

6 Roll Tap Series

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

SURZ

SU Roll Taps



Specification



Tapping Speeds depending on Materials

Low carbon steels 低炭素鋼 ~5 (m/min)	Medium carbon steels 中炭素鋼 ~5 (m/min)	Stainless steels ステンレス鋼 ~5 (m/min)
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Product Features

- Adopting the special form on tap's root, SURZ controls the minor diameter geometry of internal threads.
- Special lobe shape realizes low tapping torque.
- High efficiency can be obtained in thread forming of stainless steel parts.
- By adjusting bored hole size, you can adjust the minor diameter geometry of internal threads.

Tapping Data

Tapping condition [M2×0.4]

Work Material	SUS304
Tapping Length	5.2mm (Blind hole)
Bored Hole Size	$\phi 1.82 \sim \phi 1.85$
Tapping Speed	5m/min
Feed	Rigid
Tapping Direction	Vertical
Machine	Machining center (BT15)
Tapping Fluid	Water soluble cutting fluid (×20)

POINT

In use, please select proper bored hole diameter.

Recommended bored hole diameter before tapping

Unit : mm

Size	Class	Recommended Bored Hole Size
M1 × 0.25	G4	0.90
M1.2 × 0.25	G4	1.10
M1.4 × 0.3	G4	1.28
M1.6 × 0.2	G3	1.52
M1.6 × 0.35	G4	1.46
M1.7 × 0.35	G4	1.56
M2 × 0.4	G4	1.82
M2.3 × 0.4	G4	2.12
M2.5 × 0.45	G4	2.30
M2.6 × 0.45	G5	2.40
M3 × 0.5	G5	2.77
No.2-56UNC	G4	1.98
No.4-40UNC	G5	2.55
No.6-32UNC	G5	3.14

※Recommended bored hole diameters shown in above table have been calculated by aiming at the thread engagement of 90% and by considering avoidance of tap breakage, based on our past tapping test experiences.

※Recommended bore hole diameter may change because material deformation can slightly change depending on material, hardness, dimension of workpiece and tapping condition.

Bored Hole Size	$\phi 1.84$	$\phi 1.83$
Cross Section Picture of Internal Threads		
Seam Shape	Normal seams remain.	Seams remain a little.
Minor Diameter	$\phi 1.62$	$\phi 1.60$

Bored Hole Size	$\phi 1.82$	$\phi 1.81$
Cross Section Picture of Internal Threads		
Seam Shape	Seams remain a little.	No seam remains.
Minor Diameter	$\phi 1.59$	$\phi 1.58$

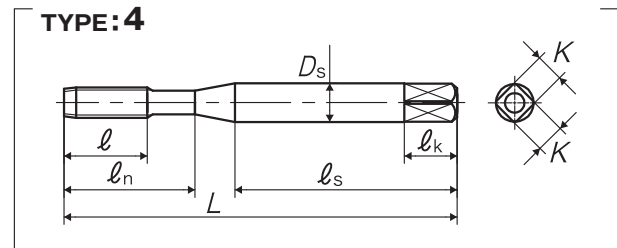
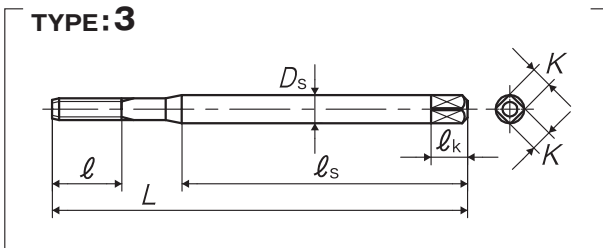
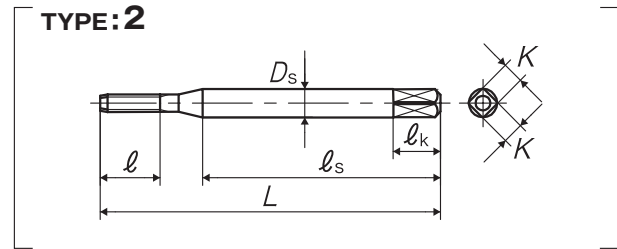
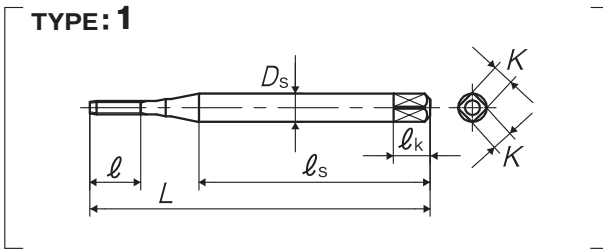
M2×0.4 6H Internal Thread Minor Diameter and Tolerance	
Max.	1.679
Min.	1.567
Tolerance	0.112

Think threads with
YAMAWA

Overall length	Thread length	Thread + Neck length	Shank length	Shank dia.	Size of square	Length of square
L	ℓ	ℓ_n	ℓ_s	Ds	K	ℓ_k

6

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 Recommended class

Segment : 1J

Size	Class	Code	Chamfer	L (mm)	ℓ (mm)	ℓ_n (mm)	ℓ_s (mm)	Ds (mm)	K (mm)	ℓ_k (mm)	Lobe	TYPE	MSRP
For Metric Threads													
M1 × 0.25	G4	SURZ41.0BB	2P	36	4.5	-	24	3	2.5	5	4	1	¥ 5,480
M1.2 × 0.25	G4	SURZ41.2BB	2P	36	4.5	-	24	3	2.5	5	4	1	¥ 5,480
M1.4 × 0.3	G4	SURZ41.4CB	2P	36	5.4	-	24	3	2.5	5	4	1	¥ 5,140
M1.6 × 0.35	G4	SURZ41.6DB	2P	36	6.3	-	24	3	2.5	5	4	2	¥ 4,940
M1.6 × 0.2	G3	SURZ31.6AB	2P	36	3.6	-	24	3	2.5	5	4	2	¥ 5,140
M1.7 × 0.35	G4	SURZ41.7DB	2P	36	6.3	-	24	3	2.5	5	4	2	¥ 4,940
M2 × 0.4	G4	SURZ42.0EB	2P	42	7.2	-	27	3	2.5	5	4	3	¥ 4,420
M2.3 × 0.4	G4	SURZ42.3EB	2P	42	7.2	-	27	3	2.5	5	4	3	¥ 4,300
M2.5 × 0.45	G4	SURZ42.5FB	2P	46	8.1	14	29	3	2.5	5	4	4	¥ 4,140
M2.6 × 0.45	G5	SURZ52.6FB	2P	46	8.1	14	29	3	2.5	5	4	4	¥ 4,140
M3 × 0.5	G5	SURZ53.0GB	2P	46	9	14	26	4	3.2	6	4	4	¥ 4,080
For Unified Threads													
No.2-56UNC	G4	SURZ4UN2EB	2P	42	8.1	-	27	3	2.5	5	4	3	¥ 4,790
No.4-40UNC	G5	SURZ5UN4HB	2P	46	9	14	25	4	3.2	6	4	4	¥ 4,650
No.6-32UNC	G5	SURZ5UN6JB	2P	52	11	17	27	5	4	7	4	4	¥ 4,380

Number of oil grooves : Metric thread: M2.6 and smaller = non, M3 = 2
Unified thread: No.4 and smaller = non, No.6 = 2

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Dies ⑩

Center Drills
Centering Tools ⑪

Precision Machinery/
Medical Surgical Instruments ⑫

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⑥-60