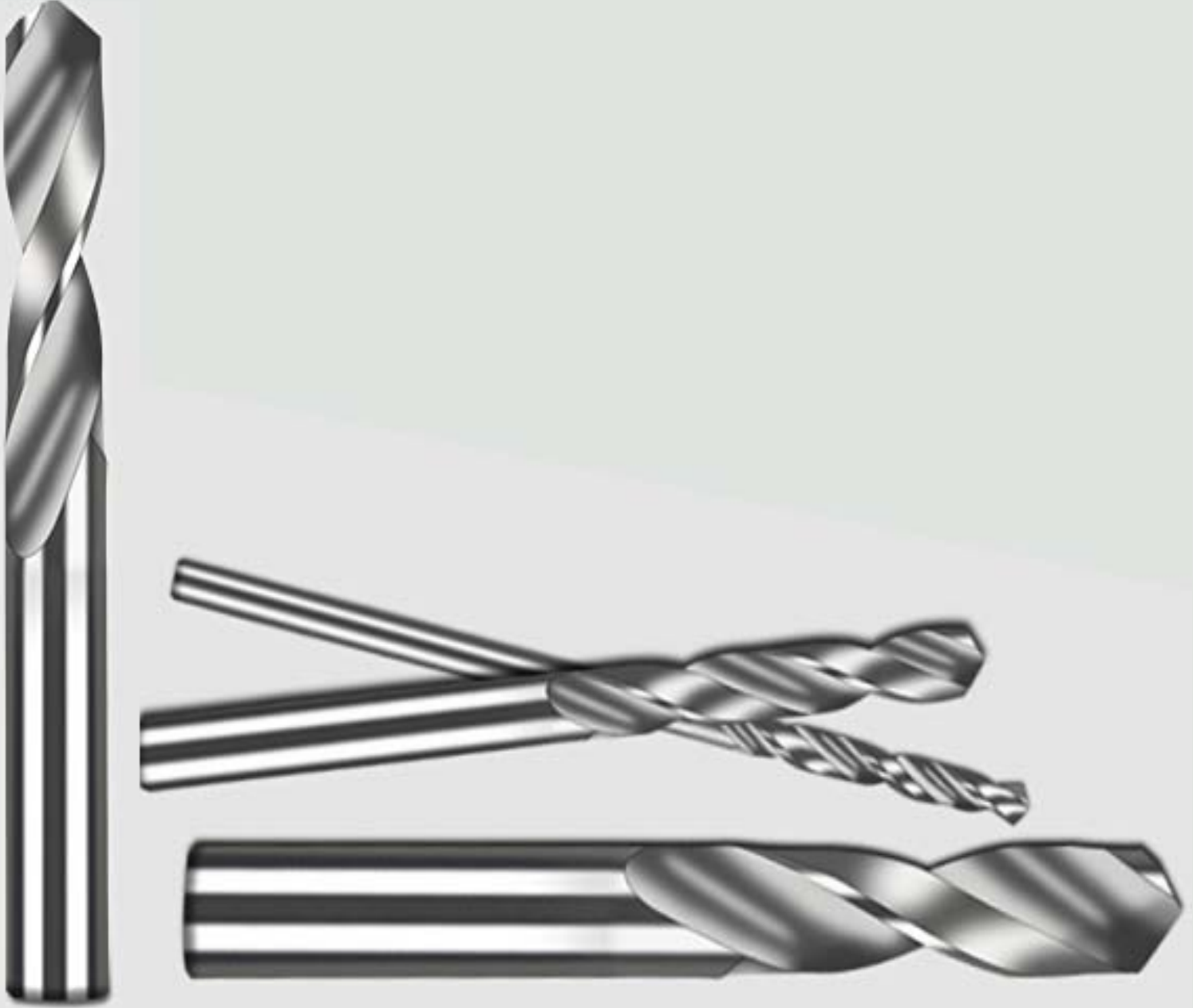


Solid Carbide Drills & Taps



Hard Metal®

Index Table- Carbide Drill

PMK	Suitable for general cutting PMK materials
KN	Suitable for cutting KN (Cast Iron & Aluminum Alloys) materials
M	Suitable for cutting M (Stainless Steel) materials,

Drilling Depth	
3	≅ 3D
5	≅ 5D
8	≅ 8D
90	90°Center Drill
120	120°Center Drill

PMK

20-

HA

3

I-

0600

Max Diameter	
20	20mm
16	16mm

Shank Type	
HA	DIN6535HA
HB	DIN6535HB
HE	DIN6535HE

Coolant Method	
I	Inner Cooling
E	External Cooling

Dill Diameter	
0600	Dia: Φ 6.00
1200	Dia: Φ 12.00
0325	Dia: Φ 3.25

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

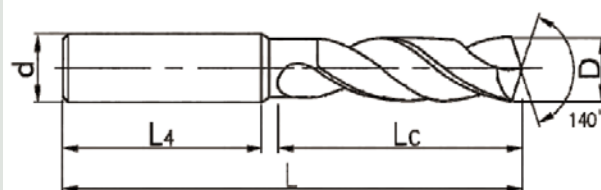
Drill & Tap

Drilling & Boring

Tool Holder

3D Twist Drill, general cutting

- General machining PMK materials
- External cooling
- Shank Type: DIN6535HA h6 (HB/HE Customer -Order)

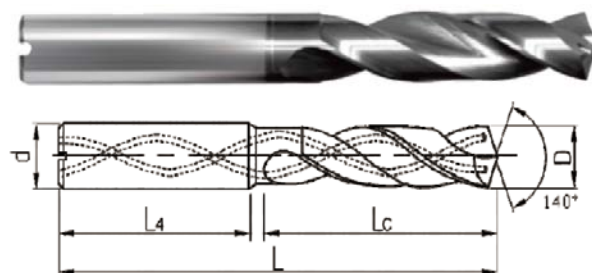


Model	D (m7)	d (h6)	L	Lc	L4
PMK20-HA3E-0300	3.00	6	62	20	36
PMK20-HA3E-0325	3.25	6	62	20	36
PMK20-HA3E-0330	3.30	6	62	20	36
PMK20-HA3E-0340	3.40	6	62	20	36
PMK20-HA3E-0350	3.50	6	62	20	36
PMK20-HA3E-0370	3.70	6	62	20	36
PMK20-HA3E-0400	4.00	6	66	24	36
PMK20-HA3E-0420	4.20	6	66	24	36
PMK20-HA3E-0430	4.30	6	66	24	36
PMK20-HA3E-0450	4.50	6	66	24	36
PMK20-HA3E-0465	4.65	6	66	24	36
PMK20-HA3E-0480	4.80	6	66	28	36
PMK20-HA3E-0500	5.00	6	66	28	36
PMK20-HA3E-0510	5.10	6	66	28	36
PMK20-HA3E-0520	5.20	6	68	28	36
PMK20-HA3E-0550	5.50	6	68	28	36
PMK20-HA3E-0555	5.55	6	68	28	38
PMK20-HA3E-0580	5.80	6	68	28	38
PMK20-HA3E-0600	6.00	6	68	28	38
PMK20-HA3E-0610	6.10	8	79	34	38
PMK20-HA3E-0620	6.20	8	79	34	38
PMK20-HA3E-0630	6.30	8	79	34	38
PMK20-HA3E-0650	6.50	8	79	34	38
PMK20-HA3E-0660	6.60	8	79	34	38
PMK20-HA3E-0680	6.80	8	79	34	38
PMK20-HA3E-0690	6.90	8	79	34	38
PMK20-HA3E-0700	7.00	8	79	34	38
PMK20-HA3E-0710	7.10	8	79	41	38
PMK20-HA3E-0740	7.40	8	79	41	38
PMK20-HA3E-0750	7.50	8	79	41	38
PMK20-HA3E-0780	7.80	8	79	41	38
PMK20-HA3E-0800	8.00	8	79	41	38
PMK20-HA3E-0810	8.10	10	89	47	40
PMK20-HA3E-0840	8.40	10	89	47	40
PMK20-HA3E-0850	8.50	10	89	47	40
PMK20-HA3E-0860	8.60	10	89	47	40
PMK20-HA3E-0870	8.70	10	89	47	40
PMK20-HA3E-0880	8.80	10	89	47	40
PMK20-HA3E-0900	9.00	10	89	47	40
PMK20-HA3E-0930	9.30	10	89	47	40
PMK20-HA3E-0950	9.50	10	89	47	40
PMK20-HA3E-0960	9.60	10	89	47	40
PMK20-HA3E-0980	9.80	10	89	47	40

Model	D (m7)	d (h6)	L	Lc	L4
PMK20-HA3E-1000	10.00	10	89	47	40
PMK20-HA3E-1025	10.25	12	102	55	45
PMK20-HA3E-1040	10.40	12	102	55	45
PMK20-HA3E-1050	10.50	12	102	55	45
PMK20-HA3E-1060	10.60	12	102	55	45
PMK20-HA3E-1080	10.80	12	102	55	45
PMK20-HA3E-1100	11.00	12	102	55	45
PMK20-HA3E-1120	11.20	12	102	55	45
PMK20-HA3E-1150	11.50	12	102	55	45
PMK20-HA3E-1180	11.80	12	102	55	45
PMK20-HA3E-1200	12.00	12	102	55	45
PMK20-HA3E-1225	12.25	14	107	60	45
PMK20-HA3E-1250	12.50	14	107	60	45
PMK20-HA3E-1270	12.70	14	107	60	45
PMK20-HA3E-1275	12.75	14	107	60	45
PMK20-HA3E-1280	12.80	14	107	60	45
PMK20-HA3E-1300	13.00	14	107	60	45
PMK20-HA3E-1310	13.10	14	107	60	45
PMK20-HA3E-1350	13.50	14	107	60	45
PMK20-HA3E-1380	13.80	14	107	60	45
PMK20-HA3E-1400	14.00	14	107	60	45
PMK20-HA3E-1425	14.25	16	115	65	48
PMK20-HA3E-1450	14.50	16	115	65	48
PMK20-HA3E-1475	14.75	16	115	65	48
PMK20-HA3E-1480	14.80	16	115	65	48
PMK20-HA3E-1500	15.00	16	115	65	48
PMK20-HA3E-1510	15.10	16	115	65	48
PMK20-HA3E-1550	15.50	16	115	65	48
PMK20-HA3E-1580	15.80	16	115	65	48
PMK20-HA3E-1600	16.00	16	115	65	48
PMK20-HA3E-1650	16.50	18	123	73	48
PMK20-HA3E-1675	16.75	18	123	73	48
PMK20-HA3E-1680	16.80	18	123	73	48
PMK20-HA3E-1700	17.00	18	123	73	48
PMK20-HA3E-1750	17.50	18	123	73	48
PMK20-HA3E-1780	17.80	18	123	73	48
PMK20-HA3E-1800	18.00	18	123	73	48
PMK20-HA3E-1850	18.50	20	131	79	50
PMK20-HA3E-1880	18.80	20	131	79	50
PMK20-HA3E-1900	19.00	20	131	79	50
PMK20-HA3E-1950	19.50	20	131	79	50
PMK20-HA3E-1980	19.80	20	131	79	50
PMK20-HA3E-2000	20.00	20	131	79	50

3D Twist Drill, general cutting

- General machining PMK materials
- Inner cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)



Model	D (m7)	d (h6)	L	LC	L4
PMK20-HA3I-0330	3.30	6	62	20	36
PMK20-HA3I-0340	3.40	6	62	20	36
PMK20-HA3I-0350	3.50	6	62	20	36
PMK20-HA3I-0370	3.70	6	62	20	36
PMK20-HA3I-0400	4.00	6	66	24	36
PMK20-HA3I-0420	4.20	6	66	24	36
PMK20-HA3I-0430	4.30	6	66	24	36
PMK20-HA3I-0450	4.50	6	66	24	36
PMK20-HA3I-0465	4.65	6	66	24	36
PMK20-HA3I-0480	4.80	6	66	28	36
PMK20-HA3I-0500	5.00	6	66	28	36
PMK20-HA3I-0510	5.10	6	66	28	36
PMK20-HA3I-0520	5.20	6	68	28	36
PMK20-HA3I-0550	5.50	6	68	28	36
PMK20-HA3I-0555	5.55	6	68	28	38
PMK20-HA3I-0580	5.80	6	68	28	38
PMK20-HA3I-0600	6.00	6	68	28	38
PMK20-HA3I-0610	6.10	8	79	34	38
PMK20-HA3I-0620	6.20	8	79	34	38
PMK20-HA3I-0630	6.30	8	79	34	38
PMK20-HA3I-0650	6.50	8	79	34	38
PMK20-HA3I-0660	6.60	8	79	34	38
PMK20-HA3I-0680	6.80	8	79	34	38
PMK20-HA3I-0690	6.90	8	79	34	38
PMK20-HA3I-0700	7.00	8	79	34	38
PMK20-HA3I-0710	7.10	8	79	41	38
PMK20-HA3I-0740	7.40	8	79	41	38
PMK20-HA3I-0750	7.50	8	79	41	38
PMK20-HA3I-0780	7.80	8	79	41	38
PMK20-HA3I-0800	8.00	8	79	41	38
PMK20-HA3I-0810	8.10	10	89	47	40
PMK20-HA3I-0840	8.40	10	89	47	40
PMK20-HA3I-0850	8.50	10	89	47	40
PMK20-HA3I-0860	8.60	10	89	47	40
PMK20-HA3I-0870	8.70	10	89	47	40
PMK20-HA3I-0880	8.80	10	89	47	40
PMK20-HA3I-0900	9.00	10	89	47	40
PMK20-HA3I-0930	9.30	10	89	47	40
PMK20-HA3I-0950	9.50	10	89	47	40
PMK20-HA3I-0960	9.60	10	89	47	40
PMK20-HA3I-0980	9.80	10	89	47	40
PMK20-HA3I-1000	10.00	10	89	47	40

Model	D (m7)	d (h6)	L	LC	L4
PMK20-HA3I-1025	10.25	12	102	55	45
PMK20-HA3I-1040	10.40	12	102	55	45
PMK20-HA3I-1050	10.50	12	102	55	45
PMK20-HA3I-1060	10.60	12	102	55	45
PMK20-HA3I-1080	10.80	12	102	55	45
PMK20-HA3I-1100	11.00	12	102	55	45
PMK20-HA3I-1120	11.20	12	102	55	45
PMK20-HA3I-1150	11.50	12	102	55	45
PMK20-HA3I-1180	11.80	12	102	55	45
PMK20-HA3I-1200	12.00	12	102	55	45
PMK20-HA3I-1225	12.25	14	107	60	45
PMK20-HA3I-1250	12.50	14	107	60	45
PMK20-HA3I-1270	12.70	14	107	60	45
PMK20-HA3I-1275	12.75	14	107	60	45
PMK20-HA3I-1280	12.80	14	107	60	45
PMK20-HA3I-1300	13.00	14	107	60	45
PMK20-HA3I-1310	13.10	14	107	60	45
PMK20-HA3I-1350	13.50	14	107	60	45
PMK20-HA3I-1380	13.80	14	107	60	45
PMK20-HA3I-1400	14.00	14	107	60	45
PMK20-HA3I-1425	14.25	16	115	65	48
PMK20-HA3I-1450	14.50	16	115	65	48
PMK20-HA3I-1475	14.75	16	115	65	48
PMK20-HA3I-1480	14.80	16	115	65	48
PMK20-HA3I-1500	15.00	16	115	65	48
PMK20-HA3I-1510	15.10	16	115	65	48
PMK20-HA3I-1550	15.50	16	115	65	48
PMK20-HA3I-1580	15.80	16	115	65	48
PMK20-HA3I-1600	16.00	16	115	65	48
PMK20-HA3I-1650	16.50	18	123	73	48
PMK20-HA3I-1675	16.75	18	123	73	48
PMK20-HA3I-1680	16.80	18	123	73	48
PMK20-HA3I-1700	17.00	18	123	73	48
PMK20-HA3I-1750	17.50	18	123	73	48
PMK20-HA3I-1780	17.80	18	123	73	48
PMK20-HA3I-1800	18.00	18	123	73	48
PMK20-HA3I-1850	18.50	20	131	79	50
PMK20-HA3I-1880	18.80	20	131	79	50
PMK20-HA3I-1900	19.00	20	131	79	50
PMK20-HA3I-1950	19.50	20	131	79	50
PMK20-HA3I-1980	19.80	20	131	79	50
PMK20-HA3I-2000	20.00	20	131	79	50

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

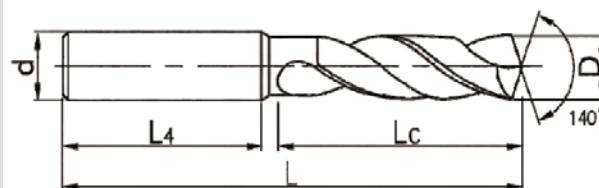
Drill & Tap

Drilling & Boring

Tool Holder

5D Twist Drill, General Cutting

- General machining PMK materials
- External cooling
- Shank Type: DIN6535HA h6 (HB/HE Customer -Order)

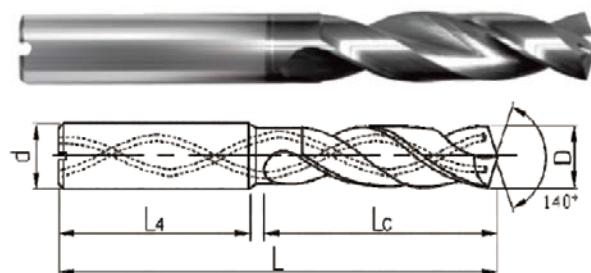


Model	D (m7)	d (h6)	L	LC	L4
PMK20-HA5E-0300	3.00	6	68	28	36
PMK20-HA5E-0325	3.25	6	68	28	36
PMK20-HA5E-0330	3.30	6	68	28	36
PMK20-HA5E-0340	3.40	6	68	28	36
PMK20-HA5E-0350	3.50	6	68	28	36
PMK20-HA5E-0370	3.70	6	68	28	36
PMK20-HA5E-0400	4.00	6	74	36	36
PMK20-HA5E-0420	4.20	6	74	36	36
PMK20-HA5E-0430	4.30	6	74	36	36
PMK20-HA5E-0450	4.50	6	74	36	36
PMK20-HA5E-0465	4.65	6	74	36	36
PMK20-HA5E-0480	4.80	6	82	44	36
PMK20-HA5E-0500	5.00	6	82	44	36
PMK20-HA5E-0510	5.10	6	82	44	36
PMK20-HA5E-0520	5.20	6	82	44	36
PMK20-HA5E-0550	5.50	6	82	44	36
PMK20-HA5E-0555	5.55	6	82	44	38
PMK20-HA5E-0580	5.80	6	82	44	38
PMK20-HA5E-0600	6.00	6	82	44	38
PMK20-HA5E-0610	6.10	8	91	53	38
PMK20-HA5E-0620	6.20	8	91	53	38
PMK20-HA5E-0630	6.30	8	91	53	38
PMK20-HA5E-0650	6.50	8	91	53	38
PMK20-HA5E-0660	6.60	8	91	53	38
PMK20-HA5E-0680	6.80	8	91	53	38
PMK20-HA5E-0690	6.90	8	91	53	38
PMK20-HA5E-0700	7.00	8	91	53	38
PMK20-HA5E-0710	7.10	8	91	53	38
PMK20-HA5E-0740	7.40	8	91	53	38
PMK20-HA5E-0750	7.50	8	91	53	38
PMK20-HA5E-0780	7.80	8	91	53	38
PMK20-HA5E-0800	8.00	8	91	53	38
PMK20-HA5E-0810	8.10	10	103	61	40
PMK20-HA5E-0840	8.40	10	103	61	40
PMK20-HA5E-0850	8.50	10	103	61	40
PMK20-HA5E-0860	8.60	10	103	61	40
PMK20-HA5E-0870	8.70	10	103	61	40
PMK20-HA5E-0880	8.80	10	103	61	40
PMK20-HA5E-0900	9.00	10	103	61	40
PMK20-HA5E-0930	9.30	10	103	61	40
PMK20-HA5E-0950	9.50	10	103	61	40
PMK20-HA5E-0960	9.60	10	103	61	40
PMK20-HA5E-0980	9.80	10	103	61	40

Model	D (m7)	d (h6)	L	LC	L4
PMK20-HA5E-1000	10.00	10	103	61	40
PMK20-HA5E-1025	10.25	12	118	71	45
PMK20-HA5E-1040	10.40	12	118	71	45
PMK20-HA5E-1050	10.50	12	118	71	45
PMK20-HA5E-1060	10.60	12	118	71	45
PMK20-HA5E-1080	10.80	12	118	71	45
PMK20-HA5E-1100	11.00	12	118	71	45
PMK20-HA5E-1120	11.20	12	118	71	45
PMK20-HA5E-1150	11.50	12	118	71	45
PMK20-HA5E-1180	11.80	12	118	71	45
PMK20-HA5E-1200	12.00	12	118	71	45
PMK20-HA5E-1225	12.25	14	124	77	45
PMK20-HA5E-1250	12.50	14	124	77	45
PMK20-HA5E-1270	12.70	14	124	77	45
PMK20-HA5E-1275	12.75	14	124	77	45
PMK20-HA5E-1280	12.80	14	124	77	45
PMK20-HA5E-1300	13.00	14	124	77	45
PMK20-HA5E-1310	13.10	14	124	77	45
PMK20-HA5E-1350	13.50	14	124	77	45
PMK20-HA5E-1380	13.80	14	124	77	45
PMK20-HA5E-1400	14.00	14	124	77	45
PMK20-HA5E-1425	14.25	16	133	83	48
PMK20-HA5E-1450	14.50	16	133	83	48
PMK20-HA5E-1475	14.75	16	133	83	48
PMK20-HA5E-1480	14.80	16	133	83	48
PMK20-HA5E-1500	15.00	16	133	83	48
PMK20-HA5E-1510	15.10	16	133	83	48
PMK20-HA5E-1550	15.50	16	133	83	48
PMK20-HA5E-1580	15.80	16	133	83	48
PMK20-HA5E-1600	16.00	16	133	83	48
PMK20-HA5E-1650	16.50	18	143	93	48
PMK20-HA5E-1675	16.75	18	143	93	48
PMK20-HA5E-1680	16.80	18	143	93	48
PMK20-HA5E-1700	17.00	18	143	93	48
PMK20-HA5E-1750	17.50	18	143	93	48
PMK20-HA5E-1780	17.80	18	143	93	48
PMK20-HA5E-1800	18.00	18	143	93	48
PMK20-HA5E-1850	18.50	20	153	101	50
PMK20-HA5E-1880	18.80	20	153	101	50
PMK20-HA5E-1900	19.00	20	153	101	50
PMK20-HA5E-1950	19.50	20	153	101	50
PMK20-HA5E-1980	19.80	20	153	101	50
PMK20-HA5E-2000	20.00	20	153	101	50

5D Twist Drill, General Cutting

- General machining PMK materials
- Inner cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)



Model	D (m7)	d (h6)	L	LC	L4
PMK16-HA5I-0330	3.30	6	68	28	36
PMK16-HA5I-0340	3.40	6	68	28	36
PMK16-HA5I-0350	3.50	6	68	28	36
PMK16-HA5I-0370	3.70	6	68	28	36
PMK16-HA5I-0400	4.00	6	74	36	36
PMK16-HA5I-0420	4.20	6	74	36	36
PMK16-HA5I-0430	4.30	6	74	36	36
PMK16-HA5I-0450	4.50	6	74	36	36
PMK16-HA5I-0465	4.65	6	74	36	36
PMK16-HA5I-0480	4.80	6	82	44	36
PMK16-HA5I-0500	5.00	6	82	44	36
PMK16-HA5I-0510	5.10	6	82	44	36
PMK16-HA5I-0520	5.20	6	82	44	36
PMK16-HA5I-0550	5.50	6	82	44	36
PMK16-HA5I-0555	5.55	6	82	44	38
PMK16-HA5I-0580	5.80	6	82	44	38
PMK16-HA5I-0600	6.00	6	82	44	38
PMK16-HA5I-0610	6.10	8	91	53	38
PMK16-HA5I-0620	6.20	8	91	53	38
PMK16-HA5I-0630	6.30	8	91	53	38
PMK16-HA5I-0650	6.50	8	91	53	38
PMK16-HA5I-0660	6.60	8	91	53	38
PMK16-HA5I-0680	6.80	8	91	53	38
PMK16-HA5I-0690	6.90	8	91	53	38
PMK16-HA5I-0700	7.00	8	91	53	38
PMK16-HA5I-0710	7.10	8	91	53	38
PMK16-HA5I-0740	7.40	8	91	53	38
PMK16-HA5I-0750	7.50	8	91	53	38
PMK16-HA5I-0780	7.80	8	91	53	38
PMK16-HA5I-0800	8.00	8	91	53	38
PMK16-HA5I-0810	8.10	10	103	61	40
PMK16-HA5I-0840	8.40	10	103	61	40
PMK16-HA5I-0850	8.50	10	103	61	40
PMK16-HA5I-0860	8.60	10	103	61	40
PMK16-HA5I-0870	8.70	10	103	61	40

Model	D (m7)	d (h6)	L	LC	L4
PMK16-HA5I-0900	9.00	10	103	61	40
PMK16-HA5I-0930	9.30	10	103	61	40
PMK16-HA5I-0950	9.50	10	103	61	40
PMK16-HA5I-0960	9.60	10	103	61	40
PMK16-HA5I-0980	9.80	10	103	61	40
PMK16-HA5I-1000	10.00	10	103	61	40
PMK16-HA5I-1025	10.25	12	118	71	45
PMK16-HA5I-1040	10.40	12	118	71	45
PMK16-HA5I-1050	10.50	12	118	71	45
PMK16-HA5I-1060	10.60	12	118	71	45
PMK16-HA5I-1080	10.80	12	118	71	45
PMK16-HA5I-1100	11.00	12	118	71	45
PMK16-HA5I-1120	11.20	12	118	71	45
PMK16-HA5I-1150	11.50	12	118	71	45
PMK16-HA5I-1180	11.80	12	118	71	45
PMK16-HA5I-1200	12.00	12	118	71	45
PMK16-HA5I-1225	12.25	14	124	77	45
PMK16-HA5I-1250	12.50	14	124	77	45
PMK16-HA5I-1270	12.70	14	124	77	45
PMK16-HA5I-1275	12.75	14	124	77	45
PMK16-HA5I-1280	12.80	14	124	77	45
PMK16-HA5I-1300	13.00	14	124	77	45
PMK16-HA5I-1310	13.10	14	124	77	45
PMK16-HA5I-1350	13.50	14	124	77	45
PMK16-HA5I-1380	13.80	14	124	77	45
PMK16-HA5I-1400	14.00	14	124	77	45
PMK16-HA5I-1425	14.25	16	133	83	48
PMK16-HA5I-1450	14.50	16	133	83	48
PMK16-HA5I-1475	14.75	16	133	83	48
PMK16-HA5I-1480	14.80	16	133	83	48
PMK16-HA5I-1500	15.00	16	133	83	48
PMK16-HA5I-1510	15.10	16	133	83	48
PMK16-HA5I-1550	15.50	16	133	83	48
PMK16-HA5I-1580	15.80	16	133	83	48
PMK16-HA5I-1600	16.00	16	133	83	48

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

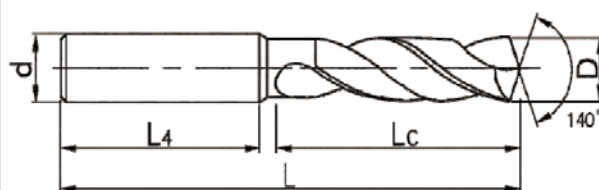
Drill & Tap

Drilling & Boring

Tool Holder

3D Twist Drill,for Stainless Steel

- For Machining M (Stainless Steel)materials
- External cooling
- Shank Type: DIN6535HA h6 (HB/HE Customer -Order)

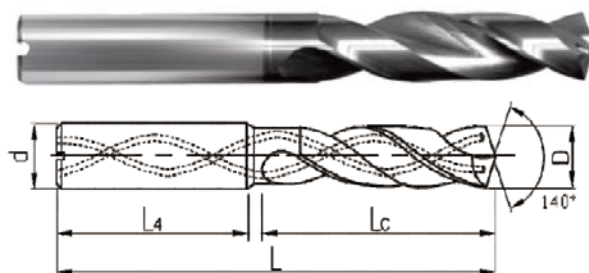


Model	D (m7)	d (h6)	L	Lc	L4
M20-HA3E -0300	3.00	6	62	20	36
M20-HA3E -0325	3.25	6	62	20	36
M20-HA3E -0330	3.30	6	62	20	36
M20-HA3E -0340	3.40	6	62	20	36
M20-HA3E -0350	3.50	6	62	20	36
M20-HA3E -0370	3.70	6	62	20	36
M20-HA3E -0400	4.00	6	66	24	36
M20-HA3E -0420	4.20	6	66	24	36
M20-HA3E -0430	4.30	6	66	24	36
M20-HA3E -0450	4.50	6	66	24	36
M20-HA3E -0465	4.65	6	66	24	36
M20-HA3E -0480	4.80	6	66	28	36
M20-HA3E -0500	5.00	6	66	28	36
M20-HA3E -0510	5.10	6	66	28	36
M20-HA3E -0520	5.20	6	68	28	36
M20-HA3E -0550	5.50	6	68	28	36
M20-HA3E -0555	5.55	6	68	28	38
M20-HA3E -0580	5.80	6	68	28	38
M20-HA3E -0600	6.00	6	68	28	38
M20-HA3E -0610	6.10	8	79	34	38
M20-HA3E -0620	6.20	8	79	34	38
M20-HA3E -0630	6.30	8	79	34	38
M20-HA3E -0650	6.50	8	79	34	38
M20-HA3E -0660	6.60	8	79	34	38
M20-HA3E -0680	6.80	8	79	34	38
M20-HA3E -0690	6.90	8	79	34	38
M20-HA3E -0700	7.00	8	79	34	38
M20-HA3E -0710	7.10	8	79	41	38
M20-HA3E -0740	7.40	8	79	41	38
M20-HA3E -0750	7.50	8	79	41	38
M20-HA3E -0780	7.80	8	79	41	38
M20-HA3E -0800	8.00	8	79	41	38
M20-HA3E -0810	8.10	10	89	47	40
M20-HA3E -0840	8.40	10	89	47	40
M20-HA3E -0850	8.50	10	89	47	40
M20-HA3E -0860	8.60	10	89	47	40
M20-HA3E -0870	8.70	10	89	47	40
M20-HA3E -0880	8.80	10	89	47	40
M20-HA3E -0900	9.00	10	89	47	40
M20-HA3E -0930	9.30	10	89	47	40
M20-HA3E -0950	9.50	10	89	47	40
M20-HA3E -0960	9.60	10	89	47	40
M20-HA3E -0980	9.80	10	89	47	40

Model	D (m7)	d (h6)	L	Lc	L4
M20-HA3E -1000	10.00	10	89	47	40
M20-HA3E -1025	10.25	12	102	55	45
M20-HA3E -1040	10.40	12	102	55	45
M20-HA3E -1050	10.50	12	102	55	45
M20-HA3E -1060	10.60	12	102	55	45
M20-HA3E -1080	10.80	12	102	55	45
M20-HA3E -1100	11.00	12	102	55	45
M20-HA3E -1120	11.20	12	102	55	45
M20-HA3E -1150	11.50	12	102	55	45
M20-HA3E -1180	11.80	12	102	55	45
M20-HA3E -1200	12.00	12	102	55	45
M20-HA3E -1225	12.25	14	107	60	45
M20-HA3E -1250	12.50	14	107	60	45
M20-HA3E -1270	12.70	14	107	60	45
M20-HA3E -1275	12.75	14	107	60	45
M20-HA3E -1280	12.80	14	107	60	45
M20-HA3E -1300	13.00	14	107	60	45
M20-HA3E -1310	13.10	14	107	60	45
M20-HA3E -1350	13.50	14	107	60	45
M20-HA3E -1380	13.80	14	107	60	45
M20-HA3E -1400	14.00	14	107	60	45
M20-HA3E -1425	14.25	16	115	65	48
M20-HA3E -1450	14.50	16	115	65	48
M20-HA3E -1475	14.75	16	115	65	48
M20-HA3E -1480	14.80	16	115	65	48
M20-HA3E -1500	15.00	16	115	65	48
M20-HA3E -1510	15.10	16	115	65	48
M20-HA3E -1550	15.50	16	115	65	48
M20-HA3E -1580	15.80	16	115	65	48
M20-HA3E -1600	16.00	16	115	65	48
M20-HA3E -1650	16.50	18	123	73	48
M20-HA3E -1675	16.75	18	123	73	48
M20-HA3E -1680	16.80	18	123	73	48
M20-HA3E -1700	17.00	18	123	73	48
M20-HA3E -1750	17.50	18	123	73	48
M20-HA3E -1780	17.80	18	123	73	48
M20-HA3E -1800	18.00	18	123	73	48
M20-HA3E -1850	18.50	20	131	79	50
M20-HA3E -1880	18.80	20	131	79	50
M20-HA3E -1900	19.00	20	131	79	50
M20-HA3E -1950	19.50	20	131	79	50
M20-HA3E -1980	19.80	20	131	79	50
M20-HA3E -2000	20.00	20	131	79	50

3D Twist Drill, for Stainless Steel

- For machining M materials
- Inner cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)



Model	D (m7)	d (h6)	L	LC	L4
M16-HA3I-0330	3.30	6	68	28	36
M16-HA3I-0340	3.40	6	68	28	36
M16-HA3I-0350	3.50	6	68	28	36
M16-HA3I-0370	3.70	6	68	28	36
M16-HA3I-0400	4.00	6	74	36	36
M16-HA3I-0420	4.20	6	74	36	36
M16-HA3I-0430	4.30	6	74	36	36
M16-HA3I-0450	4.50	6	74	36	36
M16-HA3I-0465	4.65	6	74	36	36
M16-HA3I-0480	4.80	6	82	44	36
M16-HA3I-0500	5.00	6	82	44	36
M16-HA3I-0510	5.10	6	82	44	36
M16-HA3I-0520	5.20	6	82	44	36
M16-HA3I-0550	5.50	6	82	44	36
M16-HA3I-0555	5.55	6	82	44	38
M16-HA3I-0580	5.80	6	82	44	38
M16-HA3I-0600	6.00	6	82	44	38
M16-HA3I-0610	6.10	8	91	53	38
M16-HA3I-0620	6.20	8	91	53	38
M16-HA3I-0630	6.30	8	91	53	38
M16-HA3I-0650	6.50	8	91	53	38
M16-HA3I-0660	6.60	8	91	53	38
M16-HA3I-0680	6.80	8	91	53	38
M16-HA3I-0690	6.90	8	91	53	38
M16-HA3I-0700	7.00	8	91	53	38
M16-HA3I-0710	7.10	8	91	53	38
M16-HA3I-0740	7.40	8	91	53	38
M16-HA3I-0750	7.50	8	91	53	38
M16-HA3I-0780	7.80	8	91	53	38
M16-HA3I-0800	8.00	8	91	53	38
M16-HA3I-0810	8.10	10	103	61	40
M16-HA3I-0840	8.40	10	103	61	40
M16-HA3I-0850	8.50	10	103	61	40
M16-HA3I-0860	8.60	10	103	61	40
M16-HA3I-0870	8.70	10	103	61	40

Model	D (m7)	d (h6)	L	LC	L4
M16-HA3I-0900	9.00	10	103	61	40
M16-HA3I-0930	9.30	10	103	61	40
M16-HA3I-0950	9.50	10	103	61	40
M16-HA3I-0960	9.60	10	103	61	40
M16-HA3I-0980	9.80	10	103	61	40
M16-HA3I-1000	10.00	10	103	61	40
M16-HA3I-1025	10.25	12	118	71	45
M16-HA3I-1040	10.40	12	118	71	45
M16-HA3I-1050	10.50	12	118	71	45
M16-HA3I-1060	10.60	12	118	71	45
M16-HA3I-1080	10.80	12	118	71	45
M16-HA3I-1100	11.00	12	118	71	45
M16-HA3I-1120	11.20	12	118	71	45
M16-HA3I-1150	11.50	12	118	71	45
M16-HA3I-1180	11.80	12	118	71	45
M16-HA3I-1200	12.00	12	118	71	45
M16-HA3I-1225	12.25	14	124	77	45
M16-HA3I-1250	12.50	14	124	77	45
M16-HA3I-1270	12.70	14	124	77	45
M16-HA3I-1275	12.75	14	124	77	45
M16-HA3I-1280	12.80	14	124	77	45
M16-HA3I-1300	13.00	14	124	77	45
M16-HA3I-1310	13.10	14	124	77	45
M16-HA3I-1350	13.50	14	124	77	45
M16-HA3I-1380	13.80	14	124	77	45
M16-HA3I-1400	14.00	14	124	77	45
M16-HA3I-1425	14.25	16	133	83	48
M16-HA3I-1450	14.50	16	133	83	48
M16-HA3I-1475	14.75	16	133	83	48
M16-HA3I-1480	14.80	16	133	83	48
M16-HA3I-1500	15.00	16	133	83	48
M16-HA3I-1510	15.10	16	133	83	48
M16-HA3I-1550	15.50	16	133	83	48
M16-HA3I-1580	15.80	16	133	83	48
M16-HA3I-1600	16.00	16	133	83	48

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

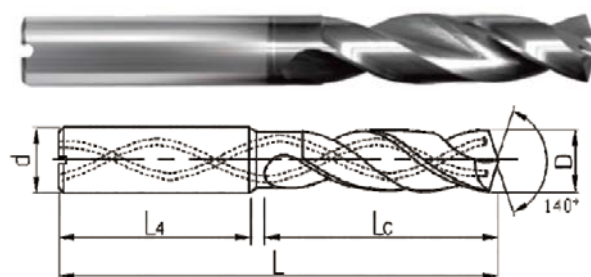
Drill & Tap

Drilling & Boring

Tool Holder

5D Twist Drill, for Stainless Steel

- For Machining M (Stainless Steel) materials
- Inner cooling
- Shank Type: DIN6535HA h6 (HB/HE Customer -Order)

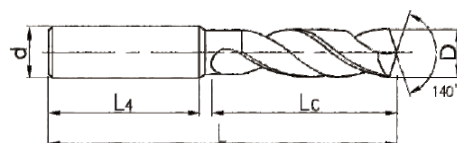


Model	D (m7)	d (h6)	L	LC	L4
M16HA5 I -0330	3.30	6	68	28	36
M16HA5 I -0340	3.40	6	68	28	36
M16HA5 I -0350	3.50	6	68	28	36
M16HA5 I -0370	3.70	6	68	28	36
M16HA5 I -0400	4.00	6	74	36	36
M16HA5 I -0420	4.20	6	74	36	36
M16HA5 I -0430	4.30	6	74	36	36
M16HA5 I -0450	4.50	6	74	36	36
M16HA5 I -0465	4.65	6	74	36	36
M16HA5 I -0480	4.80	6	82	44	36
M16HA5 I -0500	5.00	6	82	44	36
M16HA5 I -0510	5.10	6	82	44	36
M16HA5 I -0520	5.20	6	82	44	36
M16HA5 I -0550	5.50	6	82	44	36
M16HA5 I -0555	5.55	6	82	44	38
M16HA5 I -0580	5.80	6	82	44	38
M16HA5 I -0600	6.00	6	82	44	38
M16HA5 I -0610	6.10	8	91	53	38
M16HA5 I -0620	6.20	8	91	53	38
M16HA5 I -0630	6.30	8	91	53	38
M16HA5 I -0650	6.50	8	91	53	38
M16HA5 I -0660	6.60	8	91	53	38
M16HA5 I -0680	6.80	8	91	53	38
M16HA5 I -0690	6.90	8	91	53	38
M16HA5 I -0700	7.00	8	91	53	38
M16HA5 I -0710	7.10	8	91	53	38
M16HA5 I -0740	7.40	8	91	53	38
M16HA5 I -0750	7.50	8	91	53	38
M16HA5 I -0780	7.80	8	91	53	38
M16HA5 I -0800	8.00	8	91	53	38
M16HA5 I -0810	8.10	10	103	61	40
M16HA5 I -0840	8.40	10	103	61	40
M16HA5 I -0850	8.50	10	103	61	40
M16HA5 I -0860	8.60	10	103	61	40
M16HA5 I -0870	8.70	10	103	61	40

Model	D (m7)	d (h6)	L	LC	L4
M16HA5 I -0900	9.00	10	103	61	40
M16HA5 I -0930	9.30	10	103	61	40
M16HA5 I -0950	9.50	10	103	61	40
M16HA5 I -0960	9.60	10	103	61	40
M16HA5 I -0980	9.80	10	103	61	40
M16HA5 I -1000	10.00	10	103	61	40
M16HA5 I -1025	10.25	12	118	71	45
M16HA5 I -1040	10.40	12	118	71	45
M16HA5 I -1050	10.50	12	118	71	45
M16HA5 I -1060	10.60	12	118	71	45
M16HA5 I -1080	10.80	12	118	71	45
M16HA5 I -1100	11.00	12	118	71	45
M16HA5 I -1120	11.20	12	118	71	45
M16HA5 I -1150	11.50	12	118	71	45
M16HA5 I -1180	11.80	12	118	71	45
M16HA5 I -1200	12.00	12	118	71	45
M16HA5 I -1225	12.25	14	124	77	45
M16HA5 I -1250	12.50	14	124	77	45
M16HA5 I -1270	12.70	14	124	77	45
M16HA5 I -1275	12.75	14	124	77	45
M16HA5 I -1280	12.80	14	124	77	45
M16HA5 I -1300	13.00	14	124	77	45
M16HA5 I -1310	13.10	14	124	77	45
M16HA5 I -1350	13.50	14	124	77	45
M16HA5 I -1380	13.80	14	124	77	45
M16HA5 I -1400	14.00	14	124	77	45
M16HA5 I -1425	14.25	16	133	83	48
M16HA5 I -1450	14.50	16	133	83	48
M16HA5 I -1475	14.75	16	133	83	48
M16HA5 I -1480	14.80	16	133	83	48
M16HA5 I -1500	15.00	16	133	83	48
M16HA5 I -1510	15.10	16	133	83	48
M16HA5 I -1550	15.50	16	133	83	48
M16HA5 I -1580	15.80	16	133	83	48
M16HA5 I -1600	16.00	16	133	83	48

Twist Drill, 3 flute for Cast Iron & Aluminum

- For machining K & N materials
- External cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)



Model	D(m7)	d(h6)	L	LC
KN20-HAE-0300	3.0	3	50	22
KN20-HAE-0310	3.1	4	55	24
KN20-HAE-0320	3.2	4	55	24
KN20-HAE-0330	3.3	4	55	24
KN20-HAE-0340	3.4	4	55	27
KN20-HAE-0350	3.5	4	55	27
KN20-HAE-0360	3.6	4	55	27
KN20-HAE-0370	3.7	4	55	27
KN20-HAE-0380	3.8	4	60	30
KN20-HAE-0390	3.9	4	60	30
KN20-HAE-0400	4.0	4	60	30
KN20-HAE-0410	4.1	5	60	30
KN20-HAE-0420	4.2	5	60	30
KN20-HAE-0430	4.3	5	60	32
KN20-HAE-0440	4.4	5	60	32
KN20-HAE-0450	4.5	5	60	32
KN20-HAE-0460	4.6	5	60	32
KN20-HAE-0470	4.7	5	60	32
KN20-HAE-0480	4.8	5	65	35
KN20-HAE-0490	4.9	5	65	35
KN20-HAE-0500	5.0	5	65	35
KN20-HAE-0510	5.1	6	70	35
KN20-HAE-0520	5.2	6	70	35
KN20-HAE-0530	5.3	6	70	35
KN20-HAE-0540	5.4	6	75	39
KN20-HAE-0550	5.5	6	75	39
KN20-HAE-0560	5.6	6	75	39
KN20-HAE-0570	5.7	6	75	39
KN20-HAE-0580	5.8	6	75	39
KN20-HAE-0590	5.9	6	75	39
KN20-HAE-0600	6.0	6	80	42
KN20-HAE-0610	6.1	8	80	42
KN20-HAE-0620	6.2	8	80	42
KN20-HAE-0630	6.3	8	80	42
KN20-HAE-0640	6.4	8	80	42
KN20-HAE-0650	6.5	8	80	42

Model	D(m7)	d(h6)	L	LC
KN20-HAE-0660	6.6	8	80	42
KN20-HAE-0670	6.7	8	80	42
KN20-HAE-0680	6.8	8	80	45
KN20-HAE-0690	6.9	8	80	45
KN20-HAE-0700	7.0	8	80	45
KN20-HAE-0710	7.1	8	80	45
KN20-HAE-0720	7.2	8	80	45
KN20-HAE-0730	7.3	8	80	45
KN20-HAE-0740	7.4	8	80	45
KN20-HAE-0750	7.5	8	80	45
KN20-HAE-0760	7.6	8	80	45
KN20-HAE-0770	7.7	8	85	48
KN20-HAE-0780	7.8	8	85	48
KN20-HAE-0790	7.9	8	85	48
KN20-HAE-0800	8.0	8	85	48
KN20-HAE-0810	8.1	10	85	48
KN20-HAE-0820	8.2	10	85	48
KN20-HAE-0830	8.3	10	85	48
KN20-HAE-0840	8.4	10	85	48
KN20-HAE-0850	8.5	10	90	48
KN20-HAE-0860	8.6	10	90	52
KN20-HAE-0870	8.7	10	90	52
KN20-HAE-0880	8.8	10	90	52
KN20-HAE-0890	8.9	10	90	52
KN20-HAE-0900	9.0	10	90	52
KN20-HAE-0910	9.1	10	90	52
KN20-HAE-0920	9.2	10	90	52
KN20-HAE-0930	9.3	10	90	52
KN20-HAE-0940	9.4	10	90	52
KN20-HAE-0950	9.5	10	90	52
KN20-HAE-0960	9.6	10	95	55
KN20-HAE-0970	9.7	10	95	55
KN20-HAE-0980	9.8	10	95	55
KN20-HAE-0990	9.9	10	95	55
KN20-HAE-1000	10.0	10	95	55
KN20-HAE-1010	10.1	12	100	55

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

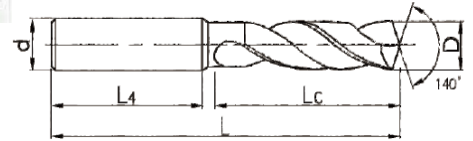
Drill & Tap

Drilling & Boring

Tool Holder

Twist Drill, 3 flute for Cast Iron & Aluminum

- For machining K & N materials
- External cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)

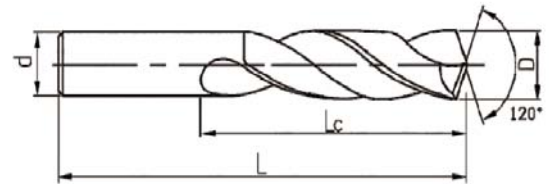


Model	D(m7)	d(h6)	L	LC
KN20-HAE-1020	10.2	12	100	55
KN20-HAE-1030	10.3	12	100	55
KN20-HAE-1040	10.4	12	100	55
KN20-HAE-1050	10.5	12	100	55
KN20-HAE-1060	10.6	12	100	55
KN20-HAE-1070	10.7	12	105	60
KN20-HAE-1080	10.8	12	105	60
KN20-HAE-1090	10.9	12	105	60
KN20-HAE-1100	11.0	12	105	60
KN20-HAE-1110	11.1	12	105	60
KN20-HAE-1120	11.2	12	105	60
KN20-HAE-1130	11.3	12	105	60
KN20-HAE-1140	11.4	12	105	60
KN20-HAE-1150	11.5	12	105	60
KN20-HAE-1160	11.6	12	105	60
KN20-HAE-1170	11.7	12	105	60
KN20-HAE-1180	11.8	12	105	60
KN20-HAE-1190	11.9	12	110	65
KN20-HAE-1200	12.0	12	110	65
KN20-HAE-1210	12.1	14	110	65
KN20-HAE-1220	12.2	14	110	65
KN20-HAE-1230	12.3	14	110	65
KN20-HAE-1240	12.4	14	110	65
KN20-HAE-1250	12.5	14	110	65
KN20-HAE-1260	12.6	14	110	65
KN20-HAE-1270	12.7	14	110	65
KN20-HAE-1280	12.8	14	110	65
KN20-HAE-1290	12.9	14	110	65
KN20-HAE-1300	13.0	14	110	65
KN20-HAE-1310	13.1	14	110	65
KN20-HAE-1320	13.2	14	110	65
KN20-HAE-1330	13.3	14	115	66
KN20-HAE-1340	13.4	14	115	66
KN20-HAE-1350	13.5	14	115	66

Model	D(m7)	d(h6)	L	LC
KN20-HAE-1360	13.6	14	115	55
KN20-HAE-1370	13.7	14	115	55
KN20-HAE-1380	13.8	14	115	55
KN20-HAE-1390	13.9	14	115	55
KN20-HAE-1400	14.0	14	115	55
KN20-HAE-1410	14.1	16	118	60
KN20-HAE-1420	14.2	16	118	60
KN20-HAE-1430	14.3	16	118	60
KN20-HAE-1440	14.4	16	118	60
KN20-HAE-1450	14.5	16	118	60
KN20-HAE-1460	14.6	16	118	60
KN20-HAE-1470	14.7	16	118	60
KN20-HAE-1480	14.8	16	118	60
KN20-HAE-1490	14.9	16	118	60
KN20-HAE-1500	15.0	16	118	60
KN20-HAE-1510	15.1	16	120	60
KN20-HAE-1520	15.2	16	120	60
KN20-HAE-1530	15.3	16	120	65
KN20-HAE-1540	15.4	16	120	65
KN20-HAE-1550	15.5	16	120	65
KN20-HAE-1560	15.6	16	120	65
KN20-HAE-1570	15.7	16	120	65
KN20-HAE-1580	15.8	16	120	65
KN20-HAE-1590	15.9	16	120	65
KN20-HAE-1600	16.0	16	120	65
KN20-HAE-1650	16.5	18	120	65
KN20-HAE-1700	17.0	18	120	65
KN20-HAE-1750	17.5	18	125	65
KN20-HAE-1800	18.0	18	125	65
KN20-HAE-1850	18.5	18	127	65
KN20-HAE-1900	19.0	20	127	65
KN20-HAE-1950	19.5	20	131	66
KN20-HAE-2000	20.0	20	131	66

Twist Drill, for Aluminum Alloy

- For machining **N** materials
- External cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)



Model	D (m7)	d (h6)	L	LC
AL20-HAE-0300	3.0	3	50	16
AL20-HAE-0350	3.5	4	50	20
AL20-HAE-0400	4.0	4	50	22
AL20-HAE-0450	4.5	6	65	24
AL20-HAE-0500	5.0	6	70	26
AL20-HAE-0550	5.5	6	70	28
AL20-HAE-0600	6.0	6	70	28
AL20-HAE-0650	6.5	8	75	31
AL20-HAE-0700	7.0	8	80	34
AL20-HAE-0750	7.5	8	80	34

Model	D (m7)	d (h6)	L	LC
AL20-HAE-0800	8.0	8	80	37
AL20-HAE-0850	8.5	10	90	37
AL20-HAE-0900	9.0	10	90	40
AL20-HAE-0950	9.5	10	90	40
AL20-HAE-1000	10	10	95	43
AL20-HAE-1100	11	12	100	47
AL20-HAE-1200	12	12	110	51
AL20-HAE-1300	13	14	110	51
AL20-HAE-1500	15	16	140	76
AL20-HAE-2000	20	20	160	94

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

Drill & Tap

Drilling & Boring

Tool Holder

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

Drill & Tap

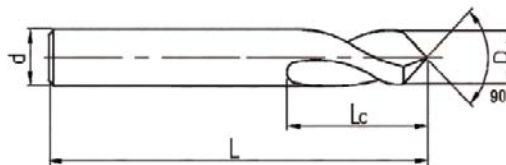
Drilling & Boring

Tool Holder

NC Center Drill, General Machining for PMK Materi:



- For machining PMKmaterials
- External cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)



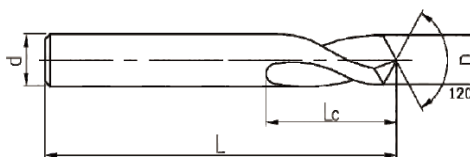
90° Tip Angle-

Model	D (m7)	d (h6)	L	LC
PMK-HA90-0500	5.0	5.0	62	10
PMK-HA90-0600	6.0	6.0	66	15
PMK-HA90-0800	8.0	8.0	79	17
PMK-HA90-1000	10.0	10.0	89	20
PMK-HA90-1200	12	12	102	25
PMK-HA90-1400	14	14	107	30
PMK-HA90-1600	16	16	115	35
PMK-HA90-2000	20	20	131	40

NC Center Drill, General Machining for PMK Materi



- For machining PMKmaterials
- External cooling
- Shank Type: DIN6535 h6 (HB&HE Customer-Order)



120° Tip Angle-

Model	D (m7)	d (h6)	L	LC
PMK-HA120-0500	5.0	5.0	62	10
PMK-HA120-0600	6.0	6.0	66	15
PMK-HA120-0800	8.0	8.0	79	17
PMK-HA120-1000	10.0	10.0	89	20
PMK-HA120-1200	12	12	102	25
PMK-HA120-1400	14	14	107	30
PMK-HA120-1600	16	16	115	35
PMK-HA120-2000	20	20	131	40

Taps



发动机缸体、缸盖
Engine cylinder, Engine cylinder head



曲轴
Crankshaft



连杆
Connecting rod



轴承轮毂 Wheel hub



变速箱 Gearbox



刹车系统 Brake system

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

Drill & Tap

Drilling & Boring

Tool Holder

Tap selection instruction

CT100

- Taps, with straight flutes
- Mainly used for cast iron
- Suitable for both blind and through holes
- Carbide Taps available

FT300

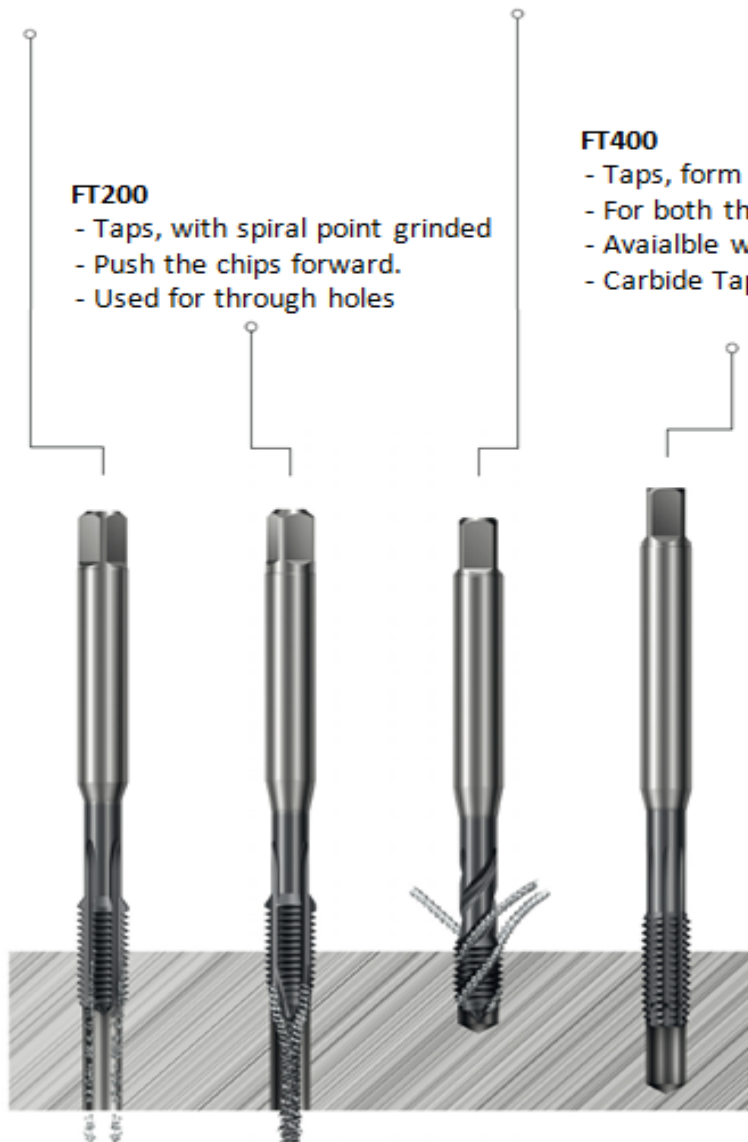
- Taps, with spiral flute grinded
- The spiral flute transport the chips out of the hole
- Best Option for blind holes
- Carbide Taps available

FT200

- Taps, with spiral point grinded
- Push the chips forward.
- Used for through holes

FT400

- Taps, form the thread in stead of cutting
- For both through and blind holes
- Available with and without oil grooves
- Carbide Taps available



Tap Index Table

Forming Taps		Application				Page NO.
FT400-A01	Metric 2 Pitch forming lead	P	M	N	S	
FT400-B01	Metric 4 Pitch forming lead	P	M	N	S	
FT400-C01	UN 2 Pitch forming lead	P	M	N	S	
FT400-D01	UN 4 Pitch forming lead	P	M	N	S	
FT400-E01	BSW	P	M	N	S	
FT400-G01	DIN371(UN & Metric)	P	M	N	S	
FT400-H01	DIN376(UN & Metric)	P	M	N	S	
FT400-K01	DIN374(UN & Metric)	P	M	N	S	
Cutting Taps-Spiral Fluted Taps		Application				Page NO.
CT300-A01	Metric	P	M	N	S	
CT300-B01	UN	P	M	N	S	
CT300-C01	Short Thread Metric Taps	P	M	N	S	
CT300-D01	Short Thread UN Taps	P	M	N	S	
CT300-E01	DIN 371	P	M	N	S	
CT300-G01	DIN 376	P	M	N	S	
CT300-H01	DIN 374	P	M	N	S	
Cutting Taps- with Sprial Point		Application				Page NO.
CT200-A01	Metric	P	M	N	S	
CT200-B01	UN	P	M	N	S	
CT200-C01	DIN 371	P	M	N	S	
CT200-D01	DIN 376	P	M	N	S	
CT200-E01	DIN 374	P	M	N	S	
Cutting Taps- HT		Application				Page NO.
Carbide-		Application				Page NO.
HM100-A01	Straight Flute (HT)	K	N	S	H	
HM400-A01	Forming Taps	P	M	N	S	
HM300-A01	Spiral Flute Taps	K	N	S	H	

Coating color and grade

Tin	Alsin-A	Ticn	Uncoated
G100	G200	G300	G000

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

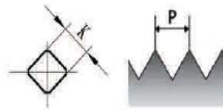
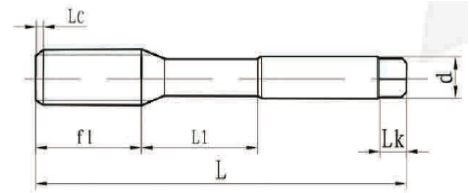
Drill & Tap

Drilling & Boring

Tool Holder

FT400, Forming Taps

- Metric Coarse
- General Cutting **P M N S** materials
- 2 pitch forming lead, for blind hole



Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Ti alloys			
							P				M				K				N				S			
							G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-A01 M1.7	M1.7*0.35	RH4	2P	35	8	3	*	*			*	*										*	*	*		
FT400-A02 M2	M2*0.4	RH4	2P	43	10	3	*	*			*	*										*	*	*		
FT400-A03 M2.3	M2.3*0.4	RH4	2P	43	10	3	*	*			*	*										*	*	*		
FT400-A04 M2.5	M2.5*0.45	RH5	2P	43	13	3	*	*			*	*										*	*	*		
FT400-A05 M2.6	M2.6*0.45	RH5	2P	43	13	3	*	*			*	*										*	*	*		
FT400-A06 M3	M3*0.5	RH7	2P	47	16	4	*	*			*	*										*	*	*		
FT400-A07 M3.5	M3.5*0.6	RH7	2P	47	16	4	*	*			*	*										*	*	*		
FT400-A08 M4	M4*0.7	RH7	2P	54	18	5	*	*			*	*										*	*	*		
FT400-A09 M5	M5*0.8	RH7	2P	62.5	20	5.5	*	*			*	*										*	*	*		
FT400-A10 M6	M6*1	RH7	2P	65.5	24	6	*	*			*	*										*	*	*		
FT400-A11 M7	M7*1	RH7	2P	70	13	6.2	*	*			*	*										*	*	*		
FT400-A12 M8	M8*1.25	RH7	2P	70	13	6.2	*	*			*	*										*	*	*		
FT400-A13 M8	M8*1	RH7	2P	70	13	6.2	*	*			*	*										*	*	*		
FT400-A14 M10	M10*1.5	RH7	2P	75	15	7	*	*			*	*										*	*	*		
FT400-A15 M10	M10*1.25	RH7	2P	75	13	7	*	*			*	*										*	*	*		
FT400-A16 M10	M10*1	RH7	2P	75	13	7	*	*			*	*										*	*	*		
FT400-A17 M12	M12*1.75	RH8	2P	82	17	8.5	*	*			*	*										*	*	*		
FT400-A18 M12	M12*1.5	RH7	2P	82	17	8.5	*	*			*	*										*	*	*		
FT400-A19 M12	M12*1.25	RH7	2P	82	13	8.5	*	*			*	*										*	*	*		
FT400-A20 M12	M12*1	RH7	2P	82	13	8.5	*	*			*	*										*	*	*		
FT400-A21 M14	M14*2	RH10	2P	88	20	10.5	*	*			*	*										*	*	*		
FT400-A22 M14	M14*1.5	RH8	2P	88	20	10.5	*	*			*	*										*	*	*		
FT400-A23 M14	M14*1.25	RH7	2P	88	20	10.5	*	*			*	*										*	*	*		
FT400-A24 M14	M14*1	RH7	2P	88	20	10.5	*	*			*	*										*	*	*		
FT400-A25 M16	M16*2	RH10	2P	95	20	12.5	*	*			*	*										*	*	*		
FT400-A26 M16	M16*1.5	RH8	2P	95	20	12.5	*	*			*	*										*	*	*		
FT400-A27 M16	M16*1.25	RH7	2P	95	20	12.5	*	*			*	*										*	*	*		
FT400-A28 M16	M16*1	RH7	2P	95	20	12.5	*	*			*	*										*	*	*		
							P				M				K				N				S			

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

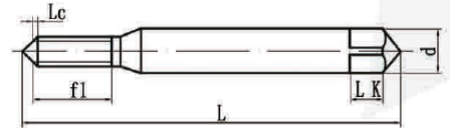
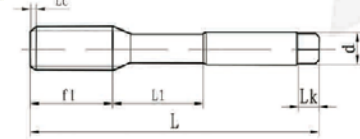
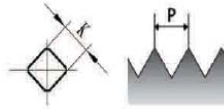
Drill & Tap

Drilling & Boring

Tool Holder

FT400, Forming Taps

- Metric Coarse
- General Cutting **PMNS** materials
- 4 pitch forming lead , for through hole
- Small sizes (<M7)have external center

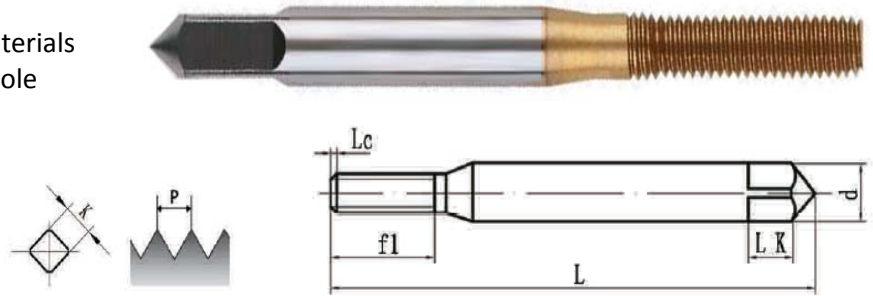


Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
							P				M				K				N				S			
							G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-B01 M1.7	M1.7*0.35	RH4	4P	37	8	3	*	*			*	*										*	*	*	*	
FT400-B02 M2	M2*0.4	RH4	4P	45	10	3	*	*			*	*										*	*	*	*	
FT400-B03 M2.3	M2.3*0.4	RH4	4P	45	10	3	*	*			*	*										*	*	*	*	
FT400-B04 M2.5	M2.5*0.45	RH5	4P	45	13	3	*	*			*	*										*	*	*	*	
FT400-B05 M2.6	M2.6*0.45	RH5	4P	45	13	3	*	*			*	*										*	*	*	*	
FT400-B06 M3	M3*0.5	RH7	4P	50	16	4	*	*			*	*										*	*	*	*	
FT400-B07 M3.5	M3.5*0.6	RH7	4P	50	16	4	*	*			*	*										*	*	*	*	
FT400-B08 M4	M4*0.7	RH7	4P	57	18	5	*	*			*	*										*	*	*	*	
FT400-B09 M5	M5*0.8	RH7	4P	66	20	5.5	*	*			*	*										*	*	*	*	
FT400-B10 M6	M6*1	RH7	4P	69	24	6	*	*			*	*										*	*	*	*	
FT400-B11 M7	M7*1	RH7	4P	70	13	6.2	*	*			*	*										*	*	*	*	
FT400-B12 M8	M8*1.25	RH7	4P	70	13	6.2	*	*			*	*										*	*	*	*	
FT400-B13 M8	M8*1	RH7	4P	70	13	6.2	*	*			*	*										*	*	*	*	
FT400-B14 M10	M10*1.5	RH7	4P	75	15	7	*	*			*	*										*	*	*	*	
FT400-B15 M10	M10*1.25	RH7	4P	75	13	7	*	*			*	*										*	*	*	*	
FT400-B16 M10	M10*1	RH7	4P	75	13	7	*	*			*	*										*	*	*	*	
FT400-B17 M12	M12*1.75	RH8	4P	82	17	8.5	*	*			*	*										*	*	*	*	
FT400-B18 M12	M12*1.5	RH7	4P	82	17	8.5	*	*			*	*										*	*	*	*	
FT400-B19 M12	M12*1.25	RH7	4P	82	13	8.5	*	*			*	*										*	*	*	*	
FT400-B20 M12	M12*1	RH7	4P	82	13	8.5	*	*			*	*										*	*	*	*	
FT400-B21 M14	M14*2	RH10	4P	88	20	10.5	*	*			*	*										*	*	*	*	
FT400-B22 M14	M14*1.5	RH8	4P	88	20	10.5	*	*			*	*										*	*	*	*	
FT400-B23 M14	M14*1.25	RH7	4P	88	20	10.5	*	*			*	*										*	*	*	*	
FT400-B24 M14	M14*1	RH7	4P	88	20	10.5	*	*			*	*										*	*	*	*	
FT400-B25 M16	M16*2	RH10	4P	95	20	12.5	*	*			*	*										*	*	*	*	
FT400-B26 M16	M16*1.5	RH8	4P	95	20	12.5	*	*			*	*										*	*	*	*	
FT400-B27 M16	M16*1.25	RH7	4P	95	20	12.5	*	*			*	*										*	*	*	*	
FT400-B28 M16	m16*1	RH7	4P	95	20	12.5	*	*			*	*										*	*	*	*	
							P				M				K				N				S			

Forming Taps- American UN

- UNC/UNF threads
- General Cutting **P M N S** materials
- 2 pitch forming lead , for Blind hole



Tool Material: HSS-CPs

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
							P				M				K				N				S			
							G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-C01- 0-80	#0-80UNF	RH7	2P	35	6.5	3	*	*			*	*								*	*	*	*			
FT400-C02- 1-64	#1-64UNC	RH7	2P	43	9	3	*	*			*	*								*	*	*	*			
FT400-C03- 2-56	#2-56UNC	RH7	2P	43	12	3	*	*			*	*								*	*	*	*			
FT400-C04- 3-48	#3-48UNC	RH7	2P	43	15	3	*	*			*	*								*	*	*	*			
FT400-C05- 4-40	#4-40UNC	RH7	2P	43	15	3	*	*			*	*								*	*	*	*			
FT400-C06- 5-40	#5-40UNC	RH7	2P	47	15	4	*	*			*	*								*	*	*	*			
FT400-C07- 6-32	#6-32UNC	RH7	2P	47	16	4	*	*			*	*								*	*	*	*			
FT400-C08- 8-32	#8-32UNC	RH7	2P	54	18	5	*	*			*	*								*	*	*	*			
FT400-C09- 10-24	#10-24UNC	RH7	2P	62.5	20	5.5	*	*			*	*								*	*	*	*			
FT400-C10- 10-32	#10-32UNF	RH7	2P	65.5	20	6	*	*			*	*								*	*	*	*			
FT400-C11- 12-24	#12-24UNC	RH7	2P	70	20	6.2	*	*			*	*								*	*	*	*			
FT400-C12- 12-28	#12-28UNF	RH7	2P	70	20	6.2	*	*			*	*								*	*	*	*			
FT400-C13- 1/4	1/4-20UNC	RH7	2P	62	24	6	*	*			*	*								*	*	*	*			
FT400-C14- 1/4	1/4-28UNF	RH7	2P	62	24	6	*	*			*	*								*	*	*	*			
FT400-C15- 5/16	5/16-18UNC	RH7	2P	70	15	6.1	*	*			*	*								*	*	*	*			
FT400-C16- 5/16	5/16-24UNF	RH7	2P	70	11	6.1	*	*			*	*								*	*	*	*			
FT400-C17- 3/8	3/8-16UNC	RH7	2P	75	16	7	*	*			*	*								*	*	*	*			
FT400-C18- 3/8	3/8-24UNF	RH7	2P	75	11	7	*	*			*	*								*	*	*	*			
FT400-C19- 7/16	7/16-14UNC	RH7	2P	80	20	8	*	*			*	*								*	*	*	*			
FT400-C20- 7/16	7/16-20UNF	RH7	2P	80	13	8	*	*			*	*								*	*	*	*			
FT400-C21- 1/2	1/2-13UNC	RH8	2P	85	21	9	*	*			*	*								*	*	*	*			
FT400-C22- 1/2	1/2-20UNF	RH7	2P	85	13	9	*	*			*	*								*	*	*	*			
FT400-C23- 9/16	9/16-12UNC	RH9	2P	90	21	10.5	*	*			*	*								*	*	*	*			
FT400-C24- 9/16	9/16-18UNF	RH8	2P	90	15	10.5	*	*			*	*								*	*	*	*			
FT400-C25- 5/8	5/8-11UNC	RH11	2P	95	23	12	*	*			*	*								*	*	*	*			
FT400-C26- 5/8	5/8-18UNF	RH8	2P	95	23	12	*	*			*	*								*	*	*	*			
							P				M				K				N				S			

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

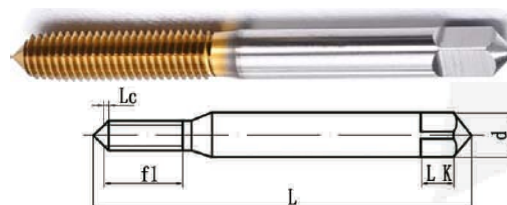
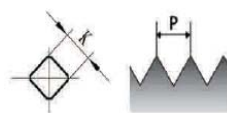
Drill & Tap

Drilling & Boring

Tool Holder

Forming Taps, American UN

- UNC/UNF threads
- General Cutting **PMNS** materials
- 4 pitch forming lead , for through hole
- Smaller sizes (<1/4) have external center

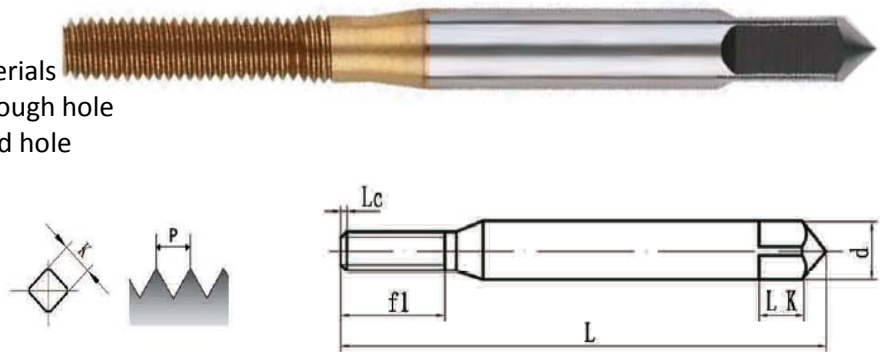


Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
							P				M				K				N				S			
							G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-D01- 0-80	#0-80UNF	RH4	4P	37	6.5	3	*	*			*	*							*	*	*	*				
FT400-D02- 1-64	#1-64UNC	RH4	4P	37	9	3	*	*			*	*							*	*	*	*				
FT400-D03- 2-56	#2-56UNC	RH4	4P	45	12	3	*	*			*	*							*	*	*	*				
FT400-D04- 3-48	#3-48UNC	RH5	4P	45	15	3	*	*			*	*							*	*	*	*				
FT400-D05- 4-40	#4-40UNC	RH5	4P	45	15	3	*	*			*	*							*	*	*	*				
FT400-D06- 5-40	#5-40UNC	RH5	4P	50	15	4	*	*			*	*							*	*	*	*				
FT400-D07- 6-32	#6-32UNC	RH7	4P	50	16	4	*	*			*	*							*	*	*	*				
FT400-D08- 8-32	#8-32UNC	RH7	4P	57	18	5	*	*			*	*							*	*	*	*				
FT400-D09- 10-24	#10-24UNC	RH7	4P	66	20	5.5	*	*			*	*							*	*	*	*				
FT400-D10- 10-32	#10-32UNF	RH7	4P	69	20	6	*	*			*	*							*	*	*	*				
FT400-D11- 12-24	#12-24UNC	RH7	4P	70	20	6.2	*	*			*	*							*	*	*	*				
FT400-D12- 12-28	#12-28UNF	RH7	4P	70	20	6.2	*	*			*	*							*	*	*	*				
FT400-D13- 1/4	1/4-20UNC	RH7	4P	62	24	6	*	*			*	*							*	*	*	*				
FT400-D14- 1/4	1/4-28UNF	RH7	4P	62	24	6	*	*			*	*							*	*	*	*				
FT400-D15- 5/16	5/16-18UNC	RH7	4P	70	15	6.1	*	*			*	*							*	*	*	*				
FT400-D16- 5/16	5/16-24UNF	RH7	4P	70	11	6.1	*	*			*	*							*	*	*	*				
FT400-D17- 3/8	3/8-16UNC	RH8	4P	75	16	7	*	*			*	*							*	*	*	*				
FT400-D18- 3/8	3/8-24UNF	RH7	4P	75	11	7	*	*			*	*							*	*	*	*				
FT400-D19- 7/16	7/16-14UNC	RH7	4P	80	20	8	*	*			*	*							*	*	*	*				
FT400-D20- 7/16	7/16-20UNF	RH7	4P	80	13	8	*	*			*	*							*	*	*	*				
FT400-D21- 1/2	1/2-13UNC	RH10	4P	85	21	9	*	*			*	*							*	*	*	*				
FT400-D22- 1/2	1/2-20UNF	RH8	4P	85	13	9	*	*			*	*							*	*	*	*				
FT400-D23- 9/16	9/16-12UNC	RH7	4P	90	21	11	*	*			*	*							*	*	*	*				
FT400-D24- 9/16	9/16-18UNF	RH7	4P	90	15	11	*	*			*	*							*	*	*	*				
FT400-D25- 5/8	5/8-11UNC	RH10	4p	95	23	12	*	*			*	*							*	*	*	*				
FT400-D26- 5/8	5/8-18UNF	RH8	4P	95	23	12	*	*			*	*							*	*	*	*				
							P				M				K				N				S			

Forming Taps- Whitworth BSW

- BSW threads
- General Cutting PMNS materials
- 4 pitch forming lead , for through hole
- 2 Pitch forming lead, for blind hole



Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
							P				M				K				N				S			
							G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-E01 W1/8	W1/8-40	RH6	4P	50	15	4	*	*			*	*										*	*	*		
FT400-E02 W1/8	W1/8-40	RH6	2P	48	15	4	*	*			*	*										*	*	*		
FT400-E03 W5/32	W5/32-32	RH7	4P	57	18	5	*	*			*	*										*	*	*		
FT400-E04 W5/32	W5/32-32	RH7	2P	54	18	5	*	*			*	*										*	*	*		
FT400-E05 W3/16	W3/16-24	RH7	4P	66	18	5.5	*	*			*	*										*	*	*		
FT400-E06 W3/16	W3/16-24	RH7	2P	63	18	5.5	*	*			*	*										*	*	*		
FT400-E07 W1/2	W1/2-20	RH7	4P	62	24	6	*	*			*	*										*	*	*		
FT400-E08 W1/2	W1/2-20	RH7	2P	62	24	6	*	*			*	*										*	*	*		
FT400-E09 W5/16	W5/16-18	RH7	4P	70	15	6.1	*	*			*	*										*	*	*		
FT400-E10 W5/16	W5/16-18	RH7	2P	70	15	6.1	*	*			*	*										*	*	*		
FT400-E11 W3/8	W3/8-16	RH7	4P	75	16	7	*	*			*	*										*	*	*		
FT400-E12 W3/8	W3/8-16	RH7	2P	75	16	7	*	*			*	*										*	*	*		
FT400-E13 W1/2	W1/2-12	RH8	4P	85	21	9	*	*			*	*										*	*	*		
FT400-E14 W1/2	W1/2-12	RH8	2P	85	21	9	*	*			*	*										*	*	*		
							P				M				K				N				S			

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

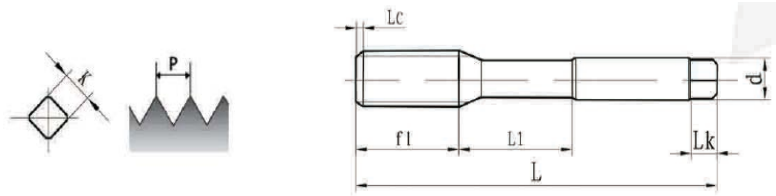
Drill & Tap

Drilling & Boring

Tool Holder

Forming Taps, DIN371

- Din371
- General Cutting PMNS materials
- 4 pitch forming lead , for through hole
- 2 Pitch forming lead, for blind hole

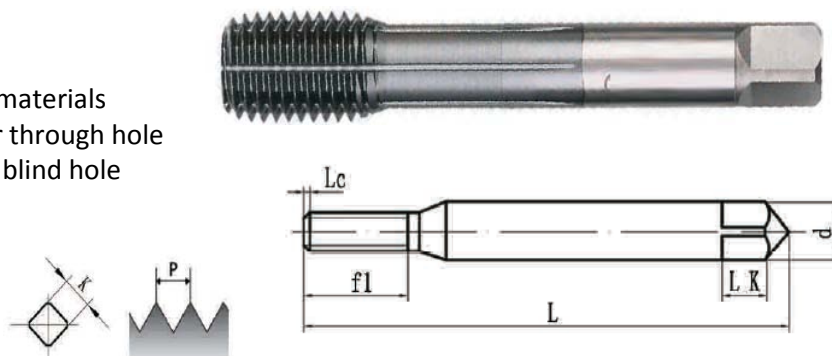


Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	k	lk	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-G01- M3	M3*0.5	RH7	4P	56	10	8	3.5	2.4	2.7	6	*	*			*	*									*	*	*	*		
FT400-G02- M3	M3*0.5	RH7	2P	56	10	8	3.5	2.4	2.7	6	*	*			*	*									*	*	*	*		
FT400-G03- M3.5	M3.5*0.6	RH7	4P	56	11	9	4	2.8	3	6	*	*			*	*									*	*	*	*		
FT400-G04- M3.5	M3.5*0.6	RH7	2P	56	11	9	4	2.8	3	6	*	*			*	*									*	*	*	*		
FT400-G05- M4	M4*0.7	RH7	4P	63	12	9	4.5	3.2	3.4	6	*	*			*	*									*	*	*	*		
FT400-G06- M4	M4*0.7	RH7	2P	63	12	9	4.5	3.2	3.4	6	*	*			*	*									*	*	*	*		
FT400-G07- M5	M5*0.8	RH7	4P	70	14	11	6	4.1	4.9	8	*	*			*	*									*	*	*	*		
FT400-G08- M5	M5*0.8	RH7	2P	70	14	11	6	4.1	4.9	8	*	*			*	*									*	*	*	*		
FT400-G09- M6	M6*1	RH7	4P	80	15	15	6	4.8	4.9	8	*	*			*	*									*	*	*	*		
FT400-G10- M6	M6*1	RH7	2P	80	15	15	6	4.8	4.9	8	*	*			*	*									*	*	*	*		
FT400-G11- M7	M7*1	RH7	4P	80	15	15	7	5.8	5.5	8	*	*			*	*									*	*	*	*		
FT400-G12- M7	M7*1	RH7	2P	80	15	15	7	5.8	5.5	8	*	*			*	*									*	*	*	*		
FT400-G13- M8	M8*1.25	RH7	4P	90	18	17	8	6.5	6.2	9	*	*			*	*									*	*	*	*		
FT400-G14- M8	M8*1.25	RH7	2P	90	18	17	8	6.5	6.2	9	*	*			*	*									*	*	*	*		
FT400-G15- M10	M10*1.5	RH7	4P	100	22	17	10	8.3	8	11	*	*			*	*									*	*	*	*		
FT400-G16- M10	M10*1.5	RH7	2P	100	22	17	10	8.3	8	11	*	*			*	*									*	*	*	*		
FT400-G17- 6-32	#6-32UNC	RH7	4P	56	12	8	4	2.6	3	6	*	*			*	*									*	*	*	*		
FT400-G18- 6-32	#6-32UNC	RH7	2P	56	12	8	4	2.6	3	6	*	*			*	*									*	*	*	*		
FT400-G19- 8-32	#8-32UNC	RH7	4P	63	12	9	4.5	3.2	3.4	6	*	*			*	*									*	*	*	*		
FT400-G20- 8-32	#8-32UNC	RH7	2P	63	12	9	4.5	3.2	3.4	6	*	*			*	*									*	*	*	*		
FT400-G21- 10-24	#10-24UNC	RH7	4P	70	16	9	6	3.4	4.9	8	*	*			*	*									*	*	*	*		
FT400-G22- 10-24	#10-24UNC	RH7	2P	70	16	9	6	3.4	4.9	8	*	*			*	*									*	*	*	*		
FT400-G23- 12-24	#12-24UNC	RH7	4P	80	16	9	6	4.2	4.9	8	*	*			*	*									*	*	*	*		
FT400-G24- 12-24	#12-24UNC	RH7	2P	80	16	9	6	4.2	4.9	8	*	*			*	*									*	*	*	*		
FT400-G25- 1/4	1/4-20UNC	RH7	4P	80	19	11	7	4.8	5.5	8	*	*			*	*									*	*	*	*		
FT400-G26- 1/4	1/4-20UNC	RH7	2P	80	19	11	7	4.8	5.5	8	*	*			*	*									*	*	*	*		
FT400-G27- 5/16	5/16-18UNC	RH7	4P	90	20	15	8	6.3	6.2	8	*	*			*	*									*	*	*	*		
FT400-G28- 5/16	5/16-18UNC	RH7	2P	90	20	15	8	6.3	6.2	8	*	*			*	*									*	*	*	*		
FT400-G29- 3/8	3/8-16UNC	RH7	4P	100	22	17	10	7.7	8	11	*	*			*	*									*	*	*	*		
FT400-G30- 3/8	3/8-16UNC	RH7	4P	100	22	17	10	7.7	8	11	*	*			*	*									*	*	*	*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	k	lk	P				M				K				N				S			

Forming Taps- DIN376

- Din376
- General Cutting PMNS materials
- 4 pitch forming lead , for through hole
- 2 Pitch forming lead, for blind hole



Tool Material: HSS-CPS

Ordering Code	Thread Size Tap Limit Lc L f1 L1 d k LK										Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-H01- M12	M12*1.75	RH8	4P	110	26	23	9	7	10	*	*			*	*									*	*	*	*			
FT400-H02- M12	M12*1.75	RH8	2P	110	26	23	9	7	10	*	*			*	*									*	*	*	*			
FT400-H03- M14	M14*2	RH10	4P	110	30	23	11	9	12	*	*			*	*									*	*	*	*			
FT400-H04- M14	M14*2	RH10	2P	110	30	23	11	9	12	*	*			*	*									*	*	*	*			
FT400-H05- M16	M16*2	RH10	4P	110	30	24	12	9	12	*	*			*	*									*	*	*	*			
FT400-H06- M16	M16*2	RH10	2P	110	30	24	12	9	12	*	*			*	*									*	*	*	*			
FT400-H07- 7/16	7/16-14UNC	RH7	4P	100	27	15	8	6.2	9	*	*			*	*									*	*	*	*			
FT400-H08- 7/16	7/16-14UNC	RH7	2P	100	27	15	8	6.2	9	*	*			*	*									*	*	*	*			
FT400-H09- 1/2	1/2-13UNC	RH8	4P	110	28	21	9	7	10	*	*			*	*									*	*	*	*			
FT400-H10- 1/2	1/2-13UNC	RH8	2P	110	28	21	9	7	10	*	*			*	*									*	*	*	*			
FT400-H11- 9/16	9/16-12UNC	RH9	4P	110	30	23	11	9	12	*	*			*	*									*	*	*	*			
FT400-H12- 9/16	9/16-12UNC	RH9	2P	110	30	23	11	9	12	*	*			*	*									*	*	*	*			
FT400-H13- 5/8	5/8-11UNC	RH11	4P	110	32	21	12	9	12	*	*			*	*									*	*	*	*			
FT400-H14- 5/8	5/8-11UNC	RH11	2P	110	32	21	12	9	12	*	*			*	*									*	*	*	*			
											P				M				K				N				S			



Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

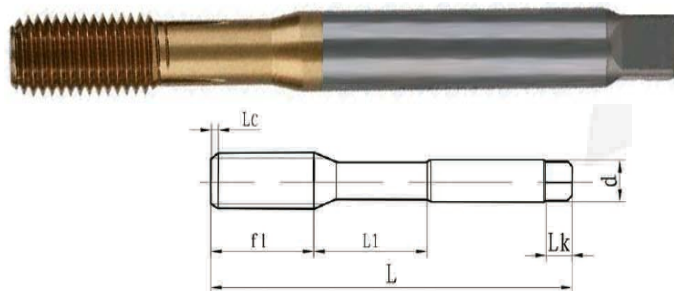
Drill & Tap

Drilling & Boring

Tool Holder

Forming Taps, DIN374

- Din374
- General Cutting P M N S materials
- 4 pitch forming lead , for through hole
- 2 Pitch forming lead, for blind hole

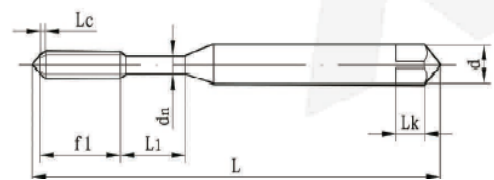
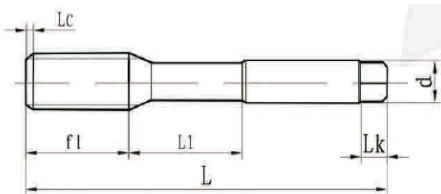
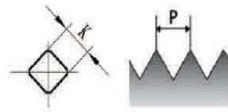


Tool Material: HSS-CPS

Ordering Code	Thread Size Tap Limit Lc L f1 L1 d k LK									Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, TiAlloys			
										P				M				K				N				S			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
FT400-K01- M8	M8*1	RH7	4P	90	15	20	8	6.2	9	*	*			*	*										*	*	*	*	
FT400-K02- M8	M8*1	RH7	2P	90	15	20	8	6.2	9	*	*			*	*										*	*	*	*	
FT400-K03- M10	M10*1.25	RH7	4P	100	17	22	7	5.5	8	*	*			*	*										*	*	*	*	
FT400-K04- M10	M10*1.25	RH7	2P	100	17	22	7	5.5	8	*	*			*	*										*	*	*	*	
FT400-K05- M12	M12*1	RH7	4P	110	20	30	9	7	10	*	*			*	*										*	*	*	*	
FT400-K06- M12	M12*1	RH7	2P	110	20	30	9	7	10	*	*			*	*										*	*	*	*	
FT400-K07- M12	M12*1.25	RH7	4P	110	20	30	9	7	10	*	*			*	*										*	*	*	*	
FT400-K08- M12	M12*1.25	RH7	2P	110	20	30	9	7	10	*	*			*	*										*	*	*	*	
FT400-K09- M12	M12*1.5	RH7	4P	110	20	30	9	7	10	*	*			*	*										*	*	*	*	
FT400-K10- M12	M12*1.5	RH7	2P	110	20	30	9	7	10	*	*			*	*										*	*	*	*	
FT400-K11- M14	M14*1	RH7	4P	110	20	33	11	9	12	*	*			*	*										*	*	*	*	
FT400-K12- M14	M14*1	RH7	2P	110	20	33	11	9	12	*	*			*	*										*	*	*	*	
FT400-K13- M14	M14*1.25	RH7	4P	110	20	33	11	9	12	*	*			*	*										*	*	*	*	
FT400-K14- M14	M14*1.25	RH7	2P	110	20	33	11	9	12	*	*			*	*										*	*	*	*	
FT400-K15- M14	M14*1.5	RH7	4P	110	20	33	11	9	12	*	*			*	*										*	*	*	*	
FT400-K16- M14	M14*1.5	RH8	2P	110	20	33	11	9	12	*	*			*	*										*	*	*	*	
FT400-K17- M16	M16*1	RH8	4P	110	22	32	11	9	12	*	*			*	*										*	*	*	*	
FT400-K18- M16	M16*1	RH7	2P	110	22	32	12	9	12	*	*			*	*										*	*	*	*	
FT400-K19- M16	M16*1.25	RH7	4P	110	22	32	12	9	12	*	*			*	*										*	*	*	*	
FT400-K20- M16	M16*1.25	RH7	2P	110	22	32	12	9	12	*	*			*	*										*	*	*	*	
FT400-K21- M16	M16*1.5	RH7	4P	110	22	32	12	9	12	*	*			*	*										*	*	*	*	
FT400-K22- M16	M16*1.5	RH8	2P	110	22	32	12	9	12	*	*			*	*										*	*	*	*	
FT400-K23- 5/16	5/16-24UNF	RH8	4P	90	16	19	6	4.9	8	*	*			*	*										*	*	*	*	
FT400-K24- 5/16	5/16-24UNF	RH7	2P	90	16	19	6	4.9	8	*	*			*	*										*	*	*	*	
FT400-K25- 3/8	3/8-24UNF	RH7	4P	90	16	19	7	5.5	8	*	*			*	*										*	*	*	*	
FT400-K26- 3/8	3/8-24UNF	RH7	2P	90	16	19	7	5.5	8	*	*			*	*										*	*	*	*	
FT400-K27- 7/16	7/16-20UNF	RH7	4P	100	20	24	8	6.2	9	*	*			*	*										*	*	*	*	
FT400-K28- 7/16	7/16-20UNF	RH7	2P	100	20	24	8	6.2	9	*	*			*	*										*	*	*	*	
FT400-K29- 1/2	1/2-20UNF	RH7	4P	100	20	24	9	7	10	*	*			*	*										*	*	*	*	
FT400-K30- 1/2	1/2-20UNF	RH7	2P	100	20	24	9	7	10	*	*			*	*										*	*	*	*	
FT400-K31- 9/16	9/16-24UNF	RH7	4P	100	24	20	11	9	12	*	*			*	*										*	*	*	*	
FT400-K32- 9/16	9/16-24UNF	RH8	2P	100	24	20	11	9	12	*	*			*	*										*	*	*	*	
FT400-K33- 5/8	5/8-18UNF	RH8	4P	100	24	20	12	9	12	*	*			*	*										*	*	*	*	
FT400-K34- 5/8	5/8-18UNF	RH8	2P	100	24	20	12	9	12	*	*			*	*										*	*	*	*	
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	k	LK	P				M				K				N				S			

Spiral Fluted Taps, External Center

- General Cutting PMNS materials
- Small Sizes have External Center



Tool Material: HSS-CPS

Ordering Code	Thread Size Tap Limit Lc L f1 L1 d dn Flutes									Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
										P				M				K				N				S			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT300-A01 M1	M1*0.25	P1	1.5P	37	4.5	-	3	-	2	*	*			*	*									*	*	*	*		
CT300-A02 M1.2	M1.2*0.25	P1	1.5P	37	5.5	-	3	-	2	*	*			*	*									*	*	*	*		
CT300-A03 M1.4	M1.4*0.3	P1	1.5P	37	6.5	-	3	-	2	*	*			*	*									*	*	*	*		
CT300-A04 M1.6	M1.6*0.35	P2	1.5P	37	8	-	3	-	2	*	*			*	*									*	*	*	*		
CT300-A05 M2	M2*0.4	P2	2.5P	45	11	-	3	-	2	*	*			*	*									*	*	*	*		
CT300-A06 M2	M2.5*0.45	P2	2.5P	45	12	-	3	-	2	*	*			*	*									*	*	*	*		
CT300-A07 M3	M3*0.5	P2	2.5P	50	12	7	4	2.3	3	*	*			*	*									*	*	*	*		
CT300-A08 M3.5	M3.5*0.6	P2	2.5P	50	13	7	4	2.6	3	*	*			*	*									*	*	*	*		
CT300-A09 M4	M4*0.7	P2	2.5P	57	14	7	5	3	3	*	*			*	*									*	*	*	*		
CT300-A10 M5	M5*0.8	P2	2.5P	66	16	9	5.5	4	3	*	*			*	*									*	*	*	*		
CT300-A11 M6	M6*1	P3	2.5P	69	19.5	9.5	6	4.6	3	*	*			*	*									*	*	*	*		
CT300-A12 M7	M7*1	P3	2.5P	78	13	10	6.2	5.6	3	*	*			*	*									*	*	*	*		
CT300-A13 M8	M8*1.25	P4	2.5P	70	22	15	6.2	-	3	*	*			*	*									*	*	*	*		
CT300-A14 M8	M8*1	P4	2.5P	70	22	15	6.2	-	3	*	*			*	*									*	*	*	*		
CT300-A15 M10	M10*1.5	P4	2.5P	75	24	19	7	-	3	*	*			*	*									*	*	*	*		
CT300-A16 M10	M10*1.25	P4	2.5P	75	24	19	7	-	3	*	*			*	*									*	*	*	*		
CT300-A17 M10	M10*1	P4	2.5P	75	24	19	7	-	3	*	*			*	*									*	*	*	*		
CT300-A18 M12	M12*1.75	P4	2.5P	82	29	17	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-A19 M12	M12*1.5	P4	2.5P	82	29	17	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-A20 M12	M12*1.25	P4	2.5P	82	29	17	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-A21 M12	M12*1	P3	2.5P	82	29	17	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-A22 M14	M14*2	P5	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-A23 M14	M14*1.5	P4	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-A24 M14	M14*1.25	P4	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-A25 M14	M14*1	P3	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-A26 M16	M16*2	P5	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
CT300-A27 M16	M16*1.5	P4	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
CT300-A28 M16	M16*1.25	P4	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
CT300-A29 M16	M16*1	P3	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	dn	P				M				K				N				S			

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

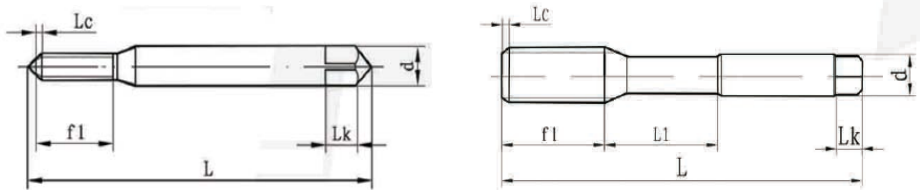
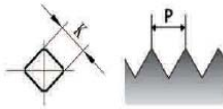
Drill & Tap

Drilling & Boring

Tool Holder

Sprial Fluted Taps- UN

- General Cutting PMNS materials
- Small Sizes have External Center
- UN Fine Thread, and Coarse Thread

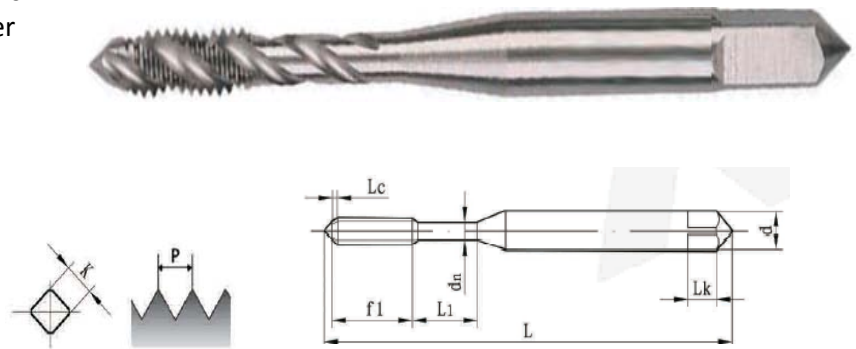


Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
										P				M				K				N				S			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT300-B01- 0-80	#0-80UNF	P1	1.5P	37	10	-	3	-	2	*	*			*	*							*		*	*	*			
CT300-B02- 1-64	#1-64UNC	P1	1.5P	37	11	-	3	-	2	*	*			*	*							*		*	*	*			
CT300-B03- 2-56	#2-56UNC	P1	2.5P	45	12	-	3	-	2	*	*			*	*							*		*	*	*			
CT300-B04- 3-48	#3-48UNC	P1	2.5P	45	14	-	3	-	2	*	*			*	*							*		*	*	*			
CT300-B05- 4-40	#4-40UNC	P2	2.5P	45	10	6	3	-	3	*	*			*	*							*		*	*	*			
CT300-B06- 5-50	#5-40UNC	P2	2.5P	50	12	7	4	-	3	*	*			*	*							*		*	*	*			
CT300-B07- 6-32	#6-32UNC	P2	2.5P	50	13	7	4	2.3	3	*	*			*	*							*		*	*	*			
CT300-B08- 8-32	#8-32UNC	P2	2.5P	57	13.5	8	5	2.6	3	*	*			*	*							*		*	*	*			
CT300-B09- 10-24	#10-24UNC	P2	2.5P	66	16.5	9.5	5.5	3	3	*	*			*	*							*		*	*	*			
CT300-B10- 12-24	#12-24UNC	P2	2.5P	66	16.5	9.5	5.5	4	3	*	*			*	*							*		*	*	*			
CT300-B11- 1/4	1/4-20UNC	P3	2.5P	69	19.5	9.5	6	4.6	3	*	*			*	*							*		*	*	*			
CT300-B12- 5/16	5/16-18UNC	P3	2.5P	70	23	15	6.1	5.6	3	*	*			*	*							*		*	*	*			
CT300-B13- 5/16	5/16-24UNF	P3	2.5P	70	23	15	6.1	-	3	*	*			*	*							*		*	*	*			
CT300-B14- 3/8	3/8-16UNC	P3	2.5P	75	24	19	7	-	3	*	*			*	*							*		*	*	*			
CT300-B15- 3/8	3/8-24UNF	P3	2.5P	75	24	19	7	-	3	*	*			*	*							*		*	*	*			
CT300-B16- 7/16	7/16-14UNC	P4	2.5P	80	29	16	8	-	3	*	*			*	*							*		*	*	*			
CT300-B17- 7/16	7/16-20UNF	P3	2.5P	80	29	16	8	-	3	*	*			*	*							*		*	*	*			
CT300-B18- 1/2	1/2-13UNC	P4	2.5P	85	30	18	9	-	3	*	*			*	*							*		*	*	*			
CT300-B19- 1/2	1/2-20UNF	P3	2.5P	85	30	18	9	-	3	*	*			*	*							*		*	*	*			
CT300-B20- 9/16	9/16-12UNC	P4	2.5P	90	30	20	10.5	-	3	*	*			*	*							*		*	*	*			
CT300-B21- 9/16	9/16-18UNF	P3	2.5P	90	30	20	10.5	-	3	*	*			*	*							*		*	*	*			
CT300-B22- 5/8	5/8-11UNC	P4	2.5P	95	23	25	12	-	3	*	*			*	*							*		*	*	*			
CT300-B23- 5/8	5/8-18UNF	P3	2.5P	95	23	25	12	-	3	*	*			*	*							*		*	*	*			
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	dn	P				M				K				N				S			

Short Thread Spiral Fluted Taps

- General Cutting PMNS materials
- Small Sizes have External Center
- Metric

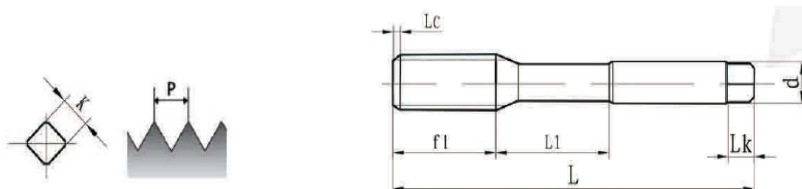


Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
										P				M				K				N				S			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT300-C01- M3	M3*0.5	P2	2.5P	50	5	13	4	2.3	3	*	*			*	*									*	*	*	*		
CT300-C02- M3.5	M3.5*0.6	P2	2.5P	50	6	13	4	2.6	3	*	*			*	*									*	*	*	*		
CT300-C03- M4	M4*0.7	P2	2.5P	57	9	11	5	3	3	*	*			*	*									*	*	*	*		
CT300-C04- M5	M5*0.8	P3	2.5P	66	8	17	5.5	4	3	*	*			*	*									*	*	*	*		
CT300-C05- M6	M6*1	P3	2.5P	69	12.0	12	6	4.6	3	*	*			*	*									*	*	*	*		
CT300-C06- M7	M7*1	P3	2.5P	78	13	10	6.2	5.6	3	*	*			*	*									*	*	*	*		
CT300-C07- M8	M8*1.25	P3	2.5P	70	13	23	6.2	-	3	*	*			*	*									*	*	*	*		
CT300-C08- M8	M8*1	P3	2.5P	70	13	23	6.2	-	3	*	*			*	*									*	*	*	*		
CT300-C09- M10	M10*1.5	P4	2.5P	75	15	28	7	-	3	*	*			*	*									*	*	*	*		
CT300-C10- M10	M10*1.25	P3	2.5P	75	13	30	7	-	3	*	*			*	*									*	*	*	*		
CT300-C11- M10	M10*1	P3	2.5P	75	13	30	7	-	3	*	*			*	*									*	*	*	*		
CT300-C12- M12	M12*1.75	P4	2.5P	82	17	25	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-C13- M12	M12*1.5	P4	2.5P	82	17	25	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-C14- M12	M12*1.25	P4	2.5P	82	13	29	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-C15- M12	M12*1	P3	2.5P	82	13	29	8.5	-	3	*	*			*	*									*	*	*	*		
CT300-C16- M14	M14*2	P5	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-C17- M14	M14*1.5	P4	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-C18- M14	M14*1.25	P4	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-C19- M14	M14*1	P3	2.5P	88	20	31	10.5	-	3	*	*			*	*									*	*	*	*		
CT300-C20- M16	M16*2	P5	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
CT300-C21- M16	M16*1.5	P4	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
CT300-C22- M16	M16*1.25	P4	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
CT300-C23- M16	M16*1	P3	2.5P	95	20	32	12.5	-	3	*	*			*	*									*	*	*	*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	dn	P				M				K				N				S			

Short Thread Sprial Fluted Taps,

- General Cutting PMNS materials
- Small Sizes have External Center
- UN

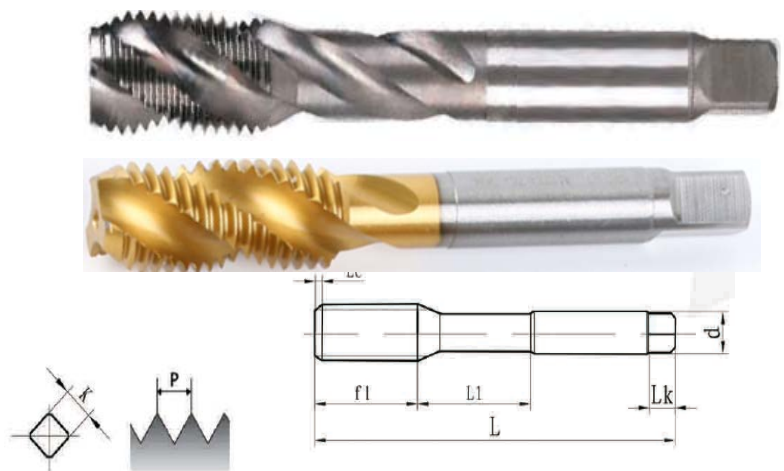


Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	Flutes	Steels P				Stainless Steels M				Cast Iron K				Non-Ferrous Metal N				Alloys, Tialloys S			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT300-D01- 4-40	#4-40UNC	P2	2.5P	45	6	10	3	-	3	*	*			*	*								*	*	*	*			
CT300-D02- 5-50	#5-40UNC	P2	2.5P	50	7	12	4	-	3	*	*			*	*								*	*	*	*			
CT300-D03- 6-32	#6-32UNC	P2	2.5P	50	8	12	4	2.3	3	*	*			*	*								*	*	*	*			
CT300-D04- 8-32	#8-32UNC	P2	2.5P	57	8	13.5	5	2.6	3	*	*			*	*								*	*	*	*			
CT300-D05- 10-24	#10-24UNC	P2	2.5P	66	10	16	5.5	3	3	*	*			*	*								*	*	*	*			
CT300-D06- 12-24	#12-24UNC	P2	2.5P	66	10	16	5.5	4	3	*	*			*	*								*	*	*	*			
CT300-D07- 1/4	1/4-20UNC	P3	2.5P	69	12	12	6	4.6	3	*	*			*	*								*	*	*	*			
CT300-D08- 5/16	5/16-18UNC	P3	2.5P	70	15	15	6.1	5.6	3	*	*			*	*								*	*	*	*			
CT300-D09- 5/16	5/16-24UNF	P3	2.5P	70	11	19	6.1	-	3	*	*			*	*								*	*	*	*			
CT300-D10- 3/8	3/8-16UNC	P3	2.5P	75	16	28	7	-	3	*	*			*	*								*	*	*	*			
CT300-D11- 3/8	3/8-24UNF	P3	2.5P	75	11	30	7	-	3	*	*			*	*								*	*	*	*			
CT300-D12- 7/16	7/16-14UNC	P4	2.5P	80	20	20	8	-	3	*	*			*	*								*	*	*	*			
CT300-D13- 7/16	7/16-20UNF	P3	2.5P	80	13	27	8	-	3	*	*			*	*								*	*	*	*			
CT300-D14- 1/2	1/2-13UNC	P4	2.5P	85	21	27	9	-	3	*	*			*	*								*	*	*	*			
CT300-D15- 1/2	1/2-20UNF	P3	2.5P	85	13	35	9	-	3	*	*			*	*								*	*	*	*			
CT300-D16- 9/16	9/16-12UNC	P4	2.5P	90	21	29	10.5	-	3	*	*			*	*								*	*	*	*			
CT300-D17- 9/16	9/16-18UNF	P3	2.5P	90	15	35	10.5	-	3	*	*			*	*								*	*	*	*			
CT300-D18- 5/8	5/8-11UNC	P4	2.5P	95	23	25	12	-	3	*	*			*	*								*	*	*	*			
CT300-D19- 5/8	5/8-18UNF	P3	2.5P	95	23	25	12	-	3	*	*			*	*								*	*	*	*			
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	dn	P				M				K				N				S			

DIN371/376-Spiral Fluted Taps

- General Cutting PMNS materials
- Small Sizes have External Center
- DIN



DIN371

Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT300-E02- M3	M3*0.5	P2	2.5P	56	10	8	3.5	2.7	6	3	*	*			*	*									*	*	*	*		
CT300-E02- M3.5	M3.5*0.6	P2	2.5P	56	11	9	4	3	6	3	*	*			*	*									*	*	*	*		
CT300-E03- M4	M4*0.7	P2	2.5P	63	12	9	4.5	3.4	6	3	*	*			*	*									*	*	*	*		
CT300-E04- M4.5	M4.5*0.75	P2	2.5P	70	12	13	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT300-E05- M5	M5*0.8	P3	2.5P	70	14	11	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT300-E06- M6	M6*1	P3	2.5P	80	15	15	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT300-E07- M7	M7*1	P3	2.5P	80	15	15	7	5.5	8	3	*	*			*	*									*	*	*	*		
CT300-E08- M8	M8*1.25	P3	2.5P	90	17	17	8	6.2	9	3	*	*			*	*									*	*	*	*		
CT300-E09- M10	M10*1.5	P4	2.5P	100	17	17	10	8	11	3	*	*			*	*									*	*	*	*		
CT300-E10- 6-32	#6-32UNC	P2	2.5P	56	8	8	4	3	6	3	*	*			*	*									*	*	*	*		
CT300-E11- 8-32	#8-32UNC	P2	2.5P	63	9	9	4.5	3.4	6	3	*	*			*	*									*	*	*	*		
CT300-E12- 10-24	#10-24UNC	P2	2.5P	70	9	9	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT300-E13- 12-24	#12-24UNC	P2	2.5P	80	9	9	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT300-E14- 1/4	1/4-20UNC	P3	2.5P	80	11	11	7	5.5	8	3	*	*			*	*									*	*	*	*		
CT300-E15- 5/16	5/16-18UNC	P3	2.5P	90	15	15	8	6.2	8	3	*	*			*	*									*	*	*	*		
CT300-E16- 3/8	3/8-16UNC	P3	2.5P	100	17	17	10	8	11	3	*	*			*	*									*	*	*	*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	flutes	P				M				K				N				S			

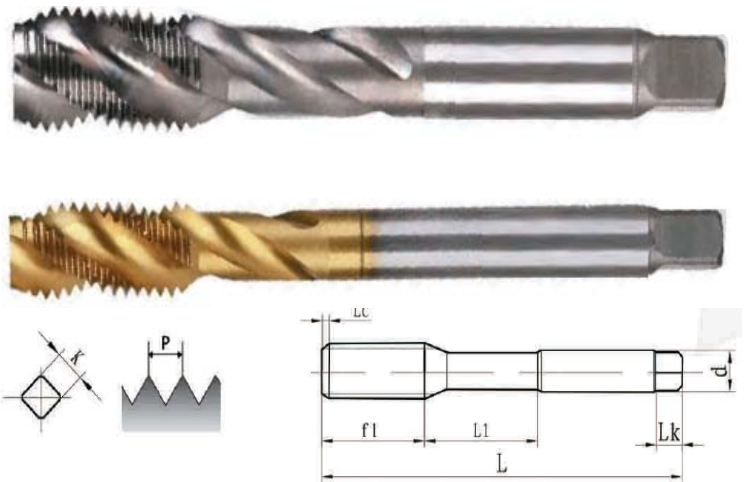
DIN376-Spiral Fluted Taps

DIN376

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metals				Alloys, Titaniums			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT300-G01- M12	M12*1.75	P4	2.5P	110	26	23	9	7	10	3	*	*			*	*									*	*	*	*		
CT300-G02- M14	M14*2	P4	2.5P	110	30	23	11	9	12	3	*	*			*	*									*	*	*	*		
CT300-G03- M16	M16*2	P4	2.5P	110	30	24	12	9	12	3	*	*			*	*									*	*	*	*		
CT300-G04- 7/16	7/16-14UNC	P4	2.5P	100	27	15	8	6.2	9	3	*	*			*	*									*	*	*	*		
CT300-G05- 1/2	1/2-13UNC	P4	2.5P	110	28	21	9	7	10	3	*	*			*	*									*	*	*	*		
CT300-G06- 9/16	9/16-12UNC	P4	2.5P	110	30	23	11	9	12	3	*	*			*	*									*	*	*	*		
CT300-G07- 5/8	5/8-11UNC	P4	2.5P	110	32	21	12	9	12	3	*	*			*	*									*	*	*	*		

DIN374-Spiral Fluted Taps

- General Cutting PMNS materials
- Small Sizes have External Center
- DIN



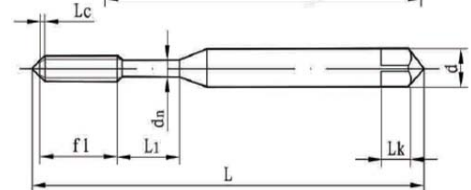
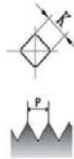
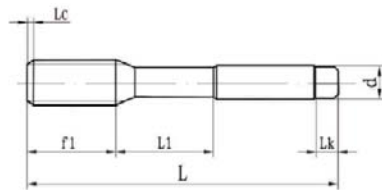
DIN374

Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT300-H01- M8	M8*1	P3	2.5P	90	15	20	8	6.2	9	3	*	*			*	*									*	*	*	*		
CT300-H02- M10	M10*1.25	P3	2.5P	100	17	22	7	5.5	8	3	*	*			*	*									*	*	*	*		
CT300-H03- M12	M12*1	P3	2.5P	110	20	30	9	7	10	3	*	*			*	*									*	*	*	*		
CT300-H04- M12	M12*1.25	P3	2.5P	110	20	30	9	7	10	3	*	*			*	*									*	*	*	*		
CT300-H05- M12	M12*1.5	P3	2.5P	110	20	30	9	7	10	3	*	*			*	*									*	*	*	*		
CT300-H06- M14	M14*1	P3	2.5P	110	20	33	11	9	12	3	*	*			*	*									*	*	*	*		
CT300-H07- M14	M14*1.25	P3	2.5P	110	20	33	11	9	12	3	*	*			*	*									*	*	*	*		
CT300-H08- M14	M14*1.5	P3	2.5P	110	20	33	11	9	12	3	*	*			*	*									*	*	*	*		
CT300-H09- M16	M16*1	P3	2.5P	110	22	32	12	9	12	3	*	*			*	*									*	*	*	*		
CT300-H10- M16	M16*1.25	P3	2.5P	110	22	32	12	9	12	3	*	*			*	*									*	*	*	*		
CT300-H11- M16	M16*1.5	P3	2.5P	110	22	32	12	9	12	3	*	*			*	*									*	*	*	*		
CT300-H12- 5/16	5/16-24UNF	P3	2.5P	90	16	19	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT300-H13- 3/8	3/8-24UNF	P3	2.5P	90	16	19	7	5.5	8	3	*	*			*	*									*	*	*	*		
CT300-H14- 7/16	7/16-20UNF	P3	2.5P	100	20	24	8	6.2	9	3	*	*			*	*									*	*	*	*		
CT300-H15- 1/2	1/2-20UNF	P3	2.5P	100	20	24	9	7	10	3	*	*			*	*									*	*	*	*		
CT300-H16- 9/16	9/16-24UNF	P3	2.5P	100	24	20	11	9	12	3	*	*			*	*									*	*	*	*		
CT300-H17- 5/8	5/8-18UNF	P3	2.5P	100	24	20	12	9	12	3	*	*			*	*									*	*	*	*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	flutes	P				M				K				N				S			

Cutting Tap, with Spiral point

- General Cutting PMNS materials
- Small Sizes have External Center
- UN Fine & Coarse thread



Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metals				Alloys, TiAlloys			
										P				M				K				N				S			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT200-B01- 0-80	#0-80UNF	P1	5P	37	10	-	3	-	2	*	*			*	*									*	*	*	*	*	*
CT200-B02- 1-64	#1-64UNC	P1	5P	37	11	-	3	-	2	*	*			*	*									*	*	*	*	*	*
CT200-B03- 2-56	#2-56UNC	P1	5P	45	12	-	3	-	2	*	*			*	*									*	*	*	*	*	*
CT200-B04- 3-48	#3-48UNC	P1	5P	45	14	-	3	-	2	*	*			*	*									*	*	*	*	*	*
CT200-B05- 4-40	#4-40UNC	P2	5P	45	10	6	3	2	3	*	*			*	*									*	*	*	*	*	*
CT200-B06- 5-50	#5-40UNC	P2	5P	50	12	7	4	2.3	3	*	*			*	*									*	*	*	*	*	*
CT200-B07- 6-32	#6-32UNC	P2	5P	50	13	7	4	2.4	3	*	*			*	*									*	*	*	*	*	*
CT200-B08- 8-32	#8-32UNC	P2	5P	57	13.5	8	5	3	3	*	*			*	*									*	*	*	*	*	*
CT200-B09- 10-24	#10-24UNC	P2	5P	66	16.5	9.5	5.5	3.4	3	*	*			*	*									*	*	*	*	*	*
CT200-B10- 12-24	#12-24UNC	P2	5P	66	16.5	9.5	5.5	4	3	*	*			*	*									*	*	*	*	*	*
CT200-B11- 1/4	1/4-20UNC	P3	5P	69	19.5	9.5	6	4.6	3	*	*			*	*									*	*	*	*	*	*
CT200-B12- 5/16	5/16-18UNC	P3	5P	70	23	15	6.1	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B13- 5/16	5/16-24UNF	P3	5P	70	23	15	6.1	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B14- 3/8	3/8-16UNC	P3	5P	75	24	19	7	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B15- 3/8	3/8-24UNF	P3	5P	75	24	19	7	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B16- 7/16	7/16-14UNC	P4	5P	80	29	16	8	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B17- 7/16	7/16-20UNF	P3	5P	80	29	16	8	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B18- 1/2	1/2-13UNC	P4	5P	85	30	18	9	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B19- 1/2	1/2-20UNF	P3	5P	85	30	18	9	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B20- 9/16	9/16-12UNC	P4	5P	90	30	20	11	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B21- 9/16	9/16-18UNF	P3	5P	90	30	20	11	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B22- 5/8	5/8-11UNC	P4	5P	95	23	25	12	-	3	*	*			*	*									*	*	*	*	*	*
CT200-B23- 5/8	5/8-18UNF	P3	5P	95	23	25	12	-	3	*	*			*	*									*	*	*	*	*	*
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	dn	P				M				K				N				S			

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

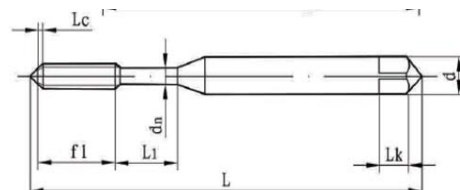
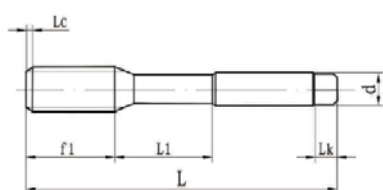
Drill & Tap

Drilling & Boring

Tool Holder

DIN374-Spiral Fluted Taps

- General Cutting PMNS materials
- Small Sizes have External Center
- Metric Fine & Coarse thread

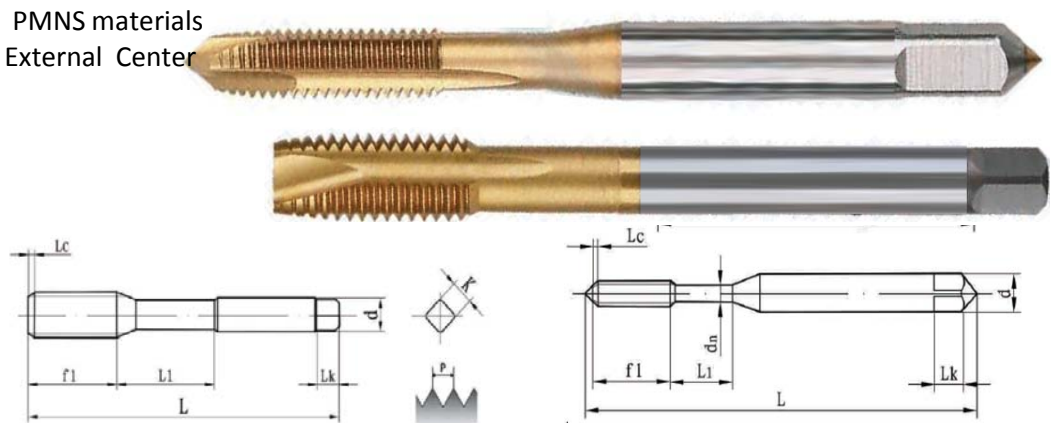


Tool Material: HSS-CPS

Ordering Code										Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Thread Size	Tap Limit	Lc	L	f1	L1	d	dn	Flutes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

DIN371/376-Cutting Tap, with Spiral points

- General Cutting PMNS materials
- Small Sizes have External Center
- DIN371/376



DIN371

Tool Material: HSS-CPS

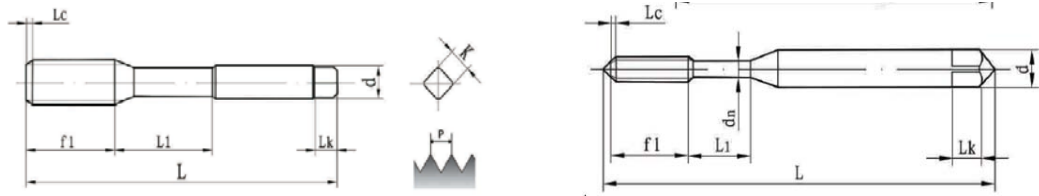
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT200-C01- M3	M3*0.5	P2	5P	56	10	8	3.5	2.7	6	3	*	*			*	*									*	*	*	*		
CT200-C02- M3.5	M3.5*0.6	P2	5P	56	11	9	4	3	6	3	*	*			*	*									*	*	*	*		
CT200-C03- M4	M4*0.7	P2	5P	63	12	9	4.5	3.4	6	3	*	*			*	*									*	*	*	*		
CT200-C04- M4.5	M4.5*0.75	P2	5P	70	12	13	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT200-C05- M5	M5*0.8	P3	5P	70	14	11	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT200-C06- M6	M6*1	P3	5P	80	15	15	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT200-C07- M7	M7*1	P3	5P	80	15	15	7	5.5	8	3	*	*			*	*									*	*	*	*		
CT200-C08- M8	M8*1.25	P3	5P	90	17	17	8	6.2	9	3	*	*			*	*									*	*	*	*		
CT200-C09- M10	M10*1.5	P4	5P	100	17	17	10	8	11	3	*	*			*	*									*	*	*	*		
CT200-C10- 6-32	#6-32UNC	P2	5P	56	8	8	4	3	6	3	*	*			*	*									*	*	*	*		
CT200-C11- 8-32	#8-32UNC	P2	5P	63	9	9	4.5	3.4	6	3	*	*			*	*									*	*	*	*		
CT200-C12- 10-24	#10-24UNC	P2	5P	70	9	9	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT200-C13- 12-24	#12-24UNC	P2	5P	80	9	9	6	4.9	8	3	*	*			*	*									*	*	*	*		
CT200-C14- 1/4	1/4-20UNC	P3	5P	80	11	11	7	5.5	8	3	*	*			*	*									*	*	*	*		
CT200-C15- 5/16	5/16-18UNC	P3	5P	90	15	15	8	6.2	8	3	*	*			*	*									*	*	*	*		
CT200-C16- 3/8	3/8-16UNC	P3	5P	100	17	17	10	8	11	3	*	*			*	*									*	*	*	*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	flutes	P				M				K				N				S			

DIN376

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT200-D01- M12	M12*1.75	P4	5P	110	26	23	9	7	10	3	*	*			*	*									*	*	*	*		
CT200-D02- M14	M14*2	P4	5P	110	30	23	11	9	12	3	*	*			*	*									*	*	*	*		
CT200-D03- M16	M16*2	P4	5P	110	30	24	12	9	12	3	*	*			*	*									*	*	*	*		
CT200-D04- 7/16	7/16-14UNC	P4	5P	100	27	15	8	6.2	9	3	*	*			*	*									*	*	*	*		
CT200-D05- 1/2	1/2-13UNC	P4	5P	110	28	21	9	7	10	3	*	*			*	*									*	*	*	*		
CT200-D06- 9/16	9/16-12UNC	P4	5P	110	30	23	11	9	12	3	*	*			*	*									*	*	*	*		
CT200-D07- 5/8	5/8-11UNC	P4	5P	110	32	21	12	9	12	3	*	*			*	*									*	*	*	*		

DIN374-Cutting Tap, with Spiral points

- General Cutting PMNS materials
- Small Sizes have External Center
- DIN374

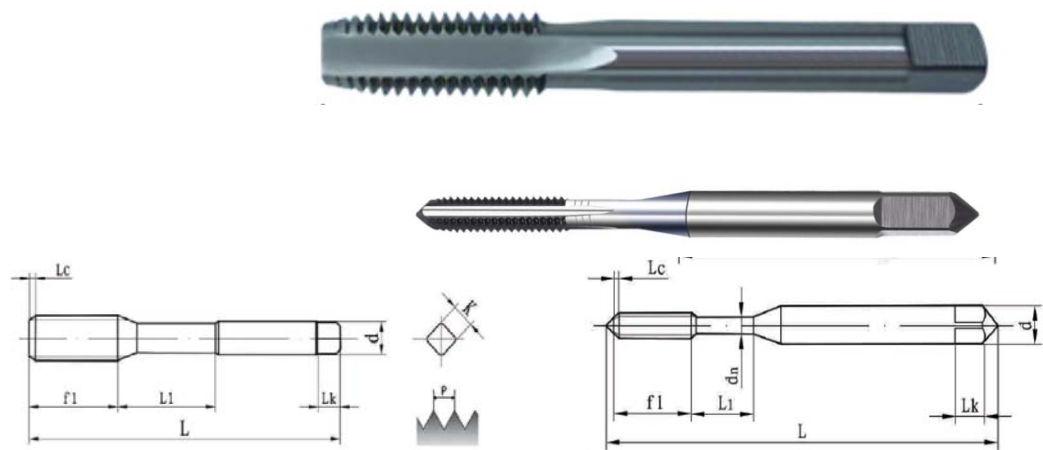


DIN374

Tool Material: HSS-CPS

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	Flutes	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
											P				M				K				N				S			
											G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
CT200-E01- M8	M8*1	P3	5P	90	15	20	8	6.2	9	3	*	*			*	*							*	*	*	*				
CT200-E02- M10	M10*1.25	P3	5P	100	17	22	7	5.5	8	3	*	*			*	*							*	*	*	*				
CT200-E03- M12	M12*1	P3	5P	110	20	30	9	7	10	3	*	*			*	*							*	*	*	*				
CT200-E04- M12	M12*1.25	P3	5P	110	20	30	9	7	10	3	*	*			*	*							*	*	*	*				
CT200-E05- M12	M12*1.5	P3	5P	110	20	30	9	7	10	3	*	*			*	*							*	*	*	*				
CT200-E06- M14	M14*1	P3	5P	110	20	33	11	9	12	3	*	*			*	*							*	*	*	*				
CT200-E07- M14	M14*1.25	P3	5P	110	20	33	11	9	12	3	*	*			*	*							*	*	*	*				
CT200-E08- M14	M14*1.5	P3	5P	110	20	33	11	9	12	3	*	*			*	*							*	*	*	*				
CT200-E09- M16	M16*1	P3	5P	110	22	32	12	9	12	3	*	*			*	*							*	*	*	*				
CT200-E10- M16	M16*1.25	P3	5P	110	22	32	12	9	12	3	*	*			*	*							*	*	*	*				
CT200-E11- M16	M16*1.5	P3	5P	110	22	32	12	9	12	3	*	*			*	*							*	*	*	*				
CT200-E12- 5/16	5/16-24UNF	P3	5P	90	16	19	6	4.9	8	3	*	*			*	*							*	*	*	*				
CT200-E13- 3/8	3/8-24UNF	P3	5P	90	16	19	7	5.5	8	3	*	*			*	*							*	*	*	*				
CT200-E14- 7/16	7/16-20UNF	P3	5P	100	20	24	8	6.2	9	3	*	*			*	*							*	*	*	*				
CT200-E15- 1/2	1/2-20UNF	P3	5P	100	20	24	9	7	10	3	*	*			*	*							*	*	*	*				
CT200-E16- 9/16	9/16-24UNF	P3	5P	100	24	20	11	9	12	3	*	*			*	*							*	*	*	*				
CT200-E17- 5/8	5/8-18UNF	P3	5P	100	24	20	12	9	12	3	*	*			*	*							*	*	*	*				
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	L1	d	K	LK	flutes	P				M				K				N				S			

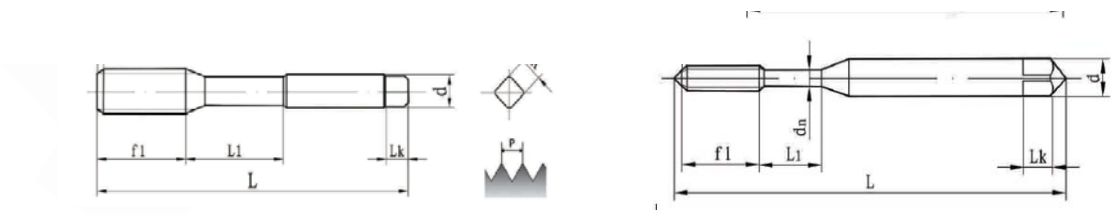
Forming Taps- Carbide, Metric



Tool Material: Carbide

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	LK	K	Steels				Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys			
									P				M				K				N				S			
									G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
HM400-A01 M0.8	M0.8*0.2	RH3	1.5P	38~50	3	3	3	2.5			*			*							*	*			*	*		
HM400-A02 M0.9	M0.9*0.225	RH3	1.5P	38~50	3	3	3	2.5			*			*							*	*			*	*		
HM400-A03 M1	M1*0.25	RH4	2P	38~50	3.5	3	3	2.5			*			*							*	*			*	*		
HM400-A04 M1	M1.2*0.25	RH4	2P	38~50	3.5	3	3	2.5			*			*							*	*			*	*		
HM400-A05 M1	M1.4*0.3	RH4	2P	38~50	6.5	3	3	2.5			*			*							*	*			*	*		
HM400-A06 M1	M1.6*0.35	RH5	2P	38~50	8	3	3	2.5			*			*							*	*			*	*		
HM400-A07 M1	M1.8*0.35	RH5	2P	38~50	8	3	3	2.5			*			*							*	*			*	*		
HM400-A08 M2	M2*0.4	RH5	2P	49	10	3	3	2.5			*			*							*	*			*	*		
HM400-A09 M2	M2.5*0.45	RH5	2P	49	13	3	3	2.5			*			*							*	*			*	*		
HM400-A10 M3	M3*0.5	RH6	4P	50	16	4	3	2.5			*			*							*	*			*	*		
HM400-A11 M3	M3*0.5	RH6	2P	48.5	16	4	3	2.5			*			*							*	*			*	*		
HM400-A12 M4	M4*0.7	RH7	4P	54	18	5	6	3.2			*			*							*	*			*	*		
HM400-A13 M4	M4*0.7	RH7	2P	52	18	5	6	3.2			*			*							*	*			*	*		
HM400-A14 M5	M5*0.8	RH7	4P	62	20	5.5	7	4			*			*							*	*			*	*		
HM400-A15 M5	M5*0.8	RH7	2P	59.5	20	5.5	7	4			*			*							*	*			*	*		
HM400-A16 M6	M6*1	RH7	4P	62	19	6	7	4.5			*			*							*	*			*	*		
HM400-A17 M6	M6*1	RH7	2P	62	19	6	7	4.5			*			*							*	*			*	*		
HM400-A18 M8	M8*1.25	RH7	4P	75	13	6.2	9	6			*			*							*	*			*	*		
HM400-A19 M8	M8*1.25	RH7	2P	75	13	6.2	9	6			*			*							*	*			*	*		
HM400-A20 M10	M10*1.5	RH7	4P	75	15	7	11	8			*			*							*	*			*	*		
HM400-A21 M10	M10*1.5	RH7	2P	75	15	7	11	8			*			*							*	*			*	*		
HM400-A22 M10	M10*1.25	RH7	4P	75	15	7	11	8			*			*							*	*			*	*		
HM400-A23 M10	M10*1.25	RH7	2P	75	15	7	11	8			*			*							*	*			*	*		
HM400-A24 M12	M12*1.75	RH8	4P	82	17	8.5	12	9			*			*							*	*			*	*		
HM400-A25 M12	M12*1.75	RH8	2P	82	17	8.5	12	9			*			*							*	*			*	*		
HM400-A26 M12	M12*1.5	RH7	4P	82	17	8.5	12	9			*			*							*	*			*	*		
HM400-A27 M12	M12*1.5	RH7	2P	82	17	8.5	12	9			*			*							*	*			*	*		
HM400-A28 M12	M12*1.25	RH7	4P	82	17	8.5	12	9			*			*							*	*			*	*		
HM400-A29 M12	M12*1.25	RH7	2P	88	17	8.5	12	9			*			*							*	*			*	*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	LK	K	P				M				K				N				S			

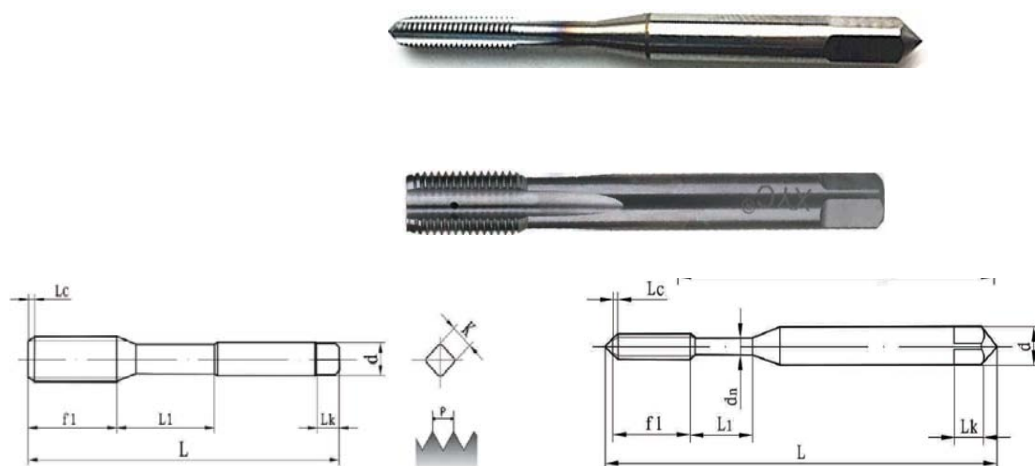
Spiral Fluted Taps- Carbide, Metric



Tool Material: Carbide

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	LK	K	flutes	Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys				Hardened Metal			
										M				K				N				S				H			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
HM300-A01 M3	M3*0.5	P3	2.5P	50	12	4	3	2.5	3								*			*			*	*		*	*		
HM300-A02 M4	M4*0.7	P3	2.5P	54	14	5	6	3.2	3								*			*			*	*		*	*		
HM300-A03 M5	M5*0.8	P3	2.5P	62	16	5.5	7	4	3								*			*			*	*		*	*		
HM300-A04 M6	M6*1	P3	2.5P	62	19	6	7	4.5	3								*			*			*	*		*	*		
HM300-A05 M8	M8*1.25	P4	2.5P	75	22	6.2	9	6	3								*			*			*	*		*	*		
HM300-A06 M10	M10*1.5	P4	2.5P	75	24	7	11	8	3								*			*			*	*		*	*		
HM300-A07 M10	M10*1.25	P4	2.5P	75	24	7	11	8	3								*			*			*	*		*	*		
HM300-A08 M12	M12*1.75	P4	2.5P	82	29	8.5	12	9	3								*			*			*	*		*	*		
HM300-A09 M12	M12*1.5	P4	2.5P	82	29	8.5	12	9	3								*			*			*	*		*	*		
HM300-A10 M12	M12*1.25	P4	2.5P	82	29	8.5	12	9	4								*			*			*	*		*	*		

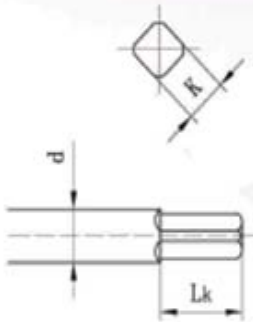
Straight Fluted Taps- Carbide, Metric



Tool Material: Carbide

Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	Flutes	LK	K	Stainless Steels				Cast Iron				Non-Ferrous Metal				Alloys, Tialloys				Hardened Metal			
										M				K				N				S				H			
										G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000	G100	G200	G300	G000
HM100-A01 M3	M3*0.5	P3	2.5P	50	12	4	3	3	2.5						*	*					*				*		*		
HM100-A02 M4	M4*0.7	P3	2.5P	54	14	5	3	6	3.2						*	*					*				*		*		
HM100-A03 M5	M5*0.8	P3	2.5P	62	16	5.5	3	7	4						*	*					*				*		*		
HM100-A04 M6	M6*1.0	P3	2.5P	62	19	6	3	7	4.5						*	*					*				*		*		
HM100-A05 M8	M8*1.25	P4	2.5P	75	22	6.2	3	9	6						*	*					*				*		*		
HM100-A06 M10	M10*1.5	P4	2.5P	75	24	7	4	11	8						*	*					*				*		*		
HM100-A07 M10	M10*1.25	P4	2.5P	75	24	7	4	11	8						*	*					*				*		*		
HM100-A08 M12	M12*1.75	P4	2.5P	82	29	8.5	4	12	9						*	*					*				*		*		
HM100-A09 M12	M12*1.5	P4	2.5P	82	29	8.5	4	12	9						*	*					*				*		*		
HM100-A10 M12	M12*1.25	P4	2.5P	82	29	8.5	4	12	9						*	*					*				*		*		
HM100-A11 M14	M14*2	P5	2.5P	100	20	10.5	4	14	11						*	*					*				*		*		
HM100-A12 M14	M14*1.5	P4	2.5P	100	20	10.5	4	14	11						*	*					*				*		*		
HM100-A13 M16	M16*2	P5	2.5P	100	20	12.5	4	15	12						*	*					*				*		*		
HM100-A14 M16	M16*1.5	P4	2.5P	100	20	12.5	4	15	12						*	*					*				*		*		
Ordering Code	Thread Size	Tap Limit	Lc	L	f1	d	Flutes	LK	K	M				K				N				S				H			

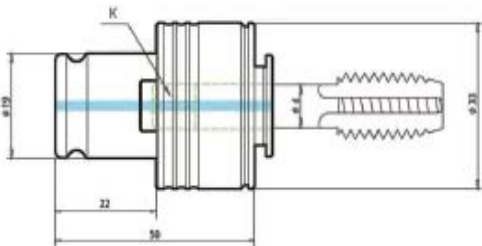
Tap's Square End Size List



Metric thread		
d	LK	K
3	3	2.5
4	6	3.2
5	7	4
5.5		4.5
6		
6.1	8	5
6.2		
7		5.5
8	9	6
8.5		6.5
9	10	7
9.5		
10	11	8
10.5		
12	12	9
12.5	13	10
13		
14	14	11
15	15	12
16		
17	16	13
18	17	14
19	18	15
20		

Unified thread		
d	LK	K
3	3	2.5
4	6	3.2
5	7	4
5.5		4.5
6		
6.1	8	5
6.2		
7		5.5
8	9	6
8.5		6.5
9	10	7
9.5		
10	11	8
10.5		
12	12	9
12.5	13	10
13		
14	14	11
15	15	12
16		
17	16	13
18	17	14
19	18	15
20		

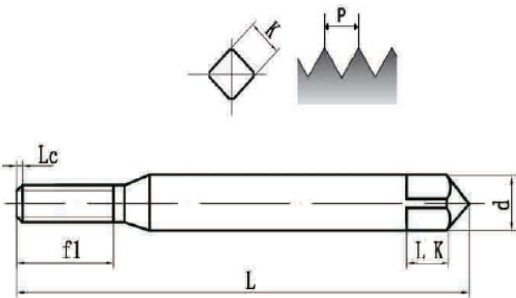
Touque Control Chuck



材质Material: 高硬轴承钢SUJ2 单位Unit: mm
规格参数 Specification

JIS		柄径 d	方身 K
M3	1/8 4-40	4	3.2
M4	8-32	5	4
M5	10-24 12-24	5.5	4.5
M6	1/4	6	4.5
M8	5/16	6.2	5
M10	3/8	7	5.5
M12	—	8.5	6.5
M14	—	10.5	8
M16	—	12.5	10
—	W1/2	9	7
—	W5/8	12	9

产品的特征:
带有四方头, 让丝锥夹持更紧不容易打滑
带有扭力保护, 丝锥不容易断
装夹方便
Product features:
Effectively and securely grip the tap square, avoid tap slip.
Avoid tap breakage
Quick change



丝锥底孔尺寸请参考P51-53
Please see page51-53 for drill size for taps.
柄部四方尺寸Lk, K请参考P50
Please see p.50 for length of external centre and shank square length Lk and width K.

Drill Hole Size for Forming Taps

Metric Coarse -

Thread Size	For JIS class 1 drill hole dia		For JIS class 2 drill hole dia	
	RH	MIN~MAX	RH	MIN~MAX
	Limit	Thread Overlap Ratio:%	Precision	Thread Overlap Ratio:%
M1.0*0.25	2	0.87~0.89(100~85)	4	0.90~0.92(100~80)
M1.2*0.25	2	1.07~1.09(100~85)	4	1.10~1.12(100~80)
M1.4*0.30	2	1.244~1.263(100~85)	4	1.270~1.294(100~80)
M1.6*0.35	2	1.40~1.44(100~80)	4	1.44~1.48(100~75)
M1.7*0.35	2	1.51~1.54(100~80)	4	1.54~1.58(100~75)
M2.0*0.40	2	1.78~1.82(100~80)	4	1.81~1.85(100~75)
M2.3*0.40	2	2.08~2.12(100~80)	4	2.11~2.15(100~75)
M2.5*0.45	2	2.25~2.29(100~80)	4	2.28~2.33(100~75)
M2.6*0.45	2	2.35~2.39(100~80)	4	2.38~2.43(100~75)
M3.0*0.50	3	2.74~2.78(100~80)	5	2.76~2.81(100~75)
M3.5*0.60	3	3.18~3.21(100~85)	5	3.20~3.26(100~75)
M4.0*0.70	4	3.63~3.67(100~85)	6	3.65~3.70(100~85)
M5.0*0.80	4	4.57~4.62(100~85)	6	4.59~4.66(100~80)
M6.0*1.00	4	5.45~5.51(100~85)	7	5.48~5.57(100~80)
M7.0*1.00	4	6.45~6.51(100~85)	7	6.48~6.57(100~80)
M8.0*1.25	5	7.31~7.38(100~85)	7	7.34~7.41(100~85)
M10.0*1.50	5	9.19~9.22(100~90)	7	9.18~9.28(100~85)
M12.0*1.75	5	11.01~11.08(100~90)	8	11.05~11.15(100~85)
M14.0*2.00	6	12.83~12.95(100~90)	10	12.92~13.04(100~85)
M16*2.00	6	14.87~14.95(100~90)	10	14.92~15.04(100~85)

UNC/ UNF-

Thread Size	For JIS class 2B drill hole dia		For JIS class 3B drill hole dia	
	RH	MIN~MAX	RH	MIN~MAX
	Limit	Thread Overlap Ratio:%	Precision	Thread Overlap Ratio:%
NO.2~56	4	1.96~2.02(100~65)	3	1.95~2.01(100~65)
NO.2~64	3	1.98~2.04(100~65)	2	1.97~2.03(100~65)
NO.3~48	4	2.25~2.32(100~65)	3	2.23~2.31(100~65)
NO.4~40	5	2.52~2.60(100~70)	3	2.50~2.58(100~70)
NO.4~48	4	2.57~2.64(100~70)	3	2.56~2.63(100~70)
NO.6~32	5	3.09~3.17(100~75)	3	3.06~3.14(100~75)
NO.6~40	5	3.19~3.26(100~70)	3	3.16~3.22(100~75)
NO.8~32	6	3.75~3.83(100~75)	4	3.74~3.82(100~75)
NO.10~24	6	4.26~4.35(100~80)	4	4.24~4.32(100~80)
NO.10~32	5	4.41~4.48(100~80)	4	4.40~4.46(100~80)
NO.12~28	5	5.00~5.08(100~80)	4	4.99~5.06(100~80)
1/4~20	6	5.66~5.76(100~80)	4	5.64~5.74(100~80)
1/4~28	5	5.86~5.93(100~80)	4	5.85~5.92(100~80)
5/16~18	7	7.18~7.29(100~80)	5	7.15~7.24(100~80)
5/16~24	6	7.38~7.46(100~80)	5	7.36~7.43(100~85)
3/8~16	7	8.66~8.78(100~80)	5	8.63~8.73(100~85)
3/8~24	6	8.96~9.05(100~80)	5	8.95~9.02(100~85)
7/16~20	7	10.44~10.54(100~80)	5	10.41~10.49(100~85)
1/2~13	8	11.62~11.78(100~80)	6	11.60~11.68(100~90)
1/2~20	7	12.02~12.12(100~80)	5	12.00~12.05(100~90)
5/8~11	11	14.62~14.76(100~85)	8	14.58~14.67(100~90)
5/8~18	9	15.14~15.25(100~80)	7	15.11~15.17(100~90)

Drill Hole Size for Cutting Taps

Specification(M)	Standard Hole Dia	For JIS Class2 Drill Hole Dia	
		Max	Min
M1.0 0.25	0.75	0.785	0.729
M1.1 0.25	0.85	0.885	0.829
M1.2 0.25	0.95	0.985	0.929
M1.4 0.30	1.10	1.142	1.075
M1.6 0.35	1.25	1.321	1.221
M1.7 0.35	1.35	1.421	1.321
M1.8 0.35	1.45	1.521	1.421
M2.0 0.40	1.60	1.679	1.567
M2.2 0.45	1.75	1.838	1.713
M2.3 0.40	1.90	1.979	1.867
M2.5 0.45	2.10	2.138	2.013
M2.6 0.45	2.20	2.238	2.113
M3.0 0.50	2.50	2.599	2.459
M3.5 0.60	2.90	3.010	2.850
M4.0 0.70	3.30	3.422	3.242
M4.5 0.75	3.80	3.878	3.688
M5.0 0.80	4.20	4.334	4.134
M6.0 1.00	5.00	5.153	4.917
M7.0 1.00	6.00	6.153	5.917
M8.0 1.25	6.80	6.912	6.647
M8.0 1.00	7.00	7.153	6.917
M9.0 1.25	7.80	7.912	7.647
M10 1.50	8.50	8.676	8.376
M10 1.25	8.80	8.912	8.647
M10 1.00	9.00	9.153	8.917
M11 1.50	9.50	9.676	9.376
M12 1.75	10.30	10.441	10.106
M12 1.50	10.50	10.676	10.376
M12 1.25	10.80	10.912	10.647
M12 1.00	11.00	11.153	10.917
M14 2.00	12.00	12.210	11.835
M14 1.50	12.50	12.676	12.376
M14 1.00	13.00	13.153	12.917
M16 2.00	14.00	14.210	13.835
M16 1.50	14.50	14.676	14.376
M16 1.00	15.00	15.153	14.917

Specification (UNC)		Standard Hole Dia	For JIS Class2 Drill Hole Dia	
			Max	Min
NO.1	-64	1.55	1.582	1.425
NO.2	-56	1.80	1.871	1.695
NO.3	-48	2.10	2.146	1.941
NO.4	-40	2.30	2.385	2.157
NO.5	-40	2.60	2.697	2.487
NO.6	-32	2.80	2.895	2.642
NO.8	-32	3.40	3.530	3.302
NO.10	-24	3.90	3.962	3.683
NO.12	-24	4.50	4.597	4.344
1/4	-20	5.10	5.257	4.979
5/16	-18	6.60	6.731	6.401
3/8	-16	8.00	8.153	7.798
7/16	-14	9.40	9.550	9.144
1/2	-13	10.90	11.023	10.592
9/16	-12	12.20	12.466	11.989
5/8	-11	13.60	13.868	13.386

Specification (UNF)		Standard Hole Dia	For JIS Class2 Drill Hole Dia	
			Max	Min
NO.0	-80	1.25	1.305	1.182
NO.1	-72	1.55	1.612	1.474
NO.2	-64	1.85	1.912	1.756
NO.3	-56	2.10	2.197	2.025
NO.4	-48	2.40	2.458	2.271
NO.5	-44	2.70	2.740	2.551
NO.6	-40	2.90	3.022	2.820
NO.8	-36	3.50	3.606	3.404
NO.10	-32	4.10	4.165	3.963
NO.12	-28	4.60	4.724	4.496
1/4	-28	5.50	5.588	5.360
5/16	-24	6.90	7.035	6.782
3/8	-24	8.50	8.636	8.382
7/16	-20	9.90	10.033	9.729
1/2	-20	11.50	11.607	11.329
9/16	-18	12.90	13.081	12.751
5/8	-18	14.50	14.681	14.351

Turning Insert

External Turning Holder

Internal Turning Holder

Grooving & Parting

Milling

Threading

End Mill

Drill & Tap

Drilling & Boring

Tool Holder