



Solid drilling and bore machining	1	HSS drilling	6
	2	Solid carbide drilling	
	3	Indexable insert drilling	
	4	Reaming and Countersinking	
	5	Spindle Tooling	
Threading	6	Taps and thread formers	6
	7	Circular and Thread Milling	
	8	Thread turning	
Turning	9	Turning Tools	6
	10	EcoCut	
	11	Grooving Tools	
	12	Miniature turning tools	
Milling	13	HSS Milling Cutters	6
	14	Solid Carbide milling cutters	
	15	Milling tools with indexable inserts	
Tool clamping	16	Adapters	6
	17	Accessories	
	18	Material examples and article no. index	

Table of contents

Symbol explanation	2
Tap Types	3
Toolfinder	
Toolfinder – WNT Performance	4+5
Toolfinder – WNT Standard	6+7
Taps Overview	8-20
Product programme	21-109
Technical Information	
Thread core hole diameter for tapered threads	110
Tapped hole pilot diameter	111+112
Tap Type Explanation	113
Thread tolerances and recommended manufacturing tolerances	114
Thread formers	115
Troubleshooting	116
Coatings	117

WNT \ Performance

Premium quality tools for high performance.

The premium quality tools from the **WNT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

WNT \ Standard

Quality tools for standard applications.

The quality tools of the **WNT Standard** product line are high quality, powerful and reliable and enjoy the highest trust of our customers worldwide. Tools from this product line are the first choice for many standard applications and guarantee optimal results.

Symbol explanation

Chamfer form



Form B
(with spiral point, 4 – 5 cutting leads)



Form C
(without spiral point, 2 – 3 cutting leads)



Form D
(without spiral point, 4 – 5 cutting leads)



Form E
(without spiral point, 1,5 – 2 cutting leads)

Helix angle



Example: helix angle 42°

Tolerances



Explanation of the tolerances can be found on
→ **Page 114.**

Tensile strength



Example up to 1100 N/mm²

Tap Material



High-speed steel



High-performance high speed steel



High-performance sintered high-speed steel



Solid carbide

Coloured rings

WNT \ Performance

An explanation of the coloured rings can be found on → **Page 117.**

Thread types



Explanation of the thread types can be found on
→ **Page 3.**

Version



Int. coolant supply



Tap types

Tool type

WNT \ Performance

Stabil	for through holes to 4xD	Salo-Rex	for blind holes up to 3xD, high helix angle for secure chip evacuation	TWIN	straight flutes for through and blind holes up to 2xD
DL	left hand helix for through holes up to 4xD	SL	for blind holes up to 2xD, 15°, 25° or 30° helix angle	Spanlos	thread former for through and blind holes up to 3xD

i A detailed explanation of the types of tools can be found on → **Page 113**.

Application range

WNT \ Performance

UNI	for universal application	ST	for good quality free machining steel	VG	for tempered and heat-resistant steels < 1100 N/mm ²
HR	for high-tensile steels < 1400 N/mm ²	GG	for cast iron	VA	for stainless and acid-resistant steels up to 1100 N/mm ²
NW	for aluminium	Soft	for soft materials	Ms	for short chipping brass
Ti	for titanium and titanium alloys	Ni	special for Inconel 718	AMPCO	for Ampco alloys
HT	for hardened steel and chilled iron up to 55 HRC	EC	Spanlos – thread former for universal application	NEO	Spanlos – thread former for heat resistant alloys
ERGO	hand taps for stainless, heat-resistant and heat-treated steels up to 1100 N/mm ²	ERGO F.T.	hand tap for steel up to 1400 N/mm ² , wolfram, chilled iron	FE	dies for steel

WNT \ Standard

UNI	for universal application up to 1000 N/mm ²	FE	for steel to 850 N/mm ²	FE-HF	for high-tensile steel to 1100 N/mm ²
VA	for corrosion and acid-resistant steels	GG	for cast iron	AL	for aluminium and aluminium alloys

Special Features

CNC	for synchronised CNC machining with minimum length compensation chuck	NC	for synchronised CNC machining with minimum length compensation chuck	NCW	with Weldon flat for synchronised CNC machining without length compensation chuck
AZ	with intermittent teeth, reduces friction	S	with back taper, for deep threads	DRY	for dry machining or minimum quantity lubrication (MMS)
TS	for high-speed machining, up to 100 m/min.	LH	for left hand threads	EL	extra long, with double overall length
AUT	short version for automatic use	SN	thread formers with lubrication grooves	ES	extra short
MMB	machine taps	R_z=1	lapped dies		

Thread types

M	ISO metric coarse thread DIN 13	UNF	Unified fine thread ASME – B1.1	NPTF	American taper pipe thread with sealing (1:16) ANSI/ASME – B1.20.3
EG M	ISO Metric coarse thread for wire inserts DIN 8140-2	EG UNF	EG Unified fine thread for wire inserts ASME – B18.29.1	Rp	Cyl. Whitworth coarse thread DIN EN 10226-1 (ISO7-1)
MF	ISO Metric fine thread DIN 13	UNJC	Unified coarse thread ASME – B1.15 and ISO 3161	Rc	Whitworth taper pipe thread (1:16) DIN EN 10226-2 (ISO7-1)
G	Whitworth pipe thread DIN EN ISO 228	UNJF	Unified fine thread ASME – B1.15 and ISO 3161	Tr	ISO metric trapezoidal thread DIN 103
UNC	Unified coarse thread ASME – B1.1	BSW	Whitworth thread BS84		
EG UNC	EG Unified coarse thread for wire inserts ASME – B18.29.1	NPT	American taper pipe thread with sealing (1:16) ANSI/ASME – B1.20.1		



The thread types BSW, NPTF, Rp and Rc as well as hand taps and dies are now available in the online shop.

Toolfinder – WNT Performance

Thread formers

 for cold-formable materials

HSS taps

 for universal application up to 1100 N/mm²

 for steel up to 750 N/mm²

 for steel up to 1400 N/mm²

 for corrosion and acid-resistant steels

 for cast iron materials

 for heat-resistant materials

 for aluminium and non-ferrous metal

 Hard materials

 Through hole – Blind hole

 Through hole

 Blind hole

 Through hole

 Blind hole

 Through hole – Blind hole

 Through hole

 Blind hole

 Through hole – Blind hole

 Through hole

 Blind hole

 Through hole – Blind hole

 Through hole

 Blind hole

 Through hole – Blind hole

 Through hole

 Blind hole

 Through hole – Blind hole

 For tools for other applications, refer to the taps overview on
→ **Pages 8–20.**

 Shank extensions for taps and thread-cutting oils can be found in
our online shop at cuttingtools.ceratizit.com

		WNT \ Performance															
Tool type	Application range	M	EG M	MF	G	UNC	EG UNC	UNJC	UNF	EG UNF	UNJF	BSW	NPT	NPTF	Rp	Rc	Tr
Spanlos	EC	59-61		81	89	94			103								
Stabil	UNI	21-23	63	65+66	83	90	95		98	104							
Salo-Rex	UNI	35-38	64	69	85	92	96		100	105							
Stabil	ST	24+25		66	83												109
Salo-Rex	ST	39-41		71+72	86												
TWIN	ST	52+53 56		78-80	88								108				
Stabil	HR	25															
Salo-Rex	HR	39-41															
TWIN	HR	52+53		78+79	88												
Stabil	VA	26			83	90											
Salo-Rex	VA	42		74	86	92			100				106				
TWIN	GG	54		79													
Stabil	Ti	27				90			98								
SL	Ti	44						97	101								
TWIN	AMPCO	52															
Stabil	NW	26															
Salo-Rex	NW	43		74													
TWIN	HT	55		78													

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Toolfinder – WNT Standard

Thread formers

 for cold-formable materials

 Through hole – Blind hole

HSS taps

 for universal application up to 1000 N/mm²

 Through hole
 Blind hole

 for steel to 850 N/mm²

 Through hole
 Blind hole

 for high-tensile steels up to 1100 N/mm²

 Through hole
 Blind hole

 for corrosion and acid-resistant steels

 Through hole
 Blind hole

 for cast iron materials

 Through hole – Blind hole

 for aluminium and non-ferrous metal

 Through hole
 Blind hole

WNT \ Standard					
Application range	M	MF	G	UNC	UNF
UNI	62	82			
UNI	31+32	67+68	84	91	99
UNI	49+50	75+76	87	93	102
FE	32+34	68		91	99
FE	50	76		93	102
FE-HF	32	68		91	
FE-HF	50	76		93	
VA	33	68		91	99
VA	50+51	77		93	102
GG	58				
AL	33				
AL	51				

Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated ■	uncoated □	Comments	WNT \ Performance	WNT \ Standard
Universal				Stabil	UNI	ISO 2 6H ISO 3 6G 7G	HSS-E	■			21+22	
					UNI	ISO 2 6H	HSS-E HSS-PM	■			31	
				Stabil	UNI NCW	ISO 2 6H	HSS-PM	■		with Weldon flat for synchronised CNC machining without length compensation chuck	23	
					UNI NCW	ISO 2 6H	HSS-PM	■		with Weldon flat for synchronised CNC machining without length compensation chuck	32	
				Stabil	UNI DRY	ISO 2X 6HX	HSS-E	■		for dry machining or minimum quantity lubrication (MMS)		
				Stabil	UNI CNC	ISO 2X 6HX ISO 3X 6GX 7GX	HSS-E	■		for synchronised CNC machining with minimum length compensation chuck	23	
					UNI NC	ISO 2 6H	HSS-E	■		for synchronised CNC machining with minimum length compensation chuck	32	
				Stabil	UNI EL	ISO 2 6H	HSS-E	■		extra long, with double overall length	29	
Steel				Stabil	ST	ISO 2 6H	HSS-E		□		24	
				Stabil	ST	ISO 1 4H ISO 3 6G	HSS-E		□			
					FE	ISO 2 6H	HSS-E		□		32	
					FE ES	ISO 2 6H	HSS-E		□	extra short	34	
				Stabil	ST AZ	ISO 2 6H	HSS-E		□	with intermittent teeth, reduces friction	24	
				Stabil	ST LH	ISO 2 6H	HSS-E		□	for left hand threads	24	
				Stabil	ST TS	ISO 2X 6HX	HSS-E	■		for high-speed machining, up to 100 m/min.	25	
				Stabil	HR	ISO 2X 6HX	HSS-PM	■			25	
				Stabil	VG	ISO 2X 6HX	HSS-E	■			25	
					FE-HF	ISO 2 6H	HSS-E	■			32	
				Stabil	VG AZ	ISO 2 6H	HSS-E	■		with intermittent teeth, reduces friction		

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
								☐ ☐			

M – Metric ISO Standard Thread

Steel		Stabil	ST EL	ISO 2 6H	HSS-E	☐	extra long, with double overall length	29
			ST MMB	ISO 2 6H	HSS-E	☐	Machine taps	30
Stainless steel		Stabil	VA	ISO 2 6H	HSS-E	☒		26
			VA	ISO 2 6H	HSS-PM HSS-E	☒ ☐		33
Non-ferrous metals		Stabil	NW	ISO 2 6H	HSS-E	☒		26
			AL	ISO 2 6H	HSS-E	☒ ☐		33
		Stabil	Soft	ISO 2 6H	HSS-E	☒		
Heat-resistant		Stabil	Ti	ISO 1X 4HX ISO 2X 6HX	HSS-PM	☒		27
		DL	Ti	ISO 2X 6HX	HSS-E	☒		28
		DL	Ni	ISO 2X 6HX	HSS-E	☒		28
Universal		Salo-Rex	UNI	ISO 2 6H 7G	HSS-E	☒	with thro' coolant	35+36
		Salo-Rex	UNI	ISO 1 4H ISO 3 6G	HSS-E	☒		
			UNI	ISO 2 6H	HSS-E HSS-PM	☒		49
		Salo-Rex	UNI NCW	ISO 2 6H	HSS-PM	☒	with Weldon flat for synchronised CNC machining without length compensation chuck	36
			UNI NCW	ISO 2 6H	HSS-PM	☒	with Weldon flat for synchronised CNC machining without length compensation chuck	50
		Salo-Rex	UNI CNC	ISO 2X 6HX ISO 2 6H	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck, with thro' coolant	37
		Salo-Rex	UNI CNC	ISO 3 6G, 7G	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck	
			UNI NC	ISO 2 6H	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck	49
		Salo-Rex	UNI DRY	ISO 2 6H	HSS-E	☒	for dry machining or minimum quantity lubrication (MMS), with thro' coolant	38

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
Universal				Salo-Rex	UNI S	ISO 2 6H	HSS-E	☒ ☐	with back taper, for deep threads		
				Salo-Rex	UNI ES	ISO 2 6H	HSS-E	☒ ☐	extra short		45
				Salo-Rex	UNI EL	ISO 2 6H	HSS-E	☒ ☐	extra long, with double overall length		47
				SL	UNI	ISO 2 6H	HSS-E	☐ ☒			
Steel				SL	ST	ISO 2 6H	HSS-E	☐ ☒			
				SL	ST CNC	ISO 2X 6HX	HSS-E	☒ ☐	for synchronised CNC machining with minimum length compensation chuck, with thro' coolant		39
				SL	ST TS	ISO 2 6H	HSS-PM	☒ ☐	for high-speed machining, up to 100 m/min.		
				SL	ST TS	ISO 2X 6HX	HSS-E	☒ ☐	for high-speed machining, up to 100 m/min.		39
				SL	ST ES	ISO 2 6H	HSS-E	☐ ☒	extra short		46
				SL	ST AUT/ES	ISO 2 6H	HSS-E	☐ ☒	short version for automatic use; extra short		46
				SL	ST EL	ISO 2 6H	HSS-E	☐ ☒	extra long, with double overall length		48
				SL	HR	ISO 2 6H	HSS-PM	☐ ☒			39
				Salo-Rex	ST	ISO 2 6H	HSS-E	☒ ☐			40
				Salo-Rex	ST	ISO 1 4H ISO 3 6G	HSS-E	☒ ☐			
					FE	ISO 2 6H	HSS-E	☐ ☒			50
					FE-HF	ISO 2 6H	HSS-E	☒ ☐			50
				Salo-Rex	ST LH	ISO 2 6H	HSS-E	☐ ☒	for left hand threads		40
				Salo-Rex	ST ES	ISO 2 6H	HSS-E	☐ ☒	extra short		
				Salo-Rex	ST EL	ISO 2 6H	HSS-E	☐ ☒	extra long, with double overall length		47

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated	uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒	☐			

M – Metric ISO Standard Thread

Steel		Salo-Rex	HR	ISO 2 6H	HSS-PM	☒	☐		41
		Salo-Rex	ST TS	ISO 2 6H	HSS-E	☒		with thro' coolant	41
Stainless steel		Salo-Rex	VA	ISO 2 6H	HSS-E	☒		with thro' coolant	42
			VA	ISO 2 6H	HSS-E HSS-PM	☒	☐		50+51
		Salo-Rex	VA S	ISO 2 6H	HSS-E	☒		with back taper, for deep threads	
		Salo-Rex	Soft	ISO 2 6H	HSS-E	☒	☐		43
Non-ferrous metals		Salo-Rex	NW	ISO 2 6H	HSS-E	☒			43
			AL	ISO 2 6H	HSS-E	☒	☐		51
		SL	Ti	ISO 2X	HSS-PM	☒			44
Heat-resistant		SL	Ni	ISO 2X ISO 2 6H	HSS-PM	☒			44
									
Steel		TWIN	ST	ISO 2X 6HX	HSS-E	☐			52
		TWIN	ST AZ	ISO 2X 6HX	HSS-E	☐		with intermittent teeth, reduces friction	
		TWIN	ST ES	ISO 2X 6HX	HSS-E	☐		extra short	56
		TWIN	ST LH/ES	ISO 2X 6HX	HSS-E	☐		for left hand threads; extra short	
		TWIN	HR	ISO 2X 6HX	HSS-E	☒			
		TWIN	HR EL	ISO 2X 6HX	HSS-E	☒		extra long, with double overall length	57
Cast iron		TWIN	GG	ISO 2X 6HX	HSS-E	☒		with thro' coolant	54
			GG	ISO 2X 6HX	HSS-E	☒			58
Non-ferrous metals		TWIN	Ms	ISO 2X 6HX	HSS-E	☐			

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
								☐ ☐			

M – Metric ISO Standard Thread

Heat-resistant		TWIN	AMPCO	ISO 2X 6HX	HSS-PM	☐		52
Tempered steel		TWIN	HT	ISO 2X 6HX	VHM HSS-PM	☒		55
Machine thread formers		Spanlos	EC	ISO 2X 6HX	HSS-E HSS-PM	☒		59
		Spanlos	EC SN	ISO 2X 6HX ISO 3X 6GX	HSS-E HSS-PM	☒	Thread formers with oil grooves and thro' coolant	60+61
		Spanlos	NEO SN	ISO 2X 6HX	HSS-PM	☒	Thread formers with oil grooves and thro' coolant	61
			UNI	ISO 2X 6HX	HSS-E	☒		62
			UNI SN	ISO 2X 6HX	HSS-E	☒	Thread formers with lubrication grooves	62
Hand taps			ST	ISO 2X 6HX	HSS-E VHM	☐		
			ERGO	ISO 2X 6HX	HSS-E	☐		
			ERGO F.T.	ISO 2X 6HX	HSS-E	☒		
Dies			FE	ISO 6g ISO 6e	HSS	☐		
			FE	ISO 6g	HSS	☐		
			FE R _i =1	ISO 6g	HSS	☐	Lapped Dies	
			FE LH	ISO 6g	HSS	☐	for left hand threads	
			VA	ISO 6g	HSS-E	☐		
			VA R _i =1	ISO 6g	HSS-E	☐	Lapped Dies	
			Ms R _i =1	ISO 6g	HSS	☐	Lapped Dies	

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated	uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒	☐			

Metric ISO standard thread for wire thread inserts

Universal		Stabil	UNI	6H mod	HSS-E	☒		63
		Salo-Rex	UNI	6H mod	HSS-E	☒		64
Non-ferrous metals		Salo-Rex	Soft	6H mod	HSS-E	☒		64

MF – Metric ISO Fine Thread

Universal		Stabil	UNI	ISO 2 6H	HSS-E	☒		65+66
		Stabil	UNI	ISO 3 6G	HSS-E	☒		
			UNI	ISO 2 6H	HSS-PM HSS-E	☒		67+68
		Stabil	UNI DRY	ISO 2X 6HX	HSS-E	☒	for dry machining or minimum quantity lubrication (MMS)	
Steel		Stabil	ST	ISO 2 6H	HSS-E	☐		
			FE	ISO 2 6H	HSS-E	☐		68
			FE-HF	ISO 2 6H	HSS-E	☒		68
		Stabil	ST TS	ISO 2X 6HX	HSS-E	☒	for high-speed machining, up to 100 m/min.	66
		Stabil	ST LH	ISO 2 6H	HSS-E	☐	for left hand threads	66
		Stabil	VG	ISO 2X 6HX	HSS-E	☒		65+66
Stainless steel		Stabil	VA	ISO 2 6H	HSS-E	☒		
			VA	ISO 2 6H	HSS-E	☒		68
Universal		Salo-Rex	UNI	ISO 2 6H ISO 3 6G	HSS-E	☒	with thro' coolant	69+70
			UNI	ISO 2 6H	HSS-E HSS-PM	☒		75+76
		Salo-Rex	UNI CNC	ISO 3 6G	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck	

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
Universal				Salo-Rex	UNI CNC	7G ISO 2 6H	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck	70	
					UNI NC	ISO 2 6H	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck	76	
Steel				Salo-Rex	ST	ISO 2 6H	HSS-E	☐		71	
				Salo-Rex	ST	ISO 1 4H	HSS-E	☐			
					FE	ISO 2 6H	HSS-E	☐		76	
					FE-HF	ISO 2 6H	HSS-E	☒		76	
				Salo-Rex	ST TS	ISO 2 6H	HSS-E	☒	for high-speed machining, up to 100 m/min.		
				Salo-Rex	ST LH	ISO 2 6H	HSS-E	☐	for left hand threads	71	
				SL	ST	ISO 2 6H	HSS-E	☐		72	
				SL	ST CNC	ISO 2X 6HX	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck		
				Salo-Rex	VA	ISO 2 6H	HSS-E	☒		74	
Stainless steel					VA	ISO 2 6H	HSS-E HSS-PM	☒ ☐		77	
Non-ferrous metals				Salo-Rex	NW	ISO 2 6H	HSS-E	☒		74	
Steel				TWIN	ST	ISO 2X 6HX	HSS-E	☐		78	
				TWIN	ST ES	ISO 2X 6HX	HSS-E	☐	extra short	80	
				TWIN	ST LH/ES	ISO 2X 6HX	HSS-E	☐	for left hand threads	80	
				TWIN	HR	ISO 2X 6HX	HSS-E	☒		78+79	
Cast iron				TWIN	GG	ISO 2X 6HX	HSS-E	☒		79	
Tempered steel				TWIN	HT	ISO 2X 6HX	VHM	☒		78	

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒ ☐			

MF – Metric ISO Fine Thread

Machine thread formers		Spanlos	EC	ISO 2X 6HX	HSS-E	☒		81
		Spanlos	EC SN	ISO 2X 6HX	HSS-E	☒	Thread formers with lubrication grooves	81
			UNI	ISO 2X 6HX	HSS-E	☒		82
			UNI SN	ISO 2X 6HX	HSS-E	☒	Thread formers with lubrication grooves	82
Hand taps			ST	ISO 2X 6HX	HSS-E	☐		
Dies			FE	ISO 6g	HSS	☐		
			FE	ISO 6g	HSS	☐		
			FE LH	ISO 6g	HSS	☐	for left hand threads	
			VA	ISO 6g	HSS-E	☐		

G – Whitworth Pipe Thread

Universal		Stabil	UNI	ISO 228	HSS-E	☒		83
			UNI	ISO 228	HSS-E	☒		84
Steel		Stabil	ST	ISO 228	HSS-E	☐		83
			FE	ISO 228	HSS-E	☐		
Stainless steel		Stabil	VA	ISO 228	HSS-E	☒		83
Universal		Salo-Rex	UNI	ISO 228 ISO 228 +0,05	HSS-E	☒		85
			UNI	ISO 228	HSS-E	☒		87
		Salo-Rex	UNI CNC	ISO 228	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck	86

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated	uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒	☐			

G – Whitworth Pipe Thread

Steel		Salo-Rex	ST	ISO 228	HSS-E	☐		86
		SL	ST	ISO 228	HSS-E	☐		
Stainless steel		Salo-Rex	VA	ISO 228	HSS-E	☒		86
Steel		TWIN	ST	ISO 228X	HSS-E	☐		88
		TWIN	HR	ISO 228X	HSS-E	☒		88
Cast iron		TWIN	GG	ISO 228X	HSS-E	☒		
Machine thread formers		Spanlos	EC	ISO 228	HSS-E	☒		89
		Spanlos	EC SN	ISO 228	HSS-E	☒	Thread formers with lubrication grooves	89
Hand taps			ERGO	ISO 228	HSS-E	☐		
Dies			FE	ISO 228A	HSS	☐		

UNC – Unified Coarse Thread

Universal		Stabil	UNI	3B	HSS-E	☒		
		Stabil	UNI	2B	HSS-E	☒		90
			UNI	2B	HSS-E	☒		91
Steel		Stabil	ST	2B	HSS-E	☐		
			FE	2B	HSS-E	☐		91
			FE-HF	2B	HSS-E	☒		91
Stainless steel		Stabil	VA	2B	HSS-E	☒		90
			VA	2B	HSS-E	☒		91

This article can be found in our online shop at cuttingtools.ceratizit.com

Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated	uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒	☐			

UNC – Unified Coarse Thread

Heat-resistant			Stabil	Ti	2BX	HSS-PM	☒				90	
Universal			Salo-Rex	UNI	2B	HSS-E	☒				92	
			Salo-Rex	UNI	2B +0,05	HSS-E	☒					
				UNI	2B	HSS-E	☒				93	
Steel			Salo-Rex	ST	2B	HSS-E	☐					
				FE	2B	HSS-E	☐				93	
				FE-HF	2B	HSS-E	☒				93	
Stainless steel			Salo-Rex	VA	2B	HSS-E	☒				92	
				VA	2B	HSS-E	☐				93	
Heat-resistant			SL	Ti	2BX	HSS-PM	☒					
Cast iron			TWIN	GG	2BX	HSS-E	☒					
Machine thread formers			Spanlos	EC	2BX	HSS-E	☒				94	
			Spanlos	EC SN	2BX	HSS-E	☒			Thread formers with lubrication grooves	94	
Hand taps				ERGO	2BX	HSS-E	☐					
Dies				FE	2A	HSS-E	☐					

EG UNC – Unified coarse thread for wire inserts

Universal			Stabil	UNI	2B	HSS-E	☒				95	
			Salo-Rex	UNI	2B	HSS-E	☒				96	

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated	uncoated	Comments	WNT \ Performance	WNT \ Standard
												
UNJC – Unified Coarse Thread												
Heat-resistant				SL	Ti	3BX	HSS-E				97	
UNF – Unified Fine Thread												
Universal				Stabil	UNI	2B	HSS-E				98	
					UNI	2B	HSS-E				99	
Steel				Stabil	ST	2B	HSS-E					
					FE	2B	HSS-E				99	
Stainless steel					VA	2B	HSS-E				99	
Heat-resistant				Stabil	Ti	2BX	HSS-PM				98	
Universal				Salo-Rex	UNI	2B 2B +0,05	HSS-E				100	
					UNI	2B	HSS-E				102	
Steel					FE	2B	HSS-E				102	
Stainless steel				Salo-Rex	VA	2B	HSS-E				100	
					VA	2B	HSS-E				102	
Heat-resistant				SL	Ti	2BX 3BX	HSS-PM				101	
Cast iron				TWIN	GG	2BX	HSS-E					
Thread formers				Spanlos	EC SN	2BX	HSS-E			Thread formers with lubrication grooves	103	
Dies					FE	2A	HSS					

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated	uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒	☐			

EG UNF – Unified fine thread for wire inserts

Universal			Stabil	UNI	2B	HSS-E	☒				104	
			Salo-Rex	UNI	2B	HSS-E	☒				105	

UNJF – Unified Extra Fine Thread

Heat-resistant			DL	Ti	3BX	HSS-E	☒					
			SL	Ti	3BX	HSS-E	☒					

BSW – Whitworth Thread

Universal			Stabil	UNI	med.	HSS-E	☒					
			Salo-Rex	UNI	med.	HSS-E	☒					

NPT – American Tapered Pipe Thread

Stainless steel			Salo-Rex	VA		HSS-E	☒				106	
Steel			TWIN	ST AZ		HSS-E	☐		with intermittent teeth, reduces friction			
			TWIN	VG		HSS-E	☐				107	
			TWIN	VG AZ		HSS-E	☐		with intermittent teeth, reduces friction			
			TWIN	ST ES		HSS-E	☐		extra short		108	
Dies				FE		HSS-E	☐					

This article can be found in our online shop at cuttingtools.ceratzit.com

Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tap Material	coated	uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒	☐			

NPTF – American Tapered Pipe Thread

Steel		TWIN	ST		HSS-E	☐					
		TWIN	VG		HSS-E	☐					
		TWIN	ST ES		HSS-E	☐	extra short				

Rp – Cylindrical Whitworth Pipe Thread

Steel		TWIN	ST	X	HSS-E	☐					
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Rc – Tapered Whitworth Pipe Thread

Steel		TWIN	ST		HSS-E	☐					
-------	---	------	----	--	-------	--------------------------	--	--	--	--	--

Tr – Metric ISO Trapezoidal Thread

Steel			ST	7H	HSS-E	☐					109
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Accessories

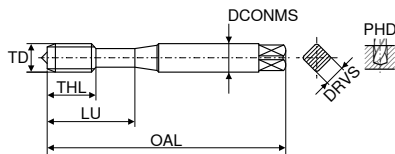
Shank extensions for taps												
Tapping Oil, Chlorine Free												

This article can be found in our online shop at cuttingtools.ceratizit.com

Through hole – Machine taps, right hand



UNI	UNI	UNI	UNI	UNI
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 3 6G	7G
nitr. + vap.	TiN	TiCN	nitr. + vap.	nitr. + vap.



DIN 371 with reinforced shank

HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 501 ...	Article no. 22 503 ...	Article no. 22 505 ...	Article no. 22 508 ...	Article no. 22 510 ...
mm	mm	mm	mm	mm	mm	mm	mm						
M1	0,25	40	2,5	2,1	0,75	5	13	2	010 ¹⁾				
M1,2	0,25	40	2,5	2,1	0,95	5	13	2	012 ¹⁾				
M1,4	0,30	40	2,5	2,1	1,10	7	13	3	014 ¹⁾				
M1,6	0,35	40	2,5	2,1	1,25	8	11	3	016				
M1,7	0,35	40	2,5	2,1	1,35	6	11	2	017				
M1,8	0,35	40	2,5	2,1	1,45	6	11	2	018				
M2	0,40	45	2,8	2,1	1,60	7	12	2		020		020	020
M2	0,40	45	2,8	2,1	1,60	8	8	3	020				
M2,2	0,45	45	2,8	2,1	1,75	7	12	2	022				
M2,5	0,45	50	2,8	2,1	2,05	9	14	2	025			025	025
M3	0,50	56	3,5	2,7	2,50	11	18	3	030	030	030	030	030
M3,5	0,60	56	4,0	3,0	2,90	12	20	3	035			035	
M4	0,70	63	4,5	3,4	3,30	13	21	3	040	040	040	040	040
M5	0,80	70	6,0	4,9	4,20	15	25	3	050	050	050	050	050
M6	1,00	80	6,0	4,9	5,00	17	30	3	060	060	060	060	060
M7	1,00	80	7,0	5,5	6,00	17	30	3	070				
M8	1,25	90	8,0	6,2	6,80	20	35	3	080	080	080	080	080
M10	1,50	100	10,0	8,0	8,50	22	39	3	100	100	100	100	100
M12	1,75	110	12,0	9,0	10,20	24	44	3	120				

Steel	6-20	6-25	6-25	6-20	6-20
Stainless steel	4-8	5-10	5-10	4-8	4-8
Cast iron	6-15	10-20	10-20	6-15	6-15
Non ferrous metals		12-25	12-25		
Heat resistant alloys					
Hardened materials					

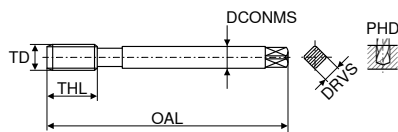
1) Tol. ISO 1 4H $\leq$ M1.4

DIN 376 can be found on the next page

Through hole – Machine taps, right hand

M

Stabil



DIN 376 with reduced shank

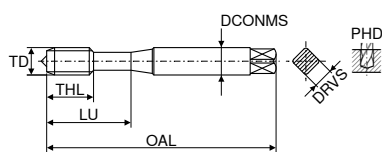
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 502 ...	Article no. 22 504 ...	Article no. 22 509 ...	Article no. 22 511 ...
	mm	mm	mm	mm	mm	mm					
M3	0,50	56	2,2		2,5	11	3	030			
M4	0,70	63	2,8	2,1	3,3	13	3	040			
M5	0,80	70	3,5	2,7	4,2	15	3	050			
M6	1,00	80	4,5	3,4	5,0	17	3	060			
M8	1,25	90	6,0	4,9	6,8	20	3	080			
M10	1,50	100	7,0	5,5	8,5	22	3	100			
M12	1,75	110	9,0	7,0	10,2	24	3	120	120	120	120
M14	2,00	110	11,0	9,0	12,0	26	3	140	140		140
M16	2,00	110	12,0	9,0	14,0	27	3	160	160	160	160
M18	2,50	125	14,0	11,0	15,5	30	3	180	180		
M20	2,50	140	16,0	12,0	17,5	32	3	200	200	200	
M22	2,50	140	18,0	14,5	19,5	32	3	220	220		
M24	3,00	160	18,0	14,5	21,0	34	3	240	240		
M27	3,00	160	20,0	16,0	24,0	36	3	270			
M30	3,50	180	22,0	18,0	26,5	40	4	300			
M33	3,50	180	25,0	20,0	29,5	40	4	330			
M36	4,00	200	28,0	22,0	32,0	50	4	360			
M42	4,50	200	32,0	24,0	37,5	56	4	420			
M48	5,00	250	36,0	29,0	43,0	65	4	480			
Steel								6-20	6-25	6-20	6-20
Stainless steel								4-8	5-10	4-8	4-8
Cast iron								6-15	10-20	6-15	6-15
Non ferrous metals									12-25		
Heat resistant alloys											
Hardened materials											

UNI	UNI	UNI	UNI
B 4-5	B 4-5	B 4-5	B 4-5
ISO 2 6H	ISO 2 6H	ISO 3 6G	7G
nitr. + vap.	TiN	nitr. + vap.	nitr. + vap.
HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$

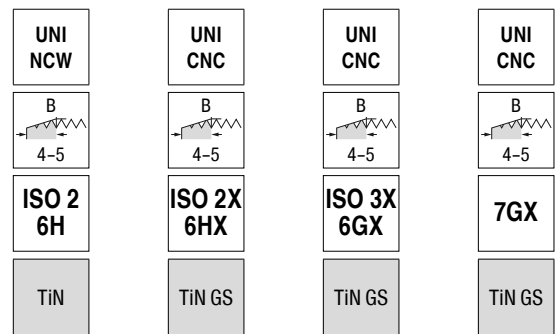
Through hole – Machine taps, right hand

▲ CNC = for synchronised CNC machining with minimum length compensation chuck

▲ NCW = with Weldon flat for synchronised CNC machining without length compensation chuck



DIN 371 with reinforced shank



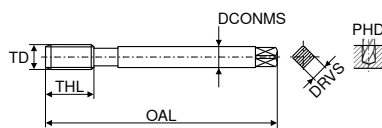
HSS-PM $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

HSS-E $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

HSS-E $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

HSS-E $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 148 ...	Article no. 22 542 ...	Article no. 22 596 ...	Article no. 22 592 ...
	mm	mm	mm	mm	mm	mm	mm					
M3	0,50	70	6,0	4,9	2,5	6	18	3	030			
M3	0,50	56	3,5	2,7	2,5	6	18	3		030		
M4	0,70	70	6,0	4,9	3,3	7	21	3	040			
M4	0,70	63	4,5	3,4	3,3	7	21	3		040	040	040
M5	0,80	70	6,0	4,9	4,2	8	25	3	050	050	050	050
M6	1,00	80	6,0	4,9	5,0	10	30	3	060	060	060	060
M8	1,25	90	8,0	6,2	6,8	14	35	3	080	080	080	080
M8	1,25	90	8,0	6,2	6,8	14	35	4		080	080	080
M10	1,50	100	10,0	8,0	8,5	16	39	3	100			
M10	1,50	100	10,0	8,0	8,5	16	39	4		100	100	100
M12	1,75	110	10,0	8,0	10,2	18		3	120			
M16	2,00	110	12,0	9,0	14,0	22		3	160			



DIN 376 with reduced shank

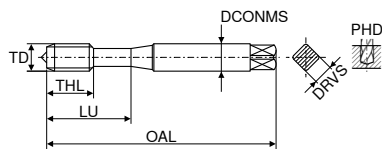
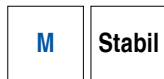
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 543 ...	Article no. 22 597 ...	Article no. 22 593 ...
	mm	mm	mm	mm	mm	mm				
M12	1,75	110	9	7	10,2	18	4	120	120	120
M14	2,00	110	11	9	12,0	20	4	140		
M16	2,00	110	12	9	14,0	22	4	160		
M20	2,50	140	16	12	17,5	25	4	200		

Steel	6-25	6-25	6-25	6-25
Stainless steel	5-10	5-10	5-10	5-10
Cast iron	10-20	10-20	10-20	10-20
Non ferrous metals	12-25	12-25	12-25	12-25
Heat resistant alloys				
Hardened materials				

Through hole – Machine taps, right/left hand

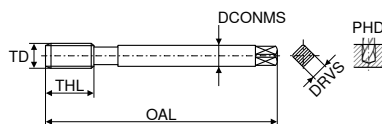
▲ AZ = with intermittent teeth, reduces friction

▲ LH = for left hand threads



DIN 371 with reinforced shank

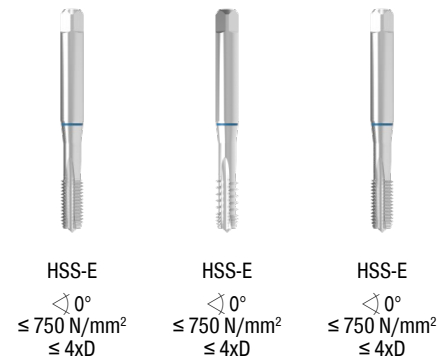
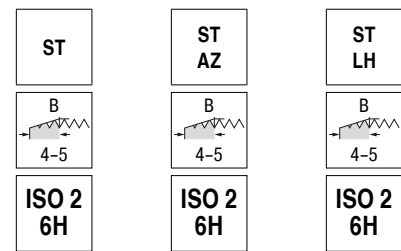
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M2	0,40	45	2,8	2,1	1,60	7	12	2
M2,3	0,40	45	2,8	2,1	1,90	7	12	2
M2,5	0,45	50	2,8	2,1	2,05	9	14	2
M2,6	0,45	50	2,8	2,1	2,15	9	14	2
M3	0,50	56	3,5	2,7	2,50	11	18	3
M3,5	0,60	56	4,0	3,0	2,90	12	20	3
M4	0,70	63	4,5	3,4	3,30	13	21	3
M5	0,80	70	6,0	4,9	4,20	15	25	3
M6	1,00	80	6,0	4,9	5,00	17	30	3
M8	1,25	90	8,0	6,2	6,80	20	35	3
M10	1,50	100	10,0	8,0	8,50	22	39	3
M12	1,75	110	12,0	9,0	10,20	24	44	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M3	0,50	56	2,2		2,5	11	3
M4	0,70	63	2,8	2,1	3,3	13	3
M5	0,80	70	3,5	2,7	4,2	15	3
M6	1,00	80	4,5	3,4	5,0	17	3
M8	1,25	90	6,0	4,9	6,8	20	3
M10	1,50	100	7,0	5,5	8,5	22	3
M12	1,75	110	9,0	7,0	10,2	24	3
M14	2,00	110	11,0	9,0	12,0	26	3
M16	2,00	110	12,0	9,0	14,0	27	3
M18	2,50	125	14,0	11,0	15,5	30	3
M20	2,50	140	16,0	12,0	17,5	32	3
M22	2,50	140	18,0	14,5	19,5	32	3
M24	3,00	160	18,0	14,5	21,0	34	3
M27	3,00	160	20,0	16,0	24,0	36	3
M30	3,50	180	22,0	18,0	26,5	40	4

Steel	10-20	10-20	10-20
Stainless steel			
Cast iron			
Non ferrous metals	10-20	10-20	10-20
Heat resistant alloys			
Hardened materials			

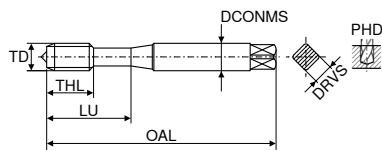


Article no. 22 020 ...	Article no. 22 022 ...	Article no. 22 127 ...
020	020	
023		
025		
026		
030	030	030
035		
040	040	040
050	050	050
060	060	060
080	080	080
100	100	100
120		

Article no. 22 021 ...	Article no. 22 023 ...	Article no. 22 147 ...
030		
040		
050		
060		
080		
100		
120	120	120
140		
160	160	160
180		
200	200	200
220		
240		
270		
300		

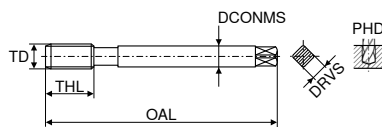
Through hole – Machine taps, right hand

▲ TS = for high-speed machining, up to 100 m/min.



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M2	0,40	45	2,8	2,1	1,60	8	9,5	2
M2	0,40	45	2,8	2,1	1,60	4	12,0	2
M2,2	0,45	45	2,8	2,1	1,75	7	12,0	2
M2,5	0,45	50	2,8	2,1	2,05	9	14,0	2
M2,5	0,45	50	2,8	2,1	2,05	5	15,0	2
M3	0,50	56	3,5	2,7	2,50	11	18,0	2
M3	0,50	56	3,5	2,7	2,50	6	18,0	3
M3,5	0,60	56	4,0	3,0	2,90	12	20,0	2
M4	0,70	63	4,5	3,4	3,30	13	21,0	2
M4	0,70	63	4,5	3,4	3,30	7	21,0	3
M5	0,80	70	6,0	4,9	4,20	15	25,0	2
M5	0,80	70	6,0	4,9	4,20	8	25,0	3
M6	1,00	80	6,0	4,9	5,00	17	30,0	3
M6	1,00	80	6,0	4,9	5,00	10	30,0	3
M8	1,25	90	8,0	6,2	6,80	20	35,0	3
M8	1,25	90	8,0	6,2	6,80	14	35,0	4
M10	1,50	100	10,0	8,0	8,50	22	39,0	3
M10	1,50	100	10,0	8,0	8,50	16	39,0	4
M12	1,75	110	12,0	9,0	10,20	24	44,0	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7	10,2	18	4
M16	2,00	110	12	9	14,0	22	4
M20	2,50	140	16	12	17,5	25	4

ST TS	HR	HR	VG
B 4-5	B 4-5	B 4-5	B 4-5
ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
TiN	nitr.	TiN	TiN
HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	HSS-PM $\angle 0^\circ$ $\leq 1400 \text{ N/mm}^2$ $\leq 4xD$	HSS-PM $\angle 0^\circ$ $\leq 1400 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$

Article no. 22 092 ...	Article no. 22 053 ...	Article no. 22 055 ...	Article no. 22 120 ...
020	020		020
	022		
	025		025
025			
	030	030	030
030			
	035		
	040	040	040
040			
	050	050	050
050			
	060	060	060
060			
	080	080	080
080			
	100	100	100
100			
	120		

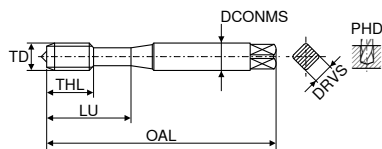
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 093 ...	Article no. 22 121 ...
	mm	mm	mm	mm	mm	mm			
M12	1,75	110	9	7	10,2	18	4	120	120
M16	2,00	110	12	9	14,0	22	4	160	160
M20	2,50	140	16	12	17,5	25	4	200	200

Steel	20-100	2-6	2-6	6-15
Stainless steel				5-10
Cast iron	20-60			
Non ferrous metals	20-100			10-20
Heat resistant alloys	10-25	3-5	3-5	
Hardened materials				

Through hole – Machine taps, right hand

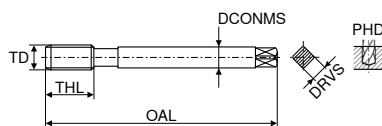
M

Stabil



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M1,6	0,35	40	2,5	2,1	1,25	6	11	2
M2	0,40	45	2,8	2,1	1,60	7	12	2
M2,3	0,40	45	2,8	2,1	1,90	7	12	2
M2,5	0,45	50	2,8	2,1	2,05	9	14	2
M2,6	0,45	50	2,8	2,1	2,15	9	14	2
M3	0,50	56	3,5	2,7	2,50	11	18	3
M3,5	0,60	56	4,0	3,0	2,90	12	20	3
M4	0,70	63	4,5	3,4	3,30	13	21	3
M5	0,80	70	6,0	4,9	4,20	15	25	3
M6	1,00	80	6,0	4,9	5,00	17	30	3
M8	1,25	90	8,0	6,2	6,80	20	35	3
M10	1,50	100	10,0	8,0	8,50	22	39	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7,0	10,2	24	3
M14	2,00	110	11	9,0	12,0	26	3
M16	2,00	110	12	9,0	14,0	27	3
M18	2,50	125	14	11,0	15,5	30	3
M20	2,50	140	16	12,0	17,5	32	3
M22	2,50	140	18	14,5	19,5	32	3
M24	3,00	160	18	14,5	21,0	34	3
M27	3,00	160	20	16,0	24,0	36	3
M30	3,50	180	22	18,0	26,5	40	4

VA	VA	NW	NW
B 4-5	B 4-5	B 4-5	B 4-5
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
nitr.	TiN GS	vap.	HCr



HSS-E
 $\angle 0^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 4xD$

Article no.
22 056 ...



HSS-E
 $\angle 0^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 4xD$

Article no.
22 038 ...



HSS-E
 $\angle 0^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 4xD$

Article no.
22 058 ...



HSS-E
 $\angle 0^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 4xD$

Article no.
22 060 ...

020
025
030
035
040
050
060
080
100

016
020
025
026
030
035
040
050
060
080
100

020
023
025
026
030
035
040
050
060
080
100

020
023
025
026
030
035
040
050
060
080
100

Article no.
22 057 ...

Article no.
22 039 ...

Article no.
22 059 ...

Article no.
22 061 ...

120
140
160
180
200
220
240
270
300

120
140
160
180
200
220
240
270
300

120
140
160
180
200
220
240
270
300

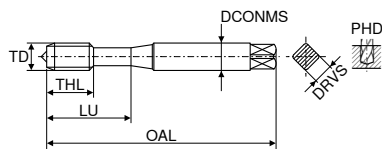
120
140
160
180
200
220
240
270
300

Steel	5-12	
Stainless steel	5-10	5-10
Cast iron		
Non ferrous metals	10-20	12-25
Heat resistant alloys		
Hardened materials		

Through hole – Machine taps, right hand

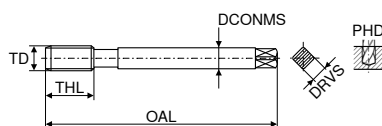
M

Stabil



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M1	0,25	40	2,5	2,1	0,75	5	6,5	2
M1,6	0,35	40	2,5	2,1	1,25	8	9,5	3
M2	0,40	45	2,8	2,1	1,60	8	9,5	3
M2,5	0,45	50	2,8	2,1	2,05	9	14,0	3
M3	0,50	56	3,5	2,7	2,50	11	18,0	3
M3,5	0,60	56	4,0	3,0	2,90	12	20,0	3
M4	0,70	63	4,5	3,4	3,30	13	21,0	3
M5	0,80	70	6,0	4,9	4,20	15	25,0	3
M6	1,00	80	6,0	4,9	5,00	17	30,0	3
M8	1,25	90	8,0	6,2	6,80	20	35,0	3
M10	1,50	100	10,0	8,0	8,50	22	39,0	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7	10,2	24	3

	Article no. 22 081 ...	Article no. 22 075 ...	Article no. 22 077 ...
Steel	2-5	2-5	2-5
Stainless steel			
Cast iron			
Non ferrous metals			
Heat resistant alloys	2-6	2-6	2-6
Hardened materials			

Ti	Ti	Ti
B 4-5	B 4-5	B 4-5
ISO 1X 4HX	ISO 2X 6HX	ISO 2X 6HX
TiN	vap.	TiN

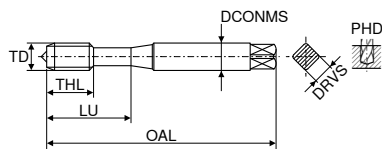
HSS-PM
≤ 44 HRC
≤ 4xDHSS-PM
≤ 1400 N/mm²
≤ 4xDHSS-PM
≤ 44 HRC
≤ 4xD

Article no. 22 081 ...	Article no. 22 075 ...	Article no. 22 077 ...
010	016	
020	020	
	025	
030	030	030
	035	
040	040	040
050	050	050
060	060	060
080	080	080
	100	100

Through hole – Machine taps, right hand

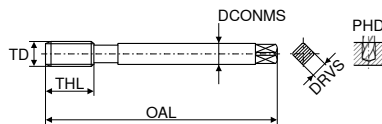
M

DL



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 159 ...	Article no. 22 297 ...
	mm	mm	mm	mm	mm	mm	mm			
M3	0,50	56	3,5	2,7	2,5	11	18	2	030	030
M4	0,70	63	4,5	3,4	3,3	13	21	3	040	040
M5	0,80	70	6,0	4,9	4,2	15	25	3	050	050
M6	1,00	80	6,0	4,9	5,0	17	30	3	060	060
M8	1,25	90	8,0	6,2	6,8	20	35	3	080	080
M10	1,50	100	10,0	8,0	8,5	22	39	3	100	100



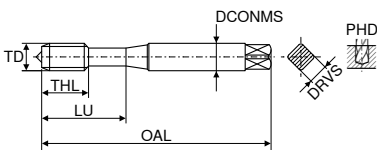
DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 160 ...	Article no. 22 298 ...
	mm	mm	mm	mm	mm	mm			
M12	1,75	110	9	7,0	10,2	24	3	120	120
M14	2,00	110	11	9,0	12,0	26	3		140
M16	2,00	110	12	9,0	14,0	27	3	160	160
M20	2,50	140	16	12,0	17,5	32	3	200	200
M24	3,00	160	18	14,5	21,0	34	3	240	

Steel	6-8	
Stainless steel	4-10	
Cast iron		
Non ferrous metals	10-12	
Heat resistant alloys	4-6	2-20
Hardened materials		

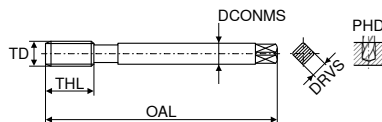
Through hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank

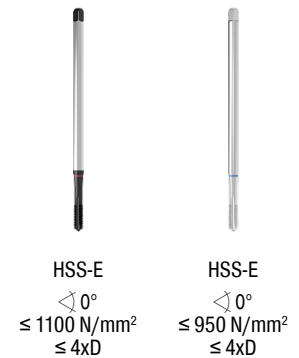
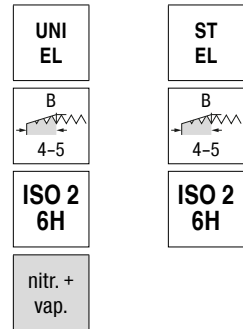
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	100	3,5	2,7	2,5	11	18	3
M4	0,70	125	4,5	3,4	3,3	13	21	3
M5	0,80	140	6,0	4,9	4,2	15	25	3
M6	1,00	160	6,0	4,9	5,0	17	30	3
M8	1,25	180	8,0	6,2	6,8	20	35	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M6	1,00	160	4,5	3,4	5,0	17	3
M8	1,25	180	6,0	4,9	6,8	20	3
M10	1,50	200	7,0	5,5	8,5	22	3
M12	1,75	224	9,0	7,0	10,2	24	3
M14	2,00	224	11,0	9,0	12,0	26	3
M16	2,00	224	12,0	9,0	14,0	27	3
M18	2,50	250	14,0	11,0	15,5	30	3
M20	2,50	280	16,0	12,0	17,5	32	3

Steel	6-20	5-25
Stainless steel	4-8	
Cast iron	6-15	10-20
Non ferrous metals		10-40
Heat resistant alloys		
Hardened materials		

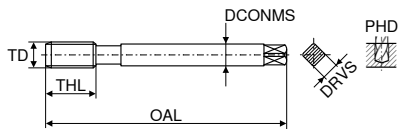


Article no. 22 514 ...	Article no. 22 233 ...
030	030
040	040
050	050
060	060
080	080

Through hole – Machine taps, right hand

▲ MMB = Nut taps

M

ST
MMBISO 2
6H

DIN 357 with reduced shank



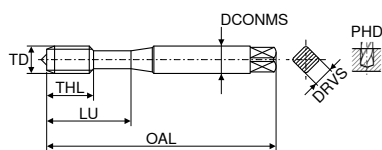
HSS-E

 $\angle 0^\circ$
 $\leq 850 \text{ N/mm}^2$
 $\leq 1xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 098 ...
	mm	mm	mm	mm	mm	mm		
M3	0,50	70	2,2		2,5	16	3	030
M4	0,70	90	2,8	2,1	3,3	22	3	040
M5	0,80	100	3,5	2,7	4,2	24	3	050
M6	1,00	110	4,5	3,4	5,0	30	3	060
M8	1,25	125	6,0	4,9	6,8	38	3	080
M10	1,50	140	7,0	5,5	8,5	45	3	100
M12	1,75	180	9,0	7,0	10,2	50	3	120
M16	2,00	200	12,0	9,0	14,0	63	3	160
Steel								10-25
Stainless steel								
Cast iron								
Non ferrous metals								10-25
Heat resistant alloys								
Hardened materials								

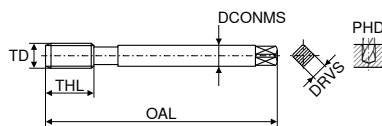
Through hole – Machine taps, right hand

M



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M2	0,40	45	2,8	2,1	1,60	7	12,0	2
M2	0,40	45	2,8	2,1	1,60	4	13,5	2
M2,5	0,45	50	2,8	2,1	2,05	9	14,0	2
M3	0,50	56	3,5	2,7	2,50	11	18,0	3
M4	0,70	63	4,5	3,4	3,30	13	21,0	3
M5	0,80	70	6,0	4,9	4,20	15	25,0	3
M6	1,00	80	6,0	4,9	5,00	17	30,0	3
M8	1,25	90	8,0	6,2	6,80	20	35,0	3
M10	1,50	100	10,0	8,0	8,50	22	39,0	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M3	0,50	56	2,2		2,5	11	3
M4	0,70	63	2,8	2,1	3,3	13	3
M5	0,80	70	3,5	2,7	4,2	15	3
M6	1,00	80	4,5	3,4	5,0	17	3
M8	1,25	90	6,0	4,9	6,8	20	3
M10	1,50	100	7,0	5,5	8,5	22	3
M12	1,75	110	9,0	7,0	10,2	24	3
M14	2,00	110	11,0	9,0	12,0	26	3
M14	2,00	110	11,0	9,0	12,0	20	4
M16	2,00	110	12,0	9,0	14,0	27	3
M18	2,50	125	14,0	11,0	15,5	30	3
M18	2,50	125	14,0	11,0	15,5	25	4
M20	2,50	140	16,0	12,0	17,5	32	3
M22	2,50	140	18,0	14,5	19,5	32	3
M24	3,00	160	18,0	14,5	21,0	34	3
M27	3,00	160	20,0	16,0	24,0	36	3
M30	3,50	180	22,0	18,0	26,5	40	4
M33	3,50	180	25,0	20,0	29,5	40	4
M36	4,00	200	28,0	22,0	32,0	50	4

Steel	2-25	5-45	10-20
Stainless steel	2-8	5-15	8-15
Cast iron	5-20	10-25	20-25
Non ferrous metals	10-20	15-40	20-25
Heat resistant alloys			
hardened materials			

UNI	UNI	UNI
B 4-5	B 4-5	B 4-5
ISO 2 6H	ISO 2 6H	ISO 2 6H
nitr. + vap.	TiN	TiN



HSS-E

 $\angle 0^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 3xD$
Article no.
23 110 ...

020

025

030

040

050

060

080

100



HSS-E

 $\angle 0^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 3xD$
Article no.
23 112 ...

020

025

030

040

050

060

080

100



HSS-PM

 $\angle 0^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 3xD$
Article no.
23 010 ...

020

030

040

050

060

080

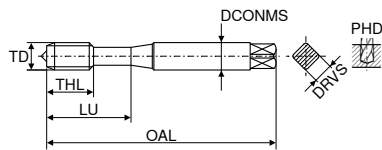
100

Through hole – Machine taps, right hand

▲ NCW = with Weldon flat for synchronised CNC machining without length compensation chuck

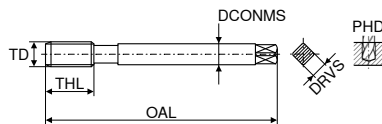
▲ NC = for synchronised CNC machining with minimum length compensation chuck

M



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M1,6	0,35	40	2,5	2,1	1,25	6	11	2
M2	0,40	45	2,8	2,1	1,60	7	12	2
M2,5	0,45	50	2,8	2,1	2,05	9	14	2
M3	0,50	70	6,0	4,9	2,50	6	18	3
M3	0,50	56	3,5	2,7	2,50	11	18	3
M3,5	0,60	56	4,0	3,0	2,90	12	20	3
M4	0,70	70	6,0	4,9	3,30	7	21	3
M4	0,70	63	4,5	3,4	3,30	13	21	3
M5	0,80	70	6,0	4,9	4,20	15	25	3
M5	0,80	70	6,0	4,9	4,20	8	25	3
M6	1,00	80	6,0	4,9	5,00	17	30	3
M6	1,00	80	6,0	4,9	5,00	10	30	3
M8	1,25	90	8,0	6,2	6,80	20	35	3
M8	1,25	90	8,0	6,2	6,80	14	35	3
M10	1,50	100	10,0	8,0	8,50	22	39	3
M10	1,50	100	10,0	8,0	8,50	16	39	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	10	8	10,2	18	3
M12	1,75	110	9	7	10,2	24	3
M14	2,00	110	11	9	12,0	26	3
M16	2,00	110	12	9	14,0	22	3
M16	2,00	110	12	9	14,0	27	3
M20	2,50	140	16	12	17,5	32	3

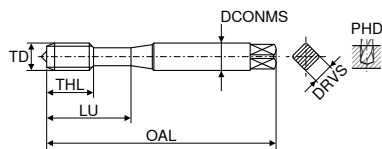
UNI NC	UNI NCW	FE	FE-HF
B 4-5	B 4-5	B 4-5	B 4-5
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
TiN GS	TiCN		TiCN
HSS-E $\angle 0^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	HSS-PM $\angle 0^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$

Article no. 23 114 ...	Article no. 23 116 ...	Article no. 23 212 ...	Article no. 23 310 ...
		016	
		020	
		025	
030	030	030	030
		035	
	040		
040		040	040
050		050	050
	050		
060		060	060
	060		
080		080	080
	080		
100		100	100
	100		

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 115 ...	Article no. 23 117 ...	Article no. 23 213 ...	Article no. 23 311 ...
	mm	mm	mm	mm	mm	mm					
M12	1,75	110	10	8	10,2	18	3		120		120
M12	1,75	110	9	7	10,2	24	3	120		120	120
M14	2,00	110	11	9	12,0	26	3			140	
M16	2,00	110	12	9	14,0	22	3		160		
M16	2,00	110	12	9	14,0	27	3	160		160	160
M20	2,50	140	16	12	17,5	32	3	200		200	200
Steel								5-45	5-45	5-25	5-45
Stainless steel								5-15	5-15		
Cast iron								10-25	10-25		
Non ferrous metals								15-40	15-40		
Heat resistant alloys									5-8		
hardened materials											

Through hole – Machine taps, right hand

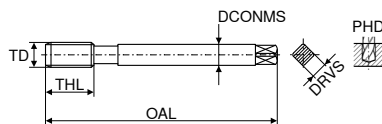
M



DIN 371 with reinforced shank

VA	VA	VA	AL	AL
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
nitr.	nitr.	TiN		CrN
HSS-PM	HSS-E	HSS-E	HSS-E	HSS-E
$\leq 1200 \text{ N/mm}^2$ $\leq 3xD$	$\leq 1200 \text{ N/mm}^2$ $\leq 3xD$	$\leq 1200 \text{ N/mm}^2$ $\leq 3xD$	$\leq 500 \text{ N/mm}^2$ $\leq 3xD$	$\leq 500 \text{ N/mm}^2$ $\leq 3xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 450 ...	Article no. 23 410 ...	Article no. 23 412 ...	Article no. 23 610 ...	Article no. 23 612 ...
	mm	mm	mm	mm	mm	mm	mm						
M2	0,40	45	2,8	2,1	1,60	7	12	2			020		
M2,5	0,45	50	2,8	2,1	2,05	9	14	2			025		
M3	0,50	56	3,5	2,7	2,50	11	18	3	030	030	030	030	030
M4	0,70	63	4,5	3,4	3,30	13	21	3	040	040	040	040	040
M5	0,80	70	6,0	4,9	4,20	15	25	3	050	050	050	050	050
M6	1,00	80	6,0	4,9	5,00	17	30	3	060	060	060	060	060
M8	1,25	90	8,0	6,2	6,80	20	35	3	080	080	080	080	080
M10	1,50	100	10,0	8,0	8,50	22	39	3	100	100	100	100	100



DIN 376 with reduced shank

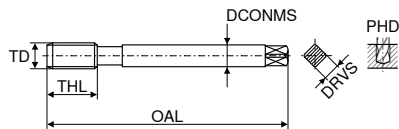
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 451 ...	Article no. 23 411 ...	Article no. 23 413 ...	Article no. 23 611 ...	Article no. 23 613 ...
	mm	mm	mm	mm	mm	mm						
M12	1,75	110	9	7,0	10,2	24	3	120	120	120	120	120
M14	2,00	110	11	9,0	12,0	26	3	140				
M16	2,00	110	12	9,0	14,0	27	3	160	160	160		
M20	2,50	140	16	12,0	17,5	32	3	200	200	200		
M24	3,00	160	18	14,5	21,0	34	3		240			

Steel												
Stainless steel		5-10		3-10		8-20						
Cast iron												
Non ferrous metals										10-20		15-40
Heat resistant alloys												
hardened materials												

Through hole – Machine taps, right hand

▲ ES = extra short

M

FE
ESB
4-5ISO 2
6H

DIN 376 with reduced shank

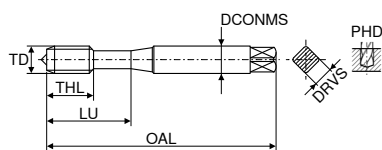


HSS-E

 $\angle 0^\circ$
 $\leq 850 \text{ N/mm}^2$
 $\leq 3xD$

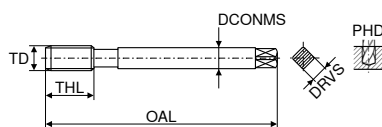
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 210 ...
mm	mm	mm	mm	mm	mm	mm		
M2	0,40	36	2,8	2,1	1,60	8	2	020
M2,5	0,45	40	2,8	2,1	2,05	9	2	025
M3	0,50	40	3,5	2,7	2,50	10	3	030
M4	0,70	45	4,5	3,4	3,30	12	3	040
M5	0,80	50	6,0	4,9	4,20	14	3	050
M6	1,00	56	6,0	4,9	5,00	16	3	060
M8	1,25	63	6,0	4,9	6,80	20	3	080
M10	1,50	70	7,0	5,5	8,50	22	3	100
M12	1,75	75	9,0	7,0	10,20	24	3	120
M16	2,00	80	12,0	9,0	14,00	27	3	160
Steel								5-25
Stainless steel								
Cast iron								
Non ferrous metals								
Heat resistant alloys								
hardened materials								

Blind hole – Machine taps, right hand



DIN 371 with reinforced shank

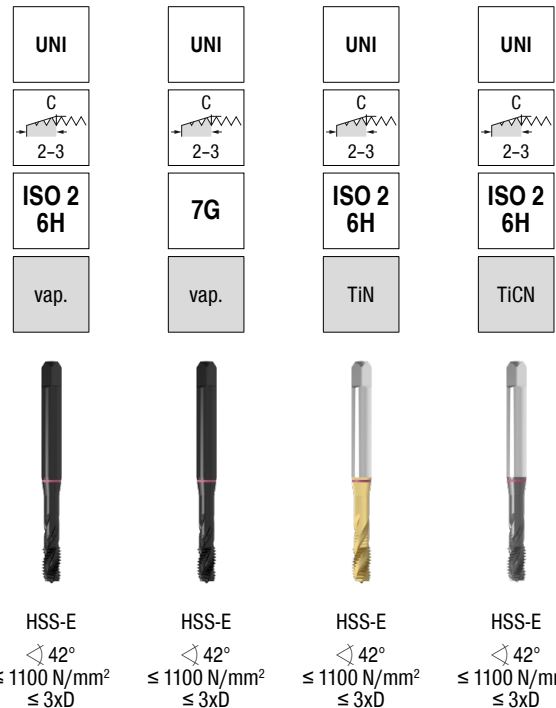
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 518 ...	Article no. 22 532 ...	Article no. 22 520 ...	Article no. 22 522 ...
	mm	mm	mm	mm	mm	mm	mm					
M2	0,40	45	2,8	2,1	1,60	4,0	12	2	020		020	
M2,2	0,45	45	2,8	2,1	1,75	4,5	12	2	022			
M2,3	0,40	45	2,8	2,1	1,90	4,5	12	2	023			
M2,5	0,45	50	2,8	2,1	2,05	5,0	15	2	025			
M2,6	0,45	50	2,8	2,1	2,15	5,0	15	2	026			
M3	0,50	56	3,5	2,7	2,50	6,0	18	3	030		030	
M3,5	0,60	56	4,0	3,0	2,90	7,0	20	3	035	030		030
M4	0,70	63	4,5	3,4	3,30	7,0	21	3	040	040	040	040
M5	0,80	70	6,0	4,9	4,20	8,0	25	3	050	050	050	050
M6	1,00	80	6,0	4,9	5,00	10,0	30	3	060	060	060	060
M7	1,00	80	7,0	5,5	6,00	10,0	30	3	070			
M8	1,25	90	8,0	6,2	6,80	14,0	35	3	080	080	080	080
M10	1,50	100	10,0	8,0	8,50	16,0	39	3	100	100	100	100
M12	1,75	110	12,0	9,0	10,20	18,0	44	3	120		120	120



DIN 376 with reduced shank

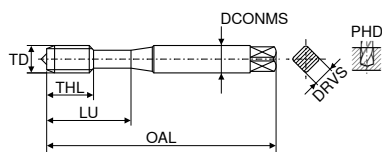
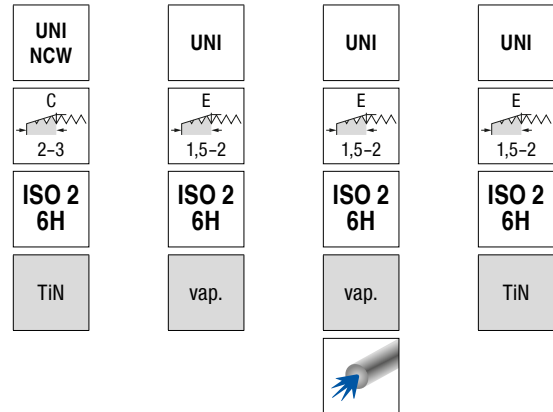
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 519 ...	Article no. 22 533 ...	Article no. 22 521 ...	Article no. 22 523 ...
	mm	mm	mm	mm	mm	mm					
M3	0,50	56	2,2		2,5	6	3	030			
M4	0,70	63	2,8	2,1	3,3	7	3	040			
M5	0,80	70	3,5	2,7	4,2	8	3	050			
M6	1,00	80	4,5	3,4	5,0	10	3	060			
M8	1,25	90	6,0	4,9	6,8	14	3	080			
M10	1,50	100	7,0	5,5	8,5	16	3	100			
M12	1,75	110	9,0	7,0	10,2	18	3	120			
M14	2,00	110	11,0	9,0	12,0	20	3	140	120	120	120
M16	2,00	110	12,0	9,0	14,0	22	3	160		140	140
M18	2,50	125	14,0	11,0	15,5	25	3	180	160	160	160
M20	2,50	140	16,0	12,0	17,5	25	3	200		180	180
M22	2,50	140	18,0	14,5	19,5	27	4	220	200	200	200
M24	3,00	160	18,0	14,5	21,0	30	4	240		220	
M27	3,00	160	20,0	16,0	24,0	30	4	270		240	
M30	3,50	180	22,0	18,0	26,5	35	4	300			
M33	3,50	180	25,0	20,0	29,5	35	4	330			
M36	4,00	200	28,0	22,0	32,0	40	4	360			

Steel	6-20	6-20	6-25	6-25
Stainless steel	4-8	4-8	5-10	5-10
Cast iron	6-15	6-15	10-20	10-20
Non ferrous metals			12-25	12-25
Heat resistant alloys				
Hardened materials				



Blind hole – Machine taps, right hand

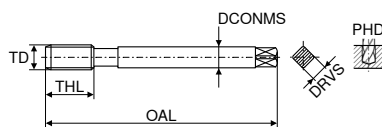
▲ NCW = with Weldon flat for synchronised CNC machining without length compensation chuck



DIN 371 with reinforced shank



TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 149 ...	Article no. 22 524 ...	Article no. 22 534 ...	Article no. 22 526 ...
mm	mm	mm	mm	mm	mm	mm	mm					
M3	0,50	70	6,0	4,9	2,5	6	18	3	030			
M3	0,50	56	3,5	2,7	2,5	6	18	3		030		030
M4	0,70	63	4,5	3,4	3,3	7	21	3		040		040
M4	0,70	70	6,0	4,9	3,3	7	21	3	040			
M5	0,80	70	6,0	4,9	4,2	8	25	3	050		050	050
M6	1,00	80	6,0	4,9	5,0	10	30	3	060		060	060
M8	1,25	90	8,0	6,2	6,8	14	35	3	080		080	080
M10	1,50	100	10,0	8,0	8,5	16	39	3	100		100	100



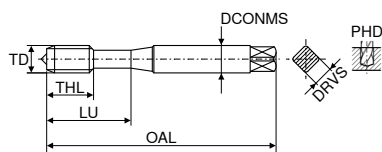
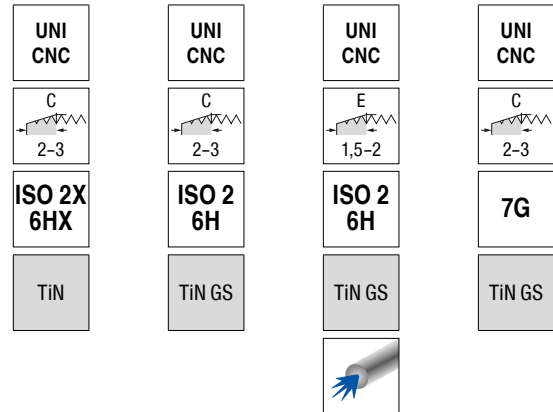
DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 149 ...	Article no. 22 525 ...	Article no. 22 535 ...	Article no. 22 527 ...
mm	mm	mm	mm	mm	mm	mm					
M12	1,75	110	10	8,0	10,2	18	3	120			
M12	1,75	110	9	7,0	10,2	18	4		120		120
M14	2,00	110	11	9,0	12,0	20	4		140		
M16	2,00	110	12	9,0	14,0	22	3	160			
M16	2,00	110	12	9,0	14,0	22	4		160		160
M18	2,50	125	14	11,0	15,5	25	4		180		
M20	2,50	140	16	12,0	17,5	25	4		200		200
M22	2,50	140	18	14,5	19,5	27	5		220		
M24	3,00	160	18	14,5	21,0	30	5		240		

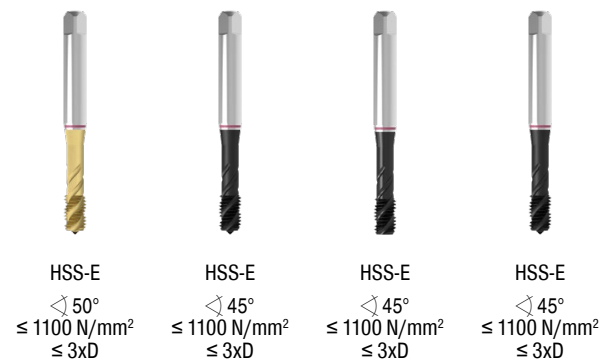
Steel	6-25	6-20	6-20	6-25
Stainless steel	5-10	4-8	4-8	5-10
Cast iron	10-20	6-15	6-15	10-20
Non ferrous metals	12-25			12-25
Heat resistant alloys				
Hardened materials				

Blind hole – Machine taps, right hand

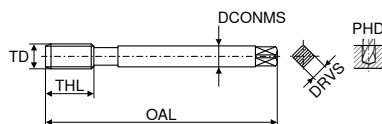
▲ CNC = for synchronised CNC machining with minimum length compensation chuck



DIN 371 with reinforced shank



TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 416 ...	Article no. 22 544 ...	Article no. 22 546 ...	Article no. 22 594 ...
	mm	mm	mm	mm	mm	mm	mm					
M3	0,50	56	3,5	2,7	2,5	6	18	3	030	030		030
M4	0,70	63	4,5	3,4	3,3	7	21	3	040	040		040
M5	0,80	70	6,0	4,9	4,2	8	25	3	050	050	050	050
M6	1,00	80	6,0	4,9	5,0	10	30	3	060	060	060	060
M8	1,25	90	8,0	6,2	6,8	14	35	3	080	080	080	080
M10	1,50	100	10,0	8,0	8,5	16	39	3	100	100	100	100



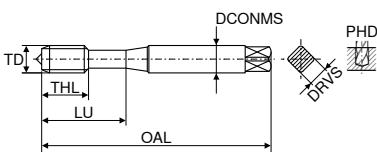
DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 417 ...	Article no. 22 545 ...	Article no. 22 595 ...
	mm	mm	mm	mm	mm	mm				
M12	1,75	110	9	7	10,2	18	3	120		
M12	1,75	110	9	7	10,2	18	4		120	120
M14	2,00	110	11	9	12,0	20	3	140		
M14	2,00	110	11	9	12,0	20	4		140	140
M16	2,00	110	12	9	14,0	22	3	160		
M16	2,00	110	12	9	14,0	22	4		160	160
M20	2,50	140	16	12	17,5	25	3	200		
M20	2,50	140	16	12	17,5	25	4		200	200

Steel	2-25	6-25	6-25	6-25
Stainless steel	1-10	5-10	5-10	5-10
Cast iron		10-20	10-20	10-20
Non ferrous metals	2-20	12-25	12-25	12-25
Heat resistant alloys				
Hardened materials				

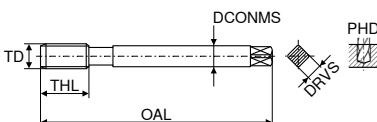
Blind hole – Machine taps, right hand

▲ DRY = for dry machining or minimum quantity lubrication (MMS)



DIN 371 with reinforced shank

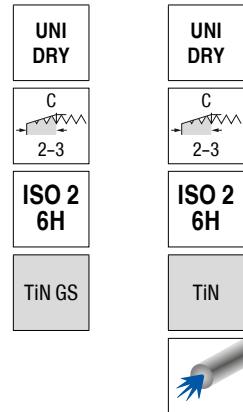
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	56	3,5	2,7	2,5	6	18	3
M4	0,70	63	4,5	3,4	3,3	7	21	3
M5	0,80	70	6,0	4,9	4,2	8	25	3
M6	1,00	80	6,0	4,9	5,0	10	30	3
M8	1,25	90	8,0	6,2	6,8	14	35	3
M10	1,50	100	10,0	8,0	8,5	16	39	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7	10,2	18	4
M16	2,00	110	12	9	14,0	22	4
M20	2,50	140	16	12	17,5	25	4

	Article no. 22 567 ...	Article no. 22 450 ...
Steel	6-25	5-45
Stainless steel	5-10	5-20
Cast iron		
Non ferrous metals		20-60
Heat resistant alloys		
Hardened materials		

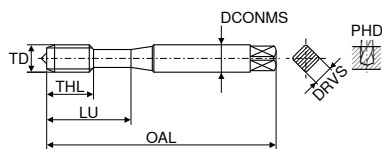
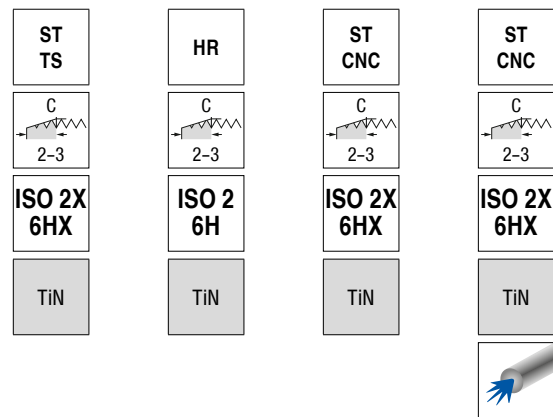
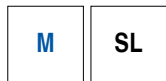


Article no. 22 566 ...	Article no. 22 449 ...
030	
040	
050	050
060	060
080	080
100	100

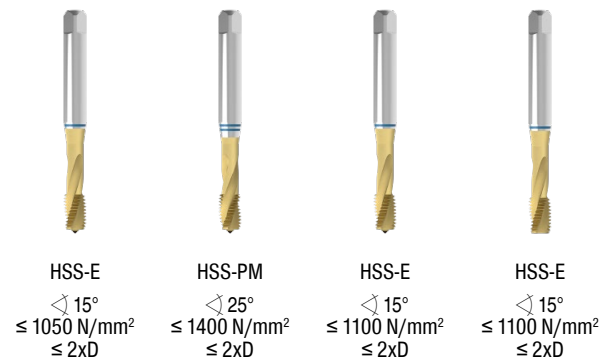
Blind hole – Machine taps, right hand

▲ CNC = for synchronised CNC machining with minimum length compensation chuck

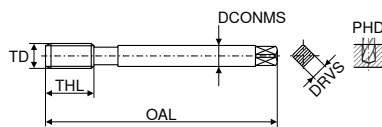
▲ TS = for high-speed machining, up to 100 m/min.



DIN 371 with reinforced shank



TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 406 ...	Article no. 22 072 ...	Article no. 22 328 ...	Article no. 22 443 ...
	mm	mm	mm	mm	mm	mm	mm					
M3	0,50	56	3,5	2,7	2,5	6	18	2	030		030	
M3	0,50	56	3,5	2,7	2,5	11	18	3		030		
M4	0,70	63	4,5	3,4	3,3	13	21	3	040		040	
M4	0,70	63	4,5	3,4	3,3	7	21	3		040		
M5	0,80	70	6,0	4,9	4,2	15	25	3	050		050	050
M5	0,80	70	6,0	4,9	4,2	8	25	3		050		
M6	1,00	80	6,0	4,9	5,0	17	30	3	060		060	060
M6	1,00	80	6,0	4,9	5,0	10	30	3		060		
M8	1,25	90	8,0	6,2	6,8	20	35	3	080		080	080
M8	1,25	90	8,0	6,2	6,8	14	35	3		080		
M10	1,50	100	10,0	8,0	8,5	22	39	3	100		100	100
M10	1,50	100	10,0	8,0	8,5	16	39	3		100		
M12	1,75	110	12,0	9,0	10,2	24	44	3		120		



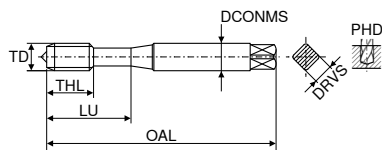
DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 407 ...	Article no. 22 329 ...	Article no. 22 444 ...
	mm	mm	mm	mm	mm	mm				
M12	1,75	110	9	7	10,2	18	3	120	120	120
M16	2,00	110	12	9	14,0	22	3	160	160	160
M20	2,50	140	16	12	17,5	25	3	200	200	

Steel	20-100	2-6	5-45	5-45
Stainless steel				
Cast iron	20-60		10-30	10-30
Non ferrous metals	20-100		5-30	5-30
Heat resistant alloys	10-25	3-5		
Hardened materials				

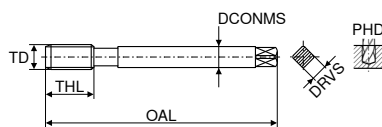
Blind hole – Machine taps, right/left hand

▲ LH = for left hand threads



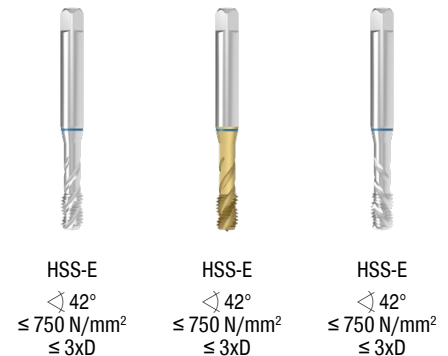
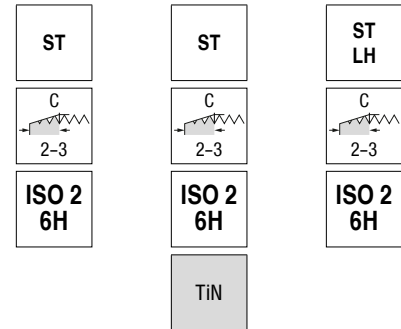
DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M2	0,40	45	2,8	2,1	1,60	4,0	12	2
M2,3	0,40	45	2,8	2,1	1,90	4,5	12	2
M2,5	0,45	50	2,8	2,1	2,05	5,0	15	2
M3	0,50	56	3,5	2,7	2,50	6,0	18	3
M3,5	0,60	56	4,0	3,0	2,90	7,0	20	3
M4	0,70	63	4,5	3,4	3,30	7,0	21	3
M5	0,80	70	6,0	4,9	4,20	8,0	25	3
M6	1,00	80	6,0	4,9	5,00	10,0	30	3
M8	1,25	90	8,0	6,2	6,80	14,0	35	3
M10	1,50	100	10,0	8,0	8,50	16,0	39	3
M12	1,75	110	12,0	9,0	10,20	18,0	44	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M3	0,50	56	2,2		2,5	6	3
M4	0,70	63	2,8	2,1	3,3	7	3
M5	0,80	70	3,5	2,7	4,2	8	3
M6	1,00	80	4,5	3,4	5,0	10	3
M8	1,25	90	6,0	4,9	6,8	14	3
M10	1,50	100	7,0	5,5	8,5	16	3
M12	1,75	110	9,0	7,0	10,2	18	3
M14	2,00	110	11,0	9,0	12,0	20	3
M16	2,00	110	12,0	9,0	14,0	22	3
M18	2,50	125	14,0	11,0	15,5	25	3
M20	2,50	140	16,0	12,0	17,5	25	3
M22	2,50	140	18,0	14,5	19,5	27	4
M24	3,00	160	18,0	14,5	21,0	30	4
M30	3,50	180	22,0	18,0	26,5	35	4
M33	3,50	180	25,0	20,0	29,5	35	4
M36	4,00	200	28,0	22,0	32,0	40	4



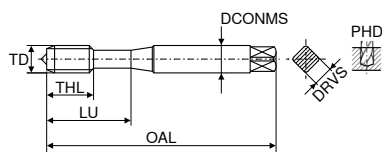
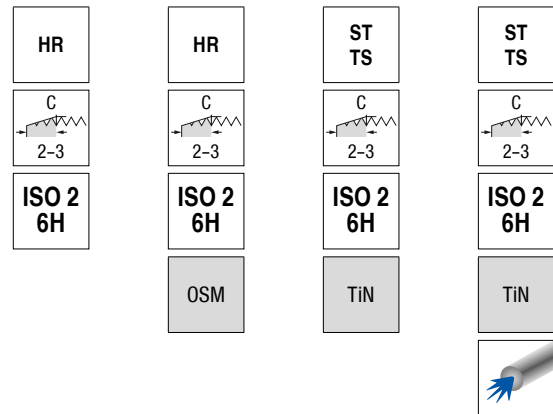
Article no. 22 082 ...	Article no. 22 084 ...	Article no. 22 138 ...
020	020	
023		
025		
030	030	030
035		
040	040	040
050	050	050
060	060	060
080	080	080
100	100	100
120		

Article no. 22 083 ...	Article no. 22 085 ...	Article no. 22 139 ...
030		
040		
050		
060		
080		
120	100	120
140	120	
160	160	160
180		
200	200	200
220		
240		
300		
330		
360		

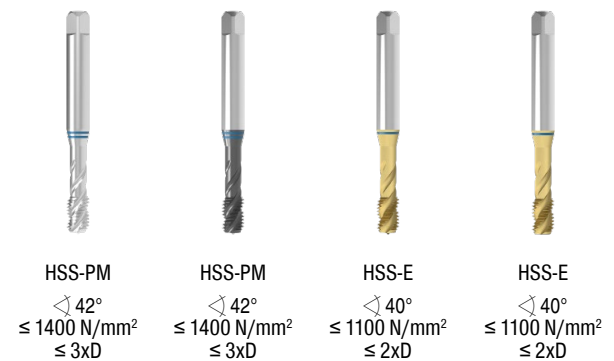
Steel	10-20	10-25	10-20
Stainless steel			
Cast iron			
Non ferrous metals	10-20	10-25	10-20
Heat resistant alloys			
Hardened materials			

Blind hole – Machine taps, right hand

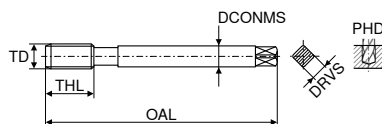
▲ TS = for high-speed machining, up to 100 m/min.



DIN 371 with reinforced shank



TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 498 ...	Article no. 22 499 ...	Article no. 22 044 ...	Article no. 22 046 ...
	mm	mm	mm	mm	mm	mm	mm					
M3	0,50	56	3,5	2,7	2,5	6	18	3	030	030		
M4	0,70	63	4,5	3,4	3,3	7	21	3	040	040		
M5	0,80	70	6,0	4,9	4,2	8	25	3	050	050	050	050
M6	1,00	80	6,0	4,9	5,0	10	30	3	060	060	060	060
M8	1,25	90	8,0	6,2	6,8	14	35	3	080	080	080	080
M10	1,50	100	10,0	8,0	8,5	16	39	3	100	100	100	100

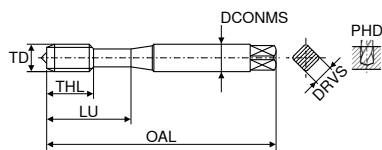


DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 045 ...	Article no. 22 047 ...
	mm	mm	mm	mm	mm	mm			
M12	1,75	110	9	7	10,2	18	4	120	120
M16	2,00	110	12	9	14,0	22	4	160	160

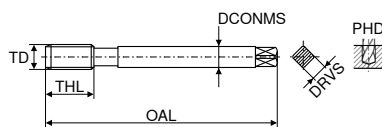
Steel	4-12	4-12	20-100	20-100
Stainless steel	6-8	6-8		
Cast iron			20-60	20-60
Non ferrous metals			20-100	20-100
Heat resistant alloys	3-5	3-5	10-25	10-25
Hardened materials				

Blind hole – Machine taps, right hand



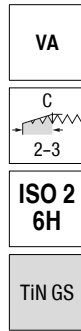
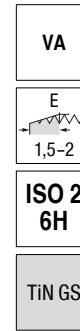
DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	mm	
M1,6	0,35	40	2,5	2,1	1,25	4	11	2
M2	0,40	45	2,8	2,1	1,60	4	12	2
M2,5	0,45	50	2,8	2,1	2,05	5	15	2
M2,5	0,45	50	2,8	2,1	2,05	5	15	3
M3	0,50	56	3,5	2,7	2,50	6	18	3
M4	0,70	63	4,5	3,4	3,30	7	21	3
M5	0,80	70	6,0	4,9	4,20	8	25	3
M6	1,00	80	6,0	4,9	5,00	10	30	3
M8	1,25	90	8,0	6,2	6,80	14	35	3
M10	1,50	100	10,0	8,0	8,50	16	39	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7,0	10,2	18	4
M14	2,00	110	11	9,0	12,0	20	4
M16	2,00	110	12	9,0	14,0	22	4
M20	2,50	140	16	12,0	17,5	25	4
M22	2,50	140	18	14,5	19,5	27	5
M24	3,00	160	18	14,5	21,0	30	5
M30	3,50	180	22	18,0	26,5	35	5

HSS-E
 $\angle 42^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$ HSS-E
 $\angle 45^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$ HSS-E
 $\angle 45^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$ Article no.
22 090 ...Article no.
22 042 ...Article no.
22 040 ...

020

025

030

040

050

060

080

100

016

020

025

030

040

050

060

080

100

Article no.
22 091 ...Article no.
22 041 ...

120

140

160

200

220

240

300

120

140

160

200

Steel

Stainless steel

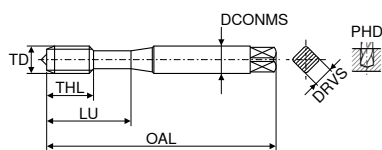
Cast iron

Non ferrous metals

Heat resistant alloys

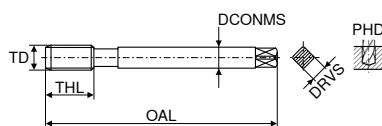
Hardened materials

Blind hole – Machine taps, right hand



DIN 371 with reinforced shank

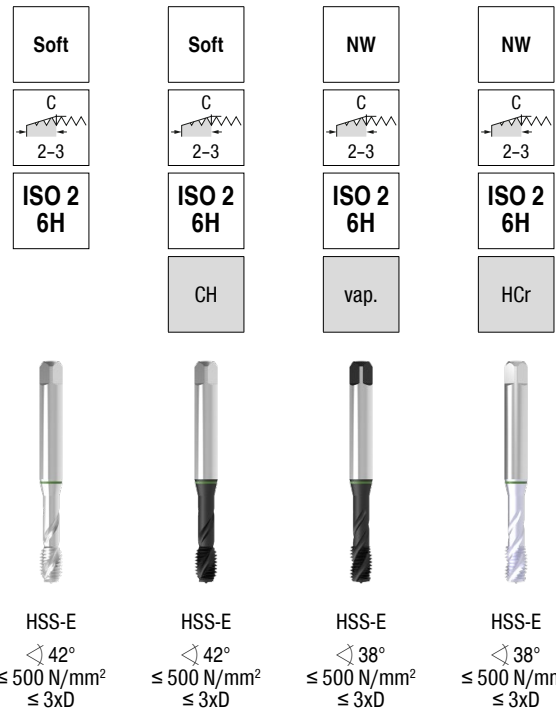
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 326 ...	Article no. 22 324 ...	Article no. 22 086 ...	Article no. 22 088 ...
	mm	mm	mm	mm	mm	mm	mm					
M2	0,40	45	2,8	2,1	1,60	4	12	2	020	020	020	020
M2,5	0,45	50	2,8	2,1	2,05	5	15	2	025	025	025	025
M3	0,50	56	3,5	2,7	2,50	6	18	2	030	030	030	030
M3	0,50	56	3,5	2,7	2,50	6	18	3				
M4	0,70	63	4,5	3,4	3,30	7	21	2	040	040	040	040
M4	0,70	63	4,5	3,4	3,30	7	21	3				
M5	0,80	70	6,0	4,9	4,20	8	25	2	050	050	050	050
M5	0,80	70	6,0	4,9	4,20	8	25	3				
M6	1,00	80	6,0	4,9	5,00	10	30	2	060	060	060	060
M6	1,00	80	6,0	4,9	5,00	10	30	3				
M8	1,25	90	8,0	6,2	6,80	14	35	2	080	080	080	080
M8	1,25	90	8,0	6,2	6,80	14	35	3				
M10	1,50	100	10,0	8,0	8,50	16	39	2	100	100	100	100
M10	1,50	100	10,0	8,0	8,50	16	39	3				



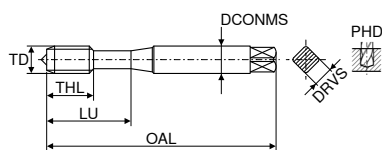
DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 087 ...	Article no. 22 089 ...
	mm	mm	mm	mm	mm	mm			
M12	1,75	110	9	7	10,2	18	3	120	120
M16	2,00	110	12	9	14,0	22	3	160	160

Steel				
Stainless steel				
Cast iron				
Non ferrous metals	15-40	15-40	10-20	12-25
Heat resistant alloys				
Hardened materials				

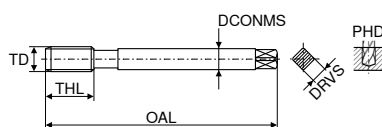


Blind hole – Machine taps, right hand



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	56	3,5	2,7	2,5	11	18	2
M3	0,50	56	3,5	2,7	2,5	11	18	3
M3	0,50	56	3,5	2,7	2,5	6	18	3
M3,5	0,60	56	4,0	3,0	2,9	12	20	3
M4	0,70	63	4,5	3,4	3,3	7	21	3
M4	0,70	63	4,5	3,4	3,3	13	21	3
M5	0,80	70	6,0	4,9	4,2	8	25	3
M5	0,80	70	6,0	4,9	4,2	15	25	3
M6	1,00	80	6,0	4,9	5,0	10	30	3
M6	1,00	80	6,0	4,9	5,0	17	30	3
M8	1,25	90	8,0	6,2	6,8	14	35	3
M8	1,25	90	8,0	6,2	6,8	20	35	3
M10	1,50	100	10,0	8,0	8,5	16	39	3
M10	1,50	100	10,0	8,0	8,5	22	39	3
M12	1,75	110	12,0	9,0	10,2	18	44	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7,0	10,2	24	3
M12	1,75	110	9	7,0	10,2	24	4
M14	2,00	110	11	9,0	12,0	26	3
M14	2,00	110	11	9,0	12,0	26	4
M16	2,00	110	12	9,0	14,0	27	3
M16	2,00	110	12	9,0	14,0	27	5
M20	2,50	140	16	12,0	17,5	32	3
M24	3,00	160	18	14,5	21,0	34	3

Ti	Ti	Ni	Ni
C 2-3	C 2-3	C 2-3	C 2-3
ISO 2X 6HX	ISO 2X 6HX	ISO 2 6H	ISO 2X 6HX
TiN	TiCN	TiCN	TiCN
HSS-PM $\angle 30^\circ$ $\leq 1400 \text{ N/mm}^2$ $\leq 1,5xD$	HSS-PM $\angle 15^\circ$ $\leq 1200 \text{ N/mm}^2$ $\leq 2xD$	HSS-PM $\angle 15^\circ$ $\leq 1600 \text{ N/mm}^2$ $\leq 1,5xD$	HSS-PM $\angle 15^\circ$ $\leq 1600 \text{ N/mm}^2$ $\leq 2xD$

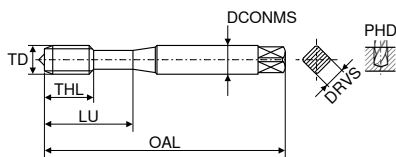
Article no. 22 076 ...	Article no. 22 163 ...	Article no. 22 073 ...	Article no. 22 424 ...
	030	030	030
030	035		
040	040	040	040
050	050	050	050
060	060	060	060
080	080	080	080
100	100	100	100
120			

Article no. 22 164 ...	Article no. 22 124 ...	Article no. 22 425 ...
120	120	120
	140	140
160	160	160
200		200
240		

Steel	2-5	6-8		
Stainless steel		4-10		
Cast iron				
Non ferrous metals		10-12		
Heat resistant alloys	2-6	4-6	2-4	2-4
Hardened materials				

Blind hole – Machine taps, right hand

▲ ES = extra short



DIN 352 with reinforced shank



HSS-E

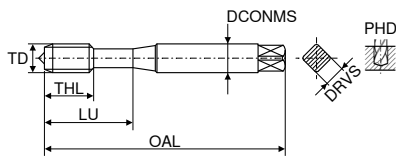
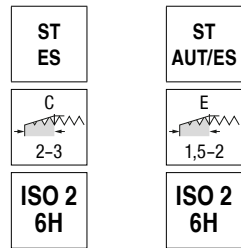
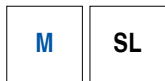
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$
Article no.
22 500 ...

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	
	mm	mm	mm	mm	mm	mm	mm		
M3	0,50	40	3,5	2,7	2,5	6	18	3	030
M3,5	0,60	45	4,0	3,0	2,9	7	20	3	035
M4	0,70	45	4,5	3,4	3,3	7	22	3	040
M5	0,80	50	6,0	4,9	4,2	9	25	3	050
M6	1,00	56	6,0	4,9	5,0	10	28	3	060
M8	1,25	63	6,0	4,9	6,8	14		3	080
M10	1,50	70	7,0	5,5	8,5	16		3	100
M12	1,75	75	9,0	7,0	10,2	18		4	120
M16	2,00	80	12,0	9,0	14,0	22		4	160
Steel									6-20
Stainless steel									4-8
Cast iron									6-15
Non ferrous metals									
Heat resistant alloys									
Hardened materials									

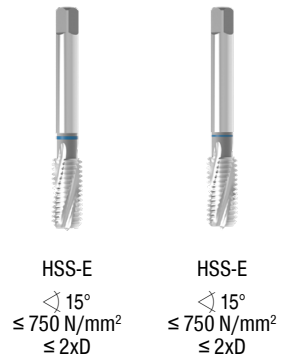
Blind hole – Machine taps, right hand

▲ AUT = short version for automatic use

▲ ES = extra short



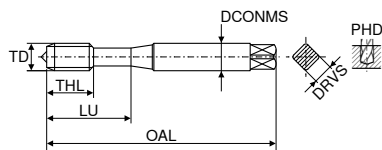
DIN 352 with reinforced shank



TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 016 ...	Article no. 22 001 ...
	mm	mm	mm	mm	mm	mm	mm			
M3	0,50	40	3,5	2,7	2,5	10	18	2	030	030
M4	0,70	45	4,5	3,4	3,3	12	22	3	040	040
M5	0,80	50	6,0	4,9	4,2	14	25	3	050	050
M6	1,00	56	6,0	4,9	5,0	16	28	3	060	060
M8	1,25	63	6,0	4,9	6,8	20		3	080	080
M10	1,50	70	7,0	5,5	8,5	22		3	100	100
M12	1,75	75	9,0	7,0	10,2	24		3	120	
M14	2,00	80	11,0	9,0	12,0	26		3	140	
M16	2,00	80	12,0	9,0	14,0	27		3	160	
M20	2,50	95	16,0	12,0	17,5	32		3	200	
Steel									10-20	10-20
Stainless steel										
Cast iron										
Non ferrous metals									10-20	10-20
Heat resistant alloys										
Hardened materials										

Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	100	3,5	2,7	2,5	6	18	3
M4	0,70	125	4,5	3,4	3,3	7	21	3
M5	0,80	140	6,0	4,9	4,2	8	25	3
M6	1,00	160	6,0	4,9	5,0	10	30	3
M8	1,25	180	8,0	6,2	6,8	14	35	3

HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

HSS-E
 $\angle 42^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 3xD$

Article no.
22 538 ...Article no.
22 422 ...

030

030

040

040

050

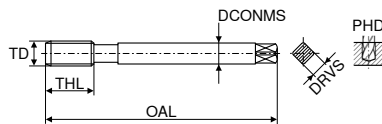
050

060

060

080

080



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M6	1,00	160	4,5	3,4	5,0	10	3
M8	1,25	180	6,0	4,9	6,8	14	3
M10	1,50	200	7,0	5,5	8,5	16	3
M12	1,75	224	9,0	7,0	10,2	18	3
M14	2,00	224	11,0	9,0	12,0	20	3
M16	2,00	224	12,0	9,0	14,0	22	3
M18	2,50	250	14,0	11,0	15,5	25	3
M20	2,50	280	16,0	12,0	17,5	25	3

Article no.
22 539 ...Article no.
22 423 ...

060

060

080

080

100

100

120

120

140

140

160

160

180

180

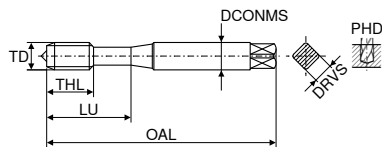
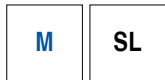
200

200

Steel	6-20	5-25
Stainless steel	4-8	
Cast iron	6-15	
Non ferrous metals		10-40
Heat resistant alloys		
Hardened materials		

Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank



HSS-E

 $\angle 15^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	100	3,5	2,7	2,5	11	18	2
M4	0,70	125	4,5	3,4	3,3	13	21	3
M5	0,80	140	6,0	4,9	4,2	15	25	3
M6	1,00	160	6,0	4,9	5,0	17	30	3
M8	1,25	180	8,0	6,2	6,8	20	35	3

Article no.
22 078 ...

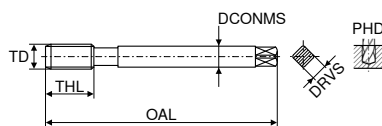
030

040

050

060

080



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M6	1,00	160	4,5	3,4	5,0	17	3
M8	1,25	180	6,0	4,9	6,8	20	3
M10	1,50	200	7,0	5,5	8,5	22	3
M12	1,75	224	9,0	7,0	10,2	24	3
M14	2,00	224	11,0	9,0	12,0	26	3
M16	2,00	224	12,0	9,0	14,0	27	3
M20	2,50	280	16,0	12,0	17,5	32	3

Article no.
22 080 ...

060

080

100

120

140

160

200

Steel

10-20

Stainless steel

Cast iron

Non ferrous metals

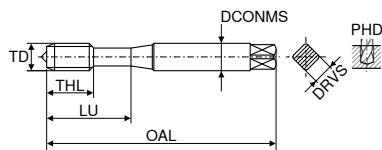
10-20

Heat resistant alloys

Hardened materials

Blind hole – Machine taps, right hand

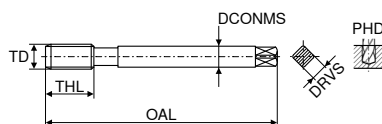
▲ NC = for synchronised CNC machining with minimum length compensation chuck



DIN 371 with reinforced shank

UNI	UNI	UNI	UNI	UNI NC
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
vap.	TiN	TiN	TiCN	TiN GS
HSS-E ≤ 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E ≤ 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-PM ≤ 50° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E ≤ 45° ≤ 1000 N/mm² ≤ 3xD	HSS-E ≤ 45° ≤ 1000 N/mm² ≤ 3xD

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 118 ...	Article no. 23 120 ...	Article no. 23 026 ...	Article no. 23 122 ...	Article no. 23 124 ...
	mm	mm	mm	mm	mm	mm	mm						
M2	0,40	45	2,8	2,1	1,60	4	12	2	020	020			
M2,5	0,45	50	2,8	2,1	2,05	5	14	2	025	025			
M3	0,50	56	3,5	2,7	2,50	6	18	3	030	030	030	030	030
M4	0,70	63	4,5	3,4	3,30	7	21	3	040	040	040	040	040
M5	0,80	70	6,0	4,9	4,20	8	25	3	050	050	050	050	050
M6	1,00	80	6,0	4,9	5,00	10	30	3	060	060	060	060	060
M8	1,25	90	8,0	6,2	6,80	14	35	3	080	080	080	080	080
M10	1,50	100	10,0	8,0	8,50	16	39	3	100	100	100	100	100



DIN 376 with reduced shank

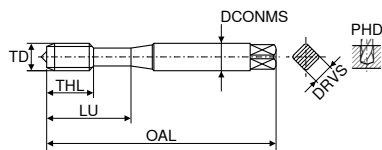
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 119 ...	Article no. 23 121 ...	Article no. 23 027 ...	Article no. 23 123 ...	Article no. 23 125 ...
	mm	mm	mm	mm	mm	mm						
M3	0,50	56	2,2	2,1	2,5	6	3	030				
M4	0,70	63	2,8	2,1	3,3	7	3	040				
M5	0,80	70	3,5	2,7	4,2	8	3	050				
M6	1,00	80	4,5	3,4	5,0	10	3	060				
M8	1,25	90	6,0	4,9	6,8	14	3	080				
M10	1,50	100	7,0	5,5	8,5	16	3	100				
M12	1,75	110	9,0	7,0	10,2	18	3	120	120			
M12	1,75	110	9,0	7,0	10,2	18	4			120	120	120
M14	2,00	110	11,0	9,0	12,0	20	3		14000			
M14	2,00	110	11,0	9,0	12,0	20	4			140		
M16	2,00	110	12,0	9,0	14,0	22	3	160	160			
M16	2,00	110	12,0	9,0	14,0	22	4			160	160	160
M18	2,50	125	14,0	11,0	15,5	25	3		18000			
M20	2,50	140	16,0	12,0	17,5	25	3	200	200	200		
M20	2,50	140	16,0	12,0	17,5	25	4				200	200
M22	2,50	140	18,0	14,5	19,5	27	4		22000			
M24	3,00	160	18,0	14,5	21,0	34	4		240			
M27	3,00	160	20,0	16,0	24,0	30	4		27000			
M30	3,50	180	22,0	18,0	26,5	35	4		30000			
M33	3,50	180	25,0	20,0	29,5	35	4		33000			
M36	4,00	200	28,0	22,0	32,0	40	4		36000			

Steel	2-25	5-45	10-20	5-45	5-45
Stainless steel	2-8	5-15	8-15	5-15	5-15
Cast iron	5-20	10-25	20-25	10-25	10-25
Non ferrous metals	10-20	15-40	20-25	15-40	15-40
Heat resistant alloys					
Hardened materials					

Blind hole – Machine taps, right hand

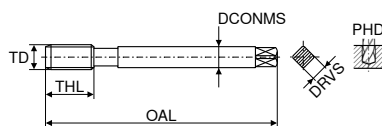
▲ NCW = with Weldon flat for synchronised CNC machining without length compensation chuck

M



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 126 ...	Article no. 23 216 ...	Article no. 23 312 ...	Article no. 23 414 ...
	mm	mm	mm	mm	mm	mm	mm					
M2	0,40	45	2,8	2,1	1,60	4	12	2				
M2,5	0,45	50	2,8	2,1	2,05	5	14	2		020		020
M3	0,50	56	3,5	2,7	2,50	6	18	3		025		025
M3	0,50	70	6,0	4,9	2,50	6	18	3	030	030		030
M4	0,70	63	4,5	3,4	3,30	7	21	3		040		040
M4	0,70	70	6,0	4,9	3,30	7	21	3	040	040		040
M5	0,80	70	6,0	4,9	4,20	8	25	3	050	050		050
M6	1,00	80	6,0	4,9	5,00	10	30	3	060	060		060
M8	1,25	90	8,0	6,2	6,80	14	35	3	080	080		080
M10	1,50	100	10,0	8,0	8,50	16	39	3	100	100		100



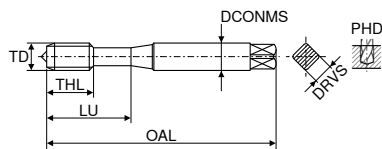
DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 127 ...	Article no. 23 217 ...	Article no. 23 313 ...	Article no. 23 415 ...
	mm	mm	mm	mm	mm	mm					
M12	1,75	110	10	8,0	10,2	18	3	120			
M12	1,75	110	9	7,0	10,2	18	3		120		120
M14	2,00	110	11	9,0	12,0	20	3		140		
M16	2,00	110	12	9,0	14,0	22	3	160	160		160
M20	2,50	140	16	12,0	17,5	25	3		200		200
M24	3,00	160	18	14,5	21,0	30	4			200	240

Steel	5-45	5-25	5-45
Stainless steel	5-15		3-10
Cast iron	10-25		
Non ferrous metals	15-40		
Heat resistant alloys	5-8		
Hardened materials			

Blind hole – Machine taps, right hand

M

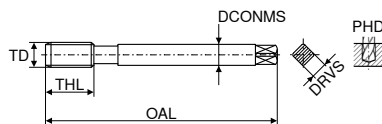


DIN 371 with reinforced shank

VA	VA	VA	AL	AL
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
TiN		TiN		CrN

HSS-E
 $\angle 45^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 3xD$ HSS-PM
 $\angle 40^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 2,5xD$ HSS-PM
 $\angle 40^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 2,5xD$ HSS-E
 $\angle 35^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 2,5xD$ HSS-E
 $\angle 35^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 2,5xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 416 ...	Article no. 23 426 ...	Article no. 23 456 ...	Article no. 23 616 ...	Article no. 23 614 ...
	mm	mm	mm	mm	mm	mm	mm						
M2	0,40	45	2,8	2,1	1,60	4	12	2	020				
M2,5	0,45	50	2,8	2,1	2,05	5	14	2	025				
M3	0,50	56	3,5	2,7	2,50	6	18	3	030	030	030	030	030
M4	0,70	63	4,5	3,4	3,30	7	21	3	040	040	040	040	040
M5	0,80	70	6,0	4,9	4,20	8	25	3	050	050	050	050	050
M6	1,00	80	6,0	4,9	5,00	10	30	3	060	060	060	060	060
M8	1,25	90	8,0	6,2	6,80	14	35	3	080	080	080	080	080
M10	1,50	100	10,0	8,0	8,50	16	39	3	100	100	100	100	100



DIN 376 with reduced shank

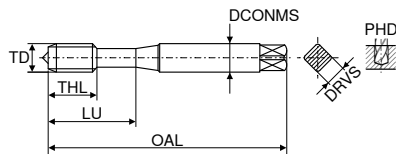
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 417 ...	Article no. 23 427 ...	Article no. 23 457 ...	Article no. 23 617 ...	Article no. 23 615 ...
	mm	mm	mm	mm	mm	mm						
M12	1,75	110	9	7,0	10,2	18	3		120	120	120	120
M12	1,75	110	9	7,0	10,2	18	4	120				
M14	2,00	110	11	9,0	12,0	20	4		140			
M16	2,00	110	12	9,0	14,0	22	3		160	160		
M16	2,00	110	12	9,0	14,0	22	4	160				
M20	2,50	140	16	12,0	17,5	25	3		200	200		
M20	2,50	140	16	12,0	17,5	25	4	200				
M24	3,00	160	18	14,5	21,0	30	4		240			

Steel												
Stainless steel								8-20	5-10	8-20		
Cast iron												
Non ferrous metals											10-20	15-40
Heat resistant alloys												
Hardened materials												

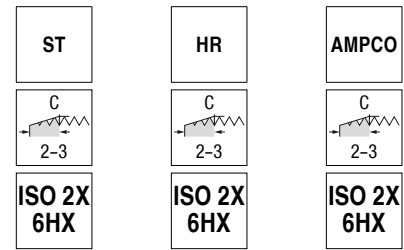
Through hole / Blind hole – Machine taps, right hand

M

TWIN



DIN 371 with reinforced shank



nitr.



HSS-E
 $\angle 0^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$



HSS-E
 $\angle 0^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 2xD$



HSS-PM
 $\angle 0^\circ$
 $\leq 800 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 028 ...	Article no. 22 006 ...	Article no. 22 030 ...
mm	mm	mm	mm	mm	mm	mm	mm				
M1,2	0,25	40	2,5	2,1	0,95	5	13	2	012 ¹⁾		
M1,4	0,30	40	2,5	2,1	1,10	6	13	2	014 ¹⁾		
M1,6	0,35	40	2,5	2,1	1,25	6	11	2	016		
M1,7	0,35	40	2,5	2,1	1,35	6	11	2	017		
M1,8	0,35	40	2,5	2,1	1,45	6	11	2	018		
M2	0,40	45	2,8	2,1	1,60	7	12	3	020		
M2,2	0,45	45	2,8	2,1	1,75	7	12	3	022		
M2,3	0,40	45	2,8	2,1	1,90	7	12	3	023		
M2,5	0,45	50	2,8	2,1	2,05	9	14	3	025		
M2,6	0,45	50	2,8	2,1	2,15	9	14	3	026		
M3	0,50	56	3,5	2,7	2,50	11	18	3	030	030	030
M3,5	0,60	56	4,0	3,0	2,90	12	20	3	035		
M4	0,70	63	4,5	3,4	3,30	13	21	3	040	040	040
M5	0,80	70	6,0	4,9	4,20	15	25	3	050	050	050
M6	1,00	80	6,0	4,9	5,00	17	30	3	060	060	060
M7	1,00	80	7,0	5,5	6,00	17	30	3	070		
M8	1,25	90	8,0	6,2	6,80	20	35	3	080	080	080
M10	1,50	100	10,0	8,0	8,50	22	39	3	100	100	100
M12	1,75	110	12,0	9,0	10,20	24	44	3	120		

Steel	10-20	6-15
Stainless steel		
Cast iron		6-15
Non ferrous metals	10-20	
Heat resistant alloys		3-5
Hardened materials		3-5

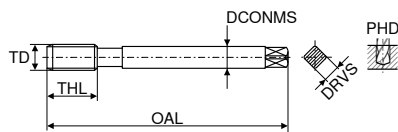
1) Tol. 4H/5H $\leq$ M1.4

DIN 376 can be found on the next page

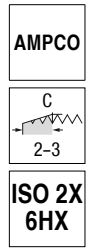
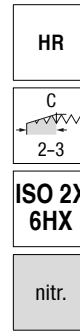
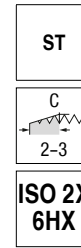
Through hole / Blind hole – Machine taps, right hand

M

TWIN



DIN 376 with reduced shank



HSS-E
 $\angle 0^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$



HSS-E
 $\angle 0^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 2xD$



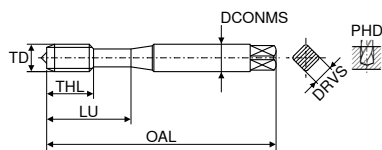
HSS-PM
 $\angle 0^\circ$
 $\leq 800 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 029 ...	Article no. 22 007 ...	Article no. 22 031 ...
mm	mm	mm	mm	mm	mm	mm				
M4	0,70	63	2,8	2,1	3,3	13	3	040		
M5	0,80	70	3,5	2,7	4,2	15	3	050		
M6	1,00	80	4,5	3,4	5,0	17	3	060		
M8	1,25	90	6,0	4,9	6,8	20	3	080		
M10	1,50	100	7,0	5,5	8,5	22	3	100		
M12	1,75	110	9,0	7,0	10,2	24	3	120	120	
M12	1,75	110	9,0	7,0	10,2	24	4			120
M14	2,00	110	11,0	9,0	12,0	26	3	140		
M16	2,00	110	12,0	9,0	14,0	27	3	160	160	
M16	2,00	110	12,0	9,0	14,0	27	4			160
M18	2,50	125	14,0	11,0	15,5	30	4	180		
M20	2,50	140	16,0	12,0	17,5	32	4	200		200
M22	2,50	140	18,0	14,5	19,5	32	4	220		
M24	3,00	160	18,0	14,5	21,0	34	4	240		240
M33	3,50	180	25,0	20,0	29,5	40	4	330		
Steel								10-20	6-15	
Stainless steel										
Cast iron									6-15	
Non ferrous metals								10-20		
Heat resistant alloys									3-5	3-5
Hardened materials										

Through hole / Blind hole – Machine taps, right hand

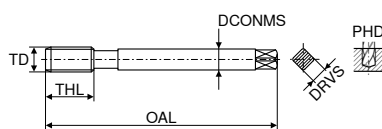
M

TWIN



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M2	0,40	45	2,8	2,1	1,60	7	12	3
M2,5	0,45	50	2,8	2,1	2,05	9	14	3
M3	0,50	56	3,5	2,7	2,50	11	18	3
M3,5	0,60	56	4,0	3,0	2,90	12	20	3
M4	0,70	63	4,5	3,4	3,30	13	21	3
M5	0,80	70	6,0	4,9	4,20	15	25	3
M6	1,00	80	6,0	4,9	5,00	17	30	3
M8	1,25	90	8,0	6,2	6,80	20	35	3
M10	1,50	100	10,0	8,0	8,50	22	39	3



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M4	0,70	63	2,8	2,1	3,3	13	3
M5	0,80	70	3,5	2,7	4,2	15	3
M6	1,00	80	4,5	3,4	5,0	17	3
M8	1,25	90	6,0	4,9	6,8	20	3
M10	1,50	100	7,0	5,5	8,5	22	3
M12	1,75	110	9,0	7,0	10,2	24	3
M14	2,00	110	11,0	9,0	12,0	26	3
M16	2,00	110	12,0	9,0	14,0	27	3
M18	2,50	125	14,0	11,0	15,5	30	4
M20	2,50	140	16,0	12,0	17,5	32	4
M22	2,50	140	18,0	14,5	19,5	32	4
M24	3,00	160	18,0	14,5	21,0	34	4

GG

ISO 2X
6HX

nitr.

GG

ISO 2X
6HX

nitr.



HSS-E

 $\angle 0^\circ$
 $\leq 1050 \text{ N/mm}^2$
 $\leq 2xD$


HSS-E

 $\angle 0^\circ$
 $\leq 1050 \text{ N/mm}^2$
 $\leq 2xD$
Article no.
22 032 ...Article no.
22 036 ...020
025
030
035
040
050
060
080
100050
060
080
100Article no.
22 033 ...Article no.
22 037 ...040
050
060
080
100
120
140
160
180
200
220
240120
140
160
200

Steel

Stainless steel

Cast iron

10-20

10-20

Non ferrous metals

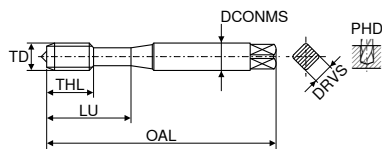
Heat resistant alloys

Hardened materials

Through hole / Blind hole – Machine taps, right hand

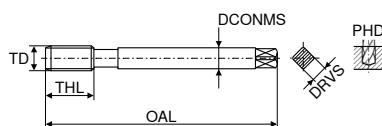
M

TWIN



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	63	4,5	3,4	2,55	6	18	4
M4	0,70	63	4,5	3,4	3,40	8	20	4
M5	0,80	70	6,0	4,9	4,30	10	26	4
M6	1,00	80	6,0	4,9	5,00	10	30	4
M6	1,00	80	6,0	4,9	5,10	12	28	4
M8	1,25	90	8,0	6,2	6,80	14	35	5
M8	1,25	90	8,0	6,2	6,90	15	35	5
M10	1,50	100	10,0	8,0	8,50	18	38	5
M10	1,50	100	10,0	8,0	8,50	16	39	5
M12	1,75	110	12,0	9,0	10,40	21	41	5
M16	2,00	110	16,0	12,0	14,20	24	44	6



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7	10,4	18	5
M16	2,00	110	12	9	14,2	22	6

Article no.
22 228 ...120
160

Steel

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

Hardened materials

1-3

1-3

HT

ISO 2X
6HX

OSM



Solid carbide

 $\angle 0^\circ$
 $\leq 63 \text{ HRC}$
 $\leq 1,5xD$
Article no.
22 806 ...030
040
050
060
080
100
120
160

HT

ISO 2X
6HX

TiCN

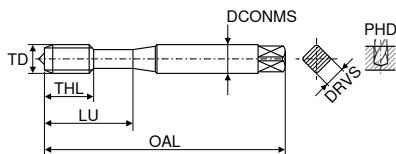


HSS-PM

 $\angle 0^\circ$
 $44 - 52 \text{ HRC}$
 $\leq 1,5xD$
Article no.
22 227 ...060
080
100

Through hole / Blind hole – Machine taps, right hand

▲ ES = extra short



DIN 352 with reinforced shank



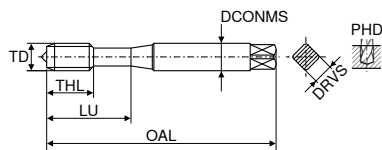
HSS-E

 $\angle 0^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 018 ...
mm	mm	mm	mm	mm	mm	mm	mm		
M2	0,40	36	2,8	2,1	1,60	8		3	020
M2,5	0,45	40	2,8	2,1	2,05	9		3	025
M3	0,50	40	3,5	2,7	2,50	10	18	3	030
M4	0,70	45	4,5	3,4	3,30	12	22	3	040
M5	0,80	50	6,0	4,9	4,20	14	25	3	050
M6	1,00	56	6,0	4,9	5,00	16	28	3	060
M8	1,25	63	6,0	4,9	6,80	20		3	080
M10	1,50	70	7,0	5,5	8,50	22		3	100
M12	1,75	75	9,0	7,0	10,20	24		3	120
Steel									10-20
Stainless steel									
Cast iron									
Non ferrous metals									10-20
Heat resistant alloys									
Hardened materials									

Through hole / Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank



HSS-E

 $\angle 0^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	100	3,5	2,7	2,5	11	18	3
M4	0,70	125	4,5	3,4	3,3	13	21	3
M5	0,80	140	6,0	4,9	4,2	15	25	3
M6	1,00	160	6,0	4,9	5,0	17	30	3
M8	1,25	180	8,0	6,2	6,8	20	35	3

Article no.
22 122 ...

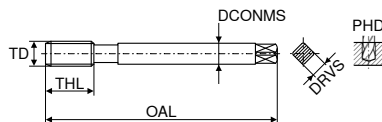
030

040

050

060

080



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M10	1,50	200	7	5,5	8,5	22	3
M12	1,75	224	9	7,0	10,2	24	3
M16	2,00	224	12	9,0	14,0	27	3
M20	2,50	280	16	12,0	17,5	32	4

Article no.
22 123 ...

100

120

160

200

Steel	6-15
Stainless steel	
Cast iron	6-15
Non ferrous metals	
Heat resistant alloys	3-5
Hardened materials	

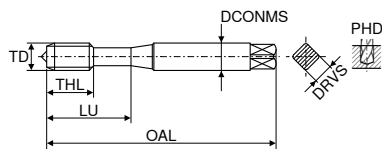
Through hole / Blind hole – Machine taps, right hand

M

GG

ISO 2X
6HX

TiCN



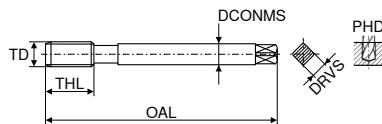
DIN 371 with reinforced shank



HSS-E

 $\angle 0^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 512 ...
	mm	mm	mm	mm	mm	mm	mm		
M3	0,50	56	3,5	2,7	2,5	11	18	3	030
M4	0,70	63	4,5	3,4	3,3	13	21	3	040
M5	0,80	70	6,0	4,9	4,2	15	25	3	050
M6	1,00	80	6,0	4,9	5,0	17	30	3	060
M8	1,25	90	8,0	6,2	6,8	20	35	3	080
M10	1,50	100	10,0	8,0	8,5	22	39	3	100



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 513 ...
	mm	mm	mm	mm	mm	mm		
M12	1,75	110	9	7	10,2	24	3	120

Steel

Stainless steel

Cast iron

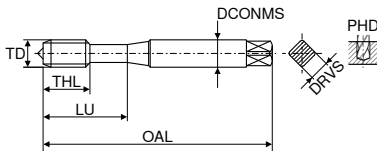
Non ferrous metals

Heat resistant alloys

Hardened materials

10-30

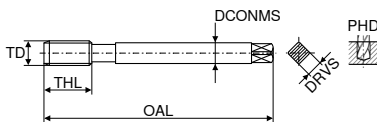
Through hole / Blind hole – Machine thread formers, right hand



DIN 2174 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU
	mm	mm	mm	mm	mm	mm	mm
M1	0,25	40	2,5	2,1	0,90	5	6,5
M1,2	0,25	40	2,5	2,1	1,10	5	6,5
M1,4	0,30	40	2,5	2,1	1,28	6	9,0
M1,6	0,35	40	2,5	2,1	1,47	6	9,0
M1,7	0,35	40	2,5	2,1	1,57	6	9,0
M2	0,40	45	2,8	2,1	1,85	7	10,0
M2,5	0,45	50	2,8	2,1	2,30	9	14,0
M2,5	0,45	50	2,8	2,1	2,33	9	14,0
M2,6	0,45	50	2,8	2,1	2,43	9	14,0
M3	0,50	56	3,5	2,7	2,80	6	18,0
M3	0,50	56	3,5	2,7	2,80	11	18,0
M3,5	0,60	56	4,0	3,0	3,25	12	20,0
M4	0,70	63	4,5	3,4	3,70	13	21,0
M4	0,70	63	4,5	3,4	3,70	7	21,0
M5	0,80	70	6,0	4,9	4,65	15	25,0
M5	0,80	70	6,0	4,9	4,65	8	25,0
M6	1,00	80	6,0	4,9	5,60	10	30,0
M6	1,00	80	6,0	4,9	5,60	17	30,0
M8	1,25	90	8,0	6,2	7,40	20	35,0
M8	1,25	90	8,0	6,2	7,45	20	35,0
M8	1,25	90	8,0	6,2	7,45	14	35,0
M10	1,50	100	10,0	8,0	9,35	16	39,0
M10	1,50	100	10,0	8,0	9,35	22	39,0

1) Tol. ISO 1X 4HX ≤ M1.4



DIN 2174 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL
	mm	mm	mm	mm	mm	mm
M12	1,75	110	9	7	11,25	24
M16	2,00	110	12	9	15,10	27

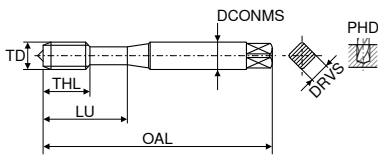
Article no.
22 101 ...120
160

Steel	8-30	8-25	8-30	8-30
Stainless steel	8-15		8-15	8-15
Cast iron				
Non ferrous metals	12-25	10-30	12-25	12-25
Heat resistant alloys				
Hardened materials				

EC	EC	EC	EC
C 2-3	C 2-3	C 2-3	C 2-3
ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
Ti200	HCr	TiN GS	TiN
HSS-PM ≤ 1400 N/mm ² ≤ 1,5xD	HSS-E ≤ 1100 N/mm ² ≤ 1,5xD	HSS-E ≤ 1100 N/mm ² ≤ 1,5xD	HSS-E ≤ 1100 N/mm ² ≤ 1,5xD
Article no. 22 112 ...	Article no. 22 128 ...	Article no. 22 136 ...	Article no. 22 100 ...
			010 ¹⁾
			012 ¹⁾
			014 ¹⁾
			016
			017
			020
	020	025	025
	025		025
			026
030			030
	030	030	035
	040	040	040
040			050
050	050	050	
060			060
	060	060	080
	080	080	
080			
100	100	100	100

Through hole / Blind hole – Machine thread formers, right hand

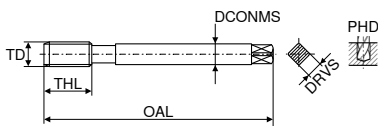
▲ SN = Thread formers with lubrication grooves



DIN 2174 with reinforced shank

EC SN	EC SN	EC SN	EC SN	EC SN
C 2-3	C 2-3	C 2-3	C 2-3	C 2-3
ISO 2X 6HX	ISO 2X 6HX	ISO 3X 6GX	ISO 2X 6HX	ISO 2X 6HX
nitr.	HCr	TiN	TiN GS	TiN
HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 104 ...	Article no. 22 107 ...	Article no. 22 108 ...	Article no. 22 154 ...	Article no. 22 105 ...
mm	mm	mm	mm	mm	mm	mm	mm						
M2	0,40	45	2,8	2,1	1,85	7	10	3					020
M2,5	0,45	50	2,8	2,1	2,33	9	14	3					025
M3	0,50	56	3,5	2,7	2,80	11	18	3					
M3	0,50	56	3,5	2,7	2,80	11	18	4	030	030	030	030	030
M3,5	0,60	56	4,0	3,0	3,25	12	20	3					035
M4	0,70	63	4,5	3,4	3,70	13	21	4					
M4	0,70	63	4,5	3,4	3,70	13	21	5	040	040	040	040	040
M5	0,80	70	6,0	4,9	4,65	15	25	4					
M5	0,80	70	6,0	4,9	4,65	15	25	5	050	050	050	050	050
M6	1,00	80	6,0	4,9	5,60	17	30	4					
M6	1,00	80	6,0	4,9	5,60	17	30	5	060	060	060	060	060
M8	1,25	90	8,0	6,2	7,45	20	35	6	080	080	080	080	080
M10	1,50	100	10,0	8,0	9,35	22	39	6	100	100	100	100	100



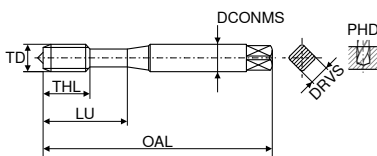
DIN 2174 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 106 ...
mm	mm	mm	mm	mm	mm	mm		
M12	1,75	110	9	7	11,25	24	6	120
M14	2,00	110	11	9	13,10	26	5	140
M16	2,00	110	12	9	15,10	27	7	160

Steel	8-30	8-30	8-30	8-30	8-30
Stainless steel	8-15	8-15	8-15	8-15	8-15
Cast iron					
Non ferrous metals	10-30	10-30	12-25	12-25	12-25
Heat resistant alloys					
Hardened materials					

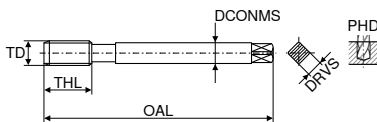
Through hole / Blind hole – Machine thread formers, right hand

▲ SN = Thread formers with lubrication grooves



DIN 2174 with reinforced shank

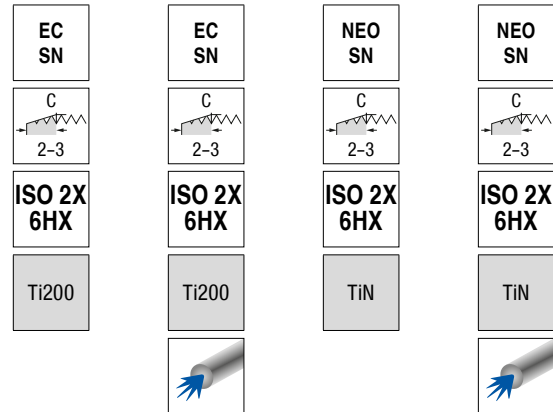
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M2	0,40	45	2,8	2,1	1,85	4	12	3
M2,5	0,45	50	2,8	2,1	2,33	5	14	3
M3	0,50	56	3,5	2,7	2,80	6	18	3
M3	0,50	56	3,5	2,7	2,80	11	18	4
M4	0,70	63	4,5	3,4	3,70	13	21	4
M4	0,70	63	4,5	3,4	3,70	7	21	4
M5	0,80	70	6,0	4,9	4,65	8	25	4
M5	0,80	70	6,0	4,9	4,65	15	25	4
M6	1,00	80	6,0	4,9	5,60	10	30	4
M6	1,00	80	6,0	4,9	5,60	17	30	5
M8	1,25	90	8,0	6,2	7,45	20	35	5
M8	1,25	90	8,0	6,2	7,45	14	35	5
M10	1,50	100	10,0	8,0	9,35	22	39	5
M10	1,50	100	10,0	8,0	9,35	16	39	5



DIN 2174 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12	1,75	110	9	7	11,25	18	5
M12	1,75	110	9	7	11,25	24	6
M16	2,00	110	12	9	15,10	27	6

Steel	8-30	8-30	5-30	5-30
Stainless steel	8-15	8-15	5-15	5-15
Cast iron				
Non ferrous metals	12-25	12-25	5-10	5-10
Heat resistant alloys			5-20	5-20
Hardened materials				

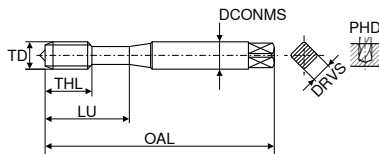


HSS-PM ≤ 1400 N/mm ² ≤ 3xD	HSS-PM ≤ 1400 N/mm ² ≤ 3xD	HSS-PM ≤ 1100 N/mm ² ≤ 3xD	HSS-PM ≤ 1100 N/mm ² ≤ 3xD
Article no. 22 114 ...	Article no. 22 118 ...	Article no. 22 452 ...	Article no. 22 453 ...
020			
025			
030		030	
040		040	
050	050	050	050
060	060	060	060
080	080	080	080
100	100	100	100

Through hole / Blind hole – Machine thread formers, right hand

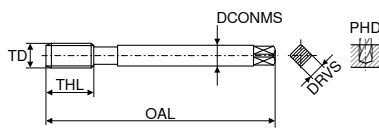
▲ SN = Thread formers with lubrication grooves

M



DIN 2174 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 810 ...	Article no. 23 812 ...	Article no. 23 814 ...	Article no. 23 816 ...
	mm	mm	mm	mm	mm	mm	mm					
M2	0,40	45	2,8	2,1	1,85	7	12		020	020		
M2	0,40	45	2,8	2,1	1,85	7	12	3			020	020
M2,5	0,45	50	2,8	2,1	2,33	9	14	3			025	025
M2,5	0,45	50	2,8	2,1	2,33	9	14		025	025		
M3	0,50	56	3,5	2,7	2,80	11	18	3			030	030
M3	0,50	56	3,5	2,7	2,80	11	18		030	030		
M4	0,70	63	4,5	3,4	3,70	13	21	4			040	040
M4	0,70	63	4,5	3,4	3,70	13	21		040	040		
M5	0,80	70	6,0	4,9	4,65	15	25	4			050	050
M5	0,80	70	6,0	4,9	4,65	15	25		050	050		
M6	1,00	80	6,0	4,9	5,60	17	30	4			060	060
M6	1,00	80	6,0	4,9	5,60	17	30		060	060		
M8	1,25	90	8,0	6,2	7,45	20	35	5			080	080
M8	1,25	90	8,0	6,2	7,45	20	35		080	080		
M10	1,50	100	10,0	8,0	9,35	22	39	5			100	100
M10	1,50	100	10,0	8,0	9,35	22	39		100	100		



DIN 2174 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 811 ...	Article no. 23 813 ...	Article no. 23 815 ...	Article no. 23 817 ...
	mm	mm	mm	mm	mm	mm					
M12	1,75	110	9	7,0	11,25	24		120	120		
M12	1,75	110	9	7,0	11,25	24	5			120	120
M16	2,00	110	12	9,0	15,10	27	6			160	160
M16	2,00	110	12	9,0	15,10	27		160	160		
M18	2,50	125	14	11,0	16,80	30	6			18000	
M20	2,50	140	16	12,0	18,80	32	6			20000	
M24	3,00	160	18	14,5	22,60	34	6			24000	

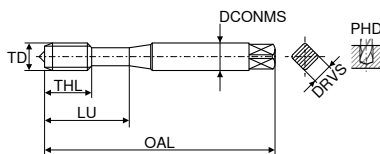
Steel	10-50	10-50	10-50	10-50
Stainless steel	5-20	5-20	5-20	5-20
Cast iron				
Non ferrous metals	10-50	10-50	10-50	10-50
Heat resistant alloys	5-15	5-15	5-15	5-15
Hardened materials				

Through hole – machine taps for wire thread inserts, right hand

EG M

Stabil

UNI

6H
modnitr. +
vap.

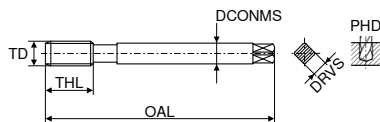
DIN 40435 with reinforced shank



HSS-E

 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 662 ...
	mm	mm	mm	mm	mm	mm	mm		
EG-M2,5	0,45	56	3,5	2,7	2,65	11	18	3	025
EG-M3	0,50	63	4,5	3,4	3,15	10	21	3	030
EG-M4	0,70	70	6,0	4,9	4,20	12	25	3	040
EG-M5	0,80	80	6,0	4,9	5,25	13	30	3	050
EG-M6	1,00	90	8,0	6,2	6,30	17	35	3	060
EG-M8	1,25	100	10,0	8,0	8,40	18	39	3	080



DIN 40435 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 663 ...
	mm	mm	mm	mm	mm	mm		
EG-M10	1,50	100	9	7,0	10,50	22	3	100
EG-M12	1,75	110	11	9,0	12,50	26	3	120
EG-M16	2,00	125	14	11,0	16,50	27	3	160
EG-M20	2,50	160	18	14,5	20,75	34	3	200

Steel	6-20
Stainless steel	4-8
Cast iron	6-15
Non ferrous metals	
Heat resistant alloys	
Hardened materials	

Blind hole – machine taps for wire thread inserts, right hand

EG M

Salo-Rex

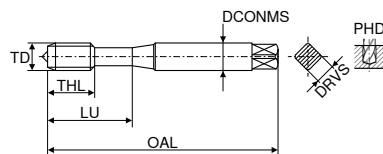
Soft

UNI

6H
mod6H
mod

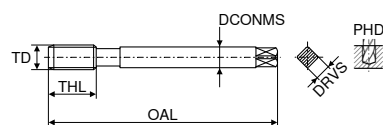
CH

vap.

HSS-E
 $\angle 42^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 3xD$ HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$ 

DIN 40435 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 280 ...	Article no. 22 664 ...
mm	mm	mm	mm	mm	mm	mm	mm			
EG-M2,5	0,45	56	3,5	2,7	2,65	5	18	2	025	
EG-M2,5	0,45	56	3,5	2,7	2,65	5	18	3		025
EG-M3	0,50	63	4,5	3,4	3,15	5	21	2	030	
EG-M3	0,50	63	4,5	3,4	3,15	5	21	3		030
EG-M4	0,70	70	6,0	4,9	4,20	8	25	2	040	
EG-M4	0,70	70	6,0	4,9	4,20	8	25	3		040
EG-M5	0,80	80	6,0	4,9	5,25	8	30	2	050	
EG-M5	0,80	80	6,0	4,9	5,25	8	30	3		050
EG-M6	1,00	90	8,0	6,2	6,30	10	35	2	060	
EG-M6	1,00	90	8,0	6,2	6,30	10	35	3		060
EG-M8	1,25	100	10,0	8,0	8,40	16	39	2	080	
EG-M8	1,25	100	10,0	8,0	8,40	16	39	3		080



DIN 40435 with reduced shank

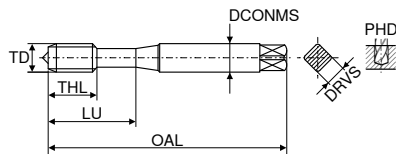
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 665 ...
mm	mm	mm	mm	mm	mm	mm		
EG-M10	1,50	100	9	7,0	10,50	15	5	100
EG-M12	1,75	110	11	9,0	12,50	20	4	120
EG-M16	2,00	125	14	11,0	16,50	20	5	160
EG-M20	2,50	160	18	14,5	20,75	30	4	200

Steel	6-20
Stainless steel	4-8
Cast iron	6-15
Non ferrous metals	15-40
Heat resistant alloys	
Hardened materials	

Through hole – Machine taps, right hand

MF

Stabil



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M4x0,5	0,50	63	4,5	3,4	3,5	10	21	3
M4x0,5	0,50	63	4,5	3,4	3,5	5	21	3
M5x0,5	0,50	70	6,0	4,9	4,5	11	25	3
M6x0,5	0,50	80	6,0	4,9	5,5	13	30	3
M6x0,75	0,75	80	6,0	4,9	5,2	13	30	3
M6x0,75	0,75	80	6,0	4,9	5,2	8	30	3
M6x0,5	0,50	80	6,0	4,9	5,5	5	30	3
M5x0,5	0,50	70	6,0	4,9	4,5	5	25	3
M8x1	1,00	90	8,0	6,2	7,0	17	35	3
M10x1	1,00	90	10,0	8,0	9,0	18	35	4

Steel	6-20	6-25	6-15
Stainless steel	4-8	5-10	5-10
Cast iron	6-15	10-20	
Non ferrous metals		12-25	10-20
Heat resistant alloys			
hardened materials			

UNI	UNI	VG
ISO 2 6H	ISO 2 6H	ISO 2X 6HX
nitr. + vap.	TiN	TiN

HSS-E
 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$ HSS-E
 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$ HSS-E
 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

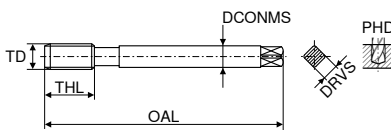
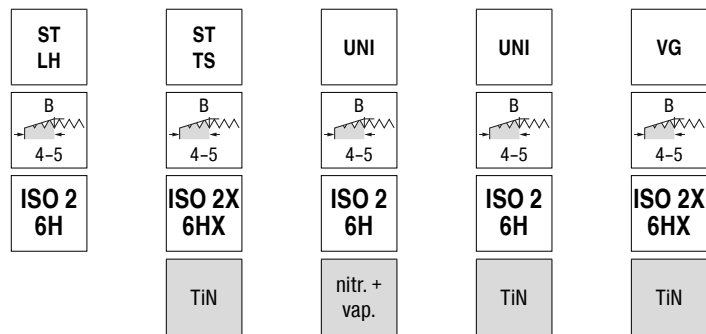
Article no. 22 590 ...	Article no. 22 550 ...	Article no. 22 587 ...
040	040	040
050	050	
060	060	
062	062	
		062
		060
		050
084	080	
102	100	

i DIN 374 can be found on the next page

Through hole – Machine taps, right/left hand

▲ TS = for high-speed machining, up to 100 m/min.

▲ LH = for left hand threads



DIN 374 with reduced shank



TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 210 ...	Article no. 22 193 ...	Article no. 22 551 ...	Article no. 22 552 ...	Article no. 22 570 ...
mm	mm	mm	mm	mm	mm	mm						
M6x0,75	0,75	80	4,5	3,4	5,2	13	3			062		
M6x0,5	0,50	80	4,5	3,4	5,5	13	3			060		
M8x0,75	0,75	80	6,0	4,9	7,2	14	3	082		082		
M8x1	1,00	90	6,0	4,9	7,0	17	3	084		084		
M8x1	1,00	90	6,0	4,9	7,0	10	4		080		080	080
M10x1	1,00	90	7,0	5,5	9,0	18	4	102		102	100	
M10x0,75	0,75	90	7,0	5,5	9,2	18	4			100		
M10x1,25	1,25	100	7,0	5,5	8,8	16	4					102
M10x1,25	1,25	100	7,0	5,5	8,8	22	3			104		
M10x1	1,00	90	7,0	5,5	9,0	10	4		100			100
M12x1	1,00	100	9,0	7,0	11,0	18	4	120		120	121	
M12x1,5	1,50	100	9,0	7,0	10,5	22	3	124		124	120	
M12x1,25	1,25	100	9,0	7,0	10,8	22	3			122		
M12x1,5	1,50	100	9,0	7,0	10,5	15	4		120			120
M14x1,5	1,50	100	11,0	9,0	12,5	22	3	144		144	140	
M14x1	1,00	100	11,0	9,0	13,0	18	4		140			140
M14x1,5	1,50	100	11,0	9,0	12,5	15	4					140
M16x1,5	1,50	100	12,0	9,0	14,5	22	3	162		162	160	
M16x1,5	1,50	100	12,0	9,0	14,5	15	4		160			160
M18x1	1,00	110	14,0	11,0	17,0	20	5			180		
M18x1,5	1,50	110	14,0	11,0	16,5	25	4	182		182		
M18x2	2,00	125	14,0	11,0	16,0	26	3			184		
M18x1,5	1,50	110	14,0	11,0	16,5	17	4		180			180
M20x1,5	1,50	125	16,0	12,0	18,5	25	4	202		202	200	
M20x1	1,00	125	16,0	12,0	19,0	20	5			200		
M20x1,5	1,50	125	16,0	12,0	18,5	17	4		200			200
M22x1,5	1,50	125	18,0	14,5	20,5	25	4			222	220	
M26x1,5	1,50	140	18,0	14,5	24,5	28	4			260		
M24x2	2,00	140	18,0	14,5	22,0	27	4			244		
M25x1,5	1,50	140	18,0	14,5	23,5	28	4			250		
M24x1,5	1,50	140	18,0	14,5	22,5	27	4			242		
M27x2	2,00	140	20,0	16,0	25,0	28	4			272		
M28x1,5	1,50	140	20,0	16,0	26,5	28	5			280		
M30x1,5	1,50	150	22,0	18,0	28,5	28	5			302		

Steel	10-20	20-100	6-20	6-25	6-15
Stainless steel			4-8	5-10	5-10
Cast iron		20-60	6-15	10-20	
Non ferrous metals	10-20	20-100		12-25	10-20
Heat resistant alloys		10-25			
hardened materials					

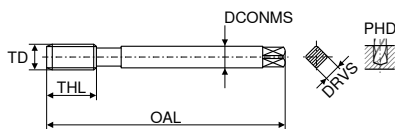
Through hole – Machine taps, right hand

MF

UNI

ISO 2
6H

TiN



DIN 374 with reduced shank



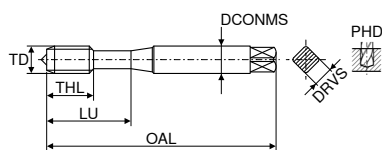
HSS-PM

 $\angle 0^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 3 \times D$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 041 ...
mm	mm	mm	mm	mm	mm	mm		
M8x1	1,00	90	6	4,9	7,0	17	3	081
M10x1	1,00	90	7	5,5	9,0	18	4	102
M10x1,25	1,25	100	7	5,5	8,8	22	3	104
M12x1	1,00	100	9	7,0	11,0	18	4	120
M12x1,25	1,25	100	9	7,0	10,8	22	3	122
M12x1,5	1,50	100	9	7,0	10,5	22	3	121
M14x1,5	1,50	100	11	9,0	12,5	22	3	144
M14x1,25	1,25	100	11	9,0	12,8	22	3	142
M16x1,5	1,50	100	12	9,0	14,5	22	3	162
M18x1,5	1,50	110	14	11,0	16,5	17	4	182
M20x1,5	1,50	125	16	12,0	18,5	17	4	202
M24x1,5	1,50	140	18	14,5	22,5	27	4	242
M24x2	2,00	140	18	14,5	22,0	27	4	244
M22x1,5	1,50	125	18	14,5	20,5	25	4	222
Steel								10-20
Stainless steel								8-15
Cast iron								20-25
Non ferrous metals								20-25
Heat resistant alloys								
hardened materials								

Through hole – Machine taps, right hand

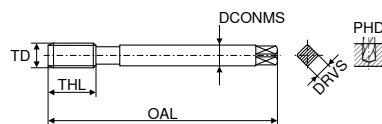
MF



DIN 371 with reinforced shank

UNI	UNI	FE	FE-HF	VA
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
nitr. + vap.	TiN		TiCN	TiN
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
$\angle 0^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	$\angle 0^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	$\angle 0^\circ$ $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1200 \text{ N/mm}^2$ $\leq 4xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 140 ...	Article no. 23 142 ...	Article no. 23 240 ...	Article no. 23 340 ...	Article no. 23 440 ...
mm	mm	mm	mm	mm	mm	mm	mm						
M4x0,5	0,50	63	4,5	3,4	3,5	10	21	3	040	040	040		
M6x0,75	0,75	80	6,0	4,9	5,2	13	30	3	062	062	062	062	062
M6x0,5	0,50	80	6,0	4,9	5,5	13	30	3	060	060	060		
M5x0,5	0,50	70	6,0	4,9	4,5	11	25	3	050	050	050	050	050

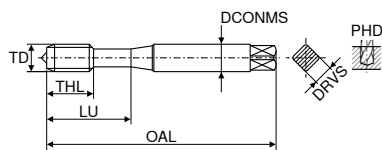


DIN 374 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 141 ...	Article no. 23 143 ...	Article no. 23 241 ...	Article no. 23 341 ...	Article no. 23 441 ...
mm	mm	mm	mm	mm	mm	mm						
M8x0,75	0,75	80	6	4,9	7,0	14	3				082	
M8x0,5	0,50	80	6	8,0	7,5	14	3			080		
M8x1	1,00	90	6	4,9	7,0	17	3	084		084	084	084
M8x1	1,00	90	6	4,9	7,0	17	4		084			
M8x0,75	0,75	80	6	4,9	7,2	14	3	082	082	082		082
M10x0,75	0,75	90	7	5,5	9,2	18	4	100	100	100		
M10x1,25	1,25	100	7	5,5	8,8	22	3	104	104	104		
M10x1	1,00	90	7	5,5	9,0	18	4	102	102	102	102	102
M12x1,5	1,50	100	9	7,0	10,5	22	3	124	124	124	124	124
M12x1,25	1,25	100	9	7,0	10,8	22	3	122	122	122		
M12x1	1,00	100	9	7,0	11,0	18	4	120	120	120	120	120
M14x1	1,00	100	11	9,0	13,0	18	4	140	140	140		
M14x1,5	1,50	100	11	9,0	12,5	22	3	144	144	144	144	144
M16x1	1,00	100	12	9,0	15,0	18	4	160	160	160		
M16x1,5	1,50	100	12	9,0	14,5	22	3	162	162	162	162	162
M18x1	1,00	110	14	11,0	17,0	20	5			180		
M18x1,5	1,50	110	14	11,0	16,5	25	4	182	182	182		
M20x1,5	1,50	125	16	12,0	18,5	25	4	202	202	202		
M20x1	1,00	125	16	12,0	19,0	20	5			200		
M26x1,5	1,50	140	18	14,5	24,5	28	4			260		
M24x1,5	1,50	140	18	14,5	22,5	27	4	242	242	242		
M22x1,5	1,50	125	18	14,5	20,5	25	4	222	222	222		
M28x1,5	1,50	140	20	16,0	26,5	28	5			280		
M30x1,5	1,50	150	22	18,0	28,5	28	5			300		

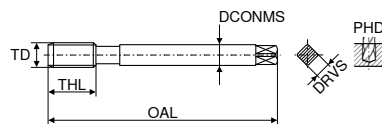
Steel	2-25	5-45	5-25	5-45	
Stainless steel	2-8	5-15			8-20
Cast iron	5-20	10-25			
Non ferrous metals	10-20	15-40			
Heat resistant alloys					
hardened materials					

Blind hole – Machine taps, right hand



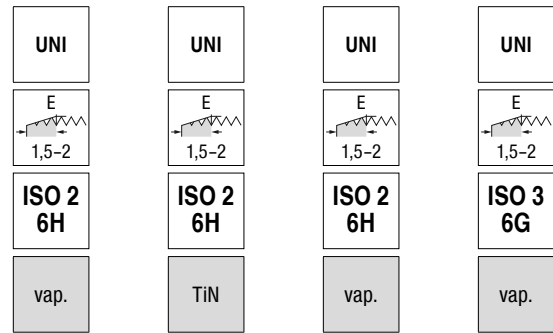
DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 441 ...
	mm	mm	mm	mm	mm	mm	mm		
M4x0,5	0,50	63	4,5	3,4	3,50	5	21	3	040
M6x0,75	0,75	80	6,0	4,9	5,25	8	30	3	062
M5x0,5	0,50	70	6,0	4,9	4,50	5	25	3	050



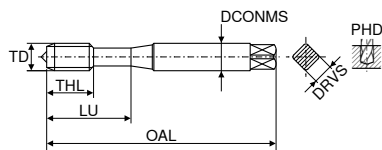
DIN 374 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 555 ...	Article no. 22 556 ...	Article no. 22 491 ...	Article no. 22 490 ...
	mm	mm	mm	mm	mm	mm					
M8x1	1,0	90	6	4,9	7,0	10	3	080	080		080
M10x1	1,0	90	7	5,5	9,0	10	4	100	100		100
M12x1,5	1,5	100	9	7,0	10,5	15	5	120	120	120	120
M14x1,5	1,5	100	11	9,0	12,5	15	5	140	140	140	140
M16x1,5	1,5	100	12	9,0	14,5	15	5	160	160	160	160
M18x1,5	1,5	110	14	11,0	16,5	17	5				180
M20x1,5	1,5	125	16	12,0	18,5	17	5			200	200
Steel								6-20	6-25	6-20	6-20
Stainless steel								4-8	5-10	4-8	4-8
Cast iron								6-15	10-20	6-15	6-15
Non ferrous metals									12-25		
Heat resistant alloys											
hardened materials											



Blind hole – Machine taps, right hand

▲ CNC = for synchronised CNC machining with minimum length compensation chuck



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 202 ...	Article no. 22 548 ...
	mm	mm	mm	mm	mm	mm	mm			
M4x0,5	0,50	63	4,5	3,4	3,5	5	21	3	040	
M5x0,5	0,50	70	6,0	4,9	4,5	5	25	3	050	050
M6x0,75	0,75	80	6,0	4,9	5,2	8	30	3	062	062
M6x0,5	0,50	80	6,0	4,9	5,5	5	30	3	060	060

UNI	UNI	UNI CNC	UNI CNC
C 2-3	C 2-3	E 1,5-2	E 1,5-2
ISO 2 6H	ISO 2 6H	7G	ISO 2 6H
vap.	TiN	TiN GS	TiN GS



HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$



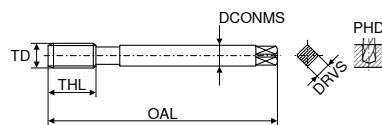
HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$



HSS-E
 $\angle 45^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$



HSS-E
 $\angle 45^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$



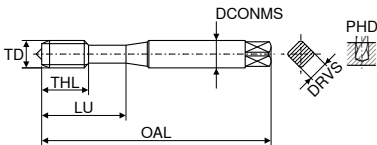
DIN 374 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 553 ...	Article no. 22 554 ...	Article no. 22 563 ...	Article no. 22 549 ...
	mm	mm	mm	mm	mm	mm					
M6x0,75	0,75	80	4,5	3,4	5,2	8	3	062			
M8x0,75	0,75	80	6,0	4,9	7,2	8	3	080			082
M8x1	1,00	90	6,0	4,9	7,0	10	3	082	080	084	084
M10x0,75	0,75	90	7,0	5,5	9,2	10	4	101			
M10x1	1,00	90	7,0	5,5	9,0	10	3	100	100		
M10x1	1,00	90	7,0	5,5	9,0	10	4			102	102
M10x1,25	1,25	100	7,0	5,5	8,8	16	3	102			
M12x1	1,00	100	9,0	7,0	11,0	11	4	120	121		120
M12x1,25	1,25	100	9,0	7,0	10,8	15	4	122			
M12x1,5	1,50	100	9,0	7,0	10,5	15	4	124	120		
M12x1,5	1,50	100	9,0	7,0	10,5	15	5			124	124
M14x1,5	1,50	100	11,0	9,0	12,5	15	5			144	144
M14x1,5	1,50	100	11,0	9,0	12,5	15	4	140	140		
M16x1,5	1,50	100	12,0	9,0	14,5	15	4	160	160		
M16x1,5	1,50	100	12,0	9,0	14,5	15	5			162	162
M18x1,5	1,50	110	14,0	11,0	16,5	17	5				182
M18x1,5	1,50	110	14,0	11,0	16,5	17	4	180	182		
M20x1,5	1,50	125	16,0	12,0	18,5	17	5			202	202
M20x1,5	1,50	125	16,0	12,0	18,5	17	4	200	202		
M22x1,5	1,50	125	18,0	14,5	20,5	17	4	220			
M26x1,5	1,50	140	18,0	14,5	24,5	20	5	260			
M24x1,5	1,50	140	18,0	14,5	22,5	20	5	240			
M28x1,5	1,50	140	20,0	16,0	26,5	20	5	280			
M30x1,5	1,50	150	22,0	18,0	28,5	22	6	300			

Steel	6-20	6-25	6-25	6-25
Stainless steel	4-8	5-10	5-10	5-10
Cast iron	6-15	10-20	10-20	10-20
Non ferrous metals		12-25	12-25	12-25
Heat resistant alloys				
hardened materials				

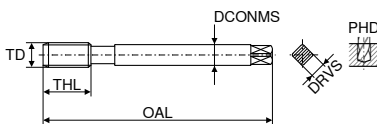
Blind hole – Machine taps, right/left hand

▲ LH = for left hand threads



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M2,5x0,35	0,35	50	2,8	2,1	2,15	5,0	15	2
M3x0,35	0,35	56	3,5	2,7	2,65	4,5	18	3
M3,5x0,35	0,35	56	4,0	3,0	3,15	5,0	20	3
M4x0,5	0,50	63	4,5	3,4	3,50	5,0	21	3
M5x0,5	0,50	70	6,0	4,9	4,50	5,0	25	3
M6x0,75	0,75	80	6,0	4,9	5,20	8,0	30	3
M8x0,75	0,75	80	8,0	6,2	7,20	8,0	30	3
M8x1	1,00	90	8,0	6,2	7,00	10,0	35	3

Article no.
22 238 ...025
030
035
040
050
060
080
082

DIN 374 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M6x0,75	0,75	80	4,5	3,4	5,2	8	3
M8x0,75	0,75	80	6,0	4,9	7,2	8	3
M8x1	1,00	90	6,0	4,9	7,0	10	3
M10x1	1,00	90	7,0	5,5	9,0	10	3
M12x1,5	1,50	100	9,0	7,0	10,5	15	4
M12x1	1,00	100	9,0	7,0	11,0	11	4
M14x1,5	1,50	100	11,0	9,0	12,5	15	4
M16x1,5	1,50	100	12,0	9,0	14,5	15	4
M18x1,5	1,50	110	14,0	11,0	16,5	17	4
M20x1,5	1,50	125	16,0	12,0	18,5	17	4
M22x1,5	1,50	125	18,0	14,5	20,5	17	4
M26x1,5	1,50	140	18,0	14,5	24,5	20	5
M24x1,5	1,50	140	18,0	14,5	22,5	20	5

Article no.
22 601 ...Article no.
22 186 ...

M6x0,75	0,75	80	4,5	3,4	5,2	8	3		060
M8x0,75	0,75	80	6,0	4,9	7,2	8	3		080
M8x1	1,00	90	6,0	4,9	7,0	10	3	082	082
M10x1	1,00	90	7,0	5,5	9,0	10	3	100	100
M12x1,5	1,50	100	9,0	7,0	10,5	15	4		122
M12x1	1,00	100	9,0	7,0	11,0	11	4	120	120
M14x1,5	1,50	100	11,0	9,0	12,5	15	4	140	140
M16x1,5	1,50	100	12,0	9,0	14,5	15	4	160	160
M18x1,5	1,50	110	14,0	11,0	16,5	17	4	180	180
M20x1,5	1,50	125	16,0	12,0	18,5	17	4	200	200
M22x1,5	1,50	125	18,0	14,5	20,5	17	4		220
M26x1,5	1,50	140	18,0	14,5	24,5	20	5		260
M24x1,5	1,50	140	18,0	14,5	22,5	20	5		240

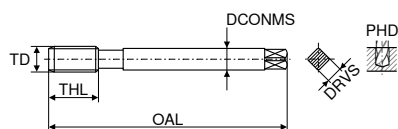
Steel	10-20	10-20
Stainless steel		
Cast iron		
Non ferrous metals	10-20	10-20
Heat resistant alloys		
hardened materials		

Blind hole – Machine taps, right hand

MF

SL

ST

ISO 2
6H

DIN 374 with reduced shank



HSS-E

 $\angle 15^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 182 ...
mm	mm	mm	mm	mm	mm	mm		
M6x0,75	0,75	80	4,5	3,4	5,2	13	3	062
M8x0,75	0,75	80	6,0	4,9	7,2	14	3	082
M8x1	1,00	90	6,0	4,9	7,0	17	3	084
M10x1	1,00	90	7,0	5,5	9,0	18	3	102
M10x0,75	0,75	90	7,0	5,5	9,2	18	3	100
M10x1,25	1,25	100	7,0	5,5	8,8	22	3	104
M9x1	1,00	90	7,0	5,5	8,0	17	3	090
M11x1	1,00	90	8,0	6,2	10,0	18	3	110
M12x1,25	1,25	100	9,0	7,0	10,8	22	3	122
M12x1,5	1,50	100	9,0	7,0	10,5	22	3	124
M12x1	1,00	100	9,0	7,0	11,0	18	3	120
M14x1	1,00	100	11,0	9,0	13,0	18	4	140
M14x1,5	1,50	100	11,0	9,0	12,5	22	3	144
M16x1	1,00	100	12,0	9,0	15,0	18	4	160
M16x1,5	1,50	100	12,0	9,0	14,5	22	3	162
M15x1	1,00	100	12,0	9,0	14,0	18	4	150
M18x1,5	1,50	110	14,0	11,0	16,5	25	4	182
M18x2	2,00	125	14,0	11,0	16,0	26	3	184
M18x1	1,00	110	14,0	11,0	17,0	20	4	180
M20x1	1,00	125	16,0	12,0	19,0	20	4	200
M20x2	2,00	140	16,0	12,0	18,0	27	3	204
M20x1,5	1,50	125	16,0	12,0	18,5	25	4	202
M22x2	2,00	140	18,0	14,5	20,0	27	4	224
M24x1,5	1,50	140	18,0	14,5	22,5	27	4	242
M24x1	1,00	140	18,0	14,5	23,0	20	5	240
M24x2	2,00	140	18,0	14,5	22,0	27	4	244
M22x1,5	1,50	125	18,0	14,5	20,5	25	4	222
M25x1,5	1,50	140	18,0	14,5	23,5	28	4	252
M22x1	1,00	125	18,0	14,5	21,0	20	4	220
M27x1,5	1,50	140	20,0	16,0	25,5	28	4	270
M28x2	2,00	140	20,0	16,0	26,0	28	4	282
M27x2	2,00	140	20,0	16,0	25,0	28	4	272
M30x1,5	1,50	150	22,0	18,0	28,5	28	5	302
M32x1,5	1,50	150	22,0	18,0	30,5	28	6	320
M30x2	2,00	150	22,0	18,0	28,0	28	4	304
M33x2	2,00	160	25,0	20,0	31,0	30	4	332
M36x2	2,00	170	28,0	22,0	34,0	30	5	362
M36x3	3,00	200	28,0	22,0	33,0	42	4	364
M34x1,5	1,50	170	28,0	22,0	32,5	30	6	340

Steel

10-20

Stainless steel

Cast iron

Non ferrous metals

Heat resistant alloys

hardened materials

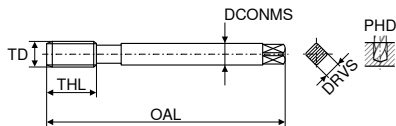
10-20

Blind hole – Machine taps, right hand

MF

SL

ST

ISO 2
6H

DIN 374 with reduced shank

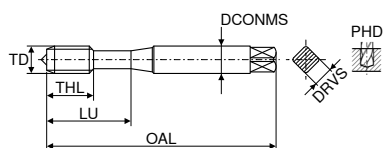


HSS-E

 $\angle 15^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 182 ...
mm	mm	mm	mm	mm	mm	mm		
M40x1,5	1,50	170	32,0	24,0	38,5	30	6	400
M42x3	3,00	200	32,0	24,0	39,0	45	4	424
M42x2	2,00	170	32,0	24,0	40,0	30	6	422
M45x1,5	1,50	180	36,0	29,0	43,5	32	6	450
M48x2	2,00	190	36,0	29,0	46,0	32	6	482
M48x3	3,00	225	36,0	29,0	45,0	50	5	484
M48x1,5	1,50	190	36,0	29,0	46,5	32	6	480
M45x3	3,00	200	36,0	29,0	42,0	45	5	454
M52x2	2,00	190	40,0	32,0	50,0	32	6	522
Steel								10-20
Stainless steel								
Cast iron								
Non ferrous metals								10-20
Heat resistant alloys								
hardened materials								

Blind hole – Machine taps, right hand



DIN 371 with reinforced shank

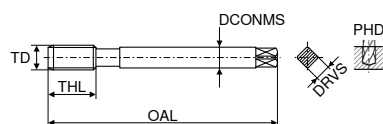


HSS-E
 $\angle 42^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 3xD$

HSS-E
 $\angle 42^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 3xD$

HSS-E
 $\angle 45^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 176 ...
	mm	mm	mm	mm	mm	mm	mm		
M4x0,5	0,50	63	4,5	3,4	3,5	5	21	3	040
M6x0,75	0,75	80	6,0	4,9	5,2	8	30	3	062
M6x0,5	0,50	80	6,0	4,9	5,5	5	30	3	060
M5x0,5	0,50	70	6,0	4,9	4,5	5	25	3	050



DIN 374 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 188 ...	Article no. 22 189 ...	Article no. 22 177 ...
	mm	mm	mm	mm	mm	mm				
M8x1	1,00	90	6	4,9	7,0	10	3	081	082	084
M8x0,75	0,75	80	6	4,9	7,2	8	3			082
M10x1	1,00	90	7	5,5	9,0	10	4		100	102
M10x1	1,00	90	7	5,5	9,0	10	3	100		
M12x1	1,00	100	9	7,0	11,0	11	4	120	121	120
M12x1,5	1,50	100	9	7,0	10,5	15	4	122		
M12x1,5	1,50	100	9	7,0	10,5	15	5		120	124
M14x1,5	1,50	100	11	9,0	12,5	15	5		140	144
M14x1,5	1,50	100	11	9,0	12,5	15	4	140		
M16x1,5	1,50	100	12	9,0	14,5	15	4	160		
M16x1,5	1,50	100	12	9,0	14,5	15	5		160	162
M18x1,5	1,50	110	14	11,0	16,5	17	5			182
M18x1,5	1,50	110	14	11,0	16,5	17	4	180		
M20x1,5	1,50	125	16	12,0	18,5	17	4	200		
M20x1,5	1,50	125	16	12,0	18,5	17	5		200	202
M26x1,5	1,50	140	18	14,5	24,5	20	6		260	
M28x1,5	1,50	140	20	16,0	26,5	20	6		280	
M30x1,5	1,50	150	22	18,0	28,5	22	6		300	

Steel	5-12
Stainless steel	5-10
Cast iron	
Non ferrous metals	10-20
Heat resistant alloys	
Hardened materials	

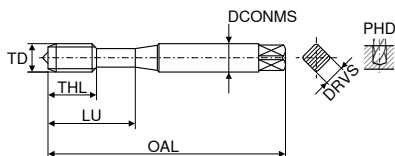
Blind hole – Machine taps, right hand

MF

UNI

ISO 2
6H

TiN



DIN 374 with reinforced shank



HSS-PM

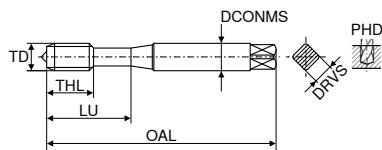
 $\angle 40^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 2,5 \times D$
Article no.
23 047 ...

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	
mm	mm	mm	mm	mm	mm	mm	mm		
M8x1	1,00	90	6	4,9	7,0	10	35	3	081
M10x1	1,00	90	7	5,5	9,0	10	35	4	102
M10x1,25	1,25	100	7	5,5	8,8	16	39	4	104
M12x1	1,00	100	9	7,0	11,0	11	40	4	120
M12x1,25	1,25	100	9	7,0	10,8	15	40	5	122
M12x1,5	1,50	100	9	7,0	10,5	15	40	5	121
M14x1	1,00	100	11	9,0	12,8	11	40	4	140
M14x1,5	1,50	100	11	9,0	12,5	15	40	5	144
M16x1,5	1,50	100	12	9,0	14,5	15	44	5	162
M18x1,5	1,50	110	14	11,0	16,5	17	44	5	182
M20x1,5	1,50	125	16	12,0	18,5	17	44	5	202
M22x1,5	1,50	125	18	14,5	20,5	17	44	5	222
M24x1,5	1,50	140	18	14,5	22,5	20	48	5	242
M24x2	2,00	140	18	14,5	22,0	20	48	5	244
Steel									10-20
Stainless steel									8-15
Cast iron									20-25
Non ferrous metals									20-25
Heat resistant alloys									
Hardened materials									

Blind hole – Machine taps, right hand

▲ NC = for synchronised CNC machining with minimum length compensation chuck

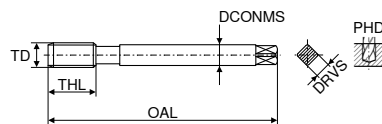
MF



DIN 371 with reinforced shank

UNI	UNI	UNI NC	FE	FE-HF
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
vap.	TiN	TiN GS		TiCN
HSS-E ≤ 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E ≤ 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E ≤ 45° ≤ 1000 N/mm² ≤ 3xD	HSS-E ≤ 35° ≤ 850 N/mm² ≤ 2,5xD	HSS-E ≤ 35° ≤ 1100 N/mm² ≤ 2,5xD

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 144 ...	Article no. 23 146 ...	Article no. 23 148 ...	Article no. 23 242 ...	Article no. 23 342 ...
mm	mm	mm	mm	mm	mm	mm	mm						
M4x0,5	0,50	63	4,5	3,4	3,5	5	21	3	040				
M6x0,75	0,75	80	6,0	4,9	5,2	8	30	3	062	040			
M6x0,5	0,50	80	6,0	4,9	5,5	5	30	3	060	060	060	060	062
M5x0,5	0,50	70	6,0	4,9	4,5	5	25	3	050	050	050	050	050



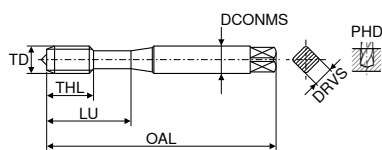
DIN 374 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 145 ...	Article no. 23 147 ...	Article no. 23 149 ...	Article no. 23 243 ...	Article no. 23 343 ...
mm	mm	mm	mm	mm	mm	mm						
M4x0,5	0,50	63	2,8	2,1	3,5	5	3	040				
M5x0,5	0,50	70	3,5	2,7	4,5	5	3	050				
M6x0,75	0,75	80	4,5	3,4	5,2	8	3	062				
M8x0,75	0,75	80	6,0	4,9	7,2	8	3	082				
M8x1	1,00	90	6,0	4,9	7,0	10	3	084	082			
M8x0,5	0,50	80	6,0	8,0	7,5	6	3		084	082		
M8x0,75	0,75	80	6,0	4,9	7,0	8	3			082	082	084
M10x1,25	1,25	100	7,0	5,5	8,8	16	3	104				
M10x0,75	0,75	90	7,0	5,5	9,2	10	4	100	104			
M10x1	1,00	90	7,0	5,5	9,0	10	4		100			
M10x1	1,00	90	7,0	5,5	9,0	10	3	102	102	102		
M12x1,25	1,25	100	9,0	7,0	10,8	15	4	122				
M12x1,5	1,50	100	9,0	7,0	10,5	15	4	124	124			
M12x1,5	1,50	100	9,0	7,0	10,5	15	5			124		
M12x1	1,00	100	9,0	7,0	11,0	11	4	120	120	120	120	120
M14x1	1,00	100	11,0	9,0	13,0	11	4	140	140		140	
M14x1,5	1,50	100	11,0	9,0	12,5	15	5			144		
M14x1,5	1,50	100	11,0	9,0	12,5	15	4	144	144		144	144
M16x1	1,00	100	12,0	9,0	15,0	12	4	160	160		160	
M16x1,5	1,50	100	12,0	9,0	14,5	15	5			162		
M16x1,5	1,50	100	12,0	9,0	14,5	15	4	162	162		162	162
M18x1,5	1,50	110	14,0	11,0	16,5	17	4	182	182		182	
M18x1,5	1,50	110	14,0	11,0	16,5	17	5			182		
M20x1,5	1,50	125	16,0	12,0	18,5	17	4	202	202		202	
M20x1,5	1,50	125	16,0	12,0	18,5	17	5			202		
M24x1,5	1,50	140	18,0	14,5	22,5	20	5	242	242		242	
M22x1,5	1,50	125	18,0	14,5	20,5	17	4	222	222		222	

Steel	2-25	5-45	5-45	5-25	5-45
Stainless steel	2-8	5-15	5-15		
Cast iron	5-20	10-25	10-25		
Non ferrous metals	10-20	15-40	15-40		
Heat resistant alloys					
Hardened materials					

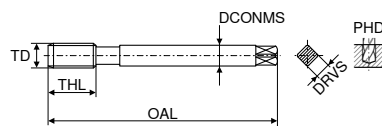
Blind hole – Machine taps, right hand

MF



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 442 ...
	mm	mm	mm	mm	mm	mm	mm		
M6x0,75	0,75	80	6	4,9	5,2	8	30	3	062
M5x0,5	0,50	70	6	4,9	4,5	5	25	3	050



DIN 374 with reduced shank

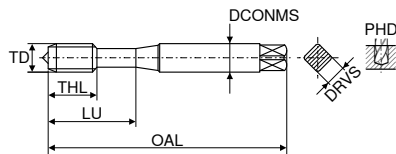
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 447 ...	Article no. 23 443 ...
	mm	mm	mm	mm	mm	mm			
M8x1	1,00	90	6	4,9	7,0	10	3	084	084
M8x0,75	0,75	80	6	4,9	7,2	8	3		082
M10x1	1,00	90	7	5,5	9,0	10	4	102	102
M12x1,5	1,50	100	9	7,0	10,5	15	5	124	124
M12x1	1,00	100	9	7,0	11,0	11	4	120	120
M14x1,5	1,50	100	11	9,0	12,5	15	5	144	144
M16x1,5	1,50	100	12	9,0	14,5	15	5	162	162
M18x1,5	1,50	110	14	11,0	16,5	17	5	182	
M20x1,5	1,50	125	16	12,0	18,5	17	5	202	

Steel		
Stainless steel	5-10	8-20
Cast iron		
Non ferrous metals		
Heat resistant alloys		
Hardened materials		

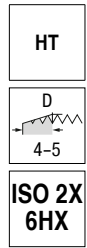
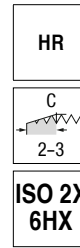
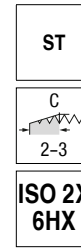
Through hole / Blind hole – Machine taps, right hand

MF

TWIN



DIN 371 with reinforced shank



nit.

OSM



HSS-E
 $\angle 0^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$



HSS-E
 $\angle 0^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 2xD$



Solid carbide
 $\angle 0^\circ$
 $\leq 63 \text{ HRC}$
 $\leq 1,5xD$

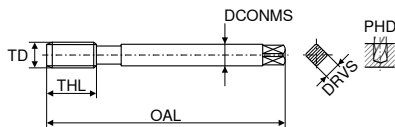
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 144 ...	Article no. 22 146 ...	Article no. 22 817 ...
M3x0,35	0,35	56	3,5	2,7	2,65	8	18	3	030		
M4x0,5	0,50	63	4,5	3,4	3,50	10	21	3	040	040	
M5x0,5	0,50	70	6,0	4,9	4,50	11	25	3	050	050	
M6x0,5	0,50	80	6,0	4,9	5,50	13	30	3	060	060	
M6x0,75	0,75	80	6,0	4,9	5,20	13	30	3	062	062	
M8x1	1,00	90	8,0	6,2	7,00	17	35	3	084		
M8x1	1,00	90	8,0	6,2	7,10	15	35	5			080
M10x1	1,00	100	10,0	8,0	9,10	18	38	5			100
M10x1	1,00	90	10,0	8,0	9,00	18	35	4	104		
M12x1,5	1,50	110	12,0	9,0	10,60	21	41	5			120
M14x1,5	1,50	110	14,0	11,0	12,60	24	44	6			140
M16x1,5	1,50	110	16,0	12,0	14,60	24	44	6			160
Steel									10-20	6-15	
Stainless steel											
Cast iron										6-15	
Non ferrous metals									10-20		
Heat resistant alloys										3-5	
Hardened materials											1-3

i DIN 374 can be found on the next page

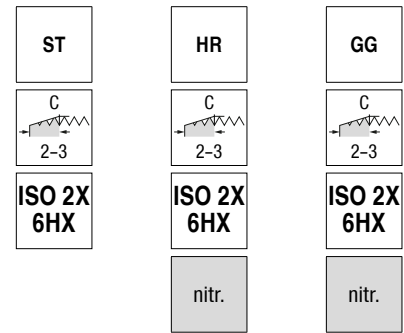
Through hole / Blind hole – Machine taps, right hand

MF

TWIN



DIN 374 with reduced shank



HSS-E
 $\angle 0^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$



HSS-E
 $\angle 0^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 2xD$



HSS-E
 $\angle 0^\circ$
 $\leq 1050 \text{ N/mm}^2$
 $\leq 2xD$

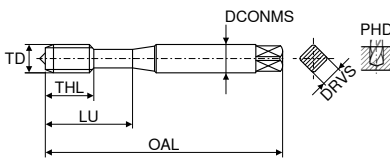
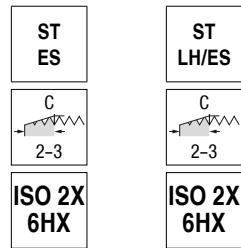
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 171 ...	Article no. 22 209 ...	Article no. 22 173 ...
mm	mm	mm	mm	mm	mm	mm				
M4x0,5	0,50	63	2,8	2,1	3,5	10	3	042		
M5x0,5	0,50	70	3,5	2,7	4,5	11	3	050		050
M6x0,75	0,75	80	4,5	3,4	5,2	13	3	062		062
M6x0,5	0,50	80	4,5	3,4	5,5	13	3	060		060
M8x0,75	0,75	80	6,0	4,9	7,2	14	3	082		080
M8x1	1,00	90	6,0	4,9	7,0	17	3	084		082
M10x1	1,00	90	7,0	5,5	9,0	18	4	104	082	100
M10x1,25	1,25	100	7,0	5,5	8,8	22	3	106		
M10x0,75	0,75	90	7,0	5,5	9,2	18	4	102		
M11x1	1,00	90	8,0	6,2	10,0	18	4	110		
M12x1	1,00	100	9,0	7,0	11,0	18	4	122		120
M12x1,25	1,25	100	9,0	7,0	10,8	22	4	124		
M12x1,5	1,50	100	9,0	7,0	10,5	22	4	126		
M14x1	1,00	100	11,0	9,0	13,0	18	4	140		140
M14x1,25	1,25	100	11,0	9,0	12,8	22	4	142		
M14x1,5	1,50	100	11,0	9,0	12,5	22	4	144		
M16x1	1,00	100	12,0	9,0	15,0	18	5	160		
M16x1,5	1,50	100	12,0	9,0	14,5	22	4	162		
M18x1	1,00	110	14,0	11,0	17,0	20	5	180		
M18x2	2,00	125	14,0	11,0	16,0	26	4	184		
M18x1,5	1,50	110	14,0	11,0	16,5	25	4	182		
M20x1	1,00	125	16,0	12,0	19,0	20	5	200		
M20x2	2,00	140	16,0	12,0	18,0	27	4	204		
M20x1,5	1,50	125	16,0	12,0	18,5	25	4	202		
M24x2	2,00	140	18,0	14,5	22,0	27	4	244		
M22x2	2,00	140	18,0	14,5	20,0	27	4	224		
M22x1	1,00	125	18,0	14,5	21,0	20	5	220		
M24x1	1,00	140	18,0	14,5	23,0	20	6	240		
M26x1,5	1,50	140	18,0	14,5	24,5	28	4	260		260
M24x1,5	1,50	140	18,0	14,5	22,5	27	4	242		240
M25x1,5	1,50	140	18,0	14,5	23,5	28	4	250		
M22x1,5	1,50	125	18,0	14,5	20,5	25	4	222		
M28x1,5	1,50	140	20,0	16,0	26,5	28	5			220
M27x2	2,00	140	20,0	16,0	25,0	28	4	274		280
M27x1,5	1,50	140	20,0	16,0	25,5	28	5	272		
M30x2	2,00	150	22,0	18,0	28,0	28	4	302		
M32x2	2,00	150	22,0	18,0	30,0	28	5	322		
M32x1,5	1,50	150	22,0	18,0	30,5	28	6	320		
M30x1,5	1,50	150	22,0	18,0	28,5	28	5	300		
M33x2	2,00	160	25,0	20,0	31,0	30	5	332		
M36x2	2,00	170	28,0	22,0	34,0	30	5	362		
M36x1,5	1,50	170	28,0	22,0	34,5	30	6	360		
M35x1,5	1,50	170	28,0	22,0	33,5	30	6	350		
M42x1,5	1,50	170	32,0	24,0	40,5	30	6	420		
M42x3	3,00	200	32,0	24,0	39,0	45	5	424		
M40x2	2,00	170	32,0	24,0	38,0	30	6	402		
M50x1,5	1,50	190	36,0	29,0	48,5	32	8	500		
M52x1,5	1,50	190	40,0	32,0	50,5	32	8	520		

Steel	10-20	6-15	
Stainless steel			
Cast iron		6-15	10-20
Non ferrous metals	10-20		
Heat resistant alloys		3-5	
Hardened materials			

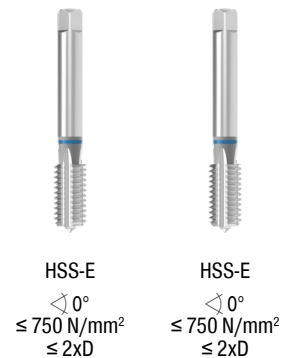
Through hole / Blind hole – Machine taps, right/left hand

▲ ES = extra short

▲ LH = for left hand threads



DIN 2181 with reinforced shank

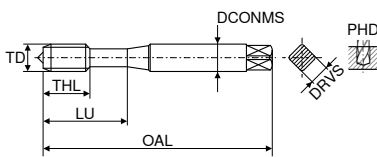


TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 179 ...	Article no. 22 200 ...
mm	mm	mm	mm	mm	mm	mm	mm			
M2,5x0,35	0,35	40	2,8	2,1	2,15	9		3	025	
M3x0,35	0,35	40	3,5	2,7	2,65	8	18	3	030	
M4x0,35	0,35	45	4,5	3,4	3,65	9	22	3	040	
M4x0,5	0,50	45	4,5	3,4	3,50	9	22	3	042	
M4,5x0,5	0,50	50	6,0	4,9	4,00	10	24	3	045	
M5x0,5	0,50	50	6,0	4,9	4,50	11	25	3	050	
M6x0,5	0,50	56	6,0	4,9	5,50	12	27	3	060	
M6x0,75	0,75	56	6,0	4,9	5,20	12	27	3	062	062
M7x0,75	0,75	56	6,0	4,9	6,20	14		3	070	
M8x0,5	0,50	56	6,0	4,9	7,50	14		4	080	
M8x0,75	0,75	56	6,0	4,9	7,20	14		3	082	
M8x1	1,00	63	6,0	4,9	7,00	17		3	084	084
M9x1	1,00	63	7,0	5,5	8,00	17		4	090	
M10x0,75	0,75	63	7,0	5,5	9,20	18		4	100	
M10x1	1,00	63	7,0	5,5	9,00	18		4	102	102
M10x1,25	1,25	70	7,0	5,5	8,80	22		3	104	
M11x1	1,00	63	8,0	6,2	10,00	18		4	110	
M12x1	1,00	70	9,0	7,0	11,00	18		4	120	120
M12x1,25	1,25	70	9,0	7,0	10,80	20		4	122	
M12x1,5	1,50	70	9,0	7,0	10,50	20		4	124	124
M13x1	1,00	70	11,0	9,0	12,00	18		4	130	
M14x1	1,00	70	11,0	9,0	13,00	18		4	140	
M14x1,25	1,25	70	11,0	9,0	12,80	20		4	142	
M14x1,5	1,50	70	11,0	9,0	12,50	20		4	144	144
M15x1	1,00	70	12,0	9,0	14,00	18		5	150	
M16x1	1,00	70	12,0	9,0	15,00	18		5	160	
M16x1,5	1,50	70	12,0	9,0	14,50	20		4	162	162
M18x1	1,00	80	14,0	11,0	17,00	18		5	180	
M18x1,5	1,50	80	14,0	11,0	16,50	22		4	182	182
M18x2	2,00	80	14,0	11,0	16,00	22		4	184	
M20x1,5	1,50	80	16,0	12,0	18,50	22		4	202	202
M20x2	2,00	80	16,0	12,0	18,00	22		4	204	

Steel	10-20	10-20
Stainless steel		
Cast iron		
Non ferrous metals	10-20	10-20
Heat resistant alloys		
Hardened materials		

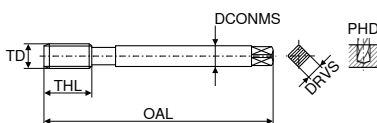
Through hole / Blind hole – Machine thread formers, right hand

▲ SN = Thread formers with lubrication grooves



DIN 2174 with reinforced shank

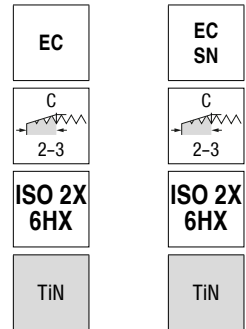
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M4x0,5	0,50	63	4,5	3,4	3,8	10	21	
M4x0,5	0,50	63	4,5	3,4	3,8	10	21	4
M5x0,5	0,50	70	6,0	4,9	4,8	11	25	
M5x0,5	0,50	70	6,0	4,9	4,8	11	25	4
M6x0,5	0,50	80	6,0	4,9	5,8	13	30	
M6x0,5	0,50	80	6,0	4,9	5,8	13	30	5
M6x0,75	0,75	80	6,0	4,9	5,7	13	30	
M6x0,75	0,75	80	6,0	4,9	5,7	13	30	4
M8x0,75	0,75	80	8,0	6,2	7,7	14	30	
M8x0,75	0,75	80	8,0	6,2	7,7	14	30	5
M8x1	1,00	90	8,0	6,2	7,6	17	35	
M8x1	1,00	90	8,0	6,2	7,6	17	35	5
M10x1	1,00	90	10,0	8,0	9,6	18	35	
M10x1	1,00	90	10,0	8,0	9,6	18	35	5



DIN 2174 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12x1	1,0	100	9	7	11,60	18	
M12x1	1,0	100	9	7	11,60	18	6
M12x1,5	1,5	100	9	7	11,35	22	
M12x1,5	1,5	100	9	7	11,35	22	6
M14x1,5	1,5	100	11	9	13,35	22	
M14x1,5	1,5	100	11	9	13,35	22	6
M16x1,5	1,5	100	12	9	15,35	22	
M16x1,5	1,5	100	12	9	15,35	22	6
M20x1,5	1,5	125	16	12	19,35	25	
M20x1,5	1,5	125	16	12	19,35	25	6

Steel	8-30	8-30
Stainless steel	8-15	8-15
Cast iron		
Non ferrous metals	12-25	12-25
Heat resistant alloys		
Hardened materials		

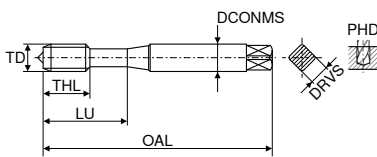


Article no. 22 204 ...	Article no. 22 205 ...
040	040
050	050
060	060
062	062
080	080
082	082
100	100

Through hole / Blind hole – Machine thread formers, right hand

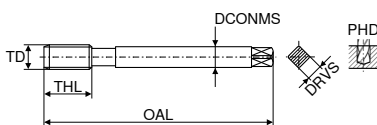
▲ SN = Thread formers with lubrication grooves

MF



DIN 2174 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
M4x0,5	0,50	63	4,5	3,4	3,80	10	21	
M4x0,5	0,50	63	4,5	3,4	3,80	10	21	4
M5x0,5	0,50	70	6,0	4,9	4,80	11	25	
M5x0,5	0,50	70	6,0	4,9	4,80	11	25	4
M6x0,5	0,50	80	6,0	4,9	5,80	13	30	
M6x0,5	0,50	80	6,0	4,9	5,80	13	30	5
M8x1	1,00	90	8,0	6,2	7,60	17	35	
M8x1	1,00	90	8,0	6,2	7,60	17	35	5
M10x1	1,00	90	10,0	8,0	9,60	18	35	
M10x1	1,00	90	10,0	8,0	9,60	18	35	5
M10x1,25	1,25	100	10,0	8,0	9,45	18	39	
M10x1,25	1,25	100	10,0	8,0	9,45	18	39	5



DIN 2174 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
M12x1,25	1,25	100	9	7	11,45	22	
M12x1,25	1,25	100	9	7	11,45	22	6
M12x1,5	1,50	100	9	7	11,35	22	
M12x1,5	1,50	100	9	7	11,35	22	6
M14x1,5	1,50	100	11	9	13,35	22	
M14x1,5	1,50	100	11	9	13,35	22	6
M16x1,5	1,50	100	12	9	15,35	22	
M16x1,5	1,50	100	12	9	15,35	22	6

Steel	10-50	10-50
Stainless steel	5-20	5-20
Cast iron		
Non ferrous metals	10-50	10-50
Heat resistant alloys	5-15	5-15
Hardened materials		

UNI	UNI SN
C 2-3	C 2-3
ISO 2X 6HX	ISO 2X 6HX
TiN	TiN

HSS-E
≤ 850 N/mm²
≤ 3xDHSS-E
≤ 850 N/mm²
≤ 3xD

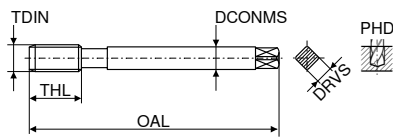
Article no. 23 840 ...	Article no. 23 842 ...
040	040
050	050
060	060
084	084
102	102
104	104

Article no. 23 841 ...	Article no. 23 843 ...
122	122
124	124
144	144
162	162

Through hole – Machine taps, right hand

G

Stabil



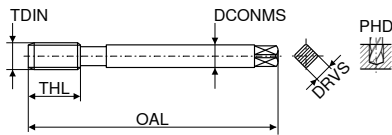
DIN 5156 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes				
	mm	mm	mm	mm	mm	mm					
1/8-28	0,907	90	7	5,5	8,80	18	3				
1/4-19	1,337	100	11	9,0	11,80	22	3				
3/8-19	1,337	100	12	9,0	15,25	22	3				
1/2-14	1,814	125	16	12,0	19,00	25	4				
3/4-14	1,814	140	20	16,0	24,50	28	4				
1-11	2,309	160	25	20,0	30,75	30	4				
								Article no.	Article no.	Article no.	Article no.
								22 632 ...	22 630 ...	22 346 ...	22 352 ...
								012	012	012	012
								025	025	025	025
								037	037	037	037
								050	050	050	050
								075	075	075	075
								100	100	100	100
								6-20	6-25	10-20	
								4-8	5-10		5-10
								6-15	10-20		
									12-25	10-20	

UNI	UNI	ST	VA
ISO 228	ISO 228	ISO 228	ISO 228
nitr. + vap.	TiN		nitr.
HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 750 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 900 \text{ N/mm}^2$ $\leq 4xD$

Through hole – Machine taps, right hand

G



DIN 5156 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
1/8-28	0,907	90	7	5,5	8,80	18	3
1/4-19	1,337	100	11	9,0	11,80	22	3
3/8-19	1,337	100	12	9,0	15,25	22	3
1/2-14	1,814	125	16	12,0	19,00	25	4
3/4-14	1,814	140	20	16,0	24,50	28	4
1-11	2,309	160	25	20,0	30,75	30	4

Steel	2-25	5-45
Stainless steel	2-8	5-15
Cast iron	5-20	10-25
Non ferrous metals	10-20	15-40
Heat resistant alloys		
Hardened materials		

UNI	UNI
B 4-5	B 4-5
ISO 228	ISO 228
nitr. + vap.	TiN



HSS-E

 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$


HSS-E

 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$
Article no.
23 161 ...Article no.
23 160 ...

012

012

025

025

037

037

050

050

075

075

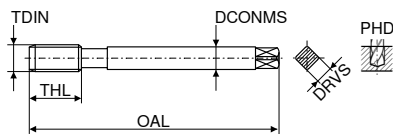
100

100

Blind hole – Machine taps, right hand



UNI	UNI	UNI	UNI	UNI
ISO 228	ISO 228	ISO 228	ISO 228	ISO 228 +0,05
vap.	TiN	vap.	TiN	vap.



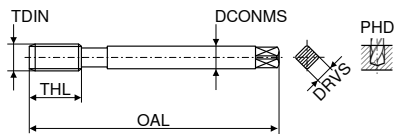
DIN 5156 with reduced shank

HSS-E $\angle 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 633 ...	Article no. 22 634 ...	Article no. 22 635 ...	Article no. 22 636 ...	Article no. 22 639 ...
mm	mm	mm	mm	mm	mm	mm						
1/8-28	0,907	90	7	5,5	8,80	10	3	012	012	012	012	012
1/8-28	0,907	90	7	5,5	8,80	10	4					
1/4-19	1,337	100	11	9,0	11,80	15	4	025	025	025	025	025
1/4-19	1,337	100	11	9,0	11,80	15	5					
3/8-19	1,337	100	12	9,0	15,25	15	4	037	037	025	025	025
3/8-19	1,337	100	12	9,0	15,25	15	5			037	037	037
1/2-14	1,814	125	16	12,0	19,00	17	4	050	050			
1/2-14	1,814	125	16	12,0	19,00	17	5			050	050	050
5/8-14	1,814	125	18	14,5	21,00	17	4	062				
5/8-14	1,814	125	18	14,5	21,00	17	5				062	
3/4-14	1,814	140	20	16,0	24,50	20	4	075				
3/4-14	1,814	140	20	16,0	24,50	20	5					075
7/8-14	1,814	150	22	18,0	28,25	22	5	087				
1-11	2,309	160	25	20,0	30,75	24	5	100				
1-11	2,309	160	25	20,0	30,75	24	6					100
1 1/4-11	2,309	170	32	24,0	39,50	25	6	125				
1 1/2-11	2,309	190	36	29,0	45,25	27	6	150				
Steel								6-20	6-25	6-25	6-25	6-25
Stainless steel								4-8	5-10	4-10	4-10	4-10
Cast iron								6-15	10-20	6-20	6-20	6-20
Non ferrous metals									12-25	12-25	12-25	12-25
Heat resistant alloys												
Hardened materials												

Blind hole – Machine taps, right hand

▲ CNC = for synchronised CNC machining with minimum length compensation chuck



DIN 5156 with reduced shank

UNI CNC	ST	VA	VA
E 1,5-2	C 2-3	E 1,5-2	E 1,5-2
ISO 228	ISO 228	ISO 228	ISO 228
TiN GS		vap.	TiN GS



HSS-E
 $\angle 45^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

HSS-E
 $\angle 42^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 3xD$

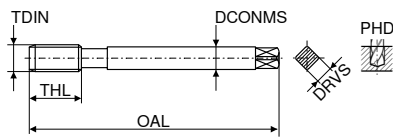
HSS-E
 $\angle 42^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$

HSS-E
 $\angle 45^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 624 ...	Article no. 22 354 ...	Article no. 22 355 ...	Article no. 22 358 ...
mm	mm	mm	mm	mm	mm	mm					
1/8-28	0,907	90	7	5,5	8,80	10	3				
1/8-28	0,907	90	7	5,5	8,80	10	4	012	012	012	012
1/4-19	1,337	100	11	9,0	11,80	15	4	025	025	025	025
1/4-19	1,337	100	11	9,0	11,80	15	5	025	037	025	025
3/8-19	1,337	100	12	9,0	15,25	15	4	037	037	037	037
3/8-19	1,337	100	12	9,0	15,25	15	5	037	050	037	037
1/2-14	1,814	125	16	12,0	19,00	17	4	050	050	050	050
1/2-14	1,814	125	16	12,0	19,00	17	5	050	075	062	050
5/8-14	1,814	125	18	14,5	21,00	17	5		075	062	
3/4-14	1,814	140	20	16,0	24,50	20	4		100	075	
3/4-14	1,814	140	20	16,0	24,50	20	5		100	075	
1-11	2,309	160	25	20,0	30,75	24	5			100	
1-11	2,309	160	25	20,0	30,75	24	6			100	
Steel								6-25	10-20		5-12
Stainless steel								5-10		5-10	5-10
Cast iron								10-20			
Non ferrous metals								12-25	10-20		
Heat resistant alloys											
Hardened materials											

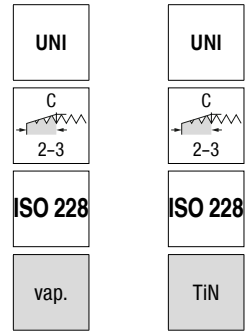
Blind hole – Machine taps, right hand

G



DIN 5156 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 163 ...	Article no. 23 162 ...
	mm	mm	mm	mm	mm	mm			
1/8-28	0,907	90	7	5,5	8,80	10	3	012	012
1/4-19	1,337	100	11	9,0	11,80	15	4	025	025
3/8-19	1,337	100	12	9,0	15,25	15	4	037	037
1/2-14	1,814	125	16	12,0	19,00	17	4	050	050
3/4-14	1,814	140	20	16,0	24,50	20	4	075	075
1-11	2,309	160	25	20,0	30,75	24	5	100	100
Steel								2-25	5-45
Stainless steel								2-8	5-15
Cast iron								5-20	10-25
Non ferrous metals								10-20	15-40
Heat resistant alloys									
Hardened materials									



Through hole / Blind hole – Machine taps, right hand

G

TWIN

ST

HR

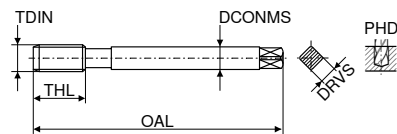
ISO 228
XISO 228
X

nitr.



HSS-E

HSS-E

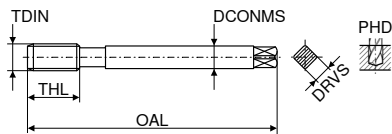
 $\angle 0^\circ$
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$
 $\angle 0^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 2xD$


DIN 5156 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 347 ...	Article no. 22 339 ...
mm	mm	mm	mm	mm	mm	mm			
1/16-28	0,907	90	6	4,9	6,80	17	3	006	
1/8-28	0,907	90	7	5,5	8,80	18	4	012	012
1/4-19	1,337	100	11	9,0	11,80	22	4	025	025
3/8-19	1,337	100	12	9,0	15,25	22	4	037	037
1/2-14	1,814	125	16	12,0	19,00	25	4	050	050
3/4-14	1,814	140	20	16,0	24,50	28	4	075	075
1-11	2,309	160	25	20,0	30,75	30	5	100	100
1 1/8-11	2,309	170	28	22,0	35,50	30	5	112	112
1 1/4-11	2,309	170	32	24,0	39,50	30	6	125	125
1 3/8-11	2,309	180	36	29,0	41,75	32	6	137	137
1 1/2-11	2,309	190	36	29,0	45,25	32	6	150	150
1 3/4-11	2,309	190	40	32,0	51,00	32	6		175
Steel								10-20	6-15
Stainless steel									
Cast iron									6-15
Non ferrous metals								10-20	
Heat resistant alloys									3-5
Hardened materials									

Through hole / Blind hole – Machine thread formers, right hand

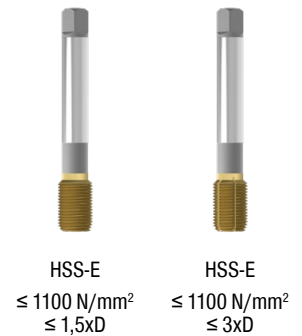
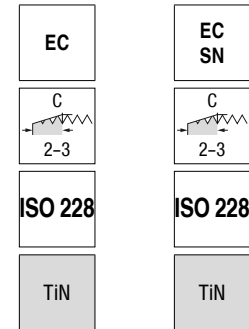
▲ SN = Thread formers with lubrication grooves



DIN 2189 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	mm	mm	mm	mm	mm	mm	
1/8-28	0,907	90	7	5,5	9,25	18	
1/8-28	0,907	90	7	5,5	9,25	18	5
1/4-19	1,337	100	11	9,0	12,55	22	
1/4-19	1,337	100	11	9,0	12,55	22	6
3/8-19	1,337	100	12	9,0	16,05	22	
3/8-19	1,337	100	12	9,0	16,05	22	6
1/2-14	1,814	125	16	12,0	20,10	25	
1/2-14	1,814	125	16	12,0	20,10	25	6

Steel	8-30	8-30
Stainless steel	8-15	8-15
Cast iron		
Non ferrous metals	12-25	12-25
Heat resistant alloys		
Hardened materials		

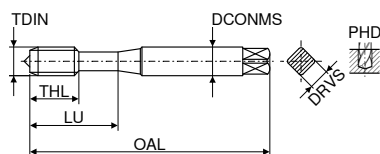


Article no. 22 360 ...	Article no. 22 359 ...
012	012
025	025
037	037
050	050

Through hole – Machine taps, right hand

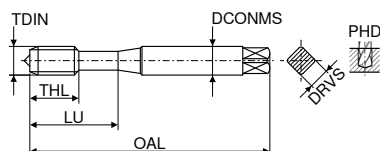
UNC

Stabil



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
Nr. 2-56	0,454	45	2,8	2,1	1,85	7	12	2
Nr. 4-40	0,635	56	3,5	2,7	2,35	11	18	2
Nr. 4-40	0,635	56	3,5	2,7	2,35	11	18	3
Nr. 6-32	0,794	56	4,0	3,0	2,85	12	20	3
Nr. 8-32	0,794	63	4,5	3,4	3,50	13	21	3
Nr. 10-24	1,058	70	6,0	4,9	3,90	15	25	3
Nr. 12-24	1,058	80	6,0	4,9	4,50	16	30	3
1/4-20	1,270	80	7,0	5,5	5,10	17	30	3
5/16-18	1,411	90	8,0	6,2	6,60	20	35	3
3/8-16	1,588	100	10,0	8,0	8,00	22	39	3



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
1/2-13	1,954	110	9	7,0	10,80	25	3
5/8-11	2,309	110	12	9,0	13,50	27	3
3/4-10	2,540	125	14	11,0	16,50	30	3
7/8-9	2,822	140	18	14,5	19,50	32	3
1-8	3,175	160	18	14,5	22,25	36	3

UNI	VA	Ti
B 4-5	B 4-5	B 4-5
2B	2B	2BX
nitr. + vap.	nitr.	TiN



HSS-E
 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

Article no.
22 572 ...

002

004

006

008

010

012

025

031

037



HSS-E
 $\angle 0^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 4xD$

Article no.
22 250 ...

006

008

010

025

031

037



HSS-PM
 $\angle 0^\circ$
 $\leq 44 \text{ HRC}$
 $\leq 4xD$

Article no.
22 269 ...

004

006

008

010

025

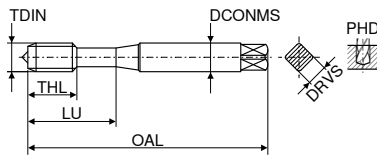
031

037

Steel	6-20	2-5
Stainless steel	4-8	5-10
Cast iron	6-15	
Non ferrous metals		
Heat resistant alloys		2-6
Hardened materials		

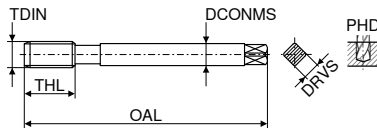
Through hole – Machine taps, right hand

UNC



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	mm	
Nr. 4-40	0,635	56	3,5	2,7	2,30	11	18	2
Nr. 6-32	0,794	56	4,0	3,0	2,85	12	20	3
Nr. 8-32	0,794	63	4,5	3,4	3,50	13	21	3
Nr. 10-24	1,058	70	6,0	4,9	3,90	15	25	3
1/4-20	1,270	80	7,0	5,5	5,20	17	30	3
5/16-18	1,411	90	8,0	6,2	6,60	20	35	3
3/8-16	1,588	100	10,0	8,0	8,00	22	39	3



DIN 376 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	mm	mm	mm	mm	mm	mm	
7/16-14	1,814	100	8	6,2	9,40	22	3
1/2-13	1,954	110	9	7,0	10,75	25	3
5/8-11	2,309	110	12	9,0	13,50	27	3
3/4-10	2,540	125	14	11,0	16,50	30	3

Steel	5-45	5-25	5-45
Stainless steel	5-15		3-10
Cast iron	10-25		
Non ferrous metals	15-40		
Heat resistant alloys			
Hardened materials			

UNI	FE	FE-HF	VA
2B	2B	2B	2B
TiN		TiCN	nitr.
HSS-E $\angle 0^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$
Article no. 23 170 ...	Article no. 23 270 ...	Article no. 23 370 ...	Article no. 23 470 ...
004	004	004	004
006	006	006	006
008	008	008	008
010	010	010	010
025	025	025	025
031	031	031	031
037	037	037	037

Blind hole – Machine taps, right hand

UNC

Salo-Rex

UNI

VA



2B

2B

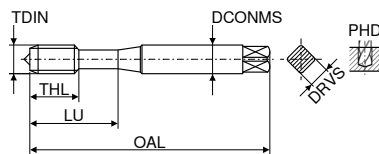
vap.

vap.



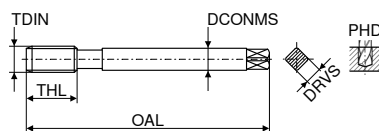
HSS-E

HSS-E

 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$
 $\angle 42^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$


DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 582 ...	Article no. 22 266 ...
mm	mm	mm	mm	mm	mm	mm	mm			
Nr. 2-56	0,454	45	2,8	2,1	1,85	4,5	12	2	002	
Nr. 4-40	0,635	56	3,5	2,7	2,35	6,0	18	2	004	
Nr. 6-32	0,794	56	4,0	3,0	2,85	7,0	20	3	006	006
Nr. 8-32	0,794	63	4,5	3,4	3,50	8,0	21	3	008	008
Nr. 10-24	1,058	70	6,0	4,9	3,90	10,0	25	3	010	010
1/4-20	1,270	80	7,0	5,5	5,10	13,0	30	3	025	025
5/16-18	1,411	90	8,0	6,2	6,60	14,0	35	3	031	031
3/8-16	1,588	100	10,0	8,0	8,00	16,0	39	3	037	037



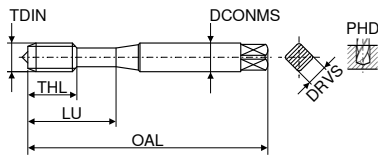
DIN 376 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 22 583 ...	Article no. 22 267 ...
mm	mm	mm	mm	mm	mm	mm			
7/16-14	1,814	100	8	6,2	9,40	18	3	043	
7/16-14	1,814	100	8	6,2	9,40	18	4		043
1/2-13	1,954	110	9	7,0	10,80	20	3	050	
1/2-13	1,954	110	9	7,0	10,80	20	4		050
9/16-12	2,117	110	11	9,0	12,25	20	3	056	
5/8-11	2,309	110	12	9,0	13,50	22	3	062	
5/8-11	2,309	110	12	9,0	13,50	22	4		062
3/4-10	2,540	125	14	11,0	16,50	25	3	075	
3/4-10	2,540	125	14	11,0	16,50	25	4		075
7/8-9	2,822	140	18	14,5	19,50	27	4	087	
1-8	3,175	160	18	14,5	22,25	30	4	100	
1-8	3,175	160	18	14,5	22,25	30	5		100

Steel	6-20	
Stainless steel	4-8	5-10
Cast iron	6-15	
Non ferrous metals		
Heat resistant alloys		
Hardened materials		

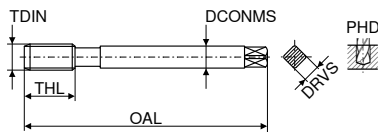
Blind hole – Machine taps, right hand

UNC



DIN 371 with reinforced shank

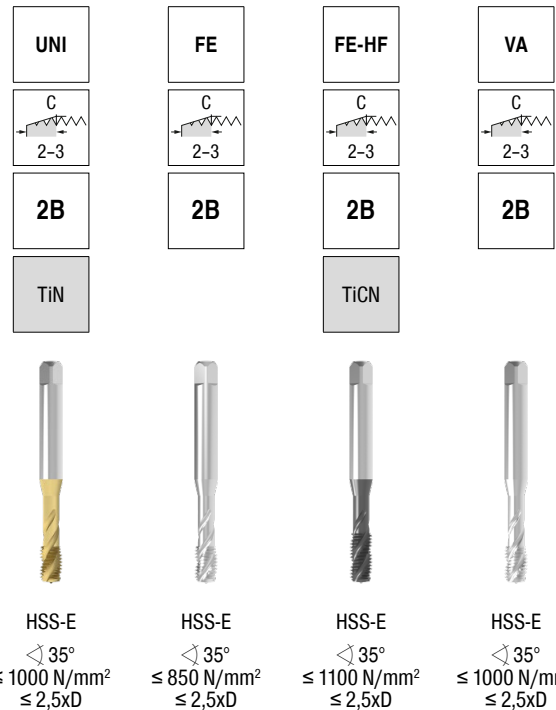
TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 172 ...	Article no. 23 272 ...	Article no. 23 372 ...	Article no. 23 472 ...
mm	mm	mm	mm	mm	mm	mm	mm					
Nr. 4-40	0,635	56	3,5	2,7	2,30	11	18	2				
Nr. 4-40	0,635	56	3,5	2,7	2,30	6	18	2	004	004	004	004
Nr. 6-32	0,794	56	4,0	3,0	2,85	7	20	3	006	006		006
Nr. 6-32	0,794	56	4,0	3,0	2,85	12	20	3			006	
Nr. 8-32	0,794	63	4,5	3,4	3,50	8	21	3	008	008		008
Nr. 8-32	0,794	63	4,5	3,4	3,50	13	21	3			008	
Nr. 10-24	1,058	70	6,0	4,9	3,90	10	25	3	010	010		010
Nr. 10-24	1,058	70	6,0	4,9	3,90	15	25	3			010	
1/4-20	1,270	80	7,0	5,5	5,20	13	30	3	025	025		025
1/4-20	1,270	80	7,0	5,5	5,20	17	30	3			025	
5/16-18	1,411	90	8,0	6,2	6,60	14	35	3	031	031		031
5/16-18	1,411	90	8,0	6,2	6,60	20	35	3			031	
3/8-16	1,588	100	10,0	8,0	8,00	16	39	3	037	037		037
3/8-16	1,588	100	10,0	8,0	8,00	22	39	3			037	



DIN 376 with reduced shank

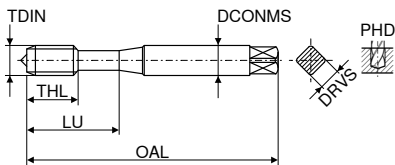
TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 173 ...	Article no. 23 273 ...	Article no. 23 373 ...	Article no. 23 473 ...
mm	mm	mm	mm	mm	mm	mm					
7/16-14	1,814	100	8	6,2	9,40	22	3			043	
7/16-14	1,814	100	8	6,2	9,40	18	3	043	043		043
1/2-13	1,954	110	9	7,0	10,75	20	3	050	050		050
1/2-13	1,954	110	9	7,0	10,75	25	3			050	
5/8-11	2,309	110	12	9,0	13,50	22	3	062	062		062
5/8-11	2,309	110	12	9,0	13,50	27	3			062	
3/4-10	2,540	125	14	11,0	16,50	25	3	075	075		075
3/4-10	2,540	125	14	11,0	16,50	30	3			075	

Steel	5-45	5-25	5-45	
Stainless steel	5-15			3-10
Cast iron	10-25			
Non ferrous metals	15-40			
Heat resistant alloys				
Hardened materials				

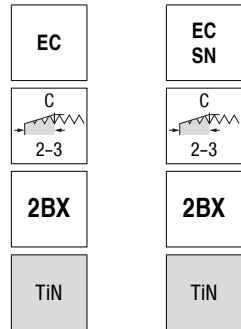


Through hole / Blind hole – Machine thread formers, right hand

▲ SN = Thread formers with lubrication grooves



DIN 2174 with reduced shank

HSS-E
≤ 1100 N/mm²
≤ 1,5xDHSS-E
≤ 1100 N/mm²
≤ 3xD

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 270 ...	Article no. 22 271 ...
mm	mm	mm	mm	mm	mm	mm	mm			
Nr. 4-40	0,635	56	3,5	2,7	2,55	11	18		004	
Nr. 4-40	0,635	56	3,5	2,7	2,55	11	18	3		004
Nr. 6-32	0,794	56	4,0	3,0	3,15	12	20		006	
Nr. 6-32	0,794	56	4,0	3,0	3,15	12	20	3		006
Nr. 8-32	0,794	63	4,5	3,4	3,80	13	21		008	
Nr. 8-32	0,794	63	4,5	3,4	3,80	13	21	4		008
Nr. 10-24	1,058	70	6,0	4,9	4,35	15	25		010	
Nr. 10-24	1,058	70	6,0	4,9	4,35	15	25	4		010
1/4-20	1,270	80	7,0	5,5	5,75	17	30		025	
1/4-20	1,270	80	7,0	5,5	5,75	17	30	4		025
5/16-18	1,411	90	8,0	6,2	7,30	20	35		031	
5/16-18	1,411	90	8,0	6,2	7,30	20	35	5		031
3/8-16	1,588	100	10,0	8,0	8,80	22	39		037	
3/8-16	1,588	100	10,0	8,0	8,80	22	39	5		037
Steel									8-30	8-30
Stainless steel									8-15	8-15
Cast iron										
Non ferrous metals									12-25	12-25
Heat resistant alloys										
Hardened materials										

Through hole – machine taps for wire thread inserts, right hand

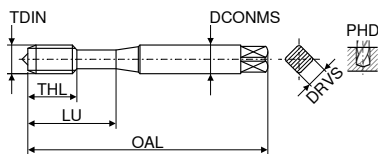
EG
UNC

Stabil

UNI



2B

nitr. +
vap.

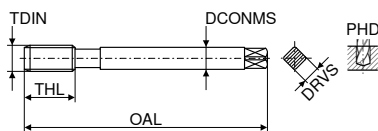
DIN 371 with reinforced shank



HSS-E

 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
EG Nr. 4-40	0,635	63	4,5	3,4	3,1	13	21	3
EG Nr. 6-32	0,794	70	6,0	4,9	3,8	14	25	3
EG Nr. 8-32	0,794	80	6,0	4,9	4,4	16	30	3
EG Nr. 10-24	1,058	80	7,0	5,5	5,2	17	30	3
EG 1/4-20	1,270	90	8,0	6,2	6,7	20	35	3
EG 5/16-18	1,411	100	10,0	8,0	8,4	22	39	3

Article no.
22 668 ...004
006
008
010
025
031

DIN 376 with reduced shank

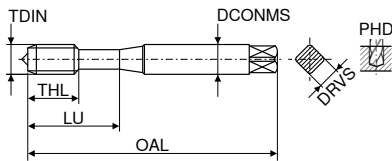
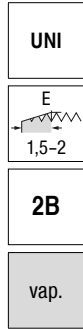
TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
EG 3/8-16	1,588	100	9	7,0	10,00	22	3
EG 7/16-14	1,814	110	11	9,0	11,60	26	3
EG 1/2-13	1,954	110	12	9,0	13,30	27	3
EG 5/8-11	2,309	125	14	11,0	16,50	30	3
EG 3/4-10	2,540	140	18	14,5	19,75	32	3

Article no.
22 670 ...037
043
050
062
075

Steel	6-20
Stainless steel	4-8
Cast iron	6-15
Non ferrous metals	
Heat resistant alloys	
Hardened materials	

6

Blind hole – machine taps for wire thread inserts, right hand



DIN 371 with reinforced shank



HSS-E

$\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 672 ...
mm	mm	mm	mm	mm	mm	mm	mm		
EG Nr. 4-40	0,635	63	4,5	3,4	3,1	7	21	3	004
EG Nr. 6-32	0,794	70	6,0	4,9	3,8	8	25	3	006
EG Nr. 8-32	0,794	80	6,0	4,9	4,4	8	30	3	008
EG Nr. 10-24	1,058	80	7,0	5,5	5,2	10	30	3	010
EG 1/4-20	1,270	90	8,0	6,2	6,7	14	35	3	025
EG 5/16-18	1,411	100	10,0	8,0	8,4	16	39	3	031
Steel									6-20
Stainless steel									4-8
Cast iron									6-15
Non ferrous metals									
Heat resistant alloys									
Hardened materials									

Blind hole – Machine taps, right hand

UNJC

SL

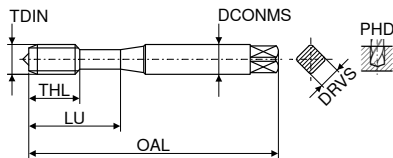
Ti

C

2-3

3BX

TiCN



DIN 371 with reinforced shank



HSS-E

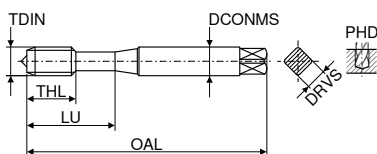
 $\angle 15^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 2xD$
Article no.
22 166 ...

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	
	mm	mm	mm	mm	mm	mm	mm		
Nr. 4-40	0,635	56	3,5	2,7	2,30	11	18	2	004
Nr. 6-32	0,794	56	4,0	3,0	2,85	12	20	3	006
Nr. 8-32	0,794	63	4,5	3,4	3,50	13	21	3	008
Nr. 10-24	1,058	70	6,0	4,9	3,90	15	25	3	010
1/4-20	1,270	80	7,0	5,5	5,25	17	30	3	025
3/8-16	1,588	100	10,0	8,0	8,10	22	39	3	037
Steel									6-8
Stainless steel									4-10
Cast iron									
Non ferrous metals									10-12
Heat resistant alloys									4-6
Hardened materials									

Through hole – Machine taps, right hand

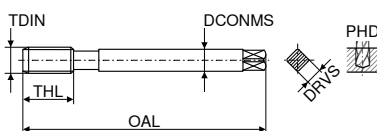
UNF

Stabil



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
Nr. 4-48	0,529	56	3,5	2,7	2,40	11	18	2
Nr. 4-48	0,529	56	3,5	2,7	2,40	11	18	3
Nr. 5-44	0,577	56	3,5	2,7	2,70	11	18	3
Nr. 6-40	0,635	56	4,0	3,0	2,95	12	20	3
Nr. 8-36	0,706	63	4,5	3,4	3,50	13	21	3
Nr. 10-32	0,794	70	6,0	4,9	4,10	15	25	3
1/4-28	0,907	80	7,0	5,5	5,50	17	30	3
5/16-24	1,058	90	8,0	6,2	6,90	17	35	3
3/8-24	1,058	90	10,0	8,0	8,50	18	35	3



DIN 374 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
7/16-20	1,270	100	8	6,2	9,90	22	3
1/2-20	1,270	100	9	7,0	11,50	22	3
9/16-18	1,411	100	11	9,0	12,90	22	3
5/8-18	1,411	100	12	9,0	14,50	22	3
3/4-16	1,588	110	14	11,0	17,50	25	4
7/8-14	1,814	125	18	14,5	20,50	25	4
1-12	2,117	140	18	14,5	23,25	28	4
1 1/8-12	2,117	150	22	18,0	26,50	28	4
1 1/4-12	2,117	150	22	18,0	29,75	28	4
1 3/8-12	2,117	170	28	22,0	33,00	30	5

Steel	6-20	2-5
Stainless steel	4-8	
Cast iron	6-15	
Non ferrous metals		
Heat resistant alloys		2-6
Hardened materials		

UNI	Ti
B 4-5	B 4-5
2B	2BX
nitr. + vap.	TiN



HSS-E

 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$


HSS-PM

 $\angle 0^\circ$
 $\leq 44 \text{ HRC}$
 $\leq 4xD$
Article no.
22 602 ...Article no.
22 317 ...

004

004

005

005

006

006

008

008

010

010

025

025

031

031

037

037

Article no.
22 603 ...Article no.
22 421 ...

043

050

050

050

056

056

062

062

075

075

087

087

100

100

112

112

125

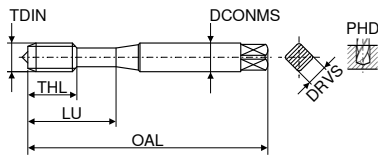
125

137

137

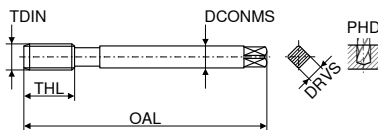
Through hole – Machine taps, right hand

UNF



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 180 ...	Article no. 23 280 ...	Article no. 23 480 ...
mm	mm	mm	mm	mm	mm	mm	mm				
Nr. 10-32	0,794	70	6	4,9	4,1	15	25	3	010	010	010
1/4-28	0,907	80	7	5,5	5,5	17	30	3	025	025	025
5/16-24	1,058	90	8	6,2	6,9	17	35	3	031	031	031
3/8-24	1,058	90	10	8,0	8,5	18	35	4	037	037	037



DIN 374 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 181 ...	Article no. 23 281 ...	Article no. 23 481 ...
mm	mm	mm	mm	mm	mm	mm				
7/16-20	1,270	100	8	6,2	9,9	22	3	043	043	043
1/2-20	1,270	100	9	7,0	11,5	22	3	050	050	050
9/16-18	1,411	100	11	9,0	12,9	22	3	056	056	056
5/8-18	1,411	100	12	9,0	14,5	22	3	062	062	062
3/4-16	1,588	110	14	11,0	17,5	25	4	075	075	075

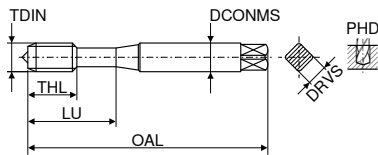
Steel	5-45	5-25	
Stainless steel	5-15		3-10
Cast iron	10-25		
Non ferrous metals	15-40		
Heat resistant alloys			
Hardened materials			

UNI	FE	VA
2B	2B	2B
TiN		nitr.
HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$

Blind hole – Machine taps, right hand

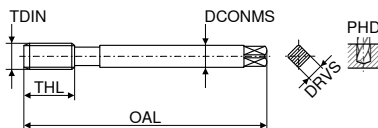
UNF

Salo-Rex



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	mm	
Nr. 2-64	0,397	45	2,8	2,1	1,85	4,5	12	2
Nr. 4-48	0,529	56	3,5	2,7	2,40	6,0	18	2
Nr. 6-40	0,635	56	4,0	3,0	2,95	7,0	20	3
Nr. 6-40	0,635	56	4,0	3,0	3,00	7,0	20	3
Nr. 8-36	0,706	63	4,5	3,4	3,50	8,0	21	3
Nr. 10-32	0,794	70	6,0	4,9	4,10	10,0	25	3
Nr. 10-32	0,794	70	6,0	4,9	4,15	10,0	25	3
1/4-28	0,907	80	7,0	5,5	5,50	10,0	30	3
1/4-28	0,907	80	7,0	5,5	5,55	10,0	30	3
5/16-24	1,058	90	8,0	6,2	6,90	10,0	35	3
5/16-24	1,058	90	8,0	6,2	6,95	10,0	35	3
3/8-24	1,058	90	10,0	8,0	8,50	10,0	35	3
3/8-24	1,058	90	10,0	8,0	8,55	10,0	35	3



DIN 374 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	mm	mm	mm	mm	mm	mm	
7/16-20	1,270	100	8	6,2	9,90	13	3
7/16-20	1,270	100	8	6,2	9,95	13	4
1/2-20	1,270	100	9	7,0	11,50	13	4
1/2-20	1,270	100	9	7,0	11,55	13	5
9/16-18	1,411	100	11	9,0	12,90	15	4
9/16-18	1,411	100	11	9,0	12,95	15	5
5/8-18	1,411	100	12	9,0	14,50	15	4
5/8-18	1,411	100	12	9,0	14,55	15	5
3/4-16	1,588	110	14	11,0	17,50	17	4
3/4-16	1,588	110	14	11,0	17,55	17	5
7/8-14	1,814	125	18	14,5	20,50	17	4
1-12	2,117	140	18	14,5	23,25	20	4
1-12	2,117	140	18	14,5	23,30	20	5
1 1/8-12	2,117	150	22	18,0	26,50	22	4
1 1/4-12	2,117	150	22	18,0	29,75	22	5
1 3/8-12	2,117	170	28	22,0	33,00	24	5

VA	UNI	UNI
E 1,5-2	C 2-3	E 1,5-2
2B	2B	2B +0,05
vap.	vap.	vap.



HSS-E
 $\angle 42^\circ$
 $\leq 900 \text{ N/mm}^2$
 $\leq 3xD$

Article no.
22 308 ...

002

004

006

008

010

025

031

037



HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

Article no.
22 606 ...

004

006

008

010

025

031



HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

Article no.
22 307 ...

006

010

025

031

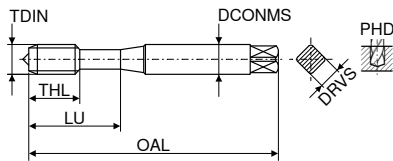
037

Steel	6-20	6-20
Stainless steel	5-10	4-8
Cast iron	6-15	6-15
Non ferrous metals		
Heat resistant alloys		
Hardened materials		

Blind hole – Machine taps, right hand

UNF

SL



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
Nr. 10-32	0,794	70	6	4,9	4,1	10	25	3
1/4-28	0,907	80	7	5,5	5,5	10	30	3
5/16-24	1,058	90	8	6,2	6,9	10	35	3
3/8-24	1,058	90	10	8,0	8,5	10	35	3

Steel	2-5	2-5
Stainless steel		
Cast iron		
Non ferrous metals		
Heat resistant alloys	2-6	2-6
Hardened materials		



HSS-PM
 $\angle 30^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 1,5xD$

HSS-PM
 $\angle 30^\circ$
 $\leq 1400 \text{ N/mm}^2$
 $\leq 1,5xD$

Article no.
22 302 ...Article no.
22 303 ...

010

010

025

025

031

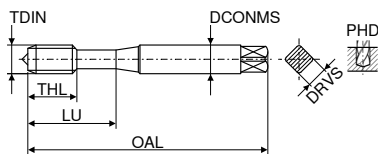
031

037

037

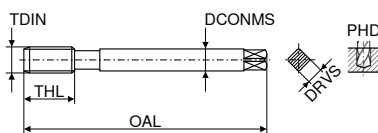
Blind hole – Machine taps, right hand

UNF



DIN 371 with reinforced shank

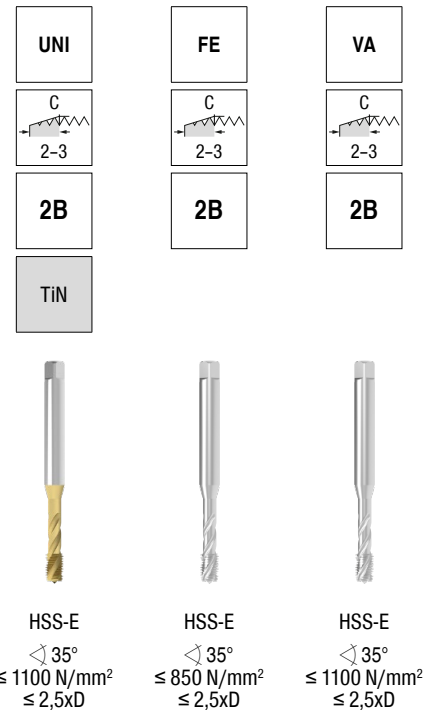
TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 23 182 ...	Article no. 23 282 ...	Article no. 23 482 ...
mm	mm	mm	mm	mm	mm	mm	mm				
Nr. 10-32	0,794	70	6	4,9	4,1	10	25	3	010	010	010
1/4-28	0,907	80	7	5,5	5,5	10	30	3	025	025	025
5/16-24	1,058	90	8	6,2	6,9	10	35	3	031	031	031
3/8-24	1,058	90	10	8,0	8,5	10	35	3	037	037	037



DIN 374 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	Article no. 23 183 ...	Article no. 23 283 ...	Article no. 23 483 ...
mm	mm	mm	mm	mm	mm	mm				
7/16-20	1,270	100	8	6,2	9,9	13	3	043	043	043
1/2-20	1,270	100	9	7,0	11,5	13	4	050	050	050
9/16-18	1,411	100	11	9,0	12,9	15	4	056	056	056
5/8-18	1,411	100	12	9,0	14,5	15	4	062	062	062
3/4-16	1,588	110	14	11,0	17,5	17	4	075	075	075

Steel	5-45	5-25	
Stainless steel	5-15		3-10
Cast iron	10-25		
Non ferrous metals	15-40		
Heat resistant alloys			
Hardened materials			



Through hole / Blind hole – Machine thread formers, right hand

▲ SN = Thread formers with lubrication grooves

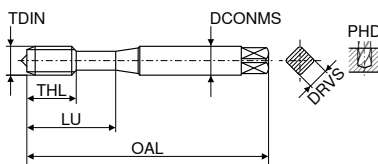
UNF

Spanlos

EC
SNC
2-3

2BX

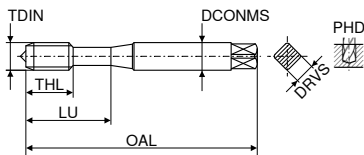
TiN



DIN 2174 with reduced shank

HSS-E
≤ 1100 N/mm²
≤ 3xD

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
Nr. 4-48	0,529	56	3,5	2,7	2,62	11	18	3
Nr. 6-40	0,635	56	4,0	3,0	3,22	12	20	3
Nr. 8-36	0,706	63	4,5	3,4	3,85	13	21	4
Nr. 10-32	0,794	70	6,0	4,9	4,45	15	25	4
1/4-28	0,907	80	7,0	5,5	5,95	17	30	4

Article no.
22 312 ...004
006
008
010
025

DIN 2174 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
7/16-20	1,27	100	8	6,2	10,55	22	6
1/2-20	1,27	100	9	7,0	12,15	22	6

Article no.
22 313 ...043
050

Steel	8-30
Stainless steel	8-15
Cast iron	
Non ferrous metals	12-25
Heat resistant alloys	
Hardened materials	

Through hole – machine taps for wire thread inserts, right hand

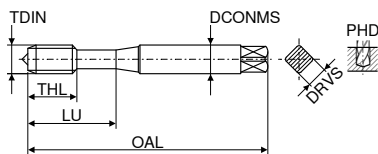
EG
UNF

Stabil

UNI



2B

nitr. +
vap.

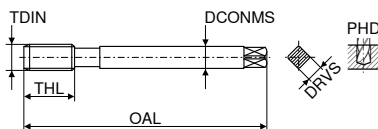
DIN 371 with reinforced shank



HSS-E

 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 4xD$

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
EG Nr. 4-48	0,529	56	4	3,0	3,0	9	20	3
EG Nr. 6-40	0,635	70	6	4,9	3,7	11	25	3
EG Nr. 8-36	0,706	80	6	4,9	4,4	13	30	3
EG Nr. 10-32	0,794	80	6	4,9	5,1	13	30	3
EG 1/4-28	0,907	90	8	6,2	6,6	17	35	3

Article no.
22 676 ...004
006
008
010
025

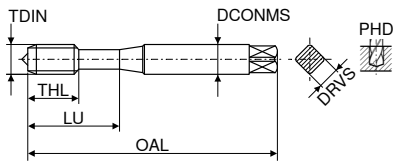
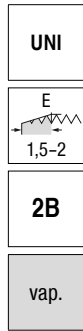
DIN 374 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
EG 3/8-24	1,058	90	8	6,2	9,80	18	4
EG 7/16-20	1,270	100	9	7,0	11,50	22	3
EG 1/2-20	1,270	100	11	9,0	13,10	22	3
EG 5/8-18	1,411	110	14	11,0	16,25	25	4
EG 3/4-16	1,588	125	16	12,0	19,50	25	4

Article no.
22 677 ...037
043
050
062
075

Steel	6-20
Stainless steel	4-8
Cast iron	6-15
Non ferrous metals	
Heat resistant alloys	
Hardened materials	

Blind hole – machine taps for wire thread inserts, right hand



DIN 371 with reinforced shank



HSS-E

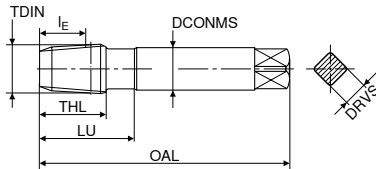
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3 \times D$

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	Article no. 22 680 ...
	mm	mm	mm	mm	mm	mm	mm		
EG Nr. 4-48	0,529	56	4	3,0	3,0	7	20	3	004
EG Nr. 6-40	0,635	70	6	4,9	3,7	8	25	3	006
EG Nr. 8-36	0,706	80	6	4,9	4,4	8	30	3	008
EG Nr. 10-32	0,794	80	6	4,9	5,1	8	30	3	010
EG 1/4-28	0,907	90	8	6,2	6,6	10	35	3	025
Steel									6-20
Stainless steel									4-8
Cast iron									6-15
Non ferrous metals									
Heat resistant alloys									
Hardened materials									

Blind hole – Machine taps, right hand

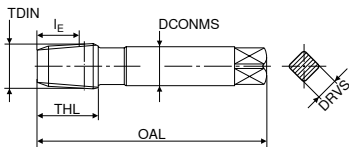
NPT

Salo-Rex



DIN 371 with reinforced shank

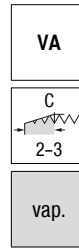
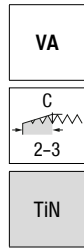
TDIN	TP	OAL	DCONMS	DRVS	I _E	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
1/16-27	0,941	90	8	6,2	9,24	13,0	26,0	3
1/8-27	0,941	90	10	8,0	9,28	13,0	26,0	3
1/8-27	0,941	90	10	8,0	9,28	12,0	26,0	4
1/4-18	1,411	100	14	11,0	13,55	19,5	34,5	3
1/4-18	1,411	100	14	11,0	13,55	18,0	34,5	4



DIN 374 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	I _E	THL	Flutes
	mm	mm	mm	mm	mm	mm	
3/8-18	1,411	110	14	11	13,86	19,5	3
3/8-18	1,411	110	14	11	13,86	18,0	5
1/2-14	1,814	140	16	12	18,11	25,0	5
1/2-14	1,814	140	16	12	18,11	23,0	5
3/4-14	1,814	150	20	16	18,59	26,0	5
1-11,5	2,209	170	25	20	22,31	32,0	5

Steel	2-4
Stainless steel	2-4
Cast iron	
Non ferrous metals	
Heat resistant alloys	
Hardened materials	

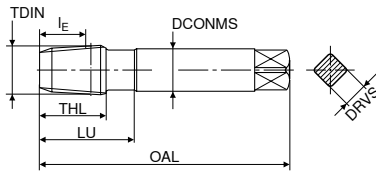
HSS-E
≤ 35°
≤ 900 N/mm²Article no.
22 364 ...006
012
025HSS-E
≤ 42°
≤ 1100 N/mm²Article no.
22 365 ...012
025

Through hole / Blind hole – Machine taps, right hand

NPT

TWIN

VG



DIN 371 with reinforced shank



HSS-E

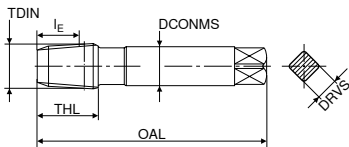
 $\angle 0^\circ$
 $\leq 1100 \text{ N/mm}^2$
Article no.
22 374 ...

TDIN	TP	OAL	DCONMS	DRVS	l_E	THL	LU	Flutes
	mm	mm	mm	mm	mm	mm	mm	
1/16-27	0,941	90	8	6,2	9,24	13,0	26,0	3
1/8-27	0,941	90	10	8,0	9,28	13,0	26,0	3
1/4-18	1,411	100	14	11,0	13,55	19,5	34,5	3

006

012

025



DIN 374 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	l_E	THL	Flutes
	mm	mm	mm	mm	mm	mm	
3/8-18	1,411	110	14	11	13,86	19,5	3
1/2-14	1,814	140	16	12	18,11	25,0	5
3/4-14	1,814	150	20	16	18,59	26,0	5
1-11,5	2,209	170	25	20	22,31	30,0	5

Article no.
22 375 ...

037

050

075

100

Steel

2-6

Stainless steel

Cast iron

4-6

Non ferrous metals

4-6

Heat resistant alloys

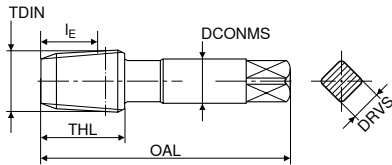
Hardened materials

Through hole / Blind hole – Machine taps, right hand

▲ ES = extra short

NPT

TWIN

ST
ES

DIN 2181 with reduced shank



HSS-E

 $\angle 0^\circ$
 $\leq 750 \text{ N/mm}^2$

TDIN	TP	OAL	DCONMS	DRVS	l_E	THL	Flutes	Article no. 22 361 ...
	mm	mm	mm	mm	mm	mm		
1/16-27	0,941	63	6	4,9	9,24	13,0	4	006
1/8-27	0,941	63	7	5,5	9,28	13,0	5	012
1/4-18	1,411	63	11	9,0	13,55	19,5	5	025
3/8-18	1,411	70	12	9,0	13,86	19,5	5	037
1/2-14	1,814	80	16	12,0	18,11	23,0	5	050
3/4-14	1,814	100	20	16,0	18,59	26,0	6	075
1-11,5	2,209	110	25	20,0	22,31	32,0	6	100
2-11,5	2,209	160	45	35,0	23,22	36,0	7	200
Steel								4-6
Stainless steel								
Cast iron								
Non ferrous metals								4-6
Heat resistant alloys								
Hardened materials								

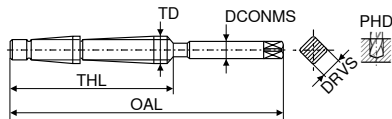
Through hole – Machine taps, right hand

- ▲ single finishing trapezoidal taps (2 steps)
- ▲ do not reverse

Tr

ST

7H



Factory standard

HSS-E

≤ 5°
≤ 900 N/mm²
≤ 2xD

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
	mm	mm	mm	mm	mm	mm	
Tr 8	1,5	105	6	4,9	6,60	55	3
Tr 9	2,0	130	7	5,5	7,20	70	3
Tr 10	2,0	130	7	5,5	8,20	70	3
Tr 10	3,0	155	7	5,5	7,25	95	3
Tr 12	3,0	160	9	7,0	9,25	95	3
Tr 14	3,0	170	10	8,0	11,25	100	3
Tr 14	4,0	195	10	8,0	10,25	125	3
Tr 16	4,0	225	12	9,0	12,25	130	3
Tr 18	4,0	225	14	11,0	14,25	116	3
Tr 20	4,0	225	16	12,0	16,25	130	3
Tr 22	5,0	260	16	12,0	17,25	160	3
Tr 24	5,0	285	18	14,5	19,25	165	3

Article no.
22 402 ...

080

090

102

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123

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Steel

Stainless steel

Cast iron

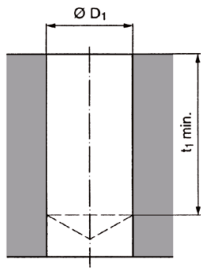
Non ferrous metals

Heat resistant alloys

Hardened materials

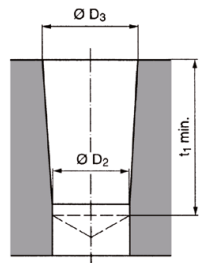
Core hole diameters for taper threads (taper 1:16)

Pre-drilling of cylindrical holes without reamer



		NPT		NPTF				Rc	
Ø D ₁ inch	Pitch Gg/1"	Ø D ₁ mm	t ₁ min. mm	Ø D ₁ mm	t ₁ min. mm	Ø D ₁ inch	Pitch Gg/1"	Ø D ₁ mm	t ₁ min. mm
1/16	27	6,15	12	6,1	12	1/16	28	6,2	11,9
1/8	27	8,5	12	8,45	12	1/8	28	8,2	11,9
1/4	18	11	17,5	10,9	17,5	1/4	19	10,85	16,3
3/8	18	14,5	17,6	14,3	17,6	3/8	19	14,5	18,1
1/2	14	17,85	22,9	17,6	22,9	1/2	14	18	24
3/4	14	23,2	23	23	23	3/4	14	23,5	25,3
1	11½	29,5	27,4	28,75	27,4	1	11	29,5	30,6
1¼	11½	37,8	28,1	37,5	28,1				
1½	11½	44	28,4	43,75	28,4				
2	11½	56	28,4	55,75	28,4				

Pre-drilling of cylindrical holes and conical boring with reamer

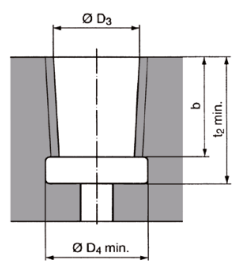


Taper 1:16

		NPT			NPTF		
Ø D ₁ inch	Pitch Gg/1"	Ø D ₂ mm	Ø D ₃ mm	t ₁ min. mm	Ø D ₂ mm	Ø D ₃ mm	t ₁ min. mm
1/16	27	5,95	6,39	12	5,95	6,41	12
1/8	27	8,25	8,74	12	8,25	8,76	12
1/4	18	10,75	11,36	17,5	10,75	11,4	17,5
3/8	18	14,1	14,8	17,6	14,1	14,84	17,6
1/2	14	17,5	18,32	22,9	17,5	18,33	22,9
3/4	14	22,7	23,67	23	22,7	23,68	23
1	11½	28,6	29,69	27,4	28,6	29,72	27,4
1¼	11½	37,3	38,45	28,1	37,3	38,48	28,1
1½	11½	43,4	44,52	28,4	43,4	44,5	28,4
2	11½	55,5	56,56	28,4	55,5	56,59	28,4

		Rc		
Ø D ₁ inch	Pitch Gg/1"	Ø D ₂ mm	Ø D ₃ mm	t ₁ min. mm
1/16	28	6,1	6,56	11,9
1/8	28	8,1	8,57	11,9
1/4	19	10,75	11,45	17,7
3/8	19	14,25	14,95	18,1
1/2	14	17,75	18,63	24
3/4	14	23	24,12	25,3
1	11	29	30,29	30,6

Recommendation for the pre-drilling of blind hole threads



Taper 1:16

		NPT				NPTF			
Ø D ₁ inch	Pitch Gg/1"	Ø D ₃ mm	b mm	t ₂ min. mm	Ø D ₄ mm	Ø D ₃ mm	b mm	t ₂ min. mm	Ø D ₄ min. mm
1/16	27	6,39	7	10	7,6	6,41	8	11	7,4
1/8	27	8,74	7	10	10	8,76	8	11	9,8
1/4	18	11,36	10,2	14,5	13,1	11,4	11,6	15,5	12,9
3/8	18	14,8	10,6	15	16,5	14,84	12	16	16,3
1/2	14	18,32	13,8	19	20,5	18,33	15,6	20,5	20,3
3/4	14	23,67	14,2	20	25,8	23,68	16	21,5	25,6
1	11½	29,69	17	24	32,2	29,72	19,2	26	32
1¼	11½	38,45	17,5	24,5	41	38,48	19,7	26,5	40,8
1½	11½	44,52	17,5	24,5	47,2	44,5	19,7	26,5	47
2	11½	56,56	18	25	59,2	56,59	20,2	27	59

		Rc			
Ø D ₁ inch	Pitch Gg/1"	Ø D ₃ mm	b mm	t ₂ min. mm	Ø D ₄ min. mm
1/16	28	6,56	5,6	9,5	7,6
1/8	28	8,57	5,6	9,5	9,6
1/4	19	11,45	8,4	14	13
3/8	19	14,95	8,8	14,4	16,5
1/2	14	18,63	11,4	19	20,6
3/4	14	24,12	12,7	20,3	26
1	11	30,29	14,5	24,3	32,8

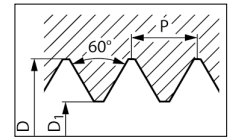
Tapped hole pilot diameter

M

ISO metric coarse threads 6H to DIN 13 and DIN ISO 965-1 (M1–M1,4 = 5H)

Thread nominal Ø		Ø D ₁		Core hole
D	P	min.	max.	
M1	0,25	0,729	0,785	0,75
M1,1	0,25	0,829	0,885	0,85
M1,2	0,25	0,929	0,985	0,95
M1,4	0,3	1,075	1,142	1,1
M1,6	0,35	1,221	1,321	1,25
M1,8	0,35	1,421	1,521	1,45
M2	0,4	1,567	1,679	1,6
M2,2	0,45	1,713	1,838	1,75
M2,5	0,45	2,013	2,138	2,05
M3	0,5	2,459	2,599	2,5
M3,5	0,6	2,850	3,010	2,9
M4	0,7	3,242	3,422	3,3
M4,5	0,75	3,688	3,878	3,7
M5	0,8	4,134	4,334	4,2
M6	1,0	4,917	5,153	5
M7	1,0	5,917	6,153	6
M8	1,25	6,647	6,912	6,8
M9	1,25	7,647	7,912	7,8
M10	1,5	8,376	8,676	8,5
M11	1,5	9,376	9,676	9,5

Thread nominal Ø		Ø D ₁		Core hole
D	P	min.	max.	
M12	1,75	10,106	10,441	10,2
M14	2,0	11,835	12,210	12
M16	2,0	13,835	14,210	14
M18	2,5	15,294	15,744	15,5
M20	2,5	17,294	17,744	17,5
M22	2,5	19,294	19,744	19,5
M24	3,0	20,752	21,252	21
M27	3,0	23,752	24,252	24
M30	3,5	26,211	26,771	26,5
M33	3,5	29,211	29,771	29,5
M36	4,0	31,670	32,270	32
M39	4,0	34,670	35,270	35
M42	4,5	37,129	37,799	37,5
M45	4,5	40,129	40,799	40,5
M48	5,0	42,587	43,297	43
M52	5,0	46,587	47,297	47
M56	5,5	50,046	50,796	50,5
M60	5,5	54,046	54,796	54,5
M64	6,0	57,505	58,305	58
M68	6,0	61,505	62,305	62



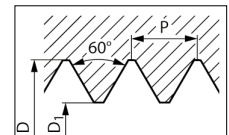
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MF

ISO metric fine threads 6H to DIN 13 and DIN ISO 965-1

Thread nominal Ø			Ø D ₁		Core hole
D	x	P	min.	max.	
M2	x	0,25	1,729	1,774	1,75
M2,2	x	0,25	1,929	1,974	1,95
M2,5	x	0,35	2,121	2,221	2,15
M3	x	0,35	2,621	2,721	2,65
M3,5	x	0,35	3,121	3,221	3,15
M4	x	0,35	3,621	3,721	3,65
M4	x	0,5	3,459	3,599	3,5
M4,5	x	0,5	3,959	4,099	4
M5	x	0,5	4,459	4,599	4,5
M6	x	0,5	5,459	5,599	5,5
M6	x	0,75	5,188	5,378	5,2
M8	x	0,75	7,188	7,378	7,2
M8	x	1,0	6,917	7,153	7
M10	x	0,75	9,188	9,378	9,2
M10	x	1,0	8,917	9,153	9
M10	x	1,25	8,647	8,912	8,8
M12	x	1,0	10,917	11,153	11
M12	x	1,5	10,376	10,676	10,5
M14	x	1,25	12,647	12,912	12,8
M16	x	1,0	14,917	15,153	15
M16	x	1,5	14,376	14,676	14,5

Thread nominal Ø			Ø D ₁		Core hole
D	x	P	min.	max.	
M20	x	1,0	18,917	19,153	19
M20	x	1,5	18,376	18,676	18,5
M20	x	2,0	17,835	18,210	18
M24	x	1,5	22,376	22,676	22,5
M30	x	2,0	27,835	28,210	28
M36	x	1,5	34,376	34,676	34,5
M36	x	3,0	32,752	33,252	33
M42	x	2,0	39,835	40,210	40
M48	x	1,5	46,376	46,676	46,5
M48	x	3,0	44,752	45,252	45
M48	x	4,0	43,670	44,270	44
M56	x	1,5	54,376	54,676	54,5
M56	x	2,0	53,835	54,210	54
M56	x	3,0	52,752	53,252	53
M56	x	4,0	51,670	52,270	52
M64	x	3,0	60,752	61,252	61
M64	x	4,0	59,670	60,270	60
M72	x	4,0	67,670	68,270	68
M80	x	6,0	73,505	74,305	74
M95	x	6,0	88,505	89,305	89
M110	x	6,0	103,505	104,305	104



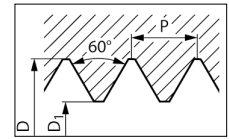
Dimensions in mm; P = Pitch

Thread former pilot hole diameter

M ISO metric coarse threads 6H to DIN 13 and DIN ISO 965-1 (M1–M1,4 = 5H)

Thread nominal Ø		Ø D ₁		Core hole
D	P	min.	max.	
M1	0,25	0,89		0,9
M1,2	0,25	1,09		1,1
M1,4	0,3	1,26		1,26
M1,6	0,35	1,45		1,45
M1,8	0,35	1,65		1,65
M2	0,4	1,83	1,86	1,85
M2,2	0,45	2,00	2,04	2,0
M2,5	0,45	2,30	2,34	2,3
M3	0,5	2,77	2,82	2,8
M3,5	0,6	3,23	3,28	3,25
M4	0,7	3,68	3,73	3,7
M4,5	0,75	4,15	4,21	4,15
M5	0,8	4,63	4,68	4,65

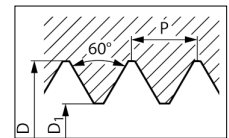
Thread nominal Ø		Ø D ₁		Core hole
D	P	min.	max.	
M6	1	5,51	5,59	5,55
M7	1	6,51	6,59	6,55
M8	1,25	7,39	7,48	7,4
M9	1,25	8,39	8,48	8,4
M10	1,5	9,25	9,35	9,3
M11	1,5	10,25	10,35	10,3
M12	1,75	11,12	11,25	11,2
M14	2	13,00	13,15	13,0
M16	2	15,00	15,15	15,0
M18	2,5	16,72	16,90	16,8
M20	2,5	18,72	18,90	18,8
M22	2,5	20,72	20,9	20,8
M24	3	22,46	22,7	22,5



MF ISO metric fine threads 6H to DIN 13 and DIN ISO 965-1

Thread nominal Ø			Ø D ₁		Core hole
D	x	P	min.	max.	
M2	x	0,25	1,89		1,9
M2,2	x	0,25	2,09		2,1
M2,5	x	0,25	2,39		2,4
M2,5	x	0,35	2,35		2,35
M3	x	0,25	2,89		2,9
M3	x	0,35	2,85		2,85
M3,5	x	0,35	3,35		3,35
M3,5	x	0,5	3,27	3,32	3,3
M4	x	0,35	3,85		3,85
M4	x	0,5	3,77	3,82	3,8
M4,5	x	0,5	4,27	4,32	4,3
M5	x	0,5	4,77	4,82	4,8
M5	x	0,75	4,65	4,71	4,65
M5,5	x	0,5	5,27	5,32	5,3
M6	x	0,5	5,78	5,83	5,8
M6	x	0,75	5,65	5,71	5,65
M7	x	0,5	6,78	6,83	6,8
M7	x	0,75	6,65	6,71	6,65
M8	x	0,5	7,78	7,83	7,8
M8	x	0,75	7,65	7,71	7,65
M8	x	1,0	7,51	7,59	7,55
M9	x	0,5	8,78	8,83	8,8
M9	x	0,75	8,65	8,71	8,65
M9	x	1,0	8,51	8,59	8,55
M10	x	0,5	9,78	9,83	9,8
M10	x	0,75	9,65	9,71	9,65
M10	x	1,0	9,51	9,59	9,55
M10	x	1,25	9,39	9,48	9,4
M11	x	0,75	10,65	10,71	10,7
M11	x	1,0	10,51	10,59	10,5
M12	x	0,75	11,66	11,72	11,7

Thread nominal Ø			Ø D ₁		Core hole
D	x	P	min.	max.	
M12	x	1,0	11,52	11,6	11,5
M12	x	1,25	11,4	11,49	11,4
M12	x	1,5	11,26	11,36	11,3
M13	x	0,75	12,66	12,72	12,7
M13	x	1,0	12,52	12,6	12,5
M13	x	1,5	12,26	12,36	12,3
M14	x	0,75	13,66	13,72	13,7
M14	x	1,0	13,52	13,6	13,5
M14	x	1,25	13,4	13,49	13,4
M14	x	1,5	13,26	13,36	13,3
M15	x	0,75	14,66	14,72	14,7
M15	x	1,0	14,52	14,6	14,5
M15	x	1,5	14,26	14,36	14,3
M16	x	0,75	15,66	15,72	15,7
M16	x	1,0	15,52	15,6	15,5
M16	x	1,5	15,26	15,36	15,3
M18	x	1,0	17,52	17,6	17,5
M18	x	1,5	17,26	17,36	17,3
M18	x	2,0	17	17,15	17
M20	x	1,0	19,52	19,6	19,5
M20	x	1,5	19,26	19,36	19,3
M20	x	2,0	19	19,15	19
M22	x	1,5	21,26	21,36	21,3
M22	x	2,0	21	21,15	21
M24	x	1,5	23,26	23,38	23,3
M24	x	2,0	23,01	23,16	23
M25	x	1,5	24,26	24,38	24,3
M26	x	1,5	25,26	25,38	25,3
M27	x	2,0	26,01	26,16	26
M28	x	1,5	27,26	27,38	27,25
M30	x	1,5	29,26	29,38	29,25
M30	x	2,0	29,01	29,16	29

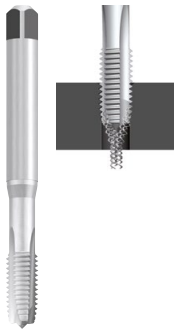


Dimensions in mm; P = Pitch

Tap Type Explanation

Stabil

Through hole tap type Stabil



- ▲ for through holes up to 4xD
- ▲ lead form B: 3,5–5 cutting leads, with spiral point
- ▲ straight Flutes
- ▲ also suitable for synchronised machining, with Wedon flat and with extra long version
- ▲ due to the special geometry of the flutes, the chips are removed in the direction of cut

Salo-Rex

Blind hole tap type Salo-Rex



- ▲ for blind holes up to 3xD
- ▲ lead form C: 2–3 cutting leads, without spiral point
- ▲ lead form E: 1,5–2 cutting leads, without spiral point
- ▲ (35°, 42°, 45°, 50°) right hand helix
- ▲ also suitable for synchronised machining, with Weldon flat, with extra long version and through coolant
- ▲ the high helix angle ensures chips are discharged effectively against the direction of cut

TWIN

Through and blind hole tap type TWIN



- ▲ for blind and through holes up to 2xD
- ▲ lead form C: 2–3 cutting leads, without spiral point
- ▲ lead form D: 3,5–5 cutting leads, without spiral point
- ▲ lead form E: 1,5–2 cutting leads, without spiral point
- ▲ straight Flutes
- ▲ for steel, short chipping and hardened materials to 55 (62) HRC
- ▲ also with extra long version and through coolant

SL

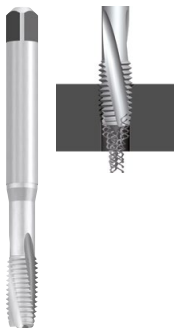
Blind hole tap type SL



- ▲ for blind holes up to 2xD
- ▲ lead form C: 2–3 cutting leads, without spiral point
- ▲ lead form E: 1,5–2 cutting leads, without spiral point
- ▲ (15°, 25°, 30°) slow right hand helix
- ▲ for steel, titanium alloys and Inconel 718
- ▲ also suitable for synchronised machining, with extra long version and through coolant
- ▲ also suitable for difficult operating conditions such as cross holes

DL

Through hole tap type DL



- ▲ for through holes up to 4xD
- ▲ lead form C: 3,5–5 cutting leads, without spiral point
- ▲ 15° left hand helix
- ▲ suitable for steel, titanium alloys and Inconel 718
- ▲ the chips are discharged in the direction of cut

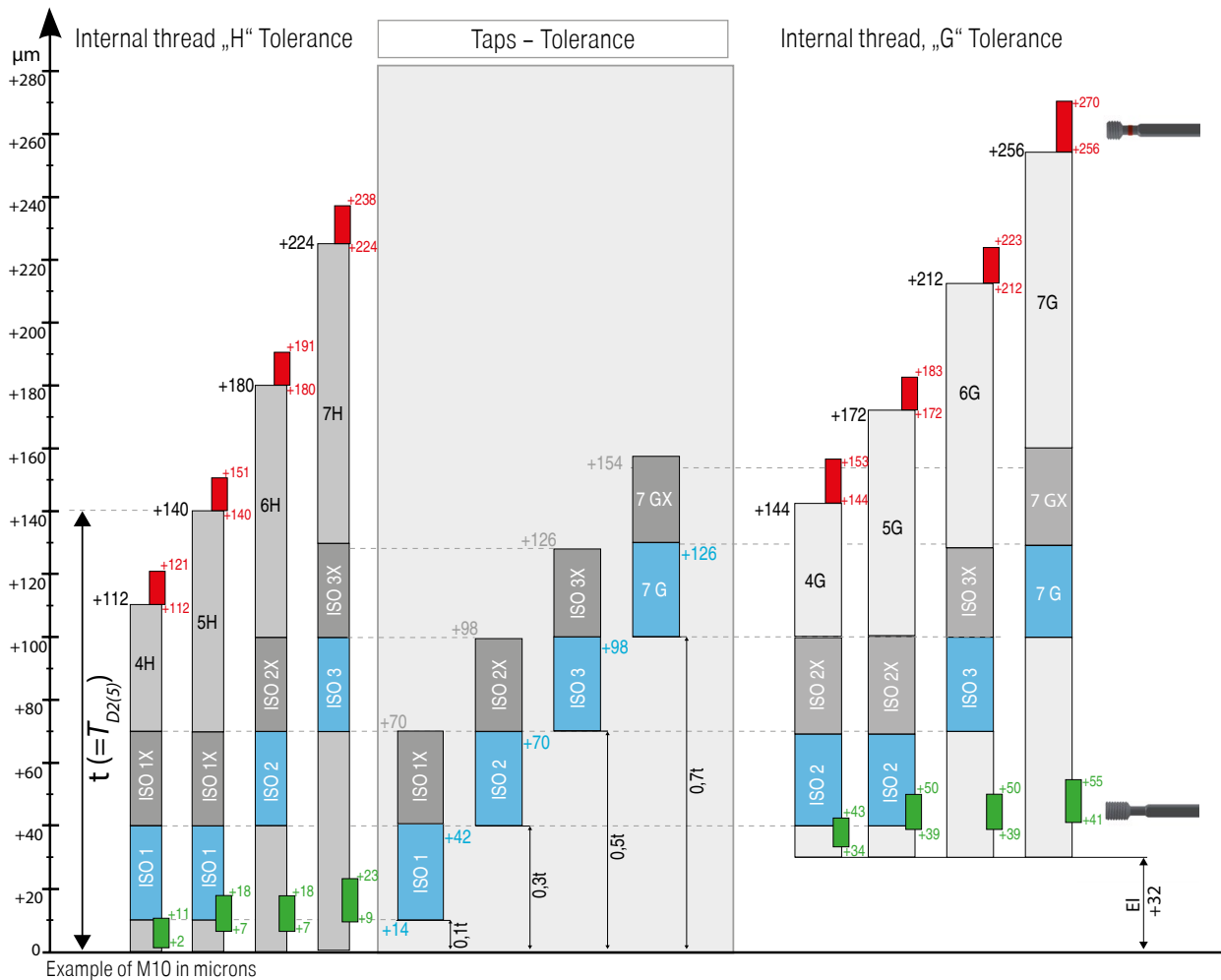
Spanlos

Thread former type Spanlos



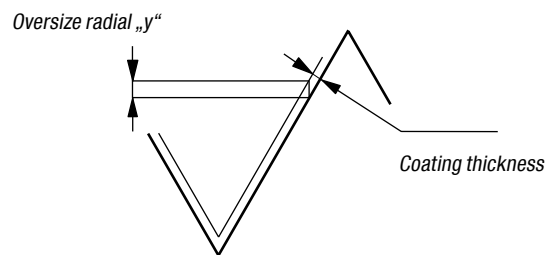
- ▲ for blind and through holes up to 3xD
- ▲ lead form C: 2–3 cutting leads, without spiral point
- ▲ for cold formable materials up to 1400 N/mm²
- ▲ suitable for synchronised machining, with lubrication grooves and internal cooling

Thread tolerances and recommended manufacturing tolerances



Workpieces to be plated require oversize taps.
The interference depends on the coating thickness and the flank angle.

at 60° Flank angle	Oversize $\triangleq 4 \times$ coating thickness
55° Flank angle	Oversize $\triangleq 4.331 \times$ coating thickness
30° Flank angle	Oversize $\triangleq 7.727 \times$ coating thickness

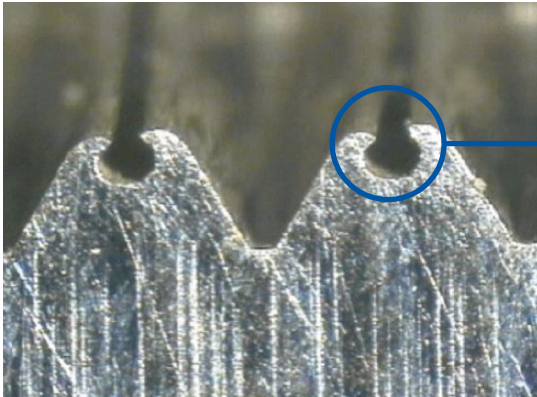


Application class of the tap designation according to		Tolerance class of the internal thread to be cut					
DIN	ISO						
4H	ISO1	4H	5H	-	-	-	-
6H	ISO2	4G	5G	6H	-	-	-
6G	ISO3	-	(4E)	6G	7H	8H	-
7G	-	-	-	(6E)	7G	8G	-

i For special applications, e.g. abrasive cast iron materials or plastics other dimensions have to be chosen which are determined on previous experience. In such cases an „X“ is added to the short designation of the tolerance, e.g. ISO 2X, however the tolerance zone assignment may be limited (6HX for tolerance zone 6H and 5G). In addition it should be taken into account that the dimensions of the internal thread do not only depend on the dimensions of the tap but on the material to be machined and all production conditions. For first taps and intermediate taps no thread dimensions are determined.

Thread formers

Spanlos thread forming taps for cold-formable materials up to 1400 N/mm² or at least 5 % elongation. The thread is produced by plastic deformation. The molded thread has very high strength.



Prior to forming a thread, you should ensure that a molded thread is acceptable. In certain sectors, the forming of a thread is **not** permitted. Dirt or bacteria can settle in the formed crown.

» Important

6

Incremental pressure forming



Workpiece

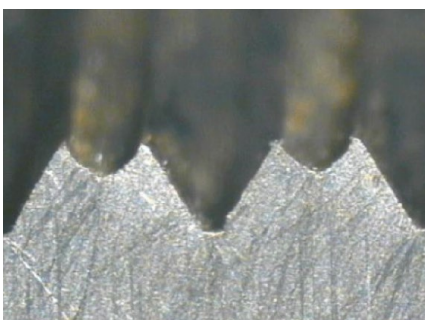
Thread formers



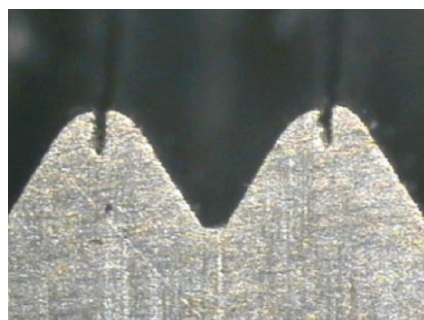
The thread profile is pressed gradually into the material via the start (leading edge) of the tap.

Properties

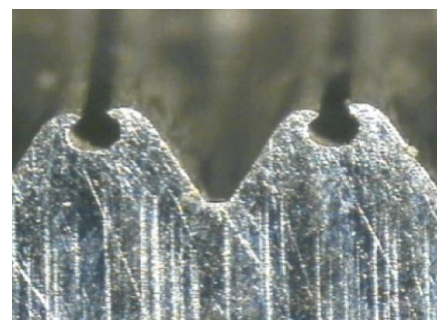
- ▲ one type can be used in different materials
- ▲ for through and blind holes
- ▲ very good thread surface quality
- ▲ high static and dynamic strength thread
- ▲ secure machining of deep and counterbored threads
- ▲ short machining times
- ▲ no chip problems
- ▲ no swarf
- ▲ high process security
- ▲ HSS-E and HSS-PM taps for materials up to 33 HRC with a minimum elongation of 5 %



Underformed – core hole too large



Overformed – core hole too small



Perfect form – core hole correct

Troubleshooting

Poor tool life

Cause

- ▲ overload fractures of the cutting edge on the lead
- ▲ hardness or tool material not suitable for the application
- ▲ core hole too small, or work hardened
- ▲ insufficient lubrication or incorrect application parameters

Remedy

- ▲ a longer lead or more flutes for the same lead length, giving a greater number of cutting teeth
- ▲ in reground tools the hardness can be reduced, apply correct parameters for regrinding
- ▲ increase frequency of changes or regrinding of the drill
- ▲ use the correct operating parameters for drilling
- ▲ select the correct lubricant and ensure adequate supply

Axial thread error

Cause

- ▲ selected geometry is not suitable
- ▲ spindle speed is wrong compared with feed (synchronisation error)
- ▲ blind hole taps are used with high feed pressure
- ▲ through hole taps are used with low feed pressure

Remedy

- ▲ check programming and pitch control or machine synchronisation
- ▲ use tapping chuck with length compensation
- ▲ increase retraction feed pressure
- ▲ increase feed pressure

Oversize thread

Cause

- ▲ thread tolerances of tool and thread gauge do not match
- ▲ burred tool edges after regrinding
- ▲ cold pressure welding

Remedy

- ▲ check the correct tolerances for tool and thread gauge
- ▲ carefully deburr
- ▲ use appropriate (positive) geometry
- ▲ reduce cutting speed
- ▲ use different surface treatment or coating
- ▲ use tapping chuck with length compensation
- ▲ use appropriate lubricant

Broken tool

Cause

- ▲ tool is worn
- ▲ tool has hit the bottom of the hole
- ▲ weld deposits
- ▲ core hole too small
- ▲ chip trapping
- ▲ incorrect cutting speed
- ▲ chip trapping in the flute
- ▲ insufficient cooling / lubrication

Remedy

- ▲ employ set taps
- ▲ use a tool with lower helix
- ▲ use tools with a shorter / longer lead
- ▲ check the pre-drilling depth and the thread depth
- ▲ drill core hole deeper
- ▲ correct cutting speed
- ▲ use a different coating or surface treatment
- ▲ use tool holder with length compensation
- ▲ use suitable lubricant
- ▲ use correct core hole
- ▲ change geometry and / or flute type
- ▲ note chip shape and chip formation

Coatings

vap.

- ▲ vaporised
- ▲ vaporisation (vapour-deposition) prevents cold welds from forming on the tool and increases the surface hardness and thus the wear resistance

nitr.

- ▲ nitrided
- ▲ nitriding increases wear resistance and offers low friction properties

vap. + nitr.

- ▲ vaporized + nitrated
- ▲ combination of increased surface hardness and lubricant carrier

TiN

- ▲ TiN coating
- ▲ maximum application temperature: 450 °C

TiN GS

- ▲ titanium nitride low friction layer
- ▲ high wear resistance with low friction properties
- ▲ maximum application temperature: 450 °C

TiCN

- ▲ TiCN multilayer coating
- ▲ maximum application temperature: 450 °C

Ti200

- ▲ TiN coating
- ▲ well suited for high cutting speeds during thread forming
- ▲ maximum application temperature: 450 °C

OSM

- ▲ hard material layer and anti-friction layer
- ▲ for use in high-strength steels

CH

- ▲ amorphous carbon layer
- ▲ for use in non-ferrous metals or aluminum
- ▲ reduces the material adhesion

HCr

- ▲ hard chromed
- ▲ for use in non-ferrous metals or aluminum
- ▲ very low surface roughness

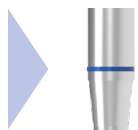
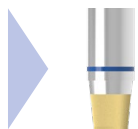
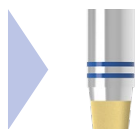
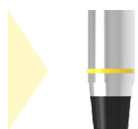
CrN

- ▲ chromium-nitrogen coating
- ▲ very wear-resistant coating
- ▲ especially suitable for use in aluminum, but also for P, M and S materials

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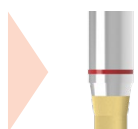
Coloured rings – overview

WNT \ Performance

for steel up to 750 N/mm²Type ST uncoated tap for steel up to 750 N/mm² tensile strengthfor steel to 1100 N/mm²Type ST and VG coated tap for steel up to 1100 N/mm² tensile strengthfor steel up to 1400 N/mm²Type HR for steel up to 1400 N/mm² tensile strength

for corrosion and acid-resistant steels

Type VA for stainless steel



for cast iron materials

Type GG for cast iron



for aluminium and non-ferrous metal

Type NW, Soft and Ms for aluminium, short-chipping brass and soft materials



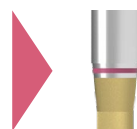
for heat resistant alloys

Type Ti, Ni and AMPCO for heat-resistant steel, titanium and Inconel



for hardened steels

Type HT for hard machining

for universal application up to 1100 N/mm²

Type UNI for the all-purpose use