

New products for machining technicians

NEW Through hole – machine taps right-hand, type Stabil NW



→ Page 26



→ Page 64



→ Page 82

- ▲ Highly efficient machining of non-ferrous metals
- ▲ 1 – 2 µm thick DLC monolayer coating ensures minimal friction values and therefore ideal chip clearance
- ▲ 4xD

NEW Blind hole – machine taps right-hand, type Salo-Rex NW



→ Page 42



→ Page 73



→ Page 85

- ▲ Highly efficient machining of non-ferrous metals
- ▲ 1 – 2 µm thick DLC monolayer coating ensures minimal friction values and therefore ideal chip clearance
- ▲ 3xD

NEW Through hole – machine taps right-hand, type Stabil HR



→ Page 25

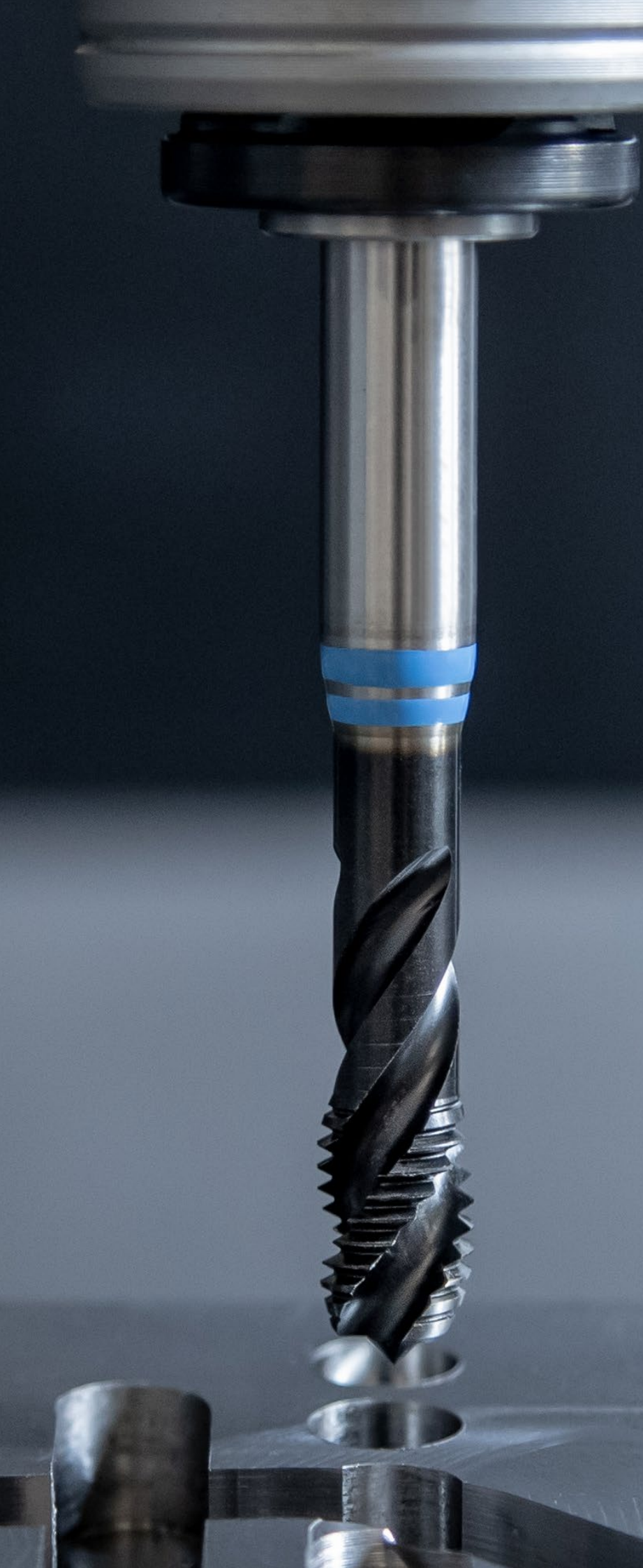
- ▲ Specialist for thread production in high-strength steels
- ▲ New optimised hard material/carbon coating delivers the very best results
- ▲ 4xD

NEW Blind hole – machine taps right-hand, type SL HR



→ Page 38

- ▲ Specialist for thread production in high-strength steels
- ▲ New optimised hard material/carbon coating delivers the very best results
- ▲ 2xD



Solid drilling and bore machining

- 1 HSS drilling
- 2 Solid carbide drilling
- 3 Indexable insert drilling
- 4 Reaming and Countersinking
- 5 Spindle Tooling

Threading

- 6 Taps and thread formers
- 7 Circular and Thread Milling
- 8 Thread turning

Turning

- 9 Turning Tools
- 10 Multifunctional Tools – EcoCut and FreeTurn
- 11 Grooving Tools
- 12 Miniature turning tools

Milling

- 13 HSS Milling Cutters
- 14 Solid Carbide milling cutters
- 15 Milling tools with indexable inserts

Catalogue –
Clamping technology

- 16 Adaptors and Accessories
- 17 Workpiece clamping
- 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	21-108
Technical Information	
Thread core hole diameter for tapered threads	109
Tapped hole pilot diameter	110+111
Tap Type Explanation	112
Thread tolerances and recommended manufacturing tolerances	113
Thread formers	114
Troubleshooting	115
Coatings/coloured rings – overview	116

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 113.**

Tensile strength



Example up to 1100 N/mm²

Tool 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 116.**

Thread types



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

Coolant supply version



Int. coolant supply



The cutting data is highly dependent on external conditions, such as stability of the tool and workpiece clamping, material and machine type!
The values indicated represent possible cutting data which may need to be corrected depending on operating conditions !

Tap types

Tool type

WNT \ Performance

Stabil

for through holes to 4xD

Salo-Rexfor 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 3xDA detailed explanation of the types of tools can be found on → **Page 112.**

Application range

WNT \ Performance

UNI

for universal application

STfor good quality free
machining steel**VG**for tempered and heat-resistant
steels < 1100 N/mm²**HR**for high-tensile steels
< 1400 N/mm²**GG**

for cast iron

VAfor stainless and acid-resistant
steels up to 1100 N/mm²**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

HTfor 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/mm²**ERGO
F.T.**Hand tap for steel up to
1400 N/mm², wolfram,
chilled iron**FE**

Dies for steel

WNT \ Standard

UNIfor universal application up to
1000 N/mm²**FE**for steel to 850 N/mm²**FE-HF**for high-tensile steel to
1100 N/mm²**VA**for corrosion and
acid-resistant steels**GG**

for cast iron

ALfor aluminium and
aluminium alloys

Special Features

CNCfor 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

ELextra long, with double
overall length**AUT**

short version for automatic use

SNThread 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

NPTFAmerican 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

UNJCUnified 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 B1.20.1The 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/mm ²
	for steel up to 750 N/mm ²
	for steel up to 1400 N/mm ²
	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

		WNT \ Performance														
Tool type	Application range	M	EG M	MF	G	UNC	EG UNC	UNJC	UNF	EG UNF	UNJF	BSW	NPT	NPTF	Rp	Tr
Spanlos	EC	57+58		80	88	93			102							
Stabil	UNI	21-23	61	63+64	82	89	94		97	103						
Salo-Rex	UNI	34-37	62	67+68	84+85	91	95		99	104						
Stabil	ST	24+25		64	82											108
Salo-Rex	ST	39+40		69+70	85											
TWIN	ST	51+52		78-79	87							107				
Stabil	HR	25														
Salo-Rex	HR	40														
TWIN	HR	51+52		77+78	87											
Stabil	VA	26			82	89										
Salo-Rex	VA	41		72	85	91			99			105				
TWIN	GG	53		78												
Stabil	Ti	27				89			97							
SL	Ti	43						96	100							
Stabil	NW	26		64	82											
Salo-Rex	NW	42		73	85											
TWIN	AMPCO	51+52														
TWIN	HT	54		77												

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

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



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 \ Standard					
Application range	M	MF	G	UNC	UNF
UNI	60	81			
UNI	31+32	65+66	83	90	98
UNI	48+49	74	86	92	101
FE	32	66			
FE	49	75			
FE-HF	32			90	
FE-HF	49			92	
VA	33	66		90	98
VA	49+50	76		92	101
GG	56				
AL	33				
AL	50				

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Taps Overview

Application range	Through hole	Blind hole	Through hole-Blind hole	Tool type	Application Area / Special Features	Tolerance	Tool 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 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		
				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	
						ISO 2 6H	HSS-E	■			32	

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Taps Overview

Application range	Through hole	Blind hole	Through hole-Blind hole	Tool type	Application Area / Special Features	Tolerance	Tool 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	☒		34+35
		Salo-Rex	UNI	ISO 1 4H ISO 3 6G	HSS-E	☒		
			UNI	ISO 2 6H	HSS-E HSS-PM	☒		48
		Salo-Rex	UNI NCW	ISO 2 6H	HSS-PM	☒	with Weldon flat for synchronised CNC machining without length compensation chuck	35
			UNI NCW	ISO 2 6H	HSS-PM	☒	with Weldon flat for synchronised CNC machining without length compensation chuck	49
		Salo-Rex	UNI CNC	ISO 2X 6HX ISO 2 6H, 7G	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck	36
		Salo-Rex	UNI CNC	ISO 3 6G	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	48

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tool Material	coated ■	uncoated □	Comments	WNT \ Performance	WNT \ Standard
Universal				Salo-Rex	UNI DRY	ISO 2 6H	HSS-E	■		for dry machining or minimum quantity lubrication (MMS), with thro' coolant	37	
				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	44	
				Salo-Rex	UNI EL	ISO 2 6H	HSS-E	■		extra long, with double overall length	46	
				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	38	
				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.	38	
				SL	ST ES	ISO 2 6H	HSS-E		□	extra short	45	
				SL	ST EL	ISO 2 6H	HSS-E		□	extra long, with double overall length	47	
				SL	HR	ISO 2 6H	HSS-PM		□		38	
				Salo-Rex	ST	ISO 2 6H	HSS-E	■	□		39	
				Salo-Rex	ST	ISO 1 4H ISO 3 6G	HSS-E	■	□			
					FE	ISO 2 6H	HSS-E		□		49	
					FE-HF	ISO 2 6H	HSS-E	■			49	
				Salo-Rex	ST LH	ISO 2 6H	HSS-E		□	for left hand threads	39	
				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	46	

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Taps Overview

Application range	Through hole	Blind hole	Through hole- Blind hole	Tool type	Application Area / Special Features	Tolerance	Tool Material	coated ■	uncoated □	Comments	WNT \ Performance	WNT \ Standard
Steel				Salo-Rex	HR	ISO 2 6H	HSS-PM	■	□		40	
				Salo-Rex	ST TS	ISO 2 6H	HSS-E	■			40	
Stainless steel				Salo-Rex	VA	ISO 2 6H	HSS-E	■			41	
					VA	ISO 2 6H	HSS-E HSS-PM	■	□		49+50	
				Salo-Rex	VA S	ISO 2 6H	HSS-E	■		with back taper, for deep threads		
				Salo-Rex	Soft	ISO 2 6H	HSS-E	■	□		42	
Non ferrous metals				Salo-Rex	NW	ISO 2 6H	HSS-E	■			42	
					AL	ISO 2 6H	HSS-E	■	□		50	
				SL	Ti	ISO 2X 6HX	HSS-PM	■			43	
Heat resistant				SL	Ni	ISO 2X 6HX ISO 2 6H	HSS-PM	■			43	
Steel				TWIN	ST	ISO 2X 6HX	HSS-E		□		51+52	
				TWIN	ST AZ	ISO 2X 6HX	HSS-E		□	with intermittent teeth, reduces friction		
				TWIN	ST ES	ISO 2X 6HX	HSS-E		□	extra short		
				TWIN	ST LH/ES	ISO 2X 6HX	HSS-E		□	for left hand threads; extra short		
				TWIN	HR	ISO 2X 6HX	HSS-E	■			51+52	
				TWIN	HR EL	ISO 2X 6HX	HSS-E	■		extra long, with double overall length	55	
Cast iron				TWIN	GG	ISO 2X 6HX	HSS-E	■			53	
					GG	ISO 2X 6HX	HSS-E	■			56	
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	Tool Material	coated ■	uncoated □	Comments	WNT \ Performance	WNT \ Standard
												

M – Metric ISO Standard Thread

Non ferrous metals		TWIN	AMPCO	ISO 2X 6HX	HSS-PM	□				51+52		
hardened materials		TWIN	HT	ISO 2X 6HX	VHM HSS-PM	■				54		
Machine thread formers		Spanlos	EC	ISO 2X 6HX	HSS-E	■				57		
		Spanlos	EC SN	ISO 2X 6HX ISO 3X 6GX	HSS-E	■			Thread formers with lubrication grooves	58		
		Spanlos	NEO SN	ISO 2X 6HX	HSS-PM	■			Thread formers with lubrication grooves	59		
			UNI	ISO 2X 6HX	HSS-E	■				60		
			UNI SN	ISO 2X 6HX	HSS-E	■			Thread formers with lubrication grooves	60		
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	Tool Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒ ☐			

Metric ISO standard thread for wire thread inserts

Universal		Stabil	UNI	6H mod	HSS-E	☒		61
		Stabil	UNI	6H mod	HSS-E	☒		62
Non ferrous metals		Stabil	Soft	6H mod	HSS-E	☒		62

MF – Metric ISO Fine Thread

Universal		Stabil	UNI	ISO 2 6H	HSS-E	☒		63+64
		Stabil	UNI	ISO 3 6G	HSS-E	☒		
			UNI	ISO 2 6H	HSS-PM HSS-E	☒		65+66
Steel		Stabil	ST	ISO 2 6H	HSS-E	☐		
			FE	ISO 2 6H	HSS-E	☐		66
			FE-HF	ISO 2 6H	HSS-E	☒		
		Stabil	ST TS	ISO 2X 6HX	HSS-E	☒	for high-speed machining, up to 100 m/min.	64
		Stabil	ST LH	ISO 2 6H	HSS-E	☐	for left hand threads	64
Stainless steel		Stabil	VA	ISO 2 6H	HSS-E	☒		
			VA	ISO 2 6H	HSS-E	☒		66
Non ferrous metals		Stabil	NW	ISO 2 6H	HSS-E	☒		64
Universal		Salo-Rex	UNI	ISO 2 6H ISO 3 6G	HSS-E	☒		67+68
			UNI	ISO 2 6H	HSS-E HSS-PM	☒		74
		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	Tool 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	68	
					UNI NC	ISO 2 6H	HSS-E	■		for synchronised CNC machining with minimum length compensation chuck	75	
Steel				Salo-Rex	ST	ISO 2 6H	HSS-E		□		69	
				Salo-Rex	ST	ISO 1 4H	HSS-E		□			
					FE	ISO 2 6H	HSS-E		□		75	
					FE-HF	ISO 2 6H	HSS-E	■				
				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	69	
				SL	ST	ISO 2 6H	HSS-E		□		70+71	
				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	■			72+73	
Stainless steel					VA	ISO 2 6H	HSS-E HSS-PM	■			76	
Non ferrous metals				Salo-Rex	NW	ISO 2 6H	HSS-E	■			73	
Steel				TWIN	ST	ISO 2X 6HX	HSS-E		□		77+78	
				TWIN	ST ES	ISO 2X 6HX	HSS-E		□	extra short	79	
				TWIN	ST LH/ES	ISO 2X 6HX	HSS-E		□	for left hand threads	79	
				TWIN	HR	ISO 2X 6HX	HSS-E	■			77+78	
Cast iron				TWIN	GG	ISO 2X 6HX	HSS-E	■			78	
hardened materials				TWIN	HT	ISO 2X 6HX	VHM	■			77	

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Taps Overview

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

MF – Metric ISO Fine Thread

Machine thread formers		Spanlos	EC	ISO 2X 6HX	HSS-E	☒			80
		Spanlos	EC SN	ISO 2X 6HX	HSS-E	☒	Thread formers with lubrication grooves		80
			UNI	ISO 2X 6HX	HSS-E	☒			81
			UNI SN	ISO 2X 6HX	HSS-E	☒	Thread formers with lubrication grooves		81
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	☒			82
			UNI	ISO 228	HSS-E	☒			83
Steel		Stabil	ST	ISO 228	HSS-E	☐			82
			FE	ISO 228	HSS-E	☐			
Stainless steel		Stabil	VA	ISO 228	HSS-E	☒			82
Non ferrous metals		Stabil	NW	ISO 228	HSS-E	☒			82
Universal		Salo-Rex	UNI	ISO 228 ISO 228 +0,05	HSS-E	☒			84
			UNI	ISO 228	HSS-E	☒			86
		Salo-Rex	UNI CNC	ISO 228	HSS-E	☒	for synchronised CNC machining with minimum length compensation chuck		85



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Taps Overview

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

G – Whitworth Pipe Thread

Steel		Salo-Rex	ST	ISO 228	HSS-E	☐		85
		SL	ST	ISO 228	HSS-E	☐		
Stainless steel		Salo-Rex	VA	ISO 228	HSS-E	☒		85
Non ferrous metals		Salo-Rex	NW	ISO 228	HSS-E	☒		85
Steel		TWIN	ST	ISO 228X	HSS-E	☐		87
		TWIN	HR	ISO 228X	HSS-E	☒		87
Cast iron		TWIN	GG	ISO 228X	HSS-E	☒		
Machine thread formers		Spanlos	EC	ISO 228	HSS-E	☒		88
		Spanlos	EC SN	ISO 228	HSS-E	☒	Thread formers with lubrication grooves	88
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	☒		89
			UNI	2B	HSS-E	☒		90
Steel		Stabil	ST	2B	HSS-E	☐		
			FE-HF	2B	HSS-E	☒		90
Stainless steel		Stabil	VA	2B	HSS-E	☒		89
			VA	2B	HSS-E	☒		90

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	Tool Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒ ☐			

UNC – Unified Coarse Thread

Heat resistant			Stabil	Ti	2BX	HSS-PM	☒			89
Universal			Salo-Rex	UNI	2B	HSS-E	☒			91
			Salo-Rex	UNI	2B +0,05	HSS-E	☒			
				UNI	2B	HSS-E	☒			92
Steel			Salo-Rex	ST	2B	HSS-E	☐			
				FE-HF	2B	HSS-E	☒			92
Stainless steel			Salo-Rex	VA	2B	HSS-E	☒			91
				VA	2B	HSS-E	☐			92
Heat resistant			SL	Ti	2BX	HSS-PM	☒			
Cast iron			TWIN	GG	2BX	HSS-E	☒			
Machine thread formers			Spanlos	EC	2BX	HSS-E	☒			93
			Spanlos	EC SN	2BX	HSS-E	☒		Thread formers with lubrication grooves	93
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	☒			94
			Salo-Rex	UNI	2B	HSS-E	☒			95

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	Tool Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒ ☐			

UNJC – Unified Coarse Thread

Heat resistant		SL	Ti	3BX	HSS-E	☒				96
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UNF – Unified Fine Thread

Universal		Stabil	UNI	2B	HSS-E	☒				97
			UNI	2B	HSS-E	☒				98
Steel		Stabil	ST	2B	HSS-E	☐				
			FE	2B	HSS-E	☐				98
Stainless steel			VA	2B	HSS-E	☒				98
Heat resistant		Stabil	Ti	2BX	HSS-PM	☒				97
Universal		Salo-Rex	UNI	2B 2B +0,05	HSS-E	☒				99
			UNI	2B	HSS-E	☒				101
Steel			FE	2B	HSS-E	☐				
Stainless steel		Salo-Rex	VA	2B	HSS-E	☒				99
			VA	2B	HSS-E	☐				101
Heat resistant		SL	Ti	2BX 3BX	HSS-PM	☒				100
Cast iron		TWIN	GG	2BX	HSS-E	☒				
Thread formers		Spanlos	EC SN	2BX	HSS-E	☒			Thread formers with lubrication grooves	102
Dies			FE	2A	HSS	☐				

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	Tool Material	coated uncoated	Comments	WNT \ Performance	WNT \ Standard
								☒ ☐			

EG UNF – Unified fine thread for wire inserts

Universal			Stabil	UNI	2B	HSS-E	☒			103
			Salo-Rex	UNI	2B	HSS-E	☒			104

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	☒			105
Steel			TWIN	VG		HSS-E	☐			106
			TWIN	VG AZ		HSS-E	☐	with intermittent teeth, reduces friction		
			TWIN	ST ES		HSS-E	☐	extra short		107
Dies				FE		HSS-E	☐			

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	Tool 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	VG				HSS-E	☐			
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Tr – Metric ISO Trapezoidal Thread

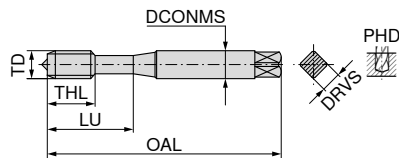
Steel			ST	7H			HSS-E	☐			108
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Accessories

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



DIN 371 with reinforced shank

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

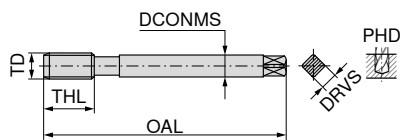
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 501 ...		22 503 ...		22 505 ...		22 508 ...		22 510 ...	
									EUR U0		EUR U0		EUR U0		EUR U0		EUR U0	
M1	0,25	40	2,5	2,1	0,75	5	13	2	102,80	010								
M1,2	0,25	40	2,5	2,1	0,95	5	13	2	97,58	012								
M1,4	0,30	40	2,5	2,1	1,10	7	13	3	88,31	014								
M1,6	0,35	40	2,5	2,1	1,25	8	11	3	62,01	016								
M1,7	0,35	40	2,5	2,1	1,35	6	11	2	95,40	017								
M1,8	0,35	40	2,5	2,1	1,45	6	11	2	131,00	018								
M2	0,40	45	2,8	2,1	1,60	7	12	2			42,67	020			45,07	020	52,40	020
M2	0,40	45	2,8	2,1	1,60	7	12	3	45,07	020								
M2,2	0,45	45	2,8	2,1	1,75	7	12	2	48,03	022								
M2,5	0,45	50	2,8	2,1	2,05	9	14	2	44,31	025					44,31	025	51,30	025
M3	0,50	56	3,5	2,7	2,50	11	18	3	33,19	030	36,03	030	36,03	030	36,03	030	41,48	030
M3,5	0,60	56	4,0	3,0	2,90	12	20	3	36,45	035					36,68	035		
M4	0,70	63	4,5	3,4	3,30	13	21	3	30,12	040	37,54	040	37,54	040	36,45	040	41,70	040
M5	0,80	70	6,0	4,9	4,20	15	25	3	30,89	050	38,09	050	38,09	050	36,68	050	42,67	050
M6	1,00	80	6,0	4,9	5,00	17	30	3	31,33	060	43,01	060	43,01	060	37,54	060	43,76	060
M7	1,00	80	7,0	5,5	6,00	17	30	3	43,76	070								
M8	1,25	90	8,0	6,2	6,80	20	35	3	35,47	080	48,25	080	48,25	080	42,47	080	48,03	080
M10	1,50	100	10,0	8,0	8,50	22	39	3	42,57	100	67,24	100	67,24	100	51,30	100	58,62	100
M12	1,75	110	12,0	9,0	10,20	24	44	3	62,65	120								
P										12		15		15		12		12
M										7		9		9		7		7
K										12		18		18		12		12
N												12		12				
S																		
H																		
O																		

1) Tol. ISO 1 4H ≤ M1.4



DIN 376 can be found on the next page

M	Stabil
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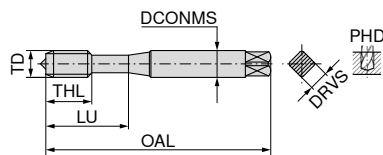
DIN 376 with reduced shank

[illegible]

Through hole – Machine taps, right hand

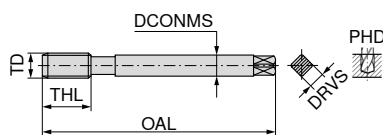
▲ CNC = for synchronised CNC machining with minimum length compensation chuck

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



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M3	0,50	70	6,0	4,9	2,5	6	18	3
M3	0,50	56	3,5	2,7	2,5	6	18	3
M4	0,70	70	6,0	4,9	3,3	7	21	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
M8	1,25	90	8,0	6,2	6,8	14	35	4
M10	1,50	100	10,0	8,0	8,5	16	39	3
M10	1,50	100	10,0	8,0	8,5	16	39	4
M12	1,75	110	10,0	8,0	10,2	18		3
M16	2,00	110	12,0	9,0	14,0	22		3



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M12	1,75	110	9	7	10,2	18	4
M14	2,00	110	11	9	12,0	20	4
M16	2,00	110	12	9	14,0	22	4
M20	2,50	140	16	12	17,5	25	4

P	15	15	15	15
M	8	9	9	9
K	15	18	18	18
N	22	12	12	12
S				
H				
O				

UNI NCW	UNI CNC	UNI CNC	UNI CNC
B 4-5	B 4-5	B 4-5	B 4-5
ISO 2 6H	ISO 2X 6HX	ISO 3X 6GX	7GX
TiN	TiN GS	TiN GS	TiN GS



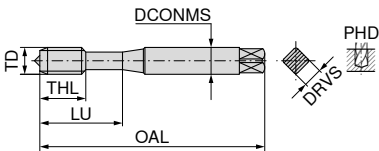
HSS-PM	HSS-E	HSS-E	HSS-E
$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	$\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$

22 148 ...	22 542 ...	22 596 ...	22 592 ...
EUR U0	EUR U0	EUR U0	EUR U0
51,52	39,08		
53,59	41,48	50,00	50,00
54,14	42,02	51,52	51,52
68,11	53,37	56,43	62,98
76,08	58,95	61,02	68,77
93,44	73,36	76,08	82,64
113,50			
158,30			

22 543 ...	22 597 ...	22 593 ...
EUR U0	EUR U0	EUR U0
85,37	92,90	100,10
240,20		
122,30		
207,30		

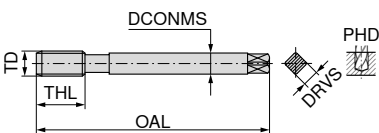
Through hole – Machine taps

▲ LH = for left hand threads



DIN 371 with reinforced shank

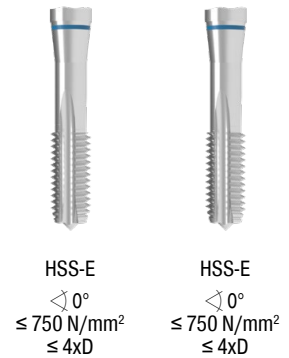
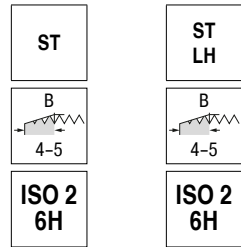
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M2	0,40	45	2,8	2,1	1,60	7	12	2
M2,3	0,40	45	2,8	2,1	1,90	7	12	2
M2,5	0,45	50	2,8	2,1	2,05	9	14	2
M2,6	0,45	50	2,8	2,1	2,15	9	14	2
M3	0,50	56	3,5	2,7	2,50	11	18	3
M3,5	0,60	56	4,0	3,0	2,90	12	20	3
M4	0,70	63	4,5	3,4	3,30	13	21	3
M5	0,80	70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

P		
M		
K		
N		
S		
H		
O		

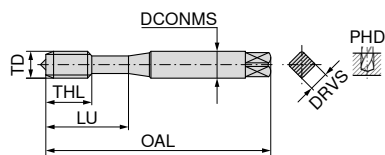


22 020 ...	22 127 ...
EUR U0	EUR U0
29,47 020	
32,41 023	
29,47 025	
32,41 026	
23,91 030	38,09 030
25,53 035	
24,23 040	39,73 040
25,53 050	40,93 050
25,53 060	40,93 060
30,67 080	46,06 080
36,78 100	58,62 100

22 021 ...	22 147 ...
EUR U0	EUR U0
30,24 050	
31,00 060	
32,96 080	
37,54 100	
45,62 120	70,08 120
62,01 140	
64,84 160	106,90 160
95,40 180	
96,71 200	157,20 200
149,60 220	
127,70 240	
174,60 270	
207,30 300	

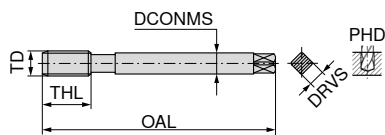
Through hole – Machine taps, right hand

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



DIN 371 with reinforced shank

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



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

P	65	8	10
M		8	8
K	65		
N	75	10	22
S		4	
H			
O			

ST TS	NEW HR	VG
B 4-5	B 4-5	B 4-5
ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
TiN	AlTiN- HD	TiN

HSS-E
≤ 1100 N/mm²
≤ 0°
≤ 4xDHSS-PM
≤ 1400 N/mm²
≤ 0°
≤ 4xDHSS-E
≤ 1100 N/mm²
≤ 0°
≤ 4xD

22 092 ...

EUR
U0

50,65

020

50,65

025

39,73

030

43,33

040

47,37

050

57,63

060

72,70

080

78,81

100

22 468 ...

EUR
U0

75,30

02000

75,30

02500

48,97

03000

51,09

04000

52,73

05000

59,74

06000

65,64

08000

92,45

10000

22 120 ...

EUR
U0

44,31

020

44,31

025

32,64

030

35,04

040

37,33

050

45,41

060

48,03

080

68,77

100

22 093 ...

EUR
U0

106,00

120

137,50

160

205,30

200

22 121 ...

EUR
U0

81,43

120

113,50

160

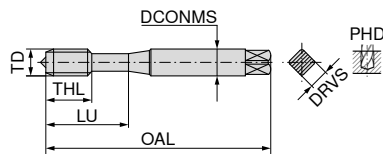
191,00

200

Through hole – Machine taps, right hand

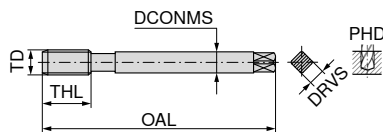
M

Stabil



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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	100	8,0	6,2	6,80	20	35	3
M8	1,25	90	8,0	6,2	6,80	20	35	3
M10	1,50	110	10,0	8,0	8,50	22	39	3
M10	1,50	100	10,0	8,0	8,50	22	39	3



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

P	8	10	15
M	6	8	6
K			
N			15
S			
H			
O			

VA	VA	NEW 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
nit.	TiN GS	vap.	DLC
HSS-E $\angle 0^\circ$ $\leq 900 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 900 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 500 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 880 \text{ N/mm}^2$ $\leq 4xD$

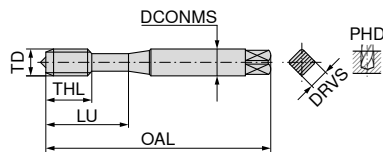
22 056 ...	22 038 ...	22 058 ...	22 464 ...
EUR U0	EUR U0	EUR U0	EUR U0
	016		
33,40	58,62 016	32,41 020	43,67 02000
	48,03 020	37,33 023	
		32,41 025	43,67 02500
32,96	46,61 025	37,00 026	
		25,76 030	33,48 03000
26,75	39,95 030	26,75 035	
30,01		25,76 040	33,98 04000
28,06	42,02 040	26,75 050	34,47 05000
29,04	43,33 050	26,75 060	34,47 06000
30,24	53,92 060		40,30 08000
			50,77 10000
33,63	59,71 080	31,87 080	
41,48	74,12 100	38,09 100	

22 057 ...	22 039 ...	22 059 ...	22 465 ...
EUR U0	EUR U0	EUR U0	EUR U0
	120		
52,73	88,31 120	48,03 120	61,14 12000
	140		
72,70	126,60 140		
	160	68,11 160	78,92 16000
75,31	124,50 160		
	180		
145,10			
108,20	209,60 200		125,90 20000
229,30			
147,40			
247,80			
237,90			

Through hole – Machine taps, right hand

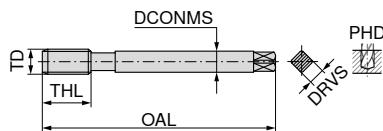
M

Stabil



DIN 371 with reinforced shank

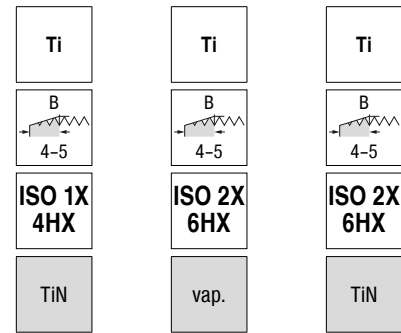
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M1,6	0,35	40	2,5	2,1	1,25	8	9,5	3
M2	0,40	45	2,8	2,1	1,60	8	9,5	3
M2,5	0,45	50	2,8	2,1	2,05	9	14,0	3
M3	0,50	56	3,5	2,7	2,50	11	18,0	3
M3,5	0,60	56	4,0	3,0	2,90	12	20,0	3
M4	0,70	63	4,5	3,4	3,30	13	21,0	3
M5	0,80	70	6,0	4,9	4,20	15	25,0	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 mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M12	1,75	110	9	7	10,2	24	3

P	7	5	7
M	7	5	7
K			
N			
S	5	3	5
H			
O			



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

22 081 ...

EUR
U0

020

030

040

050

060

080

22 075 ...

EUR
U0

016

020

025

030

035

040

050

060

080

100

22 077 ...

EUR
U0

016

020

025

030

035

040

050

060

080

100

22 140 ...

EUR
U0

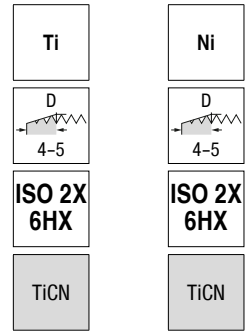
120

22 142 ...

EUR
U0

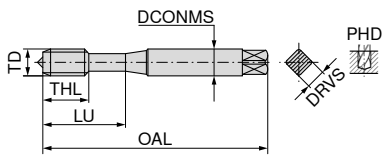
120

Through hole – Machine taps, right hand



HSS-E

HSS-E

 $\angle 15^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 4xD$
 $\angle 15^\circ$
 $\leq 1600 \text{ N/mm}^2$
 $\leq 4xD$


DIN 371 with reinforced shank

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

22 159 ...

22 297 ...

EUR
U0EUR
U0

47,48

56,76

51,95

59,27

52,28

60,70

69,86

76,75

76,75

85,14

94,42

106,60

030

030

040

040

050

050

060

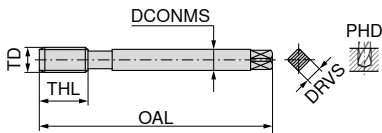
060

080

080

100

100



DIN 376 with reduced shank

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

22 160 ...

22 298 ...

EUR
U0EUR
U0

109,00

123,40

154,00

172,40

266,30

294,70

312,20

120

120

160

160

200

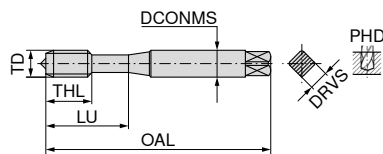
200

240

P	7	
M	7	
K		
N	22	22
S	5	2
H		
O		

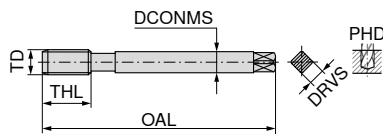
Through hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank

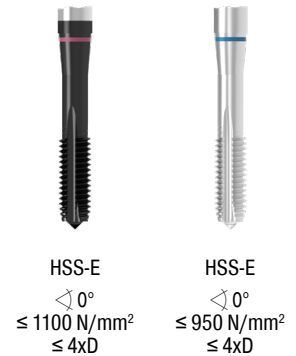
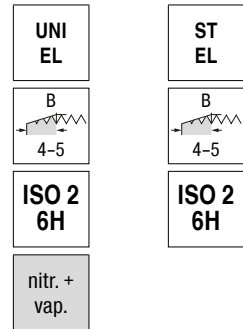
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M3	0,50	100	3,5	2,7	2,5	11	18	3
M4	0,70	125	4,5	3,4	3,3	13	21	3
M5	0,80	140	6,0	4,9	4,2	15	25	3
M6	1,00	160	6,0	4,9	5,0	17	30	3
M8	1,25	180	8,0	6,2	6,8	20	35	3



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

P	12	12
M	7	
K	12	12
N		22
S		
H		
O		



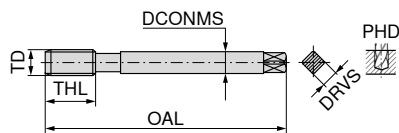
22 514 ...	22 233 ...
EUR U0	EUR U0
63,30 030	61,79 030
63,30 040	59,27 040
70,08 050	64,74 050
77,29 060	67,57 060
82,64 080	80,56 080

22 515 ...	22 234 ...
EUR U0	EUR U0
64,40 060	67,57 060
79,58 080	80,56 080
87,32 100	89,72 100
108,20 120	108,20 120
163,80 140	174,60 140
209,60 160	168,10 160
250,00 180	253,30 180
219,40 200	228,20 200

Through hole – Machine taps, right hand

▲ MMB = Nut taps

M

ST
MMBISO 2
6H

DIN 357 with reduced shank



HSS-E

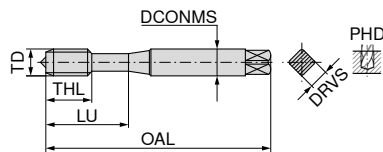
 $\angle 0^\circ$
 $\leq 850 \text{ N/mm}^2$
 $\leq 1xD$

22 098 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes		EUR U0	
M3	0,50	70	2,2		2,5	16	3		46,61	030
M4	0,70	90	2,8	2,1	3,3	22	3		46,61	040
M5	0,80	100	3,5	2,7	4,2	24	3		48,79	050
M6	1,00	110	4,5	3,4	5,0	30	3		48,79	060
M8	1,25	125	6,0	4,9	6,8	38	3		60,26	080
M10	1,50	140	7,0	5,5	8,5	45	3		68,77	100
M12	1,75	180	9,0	7,0	10,2	50	3		92,12	120
M16	2,00	200	12,0	9,0	14,0	63	3		131,00	160
P										15
M										
K										
N										
S										
H										
O										

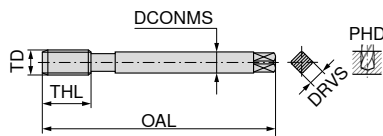
Through hole – Machine taps, right hand

M



DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	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	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

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

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


HSS-E

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


HSS-PM

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

23 110 ...	
EUR T9	
12,31	020
12,10	025
8,20	030
8,36	040
8,36	050
8,52	060
9,87	080
11,79	100

23 112 ...	
EUR T9	
14,48	020
16,14	025
10,44	030
11,38	040
11,48	050
14,59	060
15,82	080
19,55	100

23 010 ...	
EUR T9	
10,03	020
12,51	030
11,48	040
12,83	050
15,31	060
17,06	080
22,54	100

23 111 ...	
EUR T9	
8,88	030
8,74	040
8,74	050
9,18	060
10,76	080
12,41	100
14,89	120
21,52	140
22,03	160
35,06	200

23 113 ...	
EUR T9	
23,17	120
40,32	140000
32,78	160
63,97	180000
56,37	200
94,73	220000
84,91	240
118,50	270000
132,90	300000
174,30	330000
213,50	360000

23 021 ...	
EUR T9	
26,89	120
40,75	140
37,86	160
66,30	180
68,47	200

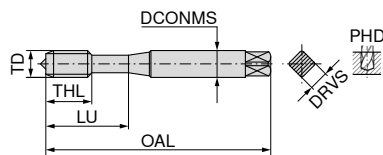
P	12	15	15
M	7	9	9
K	12	18	18
N		12	12
S			
H			
O			

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

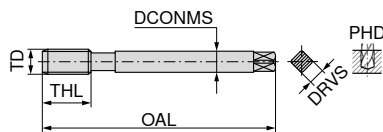


DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	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

UNI NC	UNI NCW	FE	FE-HF
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 $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$

23 114 ...	23 116 ...	23 212 ...	23 310 ...
EUR T9	EUR T9	EUR T9	EUR T9
		25,55 016	
		17,28 020	
		14,48 025	
17,68 030	21,20 030	11,48 030	16,76 030
		12,93 035	
19,23 040	24,20 040	11,48 040	17,79 040
19,35 050		11,90 050	18,00 050
	24,61 050		
28,34 060	24,61 060	11,90 060	24,61 060
29,99 080	31,13 080	15,41 080	26,58 080
37,75 100	37,54 100	18,41 100	33,40 100



DIN 376 with reduced shank

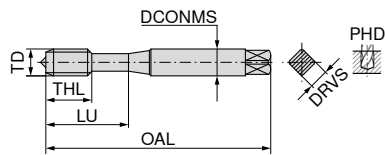
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	mm	mm	mm	mm	mm	mm	
M12	1,75	110	10	8	10,2	18	3
M12	1,75	110	9	7	10,2	24	3
M14	2,00	110	11	9	12,0	26	3
M16	2,00	110	12	9	14,0	22	3
M16	2,00	110	12	9	14,0	27	3
M20	2,50	140	16	12	17,5	32	3

23 115 ...	23 117 ...	23 213 ...	23 311 ...
EUR T9	EUR T9	EUR T9	EUR T9
	46,95 120	24,83 120	38,68 120
43,54 120		29,89 140	
	63,19 160		
59,05 160		37,65 160	53,68 160
107,60 200		58,85 200	94,84 200

P	15	15	12	15
M	9	8		
K	18	15	12	15
N	12	22	12	15
S				
H				
O				

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

 $\angle 0^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 3xD$


HSS-E

 $\angle 0^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 3xD$


HSS-E

 $\angle 0^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 3xD$

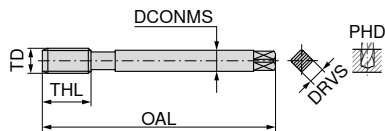

HSS-E

 $\angle 0^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 3xD$


HSS-E

 $\angle 0^\circ$
 $\leq 500 \text{ N/mm}^2$
 $\leq 3xD$

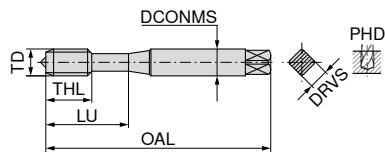
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	23 450 ...		23 410 ...		23 412 ...		23 610 ...		23 612 ...	
									EUR T9		EUR T9		EUR T9		EUR T9		EUR T9	
M2	0,40	45	2,8	2,1	1,60	7	12	2			12,72	020	23,38	020				
M2,5	0,45	50	2,8	2,1	2,05	9	14	2			14,69	025	19,65	025				
M3	0,50	56	3,5	2,7	2,50	11	18	3	11,68	030	8,36	030	15,52	030	11,48	030	13,03	030
M4	0,70	63	4,5	3,4	3,30	13	21	3	11,79	040	8,36	040	17,28	040	11,48	040	13,45	040
M5	0,80	70	6,0	4,9	4,20	15	25	3	12,72	050	8,71	050	17,68	050	11,90	050	13,85	050
M6	1,00	80	6,0	4,9	5,00	17	30	3	12,93	060	8,71	060	23,17	060	11,90	060	13,85	060
M8	1,25	90	8,0	6,2	6,80	20	35	3	14,48	080	11,18	080	24,72	080	15,41	080	15,82	080
M10	1,50	100	10,0	8,0	8,50	22	39	3	16,44	100	13,55	100	34,03	100	18,41	100	19,45	100



DIN 376 with reduced shank

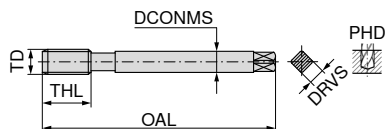
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	23 451 ...		23 411 ...		23 413 ...		23 611 ...		23 613 ...	
								EUR T9		EUR T9		EUR T9		EUR T9		EUR T9	
M12	1,75	110	9	7,0	10,2	24	3	29,27	120	18,00	120	37,54	120	24,83	120	24,41	120
M14	2,00	110	11	9,0	12,0	26	3	38,78	140								
M16	2,00	110	12	9,0	14,0	27	3	41,06	160	27,72	160	46,85	160				
M20	2,50	140	16	12,0	17,5	32	3	61,34	200	42,41	200	81,91	200				
M24	3,00	160	18	14,5	21,0	34	3			56,06	240						
P								8		8		10					
M								6		6		8					
K																	
N								22		22		24		15		15	
S																	
H																	
O																	

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	
M2	0,40	45	2,8	2,1	1,60	4,0	12	2
M2,2	0,45	45	2,8	2,1	1,75	4,5	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
M2,6	0,45	50	2,8	2,1	2,15	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
M7	1,00	80	7,0	5,5	6,00	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

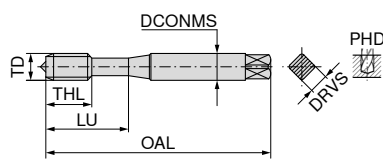
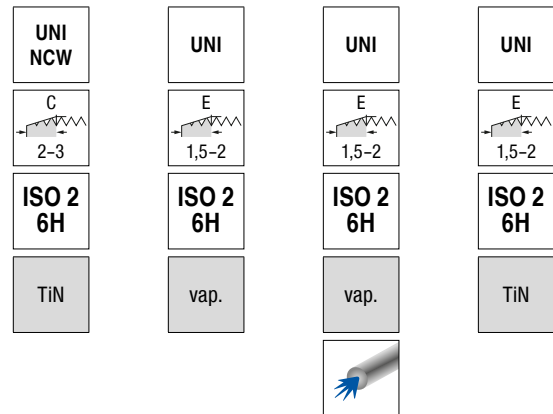
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	mm	mm	mm	mm	mm	mm	
M3	0,50	56	2,2		2,5	6	3
M4	0,70	63	2,8	2,1	3,3	7	3
M5	0,80	70	3,5	2,7	4,2	8	3
M6	1,00	80	4,5	3,4	5,0	10	3
M8	1,25	90	6,0	4,9	6,8	14	3
M10	1,50	100	7,0	5,5	8,5	16	3
M12	1,75	110	9,0	7,0	10,2	18	3
M14	2,00	110	11,0	9,0	12,0	20	3
M16	2,00	110	12,0	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
M27	3,00	160	20,0	16,0	24,0	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

P	12	12	15	15
M	7	7	9	9
K	12	12	18	18
N			12	12
S				
H				
O				

UNI	UNI	UNI	UNI
C 2-3	C 2-3	C 2-3	C 2-3
ISO 2 6H	7G	ISO 2 6H	ISO 2 6H
vap.	vap.	TiN	TiCN
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 $\angle 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$
22 518 ...	22 532 ...	22 520 ...	22 522 ...
EUR U0	EUR U0	EUR U0	EUR U0
34,82		50,00	
39,41			
41,70			
33,40			
39,73			
29,69	34,82	37,54	37,54
32,09			
31,33	34,82	40,17	40,17
31,65	37,33	40,49	40,49
32,64	50,00	47,70	47,70
48,03			
38,42	58,40	52,61	53,05
46,06	86,56	62,65	62,65
50,65		76,75	79,79
020		020	
022			
023			
025			
026			
030			
035			
040			
050			
060			
070			
080			
100			
120			

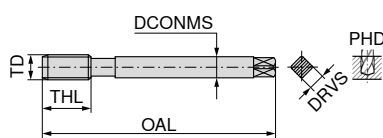
Blind hole – Machine taps, right hand

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



DIN 371 with reinforced shank

HSS-PM	HSS-E	HSS-E	HSS-E
$\leq 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\leq 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\leq 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\leq 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$
22 149 ...	22 524 ...	22 534 ...	22 526 ...
EUR U0	EUR U0	EUR U0	EUR U0
52,73	31,00		35,04
030	030		030
	31,00		38,32
040			040
57,63			
050	32,41	48,79	39,08
060	32,41	48,79	46,29
080	37,00	54,14	50,65
100	45,07	65,16	60,80

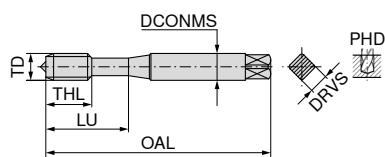
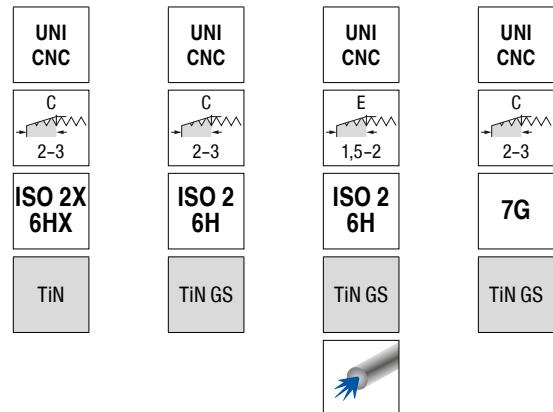


DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	EUR U0	EUR U0	EUR U0	EUR U0
M12	1,75	110	10	8,0	10,2	18	3	121,10	120		
M12	1,75	110	9	7,0	10,2	18	4			57,31	73,36
M14	2,00	110	11	9,0	12,0	20	4			93,44	
M16	2,00	110	12	9,0	14,0	22	3	162,60	160	108,20	
M16	2,00	110	12	9,0	14,0	22	4			80,11	105,50
M18	2,50	125	14	11,0	15,5	25	4			146,40	
M20	2,50	140	16	12,0	17,5	25	4			124,50	
M22	2,50	140	18	14,5	19,5	27	5			159,40	179,00
M24	3,00	160	18	14,5	21,0	30	5			174,60	
P								15	12	12	15
M								8	7	7	9
K								15	12	12	18
N								22			12
S											
H											
O											

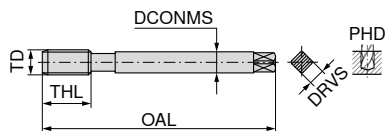
Blind hole – Machine taps, right hand

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



DIN 371 with reinforced shank

HSS-E	HSS-E	HSS-E	HSS-E
$\angle 50^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\angle 45^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\angle 45^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\angle 45^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$
22 416 ...	22 544 ...	22 546 ...	22 594 ...
EUR U0	EUR U0	EUR U0	EUR U0
50,97 030	45,07 030		51,85 030
53,37 040	46,06 040		52,40 040
54,80 050	47,70 050	68,11 050	53,92 050
66,25 060	49,34 060	68,77 060	58,95 060
73,68 080	61,67 080	88,31 080	72,70 080
91,26 100	70,08 100	101,50 100	80,66 100



DIN 376 with reduced shank

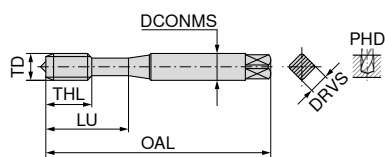
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes				
M12	1,75	110	9	7	10,2	18	3		22 417 ...	22 545 ...	22 595 ...
M12	1,75	110	9	7	10,2	18	4		EUR U0	EUR U0	EUR U0
M12	1,75	110	9	7	10,2	18	4		107,50 120	95,40 120	108,20 120
M14	2,00	110	11	9	12,0	20	3		154,00 140	116,80 140	128,80 140
M14	2,00	110	11	9	12,0	20	4		149,60 160	127,70 160	139,70 160
M16	2,00	110	12	9	14,0	22	3		256,60 200	185,50 200	204,20 200
M16	2,00	110	12	9	14,0	22	4				
M20	2,50	140	16	12	17,5	25	3				
M20	2,50	140	16	12	17,5	25	4				
P									15	15	15
M									9	9	9
K									18	18	18
N									22	12	12
S											
H											
O											

Blind hole – Machine taps, right hand

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

UNI
DRYISO 2
6H

TiN



DIN 371 with reinforced shank



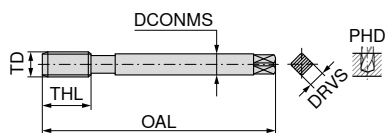
HSS-E

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

22 449 ...

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

EUR U0	
69,86	050
81,33	060
89,72	080
109,00	100



DIN 376 with reduced shank

22 450 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

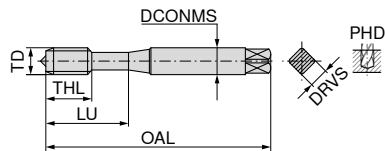
EUR U0	
119,00	120
168,10	160
275,10	200

P	12
M	
K	12
N	22
S	
H	
O	

Blind hole – Machine taps, right hand

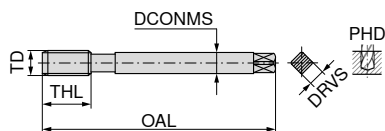
▲ CNC = for synchronised CNC machining with minimum length compensation chuck

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



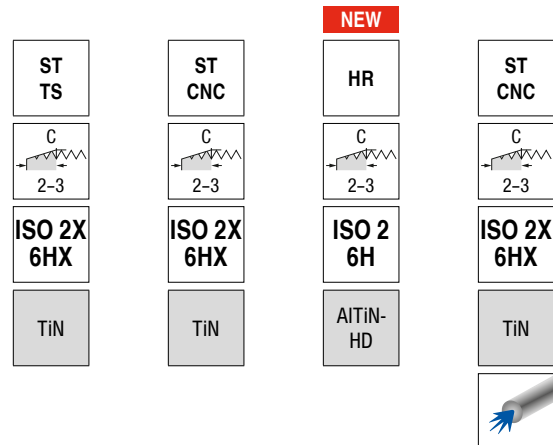
DIN 371 with reinforced shank

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



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M12	1,75	110	9	7	10,2	18	3
M16	2,00	110	12	9	14,0	22	3
M20	2,50	140	16	12	17,5	25	3



HSS-E $\angle 15^\circ$ $\leq 1050 \text{ N/mm}^2$ $\leq 2xD$	HSS-E $\angle 15^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 2xD$	HSS-PM $\angle 25^\circ$ $\leq 1400 \text{ N/mm}^2$ $\leq 2xD$	HSS-E $\angle 15^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 2xD$
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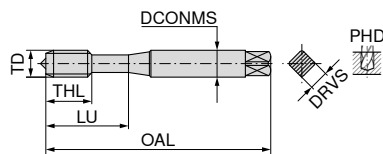
22 406 ...	22 328 ...	22 469 ...	22 443 ...
EUR U0	EUR U0	EUR U0	EUR U0
48,03	43,76	38,89	
030	030	03000	
		04000	
50,97	45,62	47,08	
		05000	
52,61	47,48	48,74	69,86
		06000	050
64,08	58,62	53,19	81,33
		08000	060
71,49	66,25	65,18	89,07
		10000	080
87,32	81,33	77,82	108,20
		12000	100

22 407 ...	22 329 ...	22 444 ...
EUR U0	EUR U0	EUR U0
104,30	95,18	121,10
120	120	120
146,40	137,50	170,40
160	160	
239,10	228,20	
200	200	

P	65	12	8	12
M		8	8	8
K	65	20		20
N	22	22	10	22
S			4	
H				
O				

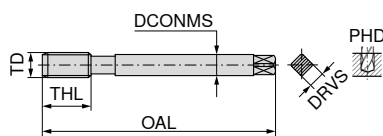
Blind hole – Machine taps

▲ LH = for left hand threads



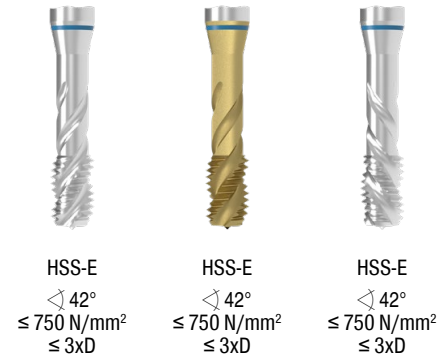
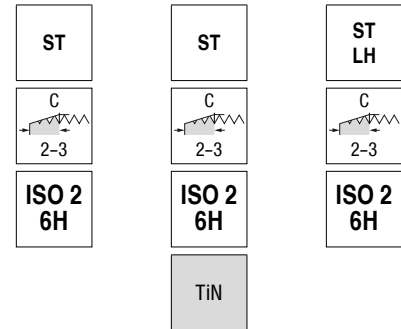
DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	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



DIN 376 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	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



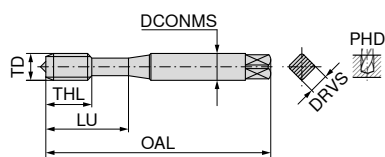
22 082 ...	22 084 ...	22 138 ...
EUR	EUR	EUR
U0	U0	U0
32,41 020	41,70 020	
36,03 023		
31,44 025		
27,40 030	34,05 030	47,37 030
30,24 035		
27,30 040	34,82 040	42,67 040
27,73 050	35,04 050	46,06 050
28,38 060	43,99 060	44,31 060
34,05 080	49,34 080	53,37 080
40,17 100	66,59 100	61,45 100

22 083 ...	22 085 ...	22 139 ...
EUR	EUR	EUR
U0	U0	U0
31,87 030		
32,09 040		
32,41 050		
38,86 060		
36,03 080		
51,95 120	74,77 100	
65,93 140	78,81 120	87,32 120
72,04 160	101,50 160	125,60 160
105,30 180		
107,10 200	170,40 200	185,50 200
147,40 220		
137,50 240		
235,80 300		
341,80 330		
341,80 360		

P	12	15	12
M			
K	12	15	12
N	12	15	22
S			
H			
O			

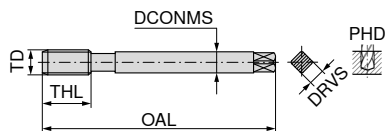
Blind hole – Machine taps, right hand

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



DIN 371 with reinforced shank

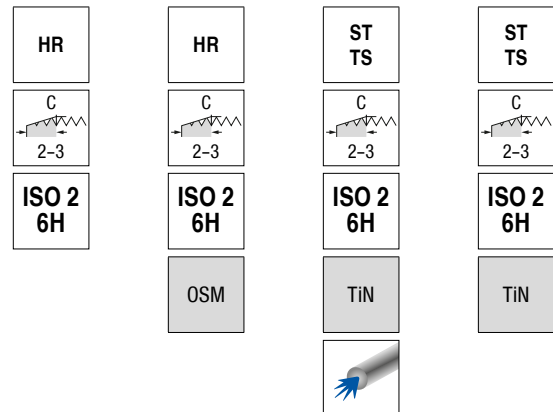
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M3	0,50	56	3,5	2,7	2,5	6	18	3
M4	0,70	63	4,5	3,4	3,3	7	21	3
M5	0,80	70	6,0	4,9	4,2	8	25	3
M6	1,00	80	6,0	4,9	5,0	10	30	3
M8	1,25	90	8,0	6,2	6,8	14	35	3
M10	1,50	100	10,0	8,0	8,5	16	39	3



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M5	0,80	70	6	4,9	4,2	8	3
M6	1,00	80	6	4,9	5,0	10	3
M8	1,25	90	8	6,2	6,8	14	3
M10	1,50	100	10	8,0	8,5	16	3
M12	1,75	110	9	7,0	10,2	18	4
M16	2,00	110	12	9,0	14,0	22	4

P	6	8	65	65
M	6	8		
K			65	65
N	8	12	75	75
S				
H				
O				



HSS-PM	HSS-PM	HSS-E	HSS-E
$\angle 42^\circ$ $\leq 1400 \text{ N/mm}^2$ $\leq 3xD$	$\angle 42^\circ$ $\leq 1400 \text{ N/mm}^2$ $\leq 3xD$	$\angle 40^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 2xD$	$\angle 40^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 2xD$
22 498 ...	22 499 ...	22 046 ...	22 044 ...
EUR U0	EUR U0	EUR U0	EUR U0
32,09 030	40,72 030		
30,24 040	40,72 040		49,66 040
31,87 050	43,33 050	84,15 050	53,37 050
31,44 060	44,75 060	109,20 060	56,76 060
38,09 080	56,76 080	113,50 080	64,08 080
46,06 100	64,08 100	154,00 100	79,58 100

22 045 ...

EUR
U0

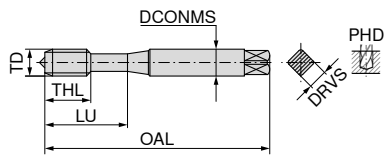
95,40

137,50

120

160

M Salo-Rex



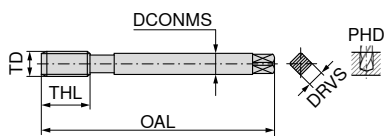
VA	VA	VA
C 2-3	E 1,5-2	C 2-3
ISO 2 6H	ISO 2 6H	ISO 2 6H
vap.	TIN GS	TIN GS



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

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

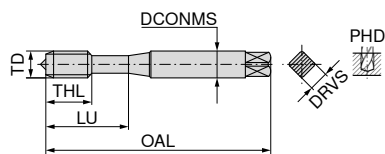
22 090 ...		22 042 ...		22 040 ...	
EUR U0		EUR U0		EUR U0	
52,40	020			83,50	016
41,48	025			47,05	020
				44,75	025
31,00	030			46,06	030
31,87	040			46,61	040
32,41	050	68,77	050	48,79	050
32,64	060	69,54	060	50,00	060
38,09	080	88,86	080	62,65	080
46,06	100	102,20	100	72,70	100



22 091 ...		22 041 ...	
EUR U0		EUR U0	
57,31	120	97,58	120
84,15	140	117,90	140
80,66	160	128,80	160
124,50	200	187,80	200
208,50	220		
158,30	240		
325,40	300		

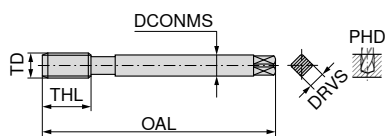
P	8	10	10
M	6	8	8
K			
N			
S			
H			
O			

Blind hole – Machine taps, right hand



DIN 371 with reinforced shank

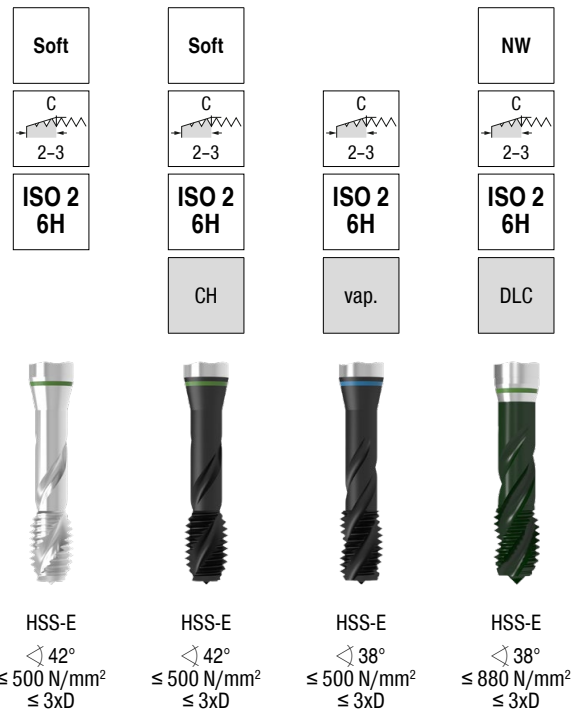
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M2	0,40	45	2,8	2,1	1,60	4	12	2
M2,5	0,45	50	2,8	2,1	2,05	5	15	2
M2,5	0,45	50	2,8	2,1	2,05	5	14	2
M3	0,50	56	3,5	2,7	2,50	6	18	2
M3	0,50	56	3,5	2,7	2,50	6	18	3
M4	0,70	63	4,5	3,4	3,30	7	21	2
M4	0,70	63	4,5	3,4	3,30	7	21	3
M5	0,80	70	6,0	4,9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



DIN 376 with reduced shank

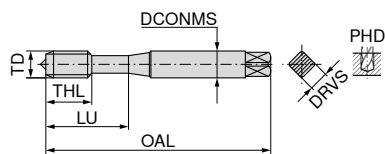
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M12	1,75	110	9	7	10,2	18	3
M14	2,00	110	11	9	12,0	20	3
M16	2,00	110	12	9	14,0	22	3
M20	2,50	140	16	12	17,5	25	3

P	15	15
M		6
K		
N	22	22
S		
H		
O		



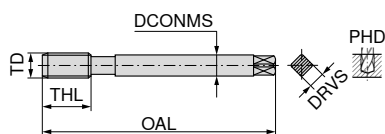
22 326 ...	22 324 ...	22 086 ...	22 460 ...
EUR U0	EUR U0	EUR U0	EUR U0
42,57	57,53	36,68	47,43
020	020	020	02000
39,84	55,89	34,05	47,43
025	025	025	02500
32,64	48,46		38,52
030	030	28,60	03000
32,64	52,28	28,60	39,63
040	040	040	04000
33,73	53,92	29,69	39,63
050	050	050	05000
33,73	74,88	29,69	40,77
060	060	060	06000
40,39	81,33	34,28	46,02
080	080	080	08000
47,48	102,20	42,02	52,48
100	100	100	10000

Blind hole – Machine taps, right hand



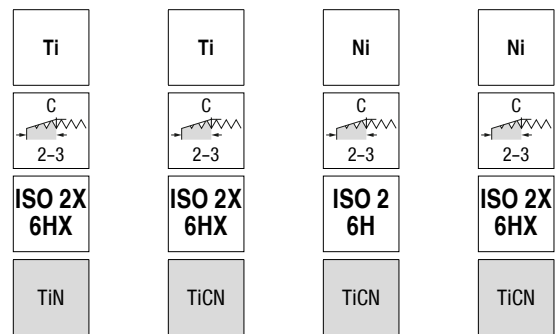
DIN 371 with reinforced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	mm	
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	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



HSS-PM	HSS-PM	HSS-PM	HSS-PM
$\angle 30^\circ$	$\angle 15^\circ$	$\angle 15^\circ$	$\angle 15^\circ$
$\leq 1400 \text{ N/mm}^2$	$\leq 1200 \text{ N/mm}^2$	$\leq 1600 \text{ N/mm}^2$	$\leq 1600 \text{ N/mm}^2$
$\leq 1,5xD$	$\leq 2xD$	$\leq 1,5xD$	$\leq 2xD$

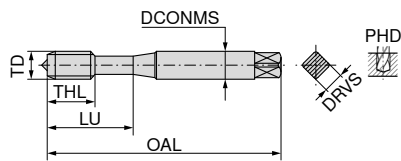
22 076 ...	22 163 ...	22 073 ...	22 424 ...
EUR	EUR	EUR	EUR
U0	U0	U0	U0
M3	46,39	100,10	59,27
M3,5	49,88		
M4	50,97	100,10	61,79
M5	51,52	89,40	64,08
M6	68,66	105,50	80,56
M8	74,88	155,00	88,42
M10	92,12	134,20	110,20
M12	88,31		

22 164 ...	22 124 ...	22 425 ...
EUR	EUR	EUR
U0	U0	U0
M12	154,00	128,80
M14	206,30	188,90
M16	146,40	176,90
M20	253,30	306,70
M24	289,20	

P	7	7		
M	7	7		
K				
N		22	22	22
S	5	5	2	2
H				
O				

Blind hole – Machine taps, right hand

▲ ES = extra short



DIN 352 with reinforced shank



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

22 500 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M3	0,50	40	3,5	2,7	2,5	6	18	3
M4	0,70	45	4,5	3,4	3,3	7	22	3
M5	0,80	50	6,0	4,9	4,2	9	25	3
M6	1,00	56	6,0	4,9	5,0	10	28	3
M8	1,25	63	6,0	4,9	6,8	14		3
M10	1,50	70	7,0	5,5	8,5	16		3
M12	1,75	75	9,0	7,0	10,2	18		4
M16	2,00	80	12,0	9,0	14,0	22		4

EUR
U0

030

25,98

040

26,75

050

27,40

060

28,38

080

32,64

100

38,86

120

50,65

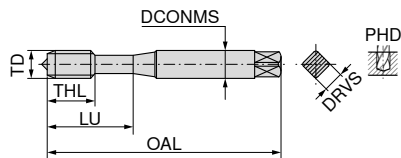
160

80,11

P	12
M	7
K	12
N	
S	
H	
O	

Blind hole – Machine taps, right hand

▲ ES = extra short



DIN 352 with reinforced shank



HSS-E

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

22 016 ...

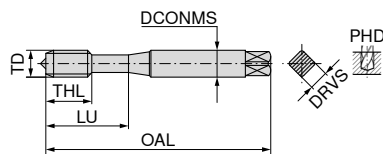
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M3	0,50	40	3,5	2,7	2,5	10	18	2
M4	0,70	45	4,5	3,4	3,3	12	22	3
M5	0,80	50	6,0	4,9	4,2	14	25	3
M6	1,00	56	6,0	4,9	5,0	16	28	3
M8	1,25	63	6,0	4,9	6,8	20		3
M10	1,50	70	7,0	5,5	8,5	22		3
M12	1,75	75	9,0	7,0	10,2	24		3

EUR
U0
030
040
050
060
080
100
120

P	12
M	
K	12
N	12
S	
H	
O	

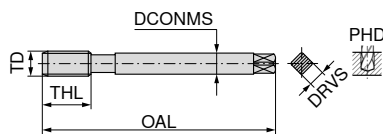
Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank

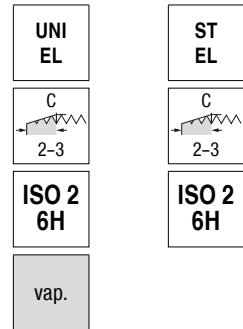
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M3	0,50	100	3,5	2,7	2,5	6	18	3
M4	0,70	125	4,5	3,4	3,3	7	21	3
M5	0,80	140	6,0	4,9	4,2	8	25	3
M6	1,00	160	6,0	4,9	5,0	10	30	3
M8	1,25	180	8,0	6,2	6,8	14	35	3



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

P	12	12
M	7	
K	12	12
N		22
S		
H		
O		

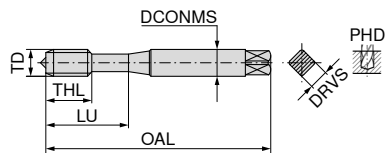


22 538 ...	22 422 ...
EUR U0	EUR U0
53,92 030	62,76 030
53,92 040	61,45 040
60,47 050	68,66 050
63,64 060	71,49 060
76,08 080	86,02 080

22 539 ...	22 423 ...
EUR U0	EUR U0
68,77 060	71,49 060
83,50 080	86,02 080
84,15 100	94,42 100
107,50 120	123,40 120
158,30 140	179,00 140
151,70 160	173,60 160
243,40 180	263,10 180
208,50 200	234,70 200

Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank

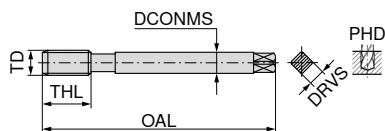


HSS-E

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

22 078 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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

EUR
U0
030
040
050
060
080


DIN 376 with reduced shank

22 080 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

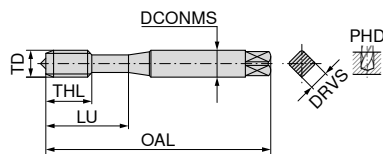
EUR
U0
060
080
100
120
140
160
200

P	12
M	
K	12
N	12
S	
H	
O	

Blind hole – Machine taps, right hand

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

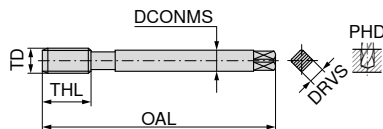
M



DIN 371 with reinforced shank

UNI	UNI	UNI	UNI	UNI NC
C 2-3	C 2-3	C 2-3	C 2-3	C 2-3
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
vap.	TiN	TiN	TiCN	TiN GS
HSS-E $\angle 35^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 2,5xD$	HSS-E $\angle 35^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 2,5xD$	HSS-PM $\angle 50^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 2,5xD$	HSS-E $\angle 45^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 45^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$

									23 118 ...	23 120 ...	23 026 ...	23 122 ...	23 124 ...
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	EUR	EUR	EUR	EUR	EUR
mm	mm	mm	mm	mm	mm	mm	mm		T9	T9	T9	T9	T9
M2	0,40	45	2,8	2,1	1,60	4	12	2	12,83	020	11,18	020	11,18
M2,5	0,45	50	2,8	2,1	2,05	5	14	2	12,62	025	16,86	025	16,86
M3	0,50	56	3,5	2,7	2,50	6	18	3	8,67	030	12,83	030	12,83
M4	0,70	63	4,5	3,4	3,30	7	21	3	8,67	040	13,75	040	13,75
M5	0,80	70	6,0	4,9	4,20	8	25	3	9,10	050	13,97	050	13,97
M6	1,00	80	6,0	4,9	5,00	10	30	3	9,41	060	17,38	060	17,38
M8	1,25	90	8,0	6,2	6,80	14	35	3	11,06	080	18,72	080	18,72
M10	1,50	100	10,0	8,0	8,50	16	39	3	12,72	100	23,99	100	23,99



DIN 376 with reduced shank

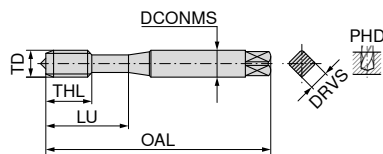
									23 119 ...	23 121 ...	23 027 ...	23 123 ...	23 125 ...
TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes		EUR	EUR	EUR	EUR	EUR
mm	mm	mm	mm	mm	mm	mm			T9	T9	T9	T9	T9
M3	0,50	56	2,2	2,1	2,5	6	3		10,34	030			
M4	0,70	63	2,8	2,1	3,3	7	3		9,32	040			
M5	0,80	70	3,5	2,7	4,2	8	3		9,18	050			
M6	1,00	80	4,5	3,4	5,0	10	3		9,03	060			
M8	1,25	90	6,0	4,9	6,8	14	3		9,46	080			
M10	1,50	100	7,0	5,5	8,5	16	3		12,83	100			
M12	1,75	110	9,0	7,0	10,2	18	3		14,48	120			
M12	1,75	110	9,0	7,0	10,2	18	4			28,75	120		
M14	2,00	110	11,0	9,0	12,0	20	3			43,72	14000		
M14	2,00	110	11,0	9,0	12,0	20	4				31,34	120	
M16	2,00	110	12,0	9,0	14,0	22	3		21,30	160			
M16	2,00	110	12,0	9,0	14,0	22	4			40,03	160		
M18	2,50	125	14,0	11,0	15,5	25	3				45,20	160	
M20	2,50	140	16,0	12,0	17,5	25	3		32,06	200			
M20	2,50	140	16,0	12,0	17,5	25	4						
M22	2,50	140	18,0	14,5	19,5	27	4			101,40	22000		
M24	3,00	160	18,0	14,5	21,0	34	4			83,58	240		
M27	3,00	160	20,0	16,0	24,0	30	4			126,80	27000		
M30	3,50	180	22,0	18,0	26,5	35	4			140,80	30000		
M33	3,50	180	25,0	20,0	29,5	35	4			203,00	33000		
M36	4,00	200	28,0	22,0	32,0	40	4			220,60	36000		

P	12	15	15	15	15
M	7	9	9	9	9
K	12	18	18	18	18
N		12	12	12	12
S					
H					
O					

Blind hole – Machine taps, right hand

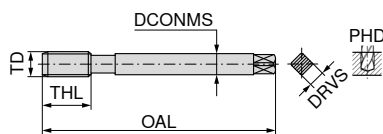
▲ NCW = with Weldon flat for synchronised CNC machining without length compensation chuck

M



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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
M3	0,50	56	3,5	2,7	2,50	6	18	3
M3	0,50	70	6,0	4,9	2,50	6	18	3
M4	0,70	63	4,5	3,4	3,30	7	21	3
M4	0,70	70	6,0	4,9	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

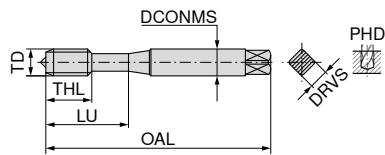
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M12	1,75	110	10	8,0	10,2	18	3
M12	1,75	110	9	7,0	10,2	18	3
M14	2,00	110	11	9,0	12,0	20	3
M16	2,00	110	12	9,0	14,0	22	3
M20	2,50	140	16	12,0	17,5	25	3
M24	3,00	160	18	14,5	21,0	30	4

P	15	12	15	8
M	8			6
K	15	12	15	
N	22	22	24	22
S				
H				
O				

UNI NCW	FE	FE-HF	VA
			
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
TiCN		TiCN	
			
HSS-PM ◁ 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E ◁ 35° ≤ 850 N/mm² ≤ 2,5xD	HSS-E ◁ 35° ≤ 1100 N/mm² ≤ 2,5xD	HSS-E ◁ 35° ≤ 1200 N/mm² ≤ 2,5xD
23 126 ...	23 216 ...	23 312 ...	23 414 ...
EUR T9	EUR T9	EUR T9	EUR T9
	11,68 020 21,41 025 11,48 030		19,97 020 23,69 025 12,93 030
21,20 030	11,48 040	17,17 030	
		18,72 040	12,93 040
24,20 040 24,61 050 24,61 060 31,13 080 37,54 100	11,90 050 11,90 060 15,41 080 18,41 100	18,93 050 26,17 060 28,54 080 35,58 100	13,35 050 13,35 060 17,28 080 21,00 100

Blind hole – Machine taps, right hand

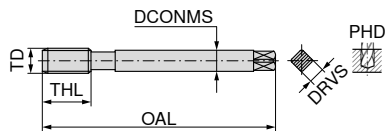
M



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 mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	23 416 ...		23 426 ...		23 456 ...		23 616 ...		23 614 ...	
									EUR T9		EUR T9		EUR T9		EUR T9		EUR T9	
M2	0,40	45	2,8	2,1	1,60	4	12	2	21,52	020								
M2,5	0,45	50	2,8	2,1	2,05	5	14	2	20,58	025								
M3	0,50	56	3,5	2,7	2,50	6	18	3	17,48	030	12,72	030	14,27	030	11,48	030	15,10	030
M4	0,70	63	4,5	3,4	3,30	7	21	3	18,31	040	12,93	040	15,52	040	11,48	040	15,10	040
M5	0,80	70	6,0	4,9	4,20	8	25	3	18,72	050	13,24	050	15,82	050	11,90	050	15,62	050
M6	1,00	80	6,0	4,9	5,00	10	30	3	23,48	060	13,45	060	20,37	060	11,90	060	15,62	060
M8	1,25	90	8,0	6,2	6,80	14	35	3	25,86	080	15,82	080	21,82	080	15,41	080	18,10	080
M10	1,50	100	10,0	8,0	8,50	16	39	3	32,68	100	19,03	100	30,09	100	18,41	100	22,14	100

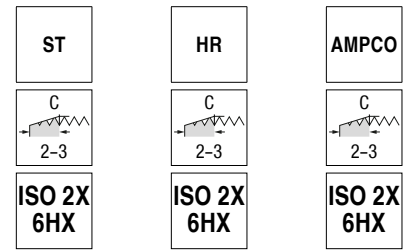
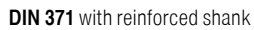


DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	23 417 ...		23 427 ...		23 457 ...		23 617 ...		23 615 ...	
								EUR T9		EUR T9		EUR T9		EUR T9		EUR T9	
M12	1,75	110	9	7,0	10,2	18	3			31,44	120	43,03	120	24,83	120	27,41	120
M12	1,75	110	9	7,0	10,2	18	4	38,68	120								
M14	2,00	110	11	9,0	12,0	20	4			41,37	140						
M16	2,00	110	12	9,0	14,0	22	3			44,99	160	54,20	160				
M16	2,00	110	12	9,0	14,0	22	4	52,75	160								
M20	2,50	140	16	12,0	17,5	25	3			67,02	200	107,60	200				
M20	2,50	140	16	12,0	17,5	25	4	90,91	200								
M24	3,00	160	18	14,5	21,0	30	4			84,81	240						

P	10	8	10		
M	8	6	8		
K					
N	24	22	24	15	20
S					
H					
O					

M
TWIN



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

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

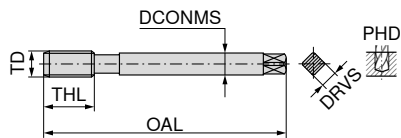
HSS-PM
 $\leq 800 \text{ N/mm}^2$
 $\leq 2xD$

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

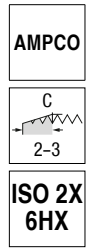
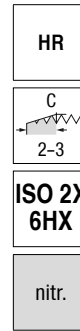
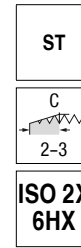
Through hole / Blind hole – Machine taps, right hand

M

TWIN



DIN 376 with reduced shank



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

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

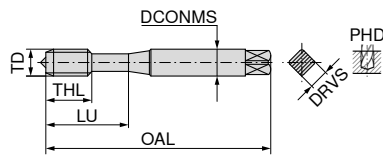
HSS-PM
 $\angle 0^\circ$
 $\leq 800 \text{ N/mm}^2$
 $\leq 2xD$

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	22 029 ...	22 007 ...	22 031 ...
mm	mm	mm	mm	mm	mm	mm		EUR U0	EUR U0	EUR U0
M4	0,70	63	2,8	2,1	3,3	13	3	29,04 040		
M5	0,80	70	3,5	2,7	4,2	15	3	29,69 050		
M6	1,00	80	4,5	3,4	5,0	17	3	29,69 060		
M8	1,25	90	6,0	4,9	6,8	20	3	37,54 080		
M10	1,50	100	7,0	5,5	8,5	22	3	42,02 100		
M12	1,75	110	9,0	7,0	10,2	24	3	43,33 120	58,95 120	
M12	1,75	110	9,0	7,0	10,2	24	4			84,15 120
M14	2,00	110	11,0	9,0	12,0	26	3	59,71 140		
M16	2,00	110	12,0	9,0	14,0	27	3	63,64 160	83,50 160	
M16	2,00	110	12,0	9,0	14,0	27	4			126,60 160
M18	2,50	125	14,0	11,0	15,5	30	4	94,64 180		
M20	2,50	140	16,0	12,0	17,5	32	4	96,16 200		160,50 200
M22	2,50	140	18,0	14,5	19,5	32	4	136,50 220		
M24	3,00	160	18,0	14,5	21,0	34	4	130,00 240		196,40 240
M33	3,50	180	25,0	20,0	29,5	40	4	256,60 330		
P								12	6	
M										
K								12	16	
N									12	8
S										
H										
O										

Through hole / Blind hole – Machine taps, right hand

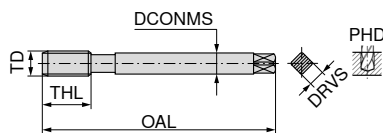
M

TWIN



DIN 371 with reinforced shank

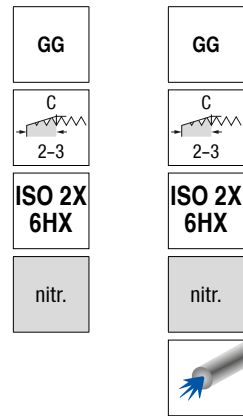
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M2	0,40	45	2,8	2,1	1,60	7	12	3
M2,5	0,45	50	2,8	2,1	2,05	9	14	3
M3	0,50	56	3,5	2,7	2,50	11	18	3
M3,5	0,60	56	4,0	3,0	2,90	12	20	3
M4	0,70	63	4,5	3,4	3,30	13	21	3
M5	0,80	70	6,0	4,9	4,20	15	25	3
M6	1,00	80	6,0	4,9	5,00	17	30	3
M8	1,25	90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

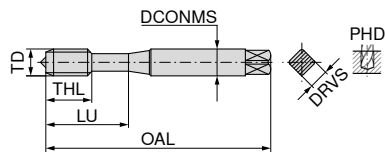
P		
M		
K	16	16
N	12	12
S		
H		
O		



22 032 ...	22 036 ...
EUR U0	EUR U0
29,69 020	
29,69 025	
25,00 030	
27,40 035	
25,66 040	
27,30 050	39,95 050
27,30 060	40,93 060
31,98 080	45,07 080
37,54 100	53,37 100

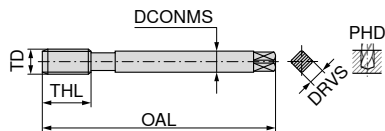
22 033 ...	22 037 ...
EUR U0	EUR U0
32,64 060	
34,82 080	
39,95 100	
47,60 120	62,98 120
62,98 140	86,56 140
68,66 160	87,32 160
101,60 180	
101,60 200	130,00 200
154,00 220	
134,20 240	

Through hole / Blind hole – Machine taps, right hand



DIN 371 with reinforced shank

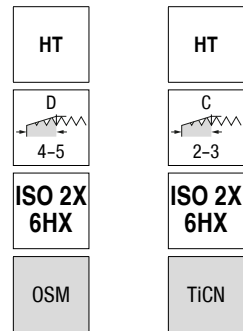
TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	mm	
M3	0,50	63	4,5	3,4	2,55	6	18	4
M4	0,70	63	4,5	3,4	3,40	8	20	4
M5	0,80	70	6,0	4,9	4,30	10	26	4
M6	1,00	80	6,0	4,9	5,00	10	30	4
M6	1,00	80	6,0	4,9	5,10	12	28	4
M8	1,25	90	8,0	6,2	6,80	14	35	5
M8	1,25	90	8,0	6,2	6,90	15	35	5
M10	1,50	100	10,0	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	mm	
M12	1,75	110	9	7	10,4	18	5
M16	2,00	110	12	9	14,2	22	6

P		
M		
K		
N		22
S		
H	2	2
O		



Solid carbide

HSS-PM

 $\angle 0^\circ$
 $\leq 63 \text{ HRC}$
 $\leq 1,5xD$
 $\angle 0^\circ$
 $44 - 52 \text{ HRC}$
 $\leq 1,5xD$

22 806 ...

EUR
U0

203,70

203,70

230,30

240,80

268,50

332,20

510,40

719,90

22 227 ...

EUR
U0

030

040

050

133,20

060

143,00

080

179,00

100

22 228 ...

EUR
U0

223,80

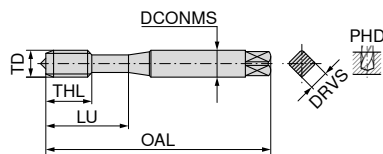
306,70

120

160

Through hole / Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length



DIN 371 with reinforced shank



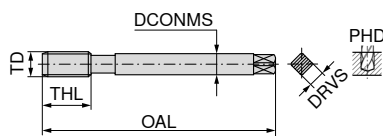
HSS-E

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

22 122 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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

EUR U0	
56,98	030
56,98	040
60,26	050
62,98	060
74,77	080



DIN 376 with reduced shank

22 123 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

EUR U0	
83,50	100
100,10	120
157,20	160
213,90	200

P	6
M	
K	16
N	22
S	
H	
O	

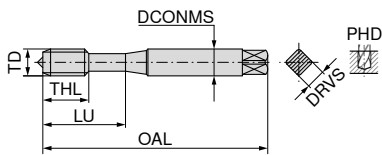
Through hole / Blind hole – Machine taps, right hand

M

GG

ISO 2X
6HX

TiCN



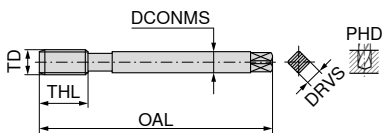
DIN 371 with reinforced shank

HSS-E

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

23 512 ...

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

EUR
T9030
040
050
060
080
100

DIN 376 with reduced shank

23 513 ...

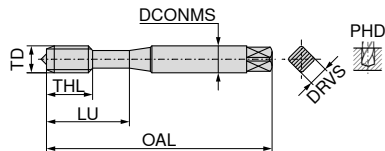
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M12	1,75	110	9	7	10,2	24	3

EUR
T9

120

P	
M	
K	20
N	24
S	
H	
O	

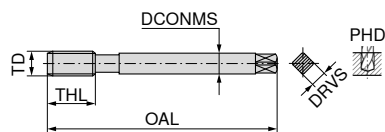
Through hole / Blind hole – Machine thread formers, right hand



DIN 2174 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU 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	2,33	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	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
M5	0,80	70	6,0	4,9	4,65	15	25,0
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
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 mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm
M12	1,75	110	9	7	11,25	24
M16	2,00	110	12	9	15,10	27

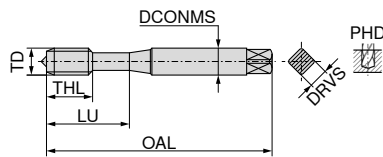
P	18	18
M	10	10
K	10	10
N	18	22
S		
H		
O		

HSS-E
≤ 1100 N/mm²
≤ 1,5xD22 128 ...
EUR
U0HSS-E
≤ 1100 N/mm²
≤ 1,5xD22 100 ...
EUR
U0

80,34	010	1)
76,08	012	1)
68,00	014	1)
65,60	016	
72,04	017	
47,05	020	
45,62	025	
50,76	026	
43,66	030	
38,42	035	
44,65	040	
46,61	050	
53,27	060	
58,50	080	
74,22	100	

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

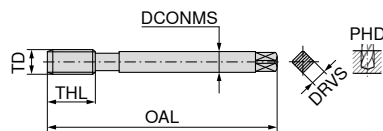
▲ SN = Thread formers with lubrication grooves



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 ≤ 1100 N/mm ² ≤ 3xD	HSS-E ≤ 1100 N/mm ² ≤ 3xD	HSS-E ≤ 1100 N/mm ² ≤ 3xD	HSS-E ≤ 1100 N/mm ² ≤ 3xD	HSS-E ≤ 1100 N/mm ² ≤ 3xD

									22 104 ...	22 107 ...	22 108 ...	22 154 ...	22 105 ...
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	EUR U0	EUR U0	EUR U0	EUR U0	EUR U0
M2	0,40	45	2,8	2,1	1,85	7	10	3					54,03 020
M2,5	0,45	50	2,8	2,1	2,33	9	14	3					49,34 025
M3	0,50	56	3,5	2,7	2,80	11	18	3	33,63	46,61	45,30	62,44	47,60 030
M3,5	0,60	56	4,0	3,0	3,25	12	20	3					47,05 035
M4	0,70	63	4,5	3,4	3,70	13	21	4	34,82	47,60	47,05	64,19	49,34 040
M5	0,80	70	6,0	4,9	4,65	15	25	4	36,78	50,00	49,34	66,48	
M5	0,80	70	6,0	4,9	4,65	15	25	5					51,30 050
M6	1,00	80	6,0	4,9	5,60	17	30	4	37,33	50,00	57,63	73,46	58,17 060
M8	1,25	90	8,0	6,2	7,45	20	35	5	44,97	57,31	65,60	79,90	64,19 080
M10	1,50	100	10,0	8,0	9,35	22	39	6	57,63	75,53	83,07	97,15	80,34 100

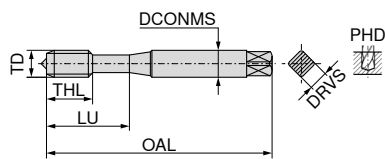
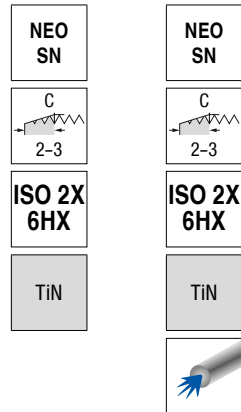


DIN 2174 with reduced shank

								22 106 ...
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	EUR U0
M12	1,75	110	9	7	11,25	24	6	100,20 120
M14	2,00	110	11	9	13,10	26	5	193,20 140
M16	2,00	110	12	9	15,10	27	7	155,00 160
P								12 18 18 18 18
M								10 10 10 10 10
K								8 10 10 10 10
N								12 18 22 22 22
S								
H								
O								

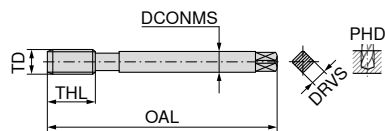
Through hole / Blind hole – Machine thread formers, right hand

▲ SN = Thread formers with lubrication grooves



DIN 2174 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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
M5	0,80	70	6,0	4,9	4,65	15	25	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
M10	1,50	100	10,0	8,0	9,35	22	39	5



DIN 2174 with reduced shank

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

P	18	18
M	10	10
K	10	10
N	22	22
S		
H		
O		

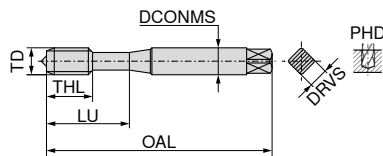
HSS-PM	HSS-PM
$\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\leq 1100 \text{ N/mm}^2$ $\leq 3xD$
22 452 ...	22 453 ...
EUR U0	EUR U0
62,44 030	
64,19 040	
68,33 050	85,37 050
86,13 060	104,10 060
96,49 080	117,90 080
125,60 100	149,60 100

22 452 ...	22 454 ...
EUR U0	EUR U0
145,10 120	174,60 120
235,80 160	267,50 160

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

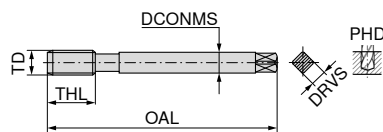
▲ SN = Thread formers with lubrication grooves

M



DIN 2174 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M2	0,40	45	2,8	2,1	1,85	7	12	
M2	0,40	45	2,8	2,1	1,85	7	12	3
M2,5	0,45	50	2,8	2,1	2,33	9	14	3
M2,5	0,45	50	2,8	2,1	2,33	9	14	
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	
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	
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	
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	
M8	1,25	90	8,0	6,2	7,45	20	35	5
M8	1,25	90	8,0	6,2	7,45	20	35	
M10	1,50	100	10,0	8,0	9,35	22	39	5
M10	1,50	100	10,0	8,0	9,35	22	39	



DIN 2174 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M12	1,75	110	9	7,0	11,25	24	
M12	1,75	110	9	7,0	11,25	24	5
M16	2,00	110	12	9,0	15,10	27	6
M16	2,00	110	12	9,0	15,10	27	
M18	2,50	125	14	11,0	16,80	30	6
M20	2,50	140	16	12,0	18,80	32	6
M24	3,00	160	18	14,5	22,60	34	6

P	18	18	18	18
M	10	10	10	10
K	10		10	
N	22	18	22	18
S				
H				
O				

UNI	UNI	UNI SN	UNI SN
C 2-3	C 2-3	C 2-3	C 2-3
ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
TiN	CrN	TiN	CrN
HSS-E $\angle 0^\circ$ $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\angle 0^\circ$ $\leq 850 \text{ N/mm}^2$ $\leq 3xD$

23 810 ...	23 812 ...	23 814 ...	23 816 ...
EUR T9	EUR T9	EUR T9	EUR T9
25,45	24,93		
020	020		
		28,86	28,44
		020	020
		26,17	24,93
		025	025
22,65	21,62		
025	025		
		18,72	18,10
		030	030
16,44	15,62		
030	030		
		19,45	18,10
		040	040
17,06	16,03		
040	040		
		20,58	19,13
		050	050
18,10	16,76		
050	050		
		23,79	19,13
		060	060
21,52	16,76		
060	060		
		26,89	22,54
		080	080
23,99	19,35		
080	080		
		34,86	28,86
		100	100
31,96	24,93		
100	100		

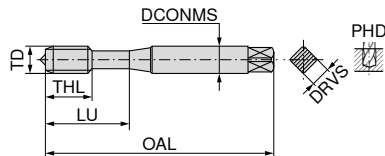
23 811 ...	23 813 ...	23 815 ...	23 817 ...
EUR T9	EUR T9	EUR T9	EUR T9
36,51	30,51		
120	120		
		40,85	35,06
		120	120
		76,43	70,13
		160	160
68,78	61,02		
160	160		
		141,00	
		18000	
		131,10	
		20000	
		175,20	
		24000	

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

EG M

Stabil

UNI

6H
modnitr. +
vap.

DIN 40435 with reinforced shank

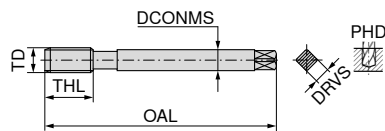


HSS-E

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

22 662 ...

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

EUR
U0025
030
040
050
060
080

DIN 40435 with reduced shank

22 663 ...

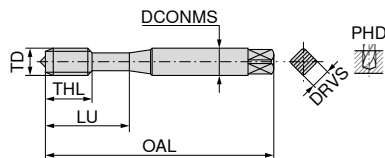
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
EG-M10	1,50	100	9	7,0	10,50	22	3
EG-M12	1,75	110	11	9,0	12,50	26	3
EG-M16	2,00	125	14	11,0	16,50	27	3
EG-M20	2,50	160	18	14,5	20,75	34	3

EUR
U0100
120
160
200

P	12
M	7
K	12
N	
S	
H	
O	

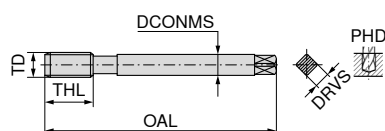
Blind hole – machine taps for wire thread inserts, right hand

EG M Salo-Rex



DIN 40435 with reinforced shank

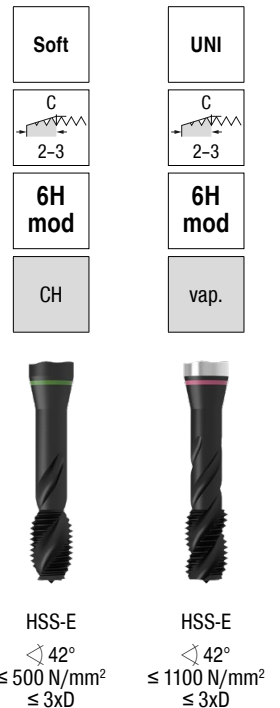
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
EG-M2,5	0,45	56	3,5	2,7	2,65	5	18	2
EG-M2,5	0,45	56	3,5	2,7	2,65	5	18	3
EG-M3	0,50	63	4,5	3,4	3,15	5	21	2
EG-M3	0,50	63	4,5	3,4	3,15	5	21	3
EG-M4	0,70	70	6,0	4,9	4,20	8	25	2
EG-M4	0,70	70	6,0	4,9	4,20	8	25	3
EG-M5	0,80	80	6,0	4,9	5,25	8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



DIN 40435 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
EG-M10	1,50	100	9	7,0	10,50	15	5
EG-M12	1,75	110	11	9,0	12,50	20	4
EG-M16	2,00	125	14	11,0	16,50	20	5
EG-M20	2,50	160	18	14,5	20,75	30	4

P	12
M	7
K	12
N	22
S	
H	
O	



22 280 ...	22 664 ...
EUR U0	EUR U0
60,70	48,03
025	025
58,62	43,76
030	030
58,62	43,76
040	040
79,90	40,39
050	050
81,33	43,76
060	060
102,20	49,01
080	080

22 665 ...

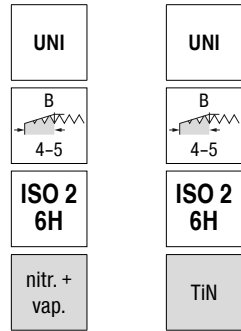
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
EG-M10	1,50	100	9	7,0	10,50	15	5
EG-M12	1,75	110	11	9,0	12,50	20	4
EG-M16	2,00	125	14	11,0	16,50	20	5
EG-M20	2,50	160	18	14,5	20,75	30	4

P	12
M	7
K	12
N	22
S	
H	
O	

Through hole – Machine taps, right hand

MF

Stabil



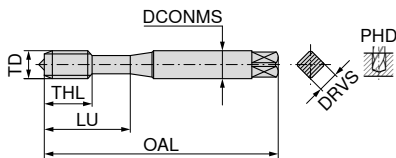
HSS-E

HSS-E

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

22 590 ...

22 550 ...



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M4x0,5	0,50	63	4,5	3,4	3,5	10	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
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

P	12	15
M	7	9
K	12	18
N		12
S		
H		
O		



DIN 374 can be found on the next page

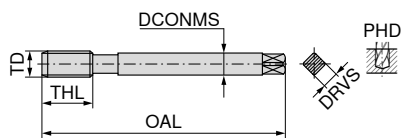
Through hole – Machine taps, right hand

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

▲ LH = for left hand threads

MF

Stabil



DIN 374 with reduced shank

ST LH	ST TS	UNI	UNI	NEW NW
ISO 2 6H	ISO 2X 6HX	ISO 2 6H	ISO 2 6H	ISO 2X 6HX
	TiN	nitr. + vap.	TiN	DLC
HSS-E $\angle 0^\circ$ $\leq 750 \text{ N/mm}^2$ $\leq 4xD$	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 $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 880 \text{ N/mm}^2$ $\leq 4xD$

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 210 ... EUR U0	22 193 ... EUR U0	22 551 ... EUR U0	22 552 ... EUR U0	22 466 ... EUR U0
M6x0,5	0,50	80	4,5	3,4	5,5	13	3			93,99 060		
M6x0,75	0,75	80	4,5	3,4	5,2	13	3			45,41 062		
M8x0,75	0,75	80	6,0	4,9	7,2	14	3			49,66 082		
M8x1	1,00	90	6,0	4,9	7,0	10	4		79,58 080	45,41 084	70,08 080	55,91 08000
M8x1	1,00	90	6,0	4,9	7,0	17	3	66,25 084		66,59 100		
M10x0,75	0,75	90	7,0	5,5	9,2	18	4			99,33 104		73,18 10200
M10x1,25	1,25	100	7,0	5,5	8,8	22	3		85,37 100	46,29 102	76,75 100	58,08 10000
M10x1	1,00	90	7,0	5,5	9,0	10	4	68,77 102		51,30 124	79,58 120	64,79 12400
M10x1	1,00	90	7,0	5,5	9,0	18	4	94,64 124		75,31 122		75,25 12200
M12x1,5	1,50	100	9,0	7,0	10,5	22	3		81,98 120	54,14 120	89,95 121	66,98 12000
M12x1,25	1,25	100	9,0	7,0	10,8	22	3			68,77 144	104,10 140	85,75 14400
M12x1,5	1,50	100	9,0	7,0	10,5	15	4					85,75 14200
M12x1	1,00	100	9,0	7,0	11,0	18	4	88,86 120		54,14 120	89,95 121	66,98 12000
M14x1,5	1,50	100	11,0	9,0	12,5	22	3	121,10 144		68,77 144	104,10 140	85,75 14400
M14x1,25	1,25	100	11,0	9,0	12,8	22	3		103,40 140			85,75 14200
M14x1,5	1,50	100	11,0	9,0	12,5	15	4			139,70 140		90,38 14000
M14x1	1,00	100	11,0	9,0	13,0	18	4			81,98 162		95,71 16200
M16x1,5	1,50	100	12,0	9,0	14,5	22	3	121,10 162			107,50 160	
M16x1,5	1,50	100	12,0	9,0	14,5	15	4		137,50 160			98,29 16000
M16x1	1,00	100	12,0	9,0	15,0	18	4					
M18x1	1,00	110	14,0	11,0	17,0	20	5			228,20 180		
M18x2	2,00	125	14,0	11,0	16,0	26	3			187,80 184		
M18x1,5	1,50	110	14,0	11,0	16,5	17	4		170,40 180			
M18x1,5	1,50	110	14,0	11,0	16,5	25	4	137,50 182		95,40 182		
M20x1	1,00	125	16,0	12,0	19,0	20	5			246,70 200		
M20x1,5	1,50	125	16,0	12,0	18,5	17	4		213,90 200			
M20x1,5	1,50	125	16,0	12,0	18,5	25	4	159,40 202		107,50 202	169,20 200	
M25x1,5	1,50	140	18,0	14,5	23,5	28	4			397,30 250		
M26x1,5	1,50	140	18,0	14,5	24,5	28	4			164,90 260		
M24x1,5	1,50	140	18,0	14,5	22,5	27	4			133,20 242		
M24x2	2,00	140	18,0	14,5	22,0	27	4			241,20 244		
M22x1,5	1,50	125	18,0	14,5	20,5	25	4			117,90 222	205,30 220	
M27x2	2,00	140	20,0	16,0	25,0	28	4			419,20 272		
M28x1,5	1,50	140	20,0	16,0	26,5	28	5			193,20 280		
M30x1,5	1,50	150	22,0	18,0	28,5	28	5			207,30 302		
P								12	65	12	15	
M										7	9	
K								12	65	12	18	
N								22	22		12	15
S												
H												
O												

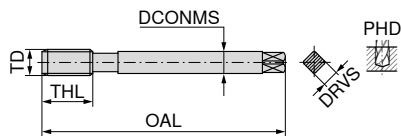
Through hole – Machine taps, right hand

MF

UNI

ISO 2
6H

TiN



DIN 374 with reduced shank



HSS-PM

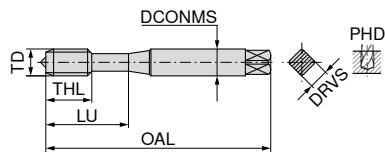
 $\angle 0^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 3 \times D$

23 041 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	EUR T9	
M8x1	1,00	90	6	4,9	7,0	17	3	22,24	081
M10x1	1,00	90	7	5,5	9,0	18	4	25,45	102
M10x1,25	1,25	100	7	5,5	8,8	22	3	27,30	104
M12x1	1,00	100	9	7,0	11,0	18	4	31,34	120
M12x1,25	1,25	100	9	7,0	10,8	22	3	32,78	122
M12x1,5	1,50	100	9	7,0	10,5	22	3	29,17	121
M14x1,5	1,50	100	11	9,0	12,5	22	3	35,99	144
M14x1,25	1,25	100	11	9,0	12,8	22	3	37,86	142
M16x1,5	1,50	100	12	9,0	14,5	22	3	40,75	162
M18x1,5	1,50	110	14	11,0	16,5	17	4	53,89	182
M20x1,5	1,50	125	16	12,0	18,5	17	4	72,82	202
M24x1,5	1,50	140	18	14,5	22,5	27	4	78,60	242
M24x2	2,00	140	18	14,5	22,0	27	4	89,57	244
M22x1,5	1,50	125	18	14,5	20,5	25	4	68,47	222
P									15
M									9
K									18
N									12
S									
H									
O									

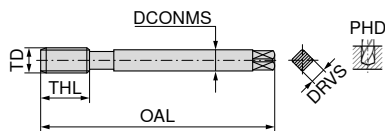
Through hole – Machine taps, right hand

MF



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M4x0,5	0,50	63	4,5	3,4	3,5	10	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

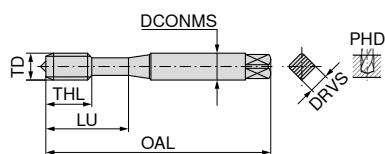


DIN 374 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	23 141 ... EUR T9	23 143 ... EUR T9	23 241 ... EUR T9	23 441 ... EUR T9
M8x0,5	0,50	80	6	8,0	7,5	14	3			25,45	080
M8x1	1,00	90	6	4,9	7,0	17	3	14,07		20,79	084
M8x1	1,00	90	6	4,9	7,0	17	4		25,96		33,72
M8x0,75	0,75	80	6	4,9	7,2	14	3	18,00	27,62	22,03	35,89
M10x0,75	0,75	90	7	5,5	9,2	18	4	24,31	36,93	30,41	
M10x1,25	1,25	100	7	5,5	8,8	22	3	21,92	34,75	25,03	104
M10x1	1,00	90	7	5,5	9,0	18	4	14,48	28,34	24,20	36,71
M12x1,5	1,50	100	9	7,0	10,5	22	3	16,44	30,09	26,89	39,30
M12x1,25	1,25	100	9	7,0	10,8	22	3	22,14	35,37	29,37	
M12x1	1,00	100	9	7,0	11,0	18	4	18,62	32,58	28,02	42,31
M14x1	1,00	100	11	9,0	13,0	18	4	26,37	39,10	34,54	
M14x1,5	1,50	100	11	9,0	12,5	22	3	23,48	40,03	33,20	51,92
M16x1	1,00	100	12	9,0	15,0	18	4	29,58	45,61	45,61	160
M16x1,5	1,50	100	12	9,0	14,5	22	3	24,31	45,61	42,20	59,37
M18x1	1,00	110	14	11,0	17,0	20	5			60,30	180
M18x1,5	1,50	110	14	11,0	16,5	25	4	33,52	56,37	54,82	182
M20x1,5	1,50	125	16	12,0	18,5	25	4	37,34	71,47	60,82	202
M20x1	1,00	125	16	12,0	19,0	20	5			65,16	200
M22x1,5	1,50	125	18	14,5	20,5	25	4	42,20	74,26	70,02	222
M24x1,5	1,50	140	18	14,5	22,5	27	4	48,61	77,78	81,61	242
M26x1,5	1,50	140	18	14,5	24,5	28	4			104,40	260
M28x1,5	1,50	140	20	16,0	26,5	28	5			120,00	280
M30x1,5	1,50	150	22	18,0	28,5	28	5			133,50	300
P								12	15	12	10
M								7	9		8
K								12	18	12	
N									12	12	24
S											
H											
O											

UNI	UNI	FE	VA
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. + vap.	TiN		TiN
HSS-E $\angle 0^\circ$ $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	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 $\angle 0^\circ$ $\leq 1200 \text{ N/mm}^2$ $\leq 4xD$
23 140 ... EUR T9	23 142 ... EUR T9	23 240 ... EUR T9	23 440 ... EUR T9
15,72 040 15,72 050 16,76 060 15,72 062	21,20 040 21,41 050 26,37 060 26,37 062	18,93 040 19,13 050 19,13 060 18,93 062	26,07 050 31,86 062

Blind hole – Machine taps, right hand



DIN 371 with reinforced shank

UNI	UNI	UNI	UNI
E 1,5-2	E 1,5-2	E 1,5-2	E 1,5-2
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 3 6G
vap.	TiN	vap.	vap.



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

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

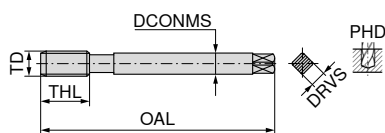
HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

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

22 441 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M4x0,5	0,50	63	4,5	3,4	3,50	5	21	3
M5x0,5	0,50	70	6,0	4,9	4,50	5	25	3
M6x0,75	0,75	80	6,0	4,9	5,25	8	30	3

EUR U0	
54,68	040
54,68	050
54,68	062

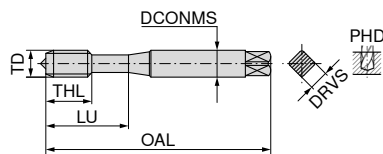


DIN 374 with reduced shank

								22 555 ...		22 556 ...		22 491 ...		22 490 ...	
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	EUR U0		EUR U0		EUR U0		EUR U0	
M8x1	1,0	90	6	4,9	7,0	10	3	50,00	080	64,08	080			54,68	080
M10x1	1,0	90	7	5,5	9,0	10	4	53,92	100	81,98	100			60,26	100
M12x1,5	1,5	100	9	7,0	10,5	15	5	61,67	120	93,99	120	88,86	120	66,25	120
M14x1,5	1,5	100	11	9,0	12,5	15	5	79,58	140	120,10	140	117,90	140	87,32	140
M16x1,5	1,5	100	12	9,0	14,5	15	5	94,64	160	126,60	160	121,10	160	104,10	160
M18x1,5	1,5	110	14	11,0	16,5	17	5							120,10	180
M20x1,5	1,5	125	16	12,0	18,5	17	5					185,50	200	137,50	200
P									12		15		12		12
M									7		9		7		7
K									12		18		12		12
N											12				
S															
H															
O															

Blind hole – Machine taps, right hand

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



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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	5	25	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

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

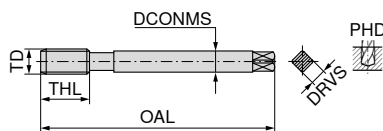
HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$ HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$ HSS-E
 $\angle 45^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$ HSS-E
 $\angle 45^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

22 202 ...

EUR U0	
54,68	040
50,00	050
54,68	062
54,68	060

22 548 ...

EUR U0	
63,30	050
63,30	062
63,30	060



DIN 374 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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
M10x0,75	0,75	90	7,0	5,5	9,2	10	4
M10x1	1,00	90	7,0	5,5	9,0	10	3
M10x1	1,00	90	7,0	5,5	9,0	10	4
M10x1,25	1,25	100	7,0	5,5	8,8	16	3
M12x1	1,00	100	9,0	7,0	11,0	11	4
M12x1,25	1,25	100	9,0	7,0	10,8	15	4
M12x1,5	1,50	100	9,0	7,0	10,5	15	4
M12x1,5	1,50	100	9,0	7,0	10,5	15	5
M14x1,5	1,50	100	11,0	9,0	12,5	15	5
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
M16x1,5	1,50	100	12,0	9,0	14,5	15	5
M18x1,5	1,50	110	14,0	11,0	16,5	17	5
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	5
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
M28x1,5	1,50	140	20,0	16,0	26,5	20	5
M30x1,5	1,50	150	22,0	18,0	28,5	22	6

22 553 ...

EUR U0	
54,68	062
51,30	080
47,37	082
94,64	101
50,65	100
125,60	102
64,08	120
100,10	122
61,67	124
76,08	140
92,90	160
113,50	180
155,00	200
150,60	220
209,60	260
163,80	240
246,70	280
250,00	300

22 554 ...

EUR U0	
64,08	080
81,98	100
96,16	121
93,99	120
108,80	140
126,60	160
161,50	182
205,30	202

22 563 ...

EUR U0	
96,71	084
104,10	102
117,90	124
145,10	144
164,90	162
246,70	202

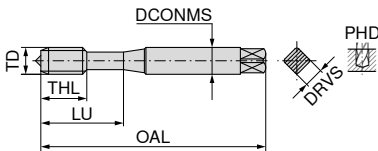
22 549 ...

EUR U0	
66,59	082
80,66	084
92,12	102
106,00	120
102,20	124
130,00	144
151,70	162
185,50	182
228,20	202

P	12	15	15	15
M	7	9	9	9
K	12	18	18	18
N		12	12	12
S				
H				
O				

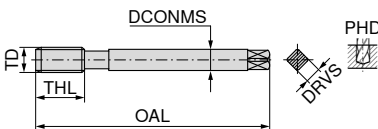
Blind hole – Machine taps

▲ LH = for left hand threads



DIN 371 with reinforced shank

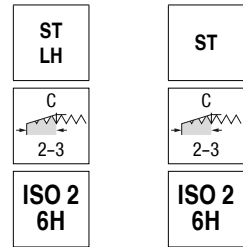
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M2,5x0,35	0,35	50	2,8	2,1	2,15	5,0	15	2
M3x0,35	0,35	56	3,5	2,7	2,65	4,5	18	3
M3,5x0,35	0,35	56	4,0	3,0	3,15	5,0	20	3
M4x0,5	0,50	63	4,5	3,4	3,50	5,0	21	3
M5x0,5	0,50	70	6,0	4,9	4,50	5,0	25	3
M6x0,75	0,75	80	6,0	4,9	5,20	8,0	30	3
M8x0,75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



DIN 374 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

P	12	12
M		
K	12	12
N	12	22
S		
H		
O		

HSS-E
≤ 42°
≤ 750 N/mm²
≤ 3xDHSS-E
≤ 42°
≤ 750 N/mm²
≤ 3xD

22 238 ...

EUR U0	
87,32	025
53,37	030
73,36	035
49,34	040
49,34	050
49,34	060
54,68	080
49,34	082

22 601 ...

EUR U0	
79,58	082
81,98	100
100,10	120
108,20	140
128,80	160
149,60	180
174,60	200

22 186 ...

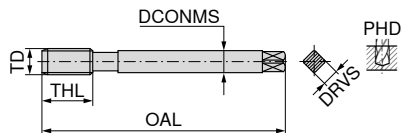
EUR U0	
48,79	060
50,00	080
45,41	082
47,37	100
56,43	122
58,40	120
75,31	140
88,86	160
115,70	180
114,60	200
128,80	220
201,90	260
138,60	240

Blind hole – Machine taps, right hand

MF

SL

ST

ISO 2
6H

DIN 374 with reduced shank



HSS-E

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

22 182 ...

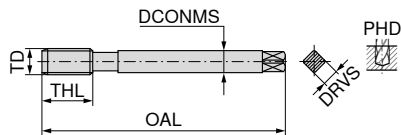
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	EUR U0	
M6x0,75	0,75	80	4,5	3,4	5,2	13	3	50,20	062
M8x0,75	0,75	80	6,0	4,9	7,2	14	3	50,65	082
M8x1	1,00	90	6,0	4,9	7,0	17	3	46,29	084
M10x1	1,00	90	7,0	5,5	9,0	18	3	48,79	102
M10x0,75	0,75	90	7,0	5,5	9,2	18	3	80,66	100
M10x1,25	1,25	100	7,0	5,5	8,8	22	3	69,54	104
M9x1	1,00	90	7,0	5,5	8,0	17	3	68,77	090
M11x1	1,00	90	8,0	6,2	10,0	18	3	77,29	110
M12x1,25	1,25	100	9,0	7,0	10,8	22	3	77,29	122
M12x1,5	1,50	100	9,0	7,0	10,5	22	3	56,98	124
M12x1	1,00	100	9,0	7,0	11,0	18	3	59,71	120
M14x1	1,00	100	11,0	9,0	13,0	18	4	78,81	140
M14x1,5	1,50	100	11,0	9,0	12,5	22	3	76,75	144
M16x1	1,00	100	12,0	9,0	15,0	18	4	92,90	160
M16x1,5	1,50	100	12,0	9,0	14,5	22	3	90,60	162
M15x1	1,00	100	12,0	9,0	14,0	18	4	103,40	150
M18x1,5	1,50	110	14,0	11,0	16,5	25	4	117,90	182
M18x2	2,00	125	14,0	11,0	16,0	26	3	186,70	184
M18x1	1,00	110	14,0	11,0	17,0	20	4	127,70	180
M20x1	1,00	125	16,0	12,0	19,0	20	4	130,00	200
M20x2	2,00	140	16,0	12,0	18,0	27	3	159,40	204
M20x1,5	1,50	125	16,0	12,0	18,5	25	4	116,80	202
M22x2	2,00	140	18,0	14,5	20,0	27	4	162,60	224
M24x1,5	1,50	140	18,0	14,5	22,5	27	4	144,10	242
M24x1	1,00	140	18,0	14,5	23,0	20	5	177,90	240
M24x2	2,00	140	18,0	14,5	22,0	27	4	168,10	244
M22x1,5	1,50	125	18,0	14,5	20,5	25	4	132,10	222
M25x1,5	1,50	140	18,0	14,5	23,5	28	4	240,20	252
M22x1	1,00	125	18,0	14,5	21,0	20	4	170,40	220
M27x1,5	1,50	140	20,0	16,0	25,5	28	4	208,50	270
M28x2	2,00	140	20,0	16,0	26,0	28	4	275,10	282
M27x2	2,00	140	20,0	16,0	25,0	28	4	235,80	272
M30x1,5	1,50	150	22,0	18,0	28,5	28	5	239,10	302
M32x1,5	1,50	150	22,0	18,0	30,5	28	6	275,10	320
M30x2	2,00	150	22,0	18,0	28,0	28	4	253,30	304
M33x2	2,00	160	25,0	20,0	31,0	30	4	332,90	332
M36x2	2,00	170	28,0	22,0	34,0	30	5	423,50	362
M36x3	3,00	200	28,0	22,0	33,0	42	4	397,30	364
M34x1,5	1,50	170	28,0	22,0	32,5	30	6	336,30	340
M40x1,5	1,50	170	32,0	24,0	38,5	30	6	417,10	400
M42x3	3,00	200	32,0	24,0	39,0	45	4	533,80	424
M42x2	2,00	170	32,0	24,0	40,0	30	6	504,30	422
M45x1,5	1,50	180	36,0	29,0	43,5	32	6	493,40	450
M48x2	2,00	190	36,0	29,0	46,0	32	6	695,40	482
M48x3	3,00	225	36,0	29,0	45,0	50	5	706,30	484
P									12
M									
K									12
N									22
S									
H									
O									

Blind hole – Machine taps, right hand

MF

SL

ST

ISO 2
6H

DIN 374 with reduced shank



HSS-E

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

22 182 ...

EUR
U0

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes		
M45x3	3,00	200	36,0	29,0	42,0	45	5		681,10 454
M48x1,5	1,50	190	36,0	29,0	46,5	32	6		579,60 480
M52x2	2,00	190	40,0	32,0	50,0	32	6		825,20 522
P									12
M									
K									12
N									22
S									
H									
O									

Blind hole – Machine taps, right hand

MF

Salo-Rex

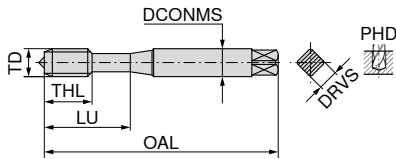
VA

E

1,5-2

ISO 2
6H

TiN GS



DIN 371 with reinforced shank



HSS-E

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

22 176 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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	5	25	3
M6x0,5	0,50	80	6,0	4,9	5,5	5	30	3
M6x0,75	0,75	80	6,0	4,9	5,2	8	30	3

EUR
U0

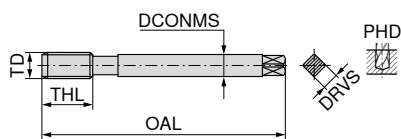
83,50	040
64,08	050
64,08	060
64,08	062

P	10
M	8
K	
N	22
S	
H	
O	



DIN 374 can be found on the next page

Blind hole – Machine taps, right hand



DIN 374 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M8x1	1,00	90	6	4,9	7,0	10	3
M8x0,75	0,75	80	6	4,9	7,2	8	3
M10x1	1,00	90	7	5,5	9,0	10	3
M10x1,25	1,25	100	7	5,5	8,8	16	3
M10x1	1,00	90	7	5,5	9,0	10	4
M12x1,25	1,25	100	9	7,0	10,8	15	4
M12x1,5	1,50	100	9	7,0	10,5	15	4
M12x1,5	1,50	100	9	7,0	10,5	15	5
M12x1	1,00	100	9	7,0	11,0	11	4
M14x1	1,00	100	11	9,0	13,0	11	4
M14x1,25	1,25	100	11	9,0	12,8	15	4
M14x1,5	1,50	100	11	9,0	12,5	15	4
M14x1,5	1,50	100	11	9,0	12,5	15	5
M16x1	1,00	100	12	9,0	15,0	12	4
M16x1,5	1,50	100	12	9,0	14,5	15	4
M16x1,5	1,50	100	12	9,0	14,5	15	5
M18x1,5	1,50	110	14	11,0	16,5	17	5
M18x1,5	1,50	110	14	11,0	16,5	17	4
M20x1,5	1,50	125	16	12,0	18,5	17	5
M20x1,5	1,50	125	16	12,0	18,5	17	4
M26x1,5	1,50	140	18	14,5	24,5	20	6
M28x1,5	1,50	140	20	16,0	26,5	20	6
M30x1,5	1,50	150	22	18,0	28,5	22	6

P	15	8	10
M		6	8
K			
N	22	15	22
S			
H			
O			

NW	NEW NW	VA	VA
C 2-3	C 2-3	E 1,5-2	E 1,5-2
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
vap.	DLC	vap.	TiN GS
HSS-E ≤ 500 N/mm ² ≤ 3xD	HSS-E ≤ 880 N/mm ² ≤ 3xD	HSS-E ≤ 750 N/mm ² ≤ 3xD	HSS-E ≤ 900 N/mm ² ≤ 3xD

22 188 ...	22 462 ...	22 189 ...	22 177 ...
EUR U0	EUR U0	EUR U0	EUR U0
50,00 081	59,46 08000	50,00 082	81,43 084
52,07 100	64,21 10000		67,34 082
	85,56 10200		
	95,26 12200	58,07 100	92,90 102
57,31 122	76,03 12400		
		64,08 120	103,40 124
63,64 120	77,05 12000	65,70 121	107,50 120
	98,50 14000		
	99,51 14200		
81,98 140	97,39 14400		
		79,58 140	132,10 144
	113,50 16000		
89,95 160	112,40 16200		
		96,16 160	154,00 162
			187,80 182
126,60 180			
		133,20 200	232,60 202
117,90 200			
		258,70 260	
		302,40 280	
		299,10 300	

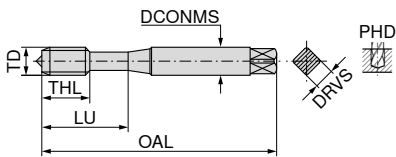
Blind hole – Machine taps, right hand

MF

UNI

ISO 2
6H

TiN



DIN 374 with reinforced shank



HSS-PM

 $\angle 40^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 2,5xD$

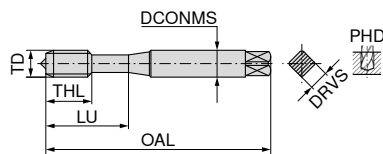
23 047 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	EUR T9	
M8x1	1,00	90	6	4,9	7,0	10	35	3	21,82	081
M10x1	1,00	90	7	5,5	9,0	10	35	4	28,44	102
M10x1,25	1,25	100	7	5,5	8,8	16	39	4	27,72	104
M12x1	1,00	100	9	7,0	11,0	11	40	4	32,37	120
M12x1,25	1,25	100	9	7,0	10,8	15	40	5	35,27	122
M12x1,5	1,50	100	9	7,0	10,5	15	40	5	31,34	121
M14x1	1,00	100	11	9,0	12,8	11	40	4	37,86	140
M14x1,5	1,50	100	11	9,0	12,5	15	40	5	37,13	144
M16x1,5	1,50	100	12	9,0	14,5	15	44	5	48,09	162
M18x1,5	1,50	110	14	11,0	16,5	17	44	5	62,57	182
M20x1,5	1,50	125	16	12,0	18,5	17	44	5	71,36	202
M22x1,5	1,50	125	18	14,5	20,5	17	44	5	78,60	222
M24x1,5	1,50	140	18	14,5	22,5	20	48	5	80,05	242
M24x2	2,00	140	18	14,5	22,0	20	48	5	93,19	244
P										15
M										9
K										18
N										12
S										
H										
O										

Blind hole – Machine taps, right hand

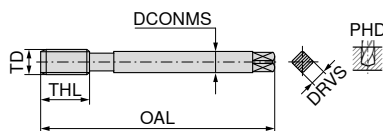
▲ NC = for synchronised CNC machining with minimum length compensation chuck

MF



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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	5	25	3
M6x0,5	0,50	80	6,0	4,9	5,5	5	30	3
M6x0,75	0,75	80	6,0	4,9	5,2	8	30	3



DIN 374 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M4x0,5	0,50	63	2,8	2,1	3,5	5	3
M5x0,5	0,50	70	3,5	2,7	4,5	5	3
M6x0,75	0,75	80	4,5	3,4	5,2	8	3
M8x1	1,00	90	6,0	4,9	7,0	10	3
M8x0,75	0,75	80	6,0	4,9	7,2	8	3
M8x0,5	0,50	80	6,0	8,0	7,5	6	3
M10x1,25	1,25	100	7,0	5,5	8,8	16	3
M10x1	1,00	90	7,0	5,5	9,0	10	3
M10x1,5	1,00	90	7,0	5,5	9,0	10	4
M10x0,75	0,75	90	7,0	5,5	9,2	10	4
M12x1,25	1,25	100	9,0	7,0	10,8	15	4
M12x1,5	1,50	100	9,0	7,0	10,5	15	4
M12x1,5	1,50	100	9,0	7,0	10,5	15	5
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
M14x1,5	1,50	100	11,0	9,0	12,5	15	5
M14x1	1,00	100	11,0	9,0	13,0	11	4
M16x1,5	1,50	100	12,0	9,0	14,5	15	4
M16x1,5	1,50	100	12,0	9,0	14,5	15	5
M16x1	1,00	100	12,0	9,0	15,0	12	4
M18x1,5	1,50	110	14,0	11,0	16,5	17	4
M18x1,5	1,50	110	14,0	11,0	16,5	17	5
M20x1,5	1,50	125	16,0	12,0	18,5	17	5
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
M24x1,5	1,50	140	18,0	14,5	22,5	20	5

P	12	15	15	12
M	7	9	9	
K	12	18	18	12
N		12	12	22
S				
H				
O				

UNI	UNI	UNI NC	FE
C 2-3	C 2-3	E 1,5-2	C 2-3
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
vap.	TiN	TiN GS	



HSS-E
 $\angle 35^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 2,5xD$

23 144 ...

EUR T9	
15,72	040
15,72	050
17,17	060
16,76	062



HSS-E
 $\angle 35^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 2,5xD$

23 146 ...

EUR T9	
22,86	040
22,86	050
26,58	060
26,58	062



HSS-E
 $\angle 45^\circ$
 $\leq 1000 \text{ N/mm}^2$
 $\leq 3xD$

23 148 ...

EUR T9	
30,31	050
38,88	060
38,88	062



HSS-E
 $\angle 35^\circ$
 $\leq 850 \text{ N/mm}^2$
 $\leq 2,5xD$

23 242 ...

EUR T9	
20,37	040
20,79	050
20,79	060
20,37	062

23 145 ...

EUR T9	
15,31	040
15,31	050
16,34	062
13,55	084
18,51	082

23 147 ...

EUR T9	
26,58	084
28,34	082
37,65	104
29,79	102

23 149 ...

EUR T9	
38,88	084
41,47	082
45,72	102
49,34	124
52,03	120
63,40	144

23 243 ...

EUR T9	
22,14	084
23,58	082
45,30	080
42,92	104
25,96	102
49,64	100
48,20	122
28,75	124
29,89	120
35,37	144
48,20	140
45,10	162
56,68	160
58,33	182
89,57	182
116,90	202
65,16	202
75,40	222
87,92	242

Blind hole – Machine taps, right hand

MF

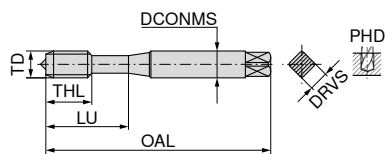
VA

E

1,5-2

ISO 2
6H

TiN



DIN 371 with reinforced shank

HSS-E

 $\angle 45^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 3xD$

23 442 ...

EUR

T9

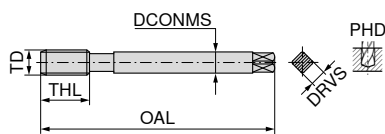
27,62

32,48

050

062

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M5x0,5	0,50	70	6	4,9	4,5	5	25	3
M6x0,75	0,75	80	6	4,9	5,2	8	30	3



DIN 374 with reduced shank

23 443 ...

EUR

T9

32,48

34,65

36,51

42,82

41,17

52,23

59,99

084

082

102

120

124

144

162

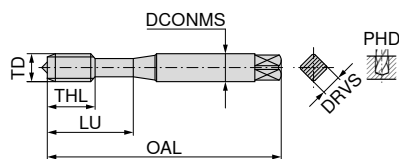
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
M8x1	1,00	90	6	4,9	7,0	10	3
M8x0,75	0,75	80	6	4,9	7,2	8	3
M10x1	1,00	90	7	5,5	9,0	10	4
M12x1	1,00	100	9	7,0	11,0	11	4
M12x1,5	1,50	100	9	7,0	10,5	15	5
M14x1,5	1,50	100	11	9,0	12,5	15	5
M16x1,5	1,50	100	12	9,0	14,5	15	5

P	10
M	8
K	
N	24
S	
H	
O	

Through hole / Blind hole – Machine taps, right hand

MF

TWIN



DIN 371 with reinforced shank

ST	HR	HT
		
ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
	nitr.	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 mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M4x0,5	0,50	63	4,5	3,4	3,5	10	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
M8x1	1,00	90	8,0	6,2	7,0	17	35	3
M8x1	1,00	90	8,0	6,2	7,1	15	35	5
M10x1	1,00	100	10,0	8,0	9,1	18	38	5
M10x1	1,00	90	10,0	8,0	9,0	18	35	4
M12x1,5	1,50	110	12,0	9,0	10,6	21	41	5
M14x1,5	1,50	110	14,0	11,0	12,6	24	44	6
M16x1,5	1,50	110	16,0	12,0	14,6	24	44	6

22 144 ...

EUR
U0040
42,67
050
42,67
060
42,67
062
42,67
084

22 146 ...

EUR
U0040
47,37
050
47,37
060
47,37
062
47,37

22 817 ...

EUR
U0080
359,90
100
459,40
120
532,40
140
625,00
160
710,50

P	12	6
M		
K	12	16
N	22	22
S		
H		
O		2

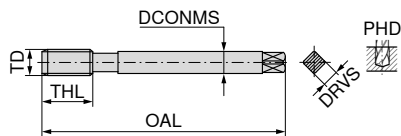


DIN 374 can be found on the next page

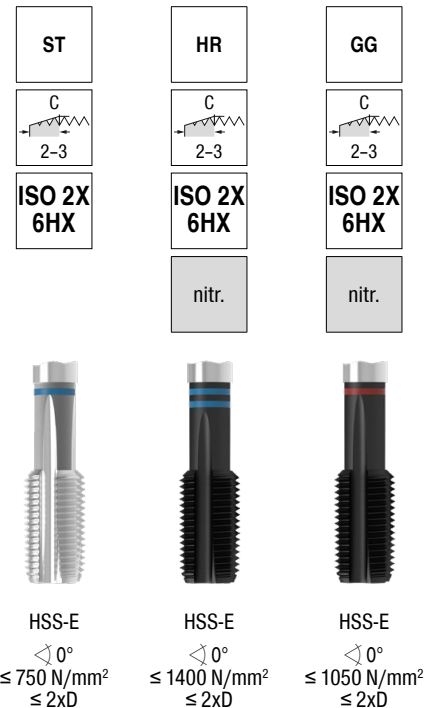
Through hole / Blind hole – Machine taps, right hand

MF

TWIN



DIN 374 with reduced shank



TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	22 171 ...	22 209 ...	22 173 ...
mm	mm	mm	mm	mm	mm	mm		EUR U0	EUR U0	EUR U0
M4x0,5	0,50	63	2,8	2,1	3,5	10	3	38,86	042	
M5x0,5	0,50	70	3,5	2,7	4,5	11	3	46,61	050	43,33
M6x0,75	0,75	80	4,5	3,4	5,2	13	3	42,02	062	47,37
M6x0,5	0,50	80	4,5	3,4	5,5	13	3	43,33	060	53,59
M8x0,75	0,75	80	6,0	4,9	7,2	14	3	47,70	082	83,50
M8x1	1,00	90	6,0	4,9	7,0	17	3	38,32	084	83,50
M10x1	1,00	90	7,0	5,5	9,0	18	4	39,73	104	83,50
M10x1,25	1,25	100	7,0	5,5	8,8	22	3	47,37	106	46,61
M10x0,75	0,75	90	7,0	5,5	9,2	18	4	61,67	102	
M11x1	1,00	90	8,0	6,2	10,0	18	4	70,08	110	
M12x1	1,00	100	9,0	7,0	11,0	18	4	46,29	122	53,59
M12x1,25	1,25	100	9,0	7,0	10,8	22	4	56,98	124	
M12x1,5	1,50	100	9,0	7,0	10,5	22	4	46,29	126	51,52
M14x1	1,00	100	11,0	9,0	13,0	18	4	70,08	140	79,58
M14x1,25	1,25	100	11,0	9,0	12,8	22	4	64,08	142	
M14x1,5	1,50	100	11,0	9,0	12,5	22	4	66,25	144	72,70
M16x1	1,00	100	12,0	9,0	15,0	18	5	72,70	160	
M16x1,5	1,50	100	12,0	9,0	14,5	22	4	65,16	162	75,31
M18x1	1,00	110	14,0	11,0	17,0	20	5	93,99	180	
M18x2	2,00	125	14,0	11,0	16,0	26	4	104,80	184	
M18x1,5	1,50	110	14,0	11,0	16,5	25	4	87,32	182	100,90
M20x1	1,00	125	16,0	12,0	19,0	20	5	104,80	200	
M20x2	2,00	140	16,0	12,0	18,0	27	4	131,00	204	
M20x1,5	1,50	125	16,0	12,0	18,5	25	4	95,40	202	105,50
M24x2	2,00	140	18,0	14,5	22,0	27	4	128,80	244	
M22x2	2,00	140	18,0	14,5	20,0	27	4	145,10	224	
M22x1	1,00	125	18,0	14,5	21,0	20	5	147,40	220	
M24x1	1,00	140	18,0	14,5	23,0	20	6	161,50	240	
M26x1,5	1,50	140	18,0	14,5	24,5	28	4	162,60	260	159,40
M24x1,5	1,50	140	18,0	14,5	22,5	27	4	114,60	242	128,80
M25x1,5	1,50	140	18,0	14,5	23,5	28	4	208,50	250	
M22x1,5	1,50	125	18,0	14,5	20,5	25	4	102,20	222	113,50
M28x1,5	1,50	140	20,0	16,0	26,5	28	5			188,90
M27x2	2,00	140	20,0	16,0	25,0	28	4	177,90	274	
M27x1,5	1,50	140	20,0	16,0	25,5	28	5	188,90	272	
M30x2	2,00	150	22,0	18,0	28,0	28	4	218,40	302	
M32x2	2,00	150	22,0	18,0	30,0	28	5	303,40	322	
M32x1,5	1,50	150	22,0	18,0	30,5	28	6	218,40	320	
M30x1,5	1,50	150	22,0	18,0	28,5	28	5	182,30	300	205,30
M33x2	2,00	160	25,0	20,0	31,0	30	5	246,70	332	
M36x2	2,00	170	28,0	22,0	34,0	30	5	306,70	362	
M36x1,5	1,50	170	28,0	22,0	34,5	30	6	273,00	360	
M35x1,5	1,50	170	28,0	22,0	33,5	30	6	336,30	350	
M42x1,5	1,50	170	32,0	24,0	40,5	30	6	401,70	420	
M42x3	3,00	200	32,0	24,0	39,0	45	5	486,90	424	
M40x2	2,00	170	32,0	24,0	38,0	30	6	354,80	402	
M50x1,5	1,50	190	36,0	29,0	48,5	32	8	513,00	500	
M52x1,5	1,50	190	40,0	32,0	50,5	32	8	586,20	520	
P								12	6	
M										
K								12	16	15
N								22	22	22
S										
H										
O										

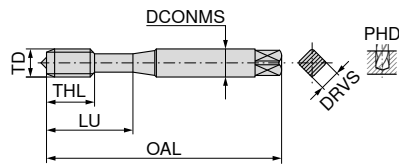
Through Hole / Blind Hole – Machine taps

▲ ES = extra short

▲ LH = for left hand threads; ES = extra short

MF

TWIN

ST
ESST
LH/ESC
2-3C
2-3ISO 2X
6HXISO 2X
6HX

DIN 2181 with reinforced shank

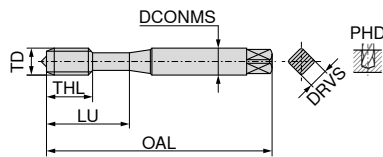
HSS-E
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$ HSS-E
 $\leq 750 \text{ N/mm}^2$
 $\leq 2xD$

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M2,5x0,35	0,35	40	2,8	2,1	2,15	9		3
M3x0,35	0,35	40	3,5	2,7	2,65	8	18	3
M4x0,35	0,35	45	4,5	3,4	3,65	9	22	3
M4x0,5	0,50	45	4,5	3,4	3,50	9	22	3
M4,5x0,5	0,50	50	6,0	4,9	4,00	10	24	3
M5x0,5	0,50	50	6,0	4,9	4,50	11	25	3
M6x0,5	0,50	56	6,0	4,9	5,50	12	27	3
M6x0,75	0,75	56	6,0	4,9	5,20	12	27	3
M7x0,75	0,75	56	6,0	4,9	6,20	14		3
M8x0,5	0,50	56	6,0	4,9	7,50	14		4
M8x0,75	0,75	56	6,0	4,9	7,20	14		3
M8x1	1,00	63	6,0	4,9	7,00	17		3
M9x1	1,00	63	7,0	5,5	8,00	17		4
M10x0,75	0,75	63	7,0	5,5	9,20	18		4
M10x1	1,00	63	7,0	5,5	9,00	18		4
M10x1,25	1,25	70	7,0	5,5	8,80	22		3
M11x1	1,00	63	8,0	6,2	10,00	18		4
M12x1	1,00	70	9,0	7,0	11,00	18		4
M12x1,25	1,25	70	9,0	7,0	10,80	20		4
M12x1,5	1,50	70	9,0	7,0	10,50	20		4
M13x1	1,00	70	11,0	9,0	12,00	18		4
M14x1	1,00	70	11,0	9,0	13,00	18		4
M14x1,25	1,25	70	11,0	9,0	12,80	20		4
M14x1,5	1,50	70	11,0	9,0	12,50	20		4
M15x1	1,00	70	12,0	9,0	14,00	18		5
M16x1	1,00	70	12,0	9,0	15,00	18		5
M16x1,5	1,50	70	12,0	9,0	14,50	20		4
M18x1	1,00	80	14,0	11,0	17,00	18		5
M18x1,5	1,50	80	14,0	11,0	16,50	22		4
M18x2	2,00	80	14,0	11,0	16,00	22		4
M20x1,5	1,50	80	16,0	12,0	18,50	22		4
M20x2	2,00	80	16,0	12,0	18,00	22		4

P	12	12
M		
K	12	12
N	22	22
S		
H		
O		

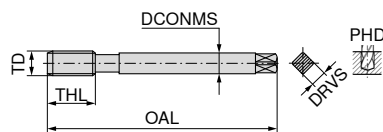
Through hole / Blind hole – Machine thread formers, right hand

▲ SN = Thread formers with lubrication grooves



DIN 2174 with reinforced shank

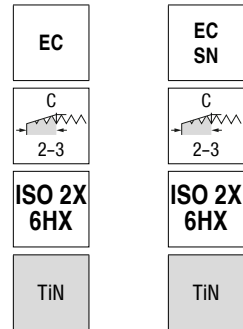
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M4x0,5	0,50	63	4,5	3,4	3,8	10	21	
M4x0,5	0,50	63	4,5	3,4	3,8	10	21	4
M5x0,5	0,50	70	6,0	4,9	4,8	11	25	
M5x0,5	0,50	70	6,0	4,9	4,8	11	25	4
M6x0,5	0,50	80	6,0	4,9	5,8	13	30	
M6x0,5	0,50	80	6,0	4,9	5,8	13	30	5
M6x0,75	0,75	80	6,0	4,9	5,7	13	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 mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

P	18	18
M	10	10
K	10	10
N	22	22
S		
H		
O		



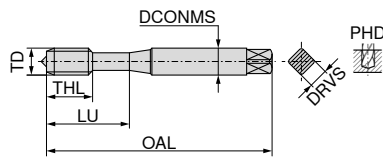
22 204 ...	22 205 ...
EUR U0	EUR U0
89,95 040	101,00 040
76,75 050	89,95 050
89,95 060	101,00 060
71,28 062	80,34 062
93,99 080	89,95 080
87,11 082	95,40 082
80,34 100	88,63 100

22 196 ...	22 197 ...
EUR U0	EUR U0
92,67 120	102,90 120
93,32 124	104,30 124
127,70 140	133,20 140
132,10 160	150,60 160
191,00 200	210,70 200

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

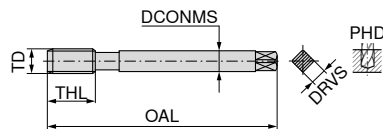
▲ SN = Thread formers with lubrication grooves

MF



DIN 2174 with reinforced shank

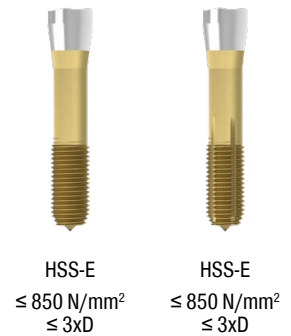
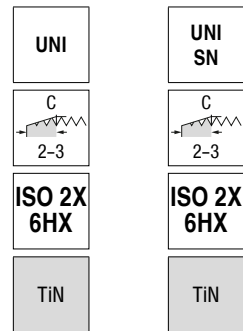
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
M4x0,5	0,50	63	4,5	3,4	3,80	10	21	
M4x0,5	0,50	63	4,5	3,4	3,80	10	21	4
M5x0,5	0,50	70	6,0	4,9	4,80	11	25	
M5x0,5	0,50	70	6,0	4,9	4,80	11	25	4
M6x0,5	0,50	80	6,0	4,9	5,80	13	30	
M6x0,5	0,50	80	6,0	4,9	5,80	13	30	5
M8x1	1,00	90	8,0	6,2	7,60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

P	18	18
M	10	10
K	10	10
N	22	22
S		
H		
O		



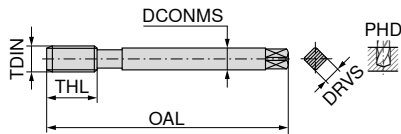
23 840 ...	23 842 ...
EUR T9	EUR T9
39,72 040	44,58 040
34,34 050	40,13 050
39,72 060	44,78 060
38,27 084	42,61 084
43,54 102	47,17 102
51,82 104	57,61 104

23 841 ...	23 843 ...
EUR T9	EUR T9
55,64 122	62,89 122
50,37 124	56,16 124
62,47 144	69,71 144
71,16 162	81,29 162

Through hole – Machine taps, right hand

G

Stabil

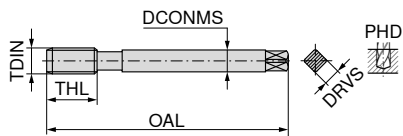


DIN 5156 with reduced shank

UNI	UNI	ST	NEW NW	VA
ISO 228	ISO 228	ISO 228	ISO 228	ISO 228
nitr. + vap.	TiN		DLC	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 $\angle 0^\circ$ $\leq 880 \text{ N/mm}^2$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 900 \text{ N/mm}^2$ $\leq 4xD$
22 632 ...	22 630 ...	22 346 ...	22 467 ...	22 352 ...
EUR U0	EUR U0	EUR U0	EUR U0	EUR U0
1/8-28 0,907 90 7 5,5 8,80 18 3 60,80 012	1/8-28 0,907 90 7 5,5 8,80 18 3 81,98 012	1/8-28 0,907 90 7 5,5 8,80 18 3 46,06 012	1/8-28 0,907 90 7 5,5 8,80 18 3 60,62 01200	1/8-28 0,907 90 7 5,5 8,80 18 3 58,62 012
1/4-19 1,337 100 11 9,0 11,80 22 3 81,43 025	1/4-19 1,337 100 11 9,0 11,80 22 3 108,20 025	1/4-19 1,337 100 11 9,0 11,80 22 3 62,33 025	1/4-19 1,337 100 11 9,0 11,80 22 3 81,04 02500	1/4-19 1,337 100 11 9,0 11,80 22 3 76,75 025
3/8-19 1,337 100 12 9,0 15,25 22 3 101,50 037	3/8-19 1,337 100 12 9,0 15,25 22 3 126,60 037	3/8-19 1,337 100 12 9,0 15,25 22 3 74,77 037	3/8-19 1,337 100 12 9,0 15,25 22 3 104,00 03700	3/8-19 1,337 100 12 9,0 15,25 22 3 95,40 037
1/2-14 1,814 125 16 12,0 19,00 25 4 131,00 050	1/2-14 1,814 125 16 12,0 19,00 25 4 194,40 050	1/2-14 1,814 125 16 12,0 19,00 25 4 102,20 050	1/2-14 1,814 125 16 12,0 19,00 25 4 138,40 05000	1/2-14 1,814 125 16 12,0 19,00 25 4 126,60 050
3/4-14 1,814 140 20 16,0 24,50 28 4 208,50 075	3/4-14 1,814 140 20 16,0 24,50 28 4 234,70 075	3/4-14 1,814 140 20 16,0 24,50 28 4 163,80 075	3/4-14 1,814 140 20 16,0 24,50 28 4 219,30 07500	3/4-14 1,814 140 20 16,0 24,50 28 4 187,80 075
1-11 2,309 160 25 20,0 30,75 30 4 323,10 100	1-11 2,309 160 25 20,0 30,75 30 4 234,70 100	1-11 2,309 160 25 20,0 30,75 30 4 234,70 100	1-11 2,309 160 25 20,0 30,75 30 4 322,80 10000	1-11 2,309 160 25 20,0 30,75 30 4 287,10 100
P 12	15	12		8
M 7	9			6
K 12	18	12		
N 12	12	22	15	22
S				
H				
O				

Through hole – Machine taps, right hand

G

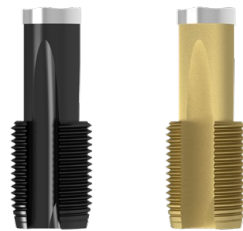


DIN 5156 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	mm	mm	mm	mm	mm	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

P	12	15
M	7	9
K	12	18
N		12
S		
H		
O		

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

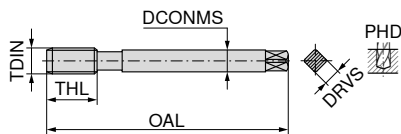


HSS-E	HSS-E
$\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	$\leq 1100 \text{ N/mm}^2$ $\leq 3xD$

23 161 ...	23 160 ...
EUR T9	EUR T9
16,03 012	29,58 012
21,62 025	39,10 025
26,48 037	46,03 037
36,61 050	70,64 050
71,68 075	92,47 075
79,12 100	170,60 100

6

Blind hole – Machine taps, right hand



DIN 5156 with reduced shank

UNI	UNI	UNI	UNI	UNI
ISO 228	ISO 228	ISO 228	ISO 228	ISO 228 +0,05
vap.	TiN	vap.	TiN	vap.
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 $\angle 42^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$

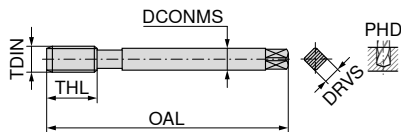
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 633 ...		22 634 ...		22 635 ...		22 636 ...		22 639 ...	
								EUR U0		EUR U0		EUR U0		EUR U0		EUR U0	
1/8-28	0,907	90	7	5,5	8,80	10	3	60,80	012	85,37	012	62,33	012	85,37	012	81,98	012
1/8-28	0,907	90	7	5,5	8,80	10	4			106,90	025						
1/4-19	1,337	100	11	9,0	11,80	15	4	85,37	025			82,64	025	106,90	025	108,20	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	104,80	037	150,60	037	102,20	037	150,60	037	134,20	037
3/8-19	1,337	100	12	9,0	15,25	15	5										
1/2-14	1,814	125	16	12,0	19,00	17	4	138,60	050	216,20	050	133,20	050	209,60	050	172,40	050
1/2-14	1,814	125	16	12,0	19,00	17	5										
5/8-14	1,814	125	18	14,5	21,00	17	4	170,40	062								
3/4-14	1,814	140	20	16,0	24,50	20	4	213,90	075								
3/4-14	1,814	140	20	16,0	24,50	20	5									262,00	075
7/8-14	1,814	150	22	18,0	28,25	22	5	294,70	087								
1-11	2,309	160	25	20,0	30,75	24	5	325,40	100								
1-11	2,309	160	25	20,0	30,75	24	6									399,50	100
1 1/4-11	2,309	170	32	24,0	39,50	25	6	524,00	125								
1 1/2-11	2,309	190	36	29,0	45,25	27	6	747,70	150								
P								12		15		12		15		12	
M								7		9		7		9		7	
K								12		18		12		18		12	
N										12				12			
S																	
H																	
O																	

Blind hole – Machine taps, right hand

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



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



DIN 5156 with reduced shank

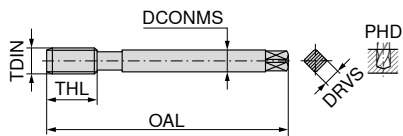


HSS-E ≤ 1100 N/mm ² ≤ 3xD ∠ 45°	HSS-E ≤ 750 N/mm ² ≤ 3xD ∠ 42°	HSS-E ≤ 880 N/mm ² ≤ 2,5xD ∠ 36°	HSS-E ≤ 900 N/mm ² ≤ 3xD ∠ 42°	HSS-E ≤ 900 N/mm ² ≤ 3xD ∠ 45°
---	--	--	--	--

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 624 ...		22 354 ...		22 463 ...		22 355 ...		22 358 ...	
								EUR U0		EUR U0		EUR U0		EUR U0		EUR U0	
1/8-28	0,907	90	7	5,5	8,80	10	3			52,07	012	67,44	01200	62,33	012	99,33	012
1/8-28	0,907	90	7	5,5	8,80	10	4	97,58	012								
1/4-19	1,337	100	11	9,0	11,80	15	4			72,70	025	97,39	02500	82,64	025	128,80	025
1/4-19	1,337	100	11	9,0	11,80	15	5	127,70	025								
3/8-19	1,337	100	12	9,0	15,25	15	4			88,86	037	116,10	03700	102,20	037	154,00	037
3/8-19	1,337	100	12	9,0	15,25	15	5	151,70	037								
1/2-14	1,814	125	16	12,0	19,00	17	4			114,60	050	148,30	05000	130,00	050	232,60	050
1/2-14	1,814	125	16	12,0	19,00	17	5	229,30	050					170,40	062		
5/8-14	1,814	125	18	14,5	21,00	17	5					236,40	07500	218,40	075		
3/4-14	1,814	140	20	16,0	24,50	20	4			182,30	075						
3/4-14	1,814	140	20	16,0	24,50	20	5										
1-11	2,309	160	25	20,0	30,75	24	5			277,30	100	378,70	10000	321,00	100		
1-11	2,309	160	25	20,0	30,75	24	6										
P								15		12				8		10	
M								9						6		8	
K								18		12							
N								12		22		15		22		22	
S																	
H																	
O																	

Blind 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	mm	
1/8-28	0,907	90	7	5,5	8,80	10	3
1/4-19	1,337	100	11	9,0	11,80	15	4
3/8-19	1,337	100	12	9,0	15,25	15	4
1/2-14	1,814	125	16	12,0	19,00	17	4
3/4-14	1,814	140	20	16,0	24,50	20	4
1-11	2,309	160	25	20,0	30,75	24	5

P	12	15
M	7	9
K	12	18
N		12
S		
H		
O		

UNI	UNI
ISO 228	ISO 228
vap.	TiN



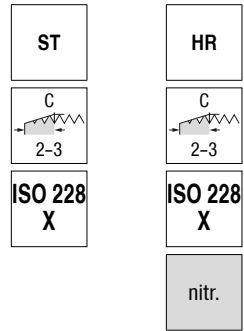
HSS-E	HSS-E
$\angle 35^\circ$	$\angle 35^\circ$
$\leq 1100 \text{ N/mm}^2$	$\leq 1100 \text{ N/mm}^2$
$\leq 2,5xD$	$\leq 2,5xD$

23 163 ...	23 162 ...
EUR	EUR
T9	T9
16,76	30,83
012	012
23,89	42,41
025	025
34,75	50,06
037	037
44,78	75,40
050	050
68,67	96,81
075	075
95,57	184,10
100	100

Through hole / Blind hole – Machine taps, right hand

G

TWIN

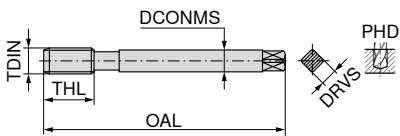


0°
≤ 750 N/mm²
≤ 2xD

0°
≤ 1400 N/mm²
≤ 2xD

22 347 ...

22 339 ...



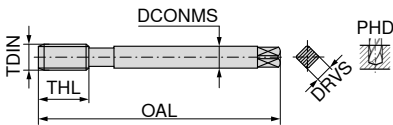
DIN 5156 with reduced shank

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
1/16-28	0,907	90	6	4,9	6,80	17	3
1/8-28	0,907	90	7	5,5	8,80	18	4
1/4-19	1,337	100	11	9,0	11,80	22	4
3/8-19	1,337	100	12	9,0	15,25	22	4
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	5
1 1/8-11	2,309	170	28	22,0	35,50	30	5
1 1/4-11	2,309	170	32	24,0	39,50	30	6
1 3/8-11	2,309	180	36	29,0	41,75	32	6
1 1/2-11	2,309	190	36	29,0	45,25	32	6
1 3/4-11	2,309	190	40	32,0	51,00	32	6

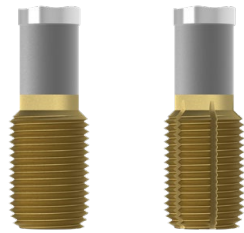
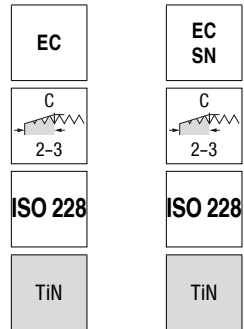
P	12	6
M		
K	12	16
N	22	22
S		
H		
O		

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

▲ SN = Thread formers with lubrication grooves



DIN 2189 with reduced shank

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

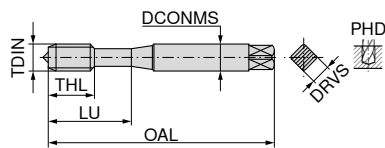
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes		
1/8-28	0,907	90	7	5,5	9,25	18			
1/8-28	0,907	90	7	5,5	9,25	18	5		
1/4-19	1,337	100	11	9,0	12,55	22			
1/4-19	1,337	100	11	9,0	12,55	22	6		
3/8-19	1,337	100	12	9,0	16,05	22			
3/8-19	1,337	100	12	9,0	16,05	22	6		
1/2-14	1,814	125	16	12,0	20,10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

22 360 ...	22 359 ...
EUR U0	EUR U0
97,70 012	110,20 012
125,60 025	138,60 025
169,20 037	189,90 037
225,90 050	254,30 050

Through hole – Machine taps, right hand

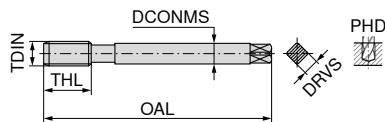
UNC

Stabil



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	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 376 with reduced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes
mm	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

P	8	7	12
M	6	7	7
K			12
N	22		
S		5	
H			
O			

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

HSS-E $\angle 0^\circ$ $\leq 900 \text{ N/mm}^2$ $\leq 4xD$	HSS-PM $\angle 0^\circ$ $\leq 44 \text{ HRC}$ $\leq 4xD$	HSS-E $\angle 0^\circ$ $\leq 1100 \text{ N/mm}^2$ $\leq 4xD$

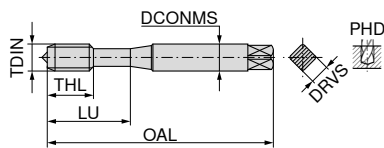
22 250 ...	22 269 ...	22 572 ...
EUR	EUR	EUR
U0	U0	U0
		79,58 002
		43,76 004
	70,08 004	
37,33 006	61,67 006	39,08 006
36,68 008	62,98 008	37,00 008
36,68 010	63,64 010	41,70 010
		50,00 012
46,61 025	67,34 025	45,07 025
47,05 031	74,77 031	51,85 031
47,70 037	87,32 037	57,63 037

22 573 ...

EUR
U0
68,77 050
96,16 062
119,00 075
151,70 087
193,20 100

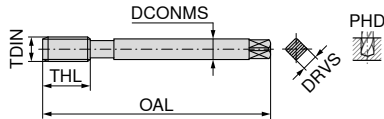
Through hole – Machine taps, right hand

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

P	15	15	8
M	9		6
K	18	15	
N	12	15	22
S			
H			
O			

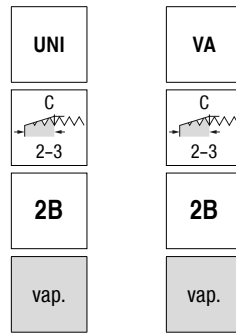
UNI	FE-HF	VA
B 4-5	B 4-5	B 4-5
2B	2B	2B
TiN	TiCN	nitr.
HSS-E $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1000 \text{ N/mm}^2$ $\leq 3xD$
23 170 ...	23 370 ...	23 470 ...
EUR T9	EUR T9	EUR T9
19,35 004	27,41 004	16,03 004
18,62 006	26,58 006	14,89 006
18,62 008	26,58 008	14,48 008
19,35 010	27,62 010	16,03 010
25,45 025	38,37 025	17,17 025
27,82 031	41,79 031	19,55 031
33,10 037	49,34 037	22,14 037

23 171 ...	23 371 ...	23 471 ...
EUR T9	EUR T9	EUR T9
38,48 043	57,09 043	27,72 043
43,03 050	64,85 050	30,31 050
53,68 062	78,30 062	39,10 062
81,29 075	123,10 075	50,26 075

Blind hole – Machine taps, right hand

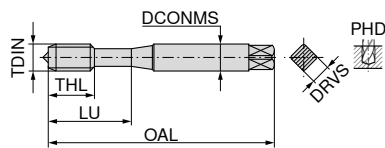
UNC

Salo-Rex



HSS-E

HSS-E

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


DIN 371 with reinforced shank

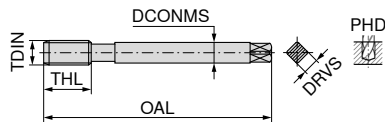
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
Nr. 2-56	0,454	45	2,8	2,1	1,85	4,5	12	2
Nr. 4-40	0,635	56	3,5	2,7	2,35	6,0	18	2
Nr. 6-32	0,794	56	4,0	3,0	2,85	7,0	20	3
Nr. 8-32	0,794	63	4,5	3,4	3,50	8,0	21	3
Nr. 10-24	1,058	70	6,0	4,9	3,90	10,0	25	3
1/4-20	1,270	80	7,0	5,5	5,10	13,0	30	3
5/16-18	1,411	90	8,0	6,2	6,60	14,0	35	3
3/8-16	1,588	100	10,0	8,0	8,00	16,0	39	3

22 582 ...

22 266 ...

EUR U0	
63,64	002
39,73	004
34,82	006
37,33	008
39,08	010
42,02	025
44,75	031
50,20	037

EUR U0	
38,09	006
40,72	008
43,33	010
44,31	025
50,20	031
52,07	037



DIN 376 with reduced shank

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
7/16-14	1,814	100	8	6,2	9,40	18	3
7/16-14	1,814	100	8	6,2	9,40	18	4
1/2-13	1,954	110	9	7,0	10,80	20	3
1/2-13	1,954	110	9	7,0	10,80	20	4
9/16-12	2,117	110	11	9,0	12,25	20	3
5/8-11	2,309	110	12	9,0	13,50	22	3
5/8-11	2,309	110	12	9,0	13,50	22	4
3/4-10	2,540	125	14	11,0	16,50	25	3
3/4-10	2,540	125	14	11,0	16,50	25	4
7/8-9	2,822	140	18	14,5	19,50	27	4
1-8	3,175	160	18	14,5	22,25	30	4
1-8	3,175	160	18	14,5	22,25	30	5

22 583 ...

22 267 ...

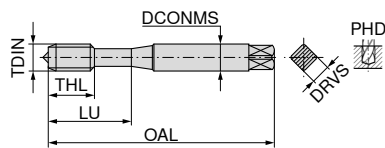
EUR U0	
68,77	043
68,77	050
97,58	056
90,60	062
116,80	075
139,70	087
189,90	100

EUR U0	
87,32	043
76,75	050
98,79	062
121,10	075
203,00	100

P	12	8
M	7	6
K	12	
N		22
S		
H		
O		

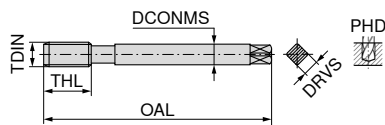
Blind hole – Machine taps, right hand

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. 4-40	0,635	56	3,5	2,7	2,30	6	18	2
Nr. 6-32	0,794	56	4,0	3,0	2,85	7	20	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	8	21	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	10	25	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	13	30	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	14	35	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	16	39	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
7/16-14	1,814	100	8	6,2	9,40	18	3
1/2-13	1,954	110	9	7,0	10,75	20	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	22	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	25	3
3/4-10	2,540	125	14	11,0	16,50	30	3

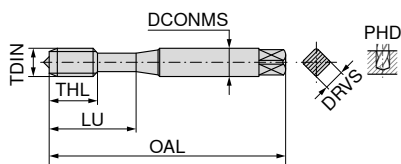
P	15	15	8
M	9		6
K	18	15	
N	12	24	22
S			
H			
O			

UNI	FE-HF	VA
2B	2B	2B
TiN	TiCN	
HSS-E $\leq 1000 \text{ N/mm}^2$ $\leq 2,5xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 2,5xD$	HSS-E $\leq 1000 \text{ N/mm}^2$ $\leq 2,5xD$
23 172 ...	23 372 ...	23 472 ...
EUR T9	EUR T9	EUR T9
20,89 004	21,92 004	26,48 004
19,23 006	20,79 006	24,83 006
20,69 008	22,03 008	25,75 008
21,41 010	22,76 010	26,79 010
27,62 025	30,71 025	30,09 025
27,62 031	31,96 031	31,75 031
33,82 037	38,06 037	35,47 037

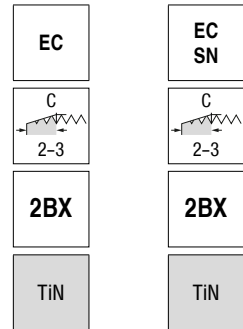
23 173 ...	23 373 ...	23 473 ...
EUR T9	EUR T9	EUR T9
42,82 043	47,47 043	49,13 043
45,20 050	51,30 050	48,41 050
55,64 062	61,44 062	67,95 062
84,19 075	96,29 075	83,36 075

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

▲ SN = Thread formers with lubrication grooves



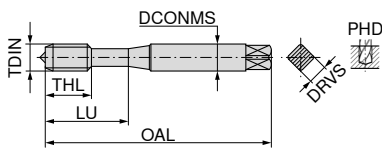
DIN 2174 with reduced shank

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

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
Nr. 4-40	0,635	56	3,5	2,7	2,55	11	18	
Nr. 4-40	0,635	56	3,5	2,7	2,55	11	18	3
Nr. 6-32	0,794	56	4,0	3,0	3,15	12	20	
Nr. 6-32	0,794	56	4,0	3,0	3,15	12	20	3
Nr. 8-32	0,794	63	4,5	3,4	3,80	13	21	
Nr. 8-32	0,794	63	4,5	3,4	3,80	13	21	4
Nr. 10-24	1,058	70	6,0	4,9	4,35	15	25	
Nr. 10-24	1,058	70	6,0	4,9	4,35	15	25	4
1/4-20	1,270	80	7,0	5,5	5,75	17	30	
1/4-20	1,270	80	7,0	5,5	5,75	17	30	4
5/16-18	1,411	90	8,0	6,2	7,30	20	35	
5/16-18	1,411	90	8,0	6,2	7,30	20	35	5
3/8-16	1,588	100	10,0	8,0	8,80	22	39	
3/8-16	1,588	100	10,0	8,0	8,80	22	39	5

P	18	18
M	10	10
K	10	10
N	22	22
S		
H		
O		

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



DIN 371 with reinforced shank



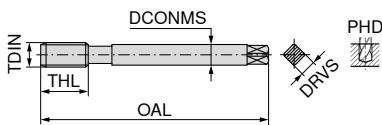
HSS-E

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

22 668 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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

EUR U0	
57,63	004
59,71	006
57,31	008
62,33	010
64,40	025
74,12	031



DIN 376 with reduced shank

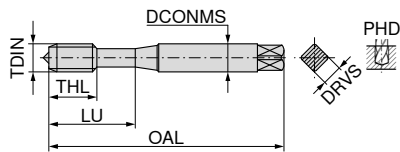
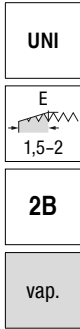
22 670 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

EUR U0	
85,37	037
103,40	043
110,20	050
137,50	062
179,00	075

P	12
M	7
K	12
N	
S	
H	
O	

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



DIN 371 with reinforced shank



HSS-E

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

22 672 ...

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

EUR
U0

58,40 004
 54,68 006
 58,07 008
 61,02 010
 67,34 025
 72,70 031

P	12
M	7
K	12
N	
S	
H	
O	

Blind hole – Machine taps, right hand

UNJC

SL

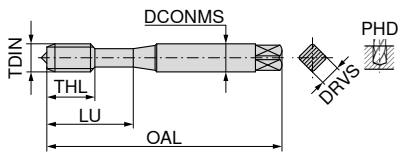
Ti

C

2-3

3BX

TiCN



DIN 371 with reinforced shank



HSS-E

 $\angle 15^\circ$
 $\leq 1200 \text{ N/mm}^2$
 $\leq 2xD$

22 166 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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	5,25	17	30	3
3/8-16	1,588	100	10,0	8,0	8,10	22	39	3

EUR

U0

76,75

004

78,37

006

77,29

008

81,33

010

104,30

025

126,60

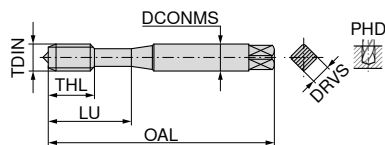
037

P	7
M	7
K	
N	22
S	5
H	
O	

Through hole – Machine taps, right hand

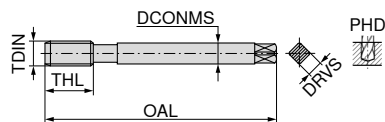
UNF

Stabil



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	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	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

P	12	7
M	7	7
K	12	
N		22
S		5
H		
O		

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

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

22 602 ...

EUR
U0
53,37

004

22 317 ...

EUR
U0
75,31

004

82,64 005

65,70 006

75,86 008

68,77 010

77,29 025

88,31 031

93,44 037

22 603 ...

EUR
U0
72,15

043

68,77 050

106,00 056

96,71 062

122,30 075

159,40 087

206,30 100

542,50 112

594,90 125

626,60 137

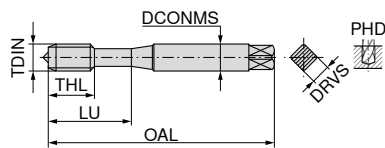
22 421 ...

EUR
U0
113,50

050

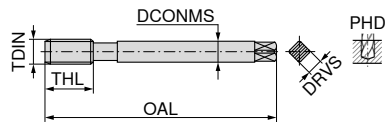
Through hole – Machine taps, right hand

UNF



DIN 371 with reinforced shank

TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	mm	
Nr. 10-32	0,794	70	6	4,9	4,1	15	25	3
1/4-28	0,907	80	7	5,5	5,5	17	30	3
5/16-24	1,058	90	8	6,2	6,9	17	35	3
3/8-24	1,058	90	10	8,0	8,5	18	35	4



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	9,9	22	3
1/2-20	1,270	100	9	7,0	11,5	22	3
9/16-18	1,411	100	11	9,0	12,9	22	3
5/8-18	1,411	100	12	9,0	14,5	22	3
3/4-16	1,588	110	14	11,0	17,5	25	4

P	15	12	8
M	9		6
K	18	12	
N	12	22	22
S			
H			
O			

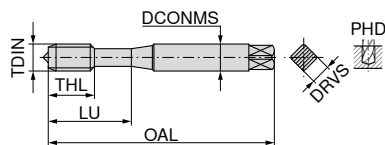
UNI	FE	VA
B 4-5	B 4-5	B 4-5
2B	2B	2B
TiN		nitr.
HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 850 \text{ N/mm}^2$ $\leq 3xD$	HSS-E $\leq 1100 \text{ N/mm}^2$ $\leq 3xD$
23 180 ...	23 280 ...	23 480 ...
EUR T9	EUR T9	EUR T9
22,34 010	27,10 010	18,41 010
28,54 025	29,17 025	20,79 025
31,75 031	32,27 031	22,96 031
34,65 037	33,62 037	23,99 037

23 181 ...	23 281 ...	23 481 ...
EUR T9	EUR T9	EUR T9
41,69 043	43,23 043	30,71 043
43,03 050	43,23 050	30,71 050
58,55 056	53,68 056	38,06 056
54,20 062	48,41 062	34,44 062
82,23 075	63,09 075	44,88 075

Blind hole – Machine taps, right hand

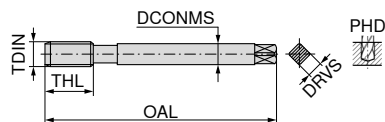
UNF

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

P	8	12	12
M	6	7	7
K		12	12
N	22		22
S			
H			
O			

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



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

22 308 ...	
EUR U0	
65,50 002	
49,34 004	
47,37 006	
47,37 008	
50,65 010	
52,07 025	
58,07 031	
60,80 037	



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

22 606 ...	
EUR U0	
47,37 004	
42,02 006	
42,02 008	
44,31 010	
48,46 025	
54,68 031	



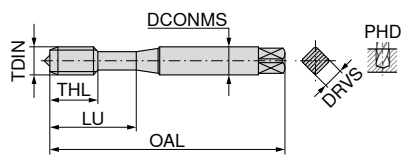
HSS-E
 $\angle 42^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 3xD$

22 307 ...	
EUR U0	
66,25 006	
70,08 010	
73,36 025	
83,50 031	
83,50 037	

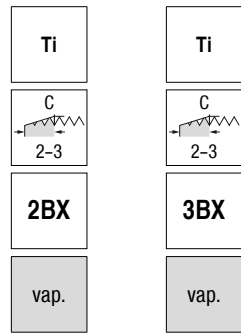
Blind hole – Machine taps, right hand

UNF

SL



DIN 371 with reinforced shank



HSS-PM

HSS-PM

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

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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

22 302 ...

22 303 ...

EUR
U0EUR
U0

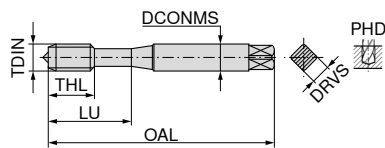
92,12 010
100,10 025
119,00 031
117,90 037

92,12 010
100,10 025
108,20 031
117,90 037

P	5	5
M	5	5
K		
N	22	22
S	3	3
H		
O		

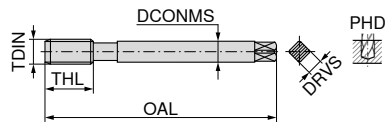
Blind hole – Machine taps, right hand

UNF



DIN 371 with reinforced shank

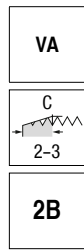
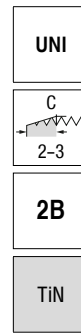
TDIN	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes
mm	mm	mm	mm	mm	mm	mm	mm	
Nr. 10-32	0,794	70	6	4,9	4,1	10	25	3
1/4-28	0,907	80	7	5,5	5,5	10	30	3
5/16-24	1,058	90	8	6,2	6,9	10	35	3
3/8-24	1,058	90	10	8,0	8,5	10	35	3



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	9,9	13	3
1/2-20	1,270	100	9	7,0	11,5	13	4
9/16-18	1,411	100	11	9,0	12,9	15	4
5/8-18	1,411	100	12	9,0	14,5	15	4
3/4-16	1,588	110	14	11,0	17,5	17	4

P	15	8
M	9	6
K	18	
N	12	22
S		
H		
O		



HSS-E
 $\angle 35^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 2,5xD$

23 182 ...	EUR	T9
23,58	010	
30,20	025	
31,96	031	
35,58	037	

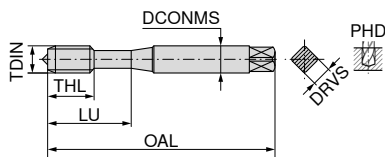


HSS-E
 $\angle 35^\circ$
 $\leq 1100 \text{ N/mm}^2$
 $\leq 2,5xD$

23 482 ...	EUR	T9
31,44	010	
34,34	025	
36,41	031	
39,51	037	

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

▲ SN = Thread formers with lubrication grooves



DIN 2174 with reduced shank



HSS-E

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

22 312 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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

EUR
U0

004

72,04

006

66,91

008

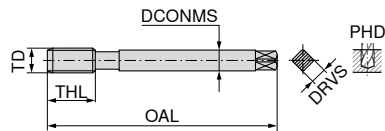
68,66

010

74,22

025

87,11



DIN 2174 with reduced shank

22 313 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

EUR
U0

043

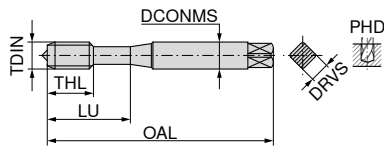
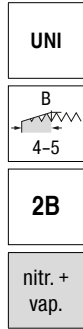
130,00

050

133,20

P	18
M	10
K	10
N	22
S	
H	
O	

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



DIN 371 with reinforced shank

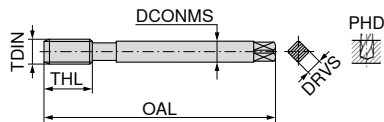


HSS-E

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

22 676 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes
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

EUR
U0004
006
008
010
025

DIN 374 with reduced shank

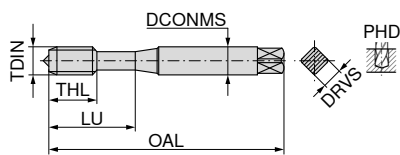
22 677 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes
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

EUR
U0037
043
050
062
075

P	12
M	7
K	12
N	
S	
H	
O	

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



DIN 371 with reinforced shank



HSS-E

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

22 680 ...

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

EUR
U0

004

70,08

006

69,54

72,70

010

76,75

84,15

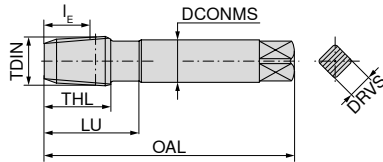
025

P	12
M	7
K	12
N	
S	
H	
O	

Blind hole – Machine taps, right hand

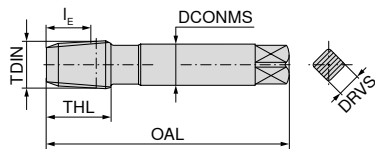
NPT

Salo-Rex



DIN 371 with reinforced shank

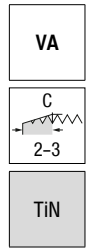
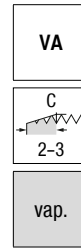
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	I _E mm	THL mm	LU mm	Flutes
1/16-27	0,941	90	8	6,2	9,24	13,0	26,0	3
1/8-27	0,941	90	10	8,0	9,28	13,0	26,0	3
1/8-27	0,941	90	10	8,0	9,28	12,0	26,0	4
1/4-18	1,411	100	14	11,0	13,55	19,5	34,5	3
1/4-18	1,411	100	14	11,0	13,55	18,0	34,5	4



DIN 374 with reduced shank

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	I _E mm	THL mm	Flutes
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

P	4	5
M	3	4
K		
N	22	22
S		
H		
O		



HSS-E
 $\leq 35^\circ$
 $\leq 900 \text{ N/mm}^2$

22 364 ...

EUR
U0

95,40

006

110,20

012

128,80

025



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

22 365 ...

EUR
U0

144,10

012

147,40

025

22 371 ...

EUR
U0

158,30

037

230,30

050

310,00

075

454,10

100

22 372 ...

EUR
U0

239,10

037

338,40

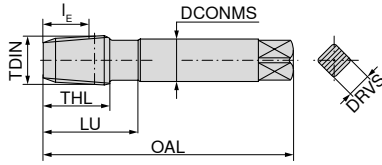
050

Through hole / Blind hole – Machine taps, right hand

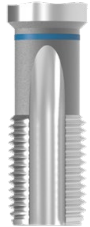
NPT

TWIN

VG



DIN 371 with reinforced shank



HSS-E

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

22 374 ...

EUR
U0

68,77

006

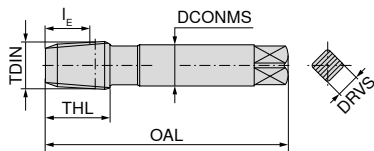
89,40

012

94,64

025

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	I _E mm	THL mm	LU mm	Flutes
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



DIN 374 with reduced shank

22 375 ...

EUR
U0

117,90

037

158,30

050

204,20

075

279,40

100

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	I _E mm	THL mm	Flutes
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

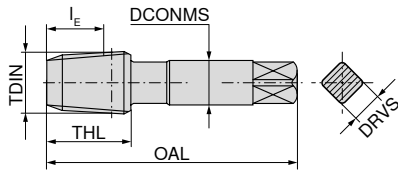
P	4
M	
K	6
N	22
S	
H	
O	

Through hole / Blind hole – Machine taps, right hand

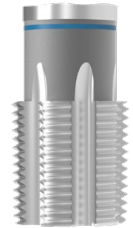
▲ ES = extra short

NPT

TWIN

ST
ES

DIN 2181 with reduced shank



HSS-E

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

22 361 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	I _E mm	THL mm	Flutes
1/16-27	0,941	63	6	4,9	9,24	13,0	4
1/8-27	0,941	63	7	5,5	9,28	13,0	5
1/4-18	1,411	63	11	9,0	13,55	19,5	5
3/8-18	1,411	70	12	9,0	13,86	19,5	5
1/2-14	1,814	80	16	12,0	18,11	23,0	5
3/4-14	1,814	100	20	16,0	18,59	26,0	6
1-11,5	2,209	110	25	20,0	22,31	32,0	6

EUR
U0

58,62	006
61,67	012
73,36	025
92,12	037
123,40	050
155,00	075
231,30	100

P	6
M	
K	6
N	22
S	
H	
O	

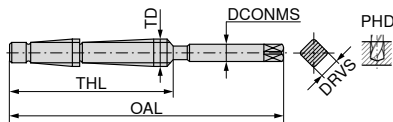
Through hole – Machine taps, right hand

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

Tr

ST

7H



Factory standard



HSS-E

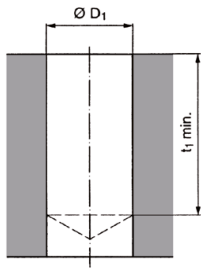
≤ 5°
≤ 900 N/mm²
≤ 2xD

22 402 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	EUR U0	
Tr 8	1,5	105	6	4,9	6,60	55	3	513,00	080
Tr 9	2,0	130	7	5,5	7,20	70	3	513,00	090
Tr 10	2,0	130	7	5,5	8,20	70	3	513,00	102
Tr 10	3,0	155	7	5,5	7,25	95	3	472,70	103
Tr 12	3,0	160	9	7,0	9,25	95	3	566,60	123
Tr 14	3,0	170	10	8,0	11,25	100	3	657,00	143
Tr 14	4,0	195	10	8,0	10,25	125	3	555,70	144
Tr 16	4,0	225	12	9,0	12,25	130	3	555,70	164
Tr 18	4,0	225	14	11,0	14,25	116	3	573,10	184
Tr 20	4,0	225	16	12,0	16,25	130	3	663,70	204
Tr 22	5,0	260	16	12,0	17,25	160	3	772,90	225
Tr 24	5,0	285	18	14,5	19,25	165	3	894,00	245
P									•
M									
K									•
N									•
S									
H									
O									

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

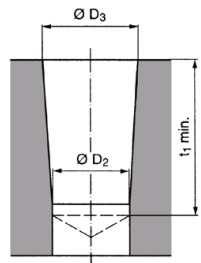
Pre-drilling of cylindrical holes without reamer



		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

6

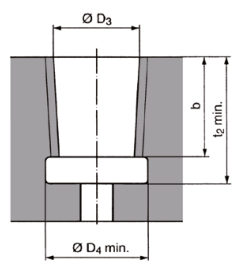


Taper 1:16

		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

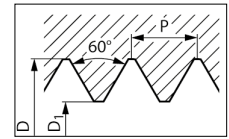
Tapped hole pilot diameter

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

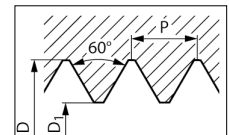


MF

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



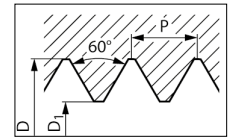
Dimensions in mm; P = Pitch

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

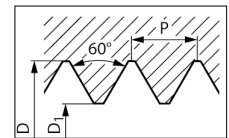
Thread nominal Ø		Ø D ₁		Core hole
D	P	min.	max.	
M6	1	5,51	5,59	5,55
M7	1	6,51	6,59	6,55
M8	1,25	7,39	7,48	7,4
M9	1,25	8,39	8,48	8,4
M10	1,5	9,25	9,35	9,3
M11	1,5	10,25	10,35	10,3
M12	1,75	11,12	11,25	11,2
M14	2	13,00	13,15	13,0
M16	2	15,00	15,15	15,0
M18	2,5	16,72	16,90	16,8
M20	2,5	18,72	18,90	18,8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

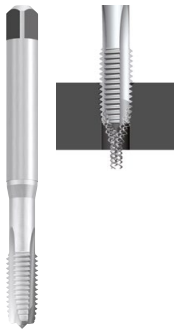


Dimensions in mm; P = Pitch

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 Wedon 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

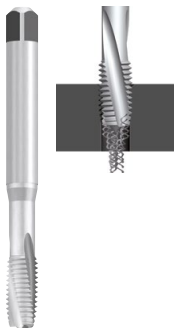
Blind hole tap type SL



- ▲ 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

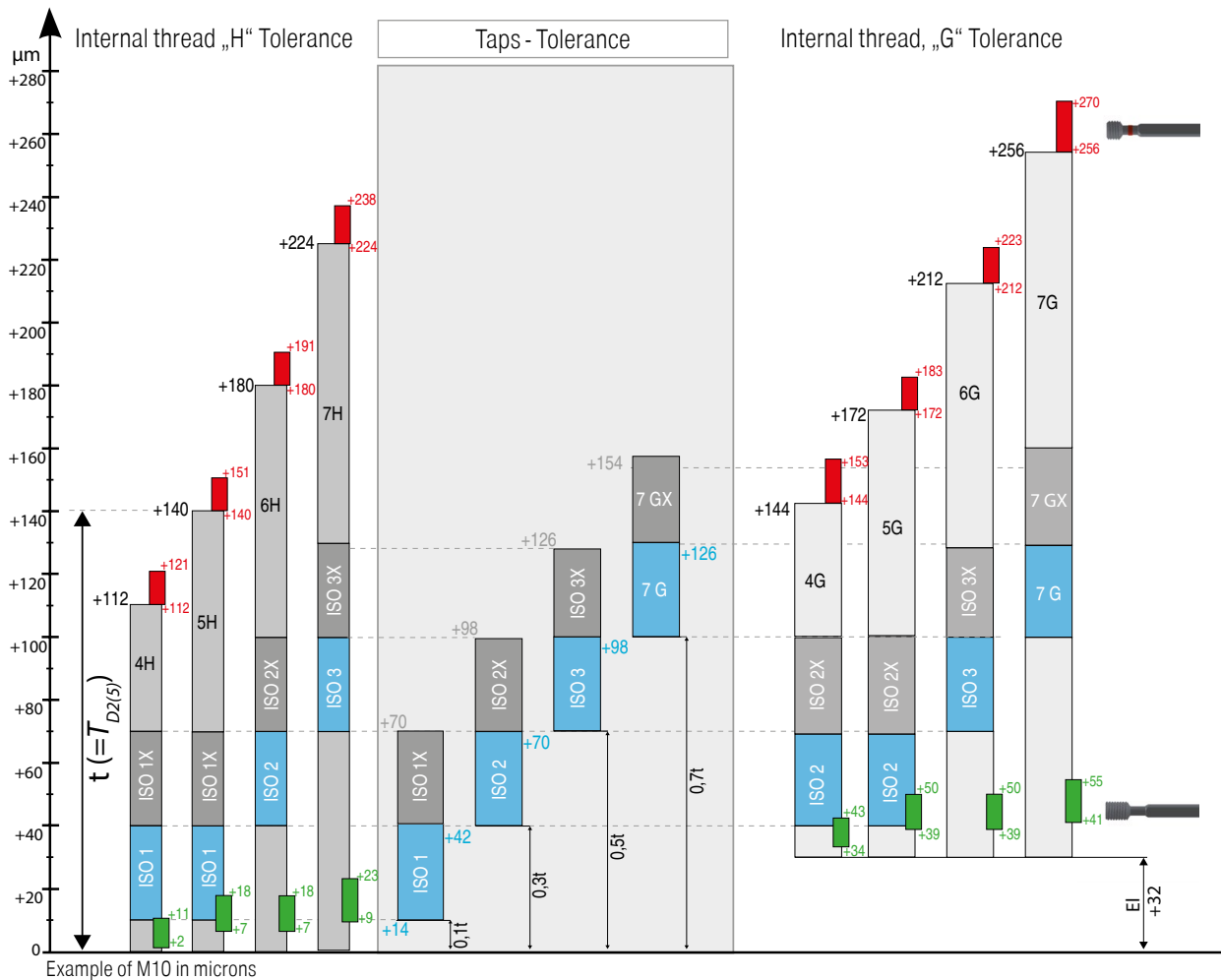
Spanlos

Thread former type Spanlos



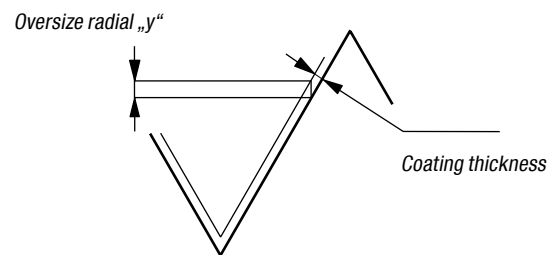
- ▲ For blind and through holes up to 3xD
- ▲ Lead Form C: 2–3 cutting leads, without spiral point
- ▲ For cold formable materials up to 1400 N/mm²
- ▲ Suitable for synchronised machining, with lubrication grooves and internal cooling

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

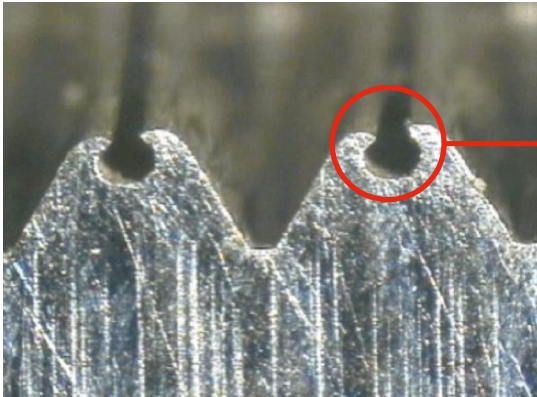


Application class of the tap Designation according to		Tolerance class of the internal thread to be cut					
DIN	ISO						
4H	ISO1	4H	5H	-	-	-	-
6H	ISO2	4G	5G	6H	-	-	-
6G	ISO3	-	(4E)	6G	7H	8H	-
7G	-	-	-	(6E)	7G	8G	-

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

Incremental pressure forming



Workpiece

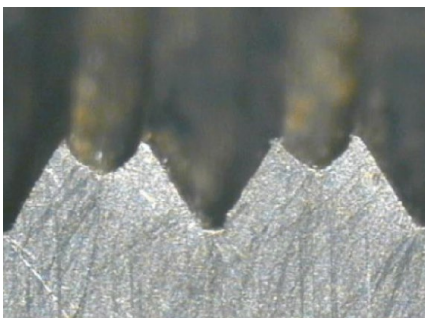
Thread formers



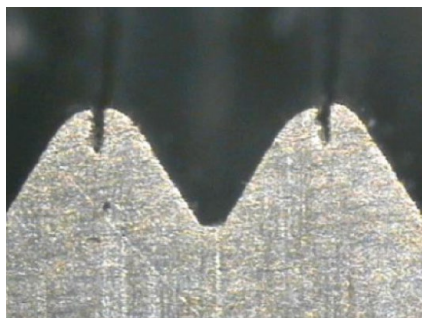
The thread profile is pressed gradually into the material via the start (leading edge) of the tap.

Properties

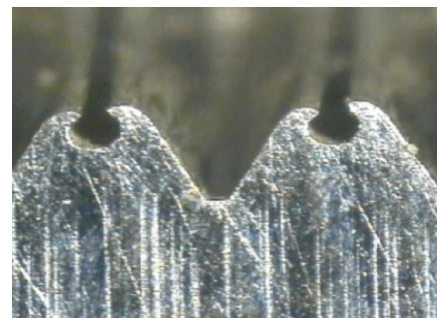
- ▲ One type can be used in different materials
- ▲ For through and blind holes
- ▲ Very good thread surface quality
- ▲ High static and dynamic strength thread
- ▲ Secure machining of deep and counterbored threads
- ▲ Short machining times
- ▲ No chip problems
- ▲ No swarf
- ▲ High process security
- ▲ 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

DLC

- ▲ Diamond-like carbon coating
- ▲ Specifically for machining non-ferrous metals
- ▲ Maximum application temperature: 400 °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

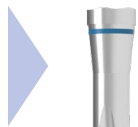
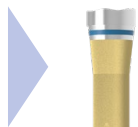
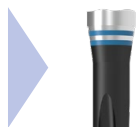
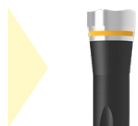
- ▲ Chromium-nitrogen coating
- ▲ Very wear-resistant coating
- ▲ Especially suitable for use in aluminum, but also for P, M and S materials

AlTiNHD

- ▲ AlTiN-based nanolayer hard material coating
- ▲ Maximum application temperature 500 °C

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

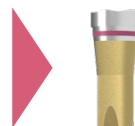
Type NW, Soft and Ms for aluminium,
short-chipping brass and soft materials

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

