

High performance screw dispenser

SCREW MASTER

Compatible with standard / large flow rate / PUR hot melt *series*

High-speed and Stable dispensing
of high viscosity particle-filled paste without clogging nozzle.



High performance screw dispenser

High performance screw dispenser that supports solder paste, thermal grease, epoxy resin, PUR, etc, that require high-speed and precision dispensing. The unique screw mechanism eliminates volume inconsistency and fluid lumps, to enable steady and accurate micro dotting and drawing.



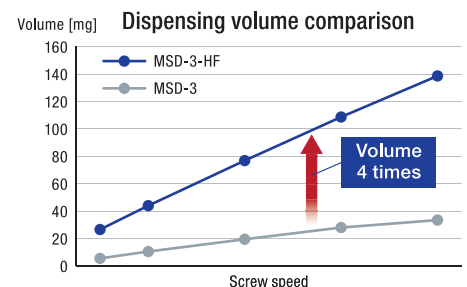
New Product

SCREW MASTER 3-HF

High flow type

High Flow & High Speed

- Dispensing speed “4 times” as fast as conventional methods.
- Achieves high tact / high precision dispensing.
- High durability rods are also available.
- Compatible with thermal interface material containing filler.



Material : Silicone oil (Viscosity 200,000 mPa · s)
Dispensing time : 1 sec.

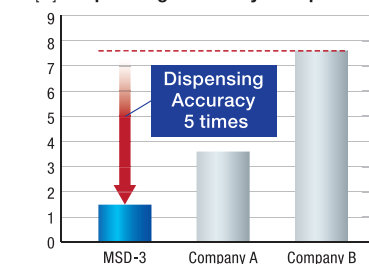
SCREW MASTER 3

Standard type

Minimum dot size $\phi 0.15$ mm (Solder paste)
Achieves overwhelming high-precision dispensing.

- The unique screw mechanism eliminates volume inconsistency and fluid pools.
- Achieves micro dotting and superfine drawing of solder paste or fluid with filler.
- The optimum screw rod can be selected according to the fluids and application.
- Syringe and wetted parts can be easily replaced, greatly reducing downtime.

CV [%] Dispensing Accuracy Comparison



Material : Silicone oil (Viscosity 500,000 mPa · s)
Dispensing volume : 10 mg
Dispensing time : 1 sec.



HOT MELT SCREW MASTER

PUR hot melt compatible type

Fine line and high-speed PUR hot melt dispensing!

- Line width 0.1 mm ~
- High maintainability.
- Achieves 100 mm/s or faster dispensing speed
- Set temperature up to 160°C
- A dedicated suckback program solves liquid dripping during waiting time.
(Please contact our sales staff)






Syringe type
30 mL



Cartridge type 300 mL

Product lineup & quick reference table

			SCREW MASTER series				
Head							
			SCREW MASTER 3-HF		SCREW MASTER 3		HOT MELT SCREW MASTER
Flow rate			High flow		Standard		Standard
Rod type			Standard	High durability	Standard	High durability*	Standard
Corresponding fluid	Radiation	Thermal grease		◎		○	
	Fixation	RTV	◎		○		
		Hot melt					◎
	Sealing	CIPG/FIPG	◎		○		
		PUR					◎
	Conduction	Solder paste	○		◎		

* Coming soon.

Common controller

Common controller that can drive each head of **SCREW MASTER** series
Equipped with various functions for various application scenes.
High-speed type is also listed on lineup (option)*

Recommended convenient functions

- **“Suckback function”** to prevent liquid dripping
- **“Auto increment function”** that automatically switches the registered dispensing parameters
- **“Synchro Speed function”** that automatically adjusts the drawing line width in cooperation with our robots.



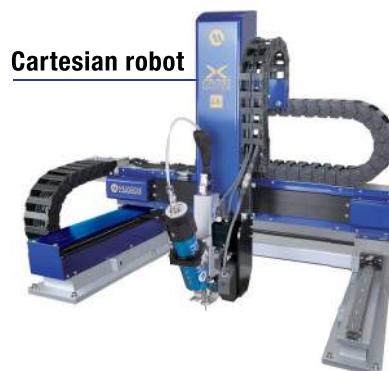
PAT.

* Pre-evaluation is required.

System lineup



SHOT mini / SHOTMASTER
×
SCREW MASTER series



X CROSS MASTER
×
SCREW MASTER series

Fully automatic machine



DISPENSMASTER FAD
×
SCREW MASTER series

Specifications

<Dispense head>

Product name	High performance screw dispenser SCREW MASTER3			
Model	MSD3-HD-HF [Cartridge Configuration]	MSD-3-SET1 [For Syringes]	MSD-3-SET2 [Temperature Control Syringes]	MSD-3-SET3 [Cartridge Configuration]
Dispensing method	Screw type			
Main functions	High-speed dispensing of high viscosity pastes, particle-filled pastes, and so on.			
Allowable fluid feed pressure	Up to 500 kPa			
External dimensions (excluding protrusion)	W37×D79×H233.5 mm	W37×D85×H230.5 mm	W37×D100×H230.5 mm	
Weight	1 kg (Excluding screw rods, fluid materials and containers)			
Applicable fluid materials	Solder paste, epoxy resin, grease etc.			
Applicable material viscosity	50,000 to 500,000 mPa・s (reference)			
Applicable nozzles	Standard nozzle (nozzle nut type)			
Applicable temperature control unit	—	—	PELTIMASTER THERMOMASTER	—
Liquid feeding method	Syringe, Barrel cartridge, Sealant cartridge, Tube cartridge	Syringes, Tank*	Syringes	Barrel cartridge, Sealant cartridge, Tube cartridge

* Needs to be connected through some valves. Please contact Musashi Sales Department.

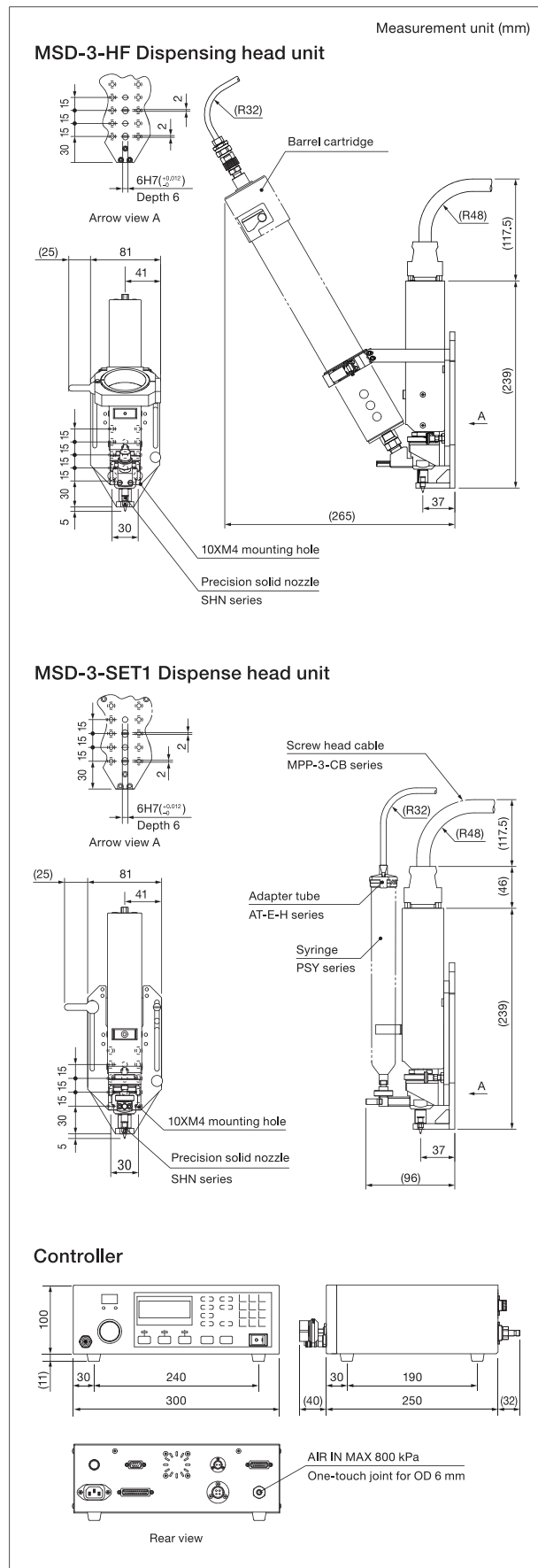
<Dispense controller>

Model	MSD3-CTR
Control system	Microcomputer digital control system
Display	20 character x 4 line LCD
Fluid feed pressure setting range	10 to 700 kPa (Set according to the allowable pressure of the device to be connected or the material container)
Fluid feed pressure display	4-digit LED digital display
Source pressure	Up to 800 kPa (Recommended supply pressure: feeding pressure + 100 kPa or more)
Dispensing mode	Timed / Manual
Dispensing time setting range	0.01 to 999.999 s
Screw rotation speed setting range	1 to 800 rpm *1
Channel number	400 CH
External input signal	Dispensing input (metal outlet: photocoupler input DC24 V 5 mA) Dispensing input, setup input, dispensing mode switching input, Error reset input, channel switching input (D-sub 25 pin: Photocoupler input DC24 V 5 mA)
External input signal *2	In-dispensing output, dispensing completion output (Metal outlet: Insulated MOSFET output (no polarity) DV24 V 300 mA or less) Busy output, in-dispensing output, dispensing completion output, setup output, Auto increment completion output, error output, power ON output (D-sub25 pin: Optocoupler open collector output DC24 V 10 mA or less)
Other functions	Suck back, multi-preset, auto increment, Synchro speed, RS-232C communication, Language selection (Japanese or English)
Usage environment (for indoor use only)	Temperature range: 15 to 35°C, Humidity range: 25 to 27°C (No condensation), Altitude: 2,000 m or less
Storage environment	Temperature range: 1 to 60°C, Humidity range: 25 to 85% (No condensation)
Applicable fuse	Time-lag fuse type φ5
Rated power supply and frequency	100 to 240 VAC (50/60 Hz)
Power consumption	45 W
Input voltage and frequency	AC 90 to 264 V, 47 Hz to 63 Hz
Overvoltage category	Category II
External dimensions (excluding protrusion)	W300×D250×H100 mm
Weight	5.2 kg
Compatible standards	CE-marking (LVD, EMC), EU RoHS2

* 1 High rotation type: 1 to 1,500 rpm (option) Pre-evaluation is required.

* 2 The in-dispensing output is a selectable type with the dispensing completion output.

Dimensions



US Integrator and representative

MUSASHI ENGINEERING, INC. (headquarters) is certified and registered according to the ISO 9001 Quality Management System and the ISO 14001 Environmental Management System.

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