Carmex®
Precision Tools Ltd.

x-treme thread cutting™ 终极螺纹切削

Supercut Taps

超级切削丝锥

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Whitworth pipe thread G, DIN-ISO228 英国惠氏管螺纹 G，DIN / ISO 228

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Key Features 主要特点

- High performance taps, designed for long lasting tool life, durability and high cutting speed to ensure that each thread is as good and accurate as the first one and as little time-consuming as possible.

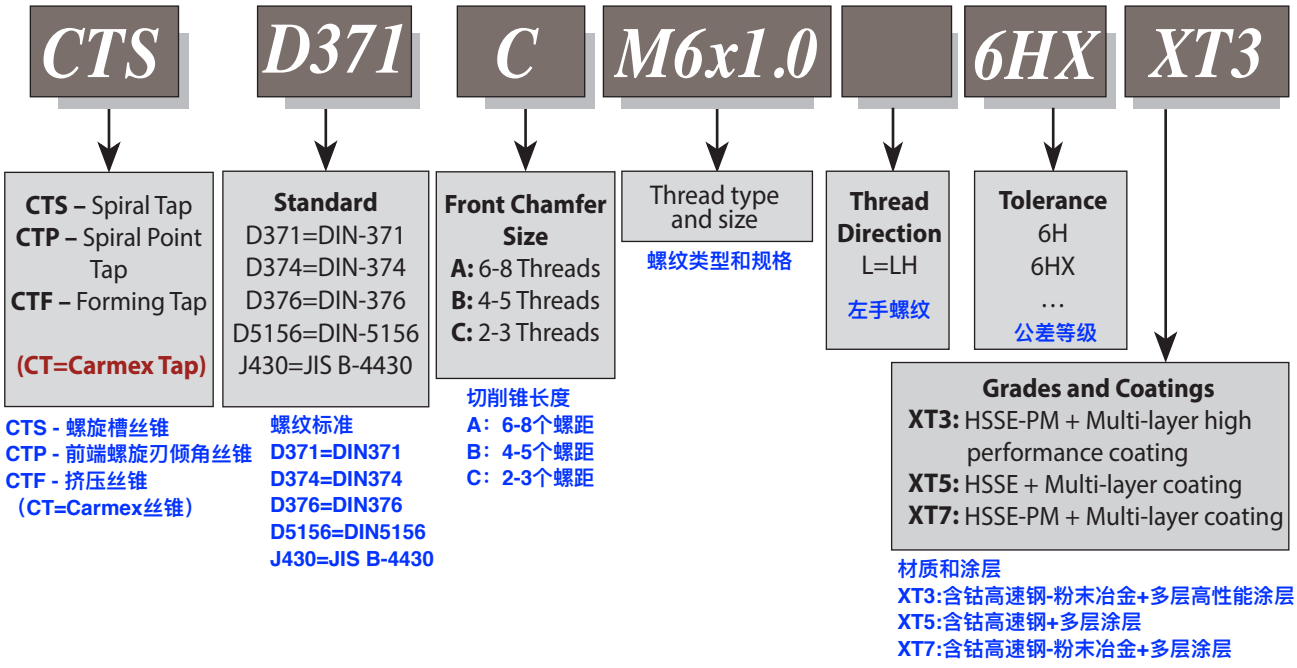
高性能丝锥，长的刀具寿命设计，用于耐久的和高速度切削，以保证每个螺纹都是好的和精确的，首要是减少耗时。

- Variety of tap designs and grades ensures there is a perfect tap for each work application.

不同种类的丝锥设计和材质，保证了丝锥精确的用于每一种加工应用。

Product Identification 产品标识

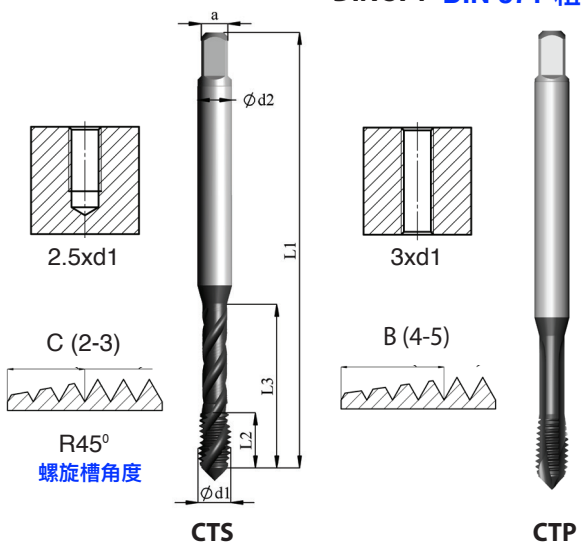
Ordering Codes 订货号



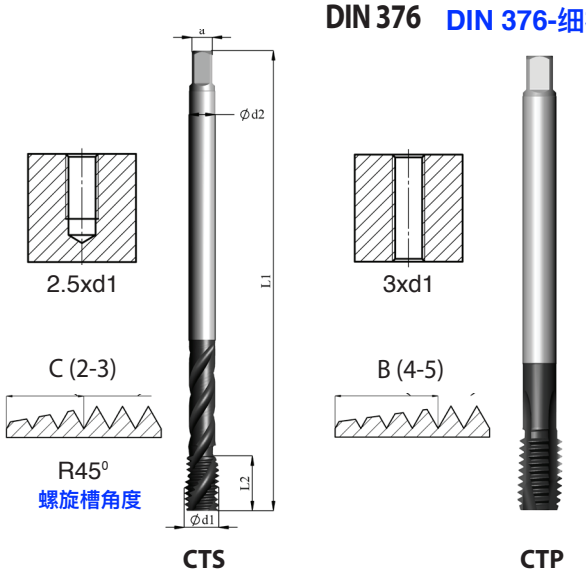
HPC Taps 高性能丝锥

ISO metric coarse M - DIN13 ISO 公制粗牙 M-DIN 13

DIN 371 DIN 371-粗柄



DIN 376 DIN 376-细柄



ISO	P	M	K	N	S	H
XT3 Grade	●	●	●	●	●	

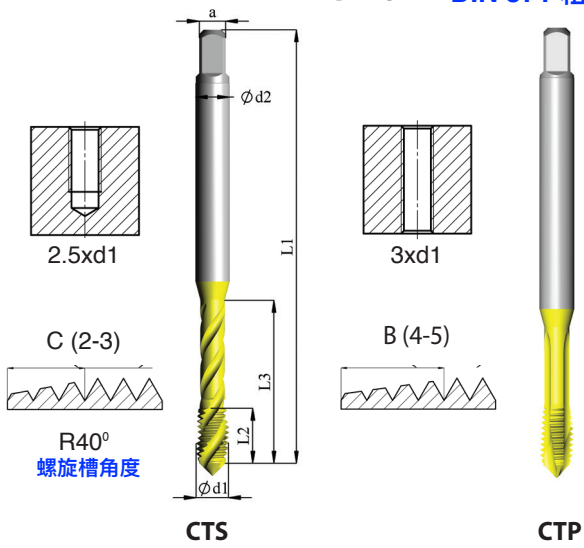
螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M3	0.5	**CTS D371 C M3x0.5 6HX XT3**	3.5	56	5	18	2.7	2.50
		CTP D371 B M3x0.5 6HX XT3	3.5	56	5	18	2.7	2.50
M4	0.7	**CTS D371 C M4x0.7 6HX XT3**	4.5	63	7	21	3.4	3.30
		CTP D371 B M4x0.7 6HX XT3	4.5	63	7	21	3.4	3.30
M5	0.8	**CTS D371 C M5x0.8 6HX XT3**	6.0	70	8	25	4.9	4.20
		CTP D371 B M5x0.8 6HX XT3	6.0	70	8	25	4.9	4.20
M6	1.0	**CTS D371 C M6x1.0 6HX XT3**	6.0	80	10	30	4.9	5.00
		CTP D371 B M6x1.0 6HX XT3	6.0	80	10	30	4.9	5.00
M8	1.25	**CTS D371 C M8x1.25 6HX XT3**	8.0	90	13	35	6.2	6.80
		CTP D371 B M8x1.25 6HX XT3	8.0	90	13	35	6.2	6.80
M10	1.5	**CTS D371 C M10x1.5 6HX XT3**	10.0	100	15	39	8.0	8.50
		CTP D371 B M10x1.5 6HX XT3	10.0	100	15	39	8.0	8.50
M12	1.75	**CTS D376 C M12x1.75 6HX XT3**	9.0	110	18	-	7.0	10.20
		CTP D376 B M12x1.75 6HX XT3	9.0	110	18	-	7.0	10.20
M16	2.0	**CTS D376 C M16x2.0 6HX XT3**	12.0	110	20	-	9.0	14.00
		CTP D376 B M16x2.0 6HX XT3	12.0	110	20	-	9.0	14.00

Order example: CTS D371 C M6x1.0 6HX XT3 订货式样：**CTS D371 C M6×1.0 6HX XT3**

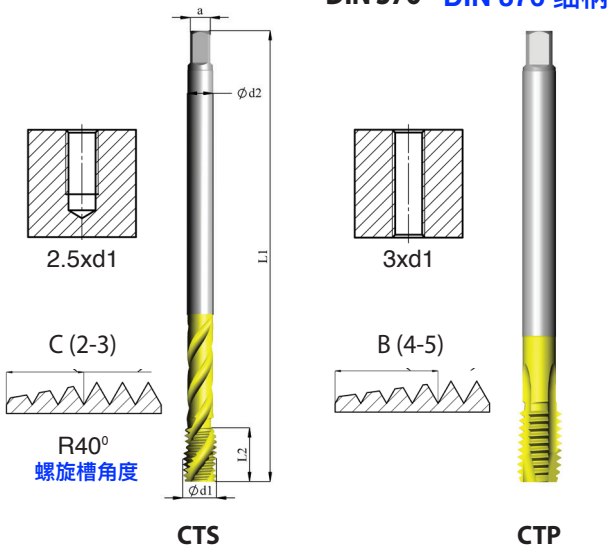
Machine Taps 机用丝锥

ISO metric coarse M - DIN13 ISO 公制粗牙 M-DIN 13

DIN 371 DIN 371 粗柄



DIN 376 DIN 376 细柄



ISO	P	M	K	N	S	H
XT5 Grade	●	●	●	●		

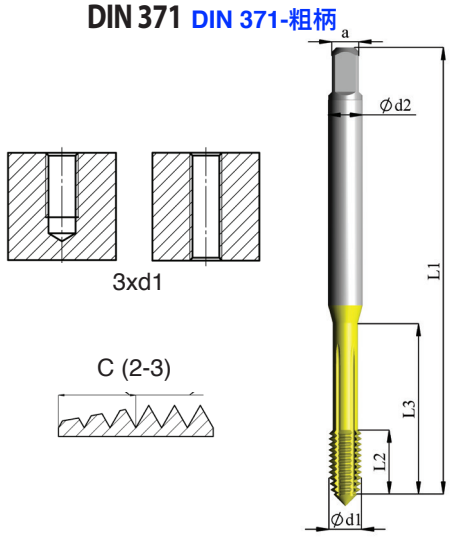
螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M3	0.5	CTS D371 C M3x0.5 6H XT5	3.5	56	5	18	2.7	2.50
		CTP D371 B M3x0.5 6H XT5	3.5	56	10	18	2.7	2.50
M4	0.7	CTS D371 C M4x0.7 6H XT5	4.5	63	7	21	3.4	3.30
		CTP D371 B M4x0.7 6H XT5	4.5	63	12	21	3.4	3.30
M5	0.8	CTS D371 C M5x0.8 6H XT5	6.0	70	8	25	4.9	4.20
		CTP D371 B M5x0.8 6H XT5	6.0	70	14	25	4.9	4.20
M6	1.0	CTS D371 C M6x1.0 6H XT5	6.0	80	10	30	4.9	5.00
		CTP D371 B M6x1.0 6H XT5	6.0	80	18	30	4.9	5.00
M8	1.25	CTS D371 C M8x1.25 6H XT5	8.0	90	13	35	6.2	6.80
		CTP D371 B M8x1.25 6H XT5	8.0	90	20	35	6.2	6.80
M10	1.5	CTS D371 C M10x1.5 6H XT5	10.0	100	15	39	8.0	8.50
		CTP D371 B M10x1.5 6H XT5	10.0	100	20	39	8.0	8.50
M12	1.75	CTS D376 C M12x1.75 6H XT5	9.0	110	18	-	7.0	10.20
		CTP D376 B M12x1.75 6H XT5	9.0	110	24	-	7.0	10.20
M16	2.0	CTS D376 C M16x2.0 6H XT5	12.0	110	20	-	9.0	14.00
		CTP D376 B M16x2.0 6H XT5	12.0	110	32	-	9.0	14.00
M20	2.5	CTS D376 C M20x2.5 6H XT5	16.0	140	25	-	12.0	17.50
		CTP D376 B M20x2.5 6H XT5	16.0	140	32	-	12.0	17.50
M24	3.0	CTS D376 C M24x3.0 6H XT5	18.0	160	30	-	14.5	21.00
		CTP D376 B M24x3.0 6H XT5	18.0	160	38	-	14.5	21.00

Order example: CTS D371 C M8x1.25 6H XT5 订货式样：CTS D 371 C M8×1.25 6H XT5

Forming Taps 挤压丝锥

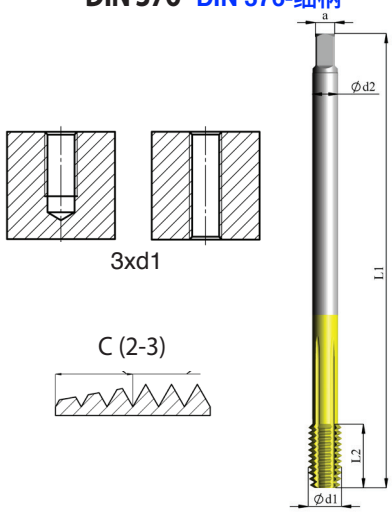
ISO metric coarse M - DIN13 ISO 公制粗牙 M-DIN 13

DIN 371 DIN 371-粗柄



CTF

DIN 376 DIN 376-细柄



CTF

ISO	P	M	K	N	S	H
XT7 Grade	●	●		●		

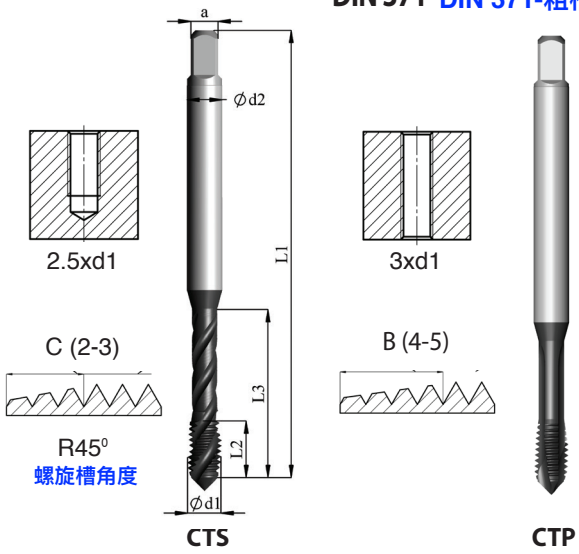
螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M3	0.5	CTF D371 C M3x0.5 6HX XT7	3.5	56	10	18	2.7	2.80
M3.5	0.6	CTF D371 C M3.5x0.6 6HX XT7	4.0	56	12	20	3.0	3.25
M4	0.7	CTF D371 C M4x0.7 6HX XT7	4.5	63	7	21	3.4	3.70
M5	0.8	CTF D371 C M5x0.8 6HX XT7	6.0	70	8	25	4.9	4.65
M6	1.0	CTF D371 C M6x1.0 6HX XT7	6.0	80	10	30	4.9	5.60
M7	1.0	CTF D371 C M7x1.0 6HX XT7	7.0	80	10	30	5.5	6.60
M8	1.25	CTF D371 C M8x1.25 6HX XT7	8.0	90	13	35	6.2	7.45
M9	1.25	CTF D371 C M9x1.25 6HX XT7	9.0	90	13	35	7.0	8.45
M10	1.5	CTF D371 C M10x1.5 6HX XT7	10.0	100	15	39	8.0	9.35
M12	1.75	CTF D376 C M12x1.75 6HX XT7	9.0	110	18	-	7.0	11.25
M14	2.0	CTF D376 C M14x2.0 6HX XT7	11.0	110	20	-	9.0	13.10
M16	2.0	CTF D376 C M16x2.0 6HX XT7	12.0	110	20	-	9.0	15.10

Order example: CTF D371 C M6x1.0 6HX XT7 CTF D 371 C M6×1.0 6HX XT7

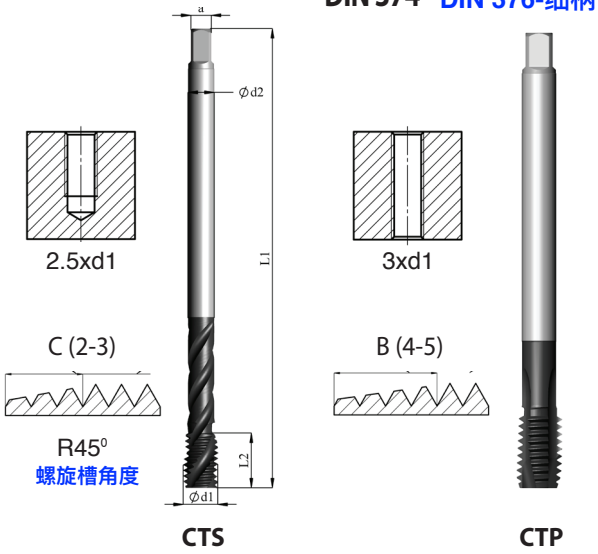
HPC Taps 高性能丝锥

ISO metric fine MF - DIN13 ISO 公制细牙 MF-DIN 13

DIN 371 DIN 371-粗柄



DIN 374 DIN 376-细柄



ISO	P	M	K	N	S	H
XT3 Grade	●	●	●	●	●	

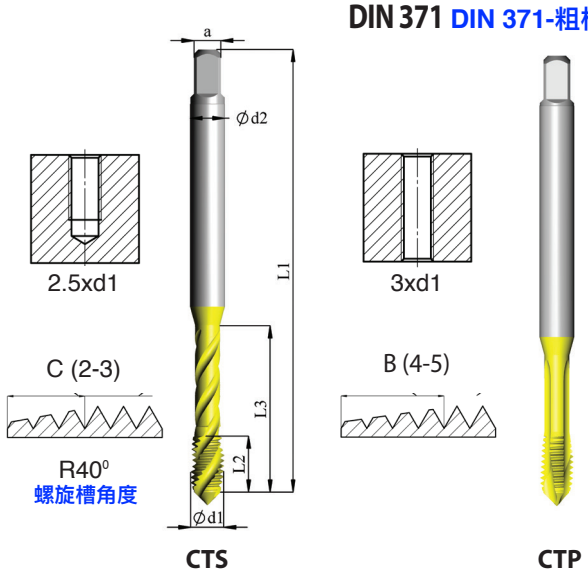
螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M8	1.0	**CTS D371 C M8x1.0 6HX XT3**	8.0	90	13	35	6.2	7.00
		CTP D371 B M8x1.0 6HX XT3	8.0	90	13	35	6.2	7.00
M10	1.0	**CTS D371 C M10x1.0 6HX XT3**	10.0	90	13	35	8.0	9.00
		CTP D371 B M10x1.0 6HX XT3	10.0	90	13	35	8.0	9.00
M12	1.25	**CTS D374 C M12x1.25 6HX XT3**	9.0	100	15	-	7.0	10.80
		CTP D374 B M12x1.25 6HX XT3	9.0	100	15	-	7.0	10.80

Order example: CTP D374 B M12x1.25 6HX XT3 订货式样：**CTP D 374 B M12×1.25 6HX XT3**

Machine Taps 机用丝锥

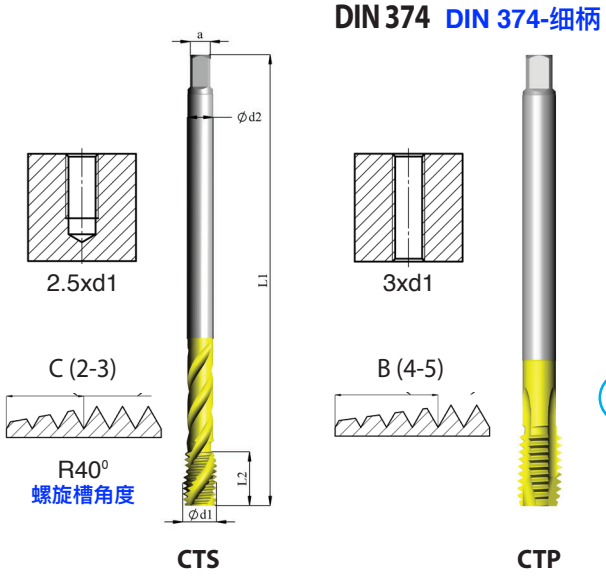
ISO metric fine MF - DIN13 ISO 公制细牙 MF-DIN 13

DIN 371 DIN 371-粗柄



CTS CTP

DIN 374 DIN 374-细柄



CTS CTP

ISO	P	M	K	N	S	H
XT5 Grade	●	●	●	●		

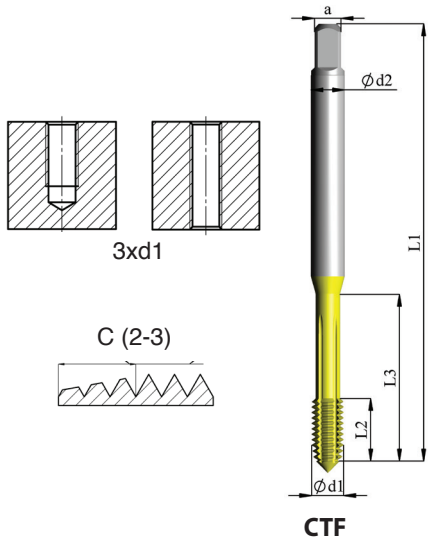
螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M8	1.0	**CTS D371 C M8x1.0 6H XT5**	8.0	90	13	35	6.2	7.0
		CTP D371 B M8x1.0 6H XT5	8.0	90	20	35	6.2	7.0
M10	1.0	**CTS D371 C M10x1.0 6H XT5**	10.0	90	13	35	8.0	9.0
		CTP D371 B M10x1.0 6H XT5	10.0	90	20	35	8.0	9.0
M12	1.25	**CTS D374 C M12x1.25 6H XT5**	9.0	100	15	-	7.0	10.8
		CTP D374 B M12x1.25 6H XT5	9.0	100	20	-	7.0	10.8

Order example: CTP D371 B M10x1.0 6H XT5 订货式样：**CTP D 371 B M10×1.0 6H XT5**

Forming Taps 挤压丝锥

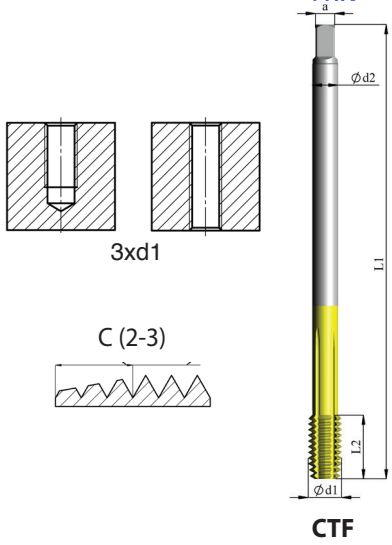
ISO metric fine MF - DIN13 ISO 公制细牙 MF-DIN13

DIN 371 DIN 371-粗柄



CTF

DIN 374 DIN 374-细柄



CTF

ISO	P	M	K	N	S	H
XT7 Grade	●	●		●		

螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M8	1.0	**CTF D371 C M8x1.0 6HX XT7**	8.0	90	13	35	6.2	7.6
M10	1.0	**CTF D371 C M10x1.0 6HX XT7**	9.0	90	13	35	7.0	9.6
M10	1.0	**CTF D374 C M10x1.0 6HX XT7**	7.0	90	10	-	5.5	9.6
M12	1.0	**CTF D374 C M12x1.0 6HX XT7**	9.0	100	10	-	7.0	11.6
M12	1.5	**CTF D374 C M12x1.5 6HX XT7**	9.0	100	15	-	7.0	11.35
M16	1.5	**CTF D374 C M16x1.5 6HX XT7**	12.0	100	15	-	9.0	15.35

Order example: CTF D371 C M8x1.0 6HX XT7 订货式样：**CTF D 371 C M8×1.0 6H XT7**

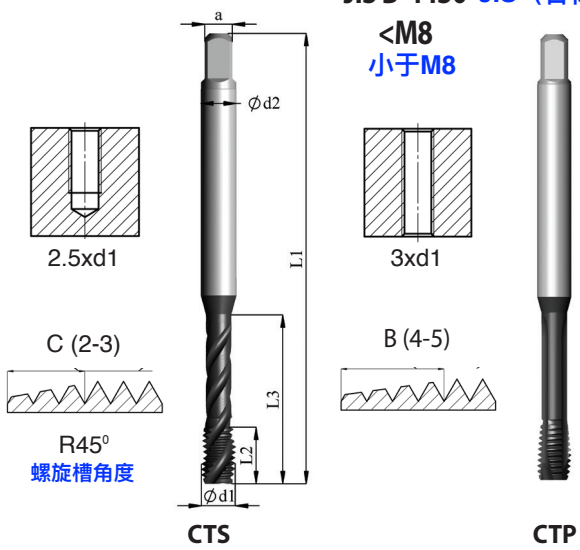
HPC Taps 高性能丝锥

ISO metric – JIS ISO 公制-JIS（日本标准）

JIS = **J**apanese **I**ndustrial **S**tandard JIS = 日本工业标准

JIS B-4430 JIS（日标） B-4430

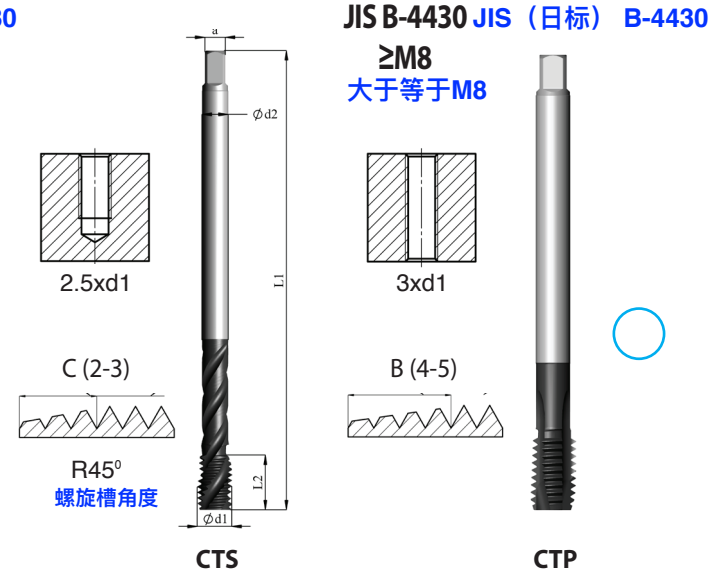
<M8
小于M8



CTS CTP

JIS B-4430 JIS（日标） B-4430

≥M8
大于等于M8



CTS CTP

ISO	P	M	K	N	S	H
XT3 Grade	●	●	●	●	●	

螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M3	0.5	CTS J430 C M3x0.5 OH2 XT3	4.0	46	5	19	3.2	2.5
		CTP J430 B M3x0.5 OH2 XT3	4.0	46	5	19	3.2	2.5
M4	0.7	CTS J430 C M4x0.7 OH3 XT3	5.0	52	7	21	4.0	3.3
		CTP J430 B M4x0.7 OH3 XT3	5.0	52	7	21	4.0	3.3
M5	0.8	CTS J430 C M5x0.8 OH3 XT3	5.5	60	8	24	4.5	4.2
		CTP J430 B M5x0.8 OH3 XT3	5.5	60	8	24	4.5	4.2
M6	1.0	CTS J430 C M6x1.0 OH3 XT3	6.0	62	10	29	4.5	5.0
		CTP J430 B M6x1.0 OH3 XT3	6.0	62	10	29	4.5	5.0

Supercut Taps 超级切削丝锥

Carmex Precision Tools Ltd.

螺纹外径	螺距	订货号	柄径	总长	刃长	有效长度	方	钻孔直径
d1	Pitch mm	Ordering Code	d2	L1	L2	L3	a	
M8	1.25	**CTS J430 C M8x1.25 OH3 XT3**	6.2	70	13	-	5.0	6.8
		CTP J430 B M8x1.25 OH3 XT3	6.2	70	13	-	5.0	6.8
M8	1.0	**CTS J430 C M8x1.0 OH3 XT3**	6.2	70	10	-	5.0	7.0
		CTP J430 B M8x1.0 OH3 XT3	6.2	70	10	-	5.0	7.0
M10	1.5	**CTS J430 C M10x1.5 OH3 XT3**	7.0	75	15	-	5.5	8.5
		CTP J430 B M10x1.5 OH3 XT3	7.0	75	15	-	5.5	8.5
M10	1.25	**CTS J430 C M10x1.25 OH3 XT3**	7.0	75	15	-	5.5	8.8
		CTP J430 B M10x1.25 OH3 XT3	7.0	75	15	-	5.5	8.8
M10	1.0	**CTS J430C M10x1.0 OH3 XT3**	7.0	75	10	-	5.5	9.0
		CTP J430 B M10x1.0 OH3 XT3	7.0	75	10	-	5.5	9.0
M12	1.75	**CTS J430 C M12x1.75 OH4 XT3**	8.5	82	18	-	6.5	10.2
		CTP J430 B M12x1.75 OH4 XT3	8.5	82	18	-	6.5	10.2
M12	1.5	**CTS J430 C M12x1.5 OH3 XT3**	8.5	82	15	-	6.5	10.5
		CTP J430 B M12x1.5 OH3 XT3	8.5	82	15	-	6.5	10.5
M14	2.0	**CTS J430 C M14x2.0 OH4 XT3**	10.5	88	20	-	8.0	12.0
		CTP J430 B M14x2.0 OH4 XT3	10.5	88	20	-	8.0	12.0
M14	1.5	**CTS J430 C M14x1.5 OH3 XT3**	10.5	88	15	-	8.0	12.5
		CTP J430 B M14x1.5 OH3 XT3	10.5	88	15	-	8.0	12.5
M16	2.0	**CTS J430 C M16x2.0 OH4 XT3**	12.5	95	20	-	10.0	14.0
		CTP J430 B M16x2.0 OH4 XT3	12.5	95	20	-	10.0	14.0
M16	1.5	**CTS J430 C M16x1.5 OH3 XT3**	12.5	95	15	-	10.0	14.5
		CTP J430 B M16x1.5 OH3 XT3	12.5	95	15	-	10.0	14.5

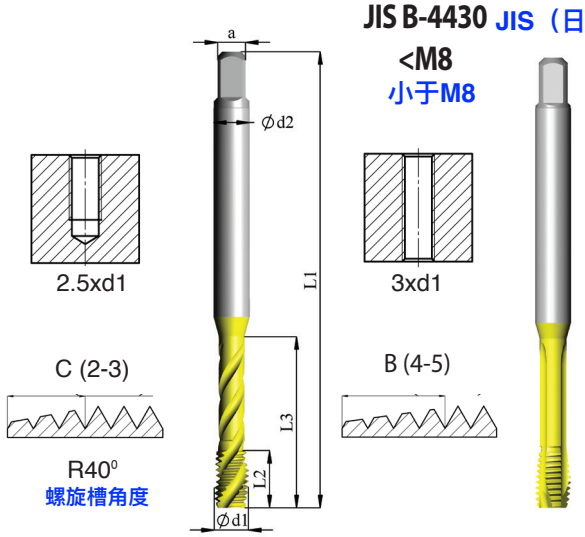
Order example: CTS J430 C M3x0.5 OH2 XT3 订货式样：**CTS J430 C M3×0.5 OH2 XT3**

Machine Taps 机用丝锥

ISO metric – JIS ISO 公制-JIS（日本标准）

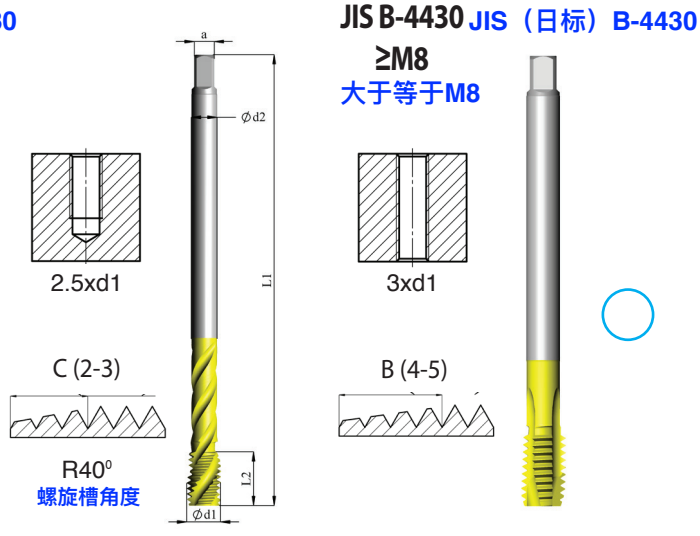
JIS = **J**apanese **I**ndustrial **S**tandard JIS=日本工业标准

JIS B-4430 JIS（日标）B-4430
<M8
小于M8



CTS CTP

JIS B-4430 JIS（日标）B-4430
≥M8
大于等于M8



CTS CTP

ISO	P	M	K	N	S	H
XT5 Grade	●	●	●	●		

螺纹外径 d1	螺距 Pitch mm	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
M3	0.5	CTS J430 C M3x0.5 OH2 XT5	4.0	46	5	19	3.2	2.5
		CTP J430 B M3x0.5 OH2 XT5	4.0	46	10	19	3.2	2.5
M4	0.7	CTS J430 C M4x0.7 OH3 XT5	5.0	52	7	21	4.0	3.3
		CTP J430 B M4x0.7 OH3 XT5	5.0	52	12	21	4.0	3.3
M5	0.8	CTS J430 C M5x0.8 OH3 XT5	5.5	60	8	24	4.5	4.2
		CTP J430 B M5x0.8 OH3 XT5	5.5	60	14	24	4.5	4.2
M6	1.0	CTS J430 C M6x1.0 OH3 XT5	6.0	62	10	29	4.5	5.0
		CTP J430 B M6x1.0 OH3 XT5	6.0	62	18	29	4.5	5.0

Supercut Taps 超级切削丝锥

Carmex Precision Tools Ltd.

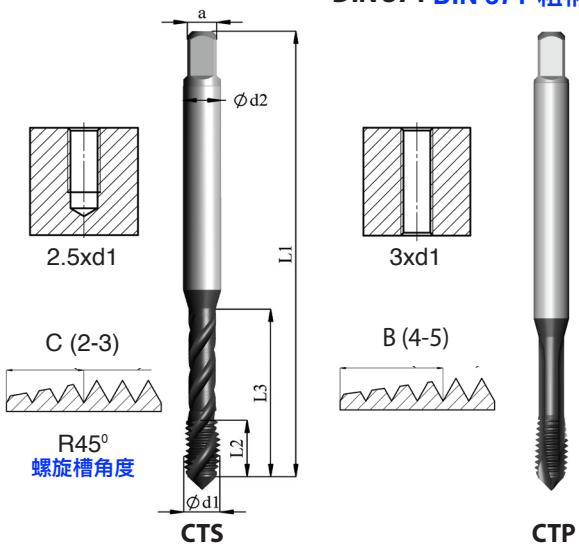
螺纹外径	螺距	订货号	柄径	总长	刃长	有效长度	方	钻孔直径
d1	Pitch mm	Ordering Code	d2	L1	L2	L3	a	
M8	1.25	**CTS J430 C M8x1.25 OH3 XT5**	6.2	70	13	-	5.0	6.8
		CTP J430 B M8x1.25 OH3 XT5	6.2	70	20	-	5.0	6.8
M8	1.0	**CTS J430 C M8x1.0 OH3 XT5**	6.2	70	10	-	5.0	7.0
		CTP J430 B M8x1.0 OH3 XT5	6.2	70	20	-	5.0	7.0
M10	1.5	**CTS J430 C M10x1.5 OH3 XT5**	7.0	75	15	-	5.5	8.5
		CTP J430 B M10x1.5 OH3 XT5	7.0	75	20	-	5.5	8.5
M10	1.25	**CTS J430 C M10x1.25 OH3 XT5**	7.0	75	15	-	5.5	8.8
		CTP J430 B M10x1.25 OH3 XT5	7.0	75	20	-	5.5	8.8
M10	1.0	**CTS J430C M10x1.0 OH3 XT5**	7.0	75	10	-	5.5	9.0
		CTP J430 B M10x1.0 OH3 XT5	7.0	75	20	-	5.5	9.0
M12	1.75	**CTS J430 C M12x1.75 OH4 XT5**	8.5	82	18	-	6.5	10.2
		CTP J430 B M12x1.75 OH4 XT5	8.5	82	24	-	6.5	10.2
M12	1.5	**CTS J430 C M12x1.5 OH3 XT5**	8.5	82	15	-	6.5	10.5
		CTP J430 B M12x1.5 OH3 XT5	8.5	82	20	-	6.5	10.5
M14	2.0	**CTS J430 C M14x2.0 OH4 XT5**	10.5	88	20	-	8.0	12.0
		CTP J430 B M14x2.0 OH4 XT5	10.5	88	25	-	8.0	12.0
M14	1.5	**CTS J430 C M14x1.5 OH3 XT5**	10.5	88	15	-	8.0	12.5
		CTP J430 B M14x1.5 OH3 XT5	10.5	88	20	-	8.0	12.5
M16	2.0	**CTS J430 C M16x2.0 OH4 XT5**	12.5	95	20	-	10.0	14.0
		CTP J430 B M16x2.0 OH4 XT5	12.5	95	32	-	10.0	14.0
M16	1.5	**CTS J430 C M16x1.5 OH3 XT5**	12.5	95	15	-	10.0	14.5
		CTP J430 B M16x1.5 OH3 XT5	12.5	95	20	-	10.0	14.5

Order example: CTS J430 C M3x0.5 OH2 XT5 订货式样：**CTS J430 C M3×0.5 OH2 XT5**

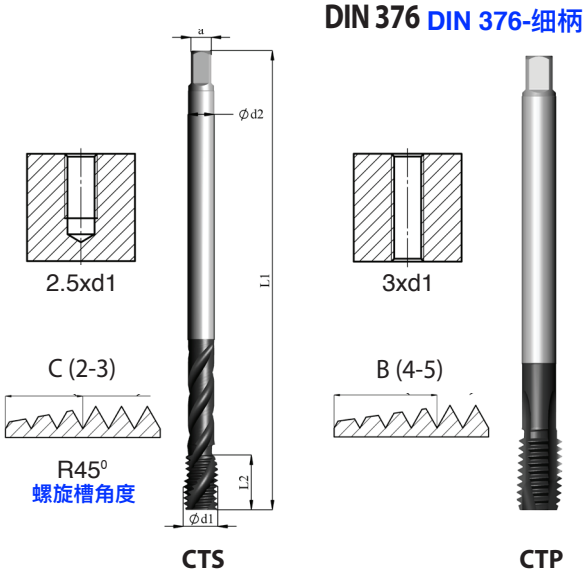
HPC Taps 高性能丝锥

UN Coarse ANSI B-1.1 UN 粗牙 美国 ANSI B-1.1

DIN 371 DIN 371-粗柄



DIN 376 DIN 376-细柄



ISO	P	M	K	N	S	H
XT3 Grade	●	●	●	●	●	

UNC粗牙 螺纹外径

UNC	d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
2-56	2.184	CTS D371 C 2-56UNC 2BX XT3	2.8	45	10	13	2.1	1.85
		CTP D371 B 2-56UNC 2BX XT3	2.8	45	10	13	2.1	1.85
4-40	2.844	CTS D371 C 4-40UNC 2BX XT3	3.5	56	5	18	2.7	2.35
		CTP D371 B 4-40UNC 2BX XT3	3.5	56	5	18	2.7	2.35
5-40	3.175	CTS D371 C 5-40UNC 2BX XT3	3.5	56	7	18	2.7	2.65
		CTP D371 B 5-40UNC 2BX XT3	3.5	56	7	18	2.7	2.65
6-32	3.505	CTS D371 C 6-32UNC 2BX XT3	4.0	56	6	20	3.0	2.85
		CTP D371 B 6-32UNC 2BX XT3	4.0	56	6	20	3.0	2.85
8-32	4.165	CTS D371 C 8-32UNC 2BX XT3	4.5	63	7	21	3.4	3.50
		CTP D371 B 8-32UNC 2BX XT3	4.5	63	7	21	3.4	3.50
10-24	4.826	CTS D371 C 10-24UNC 2BX XT3	6.0	70	8	25	4.9	3.90
		CTP D371 B 10-24UNC 2BX XT3	6.0	70	8	25	4.9	3.90
12-24	5.486	CTS D371 C 12-24UNC 2BX XT3	6.0	80	10	30	4.9	4.50
		CTP D371 B 12-24UNC 2BX XT3	6.0	80	10	30	4.9	4.50

Supercut Taps 超级切削丝锥

Carmex Precision Tools Ltd.

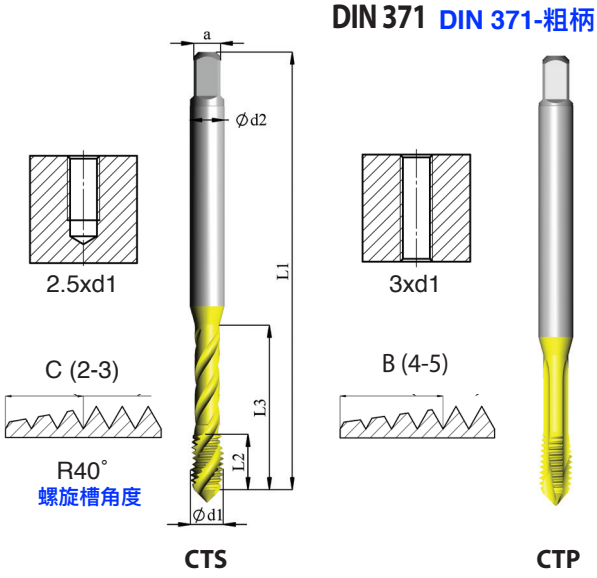
UNC粗牙	螺纹外径	订货号	柄径	总长	刃长	有效长度	方	钻孔直径
UNC	d1	Ordering Code	d2	L1	L2	L3	a	
1/4-20	6.350	**CTS D371 C 0250-20UNC 2BX XT3**	7.0	80	13	30	5.5	5.10
		CTP D371 B 0250-20UNC 2BX XT3	7.0	80	13	30	5.5	5.10
5/16-18	7.938	**CTS D371 C 0312-18UNC 2BX XT3**	8.0	90	13	35	6.0	6.60
		CTP D371 B 0312-18UNC 2BX XT3	8.0	90	13	35	6.0	6.60
3/8-16	9.525	**CTS D371 C 0375-16UNC 2BX XT3**	10.0	100	15	39	8.0	8.00
		CTP D371 B 0375-16UNC 2BX XT3	10.0	100	15	39	8.0	8.00
7/16-14	11.112	**CTS D376 C 0437-14UNC 2BX XT3**	8.0	100	15	-	6.2	9.40
		CTP D376 B 0437-14UNC 2BX XT3	8.0	100	15	-	6.2	9.40
1/2-13	12.700	**CTS D376 C 0500-13UNC 2BX XT3**	9.0	110	18	-	7.0	10.80
		CTP D376 B 0500-13UNC 2BX XT3	9.0	110	18	-	7.0	10.80
9/16-12	14.288	**CTS D376 C 0562-12UNC 2BX XT3**	11.0	110	20	-	9.0	12.20
		CTP D376 B 0562-12UNC 2BX XT3	11.0	110	20	-	9.0	12.20
5/8-11	15.875	**CTS D376 C 0625-11UNC 2BX XT3**	12.0	110	22	-	9.0	13.50
		CTP D376 B 0625-11UNC 2BX XT3	12.0	110	22	-	9.0	13.50

Order example: CTS D376 C 0562-12UNC 2BX XT3 订货式样：**CTS D 376 C 0562 -12UNC 2BX XT3**

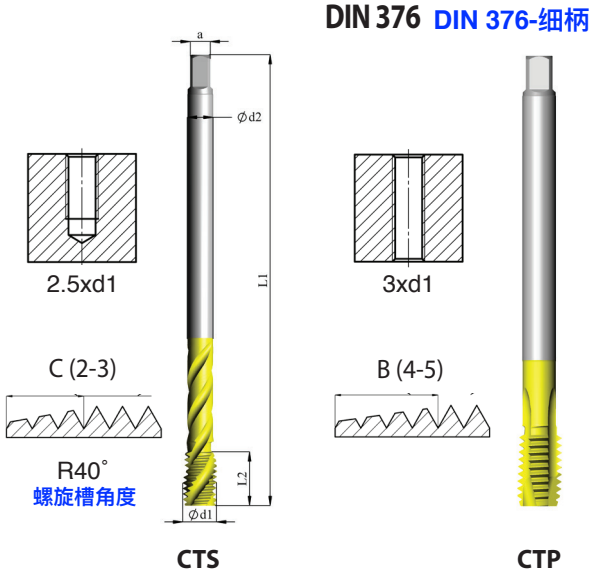
Machine Taps 机用丝锥

UN Coarse ANSI B-1.1 UN 粗牙 美国ANSI B-1.1

DIN 371 DIN 371-粗柄



DIN 376 DIN 376-细柄



ISO	P	M	K	N	S	H
XT5 Grade	●	●	●	●		

UNC粗牙 螺纹外径

UNC	d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
2-56	2.184	CTS D371 C 2-56UNC 2B XT5	2.8	45	10	13	2.1	1.85
		CTP D371 B 2-56UNC 2B XT5	2.8	45	10	13	2.1	1.85
4-40	2.844	CTS D371 C 4-40UNC 2B XT5	3.5	56	5	18	2.7	2.35
		CTP D371 B 4-40UNC 2B XT5	3.5	56	10	18	2.7	2.35
5-40	3.175	CTS D371 C 5-40UNC 2B XT5	3.5	56	7	18	2.7	2.65
		CTP D371 B 5-40UNC 2B XT5	3.5	56	10	18	2.7	2.65
6-32	3.505	CTS D371 C 6-32UNC 2B XT5	4.0	56	6	20	3.0	2.85
		CTP D371 B 6-32UNC 2B XT5	4.0	56	12	20	3.0	2.85
8-32	4.165	CTS D371 C 8-32UNC 2B XT5	4.5	63	7	21	3.4	3.50
		CTP D371 B 8-32UNC 2B XT5	4.5	63	12	21	3.4	3.50
10-24	4.826	CTS D371 C 10-24UNC 2B XT5	6.0	70	8	25	4.9	3.90
		CTP D371 B 10-24UNC 2B XT5	6.0	70	14	25	4.9	3.90
12-24	5.486	CTS D371 C 12-24UNC 2B XT5	6.0	80	10	30	4.9	4.50
		CTP D371 B 12-24UNC 2B XT5	6.0	80	18	30	4.9	4.50

Supercut Taps 超级切削丝锥

Carmex Precision Tools Ltd.

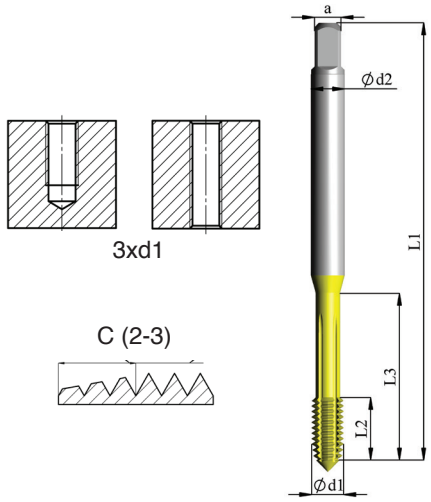
UNC粗牙	螺纹外径	订货号	柄径	总长	刃长	有效长度	方	钻孔直径
UNC	d1	Ordering Code	d2	L1	L2	L3	a	
1/4-20	6.350	**CTS D371 C 0250-20UNC 2B XT5**	7.0	80	13	30	5.5	5.10
		CTP D371 B 0250-20UNC 2B XT5	7.0	80	18	30	5.5	5.10
5/16-18	7.938	**CTS D371 C 0312-18UNC 2B XT5**	8.0	90	13	35	6.0	6.60
		CTP D371 B 0312-18UNC 2B XT5	8.0	90	20	35	6.0	6.60
3/8-16	9.525	**CTS D371 C 0375-16UNC 2B XT5**	10.0	100	15	39	8.0	8.00
		CTP D371 B 0375-16UNC 2B XT5	10.0	100	20	39	8.0	8.00
7/16-14	11.112	**CTS D376 C 0437-14UNC 2B XT5**	8.0	100	15	-	6.2	9.40
		CTP D376 B 0437-14UNC 2B XT5	8.0	100	22	-	6.2	9.40
1/2-13	12.700	**CTS D376 C 0500-13UNC 2B XT5**	9.0	110	18	-	7.0	10.80
		CTP D376 B 0500-13UNC 2B XT5	9.0	110	24	-	7.0	10.80
9/16-12	14.288	**CTS D376 C 0562-12UNC 2B XT5**	11.0	110	20	-	9.0	12.20
		CTP D376 B 0562-12UNC 2B XT5	11.0	110	25	-	9.0	12.20
5/8-11	15.875	**CTS D376 C 0625-11UNC 2B XT5**	12.0	110	22	-	9.0	13.50
		CTP D376 B 0625-11UNC 2B XT5	12.0	110	32	-	9.0	13.50
3/4-10	19.050	**CTS D376 C 0750-10UNC 2B XT5**	14.0	125	25	-	11.0	16.50
		CTP D376 B 0750-10UNC 2B XT5	14.0	125	32	-	11.0	16.50
7/8-9	22.225	**CTS D376 C 0875-9UNC 2B XT5**	18.0	140	30	-	14.5	19.50
		CTP D376 B 0875-9UNC 2B XT5	18.0	140	32	-	14.5	19.50
1-8	25.400	**CTS D376 C 1-8UNC 2B XT5**	20.0	160	30	-	16.0	22.25
		CTP D376 B 1-8UNC 2B XT5	20.0	160	38	-	16.0	22.25

Order example: CTP D371 B 0250-20UNC 2B XT5 订货式样：**CTP D 371 B 0250-20UC 2B XT5**

Forming Taps 挤压丝锥

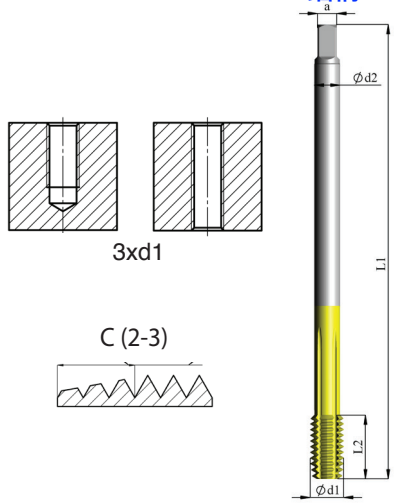
UN Coarse ANSI B-1.1 UN 粗牙 美国ANSI B-1.1

DIN 371 DIN 371-粗柄



CTF

DIN 376 DIN 376-细柄



CTF

ISO	P	M	K	N	S	H
XT7 Grade	●	●		●		

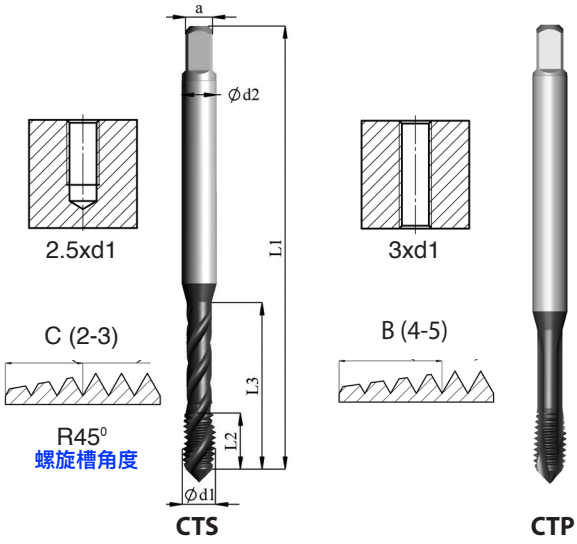
UNC粗牙 UNC	螺纹外径 d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
5-40	3.175	CTF D371 C 5-40UNC 2BX XT7	3.5	56	7	18	2.7	2.90
6-32	3.505	CTF D371 C 6-32UNC 2BX XT7	4.0	56	6	20	3.0	3.15
8-32	4.165	CTF D371 C 8-32UNC 2BX XT7	4.5	63	7	21	3.4	3.80
10-24	4.826	CTF D371 C 10-24UNC 2BX XT7	6.0	70	8	25	4.9	4.35
12-24	5.486	CTF D371 C 12-24UNC 2BX XT7	6.0	80	10	30	4.9	5.00
1/4-20	6.350	CTF D371 C 0250-20UNC 2BX XT7	7.0	80	13	30	5.5	5.75
5/16-18	7.938	CTF D371 C 0312-18UNC 2BX XT7	8.0	90	13	35	6.0	7.30
3/8-16	9.525	CTF D371 C 0375-16UNC 2BX XT7	10.0	100	15	39	8.0	8.80
7/16-14	11.112	CTF D376 C 0437-14UNC 2BX XT7	8.0	100	15	-	6.2	10.25
1/2-13	12.700	CTF D376 C 0500-13UNC 2BX XT7	9.0	110	18	-	7.0	11.80
5/8-11	15.875	CTF D376 C 0625-11UNC 2BX XT7	12.0	110	20	-	9.0	14.80

Order example: CTF D371 C 0312-18UNC 2BX XT7 订货式样：CTF D 371 C 0312-18UNC 2BX XT7

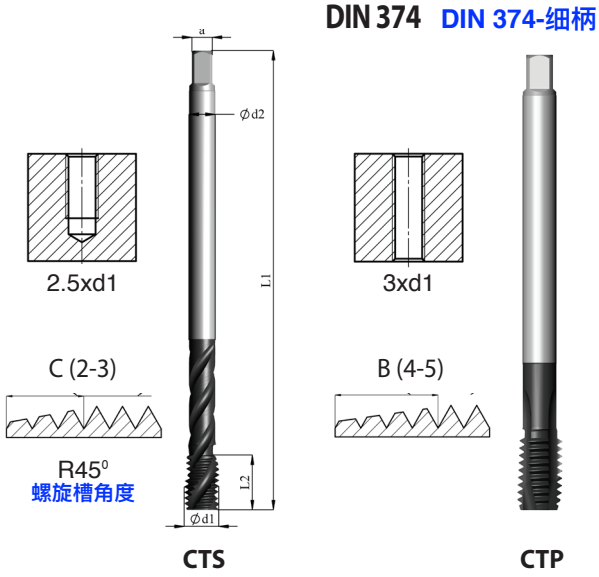
HPC Taps 高性能丝锥

UN Fine ANSI B-1.1 UN 细牙 美国ANSI B-1.1

DIN 371 DIN 371-粗柄



DIN 374 DIN 374-细柄



ISO	P	M	K	N	S	H
XT3 Grade	●	●	●	●	●	

UNF细牙 螺纹外径

UNF	d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
4-48	2.844	CTS D371 C 4-48UNF 2BX XT3	3.5	56	5	18	2.7	2.40
		CTP D371 B 4-48UNF 2BX XT3	3.5	56	5	18	2.7	2.40
5-44	3.175	CTS D371 C 5-44UNF 2BX XT3	3.5	56	7	18	2.7	2.70
		CTP D371 B 5-44UNF 2BX XT3	3.5	56	7	18	2.7	2.70
6-40	3.505	CTS D371 C 6-40UNF 2BX XT3	4.0	56	6	20	3.0	2.95
		CTP D371 B 6-40UNF 2BX XT3	4.0	56	6	20	3.0	2.95
8-36	4.165	CTS D371 C 8-36UNF 2BX XT3	4.5	63	7	21	3.4	3.50
		CTP D371 B 8-36UNF 2BX XT3	4.5	63	7	21	3.4	3.50
10-32	4.826	CTS D371 C 10-32UNF 2BX XT3	6.0	70	8	25	4.9	4.10
		CTP D371 B 10-32UNF 2BX XT3	6.0	70	8	25	4.9	4.10
12-28	5.486	CTS D371 C 12-28UNF 2BX XT3	6.0	80	10	30	4.9	4.60
		CTP D371 B 12-28UNF 2BX XT3	6.0	80	10	30	4.9	4.60
1/4-28	6.350	CTS D371 C 0250-28UNF 2BX XT3	7.0	80	10	30	5.5	5.50
		CTP D371 B 0250-28UNF 2BX XT3	7.0	80	10	30	5.5	5.50
5/16-24	7.938	CTS D371 C 0312-24UNF 2BX XT3	8.0	90	13	35	6.0	6.90
		CTP D371 B 0312-24UNF 2BX XT3	8.0	90	13	35	6.0	6.90

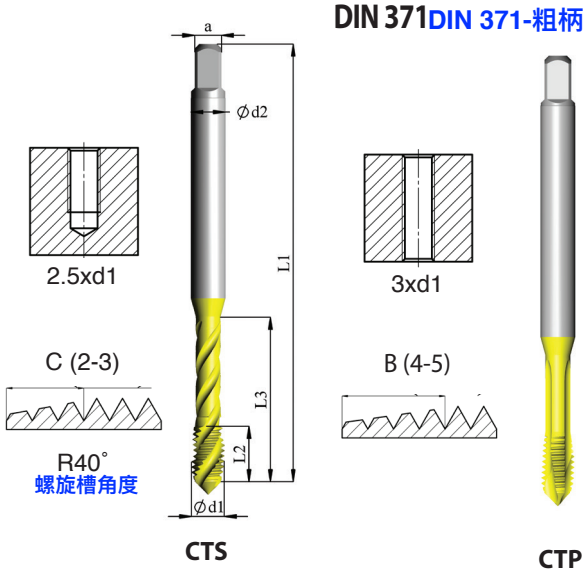
UNF细牙	螺纹外径	订货号	柄径	总长	刃长	有效长度	方	钻孔直径
UNF	d1	Ordering Code	d2	L1	L2	L3	a	
3/8-24	9.525	**CTS D371 C 0375-24UNF 2BX XT3**	10.0	100	15	39	8.0	8.50
		CTP D371 B 0375-24UNF 2BX XT3	10.0	100	15	39	8.0	8.50
7/16-20	11.112	**CTS D374 C 0437-20UNF 2BX XT3**	8.0	100	15	-	6.2	9.90
		CTP D374 B 0437-20UNF 2BX XT3	8.0	100	15	-	6.2	9.90
1/2-20	12.700	**CTS D374 C 0500-20UNF 2BX XT3**	9.0	100	15	-	7.0	11.50
		CTP D374 B 0500-20UNF 2BX XT3	9.0	100	15	-	7.0	11.50
9/16-18	14.288	**CTS D374 C 0562-18UNF 2BX XT3**	11.0	100	15	-	9.0	12.90
		CTP D374 B 0562-18UNF 2BX XT3	11.0	100	15	-	9.0	12.90
5/8-18	15.875	**CTS D374 C 0625-18UNF 2BX XT3**	12.0	100	15	-	9.0	14.50
		CTP D374 B 0625-18UNF 2BX XT3	12.0	100	15	-	9.0	14.50

Order example: CTP D371 B 0375-24UNF 2BX XT3 订货式样：**CTP DIN 371 B 0375-24UNF 2BX XT3**

Machine Taps 机用丝锥

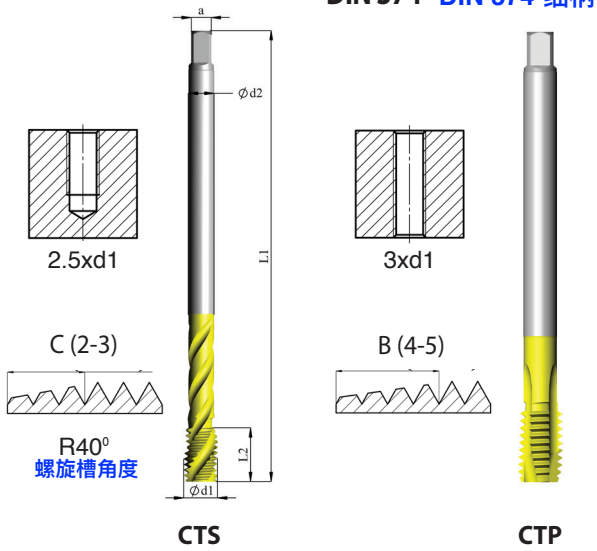
UN Fine ANSI B-1.1 UN 细牙 美国ANSI B-1.2

DIN 371 DIN 371-粗柄



CTS CTP

DIN 374 DIN 374-细柄



CTS CTP

ISO	P	M	K	N	S	H
XT5 Grade	●	●	●	●		

UNF细牙 螺纹外径

UNF	d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
6-40	3.505	CTS D371 C 6-40UNF 2B XT5	4.0	56	6	20	3.0	2.95
		CTP D371 B 6-40UNF 2B XT5	4.0	56	12	20	3.0	2.95
8-36	4.165	CTS D371 C 8-36UNF 2B XT5	4.5	63	7	21	3.4	3.50
		CTP D371 B 8-36UNF 2B XT5	4.5	63	12	21	3.4	3.50
10-32	4.826	CTS D371 C 10-32UNF 2B XT5	6.0	70	8	25	4.9	4.10
		CTP D371 B 10-32UNF 2B XT5	6.0	70	14	25	4.9	4.10
12-28	5.486	CTS D371 C 12-28UNF 2B XT5	6.0	80	10	30	4.9	4.60
		CTP D371 B 12-28UNF 2B XT5	6.0	80	18	30	4.9	4.60
1/4-28	6.350	CTS D371 C 0250-28UNF 2B XT5	7.0	80	10	30	5.5	5.50
		CTP D371 B 0250-28UNF 2B XT5	7.0	80	18	30	5.5	5.50
5/16-24	7.938	CTS D371 C 0312-24UNF 2B XT5	8.0	90	13	35	6.0	6.90
		CTP D371 B 0312-24UNF 2B XT5	8.0	90	20	35	6.0	6.90
3/8-24	9.525	CTS D371 C 0375-24UNF 2B XT5	10.0	100	15	39	8.0	8.50
		CTP D371 B 0375-24UNF 2B XT5	10.0	100	20	39	8.0	8.50
7/16-20	11.112	CTS D374 C 0437-20UNF 2B XT5	8.0	100	15	-	6.2	9.90
		CTP D374 B 0437-20UNF 2B XT5	8.0	100	20	-	6.2	9.90

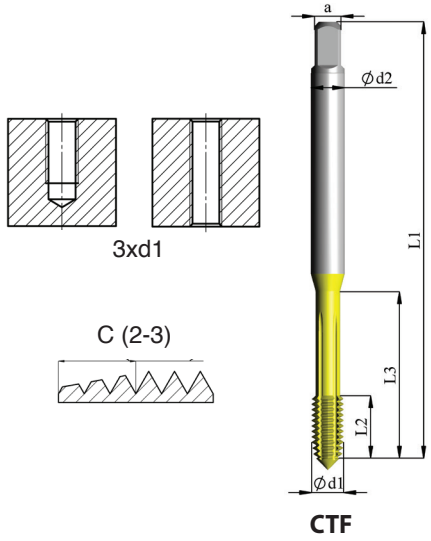
UNF细牙	螺纹外径	订货号	柄径	总长	刃长	有效长度	方	钻孔直径
UNF	d1	Ordering Code	d2	L1	L2	L3	a	
1/2-20	12.700	**CTS D374 C 0500-20UNF 2B XT5**	9.0	100	15	-	7.0	11.50
		CTP D374 B 0500-20UNF 2B XT5	9.0	100	20	-	7.0	11.50
9/16-18	14.288	**CTS D374 C 0562-18UNF 2B XT5**	11.0	100	15	-	9.0	12.90
		CTP D374 B 0562-18UNF 2B XT5	11.0	100	20	-	9.0	12.90
5/8-18	15.875	**CTS D374 C 0625-18UNF 2B XT5**	12.0	100	15	-	9.0	14.50
		CTP D374 B 0625-18UNF 2B XT5	12.0	100	20	-	9.0	14.50
3/4-16	19.050	**CTS D374 C 0750-16UNF 2B XT5**	14.0	110	17	-	11.0	17.50
		CTP D374 B 0750-16UNF 2B XT5	14.0	110	24	-	11.0	17.50
7/8-14	22.225	**CTS D374 C 0875-14UNF 2B XT5**	18.0	125	17	-	14.5	20.40
		CTP D374 B 0875-14UNF 2B XT5	18.0	125	24	-	14.5	20.40
1-12	25.400	**CTS D374 C 1-12UNF 2B XT5**	18.0	140	20	-	14.5	23.25
		CTP D374 B 1-12UNF 2B XT5	18.0	140	27	-	14.5	23.25

Order example: CTP D374 B 0875-14UNF 2B XT5 订货式样：**CTP D 374 B 0875-14UNF 2B XT5**

Forming Taps 挤压丝锥

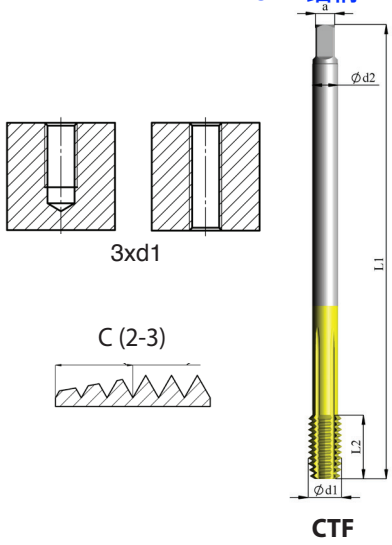
UN Fine ANSI B-1.1 UN 细牙 美国ANSI B-1.1

DIN 371 DIN 371-粗柄



CTF

DIN 374 DIN 374-细柄



CTF

ISO	P	M	K	N	S	H
XT7 Grade	●	●		●		

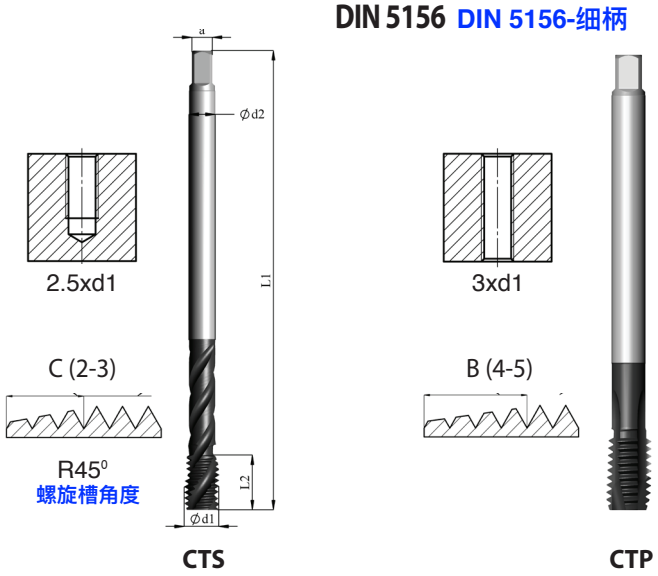
UNF细牙 UNF	螺纹外径 d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	有效长度 L3	方 a	钻孔直径 d
5-44	3.175	CTF D371 C 5-44UNF 2BX XT7	3.5	56	7	18	2.7	2.92
6-40	3.505	CTF D371 C 6-40UNF 2BX XT7	4.0	56	6	20	3.0	3.22
8-36	4.165	CTF D371 C 8-36UNF 2BX XT7	4.5	63	7	21	3.4	3.85
10-32	4.826	CTF D371 C 10-32UNF 2BX XT7	6.0	70	8	25	4.9	4.45
12-28	5.486	CTF D371 C 12-28UNF 2BX XT7	6.0	80	10	30	4.9	5.10
1/4-28	6.350	CTF D371 C 0250-28UNF 2BX XT7	6.0	80	10	30	4.9	5.95
5/16-24	7.938	CTF D371 C 0312-24UNF 2BX XT7	8.0	90	13	35	6.2	7.45
3/8-24	9.525	CTF D371 C 0375-24UNF 2BX XT7	10.0	100	15	39	8.0	9.05
7/16-20	11.112	CTF D374 C 0437-20UNF 2BX XT7	8.0	100	15	-	6.2	10.55
1/2-20	12.700	CTF D374 C 0500-20UNF 2BX XT7	9.0	110	15	-	7.0	12.15
5/8-18	15.875	CTF D374 C 0625-18UNF 2BX XT7	12.0	110	15	-	9.0	15.25
3/4-16	19.050	CTF D374 C 0750-16UNF 2BX XT7	14.0	120	17	-	11.0	18.35

Order example: CTF D371 C 10-32UNF 2BX XT7 订货式样：CTF D 371 C 10-32UNF 2BX XT7

HPC Taps 高性能丝锥

Whitworth pipe thread G, DIN-ISO 228 英国惠氏管螺纹 G，DIN-ISO 228

DIN 5156 DIN 5156-细柄



CTS CTP

ISO	P	M	K	N	S	H
XT3 Grade	●	●	●	●	●	

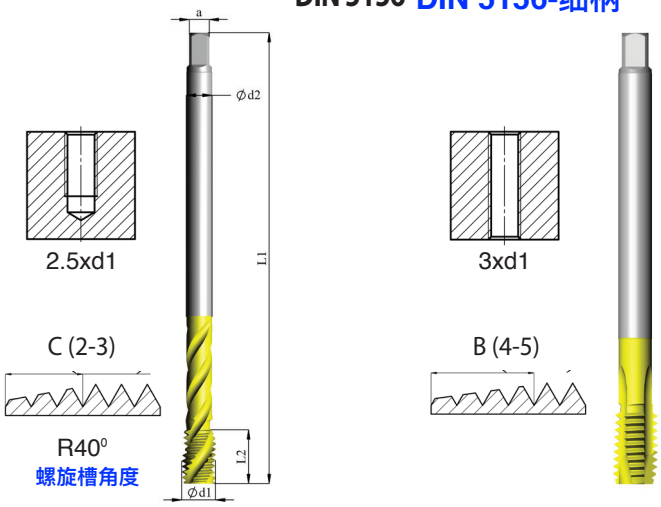
英制管螺纹 G	螺纹外径 d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	方 a	钻孔直径 d
G1/8-28	9.728	**CTS D5156 C G1/8 XT3**	7.0	90	10	5.5	8.80
		CTP D5156 B G1/8 XT3	7.0	90	10	5.5	8.80
G1/4-19	13.157	**CTS D5156 C G1/4 XT3**	11.0	100	14	9.0	11.80
		CTP D5156 B G1/4 XT3	11.0	100	14	9.0	11.80
G3/8-19	16.662	**CTS D5156 C G3/8 XT3**	12.0	100	15	9.0	15.25
		CTP D5156 B G3/8 XT3	12.0	100	15	9.0	15.25
G1/2-14	20.955	**CTS D5156 C G1/2 XT3**	16.0	125	17	12.0	19.00
		CTP D5156 B G1/2 XT3	16.0	125	17	12.0	19.00
G3/4-14	26.441	**CTS D5156 C G3/4 XT3**	20.0	140	20	16.0	24.50
		CTP D5156 B G3/4 XT3	20.0	140	20	16.0	24.50
G1-11	33.249	**CTS D5156 C G1 XT3**	25.0	160	24	20.0	30.75
		CTP D5156 B G1 XT3	25.0	160	24	20.0	30.75

Order example: CTS D5156 C G1 XT3 订货式样：**CTS D 5156 C G1 XT3**

Machine Taps 机用丝锥

Whitworth pipe thread G, DIN-ISO 228 英国惠氏管螺纹 G，DIN-ISO 228

DIN 5156 DIN 5156-细柄



CTS CTP

ISO	P	M	K	N	S	H
XT5 Grade	●	●	●	●		

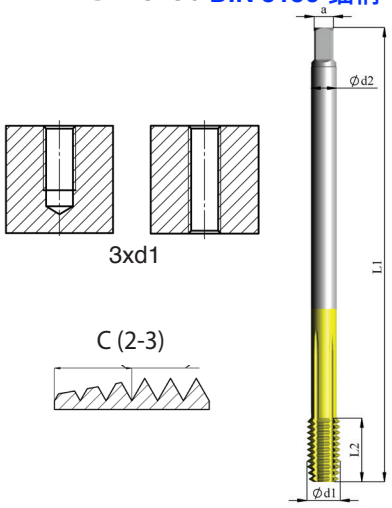
英制管螺纹 G	螺纹外径 d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	方 a	钻孔直径 d
G1/8-28	9.728	CTS D5156 C G1/8 XT5	7.0	90	10	5.5	8.80
		CTP D5156 B G1/8 XT5	7.0	90	18	5.5	8.80
G1/4-19	13.157	CTS D5156 C G1/4 XT5	11.0	100	14	9.0	11.80
		CTP D5156 B G1/4 XT5	11.0	100	22	9.0	11.80
G3/8-19	16.662	CTS D5156 C G3/8 XT5	12.0	100	15	9.0	15.25
		CTP D5156 B G3/8 XT5	12.0	100	22	9.0	15.25
G1/2-14	20.955	CTS D5156 C G1/2 XT5	16.0	125	17	12.0	19.00
		CTP D5156 B G1/2 XT5	16.0	125	25	12.0	19.00
G3/4-14	26.441	CTS D5156 C G3/4 XT5	20.0	140	20	16.0	24.50
		CTP D5156 B G3/4 XT5	20.0	140	28	16.0	24.50
G1-11	33.249	CTS D5156 C G1 XT5	25.0	160	24	20.0	30.75
		CTP D5156 B G1 XT5	25.0	160	24	20.0	30.75

Order example: CTP D5156 B G1/2 XT5 订货式样：CTP D 5156 B G1/2 XT5

Forming Taps 挤压丝锥

Whitworth pipe thread G, DIN-ISO 228 英国惠氏管螺纹 G，DIN-ISO 228

DIN 5156 DIN 5156-细柄



CTF

ISO	P	M	K	N	S	H
XT7 Grade	●	●		●		

英制管螺纹 G	螺纹外径 d1	订货号 Ordering Code	柄径 d2	总长 L1	刃长 L2	方 a	钻孔直径
G1/8-28	9.728	**CTF D5156 C G1/8 XT7**	7.0	90	13	5.5	9.25
G1/4-19	13.157	**CTF D5156 C G1/4 XT7**	11.0	100	16	9.0	12.55
G3/8-19	16.662	**CTF D5156 C G3/8 XT7**	12.0	100	16	9.0	16.05
G1/2-14	20.955	**CTF D5156 C G1/2 XT7**	16.0	125	18	12.0	20.10
G3/4-14	26.441	**CTF D5156 C G3/4 XT7**	20.0	140	22	16.0	25.60

Order example: CTF D5156 C G1/4 XT7 订货式样：**CTF D 5156 C G1/4 XT7**

Technical Section 技术部分

Cutting data 切削参数

ISO Standard	材料 Materials Class	Vc [m/min] 线速度（m/min）		
		Grades 材质		
		XT3	XT5	XT7
P 钢	Low & Medium Carbon Steels <0.55%C 低碳钢	5-45	5-40	10-35
	High Carbon Steels ≥0.55%C 中碳钢			
	Alloy Steels, Treated Steels 合金钢，热处理钢			
M 不锈钢	Stainless Steel-Free Cutting 易切不锈钢	5-20	5-20	10-30
	Stainless Steel-Austenitic 奥氏体不锈钢			
	Cast Steels 铸钢			
铸 K 铁	Cast Iron 铸铁	10-35	5-30	-
N 非铁金属	Aluminum ≤12%Si, Copper 铝合金，铜	10-35	10-35	15-45
	Aluminum >12%Si 高硅铝			
	Synthetics, duroplastics, thermoplastics 合成纤维，硬塑料，高温塑料			
高温 S 合金	Nickel alloys, Titanium alloys 镍基合金/钛合金	1-10	-	-

$$Rotation\ speed\ (rpm): n = \frac{1000 \cdot v_c}{\pi \cdot d_1}$$ 求机床转速计算公示

$$Feed\ \left(\frac{mm}{min}\right): f = p \cdot N$$ 每分钟进给计算公式

$$Torque\ (\mathrm{N} \cdot m): M = \frac{p^2 \cdot d_1 \cdot k_c}{8000}$$ 丝锥切削扭矩计算公式

$d_1 - nominal\ diameter\ (mm)$ 标定直径尺寸

$v_c - cutting\ speed\ (m/min)$ 切削速度（m/min）

$n - spindle\ rotating\ speed$ 机床主轴转速

$p - thread\ pitch$ 螺距

$f - feed$ 进给

$k_c - specific\ resistance\ of\ workpiece\ material\ (N/mm^2)$ 被加工材料抵抗阻力（N/mm2）

$M - torque\ when\ tapping\ (N*m)$ 丝锥切削扭矩

Taps Grades and material used

Carmex材质 Carmex Grades	材料代号 Material Symbol	涂层性能 Coatings	硬度 Hardness	韧性 Toughness	耐热性 Temperature resistance	切削刃强度 Cutting edge Stability
XT3	HSSE-PM 含钴高速钢-粉末冶金	Multi-layer high performance coating 多层高性能涂层	++	++	++	++
XT5	HSSE 含钴高速钢	Multi-layer coating 多层涂层	+	+	+	+
XT7	HSSE-PM 含钴高速钢-粉末冶金	Multi-layer coating 多层涂层	++	++	+	++

Grades application: 材质应用：

XT3- high performance grade, with high hardness and high temperature resistance, for tough and difficult to cut materials. High edge stability.

XT3-高性能材质，高硬和耐高温，用于坚韧和困难的切削材料。高强度切削刃。

XT5- excellent solution for wide range of materials and applications can be used with unstable conditions. High wear resistance thanks to the multi-layer smooth and polished coating.

XT5-极好的用于宽范围材料，能用于不稳定的条件。高耐磨，多层光滑抛光涂层。

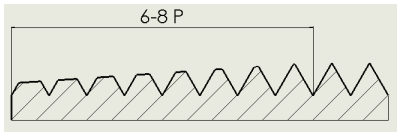
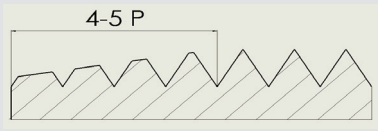
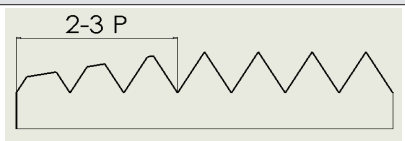
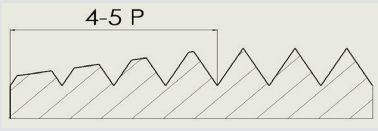
XT7- best solution for chip-free materials, high hardness and toughness grade provides smooth thread finish and allow high working parameters.

XT7-最佳的无屑加工材质，高硬度和高韧性材质，螺纹表面光洁度高，高切削参数。

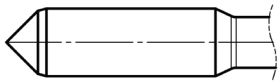
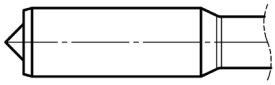
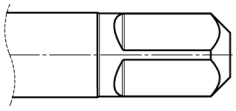
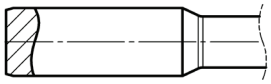
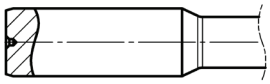
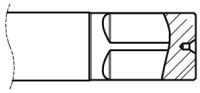
Taps standards 丝锥标准

Symbol 代号	Description 描述
DIN-371	Taps with reinforced shank for metric coarse and fine threads up to M10 and for UNC and UNF threads up to 3/8” nominal diameter 坚固柄的丝锥，用于公制粗牙和细牙到M10和UNC和UNF到3/8英时标定直径螺纹。
DIN-376	Taps with reduced shank diameter for metric coarse threads and for UNC threads 缩径柄的丝锥，用于公制粗牙和UNC螺纹。
DIN-374	Taps with reduced shank diameter for metric fine threads and for UNF threads 缩径柄的丝锥，用于公制细牙和UNF螺纹。
DIN-5156	Taps with reduced shank diameter for G threads 缩径柄的丝锥，用于英国惠氏管螺纹
JIS B-4430	Taps for JIS metric threads 丝锥 JIS（日本工业标准）公制螺纹

Types of front chamfers 前切削锥类型

Symbol 代号	Sketch 示意图	Chamfer length (No. of threads) 切削锥长度
A		6-8 P **6-8 P（6-8个螺距）**
B		4-5 P **4-5 P（4-5个螺距）**
C		2-3 P **2-3 P（2-3个螺距）**
D (straight flute taps only) **仅限于直槽丝锥**		4-5 P **4-5 P（4-5个螺距）**
E		1.5-2 P **1.5-2 P（1.5-2个螺距）**

Tap Center 丝锥倒角

Working Part 工作部分			Shank 柄部
Solid Cone/Male center 整体锥形/凸尖	(1)		
Half center 半尖	(2)		 (5) Chamfer 圆倒棱
Chamfer without center hole 圆倒棱不带中心孔	(3)		
Internal center hole 内中心孔	(4)		 (6) Internal Center Hole 内中心孔

标准 Standard	外螺纹直径 External thread Diameter (mm)	Type of center cone/hole 锥形尖/中心孔形式			柄部中心孔形式 Type of center hole on shank side
		Chamfers A,C,D 切削锥形式	Chamfer B 切削锥形式	Chamfer E 切削锥形式	
DIN-371	≤7.2	(1)	(1)	(3)	(5)
	7.2-8.2	(2)	(1)	(3)	(5)
	8.2-10.2	(2)	(2)	(3)	(5)
DIN-374 DIN-376 DIN-5156	≤7.2	(1)	(1)	(3)	(5)
	>7.2	(4)	(4)	(3)	(6)
JIS B-4430		(3)	(3)	(3)	(5)

Length of Solid Cones 整体圆锥长度

(Length of stepped cone is 1.8 mm for all Taps) 全部丝锥的圆锥阶梯长度为1.8mm

M 公制粗牙		MF 公制细牙	
M1	0.6	M2.5x0.35	1.9
M1.2	0.8	M2.6x0.35	1.9
M1.4	1.0	M3x0.35	1.3
M1.6	1.1	M3.5x0.35	1.6
M1.7	1.2	M4x0.5	1.8
M1.8	1.3	M5x0.5	2.3
M2	1.4	M6x0.75	2.6
M2.5	1.8	M7x0.75	3.1
M2.6	1.8		
M3	1.3		
M3.5	1.5		
M4	1.7		
M4.5	1.9		
M5	2.1		
M6	2.5		
M7	3.0		
UNC UNC粗牙		UNF UNF细牙	
4-40	2.0	4-48	2.1
5-40	1.3	5-44	1.4
6-32	1.4	6-40	1.5
8-32	1.8	8-36	1.8
10-24	2.0	10-32	2.1
12-24	2.3	12-28	2.3
1/4-20	2.6	1/4-28	2.8
5/16-18	3.3	5/16-24	3.5

Types of Thread Taps 丝锥类型

Spiral fluted taps 螺旋槽丝锥

Spiral fluted taps are suitable for threading blind hole applications. The spiral flute drives the chip towards the shank and out of the hole. The spiral fluted taps are not suitable for tapping through holes.

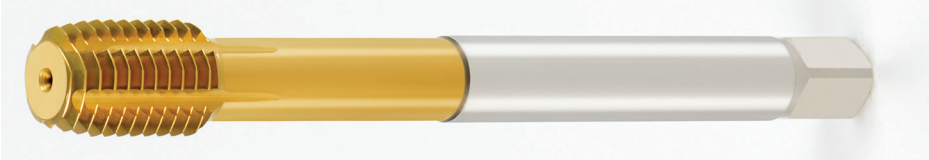
螺旋槽丝锥适用于盲孔螺纹加工。螺旋槽将切屑向后推送并排出孔外。螺旋槽丝锥不适合通孔攻丝。

Spiral point Taps 前端螺旋刃倾角（前排屑）直槽丝锥

Spiral point taps have straight flutes with a spiral point.
The spiral point drives the chip in the direction of feed, that makes spiral point taps ideal for threading through hole applications as chips are evacuated through the hole.
Because of this design spiral point taps are not suitable for blind hole applications. Moreover, when tapping a through hole, the tap must go through until the spiral point has passed the hole.

直槽丝锥前端带有螺旋刃倾角。
前端螺旋刃倾角沿着前进方向推动切屑向前排出，螺旋刃倾角丝锥在加工通孔螺纹时非常理想。
攻丝通孔时，直到丝锥前端螺旋切削刃通过孔为止。螺旋前端刃倾角丝锥不适合盲孔攻丝。

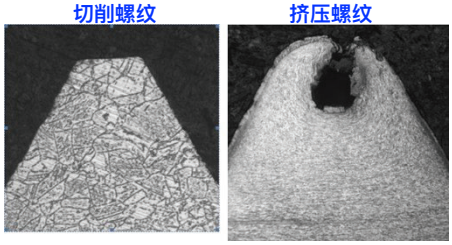
Forming Taps 挤压丝锥



Forming taps make thread by method of plastic deformation instead of cutting it. These taps are suitable for ductile materials. 挤压丝锥是用塑性变形的来加工螺纹（无屑加工），而不是用切削的方法来加工螺纹（有屑加工）。这些丝锥适用于韧性材料。
Rule of thumb is if the material produces continuous stringy chip it is probably a good candidate for thread forming.
Forming is ideal when absolutely chip free production is desired.
Note that the bore diameter required for formed thread is greater than bore diameter for cut thread.
经验的法则告诉我们；如果被加工材料产生连续的粘性切屑，它就是一个好的螺纹挤压材料。挤压是绝对理想的螺纹无屑生产过程。
注意：挤压螺纹所需的孔径必须大于切削螺纹的孔径。

Cut threat vs. formed thread 切削螺纹与挤压螺纹比较

切削螺纹 挤压螺纹



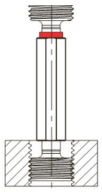
Advantages of forming taps/formed threads 挤压丝锥/挤压螺纹优点

+ The same tool is suitable for both blind and through holes 一支丝锥盲孔和通孔两者兼用
+ No chips – eliminates problems with chip evacuation 无切屑-没有排屑问题题
+ Able to tap at higher speeds than cutting taps. 比切削丝锥更高的切削速度。
+ No flutes, larger core diameter – stronger tool. 没有排屑槽，芯核直径大-丝锥强度高
+ Longer tool life. 长的刀具寿命
+ Smoother thread surface. 螺纹表面光洁度高

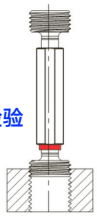
Disadvantages of forming taps/formed threads 挤压丝锥/挤压螺纹的缺点

- Greater working torque required. 需要更大的切削扭矩
- Incomplete formation of the thread top, as can be seen on the photo above, which can make the thread more prone to cross-threading. 螺纹牙尖未完全成形，如上图。使螺纹容易交叉（干涉）。
- Limited to ductile materials. 只能用于韧性材料（延伸率大的材料）

Thread gauges 螺纹塞规



Go and no-go thread gauges are used to check internal threads. The go gauge should be manually screwed freely for the whole length of the thread. 螺纹塞规通规与止规，用于检查内螺纹。通规应该能够在整个螺纹长度内用手自由旋进旋出。



The no-go gauge should not go in further than two thread pitches when screwed manually. 塞规止规端检验时，止规进入螺纹孔不得超过两个螺距。

Test Report 试验报告

Application: 应用
Internal right hand thread: M6x1 右手内螺纹：M6×1
Thread depth: 16mm 螺纹深度：16mm
Bore size: Ø5mm, blind hole 孔径：Φ5mm，盲孔

Workpiece Material: 加工材料
Steel SAE 4340 Hardened to: 17HRc 美国SAE 4340钢，硬度：HRC17

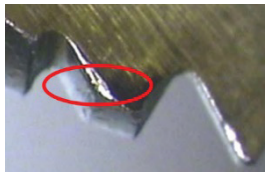
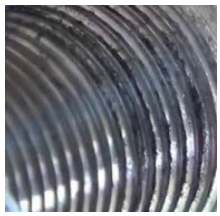
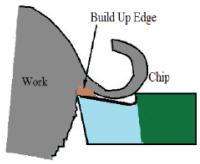
Tool Description: 刀具描述
CTS060 C M6x1 CTH CTS060 C M6×1 CTH
Shank diameter: Ø6mm 柄径：Φ6mm
Max. thread length: 3xD 最大有效螺纹长度：3×D
Chamfer size: 2-3 threads 切削锥长度：2-3个螺距

Cutting conditions: 切削条件
Cutting speed: 20 m/min 切削速度：20m/min
Rotational speed: 1060 rpm 主轴旋转速度：1060rpm

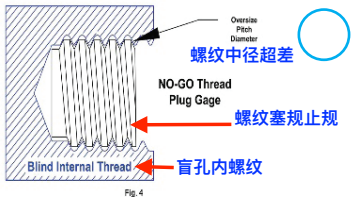
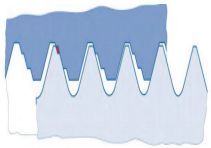
Machine: 机床
Mori Seiki NV5000. 森崎 NV5000
Coolant: emulsion 5% 冷却液：5%乳化液

Test Results: 试验结果
Tool life: 1620 threads (and still working) 刀具寿命：1620螺孔（仍然可加工）
Cycle time: 3 sec 加工周期：3秒/孔

Troubleshooting 故障原因分析

Problem 问题	Possible cause 可能的原因	Possible Solution 应对方法	
Chipped teeth 丝锥牙形破损	High tool run out 丝锥跳动量过大	Use grip with better mounting precision 夹紧丝锥，使安装精度更好	
	Too high cutting speed 切削速度高	Decrease cutting speed 降低切削速度	
	Drill hole is too small 丝底孔过小	Use recommended drill size 使用推荐钻头	
High tap wear 丝锥磨损量大	Too too high cutting speed 切削速度高	Decrease cutting speed 降低切削速度	
	Poor coolant flow to the cutting area 切削区域冷却差	Adjust direction of coolant flow into the hole 调整冷却液流向	
	High tool run out 丝锥跳动量过大	Use grip with better mounting precision 夹紧丝锥，使安装精度更好	
Chips fill up flutes 切屑聚集排屑槽	Change tool selection 选择更换丝锥	If work conditions/material suitable, try forming tap instead of cutting tap 如果条件和材料合适，更换挤压丝锥	
	Too low cutting speed 切削速度过低	Increase cutting speed 提高切削速度	
	Poor chips flow 切屑流动差	Apply internal cooling 改用内冷	
Poor finish on workpiece 工件表面光洁度差	Tap is worn out 丝锥磨损	Replace tap 更换丝锥	
	Built-up edge 切削刃积屑瘤	Replace tool and check “built-up edge” section for solution 更换丝锥和检查刃口积屑瘤	
	Poor coolant flow to the cutting area 切削区域冷却差	Adjust direction of coolant flow into the hole 调整冷却液流向	
	Wrong cutting parameters 错误的切削参数	Use recommended cutting parameters 使用推荐切削参数	
Built-up edge 切削刃积屑瘤	Too low cutting speed 刀具转速低	Increase cutting speed 提高切削速度	
	Poor coolant flow to the cutting area 切削区域冷却差	Adjust direction of coolant flow into the hole 调整冷却液流向	
	Worn out cutting edges 切削刃磨损	Replace tap 更换丝锥	

התמונות יצאו כפי שאתם רואים אותן,
מפוקסלות - תלוי בכם אם מספק

Problem 问题	Possible cause 可能的原因	Possible Solution 应对方法	
Tap breakage 丝锥断裂	Missmatch between Tap location and hole 丝锥与孔不同心	Correct alignment between tap and hole 丝锥中心与孔中心对准	
	Drilled hole not deep enough 钻孔深度不够	Check actual hole depth 检查孔深	
	Excessive runout 跳动过大	Use grip with better mounting precision 夹紧丝锥，使安装精度更好	
	Flutes filled up with chips 排屑槽挤满积屑	Check “chips fill up flutes” section on this table 查看上页的“切屑聚集排屑槽槽”部分	
	Built-up edge 切削刃积屑瘤	Replace tool, check “built-up” edge section for solution 更换丝锥，查看“切削聚集排屑槽”部分	
	Drill hole is too small 丝底孔过小	Use recommended drill size 使用推荐钻头	
	Too high cutting speed 切削速度过高	Decrease cutting speed 降低切削速度	
Oversized thread 螺纹超差	Tap tolerance and requested workpiece tolerance don’t fit 丝锥公差与工件公差不符	Choose different tap with suitable tolerance 选择不同丝锥和相适应的公差	
	Flutes filled up with chips 排屑槽挤满积屑	Remove chips and check “chips fill up flutes” section to prevent the problem from returning 清除切屑并检查“切屑聚集屑槽”部分，防止问题出现	
	Built-up edge 切削刃积屑瘤	Replace tool, check “built-up” edge section for solution 更换丝锥，查看“切削聚集排屑槽”部分	
	Too high cutting speed 切削速度过高	Decrease cutting speed 降低切削速度	
	Unstable tool 刀具不稳定	Increase cutting speed – may improve tool stability 提高切削速度-以提高刀具稳定性	
Undersized thread 螺纹尺寸过小	Worn out tap 丝锥磨损	Replace tap 更换丝锥	
	Tap tolerance and requested workpiece tolerance don’t fit 丝锥公差与工件公差不符	Choose different tap with suitable tolerance 选择不同丝锥和相适应的公差	
	Drill hole is too small 丝底孔过小	Use recommended size drill 使用推荐钻头	
Excessive power requirement 切削负载过高	Worn out tap 丝锥磨损	Replace tap 更换丝锥	
	Poor coolant flow to the cutting area 切削区域冷却差	Adjust direction of coolant flow into the hole 调整冷却液流向	
	Drill hole is too small 丝底孔过小	Use recommended size drill 使用推荐钻头	

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