

Mechanical feed/electronically controlled tapping unit

SYNCHROTAPPER SERVO

ST4M

1. Despite being compact, it is possible to tap large diameters such as Rc1/2 (aluminum).
2. Cycle time is shortened by setting the second origin.
3. Up to 15 programs with different strokes and rotation speeds can be registered.

* Up to 99 pieces are available as an option.

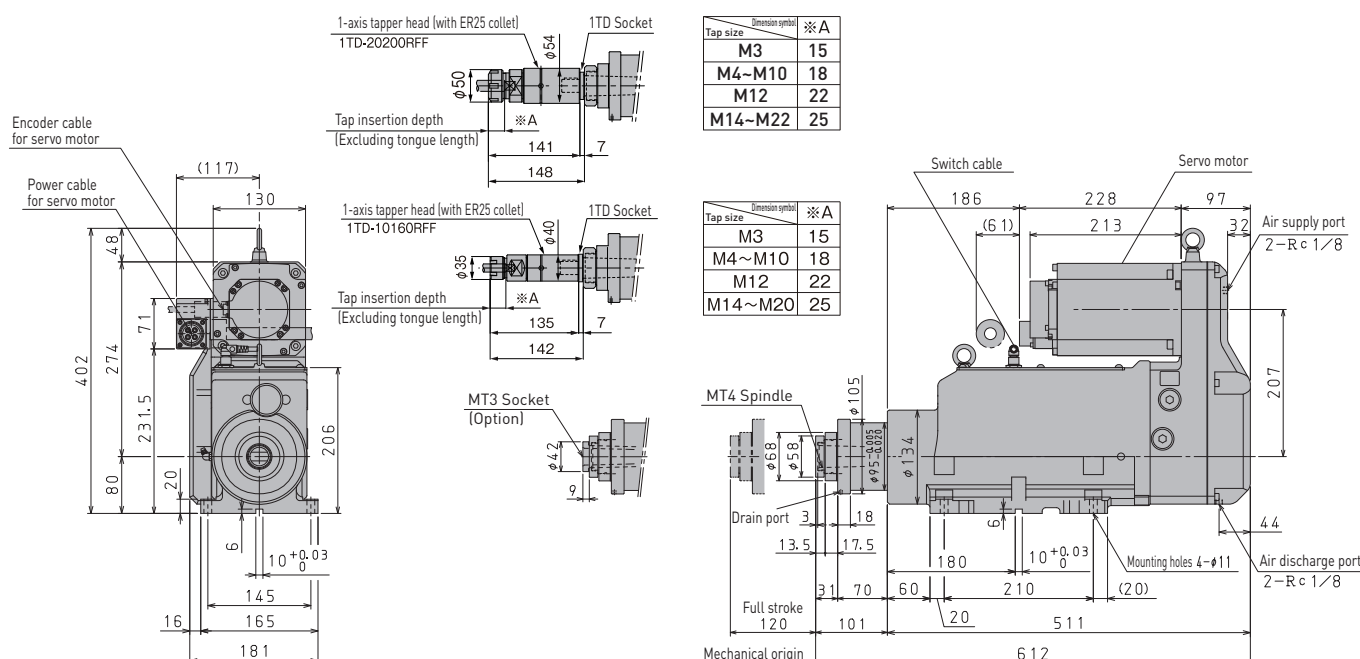


SPEC (Standard type)

Model	Rotational speed during cutting feed min ⁻¹	Tapping capacity by number of shafts 1 axis		Stroke mm	Electric motor kW	Thread pitch that can be processed		Weight kg
		AL (ADC12)	ST (S45C)			mm	thread/inch	
ST4M-H420	Max.690	M27	M20	MAX.120	3.3 AC Servo motor	0.7, 0.75, 0.8, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5	32, 28, 27, 26, 24, 20, 19, 18, 16, 14, 13, 12, 11, 9, 8	62
		M22	M16					

- Note 1. Spiral taps and point taps are used for the upper level of tapping capacity, and hand tap No. 2 is used for the lower level. The tapping depth is 1.5 times the thread diameter.
 2. Determine the cutting feed rotation speed based on the workpiece material, machinability, tap diameter and material, and cutting speed.
 3. Please select a feed gear that matches the pitch of the tap you are using.
 4. The rapid traverse rate and cutting feed rate vary depending on the thread pitch and rotation speed. Please contact your nearest sales office for details.
 5. The allowable mass of attachments that can be attached is 40 kg in all directions.
 6. In the case of upward machining, waterproof and dustproof measures are required for the main body of the Synchro Tapper. Please contact your nearest sales office for details.

Dimensions(mm)



- Note 1. A 1-axis taper head can be attached by installing an optional 1TD socket. 1TD-10160RFF and 1TD-20200RFF are optional.
 2. MT4 spindle can be attached with tap holder WFLP340-0/MT4 (M16 to M38) manufactured by NT Tool Co., Ltd. Please prepare the tap holder by yourself.
 3. By installing the optional MT3 socket, WFLP240-0/MT3 (M8 to M22) etc. can be installed. Please prepare the tap holder by yourself.
 4. When installing the synchro tapper horizontally or diagonally downward, use it with the drain outlet facing downward.

Diagram

SYNCHROTAPPER

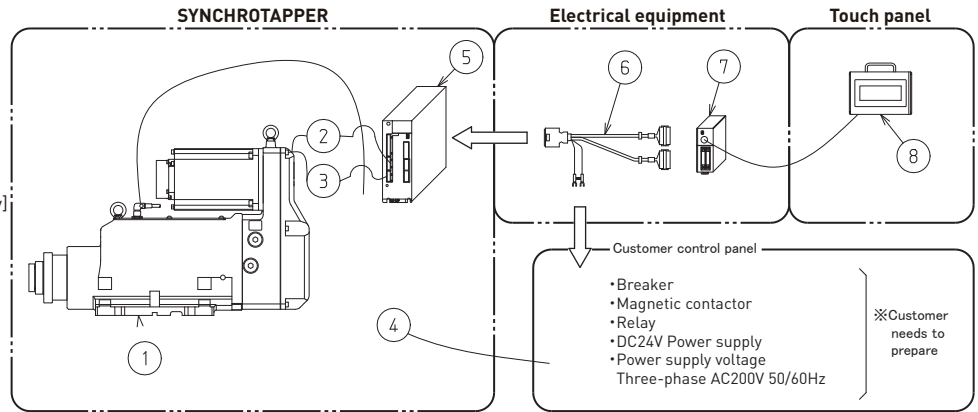
1. Synchro tapper
2. Power cable (5m)
3. Encoder cable (5m)
4. Switch cable (5m)
5. Feed axis servo amplifier [with ABS battery]

Electrical equipment

6. I/O cable (1.5m)
7. Sequencer

Touch panel (option)

8. Touch panel TP-02A [with cable (3m)]

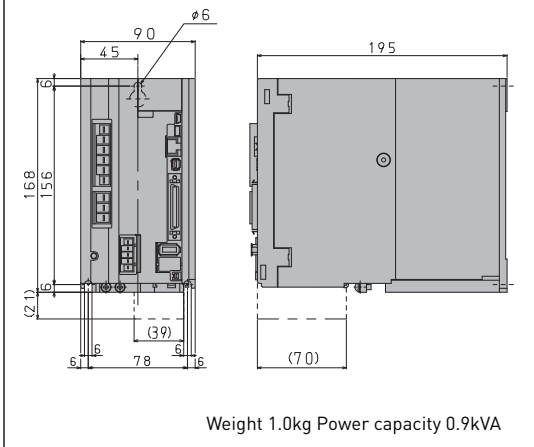


I/O signal specifications

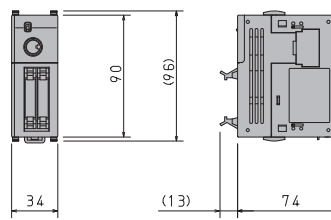
Input/Output	Signal name	Name
Input *1	X06	A-axis operation preparation
	X07	A-axis feed axis trip
	X10	A-axis automatic start
	X11	A-axis mechanical origin return
	X12	A-axis error reset
	X13	A-axis EXT/MANUAL
	X14	A-axis program selection 1
	X15	A-axis program selection 2
Output *2	X16	A-axis program selection 4
	X17	A-axis program selection 8
	Y12	A-axis during automatic operation
	Y13	A-axis cycle end
	Y14	A-axis machine origin
	Y15	A-axis ready
	Y16	A-axis error
Y17	A-axis emergency stop condition	

*1 Voltage: DC24V, Current: 7mA
*2 Voltage: DC24V, Current: 100mA

5. Feed axis servo amplifier (with ABS battery) MR-J4-350A (battery: MR-BAT6V1SET)



7. Sequencer FX3UC-32MT/D

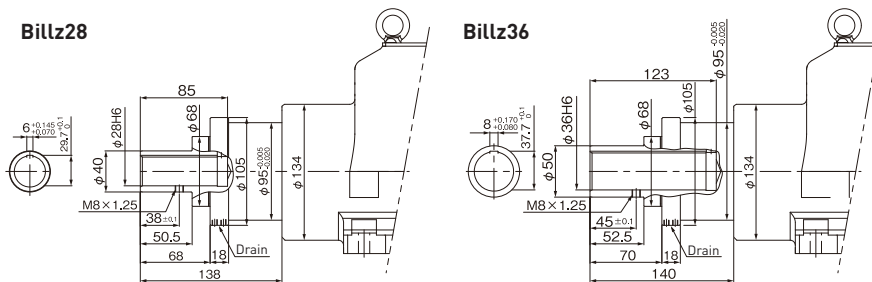


[Installation]
35mm width DIN rail mounting Weight 0.3kg

Note: Attached feed axis servo amplifier,
Use a synchro tapper for the sequencer
dedicated parameters to control,
Software is input.

Tip shape

Adjustable spindle nose (optional)



Notes 1. The detailed dimensions of the tip of the spindle are as recommended by NT Tool Corporation.
2. When installing the synchro tapper horizontally or diagonally downward, use it with the drain facing downward.

Ready to work immediately after delivery

Automatic tapping drilling machine

Having trouble with this?

1. Variation in processing accuracy
2. Occurrence of tap breakage
3. Labor shortage

These problems
We will solve it!
Please feel
free to contact us.



SUGINO
SUPER! TECHNOLOGY

SUGINO MACHINE LIMITED
www.sugino.com

Olinas Tower Bldg., 8th floor, 4-1-3 Taihei, Sumida-ku,
Tokyo, 130-0012 JAPAN
TEL +81-3-5619-5760 FAX +81-3-5619-5765
✉ export@sugino.com

- Specifications in this catalog are subject to change without prior notice for further improvement.
- When exporting this product overseas, please follow the export control procedures based on Japan's Foreign Exchange and Foreign Trade Law.
- **SUGINO**, **SUGINO**, and **SYNCHROTAPPER** are trademarks or service marks of Sugino Machine Limited in Japan or foreign countries.
- The content of this catalog is as of July 2023.
- Any unauthorized use, copying or reprinting of the contents or part thereof in this catalog is prohibited.