CONPROFE

TAPPING TOOLS

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CONPROFE

CONverging of Global Resources
PROFEssional as Industry Leader

2003 · Green · 2022 · Intelligent · Efficient · 2025

Embarking on a New Journey

MultiTap

Field of Application

Tapping tools are extensively used in almost all cnc machining industries including automotive, aviation & aerospace, electronic consumer, die & mold, machine and tool, general machinery (home hardware/fasteners), power generation, oil & gas, military & national defense, etc.

Tapping Tools

Contents

» Company Profile

Conprofe Ultrasonic Green Tool Business Unit (CUGT BU) is committed to providing precision tools and ultrasonic green manufacturing solutions. In the past two decades, we have been adhering to the idea of "CONverging of Global Resources, PROFEssional as Industry Leader", focusing closely on the thread of "green, intelligent and efficient", leading the innovation of processing technology applications by integrating traditional machining with ultrasonic technologies and green technologies, successfully making the breakthrough in hard brittle materials, hard-to-cut metal materials and composite materials machining, forming five product categories including Super-hard Tools, Tapping Tools, Precision Tool Holders, Ultrasonic Technologies and Green Technologies, which consists of eight product series such as Carbide Tools, Diamond Tools, Tapping Tools, Thread Milling Tools, Hydraulic Tool Holders, Shrink-fit Tool Holders, Ultrasonic Machining and Welding Systems, Clean Machining Equipment, which have been widely used at well-known customers' from consumable electronics, semiconductor, automotive, aerospace, medical field, general precision manufacturing, etc.

Located at Guangzhou Science City, based on the group platform, CUGT BU has established a network of R&D, sales and service based in Hong Kong, Taiwan, the United States, South Korea, India and Vietnam, etc., with intellectual property distributed in over 30 countries and regions and products exported to over 70 countries and regions across six continents, gradually shaping an integrated distribution of R&D, production, sales and service around the globe.

CUGT BU owns strong technical advantages possessing over 200 sets of the world's state-of-art production and inspection equipment such as STUDER, DMG, SMS, ROLLOMATIC, CEMECON, ZEISS, POLYTEC, etc., and has established a Provincial Engineering Technology Center and Laboratory. Over 500 core technology patents were developed. The BU has undertaken a number of major national and provincial scientific and technological projects in the field of advanced manufacturing. Its ultrasonic green product technologies contribute to achieving "Carbon Peaking" and "Carbon Neutrality" goals, and have reached international advanced level as assessed and acknowledged by experts led by members of the Chinese Academy of Engineering (CAE). Furthermore, Conprofe has successively been granted the Guangdong Scientific and Technological Progress Award (First Prize), Guangdong Patent Award (Silver), China Patent Award (Excellence), etc.

Definition of CONPROFE

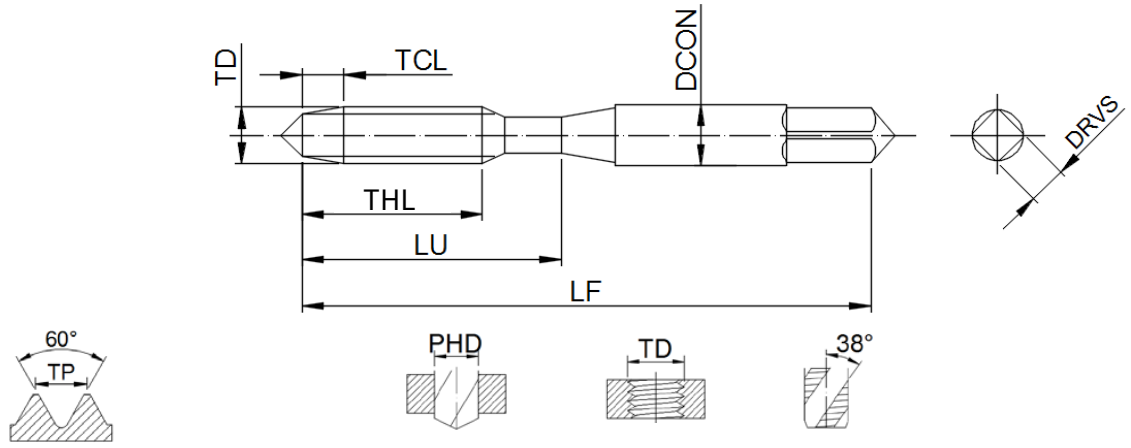
Converging of Global Resources

Professional as Industry Leader

“ CONPROFE ”

Production Equipment

1. Terminology



*The name of each part of the tap adopts the ISO 13399 standard, an international standard for convenient and efficient data exchange between cutting tools. By using uniform parameters and definitions, tool information exchange between software systems will definitely get easier.

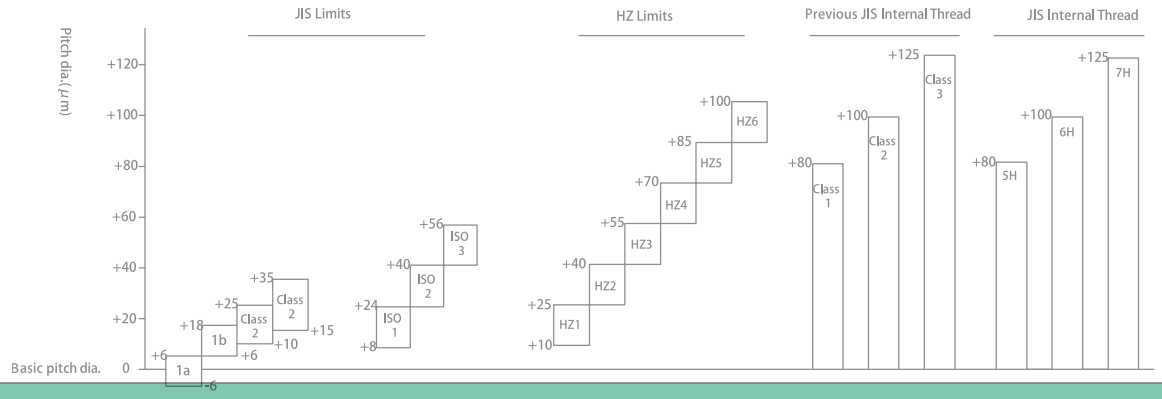
Parameter	Definition	Parameter	Definition
DCON	Connection diameter	TCTR	Thread tolerance class
DRVS	Drive size	THL	Thread length
LF	Functional length	TP	Thread pitch
LU	Usable length (max. recommended)	TPI	Threads per inch
PHD	Premachined hole diameter	CXSC1	Coolant exit style code of axial concentric
TCL	Thread chamfer length	CXSC2	Coolant exit style code of radial exit
TD	Thread diameter	CXSC4	Coolant exit style code of axial concentric on circle

2. Limit Information

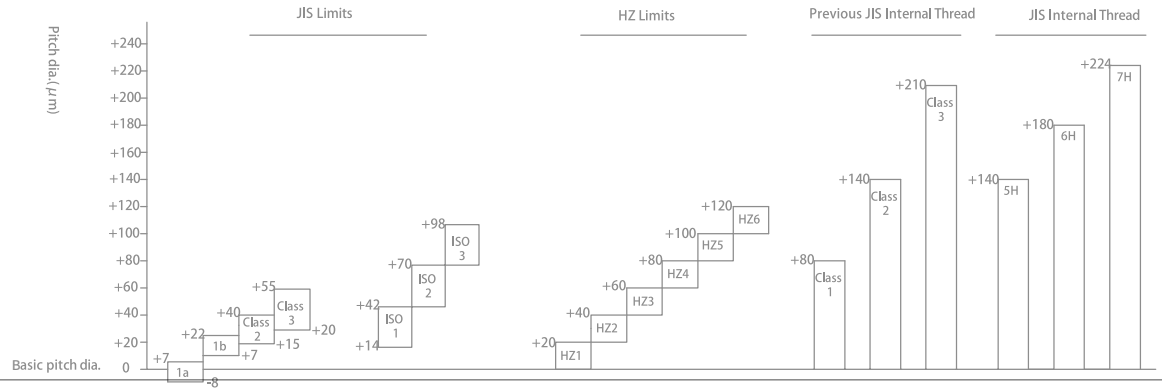
2.1 HZ Limits

① P≤0.6 (TPI≥40)	② P≥0.7 (TPI≤36)
Upper limit: 0.01+0.015*n	Upper limit: 0.02*n
Lower limit: (upper limit)-0.015	Lower limit: (upper limit)-0.02
Unit: mm (n: HZ number)	Unit: mm (n: HZ number)

Example: M3x0.5-HZ2 (STD)



Example: M10x1.5-HZ3 (STD)



2. Limit Information

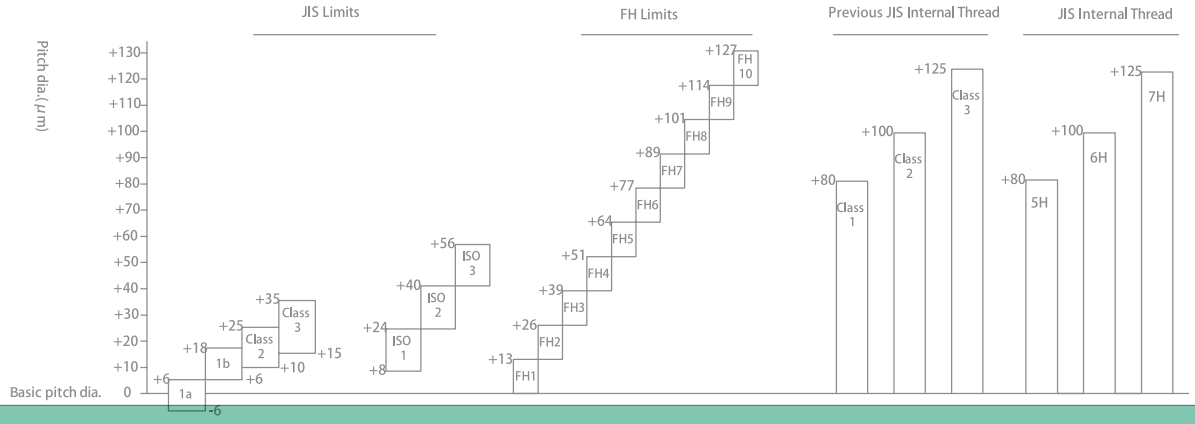
2.2 FH Limits

Upper limit: 0.0127*n

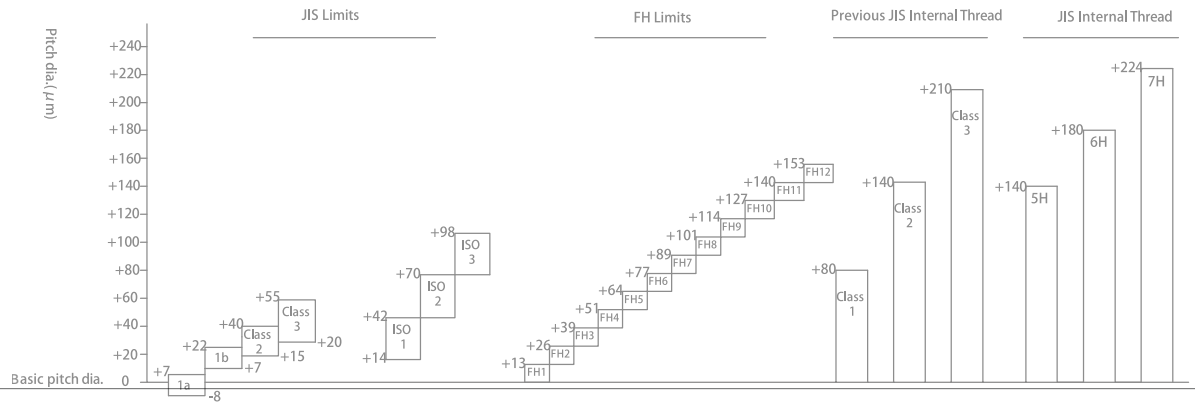
Lower limit: (upper limit)-0.0127

Unit: mm (n: FH number)

Example: M3x0.5-FH5 (STD)



Example: M10x1.5-FH7 (STD)



Grade Notes:

① STD: Recommended limit for 6H and class 2

② STD+1: Recommended limit for 1 oversized 6H and class 2

③ STD+2: Recommended limit for 2 oversized 6H and class 2

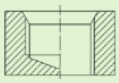
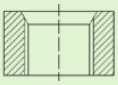
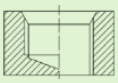
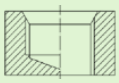
3. Workpiece Material

Item	Description
HSS	High-speed steel
HSSE	High vanadium high-speed steel (cobalt)
HSCO	Cobalt high-speed steel
HSPM	High-speed power steel
HM	Hard material

4. Surface Treatment

Item	Description	Applicable Materials
Bright	Polished finish	Copper, aluminum alloy, etc.
HAP	A black AlTiN-based coating	Non-alloy steel, alloy steel, high speed steel, etc.
SAP	A bronze TiSiN-based coating	Hardened steel, stainless steel, titanium alloy, etc.
GTS	A bright gold TiN-based coating	Carbon steel, aluminum alloy, cast iron, etc.
TDS	A dark grey TiCN-based coating	Alloy steel, stainless steel, cast iron, etc.
DLC	A bright black diamond-like carbon coating	Non-ferrous metals such as aluminum alloy, etc.

5. Types and Features

	Spiral Flute Taps (SFT)	Spiral Pointed Taps (POT)	Straight Flute Taps (HT)	Forming Taps (NRT)
Type				
Features	• Spiral flute	• Spiral point	• Straight flute	• Taps do not produce chips
	• Chips flow out against tapping direction	• Stronger style	• Strong cutting edges	• Precise uniformity of tapped thread limit
	• Lower tapping torque	• Pushes chips forward through the hole	• Easy to re-grind	• High strength of resistance to damage
Application				
	• First choice for blind holes • Recommended for the material giving long chips	• First choice for through holes • Common tap style • High speed tapping	• For through holes and blind holes • For short chipped material like cast iron • Hard materials	• Can be used for all types of holes and depth • Materials with formability

CONPROFE
Machining Application Index Table

MultiTAP

Explanation:

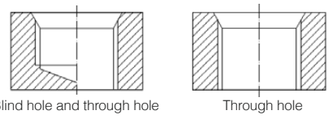
Note①: The cutting speeds (Vc) listed in the respective columns are recommended values which should be adjusted based on specific machining conditions (workpiece material, coolant type, machine type, etc.).

- Preferred choice
- Alternative choice

Note②: Chamfer (TCL): 2.5p means 2.5 times the thread pitch, 5p means 5 times the thread pitch, and so on and so forth.

Note③: Thread depth<2TD means the thread depth is less than 2 times the nominal diameter of the thread.

Note④: Hole types



Blind hole and through hole　　Through hole

			SFT	SFT-GTS	POT	POT-GTS	NRT	NRT-DLC	NRT	NRT-DLC	NRT	NRT-GTS
Type			SFT	SFT-GTS	POT	POT-GTS	NRT	NRT-DLC	NRT	NRT-DLC	NRT	NRT-GTS
Tool material-coating			HSSE	HSSE-GTS	HSSE	HSSE-GTS	HSPM	HSPM-DLC	HM	HM-DLC	HSCO	HSCO-GTS
Chamfer (TCL) ②			2.5P	2.5P	5P	5P	1P	1P	1P	1P	2P/4P	2P/4P
Thread depth ③			<2TD	<2TD	<2TD	<2TD	<3TD	<3TD	<3TD	<3TD	<3TD	<3TD
Hole type ④												
Thread type	M	Page (Range)	15-16 (M2-30)	15-16 (M2-30)	24-25 (M2-30)	24-25 (M2-30)	33 (M0.8-1.6)	33 (M0.8-1.6)	33 (M0.8-1.6)	33 (M0.8-1.6)	34 (M2-16)	34 (M2-16)
	MF		17-19 (MF3-30)	17-19 (MF3-30)	26-28 (MF3-30)	26-28 (MF3-30)					35 (M6-16)	35 (M6-16)
	UNC		20-21 (No.4-1)	20-21 (No.4-1)	29-30 (No.4-1)	29-30 (No.4-1)						
	UNF		22-23 (No.4-1)	22-23 (No.4-1)	31-32 (No.4-1)	31-32 (No.4-1)						
	G											
	NPT											
	NPTF											
	Rc											

ISO Material Group	Subgroup	Workpiece Material	Cutting Speed (Vc m/min) ①									
P	1.1	Low carbon steel (C<0.25%)	-	8~13	-	15~25	-	-	-	-	5~10	8~13
	1.2	Medium carbon steel (C0.25~C0.45%)	5~10	7~12	7~12	**10~15**	-	-	-	-	3~8	7~10
	1.3	High carbon steel (C>0.45%)	-	6~9	5~10	**8~13**	-	-	-	-	-	5~8
	1.4	Alloy steel	5~10	7~12	8~13	10~15	-	-	-	-	-	5~8
	1.5	Tool steel	-	6~9	-	7~12	-	-	-	-	-	5~8
	1.6	Cast steel	-	6~11	-	10~15	-	-	-	-	-	-
	1.7	Heat-treatable steel (HRC25~35)	2~4	3~5	-	4~6	-	-	-	-	-	-
M	2.1	Martensitic stainless steel	-	5~8	-	**8~13**	2~5	3~6	3~7	5~8	3~8	**5~10**
	2.2	Austenitic stainless steel	-	3~5	-	4~6	1~3	2~4	3~5	4~6	-	-
K	3.1	Grey cast iron	-	-	8~13	10~15	-	-	-	-	-	-
	3.2	Ductile cast iron	5~10	7~12	8~15	10~20	-	-	-	-	-	-
	3.3	Vermicular graphite cast iron	-	-	-	-	-	-	-	-	-	-
	3.4	Malleable cast iron	-	-	-	-	-	-	-	-	-	-
N	4.1	Wrought aluminum alloy	8~18	10~20	**10~20**	15~25	2~5	3~8	3~8	5~10	8~15	10~20
	4.2	Cast aluminum alloy	8~13	10~15	10~15	15~20	2~5	3~8	3~8	5~10	**7~12**	10~15
	4.3	Pure copper, low-alloyed copper	5~10	7~12	5~10	7~12	-	-	-	-	5~10	7~12
	4.4	Brass	8~18	10~20	10~18	15~25	-	-	-	-	5~10	7~12
	4.5	Aluminum bronze	5~10	7~12	8~15	10~20	-	-	-	-	-	7~12
	4.6	Magnesium alloy	6~11	8~13	8~13	10~15	-	-	-	-	-	-
	4.7	Zine alloy	6~11	8~13	8~13	10~15	-	-	-	-	5~10	7~12
S	5.1	Titanium alloy	-	-	-	5~7	-	-	1~2	1~3	-	-
	5.2	Nickel-based alloy	-	-	-	-	-	-	-	-	-	-
	5.3	Duro plastic	-	-	-	-	-	-	-	-	-	-
	5.4	Thermo plastic	7~12	10~15	8~13	10~20	-	-	-	-	-	-
	5.5	Fiber reinforced synthetic materials	-	-	-	-	-	-	-	-	-	-
H	6.1	High tensile strength steel	-	-	-	-	-	-	-	-	-	-
	6.2	Hardened steel	-	-	-	-	-	-	-	-	-	-
	6.3	Hard cast iron	-	-	-	-	-	-	-	-	-	-

Selection Guide

Steps ›››››››

CONPROFE Machining Application Index Table — multiTAP

Explanation:

Note①: The cutting speeds (Vc) listed in the respective columns are recommended values which should be adjusted based on specific machining conditions (workpiece material, coolant type, machine type, etc.).
- **Preferred choice**
- Alternative choice

Note②: Chamfer (TCL): 2.5p means 2.5 times the thread pitch, 5p means 5 times the thread pitch, and so on and so forth.

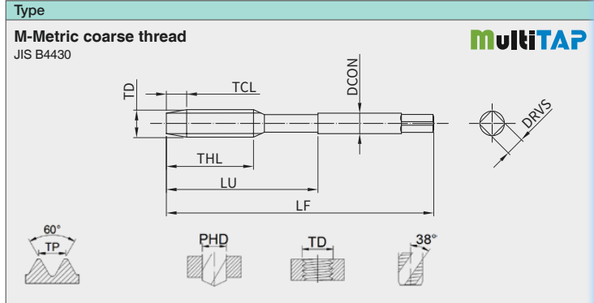
Note③: Thread depth<2TD means the thread depth is less than 2 times the nominal diameter of the thread.

Note④: Hole types

Type			SFT	SFT-GTS	POT	POT-GTS	NRT	NRT-DLC	NRT	NRT-DLC	NRT	NRT-GTS
Tool material-coating			HSSE	HSSE-GTS	HSSE	HSSE-GTS	HSPM	HSPM-DLC	HM	HM-DLC	HSCO	HSCO-GTS
Chamfer (TCL) ②			2.5P	2.5P	5P	5P	1P	1P	1P	1P	2P/4P	2P/4P
Thread depth ③			<2TD	<2TD	<2TD	<2TD	<3TD	<3TD	<3TD	<3TD	<3TD	<3TD
Hole type ④												
Thread type	M	Page (Range)	15-16 (M2-30)	15-16 (M2-30)	24-25 (M2-30)	24-25 (M2-30)	33 (M0.8-1.6)	33 (M0.8-1.6)	33 (M0.8-1.6)	33 (M0.8-1.6)	34 (M2-16)	34 (M2-16)
	MF		17-19 (MF3-30)	17-19 (MF3-30)	26-28 (MF3-30)	26-28 (MF3-30)					35 (M6-16)	35 (M6-16)
	UNC		20-21 (No.4-1)	20-21 (No.4-1)	29-30 (No.4-1)	29-30 (No.4-1)						
	UNF		22-23 (No.4-1)	22-23 (No.4-1)	31-32 (No.4-1)	31-32 (No.4-1)						
	G											
	NPT											
	NPTF											
	Rc											

ISO Material Group	Subgroup	Workpiece Material	Cutting Speed (Vc m/min) ①									
P	1.1	Low carbon steel (C<0.25%)	-	8~13	-	15~25	-	-	-	-	5~10	8~13
	1.2	Medium carbon steel (C0.25~C0.45%)	5~10	7~12	7~12	**10~15**	-	-	-	-	3~8	7~10
	1.3	High carbon steel (C>0.45%)	-	6~9	5~10	**8~13**	-	-	-	-	-	5~8
	1.4	Alloy steel	5~10	7~12	8~13	10~15	-	-	-	-	-	5~8
	1.5	Tool steel	-	6~9	-	7~12	-	-	-	-	-	5~8
	1.6	Cast steel	-	6~11	-	10~15	-	-	-	-	-	-
	1.7	Heat-treatable steel (HRC25~35)	2~4	3~5	-	4~6	-	-	-	-	-	-
M	2.1	Martensitic stainless steel	-	5~8	-	**8~13**	2~5	3~6	3~7	5~8	3~8	**5~10**
	2.2	Austenitic stainless steel	-	3~5	-	4~6	1~3	2~4	3~5	4~6	-	-
K	3.1	Grey cast iron	-	-	8~13	10~15	-	-	-	-	-	-
	3.2	Ductile cast iron	5~10	7~12	8~15	10~20	-	-	-	-	-	-
	3.3	Vermicular graphite cast iron	-	-	-	-	-	-	-	-	-	-
	3.4	Malleable cast iron	-	-	-	-	-	-	-	-	-	-
N	4.1	Wrought aluminum alloy	8~18	10~20	**10~20**	15~25	2~5	3~8	3~8	5~10	8~15	10~20
	4.2	Cast aluminum alloy	8~13	10~15	10~15	15~20	2~5	3~8	3~8	5~10	**7~12**	10~15
	4.3	Pure copper, low-alloyed copper	5~10	7~12	5~10	7~12	-	-	-	-	5~10	7~12
	4.4	Brass	8~18	10~20	10~18	15~25	-	-	-	-	5~10	7~12
	4.5	Aluminum bronze	5~10	7~12	8~15	10~20	-	-	-	-	-	7~12
	4.6	Magnesium alloy	6~11	8~13	8~13	10~15	-	-	-	-	-	-
	4.7	Zine alloy	6~11	8~13	8~13	10~15	-	-	-	-	5~10	7~12
S	5.1	Titanium alloy	-	-	-	5~7	-	-	1~2	1~3	-	-
	5.2	Nickel-based alloy	-	-	-	-	-	-	-	-	-	-
	5.3	Duro plastic	-	-	-	-	-	-	-	-	-	-
	5.4	Thermo plastic	7~12	10~15	8~13	10~20	-	-	-	-	-	-
	5.5	Fiber reinforced synthetic materials	-	-	-	-	-	-	-	-	-	-
H	6.1	High tensile strength steel	-	-	-	-	-	-	-	-	-	-
	6.2	Hardened steel	-	-	-	-	-	-	-	-	-	-
	6.3	Hard cast iron	-	-	-	-	-	-	-	-	-	-

HSSE — **Spiral Flute Taps (SFT)** — CONPROFE

Type	Multi-SFT	Multi-SFT-GTS
M-Metric coarse thread JIS B4430 — multiTAP		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 / K 3.2 / N 4.1-4.7 / S 5.4	P 1.1-1.7 / M 2.1 2.2 / K 3.2 / N 4.1-4.7 / S 5.4

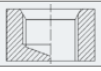
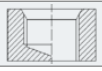
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M7	1	STD	HZ3	65	12	33	6.2	5	3	6	1.0000573	●	1.0000574	○
M8	1.25	STD	HZ3	70	14	37	6.2	5	3	6.8	1.0000849	●	1.0000850	●
M8	1.25	STD+1	HZ4						3		1.0000883	○	1.0000648	○
M10	1.5	STD	HZ3	75	16	41	7	5.5	3	8.5	1.0000871	●	1.0000872	●
M10	1.5	STD+1	HZ4						3		1.0000575	○	1.0000576	○
M12	1.75	STD	HZ4	82	18.5	48	8.5	6.5	3	10.2	1.0000853	●	1.0000854	●
M12	1.75	STD+1	HZ5						3		1.0000725	○	1.0000726	○
M14	2	STD	HZ4	88	20	48	10.5	8	3	12	1.0000857	●	1.0000858	●
M16	2	STD	HZ4	95	20	52	12.5	10	3	14	1.0000859	●	1.0000860	●
M18	2.5	STD	HZ4	100	25	55	14	11	4	15.5	1.0000655	●	1.0000656	●
M20	2.5	STD	HZ4	105	25	58	15	12	4	17.5	1.0000657	●	1.0000658	●
M22	2.5	STD	HZ4	115	27	63	17	13	4	19.5	1.0000659	●	1.0000660	●
M24	3	STD	HZ5	120	30	66	19	15	4	21	1.0000661	●	1.0000662	●
M27	3	STD	HZ5	130	30	71	20	15	4	24	1.0000663	●	1.0000664	●
M30	3.5	STD	HZ5	135	35	74	23	17	4	26.5	1.0000665	●	1.0000666	●

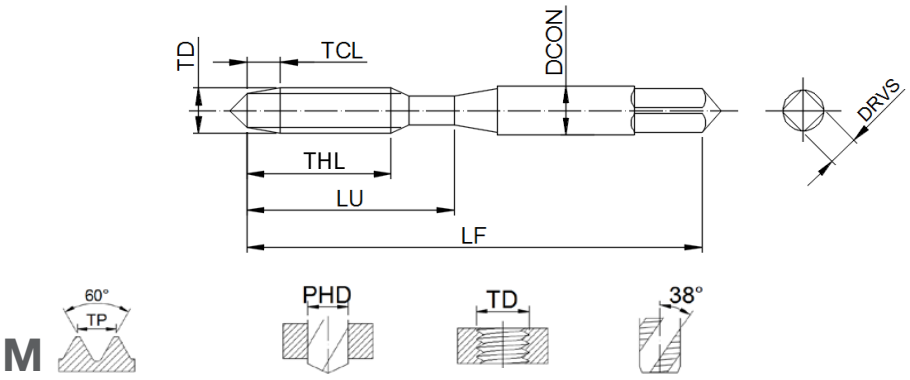
① STD in the Grade column indicates the recommended Limit of the tap.
② Spiral flute taps in size larger than M6 has no point.
③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required
④ See Page 36 for tap marking style.

1. Locate the workpiece material and select the cutting speed in the Machining Application Index Table.
2. Select a suitable tap type according to tool material-coating, chamfer, thread depth, hole type, etc.
3. Find the page based on the selected tap type and thread type.
4. Select the tap specification in the correponding page.
5. Determine the thread size and limit and mark down the Ordering Code.

Example:

● Standard stock item
Specification: M14-HZ4 2P SFT HSSE
Ordering Code: 1.0000857

Type	Multi-SFT	Multi-SFT-GTS
M-Metric coarse thread JIS B4430 MultiTAP		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4



TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M2*	0.4	STD	HZ1	40	4.5	15	3	2.5	2	1.6	1.0000865	●	1.0000866	○
M2.2*	0.45	STD	HZ2	42	5	16	3	2.5		1.75	1.0000643	●	1.0000644	○
M2.5*	0.45	STD	HZ2	44	5	16	3	2.5		2.05	1.0000874	●	1.0000723	○
M3*	0.5	STD	HZ2	46	6	19	4	3.2	3	2.5	1.0000894	●	1.0000495	●
M3*	0.5	STD+1	HZ3								1.0000496	○	1.0000566	○
M3*	0.5	STD+2	HZ4								1.0000497	○	1.0000567	○
M3.5	0.6	STD	HZ2	48	7	20	4	3.2		2.9	1.0000873	●	1.0000568	○
M4	0.7	STD	HZ2	52	7.5	21	5	4		3.3	1.0000863	●	1.0000864	●
M4	0.7	STD+1	HZ3								1.0000847	○	1.0000848	○
M4	0.7	STD+2	HZ4								1.0000867	○	1.0000569	○
M4.5	0.75	STD	HZ2	55	8	21	5	4		3.7	1.0000645	●	1.0000646	●
M5	0.8	STD	HZ2	60	8.5	24	5.5	4.5		4.2	1.0000861	●	1.0000862	●
M5	0.8	STD+1	HZ3								1.0000868	○	1.0000570	○
M5	0.8	STD+2	HZ4								1.0000869	○	1.0000571	○
M6	1	STD-1	HZ2	62	11	29	6	4.5		5	1.0000884	○	1.0000885	○
M6	1	STD	HZ3								1.0000886	●	1.0000887	●
M6	1	STD+1	HZ4								1.0000870	○	1.0000572	○

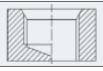
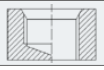
① STD in the Grade column indicates the recommended Limit of the tap.

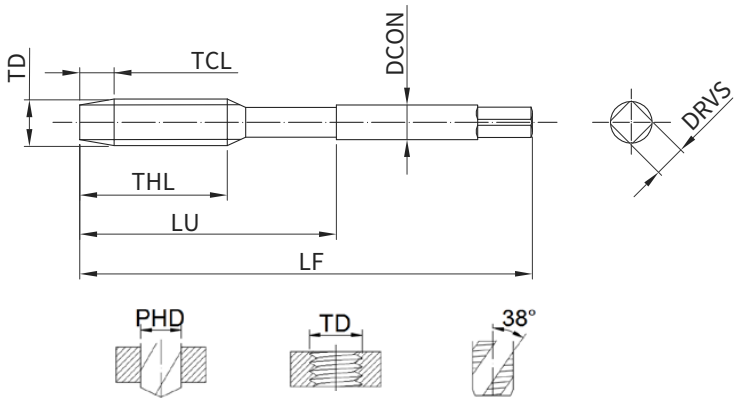
② Spiral flute taps in size larger than M6 have no point.

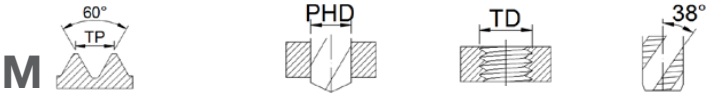
③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

⑤ The helix angle of spiral flute taps in size M3 and smaller is 40° or above.

Type	Multi-SFT	Multi-SFT-GTS
M-Metric coarse thread JIS B4430		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4





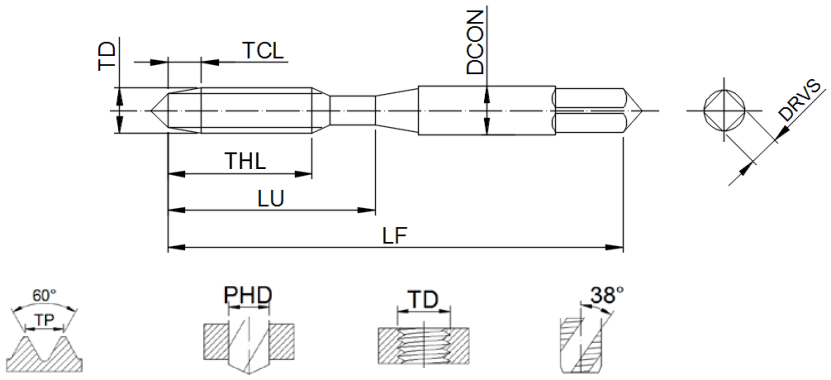
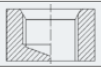
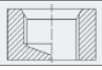
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M7	1	STD	HZ3	65	12	33	6.2	5	3	6	1.0000573	●	1.0000574	○
M8	1.25	STD	HZ3	70	14	37	6.2	5		6.8	1.0000849	●	1.0000850	●
M8	1.25	STD+1	HZ4								1.0000883	○	1.0000648	○
M10	1.5	STD	HZ3	75	16	41	7	5.5		8.5	1.0000871	●	1.0000872	●
M10	1.5	STD+1	HZ4								1.0000575	○	1.0000576	○
M12	1.75	STD	HZ4	82	18.5	48	8.5	6.5		10.2	1.0000853	●	1.0000854	●
M12	1.75	STD+1	HZ5								1.0000725	○	1.0000726	○
M14	2	STD	HZ4	88	20	48	10.5	8		12	1.0000857	●	1.0000858	●
M16	2	STD	HZ4	95	20	52	12.5	10		14	1.0000859	●	1.0000860	●
M18	2.5	STD	HZ4	100	25	55	14	11	4	15.5	1.0000655	●	1.0000656	●
M20	2.5	STD	HZ4	105	25	58	15	12		17.5	1.0000657	●	1.0000658	●
M22	2.5	STD	HZ4	115	27	63	17	13		19.5	1.0000659	●	1.0000660	●
M24	3	STD	HZ5	120	30	66	19	15		21	1.0000661	●	1.0000662	●
M27	3	STD	HZ5	130	30	71	20	15		24	1.0000663	●	1.0000664	●
M30	3.5	STD	HZ5	135	35	74	23	17		26.5	1.0000665	●	1.0000666	●

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than M6 have no point.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-SFT	Multi-SFT-GTS
MF-Metric fine thread JIS B4430 MultiTAP 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4

TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M3*	0.35	STD	HZ1	46	4	19	4	3.2	3	2.65	1.0000577	●	1.0000578	○
M3.5	0.35	STD	HZ1	48	4	20	4	3.2		3.15	1.0000653	●	1.0000654	○
M4	0.5	STD	HZ2	52	5	21	5	4		3.5	1.0000882	●	1.0000580	○
M5	0.5	STD	HZ2	60	5	24	5.5	4.5		4.5	1.0000875	●	1.0000581	○
M6	0.75	STD	HZ2	62	8	29	6	4.5		5.2	1.0000876	●	1.0000582	○

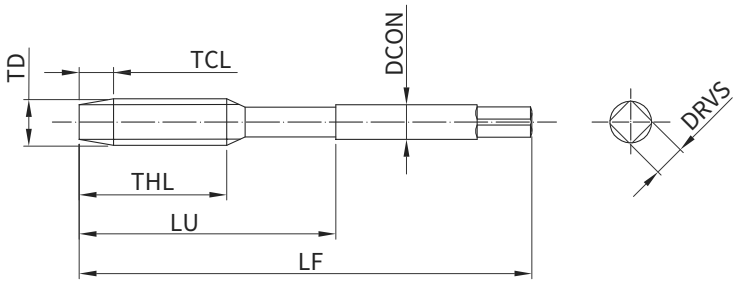
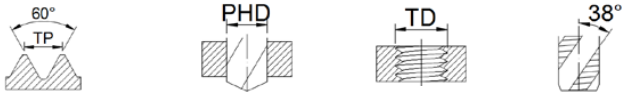
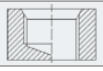
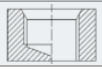
① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than M6 have no point.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

⑤ The helix angle of spiral flute taps in size M3 and smaller is 40° or above.

Type	Multi-SFT	Multi-SFT-GTS
MF-Metric fine thread JIS B4430  MF 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4

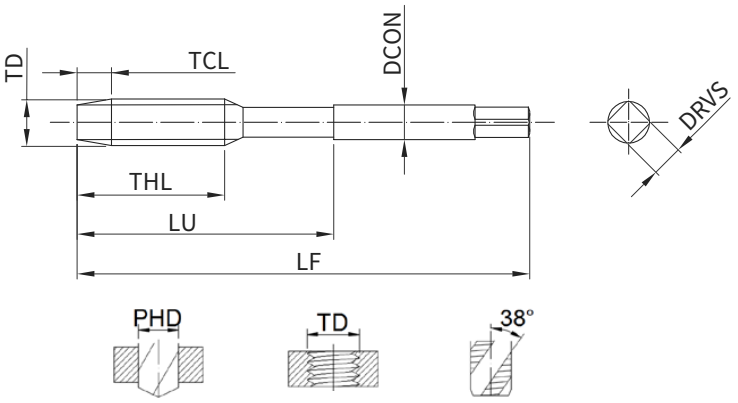
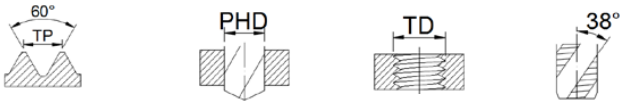
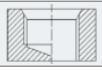
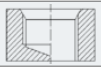
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M7	0.75	STD	HZ2	65	8	33	6.2	5		6.2	1.0000583	○	1.0000584	○
M8	0.75	STD	HZ2	70	11	37	6.2	5		7.2	1.0000649	●	1.0000650	○
M8	1	STD	HZ3							7	1.0000877	●	1.0000585	○
M10	0.75	STD	HZ2	75	11	41	7	5.5		9.2	1.0000651	●	1.0000652	○
M10	1	STD	HZ3							9	1.0000878	●	1.0000724	○
M10	1.25	STD	HZ3		14					8.8	1.0000851	●	1.0000852	○
M12	1	STD	HZ3	82	11	48	8.5	6.5		11	1.0000687	●	1.0000688	○
M12	1.25	STD	HZ3		15				3	10.8	1.0000689	●	1.0000690	○
M12	1.5	STD	HZ3							10.5	1.0000855	●	1.0000856	○
M14	1	STD	HZ3	88	11	48	10.5	8		13	1.0000691	●	1.0000692	○
M14	1.25	STD	HZ3		15					12.8	1.0000693	●	1.0000694	○
M14	1.5	STD	HZ3							12.5	1.0000626	●	1.0000627	○
M16	1	STD	HZ3	95	11	52	12.5	10		15	1.0000695	●	1.0000696	○
M16	1.5	STD	HZ3		15					14.5	1.0000697	●	1.0000698	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than M6 have no point.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-SFT	Multi-SFT-GTS
MF-Metric fine thread JIS B4430 MultiTAP  MF 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4

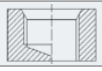
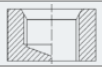
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M18	1.5	STD	HZ4	100	16	55	14	11	4	16.5	1.0000699	●	1.0000700	○
M18	2	STD	HZ4		20					16	1.0000701	●	1.0000702	○
M20	1.5	STD	HZ4	105	16	58	15	12		18.5	1.0000703	●	1.0000704	○
M20	2	STD	HZ4		20					18	1.0000705	●	1.0000706	○
M22	1.5	STD	HZ4	115	16	63	17	13		20.5	1.0000707	●	1.0000708	○
M22	2	STD	HZ4		20					20	1.0000709	●	1.0000710	○
M24	1.5	STD	HZ4	120	17	66	19	15		22.5	1.0000711	●	1.0000712	○
M24	2	STD	HZ4		20					22	1.0000713	●	1.0000714	○
M27	1.5	STD	HZ4	130	17	71	20	15		25.5	1.0000715	●	1.0000716	○
M27	2	STD	HZ4		20					25	1.0000717	●	1.0000718	○
M30	1.5	STD	HZ4	135	18	74	23	17		28.5	1.0000719	●	1.0000720	○
M30	2	STD	HZ4		22					28	1.0000721	●	1.0000722	○

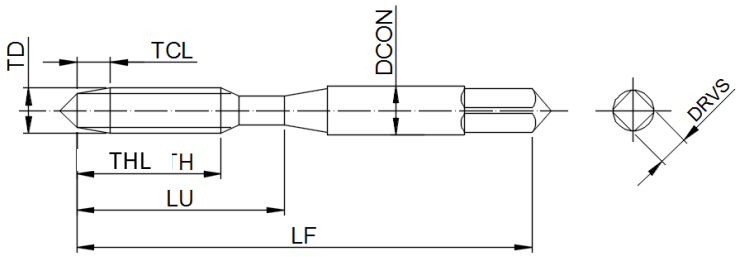
① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than M6 have no point.

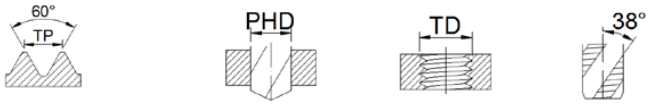
③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-SFT	Multi-SFT-GTS
American unified coarse thread UNC, ANSI B-1.1 MultiTAP		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4



UNC



TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
NO.4*	40	STD	HZ2	44	7	17	3	2.5	2	2.35	1.0000514	●	1.0000589	○
NO.5*	40	STD	HZ2	46	7	19	4	3.2	3	2.65	1.0000590	●	1.0000591	○
NO.6*	32	STD	HZ2	48	8	21	4	3.2		2.85	1.0000515	●	1.0000592	○
NO.8	32	STD	HZ2	52	8	21	5	4		3.5	1.0000516	●	1.0000593	○
NO.10	24	STD	HZ2	60	11	24	5.5	4.5		3.9	1.0000530	●	1.0000594	○
NO.12	24	STD	HZ2	60	11	25	5.5	4.5		4.5	1.0000595	●	1.0000596	○
1/4	20	STD	HZ2	62	13	29	6	4.5		5.1	1.0000879	●	1.0000597	○

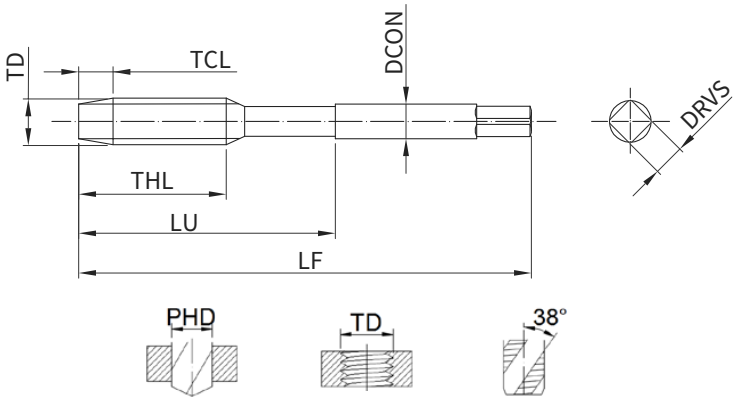
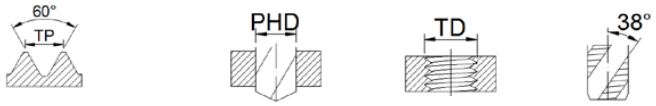
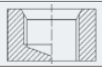
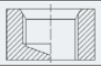
① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than 1/4 have no point.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

⑤ The helix angle of spiral flute taps in size No.6 and smaller is 40° or above.

Type	Multi-SFT	Multi-SFT-GTS
American unified coarse thread UNC, ANSI B-1.1 MultiTAP  UNC 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4

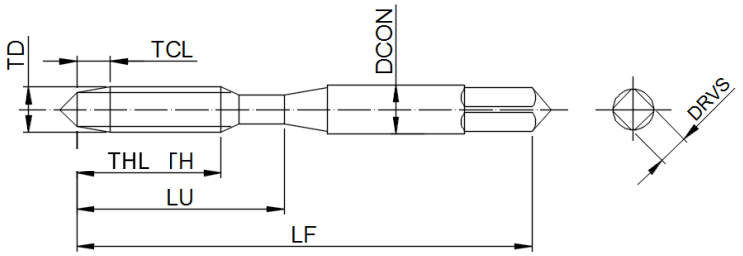
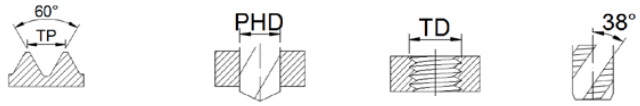
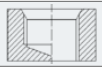
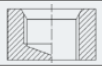
TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
5/16	18	STD	HZ3	70	14	37	6.1	5	3	6.6	1.0000881	●	1.0000598	○
3/8	16	STD	HZ3	75	16	41	7	5.5		8	1.0000599	●	1.0000600	○
7/16	14	STD	HZ3	80	18	48	8	6		9.4	1.0000601	●	1.0000602	○
1/2	13	STD	HZ4	85	20	48	9	7		10.8	1.0000603	●	1.0000604	○
9/16	12	STD	HZ4	90	21	48	10.5	8		12.2	1.0000667	●	1.0000668	○
5/8	11	STD	HZ4	95	24	52	12	9		13.5	1.0000669	●	1.0000670	○
3/4	10	STD	HZ4	105	25	58	14	11	4	16.5	1.0000671	●	1.0000672	○
7/8	9	STD	HZ4	115	28	63	17	13		19.5	1.0000673	●	1.0000674	○
1	8	STD	HZ5	125	32	68	20	15		22.25	1.0000675	●	1.0000676	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than 1/4 have no point.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-SFT	Multi-SFT-GTS
American unified fine thread UNF, ANSI B-1.1 MultiTAP  UNF 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4

TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
NO.4*	48	STD	HZ2	44	5.5	17	3	2.5	2	2.4	1.0000605	○	1.0000606	○
NO.5*	44	STD	HZ2	46	6	19	4	3.2	3	2.7	1.0000607	○	1.0000608	○
NO.6*	40	STD	HZ2	48	6.5	21	4	3.2		2.95	1.0000609	○	1.0000610	○
NO.8	36	STD	HZ2	52	7	21	5	4		3.5	1.0000611	○	1.0000612	○
NO.10	32	STD	HZ2	60	8.5	24	5.5	4.5		4.1	1.0000531	●	1.0000613	○
NO.12	28	STD	HZ2	60	9	25	5.5	4.5		4.6	1.0000614	●	1.0000615	○
1/4	28	STD	HZ2	62	9	29	6	4.5		5.5	1.0000880	●	1.0000616	○

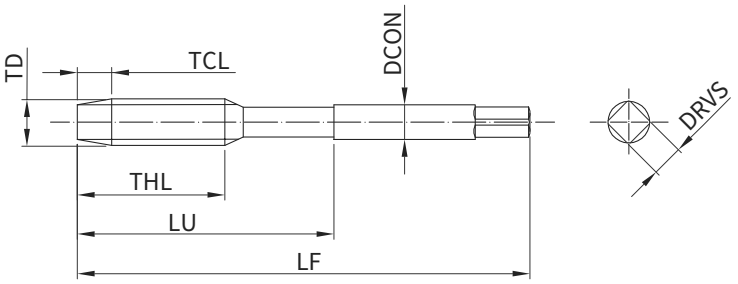
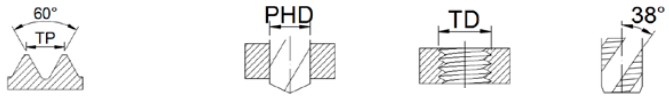
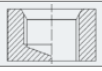
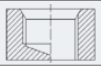
① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than 1/4 have no point.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

⑤ The helix angle of spiral flute taps in size No.6 and smaller is 40° or above.

Type	Multi-SFT	Multi-SFT-GTS
American unified fine thread UNF, ANSI B-1.1 MultiTAP  UNF 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	2.5P	2.5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2 1.4 1.7 K 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.2 N 4.1-4.7 S 5.4

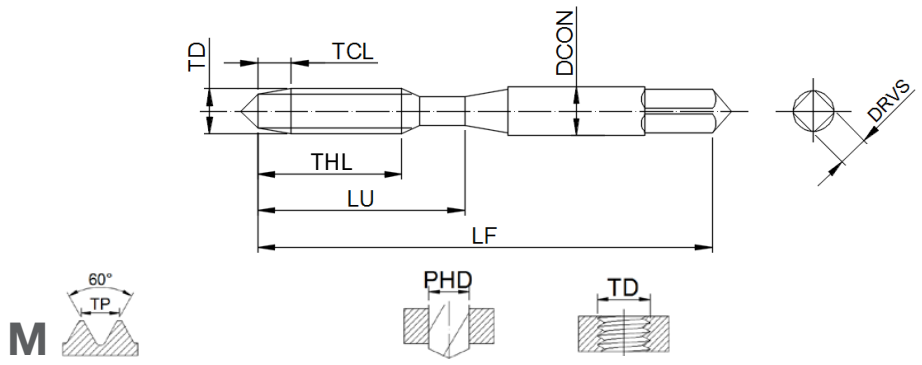
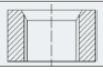
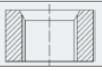
TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
5/16	24	STD	HZ3	70	11	37	6.1	5	3	6.9	1.0000733	●	1.0000617	○
3/8	24	STD	HZ3	75	11	41	7	5.5		8.5	1.0000618	●	1.0000619	○
7/16	20	STD	HZ3	80	13	48	8	6		9.9	1.0000620	●	1.0000621	○
1/2	20	STD	HZ3	85	13	48	9	7		11.5	1.0000622	●	1.0000623	○
9/16	18	STD	HZ3	90	14	48	10.5	8		12.9	1.0000677	●	1.0000678	○
5/8	18	STD	HZ3	95	15	52	12	9		14.5	1.0000679	●	1.0000680	○
3/4	16	STD	HZ3	105	16	58	14	11	4	17.5	1.0000681	●	1.0000682	○
7/8	14	STD	HZ4	115	19	63	17	13		20.4	1.0000683	●	1.0000684	○
1	12	STD	HZ4	125	22	68	20	15		23.25	1.0000685	●	1.0000686	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral flute taps in size larger than 1/4 have no point.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
M-Metric coarse thread JIS B4430 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

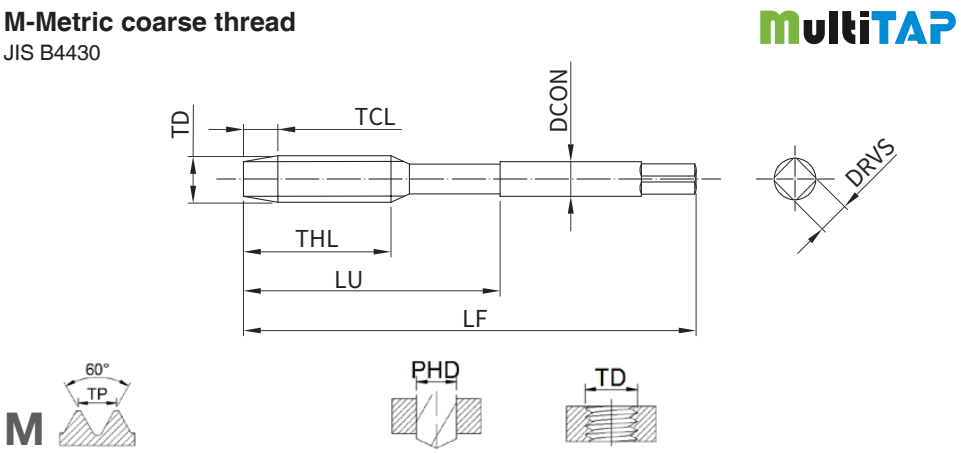
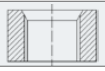
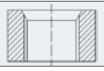
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M2	0.4	STD	HZ1	40	8	15	3	2.5	2	1.6	4.0000596	●	4.0000379	○
M2.2	0.45	STD	HZ2	42	9	16	3	2.5		1.75	4.0000380	●	4.0000381	○
M2.5	0.45	STD	HZ2	44	9	16	3	2.5		2.05	4.0000593	●	4.0000460	○
M3	0.5	STD	HZ2	46	10	19	4	3.2	3	2.5	4.0000575	●	4.0000557	●
M3	0.5	STD+1	HZ3								4.0000580	○	4.0000308	○
M3	0.5	STD+2	HZ4								4.0000551	○	4.0000309	○
M3.5	0.6	STD	HZ2	48	11	20	4	3.2		2.9	4.0000310	○	4.0000311	○
M4	0.7	STD	HZ2	52	12	21	5	4		3.3	4.0000576	●	4.0000558	●
M4	0.7	STD+1	HZ3								4.0000581	○	4.0000312	○
M4	0.7	STD+2	HZ4								4.0000552	○	4.0000594	○
M4.5	0.75	STD	HZ2	55	13	21	5	4		3.7	4.0000382	●	4.0000383	●
M5	0.8	STD	HZ2	60	14	24	5.5	4.5		4.2	4.0000577	●	4.0000559	●
M5	0.8	STD+1	HZ3								4.0000582	○	4.0000579	○
M5	0.8	STD+2	HZ4								4.0000553	○	4.0000315	○
M6	1	STD-1	HZ2	62	16	29	6	4.5		5	4.0000578	○	4.0000560	○
M6	1	STD	HZ3								4.0000583	●	4.0000313	●
M6	1	STD+1	HZ4								4.0000554	○	4.0000316	○
M7	1	STD	HZ3	65	16	33	6.2	5		6	4.0000317	●	4.0000318	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than M8 have no point (M8 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
M-Metric coarse thread JIS B4430 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

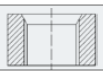
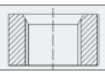
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M8	1.25	STD	HZ3	70	17	37	6.2	5	3	6.8	4.0000555	●	4.0000561	●
M8	1.25	STD+1	HZ4								4.0000319	○	4.0000320	○
M10	1.5	STD	HZ3	75	20	41	7	5.5		8.5	4.0000556	●	4.0000562	●
M10	1.5	STD+1	HZ4								4.0000322	○	4.0000323	○
M12	1.75	STD	HZ4	82	24	48	8.5	6.5		10.2	4.0000571	●	4.0000564	●
M12	1.75	STD+1	HZ5								4.0000325	○	4.0000326	○
M14	2	STD	HZ4	88	26	48	10.5	8		12	4.0000573	●	4.0000566	●
M16	2	STD	HZ4	95	26	52	12.5	10		14	4.0000574	●	4.0000569	●
M18	2.5	STD	HZ4	100	30	55	14	11		15.5	4.0000384	●	4.0000385	●
M20	2.5	STD	HZ4	105	30	58	15	12		17.5	4.0000595	●	4.0000387	●
M22	2.5	STD	HZ4	115	30	63	17	14		19.5	4.0000388	●	4.0000389	●
M24	3	STD	HZ5	120	36	66	19	15		21	4.0000390	●	4.0000391	●
M27	3	STD	HZ5	130	36	71	20	15		24	4.0000392	●	4.0000393	●
M30	3.5	STD	HZ5	135	42	74	23	17		26.5	4.0000394	●	4.0000395	●

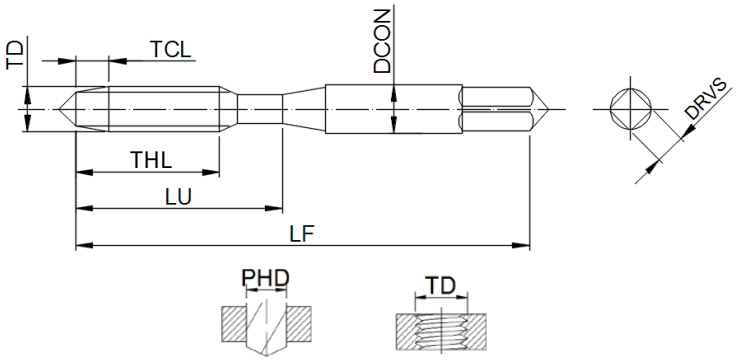
① STD in the Grade column indicates the recommended Limit of the tap.

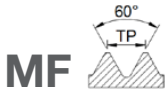
② Spiral pointed taps in size larger than M8 have no point (M8 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
MF-Metric fine thread JIS B4430 MultiTAP		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4





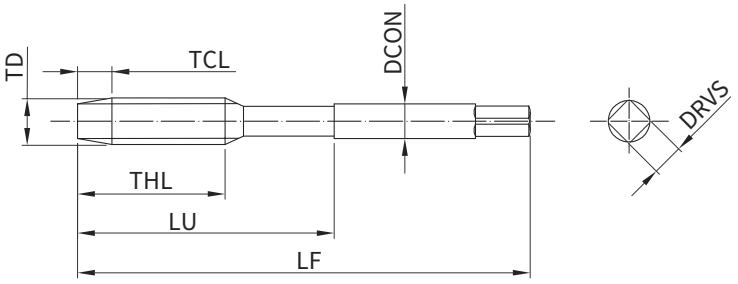
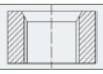
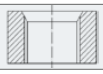
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M3	0.35	STD	HZ1	46	8	19	4	3.2	3	2.65	4.0000328	●	4.0000329	○
M3.5	0.35	STD	HZ1	48	8	20	4	3.2		3.15	4.0000396	●	4.0000397	○
M4	0.5	STD	HZ2	52	10	21	5	4		3.5	4.0000330	●	4.0000331	○
M5	0.5	STD	HZ2	60	10	24	5.5	4.5		4.5	4.0000332	●	4.0000333	○
M6	0.75	STD	HZ2	62	13	29	6	4.5		5.2	4.0000334	●	4.0000335	○
M7	0.75	STD	HZ2	65	13	33	6.2	5		6.2	4.0000336	○	4.0000337	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than M8 have no point (M8 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
MF-Metric fine thread JIS B4430  **MF**   		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

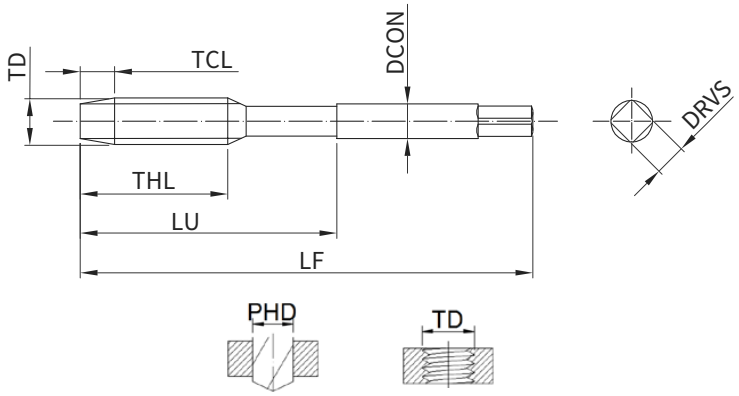
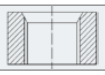
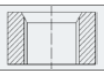
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M8	0.75	STD	HZ2	70	13	37	6.2	5	3	7.2	4.0000418	●	4.0000419	○
M8	1	STD	HZ3		16					7	4.0000338	●	4.0000341	○
M10	0.75	STD	HZ2	75	13	41	7	5.5		9.2	4.0000420	●	4.0000421	○
M10	1	STD	HZ3		16					9	4.0000422	●	4.0000423	○
M10	1.25	STD	HZ3		20					8.8	4.0000570	●	4.0000563	○
M12	1	STD	HZ3	82	20	48	8.5	6.5		11	4.0000424	●	4.0000425	○
M12	1.25	STD	HZ3							10.8	4.0000426	●	4.0000427	○
M12	1.5	STD	HZ3							10.5	4.0000572	●	4.0000565	○
M14	1	STD	HZ3	88	20	48	10.5	8		13	4.0000428	●	4.0000429	○
M14	1.25	STD	HZ3							12.8	4.0000430	●	4.0000431	○
M14	1.5	STD	HZ3							12.5	4.0000567	●	4.0000568	○
M16	1	STD	HZ3	95	22	52	12.5	10		15	4.0000432	●	4.0000433	○
M16	1.5	STD	HZ3							14.5	4.0000434	●	4.0000435	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than M8 have no point (M8 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
MF-Metric fine thread JIS B4430  MF 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

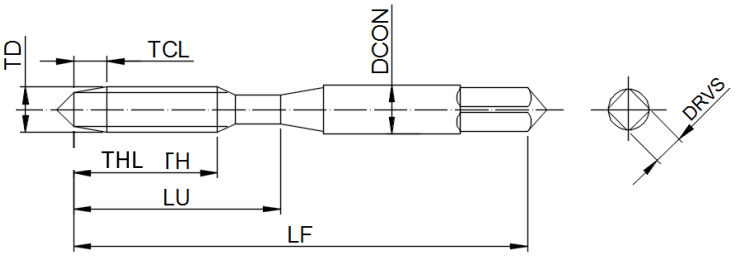
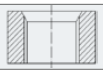
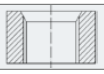
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
M18	1.5	STD	HZ4	100	25	55	14	11	3	16.5	4.0000436	●	4.0000437	○
M18	2	STD	HZ4							16	4.0000438	●	4.0000439	○
M20	1.5	STD	HZ4	105	25	58	15	12		18.5	4.0000440	●	4.0000441	○
M20	2	STD	HZ4							18	4.0000442	●	4.0000443	○
M22	1.5	STD	HZ4	115	25	63	17	14		20.5	4.0000444	●	4.0000445	○
M22	2	STD	HZ4							20	4.0000446	●	4.0000447	○
M24	1.5	STD	HZ4	120	28	66	19	15		22.5	4.0000448	●	4.0000449	○
M24	2	STD	HZ4							22	4.0000450	●	4.0000451	○
M27	1.5	STD	HZ4	130	28	71	20	15		25.5	4.0000452	●	4.0000453	○
M27	2	STD	HZ4							25	4.0000454	●	4.0000455	○
M30	1.5	STD	HZ4	135	31	74	23	17		28.5	4.0000456	●	4.0000457	○
M30	2	STD	HZ4							28	4.0000458	●	4.0000459	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than M8 have no point (M8 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
American unified coarse thread UNC, ANSI B-1.1 MultiTAP  UNC   		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

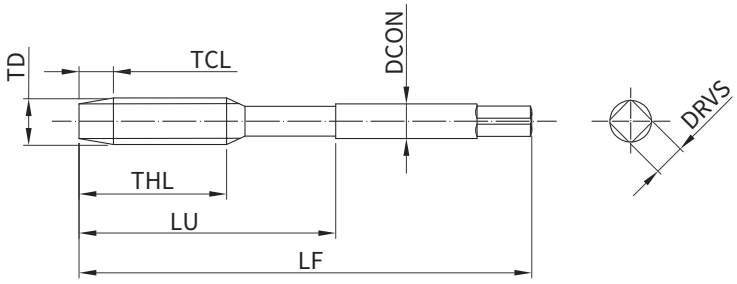
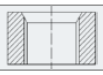
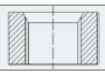
TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
NO.4	40	STD	HZ2	44	8	17	3	2.5	2	2.35	4.0000585	●	4.0000342	○
NO.5	40	STD	HZ2	46	10	19	4	3.2	3	2.65	4.0000339	●	4.0000340	○
NO.6	32	STD	HZ2	48	12	21	4	3.2		2.85	4.0000586	●	4.0000343	○
NO.8	32	STD	HZ2	52	12	21	5	4		3.5	4.0000587	●	4.0000344	○
NO.10	24	STD	HZ2	60	14	24	5.5	4.5		3.9	4.0000588	●	4.0000345	○
NO.12	24	STD	HZ2	60	16	25	5.5	4.5		4.5	4.0000346	●	4.0000347	○
1/4	20	STD	HZ3	62	16	29	6	4.5		5.1	4.0000584	●	4.0000348	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than 5/16 have no point (5/16 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
American unified coarse thread UNC, ANSI B-1.1 MultiTAP  UNC   		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

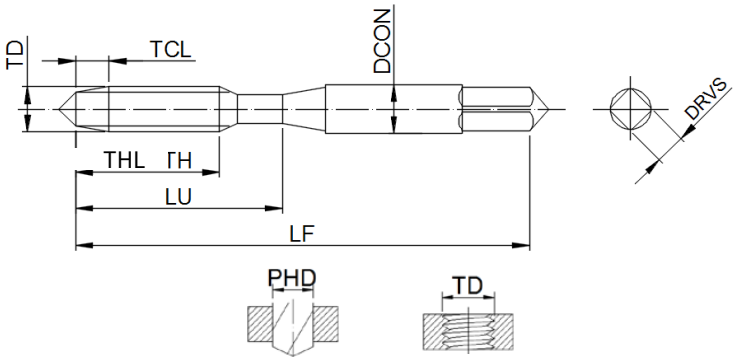
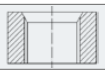
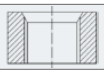
TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
5/16	18	STD	HZ3	70	18	37	6.1	5		6.6	4.0000591	●	4.0000349	○
3/8	16	STD	HZ3	75	20	41	7	5.5		8	4.0000350	●	4.0000351	○
7/16	14	STD	HZ3	80	22	48	8	6		9.4	4.0000352	●	4.0000353	○
1/2	13	STD	HZ4	85	25	48	9	7		10.8	4.0000354	●	4.0000355	○
9/16	12	STD	HZ4	90	28	48	10.5	8	3	12.2	4.0000398	●	4.0000399	○
5/8	11	STD	HZ4	95	30	52	12	9		13.5	4.0000400	●	4.0000401	○
3/4	10	STD	HZ4	105	33	58	14	11		16.5	4.0000402	●	4.0000403	○
7/8	9	STD	HZ4	115	35	63	17	13		19.5	4.0000404	●	4.0000405	○
1	8	STD	HZ5	125	38	68	20	15		22.25	4.0000406	●	4.0000407	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than 5/16 have no point (5/16 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
American unified fine thread UNF, ANSI B-1.1 MultiTAP  UNF 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

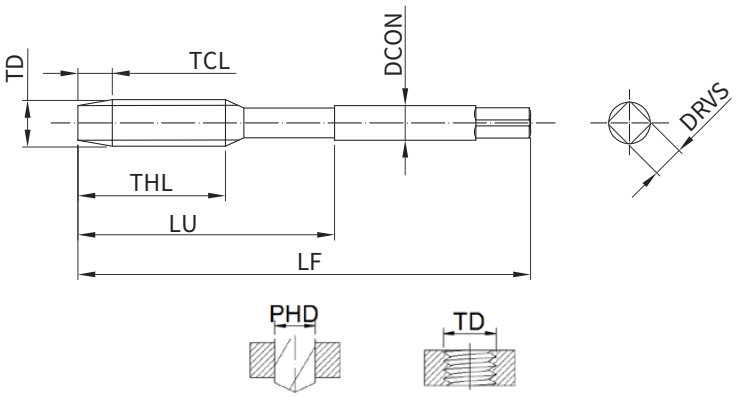
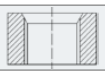
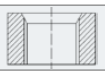
TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
NO.4	48	STD	HZ2	44	7	17	3	2.5	2	2.4	4.0000356	○	4.0000357	○
NO.5	44	STD	HZ2	46	9	19	4	3.2	3	2.7	4.0000358	○	4.0000359	○
NO.6	40	STD	HZ2	48	11	21	4	3.2		2.95	4.0000360	○	4.0000361	○
NO.8	36	STD	HZ2	52	12	21	5	4		3.5	4.0000362	○	4.0000363	○
NO.10	32	STD	HZ2	60	14	24	5.5	4.5		4.1	4.0000589	●	4.0000364	○
NO.12	28	STD	HZ2	60	16	25	5.5	4.5		4.6	4.0000365	●	4.0000366	○
1/4	28	STD	HZ2	62	16	29	6	4.5		5.5	4.0000590	●	4.0000367	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than 5/16 have no point (5/16 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-POT	Multi-POT-GTS
American unified fine thread UNF, ANSI B-1.1 MultiTAP  UNF 		
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2
Thread depth	<2TD	<2TD
Hole type		
Tool material	HSSE	HSSE
Surface treatment	Bright	GTS
Chamfer (TCL)	5P	5P
Tolerance of shank diameter	h9	h9
Rotation direction	RH	RH
Machining application	P 1.2-1.4 K 3.1 3.2 N 4.1-4.7 S 5.4	P 1.1-1.7 M 2.1 2.2 K 3.1 3.2 N 4.1-4.7 S 5.1 5.4

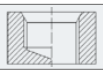
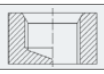
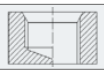
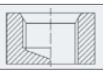
TD	TPI	Grade	Limit	LF	THL	LU	DCON	DRVS	NOF	PHD	Ordering Code			
5/16	24	STD	HZ3	70	18	37	6.1	5	3	6.9	4.0000592	●	4.0000368	○
3/8	24	STD	HZ3	75	18	41	7	5.5		8.5	4.0000369	●	4.0000370	○
7/16	20	STD	HZ3	80	20	48	8	6		9.9	4.0000371	●	4.0000372	○
1/2	20	STD	HZ3	85	20	48	9	7		11.5	4.0000373	●	4.0000374	○
9/16	18	STD	HZ3	90	22	48	10.5	8		12.9	4.0000408	●	4.0000409	○
5/8	18	STD	HZ3	95	22	52	12	9		14.5	4.0000410	●	4.0000411	○
3/4	16	STD	HZ3	105	25	58	14	11		17.5	4.0000412	●	4.0000413	○
7/8	14	STD	HZ4	115	25	63	17	13		20.4	4.0000414	●	4.0000415	○
1	12	STD	HZ4	125	28	68	20	15		23.25	4.0000416	●	4.0000417	○

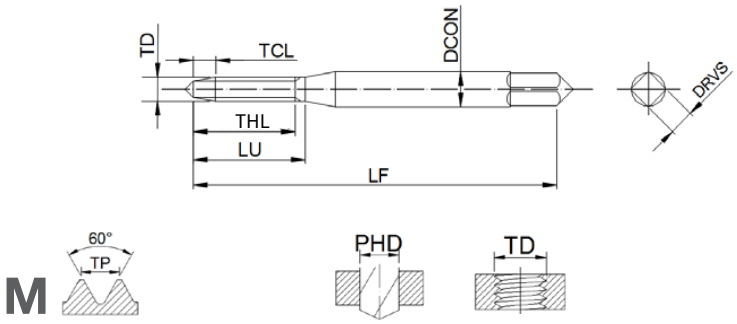
① STD in the Grade column indicates the recommended Limit of the tap.

② Spiral pointed taps in size larger than 5/16 have no point (5/16 POT has only one point, on its thread end).

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-NRT	Multi-NRT-DLC	Multi-NRT	Multi-NRT-DLC
M-Metric coarse thread JIS B4430 MultiTAP				
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2	6H/JIS2	6H/JIS2
Thread depth	<3TD	<3TD	<3TD	<3TD
Hole type				
Tool material	HSPM	HSPM	HM	HM
Surface treatment	Bright	DLC	Bright	DLC
Chamfer (TCL)	1P	1P	1P	1P
Tolerance of shank diameter	h9	h9	h7	h7
Rotation direction	RH	RH	RH	RH
Machining application	M 2.1 2.2 N 4.1 4.2	M 2.1 2.2 N 4.1 4.2	M 2.1 2.2 N 4.1 4.2 S 5.1	M 2.1 2.2 N 4.1 4.2 S 5.1



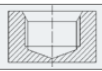
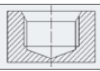
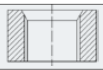
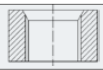
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	PHD	Ordering Code							
M0.8	0.2	STD	FH3	40	2.5	-	3	2.5	0.7	3.0000653	○	3.0000581	●	3.0000709	○	3.0000710	●
M1.0	0.25	STD	FH4	40	3	-	3	2.5	0.9	3.0000655	○	3.0000583	●	3.0000711	○	3.0000712	●
M1.2	0.25	STD	FH4	40	4	-	3	2.5	1.1	3.0000657	○	3.0000584	●	3.0000713	○	3.0000714	●
M1.4	0.3	STD	FH4	40	4.5	-	3	2.5	1.28	3.0000635	○	3.0000658	●	3.0000715	○	3.0000716	●
M1.6	0.35	STD	FH4	40	5	-	3	2.5	1.47	3.0000660	○	3.0000585	●	3.0000717	○	3.0000718	●

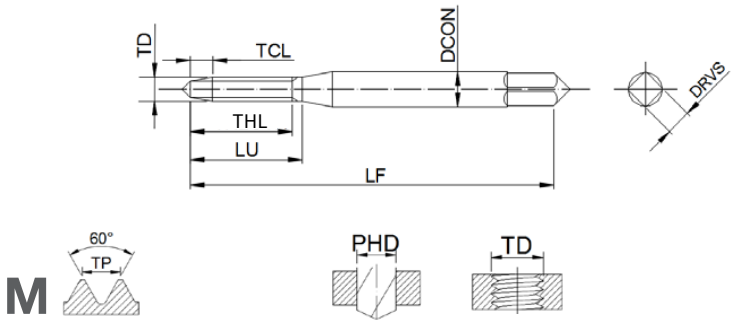
① STD in the Grade column indicates the recommended Limit of the tap.

② Forming Taps in size smaller than M7: TCL=2P has no point; TCL=4P has two points respectively on its thread end and shank end.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-NRT	Multi-NRT-GTS	Multi-NRT	Multi-NRT-GTS
M-Metric coarse thread JIS B4430 MultiTAP				
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2	6H/JIS2	6H/JIS2
Thread depth	<3TD	<3TD	<3TD	<3TD
Hole type				
Tool material	HSCO	HSCO	HSCO	HSCO
Surface treatment	Bright	GTS	Bright	GTS
Chamfer (TCL)	2P	2P	4P	4P
Tolerance of shank diameter	h9	h9	h9	h9
Rotation direction	RH	RH	RH	RH
Machining application	P 1.1 1.2 M 2.1 N 4.1-4.4 4.7	P 1.1-1.5 M 2.1 N 4.1-4.5 4.7	P 1.1 1.2 M 2.1 N 4.1-4.4 4.7	P 1.1-1.5 M 2.1 N 4.1-4.5 4.7



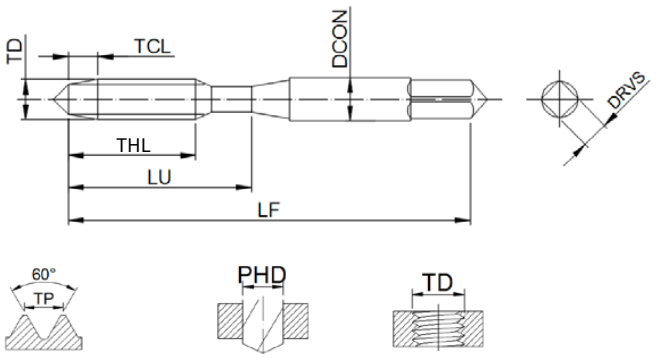
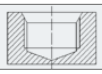
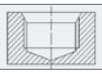
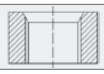
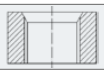
TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	PHD	Ordering Code							
M2	0.4	STD	FH4	40	4	12	3	2.5	1.85	3.0000637	○	3.0000638	●	3.0000639	○	3.0000640	●
M2.5	0.45	STD	FH4	44	5	14	3	2.5	2.33	3.0000641	○	3.0000642	●	3.0000630	○	3.0000661	●
M3	0.5	STD	FH5	46	6	18	4	3.2	2.8	3.0000631	○	3.0000662	●	3.0000632	○	3.0000663	●
M4	0.7	STD	FH6	52	7	20	5	4	3.7	3.0000633	○	3.0000664	●	3.0000634	○	3.0000665	●
M5	0.8	STD	FH6	60	8	22	5.5	4.5	4.65	3.0000643	○	3.0000644	●	3.0000645	○	3.0000646	●
M6	1	STD	FH7	62	10	24	6	4.5	5.6	3.0000647	○	3.0000648	●	3.0000649	○	3.0000650	●
M8	1.25	STD	FH7	70	14	-	6.2	5	7.45	3.0000651	○	3.0000666	●	3.0000667	○	3.0000668	●
M10	1.5	STD	FH7	75	16	-	7	5.5	9.35	3.0000669	○	3.0000670	○	3.0000671	○	3.0000672	○
M12	1.75	STD	FH8	82	18	-	8.5	6.5	11.25	3.0000673	○	3.0000674	○	3.0000675	○	3.0000676	○
M14	2	STD	FH10	88	20	-	10.5	8	13.1	3.0000677	○	3.0000678	○	3.0000679	○	3.0000680	○
M16	2	STD	FH10	95	20	-	12.5	10	15.1	3.0000681	○	3.0000682	○	3.0000683	○	3.0000684	○

① STD in the Grade column indicates the recommended Limit of the tap.

② Forming Taps in size smaller than M7: TCL=2P has no point; TCL=4P has two points respectively on its thread end and shank end.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

Type	Multi-NRT	Multi-NRT-GTS	Multi-NRT	Multi-NRT-GTS
MF-Metric fine thread JIS B4430 MultiTAP  MF				
Thread tolerance class (TCTR)	6H/JIS2	6H/JIS2	6H/JIS2	6H/JIS2
Thread depth	<3TD	<3TD	<3TD	<3TD
Hole type				
Tool material	HSCO	HSCO	HSCO	HSCO
Surface treatment	Bright	GTS	Bright	GTS
Chamfer (TCL)	2P	2P	4P	4P
Tolerance of shank diameter	h9	h9	h9	h9
Rotation direction	RH	RH	RH	RH
Machining application	P 1.1 1.2 M 2.1 N 4.1-4.4 4.7	P 1.1-1.5 M 2.1 N 4.1-4.5 4.7	P 1.1 1.2 M 2.1 N 4.1-4.4 4.7	P 1.1-1.5 M 2.1 N 4.1-4.5 4.7

TD	TP	Grade	Limit	LF	THL	LU	DCON	DRVS	PHD	Ordering Code							
M6	0.75	STD	FH6	62	10	24	6	4.5	5.7	3.0000685	○	3.0000686	○	3.0000687	○	3.0000688	○
M8	1	STD	FH7	70	14	-	6.2	5	7.6	3.0000689	○	3.0000690	○	3.0000691	○	3.0000692	○
M10	1.25	STD	FH7	75	16	-	7	5.5	9.45	3.0000693	○	3.0000694	○	3.0000695	○	3.0000696	○
M12	1.5	STD	FH7	82	18	-	8.5	6.5	11.35	3.0000697	○	3.0000698	○	3.0000699	○	3.0000700	○
M14	1.5	STD	FH9	88	20	-	10.5	8	13.35	3.0000701	○	3.0000702	○	3.0000703	○	3.0000704	○
M16	1.5	STD	FH9	95	20	-	12.5	10	15.35	3.0000705	○	3.0000706	○	3.0000707	○	3.0000708	○

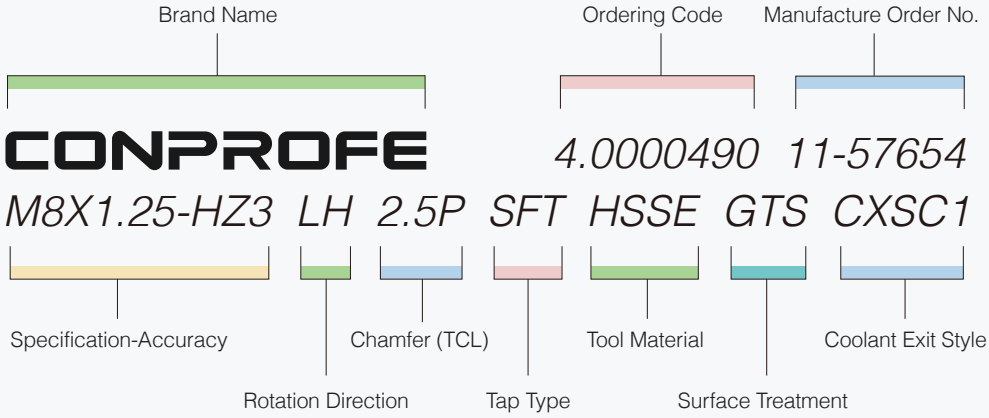
① STD in the Grade column indicates the recommended Limit of the tap.

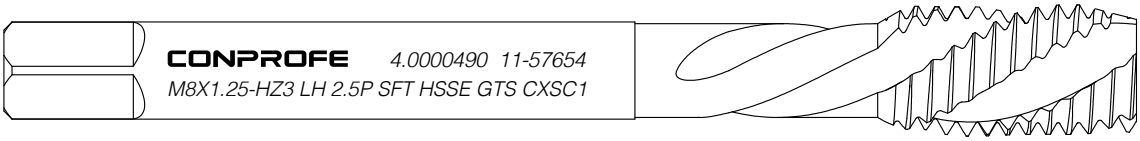
② Forming Taps in size smaller than M7: TCL=2P has no point; TCL=4P has two points respectively on its thread end and shank end.

③ The Ordering Code column: ● Standard stock item; ○ Stock inquiry required

④ See Page 36 for tap marking style.

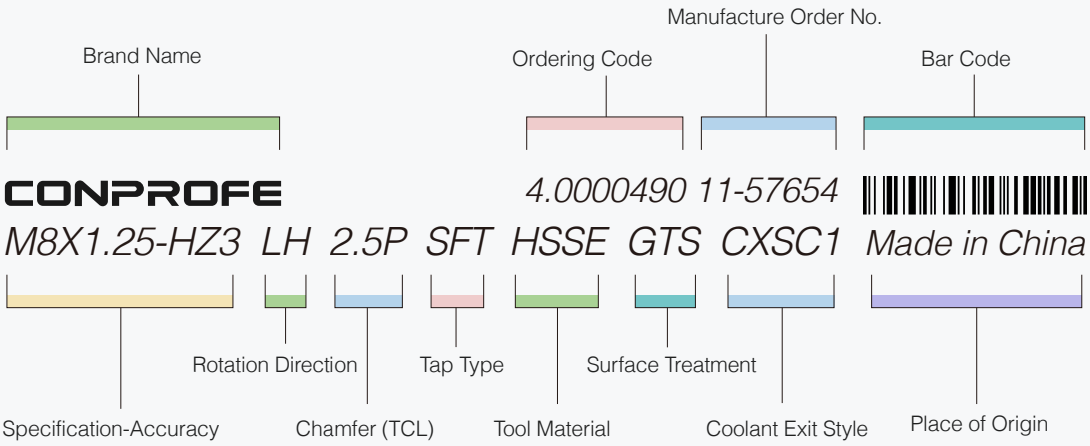
Tap Marking

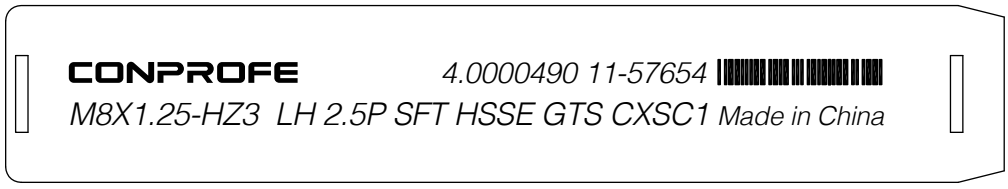




* Please refer to page 7-10 for tap terminology and related technical information.

Package Marking





* Please refer to page 7-10 for tap terminology and related technical information.

Customized Tapping Tool Request Form

CONPROFE 汇专

Basic Information

Customer Name *		Sales Engineer
Project Name		Customer No.
RFQ Date *	Expected Quote Date *	Expected Lead Time(wks)

Industry

Automotive	Die & Mold	General Machinery
Power Generation	Aviation & Aerospace	Machine & Tools
Oil & Gas	Military & National Defense	Electronic Consumer

Workpiece

Part Name		Output (pcs/year)
Workpiece Material *	CMC Code	HB/HRC Hardness *
Inhomogeneity	Blank Molding Method	Other Information

Machine Information

Machine Maker	Machine Type *	Spindle Taper *
Process System Stability	Machine Conditions	Cooling Method
Spindle Speed (rpm)	Max. Torque (N·m)	Max. Power (kW)

Tool | Coolant | Fixture | Tool Holder *

Brand of Taps in Use Now	Tool Specification	
No. of Threads	Tap Size	
Coating Type	Coolant Exit Style Code	Cooling Method
Coolant	Coolant Pressure/Concentration	Hand (LH/RH)
Pre-Hole Diameter(mm)	Pre-Hole Depth (mm)	Thread Depth (mm)
		Thread Limit
Premachined Hole Type		Thread Inspection Method
Special Description		
Cutting Speed Vc (m/min)	Rotation Speed (rev/min)	Retract Rate
Tool Holder Type	Tool Holder Brand and Specification	
Drill Brand	Drill Specification & Life	
Current Tap Life (holes)	Unit Price of Current Tap	Current Lead Time (wks)

Expectations *

Special Requirements *

Note: * indicates a required field.

CONPROFE

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PROFEssional as Industry Leader

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