

PRECISION DISPENSER ACCESSORY SERIES

VOL
16

For precision and constant volume fluid dispensing
Parts, Accessories & Valves / Tanks



- Syringes Accessory
- Nozzles & Needles
- Cartridges Accessory
- Units for Dispensing
- Fluid Dispensing Valves
- Tanks for Liquid Feeding
- Other Productions



Another fluid control field to support our state-of-the-art manufacturing technology. High-precision and high-quality parts that incorporate MUSASHI's dispensing know-how.

The proof of superior fluid precision control technology can only be established by a thorough evaluation of all the parts and accessories used in the process, as well as an analysis of the controller's main unit. MUSASHI has searched relentlessly for improvements in fluid control technology. The payoff is their deep knowledge of dispensing technology accumulated over many years. In various industrial fields including the state-of-the-art fields of semiconductors, electronics and precision mechanical devices, we are meeting and exceeding customer's requests for high precision, high quality, and high speed. Our innovations are unique seeds in themselves, that create new needs by their very existence. Our development approach can be seen in each of the parts and accessories that support high precision dispensing, as well as in the dispensing control section itself. We provide the products that surpass the others in quality and performance. You can select what you need from lots of combinations, according to your dispensing conditions, environment, workpieces, and the fluid solutions you use. This is another advanced field in which only MUSASHI's precision, fluid control technology has the answers.



*The world's first
Straight inner wall design of the syringe
eliminates knocking of the plunger.*

*Yellow color makes it easy
to check the fluid level.*

*High pressure design
greatly increases strength.*

Thick wall minimizes expand and contract.



Safe and secure
Adaptor tube with stopper holds the syringe.

Dual-wiping design
clears the wall thoroughly.
Smooth piston operation by the unique aero line system implements high precision dispensing.

The world's first
Excellent flow characteristics
by tapered shape.

Micro volume and accurate dispensing thanks to high precision and high quality design.

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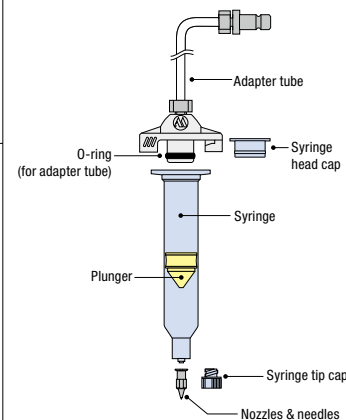
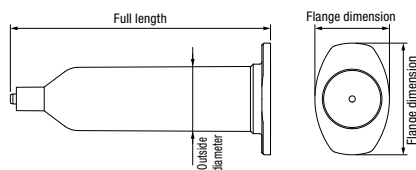
Tanks for fluid feeding

Dispensers and FA dispenser systems

Actualizing excellent fluidity and high-precision dispensing performance

MUSASHI offers syringes that meet strict requirements for precision dispensing operations. These are high precision, high quality, highly reliable parts that only MUSASHI can offer backed by our well-researched know-how for fluid dispensing. The most important points of our system that put us far ahead of the competition are: high-precision dispensing (thanks to superior flow characteristics); MUSASHI's unique system for creating smooth piston movement; and our straight wall design that eliminates knocking of plunger. These advantages will provide improvement of dispensing quality and efficiency, in addition, great saving cost.

■ Syringe dimension drawings



Clear syringe

Ideal dispensing is achieved by the excellent flow characteristics brought by designing of straight wall inside the syringe



Without graduations



With graduations

These are syringes dedicated for dispensers that hold fluid materials.

The unique shape offers excellent flow characteristics. The straight shape of the wall inside the syringe eliminates knocking of plunger intermittent dispensing. Thus, dispensing stability is greatly improved.

Syringes are available with graduated markings for general use and without markings so that you can check the material level at a glance. Select from nine standard sizes (listed in the table below), taking into account your daily dispensing volume. Material: Polypropylene

Syringe capacity	Without graduations	With graduations	Dimensions (mm)			Minimum Order Quantity (pcs per pack)
	Model	Model	Full length	Outside diameter	Flange dimension	
1 mL	—	PSY-1E2-M	84	φ 6.7	16×9	50
3 mL	PSY-3E	PSY-3E-M	80.1	φ 11.7	24.3×14.3	50
5 mL	PSY-5E	PSY-5E-M	80	φ 14.9	27×16	50
10 mL	PSY-10E	PSY-10E-M	105	φ 18.3	32×20	50
20 mL	PSY-20F	PSY-20F-M	104.8	φ 26.2	45×30	50
30 mL	PSY-30F	PSY-30F-M	129.7	φ 26.2	45×30	50
50 mL	PSY-50F	PSY-50F-M	160.7	φ 26.2	45×30	50
70 mL	PSY-70F	PSY-70F-M	223.7	φ 26.5	45×30	50
100 mL	PSY-100E	—	191	φ 35.8	60×38.8	20

Note: Working pressure: 0.5 MPa maximum at normal temperature

UV block syringe

Finally actualized "The World First"! 100% protection from UV rays, furthermore remaining amount recognizable at a glance



Without graduations



With graduations

Syringe exclusively designed for UV curing materials.

This model is a syringe equipped with epoch-making functions, one of which is complete UV ray blockage and the other of which is manifest visibility of the remaining liquid level provided by improved transmittance in the visible light range.

Material: Polypropylene

Syringe capacity	Without graduations	With graduations	Dimensions (mm)			Minimum Order Quantity (pcs per pack)
	Model	Model	Full length	Outside diameter	Flange dimension	
3 mL	PSY-3EU-OR	PSY-3EU-OR-M	80	φ 11.7	24.3×14.3	50
5 mL	PSY-5EU-OR	PSY-5EU-OR-M	80	φ 14.9	27×16	50
10 mL	PSY-10EU-OR	PSY-10EU-OR-M	105.3	φ 18.3	32×20	50
20 mL	PSY-20FU-OR	PSY-20FU-OR-M	104.8	φ 26.2	45×30	50
30 mL	PSY-30FU-OR	PSY-30FU-OR-M	129.7	φ 26.2	45×30	50
50 mL	PSY-50FU-OR	PSY-50FU-OR-M	160.7	φ 26.1	45×30	50
70 mL	PSY-70FU-OR	PSY-70FU-OR-M	223.7	φ 26.5	45×30	50
100 mL	NEW PSY-100EU-OR	—	191	φ 35.8	60×38.8	20

Note: Working pressure: 0.5 MPa maximum at normal temperature

Color syringe



Peppermint green

Best suited for managing products by material

This syringe is peppermint green, which is best suited for managing products by material.

Material: Polypropylene

Syringe capacity	Without graduations	Dimensions (mm)			Minimum Order Quantity (pcs per pack)
	Model	Full length	Outside diameter	Flange dimension	
5 mL	PSY-5E-PG	80.4	ϕ14.9	27×16	50
10 mL	PSY-10E-PG	105.5	ϕ18.3	32×20	50
20 mL	PSY-20F-PG	104.8	ϕ26.2	45×30	50
30 mL	PSY-30F-PG	129.7	ϕ26.2	45×30	50
50 mL	PSY-50F-PG	160.7	ϕ26.2	45×30	50

Note: Working pressure: 0.5 MPa maximum at normal temperature

Heat-resistant syringe



High heat-resistant syringe
Best suited for hot melt

Material: PBT [PSY-30FH-P]

Polypropylene [PSY-30FH2-P]

Heat-resistant Temperature	Syringe Capacity	Model	Dimensions (mm)			Minimum Order Quantity
			Full length	Outside diameter	Flange dimension	
①180℃	30 mL	PSY-30FH-P	130.5	ϕ26.5	45×30	50
②130℃	30 mL	PSY-30FH2-P	130	ϕ26.5	45×30	50

Mounter-specific syringe

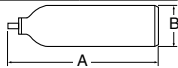


Highly stable dispensing implemented for temporary chip fixing process

This syringe can be simply mounted on a chip mounter.

Material: Polypropylene

Syringe capacity	Model	Dimensions (A×B mm)	Minimum Order Quantity
20 mL	PSY-20P	96.6×ϕ26	50



Antistatic syringe set



Outstanding antistatic effect!

Eliminates static electricity harmful to electronic components!

Syringe material: Polypropylene

Adapter head material: Polyacetal

Tube material: Polyurethane

O-ring material: Fluororubber

Syringe capacity	Antistatic syringe					Antistatic adapter tube (with stopper)		Applicable dispenser
	Model	Dimensions (mm)			Minimum Order Quantity (pcs per pack)	Model	Tube length	
		Full length	Outside diameter	Flange dimension				
10 mL	PSY-10E-SEP	105.5	ϕ 18.3	32×20	50	AT-10E-H-SEP-1.0M	1 m	–
30 mL	PSY-30E-SEP	130	ϕ 26.2	45×30	50	AT-50E-H-SEP-1.0M	1 m	–
						AT-50E-H-SEP-SIGMA-1.0M	1 m	For Σ
50 mL	PSY-50E-SEP	161.5	ϕ 26.2	45×30	50	AT-50E-H-SEP-1.0M	1 m	–
						AT-50E-H-SEP-SIGMA-1.0M	1 m	For Σ

Note: 1. Working pressure: 0.5 MPa (5 kgf/cm²) maximum, when using a PSY-10E-SEP at normal temperature
0.3 MPa (3 kgf/cm²) maximum, when using a PSY-30E-SEP or a PSY-50E-SEP at normal temperature
2. The tube length of the adapter tube can be specified (in steps of 0.5 mm). The following example shows how to specify the length.
e.g., To order a 1.5 m-long antistatic adapter tube (with stopper) for a 10 mL syringe, specify it as "AT-10E-H-SEP-1.5M".

Stainless syringe set



Best suited for dispensing at high temperatures!

The introduction of the luerlock type allows a nozzle to be mounted in a safe and secure manner.

Capable of coping with high temperatures (200℃).

Syringe material: Stainless steel

Adapter head material: Stainless steel

Tube material: Fluorine resin

O-ring material: Fluororubber

Syringe capacity	Stainless syringe					Stainless adapter tube (with stopper)	
	Model	Dimensions (mm)			Minimum Order Quantity (pcs per pack)	Model	Tube length
		Full length	Outside diameter	Flange dimension			
1 mL	SSY-1B	85	ϕ6.6	18×9	1	—	
3 mL	SSY-3E	80	ϕ11.2	24×14	1	AT-3E-SUS-1.0M	1 m
5 mL	SSY-5E	80	ϕ14.7	27×16	1	AT-5E-SUS-1.0M	1 m
10 mL	SSY-10E	105	ϕ18.1	32×20	1	AT-10E-SUS-1.0M	1 m
30 mL	SSY-30E	130	ϕ25.5	45×30	1	AT-50E-SUS-1.0M	1 m
50 mL	SSY-50E	160	ϕ25.5	45×30	1		1 m

Note: 1. Please contact our Sales Department for options.
2. Working pressure: Max. 0.5 MPa
3. The tube length of the adapter tube can be specified (in steps of 0.5 mm). The following example shows how to specify the length.
e.g., To order a 1.5 m-long stainless adapter tube (with stopper) for a 10 mL syringe, specify it as "AT-10E-SUS-1.5M".

Lineup of new type adapter tubes equipped with a safe and secure stopper



With stopper

Adapter tube [with stopper]



One touch connection! Excellent performance for stable dispensing with fine airtightness!

This tube is used to supply the air pressure by connecting the dispenser and syringe.

Adapter material: Polyacetal (AT-100E: made of aluminum alloy)

Tube material: Special elastomer resin (for Σ series dispensers: Polyurethane)

O-ring material: Fluororubber

Syringe capacity	Model	Tube length	Applicable dispenser
1 mL	AT-1E *1	1 m	–
3 mL	AT-3E-H-1.0M	1 m	–
5 mL	AT-5E-H-1.0M	1 m	–
	AT-5E-H-SIGMA-1.0M	1 m	For Σ
10 mL	AT-10E-H-1.0M	1 m	–
	AT-10E-H-SIGMA-1.0M	1 m	For Σ
20 to 70 mL	AT-50E-H-1.0M	1 m	–
	AT-50E-H-SIGMA-1.0M	1 m	For Σ
100 mL	AT-100E *1	1 m	–

Note: This product can be ordered with length specification (in units of 0.5 m). The following example shows how to specify the length.

e.g., If you want to order a 1.5 m-long adapter tube (with stopper) for a 10 mL syringe, the item number is "AT-10E-H-1.5M".

To purchase an adapter tube longer than 1 m dedicated for the Σ series, please contact our sales department.

*1 AT-1E and AT-100E models are not equipped with a stopper.

Adapter tube [with stopper, with clamp]



Completely prevents intake of fluid materials

Adapter material: Polyacetal

Tube material: Special elastomer resin

O-ring material: Fluororubber

Syringe capacity	Model	Tube length
3 mL	AT-3E-H-C-1.0M	1 m
5 mL	AT-5E-H-C-1.0M	1 m
10 mL	AT-10E-H-C-1.0M	1 m
20 to 70 mL	AT-50E-H-C-1.0M	1 m

Note: This product can be ordered with length specification (in units of 0.5 m). The following example shows how to specify the length.

e.g., If you want to order a 1.5 m-long adapter tube (with stopper and clamp) for a 10 mL syringe, the item number is "AT-10E-H-C-1.5M".

Adapter tube for plastic connector [with stopper]



Adapter material: Polyacetal

Tube material: Special elastomer resin

O-ring material: Fluororubber

Syringe capacity	OD ϕ 4 type tube	OD ϕ 6 type tube	Tube length
	Model	Model	
3 mL	AT-3E-H-P4C-1.0M	AT-3E-H-P6C-1.0M	1 m
5 mL	AT-5E-H-P4C-1.0M	AT-5E-H-P6C-1.0M	1 m
10 mL	AT-10E-H-P4C-1.0M	AT-10E-H-P6C-1.0M	1 m
20 to 70 mL	AT-50E-H-P4C-1.0M	AT-50E-H-P6C-1.0M	1 m

Note: 1. This product can be ordered with length specification (in units of 0.5 m). The following example shows how to specify the length.

e.g., If you want to order a 1.5 m-long adapter tube for plastic connector (with stopper) for a 10 mL syringe, the item number is "AT-10E-H-P4C-1.5M".

2. Both OD ϕ 4 type tube and OD ϕ 6 type tube are equipped with a clamp.

Side connection adapter tube [with stopper]



Best suited for locations with narrow space above the syringe

In this tube assembly, the tube comes out of the side of the adapter to be connected to the syringe. This model is suitable when there is not enough space above the syringe. e.g., Mounting a dispenser on an automatic machine.

Adapter material: Polyacetal

Tube material: Special elastomer resin (for Σ series dispensers: Polyurethane)

O-ring material: Fluororubber

Syringe capacity	Model	Tube length	Applicable dispenser
5 mL	AT-5E-H-S-1.0M	1 m	–
10 mL	AT-10E-H-S-1.0M	1 m	–
20 to 70 mL	AT-50E-H-S-1.0M	1 m	–
	AT-50E-H-S-SIGMA-1.0M	1 m	For Σ

Note: This product can be ordered with length specification (in units of 0.5 m). The following example shows how to specify the length.

e.g., If you want to order a 1.5 m-long side connection adapter tube (with stopper) for a 10 mL syringe, the item number is "AT-10E-H-S-1.5M".

To purchase an adapter tube longer than 1 m dedicated for the Σ series, please contact our sales department.

Air connector tube, with filter



Prevents intake of fluid material into the dispenser

This product prevents intake of fluid material into the dispenser and accordingly prevents a failure from occurring.

Tube material: Special elastomer resin

Item name	Model	Tube length
Air connector tube [QJ plug/QJ socket, with filter, 150 mm]	CT-36PS-F	150 mm

O-ring (for adapter tube)



High level of airtightness according to the fluid characteristics

This is a spare O-ring for the adapter. Select a suitable O-ring from among four kinds of materials according to the characteristics of fluid for dispensing.

Material: Fluororubber/Silicone rubber/NBR/Perfluoroelastomer

Syringe capacity	①Fluororubber		②Silicone rubber		③NBR		④Perfluoroelastomer		Minimum Order Quantity
	Model	(Former model)	Model	(Former model)	Model	(Former model)	Model	(Former model)	
1 mL	ORG-1.5-V-B-1	AOV-1E	ORG-1.5-S-R-1	AOS-1E	ORG-1.5-N-B-1	AON-1E	ORG-1.5-P-B-1	AOP-1E	20
3 mL	ORG-6-V-B-1	AOV-3	ORG-6-S-R-1	AOS-3	ORG-6-N-B-1	AON-3	ORG-6-P-B-1	AOP-3	20
5 mL	ORG-9-V-B-1	AOV-5E	ORG-9-S-R-1	AOS-5E	ORG-9-N-B-1	AON-5E	ORG-9-P-B-1	AOP-5E	20
10 mL	ORG-11-V-B-1	AOV-10E	ORG-11-S-R-1	AOS-10E	ORG-11-N-B-2	AON-10E	ORG-11-P-B-1	AOP-10E	20
20 to 70 mL	ORG-18-V-B-1	AOV-50E	ORG-18-S-R-1	AOS-50E	ORG-18-N-B-1	AON-50E	ORG-18-P-B-1	AOP-50E	20
100 mL	ORG-24-V-B-1	AOV-100E	ORG-24-S-R-1	AOS-100E	ORG-24-N-B-2	AON-100E	ORG-24-P-B-1	AOP-100E	20

Plunger

High-precision dispensing with excellent wiping performance

This plunger is inserted into a fluid-filled syringe. It can dispense absolutely all of the fluid without any waste.

4-type lineup in accordance with fluid type, dispensing characteristics and applications

Float wiper plunger



Yellow

Miracle wiper plunger



Red



Blue



White

High-speed high-precision

Excellent wiping feature

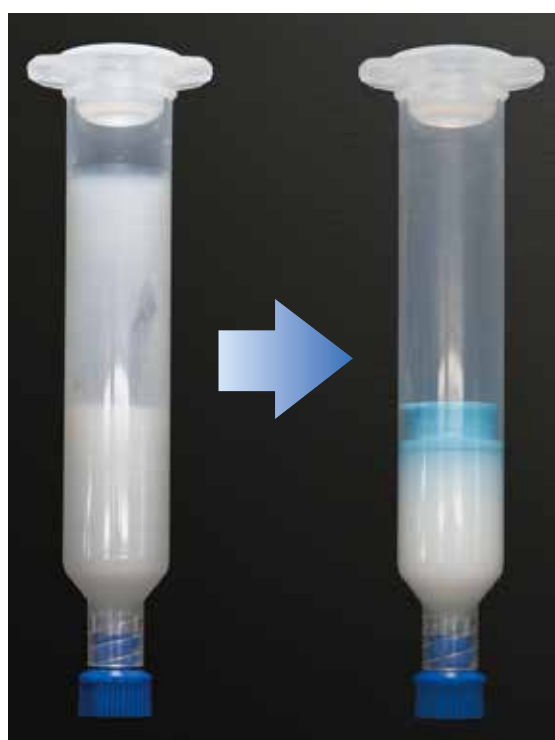
More

Smoothness between plunger and syringe

Less

Syringe capacity	Float wiper plunger (yellow)	Miracle wiper plunger (red)	Miracle wiper plunger (blue)	Miracle wiper plunger (white)	Minimum Order Quantity
	Model	Model	Model	Model	
1 mL	FLP-1E	—	—	—	50
3 mL	FLP-3E	—	—	—	50
5 mL	FLP-5E	MLP-R-5E	MLP-B-5E	MLP-5E	50
10 mL	FLP-10E	MLP-R-10E	MLP-B-10E	MLP-10E	50
20 to 70 mL	FLP-50E	MLP-R-50E	MLP-B-50E	MLP-50E	50
100 mL	NEW FLP-100E	—	—	—	50

Material: Polyethylene



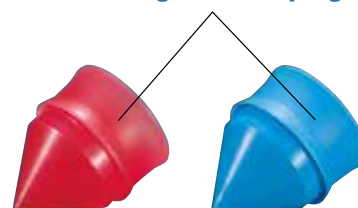
Without plunger

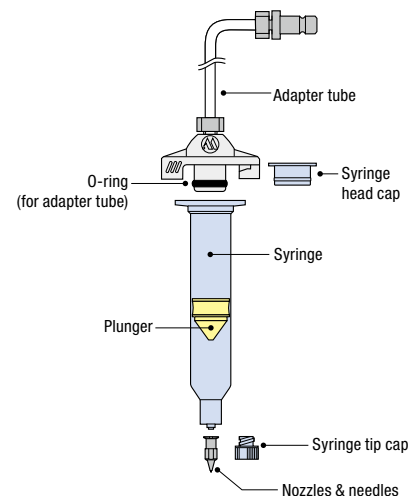
With plunger

Squeeze material cost

Reduce reject rate with high-precision dispensing

Dual wipe structure enables thorough fluid wiping.





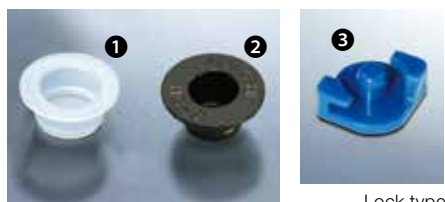
Syringe head cap/Syringe tip cap

(former: head cap/needle cap)

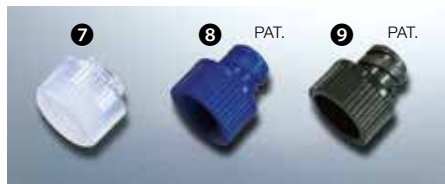
Best suited for storing and transporting syringes with fluid materials filled inside

These caps are used to seal the head and tail of the syringe.

Material: Polyethylene for ❶, ❷, ❸, ❺, ❻ and ❹ Polypropylene for ❸ and ❹ PBT for ❷



Lock type



Syringe head cap (former: head cap)

Syringe capacity	❶ For ordinary materials	❷ For UV materials	❸ For ordinary materials (with hook)	Minimum Order Quantity
	Model	Model	Model	
1 mL	—	—	HC-1E-H	50
3 mL	HC-3E	HC-3EU-B	—	50
5 mL	HC-5E	HC-5EU-B	—	50
10 mL	HC-10C	HC-10U-B	—	50
20 to 70 mL	HC-50E	HC-50EU-B	—	50
100 mL	HC-100E	—	—	50

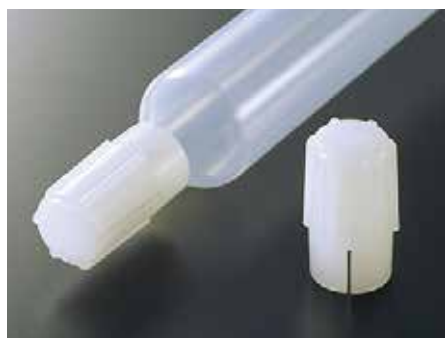
Syringe tip cap (normal type) (former: needle cap)

Syringe capacity	❹ For ordinary materials	❺ For UV materials	❻ For heat-resistant materials	Minimum Order Quantity
	Model	Model	Model	
Common for all sizes	NC-3E	NC-3EU-B	NC-3FH	50

Syringe tip cap (knurled type) (former: needle cap)

Syringe capacity	❷ For ordinary materials	❸ For ordinary materials	❹ For UV materials	Minimum Order Quantity
	Model	Model	Model	
Common for all sizes	NC-5E	NC-7E	NC-7EU-B	50

Protective cap for syringe tip



Protects the syringe tip with a tip cap on

When storing or moving a syringe containing a fluid material, this cap prevents leaks in the event the tip cap becomes damaged.

Material: Polypropylene

Syringe capacity	Applicable tip cap	Model	Minimum Order Quantity
Common for all sizes	NC-3E/NC-3EU-B	GC-1	50

The best quality ensures the finest dispensing

We use only the best parts for the material outlet to achieve the maximum high-precision controller performance. To give shape to this idea, MUSASHI has brought together all of our accumulated wisdom about dispensing technology while using computers to design our own unique needles and nozzles. Thorough mechanization and excellent processing technology enable us to create products that offer high-precision dispensing. We provide a wide variety of products that can handle the type of fluid and dispensing requirements you have.

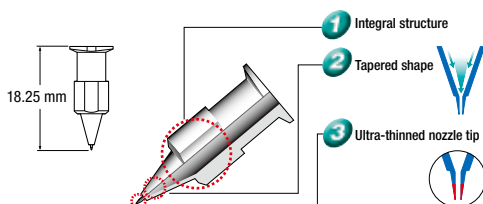
Precision solid nozzle



Micro volume dispensing with high stability achieved thanks to integral nozzle structure

The integral structure eliminates the operation of nozzle mounting to the needle base. Excellent flowability thanks to the tapered shape. Ultra-thin processing of needle tip actualizes high-precision dispensing with high stability in small volume.

Needle material: Stainless steel



Measurement unit (mm)

Model	Nozzle OD (φ)	Nozzle ID (φ)	Minimum Order Quantity
SHN-0.6N	0.70	0.60	1
SHN-0.5N	0.60	0.50	1
SHN-0.45N	0.55	0.45	1
SHN-0.4N	0.50	0.40	1
SHN-0.35N	0.45	0.35	1
SHN-0.3N	0.40	0.30	1
SHN-0.25N	0.35	0.25	1
SHN-0.2N	0.30	0.20	1
SHN-0.15N	0.25	0.15	1
SHN-0.1N	0.20	0.10	1

Precision nozzle



High-precision stable dispensing of fluid materials containing filler

Enables stable dispensing of fluid materials containing filler. Suitable for high-precision dispensing of super-small volume of materials.

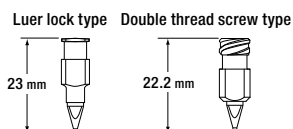
Needle material: Stainless steel

Needle base material : Brass (Nickel plate)

[Luer lock type]

: Stainless steel

[Double thread screw type]



Measurement unit (mm)

Luer lock	Double thread screw	Nozzle OD (φ)	Nozzle ID (φ)	Minimum Order Quantity
Model	Model			
HN-0.6N	HN-0.6ND	0.80	0.60	1
HN-0.5N	HN-0.5ND	0.70	0.50	1
HN-0.4N	HN-0.4ND	0.60	0.40	1
HN-0.3N	HN-0.3ND	0.50	0.30	1
HN-0.25N	HN-0.25ND	0.45	0.25	1
HN-0.2N	HN-0.2ND	0.40	0.20	1
HN-0.15N	HN-0.15ND	0.25	0.15	1
HN-0.1N	HN-0.1ND	0.20	0.10	1

Super-fine nozzles



Micro-dispensing available from as small as φ10 μm onwards

Incorporation of these super-fine nozzles into MUSASHI dispensers implements super-fine dotting and ultra-precision drawing.

Needle base material : Brass (Nickel plate) [Luer lock type]

: Stainless steel [Double thread screw type]

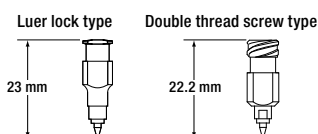
Measurement unit (mm)

Luer lock	Double thread screw	Nozzle OD (φ)	Nozzle ID (φ)	Minimum Order Quantity
Model	Model			
FN-0.60N	FN-0.60ND	0.70	0.60	1
FN-0.50N	FN-0.50ND	0.60	0.50	1
FN-0.40N	FN-0.40ND	0.50	0.40	1
FN-0.30N	FN-0.30ND	0.40	0.30	1
FN-0.25N	FN-0.25ND	0.35	0.25	1
FN-0.20N	FN-0.20ND	0.30	0.20	1
FN-0.15N	FN-0.15ND	0.25	0.15	1
FN-0.10N	FN-0.10ND	0.20	0.10	1
FN-0.05N	FN-0.05ND	0.15	0.05	1
FN-0.04N	FN-0.04ND	0.14	0.04	1
FN-0.03N	FN-0.03ND	0.13	0.03	1
FN-0.02N	FN-0.02ND	0.12	0.02	1

Tip thickness: 15 μm

Measurement unit (mm)

Luer lock	Double thread screw	Nozzle OD (φ)	Nozzle ID (φ)	Minimum Order Quantity
Model	Model			
FN-0.60N-F	FN-0.60ND-F	0.63	0.60	1
FN-0.50N-F	FN-0.50ND-F	0.53	0.50	1
FN-0.40N-F	FN-0.40ND-F	0.43	0.40	1
FN-0.30N-F	FN-0.30ND-F	0.33	0.30	1
FN-0.25N-F	FN-0.25ND-F	0.28	0.25	1
FN-0.20N-F	FN-0.20ND-F	0.23	0.20	1
FN-0.15N-F	FN-0.15ND-F	0.18	0.15	1
FN-0.10N-F	FN-0.10ND-F	0.13	0.10	1
FN-0.05N-F	FN-0.05ND-F	0.08	0.05	1
FN-0.04N-F	FN-0.04ND-F	0.07	0.04	1
FN-0.03N-F	FN-0.03ND-F	0.06	0.03	1
FN-0.02N-F	FN-0.02ND-F	0.05	0.02	1





Metal needle



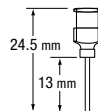
Versatile standard metal needle

These metal needles are made of highly durable stainless steel.

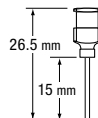
We offer a wide variety of lineup which is applicable to various dispensing shapes.

Needle material: Stainless steel

Needle base material: Brass (Nickel plate)



Type B



Type C

Gauge	Needle length 13 mm		Measurement unit (mm)		
	Model	Model	Needle OD (φ)	Needle ID (φ)	Minimum Order Quantity
12	SNA-12G-B	SNA-12G-C	2.77	2.27	60
13	SNA-13G-B	SNA-13G-C	2.40	1.94	60
14	SNA-14G-B	SNA-14G-C	2.10	1.64	60
15	SNA-15G-B	SNA-15G-C	1.83	1.43	60
16	SNA-16G-B	SNA-16G-C	1.65	1.25	60
17	SNA-17G-B	SNA-17G-C	1.49	1.11	60
18	SNA-18G-B	SNA-18G-C	1.28	0.92	60
19	SNA-19G-B	SNA-19G-C	1.08	0.72	60
20	SNA-20G-B	SNA-20G-C	0.91	0.61	60
21	SNA-21G-B	SNA-21G-C	0.82	0.52	60
22	SNA-22G-B	SNA-22G-C	0.72	0.42	60
23	SNA-23G-B	SNA-23G-C	0.64	0.34	60
24	SNA-24G-B	SNA-24G-C	0.57	0.31	60
25	SNA-25G-B	SNA-25G-C	0.52	0.26	60
26	SNA-26G-B	SNA-26G-C	0.46	0.25	60
27	SNA-27G-B	SNA-27G-C	0.42	0.21	60
28	SNA-28G-B	SNA-28G-C	0.36	0.18	60
30	SNA-30G-B	SNA-30G-C	0.32	0.14	60
31	SNA-31G-B	SNA-31G-C	0.26	0.13	60
32	SNA-32G-B	SNA-32G-C	0.23	0.10	60

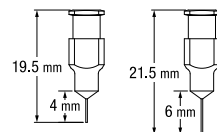
Note: For specifying needle length, the length from needle base should be notified. Contact our sales department for further information.

Thin metal needle



Needle material: Stainless steel

Needle base material: Brass (Nickel plate)

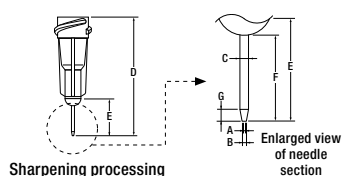


Needle length 4 mm		Needle length 6 mm		Measurement unit (mm)	
Model	Model	Needle OD (φ)	Needle ID (φ)	Minimum Order Quantity	
SNA-0.10N-4L-F	SNA-0.10N-6L-F	0.2	0.1	1	
SNA-0.20N-4L-F	SNA-0.20N-6L-F	0.3	0.2	1	
SNA-0.30N-4L-F	SNA-0.30N-6L-F	0.4	0.3	1	

Note: For specifying needle length, the length from needle base should be notified. Contact our sales department for further information.

Needle size is discernible by the color of the needle base

Sharp needle



Prevention of fluid climbing thanks to sharpening processing of needle tip

Prevention of fluid climbing to needle tip assures a stable dispensing rate. Micro-dispensing has been achieved by high-precision tapered needle tip. Double thread screw design allows the needle to be installed securely on the syringe.

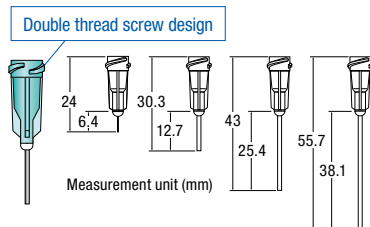
Needle material: Stainless steel

Needle base material: Polypropylene

Measurement unit (mm)

Model	Total length (D)	Needle length (E)	Visible needle length (F)	Tapered tip length (G)	Needle ID (φ) (A)	Needle tip OD (φ) (B)	Needle OD (φ) (C)	Color	Minimum Order Quantity
SPN-0.84-12.7L	30.3	12.7	(11.4)	(0.6)	0.84	1.00	1.27	Green	50
SPN-0.58-38.1L	55.7	38.1	(37.1)	(0.32)	0.58	0.74	0.91	Pink	50
SPN-0.41-38.1L	55.7	38.1	(37.1)	(0.4)	0.41	0.52	0.71	Blue	50
SPN-0.33-12.7L	30.3	12.7	(11.4)	(0.3)	0.33	0.44	0.64	Orange	50
SPN-0.25-12.7L	30.3	12.7	(11.4)	(0.3)	0.25	0.34	0.51	Rose	50
SPN-0.17-9.5L	27.1	9.5	(8.5)	(0.5)	0.17	0.26	0.51	Light blue	25
SPN-0.12-6.5L	24.0	6.5	(5.6)	(1.1)	0.12	0.19	0.46	Gray	25

Double thread screwed plastic needle



Safe and secure attachment into a syringe with double thread screwed needle design

Double thread screw design allows the needle to be installed securely on the syringe. A variety of needle lengths and gauges increases range of dispensing applications.

Needle material: Stainless steel

Needle base material: Polypropylene

Measurement unit (mm)

Gauge	Needle length 6.4 mm Model	Needle length 12.7 mm Model	Needle length 25.4 mm Model	Needle length 38.1 mm Model	Needle OD (φ)	Needle ID (φ)	Color	Minimum Order Quantity
14	—	DPN-14G-1	DPN-14G-2	DPN-14G-3	1.83	1.52	Dark green	50
15	—	DPN-15G-1	DPN-15G-2	DPN-15G-3	1.65	1.37	Brown	50
18	—	DPN-18G-1	DPN-18G-2	DPN-18G-3	1.27	0.84	Light green	50
20	—	DPN-20G-1	DPN-20G-2	DPN-20G-3	0.91	0.58	Pink	50
21	—	DPN-21G-1	DPN-21G-2	DPN-21G-3	0.81	0.51	Purple	50
22	—	DPN-22G-1	DPN-22G-2	DPN-22G-3	0.71	0.41	Blue	50
23	—	DPN-23G-1	DPN-23G-2	DPN-23G-3	0.64	0.33	Orange	50
25	—	DPN-25G-1	DPN-25G-2	DPN-25G-3	0.51	0.25	Rose	50
27	—	DPN-27G-1	—	—	0.41	0.20	White	50
30	—	DPN-30G-1	—	—	0.30	0.15	Light purple	50
32	DPN-32G-0	DPN-32G-1	—	—	0.23	0.10	Yellow	50

Plastic needles



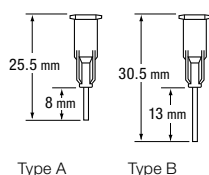
Inexpensive disposable type

These are economical, disposable plastic needles.

Needle material:

Stainless steel

Needle base material: Polyacetal



Measurement unit (mm)

Gauge	Needle length 8 mm Model	Needle length 13 mm Model	Needle OD (φ)	Needle ID (φ)	Color	Minimum Order Quantity
15	PN-15G-A	PN-15G-B	1.83	1.43	Brown	50
16	PN-16G-A	PN-16G-B	1.65	1.26	Black	50
17	PN-17G-A	PN-17G-B	1.50	1.06	Blue	50
18	PN-18G-A	PN-18G-B	1.27	0.97	Gray	50
19	PN-19G-A	PN-19G-B	1.08	0.78	Light green	50
20	PN-20G-A	PN-20G-B	0.90	0.66	Light pink	50
21	PN-21G-A	PN-21G-B	0.81	0.57	White	50
22	PN-22G-A	PN-22G-B	0.72	0.47	Light blue	50
23	PN-23G-A	PN-23G-B	0.64	0.40	Yellow	50
24	PN-24G-A	PN-24G-B	0.56	0.31	Ivory	50
25	PN-25G-A	PN-25G-B	0.51	0.29	Rose	50
26	PN-26G-A	PN-26G-B	0.46	0.25	Peacock green	50
27	PN-27G-A	PN-27G-B	0.41	0.20	Brown	50

Note: For specifying needle length, the length from needle base should be notified.
Contact our sales department for further information.



Double thread screwed tapered nozzle

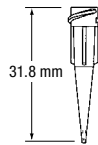
Can be used with UV fluid materials. Ideal for dispensing high-viscosity fluids, and is also disposable

Measurement unit (mm)



Best suited for dispensing high viscosity materials or materials containing filler with high flowability Made from resin to prevent damage to workpieces, even if there is contact.

Material: Polyethylene



Gauge	Model	Nozzle ID (φ)	Color	Minimum Order Quantity
12	TPND-12G-U	2.40	Red	50
14	TPND-14G-U	1.60	Dark green	50
16	TPND-16G-U	1.19	Black	50
18	TPND-18G-U	0.84	Light green	50
20	TPND-20G-U	0.61	Pink	50
22	TPND-22G-U	0.40	Blue	50
25	TPND-25G-U	0.25	Red	50
27	TPND-27G-U	0.20	Dark gray	50
30	TPND-30G-U	0.15	Olive	50

UV-block PTFE nozzle

Best suited for dispensing anaerobic fluid materials. Needle length can be specified

Measurement unit (mm)

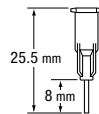


UV materials supported.

Needle material: Fluorine resin

Needle base material:

Polyacetal



Gauge	Model	Nozzle OD (φ)	Nozzle ID (φ)	Color	Minimum Order Quantity
13	TN-13G-U	2.10	1.50	Dark gray	50
14	TN-14G-U	1.95	1.35	Dark green	50
15	TN-15G-U	1.79	1.19	Olive	50
16	TN-16G-U	1.67	1.07	Black	50
17	TN-17G-U	1.56	0.96	Green	50
18	TN-18G-U	1.46	0.86	Light green	50
19	TN-19G-U	1.18	0.68	Yellow	50
20	TN-20G-U	1.06	0.56	Pink	50
21	TN-21G-U	0.92	0.46	Purple	50
22	TN-22G-U	0.84	0.38	Blue	50

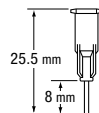
Note: For specifying needle length, the length from needle base should be notified.
Contact our sales department for further information.

PTFE nozzle

Needle material: Fluorine resin

Needle base material: Polyacetal

Measurement unit (mm)



Gauge	Needle length 8 mm Model	Nozzle OD (φ)	Nozzle ID (φ)	Color	Minimum Order Quantity
13	TN-13G	2.10	1.50	Ivory	50
14	TN-14G	1.95	1.35	Blue	50
15	TN-15G	1.79	1.19	Gray	50
16	TN-16G	1.67	1.07	Ivory	50
17	TN-17G	1.56	0.96	Yellow	50
18	TN-18G	1.46	0.86	Gray	50
19	TN-19G	1.18	0.68	Light green	50
20	TN-20G	1.06	0.56	Light pink	50
21	TN-21G	0.92	0.46	Light blue	50
22	TN-22G	0.84	0.38	White	50

Note: For specifying needle length, the length from needle base should be notified.
Contact our sales department for further information.

SUS guide PTFE nozzle



Excellent performance in high-precision dispensing of anaerobic fluid materials

Best suited for dispensing fluid materials that cannot be used with metal needles.

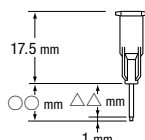
Stainless steel guide is attached to prevent vibration in the needle tip.

Needle material: Fluorine resin

Guide material: Stainless steel

Needle base material:

Polyacetal



Measurement unit (mm)

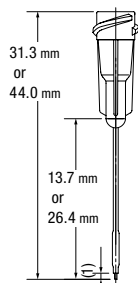
Gauge	Model	SUS guide OD (φ)	PTFE nozzle ID (φ)	Color	Minimum Order Quantity
16	TN-16G-○○L-13G-△△L	2.42	1.07	Ivory	1
17	TN-17G-○○L-14G-△△L	2.01	0.96	Yellow	1
18	TN-18G-○○L-14G-△△L	2.01	0.86	Gray	1
19	TN-19G-○○L-15G-△△L	1.82	0.68	Light green	1
20	TN-20G-○○L-16G-△△L	1.67	0.56	Light pink	1
21	TN-21G-○○L-17G-△△L	1.56	0.46	Light blue	1
22	TN-22G-○○L-18G-△△L	1.22	0.38	Brown	1

Note: 1. ○○ shows the PTFE nozzle length between 4 mm and 50 mm

△△ shows the SUS guide length between 3 mm and 49 mm

2. Specify the length of SUS guide 1 mm shorter than the PTFE nozzle.

e.g., If you want to order a 20 mm-long 19G PTFE nozzle, the item number is "TN-19G-20L-15G-19L".



Ultra-fine needle type

Measurement unit (mm)

Needle length 13.7 mm	Needle length 26.4 mm	PTFE nozzle OD (φ)	PTFE nozzle ID (φ)	Color	Minimum Order Quantity
Model	Model				
TN-0.3-13.7-SUSG	TN-0.3-26.4-SUSG	0.5	0.3	Pink	1
TN-0.2-13.7-SUSG	TN-0.2-26.4-SUSG	0.4	0.2	Purple	1
TN-0.1-13.7-SUSG	TN-0.1-26.4-SUSG	0.3	0.1	Orange	1

Needle material: Fluorine resin

Guide material: Stainless steel

Needle base material: Polypropylene

Curve needle



Best suited for dispensing to the inner surface of a workpiece

Bending processing with excellent flowability implements stable dispensing.

A variety of curve needles in two types of angles support a wide range of applications.

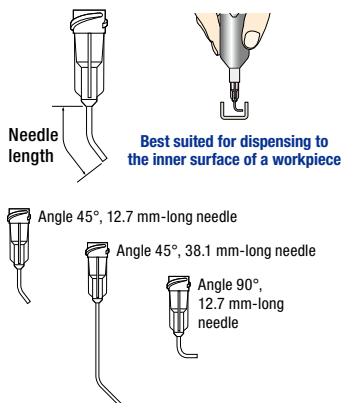
Double thread screw design allows the needle to be installed securely on the syringe.

Needle material: Stainless steel

Needle base material: Polypropylene

Measurement unit (mm)

Gauge	Angle 45°		Angle 90°	Needle OD (φ)	Needle ID (φ)	Color	Minimum Order Quantity
	Needle length 12.7 mm	Needle length 38.1 mm	Needle length 12.7 mm				
	Model	Model	Model				
14	CPN-14G-A45	CPN-14G-B45	CPN-14G-A90	1.83	1.52	Dark green	50
15	CPN-15G-A45	—	CPN-15G-A90	1.65	1.37	Brown	50
18	CPN-18G-A45	CPN-18G-B45	CPN-18G-A90	1.27	0.84	Light green	50
20	CPN-20G-A45	—	CPN-20G-A90	0.91	0.58	Pink	50
21	CPN-21G-A45	CPN-21G-B45	CPN-21G-A90	0.81	0.51	Purple	50
22	CPN-22G-A45	—	CPN-22G-A90	0.71	0.41	Blue	50
23	CPN-23G-A45	—	CPN-23G-A90	0.64	0.33	Orange	50
25	CPN-25G-A45	—	CPN-25G-A90	0.51	0.25	Rose	50
27	CPN-27G-A45	—	CPN-27G-A90	0.41	0.20	White	50
30	CPN-30G-A45	—	CPN-30G-A90	0.30	0.15	Light purple	50





Soft needle

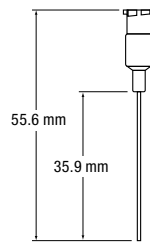


Soft touch, and no damage on workpiece

Soft and flexible needle prevents damage to workpieces and reduces a fraction defective. Especially effective for dispensing onto narrowly arranged workpieces. Can be used for dispensing anaerobic fluid materials.

Needle material: Polypropylene

Needle base material: Polypropylene



Measurement unit (mm)

Gauge	Needle length 35.9 mm Model	Needle OD (ϕ)	Needle ID (ϕ)	Color	Minimum Order Quantity
15	PPN-15G	1.83	1.37	Dark gray	50
16	PPN-16G	1.70	1.19	Brown	50
18	PPN-18G	1.35	0.81	Pink	50
20	PPN-20G	0.99	0.61	Yellow	50
22	PPN-22G	0.81	0.38	Black	50
25	PPN-25G	0.74	0.33	Red	50

Brush nozzle

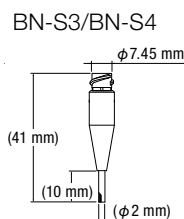
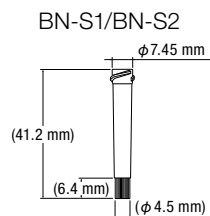


Surface dispensing efficiency remarkably improved

Wide-area surface dispensing difficult with a needle type nozzle can be performed. Double thread screw design securely install the nozzle on the syringe. Polyester fiber with high solvent resistance is used for brush. Two types are available: standard type and soft type.

Brush material: Polyester fiber

Needle base material: Polypropylene and others



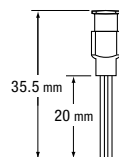
Measurement unit (mm)

Model	Hardness	Brush material	Minimum Order Quantity
BN-S1	Standard type	Polyester fiber	1
BN-S2	Soft type	Polyester fiber	1
BN-S3	Standard type	Polyester fiber	1
BN-S4	Soft type	Polyester fiber	1

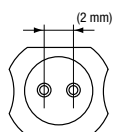
Note: The values in () are for reference purposes only.

Multi-Point Dispensing needle

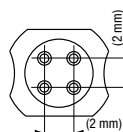
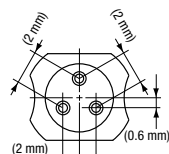
Twin needle



3-pin needle



4-pin needle



Excellent performance in simultaneous multi-point dispensing

Simultaneous multi-point dispensing will shorten tack time to half to one-fourth!

Needle material: Stainless steel

Needle base material: Brass (Nickel plate)

Measurement unit (mm)

Gauge	Needle length 20 mm			Needle OD (φ)	Needle ID (φ)	Minimum Order Quantity
	Twin needle	3-pin needle	4-pin needle			
	Model	Model	Model			
16	DN-16G	—	—	1.67	1.19	1
17	DN-17G	—	—	1.56	1.04	1
18	DN-18G	DN-18G-3P	—	1.22	0.86	1
19	DN-19G	DN-19G-3P	—	1.00	0.68	1
20	DN-20G	DN-20G-3P	—	0.91	0.58	1
21	DN-21G	DN-21G-3P	DN-21G-4P	0.83	0.49	1
22	DN-22G	DN-22G-3P	DN-22G-4P	0.72	0.39	1
23	DN-23G	DN-23G-3P	DN-23G-4P	0.63	0.32	1
24	DN-24G	DN-24G-3P	DN-24G-4P	0.57	0.29	1
25	DN-25G	DN-25G-3P	DN-25G-4P	0.50	0.26	1
26	DN-26G	DN-26G-3P	DN-26G-4P	0.46	0.24	1
27	DN-27G	DN-27G-3P	DN-27G-4P	0.41	0.20	1
28	DN-28G	DN-28G-3P	DN-28G-4P	0.35	0.15	1

Note: 1. Customization of products with needle pitch and length specified is available.

2. The values above are different from the needle pipe diameters of SN needles.

Nozzles with stoppers



Stopper structure introduced to maintain constant clearance. High-precision dispensing available even for unstable workpieces.

Needle material: Stainless steel

Needle base material: Stainless steel

Stopper material:

Stainless steel, others

Custom-made nozzle



We can design and supply specialty items, such as bending nozzles and forked nozzles that match your dispensing conditions and materials.

Nozzle kit



This kit is convenient for dispensing conditioning at manufacturing and R&D sites, which contains various needles and nozzles.

Contents of nozzle kit

- Soft needle
- Double thread screw tapered nozzle
- PTFE nozzle
- PTFE nozzle with SUS guide
- Metal needle
- Brush nozzle

- Double thread screwed plastic needle
- Sharp needle
- Curve needle

Item name	Model
Nozzle kit	NK-2
Nozzle kit case	NKC-2



Multi nozzles



Customization of pin placement and length according to dispensing pattern

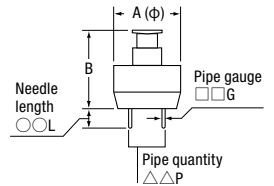
Simultaneous multi-point dispensing will shorten your tack time. Various dispensing patterns are supported.

Needle material: Stainless steel

Needle base material: Stainless steel

Item name
Multi nozzles MN◇◇-□□G-○○L-△△P [standard]

Note: Specify the cap size, pipe gauge, needle length, pipe quantity, and pipe layout.

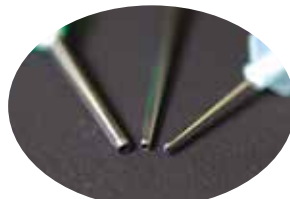


Model	Measurement unit (mm)	
	Cap dimensions	
	A (φ)	B
MN10	10	15
MN13	13	19
MN15	15	22
MN17	17	22
MN19	19	22
MN21	21	22
MN23	23	25
MN25	25	25
MN27	27	25

Pipe gauge	Measurement unit (mm)	
	Needle OD (φ)	Needle ID (φ)
12	2.99	2.30
13	2.42	1.80
14	2.01	1.58
15	1.82	1.37
16	1.67	1.19
17	1.56	1.04
18	1.22	0.86
19	1.00	0.68
20	0.91	0.58
21	0.83	0.49
22	0.72	0.39
23	0.63	0.32
24	0.57	0.29
25	0.50	0.26
26	0.46	0.24
27	0.41	0.20
28	0.35	0.15

Note: Sizes other than those shown above are also available. Please contact our sales department.

Lineup of sharp needle design to prevent fluid accumulation.



Sharpening processing of needle tip

Syringe installation section

Standard luer lock type



Double threaded screw type*



Two types of syringe installation sections are available: standard luer lock type and double threaded screw type*. The double threaded screw type* ensures secure installation of the needle on the syringe.

* The double threaded screw type is available by special order.

Slit nozzle



Best suited for forming solid film

Takt time will be reduced by wide-area surface dispensing.

Production example

Slit width	10 mm	20 mm	30 mm
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Note: Sizes other than those shown above are also available. Please contact our sales department.

Flexible response to the needs for larger capacity

MUSASHI's high-performance cartridges can respond to various scenes that use much larger volumes of material.

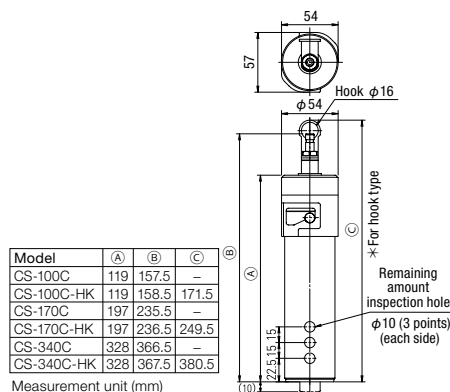
Three models are available to match your daily requirements and dispensing volume. Also available is a cartridge for tube for directly dispensing commercially available fluids that come in tubes.

By connecting the cartridge to the dispensing controller, you can use it for various types of dispensing from manual jobs to automatic insert machines. You can dispense fluids cleanly, without getting your hands or workplaces dirty.

Barrel cartridge



■ Cartridge set dimension drawings



Speedy attachment/detachment just in a few seconds!

Workability in barrel replacement is dramatically improved.

This is suitable for large volumes of fluid.

You can select the best size from among 100 mL, 170 mL, and 340 mL according to your daily requirements and dispensing volumes.

■ Barrel cartridge

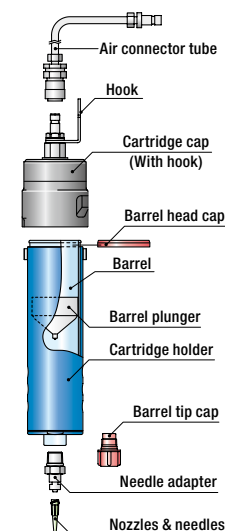
Item name	Model	Weight	Minimum Order Quantity
Barrel cartridge	[100 mL]	CS-100C	265 g
	[170 mL]	CS-170C	335 g
	[340 mL]	CS-340C	455 g
	[100 mL with hook]	CS-100C-HK	275 g
	[170 mL with hook]	CS-170C-HK	345 g
	[340 mL with hook]	CS-340C-HK	465 g

Note: 1. Always applied pressure: 0.5 MPa or less.

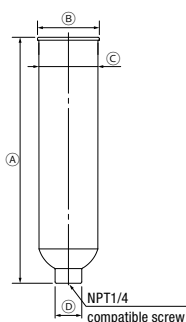
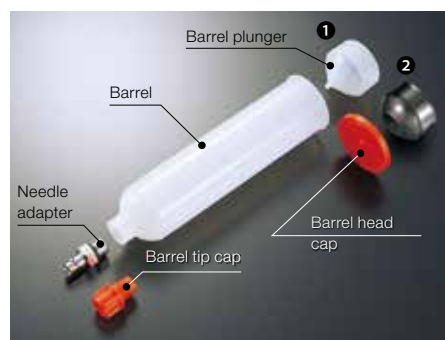
2. The barrel cartridge set consists of a cartridge holder and a cartridge cap.

■ Barrel cartridge components

Capacity	Item name	Model	Material	Minimum Order Quantity
100 mL	Cartridge cap	[Without hook]	CC-P-001-1	Select either one
		[With hook]	CC-P-001-2	
	Cartridge holder	[100 mL, barrel use]	CH-100C	1
170 mL	Cartridge cap	[Without hook]	CC-P-001-1	Select either one
		[With hook]	CC-P-001-2	
	Cartridge holder	[170 mL, barrel use]	CH-170C	1
340 mL	Cartridge cap	[Without hook]	CC-P-001-1	Select either one
		[With hook]	CC-P-001-2	
	Cartridge holder	[340 mL, barrel use]	CH-340C	1



Barrel parts



Fluid container for cartridge type

These items are a container and a cap to fill fluid in the cartridge.

■ Barrel parts

Item name	Model (former model)	Material	Minimum Order Quantity	Remarks
Barrel [100 mL type B]	PB-100B	Polyethylene	10	—
Barrel [170 mL type C]	PB-170C	Polyethylene	10	
Barrel [340 mL type C]	PB-340C	Polyethylene	10	
Barrel plunger ① [Type W1]	PP-W1	Polyethylene	10	White/Loose
Barrel plunger ② [Type B1]	PP-B1	Polyethylene	10	Black/Tight
Barrel head cap [Type 4]	BC-4	Polyethylene	10	—
Barrel tip cap [Type 4]	BP-4	Polypropylene	10	—
Needle adapter [No.12]	P-NADP-12(NA-2V)	Brass (Nickel plated)	1	—
Needle adapter [No.13]	P-NADP-13 (NA-2VT)	Fluorine coated	1	

Note: For details about the needle adapter, see page 23.

■ UV-block Barrel parts

Item name	Model	Material	Minimum Order Quantity	Remarks
UV-block barrel [170 mL type C]	PB-170CU-OR	Polypropylene	10	—
UV-block barrel [340 mL type C]	PB-340CU-OR	Polypropylene	10	
③ UV-block barrel head cap [Type 4]	BC-4U-B	Polyethylene	10	
④ UV-block barrel tip cap [Type 4]	BP-4U-B	Polypropylene	10	



Model	(A)	(B)	(C)	(D)
PB-100B	99.2	φ45.3	φ43	φ19.3
PB-170C	178	φ45	φ43	φ19.4
PB-170CU-OR	179	φ45	φ43	φ19.4
PB-340C	311.5	φ45	φ42.8	φ19.4
PB-340CU-OR	311.5	φ45	φ43	φ19.4

Measurement unit (mm)

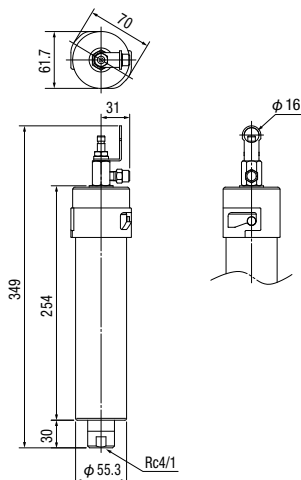
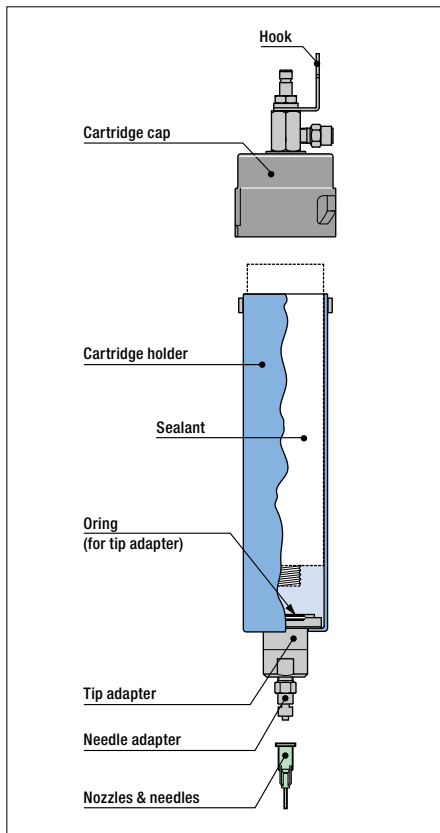
Consumables for cartridge caps

Item name	Model (former model)	Minimum Order Quantity
Seal spring [for cartridge cap]	P-SSP-1 (SCS-P-001-1A)	1
O-ring receiver [for cartridge cap]	CS-P-001-1A	1
O-ring (for cap sealing)	ORG-42-V-B-1 (CS-P-001-1B)	1
O-ring (for barrel sealing)	ORG-34-V-B-1 (CS-P-001-1C)	1

Item name	Model (former model)	Minimum Order Quantity
Seal retainer [for cartridge cap]	SCS-P-001-1C	1
Screw [No.2]	P-SCW-2 (CS-P-001-1D)	1
Cartridge cap hook	SCS-P-005-1	1
Pneumatic quick joint [plug R1/8]	QP-1B	1



Sealant cartridge



Direct constant volume dispensing with commercially available sealant

This cartridge is used for dispensing with a commercially available 330 mL sealant.

Sealant cartridge (former: sealant cartridge set (Resin specification))

Item name		Model	Weight	Minimum Order Quantity
Sealant cartridge	[Type S]	SCS-330-S	570 g	1 set
	[Type TB]	SCS-330-TB	570 g	1 set
	[Type TR]	SCS-330-TR	570 g	1 set
	[Type TS]	SCS-330-TS	580 g	1 set
	[Type MI]	SCS-330-MI	580 g	1 set
	[Type MO]	SCS-330-MO	570 g	1 set
Sealant cartridge	[Type S with hook]	SCS-330-S-HK	580 g	1 set
	[Type TB with hook]	SCS-330-TB-HK	580 g	1 set
	[Type TR with hook]	SCS-330-TR-HK	580 g	1 set
	[Type TS with hook]	SCS-330-TS-HK	590 g	1 set
	[Type MI with hook]	SCS-330-MI-HK	590 g	1 set
	[Type MO with hook]	SCS-330-MO-HK	580 g	1 set

Note: 1. Always applied pressure: 0.5MPa or less.

2. The sealant cartridge consists of a cartridge cap, cartridge holder, O-ring, tip adapter, and needle adapter.

Sealant cartridge components

Item name	Model (former model)	Material	Minimum Order Quantity
Cartridge cap	[Without hook]	SCS-P-001-1	PBT, Polyacetal, Stainless steel, 1
	[With hook]	SCS-P-001-2	Brass, NBR, Fluororubber 1
Cartridge holder [sealant use]	SCS-P-002-1	Aluminum alloy (anodized), Stainless steel	1
O-ring	ORG-20-V-B-1 (SCS-P-003-1)	Fluororubber	1
Tip adapter	[Type TB]	SCS-P-004-1	1
	[Type S]	SCS-P-004-3	1
	[Type TR]	SCS-P-004-5	1
	[Type TS]	SCS-P-004-4	1
	[Type MI]	SCS-P-004-6	1
	[Type MO]	SCS-P-004-7	1
Needle adapter [No.11]	P-NADP-11 (NA-2)	Brass (Nickel plated)	1

Note: The tip adapter is selectable from six types (TB, TR, S, TS, MI and MO) according to the material manufacturer's sealant to be used. Please contact our sales department.

Consumable parts/options

Item name		Model (former model)	Material	Minimum Order Quantity
Packing	[No.23]	P-PKG-23 (SCS-P-001-1B)	Fluororubber	1
	[No.15]	P-PKG-15 (SCS-P-004-1A)	Fluororubber	
Seal spring [for cartridge cap]		P-SSP-1 (SCS-P-001-1A)	Stainless steel	
Seal retainer [for cartridge cap]		SCS-P-001-1C	Polyacetal	
Screw [No.17]		P-SCW-17 (SCS-P-001-1D)	Stainless steel	
O-ring	[φ20 Material V Color B #1]	ORG-20-V-B-1 (SCS-P-003-1)	Fluororubber	
	[φ16 Material V Color B #1] only for TS	ORG-16-V-B-1 (SCS-P-004-4A)	Fluororubber	
	[φ14 Material V Color B #1] only for TS	ORG-14-V-B-1 (SCS-P-004-4B)	Fluororubber	
Cartridge cap hook*		SCS-P-005-1	—	

* Component count: 2 pieces

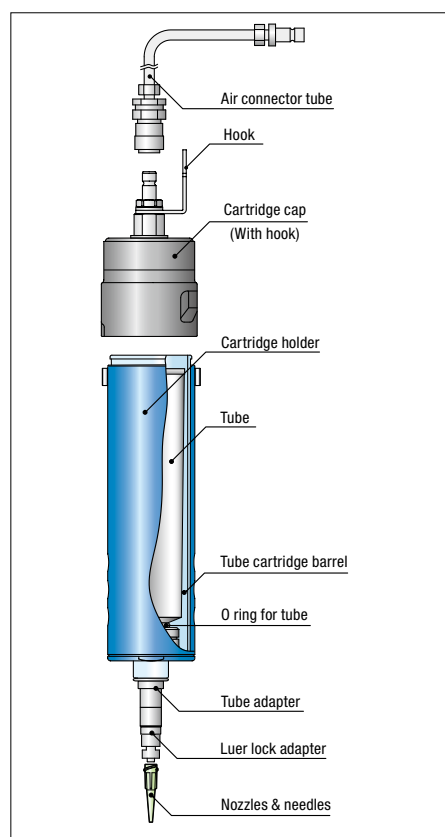
Applicable to the sealants of all manufacturers



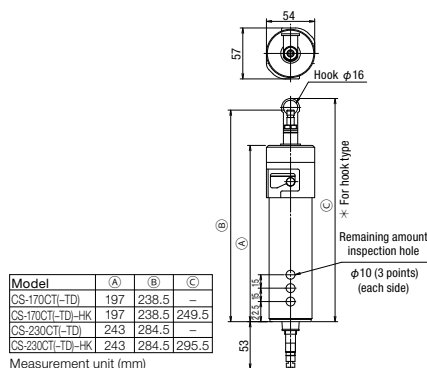
Note: This item needs to be selected in accordance with the material manufacturer's sealant to be used. Contact our sales department.



Tube cartridge



■ Tube cartridge dimension drawings



Direct dispensing from commercially available tubes

This cartridge allows users to directly set a commercially available fluid tube in this cartridge and directly perform constant volume dispensing.

■ Tube cartridge (former: tube cartridge set)

■ Tube cartridge (form: tube cartridge set)				
Item name		Model	Weight	Minimum Order Quantity
Tube cartridge	[100 g]	CS-170CT	378 g	1 set
	[100 g type TD]	CS-170CT-TD	378 g	1 set
	[100 g with hook]	CS-170CT-HK	388 g	1 set
	[100 g type TD with hook]	CS-170CT-TD-HK	388 g	1 set
Tube cartridge	[200 g]	CS-230CT	415 g	1 set
	[200 g TYPE TD]	CS-230CT-TD	415 g	1 set
	[200 g WITH HOOK]	CS-230CT-HK	425 g	1 set
	[200 g TYPE TD WITH HOOK]	CS-230CT-TD-HK	425 g	1 set

Note: 1. Select one of two types of tube cartridges according to the capacity and liquid material to be used. Contact our sales department after confirming the manufacturer, material type, and capacity of the liquid tube.
 2. Always applied pressure: 0.5 MPa or less.
 3. The tube cartridge consists of a cartridge holder, cartridge cap, tube cartridge barrel, O-ring for tube (for tube adapter), tube adapter, O-ring (for luer lock adapter), and luer lock adapter.

■ Tube cartridge components

Capacity	Item name	Model (former model)	Material	Minimum Order Quantity
For NET 100 g	Cartridge cap [Without hook]	CC-P-001-1	-	Select either one
	Cartridge cap [With hook]	CC-P-001-2	-	
	Cartridge holder [170 mL tube use]	CH-170CT	Aluminum alloy	1
	Tube cartridge barrel [170 mL] *3 *5	PB-170BT	Polyethylene	1
	O-ring for a tube*1	-	Fluororubber	1
	O-ring (for tube adapter) [φ12 Material V Color B #1]	ORG-12-V-B-1 (CS-BT-003)	Fluororubber	1
	Tube adapter [No.3] *2 *3	P-TADP-3 (CS-BT-004)	Polypropylene	Select either one
	Tube adapter [No.2] *2 *3	P-TADP-2 (CS-BT-009)	Polypropylene	
For NET 200 g	O-ring (for luer lock adapter) [φ8 Material V Color B #1]	ORG-8-V-B-1 (CS-BT-002)	Fluororubber	1
	Luer lock adapter [No.1]	P-LADP-1 (CS-BT-001)	Fluorine resin*4	1
	Cartridge cap [Without hook]	CC-P-001-1	-	Select either one
	Cartridge cap [With hook]	CC-P-001-2	-	
	Cartridge holder [230 mL tube use]	CH-230C	Aluminum alloy	1
	Tube cartridge barrel [230 mL] *3 *5	PB-230BT	Polyethylene	1
	O-ring for a tube *1	-	Fluororubber	1
	O-ring (for a tube adapter) [φ12 Material V Color B #1]	ORG-12-V-B-1 (CS-BT-003)	Fluororubber	1
	Tube adapter [No.3] *2 *3	P-TADP-3 (CS-BT-004)	Polypropylene	Select either one
	Tube adapter [No.2] *2 *3	P-TADP-2 (CS-BT-009)	Polypropylene	
	O-ring (for a luer lock adapter) [φ8 Material V Color B #1]	ORG-8-V-B-1 (CS-BT-002)	Fluororubber	1
	Luer lock adapter [No.1]	P-LADP-1 (CS-BT-001)	Fluorine resin*4	1

*1 The screw shapes of the end of the tubes and O-rings for tubes vary, depending on the liquid material. Confirm the manufacturer, material type and capacity and then contact our sales office.

*2 Select one of two types of tube adapters according to the liquid material to be used. Contact our sales department after confirming the manufacturer, material type, and capacity.

*3 Tube cartridge barrels and tube adapters are consumables. Periodical replacement is recommended.

*4 Wetted part is made of fluorocarbon resin, and luer lock part is metallic.

*5 Use Musashi's 170 mL type barrel for NET100 g and 230 mL type barrel for NET200 g.

All manufacturers' tubes are supported



Note: This item needs to be selected in accordance with the material manufacturer's tube to be used. Contact our sales department.

Best items for each situations

By supporting customers at all levels of high precision dispensing, we can be real partners.

MUSASHI offers a wide variety of items, from accessories that improve operating efficiency to parts that can connect different systems.

We respond to detailed workplace needs and follow up in areas that are not visible from the outside.

MUSASHI deliver the best item needed on the cutting edge of high-precision dispensing, to satisfy our customers.

Fluid accessories

Needle adapter



This adapter is used to connect the valves and cartridges to a needle.

Item name	Model (former model)	Suitable products	Wetted part material	Connector dia.
Needle adapter	① [No.14] P-NADP-14 (NA-1)	For valves	Brass (Nickel plated)	R1/8
	② [No.15] P-NADP-15 (NA-1T)		Fluorine coated	
	③ [No.12] P-NADP-12 (NA-2V)	For barrels	Brass (Nickel plated)	R1/4
	④ [No.13] P-NADP-13 (NA-2VT)		Fluorine coated	
	⑤ [No.17] P-NADP-17	AeroJet, MPP-1, DHG, Valves, Syringes, Nozzles (CPN, DN, Multi nozzle, Slit nozzle) * Mounting direction adjustable	Stainless steel, Fluorocarbon resin, Brass (Nickel plated)	Double thread screwed luer lock plug

Fluid accessories

Fluid feed tube connector



These connectors are used to connect the fluid feed tube to a syringe, needle, valve, tank, and cartridge. Select a connector that matches the fluid material characteristics and the connection pattern.

Item name	Model	Shape	Tube size	Connector dia.	Material	Applications
Fluid feed tube connector	① J-R-3	Straight	OD 3 mm	Double thread screwed luer lock plug	Fluorine resin	For connection between syringe and tube
	② J-RT-3	Straight	OD 3 mm	Double thread screwed luer lock socket	Fluorine resin	For connection between nozzle and tube
	③ J-B2B-6	Straight	For $\phi 6 \times 4$	R1/4	Fluorine resin	For connection between valve or suction pipe for tank and tube
	④ J-46BS	Straight	For $\phi 6 \times 4$	R1/8	Brass	
Fluid feed elbow tube connector	⑤ J-L1B-6	Elbow	For $\phi 6 \times 4$	R1/8	Stainless steel	For connection between high pressure valve or suction pipe for tank and tube
	⑥ J-L1B-48HP	Elbow	For $\phi 8 \times 4$	R1/8	Brass	
	⑦ J-L2B-48HP	Elbow	For $\phi 8 \times 4$	R1/4	Brass	

Air accessories

Pneumatic quick joint



These are compressed air fittings that can connect dispensing controllers, cartridges, or fluid feed tanks quickly to various air pipes.

	Item name	Model
Pneumatic quick joint	① [Plug Rc1/8]	QP-1N
	② [Plug Rc1/4]	QP-2N
	③ [Plug R1/8]	QP-1B
	④ [Plug R1/4]	QP-2B
	⑤ [Plug for OD6×ID3 barbed joint]	QP-TK1
Pneumatic quick joint	⑥ [Socket Rc1/8]	QS-1N
	⑦ [Socket Rc1/4]	QS-2N
	⑧ [Socket Rc1/4 without valve]	QS-2NN
	⑨ [Socket R1/4]	QS-2B
	⑩ [Socket for OD6×ID3 barbed joint]	QS-TK1

Fluid accessories

Luer lock type extension tube



An extension tube used to connect a syringe to a needle/nozzle. It is used for dispensing a fluid material at a distance from the syringe.

Item name	Model	Tube length	Material
Luer lock type extension tube	LT-23EX	49.8 cm	Tube: Polyethylene Joint: Polyethylene

Fluid accessories

Fluid feed tube



Fluid feed tube
Special tube for transferring fluid.

Item name	Model	Length to specify
Fluid feed tube	① [OD6×ID4 Nylon white]	LT-46
	② [OD6×ID4 Fluorine resin white]	LT-46T
	[OD8×ID4 Nylon white for high pressure]	LT-48HP
		In units of 1 m

Air accessories

Air connector tube



This tube is used for supplying air pressure to a cartridge.

Item name	Model	Tube length
Air connector tube	[QJ plug, OD6 mm 1 m]	CT-36P
	[QJ plug QJ socket 1 m]	CT-36PS
	[QJ plug QJ socket Σ use 1 m]	CT-58PS-SIGMA

Note: This product can be ordered with length specification (in units of 0.5 m). The following example shows how to specify the length.
e.g., For ordering a 2.5 m-long air connector tube for the cartridge, the item number is "CT-36PS-2.5M".

Air accessories

Pneumatic joints



Pneumatic joints
These are used to connect various air pipes to dispensers, cartridges, valves, or tanks.

Item name	Model
① Pneumatic barbed joint [R1/4 OD10×ID8 use]	TK-2B
② Pneumatic half union [R1/4 OD6 mm use]	J-U2B-6
③ Pneumatic elbow union [R1/4 OD6 mm use]	J-LU2B-6

Other accessories

Air accessories

Regulator/air gauge, filter/regulator



① Regulator/air gauge

Used to set and indicate the air pressure supplied to a container.

② Filter/regulator

Used to clean the air to supply the air to a dispenser.

Item name	Model
① Regulator/air gauge*	[0.2 MPa] RA-2B
	[0.7 MPa] RA-7B
② Filter/regulator	F/R-4

* Consists of a regulator, air gauge, and PT conversion adapter.

Other accessories

Handy switch



This switch is used to toggle dispensing on and off in your palm with its cord wrapped around the syringe tip. This switch supports 3 to 70 mL syringes.

Item name	Model	Code length
Handy switch	① [LS-2T type16 2 pin]	LS-2T-1602P
	[LS-2T type16 4 pin]	LS-2T-1604P
	② [LS-3T type16 2 pin]	LS-3T-1602P
	[LS-3T type16 4 pin]	LS-3T-1604P

Other accessories

Dispense handgun



Stable handy dispensing without both pneumatic source and power supply. The amount of pulling the trigger controls dispensing volume.

Item name	Model	Remarks
Dispense handgun	[5 mL]	DHG-5E
	① [10 mL]	DHG-10E
	[30 mL]	DHG-30E
	② [50 mL]	DHG-50E

Note: This dispense handgun does not include a syringe, MLP plunger, and needle.

Other accessories

Syringe stand



This stand is used for holding the syringe during and after operation. You can select a stand from three sizes to match your syringe.

Item name	Model
Syringe stand	① [5 mL use type A]
	② [10 mL use type A]
	③ [20 to 50 mL use type A]
Nozzle dryness prevention cap	[SYS-1/2/3A use] SYS-CAP

Syringe stand for when using handy switch

Item name	Model	Applicable nozzles
Syringe stand	[5 mL use LS-3T/2T use]	SYS-5B
	[For 10 mL syringe LS-3T/2T use]	SYS-10B
	[For 20 mL syringe LS-3T/2T use]	SYS-20B
	[For 30 mL syringe LS-3T/2T use]	SYS-30B
	[For 50 mL syringe LS-3T/2T use]	SYS-50B
Nozzle dry reduction cap	[For SYS-B ID:7.0 with LS-3T]	SYS-CAP-7
	[For SYS-B ID:8.5 with LS-3T]	SYS-CAP-8.5
	[For SYS-B ID:10.0 with LS-2T/No handy switch]	SYS-CAP-10

Air accessories

Air hose



Used to supply air pressure from the air source to the dispenser.

Item name	Model	Length to specify
Air hose [OD 6 mm ID4 mm black]	AH-46	In units of 1 m

Other accessories

Foot switch



This switch is used to trigger and stop dispensing with your foot. Since the shape of the metal connector varies depending on the dispenser, select the switch according to the type of dispenser you are using.

Item name	Model	Cord length
Foot switch	[Type16 2 pin]	FS/W-2-1602P
	[Type16 4 pin]	FS/W-2-1604P

Other accessories

Metal connector



Used to connect a dispenser to an external signal.

Item name	Model
Metal connector	[Plug type16 2 pin] MC-1602P
	[Plug type16 3 pin] MC-1603P
	[Plug type16 4 pin] MC-1604P

Other accessories

H type stand set



This stand fixes a cartridge and valve at your preferred height.

Components

Item name	Model	(Former model)
H-type stand	HS-1	TSS-2
H-type stand unit clamp	SH-2	
H-type stand clamp holder	CL-1	

Note: To use it as a set, please purchase the three items: H-type stand, unit clamp, and clamp holder.

Tubing dispenser accessories

Dispenser pen for tubing dispenser



This is an external input switch for tubing dispensers (MT and MK series).

Item name	Model	Code length
Dispenser pen [LS-NH3 type16 4 pin]	LS-NH3-1604P	1 m

PTFE tube for tubing dispenser



These fluid feed tubes are made of PTFE for dispensing fluid materials from a tubing dispenser. A variety of tube accessories are available according to fluid's viscosity and dispensing amount.

Note: For UV adhesive, use PTFE tube, black, TT- □B (black tube).

■ PTFE tube

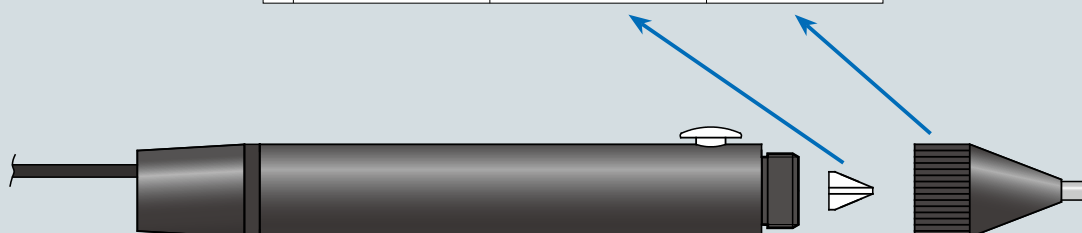
Model	Tube OD (φ) mm	Tube ID (φ) mm	Tube length
TT-32	0.75	0.25	10 m
TT-30	0.76	0.30	10 m
TT-28	0.84	0.38	10 m
TT-26	0.92	0.46	10 m
TT-24	1.06	0.56	10 m
TT-22	1.18	0.68	10 m
TT-21	1.31	0.81	10 m
TT-20	1.46	0.86	10 m
TT-19	1.56	0.96	10 m
TT-18	1.67	1.07	10 m
TT-17	1.79	1.19	10 m
TT-16	1.95	1.35	10 m
TT-15	2.10	1.50	10 m
TT-14	2.28	1.68	10 m
TT-13	2.53	1.93	10 m
TT-12	2.76	2.16	10 m
TT-11	3.01	2.41	10 m
TT-10	3.29	2.69	10 m

■ PTFE tube, black (for UV adhesive)

Model	Tube OD (φ) mm	Tube ID (φ) mm	Tube length
TT-30B	0.76	0.30	10 m
TT-28B	0.84	0.38	10 m
TT-26B	0.92	0.46	10 m
TT-24B	1.06	0.56	10 m
TT-22B	1.18	0.68	10 m
TT-21B	1.31	0.81	10 m
TT-20B	1.46	0.86	10 m
TT-19B	1.56	0.96	10 m
TT-18B	1.67	1.07	10 m
TT-17B	1.79	1.19	10 m
TT-16B	1.95	1.35	10 m
TT-15B	2.10	1.50	10 m
TT-13B	2.53	1.93	10 m
TT-12B	2.76	2.16	10 m
TT-11B	3.01	2.41	10 m
TT-10B	3.29	2.69	10 m

■ Dedicated tube collar/cap application chart

	PTFE tube	Tube collar type	Cap
Model	TT-32	LS-NH3-C4	LS-NH3-TG7
	TT-30		LS-NH3-TG8
	TT-28		LS-NH3-TG7
	TT-26		LS-NH3-TG7
	TT-24	LS-NH3-C3	LS-NH3-TG6
	TT-22		LS-NH3-TG5
	TT-21		LS-NH3-TG4
	TT-20	LS-NH3-C2	LS-NH3-TG4
	TT-19		LS-NH3-TG3
	TT-18		LS-NH3-TG3
	TT-17		LS-NH3-TG2
	TT-16	LS-NH3-C1	LS-NH3-TG2
	TT-15		LS-NH3-TG2
	TT-14		LS-NH3-TG1



Reliable support in various dispensing environments

MUSASHI provides many kinds of peripheral equipment to match various dispensing environments, fluid material characteristics, or usage conditions, so that you can conduct dispensing operations in the ideal conditions. Our peripheral equipment controls fluid materials' viscosity in several temperatures, agitates resin that contains filler, and quickly eliminates bubbles from the fluid in the syringe in order to maintain stable, high-quality precision-dispensing.

High-precision Peltier type temperature control system

PELTIER MASTER



[Fan type]



[Air type]

Controls the temperature of fluid materials accurately by heating and cooling to implement stable dispensing

High-viscosity fluid materials of which viscosity changes under the influence of environmental temperatures are stably dispensed at high precision level.

CE-marking certified, EU RoHS2 compliant.

	Item name	Model	Weight
① Fan type Peltier temperature control block	[Fan type Peltier 5 mL syringe use]	TB-5C-P-F	220 g
	[Fan type peltier 10 mL syringe use]	TB-10C-P-F	270 g
	[Fan type peltier 20 mL syringe use]	TB-20C-P-F	390 g
	[Fan type peltier 30 mL syringe use]	TB-30C-P-F	490 g
	[Fan type peltier 50 mL syringe use]	TB-50C-P-F	600 g
② Fan type Peltier temperature controller		TCU-05FIII	1.7 kg

	Item name	Model	Weight
③ Air type Peltier temperature control block	[Air type Peltier Left 5 mL syringe use]	TB-5C-P-L	300 g
	[Air type Peltier Right 5 mL syringe use]	TB-5C-P-R	
	[Air type peltier left specifications 10 mL syringe use]	TB-10C-P-L	360 g
	[Air type peltier right specifications 10 mL syringe use]	TB-10C-P-R	
	[Air type peltier left specifications 20 mL syringe use]	TB-20C-P-L	520 g
	[Air type peltier right specifications 20 mL syringe use]	TB-20C-P-R	
	[Air type peltier left specifications 30 mL syringe use]	TB-30C-P-L	640 g
	[Air type peltier right specifications 30 mL syringe use]	TB-30C-P-R	
	[Air type peltier left specifications 50 mL syringe use]	TB-50C-P-L	760 g
	[Air type peltier right specifications 50 mL syringe use]	TB-50C-P-R	
④ Air type Peltier temperature controller		TCU-05III	2.6 kg

Note: 1. Select one of two types of outlet directions of the AIR IN joint, right or left.

2. A cap for Peltier temperature control block shall be ordered separately in accordance with the nozzle size.

Resistance temperature detector control system

THERMO MASTER



Improved temperature precision and stability in a lightweight and compact body

This unit reduces dispensing fluctuations with high stability of temperature. This unit is a lightweight and compact syringe-heating temperature control system.

	Item name	Model	Weight
① Resistance bulb type temperature control block	[Resistance thermometer bulb type for 5 mL syringe]	TB-5E-K	135 g
	[Resistance thermometer bulb type 10 mL syringe use]	TB-10E-K	190 g
	[Resistance thermometer bulb type 20 mL syringe use]	TB-20E-K	240 g
	[Resistance thermometer bulb type 30 mL syringe use]	TB-30E-K	280 g
	[Resistance thermometer bulb type 50 mL syringe use]	TB-50E-K	340 g
② Resistance bulb temperature controller		TCU-02	1.04 kg

Note: The cap for resistance bulb type temperature control block shall be ordered separately in accordance with the nozzle size.

Stirring system

MIX MASTER



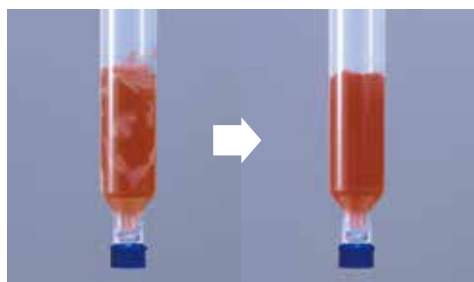
Note: The CyberJet2 is not included in this product.

Stirs fluids containing filler to prevent filler sedimentation

	Item name	Model	Weight
① Stirring block MIX MASTER	[5 mL syringe use]	MB-5E-02	880 g
	[10 mL syringe use]	MB-10E-02	880 g
	[20 mL syringe use]	MB-20E-02	850 g
	[30 mL syringe use]	MB-30E-02	860 g
	[50 mL syringe use]	MB-50E-02	860 g
	[70 mL syringe use]	MB-70E-02	870 g
	[100 mL barrel use]	MB-100C-01	Approx. 1.2 kg
	[170 mL, barrel use]	MB-170C-01	Approx. 1.27 kg
	[340 mL, barrel use]	MB-340C-01	Approx. 1.39 kg
	[30 to 70 mL CYBERJET2 use]	MB-MJETC2-3070	Approx. 1.3 kg
④ Stirring controller MIX MASTER		RMU-02	1.8 kg

Note: The weight excludes cables, syringe, and fluid material.

Syringe centrifugal degasser **AWATRON3** Further user friendly, reliable, and speedy bubble elimination!



Before bubble elimination After bubble elimination



- Bubbles are eliminated just by placing a syringe and pressing the switch.
- Introduction of a syringe detachable mechanism with stationary holder allows for simple operation and elimination of installation failure.
- Introduction of a newly developed syringe tip cap mounting jig has achieved reliable capping. Accordingly it prevents fluid from leaking during bubble elimination.
- Introduction of a digital timer allows for detailed setting and control of bubble elimination time.

■ Specifications

Model	AW-20-3	AW-20-3-220V	AW-50-3	AW-50-3-220V
Timer range	1 to 600 s			
Supported syringes mL	1 mL syringe: equipped with 4 syringes			
	3 mL syringe: equipped with 4 syringes			
	5 mL syringe: equipped with 4 syringes			
	10 mL syringe: equipped with 4 syringes			
	20 mL syringe: equipped with 4 syringes			
	—		30 mL syringe: equipped with 4 syringes	
Power supply	AC100 V 50/60 Hz		AC220 V or AC230 V 50/60 Hz	
	AC100 V 50/60 Hz		AC220 V or AC230 V 50/60 Hz	
Power consumption	165 W		400 W	
External dimensions	W320 × D394 × H210 mm		W431 × D509 × H250 mm	
Weight	Approx. 15 kg		Approx. 24 kg	

■ Transformer (option)

- If AW-20-3 or AW-50-3 is used with the voltage of other than AC100 V, use one of the following transformers.

	Item name	Model
Transformer	[AC110 V ⇒ 100 V]	TR-110
	[AC117 V ⇒ 100 V]	TR-117
	[AC200 V ⇒ 100 V]	TR-200
	[AC220 V ⇒ 100 V]	TR-220
	[AC240 V ⇒ 100 V]	TR-240

Note: 600 watts, 2-pole socket + 1 grounding
 If the power supply voltage is AC210 V, use the model TR-220.
 If the power supply voltage is AC230 V, use the model TR-240.

Automatic weighing type syringe filling system **AUTO FILLING MASTER**



Fill syringes automatically with highly viscous fluid at high-precision

- Fill syringes quickly and precisely with high viscosity fluid, including paste.
- You can fill syringes to the required volume precisely, just by pressing the start switch since this system weighs the fluid.
- Supports different sizes of syringes.

Note: Please contact our sales department in advance. This system needs to be customized for each kind of fluid.

Simple syringe filling unit

FILLING MATE

Quickly and easily fill syringes with small volumes from fluid material containers, without any bubbles

Filling options

- Quantitative filling with automatic stop function. (Syringe full detection unit + Dedicated controller)
- Tank safety valve
- Fluid material scatter-proof safety lid
- Remaining level detection unit

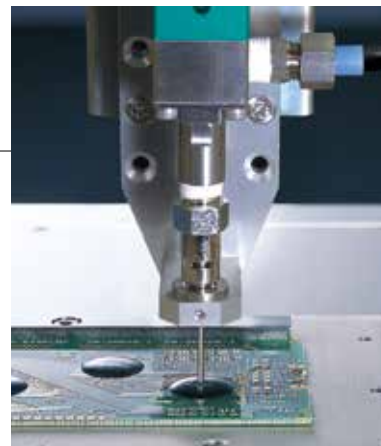


High precision dispensing valves respond to high-level requirements with no compromise.

High productivity, stability, reliability, durability, and maintainability are required of uncompromising professionals. To meet all these requirements, MUSASHI has brought together all of our dispensing experience and know-how to develop these fluid dispensing valves.

These valves enable stably high-precision dispensing at all times while preventing fluid drips.

A variety of accessories are available to suit various dispensing system requirements, such as different dispensing applications and types of fluid materials.



Needle control valve

MiniVal NCV-17



Needle control valve

MiniVal NCV-17-L

MiniVal NCV-17-L-RS

High flow type



High-precision standard valve

- Also capable of micro-deposit dispensing fluid materials containing UV and filler.
- Reduces air bubbles mixing.
- Diaphragm structure prevents fluid material from entering sliding parts.
- The square-shaped, compact and lightweight valves are ideal for use with automated equipment.
- High flow type are also available with approx. 3x fluid flow rate.

Valve controller:
ME-5000VT



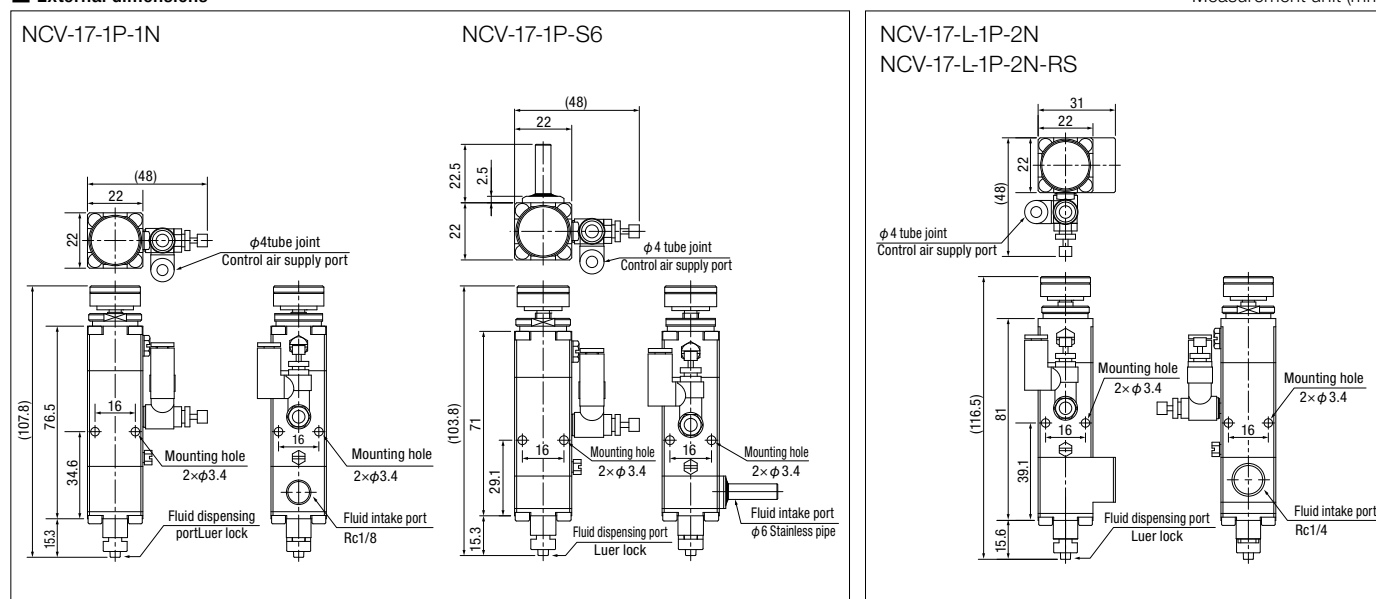
Specifications

		①Type17 1 port	②Type17 1 port OD 6 mm SUS pipe attached	③Type17 1 port high flow	④Type17 1 port high flow rate resin specification
Model		NCV-17-1P-1N	NCV-17-1P-S6	NCV-17-L-1P-2N	NCV-17-L-1P-2N-RS
Driving system		Pneumatic driven system			
Minimum dispensing amount		3 μL			9 μL
Compatible viscosity		Up to 50 Pa·s			
Control air supply pressure range		0.35 to 0.5 MPa			
Fluid material supply pressure range		Max. 0.5 Mpa			
Maximum number of cycles		680 times/min.			
Connector dia.	Fluid intake port	Rc1/8 (fluid feed joint ordered separately)	OD 6 mm Stainless pipe (fluid feed joint ordered separately)	Rc1/4 (fluid feed joint ordered separately)	
	Fluid dispensing port	Luer lock			
	Control air	One-touch joint for ϕ4 outer diameter tube (with speed controller)			
Operating temperature range		5 to 60°C			
Wetted part material		Stainless steel, Fluorine resin, Polyacetal		Stainless steel, Fluorine resin	PEEK, fluorine resin
Weight		193 g	216 g	222 g	149 g

Note: The dose volume, compatible viscosity and maximum number of cycles shown in the specifications above are only for reference.

External dimensions

Measurement unit (mm)



Needle control valve

MiniVal NCV-12S Super-small standard valve with overwhelming performance



- Stable dispensing of fluid materials containing filler
- Achieves superior fluid cut-off.
- No leakage as well as long life
- Diaphragm structure prevents fluid material from entering sliding parts.
- The ultra-compact size, rectangular shape, and lightweight valves are ideal for use with automated equipment.

Valve controller: ME-5000VT

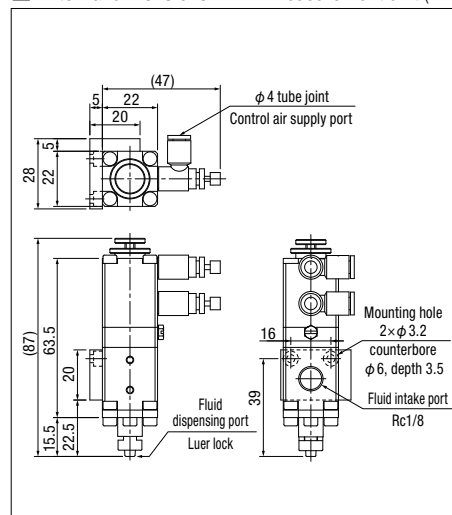
Specifications

Model	Type12S 2 port
Driving system	Pneumatic driven system
Minimum dispensing amount	8 μ L
Compatible viscosity	Up to 50 Pa·s
Applicable fluid materials	Fluid containing filler and other low and medium viscosity fluids
Control air supply pressure range	0.35 to 0.5 MPa
Fluid material supply pressure range	Max. 0.5 Mpa
Maximum number of cycles	640 times/min.
Connector dia.	Fluid intake port Rc1/8 (fluid feed joint ordered separately)
	Fluid dispensing port Luer lock
	Control air One-touch joint for ϕ 4 outer diameter tube (with speed controller)
Operating temperature range	5 to 60°C
Wetted part material	Stainless steel, Fluorine resin, Aluminum alloy (anodized)
Weight	149 g

Note: The dose volume, compatible viscosity, material type, and maximum number of cycles shown in the specifications above are only for reference.

External dimensions

Measurement unit (mm)



Needle control valve

MiniVal NCV-10 The compact and lightweight valves handle a variety of fluid materials and applications



- Stable dispensing of fluids containing filler
- One-port control system that can be reused easily from a syringe system
- Two-port control system that is best suited for more high-precision dispensing
- Fluorine resin type suitable for dispensing corrosive or anaerobic fluid materials, and UV material-supported type are also available.

Valve controller ME-5000VT

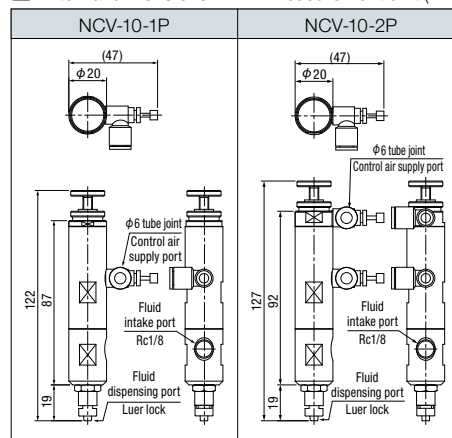
Specifications

Model	NCV-10-1P	NCV-10-2P
Driving system	Pneumatic driven system	
Minimum dispensing amount	9 μ L	8 μ L
Compatible viscosity	Up to 50 Pa·s	
Control air supply pressure range	0.35 to 0.5MPa	0.3 to 0.5 MPa
Fluid material supply pressure range	Max. 0.5 Mpa	
Maximum number of cycles	640 times/min.	680 times/min.
Connector dia.	Fluid intake port Rc1/8 (fluid feed joint ordered separately)	
	Fluid dispensing port Luer lock	
	Control air One-touch joint for ϕ 6 outer diameter tube (with speed controller)	
Operating temperature range	5 to 60°C	

Note: The dispensing volume, compatible viscosity, and max. response count shown in the specifications above are only for reference.

External dimensions

Measurement unit (mm)



Models

Valve type	Model	Wetted part material	Applicable fluid materials	Weight
1 port	NCV-10-1P	Stainless steel, Fluorine resin, Brass	Low and medium viscosity fluids	140 g
2-port	NCV-10-2P	Aluminum alloy (anodized)		150 g
1 port fluorine resin	NCV-10-T-1P	Stainless steel (fluorine resin coated), Fluorine resin	Anaerobic material, materials containing fillers	120 g
2 port fluorocarbon polymers	NCV-10-T-2P			130 g
1 port UV	NCV-10-U-1P	Stainless steel (Fluorocarbon coated), Stainless steel, Polyacetal	UV materials	120 g
2 port UV	NCV-10-U-2P			120 g

Note: The applicable fluid materials are only for reference.

Needle control valve

NCV-7DV Suitable for anaerobic materials



- Since the wetted part is made of fluorine resin, this valve is suitable for dispensing fixed doses of anaerobic fluid materials.
- A needle control valve that can dispense fixed doses of fluids containing fillers.

Valve controller ME-5000VT

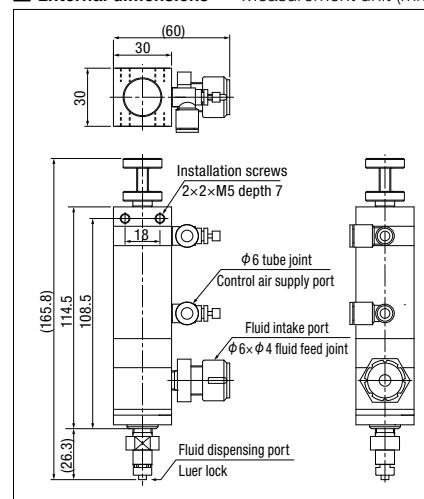
Specifications

Model	Type 7, 2 port, anaerobic, with NCV-7DV-25
Driving system	Pneumatic driven system
Minimum dispensing amount	8 μ L
Compatible viscosity	Up to 10 Pa·s
Applicable fluid materials	Anaerobic material, materials containing fillers
Control air supply pressure range	0.3 to 0.4 MPa
Fluid material supply pressure range	MAX. 0.7 MPa
Maximum number of cycles	650 times/min.
Connector dia.	Fluid intake port ϕ 6 x ϕ 4 fluid feed fitting
	Fluid dispensing port Luer lock
	Control air One-touch joint for ϕ 6 outer diameter tube (with speed controller)
Operating temperature range	5 to 50°C
Wetted part material	Fluorine resin, Fluororubber
Weight	450 g

Note: The dose volume, compatible viscosity, material type, and maximum number of cycles shown in the specifications above are only for reference.

External dimensions

Measurement unit (mm)



Piston control valve

MiniVal PCV-12



MiniVal PCV-12-L

High flow type



The standard for preventing fluid drips and blockages

- Prevents fluid drips and blockages with suck back mechanism.
- Diaphragm structure prevents fluid material from entering sliding parts.
- The square-shaped, compact and lightweight valves are ideal for use with automated equipment.

Valve controller: ME-5000VT



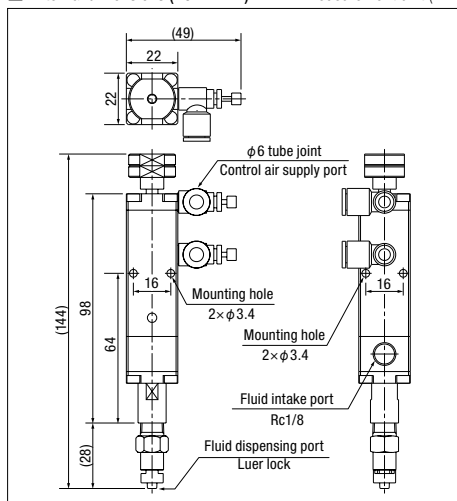
Specifications

	Type 12 2 port	Type 12 2 port high flow
Model	PCV-12-2P	PCV-12-L-2P-2N
Driving system	Pneumatic driven system	
Minimum dispensing amount	18 μ L	19 μ L
Compatible viscosity	Up to 100 Pa·s	
Control air supply pressure range	0.35 to 0.6 MPa	
Fluid material supply pressure range	Max. 0.5 Mpa	
Maximum number of cycles	580 times/min.	
Connector dia.	Fluid intake port	Rc1/8 (fluid feed joint ordered separately)
	Fluid dispensing port	Luer lock
	Control air	One-touch joint for $\phi 6$ outer diameter tube (with speed controller)
Operating temperature range	5 to 60°C	
Wetted part material	Stainless steel, Fluorine resin, Brass	
Weight	212 g	240 g

Note: The dispensing volume, compatible viscosity and material type, and max. response count shown in the specifications above are only for reference.

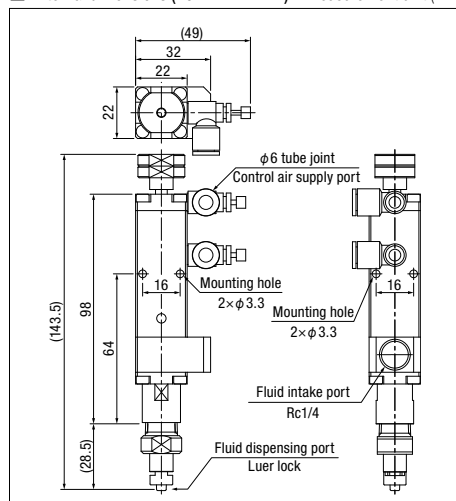
External dimensions (PCV-12-2P)

Measurement unit (mm)



External dimensions (PCV-12-L-2P-2N)

Measurement unit (mm)



Piston control valve



Valve controller ME-5000VT

PCV-5-2P

Supports a broad range of fluid viscosities. Equipped with suck back mechanism.

- A piston control valve that can be used with a broad range of fluid viscosities
- Piston scroll adjusting mechanism and suck back mechanism to prevent drips



PCV-5-1P

Supports a broad range of fluid viscosities. Single port type

- A single port version that can be reused easily in a syringe system

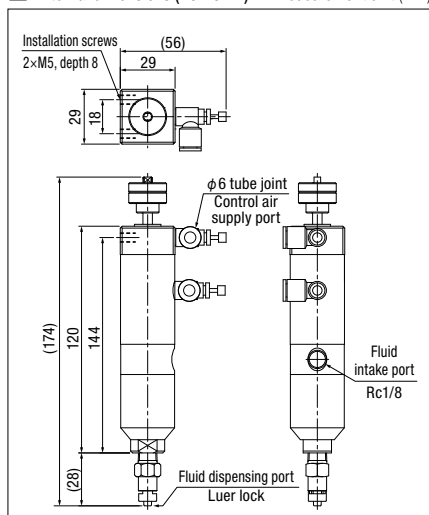
Specifications

	Type5 2 port	Type5 1 port
Model	PCV-5-2P	PCV-5-1P
Driving system	Pneumatic driven system	
Minimum dispensing amount	52 μ L	53 μ L
Compatible viscosity	Up to 100 Pa·s	
Applicable fluid materials	Any viscosity fluid	
Control air supply pressure range	0.3 to 0.7 MPa	
Fluid material supply pressure range	MAX. 0.7 MPa	
Maximum number of cycles	570 times/min.	460 times/min.
Connector dia.	Fluid intake port	Rc1/8 (fluid feed joint ordered separately)
	Fluid dispensing port	Luer lock
	Control air	One-touch joint for $\phi 6$ outer diameter tube (with speed controller)
Operating temperature range	5 to 60°C	
Wetted part material	Stainless steel, Fluorine resin, Brass	
Weight	350 g	400 g

Note: The dispensing volume, compatible viscosity and material type, and max. response count shown in the specifications above are only for reference.

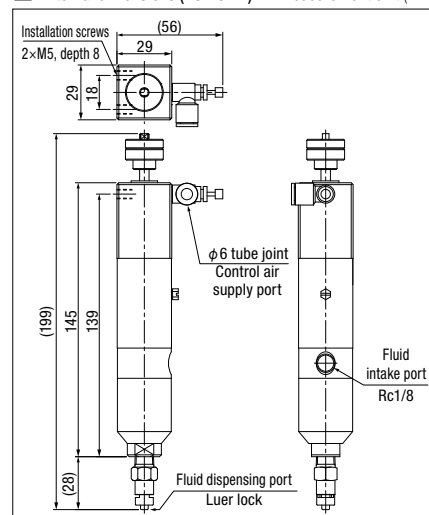
External dimensions (PCV-5-2P)

Measurement unit (mm)



External dimensions (PCV-5-1P)

Measurement unit (mm)



Plunger pump valve

PPV-5

Plunger pump system



- Volume measuring type quantitative dispensing valve with our unique mechanism for superior sealing.
- Dispensing volume setting with micrometer is accurate and simple.
- Excellent corrosion resistance.

Valve controller ME-5000VT

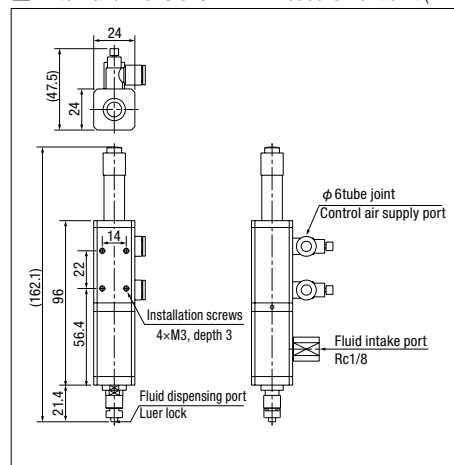
Specifications

	Type 5 2 port
Model	PPV-5-2P
Driving system	Pneumatic driven system
Dispensing volume range	1 to 90 μ L
Compatible viscosity	Up to 30 Pa·s
Applicable fluid materials	Low and medium viscosity fluids
Control air supply pressure range	0.05 to 0.5 MPa
Fluid material supply pressure range	Max. 0.33 MPa
Maximum number of cycles	120 times/min.
Connector dia.	Fluid intake port Rc1/8 (fluid feed joint ordered separately)
	Fluid dispensing port Luer lock
	Control air One-touch joint for ϕ 6 outer diameter tube (with speed controller)
Operating temperature range	5 to 60°C
Wetted part material	Stainless steel, Fluorine resin, Artificial gemstone, Polyethylene
Weight	200 g

Note: The dose volume, compatible viscosity, material type, and maximum number of cycles shown in the specifications above are only for reference.

External dimensions

Measurement unit (mm)



High pressure needle control valve

HPV-2NC

Designed exclusively for high viscosity materials



- Our unique design with high-pressure capability to prevent fluid material leaks.
- Easy maintenance.

Valve controller ME-5000VT

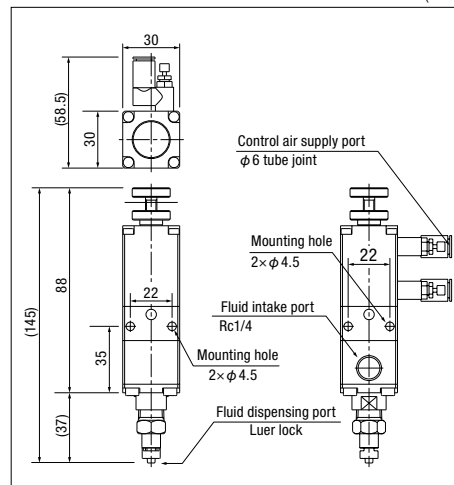
Specifications

	Type 2NC 2 port
Model	HPV-2NC-2 P
Driving system	Pneumatic driven system
Minimum dispensing amount	10 μ L
Compatible viscosity	Up to 300 Pa·s
Applicable fluid materials	Grease
Control air supply pressure range	0.35 to 0.6 MPa
Fluid material supply pressure range	Max. 20 MPa
Maximum number of cycles	500 times/min.
Connector dia.	Fluid intake port Rc1/4 (fluid feed joint ordered separately)
	Fluid dispensing port Luer lock
	Control air One-touch joint for ϕ 6 outer diameter tube (with speed controller)
Operating temperature range	5 to 60°C
Wetted part material	Stainless steel, fluorine resin, fluorine rubber, polyethylene
Weight	480 g

Note: The dispensing volume, compatible viscosity, and max. response count shown in the specifications above are only for reference.

External dimensions

Measurement unit (mm)



Volume measuring type plunger pump

JUSTRO PUMP

Just measuring and dispensing, debut of precision plunger pump!



- Precise and constant-volume dispensing of low viscosity fluid.
Dispensing volume from 0.003 mL minimum to 250 mL maximum (depending on variations)
- High-speed dispensing with high cycle speed
- Precise fluid control achieved

Pump controller dedicated for JUSTRO PUMP: ME-5000P



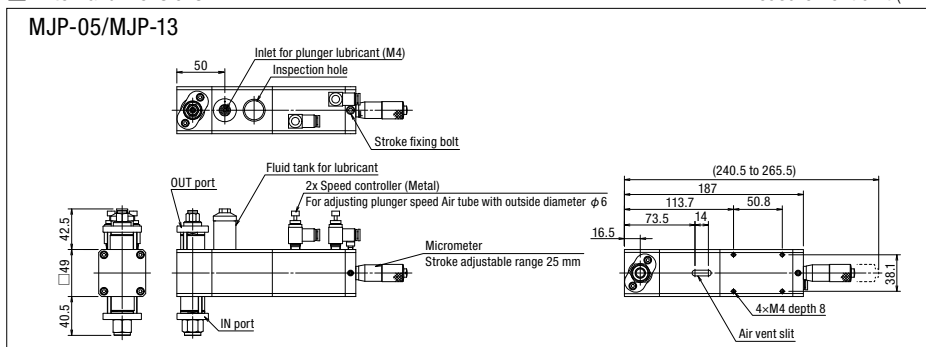
Specifications

	05 mL use	13 mL use
Model	MJP-05	MJP-13
Driving system	Pneumatic driven system	
Maximum dispensing volume	5 mL	13 mL
Control air supply pressure range	0.35 to 0.6 MPa	
Stroke adjustment method	Micrometer	
Wetted part material	Stainless steel, Fluorine resin, PEEK	
Weight	3.2 kg	

Note: The dispensing volume is up to 250 mL, and many kinds of dispensing volumes are available.

External dimensions

Measurement unit (mm)



Spray valve

SV-6 series

Compact and lightweight, applicable to all uses!



- Uniform thickness with two-fluid spray type.
- Low-pressure atomization prevents scattering.
- Multi-head compatibility.
- A wide range of spray patterns available.

SVM-6LX

Best suited for coating on inner surface of cylinder!



- Coating inner surface of cylinder with needle type nozzle.
- Low-pressure atomization prevents scattering.
- The compact and lightweight valve can be used in confined spaces.

Spray valve controller: ME-5000SP



SVM-6 LX
dispensing
illustration



Specifications

Specifications

Spray pattern		Round pattern Flat pattern			Small round pattern			Round pattern			Large round pattern			Small round pattern		
Series name		SV-6			SV-6SK			SV-6R			SV-6RW			SVM-6 LX		
			Pattern dimensions			Pattern dimensions			Pattern dimensions			Pattern dimensions			Pattern dimensions	
		Distance	50 mm*	300 mm	Distance	50 mm*	300 mm	Distance	50 mm*	300 mm	Distance	50 mm*	300 mm	Distance	50 mm*	300 mm
Nozzle dia	0.5 mm	SV-6-0.5X	30	180	SV-6SK-0.5X	φ7	φ40	SV-6R-0.5X	φ10	φ55	—			—		
	0.7 mm	—			—			—			—			SVM-6 LX	φ9	φ50
	1.0 mm	SV-6-1.0X	47	280	SV-6SK-1.0X	φ12	φ70	SV-6R-1.0X	φ14	φ80	SV-6RW-1.0X	φ22	φ130	—		
	1.3 mm	SV-6-1.3X	59	350	—			SV-6R-1.3X	φ15	φ90	SV-6RW-1.3X	φ24	φ140	—		
	2.0 mm	SV-6-2.0X	59	350	—			SV-6R-2.0X	φ17	φ100	SV-6RW-2.0X	φ25	φ150	—		
Driving system		Pneumatic driven system														
Supply pressure	Control air	0.2 to 0.5 MPa														
	Atomization air	Up to 0.5 MPa														
	Fluid materials	Up to 0.2 MPa														
Connector dia.	Control air	Rp1/8													Rc1/8	
	Atomization air	Rp1/8													Rc1/8	
	Fluid materials	Rp1/8														
Wetted part material		Brass (chrome plated), Stainless steel, Fluororubber for resistance to chemicals													Brass (chrome plated), Fluorine resin, Fluororubber	
Weight		267 g			238 g			239 g			234 g			106 g		

* Pattern dimensions at a distance of 50 mm are a guide value according to the maximum pattern dimensions at 300 mm (data of water sprayed at air pressure 0.3 MPa, and fluid feed pressure 0.01 MPa conditions).

External dimensions

Measurement unit (mm)

SV-6	SV-6SK	SV-6R
SV-6RW	SVM-6LX	

Diaphragm valve



DCV-2 / DCV-3

Suitable for low viscosity, anaerobic materials

- Diaphragm valve ideal for micro-dispensing low-viscosity fluid materials.
- Wetted part made of fluorine resin, enabling micro-dispensing of highly corrosive fluids.
- Available in types with stroke adjustment mechanism (vernier dial). (DCV-2N-VT, DCV-3N)

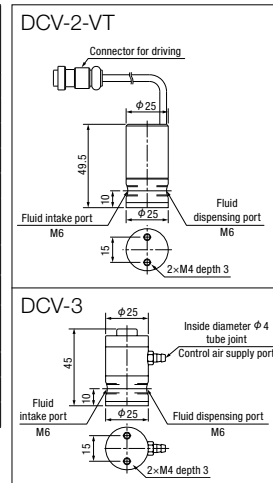
Valve controller ME-5000VT

Specifications

	Electromagnetic	Electromagnetic type stroke adjustment attached	Pneumatic type	Pneumatic type stroke adjustment attached
Model	DCV-2-VT	DCV-2N-VT	DCV-3	DCV-3N
Minimum dispensing amount	10 μ L			
Compatible viscosity	Up to 1 Pa·s			
Applicable fluid materials	Low viscosity fluids (solutions, chemicals, etc.)			
Control air supply pressure range	—		0.3 to 0.6 MPa	
Fluid material supply pressure range	Max. 0.2 Mpa		Max. 0.5 Mpa	
Connector dia.	M6			
	M6			
	—		ϕ 4 inner diameter tube connection	
Operating temperature range	0 to 80°C		-5 to 80°C	
Wetted part material	Fluorine resin			
Weight	130 g	140 g	120 g	140 g

Note: 1. Fittings for the diaphragm valve are sold separately. Please contact our sales office.
2. The dose volumes, material types and viscosities shown in the specifications above are only for reference.

External dimensions Measurement unit (mm)



Fluid drip prevention valve



TCV-S3

Supports complete, uniform, high-precision dispensing

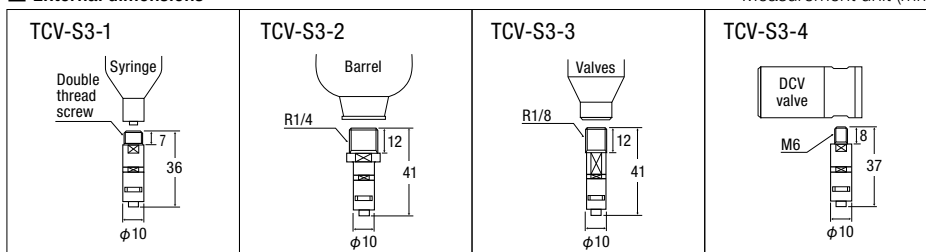
- The newly designed valve mechanism offers extremely high sealing performance without drip.
- Thoroughly effective in preventing contamination from bubbles or solution vapor escape
- Suitable for low and medium viscosity fluids

Specifications

	<input type="checkbox"/> KP Luer lock plug	<input type="checkbox"/> KP R1/4	<input type="checkbox"/> KP R1/8	<input type="checkbox"/> KP M6
Model	TCV-S3-1- <input type="checkbox"/> KP	TCV-S3-2- <input type="checkbox"/> KP	TCV-S3-3- <input type="checkbox"/> KP	TCV-S3-4- <input type="checkbox"/> KP
Spring pressure	10, 20, 30, 50, 70, 100, 150, 200, 220 kPa			
Connector dia.	Fluid intake port	Double thread screw	R1/4	R1/8
	Fluid dispensing port	Luer lock		
Wetted part material	Stainless steel. Fluorine resin. Artificial gemstone			

External dimensions

Measurement unit (mm)



Note: Select a suitable valve from four types of constant volume dispensing valves according to the shape of the inlet.

Types of spring pressures (to set the fluid feed pressure)

Spring pressure kPa	For syringes	For syringe, fluorocarbon coated	For barrels/valves	For valves	For DCV valves
	Model	Model	Model	Model	Model
10	TCV-S3-1-10 KP	TCV-S3T-1-10 KP	TCV-S3-2-10 KP	TCV-S3-3-10 KP	TCV-S3-4-10 KP
20	TCV-S3-1-20 KP	TCV-S3T-1-20 KP	TCV-S3-2-20 KP	TCV-S3-3-20 KP	TCV-S3-4-20 KP
30	TCV-S3-1-30 KP	TCV-S3T-1-30 KP	TCV-S3-2-30 KP	TCV-S3-3-30 KP	TCV-S3-4-30 KP
50	TCV-S3-1-50 KP	TCV-S3T-1-50 KP	TCV-S3-2-50 KP	TCV-S3-3-50 KP	TCV-S3-4-50 KP
70	TCV-S3-1-70 KP	TCV-S3T-1-70 KP	TCV-S3-2-70 KP	TCV-S3-3-70 KP	TCV-S3-4-70 KP
100	TCV-S3-1-100 KP	TCV-S3T-1-100 KP	TCV-S3-2-100 KP	TCV-S3-3-100 KP	TCV-S3-4-100 KP
150	TCV-S3-1-150 KP	TCV-S3T-1-150 KP	TCV-S3-2-150 KP	TCV-S3-3-150 KP	TCV-S3-4-150 KP
200	TCV-S3-1-200 KP	TCV-S3T-1-200 KP	TCV-S3-2-200 KP	TCV-S3-3-200 KP	TCV-S3-4-200 KP
220	TCV-S3-1-220 KP	TCV-S3T-1-220 KP	TCV-S3-2-220 KP	TCV-S3-3-220 KP	TCV-S3-4-220 KP

Note: Select the spring pressure after taking into account the fluid dispensing pressure and the fluid drip conditions.

Valve controller



VALVE MASTER ME-5000VT

Achieves high-precision, stable dispensing performance of valves

- Improved pressure stability eliminates dispensing volume fluctuation.
- Digital control enables user-friendly operability and high repeatability.
- Dispensing conditions centrally controllable by the controller.
- Dispensing monitorable by improved external interface, perfectly suited to mount on other equipment
- CE Marking certified, EU RoHS compliant.



Specifications

Model		ME-5000VT
Control system		Electro/pneumatic method
Pressure setting range	Fluid feed pressure	0.005 to 0.700 MPa
	Valve actuation pressure	0.200 to 0.700 MPa
Time setting range of fluid valve opening		0.01 to 99.99 s 0.010 to 9.999 s 0.1 to 999.9 s
External input/output signal	Input	Dispensing, dispensing mode switching
	Output	Dispensing completion, in-dispensing, low fluid feed pressure, low valve actuation pressure, dispensing mode, power on
Rated power supply and frequency		AC100-240 V 50/60 Hz
Power consumption		12 W
External dimensions		W280×D247×H122 mm
Weight		4.3 kg

Spray valve controller



SPRAY MASTER ME-5000SP

Two-fluid spray valve controller with high-precision digital control

- Improved pressure stability eliminates dispensing volume fluctuation.
- Digital control enables user-friendly operability and high repeatability.
- Dispensing conditions centrally controllable by the controller.
- Dispensing monitorable by improved external interface, perfectly suited to mount on other equipment
- CE Marking certified, EU RoHS compliant.



Specifications

Model		ME-5000SP
Control system		Electro/pneumatic method
Pressure setting range	Fluid feed pressure	0.010 to 0.700 MPa
	Valve actuation pressure	0.200 to 0.700 MPa
	Blow pressure	0.010 to 0.700 MPa
Time setting range of fluid valve opening		0.01 to 99.99 s 0.010 to 9.999 s 0.1 to 999.9 s
Blow time setting range	Before valve actuation	0.000 to 9.999 s
	After valve actuation	0.000 to 9.999 s
External input/output signal	Input	Dispensing, dispensing mode switching
	Output	Dispensing completion, in-dispensing, pressurizing, low fluid feed pressure, low valve actuation pressure, low blow pressure, dispensing mode, power on
Rated voltage and frequency		AC100-240 V 50/60 Hz
Power consumption		32 W
External dimensions		W340×D245×H121 mm
Weight		5.8 kg

Pump controller



PUMP MASTER ME-5000P

For JUSTRO PUMP

- CE Marking certified, EU RoHS compliant.

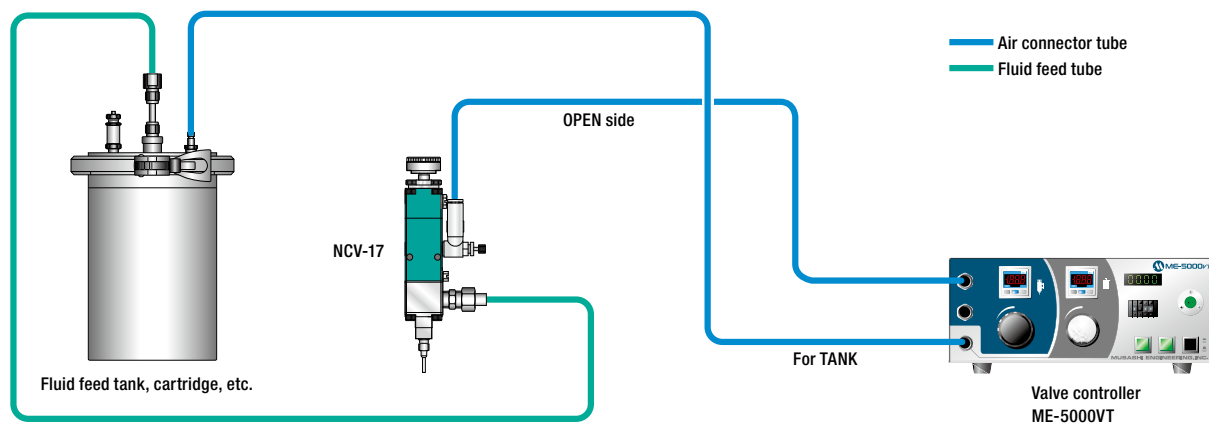


Specifications

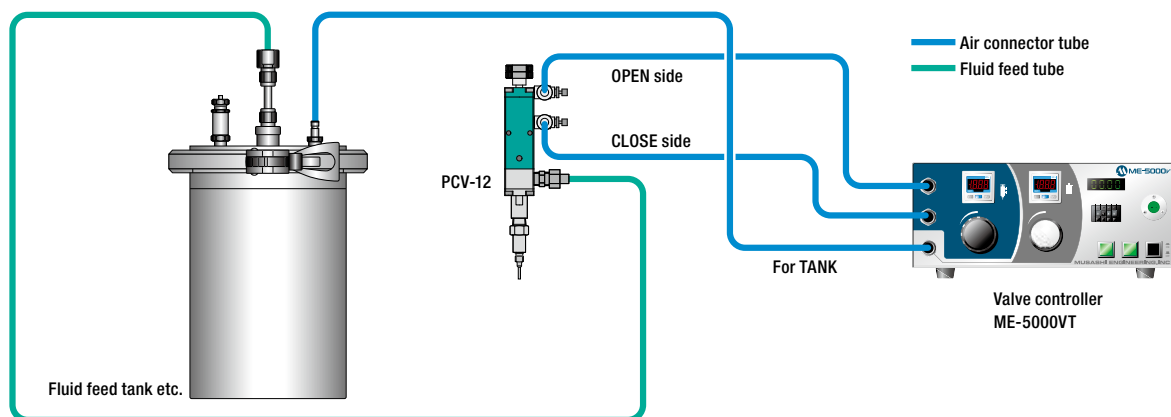
Model		ME-5000P
Control system		Electro/pneumatic method
Valve actuation pressure setting range		0.200 to 0.700 MPa
Time setting range of fluid valve opening		0.010 to 9.999 s 0.01 to 99.99 s 0.1 to 999.9 s 1 to 9999 s
External Input/output signal	Input	Dispense
	Output	Dispensing completion
Rated voltage and frequency		AC100-240 V 50/60 Hz
Power consumption		5 W
External dimensions		W175×D175×H108 mm
Weight		2.0 kg

Configuration diagram of the valve and tank system

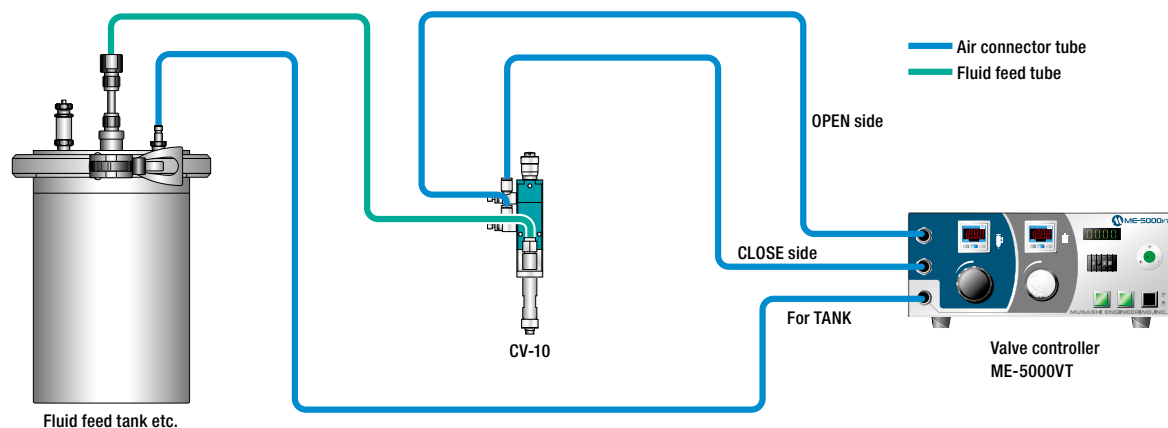
■ Super-small, constant-volume dispensing valve MiniVal NCV-17 Block diagram



■ Piston control valve MiniVal PCV-12

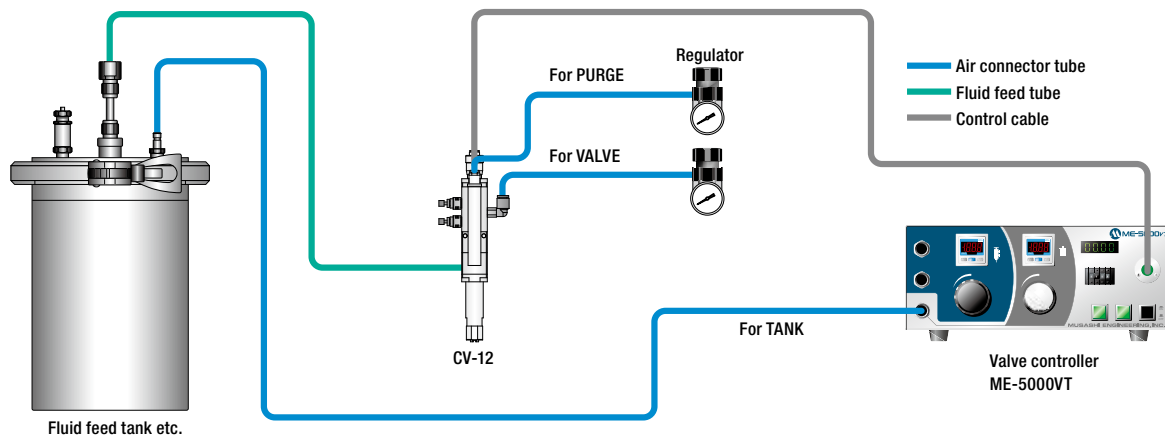


■ Coating valve CV-10

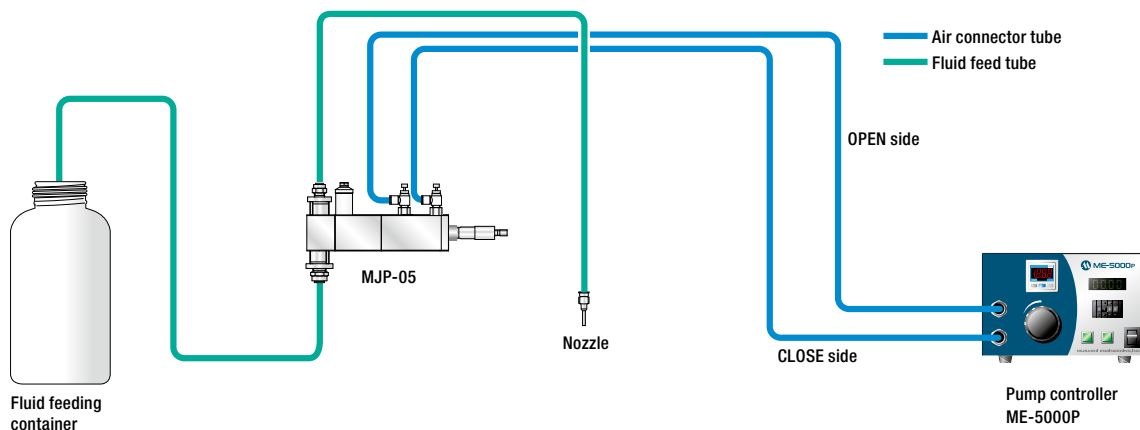


Configuration diagram of the valve and tank system

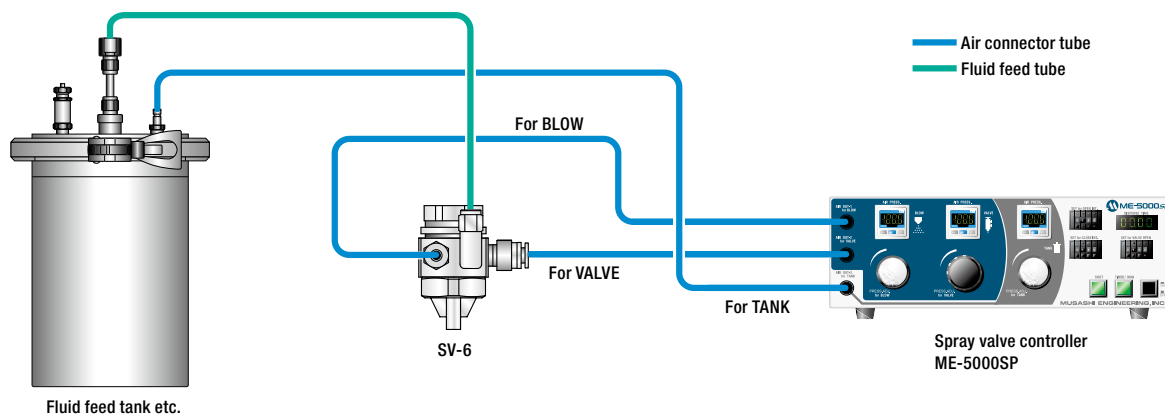
■ Coating valve CV-12



■ Volume measuring type plunger pump JUSTRO PUMP MJP-05



Spray valve SV-6



Flexible configurations for large volume dispensing with optimal tank

Fluid feed tank for efficient high-capacity dispensing work.

MUSASHI offers four types of tanks to support a wide range of fluid viscosities, characteristics, and applications: safety lock tank with safety-focused design, straight one-touch tank, one-touch tank, and gallon tank.

You can select the best tank that matches your daily requirements, either fluid material direct feed type or internal container type, and select a capacity from 0.5 L to 38.5 L.

Fluid feed tank necessary components

Select the following components for a fluid feed tank and specify the specifications.

.... Optional accessories

Note: Gallon tank differs to the specifications below. Contact MUSASHI Sales for more details.

⑥ Fluid feed tube connector

Select "size" and "material".

OD ϕ 4/6/8/10/12, Stainless steel/ Fluorine resin

④ Through connector/Suction pipe

Select the "size" of the through connector or the "size and tip shape" of the suction pipe.

- ① Through connector OD ϕ 4/6/8/10/12
- ② Suction pipe OD ϕ 4/6/8/10/12, flat tip
OD ϕ 4/6/8/10/12, tip cut 45°

③ Safety valve

Select "max. setting pressure" (0.5 MPa at standard).

- ① 0.5 MPa
- ② 0.2 MPa

② O-ring for lid

Select "material" (fluororubber at standard).

- ① Fluororubber (former: Viton)
- ② Silicone rubber
- ③ Nitrile rubber
- ④ Butyl rubber
- ⑤ Fluorine resin (former: PTFE) SST/OTT only

① Tank body

Select "type" and "size".

- ① SST 1.7/2.2/5.5/6.2/12.7/20.3/38.5 L
- ② SOT 4.6/5.6/6.3/12.7/21.3 L
- ③ OTT 1/2/3/5/10/20/30 L

⑦ Fluid feed tube

Select "size", "length", "material", "color", and "for high pressure".

OD ϕ 4/6/8/10/12, Fluorine resin/PFA/Nylon/Silicone White/Black/Transparency, for high pressure

⑤ Air hose set

Select the "size" of the pneumatic half union and the "size and length" of the air hose. (ϕ 6 x ϕ 4 air hose, 2m at standard)

- ① Half union OD ϕ 4/6/8/10/12 mm
- ② Air hose ϕ 6 x ϕ 4 2/5/10 m
 ϕ 8 x ϕ 5 2/5/10 m

⑧ Regulator/Air gauge with quick joints

Select "max. setting pressure"

- ① 0.2 MPa
- ② 0.7 MPa

⑨ Internal container

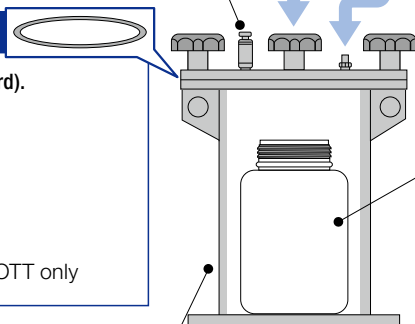
Select "size". Capacity: 0.5/1/2/3/5/10/20 L

⑩ Piston for internal container (1 kg use)

Select when using a grease can or the like as an internal container.

⑪ Other special order options

Specify model from the above tank machining list.



Full lineup of tank options



Temperature control



Piston



Inspection hole



Fluid feed tube connector



Processed tank list

A tank can be selected depending on materials to be used, capacity, and other conditions.

Model	Direct feed type				Internal container type	
	SST	SOT	OTT	GAT	SST	SOT
Standard option	Change of O-ring material					
	Change of suction pipe diameter				Change of suction pipe diameter	
Available as special order	Temperature control spec.					
	Agitation spec.				Agitation spec.	
	Vacuum spec.				Vacuum spec.	
	Piston				Piston	
	Level sensor				Level sensor	
	Change or add material air supply/outlet positions				Change or add material air supply/outlet positions	
	Inspection hole (cover)				Inspection hole (cover)	
	Inspection hole (main body)				Inspection hole (main body)	
	Level gauge					
	Bottom outlet					
	Fluorine resin coated					
	Electrolytic polishing					

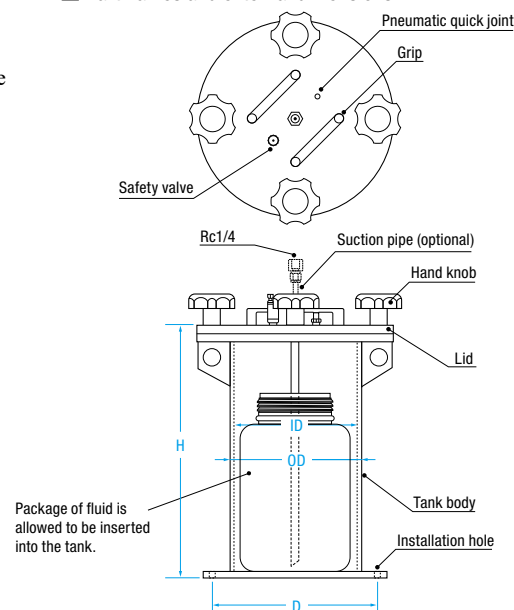
Note: The chart above indicates option item availability for each item independently. Some combinations of optional items may not be available. Contact MUSASHI Sales for more information.

Safety lock tank



- Musashi original tank designed for safety with excellent versatility.
- Can be used for a wide range of fluids from low-to high-viscosity materials.
- The wide opening makes it easy to install an agitator or similar device.
- Can be used as 2 types: direct fluid material feed type, or internal container type.
- Customizable.

Part names and external dimensions



Safety lock tank

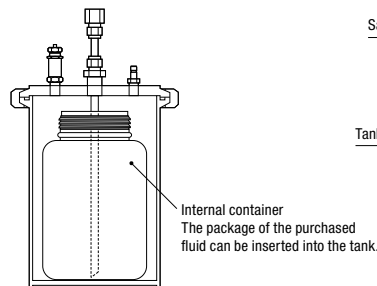
Capacity (L)	Model	External dimensions (mm)			Installation hole pitch (mm)	Installation hole diameter (mm)	Weight (kg)	Material	Pressure	Standard accessories
		H	ID	OD						
1.7	SST-1.7 L	207	φ110	φ114	150	4-φ9	4.2	Stainless steel	0.5 MPa	<ul style="list-style-type: none"> • O-ring (Fluororubber) • Safety valve * • Pneumatic quick joint
2.2	SST-2.2 L	257	φ110	φ114	150	4-φ9	4.5			
5.5	SST-5.5 L	309	φ158	φ165	200	4-φ9	11.5			
6.2	SST-6.2 L	349	φ158	φ165	200	4-φ9	12.0			
12.7	SST-12.7 L	411	φ208	φ216	260	4-φ11	25.6			
20.3	SST-20.3 L	443	φ254	φ267	310	4-φ11	42.4			
38.5	SST-38.5 L	465	φ343	φ356	400	4-φ11	69.0			

* The safety valve pressure is set at 0.2/0.5 MPa.

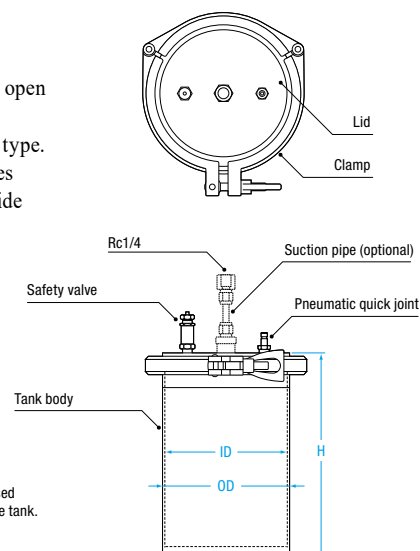
Straight one touch tank



- Straight internal tank design from opening with flat bottom allows fluid material containers to be mounted in purchased condition.
- A quick clamp system makes it simple to open and close the lid.
- Can be used as fluid material direct feed type.
- By combining MUSASHI's various valves and systems, the tank can be used in a wide variety of applications.
- Customizable.



Part names and external dimensions



Straight one touch tank

Capacity (L)	Model	External dimensions (mm)			Weight (kg)	Material	Pressure	Standard accessories
		H	ID	OD				
4.6	SOT-4.6 L	266	φ159	φ165	8.7	Stainless steel	0.5 MPa	<ul style="list-style-type: none"> • Oring (Fluororubber) • Safety valve * • Pneumatic quick joint
5.6	SOT-5.6 L	316	φ159	φ165	9.3			
6.3	SOT-6.3 L	356	φ159	φ165	9.7			
12.7	SOT-12.7 L	417	φ208	φ216	17.8			
21.3	SOT-21.3 L	448	φ259	φ267	25.8			

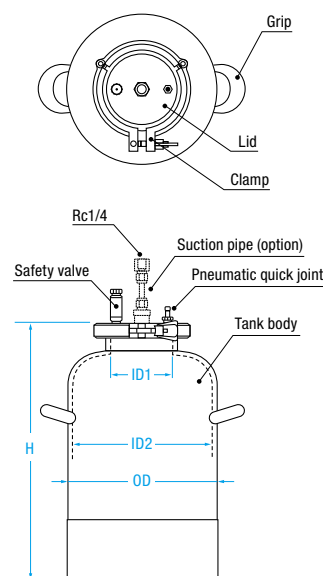
* The safety valve pressure is set at 0.2/0.5 MPa.

One touch tank



- The tank has a clamp type lid which allows you to open and close it easily.
- Can be used for a wide range of fluids from low-to high-viscosity materials.
- These are fluid material direct feed type tanks.
- Customizable.

Part names and external dimensions



Note: Handles are not installed on models OTT-1 L to OTT-5 L.

One touch tank

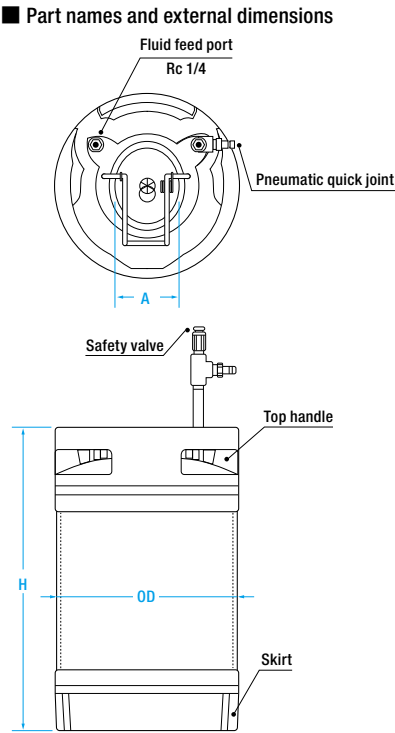
Capacity (L)	Model	External dimensions (mm)				Weight (kg)	Material	Pressure	Standard accessories
		H	ID1	ID2	OD				
1	OTT-1 L	160	φ108	φ108	φ111	2.8	Stainless steel	0.5 MPa	<ul style="list-style-type: none"> • Oring (Fluororubber) • Safety valve * • Pneumatic quick joint
2	OTT-2 L	280	φ108	φ108	φ111	3.2			
3	OTT-3 L	280	φ108	φ150	φ153	3.7			
5	OTT-5 L	310	φ108	φ180	φ183	4.2			
10	OTT-10 L	400	φ108	φ230	φ233	6.3			
20	OTT-20 L	470	φ108	φ279	φ283	9.7			
30	OTT-30 L	505	φ108	φ330	φ334	11.4			

* The safety valve pressure is set at 0.2/0.5 MPa.

Gallon tank



- Simple tank designed specifically for directly pouring fluid in.
- Suitable for low pressure feeding of low to medium viscosity fluid.
- Lightweight and easy to move.
- The safety structure disables the lid to be opened when under pressure.



■ Gallon tank

Capacity	Model	External dimensions (mm)			Weight (kg)	Material	Pressure	Standard accessories
		H	OD	A				
3 gallons (Approx. 11.5 L)	GAT-3G	379	φ229	82	3.7	Wetted part: Stainless steel, Fluorine resin	0.2 MPa	• Oring (Fluororubber) • Safety valve * • Pneumatic quick joint
5 gallon (Approx. 19 L)	GAT-5G	565	φ229	82	4.3			

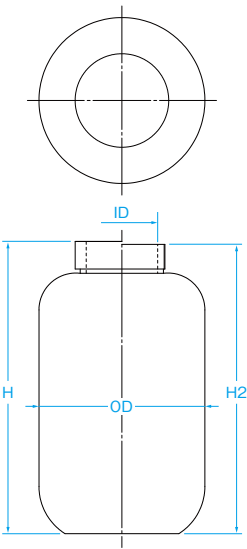
*The safety valve pressure is set at 0.2 MPa.

Internal container (former: Internal container (inside the tank))



- Since the fluid does not touch the tank directly, the tank can always be kept clean.
- Useful for using different types of fluids with one tank.

■ External dimensions



■ Internal container

Capacity (L)	Model	External dimensions (mm)				Material
		With outer lid H	Without outer lid H2	Outside diameter of body OD	Inside diameter of opening ID	
0.5	SBP-0.5 L-01	151	146	φ78	φ43.5	Lid: HDPE Internal lid: LDPE Container: HDPE
1	SBP-1 L-01	187.5	184	φ101	φ43.6	
2	SBP-2 L-01	240	234.5	φ126	φ75	
3	SBP-3 L-01	271	267.5	φ142.5	φ74.5	
5	SBP-5 L-01	303	300	φ172	φ74	
10	SBP-10 L-01	398	383.5	φ217	φ96.6	
20	SBP-20 L	420	415	φ304	φ96	

Note: The internal container must be inserted inside a safety lock tank or straight one-touch tank series before using.

MUSASHI's new products, de facto standard in 21st century

MUSASHI has always earned an excellent reputation and great trust in the forefront of the technological field. Our outstanding unique technology allows MUSASHI to keep on creating new products that meet the needs of users in 21st century.

We have a product lineup that matches various dispensing applications, such as a newly developed non-contact JET dispenser, pneumatic dispenser, volume measuring type dispenser, screw type dispenser, tubing type dispenser and ultra-small dosage dispenser.

These elite products as standards of next generation support every aspect of uncompromising professional work thoroughly.

Fully digital controlled dispenser

Super Σ CMIII



PAT.

Ultra-reliable dispensing with faster cycle time and smaller size

- Contributing to even higher throughput and yield.
- Delivering higher throughput for the global semiconductor manufacturing device industry.
- Delivering even smaller micro-dispensing.
- Better coverage of pressure changes.
- Improved stability for dispensing low-viscosity fluid materials.
- Greater performance with the Σ 3 major functions
- Better durability and easier maintenance

High-precision dispenser compatible with variable viscosity materials

ML-808GX



Debut! Intelligent dispenser

<Enhanced controller performance>

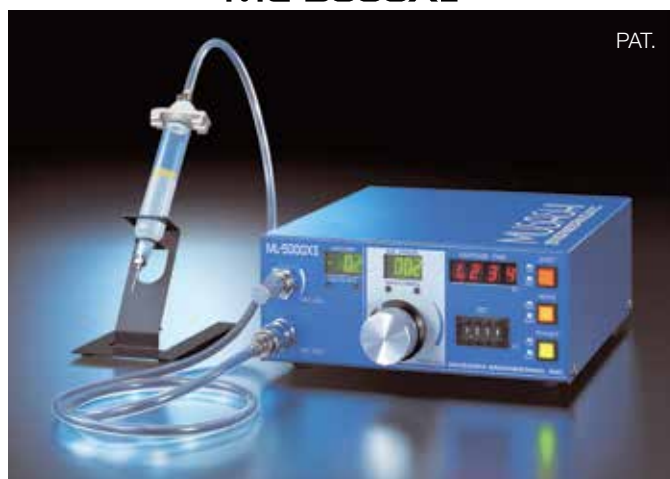
- Approximately 4 times improved about response time accuracy for dispensing signal
- I/O control **Additional function**
Controllable from PLC at will. RS-232C communication also mounted.

<New function of software>

- Conditioning mode for two-component fluid dispense **New development**
Automatic setting of dispensing conditions based on test conditions
- Management of dispensing condition recipe **New inspiration**
Chronological changing dispensing conditions can be stored by variety

High-precision digital dispenser

ML-5000XI



PAT.

Continuously enhanced "Dispensing Accuracy"—All for high quality dispensing

- Excellent dispensing accuracy achieved thanks to integration of diversified sophisticated features including air pulse stabilization circuit (PAT.).
- Compacted installation area by 65%
- Input signal selectable between "no voltage" and "applied voltage (5 V/12 V/24 V)" using input signal selection DIP switch.
- CE Marking certified, EU RoHS compliant.

High precision ECO dispenser

SMART SHOT MS-1/MS-1D



High precision ECO dispenser debut!

- Power consumption 1/2—Cut power consumption by 50%!
- Significant accuracy improvement—
Dispense precision is improved, 130% compared to existing model.
- Multi-functional machine—
Equipped with setup function for dispensing condition.
- Ultra-light weight and compact design
- CE Marking certified, EU RoHS compliant.



High viscosity Non-contact JET dispenser

Super Hi Jet



PAT.P

Advanced JET. High viscosity supported.

- For viscosity ranges of up to 1,000,000 mPa · s
- Excellent landing position accuracy
- Rod replacement possible
- Equipped with Synchro Speed function.

Volume measuring type digital dispenser

MEASURING MASTER MPP-1



PAT.

Ultra-precision constant volume dispensing of fluid materials with varying viscosity.

- Set dispensing volume to suit capacity and density.
- High resolution & high linearity.
- Easy maintenance without tools.

High-performance MOHNO dispenser

MOHNO MASTER



PAT.P

For high-speed, high-quality gasket dispensing.

- Superior for gasket applications with high speed, high flow rate and high aspect ratio.
- Lineup covers micro volume to high flow rates.
- Dual head configuration that can achieve high-precision volumetric mixing for two-component hardening materials.
- Adoption of highly chemical resistant parts compatible with a wide range of fluid materials.
- Equipped with Synchro Speed function.

Mid & High viscosity Non-contact JET dispenser

Aero Jet



PAT.

High-speed and high-precision JET. Major reduction in production takt time.

- "Pinpoint shooting" with non-contact JET.
- Better production takt time with high-speed dispensing.
- Cut costs by reducing wasted fluids.
- Equipped with Synchro Speed function.

High-performance screw dispenser

SCREW MASTER 3



PAT.P

High-precision stable dispensing of high viscosity filler-contained fluid

- Filler-contained fluid can finish up without being clogged
- Significant reduction in downtime at syringe replacement
- Long life of consumables
- Equipped with Synchro Speed function.

Rotary tubing dispenser

MT-410



Best suited for small volume dispensing of low viscosity materials such as instant adhesive agent at high precision.

- Simple tube setting.
- No fluid drips, less bubbles generated.
- Only tube used at wetted part, making maintenance easier.

Enbodiments of dispensing know-how with our great accomplishments and high reliability

MUSASHI's dispensing equipments with excellent track record and high reliability in the manufacturing processes of cutting-edge products in a wide variety of fields such as semiconductors and flat panels.

The full application of the dispensing know-how that we have built through the relentless pursuit of fluid precision control technology for years allows us to reach the highest level of not only dispensing precision but speed, stability, operability, and durability comprehensively.

Advanced technology offers ideal dispensing operations.

Fully automatic multi-purpose dispensing machine

DISPENSMASTER FAD2500



Fully automatic dispensing equipment's mainframe to meet broad application needs.

- Significant improvement in performance and functionality.
- Multi-head compatibility. Highly versatile to suit various applications.
- Equipped with equivalent functions to higher models as standard.
- Wide range of standardized optional accessories.

Desktop dispensing robot with PC control image recognition

IMAGE MASTER 350PC^{Smart}



The photo shows IMAGE MASTER 350PC Smart and SM300QX.

The world's first. High-speed and high-precision dispensing are possible even on a distorted workpiece

- Tact time reduced Our original smart 3D alignment technology implemented
- Measurement and trace functions Length measurement/dispensing pattern trace functions mounted
- Space reduced Compact footprint achieved by smart design

Cartesian robot

XCROSS MASTER RXseries



Precision inline motion unit

- The fusion of dispensing know-how of the comprehensive dispenser manufacturer
- Class-leading ± 0.005 mm repetitive positioning accuracy
- Optionally equipped with Synchro Speed function
- Dispensing pattern editing software MuCADV optionally installed

Desktop type robot

SHOTMASTER Sxseries



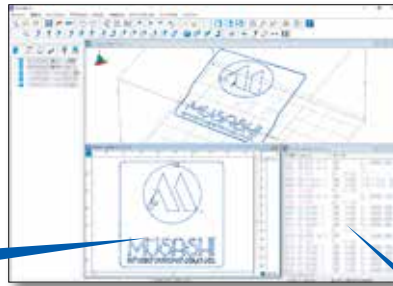
Ultimate high cost performance

- 800 mm/s top level operation speed in desktop class
- Repetitive positioning accuracy ± 0.01 mm
- Synchro Speed function mounted

MuCADV

Concentration of No. 1 dispensing know-how

- Saving editing time.
- Intuitive drawing of dispensing patterns.
- Easy editing for beginners.



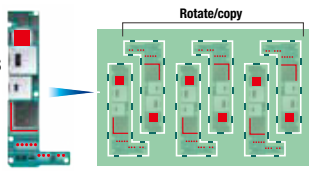
[New Function]

Automatically create dispensing programs from Gerber data.



Enter programs with drawings

- Using a mouse, create a program to "draw" locations for dispensing.
- Create a zigzag array or multi-cavity program.



Enter programs with commands

- Create accurate programs by entering values.

Linked

Fully automatic seal dispensing machine

MLC-6500



3-fold speed compared with conventional counterpart, max. speed of 300 mm/s drawing

- Newly developed mechanical dispenser mounted, drawing of high-viscosity fluid material at the speed of as high as 300 mm/s
- Precision at the start and stop points of sealing and corners significantly improved thanks to linearity control
- High-precision fine line drawing achieved



In-line enzyme/reagent dropping system

MGD-7500



Drops enzyme/reagent with high precision

- Top-class dropping accuracy
Equipped with the world's best ODF head (Fluid crystal dispenser) boasting a total of several thousand units of sales record.
- High-precision drop position accuracy
Dispensing position can be registered using a camera. Improves workability and prevents wrong registration of coordinates.
- Contributes to stable quality.
- Automatic program generation.

Desktop dispensing robot for laser soldering

DISPENSE LASER MASTER



A new era for laser solder dispensing

- Combining advanced dispensing technology with lasers
- Non-contact melting
- No sputter, no residue
- No maintenance
- All-in-one system

Screw tightening robot

SCREW FASTENER ROBO



Delivering "fast takt time" for screw tightening operations.

- Automatically creates screw tightening programs "easily" using the incorporated screw tightening assist software MuDRIVE.
- Cuts down programming time.
- Various error processing patterns are provided in advance.



Grease JET dispensing system

GREASE JET



Applying grease from many angles at high speed with pinpoint shooting!

- Continuous dispensing of an entire can of grease Helps to reduce running costs.
- Pinpoint shooting of fixed volumes with non-contact JET
- Missed shot detection function

Model index (Alphabetical order)

A

	Model	Former model	Page	Item name	Former product code
AH-	AH-46	AH-46	24	AIR HOSE [OD6MM ID4MM BLACK]	982100
AT-	AT-1E	—	8	ADAPTER TUBE [1ML]	—
	AT-3E-H-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 03ML 1.0M]	—
	AT-3E-H-C-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 03ML WITH CLAMP 1.0M]	—
	AT-3E-H-P4C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 03ML OD4MM 1.0M]	—
	AT-3E-H-P6C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 03ML OD6MM 1.0M]	—
	AT-3E-SUS-1.0M	—	7	STAINLESS ADAPTER TUBE [WITH STOPPER 03ML 1.0M]	—
	AT-5E-H-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 05ML 1.0M]	—
	AT-5E-H-C-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 05ML WITH CLAMP 1.0M]	—
	AT-5E-H-P4C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 05ML OD4MM 1.0M]	—
	AT-5E-H-P6C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 05ML OD6MM 1.0M]	—
	AT-5E-H-S-1.0M	—	9	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 05ML 1.0M]	—
	AT-5E-H-SIGMA-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 05ML SIGMA USE 1.0M]	—
	AT-5E-SUS-1.0M	—	7	STAINLESS ADAPTER TUBE [WITH STOPPER 05ML 1.0M]	—
	AT-10E-H-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-10E-H-C-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 10ML WITH CLAMP 1.0M]	—
	AT-10E-H-P4C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 10ML OD4MM 1.0M]	—
	AT-10E-H-P6C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 10ML OD6MM 1.0M]	—
	AT-10E-H-S-1.0M	—	9	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-10E-H-SEP-1.0M	—	7	ANTISTATIC ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-10E-H-SIGMA-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 10ML SIGMA USE 1.0M]	—
	AT-10E-SUS-1.0M	—	7	STAINLESS ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-50E-H-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 20~70ML 1.0M]	—
	AT-50E-H-C-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 20~70ML WITH CLAMP 1.0M]	—
	AT-50E-H-P4C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 20~70ML OD4MM 1.0M]	—
	AT-50E-H-P6C-1.0M	—	8	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 20~70ML OD6MM 1.0M]	—
	AT-50E-H-S-1.0M	—	9	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 20~70ML 1.0M]	—
	AT-50E-H-SEP-1.0M	—	7	ANTISTATIC ADAPTER TUBE [WITH STOPPER 20~70ML 1.0M]	—
	AT-50E-H-SEP-SIGMA-1.0M	—	7	ANTISTATIC ADAPTER TUBE [WITH STOPPER 20~70ML SIGMA 1.0M]	—
	AT-50E-H-SIGMA-1.0M	—	8	ADAPTER TUBE [WITH STOPPER 20~70ML SIGMA USE 1.0M]	—
	AT-50E-H-S-SIGMA-1.0M	—	9	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 20~70ML SIGMA USE 1.0M]	—
	AT-50E-SUS-1.0M	—	7	STAINLESS ADAPTER TUBE [WITH STOPPER 30~50ML 1.0M]	—
	AT-100E	AT-100E	8	ADAPTER TUBE [100ML]	5A8100
AW	AW-20-3	AW-20-3	27	SYRINGE CENTRIFUGAL BUBBLE ELIMINATOR AWATRON3	19100015
	AW-20-3-220V	AW-20-3-220V	27	SYRINGE CENTRIFUGAL BUBBLE ELIMINATOR AWATRON3	19100023
	AW-50-3	AW-50-3	27	SYRINGE CENTRIFUGAL BUBBLE ELIMINATOR AWATRON3	19100016
	AW-50-3-220V	AW-50-3-220V	27	SYRINGE CENTRIFUGAL BUBBLE ELIMINATOR AWATRON3	19100024

B

	Model	Former model	Page	Item name	Former product code
BC-	BC-4	BC-4	20	BARREL HEAD CAP [TYPE 4]	5CB300
	BC-4U2-B	—	20	UV BLOCK BARREL HEAD CAP [TYPE 4]	—
BN-	BN-S1	BN-S1	17	BRUSH NOZZLE [STANDARD 4.5PHI]	6E5100
	BN-S2	BN-S2	17	BRUSH NOZZLE [SOFT TYPE 4.5PHI]	6E6100
	BN-S3	BN-S3	17	BRUSH NOZZLE [STANDARD 2PHI]	12100062
	BN-S4	BN-S4	17	BRUSH NOZZLE [SOFT TYPE 2PHI]	12100063
BP-	BP-4	BP-4	20	BARREL TIP CAP [TYPE 4]	5DA300
	BP-4U-B	—	20	UV BLOCK BARREL TIP CAP [TYPE 4]	—

C

	Model	Former model	Page	Item name	Former product code
CC-	CC-P-001-1	CC-P-001-1	20,22	CARTRIDGE CAP [WITHOUT HOOK]	14100010
	CC-P-001-2	CC-P-001-2	20,22	CARTRIDGE CAP [WITH HOOK]	14100011
CH-	CH-100C	CH-100C	20	CARTRIDGE HOLDER [100ML BARREL USE]	14100012
	CH-170C	CH-170C	20	CARTRIDGE HOLDER [170ML BARREL USE]	14100013
	CH-170CT	CH-170C	22	CARTRIDGE HOLDER [170ML TUBE USE]	—
	CH-230C	CH-230C	22	CARTRIDGE HOLDER [230ML TUBE]	14100027
	CH-340C	CH-340C	20	CARTRIDGE HOLDER [340ML BARREL]	14100014
CL-	CL-1	CL-1	24	H-TYPE STAND CLAMP HOLDER	C22102
CPN-	CPN-14G-A45	CPN-14G-A45	16	CURVE NEEDLE[14G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	613G00
	CPN-14G-A90	CPN-14G-A90	16	CURVE NEEDLE[14G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	613H00
	CPN-14G-B45	CPN-14G-B45	16	CURVE NEEDLE[14G NEEDLE LENGTH 38.1MM ANGLE45]BODY: PLASTIC	613I00
	CPN-15G-A45	CPN-15G-A45	16	CURVE NEEDLE[15G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	614G00
	CPN-15G-A90	CPN-15G-A90	16	CURVE NEEDLE[15G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	614H00
	CPN-18G-A45	CPN-18G-A45	16	CURVE NEEDLE[18G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	617G00
	CPN-18G-A90	CPN-18G-A90	16	CURVE NEEDLE[18G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	617H00
	CPN-18G-B45	CPN-18G-B45	16	CURVE NEEDLE[18G NEEDLE LENGTH 38.1MM ANGLE45]BODY: PLASTIC	617I00
	CPN-20G-A45	CPN-20G-A45	16	CURVE NEEDLE[20G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	619G00
	CPN-20G-A90	CPN-20G-A90	16	CURVE NEEDLE[20G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	619H00
	CPN-21G-A45	CPN-21G-A45	16	CURVE NEEDLE[21G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	61AG00
	CPN-21G-A90	CPN-21G-A90	16	CURVE NEEDLE[21G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	61AH00
	CPN-21G-B45	CPN-21G-B45	16	CURVE NEEDLE[21G NEEDLE LENGTH 38.1MM ANGLE45]BODY: PLASTIC	61AI00
	CPN-22G-A45	CPN-22G-A45	16	CURVE NEEDLE[22G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	61BG00

	Model	Former model	Page	Item name	Former product code
CPN-	CPN-22G-A90	CPN-22G-A90	16	CURVE NEEDLE[22G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	61BH00
	CPN-23G-A45	CPN-23G-A45	16	CURVE NEEDLE[23G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	61CG00
	CPN-23G-A90	CPN-23G-A90	16	CURVE NEEDLE[23G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	61CH00
	CPN-25G-A45	CPN-25G-A45	16	CURVE NEEDLE[25G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	61EG00
	CPN-25G-A90	CPN-25G-A90	16	CURVE NEEDLE[25G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	61EH00
	CPN-27G-A45	CPN-27G-A45	16	CURVE NEEDLE[27G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	61GG00
	CPN-27G-A90	CPN-27G-A90	16	CURVE NEEDLE[27G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	61GH00
	CPN-30G-A45	CPN-30G-A45	16	CURVE NEEDLE[30G NEEDLE LENGTH 12.7MM ANGLE45]BODY: PLASTIC	61JG00
	CPN-30G-A90	CPN-30G-A90	16	CURVE NEEDLE[30G NEEDLE LENGTH 12.7MM ANGLE90]BODY: PLASTIC	61JH00
CS-	CS-100C	CS-100C	20	BARREL CARTRIDGE [100ML]	14100004
	CS-100C-HK	CS-100C-HK	20	BARREL CARTRIDGE [100ML WITH HOOK]	14100007
	CS-170C	CS-170C	20	BARREL CARTRIDGE [170ML]	14100005
	CS-170C-HK	CS-170C-HK	20	BARREL CARTRIDGE [170ML WITH HOOK]	14100008
	CS-170CT	CS-170CT	22	TUBE CARTRIDGE [100G]	14100019
	CS-170CT-HK	CS-170CT-HK	22	TUBE CARTRIDGE [100G WITH HOOK]	14100021
	CS-170CT-TD	CS-170CT-TD	22	TUBE CARTRIDGE [100G TYPE TD]	14100020
	CS-170CT-TD-HK	CS-170CT-TD-HK	22	TUBE CARTRIDGE [100G TYPE TD WITH HOOK]	14100022
	CS-230CT	CS-230CT	22	TUBE CARTRIDGE [200G]	14100023
	CS-230CT-HK	CS-230CT-HK	22	TUBE CARTRIDGE [200G WITH HOOK]	14100025
	CS-230CT-TD	CS-230CT-TD	22	TUBE CARTRIDGE [200G TYPE TD]	14100024
	CS-230CT-TD-HK	CS-230CT-TD-HK	22	TUBE CARTRIDGE [200G TYPE TD WITH HOOK]	14100026
CT-	CS-340C	CS-340C	20	BARREL CARTRIDGE [340ML]	14100006
	CS-340C-HK	CS-340C-HK	20	BARREL CARTRIDGE [340ML WITH HOOK]	14100009
	CS-P-001-1A	CS-P-001-1A	20	ORING RECEIVER [CARTRIDGE CAP USE]	14100015
	CT-36P	CT-36P	23	AIR CONNECTOR TUBE [QJPLUG OD6MM 1M]	952A00
	CT-36PS	CT-36PS	23	AIR CONNECTOR TUBE [QJ PLUG QJ SOCKET 1.0M]	952K00
	CT-36PS-F	—	9	AIR CONNECTOR TUBE [QJPLUG QJ SOCKET WITH FILTER 150M]	—
	CT-58PS-SIGMA	CT-58PS-SIGMA	23	AIR CONNECTOR TUBE [QJ PLUG QJ SOCKET SIGMA USE 1M]	954K00
	CV-10-2P-1N	CV-10-2P-1N	32	COATING VALVE [TYPE 10 2PORT WITHOUT JOINT]	*1
CV-	CV-12	—	32	COATING VALVE [12TYPE]	—

D

	Model	Former model	Page	Item name	Former product code
DCV-	DCV-2-VT	DCV-2-VT	34	DIAPHRAGM VALVE [ELECTROMAGNETIC TYPE]	16100012
	DCV-2N-VT	DCV-2N-VT	34	DIAPHRAGM VALVE [ELECTROMAGNETIC TYPE STROKE ADJUSTMENT ATTACHED]	16100013
	DCV-3	DCV-3	34	DIAPHRAGM VALVE [PNEUMATIC TYPE]	754100
	DCV-3N	DCV-3N	34	DIAPHRAGM VALVE [PNEUMATIC TYPE STROKE ADJUSTMENT ATTACHED]	755100
DHG-	DHG-5E	DHG-5E	24	DISPENSE HANDGUN [5ML]	2C3100
	DHG-10E	DHG-10E	24	DISPENSE HANDGUN [10ML]	2C4100
	DHG-30E	DHG-30E	24	DISPENSE HANDGUN [30ML]	2C6100
	DHG-50E	DHG-50E	24	DISPENSE HANDGUN [50ML]	2C7100
DN-	DN-16G	DN-16G	18	TWIN NEEDLE [16G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	645100
	DN-17G	DN-17G	18	TWIN NEEDLE [17G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	646100
	DN-18G	DN-18G	18	TWIN NEEDLE [18G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	647100
	DN-18G-3P	DN-18G-3P	18	3 PIN NEEDLE [18G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	647200
	DN-19G	DN-19G	18	TWIN NEEDLE [19G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	648100
	DN-19G-3P	DN-19G-3P	18	3 PIN NEEDLE [19G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	648200
	DN-20G	DN-20G	18	TWIN NEEDLE [20G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	649100
	DN-20G-3P	DN-20G-3P	18	3 PIN NEEDLE [20G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	649200
	DN-21G	DN-21G	18	TWIN NEEDLE [21G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64A100
	DN-21G-3P	DN-21G-3P	18	3 PIN NEEDLE [21G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64A200
	DN-21G-4P	DN-21G-4P	18	4PIN NEEDLE [21G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64A300
	DN-22G	DN-22G	18	TWIN NEEDLE [22G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64B100
	DN-22G-3P	DN-22G-3P	18	3 PIN NEEDLE [22G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64B200
	DN-22G-4P	DN-22G-4P	18	4PIN NEEDLE [22G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64B300
	DN-23G	DN-23G	18	TWIN NEEDLE [23G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64C100
	DN-23G-3P	DN-23G-3P	18	3 PIN NEEDLE [23G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64C200
	DN-23G-4P	DN-23G-4P	18	4PIN NEEDLE [23G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64C300
	DN-24G	DN-24G	18	TWIN NEEDLE [24G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64D100
	DN-24G-3P	DN-24G-3P	18	3 PIN NEEDLE [24G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64D200
	DN-24G-4P	DN-24G-4P	18	4PIN NEEDLE [24G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64D300
	DN-25G	DN-25G	18	TWIN NEEDLE [25G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64E100
	DN-25G-3P	DN-25G-3P	18	3 PIN NEEDLE [25G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64E200
	DN-25G-4P	DN-25G-4P	18	4PIN NEEDLE [25G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64E300
	DN-26G	DN-26G	18	TWIN NEEDLE [26G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64F100
	DN-26G-3P	DN-26G-3P	18	3 PIN NEEDLE [26G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64F200
	DN-26G-4P	DN-26G-4P	18	4PIN NEEDLE [26G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64F300
	DN-27G	DN-27G	18	TWIN NEEDLE [27G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64G100
	DN-27G-3P	DN-27G-3P	18	3 PIN NEEDLE [27G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64G200
	DN-27G-4P	DN-27G-4P	18	4PIN NEEDLE [27G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64G300
	DN-28G	DN-28G	18	TWIN NEEDLE [28G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64H100
	DN-28G-3P	DN-28G-3P	18	3 PIN NEEDLE [28G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64H200
	DN-28G-4P	DN-28G-4P	18	4PIN NEEDLE [28G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64H300

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DPN-	DPN-14G-1	DPN-14G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [14G NEEDLE LENGTH12.7MM]	613D00
	DPN-14G-2	DPN-14G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [14G NEEDLE LENGTH 25.4MM]	613E00
	DPN-14G-3	DPN-14G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [14G NEEDLE LENGTH38.1MM]	613F00
	DPN-15G-1	DPN-15G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [15G NEEDLE LENGTH12.7MM]	614D00
	DPN-15G-2	DPN-15G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [15G NEEDLE LENGTH 25.4MM]	614E00
	DPN-15G-3	DPN-15G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [15G NEEDLE LENGTH38.1MM]	614F00
	DPN-18G-1	DPN-18G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [18G NEEDLE LENGTH12.7MM]	617D00
	DPN-18G-2	DPN-18G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [18G NEEDLE LENGTH 25.4MM]	617E00
	DPN-18G-3	DPN-18G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [18G NEEDLE LENGTH38.1MM]	617F00
	DPN-20G-1	DPN-20G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [20G NEEDLE LENGTH12.7MM]	619D00
	DPN-20G-2	DPN-20G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [20G NEEDLE LENGTH 25.4MM]	619E00
	DPN-20G-3	DPN-20G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [20G NEEDLE LENGTH38.1MM]	619F00
	DPN-21G-1	DPN-21G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [21G NEEDLE LENGTH12.7MM]	61AD00
	DPN-21G-2	DPN-21G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [21G NEEDLE LENGTH25.4MM]	61AE00
	DPN-21G-3	DPN-21G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [21G NEEDLE LENGTH38.1MM]	61AF00
	DPN-22G-1	DPN-22G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [22G NEEDLE LENGTH12.7MM]	61BD00
	DPN-22G-2	DPN-22G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [22G NEEDLE LENGTH25.4MM]	61BE00
	DPN-22G-3	DPN-22G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [22G NEEDLE LENGTH38.1MM]	61BF00
	DPN-23G-1	DPN-23G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [23G NEEDLE LENGTH12.7MM]	61CD00
	DPN-23G-2	DPN-23G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [23G NEEDLE LENGTH25.4MM]	61CE00
	DPN-23G-3	DPN-23G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [23G NEEDLE LENGTH38.1MM]	61CF00
	DPN-25G-1	DPN-25G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [25G NEEDLE LENGTH12.7MM]	61ED00
	DPN-25G-2	DPN-25G-2	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [25G NEEDLE LENGTH25.4MM]	61EE00
	DPN-25G-3	DPN-25G-3	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [25G NEEDLE LENGTH38.1MM]	61EF00
	DPN-27G-1	DPN-27G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [27G NEEDLE LENGTH12.7MM]	61GD00
	DPN-30G-1	DPN-30G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [30G NEEDLE LENGTH12.7MM]	61JD00
	DPN-32G-1	DPN-32G-1	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [32G NEEDLE LENGTH12.7MM]	12100060
	DPN-32G-0	DPN-32G-0	14	DOUBLE THREAD SCREWED PLASTIC NEEDLE [32G NEEDLE LENGTH6.4MM]	12100064

	Model	Former model	Page	Item name	Former product code
F/R-	F/R-4	F/R-4	24	FILTER/REGULATOR	C34C00
FAD	FAD2500	—	44	Fully automatic multi-purpose dispensing machine DISPENS MASTRER	—
FLP-	FLP-1E	FLP-1E	10	FLOAT WIPER PLUNGER [1ML YELLOW]	13200004
	FLP-3E	FLP-3E	10	FLOAT WIPER PLUNGER [3ML YELLOW]	5B2600
	FLP-5E	FLP-5E	10	FLOAT WIPER PLUNGER [5ML YELLOW]	5B3600
	FLP-10E	FLP-10E	10	FLOAT WIPER PLUNGER [10ML YELLOW]	5B4600
	FLP-50E	FLP-50E	10	FLOAT WIPER PLUNGER [20/30/50ML YELLOW]	5B7600
	FLP-100E	—	10	FLOAT WIPER PLUNGER [100ML YELLOW]	—
FN-	FN-0.02N	FN-0.02N	12	SUPER FINE NOZZLE [ID0.02MM LUER LOCK]	68F200
	FN-0.02ND	FN-0.02ND	12	SUPER FINE NOZZLE [ID0.02MM DOUBLE TREAD SCREWED]	68F300
	FN-0.02N-F	FN-0.02N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.02MM LUER LOCK]	68F500
	FN-0.02ND-F	FN-0.02ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.02MM 2THREADSCREW]	068F6000
	FN-0.03N	FN-0.03N	12	SUPER FINE NOZZLE [ID0.03MM LUER LOCK]	68G200
	FN-0.03ND	FN-0.03ND	12	SUPER FINE NOZZLE [ID0.03MM DOUBLE TREAD SCREWED]	68G300
	FN-0.03N-F	FN-0.03N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.03MM LUER LOCK]	68G500
	FN-0.03ND-F	FN-0.03ND-F	12	SUPER FINE NOZZLE TIP THICK15MICROMETER [ID0.03MM 2THREADSCREW]	068G6000
	FN-0.04N	FN-0.04N	12	SUPER FINE NOZZLE [ID0.04MM LUER LOCK]	68H200
	FN-0.04ND	FN-0.04ND	12	SUPER FINE NOZZLE [ID0.04MM DOUBLE TREAD SCREWED]	68H300
	FN-0.04N-F	FN-0.04N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.04MM LUER LOCK]	68H500
	FN-0.04ND-F	FN-0.04ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.04MM 2THREADSCREW]	068H6000
	FN-0.05N	FN-0.05N	12	SUPER FINE NOZZLE [ID0.05MM LUER LOCK]	683200
	FN-0.05ND	FN-0.05ND	12	SUPER FINE NOZZLE [ID0.05MM DOUBLE TREAD SCREWED]	683300
	FN-0.05N-F	FN-0.05N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.05MM LUER LOCK]	683500
	FN-0.05ND-F	FN-0.05ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.05MM 2THREADSCREW]	6836000
	FN-0.10N	FN-0.10N	12	SUPER FINE NOZZLE [ID0.10MM LUER LOCK]	684200
	FN-0.10ND	FN-0.10ND	12	SUPER FINE NOZZLE [ID0.10MM DOUBLE TREAD SCREWED]	684300
	FN-0.10N-F	FN-0.10N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.10MM LUER LOCK]	684500
	FN-0.10ND-F	FN-0.10ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.10MM 2THREADSCREW]	6846000
	FN-0.15N	FN-0.15N	12	SUPER FINE NOZZLE [ID0.15MM LUER LOCK]	685200
	FN-0.15ND	FN-0.15ND	12	SUPER FINE NOZZLE [ID0.15MM DOUBLE TREAD SCREWED]	685300
	FN-0.15N-F	FN-0.15N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.15MM LUER LOCK]	685500
	FN-0.15ND-F	FN-0.15ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.15MM 2THREADSCREW]	6856000
	FN-0.20N	FN-0.20N	12	SUPER FINE NOZZLE [ID0.20MM LUER LOCK]	686200
	FN-0.20ND	FN-0.20ND	12	SUPER FINE NOZZLE [ID0.20MM DOUBLE TREAD SCREWED]	686300
	FN-0.20N-F	FN-0.20N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.20MM LUER LOCK]	686500
	FN-0.20ND-F	FN-0.20ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.20MM 2THREADSCREW]	6866000
	FN-0.25N	FN-0.25N	12	SUPER FINE NOZZLE [ID0.25MM LUER LOCK]	687200
	FN-0.25ND	FN-0.25ND	12	SUPER FINE NOZZLE [ID0.25MM DOUBLE TREAD SCREWED]	687300
	FN-0.25N-F	FN-0.25N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.25MM LUER LOCK]	687500
	FN-0.25ND-F	FN-0.25ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.25MM 2THREADSCREW]	6876000
	FN-0.30N	FN-0.30N	12	SUPER FINE NOZZLE [ID0.30MM LUER LOCK]	688200
	FN-0.30ND	FN-0.30ND	12	SUPER FINE NOZZLE [ID0.30MM DOUBLE TREAD SCREWED]	688300

	Model	Former model	Page	Item name	Former product code
FN-	FN-0.30N-F	FN-0.30N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.30MM LUER LOCK]	688500
	FN-0.30ND-F	FN-0.30ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.30MM 2THREADSCREW]	6886000
	FN-0.40N	FN-0.40N	12	SUPER FINE NOZZLE [ID0.40MM LUER LOCK]	689200
	FN-0.40ND	FN-0.40ND	12	SUPER FINE NOZZLE [ID0.40MM DOUBLE TREAD SCREWED]	689300
	FN-0.40N-F	FN-0.40N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.40MM LUER LOCK]	689500
	FN-0.40ND-F	FN-0.40ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.40MM 2THREADSCREW]	6896000
	FN-0.50N	FN-0.50N	12	SUPER FINE NOZZLE [ID0.50MM LUER LOCK]	68A200
	FN-0.50ND	FN-0.50ND	12	SUPER FINE NOZZLE [ID0.50MM DOUBLE TREAD SCREWED]	69A300
	FN-0.50N-F	FN-0.50N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.50MM LUER LOCK]	68A500
	FN-0.50ND-F	FN-0.50ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.50MM 2THREADSCREW]	068A6000
	FN-0.60N	FN-0.60N	12	SUPER FINE NOZZLE [ID0.60MM LUER LOCK]	68B200
	FN-0.60ND	FN-0.60ND	12	SUPER FINE NOZZLE [ID0.60MM DOUBLE TREAD SCREWED]	69B300
	FN-0.60N-F	FN-0.60N-F	12	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.60MM LUER LOCK]	68B500
	FN-0.60ND-F	FN-0.60ND-F	12	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.60MM 2THREADSCREW]	068B6000
FS/W-	FS/W-2-1602P	FS/W-2-1602P	24	FOOT SWITCH [TYPE 16 2PIN]	C12100
	FS/W-2-1604P	FS/W-2-1604P	24	FOOT SWITCH [TYPE 16 4PIN]	C12300

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	Model	Former model	Page	Item name	Former product code
GAT-	GAT-3G	GAT-3G	41	GALLON TANK [3 GALLONS]	834100
	GAT-5G	GAT-5G	41	GALLON TANK [5 GALLONS]	835100
GC-	GC-1	GC-1	11	PROTECTIVE CAP FOR SYRINGE TIP [E TYPE]	5D9100

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	Model	Former model	Page	Item name	Former product code
HC-	HC-1E-H	HC-1E-H	11	SYRINGE HEAD CAP [1ML HTYPE]	13200005
	HC-3E	HC-3E	11	SYRINGE HEAD CAP [3ML]	5C2100
	HC-3EU-B	HC-3EU-B	11	SYRINGE HEAD CAP [3ML UV TYPE]	13200019
	HC-5E	HC-5E	11	SYRINGE HEAD CAP [5ML]	5C3100
	HC-5EU-B	HC-5EU-B	11	SYRINGE HEAD CAP [5ML UV TYPE]	13200020
	HC-10C	HC-10C	11	SYRINGE HEAD CAP [10ML]	5C4200
	HC-10U-B	HC-10U-B	11	SYRINGE HEAD CAP [10ML UV TYPE BLACK]	13200021
	HC-50E	HC-50E	11	SYRINGE HEAD CAP [20/30/50/70ML]	5C7100
	HC-50EU-B	HC-50EU-B	11	SYRINGE HEAD CAP [20/30/50ML UV TYPE]	13200022
HN-	HC-100E	HC-100E	11	SYRINGE HEAD CAP [100ML]	5C8100
	HN-0.1N	HN-0.1N	12	PRECISION NOZZLE [ID0.1MM LUER LOCK]	651200
	HN-0.1ND	HN-0.1ND	12	PRECISION NOZZLE [ID0.1MM DOUBLE THREAD SCREWED]	651300
	HN-0.15N	HN-0.15N	12	PRECISION NOZZLE [ID0.15MM LUER LOCK]	652200
	HN-0.15ND	HN-0.15ND	12	PRECISION NOZZLE [ID0.15MM DOUBLE TREAD SCREWED]	652300
	HN-0.2N	HN-0.2N	12	PRECISION NOZZLE [ID0.2MM LUER LOCK]	653200
	HN-0.2ND	HN-0.2ND	12	PRECISION NOZZLE [ID0.2MM DOUBLE THREAD SCREWED]	653300
	HN-0.25N	HN-0.25N	12	PRECISION NOZZLE [ID0.25MM LUER LOCK]	654200
	HN-0.25ND	HN-0.25ND	12	PRECISION NOZZLE [ID0.25MM DOUBLE THREAD SCREWED]	654300
	HN-0.3N	HN-0.3N	12	PRECISION NOZZLE [ID0.3MM LUER LOCK]	655200
	HN-0.3ND	HN-0.3ND	12	PRECISION NOZZLE [ID0.3MM DOUBLE THREAD SCREWED]	655300
	HN-0.4N	HN-0.4N	12	PRECISION NOZZLE [ID0.4MM LUER LOCK]	656200
	HN-0.4ND	HN-0.4ND	12	PRECISION NOZZLE [ID0.4MM DOUBLE THREAD SCREWED]	656300
	HN-0.5N	HN-0.5N	12	PRECISION NOZZLE [ID0.5MM LUER LOCK]	657200
	HN-0.5ND	HN-0.5ND	12	PRECISION NOZZLE [ID0.5MM DOUBLE THREAD SCREWED]	657300
	HN-0.6N	HN-0.6N	12	PRECISION NOZZLE [ID0.6MM LUER LOCK]	658200
	HN-0.6ND	HN-0.6ND	12	PRECISION NOZZLE [ID0.6MM DOUBLE THREAD SCREWED]	658300
HPV-	HPV-2NC-2P	—	31	HIGH PRESSURE CORRESPONDING NEEDLE CONTROL VALVE [20MPa 2NC TYPE 2PORTS]	—
HS-	HS-1	HS-1	24	H-TYPE STAND	—

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	Model	Former model	Page	Item name	Former product code
J-	J-46BS	J-46BS	23	FLUID FEEDING TUBE CONNECTOR [R1/8 OD6MM ID4MM BS] JOINT	A33500
	J-B2B-6	J-B2B-6	23	FLUID FEEDING TUBE CONNECTOR[R1/4 OD6MMID4MM FLUOROCARBON RESIN] JOINT	A34E00
J-L	J-L1B-6	J-L1B-6	23	FLUID FEEDING ELBOW TUBE CONNECTOR [R1/8 OD6MM ID4MM SUS] JOINT	A32500
	J-L1B-48HP	J-L1B-48HP	23	FLUID FEEDING ELBOWTUBE CONNECTOR[R1/8 OD8MMID4MM USE HIGHPRESSURE] JOINT	A32601
	J-L2B-48HP	J-L2B-48HP	23	FLUIDFEEDING ELBOWTUBE CONNECTOR[R1/4 OD8MMID4MM USE HIGHPRESSURE] JOINT	A32F01
	J-LU2B-6	J-LU2B-6	23	PNEUMATIC ELBOW UNION [R1/4 OD6MM USE] JOINT	AA2E00
J-R	J-R-3	J-R-3	23	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUER LOCKPLUG OD3MM] JOINT	A61300
	J-RT-3	J-RT-3	23	FLUID FEEDING TUBE CONNECTOR[2THREAD SCREWED LUERLOCK SOCKET OD3MM] JOINT	A62300
J-U	J-U2B-6	J-U2B-6	23	PNEUMATIC HALF UNION [R1/4 OD6MM] JOINT	AA1E00

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	Model	Former model	Page	Item name	Former product code
LS-	LS-2T-1602P	—	24	HANDY SWITCH [LS-2T TYPE 16 2PIN]	—
	LS-2T-1604P	—	24	HANDY SWITCH [LS-2T TYPE 16 4PIN]	—
	LS-3T-1602P	LS-3T-1602P	24	HANDY SWITCH [LS-3T TYPE 16 2PIN]	C11500
	LS-3T-1604P	LS-3T-1604P	24	HANDY SWITCH [LS-3T TYPE 16 4PIN]	C11700

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LS-NH3-	LS-NH3-1604P	LS-NH3-1604P	25	DISPENSER PEN [LS-NH3 TYPE 16 4PIN]	C13700
	LS-NH3-C1	LS-NH3-C1	25	TUBE COLLAR [C1 LS-NH3]	C1W105
	LS-NH3-C2	LS-NH3-C2	25	TUBE COLLAR [C2 LS-NH3]	C1W106
	LS-NH3-C3	LS-NH3-C3	25	TUBE COLLAR [C3LS-NH3]	C1W107
	LS-NH3-C4	LS-NH3-C4	25	TUBE COLLAR [C4 LS-NH3 USE]	C1W108
	LS-NH3-TG1	LS-NH3-TG1	25	CAP [TG1 LS-NH3]	C1W205
	LS-NH3-TG2	LS-NH3-TG2	25	CAP [TG2 LS-NH3]	C1W206
	LS-NH3-TG3	LS-NH3-TG3	25	CAP [TG3 LS-NH3]	C1W207
	LS-NH3-TG4	LS-NH3-TG4	25	CAP [TG4 LS-NH3]	C1W208
	LS-NH3-TG5	LS-NH3-TG5	25	CAP [TG5 LS-NH3]	C1W209
	LS-NH3-TG6	LS-NH3-TG6	25	CAP [TG6 LS-NH3]	C1W210
	LS-NH3-TG7	LS-NH3-TG7	25	CAP [TG7LS-NH3 USE]	C1W211
	LS-NH3-TG8	LS-NH3-TG8	25	CAP [TG8 LS-NH3 USE]	C1W212
LT-	LT-23EX	LT-23EX	23	LUER LOCK TYPE EXTENSION TUBE	961K00
	LT-46	LT-46	23	FLUID FEEDING TUBE [OD6MM ID4MM NYLON]	962100
	LT-46T	LT-46T	23	FLUID FEEDING TUBE [OD6MM ID4MM FLUOROCARBON POLYMERS WHITE]	962500
	LT-48HP	LT-48HP	23	FLUID FEEDING TUBE [OD8MM ID4MM HIGH PRESSURE]	967100

	Model	Former model	Page	Item name	Former product code
MB-	MB-5E-02	MB-5E-02	26	MIXING BLOCK [5ML SYRINGE USE]	15200001
	MB-10E-02	MB-10E-02	26	MIXING BLOCK [10ML SYRINGE USE]	15200004
	MB-20E-02	MB-20E-02	26	MIXING BLOCK [20ML SYRINGE USE]	15200006
	MB-30E-02	MB-30E-02	26	MIXING BLOCK [30ML SYRINGE USE]	15200008
	MB-50E-02	MB-50E-02	26	MIXING BLOCK [50ML SYRINGE]	15200010
	MB-70E-02	MB-70E-02	26	MIXING BLOCK [70ML SYRINGE USE]	15200012
	MB-100C-01	MB-100C-01	26	MIXING BLOCK [100ML BARREL USE]	15200052
	MB-170C-01	MB-170C-01	26	MIXING BLOCK [170ML BARREL USE]	15200054
	MB-340C-01	MB-340C-01	26	MIXING BLOCK [340ML BARREL USE]	15200056
	MB-MJETC2-3070	MB-MJETC2-3070	26	MIXING BLOCK [30/50/70ML CYBERJET2]	—
MC-	MC-1602P	MC-1602P	24	METAL CONNECTOR [PLUG TYPE16 2 PIN]	C56100
	MC-1603P	MC-1603P	24	METAL CONNECTOR [PLUG TYPE 16 3PIN]	C56200
	MC-1604P	MC-1604P	24	METAL CONNECTOR [PLUG TYPE 16 4PIN]	C56300
ME-	ME-5000P	—	35	PUMPMaster ME-5000P PUMP CONTROLLER	—
	ME-5000SP	—	35	DIGITAL CONTROLLED SPRAY VALVE CONTROLLER SPRAY MASTER	—
	ME-5000VT	—	35	DIGITAL CONTROLLED VALVE CONTROLLER VALVE MASTER	—
MGD-	MGD-7500	—	45	Inline enzyme/reagent dispensing system	—
MJET-	MJET-A-2-4CTR	◆ MJET-A-HU○-R/L (○ : S,M,L)	43	NON-CONTACT JET DISPENSER AEROJET	*1
	MJET-S-HI	◆ —	43	NON-CONTACT JET DISPENSER SUPER HI JET LIQUID FEED ON LEFT	—
MJP-	MJP-05	—	31	JUSTRO PUMP [05mL use]	—
	MJP-13	—	31	JUSTRO PUMP [13mL use]	—
ML-	ML-5000XII	◆ ML-5000XII	42	HIGH PRECISION DIGITAL DISPENSER	195100
	ML-808GX	◆ —	42	HIGH PRECISION DISPENSER FLEXIBLE WITH VISCOSITY CHANGE	—
MLC-	MLC-6500	◆ MLC-6500	45	Fully automatic seal dispensing machine	—
MLP-	MLP-5E	MLP-5E	10	MIRACLE WIPER PLUNGER	5B3700
	MLP-10E	MLP-10E	10	MIRACLE WIPER PLUNGER	5B4700
	MLP-50E	MLP-50E	10	MIRACLE WIPER PLUNGER	5B7700
	MLP-B-5E	MLP-B-5E	10	MIRACLE WIPER PLUNGER [5mL BLUE]	13200017
	MLP-B-10E	MLP-B-10E	10	MIRACLE WIPER PLUNGER	13200018
	MLP-B-50E	MLP-B-50E	10	MIRACLE WIPER PLUNGER	5B7N00
	MLP-R-5E	MLP-R-5E	10	MIRACLE WIPER PLUNGER	13200016
	MLP-R-10E	MLP-R-10E	10	MIRACLE WIPER PLUNGER [10mL RED]	5B4F00
	MLP-R-50E	MLP-R-50E	10	MIRACLE WIPER PLUNGER	5B7F00
MPP-	MPP-1	◆ MPP-1	43	VOLUME MEASURING TYPE DIGITAL CONTROL DISPENSER MEASURING MASTER	*1
MS-	MS-1	◆ MS-1	42	HIGH PRECISION ECO DISPENSER SMART SHOT	11100236
	MS-1D	◆ MS-1D	42	HIGH PRECISION ECO DISPENSER SMART SHOT	11100279
MSD-	MSD-3	◆ —	43	HIGH-PERFORMANCE SCREW DISPENSER SCREWMASTER3	*1
MT-	MT-410	◆ MT-410	43	ROTARY TUBING DISPENSER	*1
MU	MUCADV	◆ —	45	MuCADV DISPENSE PATTERN EDITING SOFTWARE	—

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	NC-3EU-B	NC-3EU-B	11	SYRINGE TIP CAP [DOUBLE THREAD SCREWED UV TYPE]	13200023
	NC-3FH	—	11	HEAT-RESISTANT SYRINGE TIP CAP	—
	NC-5E	NC-5E	11	SYRINGE TIP CAP [LUER LOCK KNURLED HARD WHITE]	5D7200
	NC-7E	NC-7E	11	SYRINGE TIP CAP [DOUBLE THREAD SCREWED KNURLED BLUE]	13200008
	NC-7EU-B	NC-7EU-B	11	SYRINGE TIP CAP [DOUBLE THREAD SCREWED KNURLED UV TYPE BLACK]	13200024
NCV-	NCV-7DV-2P	NCV-7DV	29	NEEDLE CONTROL VALVE [TYPE 7 2PORT ANAEROBIC WITH NCV-7DV-25]	723100
	NCV-10-1P	NCV-10	29	NEEDLE CONTROL VALVE [TYPE 10 1PORT]	724A00
	NCV-10-2P	NCV-10-2P	29	NEEDLE CONTROL VALVE [TYPE 10 2PORT]	724100
	NCV-10-T-1P	NCV-10-T	29	NEEDLE CONTROL VALVE [TYPE 10 1PORT FLUOROCARBON POLYMERS]	724B00

	Model	Former model	Page	Item name	Former product code
NCV-	NCV-10-T-2P	NCV-10-T-2P	29	NEEDLE CONTROL VALVE [TYPE 10 2PORT FLUOROCARBON POLYMERS]	724200
	NCV-10-U-1P	NCV-10-U	29	NEEDLE CONTROL VALVE [TYPE 10 1PORT UV]	724C00
	NCV-10-U-2P	NCV-10-U-2P	29	NEEDLE CONTROL VALVE [TYPE 10 2PORT UV]	724300
	NCV-12S-2P	NCV-12S	29	NEEDLE CONTROL VALVE [TYPE 12S 2PORT]	725500
	NCV-17-1P-1N	NCV-17-1P-1N	28	NEEDLE CONTROL VALVE [TYPE 17 1PORT]	727A00
	NCV-17-1P-S6	NCV-17-1P-S6	28	NEEDLE CONTROL VALVE [TYPE 17 1PORT OD6MM SUS PIPE ATTACHED]	727D00
	NCV-17-L-1P-2N	NCV-17-L-1P-2N	28	NEEDLE CONTROL VALVE [TYPE 17 1PORT HIGH FLOW]	16100001
	NCV-17-L-1P-2N-RS	—	28	NEEDLE CONTROL VALVE MINIVAL [TYPE 17 1PORT HIGH FLOW RATE RESIN SPECIFICATION]	—
NK	NK-2	—	18	NOZZLE KIT [TYPE 2]	12300001
	NKC-2	—	18	NOZZLE KIT CASE [TYPE 2]	12300002

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	Model	Former model	Page	Item name	Former product code
ORG-	ORG-1.5-N-B-1	AON-1E	9	ORING [PHI 1.5 MATERIAL N COLOR B #1]	13200003
	ORG-1.5-P-B-1	AOP-1E	9	ORING [PHI 1.5 MATERIAL P COLOR B #1]	13200025
	ORG-1.5-S-R-1	AOS-1E	9	ORING [PHI 1.5 MATERIAL S COLOR R #1]	13200002
	ORG-1.5-V-B-1	AOV-1E	9	ORING [PHI 1.5 MATERIAL V COLOR B #1]	13200001
	ORG-6-N-B-1	AON-3	9	ORING [PHI 6 MATERIAL N COLOR B #1]	5G2300
	ORG-6-P-B-1	AOP-3	9	ORING [PHI 6 MATERIAL P COLOR B #1]	13200011
	ORG-6-S-R-1	AOS-3	9	ORING [PHI 6 MATERIAL S COLOR R #1]	5G2C00
	ORG-6-V-B-1	AOV-3	9	ORING [PHI 6 MATERIAL V COLOR B #1]	5G2M00
	ORG-8-V-B-1	CS-BT-002	22	ORING [PHI 8 MATERIAL V COLOR B #1]	55W212
	ORG-9-N-B-1	AON-5E	9	ORING [PHI 9 MATERIAL N COLOR B #1]	5G3100
	ORG-9-P-B-1	AOP-5E	9	ORING [PHI 9 MATERIAL P COLOR B #1]	13200012
	ORG-9-S-R-1	AOS-5E	9	ORING [PHI 9 MATERIAL S COLOR R #1]	5G3A00
	ORG-9-V-B-1	AOV-5E	9	ORING [PHI 9 MATERIAL V COLOR B #1]	5G3K00
	ORG-11-N-B-2	AON-10E	9	ORING [PHI 11 MATERIAL N COLOR B #2]	5G4100
	ORG-11-P-B-1	AOP-10E	9	ORING [PHI 11 MATERIAL P COLOR B #1]	13200013
	ORG-11-S-R-1	AOS-10E	9	ORING [PHI 11 MATERIAL S COLOR R #1]	5G4A00
	ORG-11-V-B-1	AOV-10E	9	ORING [PHI 11 MATERIAL V COLOR B #1]	5G4K00
	ORG-12-V-B-1	CS-BT-003	22	ORING [PHI 12 MATERIAL V COLOR B #1]	55W213
	ORG-14-V-B-1	SCS-P-004-4B	21	ORING [PHI 14 MATERIAL V COLOR B #1]	55W36D
	ORG-16-V-B-1	SCS-P-004-4A	21	ORING [PHI 16 MATERIAL V COLOR B #1]	55W36C
	ORG-18-N-B-1	AON-50E	9	ORING [PHI 18 MATERIAL N COLOR B #1]	5G7100
	ORG-18-P-B-1	AOP-50E	9	ORING [PHI 18 MATERIAL P COLOR B #1]	13200014
	ORG-18-S-R-1	AOS-50E	9	ORING [PHI 18 MATERIAL S COLOR R #1]	5G7A00
	ORG-18-V-B-1	AOV-50E	9	ORING [PHI 18 MATERIAL V COLOR B #1]	5G7K00
	ORG-20-V-B-1	SCS-P-003-1	21	ORING [PHI 20 MATERIAL V COLOR B #1]	55W351
	ORG-24-N-B-2	AON-100E	9	ORING [PHI 24 MATERIAL N COLOR B #2]	13200009
	ORG-24-P-B-1	AOP-100E	9	ORING [PHI 24 MATERIAL P COLOR B #1]	13200015
	ORG-24-S-R-1	AOS-100E	9	ORING [PHI 24 MATERIAL S COLOR R #1]	5G8A00
	ORG-24-V-B-1	AOV-100E	9	ORING [PHI 24 MATERIAL V COLOR B #1]	5G8K00
	ORG-34-V-B-1	CS-P-001-1C	20	ORING [PHI 34 MATERIAL V COLOR B #1]	14100017
	ORG-42-V-B-1	CS-P-001-1B	20	ORING [PHI 42 MATERIAL V COLOR B #1]	14100016
OTT-	OTT-1L	OTT-1L	40	ONE TOUCH TANK [1L]	842100
	OTT-2L	OTT-2L	40	ONE TOUCH TANK [2L]	843100
	OTT-3L	OTT-3L	40	ONE TOUCH TANK [3L]	844100
	OTT-5L	OTT-5L	40	ONE TOUCH TANK [5L]	845100
	OTT-10L	OTT-10L	40	ONE TOUCH TANK [10L]	846100
	OTT-20L	OTT-20L	40	ONE TOUCH TANK [20L]	847100
	OTT-30L	OTT-30L	40	ONE TOUCH TANK [30L]	848100

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	PB-170BT	PB-170BT	22	TUBE CARTRIDGE BARREL [170ML]	519600
	PB-170C	PB-170C	20	BARREL [170ML TYPE C]	519H00
	PB-170CU-OR	—	20	UV BLOCK BARREL [170ML TYPE C]	—
	PB-340CU-OR	—	20	UV BLOCK BARREL [340ML TYPE C]	—
	PB-230BT	PB-230BT	22	TUBE CARTRIDGE BARREL [230ML]	51A600
	PB-340C	—	20	BARREL [340ML TYPE C]	—
PCV-	PCV-5-1P	PCV-5-1P	30	PISTON CONTROL VALVE [TYPE 5 1PORT]	712A00
	PCV-5-2P	PCV-5-2P	30	PISTON CONTROL VALVE [TYPE 5 2PORT]	712100
	PCV-12-2P	PCV-12-2P	30	PISTON CONTROL VALVE [TYPE 12 2PORT]	715100
	PCV-12-L-2P-2N	—	30	PISTON CONTROL VALVE MINIVAL [TYPE 12 2 PORT LARGE FLOW RATE]	—
P-LADP	P-LADP-1	CS-BT-001	22	LUER LOCK ADAPTER [NO.1]	55W211
PN-	PN-15G-A	PN-15G-A	14	PLASTIC NEEDLE [15G NEEDLE LENGTH 8MM]	614100
	PN-15G-B	PN-15G-B	14	PLASTIC NEEDLE [15G NEEDLE LENGTH 13MM]	614A00
	PN-16G-A	PN-16G-A	14	PLASTIC NEEDLE [16G NEEDLE LENGTH 8MM]	615100
	PN-16G-B	PN-16G-B	14	PLASTIC NEEDLE [16G NEEDLE LENGTH 13MM]	615A00
	PN-17G-A	PN-17G-A	14	PLASTIC NEEDLE [17G NEEDLE LENGTH 8MM]	616100
	PN-17G-B	PN-17G-B	14	PLASTIC NEEDLE [17G NEEDLE LENGTH 13MM]	616A00
	PN-18G-A	PN-18G-A	14	PLASTIC NEEDLE [18G NEEDLE LENGTH 8MM]	617100

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	PN-19G-A	PN-19G-A	14	PLASTIC NEEDLE [19G NEEDLE LENGTH 8MM]	618100
	PN-19G-B	PN-19G-B	14	PLASTIC NEEDLE [19G NEEDLE LENGTH 13MM]	618A00
	PN-20G-A	PN-20G-A	14	PLASTIC NEEDLE [20G NEEDLE LENGTH 8MM]	619100
	PN-20G-B	PN-20G-B	14	PLASTIC NEEDLE [20G NEEDLE LENGTH 13MM]	619A00
	PN-21G-A	PN-21G-A	14	PLASTIC NEEDLE [21G NEEDLE LENGTH 8MM]	61A100
	PN-21G-B	PN-21G-B	14	PLASTIC NEEDLE [21G NEEDLE LENGTH 13MM]	61AA00
	PN-22G-A	PN-22G-A	14	PLASTIC NEEDLE [22G NEEDLE LENGTH 8MM]	61B100
	PN-22G-B	PN-22G-B	14	PLASTIC NEEDLE [22G NEEDLE LENGTH 13MM]	61BA00
	PN-23G-A	PN-23G-A	14	PLASTIC NEEDLE [23G NEEDLE LENGTH 8MM]	61C100
	PN-23G-B	PN-23G-B	14	PLASTIC NEEDLE [23G NEEDLE LENGTH 13MM]	61CA00
	PN-24G-A	PN-24G-A	14	PLASTIC NEEDLE [24G NEEDLE LENGTH 8MM]	61D100
	PN-24G-B	PN-24G-B	14	PLASTIC NEEDLE [24G NEEDLE LENGTH 13MM]	61DA00
	PN-25G-A	PN-25G-A	14	PLASTIC NEEDLE [25G NEEDLE LENGTH 8MM]	61E100
	PN-25G-B	PN-25G-B	14	PLASTIC NEEDLE [25G NEEDLE LENGTH 13MM]	61EA00
	PN-26G-A	PN-26G-A	14	PLASTIC NEEDLE [26G NEEDLE LENGTH 8MM]	61F100
	PN-26G-B	PN-26G-B	14	PLASTIC NEEDLE [26G NEEDLE LENGTH 13MM]	61FA00
	PN-27G-A	PN-27G-A	14	PLASTIC NEEDLE [27G NEEDLE LENGTH 8MM]	61G100
	PN-27G-B	PN-27G-B	14	PLASTIC NEEDLE [27G NEEDLE LENGTH 13MM]	61GA00
P-NADP-	P-NADP-11	NA-2	21	NEEDLE ADAPTER [No.11]	6B3100
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	P-NADP-13	NA-2VT	20,23	NEEDLE ADAPTER [No.13]	6B6100
	P-NADP-14	NA-1	23	NEEDLE ADAPTER [No.14]	6B1100
	P-NADP-15	NA-1T	23	NEEDLE ADAPTER [No.15]	6B2100
	P-NADP-17	—	23	NEEDLE ADAPTER [NO.17]	—
PP-B	PP-B1	PP-B1	20	BARREL PLUNGER [TYPE B1]	14100002
P-PKG-	P-PKG-15	SCS-P-004-1A	21	PACKING [NO.15]	55W36A
	P-PKG-23	SCS-P-001-1B	21	PACKING [NO.23]	55W33B
PPN-	PPN-15G	PPN-15G	17	SOFT NEEDLE [15G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	694100
	PPN-16G	PPN-16G	17	SOFT NEEDLE [16G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	695100
	PPN-18G	PPN-18G	17	SOFT NEEDLE [18G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	697100
	PPN-20G	PPN-20G	17	SOFT NEEDLE [20G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	699100
	PPN-22G	PPN-22G	17	SOFT NEEDLE [22G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	69B100
	PPN-25G	PPN-25G	17	SOFT NEEDLE [25G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	69E100
PPV-	PPV-5-2P	PPV-5	31	PLUNGER PUMP VALVE [TYPE 5 2PORT]	771100
PP-W	PP-W1	PP-W1	20	BARREL PLUNGER [TYPE W1]	14100001
P-SCW-	P-SCW-2	CS-P-001-1D	20	SCREW [NO.2]	14100018
	P-SCW-17	SCS-P-001-1D	21	SCREW [NO.17]	55W33D
P-SSP-	P-SSP-1	SCS-P-001-1A	20,21	SEAL SPRING [CARTRIDGE CAP USE]	55W33A
PSY-	PSY-1E2-M	PSY-1E2-M	6	CLEAR SYRINGE [1ML WITH SCALE]	13100005
	PSY-3E	PSY-3E	6	CLEAR SYRINGE [3ML]	512100
	PSY-3E-M	—	6	CLEAR SYRINGE [3ML WITH SCALE]	—
	PSY-3EU-OR	PSY-3EU-OR	6	UV BLOCK SYRINGE [3ML]	13100007
	PSY-3EU-OR-M	—	6	UV BLOCK SYRINGE [3ML WITH SCALES]	—
	PSY-5E	PSY-5E	6	CLEAR SYRINGE [5ML]	513100
	PSY-5E-M	PSY-5E-M	6	CLEAR SYRINGE [5ML WITH SCALE]	513200
	PSY-5E-PG	PSY-5E-PG	7	COLOR SYRINGE [5ML]	543100
	PSY-5EU-OR	PSY-5EU-OR	6	UV BLOCK SYRINGE [5ML]	13100008
	PSY-5EU-OR-M	PSY-5EU-OR-M	6	UV BLOCK SYRINGE [5ML WITH SCALES]	13100014
	PSY-10E	PSY-10E	6	CLEAR SYRINGE [10ML]	514100
	PSY-10E-M	PSY-10E-M	6	CLEAR SYRINGE [10ML WITH SCALE]	514200
	PSY-10E-PG	PSY-10E-PG	7	COLOR SYRINGE[10ML PEPPERMINT GREEN]	544100
	PSY-10E-SEP	PSY-10E-SEP	7	ANTI STATIC SYRINGE [10ML]	534100
	PSY-10EU-OR	PSY-10EU-OR	6	UV BLOCK SYRINGE [10ML]	13100009
	PSY-10EU-OR-M	PSY-10EU-OR-M	6	UV BLOCK SYRINGE [10ML WITH SCALES]	13100015
	PSY-20F	—	6	CLEAR SYRINGE [20ML F TYPE]	—
	PSY-20F-M	—	6	CLEAR SYRINGE [20ML F TYPE WITH GRADUATIONS]	—
	PSY-20F-PG	—	7	COLOR SYRINGE [20ML TYPE F PEPPERMINT GREEN]	—
	PSY-20FU-OR	—	6	UV BLOCK SYRINGE [20ML F TYPE]	—
	PSY-20FU-OR-M	—	6	UV BLOCK SYRINGE [20ML F TYPE WITH GRADUATIONS]	—
	PSY-20P	PSY-20P	7	MOUNTER-SPECIFIC SYRINGE [20ML]	515800
	PSY-30E-SEP	PSY-30E-SEP	7	ANTI STATIC SYRINGE [30ML]	536100
	PSY-30F	—	6	CLEAR SYRINGE [30ML F TYPE]	—
	PSY-30F-M	—	6	CLEAR SYRINGE [30ML TYPE F WITH GRADUATIONS]	—
	PSY-30F-PG	—	7	COLOR SYRINGE [30ML TYPE F PEPPERMINT GREEN]	—
	PSY-30FH-P	—	7	Heat-RESISTANT SYRINGE [30ML F TYPE GRADE P]	—
	PSY-30FH2-P	—	7	HEAT-RESISTANT SYRINGE [30ML F2 TYPE GRADE P]	—
	PSY-30FU-OR	—	6	UV BLOCK SYRINGE [30ML F TYPE]	—
	PSY-30FU-OR-M	—	6	UV BLOCK SYRINGE [30ML TYPE F WITH GRADUATIONS]	—
	PSY-50E-SEP	PSY-50E-SEP	7	ANTI STATIC SYRINGE [50ML]	537100
	PSY-50F	—	6	CLEAR SYRINGE [50ML F TYPE]	—
	PSY-50F-M	—	6	CLEAR SYRINGE [50ML TYPE F WITH GRADUATIONS]	—
	PSY-50F-PG	—	7	COLOR SYRINGE [50ML TYPE F PEPPERMINT GREEN]	—
	PSY-50FU-OR	—	6	UV BLOCK SYRINGE [50ML F TYPE]	—

	Model	Former model	Page	Item name	Former product code
PSY-	PSY-50FU-OR-M	—	6	UV BLOCK SYRINGE [50ML TYPE F WITH GRADUATIONS]	—
	PSY-70F	—	6	CLEAR SYRINGE [70ML F TYPE]	—
	PSY-70F-M	—	6	CLEAR SYRINGE [70ML TYPE F WITH GRADUATIONS]	—
	PSY-70FU-OR	—	6	UV BLOCK SYRINGE [70ML F TYPE]	—
	PSY-70FU-OR-M	—	6	UV BLOCK SYRINGE [70ML TYPE F WITH GRADUATIONS]	—
	PSY-100E	PSY-100E	6	CLEAR SYRINGE [100ML]	518100
P-TADP-	PSY-100EU-OR	—	6	UV BLOCK SYRINGE [100ML]	—
	P-TADP-2	CS-BT-009	22	TUBE ADAPTER [NO.2]	55W232
	P-TADP-3	CS-BT-004	22	TUBE ADAPTER [NO.3]	55W231

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	Model	Former model	Page	Item name	Former product code
QP-	QP-1B	QP-1B	20,23	PNEUMATIC QUICK JOINT [PLUG R1/8]	AB1200
	QP-1N	QP-1N	23	PNEUMATIC QUICK JOINT [PLUG RC1/8] JOINT	AB1100
	QP-2B	QP-2B	23	PNEUMATIC QUICK JOINT [PLUG R1/4] JOINT	AB1400
	QP-2N	QP-2N	23	PNEUMATIC QUICK JOINT [PLUG RC1/4] JOINT	AB1300
	QP-TK1	QP-TK1	23	PNEUMATIC QUICK JOINT [PLUG OD6MM ID3MM USE BARBED JOINT] JOINT	AB1600
QS-	QS-1N	QS-1N	23	PNEUMATIC QUICK JOINT [SOCKET RC1/8] JOINT	AB1A00
	QS-2B	QS-2B	23	PNEUMATIC QUICK JOINT [SOCKET R1/4] JOINT	AB1D00
	QS-2N	QS-2N	23	PNEUMATIC QUICK JOINT [SOCKET RC1/4] JOINT	AB1C00
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	SBP-1L-01	SBP-1L-01	41	INTERNAL CONTAINER [1L FLUID FEED TANK USE]	17200002
	SBP-2L-01	SBP-2L-01	41	INTERNAL CONTAINER [2L FLUID FEED TANK]	17200003
	SBP-3L-01	SBP-3L-01	41	INTERNAL CONTAINER [3L FLUID FEED TANK USE]	17200004
	SBP-5L-01	SBP-5L-01	41	INTERNAL CONTAINER [4L FLUID FEED TANK USE]	17200005
	SBP-10L-01	SBP-10L-01	41	INTERNAL CONTAINER [5L FLUID FEED TANK USE]	17200006
	SBP-20L	SBP-20L	41	INTERNAL CONTAINER [6L FLUID FEED TANK USE]	8A7100
SCS-	SCS-330-MI	SCS-330-MI	21	SEALANT CARTRIDGE [TYPE MI]	14100028
	SCS-330-MI-HK	SCS-330-MI-HK	21	SEALANT CARTRIDGE [TYPE MI WIT HOOK]	14100029
	SCS-330-MO	SCS-330-MO	21	SEALANT CARTRIDGE [TYPE MO]	14100032
	SCS-330-MO-HK	SCS-330-MO-HK	21	SEALANT CARTRIDGE [TYPE MO WIT HOOK]	14100033
	SCS-330-S	SCS-330-S	21	SEALANT CARTRIDGE [TYPE S]	55C800
	SCS-330-S-HK	SCS-330-S-HK	21	SEALANT CARTRIDGE [TYPE S WITH HOOK]	55C801
	SCS-330-TB	SCS-330-TB	21	SEALANT CARTRIDGE [TYPE TB]	55C600
	SCS-330-TB-HK	SCS-330-TB-HK	21	SEALANT CARTRIDGE [TYPE TB WITH HOOK]	55C601
	SCS-330-TR	SCS-330-TR	21	SEALANT CARTRIDGE [TYPE TR]	55C700
	SCS-330-TR-HK	SCS-330-TR-HK	21	SEALANT CARTRIDGE [TYPE TR WITH HOOK]	55C701
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	SCS-P-004-3	SCS-P-004-3	21	TIP ADAPTER [S TYPE]	55W363
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	SCS-P-004-6	SCS-P-004-6	21	TIP ADAPTER [MI TYPE]	14100030
	SCS-P-004-7	SCS-P-004-7	21	TIP ADAPTER [MO TYPE]	14100034
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	SHN-0.15N	SHN-0.15N	12	PRECISION SOLID NOZZLE [ID0.15MM]	652500
	SHN-0.2N	SHN-0.2N	12	PRECISION SOLID NOZZLE [ID 0.2MM]	653500
	SHN-0.25N	SHN-0.25N	12	PRECISION SOLID NOZZLE [ID 0.25MM]	654500
	SHN-0.3N	SHN-0.3N	12	PRECISION SOLID NOZZLE [ID 0.3MM]	655500
	SHN-0.35N	SHN-0.35N	12	PRECISION SOLID NOZZLE [ID 0.35MM]	656500
	SHN-0.4N	SHN-0.4N	12	PRECISION SOLID NOZZLE [ID 0.4MM]	657500
	SHN-0.45N	SHN-0.45N	12	PRECISION SOLID NOZZLE [ID 0.45MM]	658500
	SHN-0.5N	SHN-0.5N	12	PRECISION SOLID NOZZLE [ID 0.5MM]	659500
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	SNA-14G-B	SNA-14G-B	13	METAL NEEDLE [SNA 14G NEEDLE LENGTH13MM]	623600
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	SNA-30G-B	SNA-30G-B	13	METAL NEEDLE [SNA 30G NEEDLE LENGTH13MM]	62J600
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	SOT-6.3L	SOT-3L	40	STRAIGHT ONE TOUCH TANK [6.3L]	874100
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	SPN-0.17-9.5L	SPN-0.17-9.5L	14	SHARP NEEDLE[ID0.17MM NEEDLE LENGTH 9.5MM] BODY: PLASTIC	6DL200
	SPN-0.25-12.7L	SPN-0.25-12.7L	14	SHARP NEEDLE[ID0.25MM NEEDLE LENGTH 12.7MM] BODY: PLASTIC	6DL400
	SPN-0.33-12.7L	SPN-0.33-12.7L	14	SHARP NEEDLE[ID0.33MM NEEDLE LENGTH 12.7MM] BODY: PLASTIC	6DK400
	SPN-0.41-38.1L	SPN-0.41-38.1L	14	SHARP NEEDLE[ID0.41MM NEEDLE LENGTH 38.1MM] BODY: PLASTIC	6DK300
	SPN-0.58-38.1L	SPN-0.58-38.1L	14	SHARP NEEDLE[ID0.58MM NEEDLE LENGTH 38.1MM] BODY: PLASTIC	6DJ300
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SSY-	SSY-1B	SSY-1B	7	STAINLESS SYRINGE [1ML]	551B00
	SSY-3E	—	7	STAINLESS SYRINGE [3ML]	552B00
	SSY-5E	—	7	STAINLESS SYRINGE [5ML]	553100
	SSY-10E	—	7	STAINLESS SYRINGE [10ML]	554100
	SSY-30E	—	7	STAINLESS SYRINGE [30ML]	556100
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	SV-6-1.0X	SV-6-1.0X	33	SPRAY VALVE [SV-6 NOMINAL SIZE 1.0MM]	16100036
	SV-6-1.3X	SV-6-1.3X	33	SPRAY VALVE [SV-6 NOMINAL SIZE 1.3MM]	16100037
	SV-6-2.0X	SV-6-2.0X	33	SPRAY VALVE [SV-6 NOMINAL SIZE 2.0MM]	16100038
	SV-6R-0.5X	SV-6R-0.5X	33	SPRAY VALVE [SV-6R NOMINAL SIZE 0.5MM]	16100041
	SV-6R-1.0X	SV-6R-1.0X	33	SPRAY VALVE [SV-6R NOMINAL SIZE 1.0MM]	16100042
	SV-6R-1.3X	SV-6R-1.3X	33	SPRAY VALVE [SV-6R NOMINAL SIZE 1.3MM]	16100043
	SV-6R-2.0X	SV-6R-2.0X	33	SPRAY VALVE [SV-6R NOMINAL SIZE 2.0MM]	16100044
	SV-6RW-1.0X	SV-6RW-1.0X	33	SPRAY VALVE [SV-6RW NOMINAL SIZE 1.0MM]	16100045
	SV-6RW-1.3X	SV-6RW-1.3X	33	SPRAY VALVE [SV-6RW NOMINAL SIZE 1.3MM]	16100046
	SV-6RW-2.0X	SV-6RW-2.0X	33	SPRAY VALVE [SV-6RW NOMINAL SIZE 2.0MM]	16100047
	SV-6SK-0.5X	SV-6SK-0.5X	33	SPRAY VALVE [SV-6SK NOMINAL SIZE 0.5MM]	16100039
	SV-6SK-1.0X	SV-6SK-1.0X	33	SPRAY VALVE [SV-6SK NOMINAL SIZE 1.0MM]	16100040
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	SYS-2A	SYS-2A	24	SYRINGE STAND [10ML USE TYPE A]	11200003
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	SYS-5B	—	24	SYRINGE STAND [FOR 5ML SYRINGE LS-3T/2T USE]	—
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	SYS-20B	—	24	SYRINGE STAND [FOR 20ML SYRINGE LS-3T/2T USE]	—
	SYS-30B	—	24	SYRINGE STAND [FOR 30ML SYRINGE LS-3T/2T USE]	—
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	TB-5C-P-R	TB-5C-P-R	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER RIGHT 5ML SYRINGE USE]	B23200
	TB-5E-K	TB-5E-K	26	TEMPERATURE CONTROL BLOCK [RESISTANCE THERMOMETER BULB TYPE 5ML SYRINGE USE]	B13200
	TB-10C-P-F	TB-10C-P-F	26	TEMPERATURE CONTROL BLOCK [FAN TYPE PELTIER 10ML SYRINGE]	B24A00
	TB-10C-P-L	TB-10C-P-L	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER LEFT 10ML SYRINGE USE]	B24100
	TB-10C-P-R	TB-10C-P-R	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER RIGHT 10ML SYRINGE USE]	B24200
	TB-10E-K	TB-10E-K	26	TEMPERATURE CONTROL BLOCK [RESISTANCE THERMOMETER BULB TYPE 10ML SYRINGE USE]	B14200
	TB-20C-P-F	TB-20C-P-F	26	TEMPERATURE CONTROL BLOCK [FAN TYPE PELTIER 20ML SYRINGE USE]	B25A00
	TB-20C-P-L	TB-20C-P-L	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER LEFT 20ML SYRINGE USE]	B25100
	TB-20C-P-R	TB-20C-P-R	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER RIGHT 20ML SYRINGE USE]	B25200
	TB-20E-K	TB-20E-K	26	TEMPERATURE CONTROL BLOCK [RESISTANCE THERMOMETER BULB TYPE 20ML SYRINGE USE]	B15200
	TB-30C-P-F	TB-30C-P-F	26	TEMPERATURE CONTROL BLOCK [FAN TYPE PELTIER 30ML SYRINGE USE]	B26A00
	TB-30C-P-L	TB-30C-P-L	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER LEFT 30ML SYRINGE USE]	B26100
	TB-30C-P-R	TB-30C-P-R	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER RIGHT 30ML SYRINGE USE]	B26200
	TB-30E-K	TB-30E-K	26	TEMPERATURE CONTROL BLOCK [RESISTANCE THERMOMETER BULB TYPE 30ML SYRINGE USE]	B16200
	TB-50C-P-F	TB-50C-P-F	26	TEMPERATURE CONTROL BLOCK [FAN TYPE PELTIER 50ML SYRINGE USE]	B27A00
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	TB-50C-P-R	TB-50C-P-R	26	TEMPERATURE CONTROL BLOCK [AIR TYPE PELTIER RIGHT 50ML SYRINGE]	B27200
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	TCU-05FIII	—	26	FAN TYPE PELTIER TEMPERATURE CONTROLLER PELTIER MASTER	B2KB00
	TCU-05III	—	26	AIR TYPE PELTIER TEMPERATURE CONTROLLER PELTIER MASTER	B2K200
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	TCV-S3-1-20KP	TCV-S3-1-20KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP LUER LOCK PLUG]	762100
	TCV-S3-1-30KP	TCV-S3-1-30KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP LUER LOCK PLUG]	763100
	TCV-S3-1-50KP	TCV-S3-1-50KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP LUER LOCK PLUG]	764100
	TCV-S3-1-70KP	TCV-S3-1-70KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP LUER LOCK PLUG]	765100
	TCV-S3-1-100KP	TCV-S3-1-100KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP LUER LOCK PLUG]	766100
	TCV-S3-1-150KP	TCV-S3-1-150KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP LUER LOCK PLUG]	767100
	TCV-S3-1-200KP	TCV-S3-1-200KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP LUER LOCK PLUG]	768100
	TCV-S3-1-220KP	TCV-S3-1-220KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP LUER LOCK PLUG]	769100
	TCV-S3-2-10KP	TCV-S3-2-10KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP R1/4]	761200
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	TCV-S3-2-100KP	TCV-S3-2-100KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP R1/4]	766200
	TCV-S3-2-150KP	TCV-S3-2-150KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP R1/4]	767200
	TCV-S3-2-200KP	TCV-S3-2-200KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP R1/4]	768200
	TCV-S3-2-220KP	TCV-S3-2-220KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP R1/4]	769200
	TCV-S3-3-10KP	TCV-S3-3-10KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP R1/8]	761300
	TCV-S3-3-20KP	TCV-S3-3-20KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP R1/8]	762300
	TCV-S3-3-30KP	TCV-S3-3-30KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP R1/8]	763300

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(Alphabetical order)

	Model	Former model	Page	Item name	Former product code
TCV-	TCV-S3-3-50KP	TCV-S3-3-50KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP R1/8]	764300
	TCV-S3-3-70KP	TCV-S3-3-70KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP R1/8]	765300
	TCV-S3-3-100KP	TCV-S3-3-100KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP R1/8]	766300
	TCV-S3-3-150KP	TCV-S3-3-150KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP R1/8]	767300
	TCV-S3-3-200KP	TCV-S3-3-200KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP R1/8]	768300
	TCV-S3-3-220KP	TCV-S3-3-220KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP R1/8]	769300
	TCV-S3-4-10KP	TCV-S3-4-10KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP M6]	761400
	TCV-S3-4-20KP	TCV-S3-4-20KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP M6]	762400
	TCV-S3-4-30KP	TCV-S3-4-30KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP M6]	763400
	TCV-S3-4-50KP	TCV-S3-4-50KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP M6]	764400
	TCV-S3-4-70KP	TCV-S3-4-70KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP M6]	765400
	TCV-S3-4-100KP	TCV-S3-4-100KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP M6]	766400
	TCV-S3-4-150KP	TCV-S3-4-150KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP M6]	767400
	TCV-S3-4-200KP	TCV-S3-4-200KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP M6]	768400
	TCV-S3-4-220KP	TCV-S3-4-220KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP M6]	769400
	TCV-S3T-1-10KP	TCV-S3T-1-10KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP LUER LOCK PLUG FLUOROCARBON COATED]	761600
	TCV-S3T-1-20KP	TCV-S3T-1-20KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP LUER LOCK PLUG FLUOROCARBON COATED]	762600
	TCV-S3T-1-30KP	TCV-S3T-1-30KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP LUER LOCK PLUG FLUOROCARBON COATED]	763600
	TCV-S3T-1-50KP	TCV-S3T-1-50KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP LUER LOCK PLUG FLUOROCARBON COATED]	764600
	TCV-S3T-1-70KP	TCV-S3T-1-70KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP LUER LOCK PLUG FLUOROCARBON COATED]	765600
	TCV-S3T-1-100KP	TCV-S3T-1-100KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP LUER LOCK PLUG FLUOROCARBON COATED]	766600
	TCV-S3T-1-150KP	TCV-S3T-1-150KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP LUER LOCK PLUG FLUOROCARBON COATED]	767600
	TCV-S3T-1-200KP	TCV-S3T-1-200KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP LUER LOCK PLUG FLUOROCARBON COATED]	768600
	TCV-S3T-1-220KP	TCV-S3T-1-220KP	34	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP LUER LOCK PLUG FLUOROCARBON COATED]	769600
TK-	TK-2B	TK-2B	23	PNEUMATIC BARBED JOINT [R1/4 OD10MM ID8MM USE] JOINT	AA5100
TN-	TN-0.1-13.7-SUSG	TN-0.1-13.7-SUSG	16	PTFE NEEDLE WITH SUS GUIDE[ID0.1MM OD0.3MM NEEDLE LENGTH 13.7MM]	63KB00
	TN-0.1-26.4-SUSG	TN-0.1-26.4-SUSG	16	PTFE NEEDLE WITH SUS GUIDE[ID0.1MM OD0.3MM NEEDLE LENGTH 26.4MM]	63KC00
	TN-0.2-13.7-SUSG	TN-0.2-13.7-SUSG	16	PTFE NEEDLE WITH SUS GUIDE[ID0.2MM OD0.4MM NEEDLE LENGTH 13.7MM] RESIN	63LB00
	TN-0.2-26.4-SUSG	TN-0.2-26.4-SUSG	16	PTFE NEEDLE WITH SUS GUIDE[ID0.2MM OD0.4MM NEEDLE LENGTH 26.4MM]	63LC00
	TN-0.3-13.7-SUSG	TN-0.3-13.7-SUSG	16	PTFE NEEDLE WITH SUS GUIDE[ID0.3MM OD0.5MM NEEDLE LENGTH 13.7MM]	63MB00
	TN-0.3-26.4-SUSG	TN-0.3-26.4-SUSG	16	PTFE NEEDLE WITH SUS GUIDE[ID0.3MM OD0.5MM NEEDLE LENGTH 26.4MM]	63MC00
	TN-13G	TN-13G	15	PTFE NOZZLE [13G NEEDLE LENGTH 8MM] RESIN NOZZLE	632100
	TN-13G-U	—	15	UV BLOCK PTFE NOZZLE [13G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-14G	TN-14G	15	PTFE NOZZLE [14G NEEDLE LENGTH 8MM] RESIN NOZZLE	633100
	TN-14G-U	—	15	UV BLOCK PTFE NOZZLE [14G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-15G	TN-15G	15	PTFE NOZZLE [15G NEEDLE LENGTH 8MM] RESIN NOZZLE	634100
	TN-15G-U	—	15	UV BLOCK PTFE NOZZLE [15G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-16G	TN-16G	15	PTFE NOZZLE [16G NEEDLE LENGTH 8MM] RESIN NOZZLE	635100
	TN-16G-U	—	15	UV BLOCK PTFE NOZZLE [16G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-16G-□L-13G-□L	TN-16G-□L-13G-□L	16	PTFE NOZZLE WITH SUS GUIDE [16G, needle length □mm, guide 13G □mm]	—
	TN-17G	TN-17G	15	PTFE NOZZLE [17G NEEDLE LENGTH 8MM] RESIN NOZZLE	636100
	TN-17G-U	—	15	UV BLOCK PTFE NOZZLE [17G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-17G-□L-14G-□L	TN-17G-□L-14G-□L	16	PTFE NOZZLE WITH SUS GUIDE [17G, needle length □mm, guide 14G □mm]	—
	TN-18G	TN-18G	15	PTFE NOZZLE [18G NEEDLE LENGTH 8MM] RESIN NOZZLE	637100
	TN-18G-U	—	15	UV BLOCK PTFE NOZZLE [18G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-18G-□L-14G-□L	TN-18G-□L-14G-□L	16	PTFE NOZZLE WITH SUS GUIDE [18G, needle length □mm, guide 14G □mm]	—
	TN-19G	TN-19G	15	PTFE NOZZLE [19G NEEDLE LENGTH 8MM] RESIN NOZZLE	638100
	TN-19G-U	—	15	UV BLOCK PTFE NOZZLE [19G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-19G-□L-15G-□L	TN-19G-□L-15G-□L	16	PTFE NOZZLE WITH SUS GUIDE [19G, needle length □mm, guide 15G □mm]	—
	TN-20G	TN-20G	15	PTFE NOZZLE [20G NEEDLE LENGTH 8MM] RESIN NOZZLE	639100
	TN-20G-U	—	15	UV BLOCK PTFE NOZZLE [20G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-20G-□L-16G-□L	TN-20G-□L-16G-□L	16	PTFE NOZZLE WITH SUS GUIDE [20G, needle length □mm, guide 16G □mm]	—
TPND-	TN-21G	TN-21G	15	PTFE NEEDLE [21G NOZZLE LENGTH 8MM] RESIN NOZZLE	63A100
	TN-21G-U	—	15	UV BLOCK PTFE NOZZLE [21G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-21G-□L-17G-□L	TN-21G-□L-17G-□L	16	PTFE NOZZLE WITH SUS GUIDE [21G, needle length □mm, guide 17G □mm]	—
	TN-22G	TN-22G	15	PTFE NOZZLE [22G NEEDLE LENGTH 8MM] RESIN NOZZLE	63B100
	TN-22G-U	—	15	UV BLOCK PTFE NOZZLE [22G NEEDLE LENGTH 8MM] RESIN NOZZLE	—
	TN-22G-□L-18G-□L	TN-22G-□L-18G-□L	16	PTFE NOZZLE WITH SUS GUIDE [22G needle length □mm, guide 18G □mm]	—
	TPND-12G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [12G]	—
	TPND-14G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [14G]	—
	TPND-16G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [16G]	—
TR-	TPND-18G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [18G]	—
	TPND-20G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [20G]	—
	TPND-22G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [22G]	—
	TPND-25G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [25G]	—
	TPND-27G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [27G]	—
	TPND-30G-U	—	15	DOUBLE THREAD SCREWED TAPERED NOZZLE [30G]	—
	TR-110	TR-110	27	TRANSFORMER [AC110V-100V]	442301
	TR-117	TR-117	27	TRANSFORMER [AC117V-100V]	442302
	TR-200	TR-200	27	TRANSFORMER [AC200V-100V]	442303
	TR-220	TR-220	27	TRANSFORMER [AC220V-100V]	442304
	TR-240	TR-240	27	TRANSFORMER [AC240V-100V]	442305

	Model	Former model	Page	Item name	Former product code
TT-	TT-10	TT-10	25	PTFE TUBE [OD3.29MM ID2.69MM]	91H100
	TT-10B	TT-10B	25	PTFE TUBE [OD3.29MM ID2.69MM BLACK]	92H100
	TT-11	TT-11	25	PTFE TUBE [OD3.01MM ID2.41MM]	91H100
	TT-11B	TT-11B	25	PTFE TUBE [OD3.01MM ID2.41MM BLACK]	92H100
	TT-12	TT-12	25	PTFE TUBE [OD2.76MM ID2.16MM]	91G100
	TT-12B	TT-12B	25	PTFE TUBE [OD2.76MM ID2.16MM BLACK]	92G100
	TT-13	TT-13	25	PTFE TUBE [OD2.53MM ID1.93MM]	91F100
	TT-13B	TT-13B	25	PTFE TUBE [OD2.53MM ID1.93MM BLACK]	92F100
	TT-14	TT-14	25	PTFE TUBE [OD2.28MM ID1.68MM]	91E100
	TT-15	TT-15	25	PTFE TUBE [OD2.10MM ID1.50MM]	91D100
	TT-15B	TT-15B	25	PTFE TUBE [OD2.10MM ID1.50MM BLACK]	92D100
	TT-16	TT-16	25	PTFE TUBE [OD1.95MM ID1.35MM]	91C100
	TT-16B	TT-16B	25	PTFE TUBE [OD1.95MM ID1.35MM BLACK]	92C100
	TT-17	TT-17	25	PTFE TUBE [OD1.79MM ID1.19MM]	91B100
	TT-17B	TT-17B	25	PTFE TUBE [OD1.79MM ID1.19MM BLACK]	92B100
	TT-18	TT-18	25	PTFE TUBE [OD1.67MM ID1.07MM]	91A100
	TT-18B	TT-18B	25	PTFE TUBE [OD1.67MM ID1.07MM BLACK]	92A100
	TT-19	TT-19	25	PTFE TUBE [OD1.56MM ID0.96MM]	919100
	TT-19B	TT-19B	25	PTFE TUBE [OD1.56MM ID0.96MM BLACK]	929100
	TT-20	TT-20	25	PTFE TUBE [OD1.46MM ID0.86MM]	918100
	TT-20B	TT-20B	25	PTFE TUBE [OD1.46MM ID0.86MM BLACK]	928100
	TT-21	TT-21	25	PTFE TUBE [OD1.31MM ID0.81MM]	917100
	TT-21B	TT-21B	25	PTFE TUBE [OD1.31MM ID0.81MM BLACK]	927100
	TT-22	TT-22	25	PTFE TUBE [OD1.18MM ID0.68MM]	916100
	TT-22B	TT-22B	25	PTFE TUBE [OD1.18MM ID0.68MM BLACK]	926100
	TT-24	TT-24	25	PTFE TUBE [OD1.06MM ID0.56MM]	915100
	TT-24B	TT-24B	25	PTFE TUBE [OD1.06MM ID0.56MM BLACK]	925100
	TT-26	TT-26	25	PTFE TUBE [OD0.92MM ID0.46MM]	914100
	TT-26B	TT-26B	25	PTFE TUBE [OD0.92MM ID0.46MM BLACK]	924100
	TT-28	TT-28	25	PTFE TUBE [OD0.84MM ID0.38MM]	913100
	TT-28B	TT-28B	25	PTFE TUBE [OD0.84MM ID0.38MM BLACK]	923100
	TT-30	TT-30	25	PTFE TUBE [OD0.76MM ID0.30MM]	912100
	TT-30B	TT-30B	25	PTFE TUBE [OD0.76MM ID0.30MM BLACK]	922100
	TT-32	TT-32	25	PTFE TUBE [OD0.75MM ID0.25MM]	911100

V

	Model	Former model	Page	Item name	Former product code
VSD	VSD-1 ◆	—	43	HIGH-PERFORMANCE MOHNO DISPENSER MOHNO MASTER	—

X

	Model	Former model	Page	Item name	Former product code
XM	XM□RX-3A-L-[SBA/AAS]◆	—	44	CROSSMASTER □RX MAIN BODY [3-AXIS L TYPE FINISHED PRODUCTS WITH BASES/AXIS ASSEMBLY SET]	—

Other

	Model	Former model	Page	Item name	Former product code
	350PCS-SM□OMEGAX ◆	—	44	DESKTOP DISPENSING ROBOT WITH PC CONTROL IMAGE RECOGNITION	—
		—	45	Grease JET dispensing system GREASE JET	—
		—	18	Custom-made nozzle	—
		—	27	Simple syringe filling unit FILLINGMATE	—
		—	27	Automatic weighing type syringe filling system AUTO FILLING MASTER	—
		—	18	Nozzles with stoppers	—
		—	19	Slit nozzle	—
		—	22	O-ring for a tube	—
		—	45	Screw tightening robot	—
		—	19	Multi nozzle MN10-□G-□L-□P [standard]	—
	Please select the specification meeting with your requirements. Please contact our sales department for further information.	—	19	Multi nozzle MN13-□G-□L-□P [standard]	—
		—	19	Multi nozzle MN15-□G-□L-□P [standard]	—
		—	19	Multi nozzle MN17-□G-□L-□P [standard]	—
		—	19	Multi nozzle MN19-□G-□L-□P [standard]	—
		—	19	Multi nozzle MN21-□G-□L-□P [standard]	—
		—	19	Multi nozzle MN23-□G-□L-□P [standard]	—
		—	19	Multi nozzle MN25-□G-□L-□P [standard]	—
		—	19	Multi nozzle MN27-□G-□L-□P [standard]	—
		—	45	Desktop dispensing robot for laser soldering DISPENSE LASER MASTER	—

Models and product names have been partly changed and product codes have totally been abolished since December 2012.
However, product specifications and shapes have not been changed.

*1 Former models that had been classified by optional specifications were integrated into new models.

Note: 1. Select a product according to the volumes, shapes, and others shown in the bracket [] in the above table.

The value of selected specifications shall be entered into the square mark □ of a model name.

2. Refer to the separate General Catalog or contact our sales department for further information about dispenser controllers and dispensing systems marked with ◆.

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PROFILE

We create high-grade products backed by remarkable achievements and reliability.

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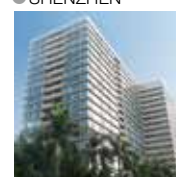
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● TIANJIN



● SUZHOU



● SHENZHEN



● INDONESIA



● SHANGHAI



● HONG KONG



● KOREA



● TAIWAN



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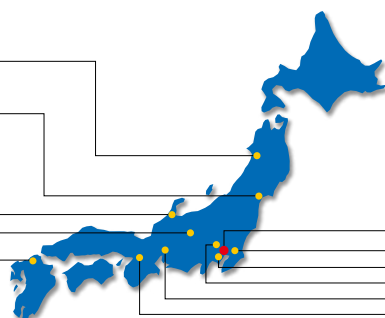


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PRECISION DISPENSER ACCESSORY SERIES

 **Safety precautions**
Please read the instruction manual carefully before use to ensure correct and safe usage.

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