	8.00	6.20	9	5	10.60	-	1	7174121
E2861/2	1/2	20	12.70	100.0	21	9.00	7.00	10	5	12.10	-	1	7174122

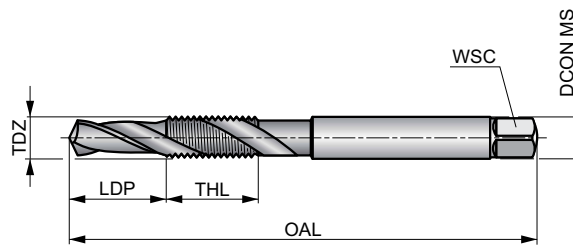
E654



HSS Drill-Tap Combination Tool with 30° Spiral Flute, UNF, DIN Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.

		Medium
	1.5×D	HSS
		λ 30°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	N1.2	N1.3	N3.1	N3.2	N4.1
■ 59	■ 66	■ 72	■ 66	■ 59	■ 49	■ 39	■ 46	■ 30	■ 66	■ 49	■ 82

Product	TDZ	TPI	TD	OAL	THL	LDP	DCON MS	WSC	NOF	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
E6548-36	8	36	3.50	64.0	13	8.00	4.50	3.55	2	1	5978426
E65410-32	10	32	4.10	72.0	16	10.00	5.00	4.00	2	1	5978409
E65412-28	12	28	4.70	77.0	17	11.00	5.60	4.50	2	1	5978411
E6541/4	1/4	28	5.50	83.0	19	13.00	6.30	5.00	2	1	5978407
E6545/16	5/16	24	6.90	94.0	22	16.00	8.00	6.30	2	1	5978417
E6543/8	3/8	24	8.50	104.0	24	19.00	10.00	8.00	2	1	5978414
E6547/16	7/16	20	9.90	107.0	25	22.00	8.00	6.30	2	1	5978423
E6541/2	1/2	20	11.50	114.0	29	25.00	9.00	7.10	2	1	5978405
E6545/8	5/8	18	14.50	134.0	32	32.00	12.50	10.00	2	1	5978420

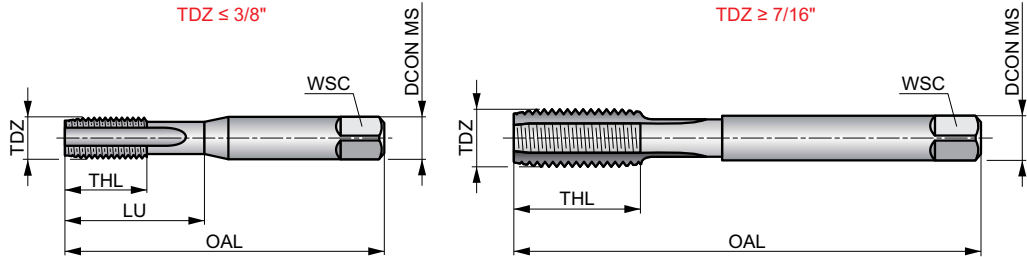
E570



HSS Straight Flute Hand Tap, UN, ISO Standard

A versatile tool, suitable for machine and also hand tapping. With a straight flute design and bottoming lead for blind and through holes.

	ISO 529	2B
	1.5×D	HSS



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ■ 13	P3.1 ■ 13	P3.2 ■ 13	P4.1 ■ 10	K1.1 ■ 39	K1.2 ■ 30	K1.3 ■ 23	K2.1 ■ 39	K2.2 ■ 33
K3.1 ■ 36	K3.2 ■ 26	K4.1 ■ 33	K4.2 ■ 26	K5.1 ■ 36	K5.2 ■ 30	N1.3 ■ 26	N2.1 ■ 36	N2.2 ■ 33	N2.3 ■ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ■ 16	N4.2 ■ 16
N4.3 ■ 10													

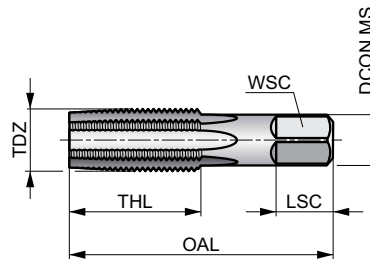
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E5701/4X32N03	1/4	32	6.35	66.0	13	6.30	5.00	3	5.60	26.00	1	5977459
E5701/4X36N03	1/4	36	6.35	66.0	13	6.30	5.00	3	5.70	26.00	1	5977460
E5701/4X40N03	1/4	40	6.35	66.0	13	6.30	5.00	3	5.70	26.00	1	5977461
E5705/16X32N03	5/16	32	7.94	72.0	16	8.00	6.30	3	7.20	29.00	1	5977466
E5703/8X32N03	3/8	32	9.53	80.0	18	10.00	8.00	3	8.80	32.00	1	5977465
E5707/16X24N03	7/16	24	11.11	85.0	19	8.00	6.30	3	10.00	-	1	5977468
E5707/16X28N03	7/16	28	11.11	85.0	19	8.00	6.30	3	10.20	-	1	5977469
E5701/2X28N03	1/2	28	12.70	89.0	22	9.00	7.10	3	11.80	-	1	5977458
E5709/16X24N03	9/16	24	14.29	95.0	24	11.20	9.00	4	13.25	-	1	5977471
E5705/8X24N03	5/8	24	15.88	102.0	24	12.50	10.00	4	14.80	-	1	5977467
E5703/4X20N03	3/4	20	19.05	112.0	29	14.00	11.20	4	17.80	-	1	5977463
E5707/8X20N03	7/8	20	22.23	118.0	30	16.00	12.50	4	21.00	-	1	5977470
E5701X14N03	1"	14	25.40	130.0	36	18.00	14.00	4	23.50	-	1	5977462
E5701.1/16X12N03	1.1/16	12	26.99	127.0	37	20.00	16.00	4	24.75	-	1	5977451
E5701.1/8X8N03	1.1/8	8	28.57	138.0	35	20.00	16.00	4	25.50	-	1	5977455
E5701.3/16X12N03	1.3/16	12	30.16	137.0	37	22.40	18.00	4	28.00	-	1	5977456
E5701.1/4X8N03	1.1/4	8	31.75	151.0	41	22.40	18.00	4	28.50	-	1	5977454
E5701.5/16X12N03	1.5/16	12	33.34	137.0	37	22.40	18.00	4	31.25	-	1	5977457

1505(UNS)



HSS Straight Flute Hand Tap, UN 8-TPI, ANSI Standard

Proven performers for manufacturers of oil field equipment, large valves, electric utilities, power generation machinery, and general construction. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	2B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15051.1/8N01	1.1/8	8	5.7/16	2.9/16	.896	.672	7/8	4	H5	T	1	6007424
15051.1/8N02	1.1/8	8	5.7/16	2.9/16	.896	.672	7/8	4	H5	P	1	6007478
15051.1/8N03	1.1/8	8	5.7/16	2.9/16	.896	.672	7/8	4	H5	B	1	6007534
15051.1/4N01	1.1/4	8	5.3/4	2.9/16	1.021	.766	1"	4	H5	T	1	6007579
15051.1/4N02	1.1/4	8	5.3/4	2.9/16	1.021	.766	1"	4	H5	P	1	6007589
15051.1/4N03	1.1/4	8	5.3/4	2.9/16	1.021	.766	1"	4	H5	B	1	6007378
15051.3/8N01	1.3/8	8	6.1/16	3"	1.108	.831	1.1/16	4	H5	T	1	6007605
15051.3/8N02	1.3/8	8	6.1/16	3"	1.108	.831	1.1/16	4	H5	P	1	6007610
15051.3/8N03	1.3/8	8	6.1/16	3"	1.108	.831	1.1/16	4	H5	B	1	6007383
15051.1/2N01	1.1/2	8	6.3/8	3"	1.233	.925	1.1/8	6	H5	T	1	6007565
15051.1/2N02	1.1/2	8	6.3/8	3"	1.233	.925	1.1/8	6	H5	P	1	6007570
15051.1/2N03	1.1/2	8	6.3/8	3"	1.233	.925	1.1/8	6	H5	B	1	6007575
15051.5/8N01	1.5/8	8	6.11/16	3.3/16	1.305	.978	1.1/8	6	H6	T	1	6007387
15051.5/8N02	1.5/8	8	6.11/16	3.3/16	1.305	.978	1.1/8	6	H6	P	1	6007391
15051.5/8N03	1.5/8	8	6.11/16	3.3/16	1.305	.978	1.1/8	6	H6	B	1	6007396
15051.3/4N01	1.3/4	8	7"	3.3/16	1.430	1.072	1.1/4	6	H6	T	1	6007586
15051.3/4N02	1.3/4	8	7"	3.3/16	1.430	1.072	1.1/4	6	H6	P	1	6007596
15051.3/4N03	1.3/4	8	7"	3.3/16	1.430	1.072	1.1/4	6	H6	B	1	6007601
15051.7/8N01	1.7/8	8	7.5/16	3.9/16	1.519	1.139	1.1/4	6	H6	T	1	6007400
15051.7/8N02	1.7/8	8	7.5/16	3.9/16	1.519	1.139	1.1/4	6	H6	P	1	6007403
15051.7/8N03	1.7/8	8	7.5/16	3.9/16	1.519	1.139	1.1/4	6	H6	B	1	6007407

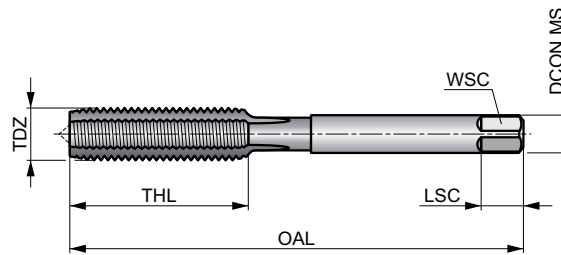
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15052N01	2"	8	7.5/8	3.9/16	1.644	1.233	1.3/8	6	H6	T	1	6009511
15052N02	2"	8	7.5/8	3.9/16	1.644	1.233	1.3/8	6	H6	P	1	6007524
15052N03	2"	8	7.5/8	3.9/16	1.644	1.233	1.3/8	6	H6	B	1	6007529

1500(UNS)



HSS Straight Flute Hand Tap, UNS, ANSI Standard

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.



	ANSI	3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

Sizes 0 to 3/8 have male centers on thread end. Sizes larger than 3/8 all have female centers - flat ends.

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15001X14H4N01	1"	14	5.1/8	2.1/2	.800	.600	13/16	4	H4	T	1	6007072
15001X14H4N02	1"	14	5.1/8	2.1/2	.800	.600	13/16	4	H4	P	1	6007075
15001X14H4N03	1"	14	5.1/8	2.1/2	.800	.600	13/16	4	H4	B	1	6007078

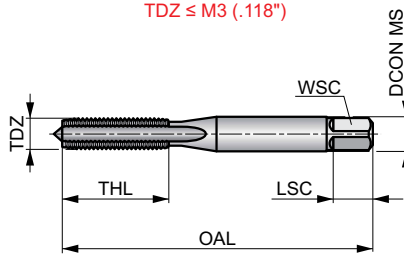
1700(M)



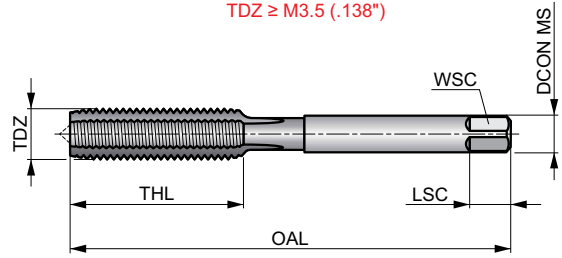
HSS Straight Flute Hand Tap, Metric, ANSI Standard

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Available in 3 chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.

TDZ ≤ M3 (.118")



TDZ ≥ M3.5 (.138")



	ANSI	6H
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P2.3 23	P3.1 23	P3.2 20	P3.3 16	P4.1 13	P4.2 13	P4.3 10	M1.1 26	M1.2 23
M2.1 23	M2.2 20	M3.1 16	M3.2 13	M3.3 13	M4.1 13	K1.1 39	K1.2 30	K1.3 23	K2.1 33	K2.2 26	K2.3 20	K3.1 30	K3.2 23
K3.3 16	K4.1 26	K4.2 20	K4.3 13	K4.4 13	K4.5 10	K5.1 30	K5.2 23	K5.3 16	N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82
N2.3 59	N3.1 112	N3.2 66	N3.3 33	N4.1 26	N4.2 13	S1.1 16	S1.2 13	S2.1 10	S3.1 7	S4.1 7			

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(mm)	(inch)								
1700M3X.5N01	M3	0.50	1.15/16	5/8	.141	.110	3/16	3	D3	T	1	6008727
1700M3X.5N02	M3	0.50	1.15/16	5/8	.141	.110	3/16	3	D3	P	1	6008732
1700M3X.5N03	M3	0.50	1.15/16	5/8	.141	.110	3/16	3	D3	B	1	6008737
1700M4X.7N01	M4	0.70	2.1/8	3/4	.168	.131	1/4	4	D4	T	1	6008787
1700M4X.7N02	M4	0.70	2.1/8	3/4	.168	.131	1/4	4	D4	P	1	6008790
1700M4X.7N03	M4	0.70	2.1/8	3/4	.168	.131	1/4	4	D4	B	1	6008794
1700M5X.8N01	M5	0.80	2.3/8	7/8	.194	.152	1/4	4	D4	T	1	6008798
1700M5X.8N02	M5	0.80	2.3/8	7/8	.194	.152	1/4	4	D4	P	1	6008801
1700M5X.8N03	M5	0.80	2.3/8	7/8	.194	.152	1/4	4	D4	B	1	6008814
1700M6X1.0N01	M6	1.00	2.1/2	1"	.255	.191	5/16	4	D5	T	1	6008818
1700M6X1.0N02	M6	1.00	2.1/2	1"	.255	.191	5/16	4	D5	P	1	6008822
1700M6X1.0N03	M6	1.00	2.1/2	1"	.255	.191	5/16	4	D5	B	1	6008828
1700M8X1.25N01	M8	1.25	2.23/32	1.1/8	.318	.238	3/8	4	D5	T	1	6008861
1700M8X1.25N02	M8	1.25	2.23/32	1.1/8	.318	.238	3/8	4	D5	P	1	6008630
1700M8X1.25N03	M8	1.25	2.23/32	1.1/8	.318	.238	3/8	4	D5	B	1	6008678
1700M10X1.5N01	M10	1.50	2.15/16	1.1/4	.381	.286	7/16	4	D6	T	1	6008880
1700M10X1.5N02	M10	1.50	2.15/16	1.1/4	.381	.286	7/16	4	D6	P	1	6008882
1700M10X1.5N03	M10	1.50	2.15/16	1.1/4	.381	.286	7/16	4	D6	B	1	6008884
1700M12X1.75N01	M12	1.75	3.3/8	1.21/32	.367	.275	7/16	4	D6	T	1	6008907
1700M12X1.75N02	M12	1.75	3.3/8	1.21/32	.367	.275	7/16	4	D6	P	1	6008911
1700M12X1.75N03	M12	1.75	3.3/8	1.21/32	.367	.275	7/16	4	D6	B	1	6008919

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
		(mm)	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)				
1700M14X2.0N01	M14	2.00	3.19/32	1.21/32	.429	.322	1/2	4	D7	T	1	6008935
1700M14X2.0N02	M14	2.00	3.19/32	1.21/32	.429	.322	1/2	4	D7	P	1	6008938
1700M14X2.0N03	M14	2.00	3.19/32	1.21/32	.429	.322	1/2	4	D7	B	1	6008943
1700M16X2.0N01	M16	2.00	3.13/16	1.13/16	.480	.360	9/16	4	D7	T	1	6008967
1700M16X2.0N02	M16	2.00	3.13/16	1.13/16	.480	.360	9/16	4	D7	P	1	6008971
1700M16X2.0N03	M16	2.00	3.13/16	1.13/16	.480	.360	9/16	4	D7	B	1	6008976
1700M18X2.5N01	M18	2.50	4.1/32	1.13/16	.542	.406	5/8	4	D7	T	1	6008995
1700M18X2.5N02	M18	2.50	4.1/32	1.13/16	.542	.406	5/8	4	D7	P	1	6008999
1700M18X2.5N03	M18	2.50	4.1/32	1.13/16	.542	.406	5/8	4	D7	B	1	6009009
1700M20X2.5N01	M20	2.50	4.15/32	2"	.652	.489	11/16	4	D7	T	1	6008858
1700M20X2.5N02	M20	2.50	4.15/32	2"	.652	.489	11/16	4	D7	P	1	6008863
1700M20X2.5N03	M20	2.50	4.15/32	2"	.652	.489	11/16	4	D7	B	1	6008866
1700M24X3.0N01	M24	3.00	4.29/32	2.7/32	.760	.570	3/4	4	D8	T	1	6008695
1700M24X3.0N02	M24	3.00	4.29/32	2.7/32	.760	.570	3/4	4	D8	P	1	6008698
1700M24X3.0N03	M24	3.00	4.29/32	2.7/32	.760	.570	3/4	4	D8	B	1	6008703
1700M30X3.5N01	M30	3.50	5.7/16	2.9/16	1.021	.766	1"	4	D9	T	1	6008742
1700M30X3.5N02	M30	3.50	5.7/16	2.9/16	1.021	.766	1"	4	D9	P	1	6008746
1700M30X3.5N03	M30	3.50	5.7/16	2.9/16	1.021	.766	1"	4	D9	B	1	6008751
1700M36X4.0N02	M36	4.00	6.1/16	3"	1.233	.925	1.1/8	4	D9	P	1	6008763
1700M36X4.0N03	M36	4.00	6.1/16	3"	1.233	.925	1.1/8	4	D9	B	1	6008768

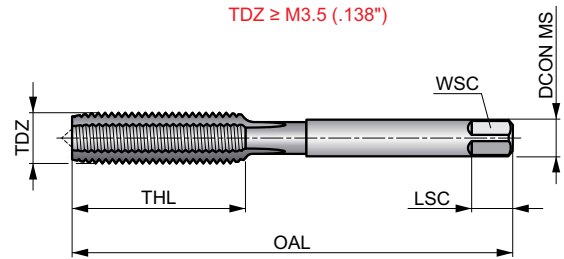
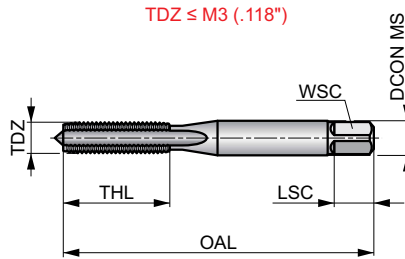
1700S



Set of HSS Straight Flute Hand Taps, Metric, ANSI Standard

The most versatile taps for hand use or machine tapping in a wide variety of materials in through or blind hole applications. Set including taps with 3 different chamfer lengths; taper lead which is ideally for short through holes, plug perfect for deeper through holes and bottoming best suited for blind holes.

	ANSI	6H
	1.5xD	HSS
	Bright	



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S2.1	S3.1	S4.1			

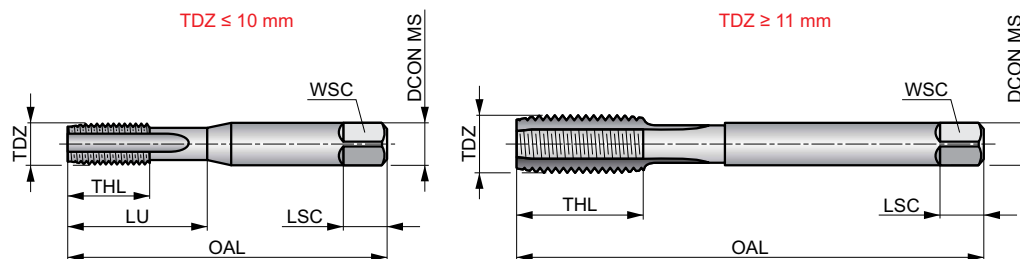
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Pack Qty	MID
		(mm)	(inch)	(inch)	(inch)	(inch)	(inch)				
1700SM3X.5	3	0.50	1.5/16	5/8	.141	.110	3/16	3	D3	1	6008660
1700SM4X.7	4	0.70	2.1/8	3/4	.168	.131	1/4	4	D4	1	6008666
1700SM5X.8	5	0.80	2.3/8	7/8	.194	.152	1/4	4	D4	1	6008673
1700SM6X1.0	6	1.00	2.1/2	1"	.255	.191	5/16	4	D5	1	6008687
1700SM8X1.25	8	1.25	2.23/32	1.1/8	.318	.238	3/8	4	D5	1	6008708
1700SM10X1.5	10	1.50	2.15/16	1.1/4	.381	.286	7/16	4	D6	1	6008860
1700SM12X1.75	12	1.75	3.3/8	1.21/32	.367	.275	7/16	4	D6	1	6008867
1700SM14X2.0	14	2.00	3.19/32	1.21/32	.429	.322	1/2	4	D7	1	6008870
1700SM16X2.0	16	2.00	3.13/16	1.13/16	.480	.360	9/16	4	D7	1	6008633
1700SM20X2.5	20	2.50	4.15/32	2"	.652	.489	11/16	4	D7	1	6008652

E500



Straight Flute Hand Taps, Metric, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. As a hand tap set of three NO6 or two NO7 with different chamfer length, each producing a full thread.



	ISO 529	6H
	1.5×D	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	P4.2 ▣ 7	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39
K2.2 ▣ 33	K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ▣ 56	N3.2 ▣ 33	N3.3 ▣ 16
N4.2 ▣ 16	N4.3 ▣ 10												

Products from this series are also available in sets with drills or dies. Please see L115, L000 or L120.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
E500M1.N01 ¹⁾	1	0.25	38.0	4.5	2.50	2.00	4	2	0.75	4.50	T	1	5977027
E500M1.N02 ¹⁾	1	0.25	38.0	4.5	2.50	2.00	4	2	0.75	4.50	P	1	5977031
E500M1.N03 ¹⁾	1	0.25	38.0	4.5	2.50	2.00	4	2	0.75	4.50	SB	1	5977035
E500M1.2N01 ¹⁾	1.2	0.25	38.0	4.5	2.50	2.00	4	2	0.95	4.50	T	1	5976974
E500M1.2N02 ¹⁾	1.2	0.25	38.0	4.5	2.50	2.00	4	2	0.95	4.50	P	1	5976976
E500M1.2N03 ¹⁾	1.2	0.25	38.0	4.5	2.50	2.00	4	2	0.95	4.50	SB	1	5976978
E500M1.4N01 ¹⁾	1.4	0.30	40.0	6	2.50	2.00	4	2	1.10	6.00	T	1	5976982
E500M1.4N02 ¹⁾	1.4	0.30	40.0	6	2.50	2.00	4	2	1.10	6.00	P	1	5976983
E500M1.4N03 ¹⁾	1.4	0.30	40.0	6	2.50	2.00	4	2	1.10	6.00	SB	1	5976985
E500M1.6N01	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00	T	1	5976987
E500M1.6N02	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00	P	1	5976988
E500M1.6N03	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00	SB	1	5976989
E500M1.6N06	1.6	0.35	41.0	8	2.50	2.00	4	2	1.25	8.00	Set	1	5976990
E500M1.7N01	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00	T	1	5976993
E500M1.7N02	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00	P	1	5976994
E500M1.7N03	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00	SB	1	5976995
E500M1.7N06	1.7	0.35	41.0	8	2.50	2.00	4	2	1.35	8.00	Set	1	5977001
E500M1.8N01	1.8	0.35	41.0	8	2.50	2.00	4	2	1.45	8.00	T	1	5977007
E500M1.8N02	1.8	0.35	41.0	8	2.50	2.00	4	2	1.45	8.00	P	1	5977011
E500M1.8N03	1.8	0.35	41.0	8	2.50	2.00	4	2	1.45	8.00	SB	1	5977015
E500M2N01	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00	T	1	5975724
E500M2N02	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00	P	1	5975728
E500M2N03	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00	SB	1	5975730

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E500M2N06	2	0.40	41.0	8	2.50	2.00	4	3	1.60	8.00	Set	1	5975732
E500M2.2N01	2.2	0.45	44.5	9.5	2.80	2.24	5	3	1.75	9.50	T	1	5975398
E500M2.2N02	2.2	0.45	44.5	9.5	2.80	2.24	5	3	1.75	9.50	P	1	5975404
E500M2.2N03	2.2	0.45	44.5	9.5	2.80	2.24	5	3	1.75	9.50	SB	1	5975410
E500M2.3N01	2.3	0.45	44.5	9.5	2.80	2.24	5	3	1.85	9.50	T	1	5975432
E500M2.3N02	2.3	0.45	44.5	9.5	2.80	2.24	5	3	1.85	9.50	P	1	5975437
E500M2.3N03	2.3	0.45	44.5	9.5	2.80	2.24	5	3	1.85	9.50	SB	1	5975442
E500M2.5N01	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50	T	1	5975452
E500M2.5N02	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50	P	1	5975456
E500M2.5N03	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50	SB	1	5975461
E500M2.5N06	2.5	0.45	44.5	9.5	2.80	2.24	5	3	2.05	9.50	Set	1	5975466
E500M2.6N01	2.6	0.45	44.5	9.5	2.80	2.24	5	3	2.15	9.50	T	1	5975584
E500M2.6N02	2.6	0.45	44.5	9.5	2.80	2.24	5	3	2.15	9.50	P	1	5975631
E500M2.6N03	2.6	0.45	44.5	9.5	2.80	2.24	5	3	2.15	9.50	SB	1	5975674
E500M3N01	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50	T	1	5975703
E500M3N02	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50	P	1	5975705
E500M3N03	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50	SB	1	5975707
E500M3N06	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50	Set	1	5975709
E500M3N07	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	12.50	Set	1	5975711
E500M3X.6N01	3	0.60	48.0	12.5	3.15	2.50	5	3	2.40	12.50	T	1	5975715
E500M3X.6N02	3	0.60	48.0	12.5	3.15	2.50	5	3	2.40	12.50	P	1	5975717
E500M3X.6N03	3	0.60	48.0	12.5	3.15	2.50	5	3	2.40	12.50	SB	1	5975720
E500M3.5N01	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00	T	1	5975690
E500M3.5N02	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00	P	1	5975691
E500M3.5N03	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00	SB	1	5975693
E500M3.5N06	3.5	0.60	50.0	14	3.55	2.80	5	3	2.90	14.00	Set	1	5975695
E500M4N01	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00	T	1	5976765
E500M4N02	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00	P	1	5976770
E500M4N03	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00	SB	1	5976774
E500M4N06	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00	Set	1	5976783
E500M4N07	4	0.70	53.0	14	4.00	3.15	6	3	3.30	14.00	Set	1	5976785
E500M4X.75N01	4	0.75	53.0	14	4.00	3.15	6	3	3.25	14.00	T	1	5976795
E500M4X.75N02	4	0.75	53.0	14	4.00	3.15	6	3	3.25	14.00	P	1	5976798
E500M4X.75N03	4	0.75	53.0	14	4.00	3.15	6	3	3.25	14.00	SB	1	5976802
E500M4.5N01	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00	T	1	5976749
E500M4.5N02	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00	P	1	5976752
E500M4.5N03	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00	SB	1	5976754
E500M4.5N06	4.5	0.75	53.0	9.5	4.50	3.55	6	3	3.80	18.00	Set	1	5976757
E500M5N01	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00	T	1	5976871
E500M5N02	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00	P	1	5976878
E500M5N03	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00	SB	1	5976886
E500M5N06	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00	Set	1	5976890
E500M5N07	5	0.80	58.0	11	5.00	4.00	7	3	4.20	22.00	Set	1	5976894
E500M5X.9N01	5	0.90	58.0	11	5.00	4.00	7	3	4.10	22.00	T	1	5976902
E500M5X.9N02	5	0.90	58.0	11	5.00	4.00	7	3	4.10	22.00	P	1	5976907
E500M5X.9N03	5	0.90	58.0	11	5.00	4.00	7	3	4.10	22.00	SB	1	5976910
E500M5.5X.9N01	5.5	0.90	62.0	12	5.60	4.50	7	3	4.60	21.00	T	1	5976854
E500M5.5X.9N02	5.5	0.90	62.0	12	5.60	4.50	7	3	4.60	21.00	P	1	5976858
E500M5.5X.9N03	5.5	0.90	62.0	12	5.60	4.50	7	3	4.60	21.00	SB	1	5976862
E500M6N01	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00	T	1	5977074
E500M6N02	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00	P	1	5977116
E500M6N03	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00	SB	1	5977162
E500M6N06	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00	Set	1	5977173
E500M6N07	6	1.00	66.0	13	6.30	5.00	8	3	5.00	26.00	Set	1	5977178
E500M7N01	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00	T	1	5977183
E500M7N02	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00	P	1	5976997
E500M7N03	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00	SB	1	5976999
E500M7N06	7	1.00	66.0	13	7.10	5.60	8	3	6.00	26.00	Set	1	5977002

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E500M8N01	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00	T	1	5977012
E500M8N02	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00	P	1	5977016
E500M8N03	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00	SB	1	5977020
E500M8N06	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00	Set	1	5977024
E500M8N07	8	1.25	72.0	16	8.00	6.30	9	3	6.80	29.00	Set	1	5977028
E500M9N01	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00	T	1	5977040
E500M9N02	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00	P	1	5977043
E500M9N03	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00	SB	1	5977047
E500M9N06	9	1.25	72.0	16	9.00	7.10	10	3	7.80	29.00	Set	1	5977051
E500M10N01	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00	T	1	5975273
E500M10N02	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00	P	1	5975320
E500M10N03	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00	SB	1	5975367
E500M10N06	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00	Set	1	5975419
E500M10N07	10	1.50	80.0	18	10.00	8.00	11	3	8.50	34.00	Set	1	5975475
E500M11N01	11	1.50	85.0	19	8.00	6.30	9	3	9.50	—	T	1	5975482
E500M11N02	11	1.50	85.0	19	8.00	6.30	9	3	9.50	—	P	1	5975484
E500M11N03	11	1.50	85.0	19	8.00	6.30	9	3	9.50	—	SB	1	5975486
E500M11N06	11	1.50	85.0	19	8.00	6.30	9	3	9.50	—	Set	1	5975281
E500M12N01	12	1.75	89.0	22	9.00	7.10	10	3	10.30	—	T	1	5975288
E500M12N02	12	1.75	89.0	22	9.00	7.10	10	3	10.30	—	P	1	5975293
E500M12N03	12	1.75	89.0	22	9.00	7.10	10	3	10.30	—	SB	1	5975296
E500M12N06	12	1.75	89.0	22	9.00	7.10	10	3	10.30	—	Set	1	5975302
E500M12N07	12	1.75	89.0	22	9.00	7.10	10	3	10.30	—	Set	1	5975305
E500M14N01	14	2.00	95.0	24	11.20	9.00	12	4	12.00	—	T	1	5975313
E500M14N02	14	2.00	95.0	24	11.20	9.00	12	4	12.00	—	P	1	5975317
E500M14N03	14	2.00	95.0	24	11.20	9.00	12	4	12.00	—	SB	1	5975324
E500M14N06	14	2.00	95.0	24	11.20	9.00	12	4	12.00	—	Set	1	5975328
E500M14N07	14	2.00	95.0	24	11.20	9.00	12	4	12.00	—	Set	1	5975333
E500M16N01	16	2.00	102.0	24	12.50	10.00	13	4	14.00	—	T	1	5975340
E500M16N02	16	2.00	102.0	24	12.50	10.00	13	4	14.00	—	P	1	5975344
E500M16N03	16	2.00	102.0	24	12.50	10.00	13	4	14.00	—	SB	1	5975349
E500M16N06	16	2.00	102.0	24	12.50	10.00	13	4	14.00	—	Set	1	5975355
E500M16N07	16	2.00	102.0	24	12.50	10.00	13	4	14.00	—	Set	1	5975359
E500M18N01	18	2.50	112.0	29	14.00	11.20	14	4	15.50	—	T	1	5975371
E500M18N02	18	2.50	112.0	29	14.00	11.20	14	4	15.50	—	P	1	5975375
E500M18N03	18	2.50	112.0	29	14.00	11.20	14	4	15.50	—	SB	1	5975380
E500M18N06	18	2.50	112.0	29	14.00	11.20	14	4	15.50	—	Set	1	5975385
E500M20N01	20	2.50	112.0	29	14.00	11.20	14	4	17.50	—	T	1	5975607
E500M20N02	20	2.50	112.0	29	14.00	11.20	14	4	17.50	—	P	1	5975610
E500M20N03	20	2.50	112.0	29	14.00	11.20	14	4	17.50	—	SB	1	5975614
E500M20N06	20	2.50	112.0	29	14.00	11.20	14	4	17.50	—	Set	1	5975619
E500M20N07	20	2.50	112.0	29	14.00	11.20	14	4	17.50	—	Set	1	5975623
E500M22N01	22	2.50	118.0	29	16.00	12.50	16	4	19.50	—	T	1	5975634
E500M22N02	22	2.50	118.0	29	16.00	12.50	16	4	19.50	—	P	1	5975639
E500M22N03	22	2.50	118.0	29	16.00	12.50	16	4	19.50	—	SB	1	5975645
E500M22N06	22	2.50	118.0	29	16.00	12.50	16	4	19.50	—	Set	1	5975648
E500M24N01	24	3.00	130.0	35	18.00	14.00	18	4	21.00	—	T	1	5975656
E500M24N02	24	3.00	130.0	35	18.00	14.00	18	4	21.00	—	P	1	5975659
E500M24N03	24	3.00	130.0	35	18.00	14.00	18	4	21.00	—	SB	1	5975663
E500M24N06	24	3.00	130.0	35	18.00	14.00	18	4	21.00	—	Set	1	5975667
E500M24N07	24	3.00	130.0	35	18.00	14.00	18	4	21.00	—	Set	1	5975671
E500M27N01	27	3.00	135.0	35	20.00	16.00	20	4	24.00	—	T	1	5975684
E500M27N02	27	3.00	135.0	35	20.00	16.00	20	4	24.00	—	P	1	5975687
E500M27N03	27	3.00	135.0	35	20.00	16.00	20	4	24.00	—	SB	1	5975688
E500M30N01	30	3.50	138.0	41	20.00	16.00	20	4	26.50	—	T	1	5975722
E500M30N02	30	3.50	138.0	41	20.00	16.00	20	4	26.50	—	P	1	5975727
E500M30N03	30	3.50	138.0	41	20.00	16.00	20	4	26.50	—	SB	1	5976741
E500M33N01	33	3.50	151.0	41	22.40	18.00	22	4	29.50	—	T	1	5976778

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E500M33N02	33	3.50	151.0	41	22.40	18.00	22	4	29.50	–	P	1	5976831
E500M33N03	33	3.50	151.0	41	22.40	18.00	22	4	29.50	–	SB	1	5976875
E500M36N01	36	4.00	162.0	47	25.00	20.00	24	4	32.00	–	T	1	5976923
E500M36N02	36	4.00	162.0	47	25.00	20.00	24	4	32.00	–	P	1	5976933
E500M36N03	36	4.00	162.0	47	25.00	20.00	24	4	32.00	–	SB	1	5976938
E500M39N01	39	4.00	170.0	47	28.00	22.40	26	4	35.00	–	T	1	5976941
E500M39N02	39	4.00	170.0	47	28.00	22.40	26	4	35.00	–	P	1	5976944
E500M39N03	39	4.00	170.0	47	28.00	22.40	26	4	35.00	–	SB	1	5976746
E500M42N01	42	4.50	170.0	53	28.00	22.40	26	6	37.50	–	T	1	5976807
E500M42N02	42	4.50	170.0	53	28.00	22.40	26	6	37.50	–	P	1	5976812
E500M42N03	42	4.50	170.0	53	28.00	22.40	26	6	37.50	–	SB	1	5976815
E500M45N01	45	4.50	187.0	54	31.50	25.00	28	6	40.50	–	T	1	5976826
E500M45N03	45	4.50	187.0	54	31.50	25.00	28	6	40.50	–	SB	1	5976841
E500M48N01	48	5.00	187.0	60	31.50	25.00	28	6	43.00	–	T	1	5976844
E500M48N02	48	5.00	187.0	60	31.50	25.00	28	6	43.00	–	P	1	5976847
E500M48N03	48	5.00	187.0	60	31.50	25.00	28	6	43.00	–	SB	1	5976850
E500M52N03	52	5.00	200.0	60	35.50	28.00	31	6	47.00	–	SB	1	5976992
E500M56N03	56	5.50	200.0	60	35.50	28.00	31	6	50.50	–	SB	1	5977032

¹⁾ Supplied in 5H tolerance.

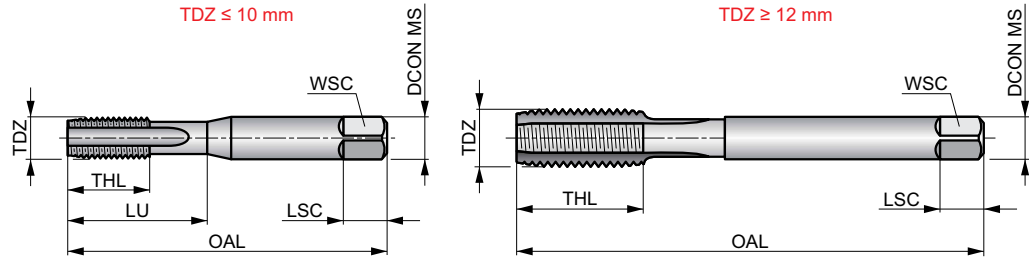
E501



HSS Straight Flute Hand Taps, Metric, ISO standard, Left-Handed

A versatile tool, suitable for hand and machine tapping. Available with taper lead NO1 for short through holes, plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes.

	ISO 529	6H
	1.5xD	HSS
	L	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	P4.2 ▣ 7	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39
K2.2 ▣ 33	K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ▣ 56	N3.2 ▣ 33	N3.3 ▣ 16
N4.2 ▣ 16	N4.3 ▣ 10												

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
E501M3N01	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	D3	12.50	T	1	5977154
E501M3N02	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	D3	12.50	P	1	5977158
E501M3N03	3	0.50	48.0	12.5	3.15	2.50	5	3	2.50	D3	12.50	SB	1	5977169
E501M4N01	4	0.70	53.0	14	4.00	3.15	6	3	3.30	D4	14.00	T	1	5976769
E501M4N02	4	0.70	53.0	14	4.00	3.15	6	3	3.30	D4	14.00	P	1	5976814
E501M4N03	4	0.70	53.0	14	4.00	3.15	6	3	3.30	D4	14.00	SB	1	5976856
E501M5N02	5	0.80	58.0	11	5.00	4.00	7	3	4.20	D4	22.00	P	1	5976942
E501M5N03	5	0.80	58.0	11	5.00	4.00	7	3	4.20	D4	22.00	SB	1	5976949
E501M6N01	6	1.00	66.0	13	6.30	5.00	8	3	5.00	D5	26.00	T	1	5976952
E501M6N02	6	1.00	66.0	13	6.30	5.00	8	3	5.00	D5	26.00	P	1	5976955
E501M6N03	6	1.00	66.0	13	6.30	5.00	8	3	5.00	D5	26.00	SB	1	5976958
E501M8N01	8	1.25	72.0	16	8.00	6.30	9	3	6.80	D5	29.00	T	1	5976771
E501M8N02	8	1.25	72.0	16	8.00	6.30	9	3	6.80	D5	29.00	P	1	5976775
E501M8N03	8	1.25	72.0	16	8.00	6.30	9	3	6.80	D5	29.00	SB	1	5976779
E501M10N01	10	1.50	80.0	18	10.00	8.00	11	3	8.50	D6	34.00	T	1	5977063
E501M10N02	10	1.50	80.0	18	10.00	8.00	11	3	8.50	D6	34.00	P	1	5977066
E501M10N03	10	1.50	80.0	18	10.00	8.00	11	3	8.50	D6	34.00	SB	1	5977070
E501M12N01	12	1.75	89.0	22	9.00	7.10	10	3	10.30	D6	—	T	1	5977078
E501M12N02	12	1.75	89.0	22	9.00	7.10	10	3	10.30	D6	—	P	1	5977081
E501M12N03	12	1.75	89.0	22	9.00	7.10	10	3	10.30	D6	—	SB	1	5977085
E501M14N01	14	2.00	95.0	24	11.20	9.00	12	4	12.00	D7	—	T	1	5977089
E501M14N02	14	2.00	95.0	24	11.20	9.00	12	4	12.00	D7	—	P	1	5977092
E501M14N03	14	2.00	95.0	24	11.20	9.00	12	4	12.00	D7	—	SB	1	5977096

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
E501M16N01	16	2.00	102.0	24	12.50	10.00	13	4	14.00	D7	–	T	1	5977100
E501M16N02	16	2.00	102.0	24	12.50	10.00	13	4	14.00	D7	–	P	1	5977104
E501M16N03	16	2.00	102.0	24	12.50	10.00	13	4	14.00	D7	–	SB	1	5977108
E501M20N01	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	–	T	1	5977124
E501M20N02	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	–	P	1	5977129
E501M20N03	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	–	SB	1	5977132
E501M24N02	24	3.00	130.0	35	18.00	14.00	18	4	21.00	D8	–	P	1	5977147
E501M24N03	24	3.00	130.0	35	18.00	14.00	18	4	21.00	D8	–	SB	1	5977150

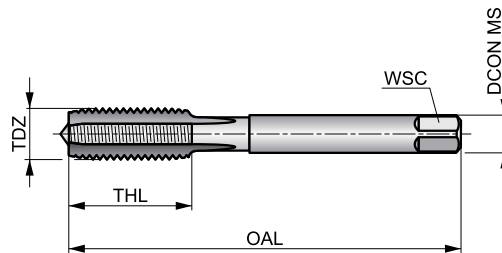
E100



HSS Straight Flute Serial Hand Taps, Metric, DIN Standard, Bright Finish

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a set of three serial taps, which should be used one after the other to create the full thread. Bright finish.

	DIN 352	6H
	1.5xD	HSS
C 2-3		
Bright		



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3.3	N4.2	N4.3											
■	■	■											

Products from this series are also available in set of sizes or with dies. Please see L119 or L120.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E100M1.6N08	1.6	0.35	32.0	7	2.50	2.10	3	1.25	1	5974252
E100M2N08	2	0.40	36.0	8	2.80	2.10	3	1.60	1	5974717
E100M2.5N08	2.5	0.45	40.0	9	2.80	2.10	3	2.05	1	5974696
E100M3N08	3	0.50	40.0	10	3.50	2.70	3	2.50	1	5974509
E100M3.5N08	3.5	0.60	45.0	10	4.00	3.00	3	2.90	1	5974647
E100M4N08	4	0.70	45.0	12	4.50	3.40	3	3.30	1	5974552
E100M5N08	5	0.80	50.0	14	6.00	4.90	3	4.20	1	5974642
E100M6N08	6	1.00	56.0	16	6.00	4.90	3	5.00	1	5974895
E100M7N08	7	1.00	56.0	16	6.00	4.90	3	6.00	1	5974763
E100M8N08	8	1.25	63.0	19	6.00	4.90	3	6.80	1	5974769
E100M9N08	9	1.25	63.0	20	7.00	5.50	3	7.80	1	5974774
E100M10N08	10	1.50	70.0	22	7.00	5.50	3	8.50	1	5974733
E100M12N08	12	1.75	75.0	25	9.00	7.00	4	10.30	1	5974594
E100M14N08	14	2.00	80.0	25	11.00	9.00	4	12.00	1	5974615
E100M16N08	16	2.00	80.0	25	12.00	9.00	4	14.00	1	5974640
E100M18N08	18	2.50	95.0	32	14.00	11.00	4	15.50	1	5974660
E100M20N08	20	2.50	95.0	32	16.00	12.00	4	17.50	1	5974737
E100M22N08	22	2.50	100.0	34	18.00	14.50	4	19.50	1	5974748
E100M24N08	24	3.00	110.0	38	18.00	14.50	4	21.00	1	5974754
E100M27N08	27	3.00	110.0	38	20.00	16.00	4	24.00	1	5974523
E100M30N08	30	3.50	125.0	45	22.00	18.00	4	26.50	1	5974516
E100M33N08	33	3.50	125.0	50	25.00	20.00	4	29.50	1	5974521
E100M36N08	36	4.00	150.0	56	28.00	22.00	4	32.00	1	5974526

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E100M39N08	39	4.00	150.0	60	32.00	24.00	4	35.00	1	5974531
E100M42N08	42	4.50	150.0	60	32.00	24.00	4	37.50	1	5974567
E100M45N08	45	4.50	160.0	65	36.00	29.00	6	40.50	1	5974593
E100M48N08	48	5.00	180.0	70	36.00	29.00	6	43.00	1	5974617

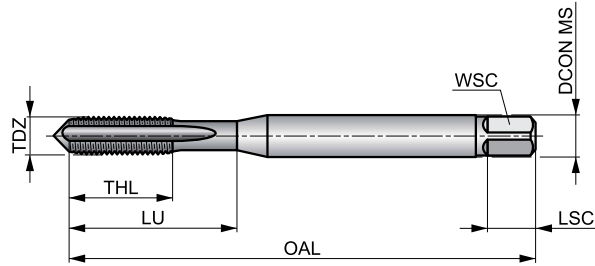
E200



HSS-E-PM Straight Flute Machine Tap, Metric, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.

	DIN 371	6H
	1.5xD	HSS-E PM
A 6-8 C 2-3		
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 39	K3.2 ▣ 30	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E200M2 ¹⁾	2	0.40	45.0	6	2.80	2.10	5	3	1.60	9.00	1	5975882
E200M2.5 ¹⁾	2.5	0.45	50.0	8	2.80	2.10	5	3	2.05	12.50	1	5975888
E200M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	5975892
E200M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	5975907
E200M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	5975689
E200M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	5975733
E200M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	5975829
E200M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	5975873

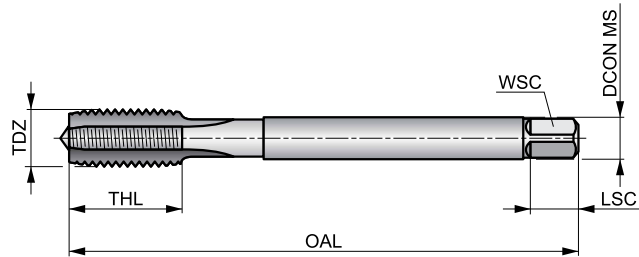
¹⁾ HSS-E.

E250



HSS-E-PM Straight Flute Machine Tap, Metric, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



	DIN 376	6H
	1.5xD	HSS-E PM
A 6-8 C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 39	K3.2 ▣ 30	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
E250M4	4	0.70	63.0	12	2.80	2.10	5	3	3.30	1	5975823
E250M5	5	0.80	70.0	13	3.50	2.70	6	3	4.20	1	5975854
E250M6	6	1.00	80.0	15	4.50	3.40	6	3	5.00	1	5975865
E250M8	8	1.25	90.0	18	6.00	4.90	8	3	6.80	1	5975876
E250M10	10	1.50	100.0	20	7.00	5.50	8	3	8.50	1	5975925
E250M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	1	5975935
E250M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	1	5975940
E250M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	1	5975747
E250M18	18	2.50	125.0	30	14.00	11.00	14	3	15.50	1	5975756
E250M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	1	5975763
E250M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	1	5975770
E250M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	1	5975777
E250M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	1	5975786
E250M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	1	5975799
E250M33	33	3.50	180.0	50	25.00	20.00	23	4	29.50	1	5975803
E250M36	36	4.00	200.0	55	28.00	22.00	25	4	32.00	1	5975806
E250M39	39	4.00	200.0	60	32.00	24.00	27	4	35.00	1	5975814
E250M42 ¹⁾	42	4.50	200.0	60	32.00	24.00	27	4	37.50	1	5975836
E250M45 ¹⁾	45	4.50	220.0	65	36.00	29.00	32	6	40.50	1	5975844
E250M48 ¹⁾	48	5.00	250.0	70	36.00	29.00	32	6	43.00	1	5975848
E250M52 ¹⁾	52	5.00	250.0	70	40.00	32.00	35	6	47.00	1	5975861

¹⁾ HSS-E.

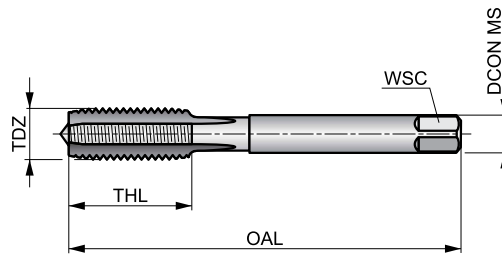
E102



HSS-E Straight Flute Serial Hand Taps, Metric, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a set of three serial taps, which should be used one after the other to create the full thread. Steam tempered surface acts to retain cutting fluid to improve lubrication and provide smoother cutting.

M	DIN 352	6HX
1.5×D	HSS-E	
C 2-3	R	
ST		



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	M1.1	M1.2	M2.1
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
K4.1	K4.2	K4.3	K5.1	K5.2	K5.3	S1.1	S2.1	S3.1	S4.1				
☑	☑	☑	☑	☑	☑	☑	☑	☑	☑				

No4 with pilot guide.

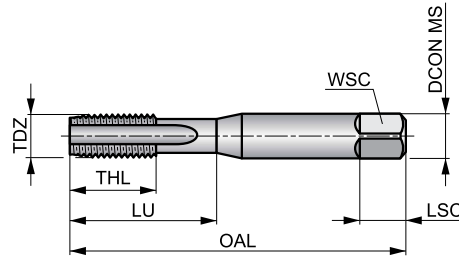
Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E102M3N08	3	0.50	40.0	10	3.50	2.70	3	2.50	1	5974856
E102M4N08	4	0.70	45.0	12	4.50	3.40	3	3.30	1	5974866
E102M5N08	5	0.80	50.0	14	6.00	4.90	3	4.20	1	5974870
E102M6N08	6	1.00	56.0	16	6.00	4.90	3	5.00	1	5974874
E102M8N08	8	1.25	63.0	19	6.00	4.90	3	6.80	1	5974882
E102M10N08	10	1.50	70.0	22	7.00	5.50	3	8.50	1	5974814
E102M12N08	12	1.75	75.0	25	9.00	7.00	4	10.30	1	5974819
E102M14N08	14	2.00	80.0	25	11.00	9.00	4	12.00	1	5974824
E102M16N08	16	2.00	80.0	25	12.00	9.00	4	14.00	1	5974830
E102M18N08	18	2.50	95.0	32	14.00	11.00	4	15.50	1	5974834
E102M20N08	20	2.50	95.0	32	16.00	12.00	4	17.50	1	5974843
E102M24N08	24	3.00	110.0	38	18.00	14.50	4	21.00	1	5974848

E504



HSS Straight Flute Hand Tap with TiN Coating, Metric, ISO Standard

A versatile tool, suitable for machine and also hand tapping, with a straight flute design and bottoming lead for blind and through holes. TiN coated to improve performance and extend tool life.



	ISO 529	6H
	1.5xD	HSS
	R	TiN

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 43	P1.2 ■ 49	P1.3 ■ 49	P2.1 ■ 36	P2.2 ■ 33	P2.3 ▧ 30	P3.1 ■ 30	P3.2 ▧ 23	P3.3 ▧ 20	P4.1 ▧ 16	P4.2 ▧ 13	K1.1 ■ 59	K1.2 ■ 43	K1.3 ■ 33
K2.1 ■ 89	K2.2 ■ 72	K3.1 ■ 79	K3.2 ■ 59	K4.1 ■ 72	K4.2 ■ 56	K5.1 ■ 82	K5.2 ■ 62	N1.3 ▧ 152	N2.1 ▧ 72	N2.2 ▧ 62	N2.3 ▧ 46	N3.1 ▧ 112	N3.2 ▧ 66
N3.3 ▧ 33	N4.2 ▧ 33	N4.3 ▧ 20											

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
E504M4N03	4	0.70	53.0	14	4.00	3.15	6	3	3.30	D4	14.00	SB	1	5976842
E504M5N03	5	0.80	58.0	11	5.00	4.00	7	3	4.20	D4	22.00	SB	1	5976848
E504M6N03	6	1.00	66.0	13	6.30	5.00	8	3	5.00	D5	26.00	SB	1	5976860
E504M8N03	8	1.25	72.0	16	8.00	6.30	9	3	6.80	D5	29.00	SB	1	5976868
E504M10N03	10	1.50	80.0	18	10.00	8.00	11	3	8.50	D6	34.00	SB	1	5976786

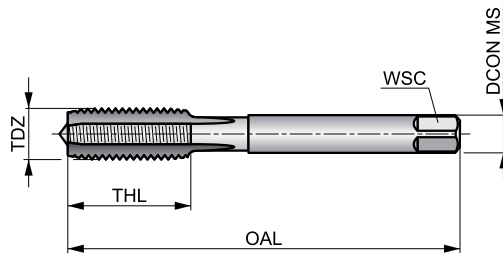
E101



HSS Straight Flute Serial Hand Taps, Metric, DIN Standard, Left-Handed

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a set of three serial taps, which should be used one after the other to create the full thread. Bright finish.

M	DIN 352	6H
1.5xD	HSS	
C 2-3	L	
Bright		



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3.3	N4.2	N4.3											
■	■	■											

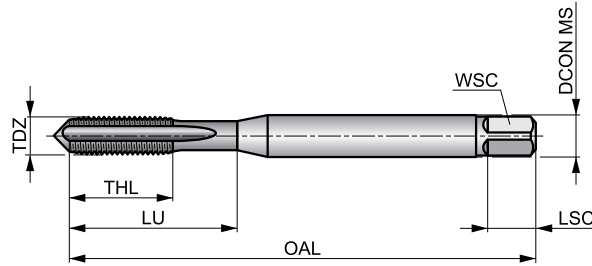
Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
E101M4N08	4	0.70	45.0	12	4.50	3.40	3	3.30	1	5974787
E101M5N08	5	0.80	50.0	14	6.00	4.90	3	4.20	1	5974793
E101M6N08	6	1.00	56.0	16	6.00	4.90	3	5.00	1	5974800
E101M8N08	8	1.25	63.0	19	6.00	4.90	3	6.80	1	5974808
E101M10N08	10	1.50	70.0	22	7.00	5.50	3	8.50	1	5974776
E101M12N08	12	1.75	75.0	25	9.00	7.00	4	10.30	1	5974778
E101M14N08	14	2.00	80.0	25	11.00	9.00	4	12.00	1	5974780
E101M16N08	16	2.00	80.0	25	12.00	9.00	4	14.00	1	5974782

E237



HSS-E-PM Straight Flute Machine Tap, Metric, DIN Standard, Left-Handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.



	DIN 371	6H
	1.5xD	HSS-E PM
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E237M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	5975755
E237M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	5975759
E237M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	5975764
E237M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	5975768
E237M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	5975772
E237M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	5975749

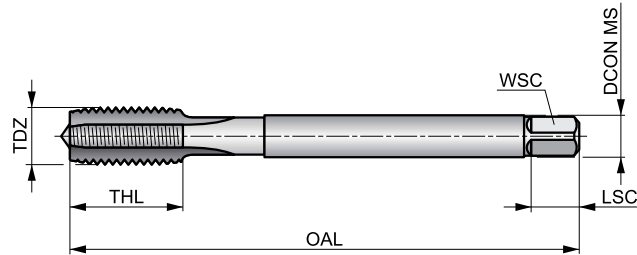
E251



HSS-E-PM Straight flute Machine tap, Metric, DIN Standard, Left-handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

	DIN 376	6H
	1.5xD	HSS-E PM
C 2-3		
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 39	K3.2 ▣ 30	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ▣ 46	N4.2 ▣ 26	

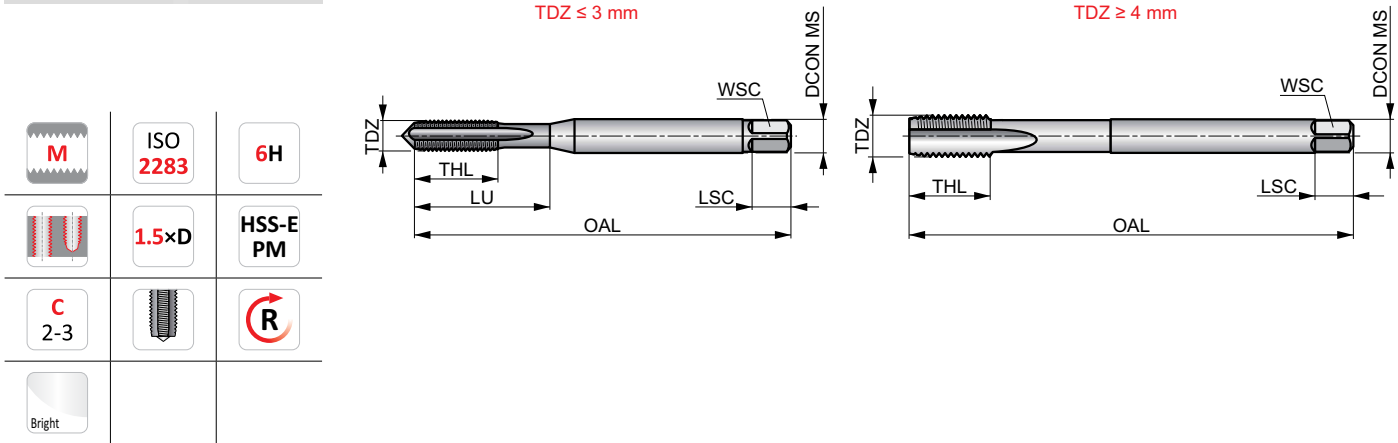
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E251M12	12	1.75	110.0	23	9.00	7.00	10	4	10.30	1	5975890
E251M14	14	2.00	110.0	25	11.00	9.00	12	4	12.00	1	5975894
E251M16	16	2.00	110.0	25	12.00	9.00	12	4	14.00	1	5975897
E251M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	1	5975901
E251M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	1	5975905
E251M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	1	5975909
E251M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	1	5975915

E600



HSS-E-PM Straight Flute Long Series Machine Tap, Metric, ISO Standard

General purpose straight flute machine tap with plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes. Bright finish to prevent material from sticking to the cutting edges. Longer design for extra reach when threading difficult to access holes.



	ISO 2283	6H
	1.5xD	HSS-E PM

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 30	P1.2 ■ 26	P1.3 ■ 26	P2.1 ■ 23	P2.2 ■ 20	P2.3 ▣ 16	P3.1 ■ 20	P3.2 ▣ 16	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ▣ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

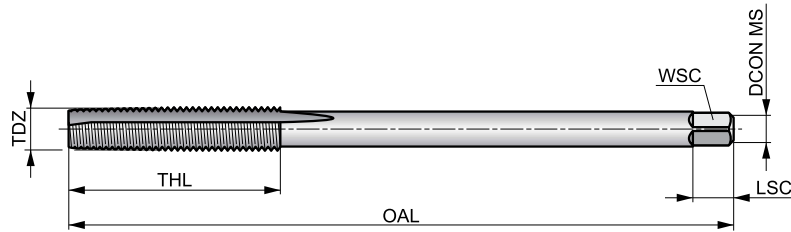
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E600M3N03	3	0.50	66.0	9	3.15	2.50	5	3	2.50	18.00	B	1	5977724
E600M4N02	4	0.70	73.0	12	3.15	2.50	5	3	3.30	—	P	1	5977744
E600M4N03	4	0.70	73.0	12	3.15	2.50	5	3	3.30	—	B	1	5977747
E600M5N02	5	0.80	79.0	12	4.00	3.15	6	3	4.20	—	P	1	5977755
E600M5N03	5	0.80	79.0	12	4.00	3.15	6	3	4.20	—	B	1	5977759
E600M6N02	6	1.00	89.0	14	4.50	3.55	6	3	5.00	—	P	1	5977775
E600M6N03	6	1.00	89.0	14	4.50	3.55	6	3	5.00	—	B	1	5977779
E600M8N02	8	1.25	97.0	17	6.30	5.00	8	3	6.80	—	P	1	5977789
E600M8N03	8	1.25	97.0	17	6.30	5.00	8	3	6.80	—	B	1	5977794
E600M10N02	10	1.50	108.0	19	8.00	6.30	9	3	8.50	—	P	1	5977671
E600M10N03	10	1.50	108.0	19	8.00	6.30	9	3	8.50	—	B	1	5977675
E600M12N02	12	1.75	119.0	23	9.00	7.10	10	3	10.30	—	P	1	5977682
E600M12N03	12	1.75	119.0	23	9.00	7.10	10	3	10.30	—	B	1	5977686
E600M16N03	16	2.00	137.0	25	12.50	10.00	13	4	14.00	—	B	1	5977703
E600M20N03	20	2.50	149.0	30	14.00	11.20	14	4	17.50	—	B	1	5977709

E303



HSS-E Straight Flute Nut Taps Metric, DIN Standard

Designed for efficient small production runs in conventional tapping machines, with either extra-long taper lead NO1 to reduce torque or with short bottoming lead NO3 to reduce cycle times.



M	DIN 357	6H
	2xD	HSS-E
C 2-3 D 18-20		R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 30	P1.2 ■ 33	P1.3 ■ 33	P2.1 ▣ 23	P2.2 ▣ 20	P2.3 ▣ 16	P3.1 ■ 20	P3.2 ▣ 16	P4.1 ▣ 13	K1.1 ▣ 36	K1.2 ▣ 26	K1.3 ▣ 20	K2.1 ▣ 36	K2.2 ▣ 30
K3.1 ▣ 33	K3.2 ▣ 23	K4.1 ▣ 30	K4.2 ▣ 23	K5.1 ▣ 33	K5.2 ▣ 26	N1.3 ▣ 23	N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ▣ 52	N3.2 ▣ 30	N4.2 ▣ 16	

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E303M3N01	3	0.50	70.0	22	2.20	2.10	5	3	2.50	1	5975504
E303M4N01	4	0.70	90.0	25	2.80	2.10	5	3	3.30	1	5975507
E303M5N01	5	0.80	100.0	28	3.50	2.70	6	3	4.20	1	5975962
E303M5N03	5	0.80	100.0	28	3.50	2.70	6	3	4.20	1	5975984
E303M6N01	6	1.00	110.0	32	4.50	3.40	6	3	5.00	1	5976017
E303M6N03	6	1.00	110.0	32	4.50	3.40	6	3	5.00	1	5976058
E303M8N01	8	1.25	125.0	40	6.00	4.90	8	3	6.80	1	5976066
E303M8N03	8	1.25	125.0	40	6.00	4.90	8	3	6.80	1	5976073
E303M10N01	10	1.50	140.0	45	7.00	5.50	8	3	8.50	1	5975489
E303M10N03	10	1.50	140.0	45	7.00	5.50	8	3	8.50	1	5975490
E303M12N01	12	1.75	180.0	50	9.00	7.00	10	3	10.30	1	5975491
E303M12N03	12	1.75	180.0	50	9.00	7.00	10	3	10.30	1	5975492
E303M14N01	14	2.00	200.0	56	11.00	9.00	12	3	12.00	1	5975493
E303M14N03	14	2.00	200.0	56	11.00	9.00	12	3	12.00	1	5975494
E303M16N01	16	2.00	200.0	63	12.00	9.00	12	3	14.00	1	5975496
E303M16N03	16	2.00	200.0	63	12.00	9.00	12	3	14.00	1	5975497
E303M20N01	20	2.50	250.0	70	16.00	12.00	15	3	17.50	1	5975500
E303M20N03	20	2.50	250.0	70	16.00	12.00	15	3	17.50	1	5975501

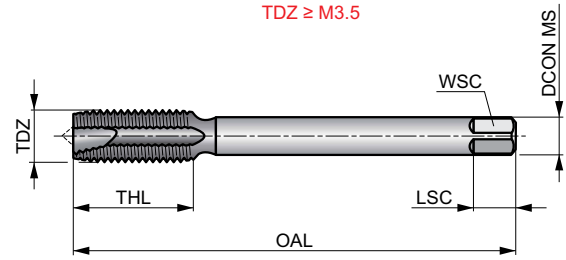
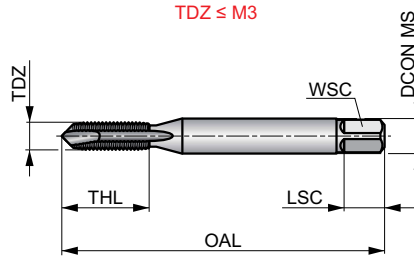
1785NR



HSS Spiral Point Tap, Metric, ANSI Standard

Feature concentric threads with no pitch diameter relief. These taps are particularly recommended for applications requiring close gauging fits and in older equipment that is not sufficiently rigid to accommodate the free cutting action of the 1785 series. For through hole applications only.

	ANSI	6H
	2.5xD	HSS
	R	Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 #62	P1.2 #69	P1.3 #72	P2.1 #52	P2.2 #46	P2.3 #39	P3.1 #23	P3.2 #20	P3.3 #16	P4.1 #13	P4.2 #13	P4.3 #10	M1.1 #26	M1.2 #23
M2.1 #23	M2.2 #20	M3.1 #16	M3.2 #13	M3.3 #13	M4.1 #10	K1.1 #46	K1.2 #33	K1.3 #26	K2.1 #33	K2.2 #26	K2.3 #20	K3.1 #30	K3.2 #23
K3.3 #16	K4.1 #26	K4.2 #20	K4.3 #13	K4.4 #13	K4.5 #10	K5.1 #30	K5.2 #23	K5.3 #16	N1.1 #33	N1.2 #26	N1.3 #16	N2.1 #66	N2.2 #59
N2.3 #43	N3.1 #112	N3.3 #33	N4.1 #66	S1.3 #10	S2.1 #16	S3.1 #13	S4.1 #10						

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(mm)	(inch)								
1785NRM1.6	1.6	0.35	1.5/8	5/16	.110	.110	3/16	2	D3	P	1	6008823
1785NRM2	2	0.40	1.3/4	7/16	.110	.110	3/16	2	D3	P	1	6008852
1785NRM2.5	2.5	0.45	1.13/16	1/2	.110	.110	3/16	2	D3	P	1	6008622
1785NRM3	3	0.50	1.15/16	5/8	.110	.110	3/16	2	D3	P	1	6008765
1785NRM3.5	3.5	0.60	2"	11/16	.110	.110	3/16	2	D4	P	1	6008815
1785NRM4	4	0.70	2.1/8	3/4	.131	.131	1/4	2	D4	P	1	6008829
1785NRM4.5	4.5	0.75	2.3/8	7/8	.152	.152	1/4	2	D4	P	1	6008834
1785NRM5	5	0.80	2.3/8	7/8	.152	.152	1/4	2	D4	P	1	6008839
1785NRM6	6	1.00	2.1/2	1"	.191	.191	5/16	2	D5	P	1	6008844
1785NRM8	8	1.25	2.23/32	1.1/8	.238	.238	3/8	2	D5	P	1	6008625
1785NRM10	10	1.50	2.15/16	1.1/4	.286	.286	7/16	3	D6	P	1	6008827
1785NRM12	12	1.75	3.3/8	1.21/32	.275	.275	7/16	3	D6	P	1	6008832
1785NRM14	14	2.00	3.19/32	1.21/32	.322	.322	1/2	3	D7	P	1	6008838
1785NRM16	16	2.00	3.13/16	1.13/16	.360	.360	9/16	3	D7	P	1	6008843
1785NRM20	20	2.50	4.15/32	2"	.489	.489	11/16	3	D7	P	1	6008713

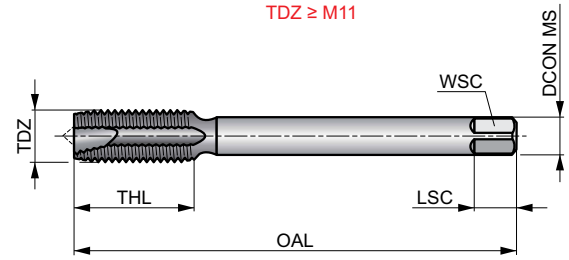
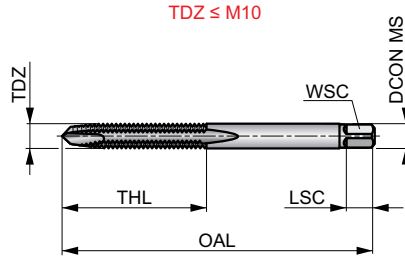
TN1785



HSS Spiral Point Tap, Metric, ANSI Standard, TiN-Coated

Most productive tap design for through hole applications only. These taps are extremely free cutting. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	ANSI	6H
	2.5xD	HSS
	R	TiN



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■66	P1.2 ■72	P1.3 ■75	P2.1 ■56	P2.2 ■49	P2.3 ■43	P3.1 ■43	P3.2 ■36	P3.3 ■30	P4.1 ■26	P4.2 ■23	P4.3 ■16	M1.1 ■52	M1.2 ■46
M2.1 ■49	M2.2 ■39	M3.1 ■30	M3.2 ■26	M3.3 ■23	M4.1 ■26	K1.1 ■49	K1.2 ■36	K1.3 ■26	K2.1 ■36	K2.2 ■30	K2.3 ■23	K3.1 ■33	K3.2 ■23
K3.3 ■20	K4.1 ■30	K4.2 ■23	K4.3 ■16	K4.4 ■13	K4.5 ■13	K5.1 ■33	K5.2 ■26	K5.3 ■20	N1.1 ■66	N1.2 ■49	N1.3 ■33	N2.1 ■121	N2.2 ■108
N2.3 ■79	N3.1 ■194	N3.2 ■115	N3.3 ■59	N4.1 ■121	N4.2 ■30	S2.1 ■16	S3.1 ■13	S4.1 ■10					

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(mm)	(inch)								
TN1785M4	M4	0.70	2.1/8	3/4	.131	.131	1/4	2	D4	P	1	6007488
TN1785M5	M5	0.80	2.3/8	7/8	.152	.152	1/4	2	D4	P	1	6007491
TN1785M6	M6	1.00	2.1/2	1"	.191	.191	5/16	2	D5	P	1	6007496
TN1785M8	M8	1.25	2.23/32	1.1/8	.238	.238	3/8	2	D5	P	1	6007501
TN1785M10	M10	1.50	2.15/16	1.1/4	.286	.286	7/16	3	D5	P	1	6007466
TN1785M12	M12	1.75	3.3/8	1.21/32	.275	.275	7/16	3	D6	P	1	6007480

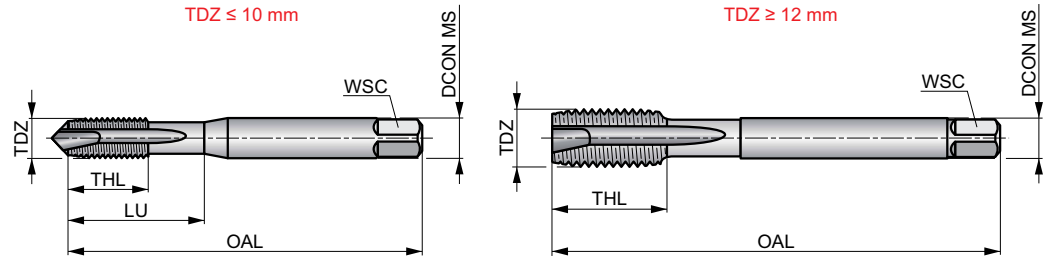
E005



HSS-E-PM Spiral Point Tap, Metric, ANSI Standard

Machine tap with spiral point for through holes only. Made from HSS-E-PM which prolongs tool life, make it more predictable, improve speed performance and reduce chipping. Bright finish to produce more accurate and cleaner threads preventing the work-material from sticking to the cutting edges.

	ANSI	6H
	2.5×D	HSS-E-PM
	3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ▣ 46	P3.1 ■ 43	P3.2 ▣ 33	P4.1 ▣ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ▣ 89	N3.3 ▣ 43	N4.1 ▣ 72									

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	PHD	Limits	LU	Chamfer	Pack Qty	MID
E005M4	4	0.70	2.1/8	.248	.168	.131	2	3.30	N30	D4	.653	P	1	5974453
E005M43FL	4	0.70	2.1/8	.248	.168	.131	3	3.30	N30	D4	.653	P	1	5974457
E005M5	5	0.80	2.3/8	.430	.194	.152	2	4.20	N19	D4	.843	P	1	5974461
E005M53FL	5	0.80	2.3/8	.430	.194	.152	3	4.20	N19	D4	.843	P	1	5974465
E005M6	6	1.00	2.1/2	.507	.255	.191	2	5.00	N9	D5	1.007	P	1	5974469
E005M63FL	6	1.00	2.1/2	.507	.255	.191	3	5.00	N9	D5	1.007	P	1	5974473
E005M8	8	1.25	2.23/32	.594	.318	.238	2	6.80	H	D5	1.189	P	1	5974476
E005M83FL	8	1.25	2.23/32	.594	.318	.238	3	6.80	H	D5	1.189	P	1	5974479
E005M10	10	1.50	2.15/16	.602	.381	.286	2	8.50	Q	D6	1.292	P	1	5974418
E005M103FL	10	1.50	2.15/16	.602	.381	.286	3	8.50	Q	D6	1.292	P	1	5974422
E005M12	12	1.75	3.3/8	.905	.367	.275	2	10.30	Y	D6	—	P	1	5974426
E005M123FL	12	1.75	3.3/8	.905	.367	.275	3	10.30	Y	D6	—	P	1	5974430
E005M14	14	2.00	3.19/32	.984	.429	.322	3	12.00	15/32	D7	—	P	1	5974434
E005M16	16	2.00	3.13/16	.984	.480	.360	3	14.00	35/64	D7	—	P	1	5974438
E005M20	20	2.50	4.15/32	1.161	.652	.489	3	17.50	11/16	D7	—	P	1	5974450

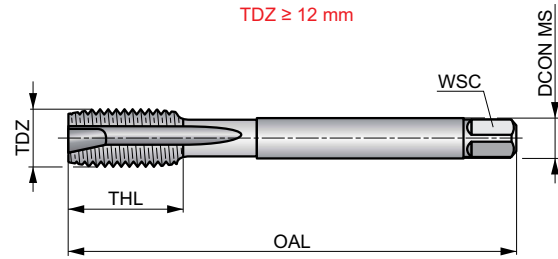
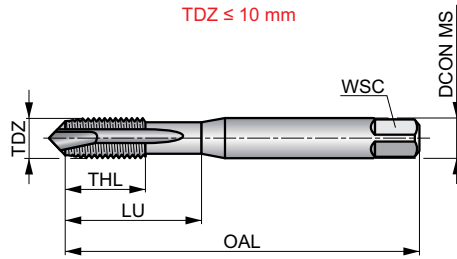
E006



HSS-E-PM Spiral Point Tap, Metric, ANSI Standard, Steam Tempered

Machine tap with spiral point for through holes only, similar in design to the standard E005 series, but with steam tempered surface which acts to retain cutting fluid and prevent chip to tool welding in abrasive and harder ferrous work-materials.

	ANSI	6H
	2.5xD	HSS-E PM



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)		(inch)			
E006M4	4	0.70	2.1/8	.248	.168	.131	2	3.30	N30	D4	.653	P	1	5973941
E006M43FL	4	0.70	2.1/8	.248	.168	.131	3	3.30	N30	D4	.653	P	1	5973945
E006M5	5	0.80	2.3/8	.430	.194	.152	2	4.20	N19	D4	.843	P	1	5973949
E006M53FL	5	0.80	2.3/8	.430	.194	.152	3	4.20	N19	D4	.843	P	1	5973777
E006M6	6	1.00	2.1/2	.507	.255	.191	2	5.00	N9	D5	1.007	P	1	5973778
E006M63FL	6	1.00	2.1/2	.507	.255	.191	3	5.00	N9	D5	1.007	P	1	5973780
E006M8	8	1.25	2.23/32	.594	.318	.238	2	6.80	H	D5	1.189	P	1	5973782
E006M83FL	8	1.25	2.23/32	.594	.318	.238	3	6.80	H	D5	1.189	P	1	5973784
E006M10	10	1.50	2.15/16	.602	.381	.286	2	8.50	Q	D6	1.292	P	1	5974482
E006M103FL	10	1.50	2.15/16	.602	.381	.286	3	8.50	Q	D6	1.292	P	1	5974488
E006M12	12	1.75	3.3/8	.905	.367	.275	2	10.30	Y	D6	—	P	1	5973774
E006M123FL	12	1.75	3.3/8	.905	.367	.275	3	10.30	Y	D6	—	P	1	5973796
E006M14	14	2.00	3.19/32	.984	.429	.322	3	12.00	15/32	D7	—	P	1	5973832
E006M16	16	2.00	3.13/16	.984	.480	.360	3	14.00	35/64	D7	—	P	1	5973878
E006M18	18	2.50	4.1/32	1.161	.542	.406	3	15.50	39/64	D7	—	P	1	5973929
E006M20	20	2.50	4.15/32	1.161	.652	.489	3	17.50	11/16	D7	—	P	1	5973937

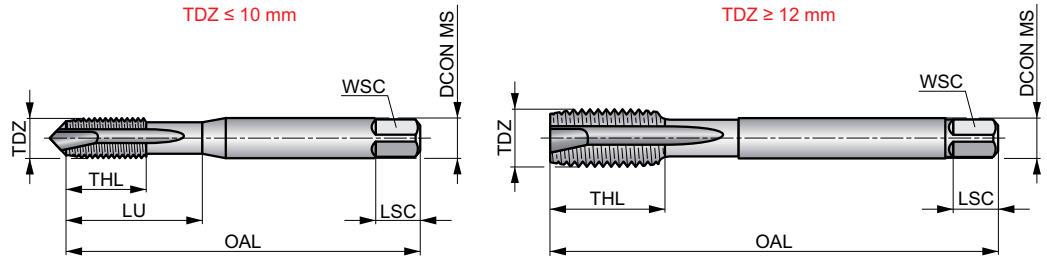
E000



HSS-E-PM Spiral Point Machine Tap, Metric, ISO Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

M	ISO 529	6H
	2.5×D	HSS-E PM
B 3.5-5		R
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ▣ 46	P3.1 ■ 43	P3.2 ▣ 33	P4.1 ▣ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ▣ 89	N3.3 ▣ 43	N4.1 ▣ 72									

Products from this series are also available in set with drills. Please see L113 or L002.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
E000M1.6	1.6	0.35	41.0	7	2.50	2.00	4	2	1.25	D3	7.00	P	1	5973759
E000M2	2	0.40	41.0	8	2.50	2.00	4	2	1.60	D3	8.00	P	1	5973771
E000M2.5	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	D3	9.50	P	1	5973775
E000M3	3	0.50	48.0	15	3.15	2.50	5	3	2.50	D3	15.00	P	1	5973783
E000M3.5	3.5	0.60	50.0	16	3.55	2.80	5	3	2.90	D4	16.00	P	1	5973785
E000M4	4	0.70	53.0	17	4.00	3.15	6	3	3.30	D4	17.00	P	1	5973788
E000M5	5	0.80	58.0	11	5.00	4.00	7	3	4.20	D4	22.00	P	1	5973790
E000M6	6	1.00	66.0	13	6.30	5.00	8	3	5.00	D5	26.00	P	1	5973792
E000M8	8	1.25	72.0	16	8.00	6.30	9	3	6.80	D5	29.00	P	1	5973802
E000M10	10	1.50	80.0	18	10.00	8.00	11	3	8.50	D6	34.00	P	1	5973761
E000M12	12	1.75	89.0	22	9.00	7.10	10	3	10.30	D6	—	P	1	5973763
E000M14	14	2.00	95.0	24	11.20	9.00	12	3	12.00	D7	—	P	1	5973765
E000M16	16	2.00	102.0	24	12.50	10.00	13	3	14.00	D7	—	P	1	5973767
E000M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	—	P	1	5973776
E000M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	D8	—	P	1	5973781

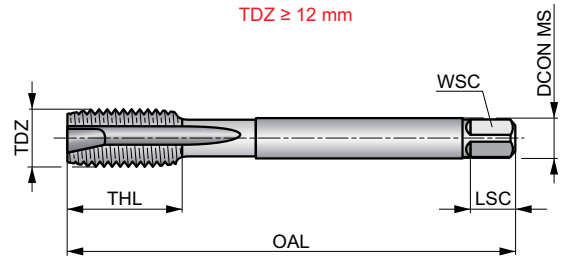
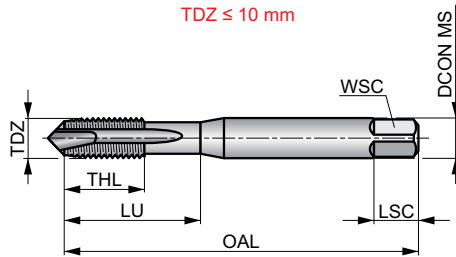
E001



HSS-E-PM Spiral Point Machine Tap, Metric, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	6H
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

Products from this series are also available in set with drills. Please see L113.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
E001M1.6	1.6	0.35	41.0	7	2.50	2.00	4	2	1.25	D3	7.00	P	1	5973804
E001M2	2	0.40	41.0	8	2.50	2.00	4	2	1.60	D3	8.00	P	1	5973825
E001M2.5	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	D3	9.50	P	1	5973830
E001M3	3	0.50	48.0	15	3.15	2.50	5	3	2.50	D3	15.00	P	1	5973852
E001M4	4	0.70	53.0	17	4.00	3.15	6	3	3.30	D4	17.00	P	1	5973861
E001M5	5	0.80	58.0	11	5.00	4.00	7	3	4.20	D4	22.00	P	1	5973865
E001M6	6	1.00	66.0	13	6.30	5.00	8	3	5.00	D5	26.00	P	1	5973870
E001M8	8	1.25	72.0	16	8.00	6.30	9	3	6.80	D5	29.00	P	1	5973880
E001M10	10	1.50	80.0	18	10.00	8.00	11	3	8.50	D6	34.00	P	1	5973807
E001M12	12	1.75	89.0	22	9.00	7.10	10	3	10.30	D6	-	P	1	5973809
E001M14	14	2.00	95.0	24	11.20	9.00	12	3	12.00	D7	-	P	1	5973812
E001M16	16	2.00	102.0	24	12.50	10.00	13	3	14.00	D7	-	P	1	5973817
E001M18	18	2.50	112.0	29	14.00	11.20	14	4	15.50	D7	-	P	1	5973821
E001M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	-	P	1	5973833
E001M22	22	2.50	118.0	29	16.00	12.50	16	4	19.50	D8	-	P	1	5973845
E001M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	D8	-	P	1	5973849

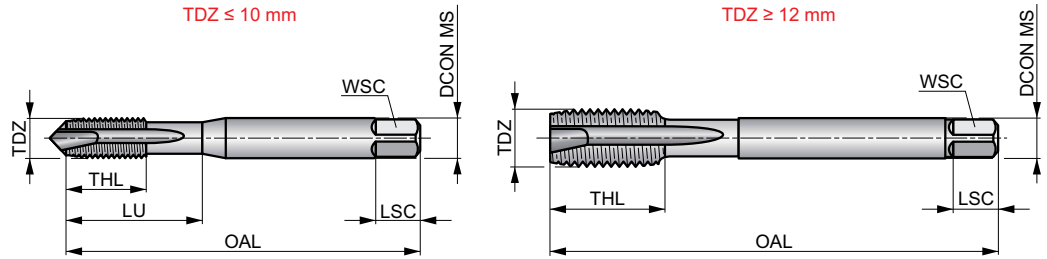
E00TIN



HSS-E-PM Spiral Point Machine Tap with TiN Coating, Metric, ISO Standard

High performance machine tap with spiral point for through holes only. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	ISO 529	6H
	2.5×D	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 112	P1.2 ■ 125	P1.3 ■ 131	P2.1 ■ 95	P2.2 ■ 79	P2.3 ■ 66	P3.1 ■ 62	P3.2 ■ 46	P3.3 ▧ 39	P4.1 ■ 33	P4.2 ▧ 30	M1.1 ■ 36	M1.2 ■ 30	M2.1 ■ 33
M2.2 ■ 26	M3.1 ■ 26	M3.2 ■ 23	M3.3 ▧ 20	M4.1 ▧ 16	K1.1 ▧ 69	K1.2 ▧ 52	K1.3 ▧ 39	K2.1 ▧ 98	K2.2 ▧ 79	K3.1 ▧ 85	K3.2 ▧ 66	K4.1 ▧ 79	K4.2 ▧ 59
K5.1 ▧ 92	K5.2 ▧ 66	N1.3 ■ 39	N2.1 ■ 121	N2.2 ■ 112	N2.3 ■ 79	N3.1 ■ 197	N3.2 ▧ 118	N4.1 ▧ 85					

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
E00TINM3	3	0.50	48.0	15	3.15	2.50	5	3	2.50	D3	15.00	P	1	6196635
E00TINM4	4	0.70	53.0	17	4.00	3.15	6	3	3.30	D4	17.00	P	1	6196636
E00TINM5	5	0.80	58.0	11	5.00	4.00	7	3	4.20	D4	22.00	P	1	6196637
E00TINM6	6	1.00	66.0	13	6.30	5.00	8	3	5.00	D5	26.00	P	1	6196638
E00TINM8	8	1.25	72.0	16	8.00	6.30	9	3	6.80	D5	29.00	P	1	6196639
E00TINM10	10	1.50	80.0	18	10.00	8.00	11	3	8.50	D6	34.00	P	1	6196690
E00TINM12	12	1.75	89.0	22	9.00	7.10	10	3	10.30	D6	–	P	1	6196691
E00TINM16	16	2.00	102.0	24	12.50	10.00	13	3	14.00	D7	–	P	1	6196692
E00TINM20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	–	P	1	6196693

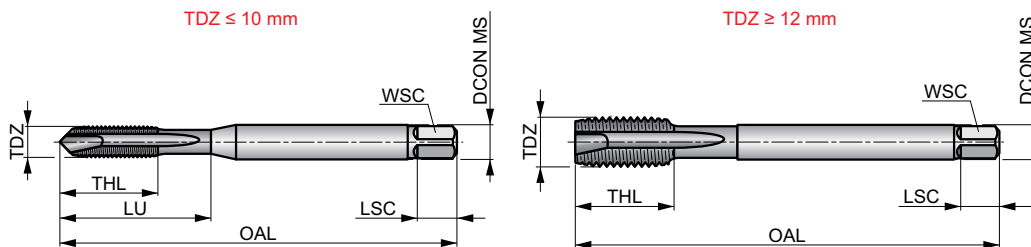
EP006H



HSS-E-PM Spiral Point Machine Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral point is suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

	DIN 371/376	6H
	2.5xD	HSS-E PM
B 3.5-5		
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ▣ 46	P3.1 ■ 43	P3.2 ▣ 33	P4.1 ▣ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ▣ 89	N3.3 ▣ 43	N4.1 ▣ 72									

Products from this series are also available in set with drills. Please see L114 or L001.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
EP00M2 ¹⁾	2	0.40	50.0	6	2.80	2.10	5	2	1.60	D3	9.00	P	1	5973413
EP00M2.5 ¹⁾	2.5	0.45	50.0	8	2.80	2.10	5	2	2.10	D3	12.50	P	1	5973414
EP00M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	D3	18.00	P	1	5973420
EP00M3DIN376	3	0.50	56.0	10	2.20	1.80	4	3	2.50	D3	18.00	P	1	5973422
EP00M3.5	3.5	0.60	56.0	11	4.00	3.00	6	3	2.90	D4	20.00	P	1	5973421
EP00M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	D4	21.00	P	1	5973426
EP00M4DIN376	4	0.70	63.0	12	2.80	2.10	5	3	3.30	D4	21.00	P	1	5973428
EP00M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	D4	25.00	P	1	5973431
EP00M5DIN376	5	0.80	70.0	13	3.50	2.70	6	3	4.20	D4	25.00	P	1	5973433
EP00M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	D5	30.00	P	1	5973437
EP00M6DIN376	6	1.00	80.0	15	4.50	3.40	6	3	5.00	D5	30.00	P	1	5973441
EP00M7	7	1.00	80.0	15	7.00	5.50	8	3	6.00	D5	30.00	P	1	5973445
EP00M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	D5	35.00	P	1	5973447
EP00M8DIN376	8	1.25	90.0	18	6.00	4.90	8	3	6.80	D5	35.00	P	1	5973449
EP00M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	D6	39.00	P	1	5973412
EP00M10DIN376	10	1.50	100.0	20	7.00	5.50	8	3	8.50	D6	—	P	1	5973423
EP00M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	D6	—	P	1	5973461
EP00M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	D7	—	P	1	5973486
EP00M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	D7	—	P	1	5973489
EP00M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	D7	—	P	1	5973493
EP00M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	D7	—	P	1	5973415
EP00M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	D8	—	P	1	5973417
EP00M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	D8	—	P	1	5973418
EP00M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	D8	—	P	1	5973419
EP00M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	D9	—	P	1	5973424

¹⁾ HSS-E.

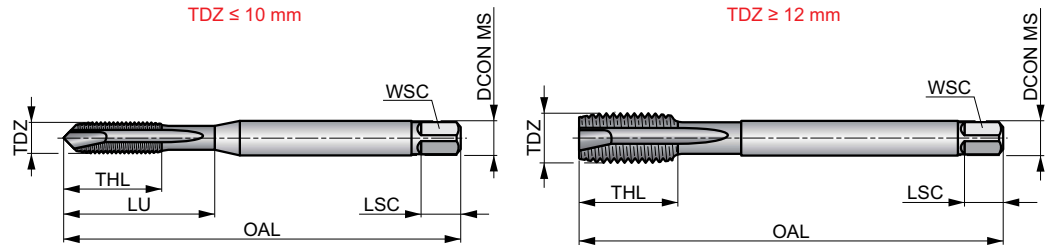
EP006G



HSS-E-PM Spiral Point Machine Tap, Metric, DIN Standard

Machine tap to produce threads within 6G tolerance for a fit with large allowance. The spiral point is suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

M	DIN 371/376	6G
	2.5×D	HSS-E PM
B 3.5-5		R



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ▣ 46	P3.1 ■ 43	P3.2 ▣ 33	P4.1 ▣ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ▣ 89	N3.3 ▣ 43	N4.1 ▣ 72									

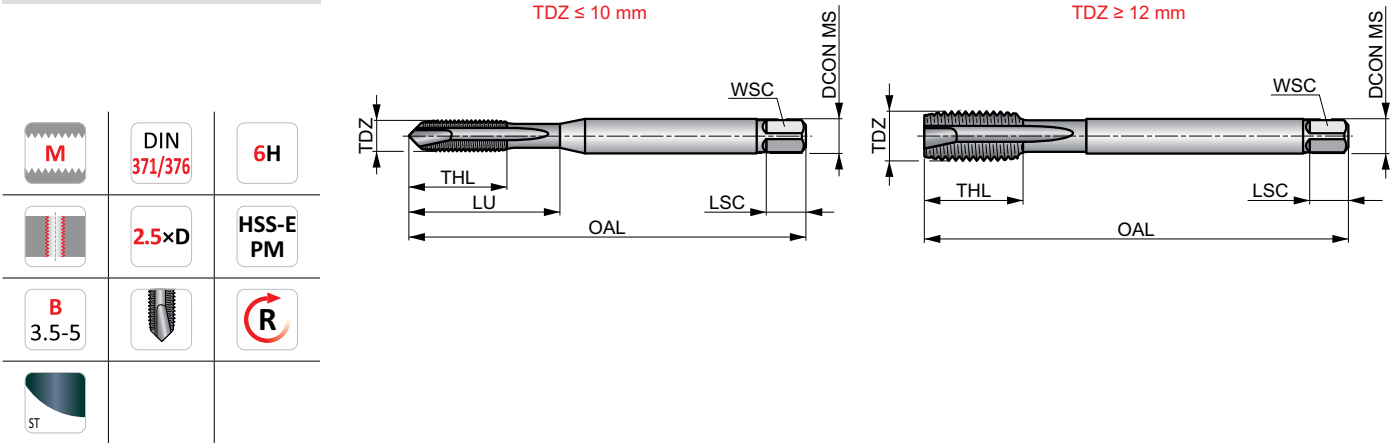
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
EP006GM3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6479120
EP006GM4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	6479121
EP006GM5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	6479122
EP006GM6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6479123
EP006GM8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6479124
EP006GM10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6479125
EP006GM12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6479126
EP006GM16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–	1	6479127
EP006GM20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–	1	6479128

EP016H



HSS-E-PM Spiral Point Machine Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral point is suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.



M	DIN 371/376	6H
	2.5xD	HSS-E PM
B 3.5-5		R

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
EP01M2 ¹⁾	2	0.40	50.0	6	2.80	2.10	5	2	1.60	D3	9.00	P	1	5973473
EP01M2.5 ¹⁾	2.5	0.45	50.0	8	2.80	2.10	5	2	2.10	D3	12.50	P	1	5973475
EP01M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	D3	18.00	P	1	5973452
EP01M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	D4	21.00	P	1	5973511
EP01M4DIN376	4	0.70	63.0	12	2.80	2.10	5	3	3.30	D4	21.00	P	1	5973515
EP01M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	D4	25.00	P	1	5973434
EP01M5DIN376	5	0.80	70.0	13	3.50	2.70	6	3	4.20	D4	25.00	P	1	5973436
EP01M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	D5	30.00	P	1	5973440
EP01M6DIN376	6	1.00	80.0	15	4.50	3.40	6	3	5.00	D5	30.00	P	1	5973442
EP01M7	7	1.00	80.0	15	7.00	5.50	8	3	6.00	D5	30.00	P	1	5973446
EP01M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	D5	35.00	P	1	5973448
EP01M8DIN376	8	1.25	90.0	18	6.00	4.90	8	3	6.80	D5	35.00	P	1	5973450
EP01M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	D6	39.00	P	1	5973453
EP01M10DIN376	10	1.50	100.0	20	7.00	5.50	8	3	8.50	D6	-	P	1	5973455
EP01M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	D6	-	P	1	5973459
EP01M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	D7	-	P	1	5973465
EP01M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	D7	-	P	1	5973467
EP01M18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	D7	-	P	1	5973471
EP01M20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	D7	-	P	1	5973477
EP01M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	D8	-	P	1	5973480
EP01M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	D8	-	P	1	5973484
EP01M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	D8	-	P	1	5973429
EP01M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	D9	-	P	1	5973506

¹⁾ HSS-E.

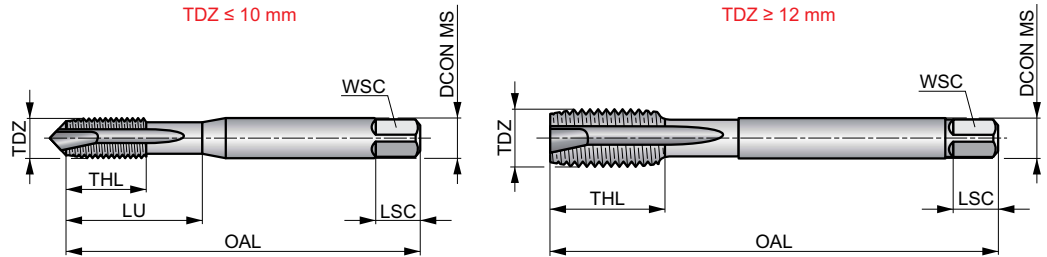
EPOOTIN



HSS-E-PM Spiral Point Machine Tap with TiN Coating, Metric, DIN Standard

High performance machine tap with spiral point for through holes only. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	DIN 371/376	6H
	2.5×D	HSS-E-PM
	3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 112	P1.2 ■ 125	P1.3 ■ 131	P2.1 ■ 95	P2.2 ■ 79	P2.3 ■ 66	P3.1 ■ 62	P3.2 ■ 46	P3.3 ▣ 39	P4.1 ■ 33	P4.2 ▣ 30	M1.1 ■ 36	M1.2 ■ 30	M2.1 ■ 33
M2.2 ■ 26	M3.1 ■ 26	M3.2 ■ 23	M3.3 ▣ 20	M4.1 ▣ 16	K1.1 ▣ 69	K1.2 ▣ 52	K1.3 ▣ 39	K2.1 ▣ 98	K2.2 ▣ 79	K3.1 ▣ 85	K3.2 ▣ 66	K4.1 ▣ 79	K4.2 ▣ 59
K5.1 ▣ 92	K5.2 ▣ 66	N1.3 ■ 39	N2.1 ■ 121	N2.2 ■ 112	N2.3 ■ 79	N3.1 ▣ 197	N3.2 ▣ 118	N4.1 ▣ 85					

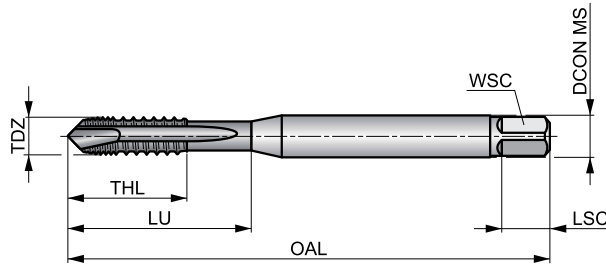
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
EPOOTINM3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	6196703
EPOOTINM4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	6196704
EPOOTINM5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	6196705
EPOOTINM6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	6196706
EPOOTINM8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	6196707
EPOOTINM10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	6196708
EPOOTINM12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	–	1	6196709
EPOOTINM14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	–	1	6196710
EPOOTINM16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	–	1	6196711
EPOOTINM18	18	2.50	125.0	30	14.00	11.00	14	4	15.50	–	1	6196712
EPOOTINM20	20	2.50	140.0	30	16.00	12.00	15	4	17.50	–	1	6196713
EPOOTINM22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	–	1	6196714
EPOOTINM24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	–	1	6196715
EPOOTINM27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	–	1	6196716
EPOOTINM30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	–	1	6196717

E422



HSS-E-PM Spiral Point Interrupted Thread Machine Tap, Metric, DIN Standard

High performance spiral point tap for through holes only. Interrupted threads to lessen the damaging effects of chip wedging, reduce friction, permit better lubrication and allow more space for the passage of chips. The reinforced shank increases the strength and TiN coating enables higher cutting speeds and performance.



	DIN 371	6H
	3xD	HSS-E PM
B 3.5-5		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 121	P1.2 ■ 138	P1.3 ■ 141	P2.1 ■ 105	P2.2 ■ 92	P2.3 ▣ 82	P3.1 ■ 49	P3.2 ▣ 39	P4.1 ▣ 30	N1.1 ■ 82	N1.2 ■ 62	N1.3 ▣ 43	N2.1 ▣ 151	N2.2 ▣ 138
N2.3 ▣ 98	N3.1 ■ 249	N3.2 ▣ 148	N3.3 ■ 75	N4.1 ▣ 98									

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E422M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	5976629
E422M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	5976633
E422M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	5976637
E422M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	5976640
E422M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	5976644
E422M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	5976624

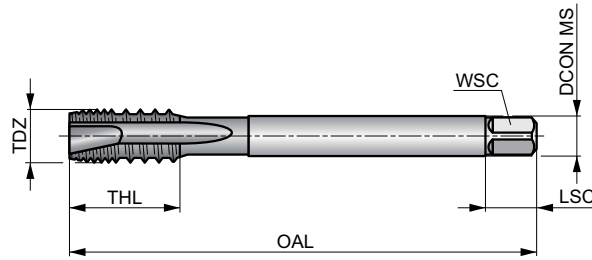
E423



HSS-E-PM Spiral Point Interrupted Thread Machine Tap, Metric, DIN Standard

High performance spiral point tap for through holes only. Interrupted threads to lessen the damaging effects of chip wedging, reduce friction, permit better lubrication and allow more space for the passage of chips. The reduced shank increases the reach and TiN coating enables higher cutting speeds and performance.

M	DIN 376	6H
	3xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 121	P1.2 ■ 138	P1.3 ■ 141	P2.1 ■ 105	P2.2 ■ 92	P2.3 ▣ 182	P3.1 ■ 49	P3.2 ▣ 39	P4.1 ▣ 30	N1.1 ■ 82	N1.2 ■ 62	N1.3 ▣ 43	N2.1 ▣ 151	N2.2 ▣ 138
N2.3 ▣ 98	N3.1 ■ 249	N3.2 ▣ 148	N3.3 ■ 75	N4.1 ▣ 98									

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E423M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	1	5976648
E423M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	1	5976651
E423M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	1	5976655
E423M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	1	5976668
E423M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	1	5976674

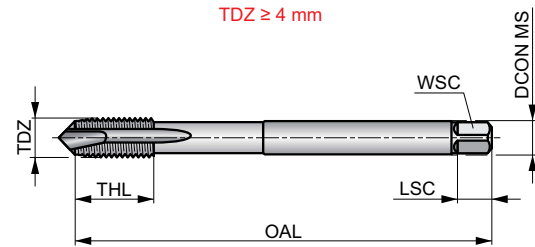
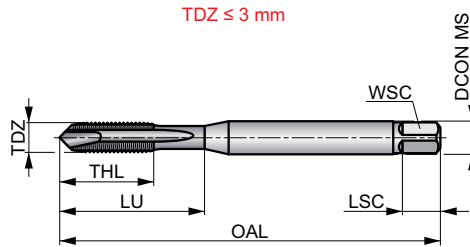
E606



HSS-E-PM Spiral Point Long Series Machine Tap, Metric, ISO Standard

Longer design for extra reach when threading difficult to access holes. The spiral point drives the swarf forward ahead of the cutting edges for a safe and reliable process. Suited for through holes only.

	ISO 2283	6H
	2.5xD	HSS-E PM
B 3.5-5		
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 46	P1.3 ■ 46	P2.1 ■ 36	P2.2 ■ 33	P2.3 ▣ 30	P3.1 ■ 30	P3.2 ▣ 20	P4.1 ▣ 13	N1.1 ▣ 33	N1.2 ▣ 26	N1.3 ▣ 16	N2.1 ▣ 66	N2.2 ▣ 59
N2.3 ▣ 43	N3.1 ▣ 108	N3.3 ▣ 33	N4.1 ▣ 66										

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E606M3	3	0.50	66.0	9	3.15	2.50	5	3	2.50	18.00	1	5977935
E606M4	4	0.70	73.0	12	3.15	2.50	5	3	3.30	–	1	5977938
E606M5	5	0.80	79.0	12	4.00	3.15	6	3	4.20	–	1	5977940
E606M6	6	1.00	89.0	14	4.50	3.55	6	3	5.00	–	1	5977943
E606M8	8	1.25	97.0	17	6.30	5.00	8	3	6.80	–	1	5977945
E606M10	10	1.50	108.0	19	8.00	6.30	9	3	8.50	–	1	5978068
E606M12	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–	1	5978076
E606M16	16	2.00	137.0	25	12.50	10.00	13	3	14.00	–	1	5978086

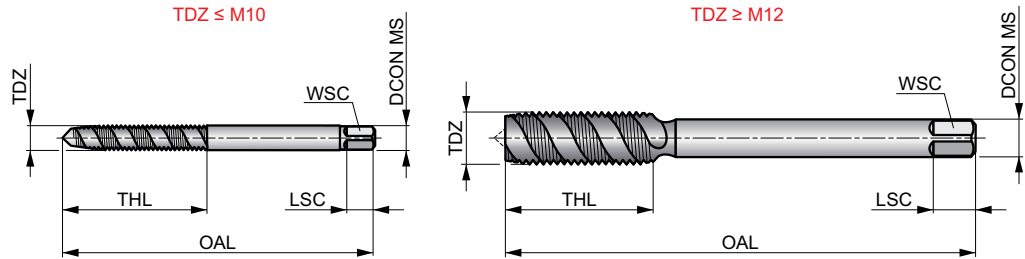
1788(M)



HSS 52° Spiral Flute Tap, Metric, ANSI Standard

Productive tap design for blind hole applications in a variety of materials. Similar in design to the standard 1586 series but with higher helix angle. The faster spiral improves the chip drawing action and permits the bridging of larger gapes inside a hole. Recommended to be used with synchronous feed tap holders.

	ANSI	6H
	2.5×D	HSS
	λ 52°	



Workpiece material group suitability and starting values for cutting speed (ft/min).

N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3
■ 49	■ 36	■ 26	■ 102	■ 92	■ 66	■ 135	■ 79	■ 39

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(mm)	(inch)								
1788M3X.5N03	M3	0.50	1.15/16	5/8	.141	.110	3/16	2	D3	B	1	6008650
1788M4X.7N03	M4	0.70	2.1/8	3/4	.168	.131	1/4	3	D4	B	1	6008674
1788M5X.8N03	M5	0.80	2.3/8	7/8	.194	.152	1/4	3	D4	B	1	6008683
1788M6X1.0N03	M6	1.00	2.1/2	1"	.255	.191	5/16	3	D5	B	1	6008692
1788M8X1.25N03	M8	1.25	2.23/32	1.1/8	.318	.238	3/8	3	D5	B	1	6008709
1788M10X1.5N03	M10	1.50	2.15/16	1.1/4	.381	.286	7/16	3	D6	B	1	6008628
1788M12X1.75N03	M12	1.75	3.3/8	1.21/32	.367	.275	7/16	3	D6	B	1	6008634

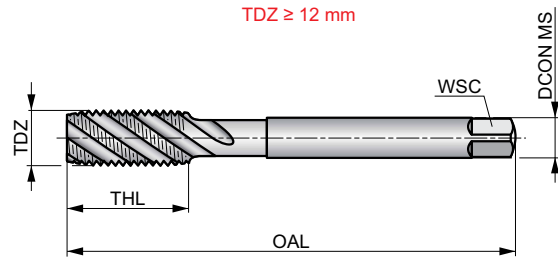
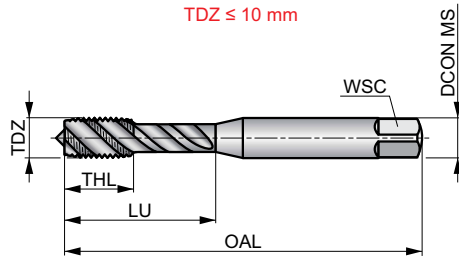
E007



HSS-E-PM 45° Spiral Flute Tap, Metric, ANSI Standard

Spiral flute tap with constant rake angle to prevent nesting in blind hole applications. Made from HSS-E-PM to prolong tool life, make it more predictable, improve speed performance and reduce chipping. Bright finish to produce more accurate cleaner threads preventing work-material from sticking to the cutting edges.

	ANSI	6H
	2.5×D	HSS-E PM
		λ 45°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(inch)	(inch)				(mm)	(inch)					
E007M4	4	0.70	2.1/8	.248	.168	.131	3	3.30	N30	D4	.653	SB	1	5973801
E007M5	5	0.80	2.3/8	.265	.194	.152	3	4.20	N19	D4	.843	SB	1	5973805
E007M6	6	1.00	2.1/2	.394	.255	.191	3	5.00	N9	D5	1.099	SB	1	5973808
E007M8	8	1.25	2.23/32	.457	.318	.238	3	6.80	H	D5	1.309	SB	1	5973811
E007M10	10	1.50	2.15/16	.531	.381	.286	3	8.50	Q	D6	1.442	SB	1	5973786
E007M12	12	1.75	3.3/8	.689	.367	.275	3	10.30	Y	D6	—	SB	1	5973787
E007M16	16	2.00	3.13/16	.709	.480	.360	3	14.00	35/64	D7	—	SB	1	5973791

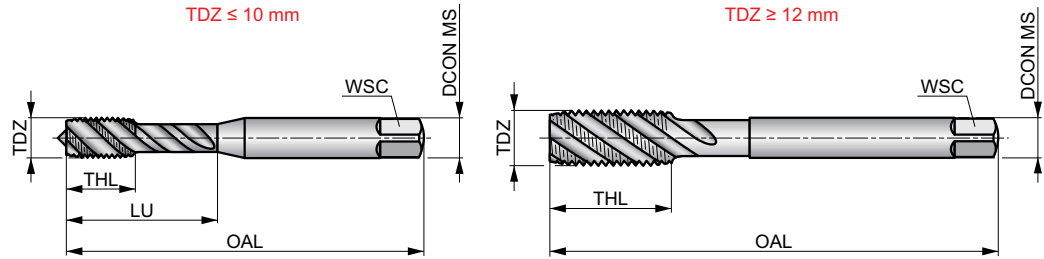
E008



HSS-E-PM 45° Spiral Flute Tap, Metric, ANSI Standard, Steam Tempered

Spiral flute tap with constant rake angle to prevent nesting in blind hole applications, similar in design to the standard E007 series, but with steam tempered surface which acts to retain cutting fluid and prevent chip to tool welding in abrasive and harder ferrous work-materials.

	ANSI	6H
	2.5×D	HSS-E-PM
		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	PHD	Limits	LU	Chamfer	Pack Qty	MID
E008M4	4	0.70	2.1/8	.248	.168	.131	3	3.30	N30	D4	.653	SB	1	5973840
E008M5	5	0.80	2.3/8	.265	.194	.152	3	4.20	N19	D4	.843	SB	1	5973843
E008M6	6	1.00	2.1/2	.394	.255	.191	3	5.00	N9	D5	1.099	SB	1	5973846
E008M8	8	1.25	2.23/32	.457	.318	.238	3	6.80	H	D5	1.309	SB	1	5973850
E008M10	10	1.50	2.15/16	.531	.381	.286	3	8.50	Q	D6	1.442	SB	1	5973814
E008M12	12	1.75	3.3/8	.689	.367	.275	3	10.30	Y	D6	–	SB	1	5973816
E008M14	14	2.00	3.19/32	.709	.429	.322	3	12.00	15/32	D7	–	SB	1	5973820
E008M16	16	2.00	3.13/16	.709	.480	.360	3	14.00	35/64	D7	–	SB	1	5973824
E008M20	20	2.50	4.15/32	.886	.652	.489	3	17.50	11/16	D7	–	SB	1	5973836

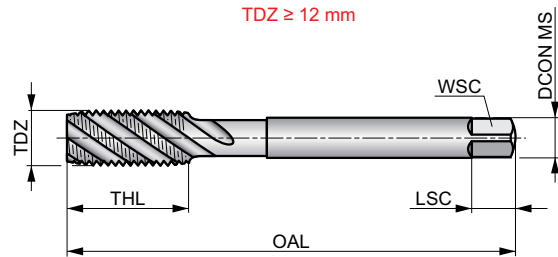
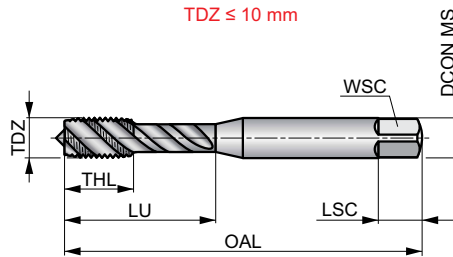
E002



HSS-E-PM 45° Spiral Flute Machine Tap, Metric, ISO Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

	ISO 529	6H
	2.5xD	HSS-E PM
		λ 45°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Products from this series are also available in set with drills. Please see L113 or L002.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(inch)			
E002M2 ¹⁾	2	0.40	41.0	8	2.50	2.00	4	2	1.60	D3	.315	SB	1	5974446
E002M2.5 ¹⁾	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	D3	.374	SB	1	5974485
E002M3	3	0.50	48.0	6	3.15	2.50	5	3	2.50	D3	.492	SB	1	5974500
E002M4	4	0.70	53.0	7	4.00	3.15	6	3	3.30	D4	.748	SB	1	5974312
E002M5	5	0.80	58.0	8	5.00	4.00	7	3	4.20	D4	.866	SB	1	5974316
E002M6	6	1.00	66.0	10	6.30	5.00	8	3	5.00	D5	1.063	SB	1	5974320
E002M8	8	1.25	72.0	12	8.00	6.30	9	3	6.80	D5	1.220	SB	1	5974325
E002M10	10	1.50	80.0	15	10.00	8.00	11	3	8.50	D6	1.378	SB	1	5973886
E002M12	12	1.75	89.0	16	9.00	7.10	10	3	10.30	D6	—	SB	1	5973895
E002M14	14	2.00	95.0	18	11.20	9.00	12	3	12.00	D7	—	SB	1	5974304
E002M16	16	2.00	102.0	18	12.50	10.00	13	4	14.00	D7	—	SB	1	5974349
E002M18	18	2.50	112.0	29	14.00	11.20	14	4	15.50	D7	—	SB	1	5974399
E002M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	—	SB	1	5974491
E002M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	D8	—	SB	1	5974497

¹⁾ HSS-E.

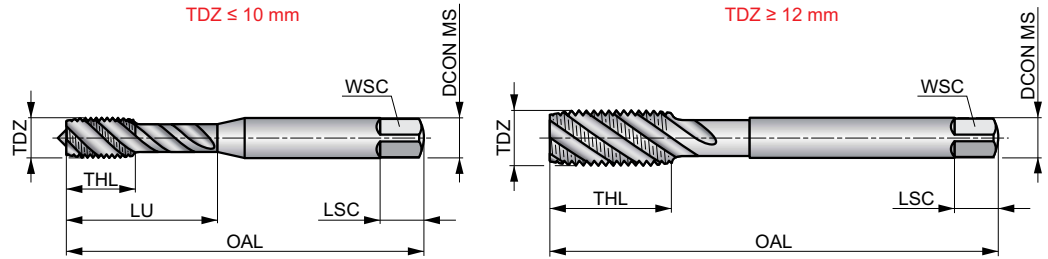
E003



HSS-E-PM 45° Spiral Flute Machine Tap, Metric, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

Products from this series are also available in set with drills. Please see L113.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(inch)			
E003M2 ¹⁾	2	0.40	41.0	8	2.50	2.00	4	2	1.60	D3	.315	SB	1	5974357
E003M2.5 ¹⁾	2.5	0.45	44.5	9.5	2.80	2.24	5	2	2.05	D3	.374	SB	1	5974361
E003M3	3	0.50	48.0	6	3.15	2.50	5	3	2.50	D3	.492	SB	1	5974380
E003M4	4	0.70	53.0	7	4.00	3.15	6	3	3.30	D4	.748	SB	1	5974390
E003M5	5	0.80	58.0	8	5.00	4.00	7	3	4.20	D4	.866	SB	1	5974394
E003M6	6	1.00	66.0	10	6.30	5.00	8	3	5.00	D5	1.063	SB	1	5974404
E003M8	8	1.25	72.0	12	8.00	6.30	9	3	6.80	D5	1.220	SB	1	5974414
E003M10	10	1.50	80.0	15	10.00	8.00	11	3	8.50	D6	1.378	SB	1	5974329
E003M12	12	1.75	89.0	16	9.00	7.10	10	3	10.30	D6	–	SB	1	5974334
E003M14	14	2.00	95.0	18	11.20	9.00	12	3	12.00	D7	–	SB	1	5974339
E003M16	16	2.00	102.0	18	12.50	10.00	13	4	14.00	D7	–	SB	1	5974344
E003M18	18	2.50	112.0	29	14.00	11.20	14	4	15.50	D7	–	SB	1	5974352
E003M20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	D7	–	SB	1	5974366
E003M22	22	2.50	118.0	29	16.00	12.50	16	4	19.50	D8	–	SB	1	5974371
E003M24	24	3.00	130.0	35	18.00	14.00	18	4	21.00	D8	–	SB	1	5974376

¹⁾ HSS-E.

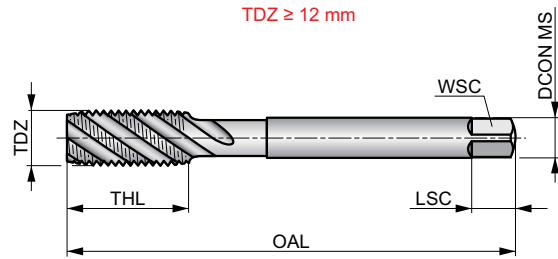
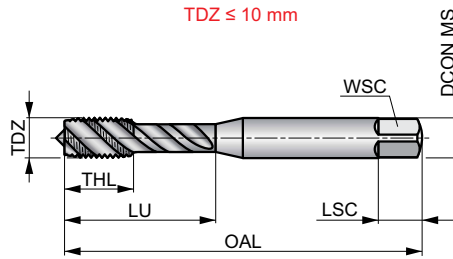
E002TIN



HSS-E-PM 45° Spiral Flute Machine Tap, Metric, ISO Standard

High performance machine tap with spiral flute for blind holes. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	ISO 529	6H
	2.5xD	HSS-E PM
		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 105	P1.2 ■ 118	P1.3 ■ 121	P2.1 ■ 89	P2.2 ■ 75	P2.3 ■ 62	P3.1 ■ 59	P3.2 ■ 43	P3.3 ■ 36	P4.1 ■ 33	P4.2 ■ 26	M1.1 ■ 33	M1.2 ■ 26	M2.1 ■ 30
M2.2 ■ 23	M3.1 ■ 23	M3.2 ■ 20	M3.3 ■ 16	M4.1 ■ 13	N2.1 ■ 115	N2.2 ■ 105	N2.3 ■ 75						

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E002TINM3	3	0.50	48.0	6	3.15	2.50	5	3	2.50	12.50	1	6196694
E002TINM4	4	0.70	53.0	7	4.00	3.15	6	3	3.30	19.00	1	6196695
E002TINM5	5	0.80	58.0	8	5.00	4.00	7	3	4.20	22.00	1	6196696
E002TINM6	6	1.00	66.0	10	6.30	5.00	8	3	5.00	27.00	1	6196697
E002TINM8	8	1.25	72.0	12	8.00	6.30	9	3	6.80	31.00	1	6196698
E002TINM10	10	1.50	80.0	15	10.00	8.00	11	3	8.50	35.00	1	6196699
E002TINM12	12	1.75	89.0	16	9.00	7.10	10	3	10.30	–	1	6196700
E002TINM16	16	2.00	102.0	18	12.50	10.00	13	4	14.00	–	1	6196701
E002TINM20	20	2.50	112.0	29	14.00	11.20	14	4	17.50	–	1	6196702

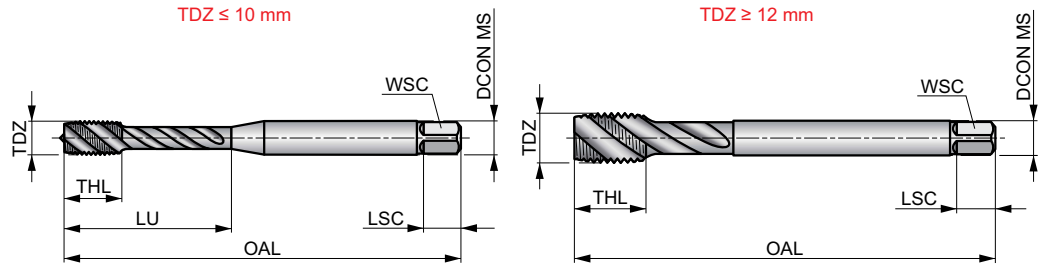
EX006H



HSS-E-PM 45° Spiral Flute Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral flute is suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

	DIN 371/376	6H
	2.5×D	HSS-E-PM
		λ 45°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Products from this series are also available in set with drills. Please see L114 or L001.

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
EX00M2 ¹⁾	2	0.40	45.0	4	2.80	2.10	5	3	1.60	D3	.354	SB	1	5973751
EX00M2.5 ¹⁾	2.5	0.45	50.0	4	2.80	2.10	5	3	2.05	D3	.492	SB	1	5973567
EX00M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	D3	.709	SB	1	5973590
EX00M3.5	3.5	0.60	56.0	7	4.00	3.00	6	3	2.90	D4	.787	SB	1	5973595
EX00M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	D4	.827	SB	1	5973630
EX00M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	D4	.984	SB	1	5973649
EX00M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	D5	1.220	SB	1	5973673
EX00M6DIN376	6	1.00	80.0	10	4.50	3.40	6	3	5.00	D5	1.220	SB	1	5973677
EX00M7	7	1.00	80.0	10	7.00	5.50	8	3	6.00	D5	1.220	SB	1	5973690
EX00M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	D5	1.378	SB	1	5973694
EX00M8DIN376	8	1.25	90.0	13	6.00	4.90	8	3	6.80	D5	1.378	SB	1	5973697
EX00M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	D6	1.535	SB	1	5973986
EX00M10DIN376	10	1.50	100.0	15	7.00	5.50	8	3	8.50	D6	1.535	SB	1	5973991
EX00M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	D6	—	SB	1	5973611
EX00M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	D7	—	SB	1	5973709
EX00M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	D7	—	SB	1	5973744
EX00M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	D7	—	SB	1	5973748
EX00M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	D7	—	SB	1	5973571
EX00M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	D8	—	SB	1	5973578
EX00M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	D8	—	SB	1	5973583
EX00M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	D8	—	SB	1	5973586
EX00M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	D9	—	SB	1	5973599
EX00M33	33	3.50	180.0	36	25.00	20.00	23	4	29.50	D9	—	SB	1	5973604
EX00M36	36	4.00	200.0	40	28.00	22.00	25	4	32.00	D9	—	SB	1	5973616
EX00M39	39	4.00	200.0	40	32.00	24.00	27	4	35.00	D9	—	SB	1	5973624

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(inch)			
EX00M42 ¹⁾	42	4.50	200.0	45	32.00	24.00	27	4	37.50	D10	–	SB	1	5973634
EX00M48 ¹⁾	48	5.00	250.0	50	36.00	29.00	32	4	43.00	D11	–	SB	1	5973646
EX00M52 ¹⁾	52	5.00	250.0	50	40.00	32.00	35	5	47.00	D11	–	SB	1	5973653
EX00M56 ¹⁾	56	5.50	250.0	55	40.00	32.00	35	5	50.50	D11	–	SB	1	5973658
EX00M64 ¹⁾	64	6.00	315.0	60	50.00	39.00	42	6	58.00	D12	–	SB	1	5973682

¹⁾ HSS-E.

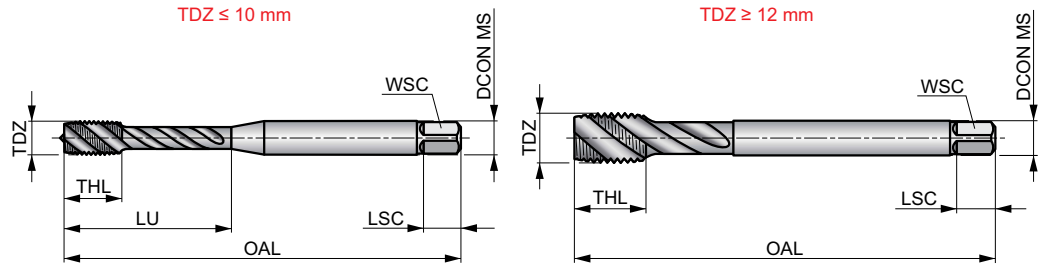
EX006G



HSS-E-PM 45° Spiral Flute Tap, Metric, DIN Standard

Machine tap to produce threads within 6G tolerance for a fit with large allowance. The spiral flute is suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges.

M	DIN 371/376	6G
	2.5×D	HSS-E PM
C 2-3		λ 45°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ▣ 43	P3.1 ■ 39	P3.2 ▣ 30	P4.1 ▣ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
EX00M36G	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	5973620
EX00M46G	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	5973641
EX00M56G	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	5973669
EX00M66G	6	1.00	80.0	10	6.00	4.90	8	3	5.00	31.00	1	5973686
EX00M86G	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00	1	5973701
EX00M106G	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	5973560
EX00M126G	12	1.75	110.0	16	9.00	7.00	10	3	10.30	–	1	5973664
EX00M146G	14	2.00	110.0	20	11.00	9.00	12	3	12.00	–	1	5973740
EX00M166G	16	2.00	110.0	20	12.00	9.00	12	4	14.00	–	1	5973746
EX00M206G	20	2.50	140.0	25	16.00	12.00	15	4	17.50	–	1	5973574

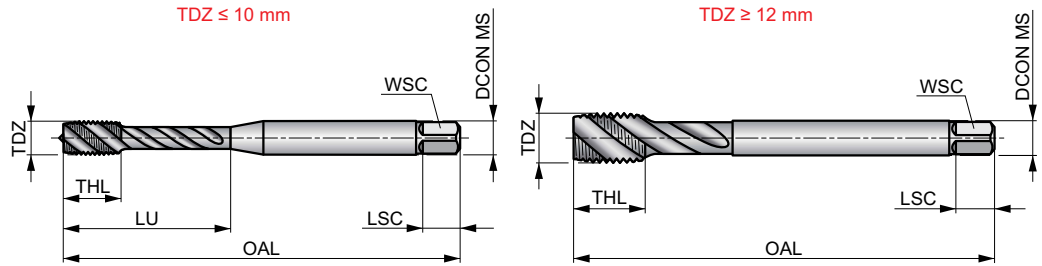
EX016H



HSS-E-PM 45° Spiral Flute Machine Tap, Metric, DIN Standard

Machine tap to produce normal fit threads within 6H tolerance. The spiral flute is suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	DIN 371/376	6H
	2.5×D	HSS-E PM
		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣69	P2.2 ▣49	P2.3 ▣43	P3.2 ▣30	P3.3 ▣26	P4.1 ▣23	P4.2 ▣16	M1.1 ▣26	M1.2 ▣20	M2.1 ▣23	M2.2 ▣16	M3.1 ▣16	M3.2 ▣13	M3.3 ▣10
M4.1 ▣10													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
EX01M2 ¹⁾	2	0.40	45.0	4	2.80	2.10	5	3	1.60	D3	.354	SB	1	5973739
EX01M2.5 ¹⁾	2.5	0.45	50.0	4	2.80	2.10	5	3	2.05	D3	.492	SB	1	5973742
EX01M3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	D3	.709	SB	1	5973698
EX01M4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	D4	.827	SB	1	5973532
EX01M5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	D4	.984	SB	1	5973544
EX01M6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	D5	1.220	SB	1	5973559
EX01M6DIN376	6	1.00	80.0	10	4.50	3.40	6	3	5.00	D5	1.220	SB	1	5973562
EX01M7	7	1.00	80.0	10	7.00	5.50	8	3	6.00	D5	1.220	SB	1	5973576
EX01M8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	D5	1.378	SB	1	5973580
EX01M8DIN376	8	1.25	90.0	13	6.00	4.90	8	3	6.80	D5	1.378	SB	1	5973584
EX01M10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	D6	1.535	SB	1	5973705
EX01M10DIN376	10	1.50	100.0	15	7.00	5.50	8	3	8.50	D6	1.535	SB	1	5973712
EX01M12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	D6	—	SB	1	5973717
EX01M14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	D7	—	SB	1	5973722
EX01M16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	D7	—	SB	1	5973730
EX01M18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	D7	—	SB	1	5973736
EX01M20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	D7	—	SB	1	5973524
EX01M22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	D8	—	SB	1	5973594
EX01M24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	D8	—	SB	1	5973644
EX01M27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	D8	—	SB	1	5973689
EX01M30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	D9	—	SB	1	5973706
EX01M33	33	3.50	180.0	36	25.00	20.00	23	4	29.50	D9	—	SB	1	5973710
EX01M36	36	4.00	200.0	40	28.00	22.00	25	4	32.00	D9	—	SB	1	5973526
EX01M39	39	4.00	200.0	40	32.00	24.00	27	4	35.00	D9	—	SB	1	5973530
EX01M42 ¹⁾	42	4.50	200.0	45	32.00	24.00	27	4	37.50	D10	—	SB	1	5973534
EX01M48 ¹⁾	48	5.00	250.0	50	36.00	29.00	32	4	43.00	D11	—	SB	1	5973539

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(inch)			
EX01M56 ¹⁾	56	5.50	250.0	55	40.00	32.00	35	5	50.50	D11	–	SB	1	5973550
EX01M64 ¹⁾	64	6.00	315.0	60	50.00	39.00	42	6	58.00	D12	–	SB	1	5973565

¹⁾ HSS-E.

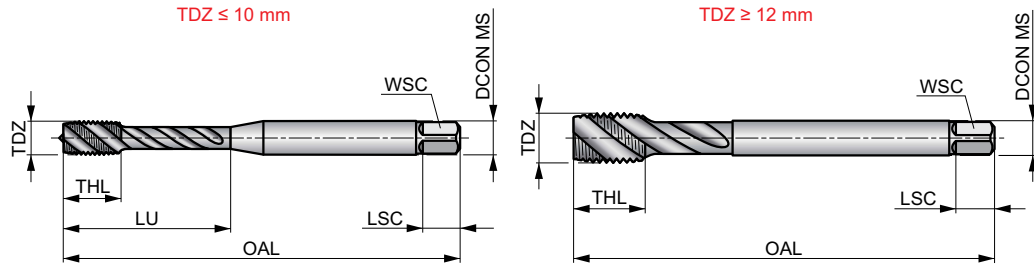
EXOOTIN



HSS-E-PM 45° Spiral Flute Machine Tap, Metric, DIN Standard

High performance machine tap with spiral flute for blind holes. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

M	DIN 371/376	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°
R		TiN



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 105	P1.2 ■ 118	P1.3 ■ 121	P2.1 ■ 89	P2.2 ■ 75	P2.3 ■ 62	P3.1 ■ 59	P3.2 ■ 43	P3.3 ■ 36	P4.1 ■ 33	P4.2 ■ 26	M1.1 ■ 33	M1.2 ■ 26	M2.1 ■ 30
M2.2 ■ 23	M3.1 ■ 23	M3.2 ■ 20	M3.3 ■ 16	M4.1 ■ 13	N2.1 ■ 115	N2.2 ■ 105	N2.3 ■ 75						

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
EXOOTINM3	3	0.50	56.0	6	3.50	2.70	6	3	2.50	18.00	1	6196728
EXOOTINM4	4	0.70	63.0	7	4.50	3.40	6	3	3.30	21.00	1	6196729
EXOOTINM5	5	0.80	70.0	8	6.00	4.90	8	3	4.20	25.00	1	6196730
EXOOTINM6	6	1.00	80.0	10	6.00	4.90	8	3	5.00	31.00	1	6196731
EXOOTINM8	8	1.25	90.0	12	8.00	6.20	9	3	6.80	35.00	1	6196732
EXOOTINM10	10	1.50	100.0	15	10.00	8.00	11	3	8.50	39.00	1	6196733
EXOOTINM12	12	1.75	110.0	16	9.00	7.00	10	3	10.30	—	1	6196734
EXOOTINM14	14	2.00	110.0	20	11.00	9.00	12	3	12.00	—	1	6196735
EXOOTINM16	16	2.00	110.0	20	12.00	9.00	12	4	14.00	—	1	6196736
EXOOTINM18	18	2.50	125.0	25	14.00	11.00	14	4	15.50	—	1	6196737
EXOOTINM20	20	2.50	140.0	25	16.00	12.00	15	4	17.50	—	1	6196738
EXOOTINM22	22	2.50	140.0	25	18.00	14.50	17	4	19.50	—	1	6196739
EXOOTINM24	24	3.00	160.0	30	18.00	14.50	17	4	21.00	—	1	6196740
EXOOTINM27	27	3.00	160.0	30	20.00	16.00	19	4	24.00	—	1	6196741
EXOOTINM30	30	3.50	180.0	36	22.00	18.00	21	4	26.50	—	1	6196742

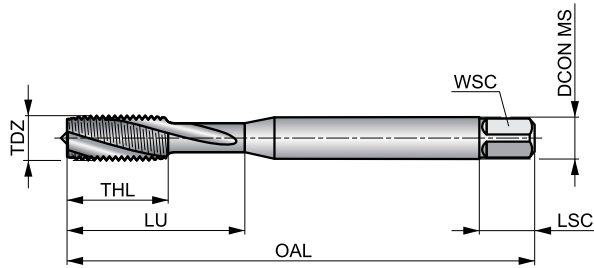
E207



HSS-E-PM 15° Spiral Flute Machine Tap, Metric, DIN Standard

Slow spiral flute tap for up to 1.5xD deep blind holes. With 15° helix for more stability threading in harder and higher strength steels. The reinforced shank increases strength against torsional twist.

	DIN 371	6H
	1.5xD	HSS-E PM
C 2-3		λ 15°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.2 ■ 52	P2.3 ■ 46	P3.1 ■ 33	P3.2 ■ 26	P4.1 ■ 20	N1.3 ■ 20	N2.1 ■ 75	N2.2 ■ 69	N2.3 ■ 49
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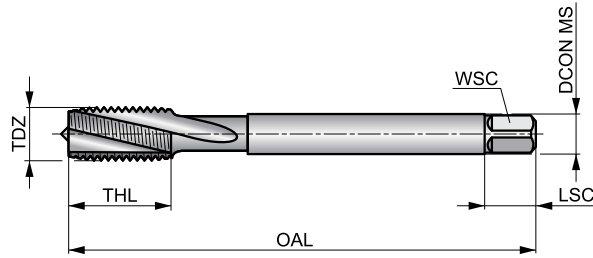
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E207M2	2	0.40	45.0	4	2.80	2.10	5	3	1.60	9.00	1	5975721
E207M2.5	2.5	0.45	50.0	4	2.80	2.10	5	3	2.05	12.50	1	5975723
E207M3	3	0.50	56.0	9	3.50	2.70	6	3	2.50	18.00	1	5975725
E207M4	4	0.70	63.0	12	4.50	3.40	6	3	3.30	21.00	1	5975729
E207M5	5	0.80	70.0	13	6.00	4.90	8	3	4.20	25.00	1	5975731
E207M6	6	1.00	80.0	15	6.00	4.90	8	3	5.00	30.00	1	5975735
E207M8	8	1.25	90.0	18	8.00	6.20	9	3	6.80	35.00	1	5975737
E207M10	10	1.50	100.0	20	10.00	8.00	11	3	8.50	39.00	1	5975719

E258



HSS-E-PM 15° Spiral Flute Machine Tap, Metric, DIN Standard

Slow spiral flute tap for up to 1.5xD deep blind holes. With 15° helix for more stability threading in harder and higher strength steels. The reduced shank increases the reach of the tap.



	DIN 376	6H
	1.5xD	HSS-E PM
C 2-3		λ 15°

Workpiece material group suitability and starting values for cutting speed (ft/min).

P2.2 ■ 52	P2.3 ■ 46	P3.1 ■ 33	P3.2 ■ 26	P4.1 ■ 20	N1.3 ■ 20	N2.1 ■ 75	N2.2 ■ 69	N2.3 ■ 49
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Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E258M4	4	0.70	63.0	12	2.80	2.10	5	3	3.30	1	5975370
E258M5	5	0.80	70.0	13	3.50	2.70	6	3	4.20	1	5975374
E258M6	6	1.00	80.0	15	4.50	3.40	6	3	5.00	1	5975379
E258M8	8	1.25	90.0	18	6.00	4.90	8	3	6.80	1	5975383
E258M10	10	1.50	100.0	20	7.00	5.50	8	3	8.50	1	5975319
E258M12	12	1.75	110.0	23	9.00	7.00	10	3	10.30	1	5975323
E258M14	14	2.00	110.0	25	11.00	9.00	12	3	12.00	1	5975327
E258M16	16	2.00	110.0	25	12.00	9.00	12	3	14.00	1	5975331
E258M18	18	2.50	125.0	30	14.00	11.00	14	3	15.50	1	5975335
E258M20	20	2.50	140.0	30	16.00	12.00	15	3	17.50	1	5975339
E258M22	22	2.50	140.0	34	18.00	14.50	17	4	19.50	1	5975343
E258M24	24	3.00	160.0	38	18.00	14.50	17	4	21.00	1	5975351
E258M27	27	3.00	160.0	38	20.00	16.00	19	4	24.00	1	5975354
E258M30	30	3.50	180.0	45	22.00	18.00	21	4	26.50	1	5975358
E258M36	36	4.00	200.0	55	28.00	22.00	25	4	32.00	1	5975366

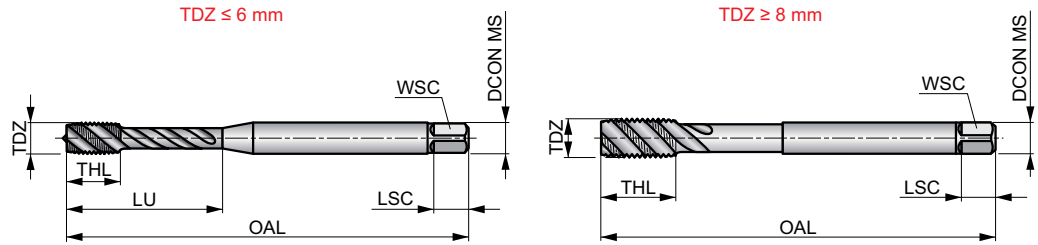
E605



HSS-E-PM 40° Spiral Flute Long Series Machine Tap, Metric, ISO Standard

Longer design to give extra reach when threading difficult to access holes. The spiral flutes transport the swarf away from the cutting edges and out of the hole, avoiding packing of swarf in the flutes or at the bottom. Suited for blind holes.

M	ISO 2283	6H
	2xD	HSS-E PM
C 2-3		λ 40°
R	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 43	P1.3 ■ 43	P2.1 ■ 33	P2.2 ■ 30	P2.3 ■ 26	P3.1 ■ 26	P3.2 ■ 16	P4.1 ■ 10	N1.1 ■ 30	N1.2 ■ 23	N1.3 ■ 13	N2.1 ■ 62	N2.2 ■ 56
N2.3 ■ 39													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E605M3	3	0.50	66.0	9	3.15	2.50	5	2	2.50	21.00	1	5977835
E605M4	4	0.70	73.0	9	4.00	3.15	6	2	3.30	22.00	1	5977927
E605M5	5	0.80	79.0	12	5.00	4.00	7	3	4.20	26.00	1	5977955
E605M6	6	1.00	89.0	12	6.30	5.00	8	3	5.00	29.00	1	5977985
E605M8	8	1.25	97.0	12	6.30	5.00	8	3	6.80	–	1	5978017
E605M10	10	1.50	108.0	14	8.00	6.30	9	3	8.50	–	1	5977798
E605M12	12	1.75	119.0	23	9.00	7.10	10	3	10.30	–	1	5977810
E605M16	16	2.00	137.0	25	12.50	10.00	13	3	14.00	–	1	5977820

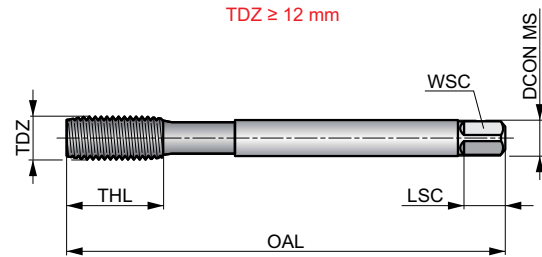
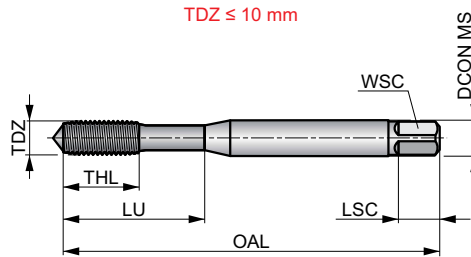
E292



HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap to produce high quality thread in blind and through holes. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	DIN 2174	6HX
	3xD	HSS-E



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ■ 167	P2.2 ■ 148	P3.1 ■ 95	P3.2 ■ 79	P3.3 ■ 59	P4.1 ■ 59	P4.2 ■ 43	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72	M2.2 ■ 59
M3.1 ■ 56	M3.2 ■ 49	M3.3 ■ 39	M4.1 ■ 26	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ■ 118	N3.3 ■ 39		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E292M1.6	1.6	0.35	40.0	8	2.50	2.10	5	3	1.40	—	1	6498040
E292M2	2	0.40	45.0	6	2.80	2.10	5	3	1.80	11.00	1	6498041
E292M2.5	2.5	0.45	50.0	8	2.80	2.10	5	3	2.30	12.50	1	6498042
E292M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00	1	6305732
E292M3.5	3.5	0.60	56.0	11	4.00	3.00	6	4	3.20	20.00	1	6305733
E292M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00	1	6305734
E292M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00	1	6305735
E292M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00	1	6305736
E292M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00	1	6305737
E292M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00	1	6305738
E292M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	—	1	6305739
E292M16	16	2.00	110.0	25	12.00	9.00	12	6	15.00	—	1	6305740

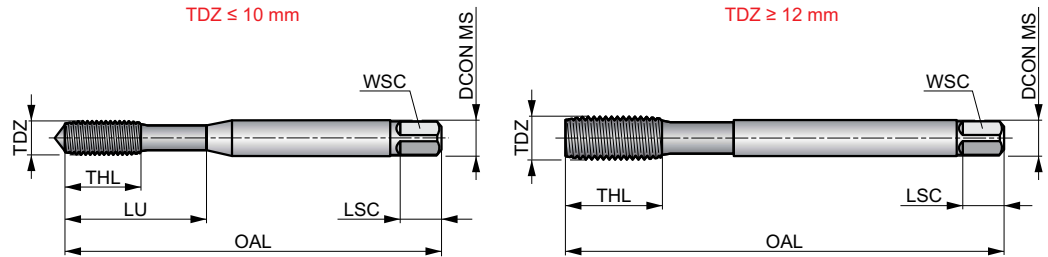
E295



HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap to produce high quality threads within 6G tolerance for a fit with large allowance. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds and extend tool life.

M	DIN 2174	6GX
	3xD	HSS-E
C 2-3.5		R



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ■ 167	P2.2 ■ 148	P3.1 ■ 95	P3.2 ■ 79	P3.3 ■ 59	P4.1 ■ 59	P4.2 ■ 43	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72	M2.2 ■ 59
M3.1 ■ 56	M3.2 ■ 49	M3.3 ■ 39	M4.1 ■ 26	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ■ 118	N3.3 ■ 39		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E295M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00	1	6305756
E295M3.5	3.5	0.60	56.0	11	4.00	3.00	6	4	3.20	20.00	1	6305757
E295M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00	1	6305758
E295M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00	1	6305759
E295M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00	1	6305760
E295M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00	1	6305761
E295M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00	1	6305762
E295M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	-	1	6305763

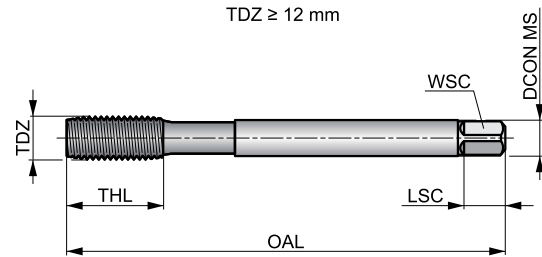
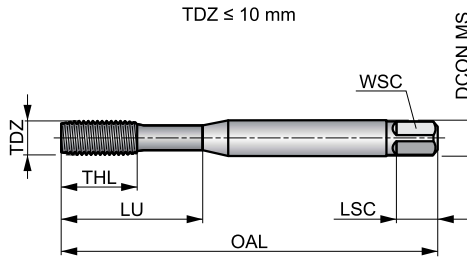
E293



HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap with full-bottoming lead to produce an almost full thread in blind holes. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, improve performance and tool life.

	DIN 2174	6HX
	3xD	HSS-E
E 1.5-2		
TiN		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ■ 167	P2.2 ■ 148	P3.1 ■ 95	P3.2 ■ 79	P3.3 ▣ 59	P4.1 ■ 59	P4.2 ▣ 43	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72	M2.2 ■ 59
M3.1 ■ 56	M3.2 ■ 49	M3.3 ▣ 39	M4.1 ▣ 26	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ▣ 118	N3.3 ▣ 39		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E293M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00	1	6305741
E293M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00	1	6305742
E293M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00	1	6305743
E293M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00	1	6305744
E293M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00	1	6305745
E293M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00	1	6305746
E293M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	-	1	7174062

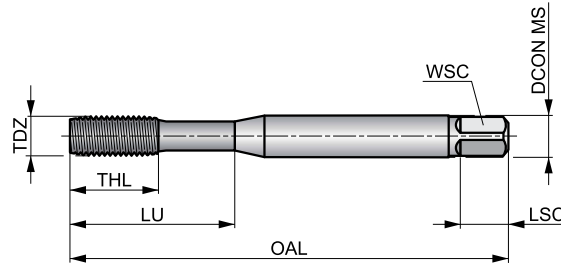
E296



HSS-E Thread Forming TiN Coated Tap, Metric, DIN Standard

High performance fluteless tap with full-bottoming lead to produce an almost full blind hole thread within 6G tolerance. Provides a strong, clean, chip-free and accurate thread. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, improve performance and tool life.

M	DIN 2174	6GX
3xD	HSS-E	
E 1.5-2	R	
TiN		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ■ 167	P2.2 ■ 148	P3.1 ■ 95	P3.2 ■ 79	P3.3 ■ 59	P4.1 ■ 59	P4.2 ■ 43	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72	M2.2 ■ 59
M3.1 ■ 56	M3.2 ■ 49	M3.3 ■ 39	M4.1 ■ 26	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ■ 118	N3.3 ■ 39		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E296M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00	1	6305764
E296M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00	1	6305765
E296M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00	1	6305766
E296M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00	1	6305767
E296M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00	1	6305768
E296M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00	1	6305769

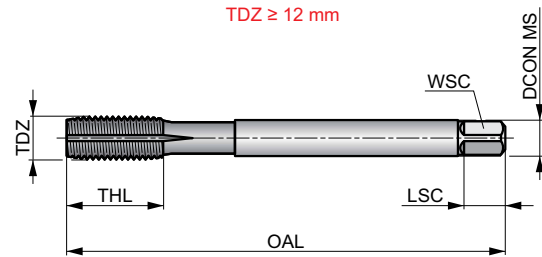
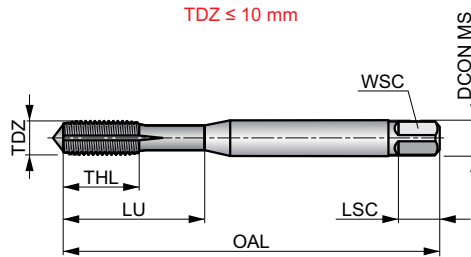
E294



HSS-E Thread Forming TiN Coated Tap, Oil-Grooves, Metric, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, performance and tool life. With oil-grooves for better lubrication in deep holes.

	DIN 2174	6HX
	3.5xD	HSS-E
C 2-3.5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ■ 167	P2.2 ■ 148	P2.3 ▣ 131	P3.1 ■ 95	P3.2 ■ 79	P3.3 ■ 66	P4.1 ■ 59	P4.2 ■ 49	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72
M2.2 ■ 59	M2.3 ▣ 39	M3.1 ■ 56	M3.2 ■ 49	M3.3 ■ 46	M4.1 ■ 33	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ▣ 131	N3.3 ▣ 39

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E294M3	3	0.50	56.0	9	3.50	2.70	6	4	2.80	18.00	1	6305747
E294M4	4	0.70	63.0	12	4.50	3.40	6	5	3.70	21.00	1	6305748
E294M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00	1	6305749
E294M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00	1	6305750
E294M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00	1	6305751
E294M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00	1	6305752
E294M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	-	1	6305753
E294M14	14	2.00	110.0	25	11.00	9.00	12	6	13.00	-	1	6305754
E294M16	16	2.00	110.0	25	12.00	9.00	12	6	15.00	-	1	6305755

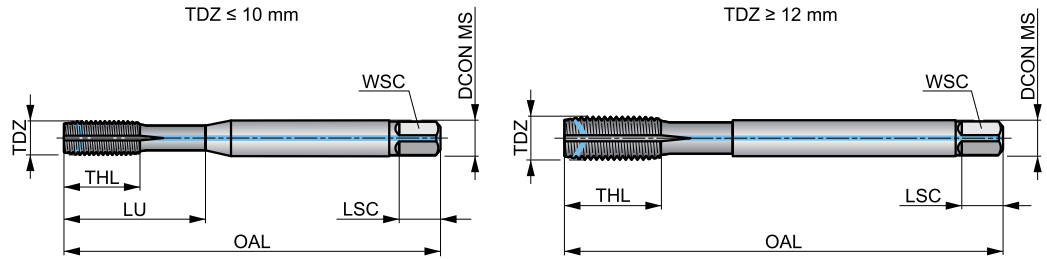
E289



HSS-E Thread Forming TiN Coated Tap, Through Coolant, Metric, DIN Standard

High performance fluteless tap for blind and through holes. Provide strong, clean, chip-free and accurate threads with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, performance and tool life. Through coolant and oil-grooves for optimal lubrication.

	DIN 2174	6HX
	3.5×D	HSS-E
C 2-3.5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 164	P1.2 ■ 184	P1.3 ■ 184	P2.1 ■ 184	P2.2 ■ 161	P2.3 ▣ 138	P3.1 ■ 108	P3.2 ■ 85	P3.3 ■ 72	P4.1 ■ 66	P4.2 ■ 52	M1.1 ■ 89	M1.2 ■ 75	M2.1 ■ 79
M2.2 ■ 62	M2.3 ▣ 39	M3.1 ■ 59	M3.2 ■ 52	M3.3 ■ 46	M4.1 ■ 33	N1.1 ■ 197	N1.2 ■ 180	N1.3 ■ 102	N2.1 ■ 223	N2.2 ■ 197	N2.3 ■ 144	N3.1 ▣ 131	N3.3 ▣ 46

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E289M5	5	0.80	70.0	13	6.00	4.90	8	5	4.60	25.00	1	7174064
E289M6	6	1.00	80.0	15	6.00	4.90	8	5	5.50	30.00	1	7174065
E289M8	8	1.25	90.0	18	8.00	6.20	9	5	7.40	35.00	1	7174066
E289M10	10	1.50	100.0	20	10.00	8.00	11	5	9.30	39.00	1	7174067
E289M12	12	1.75	110.0	23	9.00	7.00	10	5	11.20	-	1	7174068

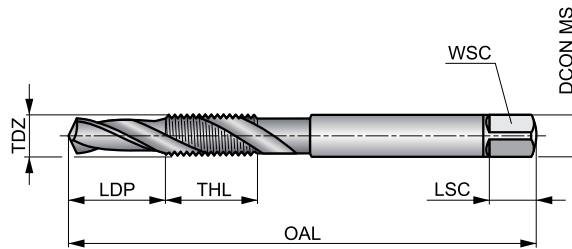
E650



HSS Drill-Tap Combination Tool with 30° Spiral Flute, Metric, ISO Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.

	ISO 	6H
	1.5×D	HSS
C 2-3		λ 30°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 59	P1.2 ■ 66	P1.3 ■ 72	P2.1 ■ 66	P2.2 ■ 59	P3.1 ■ 49	P3.2 ■ 39	N1.2 ■ 46	N1.3 ■ 30	N3.1 ■ 66	N3.2 ■ 49	N4.1 ■ 82
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Products from this series are also available in set. Please see L126.

Product	TDZ	TP	TD	OAL	THL	LDP	DCON MS	WSC	LSC	NOF	Pack Qty	MID
E650M3	3	0.50	2.50	56.0	10	6.00	3.15	2.50	5	2	1	5978325
E650M4	4	0.70	3.30	65.0	12	8.00	4.00	3.15	6	2	1	5978330
E650M5	5	0.80	4.20	69.0	15	10.00	5.00	4.00	7	2	1	5978339
E650M6	6	1.00	5.00	84.0	18	12.00	6.30	5.00	8	2	1	5978342
E650M8	8	1.25	6.80	96.0	21	16.00	8.00	6.30	9	2	1	5978347
E650M10	10	1.50	8.50	108.0	22	20.00	10.00	8.00	11	2	1	5978304
E650M12	12	1.75	10.20	113.0	29	24.00	9.00	7.10	10	2	1	5978308
E650M14	14	2.00	12.00	123.0	30	28.00	11.20	9.00	12	2	1	5978313
E650M16	16	2.00	14.00	134.0	32	32.00	12.50	10.00	13	2	1	5978320

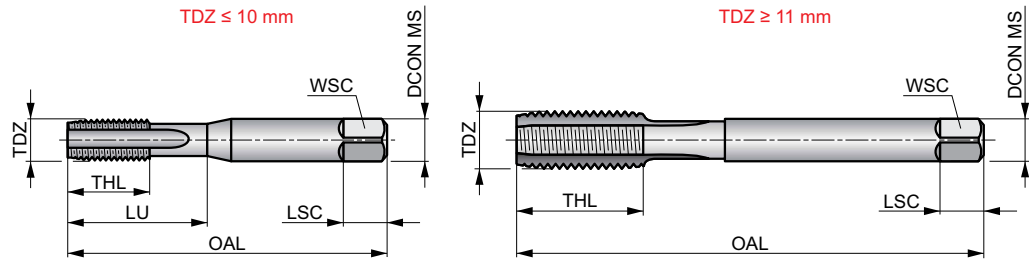
E513



HSS Straight Flute Hand Tap, Metric Fine, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available with taper lead NO1 for short through holes, plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes. Also, as a set NO7 with a plug lead and bottoming lead tap.

	ISO 529	6H
	1.5xD	HSS
		Bright



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
E513M3X.35N01	3	0.35	48.0	12.5	3.15	2.50	5	3	2.65	12.50	T	1	5977029
E513M3X.35N02	3	0.35	48.0	12.5	3.15	2.50	5	3	2.65	12.50	P	1	5977033
E513M3X.35N03	3	0.35	48.0	12.5	3.15	2.50	5	3	2.65	12.50	SB	1	5977041
E513M3.5X.35N03	3.5	0.35	48.0	12.5	3.15	2.50	5	3	3.20	12.50	SB	1	5977025
E513M4X.5N01	4	0.50	53.0	14	4.00	3.15	6	3	3.50	14.00	T	1	5977117
E513M4X.5N02	4	0.50	53.0	14	4.00	3.15	6	3	3.50	14.00	P	1	5977125
E513M4X.5N03	4	0.50	53.0	14	4.00	3.15	6	3	3.50	14.00	SB	1	5977128
E513M5X.5N01	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00	T	1	5977153
E513M5X.5N02	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00	P	1	5977196
E513M5X.5N03	5	0.50	58.0	11	5.00	4.00	7	3	4.50	22.00	SB	1	5977223
E513M5X.75N01	5	0.75	58.0	11	5.00	4.00	7	3	4.30	22.00	T	1	5977229
E513M5X.75N02	5	0.75	58.0	11	5.00	4.00	7	3	4.30	22.00	P	1	5977231
E513M5X.75N03	5	0.75	58.0	11	5.00	4.00	7	3	4.30	22.00	SB	1	5977233
E513M6X.5N01	6	0.50	66.0	13	6.30	5.00	8	3	5.50	26.00	T	1	5977076
E513M6X.5N02	6	0.50	66.0	13	6.30	5.00	8	3	5.50	26.00	P	1	5977080
E513M6X.5N03	6	0.50	66.0	13	6.30	5.00	8	3	5.50	26.00	SB	1	5977083
E513M6X.75N01	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00	T	1	5977087
E513M6X.75N02	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00	P	1	5977094
E513M6X.75N03	6	0.75	66.0	13	6.30	5.00	8	3	5.30	26.00	SB	1	5977098
E513M7X.75N01	7	0.75	66.0	13	7.10	5.60	8	3	6.30	26.00	T	1	5977106
E513M7X.75N02	7	0.75	66.0	13	7.10	5.60	8	3	6.30	26.00	P	1	5977114
E513M7X.75N03	7	0.75	66.0	13	7.10	5.60	8	3	6.30	26.00	SB	1	5977118
E513M8X.5N01	8	0.50	72.0	16	8.00	6.30	9	3	7.50	29.00	T	1	5977122

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E513M8X.5N02	8	0.50	72.0	16	8.00	6.30	9	3	7.50	29.00	P	1	5977126
E513M8X.5N03	8	0.50	72.0	16	8.00	6.30	9	3	7.50	29.00	SB	1	5977130
E513M8X.75N01	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00	T	1	5977134
E513M8X.75N02	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00	P	1	5977136
E513M8X.75N03	8	0.75	72.0	16	8.00	6.30	9	3	7.30	29.00	SB	1	5977141
E513M8X1.0N01	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00	T	1	5977149
E513M8X1.0N02	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00	P	1	5977155
E513M8X1.0N03	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00	SB	1	5977161
E513M8X1.0N07	8	1.00	72.0	16	8.00	6.30	9	3	7.00	29.00	Set of 2	1	5977163
E513M9X.75N03	9	0.75	72.0	16	9.00	7.10	10	3	8.30	29.00	SB	1	5977168
E513M9X1.0N01	9	1.00	72.0	16	9.00	7.10	10	3	8.00	29.00	T	1	5977172
E513M9X1.0N02	9	1.00	72.0	16	9.00	7.10	10	3	8.00	29.00	P	1	5977177
E513M9X1.0N03	9	1.00	72.0	16	9.00	7.10	10	3	8.00	29.00	SB	1	5977182
E513M10X.5N03	10	0.50	80.0	18	10.00	8.00	11	3	9.50	34.00	SB	1	5977390
E513M10X.75N01	10	0.75	80.0	18	10.00	8.00	11	3	9.30	34.00	T	1	5977393
E513M10X.75N02	10	0.75	80.0	18	10.00	8.00	11	3	9.30	34.00	P	1	5977396
E513M10X.75N03	10	0.75	80.0	18	10.00	8.00	11	3	9.30	34.00	SB	1	5977398
E513M10X1.0N01	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00	T	1	5977402
E513M10X1.0N02	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00	P	1	5977404
E513M10X1.0N03	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00	SB	1	5977407
E513M10X1.0N06	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00	Set of 3	1	5976682
E513M10X1.0N07	10	1.00	80.0	18	10.00	8.00	11	3	9.00	34.00	Set of 2	1	5976716
E513M10X1.25N01	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00	T	1	5976737
E513M10X1.25N02	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00	P	1	5976768
E513M10X1.25N03	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00	SB	1	5976817
E513M10X1.25N06	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00	Set of 3	1	5976828
E513M10X1.25N07	10	1.25	80.0	18	10.00	8.00	11	3	8.80	34.00	Set of 2	1	5976833
E513M11X.75N01	11	0.75	85.0	19	8.00	6.30	9	3	10.30	–	T	1	5976838
E513M11X.75N02	11	0.75	85.0	19	8.00	6.30	9	3	10.30	–	P	1	5976843
E513M11X.75N03	11	0.75	85.0	19	8.00	6.30	9	3	10.30	–	SB	1	5976886
E513M11X1.0N01	11	1.00	85.0	19	8.00	6.30	9	3	10.00	–	T	1	5976690
E513M11X1.0N02	11	1.00	85.0	19	8.00	6.30	9	3	10.00	–	P	1	5976693
E513M11X1.0N03	11	1.00	85.0	19	8.00	6.30	9	3	10.00	–	SB	1	5976696
E513M11X1.25N03	11	1.25	85.0	19	8.00	6.30	9	3	9.80	–	SB	1	5976699
E513M12X.75N03	12	0.75	89.0	22	9.00	7.10	10	3	11.30	–	SB	1	5976702
E513M12X1.0N01	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–	T	1	5976704
E513M12X1.0N02	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–	P	1	5976707
E513M12X1.0N03	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–	SB	1	5976710
E513M12X1.0N07	12	1.00	89.0	22	9.00	7.10	10	3	11.00	–	Set of 2	1	5976713
E513M12X1.25N01	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–	T	1	5976718
E513M12X1.25N02	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–	P	1	5976719
E513M12X1.25N03	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–	SB	1	5976721
E513M12X1.25N06	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–	Set of 3	1	5976723
E513M12X1.25N07	12	1.25	89.0	22	9.00	7.10	10	3	10.80	–	Set of 2	1	5976725
E513M12X1.5N01	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–	T	1	5976727
E513M12X1.5N02	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–	P	1	5976729
E513M12X1.5N03	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–	SB	1	5976731
E513M12X1.5N06	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–	Set of 3	1	5976733
E513M12X1.5N07	12	1.50	89.0	22	9.00	7.10	10	3	10.50	–	Set of 2	1	5976735
E513M13X1.5N03	13	1.50	89.0	22	9.00	7.10	10	3	11.50	–	SB	1	5976739
E513M14X1.0N01	14	1.00	95.0	24	11.20	9.00	12	4	13.00	–	T	1	5976742
E513M14X1.0N02	14	1.00	95.0	24	11.20	9.00	12	4	13.00	–	P	1	5976744
E513M14X1.0N03	14	1.00	95.0	24	11.20	9.00	12	4	13.00	–	SB	1	5976747
E513M14X1.25N01	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–	T	1	5976755
E513M14X1.25N02	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–	P	1	5976758
E513M14X1.25N03	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–	SB	1	5976760
E513M14X1.25N06	14	1.25	95.0	24	11.20	9.00	12	4	12.80	–	Set of 3	1	5976763
E513M14X1.5N01	14	1.50	95.0	24	11.20	9.00	12	4	12.50	–	T	1	5976773

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
E513M14X1.5N02	14	1.50	95.0	24	11.20	9.00	12	4	12.50	—	P	1	5976777
E513M14X1.5N03	14	1.50	95.0	24	11.20	9.00	12	4	12.50	—	SB	1	5976780
E513M14X1.5N06	14	1.50	95.0	24	11.20	9.00	12	4	12.50	—	Set of 3	1	5976784
E513M14X1.5N07	14	1.50	95.0	24	11.20	9.00	12	4	12.50	—	Set of 2	1	5976788
E513M15X1.5N02	15	1.50	95.0	24	11.20	9.00	12	4	13.50	—	P	1	5976793
E513M15X1.5N03	15	1.50	95.0	24	11.20	9.00	12	4	13.50	—	SB	1	5976797
E513M16X1.0N01	16	1.00	102.0	24	12.50	10.00	13	4	15.00	—	T	1	5976806
E513M16X1.0N02	16	1.00	102.0	24	12.50	10.00	13	4	15.00	—	P	1	5976813
E513M16X1.0N03	16	1.00	102.0	24	12.50	10.00	13	4	15.00	—	SB	1	5976823
E513M16X1.0N07	16	1.00	102.0	24	12.50	10.00	13	4	15.00	—	Set of 2	1	5977250
E513M16X1.25N03	16	1.25	102.0	24	12.50	10.00	13	4	14.80	—	SB	1	5977291
E513M16X1.5N01	16	1.50	102.0	24	12.50	10.00	13	4	14.50	—	T	1	5977327
E513M16X1.5N02	16	1.50	102.0	24	12.50	10.00	13	4	14.50	—	P	1	5977362
E513M16X1.5N03	16	1.50	102.0	24	12.50	10.00	13	4	14.50	—	SB	1	5977395
E513M16X1.5N06	16	1.50	102.0	24	12.50	10.00	13	4	14.50	—	Set of 3	1	5977400
E513M16X1.5N07	16	1.50	102.0	24	12.50	10.00	13	4	14.50	—	Set of 2	1	5977401
E513M18X1.0N01	18	1.00	112.0	29	14.00	11.20	14	4	17.00	—	T	1	5977403
E513M18X1.0N02	18	1.00	112.0	29	14.00	11.20	14	4	17.00	—	P	1	5977405
E513M18X1.0N03	18	1.00	112.0	29	14.00	11.20	14	4	17.00	—	SB	1	5977255
E513M18X1.5N01	18	1.50	112.0	29	14.00	11.20	14	4	16.50	—	T	1	5977261
E513M18X1.5N02	18	1.50	112.0	29	14.00	11.20	14	4	16.50	—	P	1	5977264
E513M18X1.5N03	18	1.50	112.0	29	14.00	11.20	14	4	16.50	—	SB	1	5977267
E513M18X1.5N06	18	1.50	112.0	29	14.00	11.20	14	4	16.50	—	Set of 3	1	5977271
E513M18X1.5N07	18	1.50	112.0	29	14.00	11.20	14	4	16.50	—	Set of 2	1	5977275
E513M18X2.0N01	18	2.00	112.0	29	14.00	11.20	14	4	16.00	—	T	1	5977279
E513M18X2.0N02	18	2.00	112.0	29	14.00	11.20	14	4	16.00	—	P	1	5977283
E513M18X2.0N03	18	2.00	112.0	29	14.00	11.20	14	4	16.00	—	SB	1	5977287
E513M20X1.0N02	20	1.00	112.0	29	14.00	11.20	14	4	19.00	—	P	1	5977302
E513M20X1.0N03	20	1.00	112.0	29	14.00	11.20	14	4	19.00	—	SB	1	5977305
E513M20X1.5N01	20	1.50	112.0	29	14.00	11.20	14	4	18.50	—	T	1	5977311
E513M20X1.5N02	20	1.50	112.0	29	14.00	11.20	14	4	18.50	—	P	1	5977314
E513M20X1.5N03	20	1.50	112.0	29	14.00	11.20	14	4	18.50	—	SB	1	5977318
E513M20X1.5N06	20	1.50	112.0	29	14.00	11.20	14	4	18.50	—	Set of 3	1	5977322
E513M20X1.5N07	20	1.50	112.0	29	14.00	11.20	14	4	18.50	—	Set of 2	1	5977324
E513M20X2.0N01	20	2.00	112.0	29	14.00	11.20	14	4	18.00	—	T	1	5977330
E513M20X2.0N02	20	2.00	112.0	29	14.00	11.20	14	4	18.00	—	P	1	5977333
E513M20X2.0N03	20	2.00	112.0	29	14.00	11.20	14	4	18.00	—	SB	1	5977336
E513M20X2.0N07	20	2.00	112.0	29	14.00	11.20	14	4	18.00	—	Set of 2	1	5977341
E513M22X1.0N02	22	1.00	118.0	29	16.00	12.50	16	4	21.00	—	P	1	5977344
E513M22X1.0N03	22	1.00	118.0	29	16.00	12.50	16	4	21.00	—	SB	1	5977347
E513M22X1.0N07	22	1.00	118.0	29	16.00	12.50	16	4	21.00	—	Set of 2	1	5977350
E513M22X1.5N01	22	1.50	118.0	29	16.00	12.50	16	4	20.50	—	T	1	5977353
E513M22X1.5N02	22	1.50	118.0	29	16.00	12.50	16	4	20.50	—	P	1	5977356
E513M22X1.5N03	22	1.50	118.0	29	16.00	12.50	16	4	20.50	—	SB	1	5977359
E513M22X1.5N07	22	1.50	118.0	29	16.00	12.50	16	4	20.50	—	Set of 2	1	5977365
E513M22X2.0N01	22	2.00	118.0	29	16.00	12.50	16	4	20.00	—	T	1	5977369
E513M22X2.0N02	22	2.00	118.0	29	16.00	12.50	16	4	20.00	—	P	1	5977372
E513M22X2.0N03	22	2.00	118.0	29	16.00	12.50	16	4	20.00	—	SB	1	5977375
E513M22X2.0N07	22	2.00	118.0	29	16.00	12.50	16	4	20.00	—	Set of 2	1	5977378
E513M24X1.0N02	24	1.00	130.0	35	18.00	14.00	18	4	23.00	—	P	1	5977381
E513M24X1.0N03	24	1.00	130.0	35	18.00	14.00	18	4	23.00	—	SB	1	5977383
E513M24X1.5N01	24	1.50	130.0	35	18.00	14.00	18	4	22.50	—	T	1	5977386
E513M24X1.5N02	24	1.50	130.0	35	18.00	14.00	18	4	22.50	—	P	1	5977389
E513M24X1.5N03	24	1.50	130.0	35	18.00	14.00	18	4	22.50	—	SB	1	5977392
E513M24X1.5N07	24	1.50	130.0	35	18.00	14.00	18	4	22.50	—	Set of 2	1	5977399
E513M24X2.0N01	24	2.00	130.0	35	18.00	14.00	18	4	22.00	—	T	1	5976996
E513M24X2.0N02	24	2.00	130.0	35	18.00	14.00	18	4	22.00	—	P	1	5977038
E513M24X2.0N03	24	2.00	130.0	35	18.00	14.00	18	4	22.00	—	SB	1	5977079

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E513M24X2.0N07	24	2.00	130.0	35	18.00	14.00	18	4	22.00	—	Set of 2	1	5977121
E513M25X1.5N01	25	1.50	130.0	35	18.00	14.00	18	4	23.50	—	T	1	5977166
E513M25X1.5N02	25	1.50	130.0	35	18.00	14.00	18	4	23.50	—	P	1	5977175
E513M25X1.5N03	25	1.50	130.0	35	18.00	14.00	18	4	23.50	—	SB	1	5977179
E513M25X1.5N06	25	1.50	130.0	35	18.00	14.00	18	4	23.50	—	Set of 3	1	5977187
E513M25X1.5N07	25	1.50	130.0	35	18.00	14.00	18	4	23.50	—	Set of 2	1	5977193
E513M26X1.5N02	26	1.50	130.0	35	18.00	14.00	18	4	24.50	—	P	1	5977000
E513M26X1.5N03	26	1.50	130.0	35	18.00	14.00	18	4	24.50	—	SB	1	5977003
E513M27X1.5N02	27	1.50	135.0	35	20.00	16.00	20	4	25.50	—	P	1	5977006
E513M27X1.5N03	27	1.50	135.0	35	20.00	16.00	20	4	25.50	—	SB	1	5977010
E513M27X2.0N03	27	2.00	135.0	35	20.00	16.00	20	4	25.00	—	SB	1	5977013
E513M28X1.5N02	28	1.50	138.0	35	20.00	16.00	20	4	26.50	—	P	1	5977017
E513M28X1.5N03	28	1.50	138.0	35	20.00	16.00	20	4	26.50	—	SB	1	5977021
E513M30X1.5N02	30	1.50	138.0	41	20.00	16.00	20	4	28.50	—	P	1	5977045
E513M30X1.5N03	30	1.50	138.0	41	20.00	16.00	20	4	28.50	—	SB	1	5977049
E513M30X2.0N02	30	2.00	138.0	41	20.00	16.00	20	4	28.00	—	P	1	5977053
E513M30X2.0N03	30	2.00	138.0	41	20.00	16.00	20	4	28.00	—	SB	1	5977057
E513M32X1.5N01	32	1.50	151.0	41	22.40	18.00	22	4	30.50	—	T	1	5977062
E513M32X1.5N02	32	1.50	151.0	41	22.40	18.00	22	4	30.50	—	P	1	5977065
E513M32X1.5N03	32	1.50	151.0	41	22.40	18.00	22	4	30.50	—	SB	1	5977068
E513M33X2.0N02	33	2.00	151.0	41	22.40	18.00	22	4	31.00	—	P	1	5977071
E513M33X2.0N03	33	2.00	151.0	41	22.40	18.00	22	4	31.00	—	SB	1	5977075
E513M35X1.5N02	35	1.50	162.0	47	25.00	20.00	24	4	33.50	—	P	1	5977082
E513M35X1.5N03	35	1.50	162.0	47	25.00	20.00	24	4	33.50	—	SB	1	5977086
E513M36X1.5N03	36	1.50	162.0	47	25.00	20.00	24	4	34.50	—	SB	1	5977090
E513M36X2.0N02	36	2.00	162.0	47	25.00	20.00	24	4	34.00	—	P	1	5977093
E513M36X2.0N03	36	2.00	162.0	47	25.00	20.00	24	4	34.00	—	SB	1	5977097
E513M36X3.0N02	36	3.00	162.0	47	25.00	20.00	24	4	33.00	—	P	1	5977101
E513M36X3.0N03	36	3.00	162.0	47	25.00	20.00	24	4	33.00	—	SB	1	5977105
E513M39X3.0N03	39	3.00	170.0	47	28.00	22.40	26	4	36.00	—	SB	1	5977113
E513M40X1.5N02	40	1.50	170.0	53	28.00	22.40	26	6	38.50	—	P	1	5977137
E513M40X1.5N03	40	1.50	170.0	53	28.00	22.40	26	6	38.50	—	SB	1	5977140
E513M42X1.5N02	42	1.50	170.0	53	28.00	22.40	26	6	40.50	—	P	1	5977144
E513M42X1.5N03	42	1.50	170.0	53	28.00	22.40	26	6	40.50	—	SB	1	5977151
E513M42X3.0N03	42	3.00	170.0	53	28.00	22.40	26	6	39.00	—	SB	1	5977156
E513M45X1.5N02	45	1.50	187.0	54	31.50	25.00	28	6	43.50	—	P	1	5977160
E513M45X1.5N03	45	1.50	187.0	54	31.50	25.00	28	6	43.50	—	SB	1	5977164
E513M48X1.5N03	48	1.50	187.0	60	31.50	25.00	28	6	46.50	—	SB	1	5977170
E513M48X2.0N03	48	2.00	187.0	60	31.50	25.00	28	6	46.00	—	SB	1	5977058
E513M48X3.0N03	48	3.00	187.0	60	31.50	25.00	28	6	45.00	—	SB	1	5977110
E513M50X1.5N02	50	1.50	187.0	60	31.50	25.00	28	6	48.50	—	P	1	5977067
E513M50X1.5N03	50	1.50	187.0	60	31.50	25.00	28	6	48.50	—	SB	1	5977072

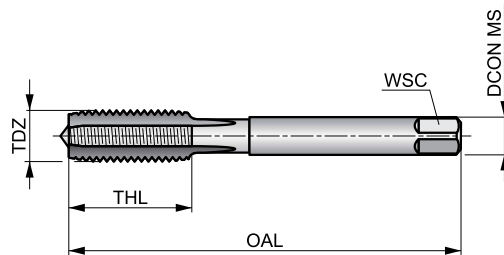
E105



HSS Straight Flute Serial Hand Tap, Metric-Fine, DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.

MF	DIN 2181	6H
1.5xD	HSS	
C 2-3	R	
Bright		



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3.3	N4.2	N4.3											
■	■	■											

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	Chamfer	Pack Qty	MID
E105M4X.5N09	4	0.50	45.0	12	4.50	3.40	3	3.50	Set	1	5975063
E105M5X.5N09	5	0.50	50.0	14	6.00	4.90	3	4.50	Set	1	5975171
E105M6X.75N09	6	0.75	56.0	16	6.00	4.90	3	5.30	Set	1	5975226
E105M8X.75N09	8	0.75	56.0	16	6.00	4.90	3	7.30	Set	1	5975236
E105M8X1.0N09	8	1.00	63.0	19	6.00	4.90	3	7.00	Set	1	5975239
E105M10X1.0N09	10	1.00	63.0	16	7.00	5.50	3	9.00	Set	1	5975038
E105M10X1.25N09	10	1.25	70.0	22	7.00	5.50	3	8.80	Set	1	5975052
E105M12X1.0N09	12	1.00	70.0	16	9.00	7.00	3	11.00	Set	1	5974971
E105M12X1.25N09	12	1.25	70.0	16	9.00	7.00	3	10.80	Set	1	5974975
E105M12X1.5N09	12	1.50	70.0	16	9.00	7.00	3	10.50	Set	1	5974978
E105M14X1.0N09	14	1.00	70.0	16	11.00	9.00	4	13.00	Set	1	5974981
E105M14X1.25N09	14	1.25	70.0	16	11.00	9.00	4	12.80	Set	1	5974985
E105M14X1.5N09	14	1.50	70.0	16	11.00	9.00	4	12.50	Set	1	5974988
E105M15X1.0N03	15	1.00	70.0	16	12.00	9.00	4	14.00	B	1	5974989
E105M15X1.0N09	15	1.00	70.0	16	12.00	9.00	4	14.00	Set	1	5974991
E105M15X1.5N09	15	1.50	70.0	16	12.00	9.00	4	13.50	Set	1	5974994
E105M16X1.5N09	16	1.50	70.0	16	12.00	9.00	4	14.50	Set	1	5975009
E105M18X1.0N09	18	1.00	80.0	18	14.00	11.00	4	17.00	Set	1	5975020
E105M18X1.5N09	18	1.50	80.0	18	14.00	11.00	4	16.50	Set	1	5974788
E105M20X1.0N09	20	1.00	80.0	18	16.00	12.00	4	19.00	Set	1	5974952
E105M20X1.5N09	20	1.50	80.0	18	16.00	12.00	4	18.50	Set	1	5974792
E105M22X1.5N09	22	1.50	80.0	22	18.00	14.50	4	20.50	Set	1	5974813
E105M24X1.5N09	24	1.50	90.0	22	18.00	14.50	4	22.50	Set	1	5974840

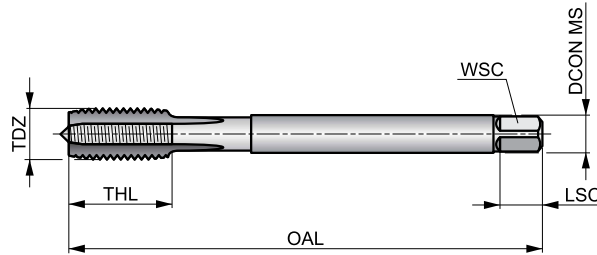
Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
E105M24X2.0N09	24	2.00	90.0	22	18.00	14.50	4	22.00	Set	1	5974854
E105M27X1.5N09	27	1.50	90.0	22	20.00	16.00	4	25.50	Set	1	5974892
E105M27X2.0N09	27	2.00	90.0	22	20.00	16.00	4	25.00	Set	1	5974902
E105M30X1.5N09	30	1.50	90.0	22	22.00	18.00	4	28.50	Set	1	5975044
E105M30X2.0N09	30	2.00	90.0	22	22.00	18.00	4	28.00	Set	1	5975188
E105M40X1.5N09	40	1.50	110.0	25	32.00	24.00	4	38.50	Set	1	5975074
E105M42X2.0N09	42	2.00	125.0	40	32.00	24.00	4	40.00	Set	1	5975128
E105M42X3.0N09	42	3.00	125.0	40	32.00	24.00	4	39.00	Set	1	5975147

E268



HSS-E-PM Straight Flute Machine Tap, Metric-Fine, DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
1.5xD	HSS-E PM	
C 2-3	R	
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E268M4X.5	4	0.50	63.0	10	2.80	2.10	5	3	3.50	1	5975130
E268M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50	1	5975199
E268M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30	1	5975621
E268M7X.75	7	0.75	80.0	15	5.50	4.30	7	3	6.30	1	5975665
E268M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30	1	5975673
E268M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00	1	5975677
E268M9X1.0	9	1.00	90.0	18	6.00	4.90	8	3	8.00	1	5975682
E268M10X.75	10	0.75	90.0	20	7.00	5.50	8	3	9.30	1	5975177
E268M10X1.0	10	1.00	90.0	20	7.00	5.50	8	3	9.00	1	5975182
E268M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80	1	5975187
E268M11X1.0	11	1.00	90.0	20	8.00	6.20	9	3	10.00	1	5975197
E268M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00	1	5975001
E268M12X1.25	12	1.25	100.0	21	9.00	7.00	10	4	10.80	1	5975051
E268M12X1.5	12	1.50	100.0	21	9.00	7.00	10	4	10.50	1	5975097
E268M14X1.0	14	1.00	100.0	21	11.00	9.00	12	4	13.00	1	5975141
E268M14X1.25	14	1.25	100.0	21	11.00	9.00	12	4	12.80	1	5975195
E268M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50	1	5975204
E268M15X1.5	15	1.50	100.0	21	12.00	9.00	12	4	13.50	1	5975209
E268M16X1.0	16	1.00	100.0	21	12.00	9.00	12	4	15.00	1	5975213
E268M16X1.5	16	1.50	100.0	21	12.00	9.00	12	4	14.50	1	5975218
E268M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00	1	5975006
E268M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50	1	5975010
E268M20X1.0	20	1.00	125.0	24	16.00	12.00	15	4	19.00	1	5975013
E268M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50	1	5975017
E268M22X1.0	22	1.00	125.0	25	18.00	14.50	17	4	21.00	1	5975023
E268M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50	1	5975027

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
E268M24X1.0	24	1.00	140.0	28	18.00	14.50	17	4	23.00	1	5975031
E268M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50	1	5975036
E268M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00	1	5975041
E268M25X1.5	25	1.50	140.0	28	18.00	14.50	17	4	23.50	1	5975046
E268M25X2.0	25	2.00	140.0	28	18.00	14.50	17	4	23.00	1	5975056
E268M26X1.5	26	1.50	140.0	28	18.00	14.50	17	4	24.50	1	5975060
E268M26X2.0	26	2.00	140.0	28	18.00	14.50	17	4	24.00	1	5975064
E268M27X1.5	27	1.50	140.0	28	20.00	16.00	19	4	25.50	1	5975068
E268M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00	1	5975073
E268M28X1.5	28	1.50	140.0	28	20.00	16.00	19	4	26.50	1	5975076
E268M28X2.0	28	2.00	140.0	28	20.00	16.00	19	4	26.00	1	5975079
E268M30X1.5	30	1.50	150.0	28	22.00	18.00	21	4	28.50	1	5975083
E268M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00	1	5975087
E268M32X1.5	32	1.50	150.0	28	22.00	18.00	21	4	30.50	1	5975093
E268M32X2.0	32	2.00	150.0	28	22.00	18.00	21	4	30.00	1	5975100
E268M33X1.5	33	1.50	160.0	30	25.00	20.00	23	4	31.50	1	5975104
E268M34X1.5	34	1.50	170.0	30	28.00	22.00	25	4	32.50	1	5975108
E268M35X1.5	35	1.50	170.0	30	28.00	22.00	25	4	33.50	1	5975112
E268M36X1.5	36	1.50	170.0	30	28.00	22.00	25	4	34.50	1	5975116
E268M36X2.0	36	2.00	170.0	30	28.00	22.00	25	4	34.00	1	5975120
E268M36X3.0	36	3.00	200.0	55	28.00	22.00	25	4	33.00	1	5975124
E268M40X1.5 ¹⁾	40	1.50	170.0	30	32.00	24.00	27	4	38.50	1	5975134
E268M40X2.0 ¹⁾	40	2.00	170.0	30	32.00	24.00	27	4	38.00	1	5975137
E268M42X1.5 ¹⁾	42	1.50	170.0	30	32.00	24.00	27	4	40.50	1	5975149
E268M42X2.0 ¹⁾	42	2.00	170.0	30	32.00	24.00	27	4	40.00	1	5975155
E268M42X3.0 ¹⁾	42	3.00	200.0	60	32.00	24.00	27	4	39.00	1	5975159
E268M45X1.5 ¹⁾	45	1.50	180.0	32	36.00	29.00	32	6	43.50	1	5975163
E268M45X2.0 ¹⁾	45	2.00	180.0	32	36.00	29.00	32	6	43.00	1	5975167
E268M45X3.0 ¹⁾	45	3.00	200.0	42	36.00	29.00	32	6	42.00	1	5975175
E268M48X1.5 ¹⁾	48	1.50	190.0	32	36.00	29.00	32	6	46.50	1	5975179
E268M48X2.0 ¹⁾	48	2.00	190.0	32	36.00	29.00	32	6	46.00	1	5975184
E268M48X3.0 ¹⁾	48	3.00	225.0	50	36.00	29.00	32	6	45.00	1	5975189
E268M50X1.5 ¹⁾	50	1.50	190.0	32	36.00	29.00	32	6	48.50	1	5975513
E268M50X2.0 ¹⁾	50	2.00	190.0	30	36.00	29.00	32	6	48.00	1	5975544

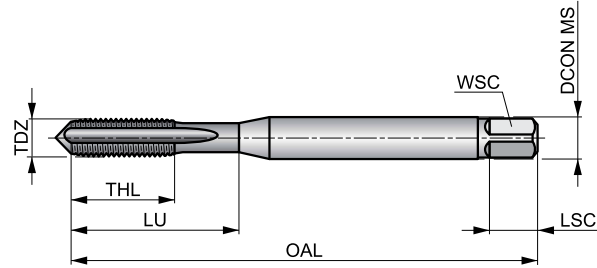
¹⁾ HSS-E.

E242



HSS-E-PM Straight Flute Machine Tap, Metric Fine, DIN Left-Handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reinforced shank increases strength against torsional twist.



MF	DIN 371	6H
1.5×D	HSS-E PM	
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

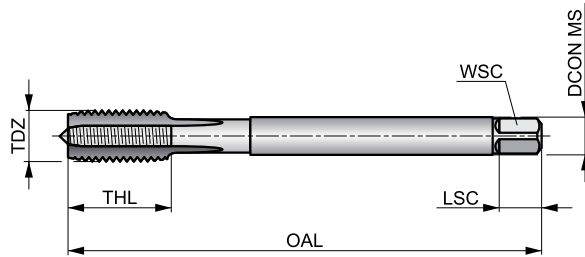
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E242M8X1.0	8	1.00	90.0	18	8.00	6.20	9	3	7.00	35.00	1	5975780
E242M10X1.0	10	1.00	100.0	20	10.00	8.00	11	3	9.00	39.00	1	5975775

E290



HSS-E-PM Straight Flute Machine Tap Metric Fine, DIN Left-Handed

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



	DIN 374	6H
	1.5xD	HSS-E PM
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▧ 23	P3.1 ■ 23	P3.2 ▧ 20	P4.1 ▧ 13	K1.1 ▧ 43	K1.2 ▧ 33	K1.3 ▧ 26	K2.1 ▧ 46	K2.2 ▧ 36
K3.1 ▧ 43	K3.2 ▧ 33	K4.1 ▧ 39	K4.2 ▧ 30	K5.1 ▧ 39	K5.2 ▧ 33	N1.3 ▧ 39	N2.1 ▧ 49	N2.2 ▧ 46	N2.3 ▧ 36	N3.1 ▧ 69	N3.2 ■ 46	N4.2 ▧ 26	

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E290M12X1.0	12	1.00	100.0	21	9.00	7.00	10	4	11.00	1	5975924
E290M12X1.5	12	1.50	100.0	21	9.00	7.00	10	4	10.50	1	5975928
E290M14X1.0	14	1.00	100.0	21	11.00	9.00	12	4	13.00	1	5975932
E290M14X1.5	14	1.50	100.0	21	11.00	9.00	12	4	12.50	1	5975936
E290M16X1.0	16	1.00	100.0	21	12.00	9.00	12	4	15.00	1	5975937
E290M16X1.5	16	1.50	100.0	21	12.00	9.00	12	4	14.50	1	5975941
E290M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50	1	5975943
E290M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50	1	5975945
E290M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50	1	5975947
E290M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50	1	5975949

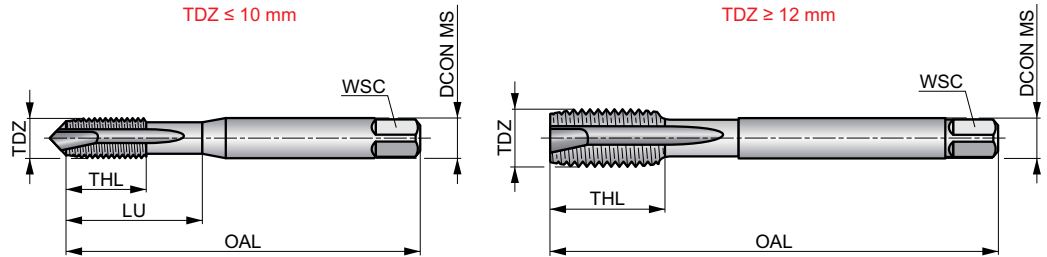
E016



HSS-E-PM Spiral Point Tap, Metric-Fine, ANSI Standard, Steam Tempered

Machine tap with spiral point for through holes only. Made from HSS-E-PM which prolongs tool life, make it more predictable, improve speed performance and reduce chipping. With steam tempered surface which acts to retain cutting fluid and prevent chip to tool welding in abrasive and harder ferrous work-materials.

	ANSI	6H
	2.5×D	HSS-E-PM
	B 3.5-5	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

Product	TDZ	TP	OAL	THL	LU	DCON MS	WSC	NOF	PHD	PHD	Limits	Chamfer	Pack Qty	MID
		(mm)	(inch)	(inch)	(inch)	(inch)	(inch)		(mm)	(inch)				
E016M8X1.0	8	1.00	2.23/32	.594	1.189	.318	.238	3	7.00	J	D5	P	1	5973568
E016M10X1.0	10	1.00	2.15/16	.602	1.292	.381	.286	3	9.00	T	D6	P	1	5973557
E016M14X1.5	14	1.50	3.19/32	.984	—	.429	.322	3	12.50	31/64	D7	P	1	5973561

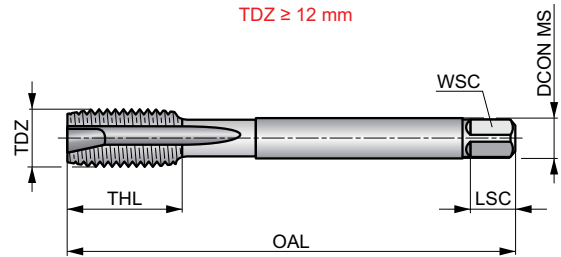
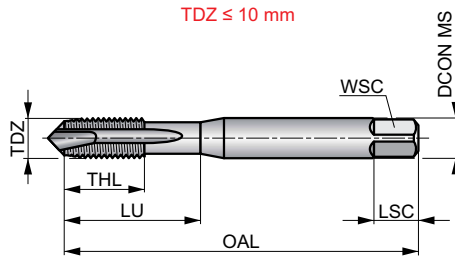
E011



HSS-E-PM Spiral Point Machine Tap, Metric Fine, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	6H
	2.5xD	HSS-E PM
B 3.5-5		
ST		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		(mm)			
E011M4X.5	4	0.50	53.0	17	4.00	3.15	6	3	3.50	D4	17.00	P	1	5974474
E011M5X.5	5	0.50	58.0	11	5.00	4.00	7	3	4.50	D4	22.00	P	1	5974477
E011M6X.5	6	0.50	66.0	13	6.30	5.00	8	3	5.50	D5	26.00	P	1	5974483
E011M6X.75	6	0.75	66.0	13	6.30	5.00	8	3	5.30	D5	26.00	P	1	5974486
E011M8X.75	8	0.75	72.0	16	8.00	6.30	9	3	7.30	D5	29.00	P	1	5974489
E011M8X1.0	8	1.00	72.0	16	8.00	6.30	9	3	7.00	D5	29.00	P	1	5974492
E011M10X1.0	10	1.00	80.0	18	10.00	8.00	11	3	9.00	D6	34.00	P	1	5974395
E011M10X1.25	10	1.25	80.0	18	10.00	8.00	11	3	8.80	D6	34.00	P	1	5974400
E011M12X1.0	12	1.00	89.0	22	9.00	7.10	10	3	11.00	D6	-	P	1	5974405
E011M12X1.25	12	1.25	89.0	22	9.00	7.10	10	3	10.80	D6	-	P	1	5974410
E011M12X1.5	12	1.50	89.0	22	9.00	7.10	10	3	10.50	D6	-	P	1	5974415
E011M14X1.0	14	1.00	95.0	24	11.20	9.00	12	3	13.00	D7	-	P	1	5974419
E011M14X1.25	14	1.25	95.0	24	11.20	9.00	12	3	12.80	D7	-	P	1	5974423
E011M14X1.5	14	1.50	95.0	24	11.20	9.00	12	3	12.50	D7	-	P	1	5974427
E011M16X1.0	16	1.00	102.0	24	12.50	10.00	13	3	15.00	D7	-	P	1	5974431
E011M16X1.5	16	1.50	102.0	24	12.50	10.00	13	3	14.50	D7	-	P	1	5974435
E011M18X1.0	18	1.00	112.0	29	14.00	11.20	14	4	17.00	D7	-	P	1	5974443
E011M18X1.5	18	1.50	112.0	29	14.00	11.20	14	4	16.50	D7	-	P	1	5974447
E011M20X1.0	20	1.00	112.0	29	14.00	11.20	14	4	19.00	D7	-	P	1	5974452
E011M20X1.5	20	1.50	112.0	29	14.00	11.20	14	4	18.50	D7	-	P	1	5974456
E011M20X2.0	20	2.00	112.0	29	14.00	11.20	14	4	18.00	D7	-	P	1	5974459
E011M22X1.5	22	1.50	118.0	29	16.00	12.50	16	4	20.50	D8	-	P	1	5974463
E011M24X1.5	24	1.50	130.0	35	18.00	14.00	18	4	22.50	D8	-	P	1	5974467
E011M24X2.0	24	2.00	130.0	35	18.00	14.00	18	4	22.00	D8	-	P	1	5974470

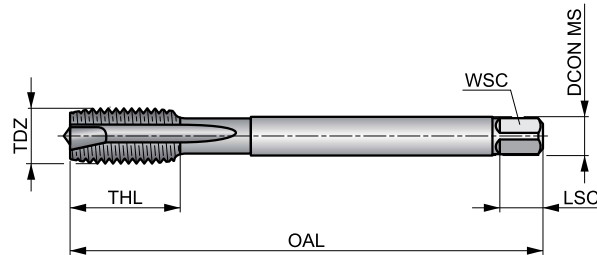
EP10



HSS-E-PM Spiral Point Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.

MF	DIN 374	6H
2.5xD	HSS-E PM	
B 3.5-5	R	
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ▣ 46	P3.1 ■ 43	P3.2 ▣ 33	P4.1 ▣ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ▣ 89	N3.3 ▣ 43	N4.1 ▣ 72									

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)				
EP10M4X.5	4	0.50	63.0	12	2.80	2.10	5	3	3.50	D4	P	1	5973502
EP10M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50	D4	P	1	5973503
EP10M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30	D5	P	1	5973504
EP10M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30	D5	P	1	5973505
EP10M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00	D5	P	1	5973507
EP10M10X.75	10	0.75	90.0	18	7.00	5.50	8	3	9.30	D6	P	1	5973456
EP10M10X1.0	10	1.00	90.0	18	7.00	5.50	8	3	9.00	D6	P	1	5973458
EP10M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80	D6	P	1	5973460
EP10M12X1.0	12	1.00	100.0	21	9.00	7.00	10	3	11.00	D6	P	1	5973462
EP10M12X1.25	12	1.25	100.0	21	9.00	7.00	10	3	10.80	D6	P	1	5973464
EP10M12X1.5	12	1.50	100.0	21	9.00	7.00	10	3	10.50	D6	P	1	5973466
EP10M14X1.0	14	1.00	100.0	21	11.00	9.00	12	3	13.00	D7	P	1	5973468
EP10M14X1.25	14	1.25	100.0	21	11.00	9.00	12	3	13.00	D7	P	1	5973470
EP10M14X1.5	14	1.50	100.0	21	11.00	9.00	12	3	12.50	D7	P	1	5973472
EP10M16X1.0	16	1.00	100.0	21	12.00	9.00	12	3	15.00	D7	P	1	5973476
EP10M16X1.5	16	1.50	100.0	21	12.00	9.00	12	3	14.50	D7	P	1	5973478
EP10M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00	D7	P	1	5973481
EP10M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50	D7	P	1	5973483
EP10M20X1.0	20	1.00	125.0	24	16.00	12.00	15	4	19.00	D7	P	1	5973485
EP10M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50	D7	P	1	5973487
EP10M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50	D8	P	1	5973488
EP10M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50	D8	P	1	5973490
EP10M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00	D8	P	1	5973492
EP10M25X1.5	25	1.50	140.0	28	18.00	14.50	17	4	23.50	D8	P	1	5973494
EP10M26X1.5	26	1.50	140.0	28	18.00	14.50	17	4	24.50	D8	P	1	5973496
EP10M27X1.5	27	1.50	140.0	28	20.00	16.00	19	4	25.50	D8	P	1	5973497

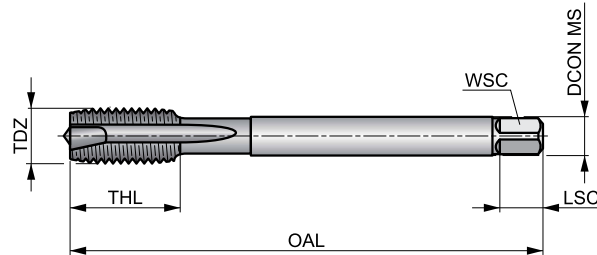
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)				
EP10M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00	D8	P	1	5973498
EP10M28X1.5	28	1.50	140.0	28	20.00	16.00	19	4	26.50	D9	P	1	5973499
EP10M30X1.5	30	1.50	150.0	28	22.00	18.00	21	4	28.50	D9	P	1	5973500
EP10M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00	D9	P	1	5973501

EP11



HSS-E-PM Spiral Point Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
	2.5xD	HSS-E PM
B 3.5-5		R

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▽72	P2.2 ▽52	P2.3 ■46	P3.2 ■33	P3.3 ▽30	P4.1 ■26	P4.2 ▽20	M1.1 ▽33	M1.2 ▽26	M2.1 ▽30	M2.2 ▽23	M3.1 ▽23	M3.2 ▽20	M3.3 ▽16
M4.1 ▽13	K1.1 ▽43	K1.2 ▽33	K1.3 ▽23	K2.1 ▽52	K2.2 ▽43	K3.1 ▽46	K3.2 ▽33	K4.1 ▽43	K4.2 ▽30	K5.1 ▽49	K5.2 ▽36		

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)				
EP11M4X.5	4	0.50	63.0	12	2.80	2.10	5	3	3.50	D4	P	1	5973691
EP11M5X.5	5	0.50	70.0	13	3.50	2.70	6	3	4.50	D4	P	1	5973695
EP11M6X.75	6	0.75	80.0	15	4.50	3.40	6	3	5.30	D5	P	1	5973699
EP11M8X.75	8	0.75	80.0	15	6.00	4.90	8	3	7.30	D5	P	1	5973703
EP11M8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00	D5	P	1	5973711
EP11M10X.75	10	0.75	90.0	18	7.00	5.50	8	3	9.30	D6	P	1	5973600
EP11M10X1.0	10	1.00	90.0	18	7.00	5.50	8	3	9.00	D6	P	1	5973663
EP11M10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80	D6	P	1	5973707
EP11M12X1.0	12	1.00	100.0	21	9.00	7.00	10	3	11.00	D6	P	1	5973738
EP11M12X1.25	12	1.25	100.0	21	9.00	7.00	10	3	10.80	D6	P	1	5973762
EP11M12X1.5	12	1.50	100.0	21	9.00	7.00	10	3	10.50	D6	P	1	5973766
EP11M14X1.0	14	1.00	100.0	21	11.00	9.00	12	3	13.00	D7	P	1	5973768
EP11M14X1.25	14	1.25	100.0	21	11.00	9.00	12	3	13.00	D7	P	1	5973770
EP11M14X1.5	14	1.50	100.0	21	11.00	9.00	12	3	12.50	D7	P	1	5973772
EP11M16X1.0	16	1.00	100.0	21	12.00	9.00	12	3	15.00	D7	P	1	5973606
EP11M16X1.5	16	1.50	100.0	21	12.00	9.00	12	3	14.50	D7	P	1	5973610
EP11M18X1.0	18	1.00	110.0	24	14.00	11.00	14	4	17.00	D7	P	1	5973615
EP11M18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50	D7	P	1	5973623
EP11M20X1.0	20	1.00	125.0	24	16.00	12.00	15	4	19.00	D7	P	1	5973628
EP11M20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50	D7	P	1	5973632
EP11M22X1.5	22	1.50	125.0	25	18.00	14.50	17	4	20.50	D8	P	1	5973637
EP11M24X1.5	24	1.50	140.0	28	18.00	14.50	17	4	22.50	D8	P	1	5973642
EP11M24X2.0	24	2.00	140.0	28	18.00	14.50	17	4	22.00	D8	P	1	5973654
EP11M25X1.5	25	1.50	140.0	28	18.00	14.50	17	4	23.50	D8	P	1	5973659
EP11M26X1.5	26	1.50	140.0	28	18.00	14.50	17	4	24.50	D8	P	1	5973668
EP11M27X1.5	27	1.50	140.0	28	20.00	16.00	19	4	25.50	D8	P	1	5973672

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)				
EP11M27X2.0	27	2.00	140.0	28	20.00	16.00	19	4	25.00	D8	P	1	5973676
EP11M28X1.5	28	1.50	140.0	28	20.00	16.00	19	4	26.50	D9	P	1	5973679
EP11M30X1.5	30	1.50	150.0	28	22.00	18.00	21	4	28.50	D9	P	1	5973683
EP11M30X2.0	30	2.00	150.0	28	22.00	18.00	21	4	28.00	D9	P	1	5973687

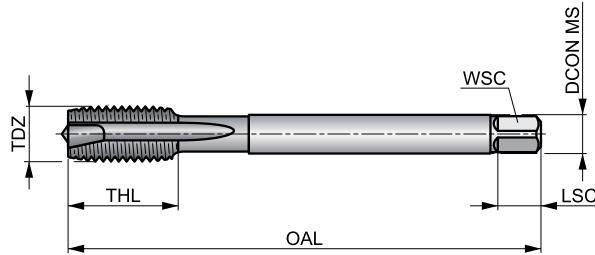
EP10TIN



HSS-E-PM Spiral Point Machine Tap, Metric Fine, TiN Coating, DIN Standard

High performance machine tap with spiral point for through holes only. Suited for a broad range of workpiece materials. TiN coating allows higher cutting speeds, improves performance and extends tool life. The reduced shank increases the reach of the tap.

MF	DIN 374	6H
2.5xD	HSS-E PM	
B 3.5-5	R	
TiN		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 112	P1.2 ■ 125	P1.3 ■ 131	P2.1 ■ 95	P2.2 ■ 79	P2.3 ■ 66	P3.1 ■ 62	P3.2 ■ 46	P3.3 ▣ 39	P4.1 ■ 33	P4.2 ▣ 30	M1.1 ■ 36	M1.2 ■ 30	M2.1 ■ 33
M2.2 ■ 26	M3.1 ■ 26	M3.2 ■ 23	M3.3 ▣ 20	M4.1 ▣ 16	K1.1 ▣ 69	K1.2 ▣ 52	K1.3 ▣ 39	K2.1 ▣ 98	K2.2 ▣ 79	K3.1 ▣ 85	K3.2 ▣ 66	K4.1 ▣ 79	K4.2 ▣ 59
K5.1 ▣ 92	K5.2 ▣ 66	N1.3 ■ 39	N2.1 ■ 121	N2.2 ■ 112	N2.3 ■ 79	N3.1 ■ 197	N3.2 ▣ 118	N4.1 ▣ 85					

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
EP10TINM8X1.0	8	1.00	90.0	18	6.00	4.90	8	3	7.00	1	6196718
EP10TINM10X1.0	10	1.00	90.0	18	7.00	5.50	8	3	9.00	1	6196719
EP10TINM10X1.25	10	1.25	100.0	20	7.00	5.50	8	3	8.80	1	6196720
EP10TINM12X1.0	12	1.00	100.0	21	9.00	7.00	10	3	11.00	1	6196721
EP10TINM12X1.25	12	1.25	100.0	21	9.00	7.00	10	3	10.80	1	6196723
EP10TINM12X1.5	12	1.50	100.0	21	9.00	7.00	10	3	10.50	1	6196722
EP10TINM14X1.5	14	1.50	100.0	21	11.00	9.00	12	3	12.50	1	6196724
EP10TINM16X1.5	16	1.50	100.0	21	12.00	9.00	12	3	14.50	1	6196725
EP10TINM18X1.5	18	1.50	110.0	24	14.00	11.00	14	4	16.50	1	6196726
EP10TINM20X1.5	20	1.50	125.0	24	16.00	12.00	15	4	18.50	1	6196727

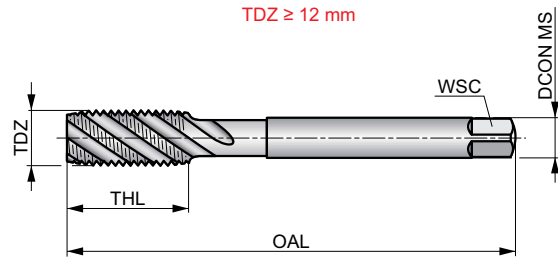
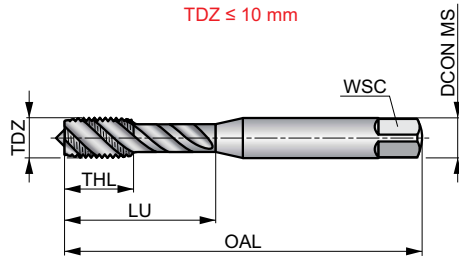
E018



HSS-E-PM 45° Spiral Flute Tap, Metric-Fine, ANSI, Steam Tempered

Spiral flute tap with constant rake angle to prevent nesting in blind hole applications. Made from HSS-E-PM to prolong tool life, make it more predictable, improve speed performance and reduce chipping. Steam tempered to retain cutting fluid and prevent chip to tool welding in abrasive harder ferrous work-materials.

	ANSI	6H
	2.5xD	HSS-E PM
		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣69	P2.2 ▣49	P2.3 ▣43	P3.2 ▣30	P3.3 ▣26	P4.1 ▣23	P4.2 ▣16	M1.1 ▣26	M1.2 ▣20	M2.1 ▣23	M2.2 ▣16	M3.1 ▣16	M3.2 ▣13	M3.3 ▣10
M4.1 ▣10													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	NOF	PHD	PHD	Limits	LU	Chamfer	Pack Qty	MID
			(inch)	(inch)				(mm)	(inch)					
E018M8X1.0	8	1.00	2.23/32	.457	.318	.238	3	7.00	J	D5	1.309	SB	1	5973601
E018M10X1.0	10	1.00	2.15/16	.531	.381	.286	3	9.00	T	D6	1.442	SB	1	5973589
E018M14X1.5	14	1.50	3.19/32	.709	.429	.322	3	12.50	31/64	D7	—	SB	1	5973593

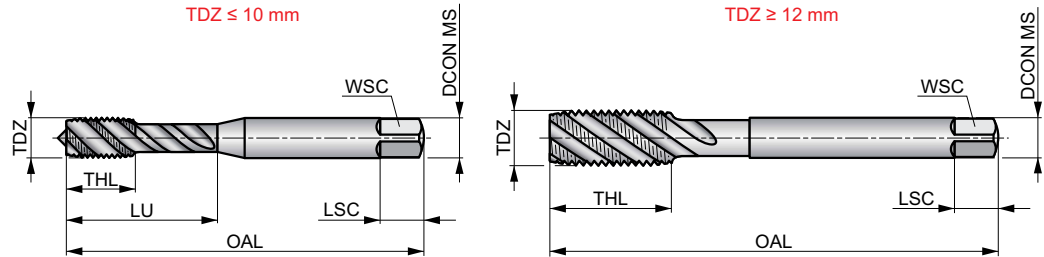
E013



HSS-E-PM Spiral Flute Machine Tap, Metric Fine, ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	6H
	2.5×D	HSS-E PM
C 2-3		λ 45°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■69	P2.2 ■49	P2.3 ■43	P3.2 ■30	P3.3 ■26	P4.1 ■23	P4.2 ■16	M1.1 ■26	M1.2 ■20	M2.1 ■23	M2.2 ■16	M3.1 ■16	M3.2 ■13	M3.3 ■10
M4.1 ■10													

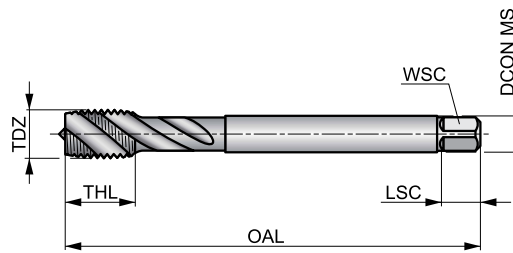
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	LU	Chamfer	Pack Qty	MID
E013M4X.5	4	0.50	53.0	7	4.00	3.15	6	3	3.50	D4	.748	SB	1	5973529
E013M5X.5	5	0.50	58.0	8	5.00	4.00	7	3	4.50	D4	.866	SB	1	5973531
E013M6X.5	6	0.50	66.0	10	6.30	5.00	8	3	5.50	D5	1.063	SB	1	5973533
E013M6X.75	6	0.75	66.0	10	6.30	5.00	8	3	5.30	D5	1.063	SB	1	5973536
E013M8X.75	8	0.75	72.0	12	8.00	6.30	9	3	7.30	D5	1.220	SB	1	5973538
E013M8X1.0	8	1.00	72.0	12	8.00	6.30	9	3	7.00	D5	1.220	SB	1	5973541
E013M10X1.0	10	1.00	80.0	15	10.00	8.00	11	3	9.00	D6	1.378	SB	1	5973512
E013M10X1.25	10	1.25	80.0	15	10.00	8.00	11	3	8.80	D6	1.378	SB	1	5973514
E013M12X1.0	12	1.00	89.0	16	9.00	7.10	10	3	11.00	D6	—	SB	1	5973516
E013M12X1.25	12	1.25	89.0	16	9.00	7.10	10	3	10.80	D6	—	SB	1	5973517
E013M12X1.5	12	1.50	89.0	16	9.00	7.10	10	3	10.50	D6	—	SB	1	5973518
E013M14X1.5	14	1.50	95.0	18	11.20	9.00	12	3	12.50	D7	—	SB	1	5973519
E013M16X1.0	16	1.00	102.0	18	12.50	10.00	13	4	15.00	D7	—	SB	1	5973520
E013M16X1.5	16	1.50	102.0	18	12.50	10.00	13	4	14.50	D7	—	SB	1	5973521
E013M18X1.5	18	1.50	112.0	29	14.00	11.20	14	4	16.50	D7	—	SB	1	5973522
E013M20X1.5	20	1.50	112.0	29	14.00	11.20	14	4	18.50	D7	—	SB	1	5973525
E013M22X1.5	22	1.50	118.0	29	16.00	12.50	16	4	20.50	D8	—	SB	1	5973527

EX10



HSS-E-PM Spiral Flute Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
	2.5xD	HSS-E PM
C 2-3		λ 45°
R	Bright	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)				
EX10M4X.50	4	0.50	63.0	7	2.80	2.10	5	3	3.50	D4	SB	1	5973675
EX10M5X.50	5	0.50	70.0	8	3.50	2.70	6	3	4.50	D4	SB	1	5973721
EX10M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30	D5	SB	1	5973726
EX10M8X.75	8	0.75	80.0	13	6.00	4.90	8	3	7.30	D5	SB	1	5973728
EX10M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00	D5	SB	1	5973731
EX10M10X.75	10	0.75	90.0	13	7.00	5.50	8	3	9.30	D6	SB	1	5973591
EX10M10X1.0	10	1.00	90.0	13	7.00	5.50	8	3	9.00	D6	SB	1	5973598
EX10M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80	D6	SB	1	5973603
EX10M12X1.0	12	1.00	100.0	15	9.00	7.00	10	3	11.00	D6	SB	1	5973608
EX10M12X1.25	12	1.25	100.0	15	9.00	7.00	10	3	10.80	D6	SB	1	5973613
EX10M12X1.5	12	1.50	100.0	15	9.00	7.00	10	3	10.50	D6	SB	1	5973618
EX10M14X1.0	14	1.00	100.0	15	11.00	9.00	12	3	13.00	D7	SB	1	5973621
EX10M14X1.25	14	1.25	100.0	15	11.00	9.00	12	3	12.80	D7	SB	1	5973626
EX10M14X1.5	14	1.50	100.0	15	11.00	9.00	12	3	12.50	D7	SB	1	5973631
EX10M16X1.0	16	1.00	100.0	15	12.00	9.00	12	4	15.00	D7	SB	1	5973635
EX10M16X1.5	16	1.50	100.0	15	12.00	9.00	12	4	14.50	D7	SB	1	5973639
EX10M18X1.0	18	1.00	110.0	17	14.00	11.00	14	4	17.00	D7	SB	1	5973647
EX10M18X1.5	18	1.50	110.0	17	14.00	11.00	14	4	16.50	D7	SB	1	5973651
EX10M20X1.0	20	1.00	125.0	17	16.00	12.00	15	4	19.00	D7	SB	1	5973657
EX10M20X1.5	20	1.50	125.0	17	16.00	12.00	15	4	18.50	D7	SB	1	5973661
EX10M22X1.5	22	1.50	125.0	17	18.00	14.50	17	4	20.50	D8	SB	1	5973665
EX10M24X1.5	24	1.50	140.0	20	18.00	14.50	17	4	22.50	D8	SB	1	5973670
EX10M24X2.0	24	2.00	140.0	20	18.00	14.50	17	4	22.00	D8	SB	1	5973674
EX10M25X1.5	25	1.50	140.0	20	18.00	14.50	17	4	23.50	D8	SB	1	5973678
EX10M26X1.5	26	1.50	140.0	20	18.00	14.50	17	4	24.50	D8	SB	1	5973681
EX10M27X1.5	27	1.50	140.0	20	20.00	16.00	19	4	25.50	D8	SB	1	5973685

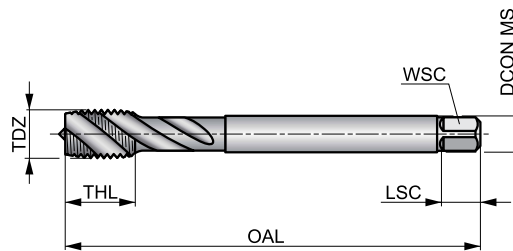
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)				
EX10M27X2.0	27	2.00	140.0	20	20.00	16.00	19	4	25.00	D8	SB	1	5973693
EX10M28X1.5	28	1.50	140.0	20	20.00	16.00	19	4	26.50	D9	SB	1	5973535
EX10M30X1.5	30	1.50	150.0	20	22.00	18.00	21	4	28.50	D9	SB	1	5973573
EX10M30X2.0	30	2.00	150.0	20	22.00	18.00	21	4	28.00	D9	SB	1	5973622

EX11



HSS-E-PM Spiral Flute Machine Tap, Metric Fine, DIN Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
	2.5xD	HSS-E PM
C 2-3		λ 45°
R		ST

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣69	P2.2 ▣49	P2.3 ▣43	P3.2 ▣30	P3.3 ▣26	P4.1 ▣23	P4.2 ▣16	M1.1 ▣26	M1.2 ▣20	M2.1 ▣23	M2.2 ▣16	M3.1 ▣16	M3.2 ▣13	M3.3 ▣10
M4.1 ▣10													

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Limits	Chamfer	Pack Qty	MID
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)				
EX11M4X.50	4	0.50	63.0	7	2.80	2.10	5	3	3.50	D4	SB	1	5973648
EX11M5X.50	5	0.50	70.0	8	3.50	2.70	6	3	4.50	D4	SB	1	5973652
EX11M6X.75	6	0.75	80.0	10	4.50	3.40	6	3	5.30	D5	SB	1	5973656
EX11M8X.75	8	0.75	80.0	13	6.00	4.90	8	3	7.30	D5	SB	1	5973662
EX11M8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00	D5	SB	1	5973667
EX11M10X.75	10	0.75	90.0	13	7.00	5.50	8	3	9.30	D6	SB	1	5973733
EX11M10X1.0	10	1.00	90.0	13	7.00	5.50	8	3	9.00	D6	SB	1	5973540
EX11M10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80	D6	SB	1	5973543
EX11M12X1.0	12	1.00	100.0	15	9.00	7.00	10	3	11.00	D6	SB	1	5973546
EX11M12X1.25	12	1.25	100.0	15	9.00	7.00	10	3	10.80	D6	SB	1	5973549
EX11M12X1.5	12	1.50	100.0	15	9.00	7.00	10	3	10.50	D6	SB	1	5973552
EX11M14X1.0	14	1.00	100.0	15	11.00	9.00	12	3	13.00	D7	SB	1	5973555
EX11M14X1.25	14	1.25	100.0	15	11.00	9.00	12	3	12.80	D7	SB	1	5973558
EX11M14X1.5	14	1.50	100.0	15	11.00	9.00	12	3	12.50	D7	SB	1	5973563
EX11M16X1.0	16	1.00	100.0	15	12.00	9.00	12	4	15.00	D7	SB	1	5973566
EX11M16X1.5	16	1.50	100.0	15	12.00	9.00	12	4	14.50	D7	SB	1	5973570
EX11M18X1.0	18	1.00	110.0	17	14.00	11.00	14	4	17.00	D7	SB	1	5973577
EX11M18X1.5	18	1.50	110.0	17	14.00	11.00	14	4	16.50	D7	SB	1	5973582
EX11M20X1.0	20	1.00	125.0	17	16.00	12.00	15	4	19.00	D7	SB	1	5973588
EX11M20X1.5	20	1.50	125.0	17	16.00	12.00	15	4	18.50	D7	SB	1	5973592
EX11M22X1.5	22	1.50	125.0	17	18.00	14.50	17	4	20.50	D8	SB	1	5973597
EX11M24X1.5	24	1.50	140.0	20	18.00	14.50	17	4	22.50	D8	SB	1	5973602
EX11M24X2.0	24	2.00	140.0	20	18.00	14.50	17	4	22.00	D8	SB	1	5973605
EX11M25X1.5	25	1.50	140.0	20	18.00	14.50	17	4	23.50	D8	SB	1	5973609
EX11M26X1.5	26	1.50	140.0	20	18.00	14.50	17	4	24.50	D8	SB	1	5973614
EX11M27X1.5	27	1.50	140.0	20	20.00	16.00	19	4	25.50	D8	SB	1	5973619

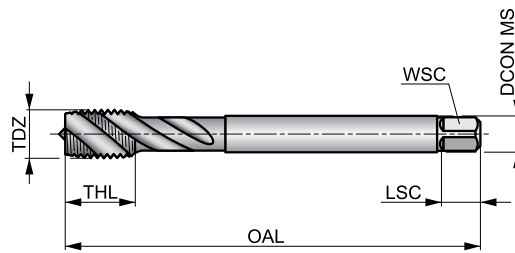
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		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)					
EX11M27X2.0	27	2.00	140.0	20	20.00	16.00	19	4	25.00	D8	SB	1	5973627
EX11M28X1.5	28	1.50	140.0	20	20.00	16.00	19	4	26.50	D9	SB	1	5973636
EX11M30X1.5	30	1.50	150.0	20	22.00	18.00	21	4	28.50	D9	SB	1	5973640
EX11M30X2.0	30	2.00	150.0	20	22.00	18.00	21	4	28.00	D9	SB	1	5973645

EX10TIN



HSS-E-PM Spiral Flute Machine Tap, Metric Fine, TiN Coating, DIN Standard

High performance machine tap with spiral flute for blind holes. Suited for a broad range of workpiece materials. TiN coated to allow higher cutting speeds, improve performance and extend tool life. The reduced shank increases the reach of the tap.



MF	DIN 374	6H
	2.5xD	HSS-E PM
C 2-3		λ 45°
R		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 105	P1.2 ■ 118	P1.3 ■ 121	P2.1 ■ 89	P2.2 ■ 75	P2.3 ■ 62	P3.1 ■ 59	P3.2 ■ 43	P3.3 ■ 36	P4.1 ■ 33	P4.2 ■ 26	M1.1 ■ 33	M1.2 ■ 26	M2.1 ■ 30
M2.2 ■ 23	M3.1 ■ 23	M3.2 ■ 20	M3.3 ■ 16	M4.1 ■ 13	N2.1 ■ 115	N2.2 ■ 105	N2.3 ■ 75						

Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
EX10TINM8X1.0	8	1.00	90.0	13	6.00	4.90	8	3	7.00	1	6196743
EX10TINM10X1.0	10	1.00	90.0	13	7.00	5.50	8	3	9.00	1	6196744
EX10TINM10X1.25	10	1.25	100.0	15	7.00	5.50	8	3	8.80	1	6196745
EX10TINM12X1.0	12	1.00	100.0	15	9.00	7.00	10	3	11.00	1	6196746
EX10TINM12X1.25	12	1.25	100.0	15	9.00	7.00	10	3	10.80	1	6196748
EX10TINM12X1.5	12	1.50	100.0	15	9.00	7.00	10	3	10.50	1	6196747
EX10TINM14X1.5	14	1.50	100.0	15	11.00	9.00	12	3	12.50	1	6196749
EX10TINM16X1.5	16	1.50	100.0	15	12.00	9.00	12	4	14.50	1	6196750
EX10TINM18X1.5	18	1.50	110.0	17	14.00	11.00	14	4	16.50	1	6196751
EX10TINM20X1.5	20	1.50	125.0	17	16.00	12.00	15	4	18.50	1	6196752

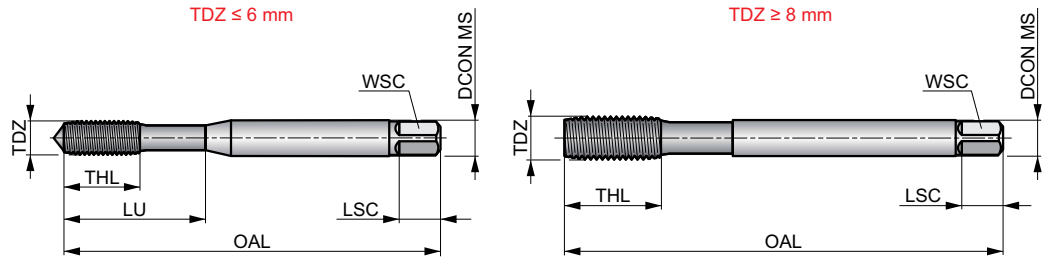
E288



HSS-E Fluteless Machine Tap, Metric Fine with TiN Coating, DIN Standard

High performance fluteless tap to produce high quality thread in blind and through holes. Provides a strong, clean, chip-free and accurate thread with excellent tolerance. Highly versatile for steel, stainless steel and non-ferrous metal. TiN coated for higher cutting speeds, improve performance and tool life.

	DIN 2174	6HX
	3xD	HSS-E
C 2-3.5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 148	P1.2 ■ 167	P1.3 ■ 167	P2.1 ■ 167	P2.2 ■ 148	P3.1 ■ 95	P3.2 ■ 79	P3.3 ■ 59	P4.1 ■ 59	P4.2 ■ 43	M1.1 ■ 82	M1.2 ■ 69	M2.1 ■ 72	M2.2 ■ 59
M3.1 ■ 56	M3.2 ■ 49	M3.3 ■ 39	M4.1 ■ 26	N1.1 ■ 180	N1.2 ■ 135	N1.3 ■ 92	N2.1 ■ 203	N2.2 ■ 180	N2.3 ■ 131	N3.1 ■ 118	N3.3 ■ 39		

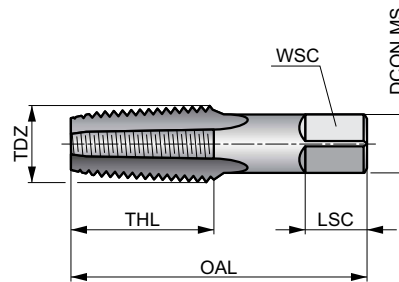
Product	TDZ	TP	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
E288M6X.75	6	0.75	80.0	15	6.00	4.90	8	5	5.70	30.00	1	7174100
E288M8X1.0	8	1.00	90.0	18	6.00	4.90	8	5	7.50	–	1	7174101
E288M10X1.0	10	1.00	90.0	20	7.00	5.50	8	5	9.50	–	1	7174102
E288M10X1.25	10	1.25	100.0	20	7.00	5.50	8	5	9.40	–	1	7174103
E288M12X1.5	12	1.50	100.0	21	9.00	7.00	10	5	11.30	–	1	7174104

1545A(NPT)



HSS Straight Flute Pipe Tap, NPT, ANSI Standard

Pipe tap with straight flutes for threading pipes, fittings and couplings. This version is has a steam tempered surface treatment to prevent galling and chipping. NPT threads require a 'sealant' such as Teflon tape or pipe compound to ensure leak-free connections.



	ANSI	Normal
	1.5xD	HSS
	R	ST

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣26	P1.2 ▣30	P1.3 ▣30	P2.1 ▣23	P2.2 ▣20	P2.3 ▣16	P3.1 ▣13	P3.2 ▣13	P3.3 ▣10	P4.1 ▣10	P4.2 ▣7	K1.1 ▣20	K1.2 ▣13	K1.3 ▣10
K2.1 ▣23	K2.2 ▣20	K2.3 ▣16	K3.1 ▣23	K3.2 ▣16	K3.3 ▣13	K4.1 ▣20	K4.2 ▣16	K4.3 ▣10	K4.4 ▣10	K4.5 ▣7	K5.1 ▣23	K5.2 ▣16	K5.3 ▣13
N2.1 ▣56	N2.2 ▣49	N2.3 ▣36	N3.1 ▣62	N3.2 ▣36	N4.1 ▣13								

Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)			
1545A1/8	1/8	27	2.1/8	3/4	.438	.328	3/8	4	1	6007223
1545A1/4	1/4	18	2.7/16	1.1/16	.563	.421	7/16	4	1	6007218
1545A1/2	1/2	14	3.1/8	1.3/8	.688	.515	5/8	4	1	6007207

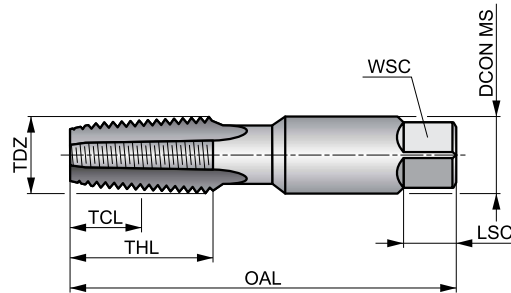
E710



HSS Straight Flute Serial Hand Tap, NPT, ANSI Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.

NPT	ANSI B94.9	Normal
1.5xD	HSS	
C 2-3	R	
Bright		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 20	K1.2 ▣ 13	K1.3 ▣ 10	K2.1 ▣ 23	K2.2 ▣ 20
K3.1 ▣ 23	K3.2 ▣ 16	K4.1 ▣ 20	K4.2 ▣ 16	K5.1 ▣ 23	K5.2 ▣ 16	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

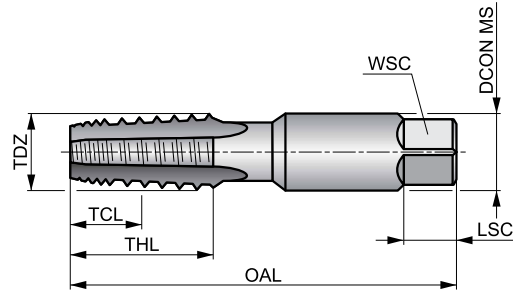
Product	TDZ	TPI	TD	OAL	THL	TCL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E7101/16N03	1/16	27	7.94	65.0	17	11.70	8.10	6.00	8	4	6.30	1	5977618
E7101/8	1/8	27	10.29	70.0	19	11.90	11.10	8.30	10	4	8.50	1	5977634
E7101/8N07	1/8	27	10.29	70.0	19	11.90	11.10	8.30	10	4	8.50	1	5977637
E7101/4	1/4	18	13.72	75.0	27	17.60	14.30	10.70	11	4	11.00	1	5977628
E7101/4N07	1/4	18	13.72	75.0	27	17.60	14.30	10.70	11	4	11.00	1	5977631
E7103/8	3/8	18	17.15	80.0	27	19.50	17.80	13.50	13	4	14.50	1	5977652
E7103/8N07	3/8	18	17.15	80.0	27	19.50	17.80	13.50	13	4	14.50	1	5977653
E7101/2	1/2	14	21.34	100.0	35	22.70	17.50	13.10	16	4	18.00	1	5977622
E7101/2N07	1/2	14	21.34	100.0	35	22.70	17.50	13.10	16	4	18.00	1	5977625
E7103/4	3/4	14	26.67	105.0	35	24.40	23.00	17.20	17	5	23.00	1	5977646
E7103/4N07	3/4	14	26.67	105.0	35	24.40	23.00	17.20	17	5	23.00	1	5977649
E7101	1"	11.5	33.40	115.0	43	29.40	28.60	21.40	21	5	29.00	1	5977609
E7101.1/4	1.1/4	11.5	42.16	125.0	43	27.70	33.30	25.00	24	5	38.00	1	5977615
E7101.1/2	1.1/2	11.5	48.26	135.0	43	28.90	38.10	28.60	25	7	44.00	1	5977612
E7102	2"	11.5	60.33	145.0	43	26.60	47.60	35.70	29	7	56.00	1	5977643

E711



HSS Straight Flute Interrupted Thread Hand Tap, NPT, ANSI Standard

A versatile tool, suitable for machine and also hand tapping. Interrupted threads lessen the damaging effects of chip wedging on both forward and reverse rotation and reduce friction, permit better lubrication and allow more space for the passage of chips. The reduced shank increases the reach of the tap.



	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣23	P1.2 ▣23	P1.3 ▣26	P2.1 ▣20	P2.2 ▣16	P2.3 ▣13	P3.1 ▣13	P3.2 ▣13	P4.1 ▣10	K1.1 ▣20	K1.2 ▣13	K1.3 ▣10	K2.1 ▣23	K2.2 ▣20
K3.1 ▣23	K3.2 ▣16	K4.1 ▣20	K4.2 ▣16	K5.1 ▣23	K5.2 ▣16	N1.3 ▣26	N2.1 ▣36	N2.2 ▣33	N2.3 ▣23	N3.1 ▣56	N3.2 ▣33	N3.3 ▣16	N4.2 ▣16
N4.3 ▣10													

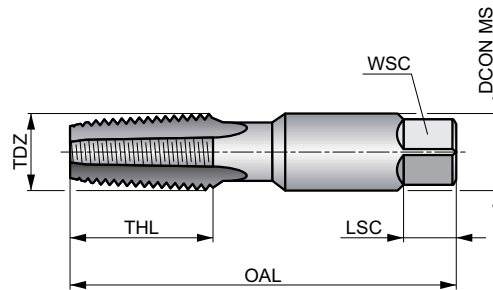
Product	TDZ	TPI	TD	OAL	THL	TCL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)							
E7111/8	1/8	27	10.29	70.0	19	11.90	11.10	8.30	10	5	8.50	1	5977664
E7111/4	1/4	18	13.72	75.0	27	17.60	14.30	10.70	11	5	11.00	1	5977662
E7113/8	3/8	18	17.15	80.0	27	19.50	17.80	13.50	13	5	14.50	1	5977542
E7111/2	1/2	14	21.33	100.0	35	22.70	17.50	13.10	16	5	18.00	1	5977660
E7113/4	3/4	14	26.67	105.0	35	24.40	23.00	17.20	17	5	23.00	1	5977669
E7111	1"	11.5	33.40	115.0	43	29.40	28.60	21.40	21	5	29.00	1	5977656
E7111.1/2	1.1/2	11.5	48.26	135.0	43	28.90	38.10	28.60	25	7	44.00	1	5977658

1544(NPT)



HSS Straight Flute Pipe Tap, NPT, ANSI Standard

Pipe tap with straight flutes and nitride surface treatment to reduce wear and chip welding. Manufactured with a cutting geometry specifically for gray cast irons producing broken chips. The design makes these tapes also appropriate for non-metallics, cast brass and other brass materials producing broken, powdery chips.



	ANSI B94.9	Normal
	1.5x D	HSS
	R	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣26	P1.2 ▣30	P1.3 ▣30	P2.1 ▣23	P2.2 ▣20	P2.3 ▣16	P3.1 ▣13	P3.2 ▣13	P3.3 ▣10	P4.1 ▣10	P4.2 ▣7	K1.1 ▣20	K1.2 ▣13	K1.3 ▣10
K2.1 ▣23	K2.2 ▣20	K2.3 ▣16	K3.1 ▣23	K3.2 ▣16	K3.3 ▣13	K4.1 ▣20	K4.2 ▣16	K4.3 ▣10	K4.4 ▣10	K4.5 ▣7	K5.1 ▣23	K5.2 ▣16	K5.3 ▣13
N2.1 ▣56	N2.2 ▣49	N2.3 ▣36	N3.1 ▣62	N3.2 ▣36	N4.1 ▣13								

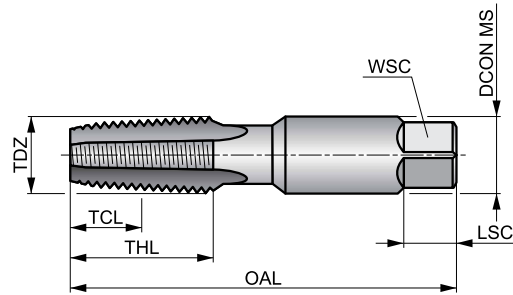
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)			
15441/8X27	1/8	27	2.1/8	3/4	.438	.328	3/8	4	1	6007175
15441/4X18	1/4	18	2.7/16	1.1/16	.563	.421	7/16	4	1	6007170
15443/8X18	3/8	18	2.9/16	1.1/16	.700	.531	1/2	4	1	6007197
15441/2X14	1/2	14	3.1/8	1.3/8	.688	.515	5/8	4	1	6007165
15441X11.1/2	1"	11.5	3.3/4	1.3/4	1.125	.843	13/16	5	1	6007183
15441.1/4X11.1/2	1.1/4	11.5	4"	1.3/4	1.313	.984	15/16	5	1	6007153

E721



HSS Straight Flute Hand Tap with TiN Coating, NPT, ANSI Standard

A versatile tool, suitable for machine and also hand tapping. With a straight flute design and bottoming lead for blind and through holes. TiN coated to improve performance and extend tool life.



	ANSI B94.9	Normal
	1.5xD	HSS
C 2-3		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣39	P1.2 ▣43	P1.3 ■43	P2.1 ▣39	P2.2 ■36	P2.3 ▣30	P3.1 ▣23	P3.2 ■20	P3.3 ▣13	P4.1 ■16	P4.2 ▣10	K1.1 ■39	K1.2 ■30	K1.3 ■23
K2.1 ■39	K2.2 ■33	K3.1 ■36	K3.2 ■26	K4.1 ■33	K4.2 ■26	K5.1 ■36	K5.2 ■30	N1.3 ▣33	N2.1 ▣56	N2.2 ▣49	N2.3 ■36	N3.1 ■62	N3.2 ■36
N3.3 ▣20	N4.2 ▣23	N4.3 ▣16											

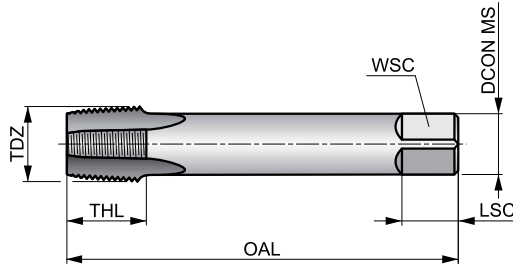
Product	TDZ	TPI	TD	OAL	THL	TCL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)					(mm)		
E7211/8	1/8	27	10.29	70.0	19	11.90	11.10	8.30	10	4	8.50	1	5977601
E7211/4	1/4	18	13.72	75.0	27	17.60	14.30	10.70	11	4	11.00	1	5977598
E7213/8	3/8	18	17.15	80.0	27	19.50	17.80	13.50	13	4	14.50	1	5977607
E7211/2	1/2	14	21.34	100.0	35	22.70	17.50	13.10	16	4	18.00	1	5977595
E7213/4	3/4	14	26.67	105.0	35	24.40	23.00	17.20	17	5	23.00	1	5977604
E7211	1"	11.5	33.40	115.0	43	29.40	28.60	21.40	21	5	29.00	1	5977592

E714



HSS-E-PM Straight Flute Machine Tap, NPT, ANSI Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.



		Normal
	1.5×D	HSS-E PM
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 26	P1.2 ■ 30	P1.3 ■ 30	P2.1 ■ 23	P2.2 ■ 20	P2.3 ▧ 16	P3.1 ■ 13	P3.2 ▧ 13	P3.3 ▧ 10	P4.1 ■ 10	P4.2 ▧ 7	K1.1 ▧ 20	K1.2 ▧ 13	K1.3 ▧ 10
K2.1 ▧ 23	K2.2 ▧ 20	K3.1 ▧ 23	K3.2 ▧ 16	K4.1 ▧ 20	K4.2 ▧ 16	K5.1 ▧ 23	K5.2 ▧ 16	N1.3 ▧ 30	N2.1 ▧ 39	N2.2 ▧ 36	N2.3 ▧ 26	N3.1 ■ 59	N3.2 ■ 36

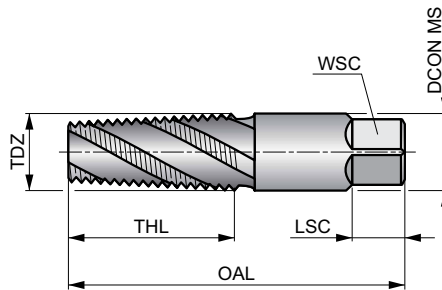
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				
E7141/8	1/8	27	10.23	90.0	14	11.00	9.00	12	3	8.50	1	5977559
E7141/4	1/4	18	13.60	100.0	20	14.00	11.00	14	3	11.00	1	5977556
E7143/8	3/8	18	17.04	110.0	20	16.00	12.00	15	4	14.50	1	5977566
E7141/2	1/2	14	21.20	125.0	26	18.00	14.50	17	4	18.00	1	5977552
E7143/4	3/4	14	26.54	140.0	26	22.00	18.00	21	5	23.00	1	5977563
E7141	1"	11.5	33.20	150.0	31	28.00	22.00	25	5	29.00	1	5977548

1548(NPT)



HSS 30° Spiral Flute Pipe Tap, NPT, ANSI Standard

Pipe tap with spiral flutes for threading pipes, fitting and couplings. Most effective when used in applications that produce, long stringy chips. The spiral flute design effectively draws chips from the hole being tapped.



	ANSI	Normal
	2×D	HSS
	λ 30°	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 26	P1.2 30	P1.3 30	P2.1 23	P2.2 20	P2.3 16	P3.1 13	P3.2 13	P3.3 10	P4.1 10	P4.2 7	K1.1 20	K1.2 13	K1.3 10
K2.1 23	K2.2 20	K2.3 16	K3.1 23	K3.2 16	K3.3 13	K4.1 20	K4.2 16	K4.3 10	K4.4 10	K4.5 7	K5.1 23	K5.2 16	K5.3 13
N2.1 56	N2.2 49	N2.3 36	N3.1 62	N3.2 36	N4.1 13								

Product	TDZ	TPI	OAL (inch)	THL (inch)	DCON MS (inch)	WSC (inch)	LSC (inch)	NOF	Pack Qty	MID
15481/8X27X0.313	1/8	27	2.1/8	3/4	.313	.234	3/8	4	1	6006978
15481/8X27	1/8	27	2.1/8	3/4	.438	.328	3/8	4	1	6006973
15481/4X18	1/4	18	2.7/16	1.1/16	.563	.421	7/16	4	1	6006961
15483/8X18	3/8	18	2.9/16	1.1/16	.700	.531	1/2	4	1	6006839

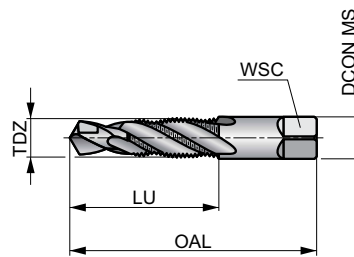
E653



HSS Drill-Tap Combination Tool with 27° Spiral Flute, NPT, ANSI Standard

Combination of a core-hole drill and tap to produce a thread in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Bright finish to prevent the work-material from sticking to the cutting edges.

	ANSI	Normal
	1.5×D	HSS
	λ 27°	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P3.1	P3.2	N1.2	N1.3	N3.1	N3.2	N4.1
■59	■66	■72	■66	■59	■49	■39	■46	■30	■66	■49	■82

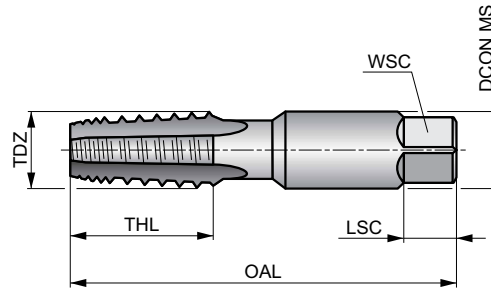
Product	TDZ	TPI	TD	OAL	LU	DCON MS	WSC	NOF	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)			
E6531/8	1/8	27	.335	2.7/8	3/4	.437	.328	4	1	5978397
E6531/4	1/4	18	.433	3.5/16	1.1/16	.562	.421	4	1	5978395
E6533/8	3/8	18	.571	3.1/2	1.1/16	.700	.531	4	1	5978403
E6531/2	1/2	14	.709	4.3/8	1.3/8	.687	.515	4	1	5978392
E6533/4	3/4	14	.905	4.9/16	1.3/8	.906	.679	6	1	5978399
E6531	1"	11.5	1.142	5.3/8	1.3/4	1.125	.843	6	1	5978386

1567(NPTF)



HSS Straight Flute Interrupted Thread Pipe Tap, NPTF, ANSI Standard

Pipe tap with spiral flutes for producing leak proof NPTF - National Pipe Taper Fuel - Dryseal thread. With interrupted guidance threads to lessen the damaging effects of chip wedging on both forward and reverse rotation and reduce friction, permit better lubrication and allow more space for the passage of chips.



	ANSI	Normal
	2xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 26	P1.2 30	P1.3 30	P2.1 23	P2.2 20	P2.3 16	P3.1 13	P3.2 13	P3.3 10	P4.1 10	P4.2 7	K1.1 20	K1.2 13	K1.3 10
K2.1 23	K2.2 20	K2.3 16	K3.1 23	K3.2 16	K3.3 13	K4.1 20	K4.2 16	K4.3 10	K4.4 10	K4.5 7	K5.1 23	K5.2 16	K5.3 13
N2.1 56	N2.2 49	N2.3 36	N3.1 62	N3.2 36	N4.1 13								

Product	TDZ	TPI	OAL (inch)	THL (inch)	DCON MS (inch)	WSC (inch)	LSC (inch)	NOF	Pack Qty	MID
15671/8X27	1/8	27	2.1/8	3/4	.438	.328	3/8	5	1	6006885
15671/4X18	1/4	18	2.7/16	1.1/16	.563	.421	7/16	5	1	6006883
15673/8X18	3/8	18	2.9/16	1.1/16	.700	.531	1/2	5	1	6006894
15671/2X14	1/2	14	3.1/8	1.3/8	.688	.515	5/8	5	1	6006881
15673/4X14	3/4	14	3.1/4	1.3/8	.906	.679	11/16	5	1	6006892

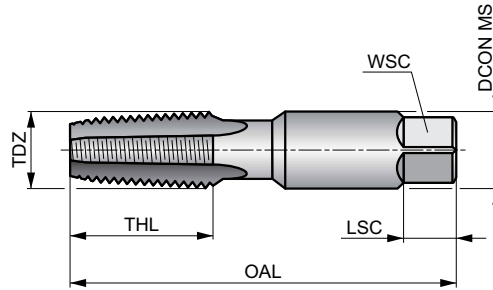
TN1543



HSS Straight Flute Pipe Tap, NPTF, ANSI Standard, TiN-Coated

Pipe tap for NPTF - National Pipe Taper Fuel - Dryseal thread for leak proof pressure tight connection without using sealant. NPTF taps might be use for NPT applications, but do not us NPT taps for NPTF applications as it will likely leak. TiN coated to allow higher cutting speeds, improve performance and extend tool life.

	ANSI	Normal
	1.5xD	HSS
	R	TiN



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣30	P1.2 ▣33	P1.3 ▣36	P2.1 ▣26	P2.2 ▣23	P2.3 ▣20	P3.1 ▣20	P3.2 ▣16	P3.3 ▣13	P4.1 ▣13	P4.2 ▣10	K1.1 ▣23	K1.2 ▣16	K1.3 ▣13
K2.1 ▣30	K2.2 ▣23	K2.3 ▣20	K3.1 ▣26	K3.2 ▣20	K3.3 ▣16	K4.1 ▣23	K4.2 ▣16	K4.3 ▣13	K4.4 ▣10	K4.5 ▣10	K5.1 ▣26	K5.2 ▣20	K5.3 ▣16
N2.1 ▣59	N2.2 ▣56	N2.3 ▣39	N3.1 ▣66	N3.2 ▣39	N4.1 ▣16								

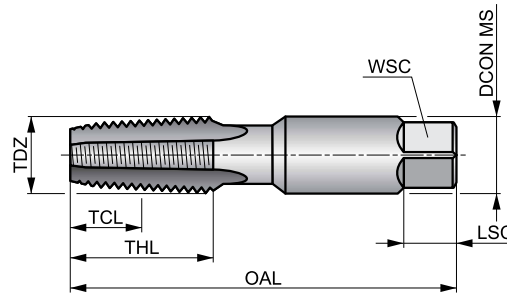
Product	TDZ	TPI	OAL (inch)	THL (inch)	DCON MS (inch)	WSC (inch)	LSC (inch)	NOF	Pack Qty	MID
TN15431/8	1/8	27	2.1/8	3/4	.438	.328	3/8	4	1	6007381
TN15431/4	1/4	18	2.7/16	1.1/16	.563	.421	7/16	4	1	6007609
TN15431/2	1/2	14	3.1/8	1.3/8	.688	.515	5/8	4	1	6007606

E712



HSS Straight Flute Hand Tap, NPTF, ANSI Standard

A versatile tool, suitable for machine and also hand tapping. With a straight flute design and bottoming lead for blind and through holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.



	ANSI B94.9	Normal
	1.5xD	HSS

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 20	K1.2 ▣ 13	K1.3 ▣ 10	K2.1 ▣ 23	K2.2 ▣ 20
K3.1 ▣ 23	K3.2 ▣ 16	K4.1 ▣ 20	K4.2 ▣ 16	K5.1 ▣ 23	K5.2 ▣ 16	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

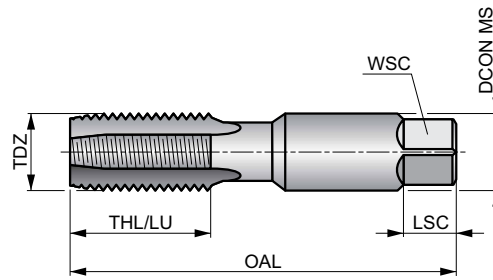
Product	TDZ	TPI	TD	OAL	THL	TCL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)					(mm)		
E7121/16	1/16	27	7.94	65.0	17	11.70	8.10	6.00	8	4	6.20	1	5977651
E7121/8	1/8	27	10.29	70.0	19	11.90	11.10	8.30	10	4	8.40	1	5977688
E7121/4	1/4	18	13.72	75.0	27	17.60	14.30	10.70	11	4	10.90	1	5977685
E7123/8	3/8	18	17.15	80.0	27	19.50	17.80	13.50	13	4	14.25	1	5977694
E7121/2	1/2	14	21.34	100.0	35	22.70	17.50	13.10	16	4	17.75	1	5977677
E7123/4	3/4	14	26.67	105.0	35	24.40	23.00	17.20	17	5	23.00	1	5977691
E7121	1"	11.5	33.40	115.0	43	29.40	28.60	21.40	21	5	29.00	1	5977585
E7121.1/4	1.1/4	11.5	42.16	125.0	43	27.70	33.40	24.90	23	5	37.75	1	5977619

E709



HSS Straight Flute Machine Tap, NPSF, ANSI Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.



	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 20	K1.2 ▣ 13	K1.3 ▣ 10	K2.1 ▣ 23	K2.2 ▣ 20
K3.1 ▣ 23	K3.2 ▣ 16	K4.1 ▣ 20	K4.2 ▣ 16	K5.1 ▣ 23	K5.2 ▣ 16	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

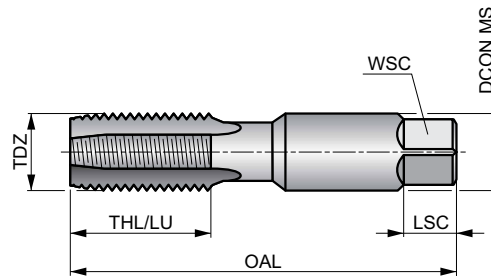
Product	TDZ	TPI	TD	OAL	THL	LU	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)					(mm)		
E7091/8	1/8	27	10.29	70.0	19	19.00	11.10	8.30	10	4	8.70	1	5977590
E7091/4	1/4	18	13.72	75.0	27	27.00	14.30	10.70	11	4	11.30	1	5977582
E7093/8	3/8	18	17.15	80.0	27	27.00	17.80	13.50	13	4	14.75	1	5977600
E7091/2	1/2	14	21.34	100.0	35	—	17.50	13.10	16	4	18.25	1	5977575
E7093/4	3/4	14	26.67	105.0	35	—	23.00	17.20	17	5	23.50	1	5977597

E720



HSS Straight Flute Machine Tap with TiN Coating, NPSF, ANSI Standard

General purpose straight flute machine tap for through and blind holes. TiN coated to improve performance and extend tool life.



	ANSI B94.9	Normal
	1.5×D	HSS
C 2-3		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣26	P1.2 ▣30	P1.3 ▣30	P2.1 ▣23	P2.2 ▣20	P2.3 ▣16	P3.1 ▣13	P3.2 ▣13	P3.3 ▣10	P4.1 ▣10	P4.2 ▣7	K1.1 ▣39	K1.2 ▣30	K1.3 ▣23
K2.1 ▣39	K2.2 ▣33	K3.1 ▣36	K3.2 ▣26	K4.1 ▣33	K4.2 ▣26	K5.1 ▣36	K5.2 ▣30	N1.3 ▣33	N2.1 ▣56	N2.2 ▣49	N2.3 ▣36	N3.1 ▣62	N3.2 ▣36
N3.3 ▣20	N4.2 ▣23	N4.3 ▣16											

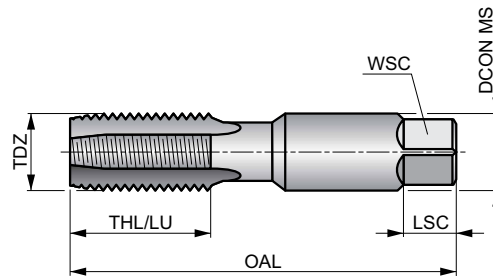
Product	TDZ	TPI	TD	OAL	THL	LU	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)					(mm)		
E7201/8N03	1/8	27	10.29	70.0	19	19.00	11.10	8.30	10	4	8.70	1	5977577
E7201/4N03	1/4	18	13.72	75.0	27	27.00	14.30	10.70	11	4	11.30	1	5977573
E7203/8N03	3/8	18	17.15	80.0	27	27.00	17.80	13.50	13	4	14.75	1	5977588
E7201/2N03	1/2	14	21.34	100.0	35	—	17.50	13.10	13	4	18.25	1	5977570
E7203/4N03	3/4	14	26.67	105.0	35	—	23.00	17.20	17	5	23.50	1	5977581

E708



HSS Straight Flute Machine Tap, NPSM, ANSI Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges.



	ANSI B94.9	Normal
	1.5xD	HSS

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 20	K1.2 ▣ 13	K1.3 ▣ 10	K2.1 ▣ 23	K2.2 ▣ 20
K3.1 ▣ 23	K3.2 ▣ 16	K4.1 ▣ 20	K4.2 ▣ 16	K5.1 ▣ 23	K5.2 ▣ 16	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

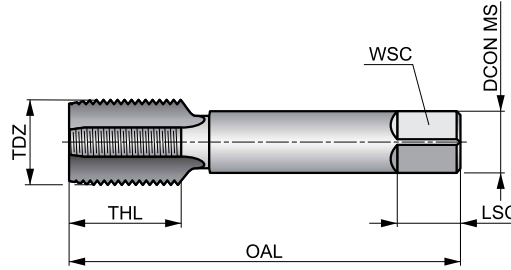
Product	TDZ	TPI	TD	OAL	THL	LU	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)					(mm)		
E7081/8	1/8	27	10.29	70.0	19	19.00	11.10	8.30	10	4	9.10	1	5977560
E7081/4	1/4	18	13.72	75.0	27	27.00	14.30	10.70	11	4	12.00	1	5977557
E7083/8	3/8	18	17.15	80.0	27	27.00	17.80	13.50	13	4	15.50	1	5977572
E7081/2	1/2	14	21.33	100.0	35	—	17.50	13.10	16	4	19.00	1	5977553
E7083/4	3/4	14	26.67	105.0	35	—	23.00	17.20	17	5	24.50	1	5977564
E7081	1"	11.5	33.40	115.0	43	—	28.60	21.40	21	5	30.50	1	5977549

E547



HSS Straight Flute Hand Tap G(BSP), ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available with taper lead NO1 for short through holes, plug lead NO2 for deeper through holes or bottoming lead NO3 for blind holes. Also, as set NO7 with a plug lead and bottoming lead tap.



	ISO 2284	Normal
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ▣ 56	N3.2 ▣ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)					
E5471/8N01	1/8	28	9.73	59.0	15	8.00	8.00	9	4	8.80	T	1	5976343
E5471/8N02	1/8	28	9.73	59.0	15	8.00	6.30	9	4	8.80	P	1	5976346
E5471/8N03	1/8	28	9.73	59.0	15	8.00	6.30	9	4	8.80	B	1	5976349
E5471/8N07	1/8	28	9.73	59.0	15	8.00	6.30	9	4	8.80	Set	1	5976353
E5471/4N01	1/4	19	13.16	67.0	19	10.00	8.00	11	4	11.80	T	1	5976327
E5471/4N02	1/4	19	13.16	67.0	19	10.00	8.00	11	4	11.80	P	1	5976330
E5471/4N03	1/4	19	13.16	67.0	19	10.00	8.00	11	4	11.80	B	1	5976335
E5471/4N07	1/4	19	13.16	67.0	19	10.00	8.00	11	4	11.80	Set	1	5976339
E5473/8N01	3/8	19	16.66	75.0	21	12.50	10.00	13	4	15.25	T	1	5976408
E5473/8N02	3/8	19	16.66	75.0	21	12.50	10.00	13	4	15.25	P	1	5976412
E5473/8N03	3/8	19	16.66	75.0	21	12.50	10.00	13	4	15.25	B	1	5976416
E5473/8N07	3/8	19	16.66	75.0	21	12.50	10.00	13	4	15.25	Set	1	5976419
E5471/2N01	1/2	14	20.95	87.0	26	16.00	12.50	16	4	19.00	T	1	5976474
E5471/2N02	1/2	14	20.95	87.0	26	16.00	12.50	16	4	19.00	P	1	5976477
E5471/2N03	1/2	14	20.95	87.0	26	16.00	12.50	16	4	19.00	B	1	5976480
E5471/2N07	1/2	14	20.95	87.0	26	16.00	12.50	16	4	19.00	Set	1	5976484
E5475/8N01	5/8	14	22.91	91.0	26	18.00	14.00	18	4	21.00	T	1	5976423
E5475/8N02	5/8	14	22.91	91.0	26	18.00	14.00	18	4	21.00	P	1	5976427
E5475/8N03	5/8	14	22.91	91.0	26	18.00	14.00	18	4	21.00	B	1	5976430
E5475/8N07	5/8	14	22.91	91.0	26	18.00	14.00	18	4	21.00	Set	1	5976434
E5473/4N01	3/4	14	26.44	96.0	28	20.00	16.00	20	4	24.50	T	1	5976389
E5473/4N02	3/4	14	26.44	96.0	28	20.00	16.00	20	4	24.50	P	1	5976392
E5473/4N03	3/4	14	26.44	96.0	28	20.00	16.00	20	4	24.50	B	1	5976397

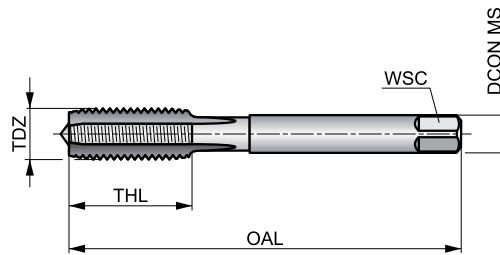
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				
E5473/4N07	3/4	14	26.44	96.0	28	20.00	16.00	20	4	24.50	Set	1	5976400
E5477/8N01	7/8	14	30.20	102.0	29	22.40	18.00	22	4	28.25	T	1	5976438
E5477/8N02	7/8	14	30.20	102.0	29	22.40	18.00	22	4	28.25	P	1	5976445
E5477/8N03	7/8	14	30.20	102.0	29	22.40	18.00	22	4	28.25	B	1	5976448
E5471N01	1"	11	33.25	109.0	33	25.00	20.00	24	4	30.75	T	1	5976357
E5471N02	1"	11	33.25	109.0	33	25.00	20.00	24	4	30.75	P	1	5976361
E5471N03	1"	11	33.25	109.0	33	25.00	20.00	24	4	30.75	B	1	5976369
E5471.1/4N01	1.1/4	11	41.91	119.0	36	31.50	25.00	28	6	39.50	T	1	5976365
E5471.1/4N02	1.1/4	11	41.91	119.0	36	31.50	25.00	28	6	39.50	P	1	5976404
E5471.1/4N03	1.1/4	11	41.91	119.0	36	31.50	25.00	28	6	39.50	B	1	5976442
E5471.1/2N01	1.1/2	11	47.80	125.0	37	35.50	28.00	31	6	45.00	T	1	5976717
E5471.1/2N02	1.1/2	11	47.80	125.0	37	35.50	28.00	31	6	45.00	P	1	5976722
E5471.1/2N03	1.1/2	11	47.80	125.0	37	35.50	28.00	31	6	45.00	B	1	5976322
E5472N01	2"	11	59.61	140.0	41	40.00	31.50	34	6	57.00	T	1	5976379
E5472N02	2"	11	59.61	140.0	41	40.00	31.50	34	6	57.00	P	1	5976382
E5472N03	2"	11	59.61	140.0	41	40.00	31.50	34	6	57.00	B	1	5976385

E119



HSS Straight Flute Serial Hand Tap, G(BSP), DIN Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a set of two serial taps, which should be used one after the other to create the full thread.



G	DIN 5157	Normal
	1.5xD	HSS
C 2-3		R
Bright		

Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3.3	N4.2	N4.3											
■	■	■											

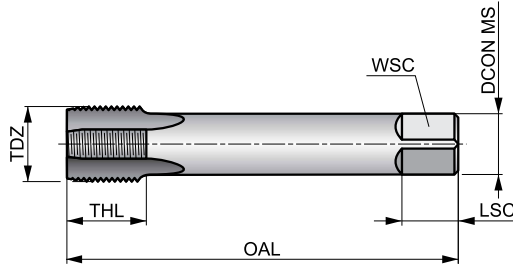
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)				
E1191/8N09	1/8	28	9.73	63.0	15	7.00	5.50	3	8.80	1	5975657
E1191/4N09	1/4	19	13.16	70.0	16	11.00	9.00	4	11.80	1	5975650
E1193/8N09	3/8	19	16.66	70.0	16	12.00	9.00	4	15.25	1	5975754
E1191/2N09	1/2	14	20.96	80.0	18	16.00	12.00	4	19.00	1	5975642
E1195/8N09	5/8	14	22.91	80.0	22	18.00	14.50	4	21.00	1	5975769
E1193/4N09	3/4	14	26.44	90.0	22	20.00	16.00	4	24.50	1	5975746
E1197/8N09	7/8	14	30.20	90.0	22	22.00	18.00	6	28.25	1	5975776
E1191N09	1"	11	33.25	100.0	25	25.00	20.00	6	30.75	1	5975739
E1191.1/8N09	1.1/8	11	37.90	125.0	40	28.00	22.00	6	35.00	1	5975624
E1191.1/4N09	1.1/4	11	41.91	125.0	40	32.00	24.00	6	39.50	1	5975612
E1191.1/2N09	1.1/2	11	47.80	140.0	40	36.00	29.00	6	45.00	1	5975604
E1191.3/4N09	1.3/4	11	53.75	140.0	40	40.00	32.00	6	51.00	1	5975635
E1192N09	2"	11	59.61	160.0	40	45.00	35.00	6	57.00	1	5975931
E1192.1/2N09	2.1/2	11	75.18	160.0	40	50.00	39.00	6	72.50	1	5975817
E1193N09	3"	11	87.88	160.0	40	50.00	39.00	8	85.50	1	5975761

E282



HSS-E-PM Straight Flute Machine Tap G(BSP), DIN Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



G	DIN 5156	Normal
	1.5x D	HSS-E PM
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 39	P2.1 ■ 30	P2.2 ■ 26	P2.3 ▣ 23	P3.1 ■ 23	P3.2 ▣ 20	P4.1 ▣ 13	K1.1 ▣ 43	K1.2 ▣ 33	K1.3 ▣ 26	K2.1 ▣ 46	K2.2 ▣ 36
K3.1 ▣ 43	K3.2 ▣ 33	K4.1 ▣ 39	K4.2 ▣ 30	K5.1 ▣ 39	K5.2 ▣ 33	N1.3 ▣ 39	N2.1 ▣ 49	N2.2 ▣ 46	N2.3 ▣ 36	N3.1 ▣ 69	N3.2 ■ 46	N4.2 ▣ 26	

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
E2821/8	1/8	28	9.73	90.0	20	7.00	5.50	8	3	8.80	1	5975977
E2821/4	1/4	19	13.16	100.0	21	11.00	9.00	12	4	11.80	1	5975973
E2823/8	3/8	19	16.66	100.0	21	12.00	9.00	12	4	15.25	1	5975981
E2821/2	1/2	14	20.96	125.0	24	16.00	12.00	15	4	19.00	1	5975951
E2823/4	3/4	14	26.44	140.0	28	20.00	16.00	19	4	24.50	1	5975979
E2821	1"	11	33.25	160.0	30	25.00	20.00	23	4	30.75	1	5975224
E2821.1/4¹⁾	1.1/4	11	41.91	170.0	30	32.00	24.00	27	4	39.50	1	5975871
E2821.1/2¹⁾	1.1/2	11	47.80	190.0	32	36.00	29.00	32	6	45.00	1	5975820

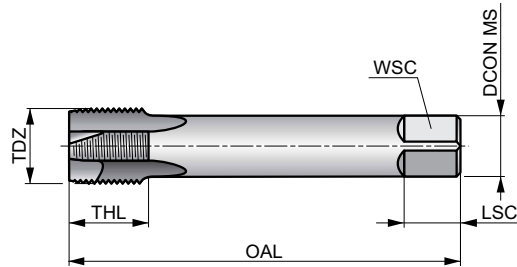
¹⁾ HSS-E.

EP40



HSS-E-PM Spiral Point Machine Tap G(BSP), DIN Standard

Machine tap with spiral point suited for through holes only. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



G	DIN 5156	Normal
2.5xD	HSS-E PM	
B 3.5-5	R	
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 72	P1.2 ■ 79	P1.3 ■ 82	P2.1 ■ 59	P2.2 ■ 52	P2.3 ▣ 46	P3.1 ■ 43	P3.2 ▣ 33	P4.1 ▣ 26	N1.1 ■ 46	N1.2 ■ 33	N1.3 ■ 23	N2.1 ■ 92	N2.2 ■ 82
N2.3 ■ 59	N3.1 ■ 144	N3.2 ▣ 89	N3.3 ■ 43	N4.1 ▣ 72									

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
EP401/8	1/8	28	9.73	90.0	18	7.00	5.50	8	3	8.80	P	1	5973943
EP401/4	1/4	19	13.16	100.0	21	11.00	9.00	12	3	11.80	P	1	5973939
EP403/8	3/8	19	16.66	100.0	21	12.00	9.00	12	4	15.25	P	1	5973951
EP401/2	1/2	14	20.95	125.0	24	16.00	12.00	15	4	19.00	P	1	5973935
EP405/8	5/8	14	22.91	125.0	24	18.00	14.50	17	4	21.00	P	1	5973954
EP403/4	3/4	14	26.44	140.0	28	20.00	16.00	19	4	24.50	P	1	5973947
EP407/8	7/8	14	30.20	150.0	28	22.00	18.00	21	4	28.25	P	1	5973960
EP401	1"	11	33.25	160.0	30	25.00	20.00	23	4	30.75	P	1	5973931

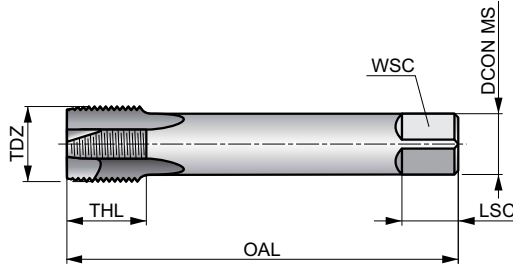
EP41



HSS-E-PM Spiral Point Machine Tap, G(BSP), DIN Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.

	DIN 5156	Normal
	2.5xD	HSS-E PM
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

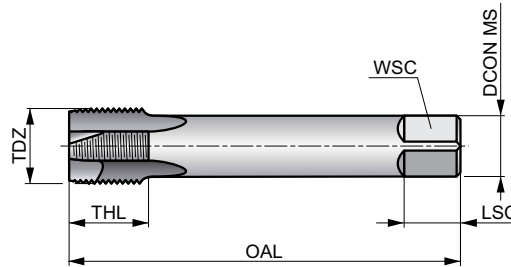
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
EP411/8	1/8	28	9.73	90.0	18	7.00	5.50	8	3	8.80	P	1	5973972
EP411/4	1/4	19	13.16	100.0	21	11.00	9.00	12	3	11.80	P	1	5973969
EP413/8	3/8	19	16.66	100.0	21	12.00	9.00	12	4	15.25	P	1	5973978
EP411/2	1/2	14	20.95	125.0	24	16.00	12.00	15	4	19.00	P	1	5973966
EP415/8	5/8	14	22.91	125.0	24	18.00	14.50	17	4	21.00	P	1	5973981
EP413/4	3/4	14	26.44	140.0	28	20.00	16.00	19	4	24.50	P	1	5973975
EP417/8	7/8	14	30.20	150.0	28	22.00	18.00	21	4	28.25	P	1	5973984
EP411	1"	11	33.25	160.0	30	25.00	20.00	23	4	30.75	P	1	5973963

E041



HSS-E-PM Spiral Point Machine Tap, G(BSP), ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



	ISO DORMER	Normal
	2.5xD	HSS-E PM
	B 3.5-5	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 72	P2.2 52	P2.3 46	P3.2 33	P3.3 30	P4.1 26	P4.2 20	M1.1 33	M1.2 26	M2.1 30	M2.2 23	M3.1 23	M3.2 20	M3.3 16
M4.1 13	K1.1 43	K1.2 33	K1.3 23	K2.1 52	K2.2 43	K3.1 46	K3.2 33	K4.1 43	K4.2 30	K5.1 49	K5.2 36		

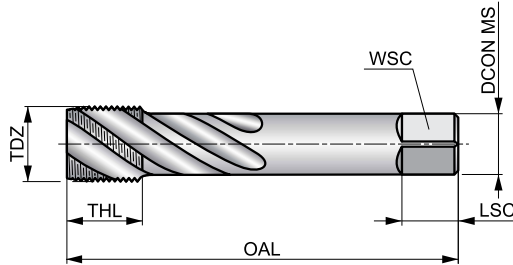
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
E0411/8	1/8	28	9.73	90.0	15	8.00	6.30	9	3	8.80	P	1	5973928
E0411/4	1/4	19	13.16	100.0	19	10.00	8.00	11	3	11.80	P	1	5973924
E0413/8	3/8	19	16.66	100.0	21	12.50	10.00	13	3	15.25	P	1	5973936
E0411/2	1/2	14	20.95	125.0	26	16.00	12.50	16	4	19.00	P	1	5973920
E0413/4	3/4	14	26.44	140.0	28	20.00	16.00	20	4	24.50	P	1	5973932

EX40



HSS-E-PM Spiral Flute Machine Tap, G(BSP), DIN Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges. The reduced shank increases the reach of the tap.



G	DIN 5156	Normal
	2.5xD	HSS-E PM
C 2-3		λ 45°
R	Bright	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 69	P1.2 ■ 75	P1.3 ■ 79	P2.1 ■ 56	P2.2 ■ 49	P2.3 ■ 43	P3.1 ■ 39	P3.2 ■ 30	P4.1 ■ 23	N1.1 ■ 43	N1.2 ■ 30	N1.3 ■ 20	N2.1 ■ 89	N2.2 ■ 79
N2.3 ■ 56													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
EX401/8	1/8	28	9.73	90.0	13	7.00	5.50	8	3	8.80	SB	1	5974218
EX401/4	1/4	19	13.16	100.0	15	11.00	9.00	12	3	11.80	SB	1	5974214
EX403/8	3/8	19	16.66	100.0	15	12.00	9.00	12	4	15.25	SB	1	5974225
EX401/2	1/2	14	20.95	125.0	18	16.00	12.00	15	4	19.00	SB	1	5974210
EX405/8	5/8	14	22.91	125.0	18	18.00	14.50	17	4	21.00	SB	1	5974232
EX403/4	3/4	14	26.44	140.0	20	20.00	16.00	19	4	24.50	SB	1	5974222
EX407/8	7/8	14	30.20	150.0	20	22.00	18.00	21	4	28.25	SB	1	5973750
EX401	1"	11	33.25	160.0	22	25.00	20.00	23	4	30.75	SB	1	5974195
EX401.1/4 ¹⁾	1.1/4	11	41.91	170.0	22	32.00	24.00	27	4	39.50	SB	1	5974202
EX401.1/2 ¹⁾	1.1/2	11	47.80	190.0	23	36.00	29.00	32	4	45.00	SB	1	5974199

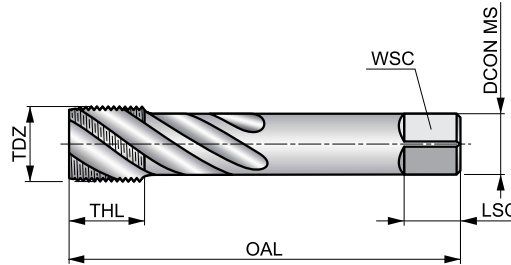
¹⁾ HSS-E.

EX41



HSS-E-PM Spiral Flute Machine Tap, G(BSP), DIN Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



	DIN 5156	Normal
	2.5xD	HSS-E PM
		λ 45°

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣69	P2.2 ▣49	P2.3 ▣43	P3.2 ▣30	P3.3 ▣26	P4.1 ▣23	P4.2 ▣16	M1.1 ▣26	M1.2 ▣20	M2.1 ▣23	M2.2 ▣16	M3.1 ▣16	M3.2 ▣13	M3.3 ▣10
M4.1 ▣10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
EX411/8	1/8	28	9.73	90.0	13	7.00	5.50	8	3	8.80	SB	1	5973910
EX411/4	1/4	19	13.16	100.0	15	11.00	9.00	12	3	11.80	SB	1	5973905
EX413/8	3/8	19	16.66	100.0	15	12.00	9.00	12	4	15.25	SB	1	5973753
EX411/2	1/2	14	20.95	125.0	18	16.00	12.00	15	4	19.00	SB	1	5973900
EX415/8	5/8	14	22.91	125.0	18	18.00	14.50	17	4	21.00	SB	1	5973755
EX413/4	3/4	14	26.44	140.0	20	20.00	16.00	19	4	24.50	SB	1	5973915
EX417/8	7/8	14	30.20	150.0	20	22.00	18.00	21	4	28.25	SB	1	5973757
EX411	1"	11	33.25	160.0	22	25.00	20.00	23	4	30.75	SB	1	5973773
EX411.1/8	1.1/8	11	37.90	170.0	22	28.00	22.00	25	4	35.00	SB	1	5973890
EX411.1/4 ¹⁾	1.1/4	11	41.91	170.0	22	32.00	24.00	27	4	39.50	SB	1	5973838
EX411.1/2 ¹⁾	1.1/2	11	47.80	190.0	23	36.00	29.00	32	4	45.00	SB	1	5973797

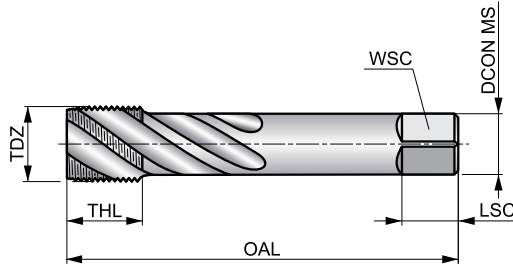
¹⁾ HSS-E.

E043



HSS-E-PM Spiral Flute Machine tap, G(BSP), ISO Standard

Machine tap with spiral flute suited for blind holes. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding. The reduced shank increases the reach of the tap.



		Normal
	2.5×D	HSS-E PM
C 2-3		λ 45°

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣69	P2.2 ▣49	P2.3 ▣43	P3.2 ▣30	P3.3 ▣26	P4.1 ▣23	P4.2 ▣16	M1.1 ▣26	M1.2 ▣20	M2.1 ▣23	M2.2 ▣16	M3.1 ▣16	M3.2 ▣13	M3.3 ▣10
M4.1 ▣10													

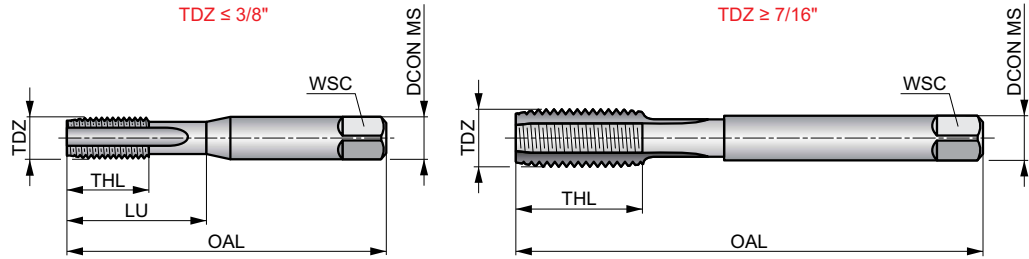
Product	TDZ	TPI	TD (mm)	OAL (mm)	THL (mm)	DCON MS (mm)	WSC (mm)	LSC (mm)	NOF	PHD (mm)	Chamfer	Pack Qty	MID
E0431/8	1/8	28	9.73	90.0	15	8.00	6.30	9	3	8.80	SB	1	5973967
E0431/4	1/4	19	13.16	100.0	19	10.00	8.00	11	3	11.80	SB	1	5973964
E0433/8	3/8	19	16.66	100.0	21	12.50	10.00	13	4	15.25	SB	1	5973973
E0431/2	1/2	14	20.95	125.0	26	16.00	12.50	16	4	19.00	SB	1	5973961
E0433/4	3/4	14	26.44	140.0	28	20.00	16.00	20	4	24.50	SB	1	5973970

E536



HSS Straight Flute Hand Tap, BSF, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available as a bottoming lead N03 for blind holes.



	ISO 529	Medium
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E5363/16N03	3/16	32	4.76	58.0	12	5.00	4.00	3	4.00	20.00	1	5976645
E5361/4N03	1/4	26	6.35	66.0	14	6.30	5.00	3	5.30	26.00	1	5976602
E5365/16N03	5/16	22	7.94	72.0	18	8.00	6.30	3	6.80	29.00	1	5976503
E5363/8N03	3/8	20	9.53	80.0	20	10.00	8.00	3	8.30	32.00	1	5976685
E5367/16N03	7/16	18	11.11	85.0	20	8.00	6.30	3	9.70	–	1	5976532
E5361/2N03	1/2	16	12.70	89.0	23	9.00	7.10	3	11.00	–	1	5976582
E5369/16N03	9/16	16	14.28	95.0	25	11.20	9.00	4	12.70	–	1	5976570
E5365/8N03	5/8	14	15.88	102.0	25	12.50	10.00	4	14.00	–	1	5976514
E5363/4N03	3/4	12	19.05	112.0	30	14.00	11.20	4	17.00	–	1	5976632
E5361N03	1"	10	25.40	130.0	36	18.00	14.00	4	22.75	–	1	5976622

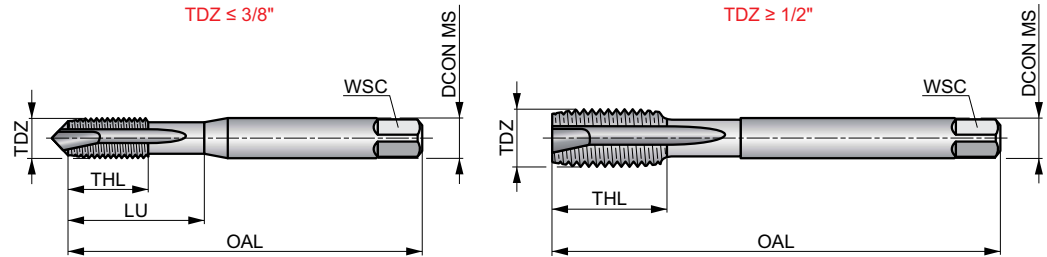
E539



HSS Spiral Point Machine Tap, BSF, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	Medium
	2.5xD	HSS
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ▣36	P1.2 ▣39	P1.3 ▣46	P2.1 ▣30	P2.2 ▣26	P2.3 ▣23	P3.1 ▣26	P3.2 ▣20	P4.1 ▣16	P4.2 ▣13	M1.1 ▣23	M1.2 ▣20	M2.1 ▣20	M2.2 ▣16
M3.1 ▣16	M3.2 ▣13	M3.3 ▣10	M4.1 ▣7	K1.1 ▣30	K1.2 ▣20	K1.3 ▣13	K2.1 ▣39	K2.2 ▣30	K3.1 ▣33	K3.2 ▣20	K4.1 ▣30	K4.2 ▣16	K5.1 ▣36
K5.2 ▣23													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E5391/4	1/4	26	6.35	66.0	14	6.30	5.00	3	5.30	26.00	1	5976638
E5395/16	5/16	22	7.94	72.0	18	8.00	6.30	3	6.80	29.00	1	5976646
E5393/8	3/8	20	9.53	80.0	20	10.00	8.00	3	8.30	32.00	1	5976642
E5391/2	1/2	16	12.70	89.0	23	9.00	7.10	3	11.00	-	1	5976634

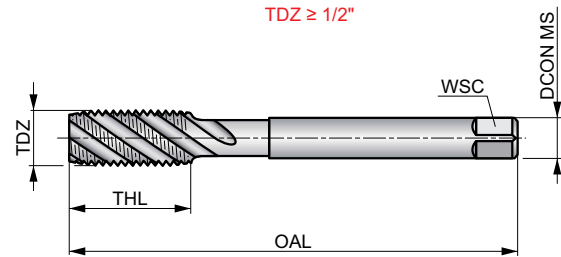
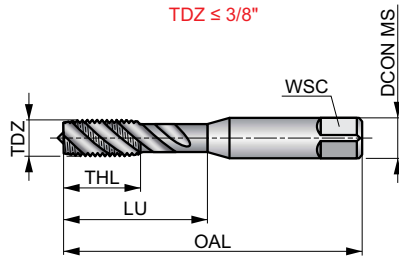
E538



HSS Spiral Flute Machine Tap, BSF, ISO Standard

Machine tap with spiral flute suited for blind holes. Available with bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges or BLUE finish with steam tempered surface, which acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	Medium
	2×D	HSS
C 2-3		λ 40°



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 33	P1.2 ■ 36	P1.3 ■ 43	P2.1 ■ 26	P2.2 ■ 23	P2.3 ■ 20	P3.1 ■ 23	P3.2 ■ 16	P3.3 ■ 13	P4.1 ■ 13	P4.2 ■ 10	M1.1 ■ 20	M1.2 ■ 16	M2.1 ■ 13
M2.2 ■ 16	M2.3 ■ 16	M3.1 ■ 16	M3.2 ■ 13	M3.3 ■ 10	M4.1 ■ 7	N1.3 ■ 16	N2.1 ■ 39	N2.2 ■ 33	N2.3 ■ 26				

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E5381/4 ¹⁾	1/4	26	6.35	66.0	13	6.30	5.00	3	5.30	26.00	1	5976595
E5381/4BLUE	1/4	26	6.35	66.0	13	6.30	5.00	3	5.30	26.00	1	5976604
E5385/16 ¹⁾	5/16	22	7.94	72.0	16	8.00	6.30	3	6.80	31.00	1	5976619
E5385/16BLUE	5/16	22	7.94	72.0	16	8.00	6.30	3	6.80	31.00	1	5976623
E5383/8 ¹⁾	3/8	20	9.53	80.0	18	10.00	8.00	3	8.30	34.00	1	5976612
E5383/8BLUE	3/8	20	9.53	80.0	18	10.00	8.00	3	8.30	34.00	1	5976616
E5381/2 ¹⁾	1/2	16	12.70	89.0	22	9.00	7.10	3	11.00	–	1	5976585
E5381/2BLUE	1/2	16	12.70	89.0	22	9.00	7.10	3	11.00	–	1	5976589

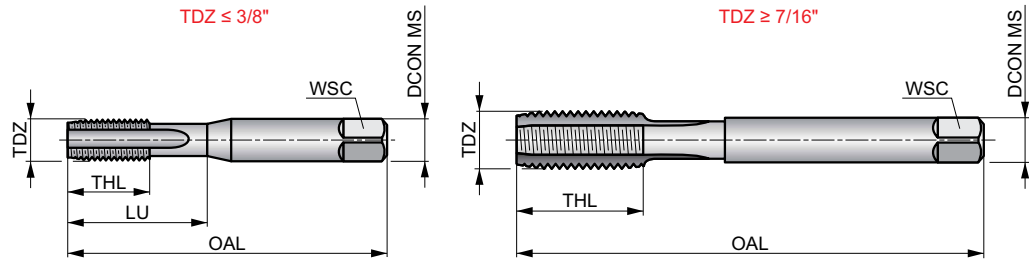
¹⁾ Bright Finish.

E531



HSS Straight Flute Hand Tap, BSW, ISO Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available as a set of three N06 or as separate taps with taper lead N01 for short through holes, plug lead N02 for deeper through holes or bottoming lead N03 for blind holes.



	ISO 529	Medium
	1.5×D	HSS
		Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)				(mm)			
E5311/8N01	1/8	40	3.17	48.0	12.5	3.15	2.50	3	2.55	12.50	T	1	5977263
E5311/8N02	1/8	40	3.17	48.0	12.5	3.15	2.50	3	2.55	12.50	P	1	5977266
E5311/8N03	1/8	40	3.17	48.0	12.5	3.15	2.50	3	2.55	12.50	B	1	5977270
E5311/8N06	1/8	40	3.17	48.0	12.5	3.15	2.50	3	2.55	12.50	Set	1	5977274
E5315/32N01	5/32	32	3.97	53.0	14	4.00	3.15	3	3.20	14.00	T	1	5977360
E5315/32N02	5/32	32	3.97	53.0	14	4.00	3.15	3	3.20	14.00	P	1	5977363
E5315/32N03	5/32	32	3.97	53.0	14	4.00	3.15	3	3.20	14.00	B	1	5977366
E5315/32N06	5/32	32	3.97	53.0	14	4.00	3.15	3	3.20	14.00	Set	1	5977368
E5313/16N01	3/16	24	4.76	58.0	11	5.00	4.00	3	3.70	20.00	T	1	5977304
E5313/16N02	3/16	24	4.76	58.0	11	5.00	4.00	3	3.70	20.00	P	1	5977307
E5313/16N03	3/16	24	4.76	58.0	11	5.00	4.00	3	3.70	20.00	B	1	5977310
E5313/16N06	3/16	24	4.76	58.0	11	5.00	4.00	3	3.70	20.00	Set	1	5977313
E5311/4N01	1/4	20	6.35	66.0	13	6.30	5.00	3	5.10	26.00	T	1	5977252
E5311/4N02	1/4	20	6.35	66.0	13	6.30	5.00	3	5.10	26.00	P	1	5977254
E5311/4N03	1/4	20	6.35	66.0	13	6.30	5.00	3	5.10	26.00	B	1	5977257
E5311/4N06	1/4	20	6.35	66.0	13	6.30	5.00	3	5.10	26.00	Set	1	5977260
E5315/16N01	5/16	18	7.94	72.0	16	8.00	6.30	3	6.50	29.00	T	1	5977345
E5315/16N02	5/16	18	7.94	72.0	16	8.00	6.30	3	6.50	29.00	P	1	5977348
E5315/16N03	5/16	18	7.94	72.0	16	8.00	6.30	3	6.50	29.00	B	1	5977354
E5315/16N06	5/16	18	7.94	72.0	16	8.00	6.30	3	6.50	29.00	Set	1	5977357
E5313/8N01	3/8	16	9.53	80.0	18	10.00	8.00	3	7.90	32.00	T	1	5977335
E5313/8N02	3/8	16	9.53	80.0	18	10.00	8.00	3	7.90	32.00	P	1	5977338
E5313/8N03	3/8	16	9.53	80.0	18	10.00	8.00	3	7.90	32.00	B	1	5977339

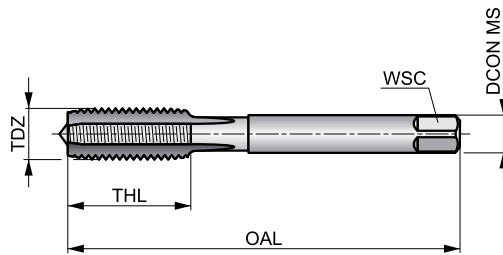
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E5313/8N06	3/8	16	9.53	80.0	18	10.00	8.00	3	7.90	32.00	Set	1	5977342
E5317/16N01	7/16	14	11.11	85.0	19	8.00	6.30	3	9.20	–	T	1	5977385
E5317/16N02	7/16	14	11.11	85.0	19	8.00	6.30	3	9.20	–	P	1	5976476
E5317/16N03	7/16	14	11.11	85.0	19	8.00	6.30	3	9.20	–	B	1	5976504
E5317/16N06	7/16	14	11.11	85.0	19	8.00	6.30	3	9.20	–	Set	1	5976541
E5311/2N01	1/2	12	12.70	89.0	22	9.00	7.10	3	10.50	–	T	1	5977394
E5311/2N02	1/2	12	12.70	89.0	22	9.00	7.10	3	10.50	–	P	1	5977397
E5311/2N03	1/2	12	12.70	89.0	22	9.00	7.10	3	10.50	–	B	1	5977247
E5311/2N06	1/2	12	12.70	89.0	22	9.00	7.10	3	10.50	–	Set	1	5977249
E5315/8N01	5/8	11	15.88	102.0	24	12.50	10.00	4	13.50	–	T	1	5977371
E5315/8N02	5/8	11	15.88	102.0	24	12.50	10.00	4	13.50	–	P	1	5977374
E5315/8N03	5/8	11	15.88	102.0	24	12.50	10.00	4	13.50	–	B	1	5977377
E5315/8N06	5/8	11	15.88	102.0	24	12.50	10.00	4	13.50	–	Set	1	5977380
E5313/4N01	3/4	10	19.05	112.0	29	14.00	11.20	4	16.50	–	T	1	5977321
E5313/4N02	3/4	10	19.05	112.0	29	14.00	11.20	4	16.50	–	P	1	5977326
E5313/4N03	3/4	10	19.05	112.0	29	14.00	11.20	4	16.50	–	B	1	5977329
E5313/4N06	3/4	10	19.05	112.0	29	14.00	11.20	4	16.50	–	Set	1	5977332
E5311N01	1"	8	25.40	130.0	35	18.00	14.00	4	22.00	–	T	1	5977286
E5311N02	1"	8	25.40	130.0	35	18.00	14.00	4	22.00	–	P	1	5977290
E5311N03	1"	8	25.40	130.0	35	18.00	14.00	4	22.00	–	B	1	5977294
E5311N06	1"	8	25.40	130.0	35	18.00	14.00	4	22.00	–	Set	1	5977298

E115



HSS Straight Flute Serial Hand Tap, BSW, DIN352 Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a set of three serial taps, which should be used one after the other to create the full thread.



Workpiece material group suitability.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	K1.1	K1.2	K1.3	K2.1	K2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3.1	K3.2	K4.1	K4.2	K5.1	K5.2	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3.3	N4.2	N4.3											
■	■	■											

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E1151/8N08	1/8	40	3.17	40.0	10	3.50	2.70	3	2.55	1	5975520
E1155/32N08	5/32	32	3.97	45.0	12	4.50	3.40	3	3.20	1	5975567
E1153/16N08	3/16	24	4.76	50.0	16	5.50	4.30	3	3.70	1	5975537
E1151/4N08	1/4	20	6.35	56.0	17	6.00	4.90	3	5.10	1	5975514
E1155/16N08	5/16	18	7.94	63.0	25	6.00	4.90	3	6.50	1	5975561
E1153/8N08	3/8	16	9.53	70.0	22	7.00	5.50	3	7.90	1	5975554
E1157/16N08	7/16	14	11.11	75.0	30	8.00	6.20	3	9.20	1	5975581
E1151/2N08	1/2	12	12.70	80.0	30	9.00	7.00	3	10.50	1	5975676
E1159/16N08	9/16	12	14.29	80.0	30	11.00	9.00	4	12.00	1	5975596
E1155/8N08	5/8	11	15.88	90.0	36	12.00	9.00	4	13.50	1	5975572
E1153/4N08	3/4	10	19.05	105.0	40	14.00	11.00	4	16.50	1	5975549
E1157/8N08	7/8	9	22.23	110.0	45	18.00	14.50	4	19.25	1	5975588
E1151N08	1"	8	25.40	110.0	50	20.00	16.00	4	22.00	1	5975526

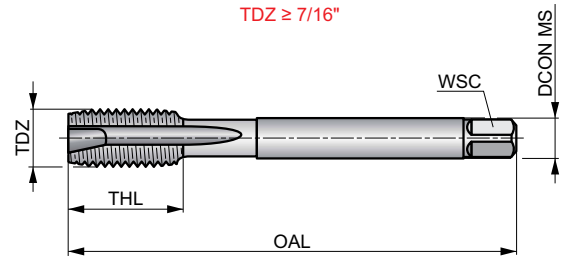
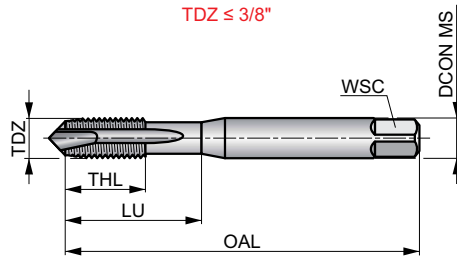
E534



HSS Spiral Point Machine Tap, BSW, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	Medium
	2.5xD	HSS
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 36	P1.2 ■ 39	P1.3 ■ 46	P2.1 ■ 30	P2.2 ■ 26	P2.3 ■ 23	P3.1 ■ 26	P3.2 ■ 20	P4.1 ■ 16	P4.2 ■ 13	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ■ 16
M3.1 ■ 16	M3.2 ■ 13	M3.3 ■ 10	M4.1 ■ 7	K1.1 ■ 30	K1.2 ■ 20	K1.3 ■ 13	K2.1 ■ 39	K2.2 ■ 30	K3.1 ■ 33	K3.2 ■ 20	K4.1 ■ 30	K4.2 ■ 16	K5.1 ■ 36
K5.2 ■ 23													

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E5341/8	1/8	40	3.17	48.0	12.5	3.15	2.50	3	2.55	12.50	1	5976535
E5345/32	5/32	32	3.97	53.0	14	4.00	3.15	3	3.20	14.00	1	5976557
E5343/16	3/16	24	4.76	58.0	11	5.00	4.00	3	3.70	20.00	1	5976539
E5341/4	1/4	20	6.35	66.0	13	6.30	5.00	3	5.10	26.00	1	5976533
E5345/16	5/16	18	7.94	72.0	16	8.00	6.30	3	6.50	29.00	1	5976552
E5343/8	3/8	16	9.53	80.0	18	10.00	8.00	3	7.90	32.00	1	5976549
E5347/16	7/16	14	11.11	85.0	19	8.00	6.30	3	9.20	-	1	5976566
E5341/2	1/2	12	12.70	89.0	22	9.00	7.10	3	10.50	-	1	5976528
E5345/8	5/8	11	15.88	102.0	24	12.50	10.00	3	13.50	-	1	5976561
E5343/4	3/4	10	19.05	112.0	29	14.00	11.20	4	16.50	-	1	5976545

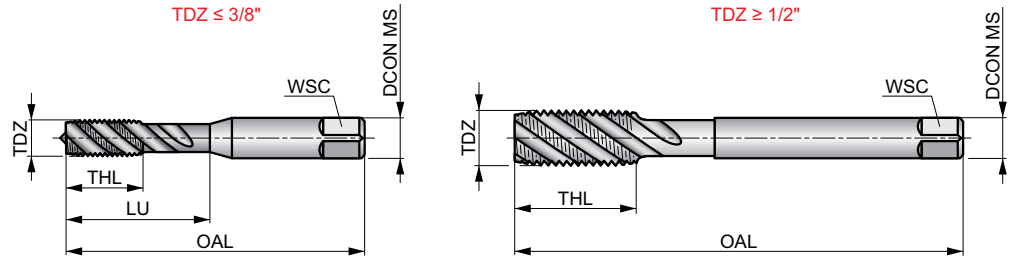
E533



HSS Spiral Flute Machine Tap, BSW, ISO Standard

Machine tap with spiral flute suited for blind holes. Available with bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges or BLUE finish with steam tempered surface, which acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	Medium
	2xD	HSS
C 2-3		λ 40°
	Bright ST	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 33	P1.2 ■ 36	P1.3 ■ 43	P2.1 ■ 26	P2.2 ■ 23	P2.3 ■ 20	P3.1 ■ 23	P3.2 ■ 16	P3.3 ■ 13	P4.1 ■ 13	P4.2 ■ 10	M1.1 ■ 20	M1.2 ■ 16	M2.1 ■ 13
M2.2 ■ 16	M2.3 ■ 16	M3.1 ■ 16	M3.2 ■ 13	M3.3 ■ 10	M4.1 ■ 7	N1.3 ■ 16	N2.1 ■ 39	N2.2 ■ 33	N2.3 ■ 26				

Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	NOF	PHD	LU	Pack Qty	MID
			(mm)	(mm)	(mm)							
E5331/8 ¹⁾	1/8	40	3.17	48.0	12.5	3.15	2.50	3	2.55	12.50	1	5976489
E5331/8BLUE	1/8	40	3.17	48.0	12.5	3.15	2.50	3	2.55	12.50	1	5976490
E5333/16 ¹⁾	3/16	24	4.76	58.0	11	5.00	4.00	3	3.70	20.00	1	5976492
E5333/16BLUE	3/16	24	4.76	58.0	11	5.00	4.00	3	3.70	20.00	1	5976495
E5331/4 ¹⁾	1/4	20	6.35	66.0	13	6.30	5.00	3	5.10	26.00	1	5976486
E5331/4BLUE	1/4	20	6.35	66.0	13	6.30	5.00	3	5.10	26.00	1	5976488
E5335/16 ¹⁾	5/16	18	7.94	72.0	16	8.00	6.30	3	6.50	31.00	1	5976515
E5335/16BLUE	5/16	18	7.94	72.0	16	8.00	6.30	3	6.50	31.00	1	5976518
E5333/8 ¹⁾	3/8	16	9.53	80.0	18	10.00	8.00	3	7.90	34.00	1	5976507
E5333/8BLUE	3/8	16	9.53	80.0	18	10.00	8.00	3	7.90	34.00	1	5976510
E5331/2 ¹⁾	1/2	12	12.70	89.0	22	9.00	7.10	3	10.50	—	1	5976481
E5331/2BLUE	1/2	12	12.70	89.0	22	9.00	7.10	3	10.50	—	1	5976483
E5335/8 ¹⁾	5/8	11	15.88	102.0	24	12.50	10.00	3	13.50	—	1	5976521
E5335/8BLUE	5/8	11	15.88	102.0	24	12.50	10.00	3	13.50	—	1	5976525
E5333/4 ¹⁾	3/4	10	19.05	112.0	29	14.00	11.20	3	16.50	—	1	5976497
E5333/4BLUE	3/4	10	19.05	112.0	29	14.00	11.20	3	16.50	—	1	5976501

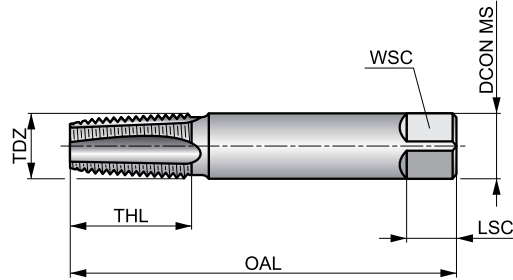
¹⁾ Bright Finish.

E550



HSS Straight Flute Serial Hand Tap, Rc(BSPT), ISO Standard

Ideal for hand tapping tough materials. The straight flute design makes it ideal for both through and blind holes. Available as a single finishing tap or as a set of two serial taps, which should be used one after the other to create the full thread.



	ISO 2284	Normal
	1.5xD	HSS
C 2-3		
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▧ 13	P3.1 ■ 13	P3.2 ▧ 13	P4.1 ▧ 10	M1.1 ▧ 16	M1.2 ▧ 13	M2.1 ▧ 16	M2.2 ▧ 13	M3.1 ▧ 16
M3.2 ▧ 13	M3.3 ▧ 10	M4.1 ▧ 10	K1.1 ▧ 20	K1.2 ▧ 13	K1.3 ▧ 10	K2.1 ▧ 23	K2.2 ▧ 20	K3.1 ▧ 23	K3.2 ▧ 16	K4.1 ▧ 20	K4.2 ▧ 16	K5.1 ▧ 23	K5.2 ▧ 16
N1.3 ▧ 26	N2.1 ▧ 36	N2.2 ▧ 33	N2.3 ▧ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▧ 16	N4.2 ▧ 16	N4.3 ▧ 10					

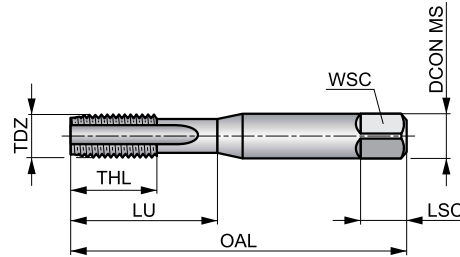
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
E5501/8	1/8	28	9.73	59.0	15	8.00	6.30	9	3	8.40	1	5976468
E5501/8N07	1/8	28	9.73	59.0	15	8.00	6.30	9	3	8.40	1	5976472
E5501/4	1/4	19	13.16	67.0	19	10.00	8.00	11	3	11.20	1	5976464
E5501/4N07	1/4	19	13.16	67.0	19	10.00	8.00	11	3	11.20	1	5976466
E5503/8	3/8	19	16.66	75.0	21	12.50	10.00	13	3	14.75	1	5977464
E5503/8N07	3/8	19	16.66	75.0	21	12.50	10.00	13	3	14.75	1	5977475
E5501/2	1/2	14	20.95	87.0	26	16.00	12.50	16	5	18.25	1	5976459
E5501/2N07	1/2	14	20.95	87.0	26	16.00	12.50	16	5	18.25	1	5976462
E5503/4	3/4	14	26.44	96.0	28	20.00	16.00	20	5	23.75	1	5977442
E5503/4N07	3/4	14	26.44	96.0	28	20.00	16.00	20	5	23.75	1	5977453
E5501	1"	11	33.25	109.0	33	25.00	20.00	24	5	30.00	1	5976452
E5501.1/4	1.1/4	11	41.91	119.0	36	31.50	25.00	28	5	38.50	1	5976457
E5501.1/2	1.1/2	11	47.80	125.0	37	35.50	28.00	31	7	44.50	1	5976455
E5502	2"	11	59.61	140.0	41	40.00	31.50	34	7	56.00	1	5977431

E542



HSS Straight Flute Hand Tap, BA, ISO Standard

A versatile tool, suitable for hand and machine tapping, available as a bottoming lead N03 with a straight flute design for both through and blind holes.



	ISO 529	Normal
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E542BA10N03	BA10	0.35	1.70	41.0	7	2.50	2.00	4	2	1.30	7.00	1	5976647
E542BA8N03	BA 8	0.43	2.20	44.5	9.5	2.80	2.20	5	3	1.80	9.50	1	5976654
E542BA6N03	BA 6	0.53	2.80	44.5	9.5	2.80	2.20	5	3	2.30	9.50	1	5976625
E542BA5N03	BA 5	0.59	3.20	48.0	14.5	3.15	2.50	5	3	2.65	14.50	1	5976610
E542BA4N03	BA 4	0.66	3.60	50.0	16.5	3.55	2.80	5	3	3.00	16.50	1	5976591
E542BA3N03	BA 3	0.73	4.10	53.0	10	4.50	3.50	6	3	3.40	17.00	1	5976573
E542BA2N03	BA 2	0.81	4.70	58.0	12	5.00	4.00	7	3	4.00	20.00	1	5976728
E542BA0N03	BA 0	1.00	6.00	66.0	14	6.30	5.00	8	3	5.10	26.00	1	5976660

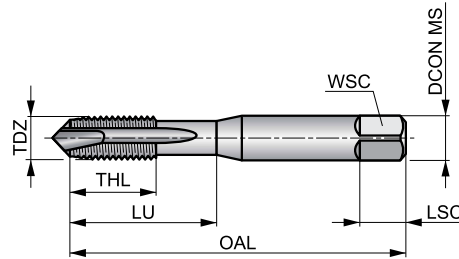
E545



HSS Spiral Point Machine Tap, BA, ISO Standard

Machine tap with spiral point suited for through holes only. Steam tempered surface acts to retain cutting fluid and prevent chip to tool welding.

	ISO 529	Normal
	2.5xD	HSS
B 3.5-5		



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■36	P1.2 ■39	P1.3 ■46	P2.1 ■30	P2.2 ■26	P2.3 ■23	P3.1 ■26	P3.2 ■20	P4.1 ■16	P4.2 ■13	M1.1 ■23	M1.2 ■20	M2.1 ■13	M2.2 ■16
M3.1 ■16	M3.2 ■13	M3.3 ■10	M4.1 ■7	K1.1 ■30	K1.2 ■20	K1.3 ■13	K2.1 ■39	K2.2 ■30	K3.1 ■33	K3.2 ■20	K4.1 ■30	K4.2 ■16	K5.1 ■36
K5.2 ■23													

Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E545BA10	BA10	0.35	1.70	41.0	7	2.50	2.00	4	2	1.30	7.00	1	5976701
E545BA8	BA 8	0.43	2.20	44.5	9.5	2.80	2.20	5	3	1.80	9.50	1	5976714
E545BA6	BA 6	0.53	2.80	44.5	9.5	2.80	2.20	5	3	2.30	9.50	1	5976711
E545BA4	BA 4	0.66	3.60	50.0	16.5	3.55	2.80	5	3	3.00	16.50	1	5976709
E545BA2	BA 2	0.81	4.70	58.0	12	5.00	4.00	7	3	4.00	20.00	1	5976706

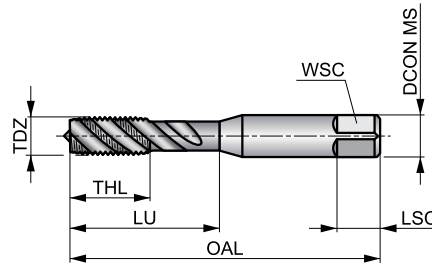
E544



HSS Spiral Flute Machine Tap, BA, ISO Standard

Machine tap with spiral flute suited for blind holes. Available with bright finish to produce more accurate and cleaner threads, preventing the workpiece material from sticking to the cutting edges or BLUE finish with steam tempered surface, which acts to retain cutting fluid and prevent chip to tool welding.

BA	ISO 529	Normal
2xD	HSS	
C 2-3	λ 40°	
R	Bright ST	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 33	P1.2 ■ 36	P1.3 ■ 43	P2.1 ■ 26	P2.2 ■ 23	P2.3 ■ 20	P3.1 ■ 23	P3.2 ■ 16	P3.3 ▣ 13	P4.1 ■ 13	P4.2 ▣ 10	M1.1 ■ 20	M1.2 ▣ 16	M2.1 ▣ 13
M2.2 ▣ 16	M2.3 ▣ 16	M3.1 ■ 16	M3.2 ▣ 13	M3.3 ▣ 10	M4.1 ▣ 7	N1.3 ▣ 16	N2.1 ▣ 39	N2.2 ▣ 33	N2.3 ▣ 26				

Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)		
E544BA8 ¹⁾	BA 8	0.43	2.20	44.5	9.5	2.80	2.20	5	2	1.80	9.50	1	5976695
E544BA8BLUE	BA 8	0.43	2.20	44.5	9.5	2.80	2.20	5	2	1.80	9.50	1	5976697
E544BA6 ¹⁾	BA 6	0.53	2.80	44.5	9.5	2.80	2.20	5	2	2.30	9.50	1	5976689
E544BA4 ¹⁾	BA 4	0.66	3.60	50.0	16.5	3.55	2.80	5	3	3.00	16.50	1	5976678
E544BA4BLUE	BA 4	0.66	3.60	50.0	16.5	3.55	2.80	5	3	3.00	16.50	1	5976681
E544BA2 ¹⁾	BA 2	0.81	4.70	58.0	12	5.00	4.00	7	3	4.00	20.00	1	5976672
E544BA2BLUE	BA 2	0.81	4.70	58.0	12	5.00	4.00	7	3	4.00	20.00	1	5976675

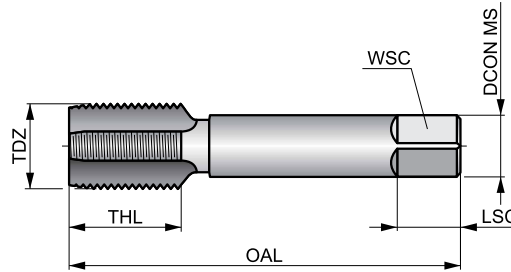
¹⁾ Bright Finish.

E243



HSS Straight Flute Hand Tap, PG Conduit Thread, DIN Standard

A versatile tool, suitable for hand and machine tapping, with a straight flute design for both through and blind holes. Available tap with plug lead NO2 for through holes or bottoming lead NO3 for blind holes.



	DIN 40432	Normal
	1.5xD	HSS
		Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▧ 13	P3.1 ■ 13	P3.2 ▧ 13	P4.1 ▧ 10	K1.1 ▧ 20	K1.2 ▧ 13	K1.3 ▧ 10	K2.1 ▧ 23	K2.2 ▧ 20
K3.1 ▧ 23	K3.2 ▧ 16	K4.1 ▧ 20	K4.2 ▧ 16	K5.1 ▧ 23	K5.2 ▧ 16	N1.3 ▧ 26	N2.1 ▧ 36	N2.2 ▧ 33	N2.3 ▧ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▧ 16	N4.2 ▧ 16
N4.3 ▧ 10													

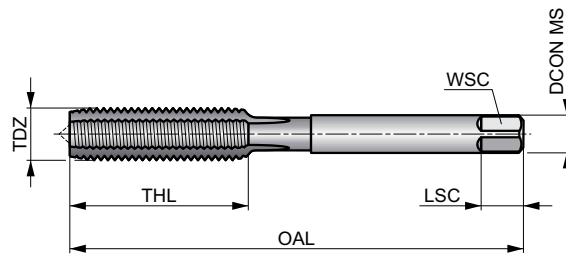
Product	TDZ	TPI	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	Chamfer	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)			
E243PG7N02	7	20	12.50	70.0	22	9.00	7.00	10	4	11.40	P	1	5975841
E243PG7N03	7	20	12.50	70.0	22	9.00	7.00	10	4	11.40	B	1	5975843
E243PG9N02	9	18	15.20	70.0	22	12.00	9.00	12	4	13.90	P	1	5975846
E243PG9N03	9	18	15.20	70.0	22	12.00	9.00	12	4	13.90	B	1	5975850
E243PG11N02	11	18	18.60	80.0	22	14.00	11.00	14	4	17.25	P	1	5975784
E243PG11N03	11	18	18.60	80.0	22	14.00	11.00	14	4	17.25	B	1	5975794
E243PG13.5N02	13.5	18	20.40	80.0	22	16.00	12.00	15	4	19.00	P	1	5975798
E243PG13.5N03	13.5	18	20.40	80.0	22	16.00	12.00	15	4	19.00	B	1	5975801
E243PG16N02	16	18	22.50	80.0	22	18.00	14.50	17	4	21.25	P	1	5975805
E243PG16N03	16	18	22.50	80.0	22	18.00	14.50	17	4	21.25	B	1	5975809
E243PG21N02	21	16	28.30	90.0	22	22.00	18.00	21	4	27.00	P	1	5975811
E243PG21N03	21	16	28.30	90.0	22	22.00	18.00	21	4	27.00	B	1	5975815
E243PG29N02	29	16	37.00	100.0	25	28.00	22.00	25	6	35.50	P	1	5975818
E243PG29N03	29	16	37.00	100.0	25	28.00	22.00	25	6	35.50	B	1	5975822
E243PG36N02	36	16	47.00	140.0	32	36.00	29.00	32	6	45.50	P	1	5975827
E243PG36N03	36	16	47.00	140.0	32	36.00	29.00	32	6	45.50	B	1	5975837

1572(UNC)



HSS Straight Flute Hand Tap, UNC for Screw Thread Insert, ANSI Standard

Versatile tap for hand use or machine tapping of thread for wire Screw Thread Inserts. These STIs are inserted into the threaded hole, produced with this tap, to reinforce the original or repair damaged ones. The tap thread diameter size is the STI's internal thread size, thus a larger premachined hole diameter is needed.



	ANSI	3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P3.1 23	P3.2 20	P4.1 13	M1.1 23	M1.2 20	M2.1 20	M2.2 16	M3.1 7	M3.2 7
N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82	N2.3 59	N3.1 112	N3.2 66	N3.3 33					

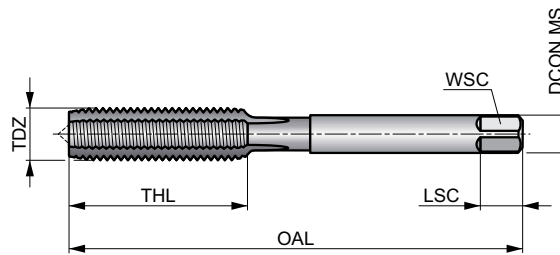
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
15724-40H2N02	4	40	2"	11/16	.141	.110	3/16	3	H2	P	1	6006887
15726-32H3N02	6	32	2.3/8	7/8	.194	.152	1/4	3	H3	P	1	6007013
15728-32H3N02	8	32	2.3/8	15/16	.220	.165	9/32	3	H3	P	1	6007032
157210-24H2N02	10	24	2.1/2	1"	.255	.191	5/16	3	H2	P	1	6006932
15721/4X20H3N02	1/4	20	2.23/32	1.1/8	.318	.238	3/8	3	H3	P	1	6006921
15725/16X18H3N02	5/16	18	2.15/16	1.1/4	.381	.286	7/16	4	H3	P	1	6006931
15723/8X16H3N02	3/8	16	3.3/8	1.21/32	.367	.275	7/16	4	H3	P	1	6006955
15727/16X14H3N02	7/16	14	3.19/32	1.21/32	.429	.322	1/2	4	H3	P	1	6007024
15721/2X13H3N02	1/2	13	3.13/16	1.13/16	.480	.360	9/16	4	H3	P	1	6006918

1572(UNF)



HSS Straight Flute Hand Tap, UNF for Screw Thread Insert, ANSI Standard

Versatile tap for hand use or machine tapping of thread for wire Screw Thread Inserts. These STIs are inserted into the threaded hole, produced with this tap, to reinforce the original or repair damaged ones. The tap thread diameter size is the STI's internal thread size, thus a larger premachined hole diameter is needed.



	ANSI	3B
	1.5xD	HSS
	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 36	P1.2 39	P1.3 39	P2.1 30	P2.2 26	P3.1 23	P3.2 20	P4.1 13	M1.1 23	M1.2 20	M2.1 20	M2.2 16	M3.1 17	M3.2 17
N1.1 39	N1.2 30	N1.3 20	N2.1 92	N2.2 82	N2.3 59	N3.1 112	N3.2 66	N3.3 33					

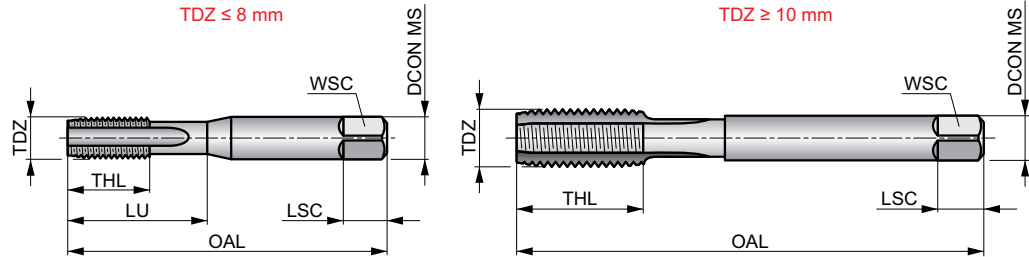
Product	TDZ	TPI	OAL	THL	DCON MS	WSC	LSC	NOF	Limits	Chamfer	Pack Qty	MID
			(inch)	(inch)	(inch)	(inch)	(inch)					
157210-32H2N02	10	32	2.1/2	1"	.255	.191	5/16	3	H2	P	1	6006936
157210-32H3N02	10	32	2.1/2	1"	.255	.191	5/16	3	H3	P	1	6006945

E620



HSS Straight Flute Machine Tap, Metric for Helicoil Insert, ISO Standard

General purpose straight flute machine tap for through and blind holes. Bright finish to produce more accurate and cleaner threads for Screw-Thread-Inserts. These STIs are inserted into the threaded hole, produced with this tap, to reinforce the original thread or repair damaged ones.



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 23	P1.2 ■ 23	P1.3 ■ 26	P2.1 ■ 20	P2.2 ■ 16	P2.3 ▣ 13	P3.1 ■ 13	P3.2 ▣ 13	P4.1 ▣ 10	K1.1 ▣ 39	K1.2 ▣ 30	K1.3 ▣ 23	K2.1 ▣ 39	K2.2 ▣ 33
K3.1 ▣ 36	K3.2 ▣ 26	K4.1 ▣ 33	K4.2 ▣ 26	K5.1 ▣ 36	K5.2 ▣ 30	N1.3 ▣ 26	N2.1 ▣ 36	N2.2 ▣ 33	N2.3 ▣ 23	N3.1 ■ 56	N3.2 ■ 33	N3.3 ▣ 16	N4.2 ▣ 16
N4.3 ▣ 10													

Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
E620M3	3	0.50	3.65	53.0	14	4.00	3.15	6	3	3.20	14.00	SB	1	5978063
E620M4	4	0.70	4.91	58.0	11	5.00	4.00	7	3	4.20	20.00	SB	1	5978072
E620M5	5	0.80	6.04	66.0	13	6.30	5.00	8	3	5.20	26.00	SB	1	5978280
E620M6	6	1.00	7.30	72.0	16	8.00	6.30	9	3	6.30	29.00	SB	1	5978336
E620M8	8	1.25	9.62	80.0	18	10.00	8.00	11	3	8.40	32.00	SB	1	5978371
E620M10	10	1.50	11.95	89.0	22	9.00	7.10	10	3	10.50	–	SB	1	5978043
E620M12	12	1.75	14.27	95.0	24	11.20	9.00	12	4	12.50	–	SB	1	5978049
E620M16	16	2.00	18.60	112.0	29	14.00	11.20	14	4	16.50	–	SB	1	5978059

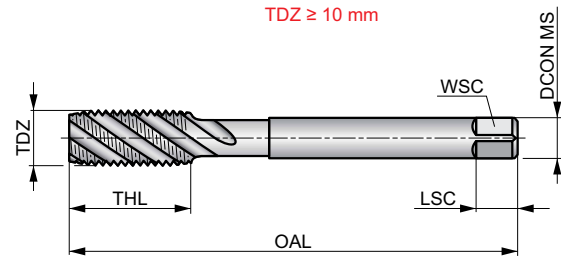
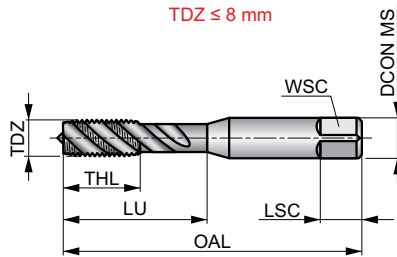
E621



HSS Spiral Flute Machine Tap, Metric for Helicoil Insert, ISO Standard

Machine tap with spiral flute suited for blind holes. Bright finish to produce more accurate and cleaner threads for Screw-Thread-Inserts. These STIs are inserted into the threaded hole, produced with this tap, to reinforce the original thread or repair damaged ones.

	ISO 	6H
	2xD	HSS
C 2-3		λ 40°
	Bright	



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 33	P1.2 ■ 36	P1.3 ■ 43	P2.1 ■ 26	P2.2 ■ 23	P2.3 ▣ 20	P3.1 ■ 23	P3.2 ▣ 16	P4.1 ▣ 13	N1.3 ▣ 16	N2.1 ▣ 39	N2.2 ▣ 33	N2.3 ▣ 26
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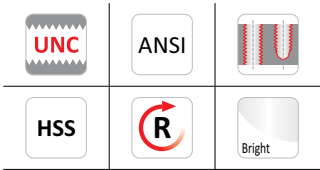
Product	TDZ	TP	TD	OAL	THL	DCON MS	WSC	LSC	NOF	PHD	LU	Chamfer	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)			
E621M3	3	0.50	3.65	53.0	14	4.00	3.15	6	3	3.20	14.00	SB	1	5978441
E621M4	4	0.70	4.91	58.0	11	5.00	4.00	7	3	4.20	20.00	SB	1	5978446
E621M5	5	0.80	6.04	66.0	13	6.30	5.00	8	3	5.20	26.00	SB	1	5978285
E621M6	6	1.00	7.30	72.0	16	8.00	6.30	9	3	6.30	31.00	SB	1	5978290
E621M8	8	1.25	9.62	80.0	18	10.00	8.00	11	3	8.40	34.00	SB	1	5978295
E621M10	10	1.50	11.95	89.0	22	9.00	7.10	10	3	10.50	–	SB	1	5978401
E621M12	12	1.75	14.27	95.0	24	11.20	9.00	12	3	12.50	–	SB	1	5978428
E621M14	14	2.00	16.60	112.0	29	14.00	11.20	14	3	14.50	–	SB	1	5978435
E621M16	16	2.00	18.60	112.0	29	14.00	11.20	14	3	16.50	–	SB	1	5978439

229SET



Set of 1500 series Taps and R10P series Drills

18 Pieces metal cassette containing straight flute taps according ANSI standard with corresponding drills. Suitable for hand and machine tapping.



Nr.=Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D	Pack Qty	MID
229CSET	229C	1500, 1528 Taps; R10P, R15P, R18P Drills	18	6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	#36, #29, #25, #21, #7, F, 5/16, U, 27/64	1	6009137

L000**DORMER**

DuoPack with E500 Tap and A002 Drill, Various Sizes

DuoPack containing a straight flute hand tap according to ISO standard with corresponding drill. Suitable for hand and machine tapping. Available with plug lead NO2 for through holes or bottoming lead NO3 for blind holes. The convenient packaging ensures the right drill size to make a perfect thread.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D	Pack Qty	MID
L000E500M3N02XA002	Nr.1	E500 + A002	2	E500M3N02	A0022.5	1	7410824
L000E500M4N02XA002	Nr.2	E500 + A002	2	E500M4N02	A0023.3	1	7410825
L000E500M5N02XA002	Nr.3	E500 + A002	2	E500M5N02	A0024.2	1	7410826
L000E500M6N02XA002	Nr.4	E500 + A002	2	E500M6N02	A0025.0	1	7410827
L000E500M8N02XA002	Nr.5	E500 + A002	2	E500M8N02	A0026.8	1	7410828
L000E500M10N02XA002	Nr.6	E500 + A002	2	E500M10N02	A0028.5	1	7410829
L000E500M12N02XA002	Nr.7	E500 + A002	2	E500M12N02	A00210.2	1	7410830
L000E500M3N03XA002	Nr.8	E500 + A002	2	E500M3N03	A0022.5	1	7410817
L000E500M4N03XA002	Nr.9	E500 + A002	2	E500M4N03	A0023.3	1	7410818
L000E500M5N03XA002	Nr.10	E500 + A002	2	E500M5N03	A0024.2	1	7410819
L000E500M6N03XA002	Nr.11	E500 + A002	2	E500M6N03	A0025.0	1	7410820
L000E500M8N03XA002	Nr.12	E500 + A002	2	E500M8N03	A0026.8	1	7410821
L000E500M10N03XA002	Nr.13	E500 + A002	2	E500M10N03	A0028.5	1	7410822
L000E500M12N03XA002	Nr.14	E500 + A002	2	E500M12N03	A00210.2	1	7410823

L001**DORMER**

DuoPack with EP00 or EX00 Tap and A002 Drill, Various Sizes

DuoPack containing a machine tap according to DIN standard with corresponding drill. Either with a spiral point tap EP00 for through holes only or spiral flute tap EX00 for blind holes. The convenient packaging ensures the right drill size to make a perfect thread.

Nr.=Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D	Pack Qty	MID
L001EP00M3XA002	Nr.1	EP006H + A002	2	EP00M3	A0022.5	1	7410796
L001EP00M4XA002	Nr.2	EP006H + A002	2	EP00M4	A0023.3	1	7410797
L001EP00M5XA002	Nr.3	EP006H + A002	2	EP00M5	A0024.2	1	7410798
L001EP00M6XA002	Nr.4	EP006H + A002	2	EP00M6	A0025.0	1	7410799
L001EP00M8XA002	Nr.5	EP006H + A002	2	EP00M8	A0026.8	1	7410800
L001EP00M10XA002	Nr.6	EP006H + A002	2	EP00M10	A0028.5	1	7410801
L001EP00M12XA002	Nr.7	EP006H + A002	2	EP00M12	A00210.2	1	7410802
L001EX00M3XA002	Nr.8	EX006H + A002	2	EX00M3	A0022.5	1	7410719
L001EX00M4XA002	Nr.9	EX006H + A002	2	EX00M4	A0023.3	1	7410790
L001EX00M5XA002	Nr.10	EX006H + A002	2	EX00M5	A0024.2	1	7410791
L001EX00M6XA002	Nr.11	EX006H + A002	2	EX00M6	A0025.0	1	7410792
L001EX00M8XA002	Nr.12	EX006H + A002	2	EX00M8	A0026.8	1	7410793
L001EX00M10XA002	Nr.13	EX006H + A002	2	EX00M10	A0028.5	1	7410794
L001EX00M12XA002	Nr.14	EX006H + A002	2	EX00M12	A00210.2	1	7410795

L115**DORMER****Set of E500 Taps and A002 or A022 Drills**

Shock-proof plastic box containing straight flute taps according to ISO standard with corresponding drills. Suitable for hand and machine tapping. Nr.101 with bottoming lead taps NO3 for blind holes and A002 jobber drills or Nr.100 with NO3 and NO2 plug lead taps for through holes and A022 stub drills.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D	Pack Qty	MID
L115100	Nr.100	E500 + A022	21	E500M3NO2, E500M3NO3, E500M4NO2, E500M4NO3, E500M5NO2, E500M5NO3, E500M6NO2, E500M6NO3, E500M8NO2, E500M8NO3, E500M10NO2, E500M10NO3, E500M12NO2, E500M12NO3	A0222.5, A0223.3, A0224.2, A0225.0, A0226.8, A0228.5, A02210.2	1	5978778
L115101	Nr.101	E500 + A002	14	E500M3NO3, E500M4NO3, E500M5NO3, E500M6NO3, E500M8NO3, E500M10NO3, E500M12NO3	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6383013

L113**DORMER****Set with Taps and A002 Drills**

Shock-proof plastic box containing seven machine taps according to ISO standard with corresponding drills. Includes either spiral point taps for through holes only Nr.201 with bright finish or Nr.202 steam tempered. Spiral flute taps for blind holes Nr.203 with bright finish or Nr.204 steam tempered.

Nr.=Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D	Pack Qty	MID
L113201	Nr.201	E000 + A002	14	E000M3, E000M4, E000M5, E000M6, E000M8, E000M10, E000M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6382963
L113202	Nr.202	E001 + A002	14	E001M3, E001M4, E001M5, E001M6, E001M8, E001M10, E001M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6382964
L113203	Nr.203	E002 + A002	14	E002M3, E002M4, E002M5, E002M6, E002M8, E002M10, E002M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6382965
L113204	Nr.204	E003 + A002	14	E003M3, E003M4, E003M5, E003M6, E003M8, E003M10, E003M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6382966



Set of EP/EX or Shark Line Taps with A002 or A108 Drills

Plastic box with 7 machine taps and corresponding drills. Either with spiral point taps for through holes only Nr.301 with bright finish, Nr.303 Yellow Shark with hard-chrome coating or Nr.305 Blue Shark for stainless steel. Spiral flute taps for blind holes Nr.302 with bright finish, Nr.304 Yellow Shark or Nr.306 Blue Shark.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set, D=Drill diameters in Set.

Product	Nr.	A	B	C	D	Pack Qty	MID
L114301	Nr.301	EP006H + A002	14	EP00M3, EP00M4, EP00M5, EP00M6, EP00M8, EP00M10, EP00M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6382967
L114302	Nr.302	EX006H + A002	14	EX00M3, EX00M4, EX00M5, EX00M6, EX00M8, EX00M10, EX00M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6382968
L114303	Nr.303	E297 + A002	14	E297M3, E297M4, E297M5, E297M6, E297M8, E297M10, E297M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6382969
L114304	Nr.304	E298 + A002	14	E298M3, E298M4, E298M5, E298M6, E298M8, E298M10, E298M12	A0022.5, A0023.3, A0024.2, A0025.0, A0026.8, A0028.5, A00210.2	1	6383010
L114305	Nr.305	E238 + A108	14	E238M3, E238M4, E238M5, E238M6, E238M8, E238M10, E238M12	A1082.5, A1083.3, A1084.2, A1085.0, A1086.8, A1088.5, A10810.2	1	6383011
L114306	Nr.306	E240 + A108	14	E240M3, E240M4, E240M5, E240M6, E240M8, E240M10, E240M12	A1082.5, A1083.3, A1084.2, A1085.0, A1086.8, A1088.5, A10810.2	1	6383012

L119**HSS Straight Flute Serial Hand Tap, Set of 21 Pieces, Metric, DIN Standard**

Metal cassette containing seven sets of serial hand taps according to DIN standard. Ideal for hand tapping tough materials. The straight flute design makes it suitable for both through and blind holes. Each set of three serial taps should be used one after the other to create the full thread.

	DIN 352	6H
	1.5×D	HSS
C 2-3		
Bright		

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set

Product	Nr.	A	B	C	Pack Qty	MID
L11917	Nr.17	E100	21	E100M3N08, E100M4N08, E100M5N08, E100M6N08, E100M8N08, E100M10N08, E100M12N08	1	5978799

L120

DORMER



Set of Taps, Dies and Tap Wrenches, Various Sizes

Threading kit for either ISO-Metric thread. Containing sets of hand or serial hand taps, dies, tap wrenches and die stocks, all together in a smart metal case with carry handle and latch-lock fasteners.

Nr. =Set number, A=No. in Set, B=Styles in Set, C=Diameters in set.

Product	Nr.	A	B	C	Pack Qty	MID
L12021	21	21	E100	E100M3N08, E100M4N08, E100M5N08, E100M6N08, E100M8N08, E100M10N08, E100M12N08	1	5978820
			F100	F100M3, F100M4, F100M5, F100M6, F100M8, F100M10, F100M12		
			L112	L112N01.1/2, L112N03		
			L110	L1102A, L1102B, L1103, L1104, L1105		
L12030	30	30	E100	E100M3N08, E100M4N08, E100M5N08, E100M6N08, E100M8N08, E100M10N08, E100M12N08, E100M14N08, E100M16N08, E100M18N08, E100M20N08	1	5978839
			F100	F100M3, F100M4, F100M5, F100M6, F100M8, F100M10, F100M12, F100M14, F100M16, F100M18, F100M20		
			L112	L112N01.1/2, L112N04		
			L110	L1102A, L1102B, L1103, L1104, L1105, L1106		
L1202M	HS-2M	23	E500	E500M2N01, E500M2N03, E500M2.5N01, E500M2.5N03, E500M3N01, E500M3N03, E500M3.5N01, E500M3.5N03, E500M4N01, E500M4N03, E500M5N01, E500M5N03, E500M6N01, E500M6N03	1	5978817
			F300	F300M2X13/16, F300M2.5X13/16, F300M3X13/16, F300M3.5X13/16, F300M4X13/16, F300M5X13/16, F300M6X13/16		
			L112	L112BT1		
			L110	L11013/16		
L1204M	HS-4M	32	E500	E500M5N01, E500M5N03, E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03, E500M11N01, E500M11N03, E500M12N01, E500M12N03	1	5978855
			F300	F300M5X13/16, F300M6X13/16, F300M7X13/16, F300M8X1.5/16, F300M9X1.5/16, F300M10X1.5/16, F300M11X1.5/16, F300M12X1.5/16		
			L112	L112BT2		
			L110	L11013/16, L1101.5/16		
L1208M	HS-8M	17	E500	E500M2N01, E500M2N03, E500M3N01, E500M3N03, E500M4N01, E500M4N03, E500M5N01, E500M5N03, E500M6N01, E500M6N03	1	5978856
			F300	F300M2X13/16, F300M3X13/16, F300M4X13/16, F300M5X13/16, F300M6X13/16		
			L112	L112BT1		
			L110	L11013/16		
L12010M	HS-10M	27	E500	E500M3N01, E500M3N03, E500M4N01, E500M4N03, E500M5N01, E500M5N03, E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03	1	5978808
			F300	F300M3X13/16, F300M4X13/16, F300M5X13/16, F300M6X1, F300M7X1, F300M8X1, F300M9X1, F300M10X1		
			L112	L112BT2		
			L110	L11013/16, L1101INCH		
L12012M	HS-12M	35	E500	E500M2N01, E500M2N03, E500M3N01, E500M3N03, E500M4N01, E500M4N03, E500M5N01, E500M5N03, E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03, E500M12N01, E500M12N03	1	5978811
			F300	F300M2X13/16, F300M3X13/16, F300M4X13/16, F300M5X13/16, F300M6X13/16, F300M7X13/16, F300M8X1, F300M9X1, F300M10X1, F300M12X1.5/16		
			L112	L112BT1, L112BT2		
			L110	L11013/16, L1101INCH, L1101.5/16		
L12014M	HS-14M	34	E500	E500M6N01, E500M6N03, E500M7N01, E500M7N03, E500M8N01, E500M8N03, E500M9N01, E500M9N03, E500M10N01, E500M10N03, E500M12N01, E500M12N03, E500M14N01, E500M14N03, E500M16N01, E500M16N03, E500M18N01, E500M18N03, E500M20N01, E500M20N03	1	5978814
			F300	F300M6X1, F300M7X1, F300M8X1, F300M9X1, F300M10X1, F300M12X1.5/16, F300M14X1.5/16, F300M16X1.1/2, F300M18X1.1/2, F300M20X1.1/2		
			L112	L112N03		
			L110	L1101INCH, L1101.5/16, L1101.1/2		

	Nr.	A	B	C	Pack Qty	MID
L12024UNF	HS-24UNF	18	E524	E5241/2N01, E5241/2N03, E5241/4N01, E5241/4N03, E5243/8N01, E5243/8N03, E5245/16N01, E5245/16N03, E5247/16N01, E5247/16N03	1	5978841
			F330	F3301/2X1.5/16, F3301/4X1, F3303/8X1, F3305/16X1, F3307/16X1.5/16		
			L112	L112BT2		
			L110	L1101.5/16, L1101INCH		
L12026UNF	HS-26UNF	25	E524	E5241/2N01, E5241/2N03, E5241/4N01, E5241/4N03, E5243/4N01, E5243/4N03, E5243/8N01, E5243/8N03, E5245/16N01, E5245/16N03, E5245/8N01, E5245/8N03, E5247/16N01, E5247/16N03	1	5978843
			F330	F3301/2X1.1/2, F3301/4X1, F3303/4X1.1/2, F3303/8X1, F3305/16X1, F3305/8X1.1/2, F3307/16X1.1/2		
			L112	L112BT2, L112N03		
			L110	L1101.1/2, L1101INCH		
L12030UNC	HS-30UNC	18	E515	E5151/2N01, E5151/2N03, E5151/4N01, E5151/4N03, E5153/8N01, E5153/8N03, E5155/16N01, E5155/16N03, E5157/16N01, E5157/16N03	1	5978829
			F320	F3201/2X1.5/16, F3201/4X1, F3203/8X1, F3205/16X1, F3207/16X1.5/16		
			L112	L112BT2		
			L110	L1101.5/16, L1101INCH		
L12032UNC	HS-32UNC	27	E515	E5151/2N01, E5151/2N03, E5151/4N01, E5151/4N03, E5153/4N01, E5153/4N03, E5153/8N01, E5153/8N03, E5155/16N01, E5155/16N03, E5155/8N01, E5155/8N03, E5157/16N01, E5157/16N03	1	5978833
			F320	F3201/2X1.1/2, F3201/2X1.5/16, F3201/4X1, F3203/4X1.1/2, F3203/8X1, F3205/16X1, F3205/8X1.1/2, F3207/16X1.1/2, F3207/16X1.5/16		
			L112	L112BT2, L112N03		
			L110	L1101.1/2, L1101INCH		

L126**DORMER**

HSS Drill-Taps with 30° Spiral Flute, Set of 6 pieces, Metric, ISO Standard

Metal cassette containing six drill-taps to produce threads in one pass. This significantly reduces the time needed to produce the thread on site with the use of a hand-held power tool. There is no need for a tap wrench or tool change. Steam tempered surface acts to retain the lubricant and provide smoother cutting.

Nr. =Set number, A=Styles in Set, B=No. in Set, C=Tap diameters in Set

Product	Nr.	A	B	C	Pack Qty	MID
L126650	650	E650	6	E650M4, E650M5, E650M6, E650M8, E650M10, E650M12	1	5978860

L112

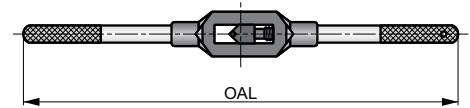
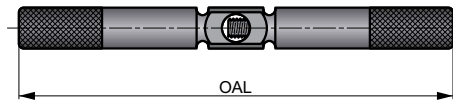


Tap Wrench

Adjustable, so one tap wrench can be used to hold several different tap sizes. The square end of the tap is inserted into the wrench which is then tightened to hold the tap securely. The two metal bars on either side of the wrench are used to rotate the tap in the hole of the workpiece to create the thread.

BT1-BT2

NO0-NO7



Products from this series are also available in set with taps and dies. Please see L120.

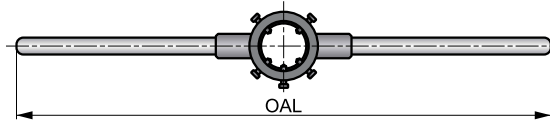
Product	Nr.	OAL	WSCN	WSCX	WSCN	WSCX	Tap Range (M)	Tap Range (Inch)	Pack Qty	MID
		(mm)	(mm)	(mm)	(inch)	(inch)				
L112BT1	BT1	105.0	1.00	6.50	.0394	.2559	M1 - M8	No. 0 - 5/16	1	7320377
L112BT2	BT2	162.0	1.00	10.00	.0394	.3937	M1 - M14	No. 0 - 5/8	1	7320378
L112N00	No. 0	130.0	2.00	5.00	.0787	.1969	M1 - M5	No. 0 - 1/4	1	7320379
L112N01.1/2	No. 1.1/2	205.0	2.10	8.00	.0827	.3150	M2.2 - M12	No. 0 - 1/2	1	7320390
L112N03	No. 3	380.0	4.90	12.00	.1929	.4724	M5 - M20	5/16 - 3/4	1	7320391
L112N04	No. 4	500.0	5.50	16.00	.2165	.6299	M7 - M30	5/16 - 1"	1	7320392
L112N06	No. 6	1000.0	11.00	24.00	.4331	.9449	M18 - M42	3/4 - 1.1/2	1	7320393
L112N07	No. 7	1250.0	16.00	32.00	.6299	1.2598	M27 - M48	1.1/8 - 2"	1	7320394

L110



Die Stock

The die stock is an accessory to make it easy to use dies by hand. The die is held securely in the metal ring, whilst the arms at either end are used to rotate the die around the outside of the metal cylinder to be threaded. The L110 series comes in an extensive range to hold all sizes of round dies.



Products from this series are also available in set with taps and dies. Please see L120.

Product	Nr.	OAL (mm)	Die BD x Die OAL	Pack Qty	MID
L1101	1"	160.0	16 x 5	1	5978506
L1102A	2a	200.0	20 x 5	1	5978542
L1102B	2b	200.0	20 x 7	1	5978547
L1103	3	224.0	25 x 9	1	5978556
L1104	4"	280.0	30 x 11	1	5978566
L1105	5	315.0	38 x 14	1	5978576
L1105F	5f	315.0	38 x 10	1	5978581
L1106	6	450.0	45 x 18	1	5978589
L1106F	6f	450.0	45 x 14	1	5978749
L1107	7	560.0	55 x 22	1	5978792
L1107F	7f	560.0	55 x 16	1	5978826
L1108	8	630.0	65 x 25	1	5978850
L1108F	8f	630.0	65 x 18	1	5978876
L1109	9	800.0	75 x 30	1	5978882
L1109F	9f	800.0	75 x 20	1	5978885
L11010	10	900.0	90 x 36	1	5978522
L11010F	10f	900.0	90 x 22	1	5978526
L11013/16	–	200.0	13/16 x 1/4	1	5978531
L1101INCH	–	224.0	1 x 3/8	1	5978518
L1101.5/16	–	270.0	1.5/16 x 7/16	1	5978514
L1101.1/2	–	315.0	1.1/2 x 1/2	1	5978511
L1102INCH	–	560.0	2 x 5/8	1	5978552
L1102.1/4	–	560.0	2.1/4 x 11/16	1	5978539
L1103INCH	–	900.0	3 x 7/8	1	5978562
L1104INCH	–	1000.0	4 x 1	1	5978571

THREAD MILLS



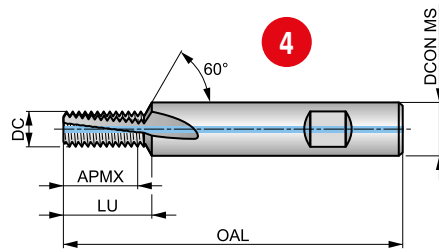
6		WMG & ISO 13399
10	TAPS	INSTRUCTIONS
18		SOLID CARBIDE TAPS
23		MATERIAL SPECIFIC SHARK TAPS
102		HSS HAND & MACHINE TAPS
331		THREAD MILLS
352		DIES
390		GENERAL TECHNICAL INFORMATION

1 J205



2 Solid Carbide Thread Mill with Through Coolant and Countersink, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation.



M	DORMER	2xD
HM		λ 10°
R	Alcrona Pro	DIN 6535HB

Workpiece material group suitability, starting values for cutting speed (m/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 172 B	P1.2 ■ 193 B	P1.3 ■ 200 B	P2.1 ■ 148 B	P2.2 ■ 130 B	P2.3 ■ 115 B	P3.1 ■ 133 B	P3.2 ■ 107 B	P3.3 ■ 90 B	P4.1 ■ 79 B	P4.2 ■ 67 B	P4.3 ■ 55 B	M1.1 ■ 62 B	M1.2 ■ 52 B
M2.1 ■ 55 B	M2.2 ■ 45 B	M2.3 ■ 38 B	M3.1 ■ 47 A	M3.2 ■ 40 A	M3.3 ■ 36 A	M4.1 ■ 30 A	M4.2 ■ 26 A	K1.1 ■ 130 B	K1.2 ■ 96 B	K1.3 ■ 72 B	K2.1 ■ 123 B	K2.2 ■ 100 B	K2.3 ■ 80 B
K3.1 ■ 109 B	K3.2 ■ 83 B	K3.3 ■ 67 B	K4.1 ■ 101 A	K4.2 ■ 76 A	K4.3 ■ 56 A	K4.4 ■ 48 A	K4.5 ■ 40 A	K5.1 ■ 114 B	K5.2 ■ 86 B	K5.3 ■ 66 B	N1.1 ■ 400 C	N1.2 ■ 300 C	N1.3 ■ 200 C
N2.1 ■ 262 C	N2.2 ■ 235 C	N2.3 ■ 170 C	N3.1 ■ 610 C	N3.2 ■ 360 C	N3.3 ■ 180 C	N4.1 ■ 290 C	N4.2 ■ 145 C	N4.3 ■ 65 C	S1.1 ■ 40 A	S1.2 ■ 40 A	S1.3 ■ 30 A	S2.1 ■ 33 A	S2.2 ■ 25 A
S3.1 ■ 25 A	S3.2 ■ 21 A	S4.1 ■ 20 A	S4.2 ■ 16 A	H1.1 ■ 60 A									

Internal Thread.

Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	LU
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)
J2056.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10
J2056.5X1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80
J2056.5X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20
J20511.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20

THREAD MILLS – PAGE OVERVIEW



Pos.	Description	Pos.	Description
1	Designation of thread mills	5	Product features
2	Product description	6	Material group recommendations incl. speed and feed guidance
3	Illustrative picture	7	Product code
4	Schematic drawing of tool	8	Product dimensions

THREAD MILLS – ICONS OVERVIEW

General Icons

	Primary use
	Possible use


Thread Form (THFT)

	Thread Form, British Standard Pipe
	Thread Form, Metric Coarse


	Thread Form, Metric Fine
	Thread Form, American National Pipe Taper


	Thread Form, Unified Coarse
	Thread Form, Unified Fine

Basic Standard Group (BSG)

	Dormer Standards
---	------------------

Usable Length (ULDR)


	1.5xD Usable Tool Depth to Diameter Ratio
---	---

	2xD Usable Tool Depth to Diameter Ratio
---	---

Material Code (BMC)

	Hard Material (Solid Carbide)
---	-------------------------------

Flute Geometry (FDC)


	Spiral Flute Geometry
---	-----------------------

Flute Helix Angle (FHA)


	10° Helix Angle (Flute)
---	-------------------------

	27° Helix Angle (Flute)
---	-------------------------

Hand (Cutting direction)

	Right Hand Rotation / Cutting
---	-------------------------------

Coating

	Aluminum Chromium Nitride (special optimized process)
---	--

Shank

	DIN 6535 HA Cylindrical Shank
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	DIN 6535 HB Weldon Shank
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Coolant Exit Style (CXSC)

	Through Tool Coolant – Axial Exit
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THREAD MILLS – TOOL MATERIALS AND SURFACE COATINGS NAVIGATOR

HM Materials

Carbide Materials (or Hard Materials)

HM

A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together.

Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Coatings

Alcrona coatings (Alcrona Pro)



The Alcrona (AlCrN) family of coatings are aluminum chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.

Thread form (THFT)	UNC	UNF	M	M	M	M	MF	MF	NPT	G			
Basic standard group (BSG)	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER	DORMER			
Usable length (ULDR)	2xD	2xD	2xD	2xD	2xD	2xD	1.5xD	1.5xD		1.5xD			
Material code (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM			
Flute Geometry (FDC)													
Flute helix angle (FHA)	λ 10°	λ 10°	λ 10°	λ 10°	λ 27°	λ 27°	λ 10°	λ 10°	λ 10°	λ 10°			
Hand (Cutting direction)	R	R	R	R	R	R	R	R	R	R			
Coating	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro	Alcrona Pro			
Shank	DIN 6535HB	DIN 6535HB	DIN 6535HA	DIN 6535HB	DIN 6535HA	DIN 6535HA	DIN 6535HA	DIN 6535HB	DIN 6535HB	DIN 6535HA			
Coolant exit style (CXSC)													
Product Family Code	J235	J245	J200	J205	J210	J215	J220	J225	J260	J280			
PSF cutting diameters range	1/4 - 3/4	1/4 - 3/4	M4 - M16	M8 - M16	M6 - M16	M6 - M16	M6 - M24	M12 - M18	1/8 - 2"	1/8 - 3"			
	338	339	340	341	342	343	344	345	346	347			
P	P1	■	■	■	■	■	■	■	■	■			
	P2	■	■	■	■	■	■	■	■	■			
	P3	■	■	■	■	■	■	■	■	■			
	P4	■	■	■	■	■	■	■	■	■			
M	M1	■	■	■	■	■	■	■	■	■			
	M2	■	■	■	■	■	■	■	■	■			
	M3	■	■	■	■	■	■	■	■	■			
	M4	■	■	▣	▣	■	■	▣	▣	■	■		
K	K1	■	■	■	■	■	■	■	■	■			
	K2	■	■	■	■	■	■	■	■	■			
	K3	■	■	■	■	■	■	■	■	■			
	K4	■	■	■	■	■	■	■	■	■			
	K5	■	■	■	■	■	■	■	■	■			
N	N1	■	■	■	■	■	■	■	■	■			
	N2	■	■	■	■	■	■	■	■	■			
	N3	■	■	■	■	■	■	■	■	■			
	N4	■	■	■	■	■	■	■	■	■			
	N5	■	■	■	■	■	■	■	■	■			
S	S1	■	■	▣	■	▣	■	▣	■	■			
	S2	▣	▣	▣	▣	▣	▣	▣	▣	▣			
	S3	▣	▣	▣	▣	▣	▣	▣	▣	▣			
	S4	▣	▣	▣	▣	▣	▣	▣	▣	▣			
H	H1	■	■	▣	■	■	■	■	■	■			
	H2	■	■	■	■	■	■	■	■	■			
	H3	▣	▣	■	■	▣	▣	▣	▣	▣			
	H4	■	■	■	■	■	■	■	■	■			

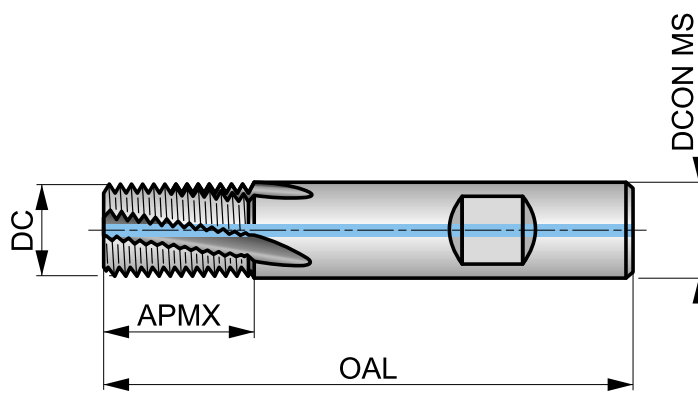
■ Primary use ▣ Possible use

J235



Solid Carbide Thread Mill with Through Coolant, UNC

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 594 H	P1.2 ■ 666 H	P1.3 ■ 689 H	P2.1 ■ 512 H	P2.2 ■ 449 H	P2.3 ■ 397 H	P3.1 ■ 459 H	P3.2 ■ 367 H	P3.3 ■ 312 H	P4.1 ■ 272 H	P4.2 ■ 230 H	P4.3 ■ 190 H	M1.1 ■ 213 H	M1.2 ■ 180 H
M2.1 ■ 190 H	M2.2 ■ 154 H	M2.3 ■ 131 H	M3.1 ■ 164 G	M3.2 ■ 138 G	M3.3 ■ 125 G	M4.1 ■ 105 G	M4.2 ■ 89 G	K1.1 ■ 449 H	K1.2 ■ 331 H	K1.3 ■ 249 H	K2.1 ■ 423 H	K2.2 ■ 344 H	K2.3 ■ 276 H
K3.1 ■ 377 H	K3.2 ■ 285 H	K3.3 ■ 233 H	K4.1 ■ 348 G	K4.2 ■ 262 G	K4.3 ■ 194 G	K4.4 ■ 167 G	K4.5 ■ 138 G	K5.1 ■ 394 H	K5.2 ■ 295 H	K5.3 ■ 230 H	N1.1 ■ 1378 l	N1.2 ■ 1033 l	N1.3 ■ 689 l
N2.1 ■ 902 l	N2.2 ■ 810 l	N2.3 ■ 587 l	N3.1 ■ 2100 l	N3.2 ■ 1240 l	N3.3 ■ 620 l	N4.1 ■ 1001 l	N4.2 ■ 502 l	N4.3 ■ 226 l	S1.1 ■ 138 G	S1.2 ■ 138 G	S1.3 ■ 105 G	S2.1 ■ 115 G	S2.2 ■ 85 G
S3.1 ■ 85 G	S3.2 ■ 72 G	S4.1 ■ 69 G	S4.2 ■ 56 G	H1.1 ■ 207 G	H3.1 ■ 148 G								

Internal Thread.

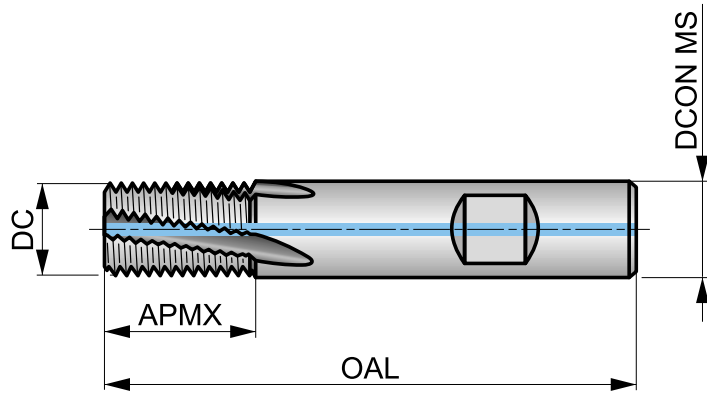
Product	TDZ	TPI	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)			
J2354.8-20	1/4	20	4.80	14.00	57.0	6.00	3	1	6821334
J2355.5-18	5/16	18	5.50	14.00	57.0	6.00	3	1	6821335
J2357.5-16	3/8	16	7.50	19.00	63.0	8.00	4	1	6821336
J2358.0-14	7/16	14	8.00	19.00	63.0	8.00	4	1	6821337
J23510.0-13	1/2	13	10.00	22.00	72.0	10.00	4	1	6821339
J23510.0-12	9/16	12	10.00	22.00	72.0	10.00	4	1	6821338
J23512.0-11	5/8	11	12.00	26.00	83.0	12.00	4	1	6821340
J23514.0-10	3/4	10	14.00	32.00	83.0	14.00	5	1	6821341

J245



Solid Carbide Thread Mill with Through Coolant, UNF

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 594 K	P1.2 ■ 666 K	P1.3 ■ 689 K	P2.1 ■ 512 K	P2.2 ■ 449 K	P2.3 ■ 397 K	P3.1 ■ 459 K	P3.2 ■ 367 K	P3.3 ■ 312 K	P4.1 ■ 272 K	P4.2 ■ 230 K	P4.3 ■ 190 K	M1.1 ■ 213 K	M1.2 ■ 180 K
M2.1 ■ 190 K	M2.2 ■ 154 K	M2.3 ■ 131 K	M3.1 ■ 164 J	M3.2 ■ 138 J	M3.3 ■ 125 J	M4.1 ■ 105 J	M4.2 ■ 89 J	K1.1 ■ 449 K	K1.2 ■ 331 K	K1.3 ■ 249 K	K2.1 ■ 423 K	K2.2 ■ 344 K	K2.3 ■ 276 K
K3.1 ■ 377 K	K3.2 ■ 285 K	K3.3 ■ 233 K	K4.1 ■ 348 J	K4.2 ■ 262 J	K4.3 ■ 194 J	K4.4 ■ 167 J	K4.5 ■ 138 J	K5.1 ■ 394 K	K5.2 ■ 295 K	K5.3 ■ 230 K	N1.1 ■ 1378 L	N1.2 ■ 1033 L	N1.3 ■ 689 L
N2.1 ■ 902 L	N2.2 ■ 810 L	N2.3 ■ 587 L	N3.1 ■ 2100 L	N3.2 ■ 1240 L	N3.3 ■ 620 L	N4.1 ■ 1001 L	N4.2 ■ 502 L	N4.3 ■ 226 L	S1.1 ■ 138 J	S1.2 ■ 138 J	S1.3 ■ 105 J	S2.1 ■ 115 J	S2.2 ■ 85 J
S3.1 ■ 85 J	S3.2 ■ 72 J	S4.1 ■ 69 J	S4.2 ■ 56 J	H1.1 ■ 207 J	H3.1 ■ 148 J								

Internal Thread.

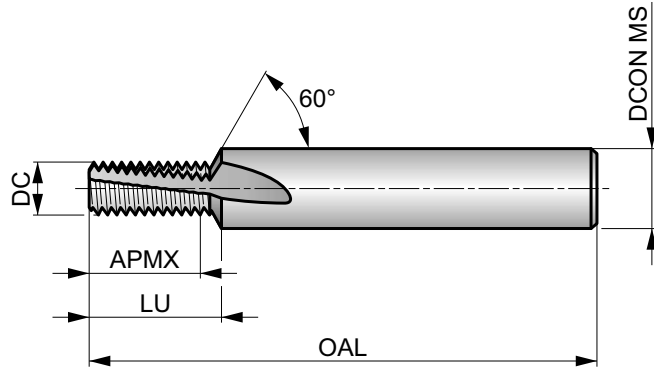
Product	TDZ	TPI	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)			
J2454.8-28	1/4	28	4.80	14.00	57.0	6.00	3	1	6821344
J2456.0-24	5/16, 3/8	24	6.00	14.00	57.0	6.00	3	1	6821345
J2458.0-20	7/16, 1/2	20	8.00	19.00	63.0	8.00	4	1	6821346
J24510.0-18	9/16, 5/8	18	10.00	22.00	72.0	10.00	4	1	6821342
J24514.0-16	3/4	16	14.00	32.00	83.0	14.00	5	1	6821343

J200



Solid Carbide Thread Mill with Countersink, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering in a single machining cycle. Alcrona Pro coated for the best machining result in a wide range of materials.



M		2xD
HM		λ 10°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 564 B	P1.2 ■ 633 B	P1.3 ■ 656 B	P2.1 ■ 486 B	P2.2 ■ 427 B	P2.3 ■ 377 B	P3.1 ■ 436 B	P3.2 ■ 351 B	P3.3 ■ 295 B	P4.1 ■ 259 B	P4.2 ■ 220 B	P4.3 ■ 180 B	M1.1 ■ 203 B	M1.2 ■ 171 B
M2.1 ■ 180 B	M2.2 ■ 148 B	M2.3 ■ 125 B	M3.1 ■ 154 A	M3.2 ■ 131 A	M3.3 ■ 118 A	M4.1 ■ 98 A	M4.2 ■ 85 A	K1.1 ■ 427 B	K1.2 ■ 315 B	K1.3 ■ 236 B	K2.1 ■ 404 B	K2.2 ■ 328 B	K2.3 ■ 262 B
K3.1 ■ 358 B	K3.2 ■ 272 B	K3.3 ■ 220 B	K4.1 ■ 331 A	K4.2 ■ 249 A	K4.3 ■ 184 A	K4.4 ■ 157 A	K4.5 ■ 131 A	K5.1 ■ 374 B	K5.2 ■ 282 B	K5.3 ■ 217 B	N1.1 ■ 1312 C	N1.2 ■ 984 C	N1.3 ■ 656 C
N2.1 ■ 860 C	N2.2 ■ 771 C	N2.3 ■ 558 C	N3.1 ■ 2001 C	N3.2 ■ 1181 C	N3.3 ■ 591 C	N4.1 ■ 951 C	N4.2 ■ 476 C	N4.3 ■ 213 C	S1.1 ■ 131 A	S1.2 ■ 131 A	S1.3 ■ 98 A	S2.1 ■ 108 A	S2.2 ■ 82 A
S3.1 ■ 82 A	S3.2 ■ 69 A	S4.1 ■ 66 A	S4.2 ■ 52 A	H1.1 ■ 197 A									

Internal Thread.

Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
J2003.2X.7	M4	0.70	3.20	8.40	57.0	6.00	3	9.50	1	6821169
J2004.1X.8	M5	0.80	4.10	11.20	57.0	6.00	3	12.10	1	6821290
J2004.8X1.0	M6	1.00	4.80	13.00	63.0	8.00	3	14.40	1	6821291
J2006.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10	1	6821292
J2008.2X1.5	M10	1.50	8.20	21.00	83.0	12.00	3	22.80	1	6821293
J2009.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20	1	6821294
J2011.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20	1	6821167
J2013.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20	1	6821168

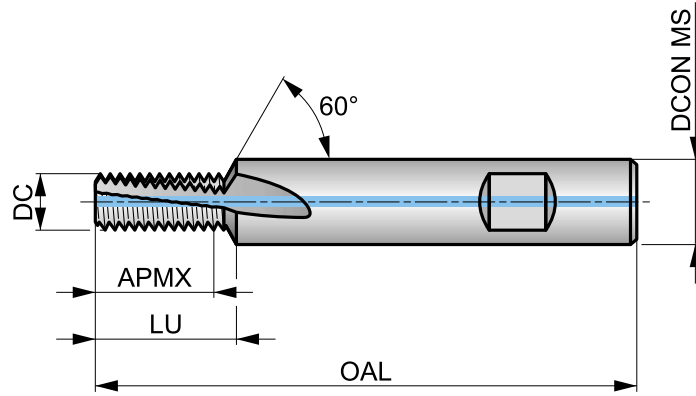
J205



Solid Carbide Thread Mill with Through Coolant and Countersink, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With 60° countersink for chamfering. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation.

		2xD
HM		λ 10°
	Alcrona Pro	DIN 6535HB



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 564 B	P1.2 ■ 633 B	P1.3 ■ 656 B	P2.1 ■ 486 B	P2.2 ■ 427 B	P2.3 ■ 377 B	P3.1 ■ 436 B	P3.2 ■ 351 B	P3.3 ■ 295 B	P4.1 ■ 259 B	P4.2 ■ 220 B	P4.3 ▣ 180 B	M1.1 ■ 203 B	M1.2 ■ 171 B
M2.1 ■ 180 B	M2.2 ■ 148 B	M2.3 ■ 125 B	M3.1 ■ 154 A	M3.2 ■ 131 A	M3.3 ■ 118 A	M4.1 ■ 98 A	M4.2 ▣ 85 A	K1.1 ■ 427 B	K1.2 ■ 315 B	K1.3 ■ 236 B	K2.1 ■ 404 B	K2.2 ■ 328 B	K2.3 ■ 262 B
K3.1 ■ 358 B	K3.2 ■ 272 B	K3.3 ■ 220 B	K4.1 ■ 331 A	K4.2 ■ 249 A	K4.3 ■ 184 A	K4.4 ■ 157 A	K4.5 ▣ 131 A	K5.1 ■ 374 B	K5.2 ■ 282 B	K5.3 ■ 217 B	N1.1 ■ 1312 C	N1.2 ■ 984 C	N1.3 ■ 656 C
N2.1 ■ 860 C	N2.2 ■ 771 C	N2.3 ■ 558 C	N3.1 ■ 2001 C	N3.2 ■ 1181 C	N3.3 ■ 591 C	N4.1 ■ 951 C	N4.2 ■ 476 C	N4.3 ■ 213 C	S1.1 ■ 131 A	S1.2 ■ 131 A	S1.3 ▣ 98 A	S2.1 ■ 108 A	S2.2 ▣ 82 A
S3.1 ■ 82 A	S3.2 ▣ 69 A	S4.1 ■ 66 A	S4.2 ▣ 52 A	H1.1 ▣ 197 A									

Internal Thread.

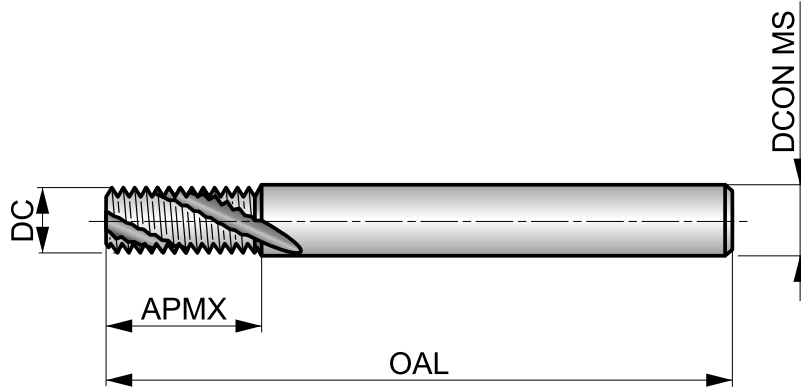
Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	LU	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)		
J2056.5X1.25	M8	1.25	6.50	17.50	72.0	10.00	3	19.10	1	6821297
J2058.2X1.50	M10	1.50	8.20	21.00	83.0	12.00	3	22.80	1	6821298
J2059.9X1.75	M12	1.75	9.90	26.25	83.0	14.00	4	28.20	1	6821299
J20511.6X2.0	M14	2.00	11.60	30.00	92.0	16.00	4	32.20	1	6821295
J20513.6X2.0	M16	2.00	13.60	34.00	92.0	18.00	4	36.20	1	6821296

J210



Solid Carbide Thread Mill with High Helix, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result in a wide range of materials and 27° helix for a smoother cutting action.



M		2×D
HM		λ 27°
R	Alcrona Pro	DIN 6535HA

Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 594 B	P1.2 ■ 666 B	P1.3 ■ 689 B	P2.1 ■ 512 B	P2.2 ■ 449 B	P2.3 ■ 397 B	P3.1 ■ 459 B	P3.2 ■ 367 B	P3.3 ■ 312 B	P4.1 ■ 272 B	P4.2 ■ 230 B	P4.3 ▣ 190 B	M1.1 ■ 213 B	M1.2 ■ 180 B
M2.1 ■ 190 B	M2.2 ■ 154 B	M2.3 ▣ 131 B	M3.1 ■ 164 A	M3.2 ■ 138 A	M3.3 ▣ 125 A	M4.1 ■ 105 A	M4.2 ▣ 89 A	K1.1 ■ 449 B	K1.2 ■ 331 B	K1.3 ■ 249 B	K2.1 ■ 423 B	K2.2 ■ 344 B	K2.3 ■ 276 B
K3.1 ■ 377 B	K3.2 ■ 285 B	K3.3 ■ 233 B	K4.1 ■ 348 A	K4.2 ■ 262 A	K4.3 ■ 194 A	K4.4 ■ 167 A	K4.5 ▣ 138 A	K5.1 ■ 394 B	K5.2 ■ 295 B	K5.3 ■ 230 B	N1.1 ■ 1378 C	N1.2 ■ 1033 C	N1.3 ■ 689 C
N2.1 ■ 902 C	N2.2 ■ 810 C	N2.3 ■ 587 C	N3.1 ■ 2100 C	N3.2 ■ 1240 C	N3.3 ■ 620 C	N4.1 ■ 1001 C	N4.2 ■ 502 C	N4.3 ■ 226 C	S1.1 ■ 138 A	S1.2 ▣ 138 A	S1.3 ▣ 105 A	S2.1 ▣ 115 A	S2.2 ▣ 85 A
S3.1 ▣ 85 A	S3.2 ▣ 72 A	S4.1 ▣ 69 A	S4.2 ▣ 56 A	H1.1 ■ 207 A	H3.1 ▣ 148 A								

Internal Thread.

Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)			
J2104.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3	1	6821302
J2106.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3	1	6821303
J2107.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3	1	6821304
J2109.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3	1	6821305
J21010.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4	1	6821300
J21012.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4	1	6821301

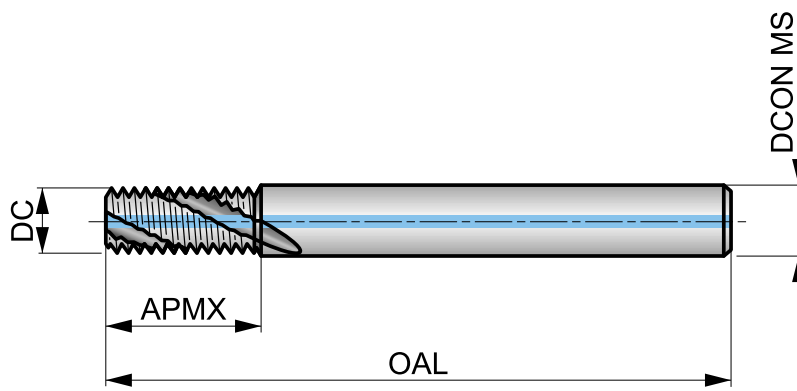
J215



Solid Carbide Thread Mill with High Helix and Through Coolant, Metric

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result with through coolant for better chip evacuation and 27° helix for a smoother cutting action.

		2xD
HM		λ 27°
	Alcrona Pro	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 594 B	P1.2 ■ 666 B	P1.3 ■ 689 B	P2.1 ■ 512 B	P2.2 ■ 449 B	P2.3 ■ 397 B	P3.1 ■ 459 B	P3.2 ■ 367 B	P3.3 ■ 312 B	P4.1 ■ 272 B	P4.2 ■ 230 B	P4.3 ■ 190 B	M1.1 ■ 213 B	M1.2 ■ 180 B
M2.1 ■ 190 B	M2.2 ■ 154 B	M2.3 ■ 131 B	M3.1 ■ 164 A	M3.2 ■ 138 A	M3.3 ■ 125 A	M4.1 ■ 105 A	M4.2 ■ 89 A	K1.1 ■ 449 B	K1.2 ■ 331 B	K1.3 ■ 249 B	K2.1 ■ 423 B	K2.2 ■ 344 B	K2.3 ■ 276 B
K3.1 ■ 377 B	K3.2 ■ 285 B	K3.3 ■ 233 B	K4.1 ■ 348 A	K4.2 ■ 262 A	K4.3 ■ 194 A	K4.4 ■ 167 A	K4.5 ■ 138 A	K5.1 ■ 394 B	K5.2 ■ 295 B	K5.3 ■ 230 B	N1.1 ■ 1378 C	N1.2 ■ 1033 C	N1.3 ■ 689 C
N2.1 ■ 902 C	N2.2 ■ 810 C	N2.3 ■ 587 C	N3.1 ■ 2100 C	N3.2 ■ 1240 C	N3.3 ■ 620 C	N4.1 ■ 1001 C	N4.2 ■ 502 C	N4.3 ■ 226 C	S1.1 ■ 138 A	S1.2 ■ 138 A	S1.3 ■ 105 A	S2.1 ■ 115 A	S2.2 ■ 85 A
S3.1 ■ 85 A	S3.2 ■ 72 A	S4.1 ■ 69 A	S4.2 ■ 56 A	H1.1 ■ 207 A	H3.1 ■ 148 A								

Internal Thread.

Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)			
J2154.5X1.0	M6	1.00	4.50	13.00	57.0	6.00	3	1	6821308
J2156.0X1.25	M8	1.25	6.00	17.50	65.0	6.00	3	1	6821309
J2157.5X1.5	M10	1.50	7.50	21.00	72.0	8.00	3	1	6821310
J2159.5X1.75	M12	1.75	9.50	26.25	80.0	10.00	3	1	6821311
J21510.0X2.0	M14	2.00	10.00	30.00	83.0	10.00	4	1	6821306
J21512.0X2.0	M16	2.00	12.00	34.00	92.0	12.00	4	1	6821307

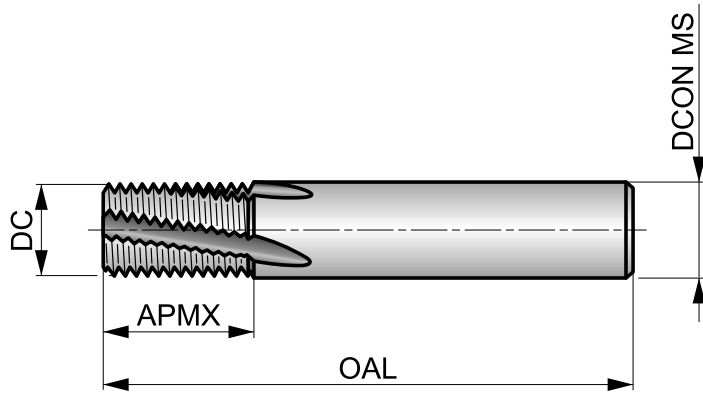
J220



Solid Carbide Thread Mill, Metric Fine

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.

		1.5×D
HM		λ 10°
	Alcrona Pro	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 623 E	P1.2 ■ 696 E	P1.3 ■ 794 E	P2.1 ■ 535 E	P2.2 ■ 469 E	P2.3 ■ 417 E	P3.1 ■ 479 E	P3.2 ■ 387 E	P3.3 ■ 325 E	P4.1 ■ 285 E	P4.2 ■ 243 E	P4.3 ■ 200 E	M1.1 ■ 226 E	M1.2 ■ 190 E
M2.1 ■ 200 E	M2.2 ■ 164 E	M2.3 ▣ 138 E	M3.1 ■ 171 D	M3.2 ■ 144 D	M3.3 ▣ 131 D	M4.1 ■ 108 D	M4.2 ▣ 95 D	K1.1 ■ 469 E	K1.2 ■ 348 E	K1.3 ■ 262 E	K2.1 ■ 446 E	K2.2 ■ 361 E	K2.3 ■ 289 E
K3.1 ■ 394 E	K3.2 ■ 299 E	K3.3 ■ 243 E	K4.1 ■ 364 D	K4.2 ■ 276 D	K4.3 ■ 203 D	K4.4 ■ 174 D	K4.5 ▣ 144 D	K5.1 ■ 413 E	K5.2 ■ 312 E	K5.3 ■ 240 E	N1.1 ■ 1444 F	N1.2 ■ 1083 F	N1.3 ■ 722 F
N2.1 ■ 945 F	N2.2 ■ 850 F	N2.3 ■ 614 F	N3.1 ■ 2201 F	N3.2 ■ 1299 F	N3.3 ■ 650 F	N4.1 ■ 1047 F	N4.2 ■ 525 F	N4.3 ■ 236 F	S1.1 ■ 144 D	S1.2 ▣ 144 D	S1.3 ▣ 108 D	S2.1 ▣ 118 D	S2.2 ▣ 92 D
S3.1 ▣ 92 D	S3.2 ▣ 75 D	S4.1 ▣ 72 D	S4.2 ▣ 59 D	H1.1 ■ 217 D	H3.1 ▣ 157 D								

Internal Thread.

Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
		(mm)	(mm)	(mm)	(mm)	(mm)			
J2204.8X.5	M6	0.50	4.80	10.00	57.0	6.00	3	1	6821322
J2206.0X.75	M8	0.75	6.00	12.00	57.0	6.00	3	1	6821323
J2206.0X1.0	M8	1.00	6.00	12.00	57.0	6.00	3	1	6821324
J2208.0X1.0	M10	1.00	8.00	16.00	63.0	8.00	4	1	6821325
J22010.0X1.0	M12	1.00	10.00	20.00	72.0	10.00	4	1	6821312
J22010.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4	1	6821313
J22012.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4	1	6821314
J22012.0X1.5	M14	1.50	12.00	22.00	83.0	12.00	4	1	6821315
J22014.0X1.0	M16	1.00	14.00	26.00	83.0	14.00	5	1	6821316
J22014.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5	1	6821317
J22016.0X2.0	M20	2.00	16.00	30.00	92.0	16.00	5	1	6821318
J22016.0X2.5	M20	2.50	16.00	42.50	105.0	16.00	5	1	6821319
J22019.0X3.0	M24	3.00	19.00	50.00	125.0	20.00	5	1	6821320
J22020.0X2.0	M24	2.00	20.00	35.00	104.0	20.00	5	1	6821321

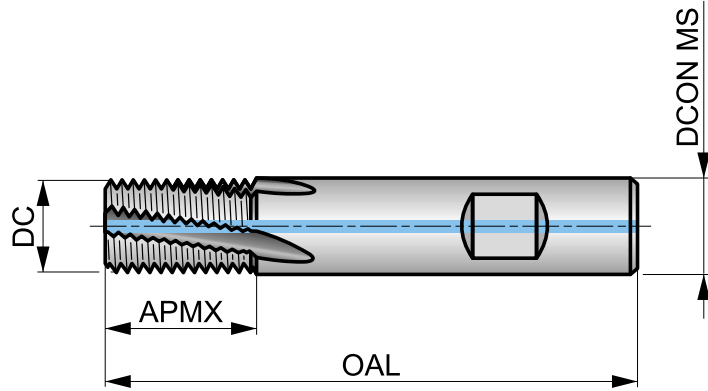
J225



Solid Carbide Thread Mill with Through Coolant, Metric Fine

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. With Alcrona Pro coated for the best machining result and through coolant for better chip evacuation.

		$1.5 \times D$
		λ 10°



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 623 E	P1.2 ■ 696 E	P1.3 ■ 794 E	P2.1 ■ 535 E	P2.2 ■ 469 E	P2.3 ■ 417 E	P3.1 ■ 479 E	P3.2 ■ 387 E	P3.3 ■ 325 E	P4.1 ■ 285 E	P4.2 ■ 243 E	P4.3 ■ 200 E	M1.1 ■ 226 E	M1.2 ■ 190 E
M2.1 ■ 200 E	M2.2 ■ 164 E	M2.3 ■ 138 E	M3.1 ■ 171 D	M3.2 ■ 144 D	M3.3 ■ 131 D	M4.1 ■ 108 D	M4.2 ▣ 95 D	K1.1 ■ 469 E	K1.2 ■ 348 E	K1.3 ■ 262 E	K2.1 ■ 446 E	K2.2 ■ 361 E	K2.3 ■ 289 E
K3.1 ■ 394 E	K3.2 ■ 299 E	K3.3 ■ 243 E	K4.1 ■ 364 D	K4.2 ■ 276 D	K4.3 ■ 203 D	K4.4 ■ 174 D	K4.5 ■ 144 D	K5.1 ■ 413 E	K5.2 ■ 312 E	K5.3 ■ 240 E	N1.1 ■ 1444 F	N1.2 ■ 1083 F	N1.3 ■ 722 F
N2.1 ■ 945 F	N2.2 ■ 850 F	N2.3 ■ 614 F	N3.1 ■ 2201 F	N3.2 ■ 1299 F	N3.3 ■ 650 F	N4.1 ■ 1047 F	N4.2 ■ 525 F	N4.3 ■ 236 F	S1.1 ■ 144 D	S1.2 ■ 144 D	S1.3 ▣ 108 D	S2.1 ■ 118 D	S2.2 ▣ 92 D
S3.1 ■ 92 D	S3.2 ▣ 75 D	S4.1 ■ 72 D	S4.2 ▣ 59 D	H1.1 ■ 217 D	H3.1 ▣ 157 D								

Internal Thread.

Product	TDZ	TP	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
J22510.0X1.5	M12	1.50	10.00	20.00	72.0	10.00	4	1	6821331
J22512.0X1.0	M14	1.00	12.00	22.00	83.0	12.00	4	1	6821332
J22514.0X1.5	M16	1.50	14.00	26.00	83.0	14.00	5	1	6821327
J22516.0X1.5	M18	1.50	16.00	30.00	92.0	16.00	5	1	6821328

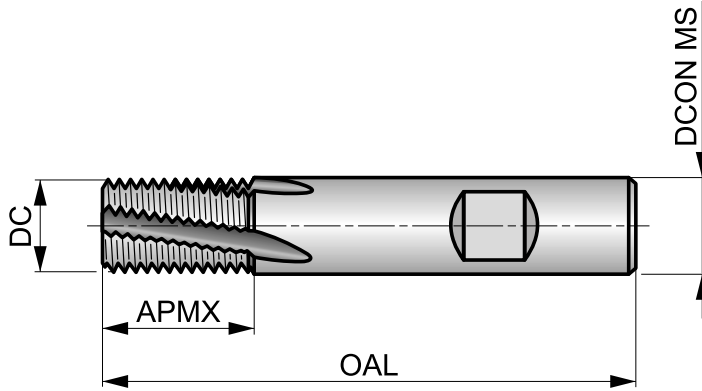
J260



Solid Carbide Thread Mill, NPT

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials.

	λ 10°	



Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 623 R	P1.2 ■ 696 R	P1.3 ■ 794 R	P2.1 ■ 535 R	P2.2 ■ 469 R	P2.3 ■ 417 R	P3.1 ■ 479 R	P3.2 ■ 387 R	P3.3 ■ 325 R	P4.1 ■ 285 R	P4.2 ■ 243 R	P4.3 ■ 200 R	M1.1 ■ 226 R	M1.2 ■ 190 R
M2.1 ■ 200 R	M2.2 ■ 164 R	M2.3 ■ 138 R	M3.1 ■ 171 Q	M3.2 ■ 144 Q	M3.3 ■ 131 Q	M4.1 ■ 108 Q	M4.2 ▣ 95 Q	K1.1 ■ 469 R	K1.2 ■ 348 R	K1.3 ■ 262 R	K2.1 ■ 446 R	K2.2 ■ 361 R	K2.3 ■ 289 R
K3.1 ■ 394 R	K3.2 ■ 299 R	K3.3 ■ 243 R	K4.1 ■ 364 Q	K4.2 ■ 276 Q	K4.3 ■ 203 Q	K4.4 ■ 174 Q	K4.5 ■ 144 Q	K5.1 ■ 413 R	K5.2 ■ 312 R	K5.3 ■ 240 R	N1.1 ■ 1444 S	N1.2 ■ 1083 S	N1.3 ■ 722 S
N2.1 ■ 945 S	N2.2 ■ 850 S	N2.3 ■ 614 S	N3.1 ■ 2201 S	N3.2 ■ 1299 S	N3.3 ■ 650 S	N4.1 ■ 1047 S	N4.2 ■ 525 S	N4.3 ■ 236 S	S1.1 ■ 144 Q	S1.2 ■ 144 Q	S1.3 ▣ 108 Q	S2.1 ■ 118 Q	S2.2 ▣ 92 Q
S3.1 ■ 92 Q	S3.2 ▣ 75 Q	S4.1 ■ 72 Q	S4.2 ▣ 59 Q	H1.1 ■ 217 Q	H3.1 ▣ 157 Q								

Internal Thread.

Product	TDZ	TPI	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)			
J2607.9-27	1/8	27	7.90	11.50	58.0	8.00	3	1	6821349
J2609.9-18	1/4, 3/8	18	9.90	15.92	66.0	10.00	3	1	6821350
J26015.9-14	1/2, 3/4	14	15.90	20.46	82.0	16.00	4	1	6821347
J26019.9-11.5	1", 2"	11.5	19.90	27.12	92.0	20.00	5	1	6821348

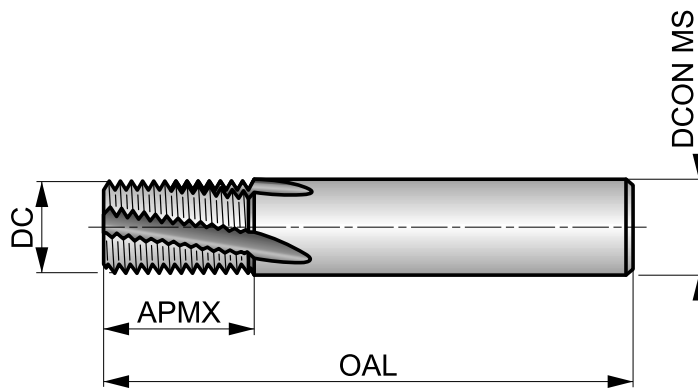
J280



Solid Carbide Thread Mill, G(BSP)

Universal high performance tool to machine same or bigger diameters than the TDZ with the same pitch. Left or right-hand, through or blind holes almost down to the bottom. Alcrona Pro coated for the best machining result in a wide range of materials. Suited for producing internal and external threads.

		1.5×D
HM		λ 10°
	Alcrona Pro	DIN 6535HA



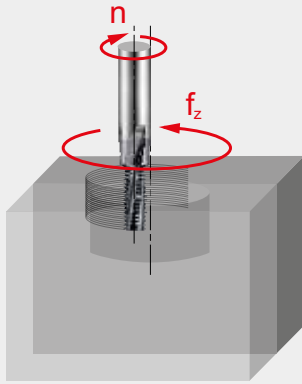
Workpiece material group suitability, starting values for cutting speed (ft/min) and Alpha Code. Tables with feed per tooth and correction factors can be found starting from page 347.

P1.1 ■ 623 N	P1.2 ■ 696 N	P1.3 ■ 794 N	P2.1 ■ 535 N	P2.2 ■ 469 N	P2.3 ■ 417 N	P3.1 ■ 479 N	P3.2 ■ 387 N	P3.3 ■ 325 N	P4.1 ■ 285 N	P4.2 ■ 243 N	P4.3 ■ 200 N	M1.1 ■ 226 N	M1.2 ■ 190 N
M2.1 ■ 200 N	M2.2 ■ 164 N	M2.3 ■ 138 N	M3.1 ■ 171 M	M3.2 ■ 144 M	M3.3 ■ 131 M	M4.1 ■ 108 M	M4.2 ■ 95 M	K1.1 ■ 469 N	K1.2 ■ 348 N	K1.3 ■ 262 N	K2.1 ■ 446 N	K2.2 ■ 361 N	K2.3 ■ 289 N
K3.1 ■ 394 N	K3.2 ■ 299 N	K3.3 ■ 243 N	K4.1 ■ 364 M	K4.2 ■ 276 M	K4.3 ■ 203 M	K4.4 ■ 174 M	K4.5 ■ 144 M	K5.1 ■ 413 N	K5.2 ■ 312 N	K5.3 ■ 249 N	N1.1 ■ 1444 O	N1.2 ■ 1083 O	N1.3 ■ 722 O
N2.1 ■ 945 O	N2.2 ■ 850 O	N2.3 ■ 614 O	N3.1 ■ 2201 O	N3.2 ■ 1299 O	N3.3 ■ 650 O	N4.1 ■ 1047 O	N4.2 ■ 525 O	N4.3 ■ 236 O	S1.1 ■ 144 M	S1.2 ■ 144 M	S1.3 ■ 108 M	S2.1 ■ 118 M	S2.2 ■ 92 M
S3.1 ■ 92 M	S3.2 ■ 75 M	S4.1 ■ 72 M	S4.2 ■ 59 M	H1.1 ■ 217 M	H3.1 ■ 157 M								

Internal and External Thread.

Product	TDZ	TPI	DC	APMX	OAL	DCON MS	NOF	Pack Qty	MID
			(mm)	(mm)	(mm)	(mm)			
J2806.0-28	1/8	28	6.00	15.00	57.0	6.00	3	1	6821356
J28010.0-19	1/4	19	10.00	20.00	72.0	10.00	4	1	6821351
J28014.0-19	3/8	19	14.00	26.00	83.0	14.00	5	1	6821352
J28016.0-14	1/2, 5/8	14	16.00	30.00	92.0	16.00	5	1	6821353
J28020.0-14	5/8, 3/4, 7/8	14	20.00	35.00	104.0	20.00	5	1	6821354
J28025.0-11	1", 3"	11	25.00	45.00	121.0	25.00	6	1	6821355

THREAD MILLS – FEED PER TOOTH TABLE



Feed per tooth per revolution f_z (in/rev).
The specified values are the recommended starting values for machining the full thread depth in one pass.

How to use this table to find the feed per tooth f_z :

1. Find your Alpha Code on the product page (example: 181B, "B" is the Alpha Code).
2. Select the column matching your cutter diameter in the top row of the table with the Thread pitch P or TPI (in the rows with icons on the left).
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter + Pitch column and Alpha Code is the feed per tooth f_z .

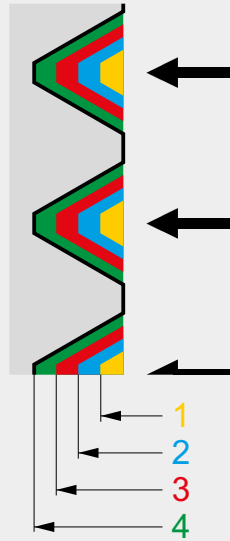
Correction of the feed per tooth for multiple passes:

1. In case the thread is being machined in **2 passes** the feed values mentioned in the table should be increased by **30 to 40 %**.
2. In case the thread is being machined in **3 passes** the feed values mentioned in the table should be increased by **55 to 65 %**.
3. In case the thread is being machined in **4 passes** the feed values mentioned in the table should be increased by **80 to 90 %**.

(Example: J2003.2X.7 machining WMG M4.1 with feed rate A in 4-passes the $f_z = .001 \times 1.80 = .018$ in/tooth).

		ϕ DC (mm)																											
		.126	.161	.177	.189	.217	.236	–	.256	.295	.311	.315	.323	.374	.390	.394	–	.457	.472	–	.535	.551	–	.630	–	–	.748	.787	.984
Feed rates		.028	.031	.039	.039	–	.049	–	.049	.059	–	–	.059	.069	.069	.079	–	.079	.079	–	.079	–	–	–	–	–	–	–	–
	A	.001	.001	.001	.001	–	.001	–	.001	.001	–	–	.002	.002	.002	.002	–	.002	.003	–	.003	–	–	–	–	–	–	–	–
	B	.001	.001	.001	.001	–	.001	–	.001	.002	–	–	.002	.002	.002	.003	–	.003	.004	–	.004	–	–	–	–	–	–	–	–
	C	.001	.001	.002	.002	–	.002	–	.002	.002	–	–	.003	.003	.003	.003	–	.004	.004	–	.005	–	–	–	–	–	–	–	–
		–	–	–	.020	–	.030	.039	–	–	–	.039	–	–	–	.039	.059	–	.039	.059	–	.039	.059	.059	.079	.098	.118	.079	–
	D	–	–	–	.002	–	.002	.001	–	–	–	.002	–	–	–	.003	.003	–	.003	.003	–	.003	.003	.004	.003	.003	.003	.004	–
	E	–	–	–	.002	–	.002	.002	–	–	–	.003	–	–	–	.004	.004	–	.004	.004	–	.004	.004	.005	.004	.004	.004	.005	–
	F	–	–	–	.003	–	.003	.002	–	–	–	.004	–	–	–	.005	.004	–	.005	.005	–	.005	.005	.006	.005	.005	.004	.006	–
		–	–	–	.787	.709	–	–	–	.630	–	.551	–	–	–	.512	.472	–	.433	–	–	.394	–	–	–	–	–	–	–
	G	–	–	–	.001	.001	–	–	–	.001	–	.001	–	–	–	.002	.002	–	.002	–	–	.003	–	–	–	–	–	–	–
H	–	–	–	.001	.001	–	–	–	.002	–	.002	–	–	–	.003	.003	–	.003	–	–	.003	–	–	–	–	–	–	–	
I	–	–	–	.001	.001	–	–	–	.002	–	.002	–	–	–	.004	.003	–	.004	–	–	.004	–	–	–	–	–	–	–	
	–	–	–	1.102	–	.945	–	–	–	–	.787	–	–	–	.709	–	–	–	–	–	.630	–	–	–	–	–	–	–	
J	–	–	–	.001	–	.001	–	–	–	–	.002	–	–	–	.002	–	–	–	–	–	.003	–	–	–	–	–	–	–	
K	–	–	–	.001	–	.001	–	–	–	–	.002	–	–	–	.003	–	–	–	–	–	.004	–	–	–	–	–	–	–	
L	–	–	–	.001	–	.002	–	–	–	–	.003	–	–	–	.004	–	–	–	–	–	.005	–	–	–	–	–	–	–	
	–	–	–	–	–	1.102	–	–	–	–	–	–	–	–	.748	–	–	–	–	–	.748	–	.551	–	–	–	.551	.433	
M	–	–	–	–	–	.001	–	–	–	–	–	–	–	–	.003	–	–	–	–	–	.003	–	.003	–	–	–	.005	.005	
N	–	–	–	–	–	.001	–	–	–	–	–	–	–	–	.003	–	–	–	–	–	.004	–	.004	–	–	–	.006	.007	
O	–	–	–	–	–	.002	–	–	–	–	–	–	–	–	.004	–	–	–	–	–	.005	–	.005	–	–	–	.008	.009	
	–	–	–	–	–	–	–	–	–	–	1.063	–	–	–	.709	–	–	–	–	–	.551	.453	–	–	–	–	–	–	
Q	–	–	–	–	–	–	–	–	–	–	.002	–	–	–	.002	–	–	–	–	–	.003	.005	–	–	–	–	–	–	
R	–	–	–	–	–	–	–	–	–	–	.002	–	–	–	.002	–	–	–	–	–	.004	.006	–	–	–	–	–	–	
S	–	–	–	–	–	–	–	–	–	–	.003	–	–	–	.003	–	–	–	–	–	.005	.008	–	–	–	–	–	–	


THREAD MILLS – NUMBER OF PASSES TABLE




How to use the tables to find the depth increments per pass:

1. Select the table for your thread profile (example: "M12" is a metric thread).
2. Find the column matching your thread pitch in the top row of the table.
3. Find in that column below the recommended number of passes and for each pass the increment radial depth of cut. (example: for a pitch of **.069** the recommended number of passes is 5 and radial depth of the 1st pass is .011 in, the 2nd .009 in etc.).
4. It is recommended to increase the number of passes for more difficult to machine materials.
5. For super-finishing result it is best practice to repeat the final pass.

Recommended number of passes and radial depth of cut per pass for female metric thread (60°).


	Radial depth of cut per pass (mm)											
	.020	.028	.030	.031	.039	.049	.059	.069	.079	.098	.118	
No. of passes	1	.006	.009	.007	.009	.009	.009	.009	.011	.011	.013	.015
	2	.005	.007	.005	.007	.007	.007	.008	.009	.009	.011	.013
	3	–	–	.005	.005	.007	.007	.007	.008	.008	.010	.012
	4	–	–	–	–	–	.005	.005	.006	.006	.007	.009
	5	–	–	–	–	–	–	.005	.005	.005	.006	.007
	6	–	–	–	–	–	–	–	–	.005	.005	.007
	7	–	–	–	–	–	–	–	–	–	.005	.006
Acc. depth	.011	.016	.017	.021	.023	.028	.034	.040	.045	.057	.068	

Recommended number of passes and radial depth of cut per pass for female unified thread (60°).


	Radial depth of cut per pass (mm)										
	1.102	.945	.787	.709	.630	.551	.512	.472	.433	.394	
No. of passes	1	.008	.009	.009	.010	.010	.011	.012	.012	.013	.013
	2	.007	.008	.008	.008	.008	.009	.010	.010	.011	.011
	3	.006	.007	.007	.008	.007	.009	.009	.009	.010	.010
	4	–	–	.005	.006	.006	.007	.007	.007	.007	.007
	5	–	–	–	–	.005	.006	.006	.006	.006	.006
	6	–	–	–	–	–	–	–	.005	.006	.006
	7	–	–	–	–	–	–	–	–	–	.005
Acc. Depth	.021	.024	.029	.032	.036	.041	.044	.048	.052	.058	

THREAD MILLS – NUMBER OF PASSES TABLE

Recommended number of passes and radial depth of cut per pass for female G (BSP) thread (55°).

		Radial depth of cut per pass (mm)			
		1.102	.748	.551	.433
No. of passes	1	.009	.011	.013	.014
	2	.007	.009	.010	.012
	3	.007	.008	.009	.011
	4	–	.006	.007	.008
	5	–	–	.006	.007
	6	–	–	–	.006
	7	–	–	–	–
Acc. Depth		.023	.034	.046	.058

Recommended number of passes and radial depth of cut per pass for female NPT thread (60°).

		Radial depth of cut per pass (mm)			
		1.063	.709	.551	.453
No. of passes	1	.011	.014	.015	.017
	2	.009	.011	.013	.014
	3	.008	.010	.012	.013
	4	–	.008	.009	.010
	5	–	–	.007	.008
	6	–	–	–	.007
	7	–	–	–	–
Acc. Depth		.029	.043	.056	.068

General hints on thread milling

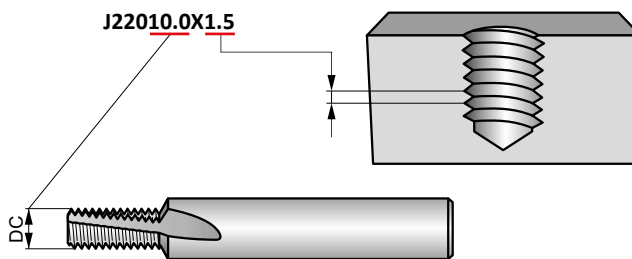
1. Thread milling is the process of generating a thread by the circular interpolation of a milling cutter with a specific thread geometry ground around its periphery.
2. To be able to use a thread milling cutter it is necessary to have a CNC machine that can make circular paths.
3. Most modern CNC machines are equipped with machining cycles for thread milling.
4. Consult the manual or contact the machine supplier for information.

Features and benefits

1. Thread milling gives increased reliability and tool life.
2. Threadmills produce small chips resulting in problem free threading.
3. Tolerance adjustments can be made using exact co-ordinates.
4. You can generate a complete thread to the bottom of the hole.
5. Capable of machining a wide variety of materials.
6. The same cutter can produce different size threads provided the pitch is the same.
7. Both right and left hand threads can be created with the same tool.
8. Some thread mills can also machine the entry chamfer (J200 and J205).

Choosing your tool

Thread milling cutters have an item code based on the type, diameter *DC* and pitch *TP*. The item code is the number to use when ordering your tool. Always consult the catalogue to ensure you have the correct thread dimensions.



This thread milling cutter can be used for threads \geq M12 \times 1.5 (M14 \times 1.5, M18 \times 1.5 etc.)

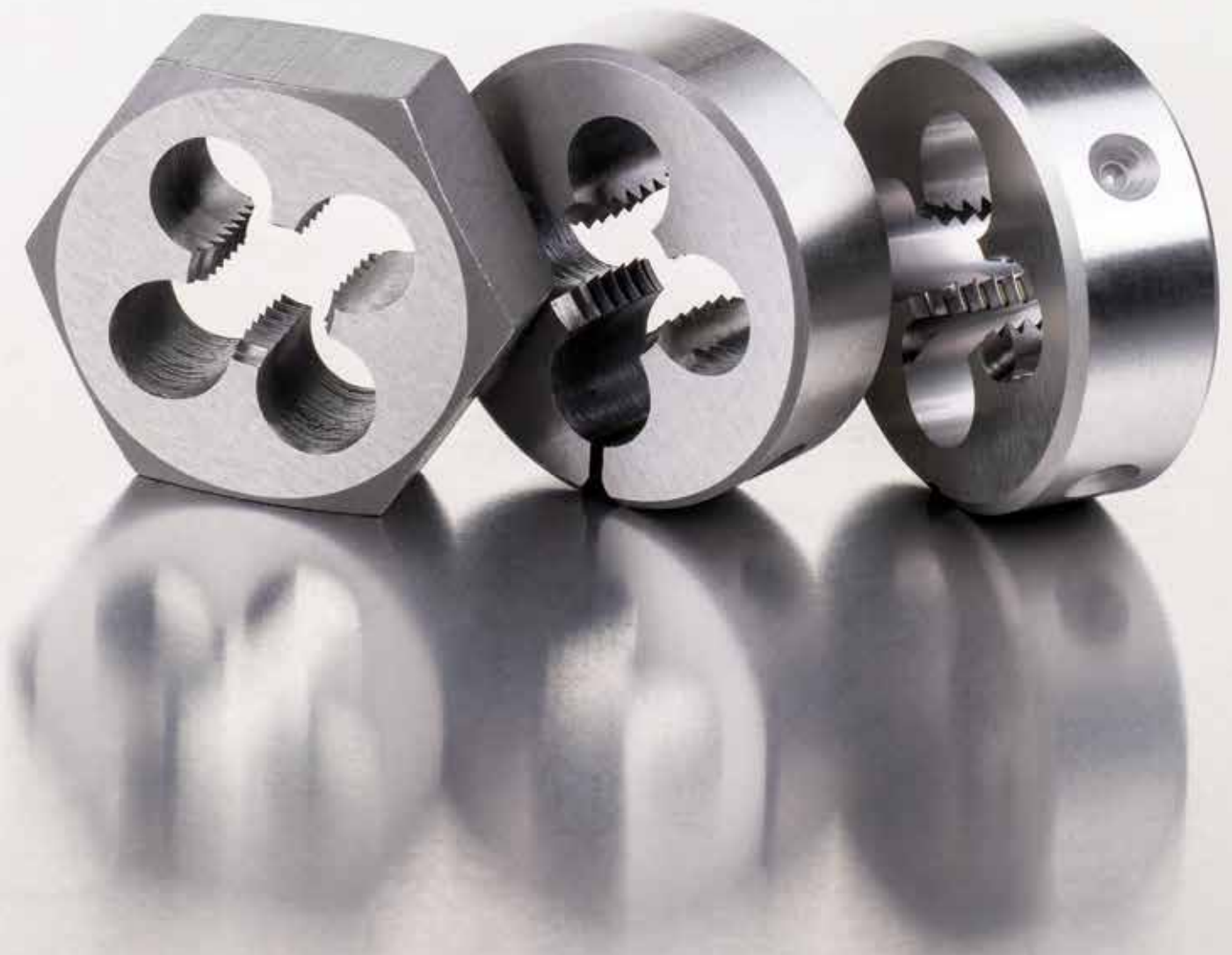
Programming with Rprg

- For easy adjustment of the thread tolerance always program with radius correction.
- The Rprg value is the start value for a new cutter and is printed on the cutter shank. This should be entered in the tool memory offset.
- Rprg is based on the theoretical zero-line of the thread meaning that when you program using Rprg the thread is never oversize, but normally tight.
- This means that with a small modification to the program co-ordinates you can create the thread to the required size.

Recommendations

- Always use the correct cutting data.
- Use the recommended drill size for the thread diameter, as for conventional taps.
- For easy adjustment of the thread tolerance always start with the Rprg value printed on the shank of the threadmill.
- Use a gauge to check the tolerance on the first thread to establish if the radius needs to be corrected. The radius can be corrected 2 or 3 times before the threadmill is worn out.
- When dry machining, compressed air is recommended to help with chip removal.
- When threading more difficult materials, it is recommended to take multiple passes.

DIES



THREADING – GENERAL CONTENT

6	TAPS	WMG & ISO 13399
10		INSTRUCTIONS
18		SOLID CARBIDE TAPS
23		MATERIAL SPECIFIC SHARK TAPS
102		HSS HAND & MACHINE TAPS
331		THREAD MILLS
352	DIES	
390	GENERAL TECHNICAL INFORMATION	

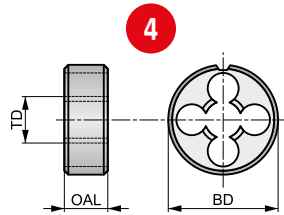


1 F201



2 HSS Gun Nosed Machine Die, Metric, Left Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



M	ISO 2568	6g
1.75 XP	HSS	L
Bright		

5

Workpiece material group suitability and starting values for cutting speed (m/min).

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P4.1	M1.1	M1.2	M2.1	M2.2	K1.1
■ 12	■ 13	■ 14	■ 10	■ 9	▧ 8	■ 8	▧ 7	▧ 5	■ 7	■ 6	■ 6	▧ 5	■ 11
K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
■ 8	▧ 6	■ 11	■ 9	▧ 7	■ 10	■ 8	▧ 6	■ 10	■ 8	▧ 6	▧ 20	▧ 15	▧ 10
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3					
▧ 10	▧ 9	▧ 6	■ 11	▧ 6	▧ 3	▧ 11	▧ 4	▧ 4					

6

Product	TD (mm)	TP (mm)	BD (mm)	OAL (mm)
F201M3	3.000	0.50	20.00	5.0
F201M4	4.000	0.70	20.00	5.0
F201M5	5.000	0.80	20.00	7.0
F201M6	6.000	1.00	20.00	7.0
F201M8	8.000	1.25	25.00	9.0
F201M10	10.000	1.50	30.00	11.0
F201M12	12.000	1.75	38.00	14.0
F201M14	14.000	2.00	38.00	14.0
F201M16	16.000	2.00	45.00	18.0

7

8

Pos. Description

Designation of dies

Product description

Illustrative picture

Schematic drawing of tool

Pos. Description

Product features

Material group recommendations incl. speed and feed guidance

Product code

Product dimensions

HSS DIES – ICONS OVERVIEW

General Icons

	Primary use
	Possible use

Basic Standard Group (BSG)

	BS 1127:1950 – Round Dies Standards		ISO 2568 – Die Standards
	DIN 382 – Hex Die Standards		

Material Code (BMC)

	High Speed Cobalt Steel Tool Material
--	---------------------------------------

	High Speed Steel Tool Material
--	--------------------------------

Coating

	Bright (uncoated)
--	-------------------

Die Chamfer to Pitch Ratio (DCPR)

	Die Thread Chamfer to Pitch Ratio (1.75×TP)
--	---

	Die Thread Chamfer to Pitch Ratio (2.25×TP)
--	---

Hand (Cutting direction)

	Left Hand Rotation/Cutting
--	----------------------------

	Right Hand Rotation/Cutting
--	-----------------------------

Thread Form Type (THFT)

	Thread Form, American National Pipe Taper
--	---

	Thread Form, British Standard Whitworth
--	---

	Thread Form, Steel Conduit DIN 40430 (electrical)
--	---

	Thread Form, British Standard Fine
--	------------------------------------

	Thread Form, Metric Coarse
--	----------------------------

	Thread Form, Unified Coarse
--	-----------------------------

	Thread Form, British Standard Pipe
--	------------------------------------

	Thread Form, Metric Fine
--	--------------------------

	Thread Form, Unified Fine
--	---------------------------

Thread Tolerance Class (TCTR)

	Thread Tolerance Class
--	------------------------

	Medium Inch Thread Class of Fit
--	---------------------------------



	Normal Fit Class for Pipe Thread
--	----------------------------------

	External Inch Thread Medium Class of Fit
--	--

	Medium Inch Thread Class of Fit
--	---------------------------------

HSS DIES – TOOL MATERIAL NAVIGATOR

Tool materials

High Speed Steel		<p>A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.</p>
Cobalt High Speed Steel		<p>This high speed steel contains cobalt for increased hot hardness. The composition of HSCo provides a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it excellent for producing drills, taps, reamers and milling cutters.</p>

Surface Coatings

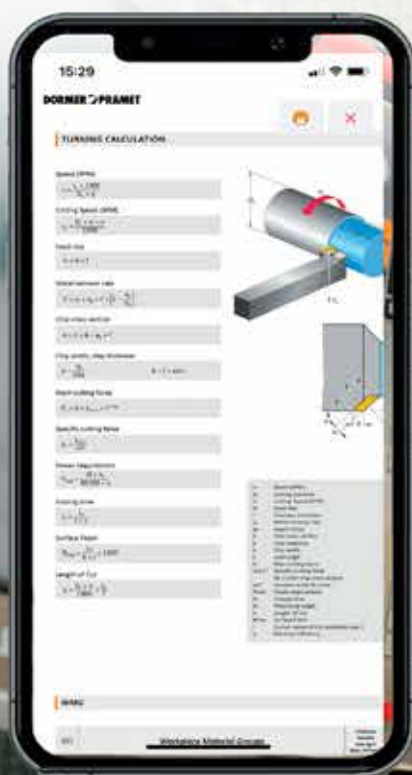
Bright (uncoated)		<p>Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials and maintains sharp cutting edges in abrasive materials.</p>
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HELP IS AT HAND

Our technical support team are always at hand to help with any technical questions or queries you have about our technical apps. Use the contact us details to reach out to your local Dormer Pramet sales office.

Simply Reliable.



Thread form (THFT)						
Basic standard group (BSG)	BS 1127:1950	ISO 2568	ANSI	BS 1127:1950	ISO 2568	ANSI
Thread tolerance class (TCTR)		2A	2B		2A	2B
Die chamfer to pitch ratio (DCPR)	1.75 XP	1.75 XP		1.75 XP	1.75 XP	
Material code (BMC)	HSS	HSS	Cr steel	HSS	HSS	Cr steel
Hand (Cutting direction)						
Coating						
Product Family Code	F320	F120	2025(UNC)	F330	F130	2025(UNF)
PSF cutting diameters range	No.4 - 1.1/4	No.8 - 1"	1/4 - 1.1/2	No.4 - 1.1/2	No.10 - 1"	1/4 - 1.1/2
	362	363	364	365	366	367
P	P1	■	■	■	■	■
	P2	■	■	■	■	■
	P3	▣	▣	▣	▣	▣
	P4	▣	▣	▣	▣	▣
M	M1	■	■	■	■	■
	M2	▣	▣	▣	▣	▣
	M3			▣		▣
	M4					▣
K	K1	■	■	■	■	■
	K2	■	■	■	■	■
	K3	■	■	■	■	■
	K4					
	K5	■	■	■	■	■
N	N1	▣	▣	▣	▣	▣
	N2	▣	▣	▣	▣	▣
	N3	▣	▣	▣	▣	▣
	N4	▣	▣	▣	▣	▣
	N5					
S	S1					
	S2					
	S3					
	S4					
H	H1					
	H2					
	H3					
	H4					

■ Primary use ▣ Possible use

UNS
ANSI
2B
Cr steel
R
Bright

M
BS 1127:1950
1.75 XP
HSS
R
Bright

M
ISO 2568
6g
1.75 XP
HSS
R
Bright

M
ISO 2568
6g
2.25 XP
HSS-E
R
Bright

M
ISO 2568
6g
1.75 XP
HSS
L
Bright

M
DIN 382
6g
1.75 XP
HSS
R
Bright

M
BS 1127:1950
6g
1.75 XP
HSS
R
Bright



	2025(UNS)	F300	F100	F108	F201	F202	F302
	11/16 - 1"	M2 - M36	M2 - M42	M2 - M20	M3 - M20	M3 - M36	M3 - M36
	368	369	370	371	372	373	374
P1	■	■	■	▣	■	■	■
P2	■	■	■	▣	■	■	■
P3	▣	▣	▣	■	▣	▣	▣
P4	▣	▣	▣	■	▣	▣	▣
M1	▣	■	■	▣	■	■	■
M2	▣	▣	▣	■	▣	▣	▣
M3	▣			■			
M4				▣			
K1	■	■	■		■	■	■
K2	■	■	■		■	■	■
K3	■	■	■		■	■	■
K4				■			
K5	■	■	■		■	■	■
N1	▣	▣	▣	▣	▣	▣	▣
N2	▣	▣	▣	▣	▣	▣	▣
N3	▣	▣	▣	▣	▣	▣	▣
N4	▣	▣	▣	▣	▣	▣	▣
N5							
S1				▣			
S2							
S3							
S4							
H1							
H2							
H3							
H4							

Thread form (THFT)		M	MF	MF	MF	NPT	NPT
Basic standard group (BSG)		ANSI	BS 1127:1950	ISO 2568	BS 1127:1950	ANSI	ISO 2568
Thread tolerance class (TCTR)		6H		6g	6g		Normal
Die chamfer to pitch ratio (DCPR)			1.75 XP	1.75 XP	1.75 XP		1.75 XP
Material code (BMC)		Cr steel	HSS	HSS	HSS	Cr steel	HSS
Hand (Cutting direction)							
Coating							
Product Family Code		2325M	F310	F110	F312	2010(NPT)	F180
PSF cutting diameters range		M6 - M20	M3 - M30	M4 - M40	M8 - M24	1/8 - 1/2	1/8 - 1"
		375	376	377	378	379	380
P	P1	■	■	■	■	■	■
	P2	■	■	■	■	■	■
	P3	☑	☑	☑	☑	☑	☑
	P4	☑	☑	☑	☑	☑	☑
M	M1	☑	■	■	■	☑	■
	M2	☑	☑	☑	☑	☑	☑
	M3	☑				☑	
	M4						
K	K1	■	■	■	■	■	■
	K2	■	■	■	■	■	■
	K3	■	■	■	■	■	■
	K4						
	K5	■	■	■	■	■	■
N	N1	☑	☑	☑	☑	☑	☑
	N2	☑	☑	☑	☑	☑	☑
	N3	☑	☑	☑	☑	☑	☑
	N4	☑	☑	☑	☑	☑	☑
	N5						
S	S1						
	S2						
	S3						
	S4						
H	H1						
	H2						
	H3						
	H4						

■ Primary use ☑ Possible use

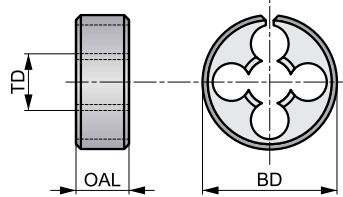
	 ANSI Cr steel Bright	 BS 1127:1950 1.75 XP HSS Bright	 ISO 2568 Class A 1.75 XP HSS Bright	 DIN 382 Class A 1.75 XP HSS Bright	 ISO 2568 Medium 1.75 XP HSS Bright	 ISO 2568 Medium 1.75 XP HSS Bright	 ISO 2568 Normal 1.75 XP HSS Bright
	2025(NPT)	F370	F170	F272	F140	F150	F190
	1/8 - 1"	1/8 - 1.1/2	1/8 - 2"	1/8 - 1.1/2	1/8 - 1"	3/16 - 1/2	No.7 - No.36
	381	382	383	384	385	386	387
P1	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■
P3	☑	☑	☑	☑	☑	☑	☑
P4	☑	☑	☑	☑	☑	☑	☑
M1	☑	■	■	■	■	■	■
M2	☑	☑	☑	☑	☑	☑	☑
M3	☑						
M4							
K1	■	■	■	■	■	■	■
K2	■	■	■	■	■	■	■
K3	■	■	■	■	■	■	■
K4							
K5	■	■	■	■	■	■	■
N1	☑	☑	☑	☑	☑	☑	☑
N2	☑	☑	☑	☑	☑	☑	☑
N3	☑	☑	☑	☑	☑	☑	☑
N4	☑	☑	☑	☑	☑	☑	☑
N5							
S1							
S2							
S3							
S4							
H1							
H2							
H3							
H4							

F320



HSS Adjustable Split Hand Die, UNC, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder it can be used to clean up or produce a partial thread.



UNC	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

Products from this series are also available in set with taps. Please see L120.

Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(inch)	(inch)		
F3204-40X13/16	4	40	2.85	13/16	1/4	1	5978041
F3205-40X13/16	5	40	3.18	13/16	1/4	1	5978045
F3206-32X13/16	6	32	3.51	13/16	1/4	1	5978080
F3208-32X13/16	8	32	4.17	13/16	1/4	1	5978869
F3208-32X1	8	32	4.17	1"	3/8	1	5978846
F32010-24X13/16	10	24	4.83	13/16	1/4	1	5978007
F32010-24X1	10	24	4.83	1"	3/8	1	5978004
F32012-24X13/16	12	24	5.49	13/16	1/4	1	5978010
F3201/4X13/16	1/4	20	6.35	13/16	1/4	1	5977996
F3201/4X1	1/4	20	6.35	1"	3/8	1	5977987
F3201/4X1.5/16	1/4	20	6.35	1.5/16	7/16	1	5977993
F3201/4X1.1/2	1/4	20	6.35	1.1/2	1/2	1	5977990
F3205/16X1	5/16	18	7.94	1"	3/8	1	5978050
F3205/16X1.1/2	5/16	18	7.94	1.1/2	1/2	1	5978055
F3203/8X1	3/8	16	9.53	1"	3/8	1	5978027
F3203/8X1.5/16	3/8	16	9.53	1.5/16	7/16	1	5978036

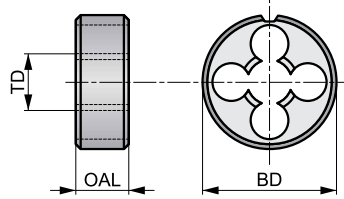
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(inch)	(inch)		
F3203/8X1.1/2	3/8	16	9.53	1.1/2	1/2	1	5978031
F3207/16X1.5/16	7/16	14	11.11	1.5/16	7/16	1	5978787
F3207/16X1.1/2	7/16	14	11.11	1.1/2	1/2	1	5978746
F3201/2X1.5/16	1/2	13	12.70	1.5/16	7/16	1	5977978
F3201/2X1.1/2	1/2	13	12.70	1.1/2	1/2	1	5977975
F3201/2X2	1/2	13	12.70	2"	5/8	1	5977981
F3209/16X1.1/2	9/16	12	14.29	1.1/2	1/2	1	5978875
F3205/8X1.1/2	5/8	11	15.88	1.1/2	1/2	1	5978065
F3205/8X2	5/8	11	15.88	2"	5/8	1	5978069
F3203/4X1.1/2	3/4	10	19.05	1.1/2	1/2	1	5978013
F3203/4X2	3/4	10	19.05	2"	5/8	1	5978016
F3207/8X2	7/8	9	22.23	2"	5/8	1	5978821
F3201X2	1"	8	25.40	2"	5/8	1	5978001
F3201.1/8X3	1.1/8	7	28.58	3"	7/8	1	5977972
F3201.1/4X3	1.1/4	7	31.75	3"	7/8	1	5977968

F120



HSS Gun Nosed Machine Die, UNC, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



	ISO 2568	2A
1.75 XP	HSS	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

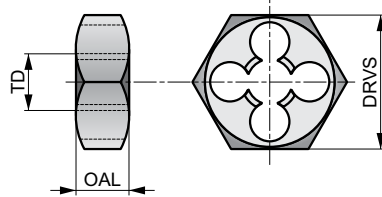
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F1208-32	8	32	4.17	20.00	7.0	1	5977858
F12010-24	10	24	4.83	20.00	7.0	1	5977827
F1201/4	1/4	20	6.35	20.00	7.0	1	5977823
F1205/16	5/16	18	7.94	25.00	9.0	1	5977841
F1203/8	3/8	16	9.53	30.00	11.0	1	5977837
F1207/16	7/16	14	11.11	30.00	11.0	1	5977850
F1201/2	1/2	13	12.70	38.00	14.0	1	5977813
F1209/16	9/16	12	14.29	38.00	14.0	1	5977861
F1205/8	5/8	11	15.88	45.00	18.0	1	5977846
F1203/4	3/4	10	19.05	45.00	18.0	1	5977832
F1207/8	7/8	9	22.23	55.00	22.0	1	5977854
F1201	1"	8	25.40	55.00	22.0	1	5977807

2025(UNC)



CS Die Nut UNC, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



	ANSI	Cr steel
	Bright	2B

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 26	P1.2 ■ 30	P1.3 ■ 30	P2.1 ■ 23	P2.2 ■ 20	P3.1 ▣ 20	P3.2 ▣ 16	P4.1 ▣ 10	M1.1 ▣ 7	M1.2 ▣ 7	M2.1 ▣ 7	M2.2 ▣ 7	M3.1 ▣ 7	M3.2 ▣ 7
K1.1 ■ 26	K1.2 ■ 20	K1.3 ▣ 13	K2.1 ■ 23	K2.2 ■ 20	K2.3 ▣ 16	K3.1 ■ 23	K3.2 ■ 16	K3.3 ▣ 13	K5.1 ■ 23	K5.2 ■ 16	K5.3 ▣ 13	N1.1 ▣ 52	N1.2 ▣ 39
N1.3 ▣ 26	N2.1 ▣ 26	N2.2 ▣ 23	N2.3 ▣ 16	N3.1 ■ 26	N3.2 ▣ 16	N3.3 ▣ 10	N4.1 ▣ 26	N4.2 ▣ 10	N4.3 ▣ 10				

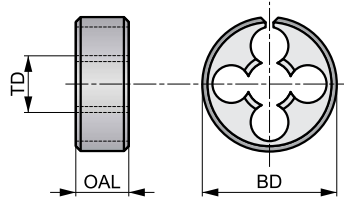
Product	TDZ	TPI	DRVS	OAL	Pack Qty	MID
			(inch)	(inch)		
20251/4X20	1/4	20	5/8	1/2	1	6009069
20255/16X18	5/16	18	11/16	5/16	1	6009316
20253/8X16	3/8	16	13/16	3/8	1	6009155
20257/16X14	7/16	14	7/8	7/16	1	6009335
20251/2X13	1/2	13	1.1/16	1/2	1	6009045
20259/16X12	9/16	12	1.1/16	1/2	1	6009131
20255/8X11	5/8	11	1.1/4	5/8	1	6009328
20253/4X10	3/4	10	1.7/16	3/4	1	6009099
20257/8X9	7/8	9	1.5/8	7/8	1	6009128
20251X8	1"	8	1.13/16	1"	1	6009093
20251.1/8X7	1.1/8	7	2"	1"	1	6009030
20251.1/4X7	1.1/4	7	2.3/16	1"	1	6009021
20251.3/8X6	1.3/8	6	2.3/8	1"	1	6009040
20251.1/2X6	1.1/2	6	2.5/8	1"	1	6009008

F330



HSS Adjustable Split Hand Die, UNF, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder it can be used to clean up or produce a partial thread.



UNF	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

Products from this series are also available in set with taps. Please see L120.

Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(inch)	(inch)		
F3304-48X13/16	4	48	2.85	13/16	1/4	1	5978804
F3305-44X13/16	5	44	3.18	13/16	1/4	1	5978807
F3306-40X13/16	6	40	3.51	13/16	1/4	1	5978830
F3308-36X13/16	8	36	4.17	13/16	1/4	1	5978840
F33010-32X13/16	10	32	4.83	13/16	1/4	1	5978776
F33010-32X1	10	32	4.83	1"	3/8	1	5978772
F33012-28X13/16	12	28	5.49	13/16	1/4	1	5978779
F3301/4X13/16	1/4	28	6.35	13/16	1/4	1	5978765
F3301/4X1	1/4	28	6.35	1"	3/8	1	5978757
F3301/4X1.1/2	1/4	28	6.35	1.1/2	1/2	1	5978761
F3305/16X1	5/16	24	7.94	1"	3/8	1	5978810
F3305/16X1.5/16	5/16	24	7.94	1.5/16	7/16	1	5978816
F3305/16X1.1/2	5/16	24	7.94	1.1/2	1/2	1	5978813
F3303/8X1	3/8	24	9.53	1"	3/8	1	5978794
F3303/8X1.5/16	3/8	24	9.53	1.5/16	7/16	1	5978801
F3303/8X1.1/2	3/8	24	9.53	1.1/2	1/2	1	5978798

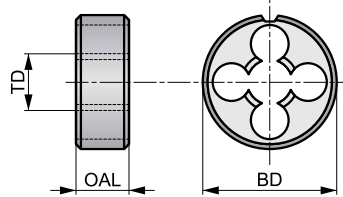
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(inch)	(inch)		
F3307/16X1	7/16	20	11.11	1"	3/8	1	5978832
F3307/16X1.5/16	7/16	20	11.11	1.5/16	7/16	1	5978836
F3307/16X1.1/2	7/16	20	11.11	1.1/2	1/2	1	5978834
F3301/2X1.5/16	1/2	20	12.70	1.5/16	7/16	1	5978753
F3301/2X1.1/2	1/2	20	12.70	1.1/2	1/2	1	5978750
F3309/16X1.5/16	9/16	18	14.29	1.5/16	7/16	1	5978844
F3309/16X1.1/2	9/16	18	14.29	1.1/2	1/2	1	5978842
F3305/8X1.1/2	5/8	18	15.88	1.1/2	1/2	1	5978825
F3305/8X2	5/8	18	15.88	2"	5/8	1	5978827
F3303/4X1.1/2	3/4	16	19.05	1.1/2	1/2	1	5978783
F3303/4X2	3/4	16	19.05	2"	5/8	1	5978791
F3307/8X2	7/8	14	22.23	2"	5/8	1	5978838
F3301X2	1"	12	25.40	2"	5/8	1	5978768
F3301.1/8X3	1.1/8	12	28.58	3"	7/8	1	5978884
F3301.1/4X3	1.1/4	12	31.75	3"	7/8	1	5978881
F3301.1/2X3	1.1/2	12	38.10	3"	7/8	1	5978878

F130



HSS Gun Nosed Machine Die, UNF, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



	ISO 2568	2A
1.75 XP	HSS	
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▧ 26	P3.1 ■ 26	P3.2 ▧ 23	P4.1 ▧ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▧ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▧ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▧ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▧ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▧ 20	N1.1 ▧ 66	N1.2 ▧ 49	N1.3 ▧ 33
N2.1 ▧ 33	N2.2 ▧ 30	N2.3 ▧ 20	N3.1 ■ 36	N3.2 ▧ 20	N3.3 ▧ 10	N4.1 ▧ 36	N4.2 ▧ 13	N4.3 ▧ 13					

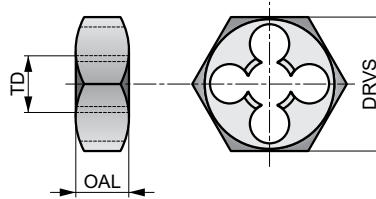
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F13010-32	10	32	4.83	20.00	7.0	1	5977876
F1301/4	1/4	28	6.35	20.00	7.0	1	5977873
F1305/16	5/16	24	7.94	25.00	9.0	1	5977885
F1303/8	3/8	24	9.53	30.00	11.0	1	5977882
F1307/16	7/16	20	11.11	30.00	11.0	1	5977891
F1301/2	1/2	20	12.70	38.00	10.0	1	5977870
F1309/16	9/16	18	14.29	38.00	10.0	1	5977900
F1305/8	5/8	18	15.88	45.00	14.0	1	5977888
F1303/4	3/4	16	19.05	45.00	14.0	1	5977879
F1307/8	7/8	14	22.23	55.00	16.0	1	5977894
F1301	1"	12	25.40	55.00	16.0	1	5977868

2025(UNF)



CS Die Nut UNF, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



	ANSI	Cr steel
	Bright	2B

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 26	P1.2 ■ 30	P1.3 ■ 30	P2.1 ■ 23	P2.2 ■ 20	P3.1 ▣ 20	P3.2 ▣ 16	P4.1 ▣ 10	M1.1 ▣ 7	M1.2 ▣ 7	M2.1 ▣ 7	M2.2 ▣ 7	M3.1 ▣ 7	M3.2 ▣ 7
K1.1 ■ 26	K1.2 ■ 20	K1.3 ▣ 13	K2.1 ■ 23	K2.2 ■ 20	K2.3 ▣ 16	K3.1 ■ 23	K3.2 ■ 16	K3.3 ▣ 13	K5.1 ■ 23	K5.2 ■ 16	K5.3 ▣ 13	N1.1 ▣ 52	N1.2 ▣ 39
N1.3 ▣ 26	N2.1 ▣ 26	N2.2 ▣ 23	N2.3 ▣ 16	N3.1 ■ 26	N3.2 ▣ 16	N3.3 ▣ 10	N4.1 ▣ 26	N4.2 ▣ 10	N4.3 ▣ 10				

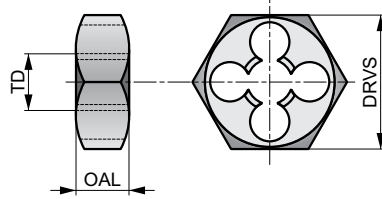
Product	TDZ	TPI	DRVS	OAL	Pack Qty	MID
			(inch)	(inch)		
20251/4X28	1/4	28	5/8	1/2	1	6009075
20255/16X24	5/16	24	11/16	5/16	1	6009324
20253/8X24	3/8	24	13/16	3/8	1	6009261
20257/16X20	7/16	20	7/8	7/16	1	6009122
20251/2X20	1/2	20	1.1/16	1/2	1	6009055
20259/16X18	9/16	18	1.1/16	1/2	1	6009134
20255/8X18	5/8	18	1.1/4	5/8	1	6009331
20253/4X16	3/4	16	1.7/16	3/4	1	6009119
20257/8X14	7/8	14	1.5/8	7/8	1	6009125
20251X12	1"	12	1.13/16	1"	1	6009089
20251.1/8X12	1.1/8	12	2"	1"	1	6009025
20251.1/4X12	1.1/4	12	2.3/16	1"	1	6009017
20251.3/8X12	1.3/8	12	2.3/8	1"	1	6009035
20251.1/2X12	1.1/2	12	2.9/16	1"	1	6009003

2025(UNS)



CS Die Nut UNS, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



	ANSI	Cr steel
	Bright	2B

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 26	P1.2 ■ 30	P1.3 ■ 30	P2.1 ■ 23	P2.2 ■ 20	P3.1 ▣ 20	P3.2 ▣ 16	P4.1 ▣ 10	M1.1 ▣ 7	M1.2 ▣ 7	M2.1 ▣ 7	M2.2 ▣ 7	M3.1 ▣ 7	M3.2 ▣ 7
K1.1 ■ 26	K1.2 ■ 20	K1.3 ▣ 13	K2.1 ■ 23	K2.2 ■ 20	K2.3 ▣ 16	K3.1 ■ 23	K3.2 ■ 16	K3.3 ▣ 13	K5.1 ■ 23	K5.2 ■ 16	K5.3 ▣ 13	N1.1 ▣ 52	N1.2 ▣ 39
N1.3 ▣ 26	N2.1 ▣ 26	N2.2 ▣ 23	N2.3 ▣ 16	N3.1 ■ 26	N3.2 ▣ 16	N3.3 ▣ 10	N4.1 ▣ 26	N4.2 ▣ 10	N4.3 ▣ 10				

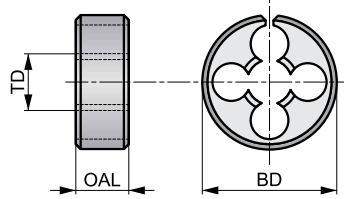
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202511/16X16	11/16	16	1.7/16	3/4	1	6009097
20251X14	1"	14	1.13/16	1"	1	6009091

F300



HSS Adjustable Split Hand Die, Metric, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder, it can be used to clean up or produce a partial thread.



M	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

Products from this series are also available in set with taps. Please see L120.

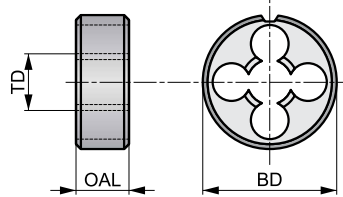
Product	TD (mm)	TP (mm)	BD (inch)	OAL (inch)	Pack Qty	MID
F300M2X13/16	2.00	0.40	13/16	1/4	1	5978745
F300M2.5X13/16	2.50	0.45	13/16	1/4	1	5978743
F300M3X13/16	3.00	0.50	13/16	1/4	1	5978777
F300M3.5X13/16	3.50	0.60	13/16	1/4	1	5978769
F300M4X13/16	4.00	0.70	13/16	1/4	1	5978788
F300M5X13/16	5.00	0.80	13/16	1/4	1	5978797
F300M6X1	6.00	1.00	1"	3/8	1	5978800
F300M7X1	7.00	1.00	1"	3/8	1	5978809
F300M8X1	8.00	1.25	1"	3/8	1	5978459
F300M9X1	9.00	1.25	1"	3/8	1	5978525
F300M10X1	10.00	1.50	1"	3/8	1	5978718
F300M11X1.5/16	11.00	1.50	1.5/16	7/16	1	5978723
F300M12X1.5/16	12.00	1.75	1.5/16	7/16	1	5978727
F300M14X1.5/16	14.00	2.00	1.5/16	7/16	1	5978732
F300M16X1.1/2	16.00	2.00	1.1/2	1/2	1	5978733
F300M18X1.1/2	18.00	2.50	1.1/2	1/2	1	5978739
F300M20X1.1/2	20.00	2.50	1.1/2	1/2	1	5978748
F300M22X2	22.00	2.50	2"	5/8	1	5978755
F300M24X2	24.00	3.00	2"	5/8	1	5978759
F300M27X3	27.00	3.00	3"	7/8	1	5978763
F300M30X3	30.00	3.50	3"	7/8	1	5978780
F300M36X3	36.00	4.00	3"	7/8	1	5978785

F100



HSS Gun Nosed Machine Die, Metric, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



M	ISO 2568	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

Products from this series are also available in set with taps. Please see L120.

Product	TD (mm)	TP (mm)	BD (mm)	OAL (mm)	Pack Qty	MID
F100M2 ¹⁾	2.00	0.40	16.00	5.0	1	5978275
F100M2.5 ¹⁾	2.50	0.45	16.00	5.0	1	5978279
F100M2.6 ¹⁾	2.60	0.45	16.00	5.0	1	5978284
F100M3	3.00	0.50	20.00	5.0	1	5978307
F100M3.5	3.50	0.60	20.00	5.0	1	5978312
F100M4	4.00	0.70	20.00	5.0	1	5978618
F100M4.5	4.50	0.75	20.00	7.0	1	5978646
F100M5	5.00	0.80	20.00	7.0	1	5978678
F100M6	6.00	1.00	20.00	7.0	1	5978681
F100M7	7.00	1.00	25.00	9.0	1	5978683
F100M8	8.00	1.25	25.00	9.0	1	5978686
F100M9	9.00	1.25	25.00	9.0	1	5978520
F100M10	10.00	1.50	30.00	11.0	1	5978250
F100M11	11.00	1.50	30.00	11.0	1	5978253

Product	TD (mm)	TP (mm)	BD (mm)	OAL (mm)	Pack Qty	MID
F100M12	12.00	1.75	38.00	14.0	1	5978256
F100M14	14.00	2.00	38.00	14.0	1	5978260
F100M16	16.00	2.00	45.00	18.0	1	5978262
F100M18	18.00	2.50	45.00	18.0	1	5978267
F100M20	20.00	2.50	45.00	18.0	1	5978288
F100M22	22.00	2.50	55.00	22.0	1	5978293
F100M24	24.00	3.00	55.00	22.0	1	5978297
F100M27	27.00	3.00	65.00	25.0	1	5978302
F100M30	30.00	3.50	65.00	25.0	1	5978317
F100M33	33.00	3.50	65.00	25.0	1	5978327
F100M36	36.00	4.00	65.00	25.0	1	5978515
F100M39	39.00	4.00	75.00	30.0	1	5978573
F100M42	42.00	4.50	75.00	30.0	1	5978671

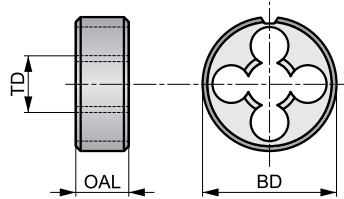
¹⁾ Without gun-nose.

F108



HSS-E Gun Nosed Machine Die, Metric, Right Hand

Solid die for producing external thread. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action. Specific geometry to cut accurate threads in stainless steel.



M	ISO 2568	6g
2.25 XP	HSS-E	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■39	P1.2 ■43	P1.3 ■46	P2.1 ■33	P2.2 ■30	P2.3 ■26	P3.1 ■26	P3.2 ■23	P3.3 ■20	P4.1 ■16	P4.2 ■13	M1.1 ■23	M1.2 ■20	M2.1 ■20
M2.2 ■16	M2.3 ■16	M3.1 ■20	M3.2 ■16	M3.3 ■13	M4.1 ■16	K4.1 ■30	K4.2 ■23	K4.3 ■16	K4.4 ■13	K4.5 ■13	N1.1 ■66	N1.2 ■49	N1.3 ■33
N2.1 ■33	N2.2 ■30	N2.3 ■20	N3.1 ■36	N3.2 ■20	N3.3 ■10	N4.1 ■36	N4.2 ■13	N4.3 ■13	S1.1 ■16				

Product	TD (mm)	TP (mm)	BD (mm)	OAL (mm)	Pack Qty	MID
F108M2 ¹⁾	2.00	0.40	16.00	5.0	1	5978551
F108M2.5 ¹⁾	2.50	0.45	16.00	5.0	1	5978559
F108M3	3.00	0.50	20.00	5.0	1	5978568
F108M4	4.00	0.70	20.00	5.0	1	5978586
F108M5	5.00	0.80	20.00	7.0	1	5978590
F108M6	6.00	1.00	20.00	7.0	1	5978594
F108M8	8.00	1.25	25.00	9.0	1	5978601
F108M10	10.00	1.50	30.00	11.0	1	5978524
F108M12	12.00	1.75	38.00	14.0	1	5978529
F108M14	14.00	2.00	38.00	14.0	1	5978535
F108M16	16.00	2.00	45.00	18.0	1	5978537
F108M18	18.00	2.50	45.00	18.0	1	5978546
F108M20	20.00	2.50	45.00	18.0	1	5978563

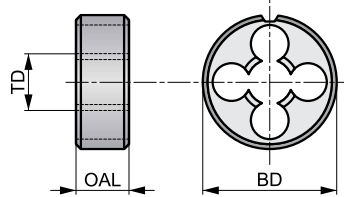
¹⁾ Without gun-nose.

F201



HSS Gun Nosed Machine Die, Metric, Left Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



M	ISO 2568	6g
1.75 XP	HSS	L
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▧ 26	P3.1 ■ 26	P3.2 ▧ 23	P4.1 ▧ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▧ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▧ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▧ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▧ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▧ 20	N1.1 ▧ 66	N1.2 ▧ 49	N1.3 ▧ 33
N2.1 ▧ 33	N2.2 ▧ 30	N2.3 ▧ 20	N3.1 ■ 36	N3.2 ▧ 20	N3.3 ▧ 10	N4.1 ▧ 36	N4.2 ▧ 13	N4.3 ▧ 13					

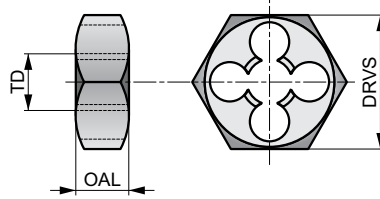
Product	TD (mm)	TP (mm)	BD (mm)	OAL (mm)	Pack Qty	MID
F201M3	3.00	0.50	20.00	5.0	1	5977853
F201M4	4.00	0.70	20.00	5.0	1	5977857
F201M5	5.00	0.80	20.00	7.0	1	5977860
F201M6	6.00	1.00	20.00	7.0	1	5977863
F201M8	8.00	1.25	25.00	9.0	1	5977866
F201M10	10.00	1.50	30.00	11.0	1	5977822
F201M12	12.00	1.75	38.00	14.0	1	5977826
F201M14	14.00	2.00	38.00	14.0	1	5977831
F201M16	16.00	2.00	45.00	18.0	1	5977836
F201M18	18.00	2.50	45.00	18.0	1	5977840
F201M20	20.00	2.50	45.00	18.0	1	5977845

F202



HSS Die Nut Metric, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



M	DIN 382	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

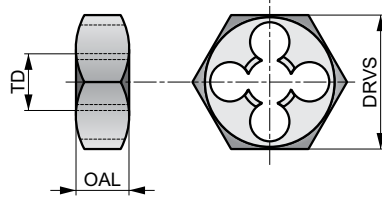
Product	TD (mm)	TP (mm)	DRVS (mm)	OAL (mm)	Pack Qty	MID
F202M3	3.00	0.50	19.00	5.0	1	5978773
F202M4	4.00	0.70	19.00	5.0	1	5978822
F202M5	5.00	0.80	19.00	7.0	1	5978824
F202M6	6.00	1.00	19.00	7.0	1	5978828
F202M8	8.00	1.25	22.00	9.0	1	5978698
F202M10	10.00	1.50	27.00	11.0	1	5977869
F202M12	12.00	1.75	36.00	14.0	1	5977872
F202M14	14.00	2.00	36.00	14.0	1	5977875
F202M16	16.00	2.00	41.00	18.0	1	5977878
F202M18	18.00	2.50	41.00	18.0	1	5977881
F202M20	20.00	2.50	41.00	18.0	1	5977886
F202M22	22.00	2.50	50.00	22.0	1	5978694
F202M24	24.00	3.00	50.00	22.0	1	5978716
F202M27	27.00	3.00	60.00	25.0	1	5978737
F202M30	30.00	3.50	60.00	25.0	1	5978812
F202M36	36.00	4.00	60.00	25.0	1	5978818

F302



HSS Die Nut Metric, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



M	BS 1127:1950	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

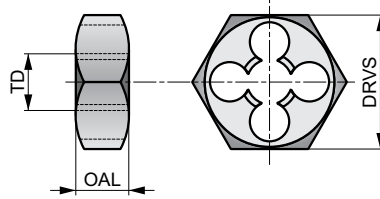
Product	TD (mm)	TP (mm)	DRVS (inch)	OAL (inch)	Pack Qty	MID
F302M3	3.00	0.50	.7100	1/4	1	5978496
F302M4	4.00	0.70	.7100	1/4	1	5978508
F302M5	5.00	0.80	.7100	1/4	1	5978510
F302M6	6.00	1.00	.7100	1/4	1	5978513
F302M7	7.00	1.00	.8200	5/16	1	5978517
F302M8	8.00	1.25	.8200	5/16	1	5978521
F302M10	10.00	1.50	.9200	3/8	1	5978465
F302M11	11.00	1.50	1.0100	7/16	1	5978468
F302M12	12.00	1.75	1.1000	1/2	1	5978471
F302M14	14.00	2.00	1.3000	5/8	1	5978473
F302M16	16.00	2.00	1.3000	5/8	1	5978476
F302M18	18.00	2.50	1.4800	11/16	1	5978479
F302M20	20.00	2.50	1.4800	11/16	1	5978482
F302M22	22.00	2.50	1.6700	13/16	1	5978484
F302M24	24.00	3.00	2.0500	15/16	1	5978487
F302M27	27.00	3.00	2.2200	1.1/16	1	5978493
F302M30	30.00	3.50	2.2200	1.1/16	1	5978499
F302M33	33.00	3.50	2.5800	1.1/8	1	5978502
F302M36	36.00	4.00	2.7600	1.1/4	1	5978505

2325M



CS Die Nut Metric, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



	ANSI	Cr steel
	Bright	6H

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 26	P1.2 ■ 30	P1.3 ■ 30	P2.1 ■ 23	P2.2 ■ 20	P3.1 ▣ 20	P3.2 ▣ 16	P4.1 ▣ 10	M1.1 ▣ 7	M1.2 ▣ 7	M2.1 ▣ 7	M2.2 ▣ 7	M3.1 ▣ 7	M3.2 ▣ 7
K1.1 ■ 26	K1.2 ■ 20	K1.3 ▣ 13	K2.1 ■ 23	K2.2 ■ 20	K2.3 ▣ 16	K3.1 ■ 23	K3.2 ■ 16	K3.3 ▣ 13	K5.1 ■ 23	K5.2 ■ 16	K5.3 ▣ 13	N1.1 ▣ 52	N1.2 ▣ 39
N1.3 ▣ 26	N2.1 ▣ 26	N2.2 ▣ 23	N2.3 ▣ 16	N3.1 ■ 26	N3.2 ▣ 16	N3.3 ▣ 10	N4.1 ▣ 26	N4.2 ▣ 10	N4.3 ▣ 10				

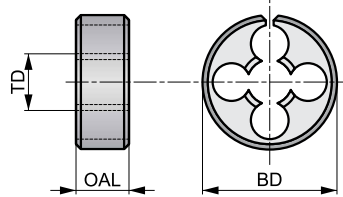
Product	TDZ	TP	DRVS	OAL	Pack Qty	MID
		(mm)	(inch)	(inch)		
2325M6X1.0	6	1.00	5/8	3/8	1	6009183
2325M8X1.25	8	1.25	1	3/8	1	6009193
2325M9X1.25	9	1.25	1	3/8	1	6009202
2325M10X1.5	10	1.50	1	3/8	1	6009144
2325M12X1.75	12	1.75	1	3/8	1	6009151
2325M14X2.0	14	2.00	1.7/16	1/2	1	6009164
2325M16X2.0	16	2.00	1.7/16	1/2	1	6009169
2325M18X1.5	18	1.50	1.7/16	1/2	1	6009174
2325M20X2.5	20	2.50	1.13/16	3/4	1	6009179

F310



HSS Adjustable Split Hand Die, Metric Fine, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder, it can be used to clean up or produce a partial thread.



MF	BS 1127:1950	1.75 XP
HSS	R	Bright

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

Product	TD (mm)	TP (mm)	BD (inch)	OAL (inch)	Pack Qty	MID
F310M3X.35X13/16	3.00	0.35	13/16	1/4	1	5977921
F310M4X.5X13/16	4.00	0.50	13/16	1/4	1	5977984
F310M4X.75X13/16	4.00	0.75	13/16	1/4	1	5978023
F310M5X.5X13/16	5.00	0.50	13/16	1/4	1	5978075
F310M5X.9X13/16	5.00	0.90	13/16	1/4	1	5978085
F310M6X.75X13/16	6.00	0.75	13/16	1/4	1	5978090
F310M8X.75X1	8.00	0.75	1"	3/8	1	5978093
F310M8X1.0X1	8.00	1.00	1"	3/8	1	5978097
F310M9X1.0X1	9.00	1.00	1"	3/8	1	5977926
F310M10X.75X1	10.00	0.75	1"	3/8	1	5978532
F310M10X1.0X1	10.00	1.00	1"	3/8	1	5978538
F310M10X1.25X1	10.00	1.25	1"	3/8	1	5978545
F310M10X1.25X1.5/16	10.00	1.25	1.5/16	7/16	1	5978550
F310M12X1.0X1.5/16	12.00	1.00	1.5/16	7/16	1	5978555
F310M12X1.25X1.5/16	12.00	1.25	1.5/16	7/16	1	5978560

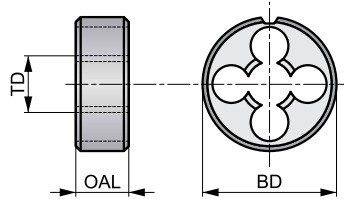
Product	TD (mm)	TP (mm)	BD (inch)	OAL (inch)	Pack Qty	MID
F310M12X1.5X1.5/16	12.00	1.50	1.5/16	7/16	1	5978565
F310M14X1.25X1.5/16	14.00	1.25	1.5/16	7/16	1	5978569
F310M14X1.5X1.5/16	14.00	1.50	1.5/16	7/16	1	5978574
F310M16X1.0X1.1/2	16.00	1.00	1.1/2	1/2	1	5978584
F310M16X1.5X1.1/2	16.00	1.50	1.1/2	1/2	1	5978588
F310M18X1.5X1.1/2	18.00	1.50	1.1/2	1/2	1	5978592
F310M20X1.0X1.1/2	20.00	1.00	1.1/2	1/2	1	5978596
F310M20X1.5X2	20.00	1.50	2"	5/8	1	5978598
F310M20X2.0X1.1/2	20.00	2.00	1.1/2	1/2	1	5978602
F310M22X1.5X2	22.00	1.50	2"	5/8	1	5978606
F310M24X1.5X2	24.00	1.50	2"	5/8	1	5978610
F310M24X2.0X2	24.00	2.00	2"	5/8	1	5978613
F310M25X1.5X2	25.00	1.50	2"	5/8	1	5978616
F310M27X2.0X2.1/4	27.00	2.00	2.1/4	11/16	1	5978622
F310M30X2.0X2.1/4	30.00	2.00	2.1/4	11/16	1	5977952

F110



HSS Gun Nosed Machine Die, Metric Fine, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



MF	ISO 2568	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

Product	TD (mm)	TP (mm)	BD (mm)	OAL (mm)	Pack Qty	MID
F110M4X.5	4.00	0.50	20.00	5.0	1	5977768
F110M5X.5	5.00	0.50	20.00	5.0	1	5977778
F110M6X.75	6.00	0.75	20.00	7.0	1	5977783
F110M7X.75	7.00	0.75	25.00	9.0	1	5977788
F110M8X.75	8.00	0.75	25.00	9.0	1	5977793
F110M8X1.0	8.00	1.00	25.00	9.0	1	5977800
F110M9X1.0	9.00	1.00	25.00	9.0	1	5977803
F110M10X.75	10.00	0.75	30.00	11.0	1	5978609
F110M10X1.0	10.00	1.00	30.00	11.0	1	5978612
F110M10X1.25	10.00	1.25	30.00	11.0	1	5978615
F110M11X1.0	11.00	1.00	30.00	11.0	1	5978621
F110M12X1.0	12.00	1.00	38.00	10.0	1	5978624
F110M12X1.25	12.00	1.25	38.00	10.0	1	5978627
F110M12X1.5	12.00	1.50	38.00	10.0	1	5978630
F110M13X1.0	13.00	1.00	38.00	10.0	1	5978633
F110M14X1.0	14.00	1.00	38.00	10.0	1	5978636
F110M14X1.25	14.00	1.25	38.00	10.0	1	5978638
F110M14X1.5	14.00	1.50	38.00	10.0	1	5978640
F110M15X1.0	15.00	1.00	38.00	10.0	1	5978642
F110M15X1.5	15.00	1.50	38.00	10.0	1	5978644
F110M16X1.0	16.00	1.00	45.00	14.0	1	5978648

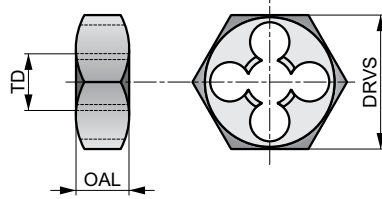
Product	TD (mm)	TP (mm)	BD (mm)	OAL (mm)	Pack Qty	MID
F110M16X1.5	16.00	1.50	45.00	14.0	1	5978650
F110M18X1.0	18.00	1.00	45.00	14.0	1	5978652
F110M18X1.5	18.00	1.50	45.00	14.0	1	5978654
F110M20X1.0	20.00	1.00	45.00	14.0	1	5978656
F110M20X1.5	20.00	1.50	45.00	14.0	1	5978658
F110M22X1.0	22.00	1.00	55.00	16.0	1	5978660
F110M22X1.5	22.00	1.50	55.00	16.0	1	5978662
F110M24X1.0	24.00	1.00	55.00	16.0	1	5978665
F110M24X1.5	24.00	1.50	55.00	16.0	1	5978668
F110M24X2.0	24.00	2.00	55.00	16.0	1	5978674
F110M25X1.5	25.00	1.50	55.00	16.0	1	5977765
F110M26X1.5	26.00	1.50	55.00	16.0	1	5977818
F110M27X1.5	27.00	1.50	65.00	18.0	1	5977864
F110M27X2.0	27.00	2.00	65.00	18.0	1	5977897
F110M28X1.5	28.00	1.50	65.00	18.0	1	5977920
F110M30X1.5	30.00	1.50	65.00	18.0	1	5977925
F110M32X1.5	32.00	1.50	65.00	18.0	1	5977929
F110M35X1.5	35.00	1.50	65.00	18.0	1	5977933
F110M36X1.5	36.00	1.50	65.00	18.0	1	5977942
F110M40X1.5	40.00	1.50	75.00	20.0	1	5977773

F312



HSS Die Nut Metric Fine, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



MF	BS 1127:1950	6g
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

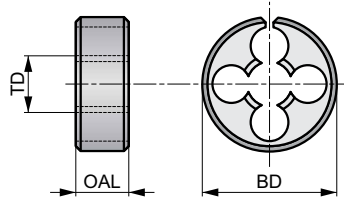
Product	TD (mm)	TP (mm)	DRVS (inch)	OAL (inch)	Pack Qty	MID
F312M8X.75	8.00	0.75	.8200	5/16	1	5977961
F312M8X1.0	8.00	1.00	.8200	5/16	1	5977964
F312M10X1.0	10.00	1.00	.9200	3/8	1	5977930
F312M10X1.25	10.00	1.25	.9200	3/8	1	5977934
F312M12X1.0	12.00	1.00	1.0100	7/16	1	5977937
F312M12X1.25	12.00	1.25	1.0100	7/16	1	5977939
F312M12X1.5	12.00	1.50	1.0100	7/16	1	5977941
F312M14X1.5	14.00	1.50	1.3000	5/8	1	5977944
F312M16X1.5	16.00	1.50	1.3000	5/8	1	5977946
F312M18X1.5	18.00	1.50	1.4800	11/16	1	5977948
F312M20X1.5	20.00	1.50	1.4800	11/16	1	5977950
F312M22X1.5	22.00	1.50	1.6700	13/16	1	5977954
F312M24X1.5	24.00	1.50	2.0500	15/16	1	5977956
F312M24X2.0	24.00	2.00	2.0500	15/16	1	5977959

2010(NPT)



CS Adjustable Split Hand Die, NPT, Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder, it can be used to clean up or produce a partial thread.



	ANSI	Cr steel
	Bright	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 26	P1.2 ■ 30	P1.3 ■ 30	P2.1 ■ 23	P2.2 ■ 20	P3.1 ▧ 20	P3.2 ▧ 16	P4.1 ▧ 10	M1.1 ▧ 7	M1.2 ▧ 7	M2.1 ▧ 7	M2.2 ▧ 7	M3.1 ▧ 7	M3.2 ▧ 7
K1.1 ■ 26	K1.2 ■ 20	K1.3 ▧ 13	K2.1 ■ 23	K2.2 ■ 20	K2.3 ▧ 16	K3.1 ■ 23	K3.2 ■ 16	K3.3 ▧ 13	K5.1 ■ 23	K5.2 ■ 16	K5.3 ▧ 13	N1.1 ▧ 52	N1.2 ▧ 39
N1.3 ▧ 26	N2.1 ▧ 26	N2.2 ▧ 23	N2.3 ▧ 16	N3.1 ■ 26	N3.2 ▧ 16	N3.3 ▧ 10	N4.1 ▧ 26	N4.2 ▧ 10	N4.3 ▧ 10				

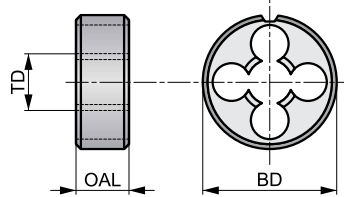
Product	TDZ	TPI	BD (inch)	OAL (inch)	Pack Qty	MID
20101/8X27X1	1/8	27	1"	3/8	1	6008629
20101/8X27X1.1/2	1/8	27	1.1/2	1/2	1	6008632
20101/4X18X1.1/2	1/4	18	1.1/2	1/2	1	6009094
20101/4X18X2	1/4	18	2"	5/8	1	6009098
20103/8X18X1.1/2	3/8	18	1.1/2	1/2	1	6008726
20103/8X18X2	3/8	18	2"	5/8	1	6008731
20101/2X14X2	1/2	14	2"	5/8	1	6009086

F180



HSS Gun Nosed Machine Die, NPT, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



	ISO 2568	Normal
1.75 XP	HSS	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

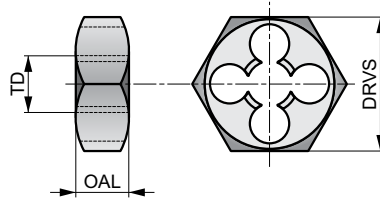
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F1801/8	1/8	27	9.49	30.00	11.0	1	5977763
F1801/4	1/4	18	12.49	38.00	14.0	1	5977760
F1803/8	3/8	18	15.93	45.00	14.0	1	5977774
F1801/2	1/2	14	19.77	45.00	18.0	1	5977757
F1803/4	3/4	14	25.12	55.00	22.0	1	5977769
F1801	1"	11.5	31.46	65.00	25.0	1	5977754

2025(NPT)



CS Die Nut NPT, Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



	ANSI	Cr steel
	Bright	

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■26	P1.2 ■30	P1.3 ■30	P2.1 ■23	P2.2 ■20	P3.1 ▣20	P3.2 ▣16	P4.1 ▣10	M1.1 ▣7	M1.2 ▣7	M2.1 ▣7	M2.2 ▣7	M3.1 ▣7	M3.2 ▣7
K1.1 ■26	K1.2 ■20	K1.3 ▣13	K2.1 ■23	K2.2 ■20	K2.3 ▣16	K3.1 ■23	K3.2 ■16	K3.3 ▣13	K5.1 ■23	K5.2 ■16	K5.3 ▣13	N1.1 ▣52	N1.2 ▣39
N1.3 ▣26	N2.1 ▣26	N2.2 ▣23	N2.3 ▣16	N3.1 ■26	N3.2 ▣16	N3.3 ▣10	N4.1 ▣26	N4.2 ▣10	N4.3 ▣10				

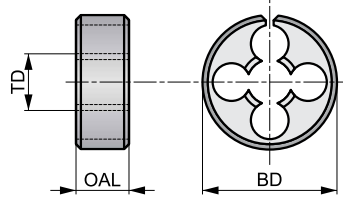
Product	TDZ	TPI	DRVS (inch)	OAL (inch)	Pack Qty	MID
20251/8X27	1/8	27	1.1/16	3/8	1	6009081
20251/4X18	1/4	18	1.1/4	5/8	1	6009060
20253/8X18	3/8	18	1.1/16	5/8	1	6009208
20251/2X14	1/2	14	1.5/8	3/4	1	6009050
20253/4X14	3/4	14	2"	13/16	1	6009103
20251X11.1/2	1"	11.5	2.3/8	1"	1	6009085

F370



HSS Adjustable Split Hand Die, G(BSP) Right Hand

Split die to produce external thread by hand in multiple passes, adjusting each pass. By tightening the die stock holder, different classes of thread fit can be achieved - tight, regular or loose fit. Slightly tightened in the holder it can be used to clean up or produce a partial thread.



Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▧ 26	P3.1 ■ 26	P3.2 ▧ 23	P4.1 ▧ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▧ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▧ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▧ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▧ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▧ 20	N1.1 ▧ 66	N1.2 ▧ 49	N1.3 ▧ 33
N2.1 ▧ 33	N2.2 ▧ 30	N2.3 ▧ 20	N3.1 ■ 36	N3.2 ▧ 20	N3.3 ▧ 10	N4.1 ▧ 36	N4.2 ▧ 13	N4.3 ▧ 13					

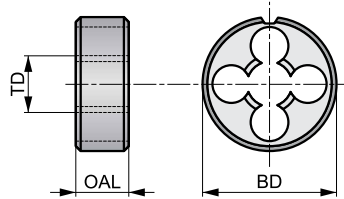
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(inch)	(inch)		
F3701/8X1	1/8	28	9.73	1"	3/8	1	5978453
F3701/4X1.5/16	1/4	19	13.16	1.5/16	7/16	1	5978451
F3703/8X1.1/2	3/8	19	16.66	1.1/2	1/2	1	5978464
F3701/2X2	1/2	14	20.96	2"	5/8	1	5978449
F3705/8X2	5/8	14	22.91	2"	5/8	1	5978467
F3703/4X2	3/4	14	26.44	2"	5/8	1	5978458
F3707/8X2.1/4	7/8	14	30.20	2.1/4	11/16	1	5978470
F3701X2.1/4	1"	11	33.25	2.1/4	11/16	1	5978455
F3701.1/4X3	1.1/4	11	41.91	3"	7/8	1	5978447
F3701.1/2X4	1.1/2	11	47.80	4"	1"	1	5978444

F170



HSS Gun Nosed Machine Die, G(BSP) Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



G	ISO 2568	Class A
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

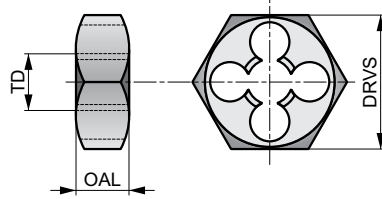
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F1701/8	1/8	28	9.73	30.00	11.0	1	5977734
F1701/4	1/4	19	13.16	38.00	10.0	1	5977731
F1703/8	3/8	19	16.66	45.00	14.0	1	5977742
F1701/2	1/2	14	20.96	45.00	14.0	1	5977726
F1705/8	5/8	14	22.91	55.00	16.0	1	5977745
F1703/4	3/4	14	26.44	55.00	16.0	1	5977739
F1707/8	7/8	14	30.20	65.00	18.0	1	5977749
F1701	1"	11	33.25	65.00	18.0	1	5977895
F1701.1/8	1.1/8	11	37.89	75.00	20.0	1	5977723
F1701.1/4	1.1/4	11	41.91	75.00	20.0	1	5977720
F1701.1/2	1.1/2	11	47.80	90.00	22.0	1	5977898
F1702	2"	11	59.61	105.00	22.0	1	5977737

F272



HSS Die Nut G(BSP) Right Hand

Hexagon die nut designed to repair or clean out damaged external threads by re-cutting the original thread form by hand. A wrench or spanner can be used to rotate the die nut around the outside of the bolt, thus it can be used in difficult to access locations.



G	DIN 382	Class A
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

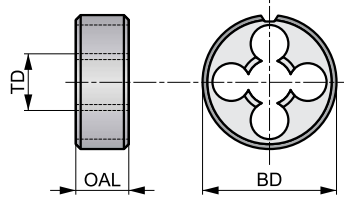
Product	TDZ	TPI	TD	DRVS	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F2721/8	1/8	28	9.73	27.00	11.0	1	5978710
F2721/4	1/4	19	13.16	36.00	10.0	1	5978708
F2723/8	3/8	19	16.66	41.00	14.0	1	5978714
F2721/2	1/2	14	20.96	41.00	14.0	1	5978706
F2723/4	3/4	14	26.44	60.00	18.0	1	5978712
F2721	1"	11	33.25	60.00	18.0	1	5978700
F2721.1/4	1.1/4	11	41.91	70.00	20.0	1	5978704
F2721.1/2	1.1/2	11	47.80	85.00	22.0	1	5978702

F140



HSS Gun Nosed Machine Die, BSW, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



	ISO 2568	Medium
1.75 XP	HSS	
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

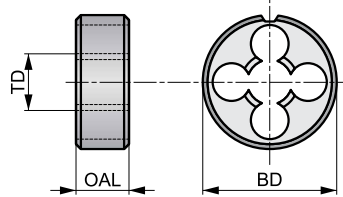
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F1401/8	1/8	40	3.17	20.00	5.0	1	5977908
F1403/16	3/16	24	4.76	20.00	7.0	1	5977910
F1401/4	1/4	20	6.35	20.00	7.0	1	5977906
F1405/16	5/16	18	7.94	25.00	9.0	1	5977916
F1403/8	3/8	16	9.53	30.00	11.0	1	5977914
F1407/16	7/16	14	11.11	30.00	11.0	1	5977923
F1401/2	1/2	12	12.70	38.00	14.0	1	5977904
F1405/8	5/8	11	15.88	45.00	18.0	1	5977918
F1403/4	3/4	10	19.05	45.00	18.0	1	5977912
F1407/8	7/8	9	22.23	55.00	22.0	1	5977717
F1401	1"	8	25.40	55.00	22.0	1	5977902

F150



HSS Gun Nosed Machine Die, BSF, Right Hand

Solid die for external thread. Generally for use on lathes, yet small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



BSF	ISO 2568	Medium
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▧ 26	P3.1 ■ 26	P3.2 ▧ 23	P4.1 ▧ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▧ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▧ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▧ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▧ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▧ 20	N1.1 ▧ 66	N1.2 ▧ 49	N1.3 ▧ 33
N2.1 ▧ 33	N2.2 ▧ 30	N2.3 ▧ 20	N3.1 ■ 36	N3.2 ▧ 20	N3.3 ▧ 10	N4.1 ▧ 36	N4.2 ▧ 13	N4.3 ▧ 13					

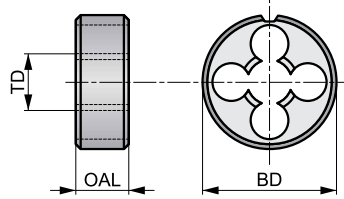
Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F1503/16	3/16	32	4.76	20.00	7.0	1	5977849
F1501/4	1/4	26	6.35	20.00	7.0	1	5977799
F1505/16	5/16	22	7.94	25.00	9.0	1	5977889
F1503/8	3/8	20	9.53	30.00	11.0	1	5977884
F1507/16	7/16	18	11.11	30.00	11.0	1	5977892
F1501/2	1/2	16	12.70	38.00	10.0	1	5977751

F190



HSS Gun Nosed Machine Die, PG Conduit Thread, Right Hand

Solid die for external thread. Generally for use on lathes, small diameters can be produced by hand with a die stock holder. The gun-nose will drive the chip ahead of the cutting edge, increasing performance. Bright finish lapped surface prevents the workpiece material from sticking and improves the threading action.



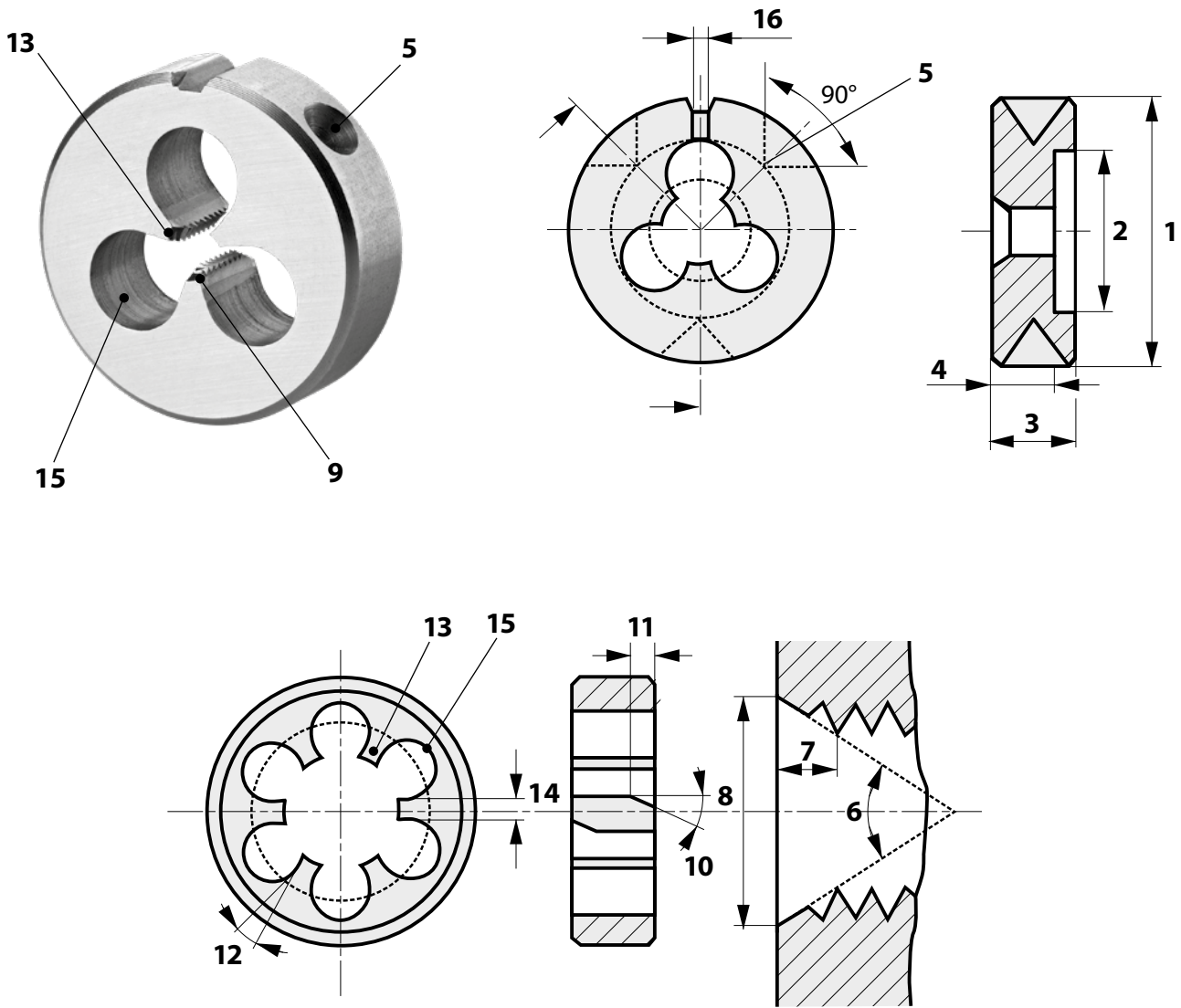
PG	ISO 2568	Normal
1.75 XP	HSS	R
Bright		

Workpiece material group suitability and starting values for cutting speed (ft/min).

P1.1 ■ 39	P1.2 ■ 43	P1.3 ■ 46	P2.1 ■ 33	P2.2 ■ 30	P2.3 ▣ 26	P3.1 ■ 26	P3.2 ▣ 23	P4.1 ▣ 16	M1.1 ■ 23	M1.2 ■ 20	M2.1 ■ 20	M2.2 ▣ 16	K1.1 ■ 36
K1.2 ■ 26	K1.3 ▣ 20	K2.1 ■ 36	K2.2 ■ 30	K2.3 ▣ 23	K3.1 ■ 33	K3.2 ■ 26	K3.3 ▣ 20	K5.1 ■ 33	K5.2 ■ 26	K5.3 ▣ 20	N1.1 ▣ 66	N1.2 ▣ 49	N1.3 ▣ 33
N2.1 ▣ 33	N2.2 ▣ 30	N2.3 ▣ 20	N3.1 ■ 36	N3.2 ▣ 20	N3.3 ▣ 10	N4.1 ▣ 36	N4.2 ▣ 13	N4.3 ▣ 13					

Product	TDZ	TPI	TD	BD	OAL	Pack Qty	MID
			(mm)	(mm)	(mm)		
F190PG7	7	20	12.50	38.00	10.0	1	5977812
F190PG9	9	18	15.20	38.00	10.0	1	5977817
F190PG11	11	18	18.60	45.00	14.0	1	5977780
F190PG13.5	13.5	18	20.40	45.00	14.0	1	5977785
F190PG16	16	18	22.50	55.00	16.0	1	5977790
F190PG36	36	16	47.00	90.00	22.0	1	5977809

Nomenclature



1	Outside Diameter
2	Recess Diameter
3	Thickness
4	Thread Length
5	Conical Hole for Fixing Screw
6	Chamfer Angle
7	Chamfer Length
8	Chamfer Diameter

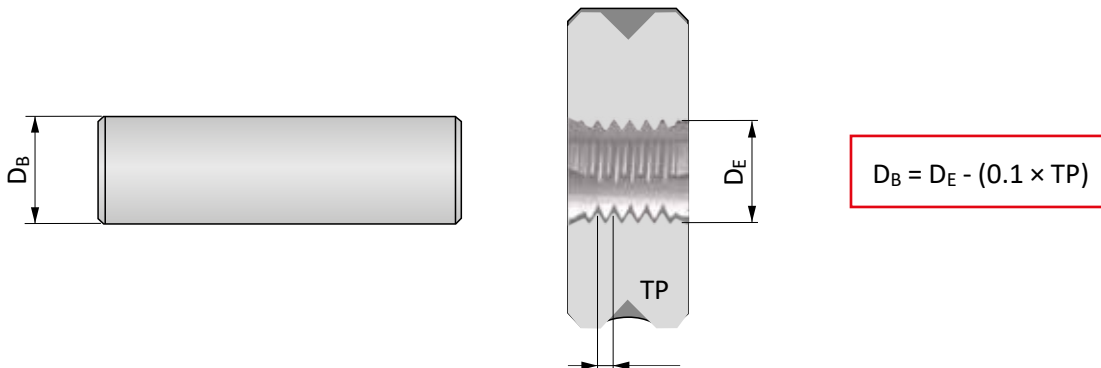
9	Gun-nose
10	Spiral Angle
11	Spiral Length
12	Rake Angle
13	Land
14	Width of Land
15	Clearance Hole
16	Split of Adjustment

Technical Tips on Threading with Dies

1. Before starting the die or die nut, chamfer the end of the bar at an angle of 45 degrees to eliminate sudden loading of the leading edges. Ensure the die or die nut is presented to the bolt squarely.
2. Make use of the large tolerances associated with the major diameter of the bolt, by reducing the diameter of the bar (see below). This will reduce the cutting force to a minimum.
3. Use the gun nose type of die, as this ensures the chips are directed away from the cutting area.
4. Ensure a good supply of the correct lubricant is aimed at the cutting area.
5. When adjusting split dies, avoid opening out as this will cause rubbing. Split dies may be closed down by approximately 0.15 mm, by turning the adjustment screws equally. Pressure on one side of the die only may cause breakage.
6. Generally speaking, die nuts are used for reclaiming or cleaning out existing threads by hand. They tend to be of a more robust construction and should only be used in exceptional circumstances to cut a thread from solid.

Pre-machining Dimensions

The diameter of the bolt blank must be smaller than the max. external diameter of the screw thread.



Trouble Shooting When Threading With Dies

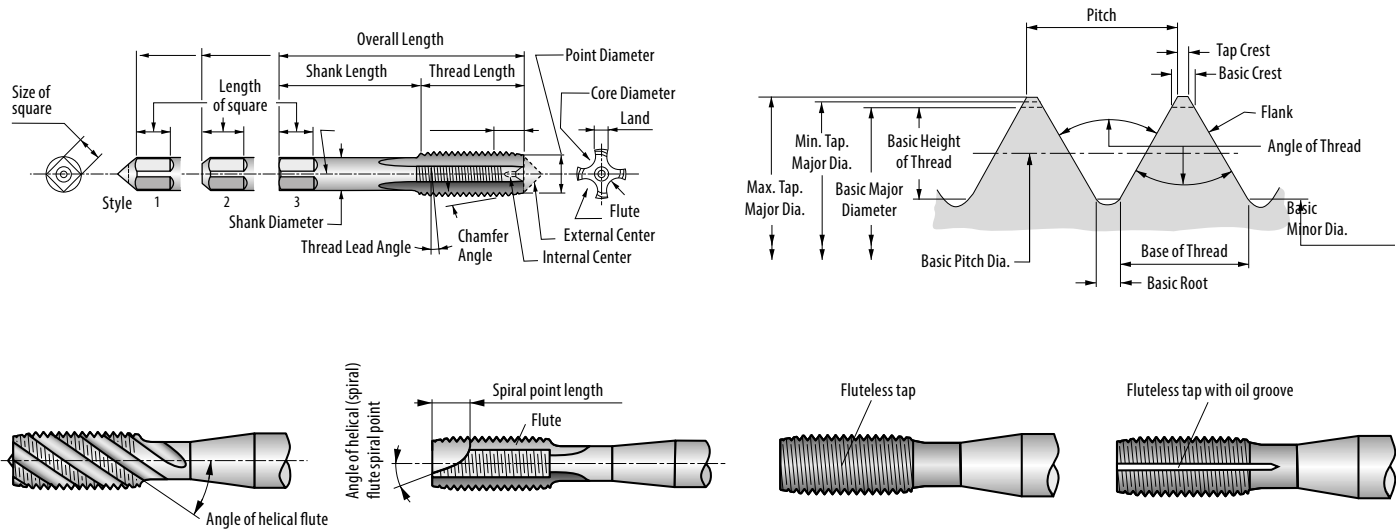
Problem	Cause	Solution
Oversize/Undersize	Misalignment	Correct alignment, ensure cleanliness
	Incorrect axial feed rate	Ensure axial feed rate is controlled accurately
Poor finish	Incorrect rake angle for the material	Try alternative dies or special die
	Incorrect/lack of lubricant	See lubricants section
	Incorrect speed	Follow recommendations in catalog
	Bar diameter too large	Reduce to appropriate size
	Bar end not chamfered	Ensure bar end is chamfered
Chipping/Breakage	Wrong type of die	Follow recommendations in catalog
	Speed too high	Follow recommendations in catalog
	Bar diameter too large	Reduce to appropriate size
	Bar end not chamfered	Ensure bar end is chamfered
	Misalignment	Correct alignment, ensure cleanliness
Rapid wear	Incorrect/lack of lubricant	See lubricants section
	Speed too high	Follow recommendations in catalog
Built up edge	Incorrect/lack of lubricant	See section lubricants
	Bar diameter too large	Reduce to appropriate size
	Speed too low	Follow recommendations in catalog



GENERAL TECHNICAL INFORMATION

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THREADING – GENERAL TECHNICAL INFORMATION



Allowance: The minimum clearance or maximum interference which is intended between mating parts.

Angle of Thread: The angle included between the flanks of a thread measured in an axial plane.

Back Taper: A slight taper on the threaded portion of the tap making the pitch diameter near the shank smaller than that at the chamfer.

Basic: The theoretical or nominal standard size from which all variations are made.

Chamfer: The tapered and relieved cutting teeth at the front end of the threaded section. Common types of chamfer are taper, 8 to 10 pitches long, plug, 3 to 5 pitches and bottoming, 1 to 2 pitches.

Crest: The top surface joining the two sides or flanks of a thread.

Cutting Face: The leading side of the land.

Flute: The longitudinal channels formed on a tap to create cutting edges on the thread profile.

Heel: The following side of the land.

Height of Thread: In profile, distance between crest and bottom section of thread measured normal to the axis.

Hook Face: A concave cutting face of the land. This may be varied for different materials and conditions.

Interrupted Thread: Alternate teeth are removed in the thread helix on a tap; usually restricted to those having an odd number of flutes.

Land: One of the threaded sections between the flutes of a tap.

Lead of Thread: The distance a screw thread advances axially in one turn.

Major Diameter: The largest diameter of the screw or nut on a straight screw thread.

Minor Diameter: The smallest diameter of the screw or nut on a straight screw thread.

Neck: The reduced diameter, on some taps, between the threaded portion and the shank.

Pitch: The distance from a point on one thread to a corresponding point on the next thread, measured parallel to the axis.

Pitch Diameter: On a straight screw thread, the diameter of an imaginary cylinder where the width of the thread and the width of the space between threads is equal.

Point Diameter: The diameter at the leading end of the chamfered portion.

Radial: The straight face of a land, the plane of which passes through the axis of the tap.

Rake: The angle of the cutting face of the land in relation to an axial plane intersecting the cutting face at the major diameter.

Relief: The removal of metal behind the cutting edge to provide clearance between the part being threaded and a portion of the threaded land. Also, see back taper.

Chamfer relief: The gradual decrease in land height from cutting edge to heel on the chamfered portion of the tap land to provide radial clearance for the cutting edge.

Concentric relief: Radial relief in the thread form starting at the back of a concentric margin.

Eccentric thread relief: Radial relief in the thread form starting at the cutting edge and continuing to the heel.

Root: The bottom surface joining the flanks of two adjacent threads.

Side or flank of thread: The surface of the thread which connects the crest with the root.

Shank: The portion of the tap by which it is held and driven.

Spiral Point: An oblique cutting edge ground into the lands to provide a shear cutting action on the first few threads.

Square: The squared end of the tap shank.

Thread: The helical formed tooth of the tap which produces the thread in a tapped hole.

Thread Lead Angle: The angle made by the helix of the thread at the pitch diameter, with a plane perpendicular to the axis.

Threads Per Inch: The number of threads in one inch of length.

THREAD: Single: A thread in which lead is equal to pitch.

Double: A thread in which lead is equal to twice the pitch.

Triple: A thread in which lead is equal to triple the pitch.

THREADING – GENERAL TECHNICAL INFORMATION

General hints on tapping

The success of any tapping operation depends on a number of factors, all of which affect the quality of the finished product.









1. Select the correct design of tap for the component material and type of hole, i.e. through or blind, from the Materials Classification chart.
2. Ensure the component is securely clamped – lateral movement may cause tap breakage or poor quality threads.
3. Select the correct size of drill from the relevant catalog page. Always ensure that work hardening of the component material is kept to a minimum.
4. Select the correct cutting speed as shown on the catalog product page.
5. Use appropriate cutting fluid for correct application.
6. In NC applications ensure that the feed value chosen for the program is correct. When using a tapping attachment, 95% to 97% of the pitch is recommended to allow the tap to generate its own pitch.
7. Where possible, hold the tap in a good quality torque limiting tapping attachment, which ensures free axial movement of the tap and presents it squarely to the hole. It also protects the tap from breakage if accidentally 'bottomed' in a blind hole.
8. Ensure smooth entry of the tap into the hole, as an uneven feed may cause 'bell mousing'.

Tap tolerance vs tolerance on internal thread (nut)

Tolerance class, Tap			Tolerance, Internal thread (Nut)					Application
ISO	DIN	ANSI BS	4 H	5 H	6 H	7 H	8 H	
ISO 1	4 H	3 B	4 H	5 H	–	–	–	Fit without allowance
ISO 2	6 H	2 B	4 G	5 G	6 H	–	–	Normal fit
ISO 3	6 G	1 B	–	–	6 G	7 H	8 H	Fit with large allowance
–	7 G	–	–	–	–	7 G	8 G	Loose fit for following treatment or coating

THREADING – GENERAL TECHNICAL INFORMATION

Tap Geometries & Applications

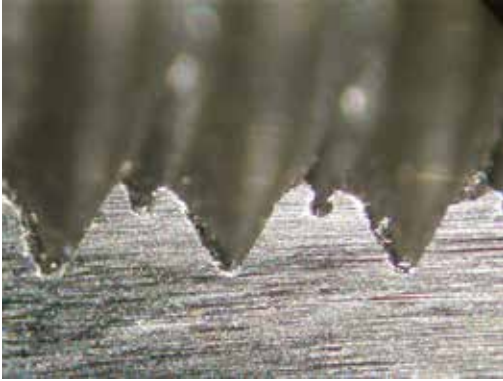
Description	Chips	Description	Chips
<p>Taps with straight flutes Straight flutes are the most commonly used type of tap. Suitable for use on most materials, mainly short chipping steel and cast iron, they form the basis of the program.</p>		<p>Taps with flutes only on the chamfer lead The cutting part of the tap is formed by gun nosing in the same manner as for a spiral point tap, the function being to drive the chips forward ahead of the cutting edges. This design is extremely rigid which facilitates good machining results. However, the short length of the gun nosing limits its application to a depth of hole less than about $1.5 \times TDZ$.</p>	
<p>Taps with interrupted thread The interrupted thread ensures less friction and therefore less resistance, which is particularly important when threading material which is resilient and difficult to machine (e.g. aluminum, bronze). It is also easier for lubricant to penetrate to the cutting edges, thus helping to minimize the torque generated.</p>		<p>Taps with spiral flutes Taps with spiral flutes are intended primarily for threading in blind holes. The helical flute transports the chips back away from the cutting edges and out of the hole, thus avoiding packing of chips in the flutes or at the bottom of the hole. In this way, danger of breaking the tap or damaging the thread is minimised.</p>	
<p>Spiral point taps The tap has a straight fairly shallow flute and is often referred to as a gun nose or spiral point tap. The gun nose or spiral point is designed to drive the chips forward. The relatively shallow flutes ensure that the sectional strength is maximised. They also act to allow lubricant to reach the cutting edges. This type of tap is recommended for threading through holes.</p>		<p>Cold forming taps Cold forming taps differ from cutting taps in that the thread is produced by plastic deformation of the component material rather than by the traditional cutting action. This means that no chips are produced by their action. The application range is materials with good formability. Tensile strength (R_m) should not exceed 1200 N/mm^2 and the elongation factor (A_5) should not be less than 10 %.</p> <p>Cold forming taps without flutes are suitable for normal machining and are especially suitable when vertically tapping blind holes. They are also available with through coolant.</p>	
<p>Nut taps These taps are generally used to thread nuts but can be used also on deep through holes. They have a shank diameter smaller than the nominal and a longer overall length, because their function is to accumulate nuts.</p> <p>They are used on special machines designed to thread huge amounts of nuts. They can work in steel and stainless steel.</p> <p>The first serial tap has a very long chamfer, in order to spread the cutting load on almost two thirds of the thread length.</p>		<p>Through coolant taps The performance of taps with through coolant holes is higher than the same taps used with external lubrication. These kinds of taps allow better evacuation of the chip, which is transported away from the cutting area itself. Wear on the cutting edge is reduced, since the cooling effect on the cutting zone is higher than the heat generation.</p> <p>Lubrication can be oil, emulsion or air pressurised with oil mist. Working pressure not less than 15 bar is required, but good results can be obtained with minimal lubrication.</p>	

THREADING – GENERAL TECHNICAL INFORMATION

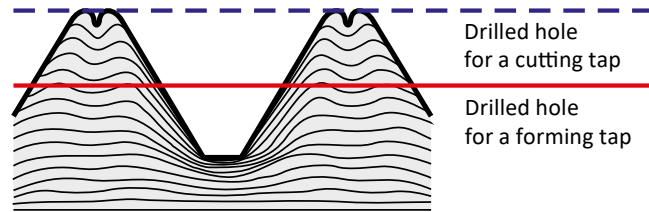
Flow Of Material When Forming A Thread

The tapping hole size depends upon the material being drilled, the cutting conditions selected and the condition of the equipment being used. If material is pushed up at the thread entry by the tap and/or the

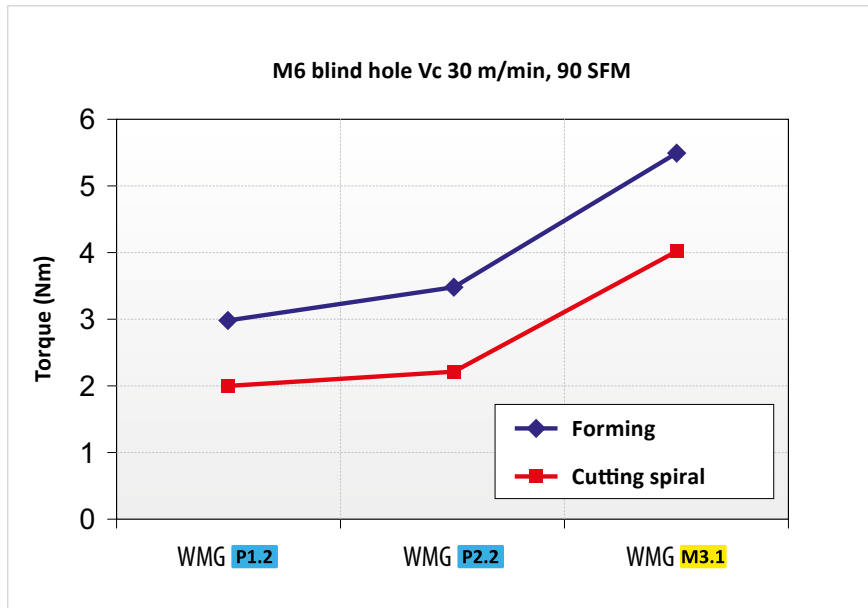
life of the tap is too short, select a slightly larger drill diameter. If on the other hand the profile of the thread formed is insufficient, then select a slightly smaller drill diameter.



Section of thread obtained by forming tap on steel C45".



Cold forming taps require more power on the spindle, compared to a cutting tap of the same size, since it generates higher torque.



Torque comparison between forming and cutting taps in different material groups.

THREADING – GENERAL TECHNICAL INFORMATION

Trouble Shooting When Tapping

Problem	Cause	Remedy
Oversize	Incorrect tolerance.	Choose a tap with lower thread tolerance.
	Incorrect axial feed rate.	Reduce feed rate by 5 – 10 % or increase compression of tap holder.
	Wrong type of tap for application.	Use spiral point for through hole or spiral flute for blind hole. Use coated tool to prevent built up edge. Check Catalog or Product Selector for correct tool alternative.
	Tap not centered on the hole.	Check tap holder and position tap center on the hole.
	Lack of lubrication.	Use good lubrication in order to prevent built up edge. See lubricant section in technical handbook.
	Tap speed too slow .	Follow recommendation in Catalog/Product Selector.
Undersize	Wrong type of tap for application.	Use spiral point for through hole or spiral flute for blind hole. Use coated tool to prevent built up edge. Use tap with higher rake angle. Check Catalog or Product Selector for correct tool alternative.
	Incorrect tolerance.	Choose a tap with higher tolerance, especially on material with low oversize tendency, such as cast iron, stainless steel.
	Incorrect or lack of lubricant.	Use good lubrication in order to prevent chip blockage inside the hole. See lubricant section in technical handbook.
	Tap drill hole too small.	Increase drill diameter to the maximum value. Check tapping size drill.
	Material closing in after tapping.	See recommendation in Catalog/Product Selector for correct tool alternative.
Chipping	Wrong type of tap for application.	Choose a tap with lower rake angle. Choose a tap with longer chamfer. Use spiral point taps for through hole and spiral flute for blind holes, in order to avoid chip blockage. Check Catalog or Product Selector for correct tool alternative.
	Incorrect or lack of lubricant.	Use good lubrication in order to prevent built up edge. See lubricant section in technical handbook.
	Taps hit bottom of hole.	Increase depth of drilling or decrease depth of tapping.
	Work hardening surface.	Reduce speed, use coated tool, use good lubrication. See section for machining of stainless steel in technical handbook.
	Chip trapping on reversal.	Avoid sudden return of tap on reversal motion.
	Chamfer hits hole entrance.	Check axial position and reduce axial error of tap point on hole center
	Tap drill hole too small.	Increase drill diameter to maximum value. Check tapping size drill.

THREADING – GENERAL TECHNICAL INFORMATION

Trouble Shooting When Tapping

Problem	Cause	Remedy
Breakage	Tap worn out.	Use a new tap or regrind the old one.
	Lack of lubricant.	Use good lubrication in order to prevent built up edge and chip blockage. See lubricant section in technical handbook.
	Taps hit bottom of hole.	Increase depth of drilling or decrease depth of tapping.
	Tap speed too high.	Reduce cutting speed. Follow recommendation in Catalog / Product Selector
	Work hardening surface.	Reduce speed. Use coated tool Use good lubrication. See section for machining of stainless steel in technical handbook.
	Tap drill hole too small.	Increase drill diameter up to maximum value. See tap drill tables.
	Too high torque.	Use tapping attachment with torque adjustment clutch.
	Material closing in after tapping.	See recommendation in Catalog/Product Selector for correct tool alternative.
Rapid wear	Wrong type of tap for application.	Use tap with lower rake angle and/or higher relief and/or longer chamfer. Use coated tool. Check Catalog or Product Selector for correct tool alternative.
	Lack of lubricant.	Use good lubrication in order to prevent built up edge and thermal stress on cutting edge. See lubricant section in technical handbook.
	Tap speed too high.	Reduce cutting speed. Follow recommendation in Catalog/Product Selector.
Built up edge	Wrong type of tap for application.	Use tap with lower rake angle and/or higher relief. Check Catalog or Product Selector for correct tool alternative.
	Lack of lubricant.	Use good lubrication in order to prevent built up edge. See lubricant section in technical handbook.
	Surface treatment not suitable.	Choose a tap with the recommended surface treatment.
	Tap speed too low.	Follow recommendation in Catalog/Product Selector.



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	Existing	New
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	EUR	EUR
Number of inserts per tool	0,00	0,00
Number of components per edge set (tool life)	0,00	0,00
Max. indexes per insert or tool	0,00	0,00
Tool or insert cost per component	0,0000	0,00
Free machine capacity	0,00	
Savings per component	0,00 EUR	
Savings per batch of year	0,00	

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A large, empty rectangular box with a thin black border, intended for taking notes.

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