

① Spiral Fluted Tap Series for blind hole

Overall length	Thread length	Thread + Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓn	ℓs	Ds	K	ℓk

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

Z-PRO HVSP

Z-PRO

Hybrid Value Spiral Fluted Taps for Steels



Specification

HSS

OX
Oxide



Tapping Speeds depending on Materials

Low carbon steels
低碳素鋼
3~12
(m/min)

Medium carbon steels
中炭素鋼
3~12
(m/min)

High carbon steels
高炭素鋼
3~12
(m/min)

Alloy steels
合金鋼
3~12
(m/min)

Thermal refined steels
調質鋼
~5
(m/min)

Stainless steels
ステンレス鋼
~5
(m/min)

Cast steels
鋳鋼
3~12
(m/min)

25~35HRC

Product Features

- YAMAWA has designed a flute shape and cutting edge angle to improve the chip ejection properties.
- A heel grind on the rear threads has improved the performance of the tap and eliminated the materials chip residue in the threads that is caused on reversal by the tap's end threads.
- With no chips left in the threads, the tapping operation is less likely to chip the flutes or threads of the tap during the tap's reversal.
- There are several full threads after the cutting chamfer and a special heel grind to the balance of the threads to reduce their full thread height, thereby reducing any chance of chipping the flutes.

Tapping Data

•Improvement of chipped flutes

Tapping conditions [M36 × 4]

Work Piece Material	SS400
Tapping Speed	3m/min
Tapping Length	50mm
Machinery Type	Radial drilling machine
Tapping Fluid	Non-water soluble cutting oil

◎Full Thread Part



◎Chamfer Part



•Compatible with a wide range of workpiece machining.

Tapping conditions

	Material	Recommended Tapping Speed (m/min)
Stainless Steel	SUS303/SUS304/SUS316	~ 5
Alloy Steel	SCM/SCr	3 ~ 12
High Carbon Steel	S45C ~	3 ~ 12
Medium Carbon Steel	S25C ~ S45C	3 ~ 12
Low Carbon Steel	~ S20C/SS400	3 ~ 12
Thermal refined steel		~ 5
Cast steel		3 ~ 12

Excellent Surface Finish



Think threads with
YAMAWA

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1

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Thread Mills
Premium Thread Mills ⑨

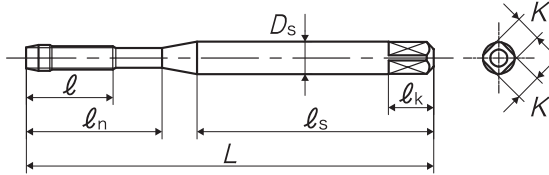
Dies ⑩

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

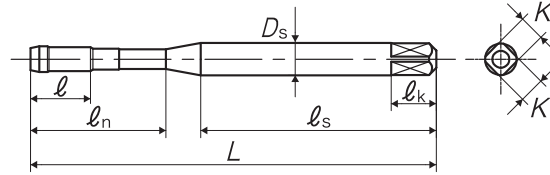
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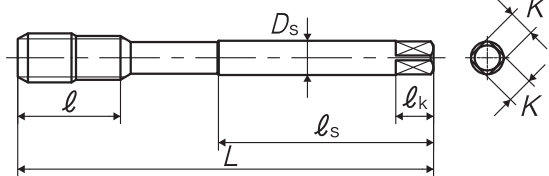
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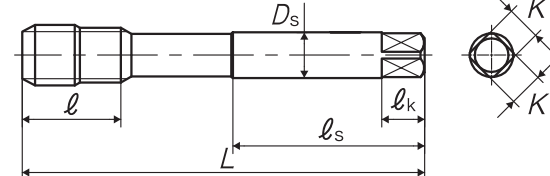
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TYPE: 3



TYPE: 4



Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓ _n (mm)	ℓ _s (mm)	D _s (mm)	K (mm)	ℓ _k (mm)	No. of flutes	TYPE	MSRP
For Metric Threads													
M3 × 0.5	P3	SY3.0GREEXJ	2.5P	56	9	18	32	4	3.2	6	3	1	¥ 1,400
M3 × 0.35	P3	SY3.0DREEXJ	2.5P	56	6.5	18	32	4	3.2	6	3	2	¥ 2,390
M4 × 0.7	P4	SY4.0ISEEXJ	2.5P	63	13	21	36	5	4	7	3	1	¥ 1,400
M4 × 0.5	P4	SY4.0GSEEXJ	2.5P	63	9	21	36	5	4	7	3	2	¥ 2,050
M5 × 0.8	P4	SY5.0KSEEXJ	2.5P	70	14	25	40	5.5	4.5	7	3	1	¥ 1,410
M5 × 0.5	P4	SY5.0GSEEXJ	2.5P	70	9	25	40	5.5	4.5	7	3	2	¥ 2,050
M6 × 1	P4	SY6.0MSEEXJ	2.5P	80	15	30	45	6	4.5	7	3	1	¥ 1,610
M6 × 0.75	P4	SY6.0JSEEXJ	2.5P	80	15	30	45	6	4.5	7	3	1	¥ 2,270
M6 × 0.5	P4	SY6.0GSEEXJ	2.5P	80	9	30	45	6	4.5	7	3	2	¥ 2,270
M8 × 1.25	P4	SY8.0NSEEXJ	2.5P	90	19	-	46	6.2	5	8	3	3	¥ 2,270
M8 × 1	P4	SY8.0MSEEXJ	2.5P	90	19	-	46	6.2	5	8	3	3	¥ 2,580
M10 × 1.5	P4	SY010OSEEXJ	2.5P	100	23	-	51	7	5.5	8	3	3	¥ 2,970
M10 × 1.25	P4	SY010NSEEXJ	2.5P	100	23	-	51	7	5.5	8	3	3	¥ 2,970
M10 × 1	P4	SY010MSEEXJ	2.5P	100	23	-	51	7	5.5	8	3	3	¥ 3,520
M12 × 1.75	P4	SY012PSEEXJ	2.5P	110	26	-	56	8.5	6.5	9	3	3	¥ 4,000
M12 × 1.5	P4	SY012OSEEXJ	2.5P	110	26	-	56	8.5	6.5	9	3	3	¥ 4,000
M12 × 1.25	P4	SY012NSEEXJ	2.5P	110	26	-	56	8.5	6.5	9	3	3	¥ 4,000
M14 × 2	P4	SY014QSEEXJ	2.5P	110	26	-	56	10.5	8	11	3	3	¥ 5,470
M14 × 1.5	P4	SY014OSEEXJ	2.5P	110	26	-	56	10.5	8	11	3	3	¥ 5,470
M16 × 2	P4	SY016QSEEXJ	2.5P	110	26	-	56	12.5	10	13	3	3	¥ 7,300
M16 × 1.5	P4	SY016OSEEXJ	2.5P	110	26	-	56	12.5	10	13	3	3	¥ 7,300
M18 × 2.5	P5	SY018RTEEXJ	2.5P	125	33	-	64	14	11	14	4	3	¥ 9,760
M18 × 1.5	P5	SY018OTEEXJ	2.5P	125	33	-	64	14	11	14	4	3	¥ 9,760
M20 × 2.5	P5	SY020RTEEXJ	2.5P	140	33	-	71	15	12	15	4	4	¥ 13,300
M20 × 1.5	P5	SY020OTEEXJ	2.5P	140	33	-	71	15	12	15	4	4	¥ 13,300
M22 × 2.5	P5	SY022RTEEXJ	2.5P	140	33	-	71	17	13	16	4	4	¥ 16,800
M22 × 1.5	P5	SY022OTEEXJ	2.5P	140	33	-	71	17	13	16	4	4	¥ 16,800
M24 × 3	P5	SY024STEEXJ	2.5P	160	37	-	82	19	15	18	4	4	¥ 21,000
M24 × 1.5	P5	SY024OTEEXJ	2.5P	160	37	-	82	19	15	18	4	4	¥ 21,000
M27 × 3	P5	SY027STEEXJ	2.5P	160	37	-	82	20	15	18	4	4	¥ 29,700
M27 × 1.5	P5	SY027OTEEXJ	2.5P	160	37	-	82	20	15	18	4	4	¥ 29,700
M30 × 3.5	P6	SY030TUEEXJ	2.5P	180	44	-	92	23	17	20	4	4	¥ 37,700
M30 × 3	P6	SY030SUEEXJ	2.5P	180	44	-	92	23	17	20	4	4	¥ 37,700
M30 × 1.5	P6	SY030OUEEXJ	2.5P	180	44	-	92	23	17	20	4	4	¥ 37,700

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HVSP Z-PRO Hybrid Value Spiral Fluted Taps for Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	TYPE	MSRP
M33 × 3.5	P6	SY033TUEEXJ	2.5P	180	46	-	92	25	19	22	4	4	¥ 44,000
M33 × 3	P6	SY033SUEEXJ	2.5P	180	46	-	92	25	19	22	4	4	¥ 44,000
M36 × 4	P6	SY036UUEEXJ	2.5P	200	52	-	102	28	21	24	4	4	¥ 50,700
M36 × 3	P6	SY036SUEEXJ	2.5P	200	52	-	102	28	21	24	4	4	¥ 50,700
M39 × 4	P6	SY039UUEEXJ	2.5P	200	52	-	102	30	23	26	4	4	¥ 58,200
M39 × 3	P6	SY039SUEEXJ	2.5P	200	52	-	102	30	23	26	4	4	¥ 58,200
M42 × 4.5	P6	SY042VUEEXJ	2.5P	200	59	-	102	32	26	30	4	4	¥ 70,800
M42 × 3	P6	SY042SUEEXJ	2.5P	200	59	-	102	32	26	30	4	4	¥ 70,800
M48 × 5	P6	SY048WUEEXJ	2.5P	250	65	-	128	38	29	32	4	4	¥ 103,000
M48 × 3	P6	SY048SUEEXJ	2.5P	250	65	-	128	38	29	32	4	4	¥ 103,000
For Unified Threads													
1 -8UNC	P5	SYU16XTEEXJ	2.5P	160	37	-	82	19	15	18	4	4	¥ 32,600
1 -12UNF	P4	SYU16SSEEXJ	2.5P	160	37	-	82	19	15	18	4	4	¥ 32,600
1 1/8-7UNC	P6	SYU18YUEEXJ	2.5P	180	44	-	92	23	17	20	4	4	¥ 40,800 ※
1 1/8-8UN	P5	SYU18XTEEXJ	2.5P	180	44	-	92	23	17	20	4	4	¥ 40,800 ※
1 1/8-12UNF	P4	SYU18SSEEXJ	2.5P	180	44	-	92	23	17	20	4	4	¥ 40,800 ※
1 1/4-7UNC	P6	SYU20YUEEXJ	2.5P	180	44	-	92	24	19	22	4	4	¥ 47,700 ※
1 1/4-8UN	P5	SYU20XTEEXJ	2.5P	180	44	-	92	24	19	22	4	4	¥ 47,700 ※
1 1/4-12UNF	P4	SYU20SSEEXJ	2.5P	180	44	-	92	24	19	22	4	4	¥ 47,700 ※
1 3/8-6UNC	P6	SYU22ZUEEXJ	2.5P	200	52	-	102	28	21	24	4	4	¥ 60,000 ※
1 3/8-8UN	P5	SYU22XTEEXJ	2.5P	200	52	-	102	28	21	24	4	4	¥ 60,000 ※
1 3/8-12UNF	P4	SYU22SSEEXJ	2.5P	200	52	-	102	28	21	24	4	4	¥ 60,000 ※
1 1/2-6UNC	P6	SYU24ZUEEXJ	2.5P	200	52	-	102	30	23	26	4	4	¥ 64,000 ※
1 1/2-8UN	P5	SYU24XTEEXJ	2.5P	200	52	-	102	30	23	26	4	4	¥ 64,000 ※
1 1/2-12UNF	P4	SYU24SSEEXJ	2.5P	200	52	-	102	30	23	26	4	4	¥ 64,000 ※
1 3/4-5UNC	P6	SYU280UEEXJ	2.5P	220	59	-	112	35	26	30	4	4	¥ 80,900 ※
1 3/4-8UN	P5	SYU28XTEEXJ	2.5P	220	59	-	112	35	26	30	4	4	¥ 80,900 ※
1 3/4-12UN	P4	SYU28SSEEXJ	2.5P	220	59	-	112	35	26	30	4	4	¥ 80,900 ※
2 -4 1/2UNC	P7	SYU329VEEXJ	2.5P	250	73	-	128	40	32	35	4	4	¥ 117,000 ※
2 -8UN	P6	SYU32XUEEXJ	2.5P	250	73	-	128	40	32	35	4	4	¥ 117,000 ※

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

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※ = Specified Distribution Items. Made to order products.