

GÜHRING

- ◆ universal taps for many different materials
- ◆ economic price paired with latest Guhring technology
- ◆ from stand drills to modern CNC centers
- ◆ Made in Germany by Gühring

JIS >eco< tap
just smart!



JIS ecotap

GUHRING YOUR WORLD-WIDE PARTNER

JIS>eco<tap just smart!

special cutting edge preparation for perfect coating adhesion

new flute and thread geometry regarding rake angle, relief and chamfer design, for higher and stable tool life

the TiCN coating protects the cutting edges from heat and wear for longer tool-life

- > The Eco Tap achieves up to double the tool-life compared with uncoated tools
- > The coating technology makes it possible to double the cutting speed > cost reduction



All these features ensure a

perfect chip evacuation

Because of its superior geometry and the special cutting edge preparation the ecotap works under all conditions. Therefore ecotaps manage stand drills as well as modern CNC centers. With the TiCN coating the ecotap achieves up to double the tool-life compared with uncoated tools.

But there is more to come. The ecotap doubles also the cutting speed. It is therefore especially economic thanks to latest Gühring grinding and coating technology – made in Germany for highest quality.

JIS Eco Taps



Gühring no.

7777

Gühring no.

7778



Thread

Ø-range on page

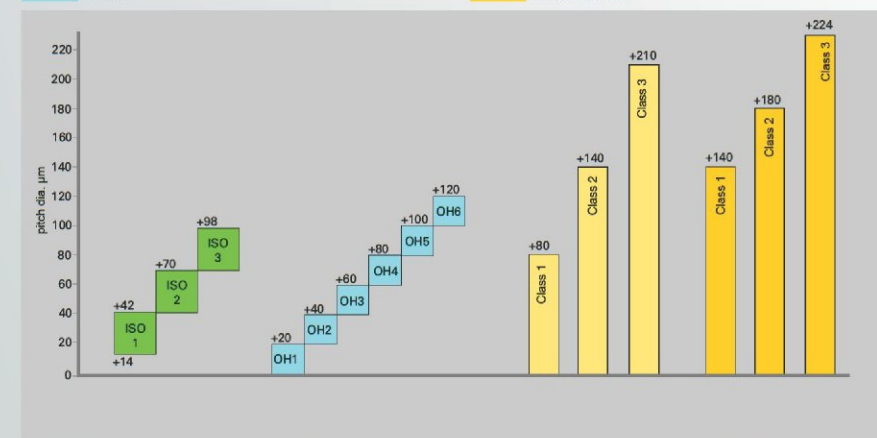
	M	4	5
Material / ISO Material	Hardness N/mm ²	Recommended cutting speed v _c m/min	
Struct./free-cut./unall. heat-treat./case hard. steels	≤ 800	18	18
P Free-cutting steels, unall. case hard. steels, nitr. steels	800–1000	15	15
Alloyed heat-treatable, tool and high speed steels	800–1200	10	10
M Stainless steel - easy to machine / sulphured	≤ 750	10	10
Stainless steel - moderately difficult to machine	750–950	10	10
K Cast iron, grey cast iron, spher. graph./mall. cast iron		18	18
N Aluminium, Al-wrought alloys, Al-alloys	≤ 6% Si	18	18
Aluminium-cast alloys	≥ 6% Si	18	18
S Titan, Ti-alloys		2	2
Ni-alloys		x	x
H Hardened steels	45–55 HRC	x	x
Hardened steels	55–62 HRC	x	x

Available in all essential tolerances

Example M10 (x 1.5)

ISO limits
OH limits

JIS internal thread
ISO internal thread



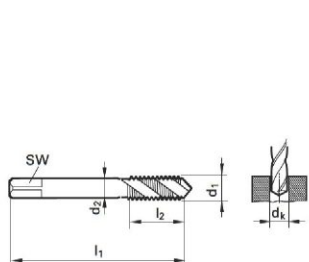
Machine taps for ISO metric threads



P	•
M	•
K	•
N	•
S	•
H	•

Tool material	HSS-E
Tolerance on Ø	OH2-OH5
Surface	C
Type	N R40
Form	C
Internal cooling	✗

NEW



JIS B 4430

Article no.

7777

d1	P	Tolerance	d2	SW	dk	l1	l2	l5
	mm		mm	mm	mm	mm	mm	mm
M3	0.500	OH2	4.000	3.200	2.50	46.000	6.000	19.000
M4	0.700	OH3	5.000	4.000	3.30	52.000	7.500	20.000
M5	0.800	OH3	5.500	4.500	4.20	60.000	8.500	24.000
M6	1.000	OH3	6.000	4.500	5.00	62.000	11.000	29.000
M8	1.250	OH3	6.200	5.000	6.80	70.000	14.000	37.000
M10	1.500	OH3	7.000	5.500	8.50	75.000	16.000	41.000
M12	1.750	OH4	8.500	6.500	10.20	82.000	18.500	48.000
M14	2.000	OH4	10.500	8.000	12.00	88.000	20.000	48.000
M16	2.000	OH4	12.500	10.000	14.00	95.000	20.000	52.000
M18	2.500	OH5	14.000	11.000	15.50	100.000	25.000	55.000
M20	2.500	OH5	15.000	12.000	17.50	105.000	25.000	58.000

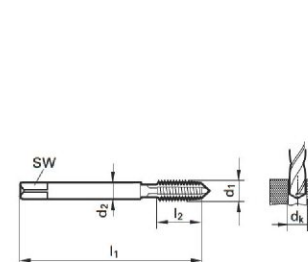
Machine taps for ISO metric threads



P	•
M	•
K	•
N	•
S	•
H	•

Tool material	HSS-E
Tolerance on Ø	OH2-OH5
Surface	C
Type	N
Form	B
Internal cooling	✗

NEW



JIS B 4430

Article no.

7778

d1	P	Tolerance	d2	SW	dk	l1	l2	l5
	mm		mm	mm	mm	mm	mm	mm
M3	0.500	OH2	4.000	3.200	2.50	46.000	10.000	19.000
M4	0.700	OH3	5.000	4.000	3.30	52.000	12.000	20.000
M5	0.800	OH3	5.500	4.500	4.20	60.000	14.000	24.000
M6	1.000	OH3	6.000	4.500	5.00	62.000	16.000	29.000
M8	1.250	OH3	6.200	5.000	6.80	70.000	17.000	37.000
M10	1.500	OH3	7.000	5.500	8.50	75.000	20.000	41.000
M12	1.750	OH4	8.500	6.500	10.20	82.000	24.000	48.000
M14	2.000	OH4	10.500	8.000	12.00	88.000	26.000	48.000
M16	2.000	OH4	12.500	10.000	14.00	95.000	26.000	52.000
M18	2.500	OH5	14.000	11.000	15.50	100.000	30.000	55.000
M20	2.500	OH5	15.000	12.000	17.50	105.000	32.000	58.000

Table of application

ISO	P			M		K	N		S		H	
Material	Steel			Stainless steel		Cast iron	Aluminium		Special alloys		Hardened steel	
Properties	<800	<1000	<1200	<750	<950		<6% Si	>6% Si	Ti	Ni	45–55 HRC	55–62 HR
v _c m/min	18	15	10	10	10		18	18	18	2	x	x

by GUHRING

Table of application

ISO	P			M		K	N		S		H	
Material	Steel			Stainless steel		Cast iron	Aluminium		Special alloys		Hardened steel	
Properties	<800	<1000	<1200	<750	<950	GG	<6% Si	>6% Si	Ti	Ni	45–55 HRC	55–62 HRC
v _c m/min	18	15	10	10	10	18	18	18	2	x	x	x

by GUHRING

Tapping size holes for thread cutting

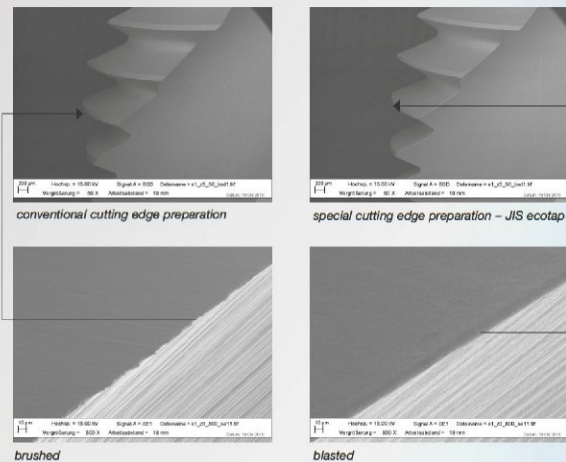
Std. ISO metric threads DIN 13				ISO metric fine threads DIN 13								UNC threads ASME B1.1				
nom. Ø	pitch P	tapping size hole Ø DIN 336	core diameter of int. thread 6H*	nom. x Ø	pitch P	tapping size hole Ø DIN 336	core diameter of int. thread 6H	nom. x Ø	pitch P	tapping size hole Ø DIN 336	core diameter of int. thread 6H	nom. Ø	threads per inch	tapping size hole Ø DIN 336	core diameter of int. thread 2B	
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		mm	mm	
M 1	0.25	0.75	0.729	0.785	M 2.5 x 0.35	2.15	2.121	2.221	M 22 x 1.50	20.50	20.376	20.676	Nr. 1 - 64	1.55	1.425	1.580
M 1.1	0.25	0.85	0.829	0.885	M 3.0 x 0.35	2.65	2.621	2.721	M 22 x 2.00	20.00	19.835	20.210	Nr. 2 - 56	1.85	1.694	1.872
M 1.2	0.25	0.95	0.929	0.985	M 3.5 x 0.35	3.15	3.121	3.221	M 24 x 1.00	23.00	22.917	23.153	Nr. 3 - 48	2.10	1.941	2.146
M 1.4	0.30	1.10	1.075	1.142	M 4.0 x 0.50	3.50	3.459	3.599	M 24 x 1.50	22.50	22.376	22.676	Nr. 4 - 40	2.35	2.157	2.385
M 1.6	0.35	1.25	1.221	1.321	M 4.5 x 0.50	4.00	3.959	4.099	M 24 x 2.00	22.00	21.835	22.130	Nr. 5 - 40	2.65	2.487	2.698
M 1.8	0.35	1.45	1.421	1.521	M 5.0 x 0.50	4.50	4.459	4.599	M 25 x 1.00	24.00	23.917	24.153	Nr. 6 - 32	2.85	2.642	2.896
M 2	0.40	1.60	1.567	1.679	M 5.5 x 0.50	5.00	4.959	5.099	M 25 x 1.50	23.50	23.376	23.676	Nr. 8 - 32	3.50	3.302	3.531
M 2.2	0.45	1.75	1.713	1.838	M 6.0 x 0.75	5.20	5.188	5.378	M 25 x 2.00	23.00	22.835	23.210	Nr. 10 - 24	3.90	3.683	3.937
M 2.5	0.45	2.05	2.013	2.138	M 7.0 x 0.75	6.20	6.188	6.378	M 27 x 1.00	26.00	25.917	26.153	Nr. 12 - 24	4.50	4.343	4.597
M 3	0.50	2.50	2.459	2.599	M 8.0 x 0.50	7.50	7.459	7.599	M 27 x 1.50	25.50	25.376	25.676	1/8 - 20	5.10	4.978	5.258
M 3.5	0.60	2.90	2.850	3.010	M 8.0 x 0.75	7.20	7.188	7.378	M 27 x 2.00	25.00	24.835	25.210	5/16 - 18	6.60	6.401	6.731
M 4	0.70	3.30	3.242	3.422	M 8.0 x 1.00	7.00	6.917	7.153	M 28 x 1.00	27.00	26.917	27.153	3/8 - 16	8.00	7.798	8.153
M 4.5	0.75	3.70	3.688	3.878	M 9.0 x 0.75	8.20	8.188	8.378	M 28 x 1.50	26.50	26.376	26.676	1/2 - 14	9.40	9.144	9.550
M 5	0.80	4.20	4.134	4.334	M 9.0 x 1.00	8.00	7.917	8.153	M 28 x 2.00	26.00	25.835	26.210	1/2 - 13	10.80	10.592	11.024
M 6	1.00	5.00	4.917	5.153	M 10 x 0.75	9.20	9.188	9.378	M 30 x 1.00	29.00	28.917	29.153	3/4 - 12	12.20	11.989	12.446
M 7	1.00	6.00	5.917	6.153	M 10 x 1.00	9.00	8.917	9.153	M 30 x 1.50	28.50	28.376	28.676	1 1/8 - 11	13.50	13.386	13.868
M 8	1.25	6.80	6.647	6.912	M 10 x 1.25	8.80	8.647	8.912	M 30 x 2.00	28.00	27.835	28.210	1 1/8 - 10	16.50	16.307	16.840
M 9	1.25	7.80	7.647	7.912	M 11 x 0.75	10.20	10.188	10.378	M 30 x 3.00	27.00	26.752	27.252	1 1/8 - 9	19.50	19.177	19.761
M 10	1.50	8.50	8.376	8.676	M 11 x 1.00	10.00	9.917	10.153	M 32 x 1.50	30.50	30.376	30.676	1 - 8	22.25	21.971	22.606
M 11	1.50	9.50	9.376	9.676	M 12 x 1.00	11.00	10.917	11.153	M 32 x 2.00	30.00	29.835	30.210	1 1/8 - 7	25.00	24.638	25.349
M 12	1.75	10.20	10.106	10.441	M 12 x 1.25	10.80	10.647	10.912	M 33 x 1.50	31.50	31.376	31.676	1 1/8 - 7	28.00	27.813	28.524
M 14	2.00	12.00	11.835	12.210	M 12 x 1.50	10.50	10.376	10.676	M 33 x 2.00	31.00	30.835	31.210	1 3/8 - 6	30.75	30.353	31.115
M 16	2.00	14.00	13.835	14.210	M 14 x 1.00	13.00	12.917	13.153	M 33 x 3.00	30.00	29.752	30.252	1 1/2 - 6	34.00	33.528	34.290
M 18	2.50	15.50	15.294	15.744	M 14 x 1.25	12.80	12.647	12.912	M 35 x 1.50	33.50	33.376	33.676	1 3/4 - 5	39.50	38.938	39.802
M 20	2.50	17.50	17.294	17.744	M 14 x 1.50	12.50	12.376	12.676	M 36 x 1.50	34.50	34.376	34.676	2 - 4.5	45.00	44.679	45.593
M 22	2.50	19.50	19.294	19.744	M 15 x 1.00	14.00	13.917	14.153								
M 24	3.00	21.00	20.752	21.252	M 15 x 1.50	13.50	13.376	13.676								
M 27	3.00	24.00	23.752	24.252	M 16 x 1.00	15.00	14.917	15.153								
M 30	3.50	26.50	26.211	26.771	M 16 x 1.25	14.80	14.647	14.912								
M 33	3.50	29.50	29.211	29.771	M 16 x 1.50	14.50	14.376	14.676								
M 36	4.00	32.00	31.670	32.270	M 17 x 1.00	16.00	15.917	16.153								
M 39	4.00	35.00	34.670	35.270	M 17 x 1.50	15.50	15.376	15.676								
M 42	4.50	37.50	37.129	37.799	M 18 x 1.00	17.00	16.917	17.153								
M 45	4.50	40.50	40.129	40.799	M 18 x 1.50	16.50	16.376	16.676								
M 48	5.00	43.00	42.587	43.297	M 20 x 1.00	19.00	18.917	19.153								
M 52	5.00	47.00	46.587	47.297	M 20 x 1.50	18.50	18.376	18.676								
M 56	5.50	50.50	50.046	50.796	M 20 x 2.00	18.00	17.835	18.210								
					M 22 x 1.00	21.00	20.917	21.153								

* M 1.1 up to M 1.4 tapping size hole of int. thread 5H

GÜHROSUNC
by GUHRING



Cutting Edge Finishing



- higher surface finish quality
- homogenous cutting edge rounding
- improved coating adhesion
- consistently higher thread quality

JIS>eco<tap

just smart!

by **GUHRING**

- ◆ economic price
- ◆ reliable functionality
- ◆ high quality

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