

JIS • ANSI • DIN

LINE UP

⑨ THREAD MILLS / PREMIUM THREAD MILLS

	JIS	ANSI	DIN
Z-PRO PRML	⑨-3		
Z-PRO PRML Ti	⑨-5		
MC-CSLC	⑨-7		
MC-HLC	⑨-11		



Selection chart of Thread Mills

Recommended tap : ◎ : Most suitable tap
○ : Suitable tap

Recommended tapping fluid : ◆ : Insoluble
♦ : Water-soluble

Tapping conditions	Helical tapping area			
Product symbol	MC-HLC	MC-CSLC	Z-PRO PRML	Z-PRO PRML TI
Tap material Surface treatment	HSS-Co Coating	HF Coating	HF Coating	HF Coating
Name	For general use	For general use, carbide		For heat-resistant alloys, carbide
				
Bored Hole Shape				
For Metric Threads	⑨-11	⑨-8	⑨-4	⑨-6
For Unified Threads			⑨-4	⑨-6
For Whitworth Threads				
For Screw Threads used on Sewing Machines				
Pipe Threads	⑨-12	⑨-9		
American Pipe Threads				
For Miniature Threads				
For Trapezoidal Threads				

⑦ Special Thread Taps Simple Inspection Tools	⑧ Pipe Taps	⑨ Thread Mills Premium Thread Mills	⑩ Dies	⑪ Center Drills Centering Tools	⑫ Precision Machinery/ Medical Surgical Instruments
~S25C	Low carbon steels	◆ ○ ◆ ○ ◆ ◎			
S25C~S45C	Medium carbon steels	◆ ○ ◆ ○ ◆ ◎			
S45C~	High carbon steels	◆ ○ ◆ ○ ◆ ◎			
SCM	Alloy steels	◆ ○ ◆ ○ ◆ ◎			
25~35HRC	Heat treated steel	◆ ○ ◆ ○ ◆ ◎			
35~45HRC	Heat treated steel		◆ ○ ◆ ○		
45~55HRC	Heat treated steel				
55~63HRC	Heat treated steel				
SUS	Stainless steels (SUS)	◆ ○ ◆ ○ ◆ ○ ◆ ◎			
SKD	Tool steels	◆ ○ ◆ ○ ◆ ◎			
SC	Cast steels	◆ ○ ◆ ○ ◆ ◎			
FC	Cast irons	◆ ○ ◆ ○ ◆ ◎			
FCD	Ductile cast irons	◆ ○ ◆ ○ ◆ ◎			
Cu	Copper	◆ ○ ◆ ○ ◆ ○			
Bs	Brass	◆ ○ ◆ ○ ◆ ○			
BsC	Brass castings	◆ ○ ◆ ○ ◆ ○			
PB	Bronze	◆ ○ ◆ ○ ◆ ○			
AL	Wrought aluminum	◆ ○ ◆ ○ ◆ ○			
AC, ADC	Aluminum alloy casting	◆ ○ ◆ ○ ◆ ○			
Mg	Magnesium alloy die castings	◆ ○ ◆ ○ ◆ ○			
ZDC	Zinc alloy die castings	◆ ○ ◆ ○ ◆ ○			
	Titanium alloys				◆ ◎
	Nickel base alloys				
	Thermosetting plastic				
	Thermoplastic resin				

M E M O

Spiral Fluted Taps
(for blind hole) ①Spiral Fluted Taps
(for through hole) ②Spiral 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
Premium Thread Mills ⑨

Dies ⑩

Center Drills
Centering Tools ⑪Precision Machinery/
Medical Surgical Instruments ⑫

9 Thread Mills / Premium 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)

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(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
Premium Thread Mills

Dies

⑩

⑪ Center Drills
Centering Tools

⑫ Precision Machinery/
Medical Surgical Instruments

JIS

⑨-3



Z-PRO PRML

Z-PRO Premium Thread Mills

Specification



Tapping Speeds depending on Materials

Low carbon steels 低碳素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Thermal refined steels 調質鋼	Thermal refined steels 調質鋼	Cast irons 鑄鉄	Ductile cast irons 強靱鑄鉄
60~100 (m/min)	60~100 (m/min)	40~100 (m/min)	40~100 (m/min)	40~100 (m/min)	40~100 (m/min)	40~100 (m/min)	40~100 (m/min)
				25~35HRC	35~45HRC		



Product Features

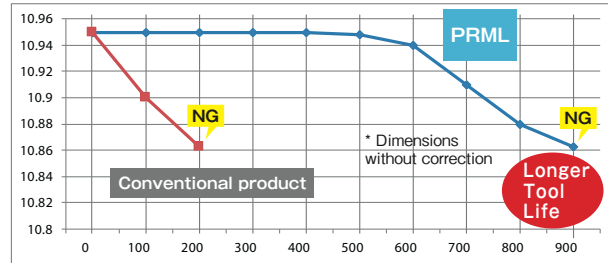
- The same PRML can process right and left hand internal threads by using the helical interpolating process.
- Because it cuts at the first thread, it won't make the internal threads taper and the internal threads become highly accurate.
- When cutting, the load on the tool is small and the tool life 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

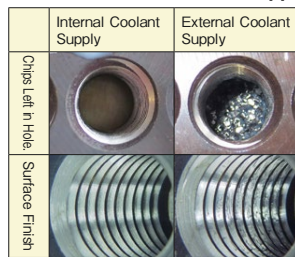
Processing Conditions [9.0P1.75 M12×1.75]

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, 1:20 dilution

Pitch diameter change graph

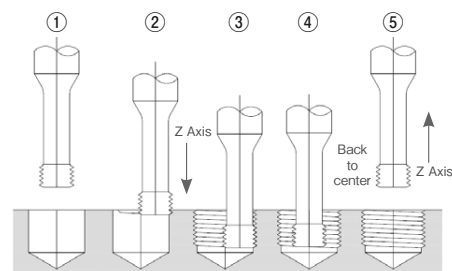


Use the internal coolant supply for blind hole applications.



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

Feed speed (mm/min) = fz x No. of flutes x Revolution speed x
(Nominal dia. of internal thread - Cutter dia. (Dc)) / Nominal dia. of
internal thread

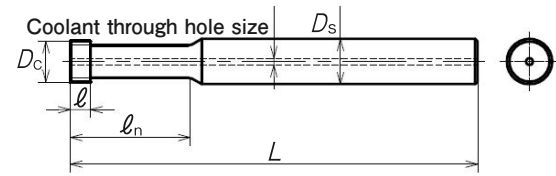
Think threads with
YAMAWA

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

9

JIS

TYPE: 1



Segment : 1L

Tool No.	Code	Dc (mm)	Pitch (mm)	L (mm)	ℓ (mm)	ℓ_n (mm)	Ds (mm)	No. of flutes	Coolant 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	¥ 17,100
4.0P1.0	MH4.0MNEXLM	4	1	60	3	14	6	3	0.5	6	12	1	¥ 17,100
4.0P0.75	MH4.0JNEXLM	4	0.75	60	2.3	14	6	3	0.5	6	12	1	¥ 17,100
6.0P1.25	MH6.0NNEXLM	6	1.25	70	3.8	18	6	4	1	8	16	1	¥ 23,300
6.0P1.0	MH6.0MNEXLM	6	1	70	3	18	6	4	1	8	16	1	¥ 23,300
7.5P1.5	MH7.5ONEXLM	7.5	1.5	80	4.5	22	8	4	1	10	20	1	¥ 24,300
7.5P1.25	MH7.5NNEXLM	7.5	1.25	80	3.8	22	8	4	1	10	20	1	¥ 24,300
7.5P1.0	MH7.5MNEXLM	7.5	1	80	3	22	8	4	1	10	20	1	¥ 24,300
9.0P1.75	MH9.0PNEXLM	9	1.75	90	5.3	26	10	4	1.5	12	24	1	¥ 27,800
9.0P1.5	MH9.0ONEXLM	9	1.5	90	4.5	26	10	4	1.5	12	24	1	¥ 27,800
9.0P1.25	MH9.0NNEXLM	9	1.25	90	3.8	26	10	4	1.5	12	24	1	¥ 27,800

Tool No.	Code	Dc (mm)	Number of threads	L (mm)	ℓ (mm)	ℓ_n (mm)	Ds (mm)	No. of flutes	Coolant 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	¥ 17,100
3.5U32	MH3.5JNEXLU	3.5	32	60	2.4	11.7	6	3	0.5	No10	9.7	1	¥ 17,100
4.5U20	MH4.5NEXLU	4.5	20	60	3.8	14.7	6	4	0.5	1/4	12.7	1	¥ 18,800
4.5U28	MH4.5KNEXLU	4.5	28	60	2.7	14.7	6	4	0.5	1/4	12.7	1	¥ 18,800
5.8U18	MH5.8ONEXLU	5.8	18	70	4.2	17.9	6	4	1	5/16	15.9	1	¥ 23,300
5.8U24	MH5.8MNEXLU	5.8	24	70	3.2	21.1	6	4	1	5/16	19.1	1	¥ 23,300
6.0U16	MH6.0PNEXLU	6	16	70	4.8	21.1	6	4	1	3/8	19.1	1	¥ 23,300
8.0U14	MH8.0QNEXLU	8	14	80	5.4	24.2	8	4	1	7/16	22.2	1	¥ 24,300
8.0U20	MH8.0NNEXLU	8	20	80	3.8	27.4	8	4	1	7/16	25.4	1	¥ 24,300
9.0U13	MH9.0RNEXLU	9	13	90	5.9	27.4	10	4	1.5	1/2	25.4	1	¥ 27,800

Spiral Fluted Taps
(for blind hole) ①Spiral Fluted Taps
(for through hole) ②Spiral 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
Premium Thread Mills ⑨

Dies ⑩

Center Drills
Centering Tools ⑪Precision Machinery/
Medical Surgical Instruments ⑫

JIS

⑨-4

9 Thread Mills / Premium 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)

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(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
Premium Thread Mills

Dies

⑩

⑪ Center Drills
Centering Tools

⑫ Precision Machinery/
Medical Surgical Instruments

JIS

⑨-5

Z-PRO

PRML TI

Z-PRO

Premium Thread Mills for Heat-Resistant Alloys



Specification



Tapping Speeds depending on Materials

Stainless steels ステンレス鋼	Titanium alloy チタン合金
60 ~ 80 (m/min)	40 ~ 60 (m/min)

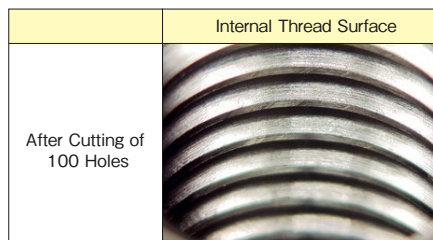
Product Features

- The same PRML TI can process right and left hand internal threads by using the helical interpolating process.
- This is most suitable for tapping heat-resistant alloys.
- 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

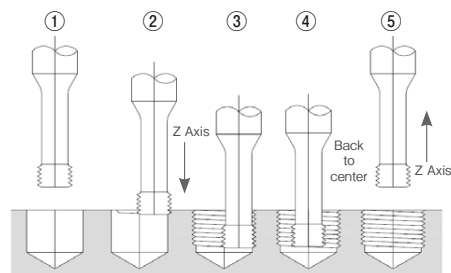
Processing Conditions [6.0P1.0]

Workpiece Material	Ti-6Al-4V
Cutting Speed	50m/min
Feed per Tooth	0.04mm/t
Cutting Length	10mm
Bored Hole Size	φ7.0
Number of Passes	1Time
Machinery Type	Machining center (BT30)
Cutting Fluid	Water soluble cutting fluid, 1:20 dilution



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)
Titanium Alloy	40 ~ 60	0.02 ~ 0.06
Austenitic Stainless Steel	60 ~ 80	0.06 ~ 0.08
Martensitic Stainless Steel	40 ~ 60	0.02 ~ 0.06

- These cutting conditions are based on water soluble cutting fluid. Depending on the condition of the cutting fluid, satisfactory performance may not be delivered.
 - Being careful of the nozzle position, supply enough oil obliquely from above the tool during use.
- Formulas for revolution speed and feed speed of tool
- Revolution speed (min⁻¹) = 1000 x Cutting speed / 3.14 / Cutter dia. (Dc)
- Feed speed (mm/min) = fz x No. of flutes x Revolution speed x (Nominal dia. of internal thread - Cutter dia. (Dc)) / Nominal dia. of internal thread

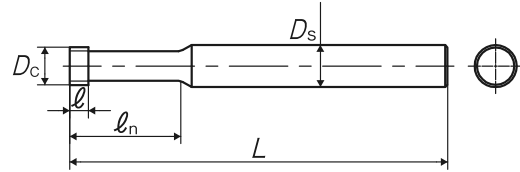
Think threads with
YAMAWA

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

9

JIS

TYPE: 1



Segment : 1L

Tool No.	Code	Dc (mm)	Pitch (mm)	L (mm)	ℓ (mm)	ℓ_n (mm)	Ds (mm)	No. of flutes	Min. size	Max. threading length	TYPE	MSRP
For Metric Threads												
1.5P0.4	MH1.5ENIWL	1.5	0.4	50	1.2	5.2	4	3	2	4	1	¥ 22,500
1.7P0.45	MH1.7FNIWL	1.7	0.45	50	1.4	5.8	4	3	2.2	4.4	1	¥ 22,500
2.4P0.5	MH2.4GNIWL	2.4	0.5	50	1.5	7.5	4	3	3	6	1	¥ 18,700
3.1P0.7	MH3.1INIWL	3.1	0.7	50	2.1	10.1	4	3	4	8	1	¥ 18,700
3.5P0.8	MH3.5KNIWL	3.5	0.8	60	2.4	12	6	3	5	10	1	¥ 17,100
4.0P1.0	MH4.0MNIWL	4.0	1	60	3	14	6	3	6	12	1	¥ 17,100
4.0P0.75	MH4.0JNIWL	4.0	0.75	60	2.3	14	6	3	6	12	1	¥ 17,100
6.0P1.25	MH6.0NNIWL	6	1.25	70	3.8	18	6	4	8	16	1	¥ 21,300
6.0P1.0	MH6.0MNIWL	6	1	70	3	18	6	4	8	16	1	¥ 21,300
7.5P1.5	MH7.5ONIWL	7.5	1.5	80	4.5	22	8	4	10	20	1	¥ 22,200
7.5P1.25	MH7.5NNIWL	7.5	1.25	80	3.8	22	8	4	10	20	1	¥ 22,200
7.5P1.0	MH7.5MNIWL	7.5	1	80	3	22	8	4	10	20	1	¥ 22,200
9.0P1.75	MH9.0PNIWL	9	1.75	90	5.3	26	10	4	12	24	1	¥ 25,400
9.0P1.5	MH9.0ONIWL	9	1.5	90	4.5	26	10	4	12	24	1	¥ 25,400
9.0P1.25	MH9.0NNIWL	9	1.25	90	3.8	26	10	4	12	24	1	¥ 25,400

Tool No.	Code	Dc (mm)	Number of threads	L (mm)	ℓ (mm)	ℓ_n (mm)	Ds (mm)	No. of flutes	Min. size	Max. threading length	TYPE	MSRP
For Unified Threads												
5.8U18	MH5.8ONIWL	5.8	18	70	4.2	17.9	6	4	5/16	15.9	1	¥ 21,300
5.8U24	MH5.8MNIWL	5.8	24	70	3.2	21.1	6	4	5/16	19.1	1	¥ 21,300
6.0U16	MH6.0PNIWL	6	16	70	4.8	21.1	6	4	3/8	19.1	1	¥ 21,300
8.0U14	MH8.0QNIWL	8	14	80	5.4	24.2	8	4	7/16	22.2	1	¥ 22,200
8.0U20	MH8.0NNIWL	8	20	80	3.8	27.4	8	4	7/16	25.4	1	¥ 22,200
9.0U13	MH9.0RNIWL	9	13	90	5.9	27.4	10	4	1/2	25.4	1	¥ 25,400

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
Premium Thread Mills

⑨

Dies

⑩

Center Drills
Centering Tools

⑪

Precision Machinery/
Medical Surgical Instruments

⑫

JIS

⑨-6

9 Thread Mills / Premium Thread Mills

Cutter dia.	Overall length	Thread length	Shank dia.
Dc	L	ℓ	Ds

JIS

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(for blind hole)

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⑨ Thread Mills
Premium Thread Mills

⑩ Dies

⑪ Center Drills
Centering Tools

⑫ Precision Machinery/
Medical Surgical Instruments

JIS

⑨-7

S

MC-CSLC

Carbide Thread Mills for Metric Internal Threads



Specification

HF

Coating

Tapping Speeds depending on Materials

High carbon steels 高炭素鋼	Alloy steels 合金鋼	Thermal refined steels 調質鋼	Stainless steels ステンレス鋼	Tool steels 工具鋼	Cast irons 鋳鉄	Brass 黄銅	Aluminum alloy castings アルミ合金鋳物
50~120 (m/min)	30~80 (m/min)	30~60 (m/min)	30~100 (m/min)	30~60 (m/min)	50~120 (m/min)	50~120 (m/min)	60~150 (m/min)

25~35HRC

Product Features

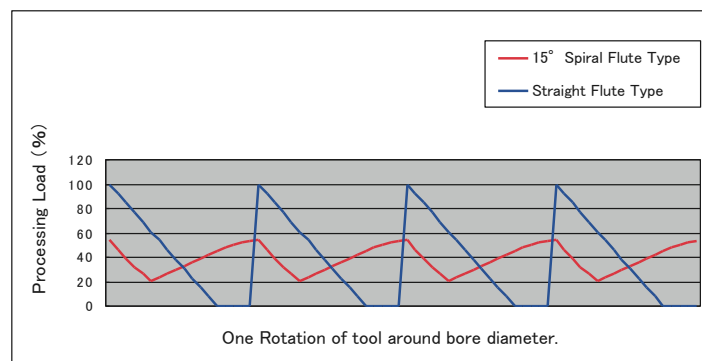
- The same MC-CSLC can process right and left hand internal threads by using the helical interpolating process.
The MC-CSLC can process different diameters of internal threads with one tool if they have the same pitch.
- The MC-CSLC can be used for a wide range of work piece materials such as aluminum, aluminum alloy, copper, copper alloy, cast iron, stainless steel, tool steel, alloy steel, carbon steel, thermal refined steel.
- The tool is produced from an ultrafine grain cemented carbide material that offers high wear resistance. It has a special coating to gain additional tool life.
- Blind hole internal thread machining with a few incomplete threads is possible.
- The MC-CSLC is a spiral fluted thread mill that reduces processing torque when compared to straight flute type.

Cutting data

Cutting Conditions [M14×1.5]

Cutter Diameter	φ10
Cutting length	20mm
Number of Flutes	4
Bored Hole Size	φ12.5
Flute type	Straight and spiral

Comparison of cutting torques



* The graph above is simulation figures, not an actual measurement value.

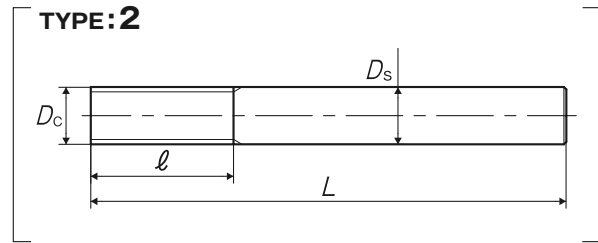
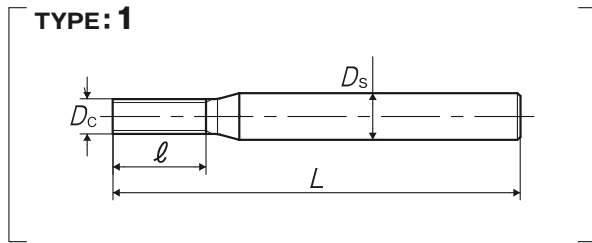
The graph on the upper right is a diagram of the machining torque change of a straight flute thread mill compared to a spiral flute thread mill. The spiral flute thread mill reduces torque by 40% and has a lower fluctuation rate than a straight flute thread mill.

• For the details of how to use thread mills, please refer to Technical information P.72 to P.78.

Cutter dia.	Overall length	Thread length	Shank dia.
Dc	L	ℓ	Ds

9

JIS



Segment : 1L

Tool No.	Code	Cutter diameter Dc (mm)	Pitch (mm)	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Min.size	TYPE	MSRP
For Metric Threads										
035083N080M	CSLCN3.5K	3.5	0.8	50	8	6	3	5	1	¥ 50,800 ※
035083N075M	CSLCN3.5J	3.5	0.75	50	8	6	3	5	1	¥ 50,800 ※
040123N100M	CSLCN4.0M	4	1	60	12	6	3	6	1	¥ 53,400 ※
060163N125M	CSLCN6.0N	6	1.25	70	16	8	3	8	1	¥ 54,500
060163N100M	CSLCN6.0M	6	1	70	16	8	3	8	1	¥ 54,500
060163N050M	CSLCN6.0G	6	0.5	70	16	8	3	8	1	¥ 54,500
075203N150M	CSLCN7.5O	7.5	1.5	70	20	8	3	10	2	¥ 67,200
075203N125M	CSLCN7.5N	7.5	1.25	70	20	8	3	10	2	¥ 67,200 ※
080203N100M	CSLCN8.0M	8	1	70	20	8	3	12	2	¥ 69,100 ※
080203N050M	CSLCN8.0G	8	0.5	70	20	8	3	12	2	¥ 69,100 ※
090244N175M	CSLCN9.0P	9	1.75	90	24	10	4	12	2	¥ 75,100
090244N125M	CSLCN9.0N	9	1.25	90	24	10	4	12	2	¥ 75,100
100254N200M	CSLCN010Q	10	2	90	25	10	4	14	2	¥ 89,200
100254N150M	CSLCN010O	10	1.5	90	25	10	4	14	2	¥ 89,200
100254N100M	CSLCN010M	10	1	90	25	10	4	14	2	¥ 89,200
100254N050M	CSLCN010G	10	0.5	90	25	10	4	14	2	¥ 89,200
120304N200M	CSLCN012Q	12	2	100	30	12	4	17	2	¥109,000
120304N150M	CSLCN012O	12	1.5	100	30	12	4	17	2	¥109,000
120304N100M	CSLCN012M	12	1	100	30	12	4	17	2	¥109,000
160404N250M	CSLCN016R	16	2.5	110	40	16	4	23	2	¥156,000
160404N200M	CSLCN016Q	16	2	110	40	16	4	23	2	¥156,000
160404N150M	CSLCN016O	16	1.5	110	40	16	4	23	2	¥156,000
200505N300M	CSLCN020S	20	3	140	50	20	5	28	2	¥227,000
200505N200M	CSLCN020Q	20	2	140	50	20	5	28	2	¥227,000
200505N150M	CSLCN020O	20	1.5	140	50	20	5	28	2	¥227,000

Spiral Fluted Taps
(for blind hole) ①Spiral Fluted Taps
(for through hole) ②Spiral 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
Premium Thread Mills ⑨

Dies ⑩

Center Drills
Centering Tools ⑪Precision Machinery/
Medical Surgical Instruments ⑫

JIS

⑨-8

※ = Specified Distribution Items. Made to order products.

 Think threads with
YAMAWA

9 Thread Mills / Premium Thread Mills

Cutter dia.	Overall length	Thread length	Shank dia.
Dc	L	ℓ	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
Premium Thread Mills

Dies

⑩

⑪ Center Drills
Centering Tools

⑫ Precision Machinery/
Medical Surgical Instruments

JIS

⑨-9

S

MC-CSLC

Carbide Thread Mills for Taper Pipe Threads(Rc・PT)



Specification



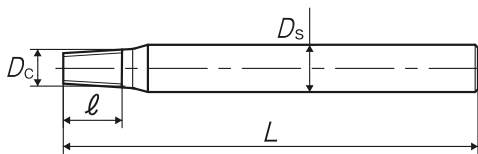
■MC-CSLC is the tool cutting threads by using helical interpolating process. One MC-CSLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

Tapping Speeds depending on Materials

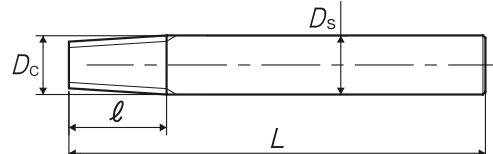
High carbon steels 高炭素鋼	Alloy steels 合金鋼	Thermal refined steels 調質鋼	Stainless steels ステンレス鋼	Tool steels 工具鋼	Cast irons 鋳鉄	Brass 黄銅	Aluminum alloy castings アルミ合金鋳物
50~120 (m/min)	30~80 (m/min)	30~60 (m/min)	30~100 (m/min)	30~60 (m/min)	50~120 (m/min)	50~120 (m/min)	60~150 (m/min)

25~35HRC

TYPE: 1



TYPE: 2



Segment : 1L

Tool No.	Code	Cutter diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Processable thread size	TYPE	MSRP
For PT Threads										
065103X28R	CSLCX6.5KR	6.5	28	70	10	8	3	1/8	1	¥ 73,800
080153X19R	CSLCX8.0-R	8	19	70	15	8	3	1/4・3/8	2	¥ 82,800
120204X14R	CSLCX012QR	12	14	80	20	12	4	1/2・3/4	2	¥ 121,000
160264X11R	CSLCX016UR	16	11	90	26	16	4	1 ~	2	¥ 170,000
200305X11R	CSLCX020UR	20	11	110	30	20	5	1 ~	2	¥ 252,000

・For the details of how to use thread mills, please refer to Technical information P.72 to P.78.

Cutter dia.	Overall length	Thread length	Shank dia.
Dc	L	ℓ	Ds

9

JIS

S
JIS

MC-CSLC

Carbide Thread Mills for Parallel Pipe Threads(G・PF) (Rp・PS)



Specification



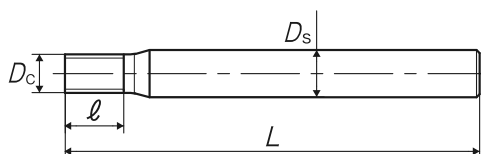
■MC-CSLC is the tool cutting threads by using helical interpolating process. One MC-CSLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

Tapping Speeds depending on Materials

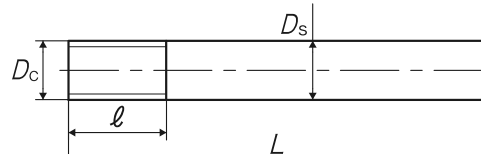
High carbon steels 高炭素鋼	Alloy steels 合金鋼	Thermal refined steels 調質鋼	Stainless steels ステンレス鋼	Tool steels 工具鋼	Cast irons 鋳鉄	Brass 黄銅	Aluminum alloy castings アルミ合金鋳物
50~120 (m/min)	30~80 (m/min)	30~60 (m/min)	30~100 (m/min)	30~60 (m/min)	50~120 (m/min)	50~120 (m/min)	60~150 (m/min)

25~35HRC

TYPE: 1



TYPE: 2



Segment : 1L

Tool No.	Code	Cutter diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	Ds (mm)	No. of flutes	Processable thread size	TYPE	MSRP
For PF Threads										
065103X28G	CSLCX6.5KG	6.5	28	70	10	8	3	1/8	1	¥ 67,200
080153X19G	CSLCX8.0-G	8	19	70	15	8	3	1/4・3/8	2	¥ 75,100
120204X14G	CSLCX012QG	12	14	80	20	12	4	1/2・3/4	2	¥ 109,000
160264X11G	CSLCX016UG	16	11	90	26	16	4	1 ~	2	¥ 156,000
200305X11G	CSLCX020UG	20	11	110	30	20	5	1 ~	2	¥ 227,000

・For the details of how to use thread mills, please refer to Technical information P.72 to P.78.

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
Premium Thread Mills ⑨

Dies ⑩

Center Drills
Centering Tools ⑪

Precision Machinery/
Medical Surgical Instruments ⑫

JIS

⑨-10

9 Thread Mills / Premium 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
Premium Thread Mills

Dies

⑩

⑪ Center Drills
Centering Tools

⑫ Precision Machinery/
Medical Surgical Instruments

JIS

⑨-11

S

MC-HLC

Thread Mills for Metric Internal Threads



Specification

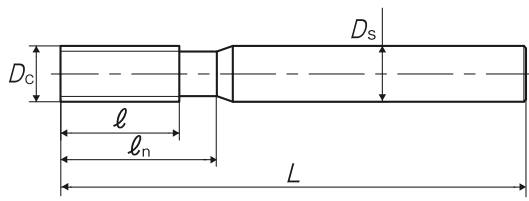
HSS-Co Coating

■MC-HLC is the tool cutting threads by using helical interpolating process. One MC-HLC can produce internal threads of different diameter, both right hand threads and left hand threads, as far as the thread pitch is same.

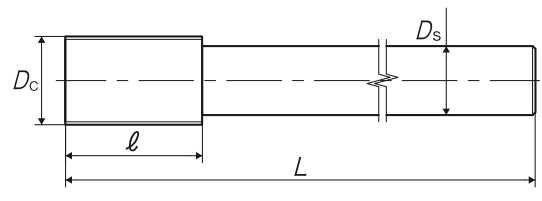
Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Cast irons 鋳鉄	Ductile cast irons 強靱鋳鉄	Brass 黄銅	Wrought aluminum アルミ圧延材	Aluminum alloy castings アルミ合金鋳物
25~40 (m/min)	20~35 (m/min)	20~35 (m/min)	30~45 (m/min)	30~45 (m/min)	40~70 (m/min)	50~80 (m/min)	50~80 (m/min)

TYPE:1



TYPE:2



Segment : 57

Tool No.	Code	Cutter diameter Dc (mm)	Pitch (mm)	L (mm)	ℓ (mm)	ℓn (mm)	Ds (mm)	No. of flutes	Min.size	TYPE	MSRP
For Metric Threads											
10204N150M	HLCN010O	10	1.5	90	20	27	10	4	14	1	¥ 45,300 ※
10204N100M	HLCN010M	10	1	90	20	27	10	4	14	1	¥ 49,600 ※
12254N200M	HLCN012Q	12	2	100	25	33	12	4	17	1	¥ 48,200 ※
12254N150M	HLCN012O	12	1.5	100	25	33	12	4	17	1	¥ 48,200 ※
12254N100M	HLCN012M	12	1	100	25	33	12	4	17	1	¥ 53,100 ※
16304N250M	HLCN016R	16	2.5	110	30	42	16	4	23	1	¥ 54,300 ※
16304N200M	HLCN016Q	16	2	110	30	42	16	4	23	1	¥ 54,300 ※
16304N150M	HLCN016O	16	1.5	110	30	42	16	4	23	1	¥ 54,300 ※
16304N100M	HLCN016M	16	1	110	30	42	16	4	23	1	¥ 59,100 ※
20505N350M	HLCN020T	20	3.5	140	50	64	20	5	28	1	¥ 61,800 ※
20505N300M	HLCN020S	20	3	140	50	64	20	5	28	1	¥ 61,800 ※
20505N200M	HLCN020Q	20	2	140	50	64	20	5	28	1	¥ 61,800 ※
20505N150M	HLCN020O	20	1.5	140	50	64	20	5	28	1	¥ 61,800 ※
20505N100M	HLCN020M	20	1	140	50	64	20	5	28	1	¥ 67,400 ※
25506N350M	HLCN025T	25	3.5	160	50	-	20	6	36	2	¥ 72,500 ※
25506N300M	HLCN025S	25	3	160	50	-	20	6	36	2	¥ 72,500 ※
25506N200M	HLCN025Q	25	2	160	50	-	20	6	36	2	¥ 72,500 ※
25506N150M	HLCN025O	25	1.5	160	50	-	20	6	36	2	¥ 72,500 ※
25506N100M	HLCN025M	25	1	160	50	-	20	6	36	2	¥ 78,400 ※
32506N300M	HLCN032S	32	3	200	50	-	25	6	45	2	¥ 84,400 ※
32506N200M	HLCN032Q	32	2	200	50	-	25	6	45	2	¥ 84,400 ※
32506N150M	HLCN032O	32	1.5	200	50	-	25	6	45	2	¥ 84,400 ※

・ For the details of how to use thread mills, please refer to Technical information P.72 to P.78.

Think threads with
YAMAWA

※ = Specified Distribution Items. Made to order products.

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

MC-HLC

Thread Mills for Taper Pipe Threads(Rc · PT)



Specification

HSS-Co

Coating

■MC-HLC is the tool cutting threads by using helical interpolating process. One MC-HLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

Tapping Speeds depending on Materials

Low carbon steels
低炭素鋼
25 ~ 40
(m/min)

Medium carbon steels
中炭素鋼
20 ~ 35
(m/min)

High carbon steels
高炭素鋼
20 ~ 35
(m/min)

Cast irons
鋳鉄
30 ~ 45
(m/min)

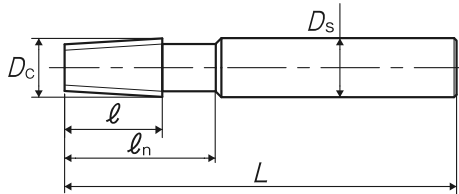
Ductile cast irons
強靱鋳鉄
30 ~ 45
(m/min)

Brass
黄銅
40 ~ 70
(m/min)

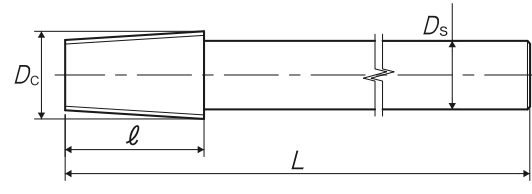
Wrought aluminum
アルミ圧延材
50 ~ 80
(m/min)

Aluminum alloy castings
アルミ合金鋳物
50 ~ 80
(m/min)

TYPE:1



TYPE:2



Segment : 57

Tool No.	Code	Cutter diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	ℓ_n (mm)	Ds (mm)	No. of flutes	Processable thread size	TYPE	MSRP
For PT Threads											
10154X19R	HLCX010-R	10	19	70	15	24	10	4	3/8	1	¥ 52,400 ※
12204X14R	HLCX012QR	12	14	80	20	30	12	4	1/2 · 3/4	1	¥ 55,800 ※
20305X11R	HLCX020UR	20	11	100	30	48	20	5	1 ~ 2	1	¥ 66,500 ※
32506X11R	HLCX032UR	32	11	200	50	-	25	6	2 1/2 ~ 6	2	¥ 86,300 ※

・ For the details of how to use thread mills, please refer to Technical information P.72 to P.78.

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
Premium Thread Mills ⑨

Dies ⑩

Center Drills
Centering Tools ⑪

Precision Machinery/
Medical Surgical Instruments ⑫

JIS

⑨-12

9 Thread Mills / Premium Thread Mills

Cutter dia.	Overall length	Thread length	Thread+Neck length	Shank dia.
Dc	L	ℓ	ℓ_n	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
Premium Thread Mills

⑩ Dies

⑪ Center Drills
Centering Tools

⑫ Precision Machinery/
Medical Surgical Instruments

JIS

⑨-13

S

MC-HLC

Thread Mills for Parallel Pipe Threads (G・PF)(Rp・PS)



Specification

HSS-Co

Coating

■MC-HLC is the tool cutting threads by using helical interpolating process. One MC-HLC can produce external and internal threads of different diameter, and both right hand threads and left hand threads, as far as the thread pitch is same.

Tapping Speeds depending on Materials

Low carbon steels
低炭素鋼
25 ~ 40
(m/min)

Medium carbon steels
中炭素鋼
20 ~ 35
(m/min)

High carbon steels
高炭素鋼
20 ~ 35
(m/min)

Cast irons
鋳鉄
30 ~ 45
(m/min)

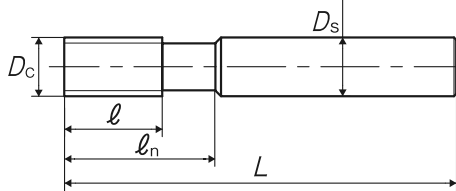
Ductile cast irons
強靱鋳鉄
30 ~ 45
(m/min)

Brass
黄銅
40 ~ 70
(m/min)

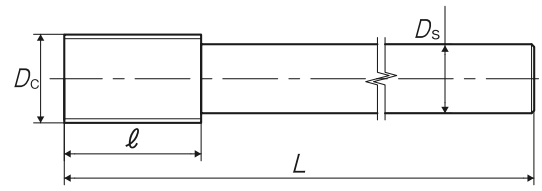
Wrought aluminum
アルミ圧延材
50 ~ 80
(m/min)

Aluminum alloy castings
アルミ合金鋳物
50 ~ 80
(m/min)

TYPE: 1



TYPE: 2



Segment : 57

Tool No.	Code	Cutter diameter Dc (mm)	Number of threads	L (mm)	ℓ (mm)	ℓ_n (mm)	Ds (mm)	No. of flutes	Processable thread size	TYPE	MSRP
For PF Threads											
10154X19G	HLCX010-G	10	19	70	15	24	10	4	3/8	1	¥ 44,600 ※
12204X14G	HLCX012QG	12	14	80	20	30	12	4	1/2・3/4	1	¥ 47,200 ※
20305X11G	HLCX020UG	20	11	100	30	48	20	5	1 ~ 2	1	¥ 56,100 ※
32506X11G	HLCX032UG	32	11	200	50	-	25	6	2 1/2 ~ 6	2	¥ 80,000 ※

• For the details of how to use thread mills, please refer to Technical information P.72 to P.78.

Think threads with
YAMAWA

※ = Specified Distribution Items. Made to order products.