New products for machining technicians

NEW HSS-E thread former with carbide strips

M

→ Page 52

MF

→ Page 73

- Maximised service life thanks to the innovative combination of the flexible HSS base support material and the wear-resistant, soldered-in carbide forming lobes
- Universal application in all ductile materials
- Reduction in tool costs

Table of contents

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

M — Thread type
Explanation of the thread types can be found on → **Page 6.**

UNI NCW — Application range
Special feature
An explanation of the areas of application/ special features can be found on → **Page 7.**

C 2–3 — Chamfer form
An explanation of the chamfer forms can be found on → **Page 6.**

ISO 2 6H — Tolerance
Explanation of the tolerances can be found on → **Page 105.**

TiN — Coating
An explanation of the coatings can be found on → **Page 108.**

Cooling agent supply

Coloured ring
An explanation of the coloured rings can be found on → **Page 5.**

HSS-E	Tool Material An explanation of the cutting materials can be found on → **Page 6.**
FHA 42°	Helix angle
≤ 1100 N/mm²	Tensile strength

Through hole thread

Blind hole thread

Through hole thread and blind hole thread

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 !

Tool types

TruTap

Through hole tap type TruTap

- 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 Weldon flat and with extra long version
- Due to the special geometry of the flutes, the chips are removed in the direction of cut

TruTap DL

Through hole tap type TruTap 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

CavTap

Blind hole tap type CavTap

- 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 syncronised machining, with Weldon flat, with extra long version and through coolant
- The high helix angle ensures chips are discharged effectively against the direction of cut

CavTap SL

Blind hole tap type CavTap 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

DuoTap

Through and blind hole tap Type DuoTap

- 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

DuoForm

Thread former type DuoForm

- 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

Coloured rings

for steel up to 750 N/mm²

ST

ST application area: uncoated taps for steels up to a tensile strength of 750 N/mm²

for corrosion and acid-resistant steels

VA

VA application area: for stainless steels

for hardened steels

HT

HT application area: for hard machining

for steel to 1100 N/mm²

ST

VG

ST and VG application area: coated taps for steels up to a tensile strength of 1100 N/mm²

for heat resistant alloys

Ti

Ni

Ti and Ni application area: for heat-resistant steels, titanium and Inconel

for aluminium and non-ferrous metal

NW

Ms

Soft

AMPCO

NW, Soft, Ms and AMPCO application area: for aluminium, short-chipping brass and soft materials

for steel up to 1400 N/mm²

HR

HR application area: for steels up to a tensile strength of 1400 N/mm²

for cast iron materials

GG

GG application area: for cast iron materials

for universal application up to 1100 N/mm²

UNI

UNI application area: for universal application

A detailed explanation of the areas of application can be found on → **Page 7.**

Thread types

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

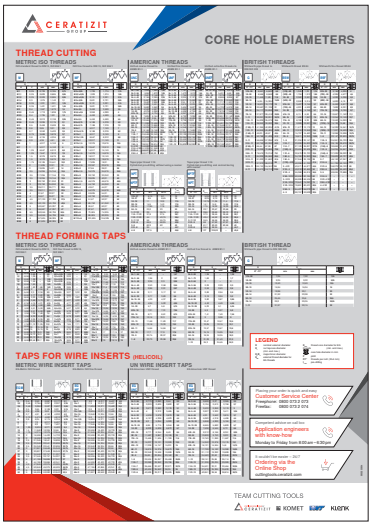
These thread types, as well as hand taps and dies, are available in the online shop.

Chamfer forms

B 4–5	Form B (with spiral point, 4–5 thread lead)
C 2–3	Form C (without spiral point, 2–3 thread lead)
D 4–5	Form D (without spiral point, 4–5 thread lead)
E 1,5–2	Form E (without spiral point, 1.5–2 thread lead)

Cutting materials

HSS	High-speed steel
HSS-E	High-performance high speed steel
HSS-E / HM	HSS-E base support material cutting/forming medium: HM
HSS-PM	High-performance sintered high-speed steel
Solid carbide	Solid carbide



A must-have for your production processes!

Thread core hole diameters at a glance thanks to the CERATIZIT workshop poster!

To receive a copy in your national language, please contact your sales representative.

Application areas

WNT \ Performance

UNI	for universal application up to 1100 N/mm²
ST	for good quality free machining steel
FE	Dies for steel
VG	for tempered and heat-resistant steels < 1100 N/mm²
HR	for high-tensile steels < 1400 N/mm²
VA	for stainless and acid-resistant steels up to 1100 N/mm²
GG	for cast iron
NW	For aluminium
Soft	For soft materials
Ms	for short chipping brass
AMPCO	For Ampco alloys
Ti	For titanium and titanium alloys
Ni	special for Inconel 718
HT	for hardened steel and chilled iron up to 55 HRc

EC	DuoForm thread former for universal use
NEO	DuoForm 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

Tools for these application areas are available in the online shop.

WNT \ Standard

UNI	for 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
AL	for aluminium and aluminium alloys

Special Features

AUT	short version for automatic use
AZ	with intermittent teeth, reduces friction
CNC	for synchronised CNC machining with minimum length compensation chuck
DRY	for dry machining or minimum quantity lubrication (MMS)
EL	extra long, with double overall length
ES	extra short
HML	with soldered-in carbide strips for a higher cutting speed
LH	for left hand threads

MMB	Machine taps
NC	for synchronised CNC machining with minimum length compensation chuck
NCW	with Weldon flat for synchronised CNC machining without length compensation chuck
R_z=1	Lapped Dies
S	with back taper, for deep threads
SN	Thread formers with lubrication grooves
TS	for high-speed machining, up to 100 m/min.

Toolfinder

Thread formers

		Machining	Application range	WNT \ Standard M	MF	G	UNC	UNF
UNI	for cold-formable materials		UNI	55	74			

HSS taps

UNI	for universal use up to 1000 N/mm² **WNT Standard** up to 1100 N/mm² **WNT Performance**		UNI	26+27	60+61	76	83	91
			UNI	43+44	67	79	85	94
P	for steels up to 850 N/mm² **WNT Standard** up to 1100 N/mm² **WNT Performance**		FE	27	61			
			FE	44	68			23 282... 23 283...
								
P	for high-strength steels up to 1100 N/mm² **WNT Standard** up to 1400 N/mm² **WNT Performance**		FE-HF	27			83	
			FE-HF	44			85	
								
M	for corrosion and acid-resistant steels		VA	28	61		83	
			VA	44+45	69		85	94
K	for cast iron materials		GG	51				
N	for aluminium and non-ferrous metal		AL	28				
			AL	45				
								
S	for heat-resistant materials							
								
H	Hard materials							

For tools for other applications, refer to the taps overview on → **Pages 10–15.**

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

Tool type	Application range	WNT \ Performance														
		M	EG M	MF	G	UNC	EG UNC	UNJC	UNF	EG UNF	UNJF	BSW	NPT	NPTF	Rp	Rc
DuoForm	EC	52+53		73	81	86			95							
TruTap	UNI	16–18	56	58+59	75	82	87		90	96		22 626... 22 627...				
CavTap	UNI	29–32	57	62+63	77+78	84	88		92	97		22 628... 22 629...				
TruTap	ST	19+20		59	75											
CavTap	ST	34+35		64+65	78											
DuoTap	ST	46+47		71+72	80								100	22 367... 22 382...	22 381...	22 389...
TruTap	HR	20														
CavTap	HR	35														
DuoTap	HR	46+47		70+71	80											
TruTap	VA	21			75	82										
CavTap	VA	36		66	78	84			92				98			
DuoTap	GG	48		71												
TruTap	NW	21		59	75											
CavTap	NW	37		66	78											
DuoTap	AMPCO	46+47														
TruTap	Ti	22				82					22 167...					
CavTap SL	Ti	38				22 262...		89	93		22 168...					
DuoTap	HT	49		70												

Shank extensions for taps can be found on → **Page 101.**

Thread-cutting oils can be found in our online shop at cuttingtools.ceratizit.com

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Taps Overview

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
M	**Metric ISO standard thread**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	ISO 2 6H ISO 3 6G 7G	HSS-E	■		16+17	
UNI CNC	TruTap	B 4–5	ISO 2X 6HX ISO 3X 6GX 7GX	HSS-E	■		18	
UNI NCW	TruTap	B 4–5	ISO 2 6H	HSS-PM	■		18	
UNI EL	TruTap	B 4–5	ISO 2 6H	HSS-E	■		24	
UNI		B 4–5	ISO 2 6H	HSS-E HSS-PM	■			26
UNI NC		B 4–5	ISO 2 6H	HSS-E	■			27
UNI NCW		B 4–5	ISO 2 6H	HSS-PM	■			27
	UNI – Blind hole thread							
UNI	CavTap	C 2–3	ISO 2 6H 7G	HSS-E	■		29	
UNI	CavTap	E 1,5–2	ISO 2 6H	HSS-E	■	💧	30	
UNI		C 2–3	ISO 2 6H	HSS-E HSS-PM	■			43
UNI NC		C 2–3	ISO 2 6H	HSS-E	■			43
UNI NCW	CavTap	C 2–3	ISO 2 6H	HSS-PM	■		30	
UNI NCW		C 2–3	ISO 2 6H	HSS-PM	■			44
UNI CNC	CavTap	C 2–3	ISO 2X 6HX ISO 2 6H 7G	HSS-E	■		31	
UNI CNC	CavTap	E 1,5–2	ISO 2 6H	HSS-E	■	💧	31	
UNI CNC	CavTap	C 2–3	ISO 3 6G	HSS-E	■		22 588..., 22 589...	
UNI DRY	CavTap	C 2–3	ISO 2 6H	HSS-E	■	💧	32	
UNI	CavTap	C 2–3	ISO 1 4H	HSS-E	■		22 528...	
UNI	CavTap	E 1,5–2	ISO 3 6G	HSS-E	■		22 530...	
UNI S	CavTap	C 2–3	ISO 2 6H	HSS-E	■		22 536..., 22 537...	
UNI ES	CavTap	E 1,5–2	ISO 2 6H	HSS-E	■		39	
UNI EL	CavTap	C 2–3	ISO 2 6H	HSS-E	■		41	
UNI	CavTap SL	C 2–3	ISO 2 6H	HSS-E	□		22 516...	

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
M	**Metric ISO standard thread**							
	P – Through hole thread							
ST	TruTap	B 4–5	ISO 2 6H	HSS-E	□		19	
ST LH	TruTap	B 4–5	ISO 2 6H	HSS-E	□		19	
ST	TruTap	B 4–5	ISO 1 4H	HSS-E	□		22 002..., 22 003...	
ST	TruTap	B 4–5	ISO 3 6G	HSS-E	□		22 004...	
ST TS	TruTap	B 4–5	ISO 2X 6HX	HSS-E	■		20	
HR	TruTap	B 4–5	ISO 2X 6HX	HSS-PM	■		20	
VG	TruTap	B 4–5	ISO 2X 6HX	HSS-E	■		20	
ST EL	TruTap	B 4–5	ISO 2 6H	HSS-E	□		24	
ST MMB		≈ 20	ISO 2 6H	HSS-E	□		25	
FE		B 4–5	ISO 2 6H	HSS-E	□			27
FE-HF		B 4–5	ISO 2 6H	HSS-E	■			27
	P – Blind hole thread							
ST	CavTap	C 2–3	ISO 2 6H	HSS-E	■□		34	
ST	CavTap	C 2–3	ISO 3 6G	HSS-E	□		22 134..., 22 135...	
ST CNC	CavTap SL	C 2–3	ISO 2X 6HX	HSS-E	■	💧	33	
ST TS	CavTap SL	C 2–3	ISO 2X 6HX	HSS-E	■		33	
ST ES	CavTap SL	C 2–3	ISO 2 6H	HSS-E	□		40	
ST EL	CavTap	C 2–3	ISO 2 6H	HSS-E	□		41	
ST EL	CavTap SL	E 1,5–2	ISO 2 6H	HSS-E	□		42	
ST LH	CavTap	C 2–3	ISO 2 6H	HSS-E	□		34	
ST TS	CavTap	C 2–3	ISO 2 6H	HSS-E	■	💧	35	
HR	CavTap SL	C 2–3	ISO 2 6H	HSS-PM	■		33	
HR	CavTap	C 2–3	ISO 2 6H	HSS-PM	■□		35	

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Taps Overview

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
M	**Metric ISO standard thread**							
FE		C 2–3	ISO 2 6H	HSS-E	□			44
FE-HF		C 2–3	ISO 2 6H	HSS-E	■			44
	P – Blind hole thread							
ST	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	□		46+47	
ST AZ	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	□		22 111..., 22 113...	
HR	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	■		46+47	
HR EL	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	■		50	
	M – Through hole thread							
VA	TruTap	B 4–5	ISO 2 6H	HSS-E	■		21	
VA		B 4–5	ISO 2 6H	HSS-PM HSS-E	■			28
	M – Blind hole thread							
VA	CavTap	C 2–3	ISO 2 6H	HSS-E	■		36	
VA	CavTap	E 1,5–2	ISO 2 6H	HSS-E	■	●	36	
VA		C 2–3	ISO 2 6H	HSS-E HSS-PM	■□			44+45
	K – Through hole thread and blind hole thread							
GG	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	■	●	48	
GG		C 2–3	ISO 2X 6HX	HSS-E	■			51
	N – Through hole thread							
NW	TruTap	B 4–5	ISO 2 6H	HSS-E	■		21	
Soft	TruTap	B 4–5	ISO 2 6H	HSS-E	■		22 305...	
AL		B 4–5	ISO 2 6H	HSS-E	■□			28
	N – Blind hole thread							
Soft	CavTap	C 2–3	ISO 2 6H	HSS-E	■□		37	
NW	CavTap	C 2–3	ISO 2 6H	HSS-E	■		37	
AL		C 2–3	ISO 2 6H	HSS-E	■□			45

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
M	**Metric ISO standard thread**							
	N – Through hole thread and blind hole thread							
AMPCO	DuoTap	C 2–3	ISO 2X 6HX	HSS-PM	□		46+47	
Ms	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	□		22 119...	
	S – Through hole thread							
Ti	TruTap	B 4–5	ISO 1X 4HX ISO 2X 6HX	HSS-PM	■		22	
Ti	TruTap DL	D 4–5	ISO 2X 6HX	HSS-E	■		23	
Ni	TruTap DL	D 4–5	ISO 2X 6HX	HSS-E	■		23	
	S – Blind hole thread							
Ti	CavTap SL	C 2–3	ISO 2X 6HX	HSS-PM	■		38	
Ni	CavTap SL	C 2–3	ISO 2X 6HX	HSS-PM	■		38	
	H – Through hole thread and blind hole thread							
HT	DuoTap	D 4–5	ISO 2X 6HX	VHM	■		49	
HT	DuoTap	C 2–3	ISO 2X 6HX	HSS-PM	■		49	
	Machine thread formers							
EC	DuoForm	C 2–3	ISO 2X 6HX	HSS-E	■		52	
EC SN	DuoForm	C 2–3	ISO 2X 6HX ISO 3X 6GX	HSS-E	■		53	
NW HML	DuoForm	C 2–3	ISO 2X 6HX	HSS-E	□	●	52	
NEO SN	DuoForm	C 2–3	ISO 2X 6HX	HSS-PM	■	●	54	
UNI		C 2–3	ISO 2X 6HX	HSS-E	■			55
UNI SN		C 2–3	ISO 2X 6HX	HSS-E	■			55
	Hand taps							
ST		C 2–3	ISO 2X 6HX	VHM	□		22 800...	
ST		C 2–3	ISO 2X 6HX	HSS-E	□		22 010...	
ERGO		C 2–3	ISO 2X 6HX	HSS-E	□		22 012...	
ERGO F.T.		C 2–3	ISO 2X 6HX	HSS-E	■		22 013...	

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Taps Overview

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
M	**Metric ISO standard thread**							
	Dies							
FE		1,5–2	ISO 6g ISO 6e	HSS	□		22 700..., 22 701...	
FE		1,5–2	ISO 6g	HSS	□		23 910...	
FE LH		1,5–2	ISO 6g	HSS	□		22 702...	
VA		2	ISO 6g	HSS-E	□		22 704...	
VA R_Z=1		2	ISO 6g	HSS-E	□		22 705...	
EG M	**ISO metric coarse thread for wire inserts**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	6H mod	HSS-E	■		56	
	UNI – Blind hole thread							
UNI	CavTap	C 2–3	6H mod	HSS-E	■		57	
	N – Blind hole thread							
Soft	CavTap	C 2–3	6H mod	HSS-E	■		57	
MF	**Metric ISO fine thread**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	ISO 2 6H	HSS-E	■		58+59	
UNI	TruTap	B 4–5	ISO 3 6G	HSS-E	■		22 599...	
UNI		B 4–5	ISO 2 6H	HSS-PM HSS-E	■			60+61
	UNI – Blind hole thread							
UNI	CavTap	E 1,5–2	ISO 2 6H ISO 3 6G	HSS-E	■		62	
UNI	CavTap	C 2–3	ISO 2 6H	HSS-E	■		63	
UNI		C 2–3	ISO 2 6H	HSS-PM HSS-E	■			67+68

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
MF	**Metric ISO fine thread**							
UNI CNC	CavTap	E 1,5–2	ISO 3 6G	HSS-E	■		22 561...	
UNI CNC	CavTap	E 1,5–2	ISO 2 6H 7G	HSS-E	■		63	
UNI NC		E 1,5–2	ISO 2 6H	HSS-E	■			68
	P – Through hole thread							
ST TS	TruTap	B 4–5	ISO 2X 6HX	HSS-E	■		59	
ST LH	TruTap	B 4–5	ISO 2 6H	HSS-E	□		59	
FE		B 4–5	ISO 2 6H	HSS-E	□			61
	P – Blind hole thread							
ST TS	CavTap	C 2–3	ISO 2 6H	HSS-E	■		22 216...	
ST LH	CavTap	C 2–3	ISO 2 6H	HSS-E	□		64	
ST	CavTap SL	C 2–3	ISO 2 6H	HSS-E	□		65	
FE		C 2–3	ISO 2 6H	HSS-E	□			68
	P – Through hole thread and blind hole thread							
ST	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	□		70+71	
ST ES	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	□		72	
ST LH/ES	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	□		72	
HR	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	■		70+71	
	M – Through hole thread							
VA		B 4–5	ISO 2 6H	HSS-E	■			61
	M – Blind hole thread							
VA	CavTap	E 1,5–2	ISO 2 6H	HSS-E	■		66	
VA		E 1,5–2	ISO 2 6H	HSS-E	■			69
	K – Through hole thread and blind hole thread							
GG	DuoTap	C 2–3	ISO 2X 6HX	HSS-E	■		71	

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Taps Overview

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
MF	**Metric ISO fine thread**							
	N – Through hole thread							
NW	TruTap	B 4–5	ISO 2 6H	HSS-E	■		59	
	N – Blind hole thread							
NW	CavTap	C 2–3	ISO 2 6H	HSS-E	■		66	
	H – Through hole thread and blind hole thread							
HT	DuoTap	D 4–5	ISO 2X 6HX	VHM	■		70	
	Machine thread formers							
EC SN	DuoForm	C 2–3	ISO 2X 6HX	HSS-E	■		73	
EC HML	DuoForm	C 2–3	ISO 2X 6HX	HSS-E	■	●	73	
UNI SN		C 2–3	ISO 2X 6HX	HSS-E	■			74
	Dies							
FE		1,5–2	ISO 6g	HSS	□		22 711...	
VA		2	ISO 6g	HSS-E	□		22 714...	
G	**Whitworth pipe thread**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	ISO 228	HSS-E	■		75	
UNI		B 4–5	ISO 228	HSS-E	■			76
	UNI – Blind hole thread							
UNI	CavTap	C 2–3	ISO 228	HSS-E	■		77	
UNI	CavTap	E 1,5–2	ISO 228, ISO 228 +0,05	HSS-E	■		77	
UNI CNC	CavTap	E 1,5–2	ISO 228	HSS-E	■		78	
UNI		C 2–3	ISO 228	HSS-E	■			79

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
G	**Whitworth pipe thread**							
	P – Through hole thread							
ST	TruTap	B 4–5	ISO 228	HSS-E	□		75	
FE		B 4–5	ISO 228	HSS-E	□			23 260...
	P – Blind hole thread							
ST	CavTap	C 2–3	ISO 228	HSS-E	□		78	
ST	CavTap SL	C 2–3	ISO 228	HSS-E	□		22 353...	
FE		C 2–3	ISO 228	HSS-E	□			23 261...
	P – Through hole thread and blind hole thread							
ST	DuoTap	C 2–3	ISO 228X	HSS-E	□		80	
HR	DuoTap	C 2–3	ISO 228X	HSS-E	■		80	
	M – Through hole thread							
VA	TruTap	B 4–5	ISO 228	HSS-E	■		75	
	M – Blind hole thread							
VA	CavTap	E 1,5–2	ISO 228	HSS-E	■		78	
	K – Through hole thread and blind hole thread							
GG	DuoTap	C 2–3	ISO 228X	HSS-E	■		22 348...	
	N – Through hole thread							
NW	TruTap	B 4–5	ISO 228	HSS-E	■		75	
	N – Blind hole thread							
NW	CavTap	C 2–3	ISO 228	HSS-E	■		78	
	Machine thread formers							
EC	DuoForm	C 2–3	ISO 228	HSS-E	■		81	
EC SN	DuoForm	C 2–3	ISO 228	HSS-E	■		81	
	Dies							
FE		1,5–2	ISO 228A	HSS	□		22 741...	

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Taps Overview

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
UNC	**Unified coarse thread**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	2B	HSS-E	■		82	
UNI		B 4–5	2B	HSS-E	■			83
	UNI – Blind hole thread							
UNI	CavTap	C 2–3	2B	HSS-E	■		84	
UNI		C 2–3	2B	HSS-E	■			85
	P – Through hole thread							
FE-HF		B 4–5	2B	HSS-E	■			83
	P – Blind hole thread							
ST	CavTap	C 2–3	2B	HSS-E	□		22 264...	
FE-HF		C 2–3	2B	HSS-E	■			85
	M – Through hole thread							
VA	TruTap	B 4–5	2B	HSS-E	■		82	
VA		B 4–5	2B	HSS-E	■			83
	M – Blind hole thread							
VA	CavTap	C 2–3	2B	HSS-E	■		84	
VA		C 2–3	2B	HSS-E	□			85
	S – Through hole thread							
Ti	TruTap	B 4–5	2BX	HSS-PM	■		82	
	S – Blind hole thread							
TI	CavTap SL	C 2–3	2BX	HSS-PM	■		22 262...	
	Machine thread formers							
EC	DuoForm	C 2–3	2BX	HSS-E	■		86	
EC SN	DuoForm	C 2–3	2BX	HSS-E	■		86	

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
UNC	**Unified coarse thread**							
	Dies							
FE		1,5–2	2A	HSS	□		22 721...	
EG UNC	**Unified coarse thread for wire inserts**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	2B mod	HSS-E	■		87	
	UNI – Blind hole thread							
UNI	CavTap	E 1,5–2	2B mod	HSS-E	■		88	
UNJC	**Unified coarse thread**							
	S – Blind hole thread							
Ti	CavTap SL	C 2–3	3BX	HSS-E	■		89	
UNF	**Unified fine thread**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	2B	HSS-E	■		90	
UNI		B 4–5	2B	HSS-E	■			91
	UNI – Blind hole thread							
UNI	CavTap	C 2–3	2B	HSS-E	■		92	
UNI	CavTap	E 1,5–2	2B +0,05	HSS-E	■		92	
UNI		C 2–3	2B	HSS-E	■			94
	M – Blind hole thread							
VA	CavTap	E 1,5–2	2B	HSS-E	■		92	
VA		C 2–3	2B	HSS-E	□			94

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Taps Overview

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
UNF	**Unified fine thread**							
	S – Blind hole thread							
Ti	CavTap SL	C 2–3	2BX 3BX	HSS-PM	■		93	
	Thread formers							
EC SN	DuoForm	C 2–3	2BX	HSS-E	■		95	
EG UNF	**Unified Fine Thread for wire inserts**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	2B	HSS-E	■		96	
	UNI – Blind hole thread							
UNI	CavTap	E 1,5–2	2B	HSS-E	■		97	
UNJF	**Unified extra-fine thread**							
	S – Through hole thread							
Ti	TruTap DL	D 4–5	3BX	HSS-E	■		22 167...	
	S – Blind hole thread							
Ti	CavTap SL	C 2–3	3BX	HSS-E	■		22 168...	
BSW	**Whitworth thread**							
	UNI – Through hole thread							
UNI	TruTap	B 4–5	med.	HSS-E	■		22 626..., 22 627...	
	UNI – Blind hole thread							
UNI	CavTap	C 2–3	med.	HSS-E	■		22 628..., 22 629...	

Application Area / Special Features	Tool type	Chamfer form	Tolerance	Tool Material	coated ■ uncoated □	Coolant	WNT \ Performance	WNT \ Standard
NPT	**American taper pipe thread**							
	P – Through hole thread and blind hole thread							
ST ES	DuoTap	C 2–3		HSS-E	□		100	
VG	DuoTap	C 2–3		HSS-E	□		99	
VG AZ	DuoTap	C 2–3		HSS-E	□		22 377..., 22 378...	
	M – Blind hole thread							
VA	CavTap	C 2–3		HSS-E	■		98	
NPTF	**American taper pipe thread**							
	P – Through hole thread and blind hole thread							
ST	DuoTap	C 2–3		HSS-E	□		22 382...	
VG	DuoTap	C 2–3		HSS-E	□		22 380...	
ST ES	DuoTap	C 2–3		HSS-E	□		22 367...	
Rp	**Cylindrical Whitworth thread**							
	P – Through hole thread and blind hole thread							
ST	DuoTap	C 2–3	X	HSS-E	□		22 381...	
Rc	**Tapered Whitworth thread**							
	P – Through hole thread and blind hole thread							
ST	DuoTap	C 2–3		HSS-E	□		22 389...	

Accessories

Shank extensions for taps	101
Tapping Oil, Chlorine Free	22 950...
Thread-cutting paste, chlorine-free	

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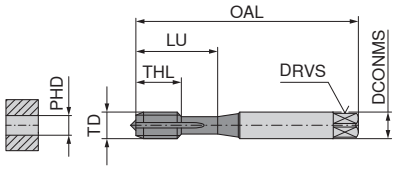
Through hole – Machine taps, right hand

TruTap | M



DIN 371 with reinforced shank

UNI	UNI	UNI	UNI	UNI
B 4–5	B 4–5	B 4–5	B 4–5	B 4–5
ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 3 6G	7G
nitr. + vap.	TiN	TiCN	nitr. + vap.	nitr. + vap.

HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 501 ... £ U0		22 503 ... £ U0		22 505 ... £ U0		22 508 ... £ U0		22 510 ... £ U0	
M1	0.25	40	2.5	2.1	0.75	5	5	2	134.24	**010** [1]								
M1,2	0.25	40	2.5	2.1	0.95	5	5	2	129.27	**012** [1]								
M1,4	0.30	40	2.5	2.1	1.10	7	7	3	115.03	**014** [1]								
M1,6	0.35	40	2.5	2.1	1.25	8	11	3	81.57	**016**								
M1,7	0.35	40	2.5	2.1	1.35	6	11	2	124.95	**017**								
M1,8	0.35	40	2.5	2.1	1.45	6	11	2	173.22	**018**								
M2	0.40	45	2.8	2.1	1.60	7	12	2			58.63	**020**					72.16	**020**
M2	0.40	45	2.8	2.1	1.60	7	12	3	60.02	**020**								
M2,2	0.45	45	2.8	2.1	1.75	7	12	2	62.16	**022**								
M2,5	0.45	50	2.8	2.1	2.05	9	14	2	58.56	**025**					57.58	**025**	69.57	**025**
M3	0.50	56	3.5	2.7	2.50	11	18	3	38.92	**030**	48.34	**030**	48.34	**030**	46.58	**030**	53.59	**030**
M3,5	0.60	56	4.0	3.0	2.90	12	20	3	47.97	**035**								
M4	0.70	63	4.5	3.4	3.30	13	21	3	34.33	**040**	46.29	**040**	46.29	**040**	49.32	**040**	53.59	**040**
M5	0.80	70	6.0	4.9	4.20	15	25	3	35.99	**050**	46.87	**050**	46.87	**050**	47.46	**050**	55.13	**050**
M6	1.00	80	6.0	4.9	5.00	17	30	3	35.99	**060**	57.21	**060**	57.21	**060**	51.24	**060**	56.45	**060**
M7	1.00	80	7.0	5.5	6.00	17	30	3	58.00	**070**								
M8	1.25	90	8.0	6.2	6.80	20	35	3	42.61	**080**	62.44	**080**	62.44	**080**	54.45	**080**	62.83	**080**
M10	1.50	100	10.0	8.0	8.50	22	39	3	51.11	**100**	93.36	**100**	88.49	**100**	66.32	**100**	76.23	**100**
M12	1.75	110	12.0	9.0	10.20	24	44	3	70.89	**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					

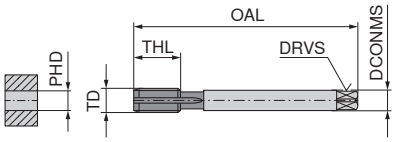
1) Tol. ISO 1 4H ≤ M1.4

Cutting speed v_c (m/min.)

DIN 376 can be found on the next page

Through hole – Machine taps, right hand

TruTap | M



DIN 376 with reduced shank

	UNI	UNI	UNI	UNI
	B 4–5	B 4–5	B 4–5	B 4–5
	ISO 2 6H	ISO 2 6H	ISO 3 6G	7G
	nitr. + vap.	TiN	nitr. + vap.	nitr. + vap.
				
	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD
	22 502 ...	22 504 ...	22 509 ...	22 511 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0		£ U0		£ U0	
M3	0.50	56	2.2		2.5	11	3	78.87	030						
M4	0.70	63	2.8	2.1	3.3	13	3	52.48	040						
M5	0.80	70	3.5	2.7	4.2	15	3	49.30	050						
M6	1.00	80	4.5	3.4	5.0	17	3	49.52	060						
M8	1.25	90	6.0	4.9	6.8	20	3	54.91	080						
M10	1.50	100	7.0	5.5	8.5	22	3	64.43	100						
M12	1.75	110	9.0	7.0	10.2	24	3	63.46	120	102.03	120	76.99	120	85.78	120
M14	2.00	110	11.0	9.0	12.0	26	3	80.25	140	178.19	140				
M16	2.00	110	12.0	9.0	14.0	27	3	89.05	160	132.81	160	112.36	160	150.91	160
M18	2.50	125	14.0	11.0	15.5	30	3	166.96	180	282.45	180				
M20	2.50	140	16.0	12.0	17.5	32	3	132.48	200	287.41	200	166.89	200		
M22	2.50	140	18.0	14.5	19.5	32	3	224.53	220	436.64	220				
M24	3.00	160	18.0	14.5	21.0	34	3	177.06	240	367.82	240				
M27	3.00	160	20.0	16.0	24.0	36	3	253.82	270						
M30	3.50	180	22.0	18.0	26.5	40	4	288.15	300						
M33	3.50	180	25.0	20.0	29.5	40	4	718.30	330						
M36	4.00	200	28.0	22.0	32.0	50	4	826.97	360						
M42	4.50	200	32.0	24.0	37.5	56	4	1,570.60	420						
M48	5.00	250	36.0	29.0	43.0	65	4	1,658.89	480						

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

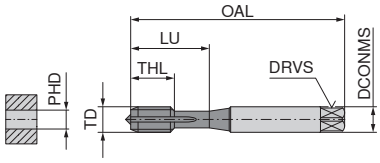
Cutting speed v_c (m/min.)

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

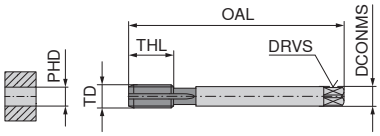
TruTap | M



DIN 371 with reinforced shank

	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 FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD
	22 148 ...	22 542 ...	22 596 ...	22 592 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0		£ U0	
M3	0.50	56	3.5	2.7	2.5	6	18	3			55.93	030				
M3	0.50	70	6.0	4.9	2.5	6	18	3	80.80	030						
M4	0.70	63	4.5	3.4	3.3	7	21	3			59.00	040	66.26	040	71.68	040
M4	0.70	70	6.0	4.9	3.3	7	21	3	85.05	040						
M5	0.80	70	6.0	4.9	4.2	8	25	3	86.36	050	61.63	050	67.35	050	74.52	050
M6	1.00	80	6.0	4.9	5.0	10	30	3	107.72	060	78.22	060	84.49	060	95.20	060
M8	1.25	90	8.0	6.2	6.8	14	35	3	118.81	080						
M8	1.25	90	8.0	6.2	6.8	14	35	4			83.61	080	92.24	080	104.40	080
M10	1.50	100	10.0	8.0	8.5	16	39	3	143.33	100						
M10	1.50	100	10.0	8.0	8.5	16	39	4			105.88	100	113.62	100	124.36	100
M12	1.75	110	10.0	8.0	10.2	18	41	3	175.98	120						
M16	2.00	110	12.0	9.0	14.0	22	44	3	247.03	160						



DIN 376 with reduced shank

								22 543 ...				22 593 ...	
								£ U0				£ U0	
M12	1.75	110	9	7	10.2	18	4	121.60	120			149.79	120
M14	2.00	110	11	9	12.0	20	4	343.64	140				
M16	2.00	110	12	9	14.0	22	4	172.85	160				
M20	2.50	140	16	12	17.5	25	4	302.00	200				

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

Cutting speed v_c (m/min.)

Through hole – Machine taps

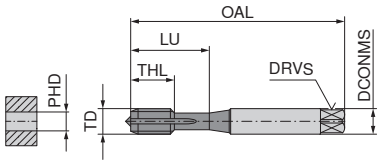
▲ LH = for left hand threads

TruTap | M

ST | ST LH

B 4–5

ISO 2 6H | ISO 2 6H

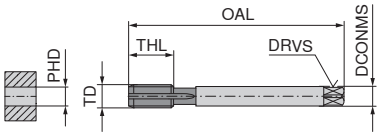


DIN 371 with reinforced shank

HSS-E FHA 0° ≤ 750 N/mm² ≤ 4xD

HSS-E FHA 0° ≤ 750 N/mm² ≤ 4xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 020 ... £ U0		22 127 ... £ U0	
M2	0.40	45	2.8	2.1	1.60	7	12	2	40.07	**020**		
M2,3	0.40	45	2.8	2.1	1.90	7	12	2	45.01	**023**		
M2,5	0.45	50	2.8	2.1	2.05	9	14	2	40.62	**025**		
M2,6	0.45	50	2.8	2.1	2.15	9	14	2	45.01	**026**		
M3	0.50	56	3.5	2.7	2.50	11	18	3	33.21	**030**	59.61	**030**
M3,5	0.60	56	4.0	3.0	2.90	12	20	3	35.79	**035**		
M4	0.70	63	4.5	3.4	3.30	13	21	3	33.95	**040**	61.37	**040**
M5	0.80	70	6.0	4.9	4.20	15	25	3	35.79	**050**	63.71	**050**
M6	1.00	80	6.0	4.9	5.00	17	30	3	35.79	**060**	63.71	**060**
M8	1.25	90	8.0	6.2	6.80	20	35	3	42.40	**080**	72.16	**080**
M10	1.50	100	10.0	8.0	8.50	22	39	3	49.79	**100**	92.24	**100**



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 021 ... £ U0		22 147 ... £ U0	
M5	0.80	70	3.5	2.7	4.2	15	3	42.40	**050**		
M6	1.00	80	4.5	3.4	5.0	17	3	43.00	**060**		
M8	1.25	90	6.0	4.9	6.8	20	3	45.75	**080**		
M10	1.50	100	7.0	5.5	8.5	22	3	51.86	**100**		
M12	1.75	110	9.0	7.0	10.2	24	3	63.27	**120**	109.50	**120**
M14	2.00	110	11.0	9.0	12.0	26	3	79.91	**140**		
M16	2.00	110	12.0	9.0	14.0	27	3	88.49	**160**	165.61	**160**
M18	2.50	125	14.0	11.0	15.5	30	3	129.12	**180**		
M20	2.50	140	16.0	12.0	17.5	32	3	134.13	**200**	244.81	**200**

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

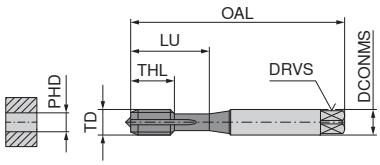
Cutting speed v_c (m/min.)

6

Through hole – Machine taps, right hand

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

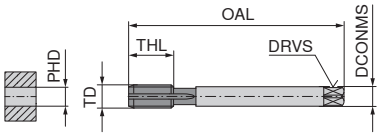
TruTap | M



DIN 371 with reinforced shank

	ST TS	HR	VG
	B 4–5	B 4–5	B 4–5
	ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
	TiN	AlTiNHD	TiN
			
	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-PM FHA 0° ≤ 1400 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD
	22 092 ...	**22 468 ...**	**22 120 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0	
M2	0.40	45	2.8	2.1	1.60	7	12	2			88.19	02000		
M2	0.40	45	2.8	2.1	1.60	4	12	2	78.20	020			69.57	020
M2,5	0.45	50	2.8	2.1	2.05	9	14	2			88.19	02500		
M2,5	0.45	50	2.8	2.1	2.05	5	15	2	78.20	025			69.57	025
M3	0.50	56	3.5	2.7	2.50	11	18	2			57.35	03000		
M3	0.50	56	3.5	2.7	2.50	6	18	3	61.37	030			51.86	030
M4	0.70	63	4.5	3.4	3.30	13	21	2			59.84	04000		
M4	0.70	63	4.5	3.4	3.30	7	21	3	71.50	040			56.10	040
M5	0.80	70	6.0	4.9	4.20	15	25	2			61.75	05000		
M5	0.80	70	6.0	4.9	4.20	8	25	3	75.11	050			58.50	050
M6	1.00	80	6.0	4.9	5.00	17	30	3			69.98	06000		
M6	1.00	80	6.0	4.9	5.00	10	30	3	97.23	060			71.59	060
M8	1.25	90	8.0	6.2	6.80	20	35	3			76.88	08000		
M8	1.25	90	8.0	6.2	6.80	14	35	4	102.95	080			75.62	080
M10	1.50	100	10.0	8.0	8.50	22	39	3			108.28	10000		
M10	1.50	100	10.0	8.0	8.50	16	39	4	139.46	100			108.11	100



DIN 376 with reduced shank

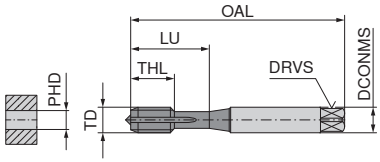
								22 093 ...		**22 121 ...**	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**	**£ U0**		**£ U0**	
M12	1.75	110	9	7	10.2	18	4	151.63	120	128.60	120
M16	2.00	110	12	9	14.0	22	4	224.53	160	175.98	160
M20	2.50	140	16	12	17.5	25	4	323.00	200	299.23	200

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

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

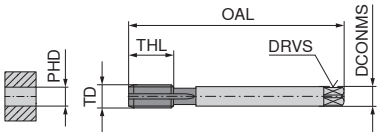
TruTap | M



DIN 371 with reinforced shank

VA	VA	NW
B 4–5	B 4–5	B 4–5
ISO 2 6H	ISO 2 6H	ISO 2 6H
nitr.	TiN GS	DLC
		
HSS-E FHA 0° ≤ 900 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 900 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 880 N/mm² ≤ 4xD
22 056 ...	**22 038 ...**	**22 464 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0	
M1,6	0.35	40	2.5	2.1	1.25	6	11	2			88.17	016		
M2	0.40	45	2.8	2.1	1.60	7	12	2	46.29	020	72.52	020	51.14	02000
M2,5	0.45	50	2.8	2.1	2.05	9	14	2	44.51	025	69.13	025	51.14	02500
M3	0.50	56	3.5	2.7	2.50	11	18	3	36.59	030	57.03	030	39.21	03000
M3,5	0.60	56	4.0	3.0	2.90	12	20	3	51.31	035				
M4	0.70	63	4.5	3.4	3.30	13	21	3	38.38	040	61.63	040	39.80	04000
M5	0.80	70	6.0	4.9	4.20	15	25	3	40.62	050	62.92	050	40.38	05000
M6	1.00	80	6.0	4.9	5.00	17	30	3	42.40	060	79.32	060	40.38	06000
M8	1.25	90	8.0	6.2	6.80	20	35	3	46.16	080	86.36	080		
M8	1.25	100	8.0	6.2	6.80	20	35	3					47.20	08000
M10	1.50	100	10.0	8.0	8.50	22	39	3	56.46	100	106.98	100		
M10	1.50	110	10.0	8.0	8.50	22	39	3					59.47	10000



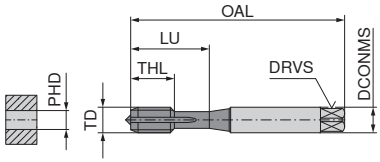
DIN 376 with reduced shank

									22 057 ...		**22 039 ...**		**22 465 ...**	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**		£ U0		£ U0		£ U0	
M12	1.75	110	9	7	10.2	24	3		71.50	120	126.56	120	77.64	12000
M14	2.00	110	11	9	12.0	26	3		98.86	140	183.17	140		
M16	2.00	110	12	9	14.0	27	3		101.15	160	179.51	160	92.43	16000
M18	2.50	125	14	11	15.5	30	3		247.71	180				
M20	2.50	140	16	12	17.5	32	3		147.48	200	306.98	200	147.49	20000
P										**8**		**10**		
M										**6**		**8**		
K														
N														**15**
S														
H														
O														

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

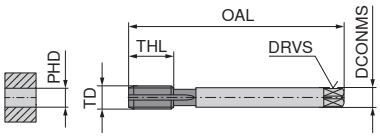
TruTap | M



DIN 371 with reinforced shank

	Ti	Ti	Ti
	B 4–5	B 4–5	B 4–5
	ISO 1X 4HX	ISO 2X 6HX	ISO 2X 6HX
	TiN	vap.	TiN
			
	HSS-PM FHA 0° ≤ 44 HRC ≤ 4xD	HSS-PM FHA 0° ≤ 1400 N/mm² ≤ 4xD	HSS-PM FHA 0° ≤ 44 HRC ≤ 4xD
	22 081 ...	**22 075 ...**	**22 077 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0	
M1,6	0.35	40	2.5	2.1	1.25	8	9.5	3			120.02	016		
M2	0.40	45	2.8	2.1	1.60	8	9.5	3	178.68	020	153.32	020		
M2,5	0.45	50	2.8	2.1	2.05	9	14.0	3			146.01	025		
M3	0.50	56	3.5	2.7	2.50	11	18.0	3	108.22	030	101.91	030	108.22	030
M3,5	0.60	56	4.0	3.0	2.90	12	20.0	3			75.55	035		
M4	0.70	63	4.5	3.4	3.30	13	21.0	3	110.33	040	109.96	040	110.33	040
M5	0.80	70	6.0	4.9	4.20	15	25.0	3	113.16	050	108.22	050	113.16	050
M6	1.00	80	6.0	4.9	5.00	17	30.0	3	113.16	060	108.22	060	113.16	060
M8	1.25	90	8.0	6.2	6.80	20	35.0	3	130.37	080	125.79	080	130.37	080
M10	1.50	100	10.0	8.0	8.50	22	39.0	3			151.62	100	152.85	100



DIN 376 with reduced shank

									22 140 ...		**22 142 ...**	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**		£ U0		£ U0	
M12	1.75	110	9	7	10.2	24	3		184.30	120	182.19	120
P									**7**		**5**	**7**
M									**7**		**5**	**7**
K												
N												
S									**5**		**3**	**5**
H												
O												

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

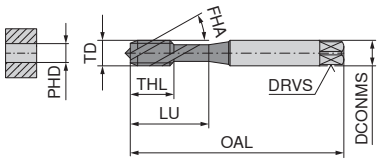
TruTap DL | M

Ti | Ni

D 4–5 | D 4–5

ISO 2X 6HX | ISO 2X 6HX

TiCN | TiCN

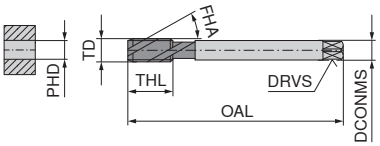


DIN 371 with reinforced shank

HSS-E FHA 15° ≤ 1200 N/mm² ≤ 4xD

HSS-E FHA 15° ≤ 1600 N/mm² ≤ 4xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 159 ... £ U0		22 297 ... £ U0	
M3	0.50	56	3.5	2.7	2.5	11	18	2	64.02	**030**	82.43	**030**
M4	0.70	63	4.5	3.4	3.3	13	21	3	69.57	**040**	85.83	**040**
M5	0.80	70	6.0	4.9	4.2	15	25	3	70.30	**050**	88.04	**050**
M6	1.00	80	6.0	4.9	5.0	17	30	3	92.11	**060**	111.39	**060**
M8	1.25	90	8.0	6.2	6.8	20	35	3	101.15	**080**	123.61	**080**
M10	1.50	100	10.0	8.0	8.5	22	39	3	126.73	**100**	154.77	**100**



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 160 ... £ U0		22 298 ... £ U0	
M12	1.75	110	9	7.0	10.2	24	3	146.30	**120**	178.24	**120**
M16	2.00	110	12	9.0	14.0	27	3	206.04	**160**	249.90	**160**
M20	2.50	140	16	12.0	17.5	32	3	356.04	**200**	426.13	**200**
M24	3.00	160	18	14.5	21.0	34	3	419.85	**240**		

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

Cutting speed v_c (m/min.)

6

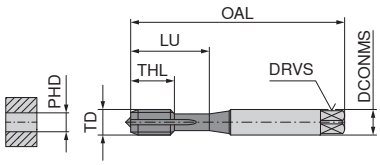
Through hole – Machine taps, right hand

▲ EL = extra long, with double overall length

TruTap | M

UNI EL | B 4–5 | ISO 2 6H | nitr. + vap.

ST EL | B 4–5 | ISO 2 6H

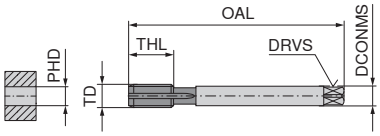


DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 4xD

HSS-E
FHA 0°
≤ 950 N/mm²
≤ 4xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 514 ... £ U0		22 233 ... £ U0	
M3	0.50	100	3.5	2.7	2.5	11	18	3	85.97	**030**	89.68	**030**
M4	0.70	125	4.5	3.4	3.3	13	21	3	85.97	**040**	85.83	**040**
M5	0.80	140	6.0	4.9	4.2	15	25	3	96.28	**050**	93.66	**050**
M6	1.00	160	6.0	4.9	5.0	17	30	3	104.78	**060**	98.02	**060**
M8	1.25	180	8.0	6.2	6.8	20	35	3	112.55	**080**	117.01	**080**



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 515 ... £ U0		22 234 ... £ U0	
M6	1.00	160	4.5	3.4	5.0	17	3	101.63	**060**	98.02	**060**
M8	1.25	180	6.0	4.9	6.8	20	3	124.91	**080**	117.01	**080**
M10	1.50	200	7.0	5.5	8.5	22	3	134.27	**100**	130.19	**100**
M12	1.75	224	9.0	7.0	10.2	24	3	147.48	**120**	156.98	**120**
M14	2.00	224	11.0	9.0	12.0	26	3	258.81	**140**	253.77	**140**
M16	2.00	224	12.0	9.0	14.0	27	3	290.94	**160**	244.10	**160**
M18	2.50	250	14.0	11.0	15.5	30	3	391.82	**180**	366.14	**180**
M20	2.50	280	16.0	12.0	17.5	32	3	346.64	**200**	329.33	**200**

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

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

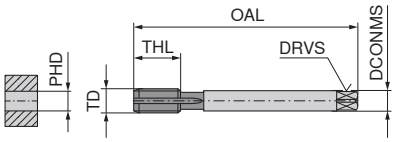
▲ MMB = Nut taps

M

ST
MMB

≈ 20

ISO 2
6H



DIN 357 with reduced shank

HSS-E
FHA 0°
≤ 850 N/mm²
≤ 1xD

22 098 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M3	0.50	70	2.2		2.5	16	3	64.02	**030**
M4	0.70	90	2.8	2.1	3.3	22	3	64.02	**040**
M5	0.80	100	3.5	2.7	4.2	24	3	66.99	**050**
M6	1.00	110	4.5	3.4	5.0	30	3	66.99	**060**
M8	1.25	125	6.0	4.9	6.8	38	3	82.68	**080**
M10	1.50	140	7.0	5.5	8.5	45	3	93.90	**100**
M12	1.75	180	9.0	7.0	10.2	50	3	126.19	**120**
M16	2.00	200	12.0	9.0	14.0	63	3	180.98	**160**

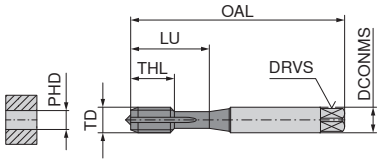
P	**15**
M	
K	
N	
S	
H	
O	

Cutting speed v_c (m/min.)

6

Through hole – Machine taps, right hand

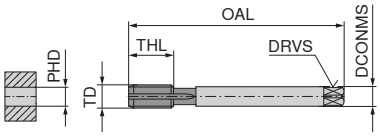
M



DIN 371 with reinforced shank

	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 FHA 0° ≤ 1000 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 1000 N/mm² ≤ 3xD	HSS-PM FHA 0° ≤ 1000 N/mm² ≤ 3xD
	23 110 ...	**23 112 ...**	**23 010 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9		£ T9	
M2	0.40	45	2.8	2.1	1.60	4	13.5	2					11.66	**020**
M2	0.40	45	2.8	2.1	1.60	7	12.0	2	34.69	**020**	40.62	**020**		
M2,5	0.45	50	2.8	2.1	2.05	9	14.0	2	33.48	**025**	39.31	**025**		
M3	0.50	56	3.5	2.7	2.50	11	18.0	3	26.42	**030**	32.94	**030**	14.65	**030**
M4	0.70	63	4.5	3.4	3.30	13	21.0	3	26.99	**040**	37.47	**040**	13.36	**040**
M5	0.80	70	6.0	4.9	4.20	15	25.0	3	27.52	**050**	37.82	**050**	14.94	**050**
M6	1.00	80	6.0	4.9	5.00	17	30.0	3	27.70	**060**	47.80	**060**	17.91	**060**
M8	1.25	90	8.0	6.2	6.80	20	35.0	3	31.69	**080**	51.31	**080**	19.88	**080**
M10	1.50	100	10.0	8.0	8.50	22	39.0	3	38.38	**100**	70.12	**100**	26.30	**100**



DIN 376 with reduced shank

									23 111 ...		**23 113 ...**		**23 021 ...**	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**		**£ T9**		**£ T9**		**£ T9**	
M3	0.50	56	2.2		2.5	11	3		10.39	**030**				
M4	0.70	63	2.8	2.1	3.3	13	3		10.21	**040**				
M5	0.80	70	3.5	2.7	4.2	15	3		10.21	**050**				
M6	1.00	80	4.5	3.4	5.0	17	3		10.65	**060**				
M8	1.25	90	6.0	4.9	6.8	20	3		12.51	**080**				
M10	1.50	100	7.0	5.5	8.5	22	3		14.50	**100**				
M12	1.75	110	9.0	7.0	10.2	24	3		17.35	**120**	77.49	**120**	31.41	**120**
M14	2.00	110	11.0	9.0	12.0	20	4						47.61	**140**
M14	2.00	110	11.0	9.0	12.0	26	3		25.16	**140**	50.30	**14000**		
M16	2.00	110	12.0	9.0	14.0	27	3		25.70	**160**	101.50	**160**	44.21	**160**
M18	2.50	125	14.0	11.0	15.5	25	4						77.44	**180**
M18	2.50	125	14.0	11.0	15.5	30	3				79.81	**18000**		
M20	2.50	140	16.0	12.0	17.5	32	3		40.92	**200**	180.25	**200**	80.01	**200**
M22	2.50	140	18.0	14.5	19.5	32	3				118.20	**22000**		
M24	3.00	160	18.0	14.5	21.0	34	3				191.49	**240**		
M27	3.00	160	20.0	16.0	24.0	36	3				147.80	**27000**		
M30	3.50	180	22.0	18.0	26.5	40	4				165.78	**30000**		
M33	3.50	180	25.0	20.0	29.5	40	4				217.45	**33000**		
M36	4.00	200	28.0	22.0	32.0	50	4				266.34	**36000**		

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

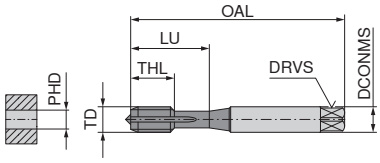
Cutting speed v_c (m/min.)

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

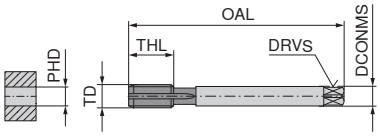
M



DIN 371 with reinforced shank

	UNI NC	UNI NCW	FE	FE-HF
	B 4–5	B 4–5	B 4–5	B 4–5
	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
	TiN GS	TiCN		TiCN
				
	HSS-E FHA 0° ≤ 1000 N/mm² ≤ 3xD	HSS-PM FHA 0° ≤ 1000 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 850 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 3xD
	23 114 ...	23 116 ...	23 212 ...	23 310 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9		£ T9		£ T9	
M1,6	0.35	40	2.5	2.1	1.25	6	11	2					35.25	**016**		
M2	0.40	45	2.8	2.1	1.60	7	12	2					23.35	**020**		
M2,5	0.45	50	2.8	2.1	2.05	9	14	2					20.30	**025**		
M3	0.50	56	3.5	2.7	2.50	11	18	3	35.25	**030**			16.09	**030**	33.21	**030**
M3	0.50	70	6.0	4.9	2.50	6	18	3			42.08	**030**				
M3,5	0.60	56	4.0	3.0	2.90	12	20	3					17.91	**035**		
M4	0.70	63	4.5	3.4	3.30	13	21	3	37.28	**040**			16.09	**040**	34.77	**040**
M4	0.70	70	6.0	4.9	3.30	7	21	3			48.18	**040**				
M5	0.80	70	6.0	4.9	4.20	8	25	3			47.97	**050**				
M5	0.80	70	6.0	4.9	4.20	15	25	3	38.38	**050**			16.14	**050**	35.79	**050**
M6	1.00	80	6.0	4.9	5.00	10	30	3			47.97	**060**				
M6	1.00	80	6.0	4.9	5.00	17	30	3	55.21	**060**			16.14	**060**	47.97	**060**
M8	1.25	90	8.0	6.2	6.80	14	35	3			60.63	**080**				
M8	1.25	90	8.0	6.2	6.80	20	35	3	59.61	**080**			21.00	**080**	51.77	**080**
M10	1.50	100	10.0	8.0	8.50	16	39	3			73.31	**100**				
M10	1.50	100	10.0	8.0	8.50	22	39	3	74.89	**100**			25.17	**100**	64.98	**100**



DIN 376 with reduced shank

		23 115 ...		23 117 ...		23 213 ...		23 311 ...	
		£ T9		£ T9		£ T9		£ T9	
M12	1.75	86.36	**120**			33.95	**120**	76.76	**120**
M12	1.75			92.99	**120**				
M14	2.00					41.15	**140**		
M16	2.00			183.41	**160**				
M16	2.00	114.91	**160**			51.67	**160**	106.45	**160**
M20	2.50	213.07	**200**			80.64	**200**	187.99	**200**

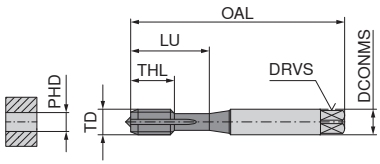
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes

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

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

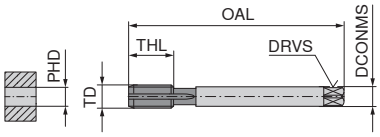
M



DIN 371 with reinforced shank

	VA	VA	VA	AL	AL
	B 4–5	B 4–5	B 4–5	B 4–5	B 4–5
	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
	TiN	nitr.	nitr.		CrN
					
	HSS-E FHA 0° ≤ 1200 N/mm² ≤ 3xD	HSS-PM FHA 0° ≤ 1200 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 1200 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 500 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 500 N/mm² ≤ 3xD
	23 412 ...	23 450 ...	23 410 ...	23 610 ...	23 612 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9		£ T9		£ T9		£ T9	
M2	0.40	45	2.8	2.1	1.60	7	12	2	41.57	**020**			26.20	**020**				
M2,5	0.45	50	2.8	2.1	2.05	9	14	2	35.18	**025**			33.48	**025**				
M3	0.50	56	3.5	2.7	2.50	11	18	3	32.94	**030**	13.65	**030**	17.57	**030**	16.09	**030**	30.27	**030**
M4	0.70	63	4.5	3.4	3.30	13	21	3	37.47	**040**	13.78	**040**	17.57	**040**	16.09	**040**	31.37	**040**
M5	0.80	70	6.0	4.9	4.20	15	25	3	37.82	**050**	14.94	**050**	18.28	**050**	16.14	**050**	32.09	**050**
M6	1.00	80	6.0	4.9	5.00	17	30	3	49.26	**060**	15.05	**060**	18.28	**060**	16.14	**060**	32.09	**060**
M8	1.25	90	8.0	6.2	6.80	20	35	3	52.84	**080**	16.92	**080**	23.26	**080**	21.00	**080**	36.04	**080**
M10	1.50	100	10.0	8.0	8.50	22	39	3	72.23	**100**	19.19	**100**	28.04	**100**	25.17	**100**	45.01	**100**



DIN 376 with reduced shank

	23 413 ...	23 451 ...	23 411 ...
	£ T9	£ T9	£ T9

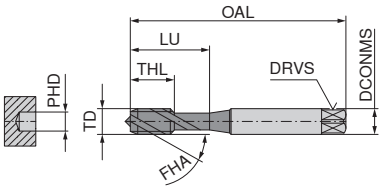
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9		£ T9		£ T9	
M12	1.75	110	9	7.0	10.2	24	3	81.36	**120**	34.26	**120**	37.47	**120**
M14	2.00	110	11	9.0	12.0	26	3			45.34	**140**		
M16	2.00	110	12	9.0	14.0	27	3	101.50	**160**	47.91	**160**	57.21	**160**
M20	2.50	140	16	12.0	17.5	32	3	176.72	**200**	71.62	**200**	87.06	**200**
M24	3.00	160	18	14.5	21.0	34	3					115.14	**240**

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

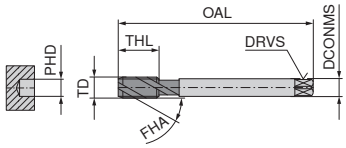
CavTap | M



DIN 371 with reinforced shank

	UNI	UNI	UNI	UNI
	C 2–3	C 2–3	C 2–3	C 2–3
	ISO 2 6H	ISO 2 6H	7G	ISO 2 6H
	vap.	TiN	vap.	TiCN
				
	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD
	22 518 ...	**22 520 ...**	**22 532 ...**	**22 522 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0		£ U0	
M2	0.40	45	2.8	2.1	1.60	4.0	12	2	46.83	**020**	68.47	**020**				
M2,2	0.45	45	2.8	2.1	1.75	4.5	12	2	52.76	**022**						
M2,3	0.40	45	2.8	2.1	1.90	4.5	12	2	57.21	**023**						
M2,5	0.45	50	2.8	2.1	2.05	5.0	15	2	43.92	**025**						
M2,6	0.45	50	2.8	2.1	2.15	5.0	15	2	54.26	**026**						
M3	0.50	56	3.5	2.7	2.50	6.0	18	3	40.07	**030**	48.89	**030**	45.60	**030**	48.53	**030**
M3,5	0.60	56	4.0	3.0	2.90	7.0	20	3	43.00	**035**						
M4	0.70	63	4.5	3.4	3.30	7.0	21	3	40.79	**040**	52.23	**040**	47.97	**040**	52.23	**040**
M5	0.80	70	6.0	4.9	4.20	8.0	25	3	40.72	**050**	53.51	**050**	49.97	**050**	53.12	**050**
M6	1.00	80	6.0	4.9	5.00	10.0	30	3	42.40	**060**	62.92	**060**	68.47	**060**	62.92	**060**
M7	1.00	80	7.0	5.5	6.00	10.0	30	3	64.75	**070**						
M8	1.25	90	8.0	6.2	6.80	14.0	35	3	48.17	**080**	69.57	**080**	78.20	**080**	69.13	**080**
M10	1.50	100	10.0	8.0	8.50	16.0	39	3	59.03	**100**	83.23	**100**	118.06	**100**	83.23	**100**
M12	1.75	110	12.0	9.0	10.20	18.0	44	3	67.53	**120**	103.55	**120**			103.55	**120**



DIN 376 with reduced shank

									22 519 ...		**22 521 ...**		**22 533 ...**	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**		**£ U0**		**£ U0**		**£ U0**	
M3	0.50	56	2.2		2.5	6	3		66.49	**030**				
M4	0.70	63	2.8	2.1	3.3	7	3		63.46	**040**				
M5	0.80	70	3.5	2.7	4.2	8	3		47.97	**050**				
M6	1.00	80	4.5	3.4	5.0	10	3		49.82	**060**				
M8	1.25	90	6.0	4.9	6.8	14	3		55.21	**080**				
M10	1.50	100	7.0	5.5	8.5	16	3		70.30	**100**				
M12	1.75	110	9.0	7.0	10.2	18	3		73.99	**120**	96.83	**120**	87.79	**120**
M14	2.00	110	11.0	9.0	12.0	20	3		94.82	**140**	188.92	**140**		
M16	2.00	110	12.0	9.0	14.0	22	3		104.40	**160**	143.33	**160**	159.21	**160**
M18	2.50	125	14.0	11.0	15.5	25	3		150.91	**180**	296.84	**180**		
M20	2.50	140	16.0	12.0	17.5	25	3		156.44	**200**	243.51	**200**	244.81	**200**
M22	2.50	140	18.0	14.5	19.5	27	4		224.53	**220**	436.64	**220**		
M24	3.00	160	18.0	14.5	21.0	30	4		197.90	**240**	380.02	**240**		
M27	3.00	160	20.0	16.0	24.0	30	4		259.92	**270**				
M30	3.50	180	22.0	18.0	26.5	35	4		333.72	**300**				
M33	3.50	180	25.0	20.0	29.5	35	4		655.78	**330**				
M36	4.00	200	28.0	22.0	32.0	40	4		542.71	**360**				

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

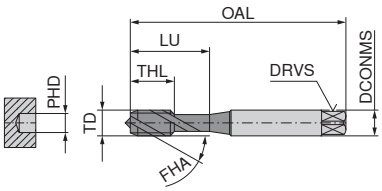
Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

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

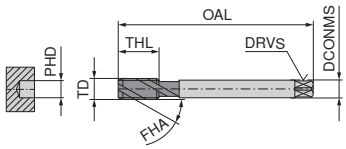
CavTap | M



DIN 371 with reinforced shank

	UNI NCW	UNI	UNI	UNI
	C 2–3	E 1,5–2	E 1,5–2	E 1,5–2
	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
	TiN	vap.	vap.	TiN
				
	HSS-PM FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD
	22 149 ...	22 524 ...	22 534 ...	22 526 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0		£ U0	
M3	0.50	56	3.5	2.7	2.5	6	18	3			40.97	030			47.97	030
M3	0.50	70	6.0	4.9	2.5	6	18	3	83.23	030						
M4	0.70	63	4.5	3.4	3.3	7	21	3			41.88	040			52.23	040
M4	0.70	70	6.0	4.9	3.3	7	21	3	90.42	040						
M5	0.80	70	6.0	4.9	4.2	8	25	3	92.11	050	43.00	050	66.43	050	53.51	050
M6	1.00	80	6.0	4.9	5.0	10	30	3	114.21	060	43.56	060	63.67	060	62.92	060
M8	1.25	90	8.0	6.2	6.8	14	35	3	129.68	080	49.79	080	74.89	080	69.57	080
M10	1.50	100	10.0	8.0	8.5	16	39	3	158.11	100	60.70	100	87.79	100	83.23	100



DIN 376 with reduced shank

								22 149 ...		22 525 ...		22 535 ...		22 527 ...	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**	£ U0		£ U0		£ U0		£ U0	
M12	1.75	110	9	7.0	10.2	18	4			75.85	120	97.97	120	98.71	120
M12	1.75	110	10	8.0	10.2	18	3	187.62	120						
M14	2.00	110	11	9.0	12.0	20	4			143.33	140	145.68	140		
M16	2.00	110	12	9.0	14.0	22	3	256.43	160						
M16	2.00	110	12	9.0	14.0	22	4			107.72	160	146.48	160	143.33	160
M18	2.50	125	14	11.0	15.5	25	4			228.01	180				
M20	2.50	140	16	12.0	17.5	25	4			160.84	200	216.56	200	243.51	200
M22	2.50	140	18	14.5	19.5	27	5			313.19	220				
M24	3.00	160	18	14.5	21.0	30	5			273.23	240				

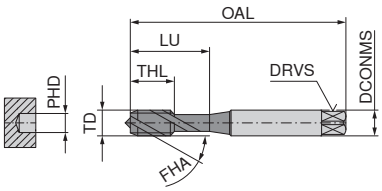
P	15	12	12	15
M	8	7	7	9
K	15	12	12	18
N	22			12
S				
H				
O				

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

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

CavTap | M

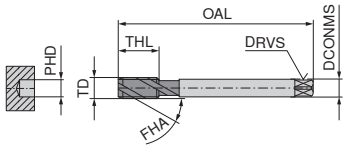


DIN 371 with reinforced shank

	UNI CNC	UNI CNC	UNI CNC	UNI CNC
	C 2–3	C 2–3	E 1,5–2	C 2–3
	ISO 2X 6HX	ISO 2 6H	ISO 2 6H	7G
	TiN	TiN GS	TiN GS	TiN GS

HSS-E FHA 50° ≤ 1100 N/mm² ≤ 3xD | HSS-E FHA 45° ≤ 1100 N/mm² ≤ 3xD | HSS-E FHA 45° ≤ 1100 N/mm² ≤ 3xD | HSS-E FHA 45° ≤ 1100 N/mm² ≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 416 ... £ U0		22 544 ... £ U0		22 546 ... £ U0		22 594 ... £ U0	
M3	0.50	56	3.5	2.7	2.5	6	18	3	74.06	030	65.10	030			78.06	030
M4	0.70	63	4.5	3.4	3.3	7	21	3	77.49	040	66.43	040			79.32	040
M5	0.80	70	6.0	4.9	4.2	8	25	3	79.68	050	68.07	050	96.83	050	82.27	050
M6	1.00	80	6.0	4.9	5.0	10	30	3	96.28	060	71.39	060	98.08	060	88.54	060
M8	1.25	90	8.0	6.2	6.8	14	35	3	106.98	080	90.01	080	126.56	080	108.11	080
M10	1.50	100	10.0	8.0	8.5	16	39	3	132.55	100	102.75	100	146.30	100	121.37	100



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 417 ... £ U0		22 545 ... £ U0			22 595 ... £ U0	
M12	1.75	110	9	7	10.2	18	3	156.03	120					
M12	1.75	110	9	7	10.2	18	4			138.01	120		164.02	120
M14	2.00	110	11	9	12.0	20	3	222.77	140					
M14	2.00	110	11	9	12.0	20	4			166.19	140		193.53	140
M16	2.00	110	12	9	14.0	22	3	433.95	160					
M16	2.00	110	12	9	14.0	22	4			184.10	160		213.82	160
M20	2.50	140	16	12	17.5	25	3	371.93	200					
M20	2.50	140	16	12	17.5	25	4			264.52	200		306.43	200

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

Cutting speed v_c (m/min.)

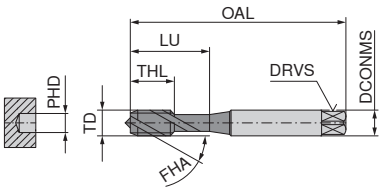
6

Blind hole – Machine taps, right hand

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

CavTap | M

UNI DRY | C 2–3 | ISO 2 6H | TiN

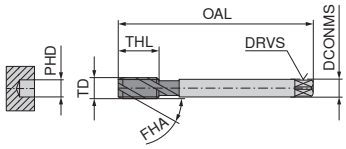


DIN 371 with reinforced shank

HSS-E
FHA 42°
≤ 1100 N/mm²
≤ 3xD

22 449 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
M5	0.80	70	6	4.9	4.2	8	25	3	101.39	**050**
M6	1.00	80	6	4.9	5.0	10	30	3	118.00	**060**
M8	1.25	90	8	6.2	6.8	14	35	3	130.19	**080**
M10	1.50	100	10	8.0	8.5	16	39	3	158.12	**100**



DIN 376 with reduced shank

22 450 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M12	1.75	110	9	7	10.2	18	4	171.46	**120**
M16	2.00	110	12	9	14.0	22	4	244.10	**160**
M20	2.50	140	16	12	17.5	25	4	399.08	**200**

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

Cutting speed v_c (m/min.)

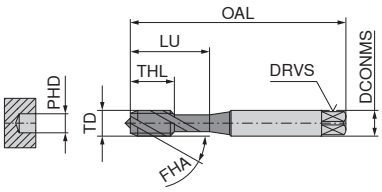
Blind hole – Machine taps, right hand

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

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

CavTap SL | M

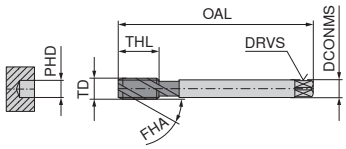
ST TS	ST CNC	HR	ST CNC
C 2–3	C 2–3	C 2–3	C 2–3
ISO 2X 6HX	ISO 2X 6HX	ISO 2 6H	ISO 2X 6HX
TiN	TiN	AlTiNHD	TiN



DIN 371 with reinforced shank

HSS-E FHA 15° ≤ 1050 N/mm² ≤ 2xD | HSS-E FHA 15° ≤ 1100 N/mm² ≤ 2xD | HSS-PM FHA 25° ≤ 1400 N/mm² ≤ 2xD | HSS-E FHA 15° ≤ 1100 N/mm² ≤ 2xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 406 ... £ U0		22 328 ... £ U0		22 469 ... £ U0		22 443 ... £ U0	
M3	0.50	56	3.5	2.7	2.5	6	18	2	69.58	030	63.61	030				
M3	0.50	56	3.5	2.7	2.5	11	18	3					45.55	03000		
M4	0.70	63	4.5	3.4	3.3	7	21	3	74.06	040	66.32	040				
M4	0.70	63	4.5	3.4	3.3	13	21	3					53.92	04000		
M5	0.80	70	6.0	4.9	4.2	8	25	3	76.35	050	68.98	050			101.39	050
M5	0.80	70	6.0	4.9	4.2	15	25	3					55.14	05000		
M6	1.00	80	6.0	4.9	5.0	10	30	3	93.04	060	85.31	060			118.00	060
M6	1.00	80	6.0	4.9	5.0	17	30	3					57.09	06000		
M8	1.25	90	8.0	6.2	6.8	14	35	3	103.65	080	96.28	080			129.21	080
M8	1.25	90	8.0	6.2	6.8	20	35	3					62.30	08000		
M10	1.50	100	10.0	8.0	8.5	16	39	3	126.94	100	118.00	100			156.98	100
M10	1.50	100	10.0	8.0	8.5	22	39	3					76.35	10000		
M12	1.75	110	12.0	9.0	10.2	24	44	3					91.14	12000		



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 407 ... £ U0		22 329 ... £ U0			22 444 ... £ U0	
M12	1.75	110	9	7	10.2	18	3	151.52	120	138.17	120		174.72	120
M16	2.00	110	12	9	14.0	22	3	213.11	160	199.59	160		247.98	160
M20	2.50	140	16	12	17.5	25	3	348.65	200	329.33	200			

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps

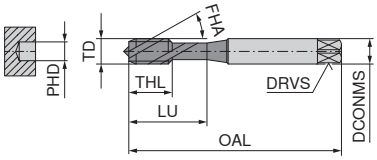
▲ LH = for left hand threads

CavTap | M

ST | C 2–3 | ISO 2 6H

ST | C 2–3 | ISO 2 6H | TiN

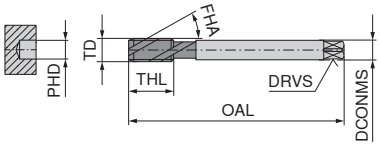
ST LH | C 2–3 | ISO 2 6H



DIN 371 with reinforced shank

HSS-E
FHA 42°
≤ 750 N/mm²
≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 082 ... £ U0		22 084 ... £ U0		22 138 ... £ U0	
M2	0.40	45	2.8	2.1	1.60	4.0	12	2	44.85	**020**	64.98	**020**		
M2,3	0.40	45	2.8	2.1	1.90	4.5	12	2	49.28	**023**				
M2,5	0.45	50	2.8	2.1	2.05	5.0	15	2	42.56	**025**				
M3	0.50	56	3.5	2.7	2.50	6.0	18	3	37.65	**030**	45.75	**030**	74.52	**030**
M3,5	0.60	56	4.0	3.0	2.90	7.0	20	3	41.46	**035**				
M4	0.70	63	4.5	3.4	3.30	7.0	21	3	37.65	**040**	48.71	**040**	66.06	**040**
M5	0.80	70	6.0	4.9	4.20	8.0	25	3	38.38	**050**	49.28	**050**	72.16	**050**
M6	1.00	80	6.0	4.9	5.00	10.0	30	3	40.07	**060**	60.51	**060**	69.57	**060**
M8	1.25	90	8.0	6.2	6.80	14.0	35	3	47.59	**080**	66.06	**080**	84.49	**080**
M10	1.50	100	10.0	8.0	8.50	16.0	39	3	54.67	**100**	90.87	**100**	97.23	**100**



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 083 ... £ U0		22 085 ... £ U0		22 139 ... £ U0	
M3	0.50	56	2.2		2.5	6	3	49.26	**030**				
M4	0.70	63	2.8	2.1	3.3	7	3	49.79	**040**				
M5	0.80	70	3.5	2.7	4.2	8	3	51.29	**050**				
M6	1.00	80	4.5	3.4	5.0	10	3	60.88	**060**				
M8	1.25	90	6.0	4.9	6.8	14	3	56.66	**080**				
M10	1.50	100	7.0	5.5	8.5	16	3			114.38	**100**		
M12	1.75	110	9.0	7.0	10.2	18	3	72.16	**120**	108.46	**120**	134.27	**120**
M14	2.00	110	11.0	9.0	12.0	20	3	89.05	**140**				
M16	2.00	110	12.0	9.0	14.0	22	3	99.06	**160**	139.46	**160**	195.92	**160**
M18	2.50	125	14.0	11.0	15.5	25	3	145.55	**180**				
M20	2.50	140	16.0	12.0	17.5	25	3	149.42	**200**	235.38	**200**	287.41	**200**

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

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

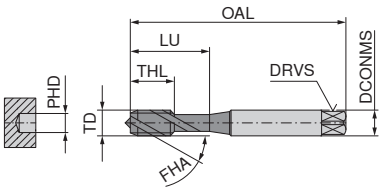
CavTap | M

HR | HR | ST TS | ST TS

C 2–3 | C 2–3 | C 2–3 | C 2–3

ISO 2 6H | ISO 2 6H | ISO 2 6H | ISO 2 6H

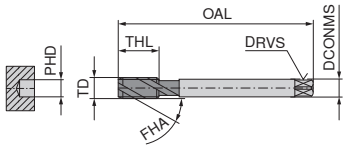
OSM | TiN | TiN



DIN 371 with reinforced shank

HSS-PM FHA 42° ≤ 1400 N/mm² ≤ 3xD | HSS-PM FHA 42° ≤ 1400 N/mm² ≤ 3xD | HSS-E FHA 40° ≤ 1100 N/mm² ≤ 2xD | HSS-E FHA 40° ≤ 1100 N/mm² ≤ 2xD

									22 498 ...		22 499 ...		22 046 ...		22 044 ...	
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0		£ U0	
M3	0.50	56	3.5	2.7	2.5	6	18	3	43.92	030	55.21	030				
M4	0.70	63	4.5	3.4	3.3	7	21	3	41.15	040	55.21	040			71.59	040
M5	0.80	70	6.0	4.9	4.2	8	25	3	42.40	050	58.83	050	122.90	050	78.22	050
M6	1.00	80	6.0	4.9	5.0	10	30	3	42.56	060	61.63	060	160.51	060	81.91	060
M8	1.25	90	8.0	6.2	6.8	14	35	3	51.05	080	76.38	080	163.07	080	93.53	080
M10	1.50	100	10.0	8.0	8.5	16	39	3	61.06	100	87.25	100	221.95	100	114.57	100



DIN 376 with reduced shank

								22 045 ...	
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M12	1.75	110	9	7	10.2	18	4	138.01	120
M16	2.00	110	12	9	14.0	22	4	199.61	160

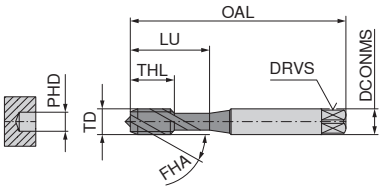
P	6	8	65	65
M	6	8		
K			65	65
N	8	12	75	75
S				
H				
O				

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

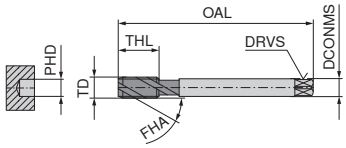
CavTap | M



DIN 371 with reinforced shank

	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 FHA 42° ≤ 900 N/mm² ≤ 3xD	HSS-E FHA 45° ≤ 900 N/mm² ≤ 3xD	HSS-E FHA 45° ≤ 900 N/mm² ≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 090 ... £ U0		22 042 ... £ U0		22 040 ... £ U0	
M1,6	0.35	40	2.5	2.1	1.25	4	11	2					114.21	**016**
M2	0.40	45	2.8	2.1	1.60	4	12	2	70.38	**020**			63.46	**020**
M2,5	0.45	50	2.8	2.1	2.05	5	15	2	56.66	**025**				
M2,5	0.45	50	2.8	2.1	2.05	5	15	3					60.81	**025**
M3	0.50	56	3.5	2.7	2.50	6	18	3	42.40	**030**			66.43	**030**
M4	0.70	63	4.5	3.4	3.30	7	21	3	43.92	**040**			66.06	**040**
M5	0.80	70	6.0	4.9	4.20	8	25	3	44.47	**050**	98.08	**050**	69.13	**050**
M6	1.00	80	6.0	4.9	5.00	10	30	3	44.36	**060**	101.10	**060**	72.16	**060**
M8	1.25	90	8.0	6.2	6.80	14	35	3	51.77	**080**	127.49	**080**	91.11	**080**
M10	1.50	100	10.0	8.0	8.50	16	39	3	63.27	**100**	147.96	**100**	104.06	**100**



DIN 376 with reduced shank

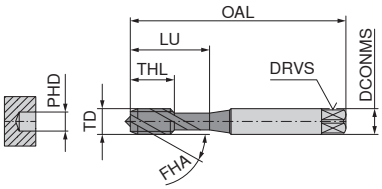
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 091 ... £ U0		22 041 ... £ U0	
M12	1.75	110	9	7.0	10.2	18	4	78.22	**120**	140.77	**120**
M14	2.00	110	11	9.0	12.0	20	4	115.14	**140**	168.97	**140**
M16	2.00	110	12	9.0	14.0	22	4	110.88	**160**	187.62	**160**
M20	2.50	140	16	12.0	17.5	25	4	165.66	**200**	268.96	**200**
M22	2.50	140	18	14.5	19.5	27	5	355.25	**220**		
M24	3.00	160	18	14.5	21.0	30	5	210.30	**240**		
M30	3.50	180	22	18.0	26.5	35	5	444.94	**300**		

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

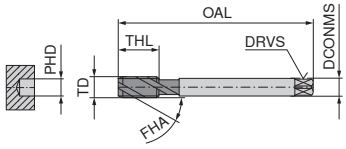
CavTap | M



DIN 371 with reinforced shank

	Soft	Soft	NW	NW
	C 2–3	C 2–3	C 2–3	C 2–3
	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
		CH	vap.	DLC
				
	HSS-E FHA 42° ≤ 500 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 500 N/mm² ≤ 3xD	HSS-E FHA 38° ≤ 500 N/mm² ≤ 3xD	HSS-E FHA 38° ≤ 880 N/mm² ≤ 3xD
	22 326 ...	22 324 ...	22 086 ...	22 460 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0		£ U0	
M2	0.40	45	2.8	2.1	1.60	4	12	2	61.85	020	83.55	020	49.82	020	55.56	02000
M2,5	0.45	50	2.8	2.1	2.05	5	15	2	58.00	025	80.81	025	46.16	025		
M2,5	0.45	50	2.8	2.1	2.05	5	14	2							55.56	02500
M3	0.50	56	3.5	2.7	2.50	6	18	2	47.33	030	70.18	030				
M3	0.50	56	3.5	2.7	2.50	6	18	3					37.65	030	45.13	03000
M4	0.70	63	4.5	3.4	3.30	7	21	2	47.33	040	75.84	040				
M4	0.70	63	4.5	3.4	3.30	7	21	3					37.65	040	46.43	04000
M5	0.80	70	6.0	4.9	4.20	8	25	2	49.04	050	78.55	050				
M5	0.80	70	6.0	4.9	4.20	8	25	3					41.15	050	46.43	05000
M6	1.00	80	6.0	4.9	5.00	10	30	2	49.04	060	108.49	060				
M6	1.00	80	6.0	4.9	5.00	10	30	3					40.07	060	47.74	06000
M8	1.25	90	8.0	6.2	6.80	14	35	2	58.52	080	118.00	080				
M8	1.25	90	8.0	6.2	6.80	14	35	3					47.59	080	53.90	08000
M10	1.50	100	10.0	8.0	8.50	16	39	2	68.98	100	148.02	100				
M10	1.50	100	10.0	8.0	8.50	16	39	3					55.71	100	61.46	10000



DIN 376 with reduced shank

								22 461 ...	
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M12	1.75	110	9	7	10.2	18	3	77.69	12000
M14	2.00	110	11	9	12.0	20	3	111.58	14000
M16	2.00	110	12	9	14.0	22	3	108.37	16000
M20	2.50	140	16	12	17.5	25	3	155.38	20000

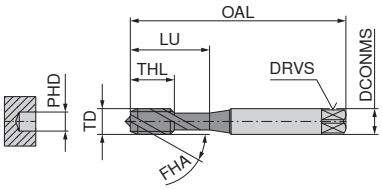
P	15		15		
M					
K					
N	22	22			15
S					
H					
O					

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

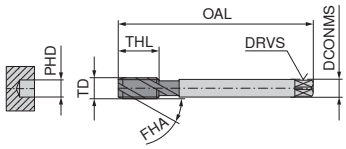
CavTap SL | M



DIN 371 with reinforced shank

	Ti	Ti	Ni
	C 2–3	C 2–3	C 2–3
	ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
	TiN	TiCN	TiCN
			
	HSS-PM FHA 30° ≤ 1400 N/mm² ≤ 1,5xD	HSS-PM FHA 15° ≤ 1200 N/mm² ≤ 2xD	HSS-PM FHA 15° ≤ 1600 N/mm² ≤ 2xD
	22 076 ...	**22 163 ...**	**22 424 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0	
M3	0.50	56	3.5	2.7	2.5	11	18	2			61.37	030	85.83	030
M3	0.50	56	3.5	2.7	2.5	6	18	3	61.37	030				
M3,5	0.60	56	4.0	3.0	2.9	12	20	3			67.14	035		
M4	0.70	63	4.5	3.4	3.3	7	21	3	64.02	040				
M4	0.70	63	4.5	3.4	3.3	13	21	3			68.47	040	89.68	040
M5	0.80	70	6.0	4.9	4.2	8	25	3	64.56	050				
M5	0.80	70	6.0	4.9	4.2	15	25	3			69.01	050	93.04	050
M6	1.00	80	6.0	4.9	5.0	10	30	3	69.72	060				
M6	1.00	80	6.0	4.9	5.0	17	30	3			92.24	060	117.01	060
M8	1.25	90	8.0	6.2	6.8	14	35	3	76.22	080				
M8	1.25	90	8.0	6.2	6.8	20	35	3			100.36	080	128.08	080
M10	1.50	100	10.0	8.0	8.5	16	39	3	106.24	100				
M10	1.50	100	10.0	8.0	8.5	22	39	3			123.61	100	160.41	100
M12	1.75	110	12.0	9.0	10.2	18	44	3	119.90	120				



DIN 376 with reduced shank

									22 164 ...		**22 425 ...**	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**		£ U0		£ U0	
M12	1.75	110	9	7.0	10.2	24	3		140.20	120	185.96	120
M14	2.00	110	11	9.0	12.0	26	3				273.22	140
M16	2.00	110	12	9.0	14.0	27	3		196.66	160	255.71	160
M20	2.50	140	16	12.0	17.5	32	3		337.58	200	445.51	200
M24	3.00	160	18	14.5	21.0	34	3		389.03	240		

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

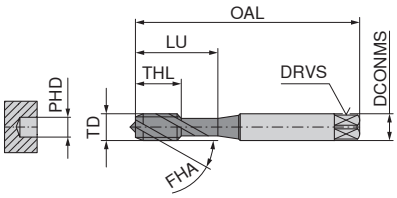
Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

▲ ES = extra short

CavTap | M

UNI ES | E 1,5–2 | ISO 2 6H | vap.



DIN 352 with reinforced shank

HSS-E
FHA 42°
≤ 1100 N/mm²
≤ 3xD

22 500 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
M3	0.50	40	3.5	2.7	2.5	6	18	3	35.79	**030**
M4	0.70	45	4.5	3.4	3.3	7	22	3	36.33	**040**
M5	0.80	50	6.0	4.9	4.2	9	25	3	35.79	**050**
M6	1.00	56	6.0	4.9	5.0	10	28	3	39.31	**060**
M8	1.25	63	6.0	4.9	6.8	14		3	45.01	**080**
M10	1.50	70	7.0	5.5	8.5	16		3	51.67	**100**
M12	1.75	75	9.0	7.0	10.2	18		4	66.77	**120**
M16	2.00	80	12.0	9.0	14.0	22		4	105.88	**160**

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

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

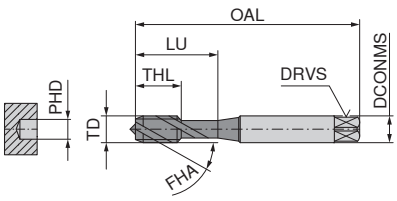
▲ ES = extra short

CavTap SL | M

ST
ES

C
2–3

ISO 2
6H



DIN 352 with reinforced shank

HSS-E
FHA 15°
≤ 750 N/mm²
≤ 2xD

22 016 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
M3	0.50	40	3.5	2.7	2.5	10	18	2	32.09	**030**
M4	0.70	45	4.5	3.4	3.3	12	22	3	31.86	**040**
M5	0.80	50	6.0	4.9	4.2	14	25	3	32.94	**050**
M6	1.00	56	6.0	4.9	5.0	16	28	3	33.66	**060**
M8	1.25	63	6.0	4.9	6.8	20		3	38.38	**080**
M10	1.50	70	7.0	5.5	8.5	22		3	49.28	**100**
M12	1.75	75	9.0	7.0	10.2	24		3	62.63	**120**

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length

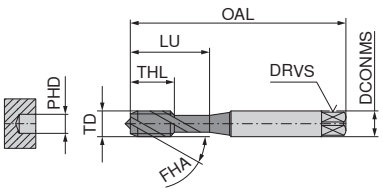
CavTap | M

ST EL | UNI EL

C 2–3 | C 2–3

ISO 2 6H | ISO 2 6H

vap.

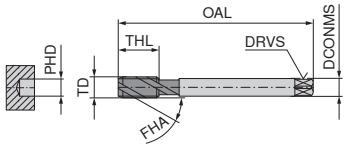


DIN 371 with reinforced shank

HSS-E FHA 42° ≤ 750 N/mm² ≤ 3xD

HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 422 ... £ U0		22 538 ... £ U0	
M3	0.50	100	3.5	2.7	2.5	6	18	3	91.27	**030**	72.86	**030**
M4	0.70	125	4.5	3.4	3.3	7	21	3	89.17	**040**	72.74	**040**
M5	0.80	140	6.0	4.9	4.2	8	25	3	99.63	**050**	81.80	**050**
M6	1.00	160	6.0	4.9	5.0	10	30	3	103.65	**060**	85.97	**060**
M8	1.25	180	8.0	6.2	6.8	14	35	3	124.80	**080**	97.97	**080**



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 539 ... £ U0	
M6	1.00	160	4.5	3.4	5.0	10	3	109.38	**060**
M8	1.25	180	6.0	4.9	6.8	14	3	132.09	**080**
M10	1.50	200	7.0	5.5	8.5	16	3	114.21	**100**
M12	1.75	224	9.0	7.0	10.2	18	3	141.88	**120**
M14	2.00	224	11.0	9.0	12.0	20	3	247.03	**140**
M16	2.00	224	12.0	9.0	14.0	22	3	208.29	**160**
M18	2.50	250	14.0	11.0	15.5	25	3	386.84	**180**
M20	2.50	280	16.0	12.0	17.5	25	3	330.19	**200**

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

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

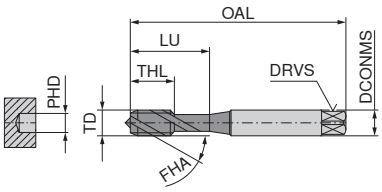
▲ EL = extra long, with double overall length

CavTap SL | M

ST
EL

E
1,5–2

ISO 2
6H

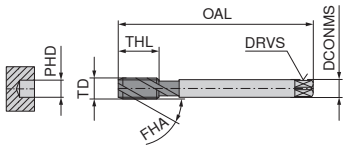


DIN 371 with reinforced shank

HSS-E
FHA 15°
≤ 750 N/mm²
≤ 2xD

22 078 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
M3	0.50	100	3.5	2.7	2.5	11	18	2	69.67	**030**
M4	0.70	125	4.5	3.4	3.3	13	21	3	69.67	**040**
M5	0.80	140	6.0	4.9	4.2	15	25	3	80.08	**050**
M6	1.00	160	6.0	4.9	5.0	17	30	3	84.12	**060**
M8	1.25	180	8.0	6.2	6.8	20	35	3	98.66	**080**



DIN 376 with reduced shank

22 080 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M6	1.00	160	4.5	3.4	5.0	17	3	85.97	**060**
M8	1.25	180	6.0	4.9	6.8	20	3	102.95	**080**
M10	1.50	200	7.0	5.5	8.5	22	3	110.32	**100**
M12	1.75	224	9.0	7.0	10.2	24	3	140.20	**120**
M14	2.00	224	11.0	9.0	12.0	26	3	203.13	**140**
M16	2.00	224	12.0	9.0	14.0	27	3	202.72	**160**
M20	2.50	280	16.0	12.0	17.5	32	3	280.74	**200**

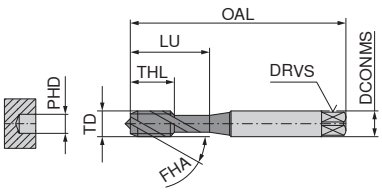
P	**12**
M	
K	**12**
N	**12**
S	
H	
O	

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

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

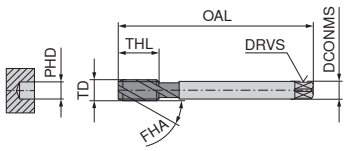
M



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 FHA 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-PM FHA 50° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E FHA 45° ≤ 1000 N/mm² ≤ 3xD	HSS-E FHA 45° ≤ 1000 N/mm² ≤ 3xD
	23 118 ...	**23 120 ...**	**23 026 ...**	**23 122 ...**	**23 124 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9		£ T9		£ T9		£ T9	
M2	0.40	45	2.8	2.1	1.60	4	12	2	36.33	**020**	41.46	**020**						
M2,5	0.45	50	2.8	2.1	2.05	5	14	2	34.93	**025**	40.79	**025**						
M3	0.50	56	3.5	2.7	2.50	6	18	3	27.70	**030**	34.77	**030**	16.62	**030**	36.59	**030**	39.31	**030**
M4	0.70	63	4.5	3.4	3.30	7	21	3	28.80	**040**	38.92	**040**	16.62	**040**	39.31	**040**	40.72	**040**
M5	0.80	70	6.0	4.9	4.20	8	25	3	29.71	**050**	40.21	**050**	17.91	**050**	40.79	**050**	43.72	**050**
M6	1.00	80	6.0	4.9	5.00	10	30	3	31.37	**060**	50.08	**060**	20.74	**060**	51.77	**060**	59.03	**060**
M8	1.25	90	8.0	6.2	6.80	14	35	3	35.50	**080**	54.67	**080**	24.61	**080**	56.66	**080**	63.46	**080**
M10	1.50	100	10.0	8.0	8.50	16	39	3	40.62	**100**	73.28	**100**	30.99	**100**	71.59	**100**	80.64	**100**



DIN 376 with reduced shank

									23 119 ...		**23 121 ...**		**23 027 ...**		**23 123 ...**		**23 125 ...**	
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes		£ T9		£ T9		£ T9		£ T9		£ T9	
M3	0.50	56	2.2		2.5	6	3		12.08	**030**								
M4	0.70	63	2.8	2.1	3.3	7	3		10.95	**040**								
M5	0.80	70	3.5	2.7	4.2	8	3		10.65	**050**								
M6	1.00	80	4.5	3.4	5.0	10	3		10.51	**060**								
M8	1.25	90	6.0	4.9	6.8	14	3		11.08	**080**								
M10	1.50	100	7.0	5.5	8.5	16	3		14.94	**100**								
M12	1.75	110	9.0	7.0	10.2	18	3		16.92	**120**	79.61	**120**						
M12	1.75	110	9.0	7.0	10.2	18	4						36.66	**120**	84.86	**120**	93.74	**120**
M14	2.00	110	11.0	9.0	12.0	20	3				54.56	**14000**						
M14	2.00	110	11.0	9.0	12.0	20	4						52.73	**140**				
M16	2.00	110	12.0	9.0	14.0	22	3		24.87	**160**	101.69	**160**						
M16	2.00	110	12.0	9.0	14.0	22	4						52.73	**160**	113.25	**160**	124.71	**160**
M18	2.50	125	14.0	11.0	15.5	25	3				86.28	**18000**						
M20	2.50	140	16.0	12.0	17.5	25	3		37.52	**200**	197.65	**200**	60.41	**200**				
M20	2.50	140	16.0	12.0	17.5	25	4								205.32	**200**	228.56	**200**
M22	2.50	140	18.0	14.5	19.5	27	4				126.47	**22000**						
M24	3.00	160	18.0	14.5	21.0	34	4				191.49	**240**						
M27	3.00	160	20.0	16.0	24.0	30	4				158.19	**27000**						
M30	3.50	180	22.0	18.0	26.5	35	4				175.66	**30000**						
M33	3.50	180	25.0	20.0	29.5	35	4				253.29	**33000**						
M36	4.00	200	28.0	22.0	32.0	40	4				275.21	**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					

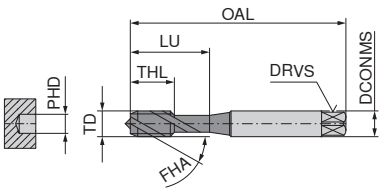
Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

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

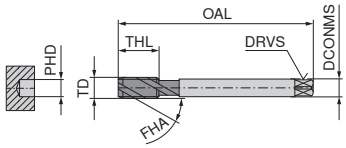
M



DIN 371 with reinforced shank

	UNI NCW	FE	FE-HF	VA
	C 2–3	C 2–3	C 2–3	C 2–3
	ISO 2 6H	ISO 2 6H	ISO 2 6H	ISO 2 6H
	TiCN		TiCN	
				
	HSS-PM FHA 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 850 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 1100 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 1200 N/mm² ≤ 2,5xD
	23 126 ...	23 216 ...	23 312 ...	23 414 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9		£ T9		£ T9	
M2	0.40	45	2.8	2.1	1.60	4	12	2			15.91	020			26.40	020
M2,5	0.45	50	2.8	2.1	2.05	5	14	2			32.09	025			34.93	025
M3	0.50	56	3.5	2.7	2.50	6	18	3			16.09	030	33.48	030	17.57	030
M3	0.50	70	6.0	4.9	2.50	6	18	3	42.08	030						
M4	0.70	63	4.5	3.4	3.30	7	21	3			16.09	040	36.59	040	17.57	040
M4	0.70	70	6.0	4.9	3.30	7	21	3	48.18	040						
M5	0.80	70	6.0	4.9	4.20	8	25	3	47.97	050	16.14	050	37.65	050	18.28	050
M6	1.00	80	6.0	4.9	5.00	10	30	3	47.97	060	16.14	060	51.86	060	18.28	060
M8	1.25	90	8.0	6.2	6.80	14	35	3	60.63	080	21.00	080	56.66	080	23.26	080
M10	1.50	100	10.0	8.0	8.50	16	39	3	73.31	100	25.17	100	70.66	100	28.04	100



DIN 376 with reduced shank

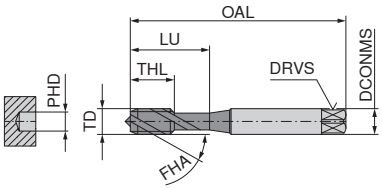
								23 127 ...		23 217 ...		23 313 ...		23 415 ...	
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9		£ T9		£ T9		£ T9	
M12	1.75	110	10	8.0	10.2	18	3	92.99	120						
M12	1.75	110	9	7.0	10.2	18	3			33.95	120	81.75	120	37.47	120
M14	2.00	110	11	9.0	12.0	20	3			41.15	140				
M16	2.00	110	12	9.0	14.0	22	3	183.41	160	51.67	160	110.32	160	57.21	160
M20	2.50	140	16	12.0	17.5	25	3			81.18	200	197.59	200	87.06	200
M24	3.00	160	18	14.5	21.0	30	4							118.81	240

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

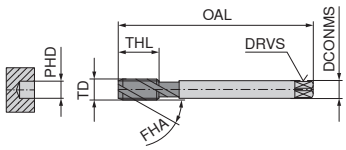
M



DIN 371 with reinforced shank

	VA	VA	VA	AL	AL
	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
	TiN		TiN		CrN
					
	HSS-E FHA 45° ≤ 1200 N/mm² ≤ 3xD	HSS-PM FHA 40° ≤ 1200 N/mm² ≤ 2,5xD	HSS-PM FHA 40° ≤ 1200 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 500 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 500 N/mm² ≤ 2,5xD
	23 416 ...	**23 426 ...**	**23 456 ...**	**23 616 ...**	**23 614 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9		£ T9		£ T9		£ T9	
M2	0.40	45	2.8	2.1	1.60	4	12	2	42.61	**020**								
M2,5	0.45	50	2.8	2.1	2.05	5	14	2	40.79	**025**								
M3	0.50	56	3.5	2.7	2.50	6	18	3	34.77	**030**	14.94	**030**	16.62	**030**	16.09	**030**	34.19	**030**
M4	0.70	63	4.5	3.4	3.30	7	21	3	38.92	**040**	15.05	**040**	18.19	**040**	16.09	**040**	34.19	**040**
M5	0.80	70	6.0	4.9	4.20	8	25	3	40.21	**050**	15.49	**050**	18.48	**050**	16.14	**050**	35.50	**050**
M6	1.00	80	6.0	4.9	5.00	10	30	3	51.58	**060**	15.77	**060**	23.73	**060**	16.14	**060**	35.50	**060**
M8	1.25	90	8.0	6.2	6.80	14	35	3	54.67	**080**	18.48	**080**	25.44	**080**	21.00	**080**	41.88	**080**
M10	1.50	100	10.0	8.0	8.50	16	39	3	76.91	**100**	22.17	**100**	35.09	**100**	25.17	**100**	51.29	**100**



DIN 376 with reduced shank

									23 417 ...		**23 427 ...**		**23 457 ...**			**23 615 ...**	
TD mm	**TP mm**	**OAL mm**	**DCONMS mm**	**DRVS mm**	**PHD mm**	**THL mm**	**Flutes**		**£ T9**		**£ T9**		**£ T9**			**£ T9**	
M12	1.75	110	9	7.0	10.2	18	3				36.66	**120**	50.31	**120**		63.46	**120**
M12	1.75	110	9	7.0	10.2	18	4		83.59	**120**							
M14	2.00	110	11	9.0	12.0	20	4				48.33	**140**					
M16	2.00	110	12	9.0	14.0	22	3				52.58	**160**	63.23	**160**			
M16	2.00	110	12	9.0	14.0	22	4		101.69	**160**							
M20	2.50	140	16	12.0	17.5	25	3				78.31	**200**	125.61	**200**			
M20	2.50	140	16	12.0	17.5	25	4		160.13	**200**							
M24	3.00	160	18	14.5	21.0	30	4				99.05	**240**					

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

Cutting speed v_c (m/min.)

6

Through hole / Blind hole – Machine taps, right hand

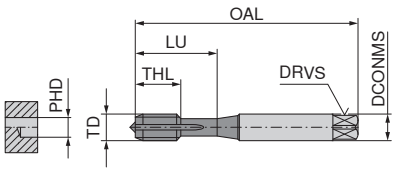
DuoTap | M

ST | HR | AMPCO

C 2–3

ISO 2X 6HX

nitr.



DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 750 N/mm²
≤ 2xD

HSS-E
FHA 0°
≤ 1400 N/mm²
≤ 2xD

HSS-PM
FHA 0°
≤ 800 N/mm²
≤ 2xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 028 ... £ U0		22 006 ... £ U0		22 030 ... £ U0	
M1,2	0.25	40	2.5	2.1	0.95	5	5	2	61.37	**012** [1]				
M1,4	0.30	40	2.5	2.1	1.10	6	6	2	49.79	**014** [1]				
M1,6	0.35	40	2.5	2.1	1.25	6	11	2	44.51	**016**				
M1,7	0.35	40	2.5	2.1	1.35	6	11	2	49.28	**017**				
M1,8	0.35	40	2.5	2.1	1.45	6	11	2	45.75	**018**				
M2	0.40	45	2.8	2.1	1.60	7	12	3	38.38	**020**				
M2,2	0.45	45	2.8	2.1	1.75	7	12	3	39.10	**022**				
M2,3	0.40	45	2.8	2.1	1.90	7	12	3	44.47	**023**				
M2,5	0.45	50	2.8	2.1	2.05	9	14	3	37.65	**025**				
M2,6	0.45	50	2.8	2.1	2.15	9	14	3	40.62	**026**				
M3	0.50	56	3.5	2.7	2.50	11	18	3	31.37	**030**	44.51	**030**	45.01	**030**
M3,5	0.60	56	4.0	3.0	2.90	12	20	3	32.09	**035**				
M4	0.70	63	4.5	3.4	3.30	13	21	3	31.30	**040**	45.62	**040**	45.94	**040**
M5	0.80	70	6.0	4.9	4.20	15	25	3	32.09	**050**	48.71	**050**	45.98	**050**
M6	1.00	80	6.0	4.9	5.00	17	30	3	31.86	**060**	48.17	**060**	45.01	**060**
M7	1.00	80	7.0	5.5	6.00	17	30	3	46.14	**070**				
M8	1.25	90	8.0	6.2	6.80	20	35	3	36.04	**080**	52.84	**080**	51.80	**080**
M10	1.50	100	10.0	8.0	8.50	22	39	3	46.16	**100**	66.99	**100**	65.86	**100**

P	**12**	**6**	
M			
K	**12**	**16**	
N		**12**	**8**
S			
H			
O			

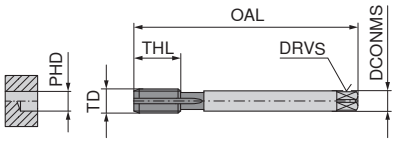
1) Tol. 4H/5H ≤ M1.4

Cutting speed v_c (m/min.)

DIN 376 can be found on the next page

Through hole / Blind hole – Machine taps, right hand

DuoTap | M



DIN 376 with reduced shank

	ST	HR	AMPCO
	C 2–3	C 2–3	C 2–3
	ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
		nitr.	
			
	HSS-E FHA 0° ≤ 750 N/mm² ≤ 2xD	HSS-E FHA 0° ≤ 1400 N/mm² ≤ 2xD	HSS-PM FHA 0° ≤ 800 N/mm² ≤ 2xD
	22 029 ...	**22 007 ...**	**22 031 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0		£ U0	
M4	0.70	63	2.8	2.1	3.3	13	3	40.79	040				
M5	0.80	70	3.5	2.7	4.2	15	3	41.15	050				
M6	1.00	80	4.5	3.4	5.0	17	3	41.15	060				
M8	1.25	90	6.0	4.9	6.8	20	3	51.86	080				
M10	1.50	100	7.0	5.5	8.5	22	3	58.63	100				
M12	1.75	110	9.0	7.0	10.2	24	3	59.61	120	83.61	120		
M12	1.75	110	9.0	7.0	10.2	24	4					114.09	120
M14	2.00	110	11.0	9.0	12.0	26	3	82.48	140				
M16	2.00	110	12.0	9.0	14.0	27	3	88.00	160	121.79	160		
M16	2.00	110	12.0	9.0	14.0	27	4					165.63	160
M18	2.50	125	14.0	11.0	15.5	30	4	129.86	180				
M20	2.50	140	16.0	12.0	17.5	32	4	132.28	200			220.63	200
M22	2.50	140	18.0	14.5	19.5	32	4	180.98	220				
M24	3.00	160	18.0	14.5	21.0	34	4	179.12	240			269.32	240
M33	3.50	180	25.0	20.0	29.5	40	4	354.18	330				
P									12		6		
M													
K									12		16		
N											12		8
S													
H													
O													

Cutting speed v_c (m/min.)

6

Through hole / Blind hole – Machine taps, right hand

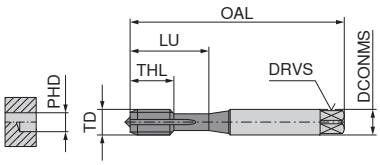
DuoTap | M

GG | C 2–3 | ISO 2X 6HX | nitr.

HSS-E
FHA 0°
≤ 1050 N/mm²
≤ 2xD

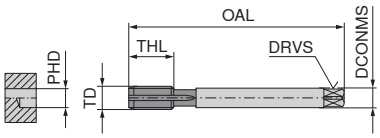
GG | C 2–3 | ISO 2X 6HX | nitr.

HSS-E
FHA 0°
≤ 1050 N/mm²
≤ 2xD



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 036 ... £ U0		22 032 ... £ U0	
M2	0.40	45	2.8	2.1	1.60	7	12	3			40.07	**020**
M2,5	0.45	50	2.8	2.1	2.05	9	14	3			41.15	**025**
M3	0.50	56	3.5	2.7	2.50	11	18	3			34.52	**030**
M3,5	0.60	56	4.0	3.0	2.90	12	20	3			37.65	**035**
M4	0.70	63	4.5	3.4	3.30	13	21	3			35.29	**040**
M5	0.80	70	6.0	4.9	4.20	15	25	3	55.54	**050**	37.65	**050**
M6	1.00	80	6.0	4.9	5.00	17	30	3	55.39	**060**	37.65	**060**
M8	1.25	90	8.0	6.2	6.80	20	35	3	62.37	**080**	43.28	**080**
M10	1.50	100	10.0	8.0	8.50	22	39	3	74.35	**100**	51.77	**100**



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 033 ... £ U0	
M6	1.00	80	4.5	3.4	5.0	17	3	44.36	**060**
M8	1.25	90	6.0	4.9	6.8	20	3	48.53	**080**
M10	1.50	100	7.0	5.5	8.5	22	3	54.95	**100**
M12	1.75	110	9.0	7.0	10.2	24	3	66.43	**120**
M14	2.00	110	11.0	9.0	12.0	26	3	81.80	**140**
M16	2.00	110	12.0	9.0	14.0	27	3	94.65	**160**
M18	2.50	125	14.0	11.0	15.5	30	4	140.20	**180**
M20	2.50	140	16.0	12.0	17.5	32	4	140.20	**200**
M22	2.50	140	18.0	14.5	19.5	32	4	208.81	**220**
M24	3.00	160	18.0	14.5	21.0	34	4	186.50	**240**

P		
M		
K	**16**	**16**
N	**12**	**12**
S		
H		
O		

Cutting speed v_c (m/min.)

Through hole / Blind hole – Machine taps, right hand

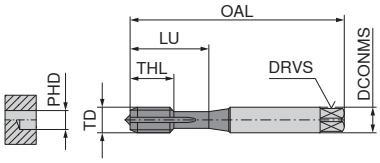
DuoTap | M

HT | D 4–5 | ISO 2X 6HX | OSM

Solid carbide
FHA 0°
≤ 63 HRC
≤ 1,5xD

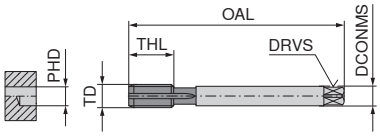
HT | C 2–3 | ISO 2X 6HX | TiCN

HSS-PM
FHA 0°
44 - 52 HRC
≤ 1,5xD



DIN 371 with reinforced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 806 ... £ U0		22 227 ... £ U0	
M3	0.50	63	4.5	3.4	2.55	6	18	4	222.10	**030**		
M4	0.70	63	4.5	3.4	3.40	8	20	4	222.10	**040**		
M5	0.80	70	6.0	4.9	4.30	10	26	4	254.94	**050**		
M6	1.00	80	6.0	4.9	5.00	10	30	4			192.56	**060**
M6	1.00	80	6.0	4.9	5.10	12	28	4	268.42	**060**		
M8	1.25	90	8.0	6.2	6.80	14	35	5			207.31	**080**
M8	1.25	90	8.0	6.2	6.90	15	35	5	307.51	**080**		
M10	1.50	100	10.0	8.0	8.50	18	38	5	389.95	**100**		
M10	1.50	100	10.0	8.0	8.50	16	39	5			259.58	**100**
M12	1.75	110	12.0	9.0	10.40	21	41	5	721.45	**120**		
M16	2.00	110	16.0	12.0	14.20	24	44	6	1,024.88	**160**		



DIN 376 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 228 ... £ U0	
M12	1.75	110	9	7	10.4	18	5	323.54	**120**
M16	2.00	110	12	9	14.2	22	6	445.51	**160**

P		
M		
K		
N		**22**
S		
H	**2**	**2**
O		

Cutting speed v_c (m/min.)

Through hole / Blind hole – Machine taps, right hand

▲ EL = extra long, with double overall length

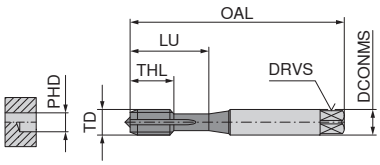
DuoTap | M

HR
EL

C
2–3

ISO 2X
6HX

nitr.

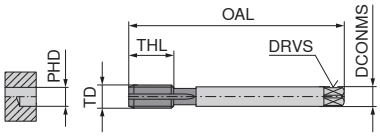


DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1400 N/mm²
≤ 2xD

22 122 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
M3	0.50	100	3.5	2.7	2.5	11	18	3	87.79	**030**
M4	0.70	125	4.5	3.4	3.3	13	21	3	87.79	**040**
M5	0.80	140	6.0	4.9	4.2	15	25	3	94.65	**050**
M6	1.00	160	6.0	4.9	5.0	17	30	3	99.24	**060**
M8	1.25	180	8.0	6.2	6.8	20	35	3	114.38	**080**



DIN 376 with reduced shank

22 123 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M10	1.50	200	7	5.5	8.5	22	3	132.09	**100**
M12	1.75	224	9	7.0	10.2	24	3	156.79	**120**
M16	2.00	224	12	9.0	14.0	27	3	244.81	**160**
M20	2.50	280	16	12.0	17.5	32	4	337.03	**200**

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

Cutting speed v_c (m/min.)

Through hole / Blind hole – Machine taps, right hand

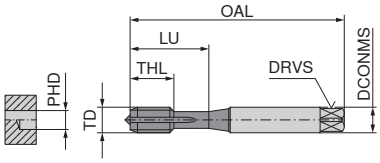
M

GG

C
2–3

ISO 2X
6HX

TiCN

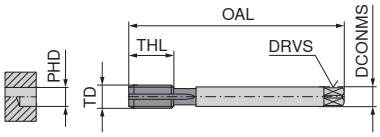


DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 900 N/mm²
≤ 2xD

23 512 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9	
M5	0.80	70	6	4.9	4.2	15	25	3	37.82	**050**
M6	1.00	80	6	4.9	5.0	17	30	3	49.26	**060**
M8	1.25	90	8	6.2	6.8	20	35	3	52.84	**080**
M10	1.50	100	10	8.0	8.5	22	39	3	72.23	**100**



DIN 376 with reduced shank

23 513 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9	
M12	1.75	110	9	7	10.2	24	3	81.36	**120**

P	
M	
K	**20**
N	**24**
S	
H	
O	

Cutting speed v_c (m/min.)

6

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

▲ HML = with soldered-in carbide strips for a higher cutting speed

DuoForm | M

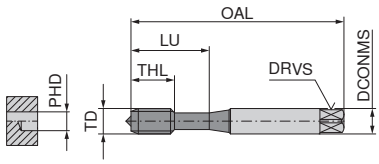
NEW

NW HML | EC | EC

C 2–3 | C 2–3 | C 2–3

ISO 2X 6HX | ISO 2X 6HX | ISO 2X 6HX

HCr | TiN

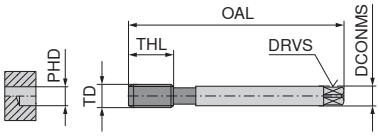


DIN 2174 with reinforced shank

HSS-E / HM ≤ 880 N/mm² ≤ 3xD | HSS-E ≤ 1100 N/mm² ≤ 1,5xD | HSS-E ≤ 1100 N/mm² ≤ 1,5xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	22 473 ... £ U0		22 128 ... £ U0		22 100 ... £ U0	
M1	0.25	40	2.5	2.1	0.90	5	6.5					101.63	**010** [1]
M1,2	0.25	40	2.5	2.1	1.10	5	6.5					93.21	**012** [1]
M1,4	0.30	40	2.5	2.1	1.28	6	9.0					87.79	**014** [1]
M1,6	0.35	40	2.5	2.1	1.47	6	9.0					85.40	**016**
M1,7	0.35	40	2.5	2.1	1.57	6	9.0					87.79	**017**
M2	0.40	45	2.8	2.1	1.85	7	10.0			104.40	**020**	57.03	**020**
M2,5	0.45	50	2.8	2.1	2.33	9	14.0			87.79	**025**	57.74	**025**
M2,6	0.45	50	2.8	2.1	2.43	9	14.0					60.70	**026**
M3	0.50	56	3.5	2.7	2.80	11	18.0			63.71	**030**	52.58	**030**
M3,5	0.60	56	4.0	3.0	3.25	12	20.0					50.50	**035**
M4	0.70	63	4.5	3.4	3.70	13	21.0			66.06	**040**	53.88	**040**
M5	0.80	70	6.0	4.9	4.65	15	25.0			69.57	**050**	56.45	**050**
M6	1.00	80	6.0	4.9	5.60	17	30.0			69.57	**060**	64.75	**060**
M6	1.00	80	6.0	5.0	5.60	18	30.0	323.08	**06000**				
M8	1.25	90	8.0	6.2	7.40	20	35.0					71.21	**080**
M8	1.25	90	8.0	6.0	7.45	18	35.0	371.61	**08000**				
M8	1.25	90	8.0	6.2	7.45	20	35.0			78.20	**080**		
M10	1.50	100	10.0	8.0	9.35	22	39.0			104.40	**100**	89.87	**100**

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	22 101 ... £ U0	
M12	1.75	110	9	7	11.25	24	110.32	**120**
M16	2.00	110	12	9	15.10	27	165.61	**160**

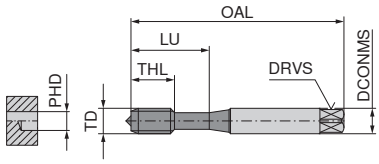
P		**18**	**18**
M		**10**	**10**
K		**10**	**10**
N	**30**	**18**	**22**
S			
H			
O			

Cutting speed v_c (m/min.)

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

▲ SN = Thread formers with lubrication grooves

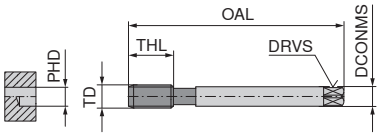
DuoForm | M



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/mm² ≤ 3xD	HSS-E ≤ 1100 N/mm² ≤ 3xD	HSS-E ≤ 1100 N/mm² ≤ 3xD	HSS-E ≤ 1100 N/mm² ≤ 3xD	HSS-E ≤ 1100 N/mm² ≤ 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	£ U0		£ U0		£ U0		£ U0		£ U0	
M2	0.40	45	2.8	2.1	1.85	7	10	3									66.99	**020**
M2,5	0.45	50	2.8	2.1	2.33	9	14	3									62.44	**025**
M3	0.50	56	3.5	2.7	2.80	11	18	3	40.97	**030**	56.45	**030**	54.81	**030**	82.34	**030**	57.75	**030**
M3,5	0.60	56	4.0	3.0	3.25	12	20	3									62.44	**035**
M4	0.70	63	4.5	3.4	3.70	13	21	4	48.53	**040**	57.37	**040**	58.83	**040**	86.36	**040**	59.97	**040**
M5	0.80	70	6.0	4.9	4.65	15	25	4	49.97	**050**	60.70	**050**	62.44	**050**	89.65	**050**		
M5	0.80	70	6.0	4.9	4.65	15	25	5									61.98	**050**
M6	1.00	80	6.0	4.9	5.60	17	30	4	51.05	**060**	61.37	**060**	70.12	**060**	98.86	**060**	70.84	**060**
M8	1.25	90	8.0	6.2	7.45	20	35	5	61.37	**080**	71.68	**080**	80.08	**080**	107.19	**080**	78.22	**080**
M10	1.50	100	10.0	8.0	9.35	22	39	6	79.51	**100**	90.97	**100**	97.23	**100**	130.43	**100**	97.60	**100**



DIN 2174 with reduced shank

22 106 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M12	1.75	110	9	7	11.25	24	6	134.49	**120**
M14	2.00	110	11	9	13.10	26	5	234.66	**140**
M16	2.00	110	12	9	15.10	27	7	197.03	**160**

P	**12**	**18**	**18**	**18**	**18**
M		**10**	**10**	**10**	**10**
K	**8**	**10**	**10**	**10**	**10**
N	**12**	**18**	**22**	**22**	**22**
S					
H					
O					

Cutting speed v_c (m/min.)

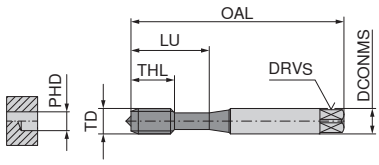
6

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

▲ SN = Thread formers with lubrication grooves

DuoForm | M

NEO SN | C 2–3 | ISO 2X 6HX | TiN

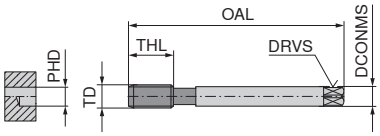


DIN 2174 with reinforced shank

HSS-PM
≤ 1100 N/mm²
≤ 3xD

HSS-PM
≤ 1100 N/mm²
≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 452 ... £ U0		22 453 ... £ U0	
M3	0.50	56	3.5	2.7	2.80	11	18	4	90.66	**030**		
M4	0.70	63	4.5	3.4	3.70	13	21	4	93.21	**040**		
M5	0.80	70	6.0	4.9	4.65	15	25	4	99.16	**050**	124.03	**050**
M6	1.00	80	6.0	4.9	5.60	17	30	5	125.02	**060**	151.10	**060**
M8	1.25	90	8.0	6.2	7.45	20	35	5	140.12	**080**	169.34	**080**
M10	1.50	100	10.0	8.0	9.35	22	39	5	181.31	**100**	216.95	**100**



DIN 2174 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 452 ... £ U0		22 454 ... £ U0	
M12	1.75	110	9	7	11.25	24	6	211.16	**120**	253.77	**120**
M16	2.00	110	12	9	15.10	27	6	342.83	**160**	387.39	**160**

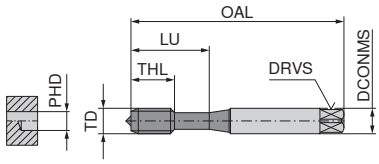
P	**18**	**18**
M	**10**	**10**
K	**10**	**10**
N	**22**	**22**
S		
H		
O		

Cutting speed v_c (m/min.)

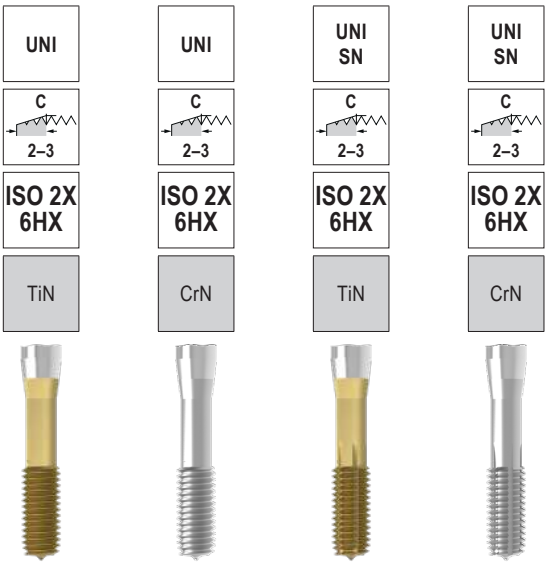
Through hole / Blind hole – Machine thread formers, right hand

▲ SN = Thread formers with lubrication grooves

M



DIN 2174 with reinforced shank



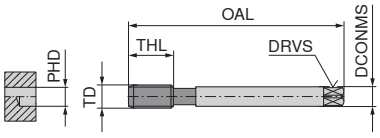
HSS-E
≤ 850 N/mm²
≤ 3xD

HSS-E
≤ 850 N/mm²
≤ 3xD

HSS-E
≤ 850 N/mm²
≤ 3xD

HSS-E
≤ 850 N/mm²
≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	23 810 ... £ T9		23 812 ... £ T9		23 814 ... £ T9		23 816 ... £ T9	
M2	0.40	45	2.8	2.1	1.85	7	12		50.35	**020**	56.46	**020**				
M2	0.40	45	2.8	2.1	1.85	7	12	3					57.21	**020**	64.44	**020**
M2,5	0.45	50	2.8	2.1	2.33	9	14		44.85	**025**	49.82	**025**				
M2,5	0.45	50	2.8	2.1	2.33	9	14	3					51.86	**025**	56.46	**025**
M3	0.50	56	3.5	2.7	2.80	11	18		32.65	**030**	36.33	**030**				
M3	0.50	56	3.5	2.7	2.80	11	18	3					34.77	**030**	40.89	**030**
M4	0.70	63	4.5	3.4	3.70	13	21		33.12	**040**	37.10	**040**				
M4	0.70	63	4.5	3.4	3.70	13	21	4					74.49	**040**	40.89	**040**
M5	0.80	70	6.0	4.9	4.65	15	25		35.50	**050**	38.38	**050**				
M5	0.80	70	6.0	4.9	4.65	15	25	4					78.55	**050**	44.27	**050**
M6	1.00	80	6.0	4.9	5.60	17	30		42.61	**060**	38.38	**060**				
M6	1.00	80	6.0	4.9	5.60	17	30	4					90.16	**060**	44.27	**060**
M8	1.25	90	8.0	6.2	7.45	20	35		47.59	**080**	43.82	**080**				
M8	1.25	90	8.0	6.2	7.45	20	35	5					94.18	**080**	52.40	**080**
M10	1.50	100	10.0	8.0	9.35	22	39		63.46	**100**	56.46	**100**				
M10	1.50	100	10.0	8.0	9.35	22	39	5					60.77	**100**	65.52	**100**



DIN 2174 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	23 811 ... £ T9		23 813 ... £ T9		23 815 ... £ T9		23 817 ... £ T9	
M12	1.75	110	9	7.0	11.25	24		72.52	**120**	70.66	**120**				
M12	1.75	110	9	7.0	11.25	24	5					79.46	**120**	79.46	**120**
M16	2.00	110	12	9.0	15.10	27		136.34	**160**	138.42	**160**				
M16	2.00	110	12	9.0	15.10	27	6					151.63	**160**	161.98	**160**
M18	2.50	125	14	11.0	16.80	30	6					175.91	**18000**		
M20	2.50	140	16	12.0	18.80	32	6					163.61	**20000**		
M24	3.00	160	18	14.5	22.60	34	6					218.60	**24000**		
P									**18**		**18**		**18**		**18**
M									**10**		**10**		**10**		**10**
K									**10**				**10**		
N									**22**		**18**		**22**		**18**
S															
H															
O															

Cutting speed v_c (m/min.)

6

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

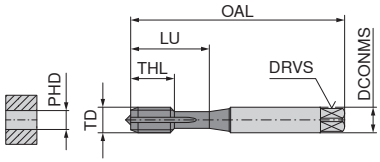
TruTap | EG M

UNI

B
4–5

6H mod

nitr. + vap.

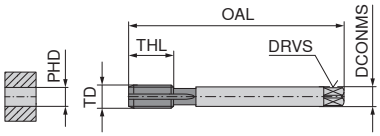


DIN 40435 with reinforced shank

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 4xD

22 662 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
EG-M2,5	0.45	56	3.5	2.7	2.65	11	18	3	64.24	**025**
EG-M3	0.50	63	4.5	3.4	3.15	10	21	3	54.14	**030**
EG-M4	0.70	70	6.0	4.9	4.20	12	25	3	56.72	**040**
EG-M5	0.80	80	6.0	4.9	5.25	13	30	3	54.59	**050**
EG-M6	1.00	90	8.0	6.2	6.30	17	35	3	55.66	**060**
EG-M8	1.25	100	10.0	8.0	8.40	18	39	3	65.29	**080**



DIN 40435 with reduced shank

22 663 ...

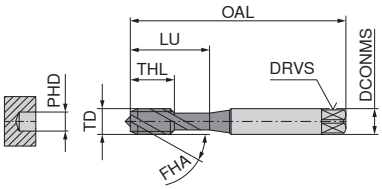
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
EG-M10	1.50	100	9	7.0	10.50	22	3	88.35	**100**
EG-M12	1.75	110	11	9.0	12.50	26	3	103.55	**120**
EG-M16	2.00	125	14	11.0	16.50	27	3	146.10	**160**
EG-M20	2.50	160	18	14.5	20.75	34	3	206.38	**200**

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

Cutting speed v_c (m/min.)

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

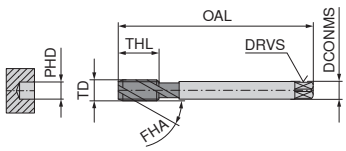
CavTap | EG M



DIN 40435 with reinforced shank

Soft	UNI
C 2–3	C 2–3
6H mod	6H mod
CH	vap.
	
HSS-E FHA 42° ≤ 500 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 280 ... £ U0		22 664 ... £ U0	
EG-M2,5	0.45	56	3.5	2.7	2.65	5	18	2	88.04	025		
EG-M2,5	0.45	56	3.5	2.7	2.65	5	18	3			61.63	025
EG-M3	0.50	63	4.5	3.4	3.15	5	21	2	85.31	030		
EG-M3	0.50	63	4.5	3.4	3.15	5	21	3			55.17	030
EG-M4	0.70	70	6.0	4.9	4.20	8	25	2	85.31	040		
EG-M4	0.70	70	6.0	4.9	4.20	8	25	3			56.28	040
EG-M5	0.80	80	6.0	4.9	5.25	8	30	2	115.87	050		
EG-M5	0.80	80	6.0	4.9	5.25	8	30	3			53.12	050
EG-M6	1.00	90	8.0	6.2	6.30	10	35	2	118.00	060		
EG-M6	1.00	90	8.0	6.2	6.30	10	35	3			58.63	060
EG-M8	1.25	100	10.0	8.0	8.40	16	39	2	148.02	080		
EG-M8	1.25	100	10.0	8.0	8.40	16	39	3			64.55	080



DIN 40435 with reduced shank

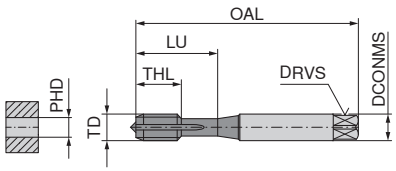
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 665 ... £ U0	
EG-M10	1.50	100	9	7.0	10.50	15	5	86.14	100
EG-M12	1.75	110	11	9.0	12.50	20	4	105.72	120
EG-M16	2.00	125	14	11.0	16.50	20	5	148.52	160
EG-M20	2.50	160	18	14.5	20.75	30	4	215.28	200

P		12
M		7
K		12
N	22	
S		
H		
O		

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

TruTap | MF



DIN 371 with reinforced shank

UNI	UNI
B 4–5	B 4–5
ISO 2 6H	ISO 2 6H
nitr. + vap.	TiN
	
HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD
22 590 ...	**22 550 ...**

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0	
M5x0,5	0.50	70	6	4.9	4.5	11	25	3	78.20	**050**	92.24	**050**
M6x0,5	0.50	80	6	4.9	5.5	13	30	3	84.49	**060**	114.21	**060**
M6x0,75	0.75	80	6	4.9	5.2	13	30	3	84.49	**062**	114.21	**062**
M8x1	1.00	90	8	6.2	7.0	17	35	3	82.27	**084**	109.50	**080**
M10x1	1.00	90	10	8.0	9.0	18	35	4	84.49	**102**	124.91	**100**

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

Cutting speed v_c (m/min.)

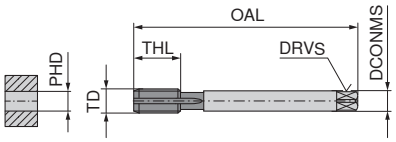
DIN 374 can be found on the next page

Through hole – Machine taps, right hand

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

▲ LH = for left hand threads

TruTap | MF



DIN 374 with reduced shank

	ST LH	ST TS	UNI	UNI	NW
	B 4–5	B 4–5	B 4–5	B 4–5	B 4–5
	ISO 2 6H	ISO 2X 6HX	ISO 2 6H	ISO 2 6H	ISO 2X 6HX
		TiN	nitr. + vap.	TiN	DLC
					
	HSS-E FHA 0° ≤ 750 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 880 N/mm² ≤ 4xD
	22 210 ...	22 193 ...	22 551 ...	22 552 ...	22 466 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0		£ U0		£ U0		£ U0	
M8x0,75	0.75	80	6	4.9	7.2	14	3					63.83	082				
M8x1	1.00	90	6	4.9	7.0	10	4			124.91	080						
M8x1	1.00	90	6	4.9	7.0	17	3	104.40	084			60.15	084	97.23	080	65.50	08000
M10x0,75	0.75	90	7	5.5	9.2	18	4					88.39	100				
M10x1	1.00	90	7	5.5	9.0	10	4			134.29	100						
M10x1	1.00	90	7	5.5	9.0	18	4	109.38	102			60.88	102	104.40	100	68.02	10000
M10x1,25	1.25	100	7	5.5	8.8	22	3					133.03	104			85.72	10200
M12x1	1.00	100	9	7.0	11.0	18	4	139.13	120			72.16	120	141.30	121	78.45	12000
M12x1,25	1.25	100	9	7.0	10.8	22	3					96.65	122			88.14	12200
M12x1,5	1.50	100	9	7.0	10.5	15	4			154.96	120						
M12x1,5	1.50	100	9	7.0	10.5	22	3	145.68	124			67.72	124	105.51	120	75.89	12400
M14x1	1.00	100	11	9.0	13.0	18	4					185.00	140			105.86	14000
M14x1,25	1.25	100	11	9.0	12.8	22	3									100.42	14200
M14x1,5	1.50	100	11	9.0	12.5	15	4			216.09	140						
M14x1,5	1.50	100	11	9.0	12.5	22	3	188.92	144			94.65	144	143.17	140	100.42	14400
M16x1	1.00	100	12	9.0	15.0	18	4									115.13	16000
M16x1,5	1.50	100	12	9.0	14.5	15	4			218.61	160						
M16x1,5	1.50	100	12	9.0	14.5	22	3	188.92	162			107.38	162	147.48	160	112.08	16200
M18x1	1.00	110	14	11.0	17.0	20	5					292.75	180				
M18x1,5	1.50	110	14	11.0	16.5	17	4			268.42	180						
M18x1,5	1.50	110	14	11.0	16.5	25	4	218.61	182			130.80	182				
M18x2	2.00	125	14	11.0	16.0	26	3					243.89	184				
M20x1	1.00	125	16	12.0	19.0	20	5					326.12	200				
M20x1,5	1.50	125	16	12.0	18.5	17	4			337.03	200						
M20x1,5	1.50	125	16	12.0	18.5	25	4	249.40	202			143.17	202	220.63	200		
M22x1,5	1.50	125	18	14.5	20.5	25	4					149.42	222	323.00	220		
M24x1,5	1.50	140	18	14.5	22.5	27	4					172.29	242				
M24x2	2.00	140	18	14.5	22.0	27	4					312.15	244				
M25x1,5	1.50	140	18	14.5	23.5	28	4					526.49	250				
M26x1,5	1.50	140	18	14.5	24.5	28	4					223.93	260				
M27x2	2.00	140	20	16.0	25.0	28	4					552.13	272				
M28x1,5	1.50	140	20	16.0	26.5	28	5					251.82	280				
M30x1,5	1.50	150	22	18.0	28.5	28	5					272.12	302				

P	12	65	12	15	
M			7	9	
K	12	65	12	18	
N	22	22		12	15
S					
H					
O					

Cutting speed v_c (m/min.)

6

Through hole – Machine taps, right hand

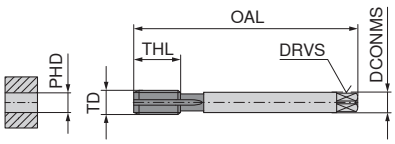
MF

UNI

B
4–5

ISO 2
6H

TiN



DIN 374 with reduced shank

HSS-PM
FHA 0°
≤ 1000 N/mm²
≤ 3xD

23 041 ...

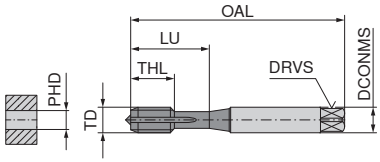
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9	
M8x1	1.00	90	6	4.9	7.0	17	3	26.01	**081**
M10x1	1.00	90	7	5.5	9.0	18	4	29.70	**102**
M10x1,25	1.25	100	7	5.5	8.8	22	3	31.83	**104**
M12x1	1.00	100	9	7.0	11.0	18	4	36.66	**120**
M12x1,25	1.25	100	9	7.0	10.8	22	3	38.24	**122**
M12x1,5	1.50	100	9	7.0	10.5	22	3	34.10	**121**
M14x1,25	1.25	100	11	9.0	12.8	22	3	44.21	**142**
M14x1,5	1.50	100	11	9.0	12.5	22	3	42.08	**144**
M16x1,5	1.50	100	12	9.0	14.5	22	3	47.61	**162**
M18x1,5	1.50	110	14	11.0	16.5	17	4	62.96	**182**
M20x1,5	1.50	125	16	12.0	18.5	17	4	84.99	**202**
M22x1,5	1.50	125	18	14.5	20.5	25	4	80.01	**222**
M24x1,5	1.50	140	18	14.5	22.5	27	4	91.83	**242**
M24x2	2.00	140	18	14.5	22.0	27	4	104.62	**244**

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

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

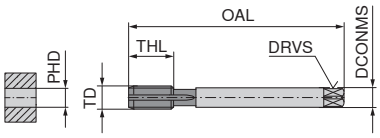
MF



DIN 371 with reinforced shank

	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 FHA 0° ≤ 1000 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 1000 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 850 N/mm² ≤ 3xD	HSS-E FHA 0° ≤ 1200 N/mm² ≤ 4xD
	23 140 ...	23 142 ...		23 440 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9			£ T9	
M4x0,5	0.50	63	4.5	3.4	3.5	10	21	3	44.47	**040**	50.50	**040**			
M5x0,5	0.50	70	6.0	4.9	4.5	11	25	3	44.85	**050**	51.86	**050**		51.86	**050**
M6x0,75	0.75	80	6.0	4.9	5.2	13	30	3	47.44	**062**	62.63	**062**		63.27	**062**
M6x0,5	0.50	80	6.0	4.9	5.5	13	30	3	47.44	**060**	62.63	**060**			



DIN 374 with reduced shank

								23 141 ...		23 143 ...		23 241 ...		23 441 ...	
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9		£ T9		£ T9		£ T9	
M8x0,5	0.50	80	6	4.9	7.5	14	3					35.25	**080**		
M8x0,75	0.75	80	6	4.9	7.2	14	3	49.97	**082**	65.52	**082**	29.90	**082**	69.85	**082**
M8x1	1.00	90	6	4.9	7.0	17	3	45.62	**084**			28.25	**084**	66.99	**084**
M8x1	1.00	90	6	4.9	7.0	17	4			62.92	**084**				
M10x0,75	0.75	90	7	5.5	9.2	18	4	71.59	**100**	89.11	**100**	41.88	**100**		
M10x1	1.00	90	7	5.5	9.0	18	4	47.44	**102**	67.33	**102**	33.41	**102**	71.50	**102**
M10x1,25	1.25	100	7	5.5	8.8	22	3	60.63	**104**	82.34	**104**	34.52	**104**		
M12x1	1.00	100	9	7.0	11.0	18	4	54.67	**120**	78.77	**120**	37.82	**120**	82.34	**120**
M12x1,25	1.25	100	9	7.0	10.8	22	3	61.37	**122**	83.61	**122**	40.21	**122**		
M12x1,5	1.50	100	9	7.0	10.5	22	3	51.86	**124**	71.50	**124**	36.91	**124**	76.38	**124**
M14x1	1.00	100	11	9.0	13.0	18	4	74.35	**140**	94.65	**140**	47.44	**140**		
M14x1,5	1.50	100	11	9.0	12.5	22	3	69.01	**144**	95.01	**144**	45.60	**144**	102.95	**144**
M16x1	1.00	100	12	9.0	15.0	18	4	83.59	**160**	110.32	**160**	62.92	**160**		
M16x1,5	1.50	100	12	9.0	14.5	22	3	83.59	**162**	110.32	**162**	57.75	**162**	117.73	**162**
M18x1	1.00	110	14	11.0	17.0	20	5					82.48	**180**		
M18x1,5	1.50	110	14	11.0	16.5	25	4	94.65	**182**	136.34	**182**	75.11	**182**		
M20x1	1.00	125	16	12.0	19.0	20	5					88.92	**200**		
M20x1,5	1.50	125	16	12.0	18.5	25	4	110.32	**202**	172.67	**202**	83.23	**202**		
M22x1,5	1.50	125	18	14.5	20.5	25	4	116.74	**222**	179.31	**222**	95.56	**222**		
M24x1,5	1.50	140	18	14.5	22.5	27	4	137.25	**242**	187.99	**242**	111.41	**242**		
M26x1,5	1.50	140	18	14.5	24.5	28	4					142.97	**260**		
M28x1,5	1.50	140	20	16.0	26.5	28	5					162.33	**280**		
M30x1,5	1.50	150	22	18.0	28.5	28	5					182.83	**300**		

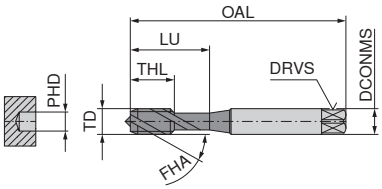
P	**12**	**15**	**12**	**10**
M	**7**	**9**		**8**
K	**12**	**18**	**12**	
N		**12**	**12**	**24**
S				
H				
O				

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

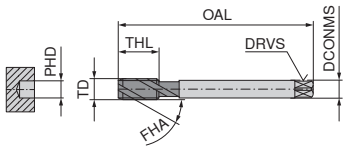
CavTap | MF



DIN 371 with reinforced shank

UNI	UNI	UNI
E 1,5–2	E 1,5–2	E 1,5–2
ISO 2 6H	ISO 2 6H	ISO 3 6G
vap.	TiN	vap.
		
HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 441 ... £ U0	
M4x0,5	0.50	63	4.5	3.4	3.50	5	21	3	86.90	**040**
M6x0,75	0.75	80	6.0	4.9	5.25	8	30	3	86.90	**062**
M5x0,5	0.50	70	6.0	4.9	4.50	5	25	3	78.62	**050**



DIN 374 with reduced shank

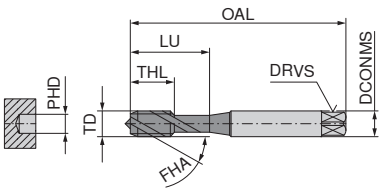
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 555 ... £ U0		22 556 ... £ U0		22 490 ... £ U0	
M8x1	1.0	90	6	4.9	7.0	10	3	64.96	**080**	88.54	**080**	86.90	**080**
M10x1	1.0	90	7	5.5	9.0	10	4	74.35	**100**	113.99	**100**	94.65	**100**
M12x1,5	1.5	100	9	7.0	10.5	15	5	83.61	**120**	129.12	**120**	104.40	**120**
M14x1,5	1.5	100	11	9.0	12.5	15	5	103.87	**140**	162.72	**140**	134.27	**140**
M16x1,5	1.5	100	12	9.0	14.5	15	5	126.93	**160**	173.60	**160**	164.02	**160**
M18x1,5	1.5	110	14	11.0	16.5	17	5					186.67	**180**
M20x1,5	1.5	125	16	12.0	18.5	17	5					218.61	**200**
P									**12**		**15**		**12**
M									**7**		**9**		**7**
K									**12**		**18**		**12**
N											**12**		
S													
H													
O													

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

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

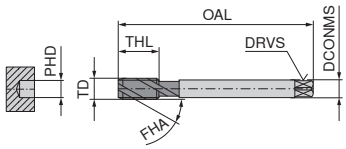
CavTap | MF



DIN 371 with reinforced shank

	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 FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 45° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 45° ≤ 1100 N/mm² ≤ 3xD
	22 202 ...			22 548 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0	
M4x0,5	0.50	63	4.5	3.4	3.5	5	21	3	86.90	**040**		
M5x0,5	0.50	70	6.0	4.9	4.5	5	25	3	78.62	**050**	92.44	**050**
M6x0,5	0.50	80	6.0	4.9	5.5	5	30	3	86.90	**060**	92.44	**060**
M6x0,75	0.75	80	6.0	4.9	5.2	8	30	3	86.90	**062**	92.44	**062**



DIN 374 with reduced shank

	22 553 ...	22 554 ...	22 563 ...	22 549 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0		£ U0		£ U0	
M6x0,75	0.75	80	4.5	3.4	5.2	8	3	75.25	**062**						
M8x0,75	0.75	80	6.0	4.9	7.2	8	3	70.30	**080**					97.23	**082**
M8x1	1.00	90	6.0	4.9	7.0	10	3	63.71	**082**	88.54	**080**	134.27	**084**	114.38	**084**
M10x0,75	0.75	90	7.0	5.5	9.2	10	4	145.68	**101**						
M10x1	1.00	90	7.0	5.5	9.0	10	3	68.07	**100**	113.99	**100**				
M10x1	1.00	90	7.0	5.5	9.0	10	4					149.30	**102**	132.28	**102**
M10x1,25	1.25	100	7.0	5.5	8.8	16	3	166.09	**102**						
M12x1	1.00	100	9.0	7.0	11.0	11	4	88.54	**120**	150.91	**121**			154.77	**120**
M12x1,25	1.25	100	9.0	7.0	10.8	15	4	134.24	**122**						
M12x1,5	1.50	100	9.0	7.0	10.5	15	4	83.61	**124**	129.12	**120**				
M12x1,5	1.50	100	9.0	7.0	10.5	15	5					174.71	**124**	147.96	**124**
M14x1,5	1.50	100	11.0	9.0	12.5	15	4	103.87	**140**	151.10	**140**				
M14x1,5	1.50	100	11.0	9.0	12.5	15	5					217.48	**144**	188.92	**144**
M16x1,5	1.50	100	12.0	9.0	14.5	15	4	126.93	**160**	173.60	**160**				
M16x1,5	1.50	100	12.0	9.0	14.5	15	5					249.40	**162**	218.61	**162**
M18x1,5	1.50	110	14.0	11.0	16.5	17	4	155.35	**180**	254.19	**182**				
M18x1,5	1.50	110	14.0	11.0	16.5	17	5							264.52	**182**
M20x1,5	1.50	125	16.0	12.0	18.5	17	4	210.87	**200**	323.00	**202**				
M20x1,5	1.50	125	16.0	12.0	18.5	17	5					372.81	**202**	325.78	**202**
M22x1,5	1.50	125	18.0	14.5	20.5	17	4	205.69	**220**						
M24x1,5	1.50	140	18.0	14.5	22.5	20	5	226.90	**240**						
M26x1,5	1.50	140	18.0	14.5	24.5	20	5	292.58	**260**						
M28x1,5	1.50	140	20.0	16.0	26.5	20	5	340.73	**280**						
M30x1,5	1.50	150	22.0	18.0	28.5	22	6	343.13	**300**						

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

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps

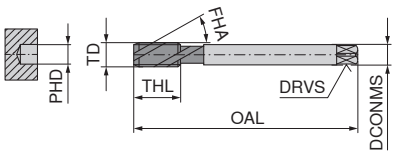
▲ LH = for left hand threads

CavTap | MF

ST
LH

C
2–3

ISO 2
6H



DIN 374 with reduced shank

HSS-E
FHA 42°
≤ 750 N/mm²
≤ 3xD

22 601 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M8x1	1.0	90	6	4.9	7.0	10	3	124.91	**082**
M10x1	1.0	90	7	5.5	9.0	10	3	129.68	**100**
M12x1	1.0	100	9	7.0	11.0	11	4	156.79	**120**
M14x1,5	1.5	100	11	9.0	12.5	15	4	171.21	**140**
M16x1,5	1.5	100	12	9.0	14.5	15	4	203.13	**160**
M18x1,5	1.5	110	14	11.0	16.5	17	4	232.82	**180**
M20x1,5	1.5	125	16	12.0	18.5	17	4	273.23	**200**

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

Cutting speed v_c (m/min.)

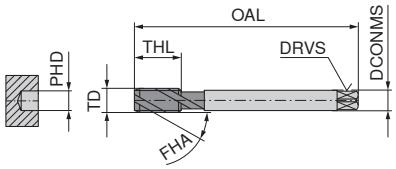
Blind hole – Machine taps, right hand

CavTap SL | MF

ST

C
2–3

ISO 2
6H



DIN 374 with reduced shank

HSS-E
FHA 15°
≤ 750 N/mm²
≤ 2xD

6

22 182 ...

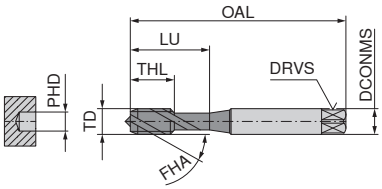
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
M6x0,75	0.75	80	4.5	3.4	5.2	13	3	69.01	**062**
M8x0,75	0.75	80	6.0	4.9	7.2	14	3	69.57	**082**
M8x1	1.00	90	6.0	4.9	7.0	17	3	62.63	**084**
M9x1	1.00	90	7.0	5.5	8.0	17	3	95.20	**090**
M10x0,75	0.75	90	7.0	5.5	9.2	18	3	110.88	**100**
M10x1	1.00	90	7.0	5.5	9.0	18	3	66.99	**102**
M10x1,25	1.25	100	7.0	5.5	8.8	22	3	96.51	**104**
M11x1	1.00	90	8.0	6.2	10.0	18	3	104.07	**110**
M12x1	1.00	100	9.0	7.0	11.0	18	3	82.27	**120**
M12x1,25	1.25	100	9.0	7.0	10.8	22	3	106.24	**122**
M12x1,5	1.50	100	9.0	7.0	10.5	22	3	78.22	**124**
M14x1	1.00	100	11.0	9.0	13.0	18	4	108.31	**140**
M14x1,5	1.50	100	11.0	9.0	12.5	22	3	105.16	**144**
M15x1	1.00	100	12.0	9.0	14.0	18	4	140.20	**150**
M16x1	1.00	100	12.0	9.0	15.0	18	4	126.93	**160**
M16x1,5	1.50	100	12.0	9.0	14.5	22	3	124.36	**162**
M18x1	1.00	110	14.0	11.0	17.0	20	4	174.71	**180**
M18x1,5	1.50	110	14.0	11.0	16.5	25	4	156.55	**182**
M18x2	2.00	125	14.0	11.0	16.0	26	3	253.09	**184**
M20x1	1.00	125	16.0	12.0	19.0	20	4	172.85	**200**
M20x1,5	1.50	125	16.0	12.0	18.5	25	4	158.25	**202**
M20x2	2.00	140	16.0	12.0	18.0	27	3	217.48	**204**
M22x1	1.00	125	18.0	14.5	21.0	20	4	223.93	**220**
M22x1,5	1.50	125	18.0	14.5	20.5	25	4	182.08	**222**
M22x2	2.00	140	18.0	14.5	20.0	27	4	223.93	**224**
M24x1	1.00	140	18.0	14.5	23.0	20	5	238.73	**240**
M24x1,5	1.50	140	18.0	14.5	22.5	27	4	197.90	**242**
M24x2	2.00	140	18.0	14.5	22.0	27	4	233.72	**244**
M25x1,5	1.50	140	18.0	14.5	23.5	28	4	332.04	**252**
M27x1,5	1.50	140	20.0	16.0	25.5	28	4	288.50	**270**
M27x2	2.00	140	20.0	16.0	25.0	28	4	322.65	**272**
M28x2	2.00	140	20.0	16.0	26.0	28	4	377.24	**282**
M30x1,5	1.50	150	22.0	18.0	28.5	28	5	329.63	**302**
M30x2	2.00	150	22.0	18.0	28.0	28	4	347.73	**304**
M32x1,5	1.50	150	22.0	18.0	30.5	28	6	377.24	**320**
M33x2	2.00	160	25.0	20.0	31.0	30	4	460.97	**332**
M34x1,5	1.50	170	28.0	22.0	32.5	30	6	512.06	**340**
M36x2	2.00	170	28.0	22.0	34.0	30	5	587.00	**362**
M36x3	3.00	200	28.0	22.0	33.0	42	4	542.34	**364**
M40x1,5	1.50	170	32.0	24.0	38.5	30	6	573.34	**400**
M42x2	2.00	170	32.0	24.0	40.0	30	6	693.24	**422**
M42x3	3.00	200	32.0	24.0	39.0	45	4	733.26	**424**
M45x1,5	1.50	180	36.0	29.0	43.5	32	6	681.06	**450**
M48x2	2.00	190	36.0	29.0	46.0	32	6	957.19	**482**
M48x3	3.00	225	36.0	29.0	45.0	50	5	981.57	**484**

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

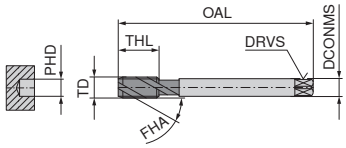
CavTap | MF



DIN 371 with reinforced shank

NW	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 FHA 42° ≤ 500 N/mm² ≤ 3xD	HSS-E FHA 38° ≤ 880 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 750 N/mm² ≤ 3xD	HSS-E FHA 45° ≤ 900 N/mm² ≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 176 ... £ U0	
M4x0,5	0.50	63	4.5	3.4	3.5	5	21	3	113.25	**040**
M5x0,5	0.50	70	6.0	4.9	4.5	5	25	3	93.53	**050**
M6x0,5	0.50	80	6.0	4.9	5.5	5	30	3	93.53	**060**
M6x0,75	0.75	80	6.0	4.9	5.2	8	30	3	93.53	**062**



DIN 374 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 188 ... £ U0		22 462 ... £ U0		22 189 ... £ U0		22 177 ... £ U0	
M8x0,75	0.75	80	6	4.9	7.2	8	3							98.34	**082**
M8x1	1.00	90	6	4.9	7.0	10	3	68.80	**081**	69.64	**08000**	67.72	**082**	117.73	**084**
M10x1	1.00	90	7	5.5	9.0	10	3	71.94	**100**	75.20	**10000**				
M10x1	1.00	90	7	5.5	9.0	10	4					79.51	**100**	131.20	**102**
M10x1,25	1.25	100	7	5.5	8.8	16	3			100.21	**10200**				
M12x1	1.00	100	9	7.0	11.0	11	4	88.00	**120**	90.24	**12000**	104.06	**121**	156.99	**120**
M12x1,25	1.25	100	9	7.0	10.8	15	4			111.58	**12200**				
M12x1,5	1.50	100	9	7.0	10.5	15	4	76.91	**122**	89.06	**12400**				
M12x1,5	1.50	100	9	7.0	10.5	15	5					88.54	**120**	149.98	**124**
M14x1	1.00	100	11	9.0	13.0	11	4			115.37	**14000**				
M14x1,25	1.25	100	11	9.0	12.8	15	4			116.55	**14200**				
M14x1,5	1.50	100	11	9.0	12.5	15	4	113.25	**140**	114.06	**14400**				
M14x1,5	1.50	100	11	9.0	12.5	15	5					108.86	**140**	191.30	**144**
M16x1	1.00	100	12	9.0	15.0	12	4			132.87	**16000**				
M16x1,5	1.50	100	12	9.0	14.5	15	4	121.58	**160**	131.60	**16200**				
M16x1,5	1.50	100	12	9.0	14.5	15	5					132.28	**160**	221.95	**162**
M18x1,5	1.50	110	14	11.0	16.5	17	4	172.29	**180**						
M18x1,5	1.50	110	14	11.0	16.5	17	5							268.96	**182**
M20x1,5	1.50	125	16	12.0	18.5	17	4	156.07	**200**						
M20x1,5	1.50	125	16	12.0	18.5	17	5					184.46	**200**	332.62	**202**
M26x1,5	1.50	140	18	14.5	24.5	20	6					439.04	**260**		
M28x1,5	1.50	140	20	16.0	26.5	20	6					517.38	**280**		
M30x1,5	1.50	150	22	18.0	28.5	22	6					508.80	**300**		

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

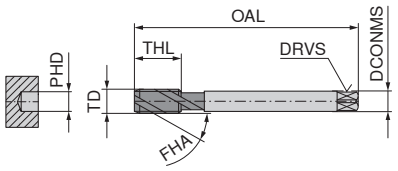
MF

UNI

C
2–3

ISO 2
6H

TiN



DIN 374 with reduced shank

HSS-PM
FHA 40°
≤ 1000 N/mm²
≤ 2,5xD

23 047 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9	
M8x1	1.00	90	6	4.9	7.0	10	35	3	25.44	**081**
M10x1	1.00	90	7	5.5	9.0	10	35	4	33.27	**102**
M10x1,25	1.25	100	7	5.5	8.8	16	39	4	32.41	**104**
M12x1	1.00	100	9	7.0	11.0	11	40	4	37.80	**120**
M12x1,25	1.25	100	9	7.0	10.8	15	40	5	41.21	**122**
M12x1,5	1.50	100	9	7.0	10.5	15	40	5	36.66	**121**
M14x1	1.00	100	11	9.0	12.8	11	40	4	44.21	**140**
M14x1,5	1.50	100	11	9.0	12.5	15	40	5	43.35	**144**
M16x1,5	1.50	100	12	9.0	14.5	15	44	5	56.14	**162**
M18x1,5	1.50	110	14	11.0	16.5	17	44	5	73.06	**182**
M20x1,5	1.50	125	16	12.0	18.5	17	44	5	83.42	**202**
M22x1,5	1.50	125	18	14.5	20.5	17	44	5	91.83	**222**
M24x1,5	1.50	140	18	14.5	22.5	20	48	5	93.51	**242**
M24x2	2.00	140	18	14.5	22.0	20	48	5	108.87	**244**

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

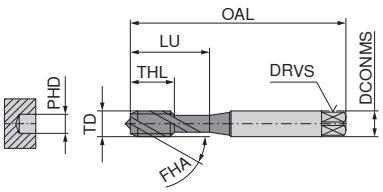
Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

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

MF



DIN 371 with reinforced shank

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

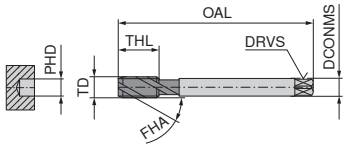
HSS-E
FHA 35°
≤ 850 N/mm²
≤ 2,5xD

HSS-E
FHA 45°
≤ 1000 N/mm²
≤ 3xD

HSS-E
FHA 35°
≤ 1000 N/mm²
≤ 2,5xD

HSS-E
FHA 35°
≤ 1000 N/mm²
≤ 2,5xD

TD	TP	OAL	DCONMS	DRVS	PHD	THL	LU	Flutes	23 144 ...		23 146 ...	
mm	mm	mm	mm	mm	mm	mm	mm		£ T9		£ T9	
M4x0,5	0.50	63	4.5	3.4	3.5	5	21	3	48.53	040	55.37	040
M5x0,5	0.50	70	6.0	4.9	4.5	5	25	3	48.53	050	55.37	050
M6x0,5	0.50	80	6.0	4.9	5.5	5	30	3	48.53	060	63.18	060
M6x0,75	0.75	80	6.0	4.9	5.2	8	30	3	48.53	062	63.18	062



DIN 374 with reduced shank

TD	TP	OAL	DCONMS	DRVS	PHD	THL	Flutes	23 243 ...		23 149 ...		23 145 ...		23 147 ...	
mm	mm	mm	mm	mm	mm	mm		£ T9		£ T9		£ T9		£ T9	
M4x0,5	0.50	63	2.8	2.1	3.5	5	3					17.91	040		
M5x0,5	0.50	70	3.5	2.7	4.5	5	3					17.91	050		
M6x0,75	0.75	80	4.5	3.4	5.2	8	3					19.05	062		
M8x0,5	0.50	80	6.0	8.0	7.5	6	3	67.72	080						
M8x0,75	0.75	80	6.0	4.9	7.2	8	3	31.86	082	82.27	082	21.60	082	67.33	082
M8x1	1.00	90	6.0	4.9	7.0	10	3	30.04	084	77.11	084	15.77	084	63.18	084
M10x0,75	0.75	90	7.0	5.5	9.2	10	4	74.52	100			34.82	100	104.40	100
M10x1	1.00	90	7.0	5.5	9.0	10	3	34.93	102			16.49	102	71.94	102
M10x1	1.00	90	7.0	5.5	9.0	10	4			89.05	102				
M10x1,25	1.25	100	7.0	5.5	8.8	16	3	64.20	104			18.33	104	91.11	104
M12x1	1.00	100	9.0	7.0	11.0	11	4	41.15	120	101.15	120	22.17	120	84.49	120
M12x1,25	1.25	100	9.0	7.0	10.8	15	4	71.94	122			26.14	122	102.75	122
M12x1,5	1.50	100	9.0	7.0	10.5	15	4	38.92	124			19.60	124	81.75	124
M12x1,5	1.50	100	9.0	7.0	10.5	15	5			97.97	124				
M14x1	1.00	100	11.0	9.0	13.0	11	4	71.94	140			29.27	140	110.32	140
M14x1,5	1.50	100	11.0	9.0	12.5	15	4	48.53	144			26.57	144	102.75	144
M14x1,5	1.50	100	11.0	9.0	12.5	15	5			125.63	144				
M16x1	1.00	100	12.0	9.0	15.0	12	4	83.06	160			31.41	160	121.00	160
M16x1,5	1.50	100	12.0	9.0	14.5	15	4	61.42	162			30.41	162	121.00	162
M16x1,5	1.50	100	12.0	9.0	14.5	15	5			140.20	162				
M18x1,5	1.50	110	14.0	11.0	16.5	17	4	79.70	182			42.22	182	138.42	182
M18x1,5	1.50	110	14.0	11.0	16.5	17	5			177.47	182				
M20x1,5	1.50	125	16.0	12.0	18.5	17	4	88.92	202			38.80	202	179.31	202
M20x1,5	1.50	125	16.0	12.0	18.5	17	5			232.42	202				
M22x1,5	1.50	125	18.0	14.5	20.5	17	4	102.95	222			57.57	222	199.61	222
M24x1,5	1.50	140	18.0	14.5	22.5	20	5	119.90	242			62.82	242	213.07	242

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

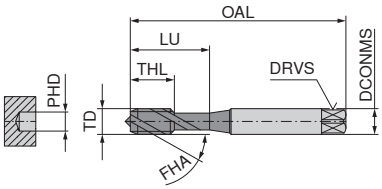
MF

VA

E
1,5–2

ISO 2
6H

TiN

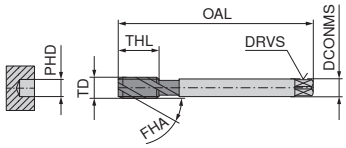


DIN 371 with reinforced shank

HSS-E
FHA 45°
≤ 1200 N/mm²
≤ 3xD

23 442 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9	
M5x0,5	0.50	70	6	4.9	4.5	5	25	3	54.81	**050**
M6x0,75	0.75	80	6	4.9	5.2	8	30	3	63.18	**062**



DIN 374 with reduced shank

23 443 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9	
M8x0,75	0.75	80	6	4.9	7.2	8	3	67.33	**082**
M8x1	1.00	90	6	4.9	7.0	10	3	63.18	**084**
M10x1	1.00	90	7	5.5	9.0	10	4	72.52	**102**
M12x1	1.00	100	9	7.0	11.0	11	4	84.86	**120**
M12x1,5	1.50	100	9	7.0	10.5	15	5	81.75	**124**
M14x1,5	1.50	100	11	9.0	12.5	15	5	103.53	**144**
M16x1,5	1.50	100	12	9.0	14.5	15	5	116.74	**162**

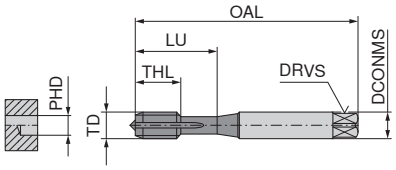
P	**10**
M	**8**
K	
N	**24**
S	
H	
O	

Cutting speed v_c (m/min.)

6

Through hole / Blind hole – Machine taps, right hand

DuoTap | MF



DIN 371 with reinforced shank

	ST	HR	HT
	C 2–3	C 2–3	D 4–5
	ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
		nitr.	OSM
			
	HSS-E FHA 0° ≤ 750 N/mm² ≤ 2xD	HSS-E FHA 0° ≤ 1400 N/mm² ≤ 2xD	Solid carbide FHA 0° ≤ 63 HRC ≤ 1,5xD
	22 144 ...	**22 146 ...**	**22 817 ...**

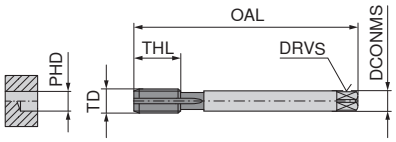
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0	
M4x0,5	0.50	63	4.5	3.4	3.5	10	21	3	66.06	**040**	74.52	**040**		
M5x0,5	0.50	70	6.0	4.9	4.5	11	25	3	66.06	**050**	74.52	**050**		
M6x0,5	0.50	80	6.0	4.9	5.5	13	30	3	66.06	**060**	74.52	**060**		
M6x0,75	0.75	80	6.0	4.9	5.2	13	30	3	66.06	**062**	74.52	**062**		
M8x1	1.00	90	8.0	6.2	7.0	17	35	3	66.06	**084**				
M8x1	1.00	90	8.0	6.2	7.1	15	35	5					512.65	**080**
M10x1	1.00	90	10.0	8.0	9.0	18	35	4	66.06	**104**				
M10x1	1.00	100	10.0	8.0	9.1	18	38	5					650.25	**100**
M12x1,5	1.50	110	12.0	9.0	10.6	21	41	5					759.26	**120**
M14x1,5	1.50	110	14.0	11.0	12.6	24	44	6					887.65	**140**
M16x1,5	1.50	110	16.0	12.0	14.6	24	44	6					1,010.72	**160**
P										**12**		**6**		
M														
K										**12**		**16**		
N										**22**		**22**		
S														
H														**2**
O														

Cutting speed v_c (m/min.)

DIN 374 can be found on the next page

Through hole / Blind hole – Machine taps, right hand

DuoTap | MF



DIN 374 with reduced shank

ST	HR	GG
C 2–3	C 2–3	C 2–3
ISO 2X 6HX	ISO 2X 6HX	ISO 2X 6HX
	nitr.	nitr.

HSS-E FHA 0° ≤ 750 N/mm² ≤ 2xD | HSS-E FHA 0° ≤ 1400 N/mm² ≤ 2xD | HSS-E FHA 0° ≤ 1050 N/mm² ≤ 2xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 171 ... £ U0		22 209 ... £ U0		22 173 ... £ U0	
M4x0,5	0.50	63	2.8	2.1	3.5	10	3	51.77	042				
M5x0,5	0.50	70	3.5	2.7	4.5	11	3	64.02	050			59.61	050
M6x0,5	0.50	80	4.5	3.4	5.5	13	3	58.83	060			74.89	060
M6x0,75	0.75	80	4.5	3.4	5.2	13	3	58.63	062			65.10	062
M8x0,75	0.75	80	6.0	4.9	7.2	14	3	65.86	082			114.21	080
M8x1	1.00	90	6.0	4.9	7.0	17	3	52.31	084	74.52	082	114.21	082
M10x0,75	0.75	90	7.0	5.5	9.2	18	4	85.05	102				
M10x1	1.00	90	7.0	5.5	9.0	18	4	54.81	104	74.52	100	64.20	100
M10x1,25	1.25	100	7.0	5.5	8.8	22	3	65.10	106				
M11x1	1.00	90	8.0	6.2	10.0	18	4	95.72	110				
M12x1	1.00	100	9.0	7.0	11.0	18	4	62.44	122			75.11	120
M12x1,25	1.25	100	9.0	7.0	10.8	22	4	78.06	124				
M12x1,5	1.50	100	9.0	7.0	10.5	22	4	62.44	126	87.79	120	69.67	124
M14x1	1.00	100	11.0	9.0	13.0	18	4	95.72	140			109.01	140
M14x1,25	1.25	100	11.0	9.0	12.8	22	4	88.54	142				
M14x1,5	1.50	100	11.0	9.0	12.5	22	4	91.87	144	114.21	140	99.06	142
M16x1	1.00	100	12.0	9.0	15.0	18	5	99.06	160				
M16x1,5	1.50	100	12.0	9.0	14.5	22	4	89.05	162	124.91	160	101.15	160
M18x1	1.00	110	14.0	11.0	17.0	20	5	129.12	180				
M18x1,5	1.50	110	14.0	11.0	16.5	25	4	119.39	182	145.68	180	137.63	180
M18x2	2.00	125	14.0	11.0	16.0	26	4	144.47	184				
M20x1	1.00	125	16.0	12.0	19.0	20	5	140.20	200				
M20x1,5	1.50	125	16.0	12.0	18.5	25	4	130.80	202	186.67	200	145.55	200
M20x2	2.00	140	16.0	12.0	18.0	27	4	180.98	204				
M22x1	1.00	125	18.0	14.5	21.0	20	5	192.96	220				
M22x1,5	1.50	125	18.0	14.5	20.5	25	4	140.20	222			154.77	220
M22x2	2.00	140	18.0	14.5	20.0	27	4	199.22	224				
M24x1	1.00	140	18.0	14.5	23.0	20	6	221.72	240				
M24x1,5	1.50	140	18.0	14.5	22.5	27	4	156.07	242			177.06	240
M24x2	2.00	140	18.0	14.5	22.0	27	4	178.56	244				
M25x1,5	1.50	140	18.0	14.5	23.5	28	4	288.50	250				
M26x1,5	1.50	140	18.0	14.5	24.5	28	4	223.22	260			217.48	260
M27x1,5	1.50	140	20.0	16.0	25.5	28	5	258.62	272				
M27x2	2.00	140	20.0	16.0	25.0	28	4	242.21	274				
M28x1,5	1.50	140	20.0	16.0	26.5	28	5					257.85	280
M30x1,5	1.50	150	22.0	18.0	28.5	28	5	250.14	300			283.19	300
M30x2	2.00	150	22.0	18.0	28.0	28	4	302.53	302				

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

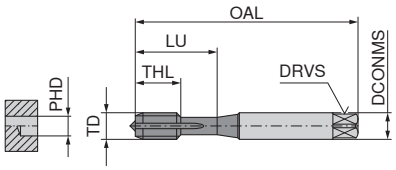
Cutting speed v_c (m/min.)

Through Hole / Blind Hole – Machine taps

▲ ES = extra short

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

DuoTap | MF



DIN 2181 with reinforced shank

ST ES | C 2–3 | ISO 2X 6HX

HSS-E
FHA 0°
≤ 750 N/mm²
≤ 2xD

ST LH/ES | C 2–3 | ISO 2X 6HX

HSS-E
FHA 0°
≤ 750 N/mm²
≤ 2xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 179 ... £ U0		22 200 ... £ U0	
M3x0,35	0.35	40	3.5	2.7	2.65	8	18	3	63.71	030		
M4x0,35	0.35	45	4.5	3.4	3.65	9	22	3	92.24	040		
M4x0,5	0.50	45	4.5	3.4	3.50	9	22	3	63.71	042		
M4,5x0,5	0.50	50	6.0	4.9	4.00	10	24	3	106.98	045		
M5x0,5	0.50	50	6.0	4.9	4.50	11	25	3	63.71	050		
M6x0,5	0.50	56	6.0	4.9	5.50	12	27	3	66.06	060		
M6x0,75	0.75	56	6.0	4.9	5.20	12	27	3	63.71	062	87.79	062
M7x0,75	0.75	56	6.0	4.9	6.20	14		3	72.16	070		
M8x0,5	0.50	56	6.0	4.9	7.50	14		4	87.79	080		
M8x0,75	0.75	56	6.0	4.9	7.20	14		3	72.16	082		
M8x1	1.00	63	6.0	4.9	7.00	17		3	63.71	084	87.79	084
M9x1	1.00	63	7.0	5.5	8.00	17		4	87.79	090		
M10x0,75	0.75	63	7.0	5.5	9.20	18		4	94.65	100		
M10x1	1.00	63	7.0	5.5	9.00	18		4	66.06	102	92.24	102
M10x1,25	1.25	70	7.0	5.5	8.80	22		3	86.90	104		
M11x1	1.00	63	8.0	6.2	10.00	18		4	104.40	110		
M12x1	1.00	70	9.0	7.0	11.00	18		4	78.20	120	109.50	120
M12x1,25	1.25	70	9.0	7.0	10.80	20		4	87.79	122		
M12x1,5	1.50	70	9.0	7.0	10.50	20		4	75.85	124	106.98	124
M13x1	1.00	70	11.0	9.0	12.00	18		4	114.38	130		
M14x1	1.00	70	11.0	9.0	13.00	18		4	104.40	140		
M14x1,25	1.25	70	11.0	9.0	12.80	20		4	104.40	142		
M14x1,5	1.50	70	11.0	9.0	12.50	20		4	99.24	144	141.30	144
M15x1	1.00	70	12.0	9.0	14.00	18		5	127.14	150		
M16x1	1.00	70	12.0	9.0	15.00	18		5	118.81	160		
M16x1,5	1.50	70	12.0	9.0	14.50	20		4	109.50	162	154.59	162
M18x1	1.00	80	14.0	11.0	17.00	18		5	154.59	180		
M18x1,5	1.50	80	14.0	11.0	16.50	22		4	129.68	182	178.25	182
M18x2	2.00	80	14.0	11.0	16.00	22		4	154.59	184		
M20x1,5	1.50	80	16.0	12.0	18.50	22		4	150.91	202	208.81	202
M20x2	2.00	80	16.0	12.0	18.00	22		4	164.02	204		

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

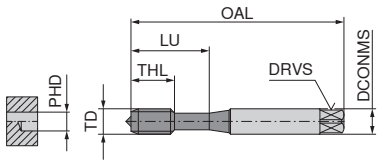
Cutting speed v_c (m/min.)

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

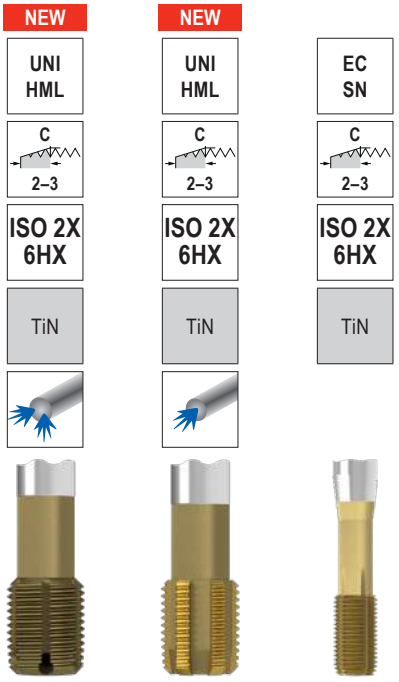
▲ SN = Thread formers with lubrication grooves

▲ HML = with soldered-in carbide strips for a higher cutting speed

DuoForm | MF



DIN 2174 with reinforced shank

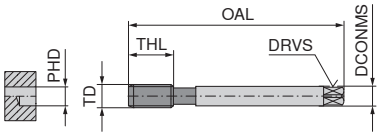


HSS-E / HM
≤ 1100 N/mm²
≤ 3xD

HSS-E / HM
≤ 1100 N/mm²
≤ 3xD

HSS-E
≤ 1100 N/mm²
≤ 3xD

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 205 ... £ U0	
M4x0,5	0.50	63	4.5	3.4	3.8	10	21	4	159.21	**040**
M5x0,5	0.50	70	6.0	4.9	4.8	11	25	4	141.30	**050**
M6x0,5	0.50	80	6.0	4.9	5.8	13	30	5	159.21	**060**
M6x0,75	0.75	80	6.0	4.9	5.7	13	30	4	127.14	**062**
M8x0,75	0.75	80	8.0	6.2	7.7	14	30	5	141.30	**080**
M8x1	1.00	90	8.0	6.2	7.6	17	35	5	150.91	**082**
M10x1	1.00	90	10.0	8.0	9.6	18	35	5	139.13	**100**



DIN 2174 with reduced shank

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 474 ... £ U0		22 474 ... £ U0		22 197 ... £ U0	
M12x1	1.0	100	9	7	11.60	18	6					124.83	**120**
M12x1,5	1.5	100	9	7	11.35	13				490.95	**12000**		
M12x1,5	1.5	100	9	7	11.35	22	6					131.73	**124**
M14x1,5	1.5	100	11	9	13.35	22	6					184.10	**140**
M16x1,5	1.5	100	12	9	15.35	18		701.62	**16100**	560.28	**16000**		
M16x1,5	1.5	100	12	9	15.35	22	6					197.22	**160**
M20x1,5	1.5	125	16	12	19.35	25	6					270.64	**200**
P									**30**		**30**		**18**
M									**20**		**20**		**10**
K									**30**		**30**		**10**
N									**40**		**40**		**22**
S													
H													
O													

Cutting speed v_c (m/min.)

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

▲ SN = Thread formers with lubrication grooves

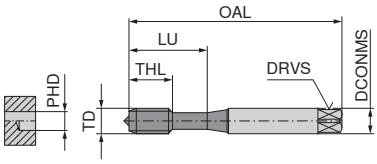
MF

UNI
SN

C
2–3

ISO 2X
6HX

TiN

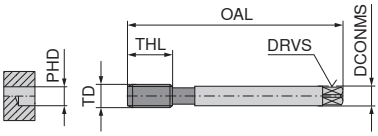


DIN 2174 with reinforced shank

HSS-E
≤ 850 N/mm²
≤ 3xD

23 842 ...

TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9	
M4x0,5	0.50	63	4.5	3.4	3.80	10	21	4	88.17	**040**
M5x0,5	0.50	70	6.0	4.9	4.80	11	25	4	78.20	**050**
M6x0,5	0.50	80	6.0	4.9	5.80	13	30	5	88.77	**060**
M8x1	1.00	90	8.0	6.2	7.60	17	35	5	84.49	**084**
M10x1	1.00	90	10.0	8.0	9.60	18	35	5	93.74	**102**
M10x1,25	1.25	100	10.0	8.0	9.45	18	39	5	114.21	**104**



DIN 2174 with reduced shank

23 843 ...

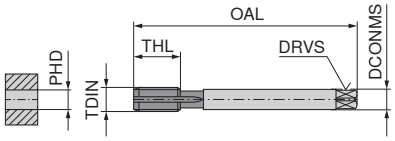
TD mm	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9	
M12x1,25	1.25	100	9	7	11.45	22	6	124.71	**122**
M12x1,5	1.50	100	9	7	11.35	22	6	111.26	**124**
M14x1,5	1.50	100	11	9	13.35	22	6	138.17	**144**
M16x1,5	1.50	100	12	9	15.35	22	6	161.07	**162**

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

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

TruTap | G



DIN 5156 with reduced shank

	UNI	UNI	ST	NW	VA
	B 4–5	B 4–5	B 4–5	B 4–5	B 4–5
	ISO 228	ISO 228	ISO 228	ISO 228	ISO 228
	nitr. + vap.	TiN		DLC	nitr.
					
	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 750 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 880 N/mm² ≤ 4xD	HSS-E FHA 0° ≤ 900 N/mm² ≤ 4xD
	22 632 ...	22 630 ...	22 346 ...	22 467 ...	22 352 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0		£ U0		£ U0		£ U0	
1/8-28	0.907	90	7	5.5	8.80	18	3	79.20	**012**	129.68	**012**	63.27	**012**	71.01	**01200**	78.72	**012**
1/4-19	1.337	100	11	9.0	11.80	22	3	105.06	**025**	171.21	**025**	84.16	**025**	94.92	**02500**	103.55	**025**
3/8-19	1.337	100	12	9.0	15.25	22	3	130.43	**037**	198.31	**037**	101.10	**037**	121.82	**03700**	130.80	**037**
1/2-14	1.814	125	16	12.0	19.00	25	4	167.16	**050**	306.43	**050**	140.77	**050**	162.06	**05000**	172.29	**050**
3/4-14	1.814	140	20	16.0	24.50	28	4	278.23	**075**			225.98	**075**	256.88	**07500**	255.49	**075**
1-11	2.309	160	25	20.0	30.75	30	4	414.58	**100**			321.18	**100**	378.02	**10000**	394.76	**100**

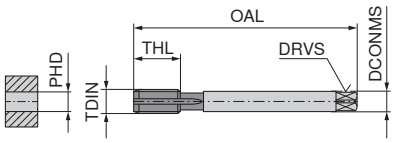
P	**12**	**15**	**12**		**8**
M	**7**	**9**			**6**
K	**12**	**18**	**12**		
N		**12**	**22**	**15**	**22**
S					
H					
O					

Cutting speed v_c (m/min.)

6

Through hole – Machine taps, right hand

G



DIN 5156 with reduced shank

UNI
B
4–5
ISO 228
nitr. + vap.

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 3xD

23 161 ...

UNI
B
4–5
ISO 228
TiN

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 3xD

23 160 ...

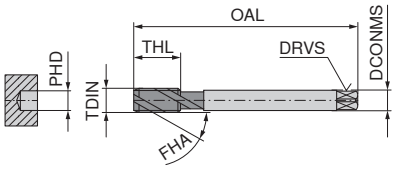
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9		£ T9	
1/8-28	0.907	90	7	5.5	8.80	18	3	48.70	**012**	71.59	**012**
1/4-19	1.337	100	11	9.0	11.80	22	3	65.52	**025**	94.65	**025**
3/8-19	1.337	100	12	9.0	15.25	22	3	83.59	**037**	111.26	**037**
1/2-14	1.814	125	16	12.0	19.00	25	4	109.50	**050**	170.82	**050**
3/4-14	1.814	140	20	16.0	24.50	28	4	178.96	**075**	222.83	**075**
1-11	2.309	160	25	20.0	30.75	30	4	244.06	**100**	412.67	**100**

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

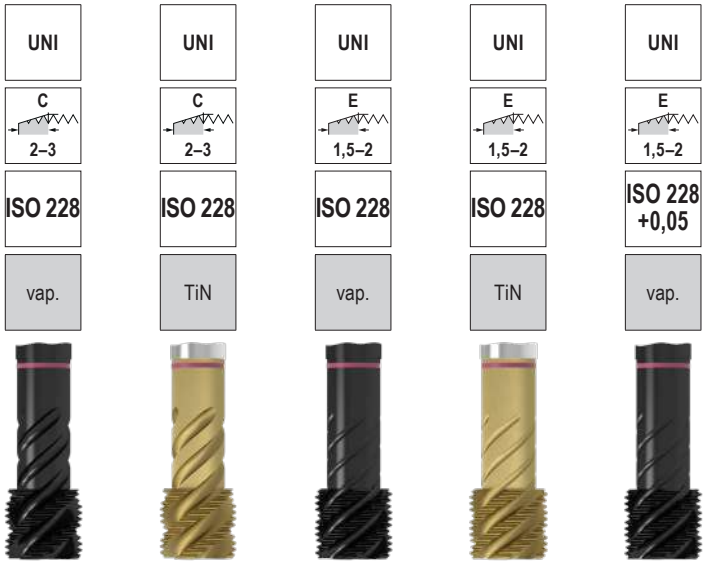
Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

CavTap | G



DIN 5156 with reduced shank



HSS-E
FHA 42°
≤ 1100 N/mm²
≤ 3xD

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 633 ... £ U0		22 634 ... £ U0		22 635 ... £ U0		22 636 ... £ U0		22 639 ... £ U0	
1/8-28	0.907	90	7	5.5	8.80	10	3	78.45	012	116.20	012						
1/8-28	0.907	90	7	5.5	8.80	10	4					80.62	012	116.20	012	127.14	012
1/4-19	1.337	100	11	9.0	11.80	15	4	112.47	025	147.57	025						
1/4-19	1.337	100	11	9.0	11.80	15	5					108.21	025	147.57	025	165.61	025
3/8-19	1.337	100	12	9.0	15.25	15	4	136.58	037	206.41	037						
3/8-19	1.337	100	12	9.0	15.25	15	5					132.97	037	206.41	037	205.32	037
1/2-14	1.814	125	16	12.0	19.00	17	4	180.51	050	292.58	050						
1/2-14	1.814	125	16	12.0	19.00	17	5					172.29	050	292.58	050	268.42	050
5/8-14	1.814	125	18	14.5	21.00	17	4	223.78	062								
3/4-14	1.814	140	20	16.0	24.50	20	4	280.03	075								
3/4-14	1.814	140	20	16.0	24.50	20	5									401.23	075
7/8-14	1.814	150	22	18.0	28.25	22	5	382.44	087								
1-11	2.309	160	25	20.0	30.75	24	5	431.54	100								
1-11	2.309	160	25	20.0	30.75	24	6									612.42	100
1 1/4-11	2.309	170	32	24.0	39.50	25	6	679.10	125								
1 1/2-11	2.309	190	36	29.0	45.25	27	6	971.17	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					

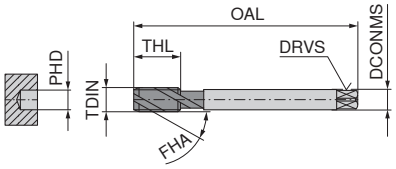
Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

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

CavTap | G



DIN 5156 with reduced shank

UNI CNC	ST	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

HSS-E
FHA 45°
≤ 1100 N/mm²
≤ 3xD

HSS-E
FHA 42°
≤ 750 N/mm²
≤ 3xD

HSS-E
FHA 36°
≤ 880 N/mm²
≤ 2,5xD

HSS-E
FHA 42°
≤ 900 N/mm²
≤ 3xD

HSS-E
FHA 45°
≤ 900 N/mm²
≤ 3xD

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 624 ... £ U0		22 354 ... £ U0		22 463 ... £ U0		22 355 ... £ U0		22 358 ... £ U0	
1/8-28	0.907	90	7	5.5	8.80	10	3			72.16	012	79.00	01200			142.77	012
1/8-28	0.907	90	7	5.5	8.80	10	4	140.77	012					81.18	012		
1/4-19	1.337	100	11	9.0	11.80	15	4			99.06	025	114.06	02500				
1/4-19	1.337	100	11	9.0	11.80	15	5	185.21	025					110.15	025	187.62	025
3/8-19	1.337	100	12	9.0	15.25	15	4			121.58	037	135.95	03700				
3/8-19	1.337	100	12	9.0	15.25	15	5	218.61	037					132.28	037	221.95	037
1/2-14	1.814	125	16	12.0	19.00	17	4			156.07	050	173.64	05000				
1/2-14	1.814	125	16	12.0	19.00	17	5	327.97	050					179.65	050	332.62	050
5/8-14	1.814	125	18	14.5	21.00	17	5							247.03	062		
3/4-14	1.814	140	20	16.0	24.50	20	4			249.04	075	276.89	07500				
3/4-14	1.814	140	20	16.0	24.50	20	5							277.27	075		
1-11	2.309	160	25	20.0	30.75	24	5			385.20	100	443.58	10000				
1-11	2.309	160	25	20.0	30.75	24	6							427.79	100		

P	15	12		8	10
M	9			6	8
K	18	12			
N	12	22	15	22	22
S					
H					
O					

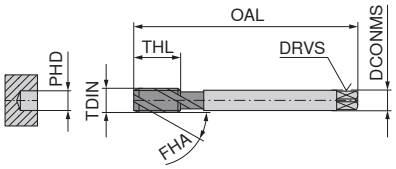
Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

G

UNI | C 2–3 | ISO 228 | vap.

UNI | C 2–3 | ISO 228 | TiN



DIN 5156 with reduced shank

HSS-E
FHA 35°
≤ 1100 N/mm²
≤ 2,5xD

HSS-E
FHA 35°
≤ 1100 N/mm²
≤ 2,5xD

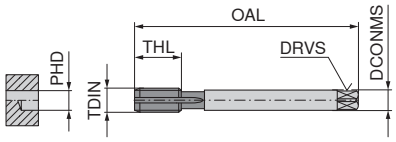
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	23 163 ... £ T9		23 162 ... £ T9	
1/8-28	0.907	90	7	5.5	8.80	10	3	54.95	**012**	74.52	**012**
1/4-19	1.337	100	11	9.0	11.80	15	4	72.23	**025**	102.75	**025**
3/8-19	1.337	100	12	9.0	15.25	15	4	92.24	**037**	121.00	**037**
1/2-14	1.814	125	16	12.0	19.00	17	4	114.91	**050**	182.08	**050**
3/4-14	1.814	140	20	16.0	24.50	20	4	190.93	**075**	234.44	**075**
1-11	2.309	160	25	20.0	30.75	24	5	288.72	**100**	453.23	**100**

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

Cutting speed v_c (m/min.)

Through hole / Blind hole – Machine taps, right hand

DuoTap | G



DIN 5156 with reduced shank

	ST	HR
	C 2–3	C 2–3
	ISO 228 X	ISO 228 X
		nitr.
		
	HSS-E FHA 0° ≤ 750 N/mm² ≤ 2xD	HSS-E FHA 0° ≤ 1400 N/mm² ≤ 2xD
	22 347 ...	22 339 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0	
1/16-28	0.907	90	6	4.9	6.80	17	3	72.23	**006**		
1/8-28	0.907	90	7	5.5	8.80	18	4	67.33	**012**	78.20	**012**
1/4-19	1.337	100	11	9.0	11.80	22	4	82.68	**025**	106.98	**025**
3/8-19	1.337	100	12	9.0	15.25	22	4	100.36	**037**	134.29	**037**
1/2-14	1.814	125	16	12.0	19.00	25	4	137.63	**050**	184.10	**050**
3/4-14	1.814	140	20	16.0	24.50	28	4	210.30	**075**	287.41	**075**
1-11	2.309	160	25	20.0	30.75	30	5	322.65	**100**	396.42	**100**
1 1/8-11	2.309	170	28	22.0	35.50	30	5	459.14	**112**	560.23	**112**
1 1/4-11	2.309	170	32	24.0	39.50	30	6	531.64	**125**	664.65	**125**
1 3/8-11	2.309	180	36	29.0	41.75	32	6	651.88	**137**	825.84	**137**
1 1/2-11	2.309	190	36	29.0	45.25	32	6	719.99	**150**	920.49	**150**
1 3/4-11	2.309	190	40	32.0	51.00	32	6			1,233.70	**175**

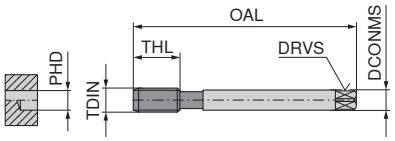
P	**12**	**6**
M		
K	**12**	**16**
N	**22**	**22**
S		
H		
O		

Cutting speed v_c (m/min.)

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

▲ SN = Thread formers with lubrication grooves

DuoForm | G



DIN 2189 with reduced shank

	EC	EC SN
	C 2–3	C 2–3
	ISO 228	ISO 228
	TiN	TiN
		
	HSS-E ≤ 1100 N/mm² ≤ 1,5xD	HSS-E ≤ 1100 N/mm² ≤ 3xD
	22 360 ...	**22 359 ...**

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0	
1/8-28	0.907	90	7	5.5	9.25	18		115.48	**012**		
1/8-28	0.907	90	7	5.5	9.25	18	5			131.16	**012**
1/4-19	1.337	100	11	9.0	12.55	22		148.52	**025**		
1/4-19	1.337	100	11	9.0	12.55	22	6			167.52	**025**
3/8-19	1.337	100	12	9.0	16.05	22		200.18	**037**		
3/8-19	1.337	100	12	9.0	16.05	22	6			224.29	**037**
1/2-14	1.814	125	16	12.0	20.10	25		269.14	**050**		
1/2-14	1.814	125	16	12.0	20.10	25	6			301.79	**050**

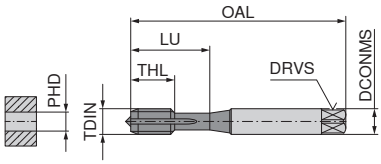
P	**18**	**18**
M	**10**	**10**
K	**10**	**10**
N	**22**	**22**
S		
H		
O		

Cutting speed v_c (m/min.)

6

Through hole – Machine taps, right hand

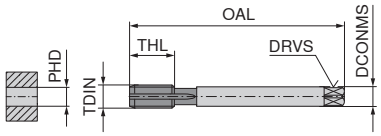
TruTap | UNC



DIN 371 with reinforced shank

	VA	Ti	UNI
	B 4–5	B 4–5	B 4–5
	2B	2BX	2B
	nitr.	TiN	nitr. + vap.
			
	HSS-E FHA 0° ≤ 900 N/mm² ≤ 4xD	HSS-PM FHA 0° ≤ 44 HRC ≤ 4xD	HSS-E FHA 0° ≤ 1100 N/mm² ≤ 4xD
	22 250 ...	**22 269 ...**	**22 572 ...**

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0	
Nr. 2-56	0.454	45	2.8	2.1	1.85	7	12	2					105.51	**002**
Nr. 4-40	0.635	56	3.5	2.7	2.35	11	18	2					58.11	**004**
Nr. 4-40	0.635	56	3.5	2.7	2.35	11	18	3			131.24	**004**		
Nr. 6-32	0.794	56	4.0	3.0	2.85	12	20	3	50.50	**006**	117.74	**006**	49.30	**006**
Nr. 8-32	0.794	63	4.5	3.4	3.50	13	21	3	50.00	**008**	117.74	**008**	49.79	**008**
Nr. 10-24	1.058	70	6.0	4.9	3.90	15	25	3	49.79	**010**	125.79	**010**	53.85	**010**
Nr. 12-24	1.058	80	6.0	4.9	4.50	16	30	3					65.09	**012**
1/4-20	1.270	80	7.0	5.5	5.10	17	30	3	63.18	**025**	131.24	**025**	56.80	**025**
5/16-18	1.411	90	8.0	6.2	6.60	20	35	3	64.75	**031**	141.43	**031**	67.69	**031**
3/8-16	1.588	100	10.0	8.0	8.00	22	39	3	65.86	**037**	166.40	**037**	74.70	**037**



DIN 376 with reduced shank

								22 573 ...	
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
1/2-13	1.954	110	9	7.0	10.80	25	3	91.62	**050**
5/8-11	2.309	110	12	9.0	13.50	27	3	124.83	**062**
3/4-10	2.540	125	14	11.0	16.50	30	3	153.45	**075**
7/8-9	2.822	140	18	14.5	19.50	32	3	197.32	**087**
1-8	3.175	160	18	14.5	22.25	36	3	253.55	**100**

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

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

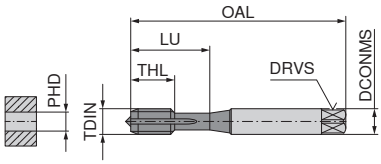
UNC

UNI | FE-HF | VA

B 4–5

2B

TiN | TiCN | nitr.



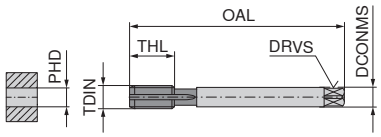
DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1000 N/mm²
≤ 3xD

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 3xD

HSS-E
FHA 0°
≤ 1000 N/mm²
≤ 3xD

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	23 170 ... £ T9		23 370 ... £ T9		23 470 ... £ T9	
Nr. 4-40	0.635	56	3.5	2.7	2.30	11	18	2	38.38	**004**	41.15	**004**	37.10	**004**
Nr. 6-32	0.794	56	4.0	3.0	2.85	12	20	3	37.10	**006**	39.09	**006**	33.66	**006**
Nr. 8-32	0.794	63	4.5	3.4	3.50	13	21	3	37.10	**008**	39.09	**008**	32.94	**008**
Nr. 10-24	1.058	70	6.0	4.9	3.90	15	25	3	38.38	**010**	41.33	**010**	37.10	**010**
1/4-20	1.270	80	7.0	5.5	5.20	17	30	3	50.35	**025**	57.21	**025**	38.92	**025**
5/16-18	1.411	90	8.0	6.2	6.60	20	35	3	55.37	**031**	61.37	**031**	44.36	**031**
3/8-16	1.588	100	10.0	8.0	8.00	22	39	3	64.44	**037**	73.99	**037**	51.29	**037**



DIN 376 with reduced shank

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	23 171 ... £ T9	
7/16-14	1.814	100	8	6.2	9.40	22	3	76.38	**043**
1/2-13	1.954	110	9	7.0	10.75	25	3	83.61	**050**
5/8-11	2.309	110	12	9.0	13.50	27	3	106.45	**062**
3/4-10	2.540	125	14	11.0	16.50	30	3	161.07	**075**

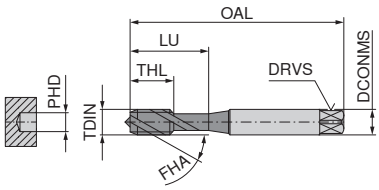
P	**15**	**15**	**8**
M	**9**		**6**
K	**18**	**15**	
N	**12**	**15**	**22**
S			
H			
O			

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

CavTap | UNC



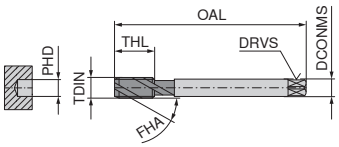
DIN 371 with reinforced shank

UNI	VA
C 2–3	C 2–3
2B	2B
vap.	vap.

HSS-E
FHA 42°
≤ 1100 N/mm²
≤ 3xD

HSS-E
FHA 42°
≤ 900 N/mm²
≤ 3xD

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 582 ... £ U0		22 266 ... £ U0	
Nr. 2-56	0.454	45	2.8	2.1	1.85	4.5	12	2	87.44	002		
Nr. 4-40	0.635	56	3.5	2.7	2.35	6.0	18	2	51.67	004		
Nr. 6-32	0.794	56	4.0	3.0	2.85	7.0	20	3	47.44	006	50.00	006
Nr. 8-32	0.794	63	4.5	3.4	3.50	8.0	21	3	48.89	008	53.34	008
Nr. 10-24	1.058	70	6.0	4.9	3.90	10.0	25	3	52.02	010	58.83	010
1/4-20	1.270	80	7.0	5.5	5.10	13.0	30	3	56.46	025	59.24	025
5/16-18	1.411	90	8.0	6.2	6.60	14.0	35	3	59.53	031	68.07	031
3/8-16	1.588	100	10.0	8.0	8.00	16.0	39	3	65.86	037	70.38	037



DIN 376 with reduced shank

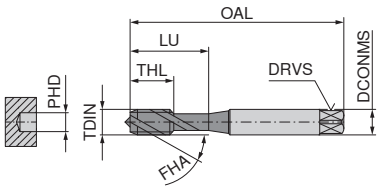
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	22 583 ... £ U0		22 267 ... £ U0	
7/16-14	1.814	100	8	6.2	9.40	18	3	125.79	043		
7/16-14	1.814	100	8	6.2	9.40	18	4			148.48	043
1/2-13	1.954	110	9	7.0	10.80	20	3	92.44	050		
1/2-13	1.954	110	9	7.0	10.80	20	4			103.55	050
9/16-12	2.117	110	11	9.0	12.25	20	3	133.37	056		
5/8-11	2.309	110	12	9.0	13.50	22	3	121.00	062		
5/8-11	2.309	110	12	9.0	13.50	22	4			131.41	062
3/4-10	2.540	125	14	11.0	16.50	25	3	156.44	075		
3/4-10	2.540	125	14	11.0	16.50	25	4			163.81	075
7/8-9	2.822	140	18	14.5	19.50	27	4	187.07	087		
1-8	3.175	160	18	14.5	22.25	30	4	253.09	100		
1-8	3.175	160	18	14.5	22.25	30	5			277.27	100

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

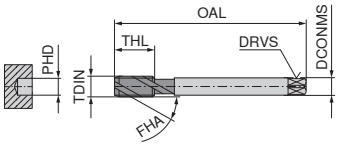
UNC



DIN 371 with reinforced shank

	UNI	FE-HF	VA
	C 2–3	C 2–3	C 2–3
	2B	2B	2B
	TiN	TiCN	
			
	HSS-E FHA 35° ≤ 1000 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 1100 N/mm² ≤ 2,5xD	HSS-E FHA 35° ≤ 1000 N/mm² ≤ 2,5xD
	23 172 ...	23 372 ...	23 472 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9		£ T9		£ T9	
Nr. 4-40	0.635	56	3.5	2.7	2.30	6	18	2	40.72	004			38.92	004
Nr. 4-40	0.635	56	3.5	2.7	2.30	11	18	2			42.72	004		
Nr. 6-32	0.794	56	4.0	3.0	2.85	7	20	3	38.19	006			36.59	006
Nr. 6-32	0.794	56	4.0	3.0	2.85	12	20	3			41.33	006		
Nr. 8-32	0.794	63	4.5	3.4	3.50	8	21	3	41.15	008			37.82	008
Nr. 8-32	0.794	63	4.5	3.4	3.50	13	21	3			43.72	008		
Nr. 10-24	1.058	70	6.0	4.9	3.90	10	25	3	42.40	010			40.21	010
Nr. 10-24	1.058	70	6.0	4.9	3.90	15	25	3			44.36	010		
1/4-20	1.270	80	7.0	5.5	5.20	13	30	3	54.81	025			45.01	025
1/4-20	1.270	80	7.0	5.5	5.20	17	30	3			60.88	025		
5/16-18	1.411	90	8.0	6.2	6.60	14	35	3	54.81	031			47.59	031
5/16-18	1.411	90	8.0	6.2	6.60	20	35	3			63.46	031		
3/8-16	1.588	100	10.0	8.0	8.00	16	39	3	67.14	037			53.12	037
3/8-16	1.588	100	10.0	8.0	8.00	22	39	3			74.04	037		



DIN 376 with reduced shank

	23 173 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9	
7/16-14	1.814	100	8	6.2	9.40	18	3	84.86	043
1/2-13	1.954	110	9	7.0	10.75	20	3	89.87	050
5/8-11	2.309	110	12	9.0	13.50	22	3	110.32	062
3/4-10	2.540	125	14	11.0	16.50	25	3	163.79	075

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

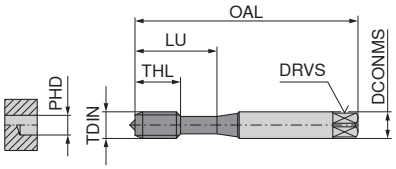
Cutting speed v_c (m/min.)

6

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

▲ SN = Thread formers with lubrication grooves

DuoForm | UNC



DIN 2174 with reinforced shank

	EC	EC SN
	C 2–3	C 2–3
	2BX	2BX
	TiN	TiN
		
	HSS-E ≤ 1100 N/mm² ≤ 1,5xD	HSS-E ≤ 1100 N/mm² ≤ 3xD

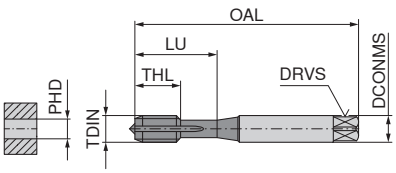
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	22 270 ... £ U0		22 271 ... £ U0	
Nr. 4-40	0.635	56	3.5	2.7	2.55	11	18		67.72	**004**		
Nr. 4-40	0.635	56	3.5	2.7	2.55	11	18	3			78.62	**004**
Nr. 6-32	0.794	56	4.0	3.0	3.15	12	20		63.46	**006**		
Nr. 6-32	0.794	56	4.0	3.0	3.15	12	20	3			72.86	**006**
Nr. 8-32	0.794	63	4.5	3.4	3.80	13	21		63.83	**008**		
Nr. 8-32	0.794	63	4.5	3.4	3.80	13	21	4			72.86	**008**
Nr. 10-24	1.058	70	6.0	4.9	4.35	15	25		71.21	**010**		
Nr. 10-24	1.058	70	6.0	4.9	4.35	15	25	4			80.64	**010**
1/4-20	1.270	80	7.0	5.5	5.75	17	30		82.48	**025**		
1/4-20	1.270	80	7.0	5.5	5.75	17	30	4			93.36	**025**
5/16-18	1.411	90	8.0	6.2	7.30	20	35		86.36	**031**		
5/16-18	1.411	90	8.0	6.2	7.30	20	35	5			100.30	**031**
3/8-16	1.588	100	10.0	8.0	8.80	22	39		106.24	**037**		
3/8-16	1.588	100	10.0	8.0	8.80	22	39	5			117.32	**037**
P										**18**		**18**
M										**10**		**10**
K										**10**		**10**
N										**22**		**22**
S												
H												
O												

Cutting speed v_c (m/min.)

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

TruTap | EG UNC

UNI | B 4–5 | 2B mod | nitr. + vap.



DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 4xD

22 668 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
EG Nr. 4-40	0.635	63	4.5	3.4	3.1	13	21	3	75.25	**004**
EG Nr. 6-32	0.794	70	6.0	4.9	3.8	14	25	3	78.87	**006**
EG Nr. 8-32	0.794	80	6.0	4.9	4.4	16	30	3	77.64	**008**
EG Nr. 10-24	1.058	80	7.0	5.5	5.2	17	30	3	83.59	**010**

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

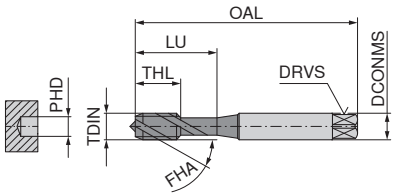
Cutting speed v_c (m/min.)

6

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

CavTap | EG UNC

UNI | E 1,5–2 | 2B mod | vap.



DIN 371 with reinforced shank

HSS-E
FHA 42°
≤ 1100 N/mm²
≤ 3xD

22 672 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
EG Nr. 4-40	0.635	63	4.5	3.4	3.1	7	21	3	75.85	**004**
EG Nr. 6-32	0.794	70	6.0	4.9	3.8	8	25	3	75.25	**006**
EG Nr. 8-32	0.794	80	6.0	4.9	4.4	8	30	3	77.64	**008**
EG Nr. 10-24	1.058	80	7.0	5.5	5.2	10	30	3	83.59	**010**

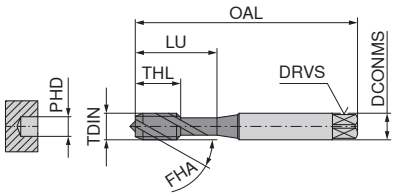
P	**12**
M	**7**
K	**12**
N	
S	
H	
O	

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

CavTap SL | UNJC

Ti | C 2–3 | 3BX | TiCN



DIN 371 with reinforced shank

HSS-E
FHA 15°
≤ 1200 N/mm²
≤ 2xD

22 166 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
Nr. 4-40	0.635	56	3.5	2.7	2.30	11	18	2	102.75	**004**
Nr. 6-32	0.794	56	4.0	3.0	2.85	12	20	3	104.64	**006**
Nr. 8-32	0.794	63	4.5	3.4	3.50	13	21	3	101.69	**008**
Nr. 10-24	1.058	70	6.0	4.9	3.90	15	25	3	109.01	**010**
1/4-20	1.270	80	7.0	5.5	5.25	17	30	3	139.46	**025**
3/8-16	1.588	100	10.0	8.0	8.10	22	39	3	168.43	**037**

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

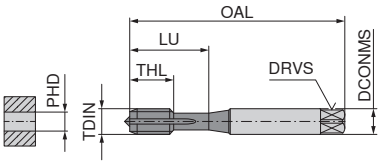
Cutting speed v_c (m/min.)

6

Through hole – Machine taps, right hand

TruTap | UNF

UNI | B 4–5 | 2B | nitr. + vap.

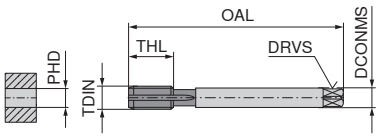


DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 4xD

22 602 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
Nr. 4-48	0.529	56	3.5	2.7	2.40	11	18	2	68.70	**004**
Nr. 6-40	0.635	56	4.0	3.0	2.95	12	20	3	61.60	**006**
Nr. 8-36	0.706	63	4.5	3.4	3.50	13	21	3	60.02	**008**
Nr. 10-32	0.794	70	6.0	4.9	4.10	15	25	3	61.64	**010**
1/4-28	0.907	80	7.0	5.5	5.50	17	30	3	70.20	**025**
5/16-24	1.058	90	8.0	6.2	6.90	17	35	3	84.49	**031**



DIN 374 with reduced shank

22 603 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
7/16-20	1.270	100	8	6.2	9.90	22	3	94.71	**043**
1/2-20	1.270	100	9	7.0	11.50	22	3	91.62	**050**
9/16-18	1.411	100	11	9.0	12.90	22	3	137.63	**056**
5/8-18	1.411	100	12	9.0	14.50	22	3	126.96	**062**
3/4-16	1.588	110	14	11.0	17.50	25	4	158.21	**075**
7/8-14	1.814	125	18	14.5	20.50	25	4	206.38	**087**
1-12	2.117	140	18	14.5	23.25	28	4	269.68	**100**
1 1/8-12	2.117	150	22	18.0	26.50	28	4	697.28	**112**
1 1/4-12	2.117	150	22	18.0	29.75	28	4	778.03	**125**
1 3/8-12	2.117	170	28	22.0	33.00	30	5	858.69	**137**

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

Cutting speed v_c (m/min.)

Through hole – Machine taps, right hand

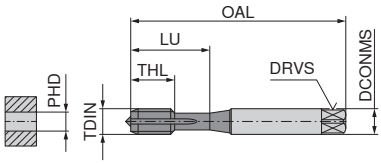
UNF

UNI

B
4–5

2B

TiN

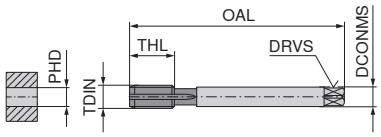


DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 3xD

23 180 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ T9	
Nr. 10-32	0.794	70	6	4.9	4.1	15	25	3	44.47	**010**
1/4-28	0.907	80	7	5.5	5.5	17	30	3	56.66	**025**
5/16-24	1.058	90	8	6.2	6.9	17	35	3	62.92	**031**
3/8-24	1.058	90	10	8.0	8.5	18	35	4	67.33	**037**



DIN 374 with reduced shank

23 181 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ T9	
7/16-20	1.270	100	8	6.2	9.9	22	3	82.68	**043**
1/2-20	1.270	100	9	7.0	11.5	22	3	83.61	**050**
9/16-18	1.411	100	11	9.0	12.9	22	3	116.06	**056**
5/8-18	1.411	100	12	9.0	14.5	22	3	105.32	**062**
3/4-16	1.588	110	14	11.0	17.5	25	4	163.07	**075**

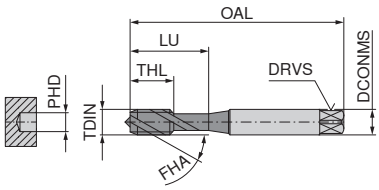
P	**15**
M	**9**
K	**18**
N	**12**
S	
H	
O	

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

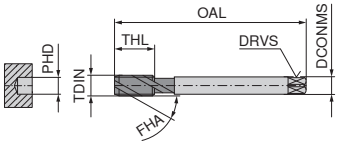
CavTap | UNF



DIN 371 with reinforced shank

	VA	UNI	UNI
	E 1,5–2	C 2–3	E 1,5–2
	2B	2B	2B +0,05
	vap.	vap.	vap.
			
	HSS-E FHA 42° ≤ 900 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD	HSS-E FHA 42° ≤ 1100 N/mm² ≤ 3xD
	22 308 ...	22 606 ...	22 307 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0		£ U0	
Nr. 2-64	0.397	45	2.8	2.1	1.85	4.5	12	2	111.39	**002**				
Nr. 4-48	0.529	56	3.5	2.7	2.40	6.0	18	2	75.85	**004**	74.52	**004**		
Nr. 6-40	0.635	56	4.0	3.0	2.95	7.0	20	3	74.52	**006**	56.46	**006**		
Nr. 6-40	0.635	56	4.0	3.0	3.00	7.0	20	3					104.40	**006**
Nr. 8-36	0.706	63	4.5	3.4	3.50	8.0	21	3	92.61	**008**	56.45	**008**		
Nr. 10-32	0.794	70	6.0	4.9	4.10	10.0	25	3	78.20	**010**	59.53	**010**		
Nr. 10-32	0.794	70	6.0	4.9	4.15	10.0	25	3					109.50	**010**
1/4-28	0.907	80	7.0	5.5	5.50	10.0	30	3	82.27	**025**	63.27	**025**		
1/4-28	0.907	80	7.0	5.5	5.55	10.0	30	3					114.21	**025**
5/16-24	1.058	90	8.0	6.2	6.90	10.0	35	3	90.97	**031**	86.90	**031**		
5/16-24	1.058	90	8.0	6.2	6.95	10.0	35	3					132.09	**031**
3/8-24	1.058	90	10.0	8.0	8.50	10.0	35	3	93.90	**037**				
3/8-24	1.058	90	10.0	8.0	8.55	10.0	35	3					132.09	**037**



DIN 374 with reduced shank

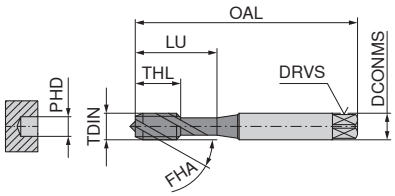
								22 607 ...		22 409 ...	
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0		£ U0	
7/16-20	1.270	100	8	6.2	9.90	13	3	92.44	**043**		
7/16-20	1.270	100	8	6.2	9.95	13	4			166.19	**043**
1/2-20	1.270	100	9	7.0	11.50	13	4	93.74	**050**		
1/2-20	1.270	100	9	7.0	11.55	13	5			159.21	**050**
9/16-18	1.411	100	11	9.0	12.90	15	4	138.90	**056**		
9/16-18	1.411	100	11	9.0	12.95	15	5			225.77	**056**
5/8-18	1.411	100	12	9.0	14.50	15	4	123.61	**062**		
5/8-18	1.411	100	12	9.0	14.55	15	5			205.32	**062**
3/4-16	1.588	110	14	11.0	17.50	17	4	170.45	**075**		
3/4-16	1.588	110	14	11.0	17.55	17	5			275.59	**075**
7/8-14	1.814	125	18	14.5	20.50	17	4	199.81	**087**		
1-12	2.117	140	18	14.5	23.25	20	4	279.83	**100**		
1-12	2.117	140	18	14.5	23.30	20	5			441.42	**100**
1 1/8-12	2.117	150	22	18.0	26.50	22	4	394.21	**112**		
1 1/4-12	2.117	150	22	18.0	29.75	22	5	456.20	**125**		
1 3/8-12	2.117	170	28	22.0	33.00	24	5	528.69	**137**		

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

CavTap SL | UNF



DIN 371 with reinforced shank

	Ti	Ti
	C 2–3	C 2–3
	2BX	3BX
	vap.	vap.
		
	HSS-PM FHA 30° ≤ 1400 N/mm² ≤ 1,5xD	HSS-PM FHA 30° ≤ 1400 N/mm² ≤ 1,5xD
	22 302 ...	**22 303 ...**

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0		£ U0	
Nr. 10-32	0.794	70	6	4.9	4.1	10	25	3	125.06	**010**	125.06	**010**
1/4-28	0.907	80	7	5.5	5.5	10	30	3	136.72	**025**	136.72	**025**
5/16-24	1.058	90	8	6.2	6.9	10	35	3	155.58	**031**	145.68	**031**
3/8-24	1.058	90	10	8.0	8.5	10	35	3	160.13	**037**	160.13	**037**
P										**5**		**5**
M										**5**		**5**
K												
N										**22**		**22**
S										**3**		**3**
H												
O												

Cutting speed v_c (m/min.)

6

Blind hole – Machine taps, right hand

UNF

UNI

C
2–3

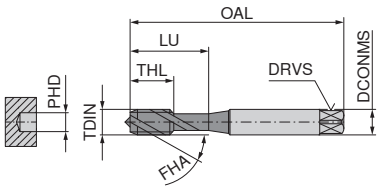
2B

TiN

VA

C
2–3

2B

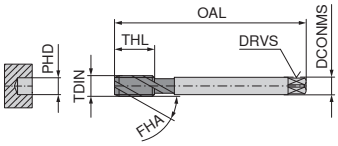


DIN 371 with reinforced shank

HSS-E
FHA 35°
≤ 1100 N/mm²
≤ 2,5xD

HSS-E
FHA 35°
≤ 1100 N/mm²
≤ 2,5xD

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	23 182 ... £ T9		23 482 ... £ T9	
Nr. 10-32	0.794	70	6	4.9	4.1	10	25	3	46.83	**010**	46.30	**010**
1/4-28	0.907	80	7	5.5	5.5	10	30	3	58.83	**025**	51.29	**025**
5/16-24	1.058	90	8	6.2	6.9	10	35	3	63.46	**031**	53.56	**031**
3/8-24	1.058	90	10	8.0	8.5	10	35	3	70.66	**037**	59.24	**037**



DIN 374 with reduced shank

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	23 183 ... £ T9		23 483 ... £ T9	
7/16-20	1.270	100	8	6.2	9.9	13	3	84.86	**043**	73.41	**043**
1/2-20	1.270	100	9	7.0	11.5	13	4	89.87	**050**	74.35	**050**
9/16-18	1.411	100	11	9.0	12.9	15	4	121.00	**056**	103.87	**056**
5/8-18	1.411	100	12	9.0	14.5	15	4	109.38	**062**	89.60	**062**
3/4-16	1.588	110	14	11.0	17.5	17	4	173.60	**075**	123.43	**075**

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

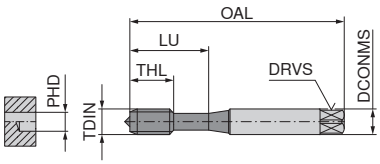
Cutting speed v_c (m/min.)

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

▲ SN = Thread formers with lubrication grooves

DuoForm | UNF

EC
SN
C
2–3
2BX
TiN

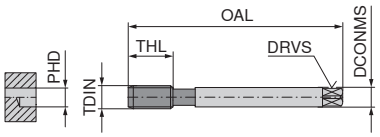


DIN 2174 with reinforced shank

HSS-E
≤ 1100 N/mm²
≤ 3xD

22 312 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
Nr. 4-48	0.529	56	3.5	2.7	2.62	11	18	3	87.28	**004**
Nr. 6-40	0.635	56	4.0	3.0	3.22	12	20	3	81.36	**006**
Nr. 8-36	0.706	63	4.5	3.4	3.85	13	21	4	84.12	**008**
Nr. 10-32	0.794	70	6.0	4.9	4.45	15	25	4	89.87	**010**
1/4-28	0.907	80	7.0	5.5	5.95	17	30	4	105.35	**025**



DIN 2174 with reduced shank

22 313 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
7/16-20	1.27	100	8	6.2	10.55	22	6	156.99	**043**
1/2-20	1.27	100	9	7.0	12.15	22	6	161.43	**050**

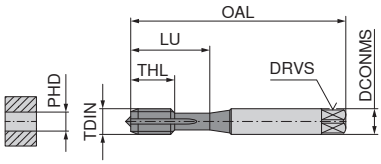
P	**18**
M	**10**
K	**10**
N	**22**
S	
H	
O	

Cutting speed v_c (m/min.)

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

TruTap | EG UNF

UNI | B 4–5 | 2B | nitr. + vap.

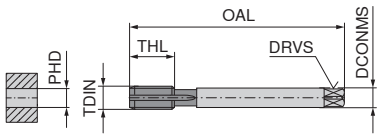


DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1100 N/mm²
≤ 4xD

22 676 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
EG Nr. 4-48	0.529	56	4	3.0	3.0	9	20	3	96.05	**004**
EG Nr. 6-40	0.635	70	6	4.9	3.7	11	25	3	94.71	**006**
EG Nr. 8-36	0.706	80	6	4.9	4.4	13	30	3	92.58	**008**
EG Nr. 10-32	0.794	80	6	4.9	5.1	13	30	3	98.71	**010**
EG 1/4-28	0.907	90	8	6.2	6.6	17	35	3	105.32	**025**



DIN 374 with reduced shank

22 677 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	Flutes	£ U0	
EG 3/8-24	1.058	90	8	6.2	9.80	18	4	128.92	**037**
EG 7/16-20	1.270	100	9	7.0	11.50	22	3	163.07	**043**
EG 1/2-20	1.270	100	11	9.0	13.10	22	3	153.45	**050**
EG 5/8-18	1.411	110	14	11.0	16.25	25	4	245.92	**062**
EG 3/4-16	1.588	125	16	12.0	19.50	25	4	304.74	**075**

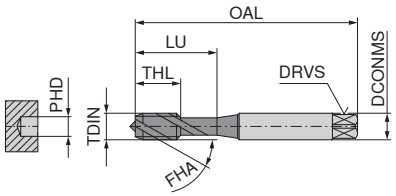
P	**12**
M	**7**
K	**12**
N	
S	
H	
O	

Cutting speed v_c (m/min.)

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

CavTap | EG UNF

UNI | E 1,5–2 | 2B | vap.



DIN 371 with reinforced shank

HSS-E
FHA 42°
≤ 1100 N/mm²
≤ 3xD

22 680 ...

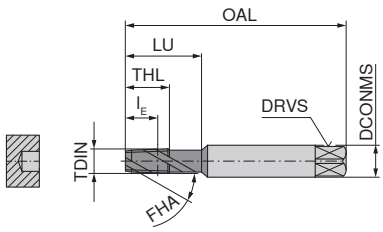
TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	PHD mm	THL mm	LU mm	Flutes	£ U0	
EG Nr. 4-48	0.529	56	4	3.0	3.0	7	20	3	97.23	**004**
EG Nr. 6-40	0.635	70	6	4.9	3.7	8	25	3	94.47	**006**
EG Nr. 8-36	0.706	80	6	4.9	4.4	8	30	3	96.83	**008**
EG Nr. 10-32	0.794	80	6	4.9	5.1	8	30	3	104.40	**010**
EG 1/4-28	0.907	90	8	6.2	6.6	10	35	3	115.14	**025**

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

Cutting speed v_c (m/min.)

Blind hole – Machine taps, right hand

CavTap | NPT



DIN 371 with reinforced shank

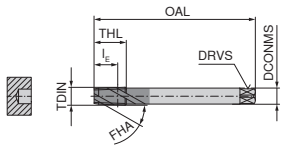
VA | C | 2–3 | vap.

HSS-E
FHA 35°
≤ 900 N/mm²

VA | C | 2–3 | TiN

HSS-E
FHA 42°
≤ 1100 N/mm²

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	l_E mm	THL mm	LU mm	Flutes	22 364 ... £ U0		22 365 ... £ U0	
1/16-27	0.941	90	8	6.2	9.24	13.0	26.0	3	125.04	**006**		
1/8-27	0.941	90	10	8.0	9.28	13.0	26.0	3	144.61	**012**		
1/8-27	0.941	90	10	8.0	9.28	12.0	26.0	4			195.36	**012**
1/4-18	1.411	100	14	11.0	13.55	19.5	34.5	3	168.92	**025**		
1/4-18	1.411	100	14	11.0	13.55	18.0	34.5	4			201.05	**025**



DIN 374 with reduced shank

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	l_E mm	THL mm	Flutes	22 371 ... £ U0		22 372 ... £ U0	
3/8-18	1.411	110	14	11	13.86	18.0	5			384.79	**037**
3/8-18	1.411	110	14	11	13.86	19.5	3	230.23	**037**		
1/2-14	1.814	140	16	12	18.11	23.0	5			445.20	**050**
1/2-14	1.814	140	16	12	18.11	25.0	5	334.60	**050**		
3/4-14	1.814	150	20	16	18.59	26.0	5	484.24	**075**		

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

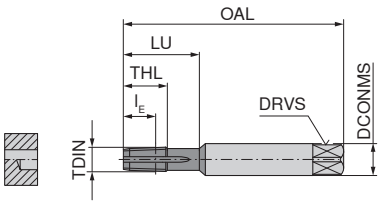
Cutting speed v_c (m/min.)

Through hole / Blind hole – Machine taps, right hand

DuoTap | NPT

VG

C
2–3

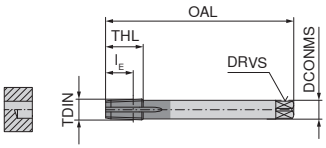


DIN 371 with reinforced shank

HSS-E
FHA 0°
≤ 1100 N/mm²

6

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	l_E mm	THL mm	LU mm	Flutes	22 374 ... £ U0	
1/16-27	0.941	90	8	6.2	9.24	13.0	26.0	3	109.38	**006**
1/8-27	0.941	90	10	8.0	9.28	13.0	26.0	3	140.39	**012**
1/4-18	1.411	100	14	11.0	13.55	19.5	34.5	3	145.68	**025**



DIN 374 with reduced shank

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	l_E mm	THL mm	Flutes	22 375 ... £ U0	
3/8-18	1.411	110	14	11	13.86	19.5	3	183.01	**037**
1/2-14	1.814	140	16	12	18.11	25.0	5	247.03	**050**
3/4-14	1.814	150	20	16	18.59	26.0	5	320.43	**075**
1-11,5	2.209	170	25	20	22.31	30.0	5	446.24	**100**

P	**4**
M	
K	**6**
N	**22**
S	
H	
O	

Cutting speed v_c (m/min.)

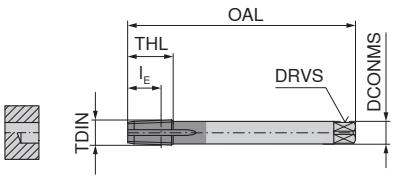
Through hole / Blind hole – Machine taps, right hand

▲ ES = extra short

DuoTap | NPT

ST
ES

C
2–3



DIN 2181 with reduced shank

HSS-E
FHA 0°
≤ 750 N/mm²

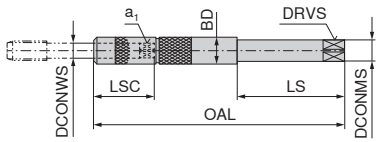
22 361 ...

TDIN	TP mm	OAL mm	DCONMS mm	DRVS mm	l_E mm	THL mm	Flutes	£ U0	
1/16-27	0.941	63	6	4.9	9.24	13.0	4	78.72	**006**
1/8-27	0.941	63	7	5.5	9.28	13.0	5	83.61	**012**
1/4-18	1.411	63	11	9.0	13.55	19.5	5	100.36	**025**
3/8-18	1.411	70	12	9.0	13.86	19.5	5	125.47	**037**
1/2-14	1.814	80	16	12.0	18.11	23.0	5	168.07	**050**
3/4-14	1.814	100	20	16.0	18.59	26.0	6	212.32	**075**
1-11,5	2.209	110	25	20.0	22.31	32.0	6	313.80	**100**

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

Cutting speed v_c (m/min.)

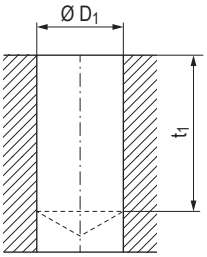
Shank extensions for taps



DIN 371	DIN 374 / 376	DCONWS mm	a_1 mm	LSC mm	BD mm	LS mm	OAL mm	DRVS mm	DCONMS mm	20 450 ... £ U0	
M3	M4,5 - M5	3.5	2.7	23	7.5	60	130	4.9	6	392.39	**020**
M3,5	M5,5	4.0	3.0	23	8.4	60	130	4.9	6	436.92	**030**
M4	M6	4.5	3.4	23	8.4	60	130	4.9	6	436.92	**040**
M4,5 - M6	M8	6.0	4.9	26	12.1	60	130	5.5	7	441.92	**050**
M7	M9 - M10	7.0	5.5	26	12.1	60	130	5.5	7	497.25	**060**
M8	M11	8.0	6.2	30	13.0	60	130	6.2	8	489.39	**070**
M9	M12	9.0	7.0	31	15.0	60	130	7.0	9	489.39	**080**
M10		10.0	8.0	33	15.0	60	130	8.0	10	502.03	**090**
	M14	11.0	9.0	36	18.0	90	180	9.0	11	672.49	**100**
(M12)	M16	12.0	9.0	36	18.0	90	180	9.0	12	672.49	**110**

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

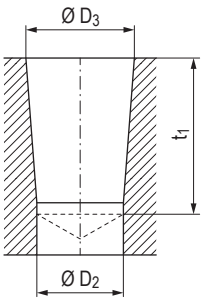
Pre-drilling of cylindrical holes without reamer



		NPT		NPTF				Rc	
Ø D inch	P Gg/1"	Ø D_1 mm	t_1 min. mm	Ø D_1 mm	t_1 min. mm	Ø D inch	P 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				

P = Pitch

Pre-drilling of cylindrical holes and conical boring with reamer



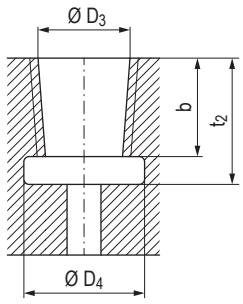
Taper 1:16

		NPT			NPTF		
Ø D inch	P 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 inch	P 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

P = Pitch

Recommendation for the pre-drilling of blind hole threads



Taper 1:16

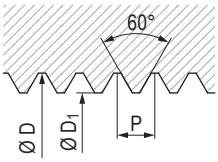
		NPT				NPTF			
Ø D inch	P Gg/1"	Ø D_3 mm	b mm	t_2 min. mm	Ø D_4 min. mm	Ø D_3 mm	b mm	t_2 min. mm	Ø D_4 min. mm
1/16	27	6,39	7	10	7,6	6,41	8	11	7,4
1/8	27	8,74	7	10	10	8,76	8	11	9,8
1/4	18	11,36	10,2	14,5	13,1	11,4	11,6	15,5	12,9
3/8	18	14,8	10,6	15	16,5	14,84	12	16	16,3
1/2	14	18,32	13,8	19	20,5	18,33	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 inch	P 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

P = Pitch

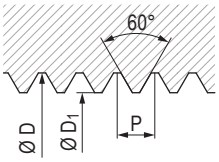
Tapped hole pilot diameter

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	Thread nominal Ø		Ø D_1		Core hole
D	P	min.	max.		D	P	min.	max.	
M1	0,25	0,729	0,785	0,75	M12	1,75	10,106	10,441	10,2
M1,1	0,25	0,829	0,885	0,85	M14	2	11,835	12,210	12
M1,2	0,25	0,929	0,985	0,95	M16	2	13,835	14,210	14
M1,4	0,3	1,075	1,142	1,1	M18	2,5	15,294	15,744	15,5
M1,6	0,35	1,221	1,321	1,25	M20	2,5	17,294	17,744	17,5
M1,8	0,35	1,421	1,521	1,45	M22	2,5	19,294	19,744	19,5
M2	0,4	1,567	1,679	1,6	M24	3	20,752	21,252	21
M2,2	0,45	1,713	1,838	1,75	M27	3	23,752	24,252	24
M2,5	0,45	2,013	2,138	2,05	M30	3,5	26,211	26,771	26,5
M3	0,5	2,459	2,599	2,5	M33	3,5	29,211	29,771	29,5
M3,5	0,6	2,850	3,01	2,9	M36	4	31,67	32,270	32
M4	0,7	3,242	3,422	3,3	M39	4	34,67	35,270	35
M4,5	0,75	3,688	3,878	3,7	M42	4,5	37,129	37,799	37,5
M5	0,8	4,134	4,334	4,2	M45	4,5	40,129	40,799	40,5
M6	1	4,917	5,153	5	M48	5	42,587	43,297	43
M7	1	5,917	6,153	6	M52	5	46,587	47,297	47
M8	1,25	6,647	6,912	6,8	M56	5,5	50,046	50,796	50,5
M9	1,25	7,647	7,912	7,8	M60	5,5	54,046	54,796	54,5
M10	1,5	8,376	8,676	8,5	M64	6	57,505	58,305	58
M11	1,5	9,376	9,676	9,5	M68	6	61,505	62,305	62

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

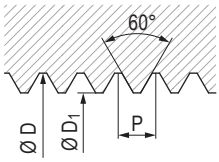


Thread nominal Ø			Ø D_1		Core hole	Thread nominal Ø			Ø D_1		Core hole
D	x	P	min.	max.		D	x	P	min.	max.	
M2	x	0,25	1,729	1,774	1,75	M20	x	1,0	18,917	19,153	19
M2,2	x	0,25	1,929	1,974	1,95	M20	x	1,5	18,376	18,676	18,5
M2,5	x	0,35	2,121	2,221	2,15	M20	x	2,0	17,835	18,210	18
M3	x	0,35	2,621	2,721	2,65	M24	x	1,5	22,376	22,676	22,5
M3,5	x	0,35	3,121	3,221	3,15	M30	x	2,0	27,835	28,210	28
M4	x	0,35	3,621	3,721	3,65	M36	x	1,5	34,376	34,676	34,5
M4	x	0,5	3,459	3,599	3,5	M36	x	3,0	32,752	33,252	33
M4,5	x	0,5	3,959	4,099	4	M42	x	2,0	39,835	40,210	40
M5	x	0,5	4,459	4,599	4,5	M48	x	1,5	46,376	46,676	46,5
M6	x	0,5	5,459	5,599	5,5	M48	x	3,0	44,752	45,252	45
M6	x	0,75	5,188	5,378	5,2	M48	x	4,0	43,67	44,270	44
M8	x	0,75	7,188	7,378	7,2	M56	x	1,5	54,376	54,676	54,5
M8	x	1,0	6,917	7,153	7	M56	x	2,0	53,835	54,210	54
M10	x	0,75	9,188	9,378	9,2	M56	x	3,0	52,752	53,252	53
M10	x	1,0	8,917	9,153	9	M56	x	4,0	51,670	52,270	52
M10	x	1,25	8,647	8,912	8,8	M64	x	3,0	60,752	61,252	61
M12	x	1,0	10,917	11,153	11	M64	x	4,0	59,670	60,270	60
M12	x	1,5	10,376	10,676	10,5	M72	x	4,0	67,670	68,270	68
M14	x	1,25	12,647	12,912	12,8	M80	x	6,0	73,505	74,305	74
M16	x	1,0	14,917	15,153	15	M95	x	6,0	88,505	89,305	89
M16	x	1,5	14,376	14,676	14,5	M110	x	6,0	103,505	104,305	104

Dimensions in mm; P=Pitch

Thread former pilot hole diameter

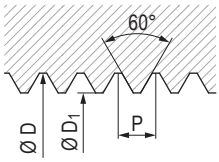
M ISO metric coarse threads 6H to DIN 13 and DIN ISO 965-1 (M1-M1,4 = 5H)



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		1,28
M1,6	0,35	1,45		1,47
M1,8	0,35	1,65		1,67
M2	0,4	1,83	1,86	1,85
M2,2	0,45	2	2,04	2,03
M2,5	0,45	2,3	2,34	2,33
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	4,2
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	5,6
M7	1	6,51	6,59	6,6
M8	1,25	7,39	7,48	7,45
M9	1,25	8,39	8,48	8,45
M10	1,5	9,25	9,35	9,35
M11	1,5	10,25	10,35	10,35
M12	1,75	11,12	11,25	11,25
M14	2	13	13,15	13,1
M16	2	15	15,15	15,1
M18	2,5	16,72	16,9	16,85
M20	2,5	18,72	18,9	18,85
M22	2,5	20,72	20,9	20,85
M24	3	22,46	22,7	22,65

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

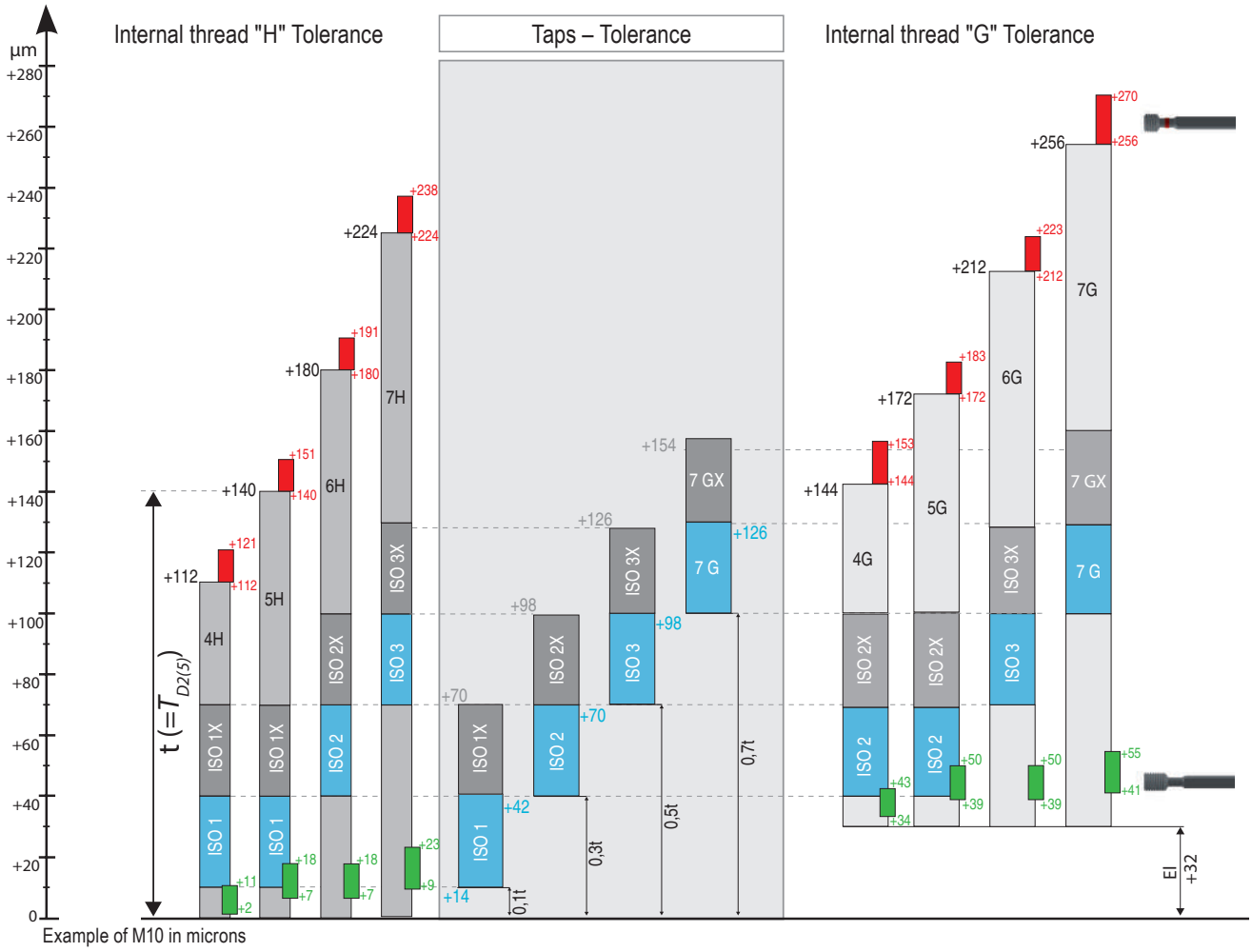


Thread nominal Ø			Ø D_1		Core hole
D	x	P	min.	max.	
M2	x	0,25	1,89		1,9
M2,2	x	0,25	2,09		2,1
M2,5	x	0,25	2,39		2,4
M2,5	x	0,35	2,35		2,37
M3	x	0,25	2,89		2,9
M3	x	0,35	2,85		2,88
M3,5	x	0,35	3,35		3,38
M3,5	x	0,5	3,27	3,32	3,3
M4	x	0,35	3,85		3,88
M4	x	0,5	3,77	3,82	3,8
M4,5	x	0,5	4,27	4,32	4,3
M5	x	0,5	4,77	4,82	4,8
M5	x	0,75	4,65	4,71	4,7
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	5,7
M7	x	0,5	6,78	6,83	6,8
M7	x	0,75	6,65	6,71	6,7
M8	x	0,5	7,78	7,83	7,8
M8	x	0,75	7,65	7,71	7,7
M8	x	1,0	7,51	7,59	7,6
M9	x	0,5	8,78	8,83	8,8
M9	x	0,75	8,65	8,71	8,7
M9	x	1,0	8,51	8,59	8,6
M10	x	0,5	9,78	9,83	9,8
M10	x	0,75	9,65	9,71	9,7
M10	x	1,0	9,51	9,59	9,6
M10	x	1,25	9,39	9,48	9,45
M11	x	0,75	10,65	10,71	10,7
M11	x	1,0	10,51	10,59	10,6
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	11,6
M12	x	1,25	11,4	11,49	11,45
M12	x	1,5	11,26	11,36	11,35
M13	x	0,75	12,66	12,72	12,7
M13	x	1,0	12,52	12,6	12,6
M13	x	1,5	12,26	12,36	12,35
M14	x	0,75	13,66	13,72	13,7
M14	x	1,0	13,52	13,6	13,6
M14	x	1,25	13,4	13,49	13,45
M14	x	1,5	13,26	13,36	13,35
M15	x	0,75	14,66	14,72	14,7
M15	x	1,0	14,52	14,6	14,6
M15	x	1,5	14,26	14,36	14,35
M16	x	0,75	15,66	15,72	15,7
M16	x	1,0	15,52	15,6	15,6
M16	x	1,5	15,26	15,36	15,35
M18	x	1,0	17,52	17,6	17,6
M18	x	1,5	17,26	17,36	17,35
M18	x	2,0	17	17,15	17,1
M20	x	1,0	19,52	19,6	19,6
M20	x	1,5	19,26	19,36	19,35
M20	x	2,0	19	19,15	19,1
M22	x	1,5	21,26	21,36	21,35
M22	x	2,0	21	21,15	21,1
M24	x	1,5	23,26	23,38	23,35
M24	x	2,0	23,01	23,16	23,1
M25	x	1,5	24,26	24,38	24,35
M26	x	1,5	25,26	25,38	25,35
M27	x	2,0	26,01	26,16	26,1
M28	x	1,5	27,26	27,38	27,35
M30	x	1,5	29,26	29,38	29,35
M30	x	2,0	29,01	29,16	29,1

Dimensions in mm; P=Pitch

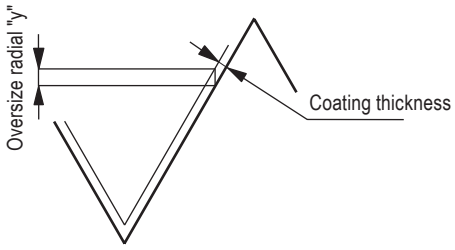
Thread tolerances and recommended manufacturing tolerances



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

at

60° Flank angle	Oversize = 4 x coating thickness
55° Flank angle	Oversize = 4.331 x coating thickness
30° Flank angle	Oversize = 7.727 x coating thickness

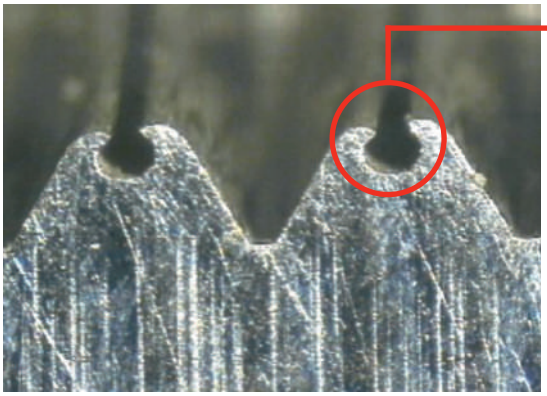


Application class of the tap Designation according to		Tolerance class of the internal thread to be cut				
DIN	ISO					
4H	ISO1	4H	5H	–	–	–
6H	ISO2	4G	5G	6H	–	–
6G	ISO3	–	(4E)	6G	7H	8H
7G	–	–	–	(6E)	7G	8G

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

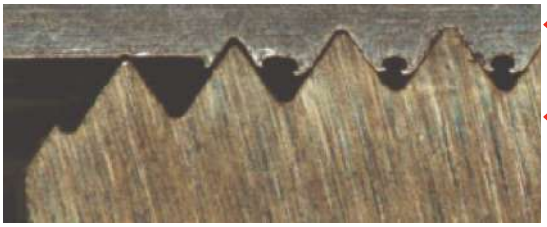
DuoForm thread forming taps for cold-formable materials up to 1400 N/mm² or at least 5 % elongation. The thread is produced by plastic deformation. The molded thread has very high strength.



Important

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.

Incremental pressure forming



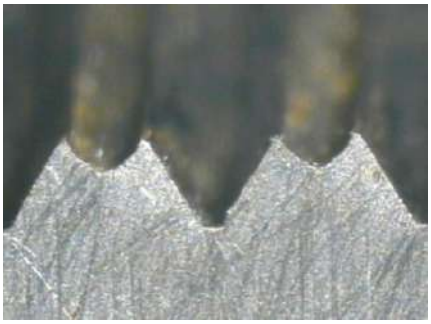
Workpiece

Thread formers

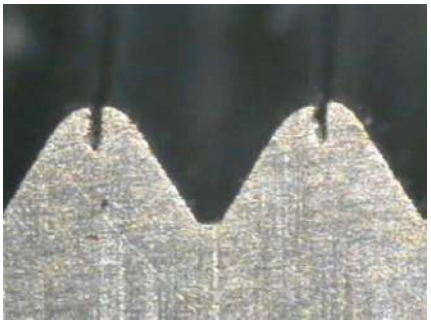
The thread profile is pressed gradually into the material via the start (leading edge) of the tap.

Properties

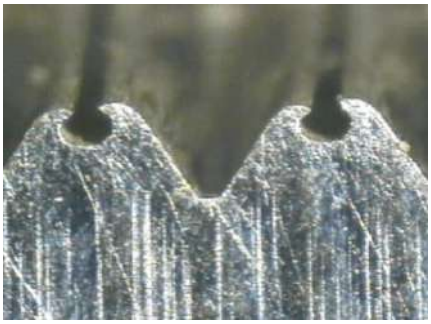
- One type can be used in different materials
- For through and blind holes
- Very good thread surface quality
- High static and dynamic strength thread
- Secure machining of deep and counterbored threads
- Short machining times
- No chip problems
- No swarf
- High process security
- HSS-E and HSS-PM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

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

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