

E255

DORMER

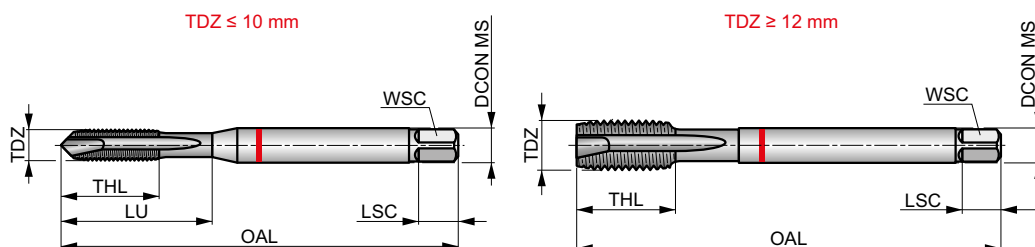
Red SHARK, Spiral Point Metric Machine Tap, DIN Standard

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



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



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

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



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