

9 Thread Mills

Cutter dia.	Overall length	Thread length	Thread+Neck length	Shank dia.
Dc	L	ℓ	ℓn	Ds

JIS

① Spiral Fluted Taps (for blind hole)

② Spiral Fluted Taps (for through hole)

③ Spiral Pointed Taps (for through hole)

④ Hand Taps

⑤ Cemented Carbide Taps

⑥ Roll Taps

⑦ Special Thread Taps Simple Inspection Tools

⑧ Pipe Taps

⑨ Thread Mills

Dies

⑩ Center Drills Centering Tools

JIS

⑨-1



Z-PRO PRML

Z-PRO Premium Thread Mills



Specification



For icon explanation, refer to icon-1

Product Features

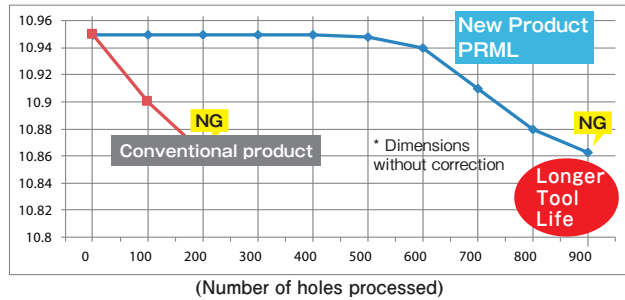
- The same PRML can process right and left hand internal threads by using the helical interpolating process.
- Because it cuts at the first thread, it won't make the internal threads taper and the internal threads become highly accurate.
- When cutting, the load on the tool is small and the tool life is long.
- Cutting resistance is reduced by turning the tool counterclockwise and machining it from the top to the bottom with 1 pass cutting.

Cutting Data

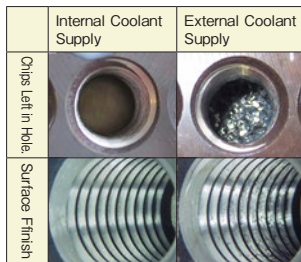
Processing Conditions [9.0P1.75-M12 M12×1.75]

Workpiece Material	SCM440 (30HRC)
Cutting Speed	100m/min
Feed per Tooth	0.06mm/t
Cutting Length	24mm
Bored Hole Size	φ10.3
Number of Passes	1Time
Machinery Type	Tapping center (BT 30)
Cutting Fluid	Water-soluble cutting fluid, 20 to 1 dilution

Pitch diameter change graph

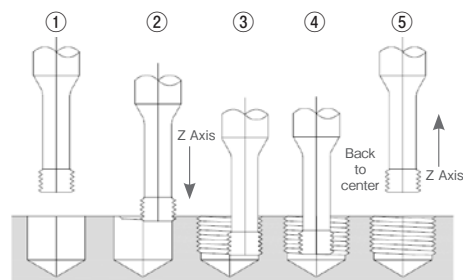


Use the internal coolant supply for blind hole applications.



Instructions

Use a counterclockwise spindle rotation for a left hand cutting tool. Process from top to the bottom like ② ~ ③. The program can be created from our web site.



Processing Conditions:

Workpiece Material	Cutting Speed (m/min)	Feed per Tooth fz (mm/t)
Thermal refined steel 35 ~ 45HRC	40 ~ 100	0.02 ~ 0.05
Thermal refined steel 25 ~ 35HRC	40 ~ 100	0.03 ~ 0.06
Cast Iron FC	40 ~ 100	0.02 ~ 0.05
Ductile Cast Iron FCD	40 ~ 100	0.02 ~ 0.05
Alloy Steel SCM	40 ~ 100	0.04 ~ 0.06
High Carbon Steel S45C ~	40 ~ 100	0.04 ~ 0.06
Medium Carbon Steel S25C ~ S45C	60 ~ 100	0.03 ~ 0.05
Low Carbon Steel ~ S20C / SS400	60 ~ 100	0.03 ~ 0.05

◇ Tool feed speed calculation formula

$$\text{Feed speed (mm/min)} = fz \times \text{No. of flutes} \times \text{Revolution speed} \times (\text{Nominal dia. of internal thread} - \text{Cutter dia. (Dc)}) / \text{Nominal dia. of internal thread}$$



For improvement, spec may change without advance notice.

Cutter dia.	Overall length	Thread length	Thread+Neck length	Shank dia.
Dc	L	ℓ	ℓn	Ds

Spiral Fluted Taps
(for blind hole) ①

Spiral Fluted Taps
(for through hole) ②

Spiral Pointed Taps
(for through hole) ③

Hand Taps ④

Cemented Carbide Taps ⑤

Roll Taps ⑥

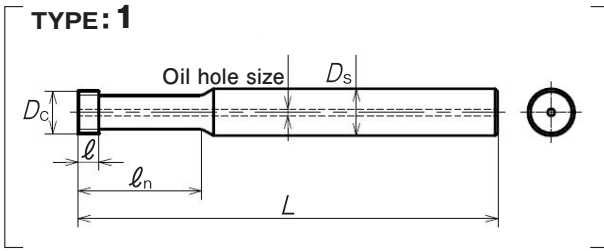
Special Thread Taps
Simple Inspection Tools ⑦

Pipe Taps ⑧

Thread Mills ⑨

Dies ⑩

Center Drills
Centering Tools ⑪



Segment : 1L

Tool No.	Code	Dc (mm)	Pitch (mm)	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	No. of flutes	Oil hole size (mm)	Min. size	Max. threading length	TYPE	MSRP
For Metric Threads													
3.5P0.8	MH3.5KNEXLM	3.5	0.8	60	2.4	12	6	3	0.5	5	10	1	¥ 16,200
4.0P1.0	MH4.0MNEXLM	4	1	60	3	14	6	3	0.5	6	12	1	¥ 16,200
4.0P0.75	MH4.0JNEXLM	4	0.75	60	2.3	14	6	3	0.5	6	12	1	¥ 16,200
6.0P1.25	MH6.0NNEXLM	6	1.25	70	3.8	18	6	4	1	8	16	1	¥ 22,100
6.0P1.0	MH6.0MNEXLM	6	1	70	3	18	6	4	1	8	16	1	¥ 22,100
7.5P1.5	MH7.5ONEXLM	7.5	1.5	80	4.5	22	8	4	1	10	20	1	¥ 23,100
7.5P1.25	MH7.5NNEXLM	7.5	1.25	80	3.8	22	8	4	1	10	20	1	¥ 23,100
7.5P1.0	MH7.5MNEXLM	7.5	1	80	3	22	8	4	1	10	20	1	¥ 23,100
9.0P1.75	MH9.0PNEXLM	9	1.75	90	5.3	26	10	4	1.5	12	24	1	¥ 26,400
9.0P1.5	MH9.0ONEXLM	9	1.5	90	4.5	26	10	4	1.5	12	24	1	¥ 26,400
9.0P1.25	MH9.0NNEXLM	9	1.25	90	3.8	26	10	4	1.5	12	24	1	¥ 26,400

Tool No.	Code	Dc (mm)	Number of threads	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	No. of flutes	Oil hole size (mm)	Min. size	Max. threading length	TYPE	MSRP
For Unified Threads													
3.5U24	MH3.5MNEXLU	3.5	24	60	3.2	11.7	6	3	0.5	No10	9.7	1	¥ 16,200
3.5U32	MH3.5JNEXLU	3.5	32	60	2.4	11.7	6	3	0.5	No10	9.7	1	¥ 16,200
4.5U20	MH4.5NNEXLU	4.5	20	60	3.8	14.7	6	4	0.5	1/4	12.7	1	¥ 17,900
4.5U28	MH4.5KNEXLU	4.5	28	60	2.7	14.7	6	4	0.5	1/4	12.7	1	¥ 17,900
5.8U18	MH5.8ONEXLU	5.8	18	70	4.2	17.9	6	4	1	5/16	15.9	1	¥ 22,100
5.8U24	MH5.8MNEXLU	5.8	24	70	3.2	21.1	6	4	1	5/16	19.1	1	¥ 22,100
6.0U16	MH6.0PNEXLU	6	16	70	4.8	21.1	6	4	1	3/8	19.1	1	¥ 22,100
8.0U14	MH8.0QNEXLU	8	14	80	5.4	24.2	8	4	1	7/16	22.2	1	¥ 23,100
8.0U20	MH8.0NNEXLU	8	20	80	3.8	27.4	8	4	1	7/16	25.4	1	¥ 23,100
9.0U13	MH9.0RNEXLU	9	13	90	5.9	27.4	10	4	1.5	1/2	25.4	1	¥ 26,400

※ = Specified Distribution Items. Made to order products.
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