

NEW TECHNOLOGY
versionUP+

Version up Series

TiN coated spiral fluted taps
for blind hole

AU+SP

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versionUP+

AU+SP enables the tapping at medium to high speed
for wide range of work materials.



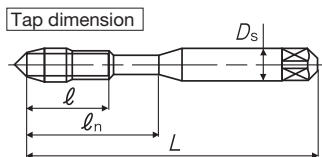
AU+SP

Think threads with
YAMAWA

Version up Series

Dimension

AU+SP



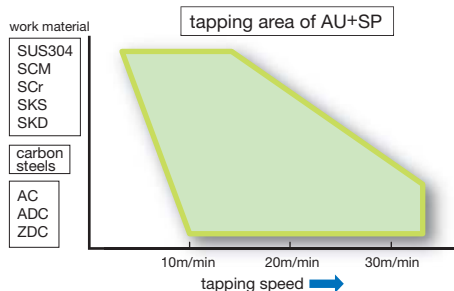
Nominal size	Class	flute	Overall length L	Thread length ℓ	Neck length ℓ _n	Shank length ※ (ℓ _s)	Shank diameter D _s
M2 ×0.4	P2	2	42	7	12	(24)	3
M2.5×0.45	P2	2	46	8	14	(28)	3
M2.6×0.45	P2	2	46	8	14	(28)	3
M3 ×0.5	P2	3	46	9	14	(26)	4
M4 ×0.7	P2	3	52	11	17	(29)	5
M5 ×0.8	P2	3	60	13	22	(33)	5.5
M6 ×1	P2	3	62	15	26	(33)	6

※The dimension of (ℓ_s) is reference. ※Tap class is only the target for the limits of internal threads.

Work material

Recommended tapping speed for AU+SP

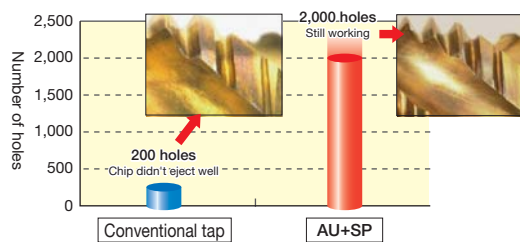
Work material	Recommended tapping speed (m./min)
Stainless steels SUS304	5~10
Tool steels SKS/SKD Alloy steels SCM/SCr	5~10
High carbon steels S45~	8~20
Medium carbon steels S25C~S45C	8~20
Low carbon steels ~S20C/SS400	8~20
Aluminum alloy castings/zinc alloy castings AC/ADC/ZDC	10~35



Tool life

Tapping condition: AU+SP M6x1

Work material	SCM440
Cutting speed	10m/min
Hole diameter	φ 5.0
Tapping length	9mm blind hole
Machine	Machining centers vertical type (floating holder used)
Oil	Water soluble oil (chlorine-free, 20 fold dilution)



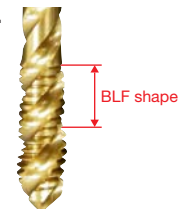
BLF (special shape) + improvement in chip ejection efficiency

- AU+SP is designed to have a few full threads only after the chamfer and half of height for the remaining threads.
- Features of AU+SP are as follows:

- Prevention of chipping trouble at full thread portion
- Reduction of tapping torque and tapping friction
- With good thread guiding feature
- With good chip ejection



chip ejection
no trouble



Change marking position from shank into square portion

Laser marking can roughen the shank surface. In order to keep high accuracy of shank circularity and diameter, marking has been transferred from shank to square portion.



Warning

- ◆Tools may shatter if broken. The wearing of eye protection is strongly advised in the vicinity of their use.
- ◆The correct using conditions and handling of our tools are essential in securing maximum useful tool life and hazard free operation.
- ◆The wearing of gloves is forbidden as the gloves may entangle with turning tools.
- ◆Tools may hurt the user's feet when falling off. The safety shoes should be put on at all time.
- ◆While fitting the tools to machine spindles and/or sleeves, care should be taken to avoid subjecting them to shock or impact.
- ◆Check that the workpieces are properly seated and securely held in the chuck before switching on machine power.
Do not use a tool whose cutting edges are worn-out or chipped severely.
- ◆Tools may generate extreme heat during use. Fire protection is strongly recommended.

※Changes may occur without advance notice.

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YAMAWA group for Overseas YAMAWA International Co., Ltd.



Our target is to reduce the energy per each tool.

We will reduce the excessive machining toward such portions as do not affect the tool's performance and reduce energy consumption. Without affecting the tool's performance, we aim to minimize the excessive machining power and hence reduce the energy consumption.