

DIN TAP Series



High Performance Carbide Tap and HSS Tap Series

- ▣ **Excellent Wear Resistance**

Highly durable carbide tap and HSS Tap series

- ▣ **Excellent Surface Finish**

A variety of taps including point taps, spiral taps, straight taps, roll taps, and more to meet a wide range of requirements, available for JIS and DIN standards in metric threads.

- ▣ **Made-to-Order Available**

Custom orders can be made for powder HSS and taps under M3.



Increased productivity due to stable chip control and evacuation

High Performance Carbide Tap and HSS Tap Series



Carbide Tap

KORLOY developed carbide taps and HSS taps that meet the increasing industry demands for productivity. **Carbide taps** now have a better wear resistance and an extended tool life thanks to the use of a high toughness substrate. There are also TiN / TiCN coated and non-coated products available for a wide range of applications.

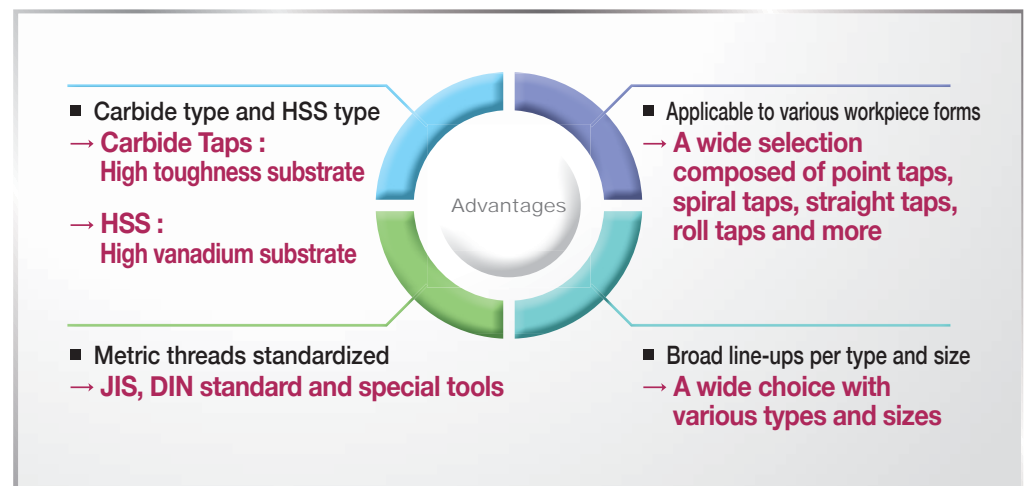
HSS taps have a high vanadium body to provide excellent cutting performances. Its wide lineup of coated and non-coated taps, as well as the Steam Oxide series is available for various workpieces.



HSS Tap

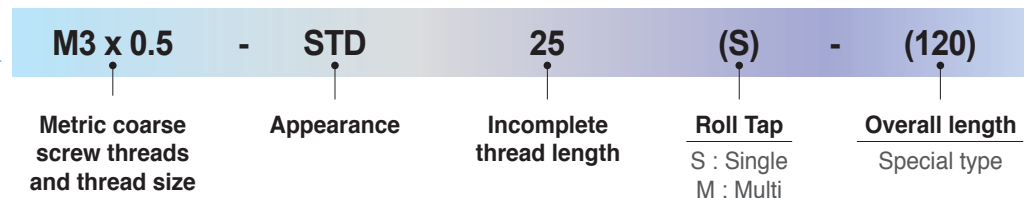
KORLOY taps were standardized not only to JIS but to DIN in metric threads. It is therefore possible to machine a comprehensive range of workpieces with KORLOY point taps, spiral taps, straight taps, roll taps and more. Straight taps are used for through holes, mass production, cast iron, medium carbon steel, and non-ferrous metal. Point taps have a similar shape compared to straight taps, but provide smoother chip evacuation for through holes. Spiral taps are optimized for blind hole making by evacuating chips through flutes. Roll taps are for making both through holes and blind holes on non-ferrous materials such as aluminum.

KORLOY taps ensure maximum cutting efficiency while providing excellent price competitiveness, quality, and a wide selection of products.



⇒ Code System

- Thread Appearance
 - STD : Straight Tap (DIN)
 - PTD : Point Tap (DIN)
 - SPD : Spiral Tap (DIN)
 - RTD : Roll Tap (DIN)






⇒ Grade System

HSS Tap		HSS Tap	
HN30T	HSS, Uncoated	HC10T	HSS, TiCN coating
HC20T	HSS, TiN coating	HH30T	HSS, Steam Oxide

⇒ HSS Tap Series

• HSS taps show improved performance due to high vanadium substrate.

Tap type	Picture	Features	Grade	Size
STD Straight Tap		<ul style="list-style-type: none"> • For through holes and mass production • For cast iron, medium carbon steel and non-ferrous metal 	HN30T	M3~M24
			HC20T	M3~M24
			HC10T	M3~M24
			HH30T	M8~M24
PTD Point Tap		<ul style="list-style-type: none"> • For through holes and mass production • Similar shape to the straight type but specialized with easier chip evacuation 	HN030T	M3~M24
			HC20T	M3~M24
			HC10T	M3~M24
			HH30T	M3~M24
SPD Spiral Tap		<ul style="list-style-type: none"> • For blind holes • Chip evacuation through flutes 	HN30T	M3~M24
			HC20T	M3~M24
			HC10T	M3~M24
			HH30T	M3~M24
RTD Roll Tap		<ul style="list-style-type: none"> • For non-ferrous metal • For through holes and blind holes 	HN30T	M3~M12
			HC20T	M3~M12
			HC10T	M3~M12

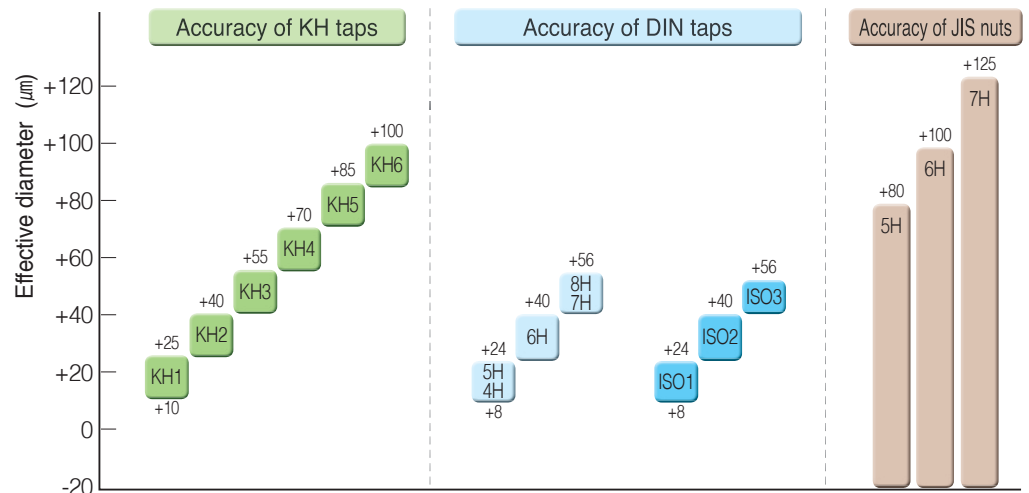
※ Special types are available including carbide taps.

⇒ 6H Stepped Accuracy System

• 6H stepped accuracy system was applied to KORLOY taps to obtain the required precision of nuts.

→ Easy to select the proper tools for pre-set cutting conditions

[Comparison of Effective Thread Diameters] M3x0.5



TAP Series

➤ Recommended Cutting Speeds and Cutting Fluid

- For machining cold / hot forging steel and sintered ferrous alloy in high feed, high depth of cut and highly interrupted conditions
- Excellent resistance to chipping, fracture and thermal cracks
- Improved surface finish due to optimized cutting edges

ISO	Workpiece		Cutting speed, vc(m/min)					Cutting fluid			
			Straight Tap	Spiral Tap	Point Tap	Carbide Tap	Roll Tap	Insoluble	Water soluble emulsion	Semi dry	Dry
P	Low carbon steel	≤ 0.25%C	8~13	8~13	15~25	-	8~13	◎	○	△	△
	Medium carbon steel	0.25~0.45%C	7~12	7~12	10~15	-	7~10	◎	○	△	△
	High carbon steel	≥ 0.45%C	6~9	6~9	8~13	-	5~8	◎	○	△	△
	Alloy steel	SCM	7~12	7~12	10~15	-	5~8	◎	△	△	△
	Quenched and tempered steel	25~45HRC	3~5	3~5	4~6	-	-	◎	△	-	-
	Tool steel	SKD	6~9	6~9	7~10	-	-	◎	-	-	-
	Cast steel	SCM	6~11	6~11	10~15	-	-	◎	○	-	-
M	Stainless steel	SUS	4~7	5~8	8~13	-	5~10	◎	○	-	-
	Precipitation hardened stainless steel	SUS630 SUS631	3~5	3~5	4~6	-	-	◎	-	-	-
K	Cast iron	FC	10~15	-	-	10~20	-	◎	○	○	○
	Ductile cast iron	FCD	7~12	7~12	10~20	10~20	-	◎	○	○	-
N	Copper	Cu	6~9	6~11	7~12	10~20	7~12	○	○	-	-
	Brass, brass-cast	Bs Bsc	10~15	10~20	15~25	15~25	7~12	○	○	○	○
	Bronze, bronze-cast	PB PBC	6~11	6~11	10~20	10~20	7~12	○	○	-	-
	Rolled aluminum	Al	10~20	10~20	15~25	-	10~20	◎	○	△	-
	Aluminum-cast, alloyed	AC ACD	10~15	10~15	15~20	10~20	10~25	◎	○	△	-
	Magnesium-cast, alloyed	MC	7~12	7~12	10~15	10~20	-	◎	○	○	-
	Zinc-cast, alloyed	ZDC	1~12	7~12	10~15	10~20	7~12	◎	○	△	-
	Thermosetting plastics	Bakelite phenol epoxy	10~20	-	-	15~25	-	-	○	○	○
	Thermoplastics	Nylon vinyl chloride	10~20	10~15	10~20	10~20	-	-	○	○	○

◎ Recommended ○ Applicable △ Usable - unusable

➔ Recommended Drill Diameter [on 2nd class thread basis]

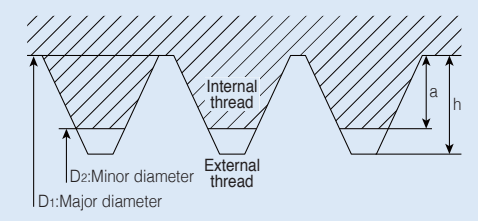
• Refer to this table for information about drill diameters per thread size of straight taps and spiral taps.

Straight Tap & Spiral Tap							
Thread size	Drill diameter			Thread size	Drill diameter		
	Min	Recommended	Max		Min	Recommended	Max
M3X0.5	2.459	2.5	2.599	M12X1.75	10.106	10.3	10.441
M4X0.7	3.242	3.3	3.422	M14X1.5	12.376	12.5	12.676
M5X0.8	4.134	4.2	4.334	M14X2.0	11.835	12.0	12.21
M6X1.0	4.917	5.0	5.153	M16X1.5	14.376	14.5	14.676
M8X1.25	6.647	6.8	6.912	M16X2.0	13.835	14.0	14.21
M10X1.25	8.647	8.8	8.912	M18X1.5	16.376	16.5	16.676
M10X1.5	8.376	8.5	8.676	M18X2.5	15.294	15.5	15.744
M12X1.0	10.917	11.0	11.153	M20X1.5	18.376	18.5	18.676
M12X1.25	10.647	10.8	10.912	M20X2.5	17.294	17.5	17.744
M12X1.5	10.376	10.5	10.676	-	-	-	-

• Refer to this table for information about drill diameters per thread size of roll taps.

Roll Tap							
Thread size	Drill diameter			Thread size	Drill diameter		
	Min	Recommended	Max		Min	Recommended	Max
M3X0.5	2.76	2.8	2.81	M10X1.5	9.18	9.2	9.28
M4X0.7	3.65	3.7	3.7	M12X1.0	11.48	11.5	11.57
M5X0.8	4.59	4.6	4.66	M12X1.25	11.34	11.4	11.41
M6X1.0	5.48	5.5	5.57	M12X1.5	11.18	11.2	11.28
M8X1.25	7.34	7.4	7.41	M12X1.75	11.05	11.1	11.15
M10X1.25	9.34	9.4	9.41	-	-	-	-

[Fig] In case that a external thread has a standard shape



- Pre-hole diameter = D1 : Major diameter
D2 : Minor diameter
- $a = 1/2 \times (D1 - D2)$
- $h = \text{Height of fundamental triangle}$
- $\text{Rate of threading engagement} = a/h \times 100(\%)$

$$\text{*Rate of threading engagement} = \frac{\text{Major diameter} - \text{Pre-hole diameter}}{2 \times (\text{Height of fundamental triangle})}$$

$$\text{* Pre-hole diameter} = d - 2 \times H \times \frac{\text{rate of threading engagement}}{100}$$

- d : Major diameter
- H (Rate of threading engagement's Height) : $0.541266P$
- P : Pitch(mm)

* Recommended bottom hole diameters follow the JIS2 standard for a nut.
(Nuts outside the JIS standard are excluded.)

$$\text{* Drill diameter} = D - 0.0068 \times P \times 65$$

- D : Nominal diameter
- P : Pitch(mm)
- 65 = 65% of the thread height

* Nut's bottom hole diameters outside the JIS standard are only for reference.

Application Examples



Cutting tool

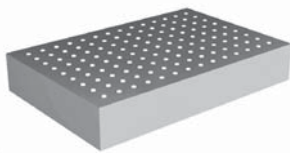
- Workpiece: SNCM439 (HRC43)
- Cutting conditions: Drill diameter(\varnothing) = 4, v_f (mm/min) = 70, a_p (mm) = 13, wet
- Tools: M4x0.7-PTD25 (HC20T)

KORLOY 143ea/edge

Competitor A 110ea/edge

30% more

➔ 30% longer tool life than competitor A



Plate

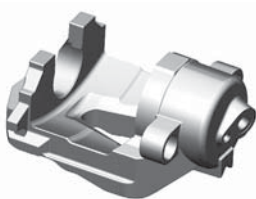
- Workpiece: SNCM439 (HRC40)
- Cutting conditions: Drill diameter(\varnothing) = 5, v_f (mm/min) = 80, a_p (mm) = 15, wet
- Tools: M5x0.8-PTD25 (HC20T)

KORLOY 210ea/edge

Competitor B 140ea/edge

50% more

➔ 50% longer tool life than competitor B



Break part (Caliper)

- Workpiece: FCD50
- Cutting conditions: Drill diameter(\varnothing) = 6, v_f (mm/min) = 100, a_p (mm) = 10, wet
- Tools: M6x1.0-PTD25 (HC20T)

KORLOY 90ea/edge

Competitor C 70ea/edge

28% more

➔ 28% longer tool life than competitor C



Cutting tool (Side cutter)

- Workpiece: SNCM439
- Cutting conditions: Drill diameter(\varnothing) = 5, v_f (mm/min) = 80, a_p (mm) = 8, wet
- Tools: M5x0.8-SPD (HC20T)

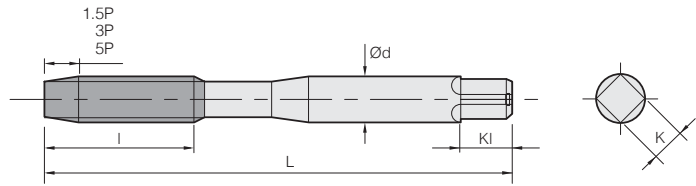
KORLOY 180ea/edge

Competitor D 150ea/edge

20% more

➔ 20% longer tool life than competitor D

⇒ STD type (Straight Tap)



3	4	Helix Angle 0°	HSSE	Uncoated HN30T	TiN HC20T	TiCN HC10T	Steam Oxide HH30T
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(mm)

Flutes	Designation	Thread size	L (Overall length)	I (Thread length)	d (Shank diameter)	K (Square width)	KI (Square length)	Limits	DIN Type
3	M3X0.5-STD50	M3X0.5	56	11.0	3.5	2.7	6	6H	371
	M4X0.7-STD50	M4X0.7	63	13.0	4.5	3.4	6	6H	371
	M5X0.8-STD50	M5X0.8	70	15.0	6.0	4.9	8	6H	371
	M6X1.0-STD50	M6X1.0	80	17.0	6.0	4.9	8	6H	371
4	M8X1.0-STD50	M8X1.0	90	17.0	6.0	4.9	8	6H	374
	M8X1.25-STD50	M8X1.25	90	20.0	8.0	6.2	9	6H	371
	M10X1.0-STD50	M10X1.0	90	18.0	7.0	5.5	8	6H	374
	M10X1.25-STD50	M10X1.25	100	22.0	7.0	5.5	8	6H	374
	M10X1.50-STD50	M10X1.50	100	22.0	10.0	8.0	11	6H	371
	M12X1.0-STD50	M12X1.0	100	18.0	9.0	7.0	10	6H	374
	M12X1.25-STD50	M12X1.25	100	22.0	9.0	7.0	10	6H	374
	M12X1.5-STD50	M12X1.5	100	22.0	9.0	7.0	10	6H	374
	M12X1.75-STD50	M12X1.75	110	24.0	9.0	7.0	10	6H	376
	M14X1.5-STD50	M14X1.5	100	22.0	11.0	9.0	12	6H	374
	M14X2.0-STD50	M14X2.0	110	26.0	11.0	9.0	12	6H	376
	M16X1.5-STD50	M16X1.5	100	22.0	12.0	9.0	12	6H	374
	M16X2.0-STD50	M16X2.0	110	27.0	12.0	9.0	12	6H	376
	M18X1.5-STD50	M18X1.5	110	25.0	14.0	11.0	14	6H	374
	M18X2.5-STD50	M18X2.5	125	30.0	14.0	11.0	14	6H	376
	M20X1.5-STD50	M20X1.5	125	25.0	16.0	12.0	15	6H	374
	M20X2.5-STD50	M20X2.5	140	32.0	16.0	12.0	15	6H	376
	M22X1.5-STD50	M22X1.5	125	25.0	18.0	14.5	17	6H	374
	M22X2.5-STD50	M22X2.5	140	32.0	18.0	14.5	17	6H	376
	M24X1.5-STD50	M24X1.5	140	27.0	18.0	14.5	17	6H	374
M24X2.0-STD50	M24X2.0	140	27.0	18.0	14.5	17	6H	374	
M24X3.0-STD50	M24X3.0	160	34.0	18.0	14.5	17	6H	376	

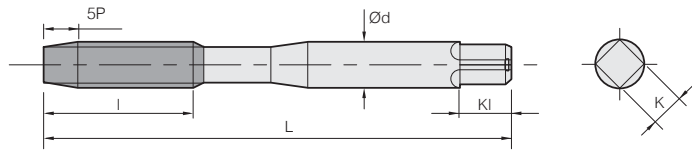
- ※ Ideal for tapping general cast iron, medium cast iron and non-ferrous metal.
- ※ Ideal for making both through holes and blind holes on carbon steel, alloy steel and non-ferrous metal.
- ※ Wear resistance highly improved by the use of TiN, TiCN, Steam oxide coating for high efficiency tapping operations.
- ※ Built-up edges are prevented thanks to a reduced coefficient of friction gained by using porous cutting fluid of Fe³O⁴.
- ※ Ideal for tapping stainless steel, cast steel, carbon steel for machine structures, etc.

► Applicable Workpiece Range

Division	Carbon steel			Alloy steel	Quenched and tempered steel			Stainless steel	Tool steel	Cast steel	Cast iron	Ductile cast iron	Copper	Brass	Brass-cast	Bronze	Rolled aluminum	Aluminum-cast, alloyed	Magnesium-cast, alloyed	Zinc-cast, alloyed	Titanium alloy		Thermo-setting plastics	Thermo-plastics
	C ~0.25%	C0.25% ~0.45%	C 0.45%~	SCM	25-45 HrC	45-55 HrC	50-60 HrC	SUS	SKD	SC	FC	FCD	Cu	Bs	BsC	PB	Al	AC ADC	MC	ZDC	Ti	Ni	-	-
HN30T		○									○			○	○	○	○	○	○	○				
HC20T	○	○	○	○	○									○	○	○	○	○	○	○				
HC10T	○	○	○	○	○									○	○	○	○	○	○	○				
HH30T	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○												

TAP Series

⇒ PTD type (Point Tap)



	Helix Angle 0°	HSSE	Uncoated HN30T	TiN HC20T	TiCN HC10T	Steam Oxide HH30T
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(mm)

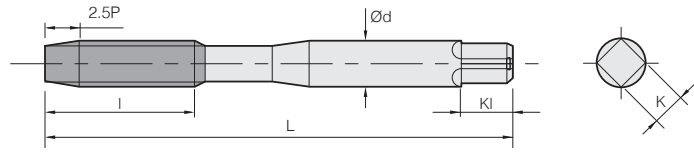
Flutes	Designation	Thread size	L (Overall length)	I (Thread length)	d (Shank diameter)	K (Square width)	KI (Square length)	Limits	DIN Type
	M3X0.5-PTD50	M3X0.5	56	11.0	3.5	2.7	6	6H	371
	M4X0.7-PTD50	M4X0.7	63	13.0	4.5	3.4	6	6H	371
	M5X0.8-PTD50	M5X0.8	70	15.0	6.0	4.9	8	6H	371
	M6X1.0-PTD50	M6X1.0	80	17.0	6.0	4.9	8	6H	371
	M8X1.0-PTD50	M8X1.0	90	17.0	6.0	4.9	8	6H	374
	M8X1.25-PTD50	M8X1.25	90	20.0	8.0	6.2	9	6H	371
	M10X1.0-PTD50	M10X1.0	90	18.0	7.0	5.5	8	6H	374
	M10X1.25-PTD50	M10X1.25	100	22.0	7.0	5.5	8	6H	374
	M10X1.50-PTD50	M10X1.50	100	22.0	10.0	8.0	11	6H	371
	M12X1.0-PTD50	M12X1.0	100	18.0	9.0	7.0	10	6H	374
	M12X1.25-PTD50	M12X1.25	100	22.0	9.0	7.0	10	6H	374
	M12X1.5-PTD50	M12X1.5	100	22.0	9.0	7.0	10	6H	374
	M12X1.75-PTD50	M12X1.75	110	24.0	9.0	7.0	10	6H	376
	M14X1.5-PTD50	M14X1.5	100	22.0	11.0	9.0	12	6H	374
	M14X2.0-PTD50	M14X2.0	110	26.0	11.0	9.0	12	6H	376
	M16X1.5-PTD50	M16X1.5	100	22.0	12.0	9.0	12	6H	374
	M16X2.0-PTD50	M16X2.0	110	27.0	12.0	9.0	12	6H	376
	M18X1.5-PTD50	M18X1.5	110	25.0	14.0	11.0	14	6H	374
	M18X2.5-PTD50	M18X2.5	125	30.0	14.0	11.0	14	6H	376
	M20X1.5-PTD50	M20X1.5	125	25.0	16.0	12.0	15	6H	374
M20X2.5-PTD50	M20X2.5	140	32.0	16.0	12.0	15	6H	376	
M22X1.5-PTD50	M22X1.5	125	25.0	18.0	14.5	17	6H	374	
M22X2.5-PTD50	M22X2.5	140	32.0	18.0	14.5	17	6H	376	
M24X1.5-PTD50	M24X1.5	140	27.0	18.0	14.5	17	6H	374	
M24X2.0-PTD50	M24X2.0	140	27.0	18.0	14.5	17	6H	374	
M24X3.0-PTD50	M24X3.0	160	34.0	18.0	14.5	17	6H	376	

- ※ Ideal for making through holes on carbon steel, alloy steel and non-ferrous metal.
- ※ Wear resistance highly improved by the use of TiN, TiCN. Steam oxide coating for high efficiency tapping operations.
- ※ Built-up edges are prevented thanks to a reduced coefficient of friction gained by using porous cutting fluid of Fe³O₄.
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► Applicable Workpiece Range

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	C ~0.25%	C0.25% ~0.45%	C 0.45%~	SCM	25~45 HrC	45~55 HrC	50~60 HrC	SUS	SKD	SC	FC	FCD	Cu	Bs	BsC	PB	Al	AC ADC	MC	ZDC	Ti	Ni	-	-
HN30T		○	○	◎							○	○	○	○	○	○	◎	○	○	○				○
HC20T	○	○	○	○				◎	○	○	○	○	○	○	○	○	○	○	○	○	○	○		○
HC10T	◎	◎	◎	○				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		○
HH30T	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○												

SPD type (Spiral Tap)



(mm)

Flutes	Designation	Thread size	L (Overall length)	I (Thread length)	d (Shank diameter)	K (Square width)	KI (Square length)	Limits	DIN Type
3	M3X0.5-SPD25	M3X0.5	56	11.0	3.5	2.7	6	6H	371
	M4X0.7-SPD25	M4X0.7	63	13.0	4.5	3.4	6	6H	371
	M5X0.8-SPD25	M5X0.8	70	15.0	6.0	4.9	8	6H	371
	M6X1.0-SPD25	M6X1.0	80	17.0	6.0	4.9	8	6H	371
	M8X1.0-SPD25	M8X1.0	90	17.0	6.0	4.9	8	6H	374
	M8X1.25-SPD25	M8X1.25	90	20.0	8.0	6.2	9	6H	371
	M10X1.0-SPD25	M10X1.0	90	18.0	7.0	5.5	8	6H	374
	M10X1.25-SPD25	M10X1.25	100	22.0	7.0	5.5	8	6H	374
	M10X1.50-SPD25	M10X1.50	100	22.0	10.0	8.0	11	6H	371
	M12X1.0-SPD25	M12X1.0	100	18.0	9.0	7.0	10	6H	374
	M12X1.25-SPD25	M12X1.25	100	22.0	9.0	7.0	10	6H	374
	M12X1.5-SPD25	M12X1.5	100	22.0	9.0	7.0	10	6H	374
	M12X1.75-SPD25	M12X1.75	110	24.0	9.0	7.0	10	6H	376
	M14X1.5-SPD25	M14X1.5	100	22.0	11.0	9.0	12	6H	374
	M14X2.0-SPD25	M14X2.0	110	26.0	11.0	9.0	12	6H	376
	4	M16X1.5-SPD25	M16X1.5	100	22.0	12.0	9.0	12	6H
M16X2.0-SPD25		M16X2.0	110	27.0	12.0	9.0	12	6H	376
M18X1.5-SPD25		M18X1.5	110	25.0	14.0	11.0	14	6H	374
M18X2.5-SPD25		M18X2.5	125	30.0	14.0	11.0	14	6H	376
M20X1.5-SPD25		M20X1.5	125	25.0	16.0	12.0	15	6H	374
M20X2.5-SPD25		M20X2.5	140	32.0	16.0	12.0	15	6H	376
M22X1.5-SPD25		M22X1.5	125	25.0	18.0	14.5	17	6H	374
M22X2.5-SPD25		M22X2.5	140	32.0	18.0	14.5	17	6H	376
M24X1.5-SPD25		M24X1.5	140	27.0	18.0	14.5	17	6H	374
M24X2.0-SPD25		M24X2.0	140	27.0	18.0	14.5	17	6H	374
M24X3.0-SPD25		M24X3.0	160	34.0	18.0	14.5	17	6H	376

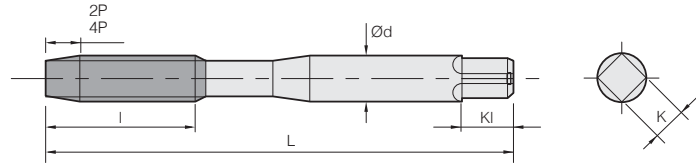
- ※ Ideal for making blind holes. Its flutes provide excellent chip evacuation in tapping carbon steel, alloy steel and non-ferrous materials.
- ※ Wear resistance highly improved by the use of TiN, TiCN, Steam oxide coating for high efficiency tapping operations.
- ※ Built-up edges are prevented thanks to a reduced coefficient of friction gained by using porous cutting fluid of Fe₃O₄.
- ※ Ideal for tapping stainless steel, cast steel, carbon steel for machine structures, etc.

Applicable Workpiece Range

Division	Carbon steel			Alloy steel SCM	Quenched and tempered steel			Stainless steel SUS	Tool steel SKD	Cast steel SC	Cast iron FC	Ductile cast iron FCD	Copper Cu	Brass Bs	Brass-cast BsC	Bronze PB	Rolled aluminum Al	Aluminum-cast, alloyed AC ADC	Magnesium-cast, alloyed MC	Zinc-cast, alloyed ZDC	Titanium alloy		Thermo-setting plastics -	Thermo-plastics -
	C -0.25%	C 0.25%~0.45%	C 0.45%~		25~45 HrC	45~55 HrC	50~60 HrC														Ti	Ni		
HN30T		○		◎								○	○	○	○	○	○	○	○	○				○
HC20T	○	○	○	○				○	○	○		○	○	○	○	○	○	○	○	○	○			○
HC10T	○	◎	◎	○				○	○	○		○	○	○	○	○	○	○	○	○	○			○
HH30T	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○												

TAP Series

⇒ RTD type (Roll Tap)



HSSE	Uncoated HN30T	TiN HC20T	TiCN HC10T
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(mm)

Oil groove	Designation		Thread size	L (Overall length)	l (Thread length)	d (Shank diameter)	K (Square width)	KI (Square length)	Limits
	2P	4P							
1	M3X0.5-RTD20(S)	-	M3X0.5	56	11	3.5	2.7	6	6HX
4	M3X0.5-RTD20(M)	M3X0.5-RTD40(M)	M3x0.5	56	11	3.5	2.7	6	6HX
1	M4X0.7-RTD20(S)	-	M4x0.7	63	13	4.5	3.4	6	6HX
4	M4X0.7-RTD20(M)	M4X0.7-RTD40(M)	M4x0.7	63	13	4.5	3.4	6	6HX
1	M5X0.8-RTD20(S)	-	M5x0.8	70	15	6.0	4.9	8	6HX
4	M5X0.8-RTD20(M)	M5X0.8-RTD40(M)	M5x0.8	70	15	6.0	4.9	8	6HX
1	M6X1.0-RTD20(S)	-	M6x1.0	80	17	6.0	4.9	8	6HX
4	M6X1.0-RTD20(M)	M6X1.0-RTD40(M)	M6x1.0	80	17	6.0	4.9	8	6HX
1	M8X1.0-RTD20(S)	-	M8x1.0	90	17	6.0	4.9	8	6HX
4	M8X1.0-RTD20(M)	M8X1.0-RTD40(M)	M8x1.0	90	17	6.0	4.9	8	6HX
1	M8X1.25-RTD20(S)	-	M8x1.25	90	20	8.0	6.2	9	6HX
4	M8X1.25-RTD20(M)	M8X1.25-RTD40(M)	M8x1.25	90	20	8.0	6.2	9	6HX
1	M10X1.0-RTD20(S)	-	M10x1.0	90	18	7.0	5.5	8	6HX
4	M10X1.0-RTD20(M)	M10X1.0-RTD40(M)	M10x1.0	90	18	7.0	5.5	8	6HX
1	M10X1.25-RTD20(S)	-	M10x1.25	100	22	7.0	5.5	8	6HX
4	M10X1.25-RTD20(M)	M10X1.25-RTD40(M)	M10x1.25	100	22	7.0	5.5	8	6HX
1	M10X1.5-RTD20(S)	-	M10x1.5	100	22	10.0	8.0	11	6HX
4	M10X1.5-RTD20(M)	M10X1.5-RTD40(M)	M10x1.5	100	22	10.0	8.0	11	6HX
1	M12X1.0-RTD20(S)	-	M12x1.0	100	18	9.0	7.0	10	6HX
4	M12X1.0-RTD20(M)	M12X1.0-RTD40(M)	M12x1.0	100	18	9.0	7.0	10	6HX
1	M12X1.25-RTD20(S)	-	M12x1.25	100	22	9.0	7.0	10	6HX
4	M12X1.25-RTD20(M)	M12X1.25-RTD40(M)	M12x1.25	100	22	9.0	7.0	10	6HX
1	M12X1.5-RTD20(S)	-	M12x1.5	100	22	9.0	7.0	10	6HX
4	M12X1.5-RTD20(M)	M12X1.5-RTD40(M)	M12x1.5	100	22	9.0	7.0	10	6HX
1	M12X1.75-RTD20(S)	-	M12x1.75	110	24	9.0	7.0	10	6HX
4	M12X1.75-RTD20(M)	M12X1.75-RTD40(M)	M12x1.75	110	24	9.0	7.0	10	6HX

※ Ideal for tapping non-ferrous alloys such as aluminum, zinc, copper, etc.

※ For general use for both steels and non-ferrous metal.

※ Wear resistance highly improved by the use of TiN, TiCN coating for high efficiency tapping operations.

► Applicable Workpiece Range

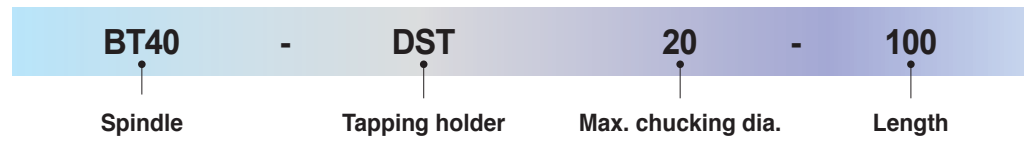
Division	Carbon steel			Alloy steel	Quenched and tempered steel			Stainless steel	Tool steel	Cast steel	Cast iron	Ductile cast iron	Copper	Brass	Brass-cast	Bronze	Rolled aluminum	Aluminum-cast, alloyed	Magnesium-cast, alloyed	Zinc-cast, alloyed	Titanium alloy		Thermo-setting plastics	Thermo-plastics	
	C ~0.25%	C0.25% ~0.45%	C 0.45%~		SCM	25~45 HrC	45~55 HrC														50~60 HrC	SUS			SKD
HN30T													○	○	○	○	○			◎					
HC20T	○	○	○	○				◎	○	○		○	○	○	○										
HC10T	◎	◎	○	○				◎					◎	◎	◎		◎	◎		◎					

Tapping Chuck

Tapping Chuck DST

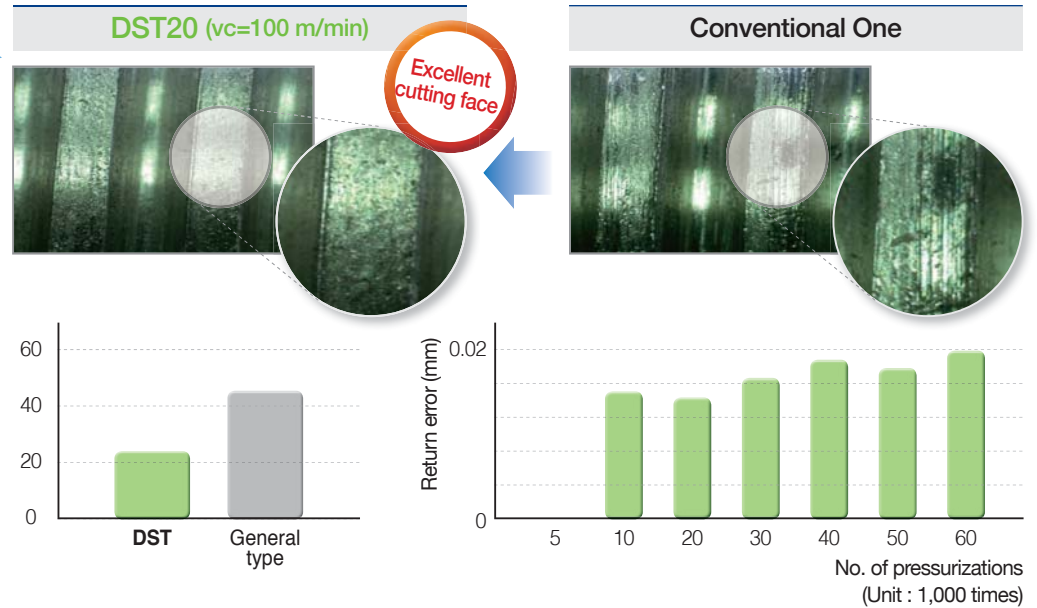
- Specially designed structure for absorbing thrust load and preventing damage on the tap
- Through coolant system available
- Applicable range : M1~M22

Code System



Precise Machining

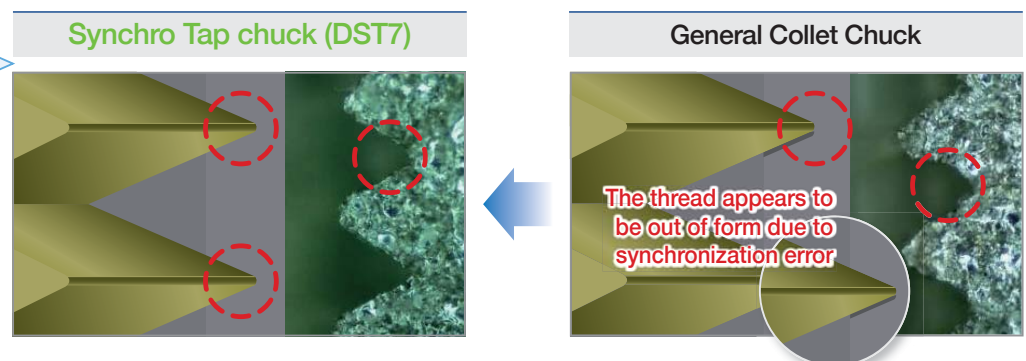
- Exclusive collet for tapping
 - Use TER collet at tapping work.
 - Use ER11 collet for DST7.



Comparison of Thread Figures

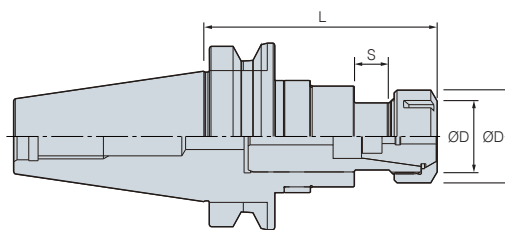
Type	Collet chuck	DST7	Competitor
Intro part after one time use			
End part after one time use			

- When tapping under the same conditions, threads of a general collet chuck seem to be damaged.



Tapping Chuck

BT-DST

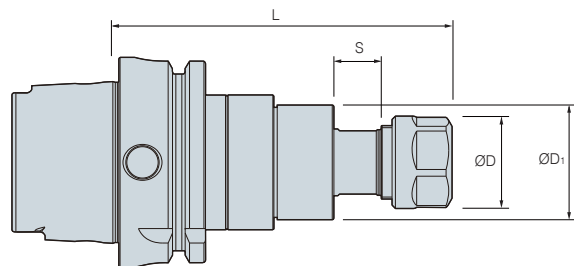


(mm)

Designation		Tapping range	ØD	ØD ₁	L	S	Collet	F-	F+
BT30 -	DST3-70	M1~M3	26	19	70	6	ER11	0.5	0.5
	DST10-95	M3~M10	40.4	28	95	11	TER16	0.5	0.5
BT40 -	DST10-100	M3~M10	40.4	28	100	11	TER16	0.5	0.5
	DST22-110	M6~M22	60	49.5	110	18	TER32	0.7	0.7
BT50 -	DST10-110	M3~M10	60	49.5	110	11	TER16	0.5	0.5
	DST22-130	M6~M22	60	49.5	125	18	TER32	0.7	0.7

※ Through coolant system is optional.

HSK-DST



(mm)

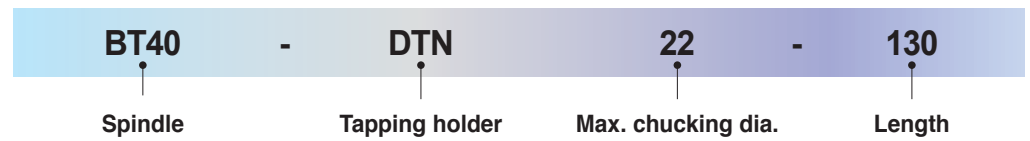
Designation		Tapping range	ØD	ØD ₁	L	S	Collet	F-	F+
HSK63A -	DST10-100	M3~M10	40.4	28	100	11	TER16	0.5	0.5
	DST10-130	M6~M22	60	49.5	130	18	TER32	0.7	0.7

※ Through coolant system is optional.

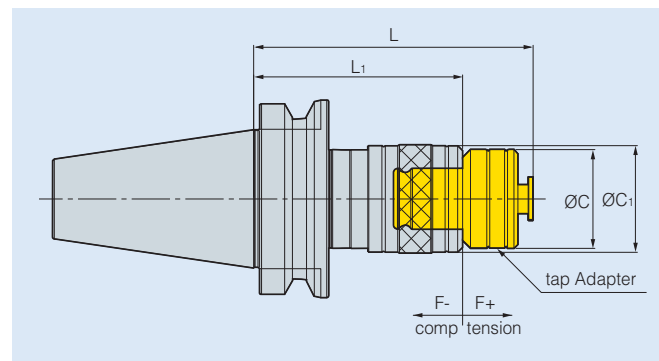
Tapping Chuck DTN

- Easy and fast tool change
- Minimizes tap breakage by using of a malleable and shrinkable adaptor.
- Applicable range : M3~M38

⇒ Code System



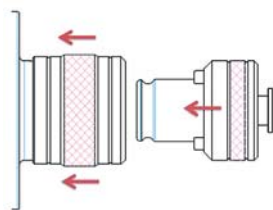
⇒ Easy Exchange of TCA (Tap adaptor)



- Convenient one-touch exchange type for high precision and longer tool life
- Fast tool change of various sizes enabling a wide range of applications.
- Length is shrinkable by the axial floating way.

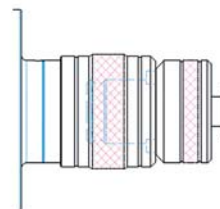
⇒ How to clamp TCA and Tap holders

Before installation



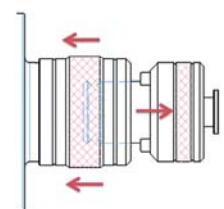
1. Insert TCA pushing the holder cover down.
2. Clamp the TCA to the key groove and hold until it clicks.

After installation



1. The cover of tap holder is placed correctly.

Disassembly

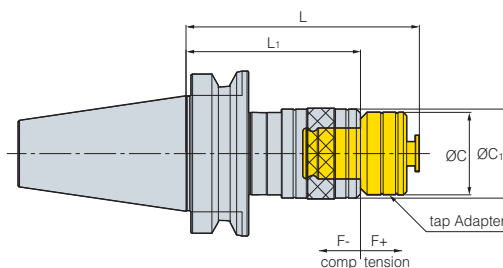


1. Separate the TCA, pushing the cover.




Tapping Chuck

BT-DTN

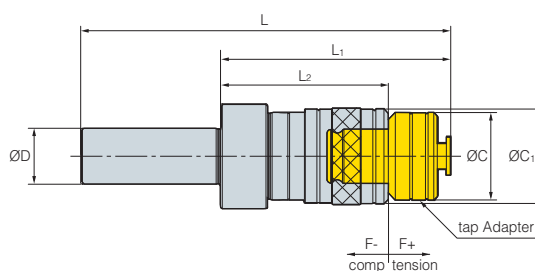


(mm)

Designation		Tapping range	L	L ₁	ØC	ØC ₁	F ⁻	F ⁺		Adaptor
BT30 -	DTN12-85	M3~M12	85	60	32	39	4	10	0.7	TCA1-M
	DTN12-90	M3~M12	90	65	32	39	4	10	1.2	TCA1-M
BT40 -	DTN12-120	M3~M12	120	95	32	39	4	10	1.4	TCA1-M
	DTN22-130	M8~M22	130	96	50	56	12.5	12.5	1.7	TCA2-M
	DTN22-160	M8~M22	160	126	50	56	12.5	12.5	2.1	TCA2-M
	DTN12-100	M3~M12	100	75	32	39	4	10	3.7	TCA1-M
BT50 -	DTN12-130	M3~M12	130	105	32	39	4	10	3.9	TCA1-M
	DTN22-140	M8~M22	140	104	50	56	12.5	12.5	4.2	TCA2-M
	DTN22-170	M8~M22	170	134	50	56	12.5	12.5	4.7	TCA2-M
	DTN38-185	M16~M38	185	140	72	81	20	20	5.7	TCA3-M
	DTN38-215	M16~M38	215	170	72	81	20	20	6.6	TCA3-M

※ Through coolant system is optional.

S-DTN

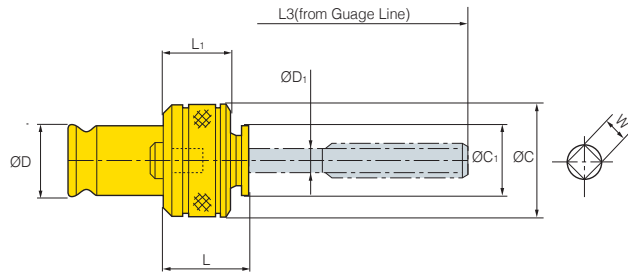


(mm)


Designation		Tapping range	ØD	L	L ₁	L ₂	ØC	ØC ₁	F ⁻	F ⁺	Adaptor
S32 -	DTN12-90	M3-M12	32	170	90	65	32	39	4	10	TCA1
	DTN22-130	M8-M24	32	210	130	96	50	56	12.5	12.5	TCA2

※ Through coolant system is not available.

⇒ TCA (Tap adaptor)

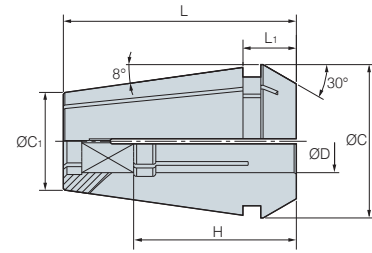
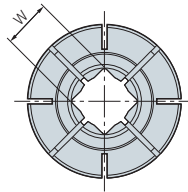


(mm)

Designation		ØD	ØC	L	L ₁	
TCA1 -	M3	4	3.2	24	22	0.2
	M4	5	4	24	22	0.2
	M5	5.5	4.5	24	22	0.2
	M6, 1/4U	6	4.5	24	22	0.2
	M8	6.2	5	25	22	0.2
	M10, 3/8U	7	5.5	25	22	0.2
	M11	8	6	39	22	0.2
	M12	8.5	6.5	26	22	0.2
TCA2 -	M8	6.2	5	38	28	0.6
TCS2 -	M10	7	5.5	38	28	0.6
TCA2 -	M12	8.5	6.5	39	28	0.6
	M14, 3/4U	10.5	8	41	28	0.6
	P1/4	11	9	31	28	0.6
TCS2 -	M16	12.5	10	43	28	0.6
TCA2 -	M18, P3/8	14	11	44	28	0.6
	M20	15	12	45	28	0.6
	M22	17	13	46	28	0.6
	P1/2	18	14	36	28	0.6
	M24	19	15	46	28	1.8
TCA3 -	M16	12.5	10	35	37	1.8
	M18	14	11	37	37	1.8
	M20	15	12	37	37	1.8
	M22	17	13	38	37	1.8
	M24	19	15	44	37	1.8
	M27, 1U	20	15	62	37	1.8
	M30, P3/4	23	17	62	37	1.8
	M33	25	19	66	37	1.8
	M36, M38	28	21	68	37	1.8

- ※ DIN standard products are custom-made.
- ※ Through coolant system is not available.

TER (Tap collet)



(mm)

Designation		Applicable Tap	ØD	W	ØC	ØC ₁	L	L ₁	H
TER16 -	4x3.2	M3	4	3.2	16.74	10.1	27.5	6.3	18
	5x4	M4	5	4	16.74	10.1	27.5	6.3	18
	5.5x4.5	M5	5.5	4.5	16.74	10.1	27.5	6.3	18
	6x4.5	M6, U1/4	6	4.5	16.74	10.1	27.5	6.3	18
	6.2x5	M7, M8	6.2	5	16.74	10.1	27.5	6.3	18
	7x5.5	M9, M10, U3/8	7	5.5	16.74	10.1	27.5	6.3	18
TER20 -	5x4	M4	5	4	20.74	13.2	31.5	7.2	18
	5.5x4.5	M5	5.5	4.5	20.74	13.2	31.5	7.2	18
	6x4.5	M6, U1/4	6	4.5	20.74	13.2	31.5	7.2	18
	6.2x5	M7, M8	6.2	5	20.74	13.2	31.5	7.2	18
	7x5.5	M9, M10, U3/8	7	5.5	20.74	13.2	31.5	7.2	18
	8x6	M11, U7/16, P1/8	8	6	20.74	-	-	-	-
	8.5x6.5	M12	8.5	6.5	20.74	13.2	31.5	7.2	22
TER25 -	5x4	M4	5	4	25.74	17.6	34	7.5	18
	5.5x4.5	M5	5.5	4.5	25.74	17.6	34	7.5	18
	6x4.5	M6	6	4.5	25.74	17.6	34	7.5	18
	6.2x5	M7, M8	6.2	5	25.74	17.6	34	7.5	18
	7x5.5	M9, M10, U3/8	7	5.5	25.74	17.6	34	7.5	18
	8.5x6.5	M12	8.5	6.5	25.74	17.6	34	7.5	22
TER32 -	6x4.5	M6, U1/4	6	4.5	32.74	23.1	40	8.2	18
	6.2x5	M7, M8	6.2	5	32.74	23.1	40	8.2	18
	7x5.5	M9, M10, U3/8	7	5.5	32.74	23.1	40	8.2	18
	8X6	M11, U7/16, P1/8	8	6	32.74	23.1	40	8.2	22
	8.5x6.5	M12	8.5	6.5	32.74	23.1	40	8.2	22
	10.5x8	M14, U9/16	10.5	8	32.74	23.1	40	8.2	25
	12.5x10	M16	12.5	10	32.74	23.1	40	8.2	25
	14x11	M18, P3/8	14	11	32.74	23.1	40	8.2	25
	15x12	M20	15	12	32.74	23.1	40	8.2	25
	17x13	M22, U7/8	17	13	32.74	23.1	40	8.2	25
	11x9	P1/4	11	9	32.74	23.1	40	8.2	25
	12x9	U5/8	12	9	32.74	23.1	40	8.2	25
	9x7	U1/2	9	7	32.74	23.1	40	8.2	22

※ Machining with a waterproof tap is possible by using RTJW and RUT nuts. (only in right sizes)



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