

SU+SP/SU-SP

Spiral Fluted Taps for Stainless Steels

Specification



Recommended Tapping Speeds depending on Materials

Alloy steels 合金鋼	Stainless steels ステンレス鋼
~10 (m/min)	~10 (m/min)

For icon explanation, refer to P.24

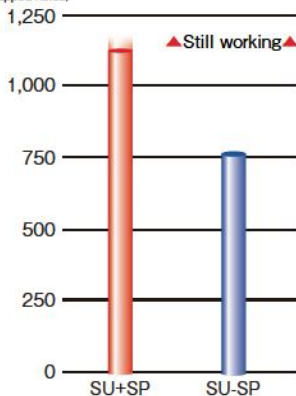
SU+SP	~ M6 (coarse thread)
SU-SP	~ M1.7, M8~, all U, all W

Product features

- Most suitable for stainless steels, sticky and tending to work-harden, as well as chrome steels and molybdenum steels, blind hole use.
- Reduction of cutting load on each cutting edge due to optimum design of thread portion.
- Decrease of cutting resistance and increase of tool life.
- Improvement of chip ejection and good thread finish.
- Increase of tool life due to the improvement of tap strength.
- Suitable for both rigid tapping machine and non-rigid tapping machine.

Comparison of tool life

(Number of tapped holes)

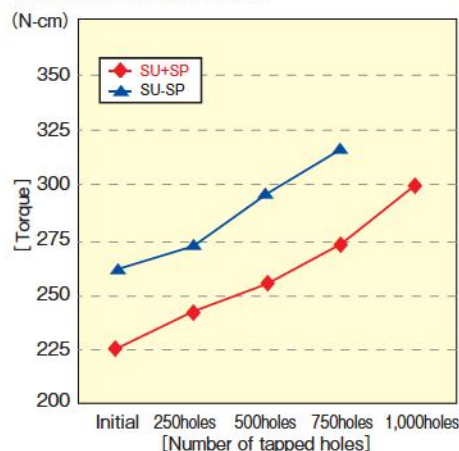


Tapping data

Tapping condition (M6×1)

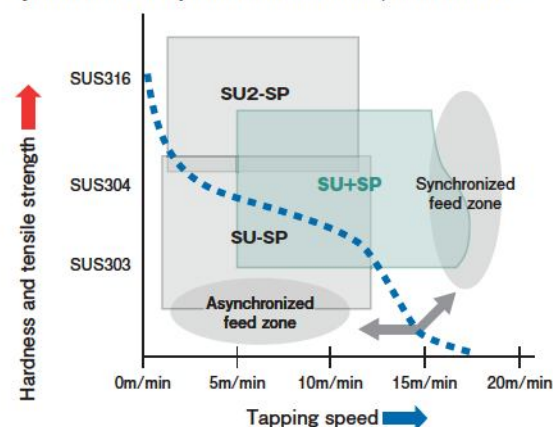
Work material	SUS304(90HRB)
Tapping speed	8m/min
Hole size	φ5.0
Tapping length	9mm, blind hole
Machine	Vertical machining center (with rigid feed)
Tapping fluid	Insoluble oil without chlorine

Transition of tapping torque



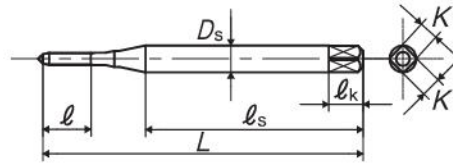
Products System

System table of taps for stainless steels, blind hole use

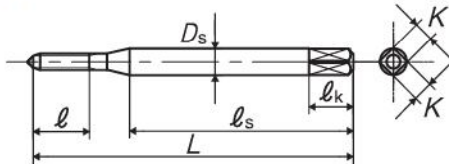


Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

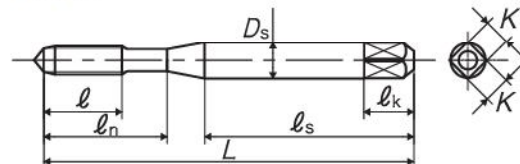
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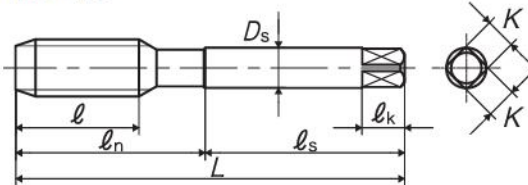
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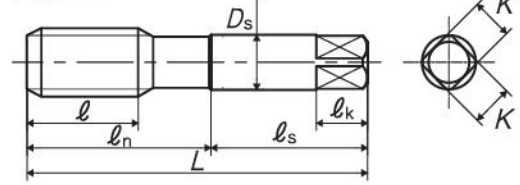
TYPE:3



TYPE:4



TYPE:5



Oversize
Segment : 1C

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
For Metric Threads													
M1.4 × 0.3	P1	SUMP1.4C	2.5P	36	5.4	-	24	3	2.5	5	2	1	△
M1.7 × 0.35	P1	SUMP1.7D	2.5P	36	6.3	-	24	3	2.5	5	2	2	△
	P2	SUMQ1.7D											
M2 × 0.4	P1	SUPP2.0E											◎
	P2	SUPQ2.0E	2.5P	42	7.2	12	27	3	2.5	5	2	3	△
	P3	SUPR2.0E											
M2.3 × 0.4	P1	SUPP2.3E											
	P2	SUPQ2.3E	2.5P	42	7.2	12	27	3	2.5	5	2	3	△
	P3	SUPR2.3E											
M2.5 × 0.45	P1	SUPP2.5F											○
	P2	SUPQ2.5F	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
	P3	SUPR2.5F											
M2.6 × 0.45	P1	SUPP2.6F											○
	P2	SUPQ2.6F	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
	P3	SUPR2.6F											
M3 × 0.5	P1	SUPP3.0G											◎
	P2	SUPQ3.0G	2.5P	46	9	14	26	4	3.2	6	3	3	△
	P3	SUPR3.0G											
3M0.6	P1	SUPP3.0H	2.5P	46	9	14	26	4	3.2	6	3	3	△
M3.5 × 0.6	P1	SUPP3.5H											
	P3	SUPR3.5H	2.5P	52	11	16	29	5	4	7	3	3	△
M4 × 0.7	P2	SUPQ4.0I											◎
	P3	SUPR4.0I	2.5P	52	11	17	29	5	4	7	3	3	△
	P4	SUP4.0I											

◎=Standard ○=Semi standard △=Made to order
For improvement, spec may change without advance notice.

Think threads with
YAMAWA

Spiral Fluted Taps
(for blind hole)

Spiral Fluted Taps
(for through hole)

Spiral Pointed Taps
(for through hole)

Hand Taps

Cemented
Carbide Taps

Roll Taps

Special Thread Taps
Simple Inspection Tools

Pipe Taps

Thread Mills

Dies

Center Drills

Centering Tools

Spiral Fluted Tap Series for blind hole

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
4M0.75	P2	SUPQ4.0J	2.5P	52	11	17	29	5	4	7	3	3	△
M5 × 0.8	P2	SUPQ5.0K	2.5P	60	13	22	33	5.5	4.5	7	3	3	⊙
	P3	SUPR5.0K											△
	P4	SUPS5.0K											△
5M0.9	P2	SUPQ5.0L	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
M6 × 1	P2	SUPQ6.0M	2.5P	62	15	26	33	6	4.5	7	3	3	⊙
	P3	SUPR6.0M											△
	P4	SUPS6.0M											△
M6 × 0.75	P2	SUMQ6.0J	2.5P	62	15	26	33	6	4.5	7	3	3	△
M8 × 1.25	P2	SUMQ8.0N	2.5P	70	19	-	36	6.2	5	8	3	4	⊙
	P3	SUMR8.0N											△
	P4	SUMS8.0N											△
M8 × 1	P2	SUMQ8.0M	2.5P	70	19	-	36	6.2	5	8	3	4	△
M8 × 0.75	P2	SUMQ8.0J	2.5P	70	19	-	36	6.2	5	8	3	4	△
M10 × 1.5	P2	SUMQ0100	2.5P	75	23	-	38	7	5.5	8	3	4	⊙
	P3	SUMR0100											△
	P4	SUMS0100											△
M10 × 1.25	P2	SUMQ010N	2.5P	75	23	-	38	7	5.5	8	3	4	○
	P3	SUMR010N											△
	P4	SUMS010N											△
M10 × 1	P2	SUMQ010M	2.5P	75	23	-	38	7	5.5	8	3	4	△
	P4	SUMS010M											△
M12 × 1.75	P2	SUMQ012P	2.5P	82	26	-	42	8.5	6.5	9	3	4	⊙
	P3	SUMR012P											△
	P4	SUMS012P											△
M12 × 1.5	P2	SUMQ012O	2.5P	82	26	-	42	8.5	6.5	9	3	4	○
	P3	SUMR012O											△
	P4	SUMS012O											△
M12 × 1.25	P2	SUMQ012N	2.5P	82	26	-	42	8.5	6.5	9	3	4	○
	P3	SUMR012N											△
M12 × 1	P2	SUMQ012M	2.5P	82	26	-	42	8.5	6.5	9	3	4	△
M14 × 2	P2	SUMQ014Q	2.5P	88	26	-	45	10.5	8	11	3	4	○
	P3	SUMR014Q											△
	P4	SUMS014Q											△
M14 × 1.5	P2	SUMQ014O	2.5P	88	26	-	45	10.5	8	11	3	4	○
	P4	SUMS014O											△
M14 × 1	P2	SUMQ014M	2.5P	88	26	-	45	10.5	8	11	3	4	△
M16 × 2	P2	SUMQ016Q	2.5P	95	26	-	48	12.5	10	13	3	4	⊙
	P3	SUMR016Q											△
	P4	SUMS016Q											△
M16 × 1.5	P2	SUMQ016O	2.5P	95	26	-	48	12.5	10	13	3	4	○
	P4	SUMS016O											△
M18 × 2.5	P3	SUMR018R	2.5P	100	33	-	51	14	11	14	4	4	○
	P4	SUMS018R											△
M18 × 1.5	P2	SUMQ018O	2.5P	100	33	-	51	14	11	14	4	4	○
	P4	SUMS018O											△
M20 × 2.5	P3	SUMR020R	2.5P	105	33	-	50	15	12	15	4	5	⊙
	P4	SUMS020R											△
M20 × 1.5	P3	SUMR020O	2.5P	105	33	-	50	15	12	15	4	5	○
	P4	SUMS020O											△

SP-35

60

Think threads with
YAMAWA

⊙=Standard ○=Semi standard △=Made to order
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Overall length	Chamfer+ full thread	Thread length	Thread+Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓt	ℓ	ℓn	ℓs	Ds	K	ℓk

SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
M22 × 2.5	P3	SUMR022R	2.5P	115	33	-	55	17	13	16	4	5	○
	P4	SUMS022R											△
	P5	SUMT022R											
M22 × 1.5	P3	SUMR022O	2.5P	115	33	-	55	17	13	16	4	5	△
	P4	SUMS022O											
M24 × 3	P3	SUMR024S	2.5P	120	39	-	55	19	15	18	4	5	○
	P4	SUMS024S											△
	P5	SUMT024S											
M24 × 1.5	P3	SUMR024O	2.5P	120	39	-	55	19	15	18	4	5	△
	P4	SUMS024O											
M27 × 3	P3	SUMR027S	2.5P	130	39	-	60	20	15	18	4	5	△
M27 × 1.5	P3	SUMR027O	2.5P	130	39	-	60	20	15	18	4	5	△
M30 × 3.5	P4	SUMS030T	2.5P	135	46	-	62	23	17	20	4	5	△
M30 × 1.5	P3	SUMR030O	2.5P	135	46	-	62	23	17	20	4	5	△
M33 × 3.5	P4	SUMS033T	2.5P	145	46	-	67	25	19	22	4	5	△
M36 × 4	P4	SUMS036U	2.5P	155	52	-	71	28	21	24	4	5	△
M39 × 4	P4	SUMS039U	2.5P	165	52	-	76	30	23	26	4	5	△
M42 × 4.5	P4	SUMS042V	2.5P	175	59	-	81	32	26	30	4	5	△
M42 × 1.5	P3	SUMR042O	2.5P	175	27	-	81	32	26	30	4	5	△
M45 × 4.5	P4	SUMS045V	2.5P	180	59	-	83	35	26	30	4	5	△
For Unified Threads													
Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓn (mm)	ℓs (mm)	Ds (mm)	K (mm)	ℓk (mm)	No. of flutes	Type	Stock
No.2-56UNC	P1	SUMPUN2E	2.5P	42	8.1	12	27	3	2.5	5	2	3	△
No.3-48UNC	P1	SUMPUN3F	2.5P	46	8.1	14	29	3	2.5	5	2	3	△
No.4-40UNC	P1	SUMPUN4H	2.5P	46	9	14	26	4	3.2	6	2	3	△
No.4-48UNF	P1	SUMPUN4F	2.5P	46	9	14	26	4	3.2	6	2	3	△
No.5-40UNC	P1	SUMPUN5H	2.5P	52	11	16	29	5	4	7	3	3	△
No.5-44UNF	P1	SUMPUN5G	2.5P	52	11	16	29	5	4	7	3	3	△
No.6-32UNC	P2	SUMQUN6J	2.5P	52	11	16	29	5	4	7	3	3	△
No.6-40UNF	P1	SUMPUN6H	2.5P	52	11	16	29	5	4	7	3	3	△
No.8-32UNC	P2	SUMQUN8J	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
No.8-36UNF	P2	SUMQUN8I	2.5P	60	13	21	33	5.5	4.5	7	3	3	△
No.10-24UNC	P2	SUMQUNAM	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
No.10-32UNF	P2	SUMQUNAJ	2.5P	60	13	22	33	5.5	4.5	7	3	3	△
1/4-20UNC	P2	SUMQU04N	2.5P	62	15	26	33	6	4.5	7	3	3	△
1/4-28UNF	P2	SUMQU04K	2.5P	62	15	26	33	6	4.5	7	3	3	△
5/16-18UNC	P2	SUMQU05O	2.5P	70	19	-	36	6.2	5	8	3	4	△
5/16-24UNF	P2	SUMQU05M	2.5P	70	19	-	36	6.2	5	8	3	4	△
3/8-16UNC	P2	SUMQU06P	2.5P	75	23	-	38	7	5.5	8	3	4	△
3/8-24UNF	P2	SUMQU06M	2.5P	75	23	-	38	7	5.5	8	3	4	△
7/16-14UNC	P3	SUMRU07Q	2.5P	82	26	-	42	8.5	6.5	9	3	4	△
7/16-20UNF	P2	SUMQU07N	2.5P	82	26	-	42	8.5	6.5	9	3	4	△
1/2-13UNC	P3	SUMRU08R	2.5P	88	26	-	45	10.5	8	11	3	4	△
1/2-20UNF	P2	SUMQU08N	2.5P	88	26	-	45	10.5	8	11	3	4	△
5/8-11UNC	P3	SUMRU10U	2.5P	95	26	-	48	12.5	10	13	3	4	△
5/8-18UNF	P2	SUMQU10O	2.5P	95	26	-	48	12.5	10	13	3	4	△
3/4-10UNC	P3	SUMRU12V	2.5P	105	33	-	50	15	12	15	4	5	△
3/4-16UNF	P3	SUMRU12P	2.5P	105	33	-	50	15	12	15	4	5	△
7/8-9UNC	P3	SUMRU14W	2.5P	115	33	-	55	17	13	16	4	5	△
7/8-14UNF	P3	SUMRU14Q	2.5P	115	33	-	55	17	13	16	4	5	△

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