

PRECISION DISPENSER ACCESSORY SERIES

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



Syringes & Accessories
Nozzles & Needles
Fluid Dispensing Valves
Tanks for Liquid Feeding
Other Products

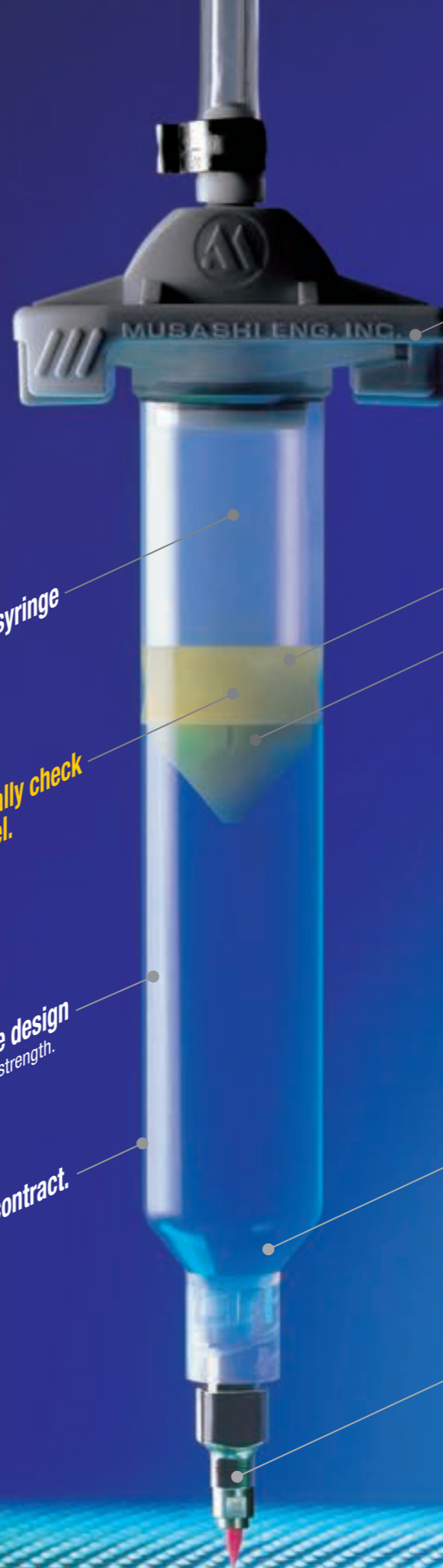
Another fluid control field to support state-of-the-art manufacturing technology. High-precision and high-quality parts that incorporate MUSASHI's dispensing know-how.

"Precision control technology that gives shape to fluids"

This can only be achieved when not only the Dispense Head Controller, but also all the units and parts that make up the Dispense System are optimized.

"MUSASHI" the pioneer of abstruse and unknown world, named precision fluid control. This development approach has been faithfully applied to peripheral devices and accessories that improve dispensing accuracy, as well as to each of our parts products such as syringes and nozzles, resulting in an abundance of variations that lead the industry.

Here is another leading edge area that only MUSASHI Dispensing Technology can provide.



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
Straight inner wall design of the syringe
eliminates knocking of the plunger.

Makes it easier to visually check the remaining fluid level.

High pressure design
greatly increases strength.

Thick wall minimizes expand and contract.

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

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

CONTENTS

	Product list P.4 to 5
	Syringes and accessories P.6 to 13
	Nozzles and needles P.14 to 21
	Cartridge-related P.22 to 25
	Other accessories P.26 to 29
	Quantitative fluid dispensing valve P.30 to 42
	Fluid feed tank P.43 to 49
	Dispenser/Equipment Lineup P.50 to 53
	Product Type Index Alphabetical order P.54 to 65

Product list

Type	Model	Page
Syringes and accessories		
Syringe		6
Clear syringe	PSY-1E2-M	7
	PSY-□ [E/E-M]	7
	PSY-□ [F/F-M]	7
UV block syringe	PSY-□EU- [OR/OR-M]	7
	PSY-□FU- [OR/OR-M]	7
Color syringe	PSY-□E-PG	8
	PSY-□F-PG	8
Heat-resistant syringe (for hot melt)	PSY-30FH-P	8
	PSY-30FH2-P	8
Mounter-specific syringe	PSY-20P	8
Antistatic syringe set (conductive type)		
Syringe	PSY-□E-SEP	9
Adapter tube (with stopper)	AT-□E-H-SEP-1.0M	9
	AT-50E-H-SEP-SIGMA-1.0M	9
Stainless syringe set		
Syringe	SSY-1B	9
	SSY-□E	9
Adapter tube (with stopper)	AT-□E-SUS-1.0M	9
Adapter tube		
Adapter tube (with stopper)	AT-□E	10
	AT-□E-H-1.0M	10
	AT-□E-H-SIGMA[1.0M/P-1.0M]	10
Adapter tube (with stopper, with clamp)	AT-□E-H-C-1.0M	10
Adapter tube for plastic connector (with stopper)	AT-□E-H-[P4C/P6C]-1.0M	10
Side connection adapter tube (with stopper)	AT-□E-H-S-1.0M	11
	AT-50E-H-S-SIGMA-1.0M	11
Air connector tube (with filter)	CT-36PS-F	11
Oring (for adapter tube)		
Fluororubber	ORG-□-V-B-1	11
Silicone rubber	ORG-□-S-R-1	11
NBR	ORG-□-N-B-[1/2]	11
Perfluoroelastomer	ORG-□-P-B-1	11
Plunger		
Float wiper plunger (for high-speed and high-precision dispensing)	FLP-□E	12
Miracle wiper plunger (for strong wiping)	MLP-[R/B]-□E, MLP-□E	12
Shuttle Type Plunger(For Ag paste and solder paste)	TPP-□E	12
Syringe cap		
Syringe head cap		
For ordinary materials	HC-□ [E/C], HC-100E-2-CL	13
For UV materials	HC-□ [EU/U]-B	13
For ordinary materials (with hook)	HC-1E-H	13
Syringe tip cap (normal type)		
For ordinary materials	NC-3E	13
For UV materials	NC-3EU-B	13
For ordinary materials (with hook)	NC-3FH	13
Syringe tip cap (knurled type)		
For ordinary materials	NC-□E	13
For UV materials	NC-7EU-B	13
Protective cap for syringe tip	GC-1	13
Nozzles and needles		
Double thread screw precision solid nozzle	DSHN-M2-□F	14
Precision solid nozzle	SHN-□N	14
Precision nozzles	HN-□ [N/ND]	14
Super-fine nozzles	FN-□ [N/ND]	15
Super-fine nozzle (15µm type)	FN-□ [N-F/ND-F]	15
Metal needle	SNA-□G-[B/C]	15
Thin metal needle	SNA-□N-□L-F	15

Type	Model	Page
Nozzles and needles		
Sharp needle	SPN-□-□L	16
Double thread screwed plastic needle	DPN-□G-□	16
Plastic needles	PN-□G-[A/B]	16
Double thread screwed tapered nozzle	TPND-□G-U	17
UV-block PTFE nozzle	TN-□G-U	17
PTFE nozzle	TN-□G	17
SUS guide PTFE nozzle	TN-□G-□L-□G-□L	18
SUS guide PTFE nozzle (fine type)	TN-□-□-SUSG	18
Curve needle	CPN-□G-[A/B]□	18
Soft needle	PPN-□G	19
Brush nozzle	BN-S□	19
Multi-point dispensing Twin needle	DN-□G	20
Multi-point dispensing 3-pin needle	DN-□G-3P	20
Multi-point dispensing 4-pin needle	DN-□G-4P	20
Nozzles with stoppers	-	20
Custom-made nozzle	-	20
Nozzle kit	NK-2, NK-2	20
Multi nozzles	MN□	21
Slit nozzle	-	21
Cartridge-related		
Cartridge for barrel		
Barrel cartridges	CS-□ [C/C-HK]	22
Cartridge cap	CC-P-001-□	22
Cartridge holder	CH-□C	22
Barrel	PB-□ [B/C]	23
Barrel plunger	PP-[W1/B1]	23
Barrel head cap	BC-4	23
Barrel tip cap	BP-4	23
Needle adapter	P-NADP-□	23
UV block barrel	PB-□CU-OR	23
UV-block barrel head cap	BC-4U-B	23
UV-block barrel tip cap	BP-4U-B	23
Cartridge cap consumables	-	23
Sealant cartridges		
Sealant cartridge	SCS-[330/330-HK]	24
Cartridge cap	SCS-P-001-□	24
Cartridge holder	SCS-P-002-1	24
O-ring	ORG-□-V-B-1	24
Needle adapter	P-NADP-□	24
Tip adapter	SCS-P-004-□	24
Consumables and optional Items	-	24
Cartridges for tubing		
Tube cartridges	CS-□CT□	25
Cartridge cap	CC-P-001-□	25
Cartridge holder	CH-□ [CT/C]	25
Barrel for Tube Cartridge	PB-□BT	25
O-ring (for Tube adapter)	ORG-12-V-B-1	25
Tube adapter	P-TADP-□	25
O-ring (for Lure lock adapter)	ORG-8-V-B-1	25
Lure lock adapter	P-LADP-1	25
Other accessories		
Needle adapter	P-NADP-□	26
Syringe joints	SJ-□	26
Fluid feed tube connector	J-□	26
Fluid feed manual 2-way valve	HB-2[BN/N]	26
Fluid feed fitting	J-[L/N] [1/2] [N/B]	26
Fluid feed tube	LT-□	27
Luer-lock extension tube	LT-23EX	27

Type	Model	Page
Other accessories		
Air accessories		
Pneumatic quick joint (plug)	QP-□	27
Pneumatic quick joint (socket)	QS-□	27
Air connector tube	CT-□ [P/PS]	27
Pneumatic fittings	J-□-6, F/R-MS-JSET	27
Pneumatic coupling	J-[H/HS]2□	27
Air hose	AH-[24/46]	28
Regulator/Air Gauge	RA-[2/7]B-PS	28
Filter/Regulator	F/R-4	28
Regulator set with mist separator [Type A]	F/R-MS-SETA	28
Other accessories		
Handy switch	LS-[2/3]T-□	28
Conversion cable	CB-1604A-CNV-DSUB25	28
Footswitch	FS/W-2-□	28
Syringe stand	SYS-□	28
Syringe stand for use with handy switch	SYS-□B	28
Nozzle drying reduction cap	SYS-CAP-□	28
Hand dispenser	HD-□E-H	29
Dispensing handgun	DHG-□E	29
Metal outlet	MC-1604P	29
H-type stand set (for cartridge and valve)	-	29
Dispensing pen for tubing dispenser	LS-NH3-1604P	29
PTFE tubing for tubing dispenser	TT-[□/□B]	29
Tubing collar for tubing dispenser	LS-NH3-C□	29
Cap for tubing dispenser	LS-NH3-TG□	29
Quantitative fluid dispensing valve		
Fluid metering dispensing valve		30
Digital spray valve controller		
SPRAY MASTER	ME-8000SP-CTR-V[05/5]-[N/P]	31
Valve controller		
VALVE MASTER	ME-5000VT	32
Spray valve controller		
SPRAY MASTER	ME-5000SP	32
Pump Controller		
PUMP MASTER	ME-5000P	32
Coating valve controller		
SPRAY MASTER	ME-5000CV-CTR	32
Needle control valve		
MiniVal NCV-17	NCV-17-□	33
MiniVal NCV-17-L (large flow type)	NCV-17-L-□	33
MiniVal NCV-12S (ultra-compact type)	NCV-12S-2P	34
NCV-7DV	NCV-7DV-2P	34
Needle control valve for high pressure		
HPV-2NC	HPV-2NC-2P	35
Volumetric metering dispensing valve		
PPV-5	PPV-5-2P-SUS	35

Type	Model	Page
Quantitative fluid dispensing valve		
Piston control valve		
MiniVal PCV-12	PCV-12-2P	36
MiniVal PCV-12-L (high flow type)	PCV-12-L-2P-2N	36
Volumetric plunger pumps		
JUSTRO PUMP	MJP-05/MJP-13	37
Diaphragm valve		
DCV-2/DCV-3	DCV-[2□/3□]	37
Two-fluid spray valve		
FSV-1	FSV-1-1P-1N	38
SSV-1	SSV-1-1P-1N-□□	39
SV-6 series	SV-6□	40
SVM-6LX	SVM-6LX	40
Coating valves		
CV-15	CV-15-EM-[1N/1N-CFS]	41
CV-10	CV-10-2P-1N	42
Fluid drip prevention valve		
TCV-S3	TCV-[S3/S3T]-□-□KP	42
Fluid feed tank		
Essential components for fluid feed tank		43
Options for fluid feed tank		44
Straight one-touch tank	SOT-□L	44
Safety lock tank	SST-□L	45
One-touch tank	OTT-□L	45
Gallon tank	GAT-[3/5]G	46
Inner container	SBP-□	46
Simple syringe filling machine		
FILLING MATE	-	46
Pail pressure feed pump for dispensing systems		
LPP-1	-	47
Configuration of the valve and tank system		48 to 49
Dispenser / Equipment		
Dispenser		50 to 51
Fully automatic dispense machine		52 to 53
Cartesian robot		52
Desktop type robot		52
Other dispensing systems		53
Index	Product Type Index	54 to 65

! Safety Information Precautions and request for your handling

About plastic products such as syringe, barrel, plunger, tip cap, head cap and nozzle, please follow the following instructions for your safety operation and good performance.

1. These products are disposable. Reuse after cleaning may have a risk of explosion and nozzle off to cause damage or injury of operator. Please dispose and change after using to maintain dispensing quality as well.
2. Please be careful not to give any shock. Particularly, a risk of damage with an impact when it is frozen.
3. Please do not wash with solvents such as toluene, MEK, acetone.
4. Please pressurize and heat product within those specification range.
5. Please keep away from fire.
6. Please wear protector such as protective goggles and clothing during operation.
7. Please dispose according to local regulation.

Actualizing excellent fluidity and high-precision dispensing performance

Dedicated syringe and plunger for dispensing are key devices to dispensing fluid materials precisely by air-pulse.

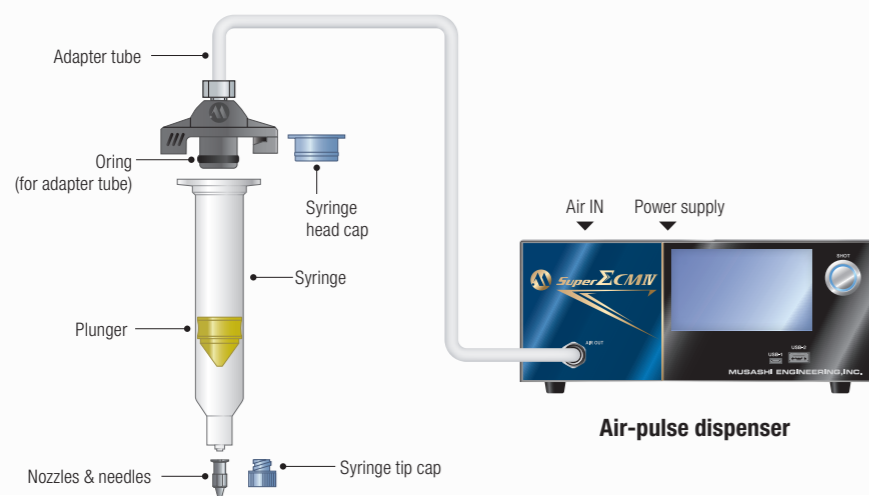
MUSASHI believes that its essential role is to achieve a high degree of compatibility between “performance as container,” such as visibility, solvent resistance, heat resistance, and cold resistance, and “dispensing performance,” as typified by flow performance, scraping performance, and dispensing precision.

MUSASHI is able to offer these parts products because of its extensive knowledge of dispensing technology know-how.

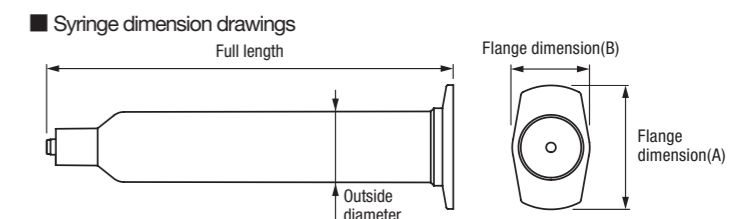


Air-pulse dispenser

Syringe Connection System Configuration Chart



50 mL: original size



Clear syringe



Without graduations

Outstanding flow characteristics for ideal dispensing



With graduations

Those syringes are dedicated for fluid dispensing. Straight inner wall design of the syringe eliminates “Knocking phenomenon” of the plunger. Drastically improved dispensing stability. The lineup includes general-purpose unscaled syringes and graduated syringes that show the fluid residue at a glance. Choose from 9 sizes to fit your daily usage and Fluid pot life. Material: Polypropylene

Syringe capacity	Without graduations	With graduations	Dimensions (mm)			Quantity (pcs per a pack)
	Model	Model	Full length	Outside diameter	Flange dimension(AxB)	
1 mL	—	PSY-1E2-M	84	φ6.7	16×9	50
3 mL	PSY-3E	PSY-3E-M	80.1	φ11.7	24.3×14.3	50
5 mL	PSY-5E	PSY-5E-M	80	φ14.9	27×16	50
10 mL	PSY-10E	PSY-10E-M	105	φ18.3	32×20	50
20 mL	PSY-20F	PSY-20F-M	104.8	φ26.2	45×30	50
30 mL	PSY-30F	PSY-30F-M	129.7	φ26.2	45×30	50
50 mL	PSY-50F	PSY-50F-M	160.7	φ26.2	45×30	50
70 mL	PSY-70F	PSY-70F-M	223.7	φ26.5	45×30	50
100 mL	PSY-100E	—	191	φ35.8	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



UV is completely shut out while visual and sensor confirmation is achieved.

Syringe capacity	Without graduations	With graduations	Dimensions (mm)			Quantity (pcs per a pack)
	Model	Model	Full length	Outside diameter	Flange dimension	
3 mL	PSY-3EU-OR	PSY-3EU-OR-M	80	φ11.7	24.3×14.3	50
5 mL	PSY-5EU-OR	PSY-5EU-OR-M	80	φ14.9	27×16	50
10 mL	PSY-10EU-OR	PSY-10EU-OR-M	105.3	φ18.3	32×20	50
20 mL	PSY-20FU-OR	PSY-20FU-OR-M	104.8	φ26.2	45×30	50
30 mL	PSY-30FU-OR	PSY-30FU-OR-M	129.7	φ26.2	45×30	50
50 mL	PSY-50FU-OR	PSY-50FU-OR-M	160.7	φ26.1	45×30	50
70 mL	PSY-70FU-OR	PSY-70FU-OR-M	223.7	φ26.5	45×30	50
100 mL	PSY-100EU-OR	—	191	φ35.8	60×38.8	20

Note: Working pressure: 0.5 MPa maximum at normal temperature

Color syringe



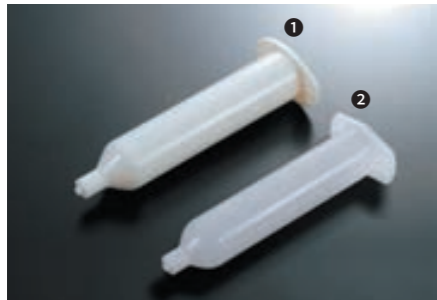
Ideal for variety control by fluid material

Peppermint Green Color Syringe Ideal for variety control by fluid material, etc.
Material: Polypropylene

Syringe capacity	Model	Dimensions (mm)			Quantity (pcs per a pack)
		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 (for hot melt)



Ideal for Reactive Hot melt (PUR) and Hot melt

Disposable syringe for fluid materials to be heated while dispensing.
Two types with heat-resistance temperatures of 130°C and 180°C are available. Please choose according to usage.

Ideal for process improvement from double-sided tape bonding and for fine drawing.
EU RoHS2 compliant.

Material: PBT [PSY-30FH-P]
Polypropylene [PSY-30FH2-P]

Heat-resistant Temperature	Syringe Capacity	Model	Dimensions (mm)			Quantity (pcs per a pack)
			Full length	Outside diameter	Flange dimension	
① 180°C	30 mL	PSY-30FH-P	130.5	φ26.5	45×30	50
② 130°C	30 mL	PSY-30FH2-P	130	φ26.5	45×30	50

Mounter-specific syringe

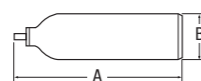


Highly stable dispensing implemented for temporary chip fixing process

Syringe with flange cut to fit tip moulder handling.

Material: Polypropylene

Syringe capacity	Model	Dimensions (mm) (A×B)	Quantity (pcs per a pack)
20 mL	PSY-20P	96.6×φ26	50



Anti-static syringe set (conductive type)



Outstanding antistatic effect! Does not accumulate harmful static electricity on electronic components!

This Syringe has an antistatic function to release static electricity.
Provides anti-dust effect.

Syringe material: Polypropylene
Adapter head material: Polyacetal
Tube material: Polyurethane
Oring material: Fluororubber

Syringe capacity	Antistatic syringe					Antistatic adapter tube (with stopper)		Applicable dispenser
	Model	Dimensions (mm)			Quantity (pcs per a pack)	Model	Tube length	
		Full length	Outside diameter	Flange dimension				
10 mL	PSY-10E-SEP	105.5	φ18.3	32×20	50	AT-10E-H-SEP-1.0M	1 m	—
30 mL	PSY-30E-SEP	130	φ26.2	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	φ26.2	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!

For liquid materials such as hot melt and special chemicals that are difficult to handle with ordinary resinous syringes.

High temperature (200°C) compatible.

Syringe material: Stainless steel
Adapter head material: Stainless steel
Tube material: Fluorine resin
Oring material: Fluororubber

Syringe capacity	Stainless syringe					Stainless adapter tube (with stopper)	
	Model	Dimensions (mm)			Quantity (pcs per a 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!

Tubes to supply air by connecting a dispenser and a syringe.

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

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

Oring 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
	AT-5E-H-SIGMA-P-1.0M	1 m	For Σ Pro
10 mL	AT-10E-H-1.0M	1 m	—
	AT-10E-H-SIGMA-1.0M	1 m	For Σ
	AT-10E-H-SIGMA-P-1.0M	1 m	For Σ Pro
20 to 70 mL	①AT-50E-H-1.0M	1 m	—
	AT-50E-H-SIGMA-1.0M	1 m	For Σ
	②AT-50E-H-SIGMA-P-1.0M	1 m	For Σ Pro
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]



Shuts off suction of fluid materials

Adapter material: Polyacetal

Tube material: Special elastomer resin

Oring 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

Oring 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

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 automated machine.

Adapter material: Polyacetal

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

Oring 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 fluid material from being sucked into the dispenser

Prevents fluid material from being sucked into the dispenser, thus preventing failures.

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

Oring (for adapter tube)



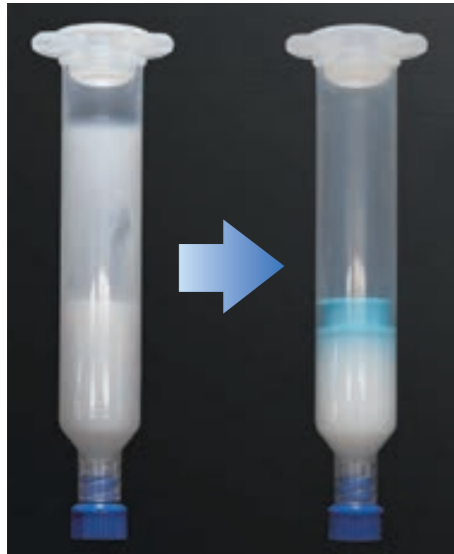
High level of airtightness according to the fluid characteristics

This is a spare Oring for the adapter. Select a suitable Oring 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	Quantity (pcs per a pack)
	Model	Model	Model	Model	
1 mL	ORG-1.5-V-B-1	ORG-1.5-S-R-1	ORG-1.5-N-B-1	ORG-1.5-P-B-1	20
3 mL	ORG-6-V-B-1	ORG-6-S-R-1	ORG-6-N-B-1	ORG-6-P-B-1	20
5 mL	ORG-9-V-B-1	ORG-9-S-R-1	ORG-9-N-B-1	ORG-9-P-B-1	20
10 mL	ORG-11-V-B-1	ORG-11-S-R-1	ORG-11-N-B-2	ORG-11-P-B-1	20
20 to 70 mL	ORG-18-V-B-1	ORG-18-S-R-1	ORG-18-N-B-1	ORG-18-P-B-1	20
100 mL	ORG-24-V-B-1	ORG-24-S-R-1	ORG-24-N-B-2	ORG-24-P-B-1	20

Plunger



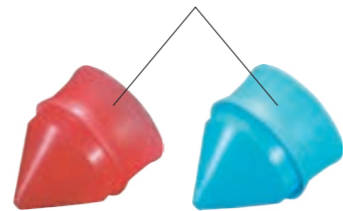
High-precision dispensing with excellent wiping performance

This product is attached to the internal part of a syringe to dispense fluid material with high precision to the end without waste. Choose according to the characteristics and application of the fluid material to be discharged.

Squeeze material cost

Reduce reject rate with high-precision dispensing

Dual wipe structure enables thorough fluid wiping.



Float wiper plunger

For high precision dispensing



Developed based on the concept of maximizing the performance and functions of the Air-pulse dispenser. Smooth fluidity, as if floating on the fluid surface inside the syringe, transmits precise Air-pulses to the fluid for high precision dispensing.

Miracle wiper plunger

Emphasizes scrapping of fluids



From the FLP series, a plunger with enhanced plunger wiping function. Two colors (red/blue) are lined up for use depending on the type and color of the fluid.

Shuttle-type plunger

For Ag paste and solder paste



The wiping blade on the top of the plunger closely matches the inner diameter of the syringe to achieve exquisite scraping performance.



Emphasis on sealing

“Anyway, the fluid needs to be scraped off.” “Need to dispense low viscosity fluids such as volatile fluids and water.” “Need to use a constantly pressurized system, such as a jet dispenser.” The plunger is designed for uses such as.

Syringe capacity	①Float wiper plunger	②Shuttle-type plunger	③Miracle wiper plunger (red)	④Miracle wiper plunger (blue)	⑤Miracle wiper plunger (white)	Quantity (pcs per a pack)
	Model	Model	Model	Model	Model	
1 mL	FLP-1E	—	—	—	—	50
3 mL	FLP-3E	—	—	—	—	50
5 mL	FLP-5E	TPP-5E	MLP-R-5E	MLP-B-5E	MLP-5E	50
10 mL	FLP-10E	TPP-10E	MLP-R-10E	MLP-B-10E	MLP-10E	50
20 to 70 mL	FLP-50E	TPP-30/50E	MLP-R-50E	MLP-B-50E	MLP-50E	50
100 mL	FLP-100E	—	—	—	—	50

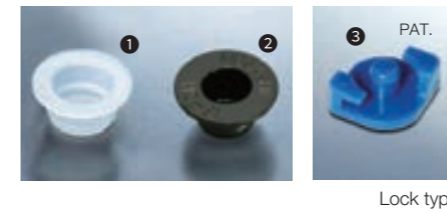
Material: Polyethylene

Syringe head cap/Syringe tip cap

Ideal for storing and transporting fluid materials in syringes!

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

Material: Polyethylene for ①, ②, ③, ⑦, ⑧ and ⑨
Polypropylene for ④ and ⑤
PBT for ⑥



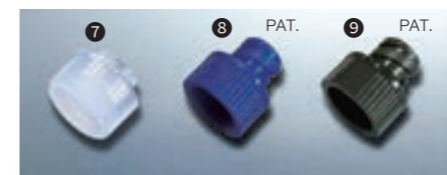
Syringe head cap

Syringe capacity	①For ordinary materials	②For UV materials	③For ordinary materials (with hook)	Quantity (pcs per a pack)
	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-2-CL	—	—	50



Syringe tip cap (normal type)

Syringe capacity	④For ordinary materials	⑤For UV materials	⑥For heat-resistant materials	Quantity (pcs per a pack)
	Model	Model	Model	
Common for all sizes	NC-3E	NC-3EU-B	NC-3FH	50



Syringe tip cap (knurled type)

Syringe capacity	⑦For ordinary materials	⑧For ordinary materials	⑨For UV materials	Quantity (pcs per a pack)
	Model	Model	Model	
Common for all sizes	NC-5E	NC-7E	NC-7EU-B	50

Protective cap for syringe tip

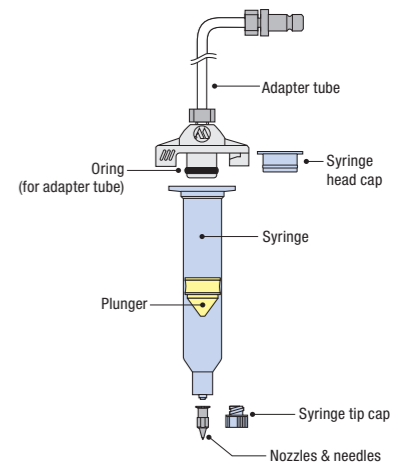


Protects the syringe tip with a tip cap on

Prevents leakage of fluid material due to breakage of tip caps during storage and transportation of syringes filled with fluid material.

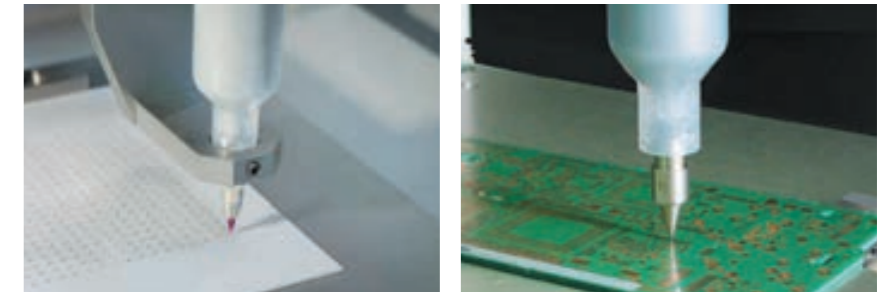
Material: Polypropylene

Syringe capacity	Applicable tip cap	Model	Quantity (pcs per a pack)
Common for all sizes	NC-3E/NC-3EU-B	GC-1	50

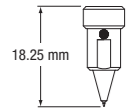


The best quality ensures the finest dispensing

To maximize the capability of the dispense controller, the best parts are also used for the outlet of fluid materials. MUSASHI has put all of its dispensing know-how into the design of its nozzles and needles to give shape to this philosophy. Thorough mechanization and skilled processing techniques are used to create products that achieve high-precision dispensing. A wide range of variations are available to meet the needs of fluid material types and Dispensing applications.



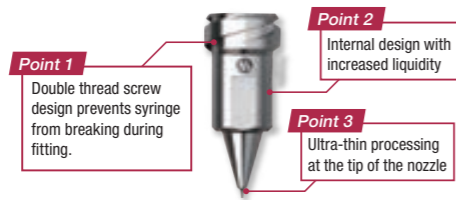
Double thread screw precision solid nozzle



No clogging, achieving micro dispensing.

- High Tact** Tact time is 1/5 of that of conventional models.
- High-stability** Solder/Ag paste dispensing "Without clogging"
- Micro dispensing** Microfabrication at the tip of the nozzle

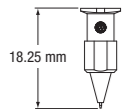
Needle material: Stainless steel



Measurement unit (mm)

Model	Nozzle ID (φ)	Quantity (pcs per a pack)
DSHN-M2-0.30F	0.30	1
DSHN-M2-0.25F	0.25	1
DSHN-M2-0.20F	0.20	1
DSHN-M2-0.15F	0.15	1
DSHN-M2-0.10F	0.10	1

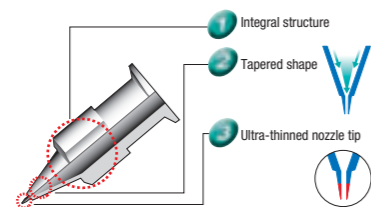
Precision solid nozzle



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)	Quantity (pcs per a pack)
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



Stable dispensing of fluids containing filler

Ideal for high-precision micro-dispensing.

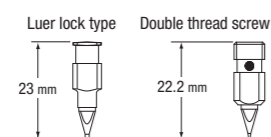
Needle material: Stainless steel

Needle base material: Brass (Nickel plate)

[Luer lock type]

: Stainless steel

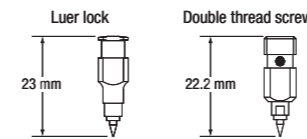
[Double thread screw type]



Measurement unit (mm)

Luer lock Model	Double thread screw Model	Nozzle OD (φ)	Nozzle ID (φ)	Quantity (pcs per a pack)
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

Combined use with MUSASHI Dispenser realizes ultra-small dots dispensing and ultra-high definition drawing.

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

: Stainless steel [Double thread screw type]

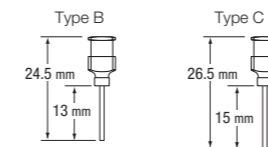
Measurement unit (mm)

Luer lock Model	Double thread screw Model	Nozzle OD (φ)	Nozzle ID (φ)	Quantity (pcs per a pack)
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 type

Luer lock Model	Double thread screw Model	Nozzle OD (φ)	Nozzle ID (φ)	Quantity (pcs per a pack)
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

Durable stainless steel metal pipes are used. Wide lineup for various dispensing shapes.

Needle material: Stainless steel
Needle base material: Brass (Nickel plate)

Measurement unit (mm)

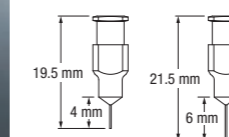
Gauge	Needle length 13 mm Model	Needle length 15 mm Model	Needle OD (φ)	Needle ID (φ)	Quantity (pcs per a pack)
12	SNA-12G-B	SNA-12G-C	2.77	2.27	50
13	SNA-13G-B	SNA-13G-C	2.40	1.94	50
14	SNA-14G-B	SNA-14G-C	2.10	1.64	50
15	SNA-15G-B	SNA-15G-C	1.83	1.43	50
16	SNA-16G-B	SNA-16G-C	1.65	1.25	50
17	SNA-17G-B	SNA-17G-C	1.49	1.11	50
18	SNA-18G-B	SNA-18G-C	1.28	0.92	50
19	SNA-19G-B	SNA-19G-C	1.08	0.72	50
20	SNA-20G-B	SNA-20G-C	0.91	0.61	50
21	SNA-21G-B	SNA-21G-C	0.82	0.52	50
22	SNA-22G-B	SNA-22G-C	0.72	0.42	50
23	SNA-23G-B	SNA-23G-C	0.64	0.34	50
24	SNA-24G-B	SNA-24G-C	0.57	0.31	50
25	SNA-25G-B	SNA-25G-C	0.52	0.26	50
26	SNA-26G-B	SNA-26G-C	0.46	0.25	50
27	SNA-27G-B	SNA-27G-C	0.42	0.21	50
28	SNA-28G-B	SNA-28G-C	0.36	0.18	50
30	SNA-30G-B	SNA-30G-C	0.32	0.14	50
31	SNA-31G-B	SNA-31G-C	0.26	0.13	50
32	SNA-32G-B	SNA-32G-C	0.23	0.10	50

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

Thin metal needle



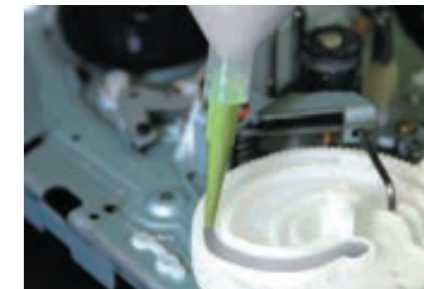
Needle material: Stainless steel
Needle base material: Brass (Nickel plate)



Measurement unit (mm)

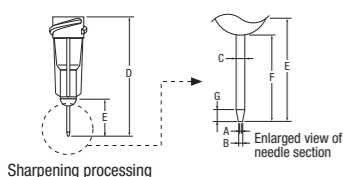
Needle length 4 mm Model	Needle length 6 mm Model	Needle OD (φ)	Needle ID (φ)	Quantity (pcs per a pack)
SNA-0.10N-4L-F	SNA-0.10N-6L-F	0.2	0.1	1
SNA-0.20N-4L-F	SNA-0.20N-6L-F	0.3	0.2	1
SNA-0.30N-4L-F	SNA-0.30N-6L-F	0.4	0.3	1

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



Color of needle base is useful for needle size identification

Sharp needle



Needle tip sharpening process realizes Micro Dispensing.

High-precision tapered shape of needle tip enables micro-dispensing.
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	Quantity (pcs per a pack)
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 tapered nozzle



Compatible with UV materials. Best suited for high viscosity fluid materials.

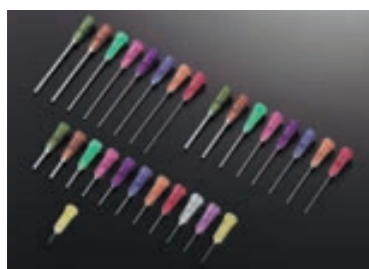
High flowability of fluid materials makes it ideal for dispensing high-viscosity materials and filler containing materials. Resin material does not damage the workpiece even if it interferes with it.
Material: Polyethylene



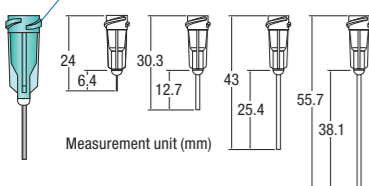
Measurement unit (mm)

Gauge	Model	Nozzle OD (φ)	Nozzle ID (φ)	Color	Quantity (pcs per a pack)
12	TPND-12G-U	2.99	2.40	Red	50
14	TPND-14G-U	2.08	1.60	Dark green	50
16	TPND-16G-U	2.08	1.19	Black	50
18	TPND-18G-U	1.48	0.84	Light green	50
20	TPND-20G-U	1.11	0.61	Pink	50
22	TPND-22G-U	0.90	0.40	Blue	50
25	TPND-25G-U	0.75	0.25	Red	50
27	TPND-27G-U	0.45	0.20	Dark gray	50
30	TPND-30G-U	0.40	0.15	Olive	50

Double thread screwed plastic needle



Double thread screw design



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)

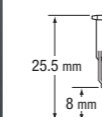
Gauge	Needle length 6.4 mm	Needle length 12.7 mm	Needle length 25.4 mm	Needle length 38.1 mm	Needle OD (φ)	Needle ID (φ)	Color	Quantity (pcs per a pack)
	Model	Model	Model	Model				
14	---	DPN-14G-1	DPN-14G-2	DPN-14G-3	1.83	1.52	Dark green	50
15	---	DPN-15G-1	DPN-15G-2	DPN-15G-3	1.65	1.37	Brown	50
18	---	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

UV-block PTFE nozzle



Ideal for dispensing anaerobic fluid materials. Needle length can be specified.

For UV materials where metal needles cannot be used.
Needle material: Fluorine resin
Needle base material: Polyacetal

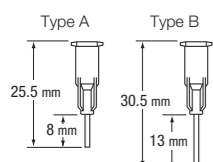


Measurement unit (mm)

Gauge	Model	Nozzle OD (φ)	Nozzle ID (φ)	Color	Quantity (pcs per a pack)
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.

Plastic needles



Inexpensive disposable type

Needle with a plastic base.
Needle material: Stainless steel
Needle base material: Polyacetal

Measurement unit (mm)

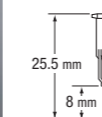
Gauge	Needle length 8 mm	Needle length 13 mm	Needle OD (φ)	Needle ID (φ)	Color	Quantity (pcs per a pack)
	Model	Model				
15	PN-15G-A	PN-15G-B	1.83	1.43	Brown	50
16	PN-16G-A	PN-16G-B	1.65	1.26	Black	50
17	PN-17G-A	PN-17G-B	1.50	1.06	Blue	50
18	PN-18G-A	PN-18G-B	1.27	0.97	Gray	50
19	PN-19G-A	PN-19G-B	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.

PTFE nozzle



Needle material: Fluorine resin
Needle base material: Polyacetal



Measurement unit (mm)

Gauge	Needle length 8 mm	Nozzle OD (φ)	Nozzle ID (φ)	Color	Quantity (pcs per a pack)
	Model				
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.



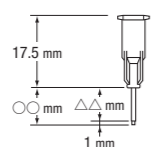
SUS guide PTFE nozzle



Excellent performance in high-precision dispensing of anaerobic fluid materials

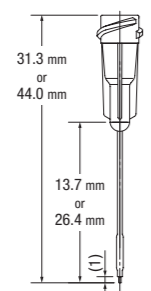
Best suited for dispensing fluid materials that cannot be used with metal needles. Stainless steel guide is attached to prevent the needle tip blur.

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	Quantity (pcs per a pack)	
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	Quantity (pcs per a pack)	
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

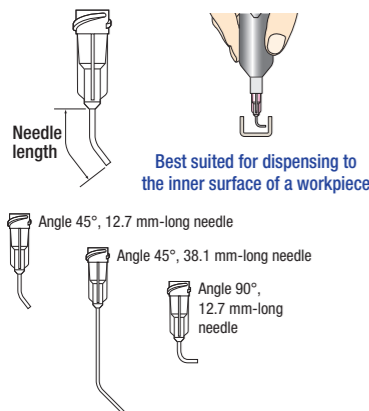
Curve needle



Best suited for dispensing to the inner surface of a workpiece

Two types of angles and a wide variations allow for various applications. Double thread screw design enables 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	Quantity (pcs per a pack)
	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

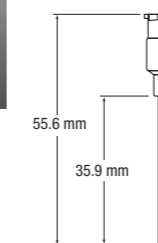
Soft needle



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	Needle OD (φ)	Needle ID (φ)	Color	Quantity (pcs per a pack)
	Model				
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

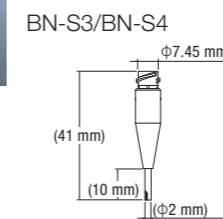
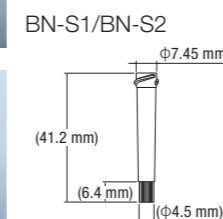
Brush nozzle



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
Pipe material: Stainless steel
Cap material: Brass (Nickel plate)



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

Measurement unit (mm)			
Model	Hardness	Brush material	Quantity (pcs per a pack)
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



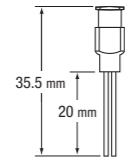
Multi-Point Dispensing needle

Excellent performance in simultaneous multi-point dispensing

Twin needle



Simultaneous multi-point dispensing will shorten tack time to half to one-fourth!
Needle material: Stainless steel
Needle base material: Brass (Nickel plate)

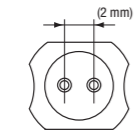


Measurement unit (mm)

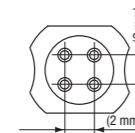
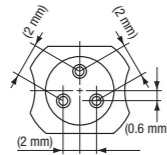
Gauge	Needle length 20 mm			Needle OD (φ)	Needle ID (φ)	Quantity (pcs per a pack)
	Twin needle Model	3-pin needle Model	4-pin needle Model			
16	DN-16G	—	—	1.67	1.19	1
17	DN-17G	—	—	1.56	1.04	1
18	DN-18G	DN-18G-3P	—	1.22	0.86	1
19	DN-19G	DN-19G-3P	—	1.00	0.68	1
20	DN-20G	DN-20G-3P	—	0.91	0.58	1
21	DN-21G	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.

3-pin needle



4-pin needle



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

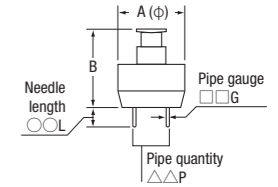
Multi nozzles



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]

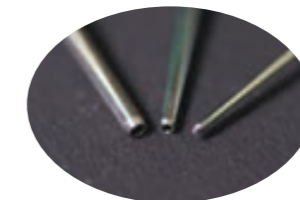
Note: Specify the cap size, pipe gauge, needle length, pipe quantity, and pipe layout.

Model	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 specifications for micro-dispensing



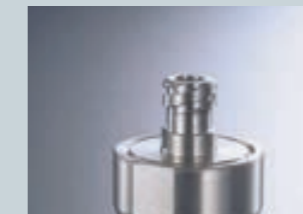
Sharpening processing of needle tip

Syringe installation section

Standard luer lock type



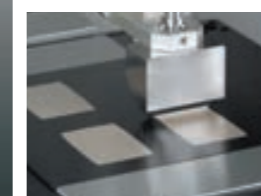
Double threaded screw type*



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



Ideal for uniform surface dispensing

One-pass surface dispensing and film formation. Capable of forming thin films with thicknesses of several hundred micrometers or less.

Examples of production

Slit width	3 mm	5 mm	10 mm	15 mm	20 mm	30 mm	40 mm
Slit gap	0.1 / 0.2 / 0.3 mm						

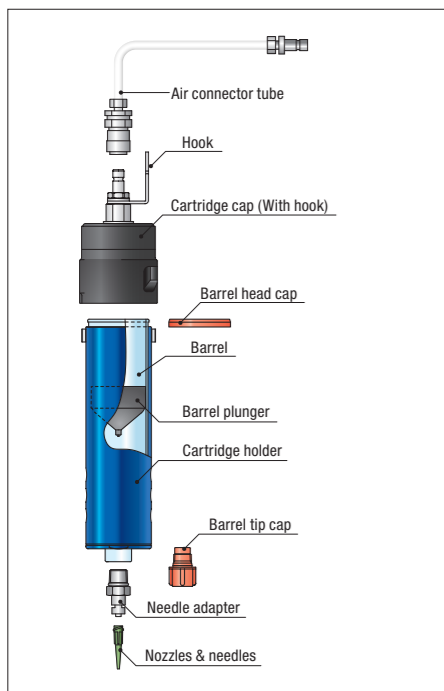
Note: We can also accommodate sizes other than those in the table above, so please contact our sales department.

Adapt flexibly to even larger-scale needs.

MUSASHI's high-performance cartridges, designed for applications requiring larger volumes of fluid material. Available in three capacity options to suit daily usage and dispensing volume, also featuring a tube cartridge designed to dispense standard commercial liquid materials directly in precise quantities. By connecting to the dispense controller, it can be used for a wide range of dispensing applications, from manual use to integration into automated machinery, and allows for hygienic dispensing without getting hands or the work area dirty.



Barrel cartridge



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.

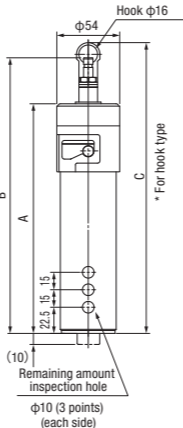
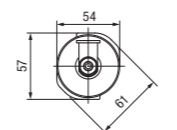
Barrel cartridge

Item name	Model	Weight	Minimum Order Quantity
[100 mL]	CS-100C	265 g	1 set
[170 mL]	CS-170C	335 g	1 set
[340 mL]	CS-340C	455 g	1 set
[100 mL with hook]	CS-100C-HK	275 g	1 set
[170 mL with hook]	CS-170C-HK	345 g	1 set
[340 mL with hook]	CS-340C-HK	465 g	1 set

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
	Cartridge cap [with hook]	CC-P-001-2	—	
170 mL	Cartridge cap [without hook]	CC-P-001-1	—	Select either one
	Cartridge cap [with hook]	CC-P-001-2	—	
340 mL	Cartridge cap [without hook]	CC-P-001-1	—	Select either one
	Cartridge cap [with hook]	CC-P-001-2	—	
	Cartridge holder [100 mL barrel use]	CH-100C	Aluminium alloy	1
	Cartridge holder [170 mL barrel use]	CH-170C	Aluminium alloy	1
	Cartridge holder [340 mL barrel use]	CH-340C	Aluminium alloy	1



Measurement unit (mm)

Model	A	B	C
CS-100C	119	160.5	—
CS-100C-HK	119	160.5	171.5
CS-170C	197	238.5	—
CS-170C-HK	197	238.5	249.5
CS-340C	328	369.5	—
CS-340C-HK	328	369.5	380.5

Air-pulse/cartridge system

Best suited system for dispensing large fluid volumes continuous operation

Fill a polyethylene barrel with fluid for dispensing operation. There are three barrel sizes: 100 mL, 170 mL, and 340 mL. Cartridges can be used in a wide range of dispensing operations to match the daily consumption.



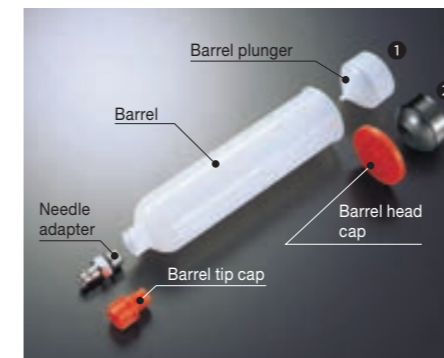
Valve/cartridge system

The smallest valve dispensing system

This dispensing system combines a quantitative fluid dispensing valve with a cartridge system dispenser. While it is compact, you can select a barrel size up to 340 mL, for continuous dispensing of low to high viscosity materials. (This system uses the ME-5000VT dispenser specialized for valve control.)



Barrel parts



Fluid container for cartridge type

A container or cap to fill the cartridge with fluid material.

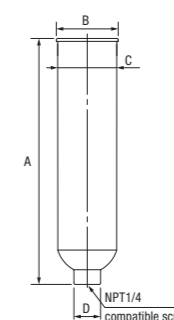
Barrel parts

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

Note: For the needle adapter, please refer to page 26.

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	



Measurement unit (mm)

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

Consumables for cartridge caps

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

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

One-touch type

Locking mechanism enables quick and secure cartridge mounting



Insert barrel or tube into cartridge holder



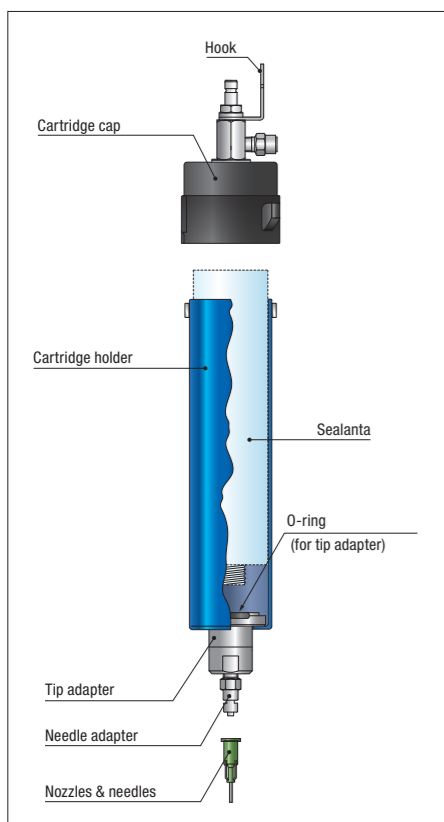
Set the cartridge cap in the cartridge holder



Rotate cartridge caps to lock securely in place



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

Item name	Model	Weight	Minimum Order Quantity
Sealant cartridge [without hook]	SCS-330	570 g	1 set
Sealant cartridge [with hook]	SCS-330-HK	580 g	1 set

Note: 1. Always applied pressure: 0.5 MPa or less.
2. The sealant cartridge consists of a cartridge cap, cartridge holder, O-ring, tip adapter, and needle adapter.

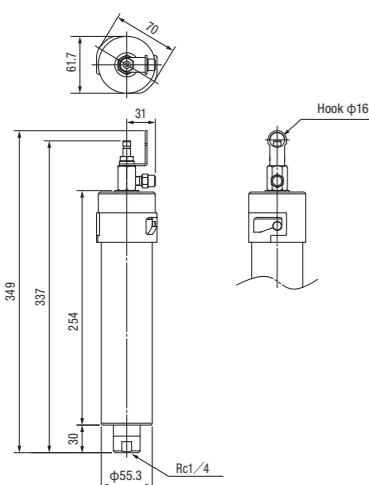
Sealant cartridge components (Single item)

Item name	Model	Material	Minimum Order Quantity
Cartridge cap	[without hook]	PBT, Polyacetal, Stainless steel, Brass, NBR, Fluororubber	1
	[with hook]		1
Cartridge holder [sealant use]	SCS-P-002-1	Aluminium alloy (anodized), Stainless steel	1
O-ring	ORG-20-V-B-1	Fluororubber	1
Needle adapter [No. 11]	P-NADP-11	Brass (Nickel plated)	1

Consumables/options

Item name	Model	Material	Minimum Order Quantity	
Tip adapter *1	[Type TB]	Aluminium alloy (anodized), Fluororubber	1	
	[Type S]		1	
	[Type TR]		1	
	[Type TS]		1	
	[Type MI]		1	
	[Type MO]		1	
	[Type C]		1	
Packing	[No.23]	Fluororubber	1	
	[No.15]	Fluororubber		
	[No.46]	Fluororubber		
Seal spring [for cartridge cap]	P-SSP-1	Stainless steel	1	
Seal retainer [for cartridge cap]	SCS-P-001-1C	Polyacetal		
Screw [No.17]	P-SCW-17	Stainless steel		
O-ring	[φ20 Material V Color B #1]	Fluororubber		1
	[φ16 Material V Color B #1] only for TS			
	[φ14 Material V Color B #1] only for TS			
Cartridge cap hook *2	SCS-P-005-1	—		1

*1 The tip adapter is available in seven types (TB, TR, S, TS, MI, MO, C) according to the sealant used by the fluid manufacturer. Please contact our sales department.
*2 Component parts are two parts.

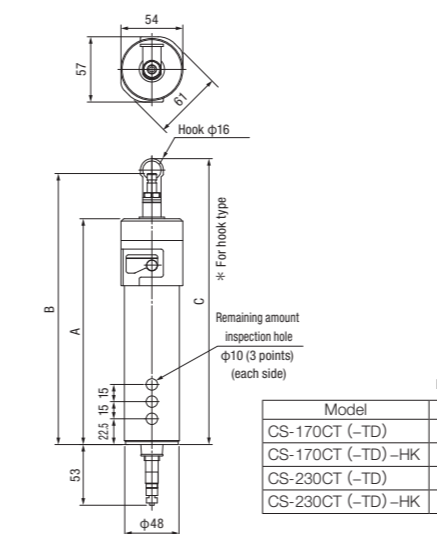
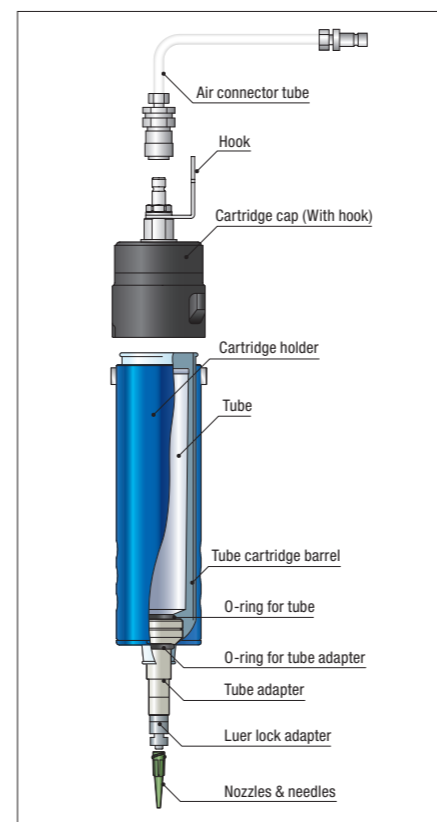


Compatible with the sealants from various manufacturers



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

Tube cartridge



Model	Measurement unit (mm)		
	A	B	C
CS-170CT (-TD)	197	238.5	—
CS-170CT (-TD) -HK	197	238.5	249.5
CS-230CT (-TD)	243	284.5	—
CS-230CT (-TD) -HK	243	284.5	295.5

Direct dispensing from commercially available tubes

This cartridge set enables direct loading of commercially available fluid materials in tubes and direct dispensing with tubes for fixed volume.

Tube cartridge (former: tube cartridge set)

Item name	Model	Weight	Minimum Order Quantity
Tube cartridge	[100 g]	CS-170CT	378 g
	[100 g, Type TD]	CS-170CT-TD	378 g
	[100 g with hook]	CS-170CT-HK	388 g
	[100 g, Type TD, with hook]	CS-170CT-TD-HK	388 g
Tube cartridge	[200 g]	CS-230CT	430 g
	[200 g type TD]	CS-230CT-TD	430 g
	[200 g with hook]	CS-230CT-HK	440 g
	[200 g type TD with hook]	CS-230CT-TD-HK	440 g

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 (Single item)

capacity	Item name	Model	Material	Minimum Order Quantity	
For NET 100 g	Cartridge cap	[without hook]	CC-P-001-1	—	
		[with hook]	CC-P-001-2	—	
	Cartridge holder [170 mL tube use]	CH-170CT	Aluminium alloy	1	
	Tube cartridge barrel [170 mL] *3 *5	PB-170BT	Polyethylene	1	
	O-ring for tube *1	—	Fluororubber	1	
	Tube adapter	[For No.3 CS-170/230 CT] *2 *3	P-TADP-3	Polypropylene	Select either one
		[For No.2 CS-170/230 CT-TD] *2 *3	P-TADP-2	Polypropylene	Select either one
O-ring (for luer lock adapter) [φ8 Material V Color B #1]	ORG-8-V-B-1	Fluororubber	1		
Luer lock adapter [No. 1]	P-LADP-1	Polypropylene *4	1		
For NET 200 g	Cartridge cap	[without hook]	CC-P-001-1	—	
		[with hook]	CC-P-001-2	—	
	Cartridge holder [230 mL tube use]	CH-230C	Aluminium alloy	1	
	Tube cartridge barrel [230 mL] *3 *5	PB-230BT	Polyethylene	1	
	O-ring for tube *1	—	Fluororubber	1	
	Tube adapter	[For No.3 CS-170/230 CT] *2 *3	P-TADP-3	Polypropylene	Select either one
		[For No.2 CS-170/230 CT-TD] *2 *3	P-TADP-2	Polypropylene	Select either one
O-ring (for luer lock adapter) [φ8 Material V Color B #1]	ORG-8-V-B-1	Fluororubber	1		
Luer lock adapter [No. 1]	P-LADP-1	Polypropylene *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.

Compatible with tubes from various manufacturers



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 an extensive lineup of accessories that improve work efficiency and parts that connect a variety of peripheral devices. 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.

Liquid accessories

Needle adapter



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

Item name	Model	Suitable products	Wetted part material	Connector size	Purpose of use
①[No.14]	P-NADP-14	PCV-12-2P etc.	Brass (Nickel plated)	R1/8	—
②[No.15]	P-NADP-15		Fluorine coated		Used for adhesives with anaerobic properties
③[No.12]	P-NADP-12	Barrel related products (PB-100B, PB-170C, PB-340C)	Brass (Nickel plated) fluorine rubber	R1/4	—
④[No.13]	P-NADP-13		Brass (Fluorine coated) fluorine rubber		Used for adhesives with anaerobic properties
⑤[No.11]	P-NADP-11	Sealant cartridge (SCS-330)	Brass (Nickel plated)	—	
⑥[For PCV-12-L]	P-NADP-18	PCV-12-L etc.	Stainless steel Brass (Ni plating)	—	Higher flow rate than P-NADP-11 Needle adapter
⑦[No.17]	P-NADP-17	Luer lock socket on syringes, valves, etc.	Stainless steel, Fluorocarbon resin, Brass (Nickel plated)	Double thread screwed luer lock plug	Use in combination with nozzles that require adjustment of the mounting orientation (CPV/DN/multi-nozzle/slit nozzle)

Liquid accessories

Syringe joints

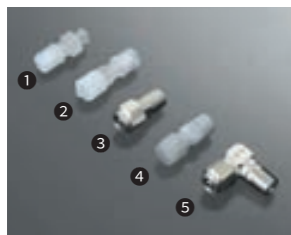


It is an adapter that can be attached to the tip of syringes or needle adapters.

Item name	Model	Applicable products	Wetted part material	Connection diameter	Purpose of use
Syringe joints	①SJ-1B	—	Stainless steel	R1/8	For filling syringes with liquid material and for connecting syringes to valves.
	②SJ-2B			R1/4	
Syringe joints Cap	③SJ-CAP	SJ-1B/SJ-2B	Fluorine resin	—	It is the cap for the tip (plug portion) of the syringe joint.

Liquid accessories

Fluid feed tube connector



It is a connector that links fluid feed tubes to syringes, needles, valves, tanks, cartridges, and other components. Please select based on the characteristics of the liquid material and the attachment configuration.

Item name	Model	shape	tube size	Connection diameter	Material	Purpose of use
Fluid feed Tube connector	①J-R-■	Straight	OD 3 mm (Photo) ■=1.6, 2, 3, 4, 6	Double thread screwed Luer lock Plug	Fluorine resin	Use for connecting syringes and fluid feed tubes Use for connecting fluid feed tubes to nozzles and needles
	②J-RT-■					
	③J-N1B-6			R1/8	Stainless steel	For connecting suction pipes for valves and tanks to fluid feed tubes
	J-N2B-6			R1/4		
	④J-B1B-6			R1/8		
Fluid elbow Tube connector	J-B2B-6	Elbow	—	R1/4	Fluorine resin	—
	⑤J-L1B-6			R1/8		
	J-L2B-6		R1/4			

Note: The tube diameter listed is a typical example. For further details, please contact our sales department.

Liquid accessories

Fluid feed manual 2-way valve



It is used to manually operate the lever and switch between blocking and allowing flow through the passage.

Item name	Model	Liquid-contact material	Purpose of use
Fluid feed manual 2-way valve	①[R1/4 Rc1/4]	Brass (Cr plating), Fluorine resin	For degassing syringe filling units and tanks
	②[Rc1/4 Rc1/4]		

Liquid accessories

Fluid feed fitting



It is a connection fitting for liquids.

Item name	Model	Material
Fluid feed elbow socket	[Rc1/8 Rc1/8 SUS]	Stainless steel
	①[Rc1/4 Rc1/4 SUS]	
Fluid feed nipple	[R1/8 R1/8 SUS Hexagonal]	Stainless steel
	②[R1/4 R1/4 SUS]	

Liquid accessories

Fluid feed tube



These are tubes for liquid feed only.

Item name	Model	Length specification
Fluid feed tube	①[φ6×φ4 nylon, white]	In increments of 1 m
	②[φ6×φ4 fluorine resin, white]	
	[φ6×φ4 fluorine resin, black]	
	[φ8×φ4 Nylon, white, for high pressure]	

Note: The tube diameter listed is a typical example. For further details, please contact our sales department.

Liquid accessories

Luer-lock extension tube



It is an extension tube that connects the syringe to the needle nozzle. It is used when dispensing liquid material away from the syringe container.

Item name	Model	Tube length	Material
Luer-lock extension tube	LT-23EX	49.8 cm	Tube: polyethylene Fitting: polyethylene

Air accessories

Pneumatic quick joint



This pneumatic quick-connect joint connects dispense controllers, cartridges, fluid feed tanks, and other components using various air piping tubes.

Item name	Model	Purpose of use
Pneumatic quick joint	①[Plug Rc1/8]	For connecting compatible screws and quick-joint sockets
	②[Plug Rc1/4]	
	③[Plug R1/8]	
	④[Plug R1/4]	
Pneumatic quick joint	⑤[Socket Rc1/8]	For connecting compatible screws and quick-joint plugs
	⑥[Socket Rc1/4]	
	⑦[Socket R1/4]	

Air accessories

Air connector Tube



It is a product that comes with an air tube and a quick joint.

Item name	Model	Tube length	Purpose of use	
Air connector Tube	①[QJ plug, OD 4 mm 1 m]	CT-24P	1 m	Dispensers and φ4 fittings are used For connecting to valves
	②[QJ plug QJ socket 1 m]	CT-36PS	1 m	For connecting dispenser and cartridge products

Note: This product also allows for specifying the tube length (in 0.5 meter increments). Please specify according to the following example. (e.g.) 2.5 m length for air connector tube cartridge: "CT-36PS-2.5M"

Air accessories

Pneumatic fittings



These fittings connect various air piping tubes to dispensers, cartridges, valves, tanks, and other units.

Item name	Model	Purpose of use	
Pneumatic half union	[R1/8 for OD 6 mm]	—	
	①[R1/4 for OD 6 mm]		
Pneumatic elbow union	[R1/8 for OD 6 mm]	—	
	②[R1/4 for OD 6 mm]		
③Regulator connection joint set	F/R-MS-JSET	Quick joint socket (QS-2N) and Pneumatic half union (J-U2B-6) assembled product. Dispenser AIR IN For pressure supply to (quick joint plug)	
Pneumatic Y-socket	④[for OD 6 mm] J-Y-6	J-Y-6	
pneumatic T-socket	⑤[for OD 6 mm] J-E-6	J-E-6	Air hose branch

Air accessories

Pneumatic coupling



Coupling for air piping.

Item name	Model	Purpose of use
Pneumatic coupling	①[Plug Rc1/4]	Used for connecting to main pressure air joints installed in buildings or for connecting to air piping for pressure feed pumps and similar equipment.
	②[Plug Rc1/4]	
	③[Socket Rc1/4]	

Other accessories

Air accessories

Air hose



This hose is used to supply air from the air source to the dispenser.

	Item name	Model	Length to specify
Air hose	[OD 4 mm ID2.5 mm black]	AH-24	In units of 1 m
	[OD 6 mm ID4 mm black]	AH-46	

Air accessories

Regulator/Air gauge, Filter/Regulator



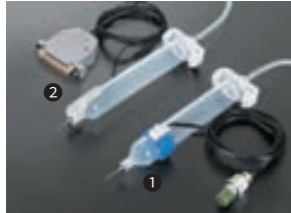
- ① **Regulator/Air gauge** Sets and displays the air pressure supplied to the container.
- ② **Filter/Regulator** Purifies the air and supplies it to the dispenser.
- ③ This product combines a mist separator that removes oil and oil mist from pneumatic lines and a filter/regulator.

	Item name	Model	AIR IN diameter	AIR OUT diameter
① Regulator/air gauge*	[0.2 MPa with QJ]	RA-2B-PS	Quick joint Plug	Quick joint Socket
	[0.7 MPa with QJ]	RA-7B-PS		
② Filter/Regulator		F/R-4	Rc1/4	Rc1/4
③ Regulator set with mist separator [A type]		F/R-MS-SETA	Rc1/4	J-U2B-6 included (Rc1/4)

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

Other accessories

Handy switch



This is a hand switch for manual operation that is attached to the tip of the syringe to control dispensing ON/OFF at hand. This switch supports 3 to 70 mL syringes.

	Item name	Model	Cord length
Handy switch	[LS-2T DSUB 25 pin]	LS-2T-DSUB25-1.5M	1.5 m
	① [LS-2T type16 4 pin]	LS-2T-1604P	
	② [LS-3T DSUB 25 pin]	LS-3T-DSUB25-1.5M	
	[LS-3T type16 4 pin]	LS-3T-1604P	
Conversion cable*	[Type 16 4 pin DSUB 25 pin]	CB-1604A-CNV-DSUB25	—

* This cable converts 4-pin specifications to DSUB specifications.

Other accessories

Foot switch



This is a foot switch for manual operation that controls ON/OFF of dispensing at your feet. The connector type varies depending on the dispenser in use. Please select the connector that matches the model of your dispenser.

	Item name	Model	Cord length
Foot switch	① [DSUB 25 pin]	FS/W-2-DSUB25-2.0M	2 m
	② [Type16 4 pin]	FS/W-2-1604P	

Other accessories

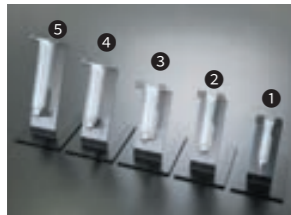
Syringe stand



A stand for storing syringes upright during and after work. Please select from 3 sizes according to the syringe size you use.

	Item name	Model
Syringe stand	① [5 mL use type A]	SYS-1A
	② [10 mL use type A]	SYS-2A
	③ [20 to 50 mL use type A]	SYS-3A
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	① [For 5 mL syringe LS-3T/2T use]	SYS-5B	—
	② [For 10 mL syringe LS-3T/2T use]	SYS-10B	
	③ [For 20 mL syringe LS-3T/2T use]	SYS-20B	
	④ [For 30 mL syringe LS-3T/2T use]	SYS-30B	
	⑤ [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	SHN, DPN, SPN, PN, TPND, TN, BN-S1/S2
	[For SYS-B ID:8.5 with LS-3T]	SYS-CAP-8.5	FN, HN, SNA, DN, PPN, BN-S3/S4
	[For SYS-B ID:10.0 with LS-2T/No handy switch]	SYS-CAP-10	Musashi standard nozzles (excluding CPN and MN)

Other accessories

Hand dispenser



It is a product with a rod for pushing out liquid material in a syringe.

	Item name	Model
Hand dispenser	[WITH STOPPER 5 mL]	HD-5E-H
	① [WITH STOPPER 10 mL]	HD-10E-H
	[WITH STOPPER 20 mL]	HD-20E-H
	[WITH STOPPER 30 mL]	HD-30E-H
	② [WITH STOPPER 50 mL]	HD-50E-H

Other accessories

Dispense Handgun



Achieves stable handheld dispensing without requiring air or power. Adjust the trigger pull to control the dispensing volume as desired.

	Item name	Model	Remarks
Dispensing handgun	[5 mL]	DHG-5E	Ratchet rod One included
	① [10 mL]	DHG-10E	
	[30 mL]	DHG-30E	
	② [50 mL]	DHG-50E	

Note: Dispense Handgun does not include a syringe, MLP plunger, or needle.

Other accessories

Metal connector



Used to connect a dispenser to an external signal.

Item name	Model
Metal connector [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
H-type stand	HS-1
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.

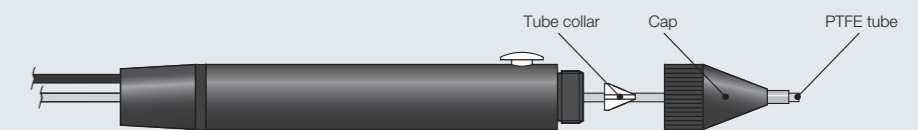
Tubing dispenser accessories

Dispensing pen for tubing dispenser



External input switch for tubing dispenser (MT series).

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



PTFE tube/Dedicated tube collar/cap application chart

PTFE tube	Model		tube OD (φ) mm	tube ID (φ) mm	tube length	Model	
	PTFE tube,black (for UV adhesive)					tube collar type	Cap
TT-32	—		0.75	0.25	10 m	LS-NH3-C4	LS-NH3-TG7
TT-30	TT-30B		0.76	0.3	10 m		LS-NH3-TG8
TT-28	TT-28B		0.84	0.38	10 m		LS-NH3-TG7
TT-26	TT-26B		0.92	0.46	10 m		LS-NH3-TG7
TT-24	TT-24B		1.06	0.56	10 m	LS-NH3-C3	LS-NH3-TG6
TT-22	TT-22B		1.18	0.68	10 m		LS-NH3-TG5
TT-21	TT-21B		1.31	0.81	10 m	LS-NH3-C2	LS-NH3-TG4
TT-20	TT-20B		1.46	0.86	10 m		LS-NH3-TG4
TT-19	TT-19B		1.56	0.96	10 m		LS-NH3-TG3
TT-18	TT-18B		1.67	1.07	10 m		LS-NH3-TG3
TT-17	TT-17B		1.79	1.19	10 m	LS-NH3-C1	LS-NH3-TG2
TT-16	TT-16B		1.95	1.35	10 m		LS-NH3-TG2
TT-15	TT-15B		2.10	1.50	10 m	—	LS-NH3-TG2
TT-14	—		2.28	1.68	10 m		LS-NH3-TG1
TT-13	TT-13B		2.53	1.93	10 m		—
TT-12	TT-12B		2.76	2.16	10 m		—
TT-11	TT-11B		3.01	2.41	10 m	—	—
TT-10	TT-10B		3.29	2.69	10 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).

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

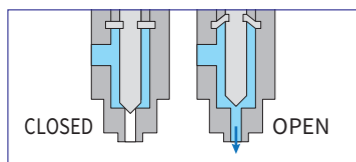
High productivity, stability, reliability, durability, and maintainability are required of uncompromising professionals. To meet all these requirements, MUSASHI has brought together all of our dispensing experience and know-how to develop these fluid dispensing valves. These valves enable stably high-precision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

Valve features

Needle control valve

Achieves stable and continuous micro-dispensing with good response.

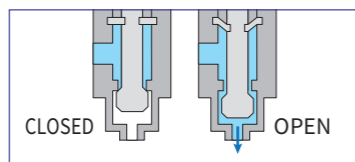
NCV series



Piston control valve

Suck back mechanism for superior fluid cut-off.

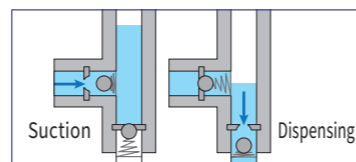
PCV series



Volumetric measuring dispensing valve

Precise, metered dispensing of low to medium viscosity liquid materials

PPV series



Valve Controller List

	Needle control valve	Piston control valve	Volume measuring dispensing valve	Diaphragm valve	Coating valve	Two-fluid spray valve	Spray valve	Volumetric metering pumps
Valves	<ul style="list-style-type: none"> • NCV-17 • NCV-17-S6 • NCV-7DV (Anaerobic support) 	<ul style="list-style-type: none"> • PCV-12 	<ul style="list-style-type: none"> • PPV-5 	<ul style="list-style-type: none"> • DCV-2 	<ul style="list-style-type: none"> • CV-15 	<ul style="list-style-type: none"> • FSV-1 	<ul style="list-style-type: none"> • SV-6 	<ul style="list-style-type: none"> • JUSTRO PUMP (MJP-05/13)
	<ul style="list-style-type: none"> • NCV-17-L (High flow) • NCV-17-L-RS (High flow/Anaerobic support) 	<ul style="list-style-type: none"> • PCV-12-L (High flow) 		<ul style="list-style-type: none"> • DCV-3 		<ul style="list-style-type: none"> • SSV-1 	<ul style="list-style-type: none"> • SVM-6LX 	
	<ul style="list-style-type: none"> • HPV-2NC (High-pressure support) • NCV-12S 							
Controller	Valve controller : ME-5000VT				Coating valve controller : ME-5000CV	Spray valve controller : ME-8000SP		Pump controller : ME-5000P

Example of system installation

Valve tank system

Valve controller: ME-5000VT
Piston control valve: PCV-12
Straight one-touch tank: SOT-4.6L



Spray valve tank system

Spray valve controller: ME-8000SP
Spray valve: SSV-1
Straight one-touch tank: SOT-4.6L



Desktop type robot + pump mounted

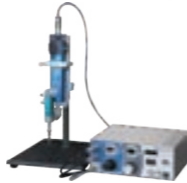
Pump controller: ME-5000P
Volumetric plunger pumps: JUSTRO PUMP
Desktop type robot: SM200SX



Valve cartridge system

Pump controller: ME-5000VT
Piston control valve: PCV-12
Barrel cartridge: CS-OC

○=100, 170, 340



Digital spray valve controller



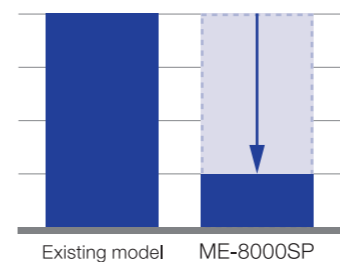
SPRAYMASTER ME-8000SP

Digital spray valve controller enabling New Manufacturing

- Significantly accelerates R&D speed through precisely controlled dispensing conditions.
- Digitized controllers that can be used directly in mass production equipment.
- Accurate pressure control and reproducibility in 0.1 kPa increments. Reduce the time required for setting conditions.
- Low-pressure control model (V05) released. Optimal for fine dispensing control. It contributes to the thin-filmization.
- Compliance with standards: EU RoHS2, CE marking (EMCD)

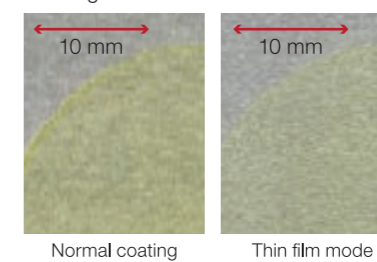
High quality pressure control

Variation of control pressure is improved to 1/4 of that of existing model. Enables control of ideal film thickness.



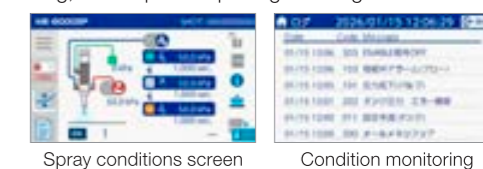
New feature Thin film mode

The new Thin-film mode reduces film thickness by approximately 60% compared to existing model.



Extensive interfaces

Features LAN port for Ethernet connectivity, features USB port, Log, Icon/Input-Output signal assignment

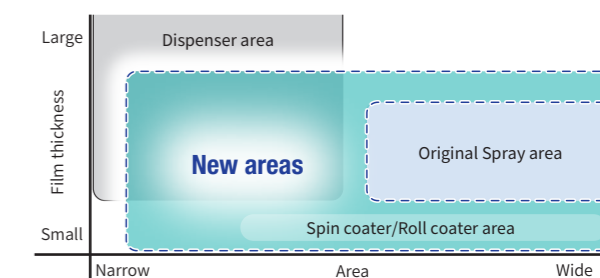


Specifications

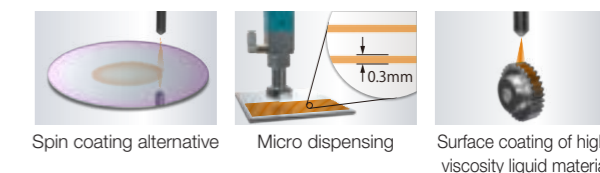
Model	ME-8000SP-CTR-V5-N	ME-8000SP-CTR-V5-P	ME-8000SP-CTR-V05-N	ME-8000SP-CTR-V05-P
Dispensing system	spray system			
Control method	Microcomputer-controlled electro/pneumatic system			
Pressure adjustment Range	For fluid feed	50.0 to 500.0 kPa		0.5 to 50.0 kPa
	For valve actuation	300.0 to 500.0 kPa		
	For blow	50.0 to 500.0 kPa	5.0 to 200.0 kPa	
Valve time setting range	0.010 to 9999.999 sec			
Blow time setting range	0.010 to 9999.999 sec			
External input-output signal D-Sub	Connector	D-Sub 25-pin (socket) x 1 port		
	Rated voltage	24 V		
input	24 V common Input resistance	GND common Input resistance	24 V common Input resistance	GND common Input resistance
	5 kΩ	13 kΩ	5 kΩ	13 kΩ
Output	Open collector output 24 VDC, 10 mA or less			
	GND common	24 V common	GND common	24 V common
Supply air pressure range	200 to 600 kPa (recommended supply pressure: valve actuation pressure + 100 kPa or more)			
Power supply *1 *2	Connector	ACAT-4 dedicated connector, e-CON (3-pin socket) *3		
	Rated voltage	DC 24 V ±10%		
	Power consumption	28 W		
External dimensions (excluding protrusions)	W250xD250xH150 mm			
Weight	5.0 kg			

*1 AC adapter is not included in the product. It is an optional product.
*2 Please use one of the following methods for power supply.
• Use our optional ACAT-4 (input rating AC 100 to 240 V 50/60 Hz).
• Use SELV power supplies that meet the harmonized standards for LVD under the CE marking. (compliant plug: e-CON 3-pin)
*3 Please use USB cables and power cables that are 3 meters or shorter. (This product's CE Declaration of Conformity does not cover lengths exceeding 3 meters).

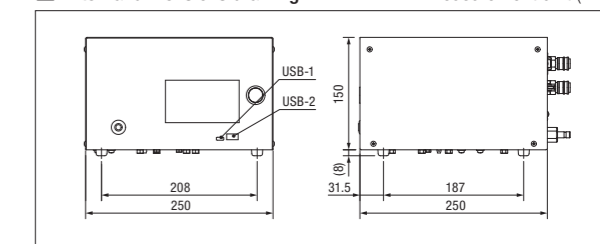
New areas required for Spray



- Achieved finer lines and thinner films in spray dispensing
- High-viscosity compatibility for spray dispensing achieved



External dimensions drawing



Valve controller



VALVE MASTER ME-5000VT
Achieves high-precision, stable dispensing performance of valves

- Improves pressure stability and eliminates variations in dispensing volume.
- Digital control delivers superior operability and reproducibility.
- Enables centralized management of dispensing conditions via the controller.
- Enhanced external interfaces enable monitoring of dispensing operations, proving highly effective when integrated into systems.
- CE marking, EU RoHS2 compliant.

Spray valve controller



SPRAY MASTER ME-5000SP
Two-fluid spray valve Controller

- Interval settings prevent liquid dripping.
- Digital control delivers superior operability and reproducibility.
- Enables centralized management of dispensing conditions via the controller.
- Enables monitoring of dispensing operations through enhanced external interfaces.
- CE marking, EU RoHS2 compliant.

Pump Controller



PUMP MASTER ME-5000P
For JUSTRO PUMP Controller

- CE marking, EU RoHS2 compliant.

Coating valve controller



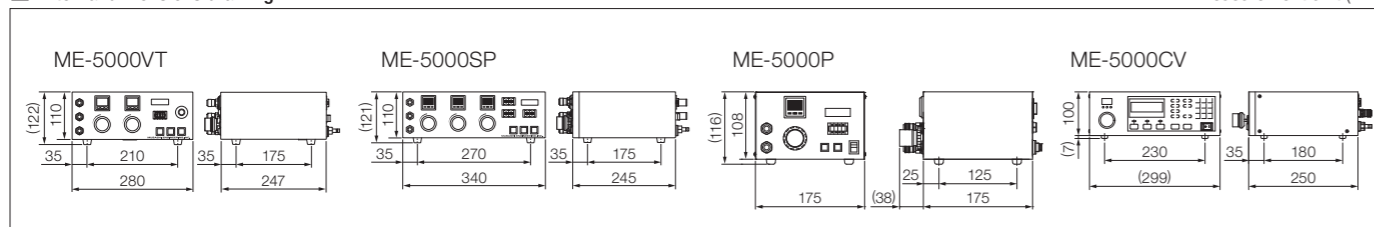
SPRAY MASTER ME-5000CV
Controller for CV-15

Specifications

Model	ME-5000VT	ME-5000SP	ME-5000P	ME-5000CV-CTR
Control system	Electro/Pneumatic system			Microcomputer digital control system
Pressure setting Range	Fluid feed pressure	0.005 to 0.700 MPa	0.010 to 0.700 MPa	0.005 to 0.700 MPa
	Valve actuation pressure	0.200 to 0.700 MPa (0.400 to 0.500 MPa)		
	Blow pressure	—	0.010 to 0.700 MPa	—
Valve drive time setting range	0.01 to 99.99 s, 0.010 to 9.999 s, 0.1 to 999.9 s		0.010 to 9.999 s, 0.01 to 99.99 s, 0.1 to 999.9 s, 1 to 9999 s	1.00 to 9999.99 ms, 0.01 to 99.99 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		Photocoupler input DC24 V, 5 mA External dispensing, dispensing mode switching, channel switching
	Output	Dispensing completed, Dispensing in progress, Pumping pressure low, Valve drive pressure low, Dispensing mode, Powered	Dispensing completed, Dispensing in progress, Pressurizing, Pumping pressure low, Valve actuation pressure low, Blow pressure low, Dispensing mode, Powered	Dispensing completed
Rated voltage and frequency	AC100-240 V 50/60 Hz			
Power consumption	12 W	32 W	5 W	5 W
External dimensions	W280xD247xH122 mm	W340xD245xH121 mm	W175xD175xH108 mm	W300xD250xH107 mm
Weight	4.3 kg	5.8 kg	2.0 kg	4.0 kg

External dimensions drawing

Measurement unit (mm)



Needle control valve

High-precision standard valve

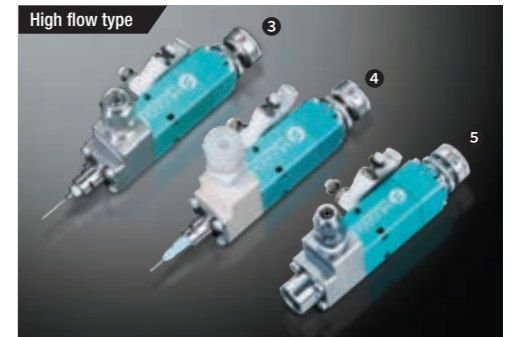
- Also capable of micro-deposit dispensing fluid materials containing UV and filler.
- Reduces air bubbles mixing.
- Diaphragm structure prevents fluid material from entering sliding parts.
- The square-shaped, compact and lightweight valves are ideal for use with automated equipment.
- High flow type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



MiniVal NCV-17



MiniVal NCV-17-L
MiniVal NCV-17-L-RS



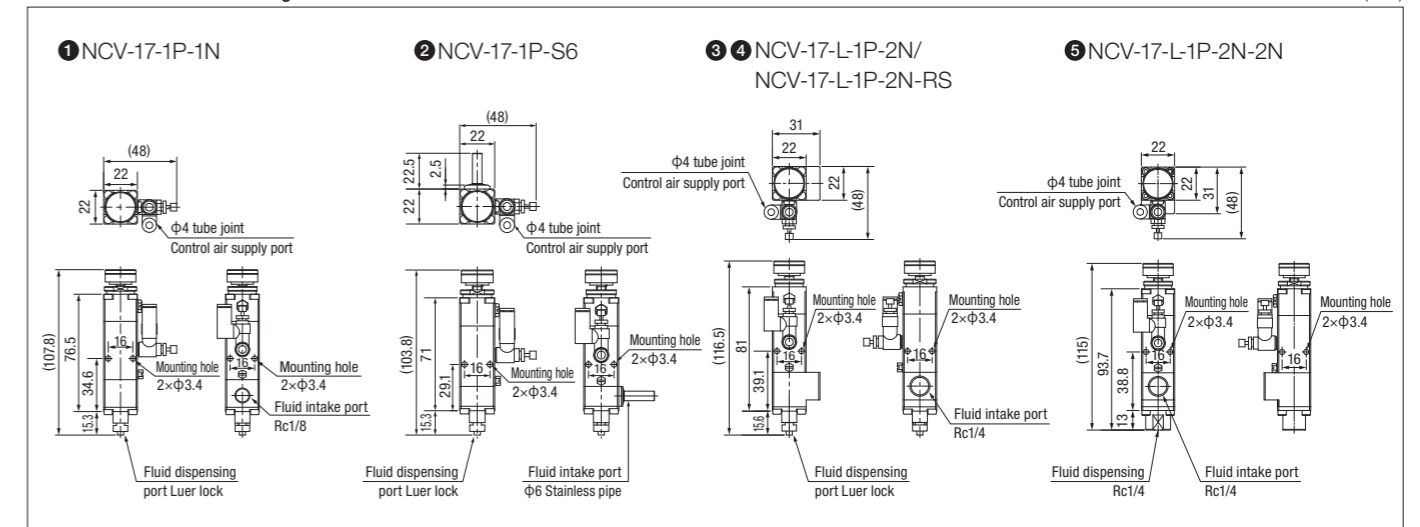
Specifications

	① Type17 1 port	② Type17 1 port OD 6 mm SUS pipe attached	③ Type17 1 port high flow	④ Type17 1 port high flow rate resin specification	⑤ 17-inch 1 port Outlet Rc1/4 High flow rate
Model	NCV-17-1P-1N	NCV-17-1P-S6	NCV-17-L-1P-2N	NCV-17-L-1P-2N-RS	NCV-17-L-1P-2N-2N
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 size	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			Rc1/4
	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	Stainless steel, Fluorine resin
Weight	193 g	216 g	222 g	149 g	227.5 g

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

External dimensions drawing

Measurement unit (mm)



Piston control valve

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.

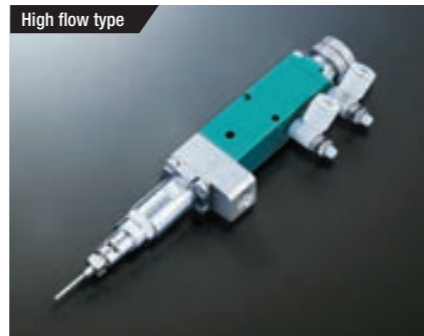
Valve controller ME-5000VT



MiniVal PCV-12



MiniVal PCV-12-L

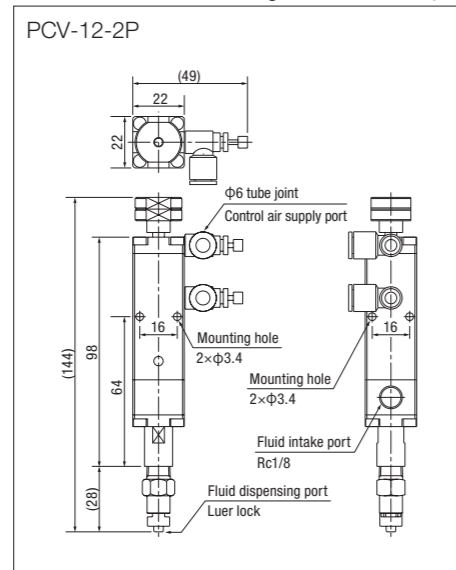


■ Specifications

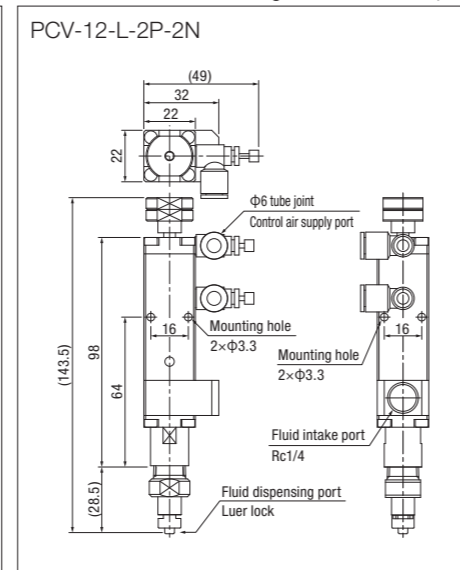
	Type 12 2 port	Type 12 2 port high flow
Model	PCV-12-2P	PCV-12-L-2P-2N
Driving system	Pneumatic driven system	
Minimum dispensing amount	18 μ L	19 μ L
Compatible viscosity	Up to 100 Pa·s	
Control air supply pressure range	0.35 to 0.6 MPa	
Fluid material supply pressure range	Max. 0.5 MPa	
Maximum number of cycles	580 times/min.	
Connector size	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, Brass	
Weight	212 g	240 g

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

■ External dimensions drawing Measurement unit (mm)



■ External dimensions drawing Measurement unit (mm)



Volume measuring type 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



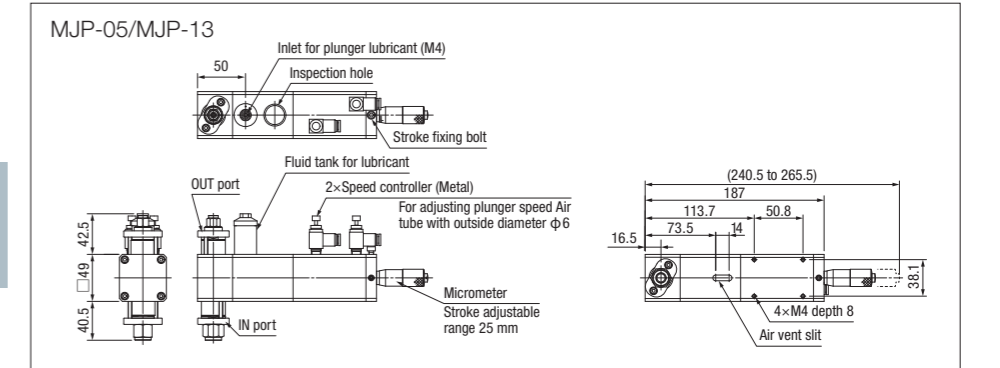
JUSTRO PUMP Just measuring and dispensing, debut of precision plunger pump

■ 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	

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

■ External dimensions drawing



Diaphragm valve



- 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



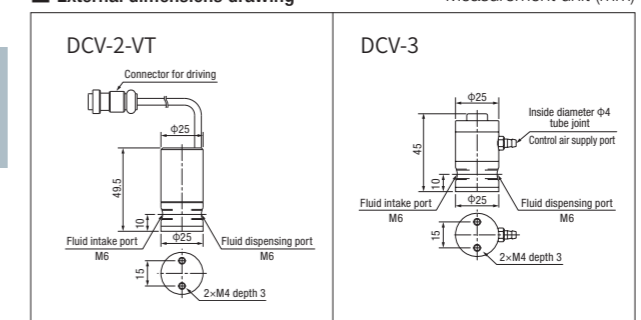
DCV-2 / DCV-3 Suitable for low viscosity, anaerobic materials

■ Specifications

	① Electromagnetic	Electromagnetic type stroke adjustment attached	② 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 size	Fluid intake port	M6		
	Fluid dispensing port	M6		
	Control air	—		
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 dispensing volume, suitable viscosity, and suitable fluid materials listed in these specifications are only for reference.

■ External dimensions drawing

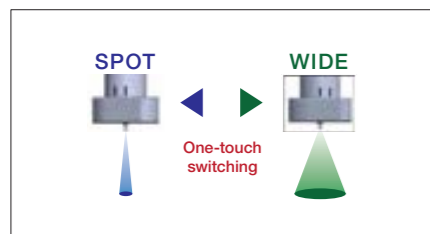


Two-fluid fine spray valve

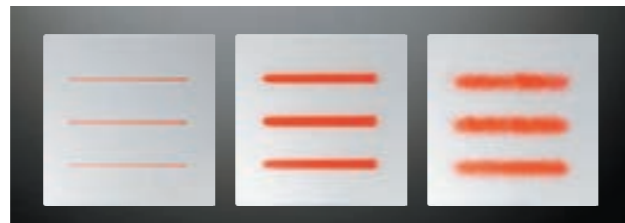


- Low-pressure atomization prevents splatter.
- With its unique one-touch switching mechanism, the dispensing pattern can be adjusted from Spot to Wide.

Digital spray valve Controller ME-8000SP



FSV-1 Uniform, wide-area film dispensing



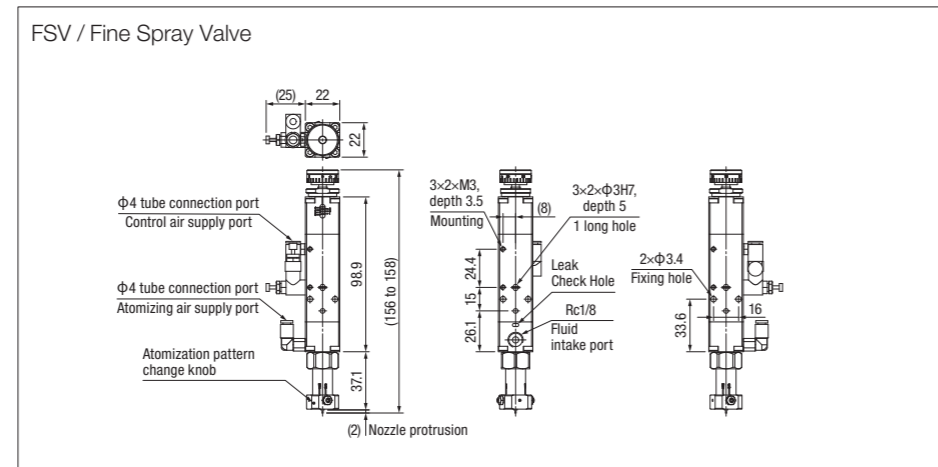
Covers narrow to wide areas with a single unit

Specifications

		Fine Spray Valve	
Model		FSV-1-1P-1N	
Controller model		ME-5000SP	
Dispensing system		Spray coat valve type	
Control method		Electro/pneumatic method	
Applicable air hose		AH-24	
Operating air supply pressure range		0.35 to 0.5 MPa	
Blow air supply pressure range		Max. 0.5 MPa	
Fluid material supply pressure range		Max. 0.5 MPa	
Applicable fluid feed joint	Fluid feed tube connector	J-46BS, J-46T, J-46U, J-N1B-6, J-N1B-8, J-B1B-6, J-B1B-8, J-B1B-10	
	Fluid feed elbow tube connector	J-L1B-4, J-L1B-6, J-L1B-8, J-L1B-48HP	
Applicable fluid feed tube	Using fluid feed joint	J-46BS, J-46T, J-46U, J-N1B-6, J-B1B-6, J-L1B-6	LT-46, LT-46P, LT-46S, LT-46T, LT-46TB
		J-N1B-4, J-L1B-4	LT-24P, LT-24T
		J-N1B-8, J-B1B-8, J-L1B-8	LT-68P, LT-68T, LT-68TB
		J-B1B-10	LT-8.10P, LT-8.10T, LT-8.10TB
		J-L1B-48HP	LT-48HP
Applicable nozzles		DPN-□G-△ (□:22 to 32, △:1 to 3)	
Wetted part material		Stainless steel, Fluorine resin, Perfluoroelastomer, PEEK	
Dimensions (excluding joint and protrusions)		W22 mmxD22 mmxH156 mm	
Weight		0.3 kg	
Compatible standards		EU RoHS2	

External dimensions drawing

Measurement unit (mm)

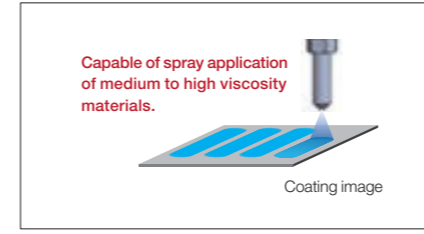


Two-fluid shape spray valve

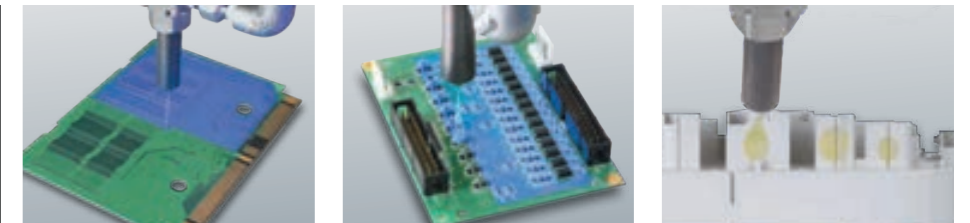


- Capable of spray dispensing of medium to high viscosity materials. Significantly reduces splatter during dispensing.
- Multiple dedicated nozzles available spraying.

Digital spray valve Controller ME-8000SP



SSV-1 Spray application of medium to high viscosity materials.



Environmentally friendly solvent-free coating

Non-diluted coating

Capable of dispensing high viscosity fluid materials such as grease

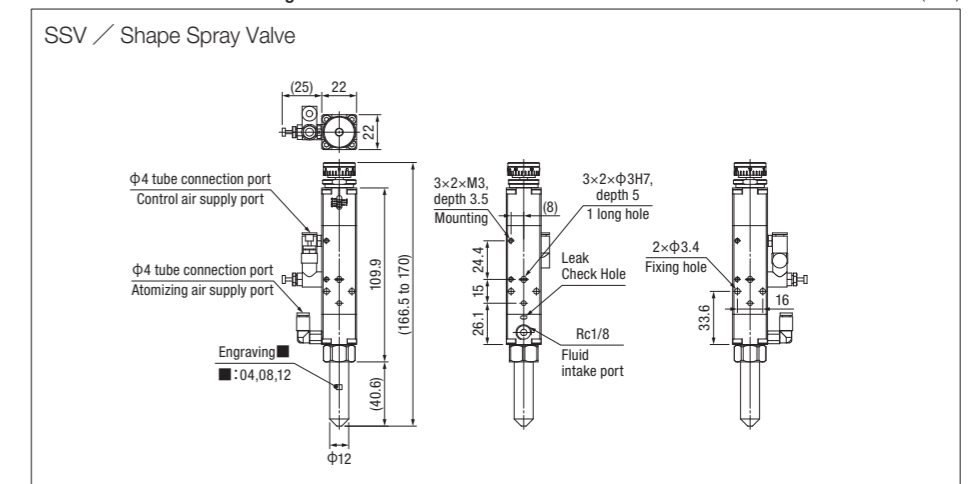
Specifications

		Shape Spray Valve					
Model		SSV-1-1P-1N-●■					
		ST04	ST08	ST12	TP04	TP08	TP12
Blow parts		ST type (For low-scattering spray)			TP type (For wide spray)		
Controller model		ME-5000SP					
Dispensing system		Spray coat valve system					
Control system		Electro/Pneumatic system					
Applicable air hose		AH-24					
Control air supply pressure range		0.35 to 0.5 MPa					
Supply pressure range of atomized air		Max. 0.5 MPa					
Fluid material supply pressure range		Max. 0.5 MPa					
Applicable fluid feed joint	Fluid feed tube connector	J-46BS, J-46T, J-46U, J-N1B-6, J-N1B-8, J-B1B-6, J-B1B-8, J-B1B-10					
	Fluid feed elbow tube connector	J-L1B-4, J-L1B-6, J-L1B-8, J-L1B-48HP					
Applicable fluid feed tube	Using fluid feed joint	J-46BS, J-46T, J-46U, J-N1B-6, J-B1B-6, J-L1B-6		LT-46, LT-46P, LT-46S, LT-46T, LT-46TB			
		J-N1B-4, J-L1B-4		LT-24P, LT-24T			
		J-N1B-8, J-B1B-8, J-L1B-8		LT-68P, LT-68T, LT-68TB			
		J-B1B-10		LT-8.10P, LT-8.10T, LT-8.10TB			
		J-L1B-48HP		LT-48HP			
Applicable nozzles		Φ0.4, Φ0.8, Φ1.2					
Wetted part material		Stainless steel, Perfluoroelastomer, PEEK					
Dimensions (excluding joint and protrusions)		W22 mmxD22 mmxH168 mm					
Weight		0.3 kg					
Compatible standards		EU RoHS2					

* ● : ST, TP ■ : 0.4, 0.8, 1.2 (Model : 04, 08, 12)

External dimensions drawing

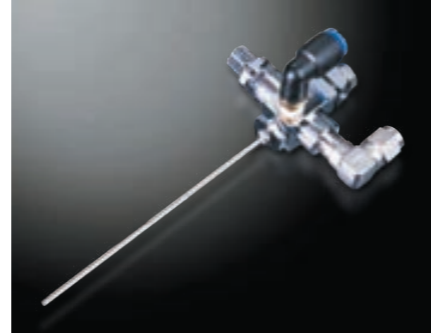
Measurement unit (mm)



Two-fluid spray valve

SV-6 series

SVM-6LX



Compact and lightweight, applicable to all uses!

Best suited for coating on inner surface of cylinder!

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

- 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.

SVM-6 LX dispensing illustration

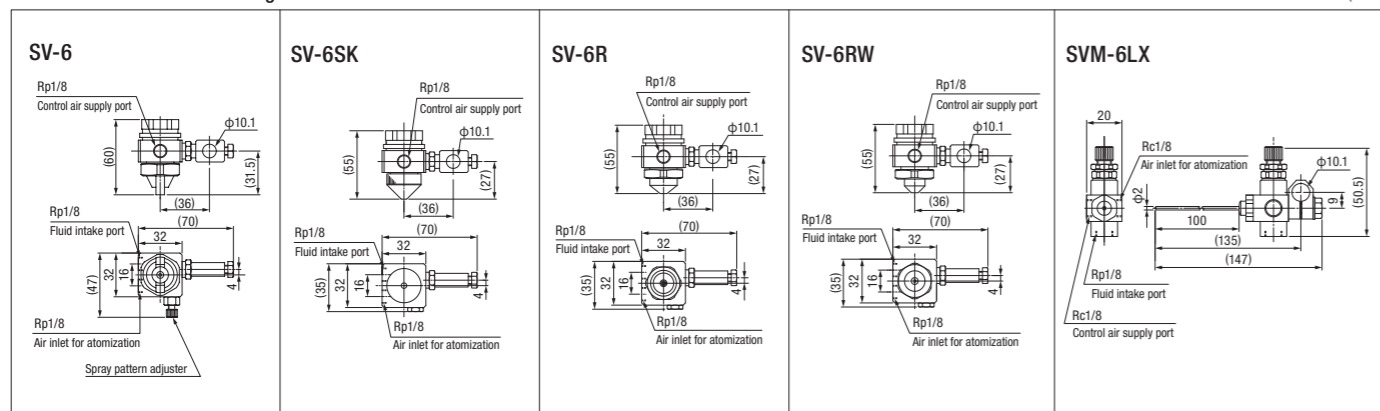
Specifications

Spray pattern		Round pattern		Small round pattern		Round pattern		Large round pattern		Small round pattern			
Series name		SV-6		SV-6SK		SV-6R		SV-6RW		SVM-6LX			
		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
Nozzle size	0.5 mm	SV-6-0.5X	30	180	SV-6SK-0.5X	φ7	φ40	SV-6R-0.5X	φ10	φ55	—	—	—
	0.7 mm	—	—	—	—	—	—	—	—	—	—	—	—
	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	Operation air	0.2 to 0.5 MPa											
	Atomization air	to 0.5 MPa											
	Fluid materials	to 0.2 MPa											
Connector size	Control air	Rp1/8										Rc1/8	
	Atomization air	Rp1/8										Rc1/8	
	Fluid materials	Rp1/8										Rc1/8	
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 drawing

Measurement unit (mm)



Coating valves

CV-15



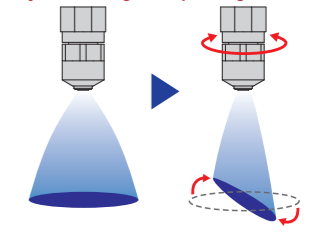
Circulation-compatible. Achieve stable coating quality

- Realizes thin-film dispensing using a dedicated nozzle.
- The orientation of the thin film can be freely changed.
- Compatible with the circulation system. Dispensing quality improved.

Coating valves Controller ME-5000CV



After attaching the nozzle, it can be manually adjusted to change its direction. Easy fine-tuning of dispensing.

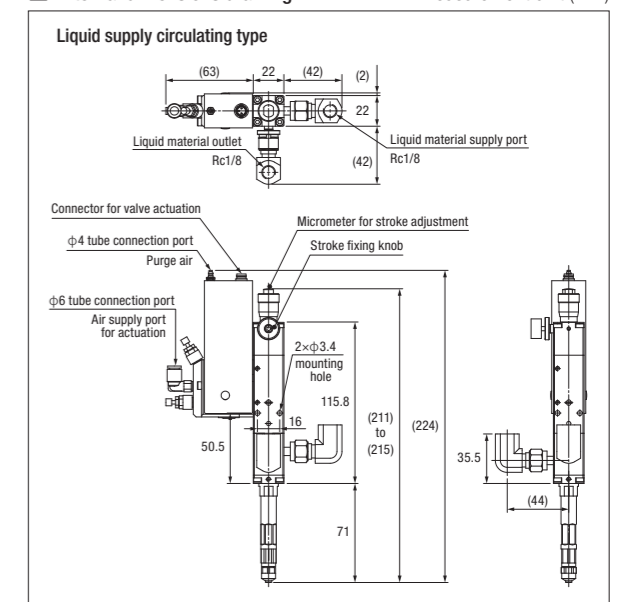


Specifications

		Coated valve Type 15	
Model		CV-15-EM-1N	CV-15-EM-1N-CFS
Dispensing system		Needle control valve type	
Control system		Electro / Pneumatic system	
Applicable air hose	Operating Air	AH-46	
	Purge air	AH-24	
Operating air supply pressure range		0.4 to 0.5 MPa	
Supply purge air pressure*		Maximum 0.2 MPa	
Fluid material supply pressure range		Maximum 0.5 MPa	
Applicable fluid feed joint	Fluid feed tube connector	J-46BS, J-N1B-6, J-N1B8	J-N1B8
	Fluid feed elbow tube connector	J-L1B-6, J-L1B-8	J-L1B-8
Applicable fluid use feed joint	J-46BS, J-N1B-6, J-N1B-6	LT-46, LT-46P, LT-46S, LT-46T, LT-46TB	—
	J-N1B8, J-L1B-8	LT-68P, LT-68T, LT-68TB	LT-68T-CFS
Applicable nozzle		Dedicated coating nozzles (S, M, L)	
Applicable viscosity range		1 to 100 mPa·s	
Wetted part material		Stainless steel, FFKM, PEEK, cemented carbide	
Dimensions		W85×D40×H224 mm	W127×D66×H224 mm
Weight		0.6 kg	0.7 kg
Compliance with standards		CE marking (LVD, EMC), EU RoHS2	

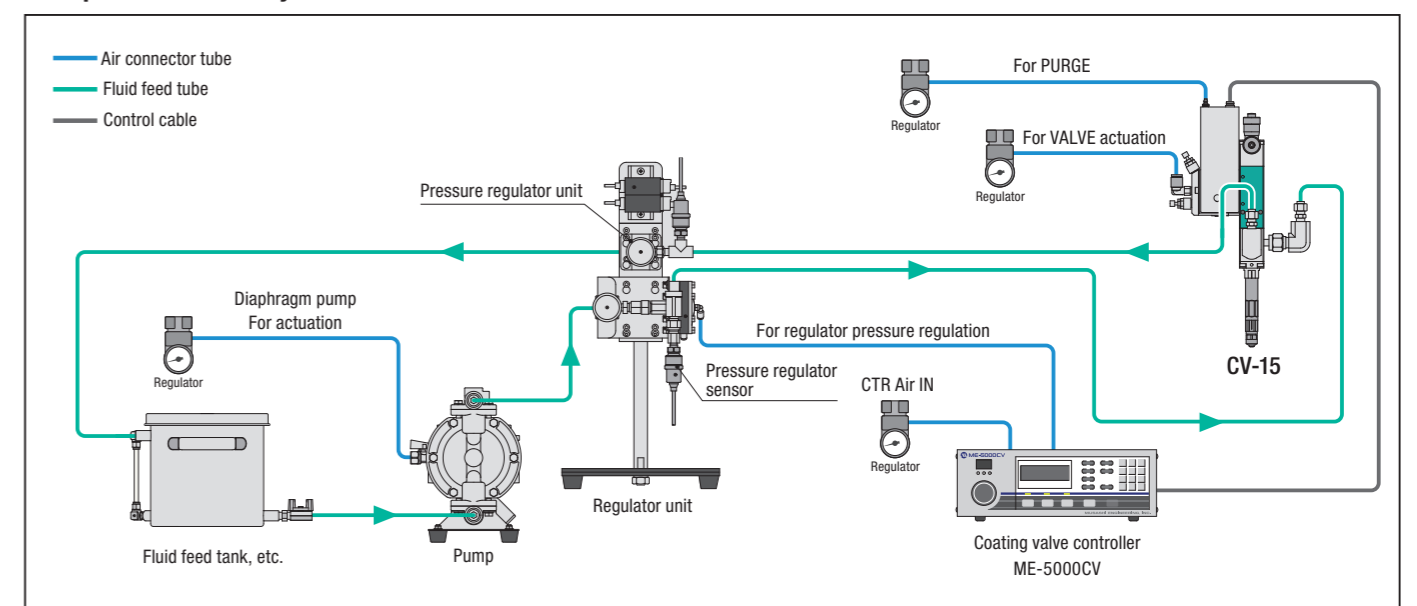
External dimensions drawing

Measurement unit (mm)



Note: Purge is performed for the purpose of preventing flammable gases from entering the area around the solenoid valve by flowing air into the valve cover. Depending on the liquid materials used and the exhaust environment of the installed equipment, purging may not be necessary.

Example of circulation system



Coating valve



CV-10

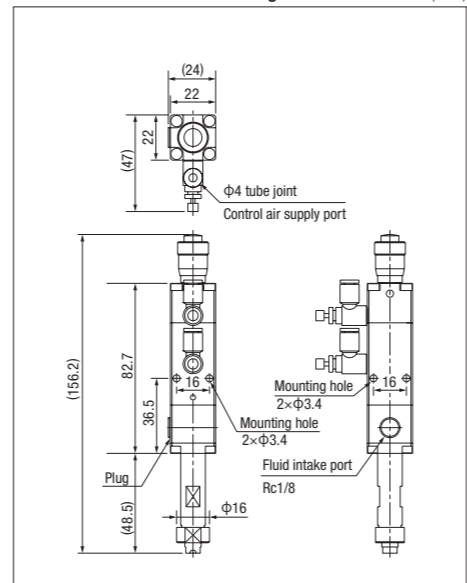
Achieves sharp-edged dispensing without scattering

- Precision application shape enables partial coating.
- Low flow achieves wide area, ultra-thin coating.
- No scattering, allowing for fine shape dispensing

Specifications

	Type 10 2 port
Model	CV-10-2P-1N
Driving system	Pneumatic driven system
Compatible viscosity	to 100 mPa·s (must not include filler or other solids)
Control air supply pressure range	0.35 to 0.5 MPa
Fluid material supply pressure range	Max. 0.5 MPa
Connector size	Fluid intake port Rc1/8 (fluid feed joint ordered separately)
	Fluid dispensing port Dedicated nozzle
	Control air One-touch joint for $\phi 4$ outer diameter tube (with speed controller)
	Purge air —
Operating Temperature Range	5 to 60°C
Wetted part material	Stainless steel, Fluorine resin, Polyacetal, Ceramic
Weight	237 g

External dimensions drawing Measurement unit (mm)



Fluid drip prevention valve



TCV-S3

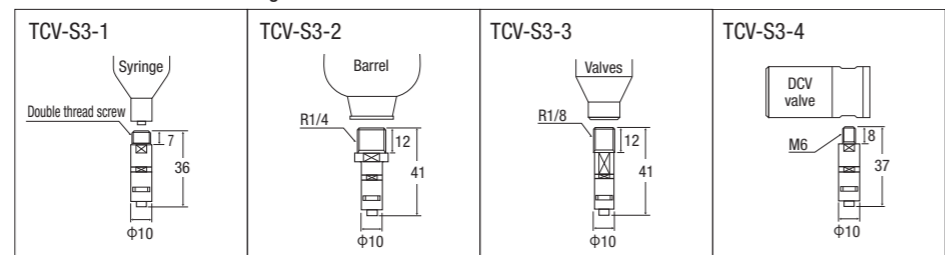
Supports complete, uniform, high-precision dispensing

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 size	Fluid intake port	Double thread screw	R1/4	R1/8	M6
	Fluid dispensing port	Luer lock			
Wetted part material	Stainless steel, Fluorine resin, Artificial gemstone				

Note: (Spring pressure) : 10, 20, 30, 50, 70, 100, 150, 200, 220

External dimensions drawing 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-S3-1-10KP	TCV-S3T-1-10KP	TCV-S3-2-10KP	TCV-S3-3-10KP	TCV-S3-4-10KP
20	TCV-S3-1-20KP	TCV-S3T-1-20KP	TCV-S3-2-20KP	TCV-S3-3-20KP	TCV-S3-4-20KP
30	TCV-S3-1-30KP	TCV-S3T-1-30KP	TCV-S3-2-30KP	TCV-S3-3-30KP	TCV-S3-4-30KP
50	TCV-S3-1-50KP	TCV-S3T-1-50KP	TCV-S3-2-50KP	TCV-S3-3-50KP	TCV-S3-4-50KP
70	TCV-S3-1-70KP	TCV-S3T-1-70KP	TCV-S3-2-70KP	TCV-S3-3-70KP	TCV-S3-4-70KP
100	TCV-S3-1-100KP	TCV-S3T-1-100KP	TCV-S3-2-100KP	TCV-S3-3-100KP	TCV-S3-4-100KP
150	TCV-S3-1-150KP	TCV-S3T-1-150KP	TCV-S3-2-150KP	TCV-S3-3-150KP	TCV-S3-4-150KP
200	TCV-S3-1-200KP	TCV-S3T-1-200KP	TCV-S3-2-200KP	TCV-S3-3-200KP	TCV-S3-4-200KP
220	TCV-S3-1-220KP	TCV-S3T-1-220KP	TCV-S3-2-220KP	TCV-S3-3-220KP	TCV-S3-4-220KP

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

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 $\phi 4/6/8/10/12$, Stainless steel/ Fluorine resin

7 Fluid feed tube

Select "size", "length", "material", "color", and "for high pressure".
OD $\phi 4/6/8/10/12$, Fluorine resin/PFA/Nylon/Silicone White/Black/Transparency, for high pressure

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 $\phi 6/8/10/12$
- ② Suction pipe OD $\phi 6/8/10/12$, flat tip
OD $\phi 6/8/10/12$, tip cut 45°

5 Air hose set

Select the "size" of the pneumatic half union and the "size and length" of the air hose. ($\phi 6 \times \phi 4$ air hose, 2 m at standard)

- ① Half union OD $6/8/10/12$ mm
- ② Air hose $\phi 6 \times \phi 4$ 2/5/10 m
 $\phi 8 \times \phi 5$ 2/5/10 m

3 Safety valve

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

- ① 0.5 MPa
- ② 0.2 MPa

9 Regulator/Air gauge with quick joints

Select "max. setting pressure"

- ① 0.2 MPa
- ② 0.7 MPa

2 Oring for lid

Select "material" (fluororubber at standard).

- ① Fluororubber (former: Viton)
- ② Silicone rubber
- ③ Nitrile rubber
- ④ Butyl rubber

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.

1 Tank body

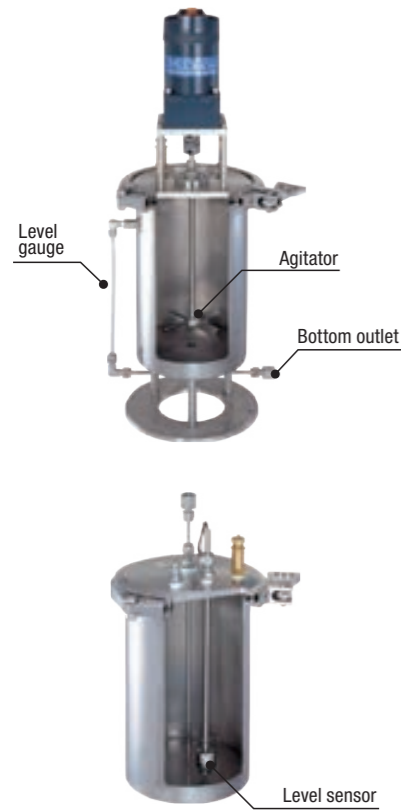
Select "type" and "size".

- 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

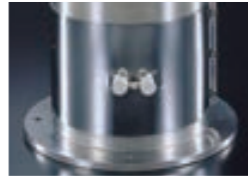
11 Other special order options

Please specify from Processing tank list on p. 41.

Full lineup of tank options



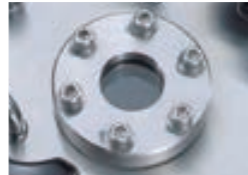
Temperature control



Piston



Inspection hole



Fluid feed tube connector



Level sensor

Tank processing list

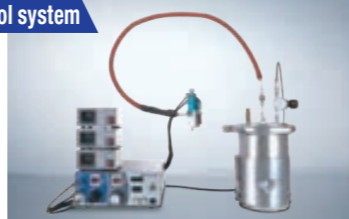
A tank can be selected depending on materials to be used, capacity, and other conditions.

Model	Direct feed type				Internal container type	
	SST	SOT	OTT	GAT	SST	SOT
Standard option	Change of Oring 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			Level gauge		
	Bottom outlet			Bottom outlet		
	Fluorine resin coated			Fluorine resin coated		
	Electrolytic polishing			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.

Valve and tank temperature control system

- Tank temperature control
- Tube temperature control
- Valve temperature control



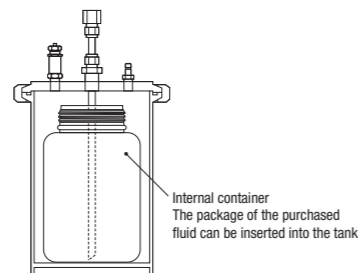
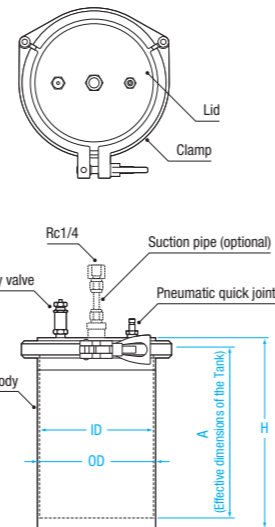
Note: Contact MUSASHI Sales for more details.

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 drawing



■ Straight one touch tank

Capacity (L)	Model	External dimensions (mm)				Weight (kg)	Material	Pressure	Standard accessories
		H	ID	OD	A				
4.6	SOT-4.6L	266	φ159	φ165	241	8.7	Stainless steel	0.5 MPa	<ul style="list-style-type: none"> • Oring (Fluororubber) • Safety valve* • Pneumatic quick joint
5.6	SOT-5.6L	316	φ159	φ165	291	9.3			
6.3	SOT-6.3L	356	φ159	φ165	331	9.7			
12.7	SOT-12.7L	417	φ208	φ216	386	17.8			
21.3	SOT-21.3L	448	φ259	φ267	417	25.8			

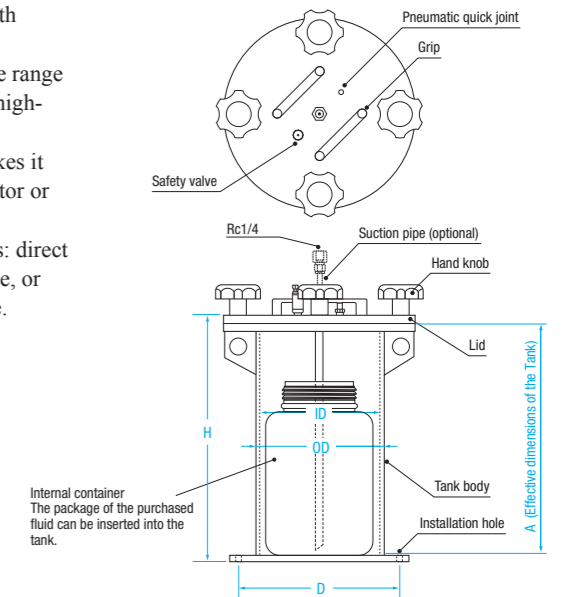
* The safety valve pressure is set at 0.2/0.5 MPa.

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 drawing



■ 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	A						
1.7	SST-1.7L	207	φ110	φ114	191	150	4- φ9	4.2	Stainless steel	0.5 MPa	<ul style="list-style-type: none"> • Oring (Fluororubber) • Safety valve* • Pneumatic quick joint
2.2	SST-2.2L	257	φ110	φ114	241	150	4- φ9	4.5			
5.5	SST-5.5L	309	φ158	φ165	289	200	4- φ9	11.5			
6.2	SST-6.2L	349	φ158	φ165	329	200	4- φ9	12.0			
12.7	SST-12.7L	411	φ208	φ216	387	260	4- φ11	25.6			
20.3	SST-20.3L	443	φ254	φ267	415	310	4- φ11	42.4			
38.5	SST-38.5L	465	φ343	φ356	431	400	4- φ11	69.0			

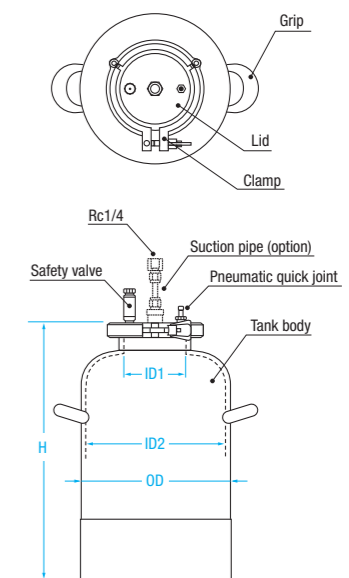
* The safety valve pressure is set at 0.2/0.5 MPa.

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 drawing



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-1L	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-2L	280	φ108	φ108	φ111	3.2			
3	OTT-3L	280	φ108	φ150	φ153	3.7			
5	OTT-5L	310	φ108	φ180	φ183	4.2			
10	OTT-10L	400	φ108	φ230	φ233	6.3			
20	OTT-20L	470	φ108	φ279	φ283	9.7			
30	OTT-30L	505	φ108	φ330	φ334	11.4			

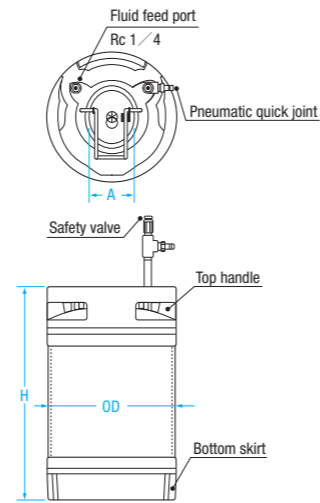
* The safety valve pressure is set at 0.2/0.5 MPa.

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.

Part names and external dimensions



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	<ul style="list-style-type: none"> • O-ring (Fluororubber) • Safety valve * • Pneumatic quick joint
5 gallon (Approx. 19 L)	GAT-5G	565	φ229	82	4.3			

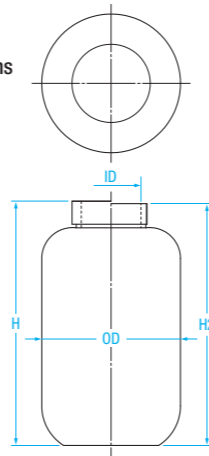
* The safety valve pressure is set at 0.2 MPa.

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 drawing



Internal container

Capacity (L)	Model	External dimensions (mm)				Supported tanks	Material
		With outer lid H	Without outer lid H2	Outside diameter of body OD	Inside diameter of opening ID		
0.5	SBP-0.5L-01	149	146	φ78	φ43.5	SOT-4.6 L to SOT-21.3 L, SST-1.7 L to SST-38.5 L	Lid: HDPE Internal lid: LDPE Container: HDPE
1	SBP-1L-01	189	186	φ101	φ43.5	SOT-4.6 L to SOT-21.3 L, SST-1.7 L to SST-38.5 L	
2	SBP-2L-01	240	234.5	φ126	φ75	SOT-4.6 L to SOT-21.3 L, SST-2.2 L to SST-38.5 L	
3	SBP-3L-01	271	267.5	φ142.5	φ74.5	SOT-5.6 L to SOT-21.3 L, SST-6.2 L to SST-38.5 L	
5	SBP-5L-01	303	300	φ172	φ74	SOT-12.7 L to SOT-21.3 L, SST-12.7 L to SST-38.5 L	
10	SBP-10L-01	398	383.5	φ217	φ96.6	SOT-21.3 L, SST-20.3 L to SST-38.5 L	
20	SBP-20L	420	415	φ304	φ96	SST-38.5 L	

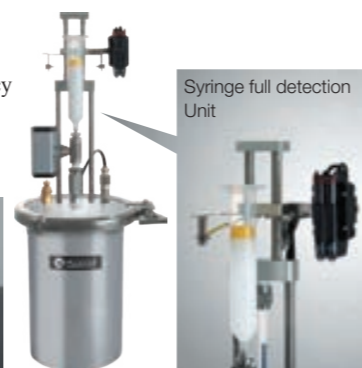
Note: The internal container must be inserted inside a safety lock tank or straight one-touch tank series before using.

Simple syringe filling machine **FILLING MATE** Optimal for small-batch filling from liquid containers to syringes, with simple, bubble-free filling.



Comprehensive options

- Automatic stop function for quantitative filling. Achieves efficient filling operations and high quantitative accuracy through the syringe full detection unit and dedicated controller.
- Custom pistons available upon request.
- Safety cap to prevent liquid splashing
- Capacity remaining detection unit



Pail pressure feed pump for dispensing systems **LPP-1**

A new pressure feed pump for dispensing applications has been developed.

- Reduced frequency of liquid material replacement by increasing the size of liquid material supply containers. It is possible to reduce the unit price per gram for purchasing liquid materials.
- Support from pre-implementation verification and evaluation through to system construction.
- We provide comprehensive support throughout the entire process, including when customer-led setup and adjustments are required, or when identifying issues during abnormal occurrences.
- Thoughtful design that puts users first

Pump actuation unit
The power source that drives the operation of the pump. Easy adjustment of liquid feed pressure due to pump ratio optimized for dispenser connection.

Remote control solenoid valves
Valve to control pump actuation air. Allows external control to start or stop liquid agent supply at any time.

Limit switch x 2
Switch for warning of remaining pail volume. Prevents operational stoppages due to empty cans through a two-stage detection process: empty can warning and final detection. Enables planned changeovers, contributing to reduced downtime.

For emergency shutdown Hand valve
Main manual valve for supply air. Residual pressure release function quickly removes residual air from the piping. Ensures a safe working environment by preventing unexpected operation during equipment shutdowns, maintenance, or emergencies.

Terminal block box
Centralized wiring for remote-operated solenoid valves and limit switches. Reduces wiring labor and minimizes the risk of wiring errors, achieving high safety and maintainability.

Pump unit
The main component that handles the pressure feed pumping of the liquid agent. Achieves high durability against filler-containing liquid materials through the use of wear-resistant materials.

Follow plate
A plate that adheres to the liquid surface inside the drum to ensure smooth supply of the liquid agent to the pump unit. Improved workability during pail can replacement through a design that reduces liquid dripping.

Air bleed port
Port for purging residual air from the top of the container during drum replacement. Improved knob tip shape enhances ease of operation during air purging.

Example of dispenser connection

Digital control with volumetric weighing Dispenser **MEASURING MASTER DUAL MPP-5 series**

High-performance screw dispensers **SCREW MASTER series**

High-performance Dual-MOHNO system dispenser **MOHNO MASTER series**

Specifications

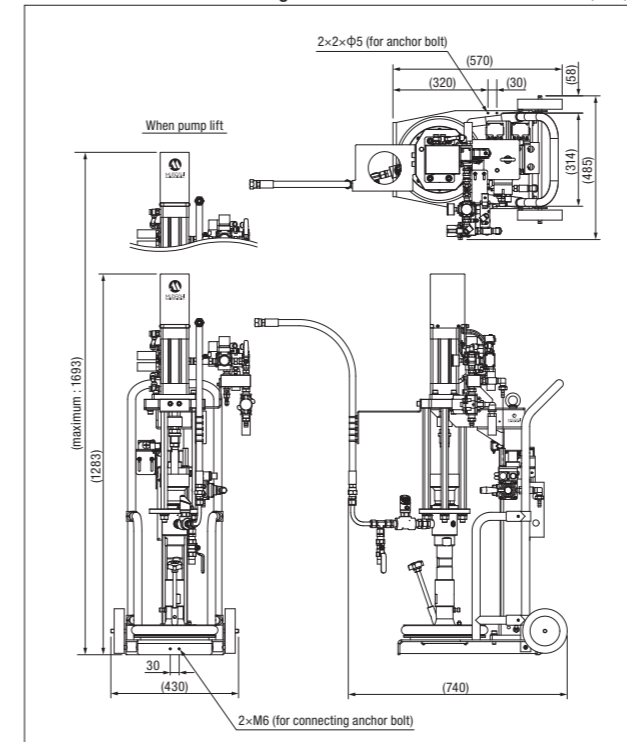
Liquid pressure feed pump body

Model	LPP-1-MU-1	
Pump ratio	11:1	
Maximum dispensing pressure	5 MPa	
use	Air motor	0.1 to 0.5 MPa
air pressure	Elevator	0.1 to 0.5 MPa
Pump capacity	75 mL/1 reciprocating	
Elevator type	Single cylinder type	
Elevator Cylinder Diameter	φ80 mm	
Elevator thrust	2150N (at 0.5 MPa air pressure)	
Fluid outlet	Rc3/4	
Air inlet	Rc1/2	
External dimensions (excluding protrusions)	W500xD570xH1283 mm (At the elevator's upper limit position, maximum height 1693 mm)	
Weight	80 kg	
Noise Level	70 dB(A) or less	
Compliance with standards	EU RoHS, CE marking	

Pressure feed pump connection unit for LPP-1

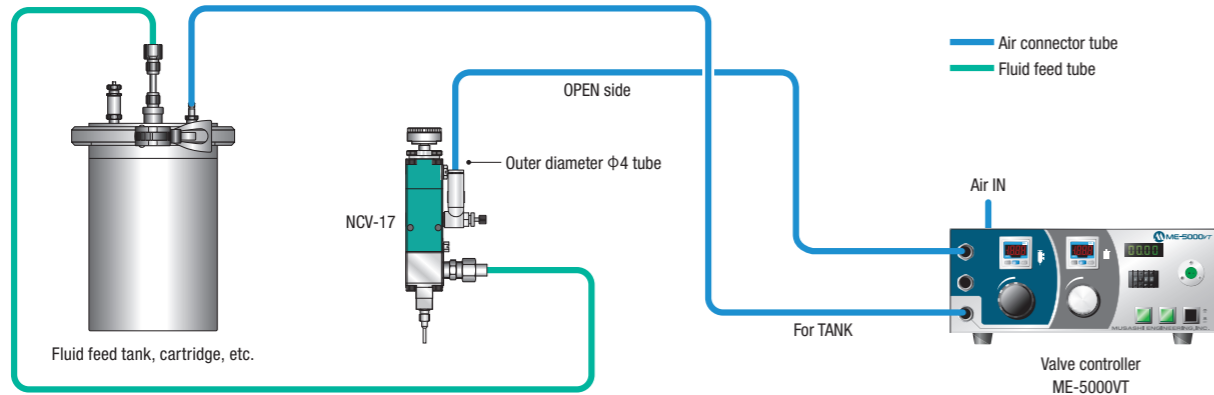
Model	LPP-1-P-CU-1	
Pressure-resistant	5.5 MPa (pressure resistance of ball valve)	
Fluid Inlet	R3/4	
Fluid outlet	G1/2 (parallel pipe male and female thread sheet)	
Pressure sensor type	GP-M100T (manufactured by Keyence, pressure resistance: 10 MPa)	
For pressure sensor	OP-75721 (manufactured by Keyence, sensor side: M12 4-pin, terminal: stripped cable, length: 2 m)	
Cable type	Piping parts: stainless steel, packing: fluoroplastic, Ball valve: stainless steel/ fluoroplastic, Pressure sensor: stainless steel/alumina/fluorine rubber/fluorine resin	
Material		
External dimensions (excluding protruding parts)	W300xD60xH280 mm	
Weight	0.8 kg	
Compliance with standards	EU RoHS, CE marking (pressure sensor)	

External dimensions drawing

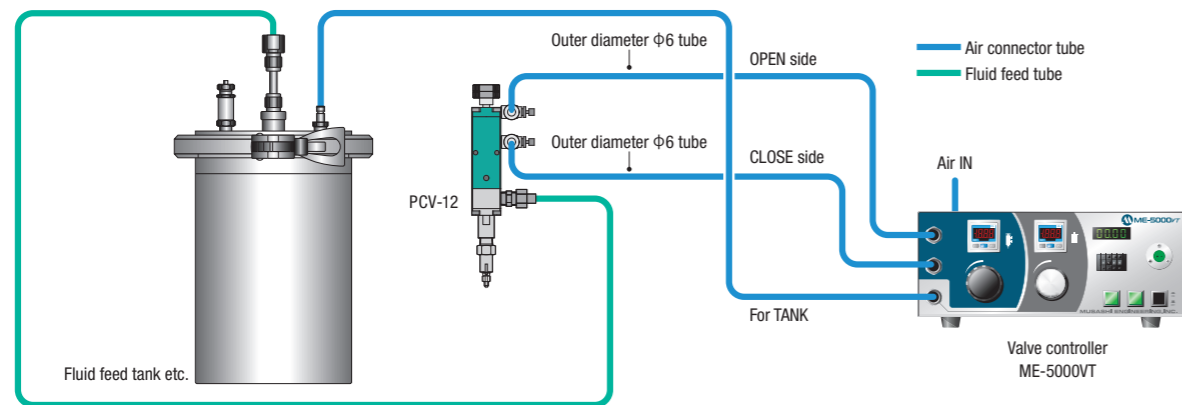


Configuration diagram of the valve and tank system

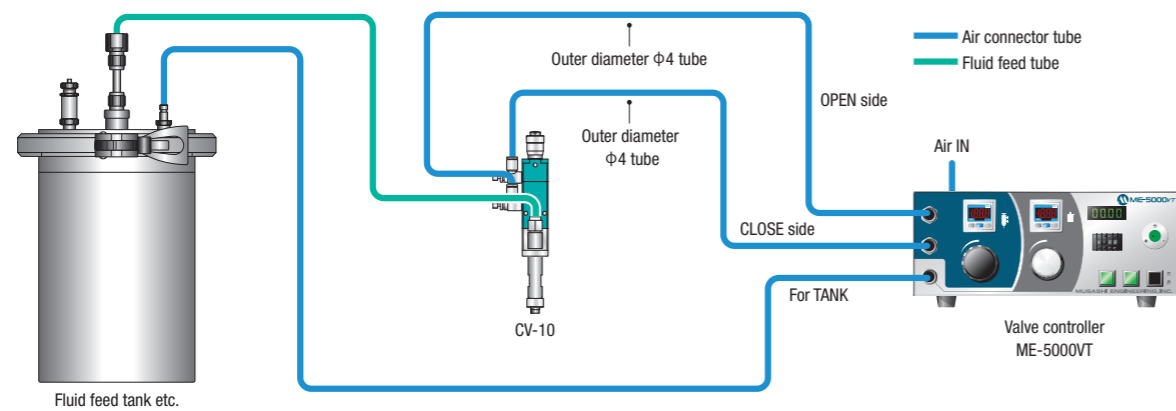
■ SMALL TYPE NEEDLE CONTROL VALVE MiniVal NCV-17



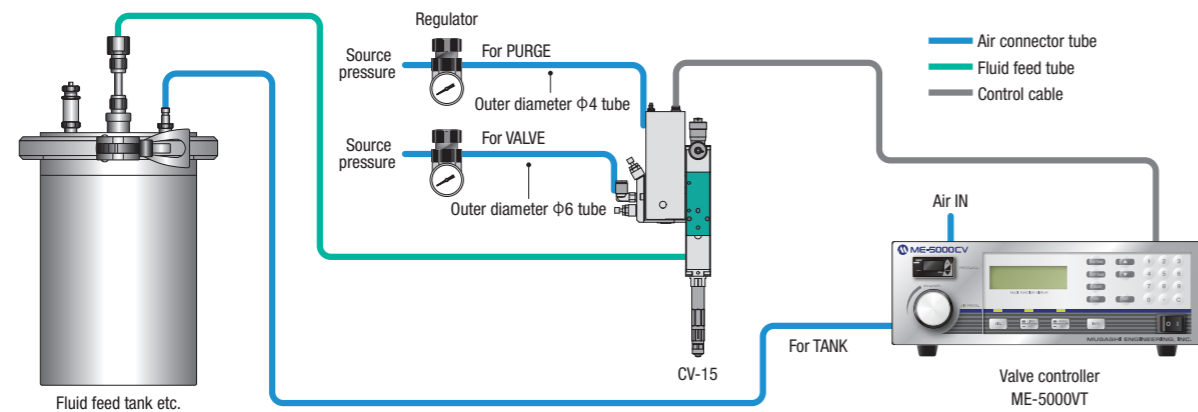
■ Piston control valve MiniVal PCV-12



■ Coating valve CV-10

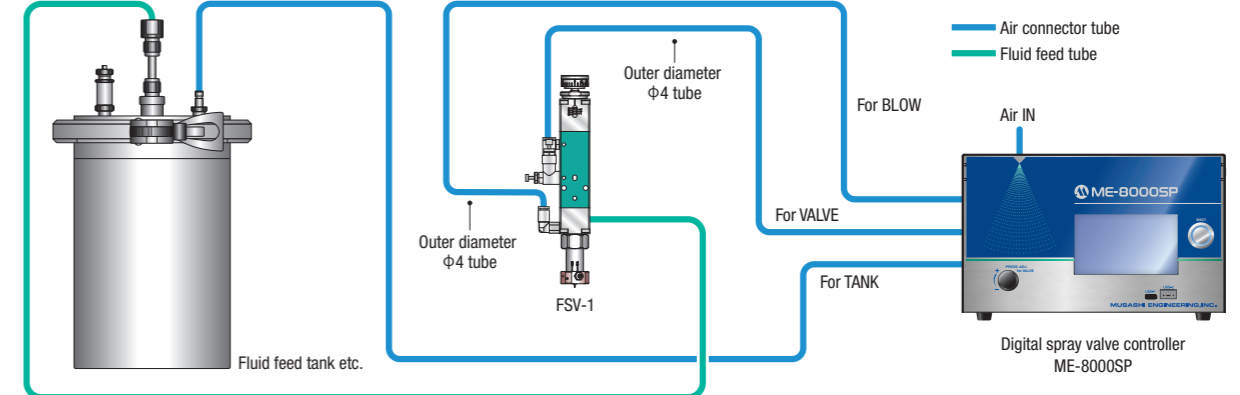


■ Coating valve CV-15

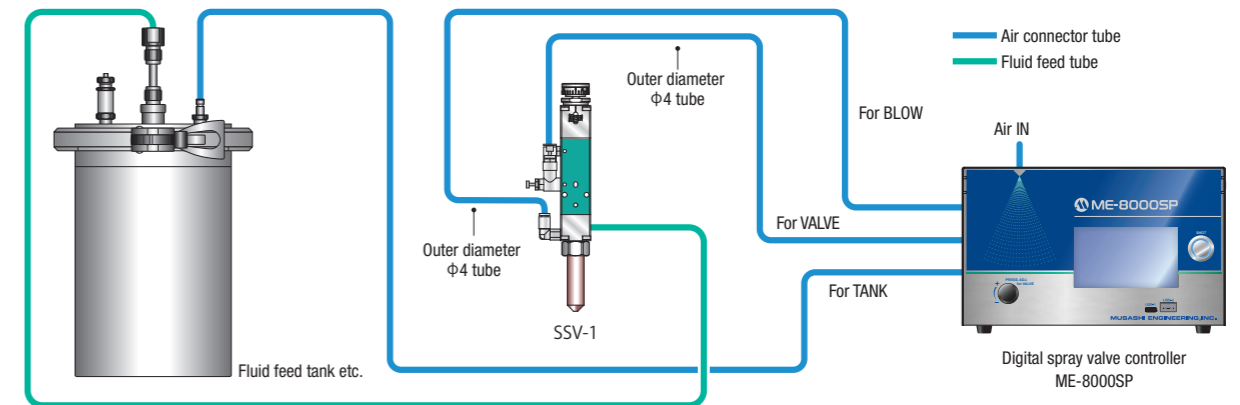


Configuration diagram of the valve and tank system

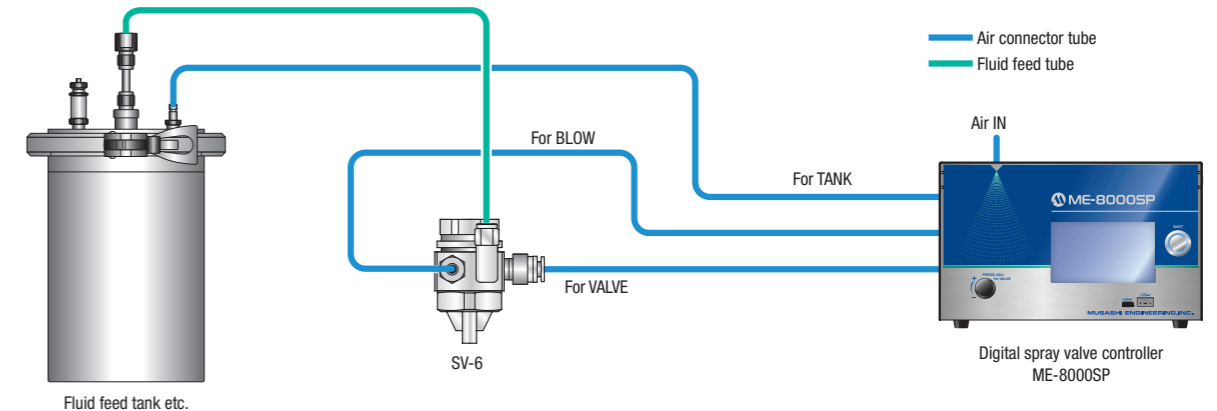
■ Two-fluid fine spray valve FSV-1



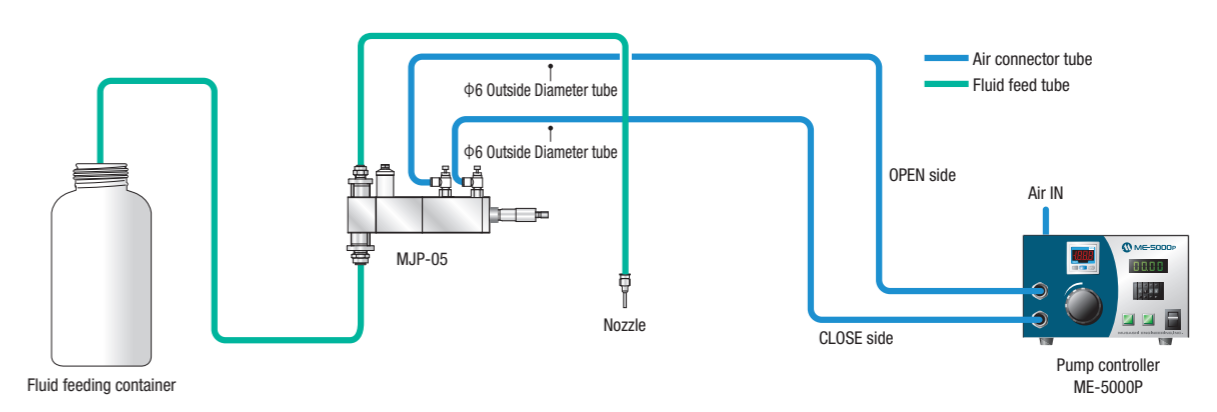
■ Two-fluid shape spray valve SSV-1



■ Two-fluid spray valve SV-6



■ Volume measuring type plunger pump JUSTRO PUMP MJ-P-05



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.

The product lineup includes a variety of dispensing methods to suit the application of dispensing, such as the newly developed Non-contact JET Dispenser, Air-pulse dispenser, Volumetric metering dispenser, Screw dispenser, Tubing dispenser, and Ultra-small dosage dispenser.

A product line worthy of the Next generation of standard Dispensers executes the work of uncompromising professionals with depth and precision.

Full-function digital control dispenser

Super Σ CMV / Super Σ CMV Pro



The pinnacle of Air-pulse technology, Reaching new frontiers.

- **Enhanced performance of the 3 major functions of Σ .**
- **Eco Mode:** Reduces air consumption during operation.
- **Sleep Mode:** Reduces power consumption and air consumption when the device is temporarily paused.
- **Enhancement of production management functions. Equipped with log, self-diagnosis, and emergency stop functions.**
- Supports network connectivity. Equipped with LAN port. (Ethernet-compatible)
- Improved compatibility with PCs. Equipped with USB port. (Type-C and Type-A compatible)
- Features an Air-pulse Stabilization Circuit (PAT.)

High-precision digital dispenser

ML-6000X / ML-6000X Pro



New generation digital dispenser

- **Compatible with Industry 4.0, outputs various abnormal errors.**
- Subscription to variety channels is available.
- Offers both general-purpose specifications and vacuum high-resolution specifications.
- **Pressure settings can now be adjusted from the device side.**
- **Two dispensing pressure types are available.**
- CE marking, EU RoHS2 compliant.
- Features an Air-pulse Stabilization Circuit (PAT.)

Supports upper-level communication Fully digital controlled dispenser

ML-8000X



Industry 4.0 "complete" support Digital Dispenser Unveiled!!

- **Improved functions** — Vacuum pressure setting.
- **Production control** — Equipped with log, self-diagnosis, emergency stop
- **Refined operability** — Equipped with a 4.3 inch touch panel
Easy operation and setting with "touch screen".
- **PC communication** — Equipped with USB ports.
- **Network connection compatible** — Equipped with LAN port.
Ethernet compatible.
- Air-pulse stabilization circuit (PAT) mounted.

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 RoHS2 compliant.



High viscosity Non-contact JET dispenser

Super Jet 3 Hi POWER



Pursuit of high reliability • high quality.

- **MAX : 2,000 shots per second.**
- **Minimum dispensing diameter : $\phi 110 \mu\text{m}$.**
- Compliance with standards: CE marking (LVD, EMCD), EU RoHS2.
- SynchroSpeed Function support.

Volumetric Digital Dispenser

MEASURING MASTER MPP-5-M



Dispense a liquid agent with changing viscosity in a quantitative manner. Overwhelming Dispensing Precision.

- Comprehensive lineup covering everything from micro-volumes to high flow rates.
- Improved error detection and enhanced operability.
- Added features useful for production management.
<Confirm error log function and cumulative distance>

High-performance MOHNO type dispenser

MOHNO MASTER



For high-speed, high-quality gasket dispensing.

- **Zero bubble contamination for dispensing!**
- **High responsiveness** eliminates variation in dispensing accuracy and shape.
- **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 and High viscosity Non-contact JET dispenser

AeroJet

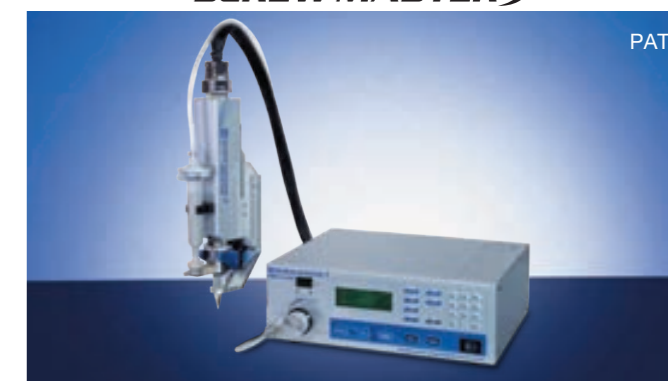


High-speed and high-precision JET. Major reduction in production takt time.

- "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



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.**

Embodiments 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 realizes ideal "Craftsmanship."

Fully automatic, high-productivity dispense machine

DISPENS MASTER SERIES **FAD 2500W**



PAT.

Dispensing machines that do not stop production

- Allows head maintenance during production. Minimize idle time. Simultaneous processing by multiple heads.
- Reduced downtime with one-touch head attachment/detachment.
- Equipped with a reliable traceability system for personnel and materials related to the equipment.
- Equipped with a camera for monitoring inside the equipment. Contributes to reducing troubleshooting time.

Cartesian robot

XCROSS MASTER **RX**series



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 MuCAD V optionally installed.
- Selectable stroke Select optimum stroke from 9 available combinations.

Desktop dispensing robot with PC control image recognition

IMAGE MASTER **350PC** Smart



PAT.

The photo shows IMAGE MASTER 350PC Smart and SM300 QX.

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.

Desktop type robot

SHOTMASTER **Sx**series



Ultimate high cost performance

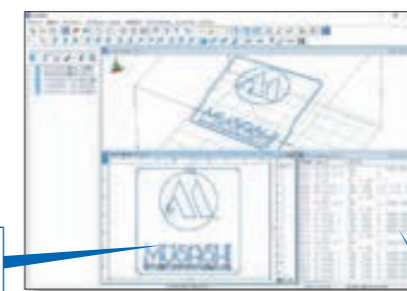
- 800 mm/s top level operation speed in desktop class.
- Repetitive positioning accuracy ± 0.01 mm.
- Synchro Speed function mounted.

Dispensing pattern editing software

MuCAD V

Concentration of No. 1 dispensing know-how

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



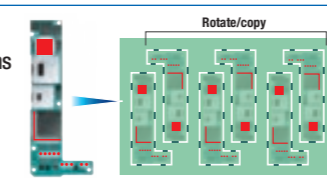
[New Function]

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 automated seal dispensing machine

MLC-6500



PAT.

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.



inkJET High precision dispensing system

LABO DISPENSE MASTER **MIJ 1000**



Verification is available from R&D through to mass-production prototyping.

- Top class dropping volume accuracy. Achieves stable dispensing through proprietary inkJET technology.
- Camera-based dispensing position correction available.
- Support for diverse work types.
- Capable of providing dispensing volume feedback through standard-equipped weighing device.
- Automatically generate dispensing programs.

Desktop dispensing robot for laser soldering

DISPENSE LASER MASTER



PAT.

A new era for laser solder dispensing

- Combining advanced dispensing technology with lasers.
- Non-contact melting.
- No spatter, 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.

A

	Model	Former model	Page	Item name	Former product code
AH-	AH-24	AH-24	28	AIR HOSE [OD4MM ID2.5MM BLACK]	981100
	AH-46	AH-46	28	AIR HOSE [OD6MM ID4MM BLACK]	982100
AT-	AT-1E	—	10	ADAPTER TUBE [1ML]	—
	AT-3E-H-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 03ML 1.0M]	—
	AT-3E-H-C-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 03ML WITH CLAMP 1.0M]	—
	AT-3E-H-P4C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 03ML OD4MM 1.0M]	—
	AT-3E-H-P6C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 03ML OD6MM 1.0M]	—
	AT-3E-SUS-1.0M	—	9	STAINLESS ADAPTER TUBE [WITH STOPPER 03ML 1.0M]	—
	AT-5E-H-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 05ML 1.0M]	—
	AT-5E-H-C-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 05ML WITH CLAMP 1.0M]	—
	AT-5E-H-P4C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 05ML OD4MM 1.0M]	—
	AT-5E-H-P6C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 05ML OD6MM 1.0M]	—
	AT-5E-H-S-1.0M	—	11	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 05ML 1.0M]	—
	AT-5E-H-SIGMA-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 05ML SIGMA USE 1.0M]	—
	AT-5E-H-SIGMA-P-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 05ML SIGMAPRO USE 1.0M]	—
	AT-5E-SUS-1.0M	—	9	STAINLESS ADAPTER TUBE [WITH STOPPER 05ML 1.0M]	—
	AT-10E-H-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-10E-H-C-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 10ML WITH CLAMP 1.0M]	—
	AT-10E-H-P4C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 10ML OD4MM 1.0M]	—
	AT-10E-H-P6C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 10ML OD6MM 1.0M]	—
	AT-10E-H-S-1.0M	—	11	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-10E-H-SEP-1.0M	—	9	ANTISTATIC ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-10E-H-SIGMA-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 10ML SIGMA USE 1.0M]	—
	AT-10E-H-SIGMA-P-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 10ML SIGMAPRO USE 1.0M]	—
	AT-10E-SUS-1.0M	—	9	STAINLESS ADAPTER TUBE [WITH STOPPER 10ML 1.0M]	—
	AT-50E-H-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 20~70ML 1.0M]	—
	AT-50E-H-C-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 20~70ML WITH CLAMP 1.0M]	—
	AT-50E-H-P4C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 20~70ML OD4MM 1.0M]	—
	AT-50E-H-P6C-1.0M	—	10	PLASTIC CONNECTOR TYPE ADAPTER TUBE [WITH STOPPER 20~70ML OD6MM 1.0M]	—
	AT-50E-H-S-1.0M	—	11	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 20~70ML 1.0M]	—
	AT-50E-H-SEP-1.0M	—	9	ANTISTATIC ADAPTER TUBE [WITH STOPPER 20~70ML 1.0M]	—
	AT-50E-H-SEP-SIGMA-1.0M	—	9	ANTISTATIC ADAPTER TUBE [WITH STOPPER 20~70ML SIGMA 1.0M]	—
	AT-50E-H-SIGMA-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 20~70ML SIGMA USE 1.0M]	—
	AT-50E-H-SIGMA-P-1.0M	—	10	ADAPTER TUBE [WITH STOPPER 20~70ML SIGMAPRO USE 1.0M]	—
	AT-50E-H-S-SIGMA-1.0M	—	11	SIDE CONNECTION ADAPTER TUBE [WITH STOPPER 20~70ML SIGMA USE 1.0M]	—
AT-50E-SUS-1.0M	—	9	STAINLESS ADAPTER TUBE [WITH STOPPER 30~50ML 1.0M]	—	
AT-100E	AT-100E	10	ADAPTER TUBE [100ML]	5A8100	

B

	Model	Former model	Page	Item name	Former product code
BC-	BC-4	BC-4	23	BARREL HEAD CAP [TYPE 4]	5CB300
	BC-4U-B	BC-4U-B	23	UV BLOCK BARREL HEAD CAP [TYPE 4]	—
BN-	BN-S1	BN-S1	19	BRUSH NOZZLE [STANDARD 4.5PHI]	6E5100
	BN-S2	BN-S2	19	BRUSH NOZZLE [SOFT TYPE 4.5PHI]	6E6100
	BN-S3	BN-S3	19	BRUSH NOZZLE [STANDARD 2PHI]	12100062
	BN-S4	BN-S4	19	BRUSH NOZZLE [SOFT TYPE 2PHI]	12100063
BP-	BP-4	BP-4	23	BARREL TIP CAP [TYPE 4]	5DA300
	BP-4U-B	—	23	UV BLOCK BARREL TIP CAP [TYPE 4]	—

C

	Model	Former model	Page	Item name	Former product code
CB-	CB-1604A-CNV-DSUB25	—	28	CONVERSION CABLE [TYPE 16 4 PIN DSUB 25 PIN]	—
CC-	CC-P-001-1	CC-P-001-1	22,25	CARTRIDGE CAP [WITHOUT HOOK]	14100010
	CC-P-001-2	CC-P-001-2	22,25	CARTRIDGE CAP [WITH HOOK]	14100011
CH-	CH-100C	CH-100C	22	CARTRIDGE HOLDER [100ML BARREL USE]	14100012
	CH-170C	CH-170C	22	CARTRIDGE HOLDER [170ML BARREL USE]	14100013
	CH-170CT	CH-170C	25	CARTRIDGE HOLDER [170ML TUBE USE]	—
	CH-230C	CH-230C	25	CARTRIDGE HOLDER [230ML TUBE]	14100027
	CH-340C	CH-340C	22	CARTRIDGE HOLDER [340ML BARREL]	14100014
CL-	CL-1	CL-1	29	H-TYPE STAND CLAMP HOLDER	C22102
CPN-	CPN-14G-A45	CPN-14G-A45	18	CURVE NEEDLE [14G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	613G00
	CPN-14G-A90	CPN-14G-A90	18	CURVE NEEDLE [14G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	613H00
	CPN-14G-B45	CPN-14G-B45	18	CURVE NEEDLE [14G NEEDLE LENGTH 38.1MM ANGLE45] BODY: PLASTIC	613I00
	CPN-15G-A45	CPN-15G-A45	18	CURVE NEEDLE [15G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	614G00
	CPN-15G-A90	CPN-15G-A90	18	CURVE NEEDLE [15G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	614H00
	CPN-18G-A45	CPN-18G-A45	18	CURVE NEEDLE [18G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	617G00
	CPN-18G-A90	CPN-18G-A90	18	CURVE NEEDLE [18G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	617H00
	CPN-18G-B45	CPN-18G-B45	18	CURVE NEEDLE [18G NEEDLE LENGTH 38.1MM ANGLE45] BODY: PLASTIC	617I00
	CPN-20G-A45	CPN-20G-A45	18	CURVE NEEDLE [20G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	619G00
	CPN-20G-A90	CPN-20G-A90	18	CURVE NEEDLE [20G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	619H00
	CPN-21G-A45	CPN-21G-A45	18	CURVE NEEDLE [21G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	61AG00
	CPN-21G-A90	CPN-21G-A90	18	CURVE NEEDLE [21G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	61AH00
	CPN-21G-B45	CPN-21G-B45	18	CURVE NEEDLE [21G NEEDLE LENGTH 38.1MM ANGLE45] BODY: PLASTIC	61AI00
	CPN-22G-A45	CPN-22G-A45	18	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	18	CURVE NEEDLE [22G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	61BH00
	CPN-23G-A45	CPN-23G-A45	18	CURVE NEEDLE [23G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	61CG00
	CPN-23G-A90	CPN-23G-A90	18	CURVE NEEDLE [23G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	61CH00
	CPN-25G-A45	CPN-25G-A45	18	CURVE NEEDLE [25G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	61EG00
	CPN-25G-A90	CPN-25G-A90	18	CURVE NEEDLE [25G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	61EH00
	CPN-27G-A45	CPN-27G-A45	18	CURVE NEEDLE [27G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	61GG00
	CPN-27G-A90	CPN-27G-A90	18	CURVE NEEDLE [27G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	61GH00
	CPN-30G-A45	CPN-30G-A45	18	CURVE NEEDLE [30G NEEDLE LENGTH 12.7MM ANGLE45] BODY: PLASTIC	61JG00
	CPN-30G-A90	CPN-30G-A90	18	CURVE NEEDLE [30G NEEDLE LENGTH 12.7MM ANGLE90] BODY: PLASTIC	61JH00
	CS-	CS-100C	CS-100C	22	BARREL CARTRIDGE [100ML]
CS-100C-HK		CS-100C-HK	22	BARREL CARTRIDGE [100ML WITH HOOK]	14100007
CS-170C		CS-170C	22	BARREL CARTRIDGE [170ML]	14100005
CS-170C-HK		CS-170C-HK	22	BARREL CARTRIDGE [170ML WITH HOOK]	14100008
CS-170CT		CS-170CT	25	TUBE CARTRIDGE [100G]	14100019
CS-170CT-HK		CS-170CT-HK	25	TUBE CARTRIDGE [100G WITH HOOK]	14100021
CS-170CT-TD		CS-170CT-TD	25	TUBE CARTRIDGE [100G TYPE TD]	14100020
CS-170CT-TD-HK		CS-170CT-TD-HK	25	TUBE CARTRIDGE [100G TYPE TD WITH HOOK]	14100022
CS-230CT		CS-230CT	25	TUBE CARTRIDGE [200G]	14100023
CS-230CT-HK		CS-230CT-HK	25	TUBE CARTRIDGE [200G WITH HOOK]	14100025
CS-230CT-TD		CS-230CT-TD	25	TUBE CARTRIDGE [200G TYPE TD]	14100024
CS-230CT-TD-HK		CS-230CT-TD-HK	25	TUBE CARTRIDGE [200G TYPE TD WITH HOOK]	14100026
CS-340C		CS-340C	22	BARREL CARTRIDGE [340ML]	14100006
CS-340C-HK		CS-340C-HK	22	BARREL CARTRIDGE [340ML WITH HOOK]	14100009
CS-P-001-1A		CS-P-001-1A	23	ORING RECEIVER [CARTRIDGE CAP USE]	14100015
CT-	CT-24P	CT-24P	27	AIR CONNECTOR TUBE [QJPLUG OD4MM 1M]	951A00
	CT-36PS	CT-36PS	27	AIR CONNECTOR TUBE [QJ PLUG QJ SOCKET 1.0M]	952K00
	CT-36PS-F	—	11	AIR CONNECTOR TUBE [QJPLUG QJ SOCKET WITH FILTER 150M]	—
CV-	CV-10-2P-1N	CV-10-2P-1N	42	COATING VALVE [TYPE 10 2PORT WITHOUT JOINT]	*1
	CV-15-EM-1N	—	41	COATING VALVE [TYPE 15 LIQUID FEED ON RIGHT]	—
	CV-15-EM-1N-CFS	—	41	COATING VALVE [TYPE 15 CIRCULATING FLUID SUPPLY]	—

D

	Model	Former model	Page	Item name	Former product code
DCV-	DCV-2-VT	DCV-2-VT	37	DIAPHRAGM VALVE [ELECTROMAGNETIC TYPE]	16100012
	DCV-2N-VT	DCV-2N-VT	37	DIAPHRAGM VALVE [ELECTROMAGNETIC TYPE STROKE ADJUSTMENT ATTACHED]	16100013
	DCV-3	DCV-3	37	DIAPHRAGM VALVE [PNEUMATIC TYPE]	754100
	DCV-3N	DCV-3N	37	DIAPHRAGM VALVE [PNEUMATIC TYPE STROKE ADJUSTMENT ATTACHED]	755100
DHG-	DHG-5E	DHG-5E	29	DISPENSE HANDGUN [5ML]	2C3100
	DHG-10E	DHG-10E	29	DISPENSE HANDGUN [10ML]	2C4100
	DHG-30E	DHG-30E	29	DISPENSE HANDGUN [30ML]	2C6100
	DHG-50E	DHG-50E	29	DISPENSE HANDGUN [50ML]	2C7100
	DN-	DN-16G	DN-16G	20	TWIN NEEDLE [16G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE
DN-17G		DN-17G	20	TWIN NEEDLE [17G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	646100
DN-18G		DN-18G	20	TWIN NEEDLE [18G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	647100
DN-18G-3P		DN-18G-3P	20	3 PIN NEEDLE [18G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	647200
DN-19G		DN-19G	20	TWIN NEEDLE [19G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	648100
DN-19G-3P		DN-19G-3P	20	3 PIN NEEDLE [19G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	648200
DN-20G		DN-20G	20	TWIN NEEDLE [20G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	649100
DN-20G-3P		DN-20G-3P	20	3 PIN NEEDLE [20G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	649200
DN-21G		DN-21G	20	TWIN NEEDLE [21G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64A100
DN-21G-3P		DN-21G-3P	20	3 PIN NEEDLE [21G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64A200
DN-21G-4P		DN-21G-4P	20	4 PIN NEEDLE [21G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64A300
DN-22G		DN-22G	20	TWIN NEEDLE [22G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64B100
DN-22G-3P		DN-22G-3P	20	3 PIN NEEDLE [22G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64B200
DN-22G-4P		DN-22G-4P	20	4 PIN NEEDLE [22G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64B300
DN-23G		DN-23G	20	TWIN NEEDLE [23G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64C100
DN-23G-3P		DN-23G-3P	20	3 PIN NEEDLE [23G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64C200
DN-23G-4P		DN-23G-4P	20	4 PIN NEEDLE [23G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64C300
DN-24G		DN-24G	20	TWIN NEEDLE [24G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64D100
DN-24G-3P		DN-24G-3P	20	3 PIN NEEDLE [24G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64D200
DN-24G-4P		DN-24G-4P	20	4 PIN NEEDLE [24G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64D300
DN-25G		DN-25G	20	TWIN NEEDLE [25G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64E100
DN-25G-3P		DN-25G-3P	20	3 PIN NEEDLE [25G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64E200
DN-25G-4P		DN-25G-4P	20	4 PIN NEEDLE [25G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64E300
DN-26G		DN-26G	20	TWIN NEEDLE [26G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64F100
DN-26G-3P	DN-26G-3P	20	3 PIN NEEDLE [26G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64F200	
DN-26G-4P	DN-26G-4P	20	4 PIN NEEDLE [26G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64F300	
DN-27G	DN-27G	20	TWIN NEEDLE [27G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64G100	
DN-27G-3P	DN-27G-3P	20	3 PIN NEEDLE [27G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64G200	
DN-27G-4P	DN-27G-4P	20	4 PIN NEEDLE [27G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64G300	
DN-28G	DN-28G	20	TWIN NEEDLE [28G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64H100	
DN-28G-3P	DN-28G-3P	20	3 PIN NEEDLE [28G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64H200	
DN-28G-4P	DN-28G-4P	20	4 PIN NEEDLE [28G NEEDLE LENGTH 20MM] MULTI-PIN NOZZLE	64H300	

	Model	Former model	Page	Item name	Former product code
DPN-	DPN-14G-1	DPN-14G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [14G NEEDLE LENGTH12.7MM]	613D00
	DPN-14G-2	DPN-14G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [14G NEEDLE LENGTH 25.4MM]	613E00
	DPN-14G-3	DPN-14G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [14G NEEDLE LENGTH38.1MM]	613F00
	DPN-15G-1	DPN-15G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [15G NEEDLE LENGTH12.7MM]	614D00
	DPN-15G-2	DPN-15G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [15G NEEDLE LENGTH 25.4MM]	614E00
	DPN-15G-3	DPN-15G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [15G NEEDLE LENGTH38.1MM]	614F00
	DPN-18G-1	DPN-18G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [18G NEEDLE LENGTH12.7MM]	617D00
	DPN-18G-2	DPN-18G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [18G NEEDLE LENGTH 25.4MM]	617E00
	DPN-18G-3	DPN-18G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [18G NEEDLE LENGTH38.1MM]	617F00
	DPN-20G-1	DPN-20G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [20G NEEDLE LENGTH12.7MM]	619D00
	DPN-20G-2	DPN-20G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [20G NEEDLE LENGTH 25.4MM]	619E00
	DPN-20G-3	DPN-20G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [20G NEEDLE LENGTH38.1MM]	619F00
	DPN-21G-1	DPN-21G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [21G NEEDLE LENGTH12.7MM]	61AD00
	DPN-21G-2	DPN-21G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [21G NEEDLE LENGTH25.4MM]	61AE00
	DPN-21G-3	DPN-21G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [21G NEEDLE LENGTH38.1MM]	61AF00
	DPN-22G-1	DPN-22G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [22G NEEDLE LENGTH12.7MM]	61BD00
	DPN-22G-2	DPN-22G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [22G NEEDLE LENGTH25.4MM]	61BE00
	DPN-22G-3	DPN-22G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [22G NEEDLE LENGTH38.1MM]	61BF00
	DPN-23G-1	DPN-23G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [23G NEEDLE LENGTH12.7MM]	61CD00
	DPN-23G-2	DPN-23G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [23G NEEDLE LENGTH25.4MM]	61CE00
	DPN-23G-3	DPN-23G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [23G NEEDLE LENGTH38.1MM]	61CF00
	DPN-25G-1	DPN-25G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [25G NEEDLE LENGTH12.7MM]	61ED00
	DPN-25G-2	DPN-25G-2	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [25G NEEDLE LENGTH25.4MM]	61EE00
	DPN-25G-3	DPN-25G-3	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [25G NEEDLE LENGTH38.1MM]	61EF00
DPN-27G-1	DPN-27G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [27G NEEDLE LENGTH12.7MM]	61GD00	
DPN-30G-1	DPN-30G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [30G NEEDLE LENGTH12.7MM]	61JD00	
DPN-32G-1	DPN-32G-1	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [32G NEEDLE LENGTH12.7MM]	12100060	
DPN-32G-0	DPN-32G-0	16	DOUBLE THREAD SCREWED PLASTIC NEEDLE [32G NEEDLE LENGTH6.4MM]	12100064	
DSHN-	DSHN-M2-0.10F	—	14	DOUBLE THREAD SCREW PRECISION SOLID NOZZLE [FINE TYPE ID 0.10MM]	—
	DSHN-M2-0.15F	—	14	DOUBLE THREAD SCREW PRECISION SOLID NOZZLE [FINE TYPE ID 0.15MM]	—
	DSHN-M2-0.20F	—	14	DOUBLE THREAD SCREW PRECISION SOLID NOZZLE [FINE TYPE ID 0.20MM]	—
	DSHN-M2-0.25F	—	14	DOUBLE THREAD SCREW PRECISION SOLID NOZZLE [FINE TYPE ID 0.25MM]	—
	DSHN-M2-0.30F	—	14	DOUBLE THREAD SCREW PRECISION SOLID NOZZLE [FINE TYPE ID 0.30MM]	—

	Model	Former model	Page	Item name	Former product code
F/R-	F/R-4	F/R-4	28	FILTER/REGULATOR	C34C00
	F/R-MS-JSET	F/R-MS-JSET	27	REGULATOR CONNECTION JOINT SET	—
	F/R-MS-SETA	—	28	MIST SEPARATOR REGULATOR SET [TYPE A]	C36200
FAD	FAD2500W	—	52	FULLY AUTOMATIC HIGH PRODUCTIVITY DISPENSE MACHINE DISPENS MASTER	—
FLP-	FLP-1E	FLP-1E	12	FLOAT WIPER PLUNGER [1ML YELLOW]	13200004
	FLP-3E	FLP-3E	12	FLOAT WIPER PLUNGER [3ML YELLOW]	5B2600
	FLP-5E	FLP-5E	12	FLOAT WIPER PLUNGER [5ML YELLOW]	5B3600
	FLP-10E	FLP-10E	12	FLOAT WIPER PLUNGER [10ML YELLOW]	5B4600
	FLP-50E	FLP-50E	12	FLOAT WIPER PLUNGER [20/30/50ML YELLOW]	5B7600
	FLP-100E	—	12	FLOAT WIPER PLUNGER [100ML YELLOW]	—
FN-	FN-0.02N	FN-0.02N	15	SUPER FINE NOZZLE [ID0.02MM LUER LOCK]	68F200
	FN-0.02ND	FN-0.02ND	15	SUPER FINE NOZZLE [ID0.02MM DOUBLE TREAD SCREWED]	68F300
	FN-0.02N-F	FN-0.02N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.02MM LUER LOCK]	68F500
	FN-0.02ND-F	FN-0.02ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.02MM 2THREADSCREW]	068F6000
	FN-0.03N	FN-0.03N	15	SUPER FINE NOZZLE [ID0.03MM LUER LOCK]	68G200
	FN-0.03ND	FN-0.03ND	15	SUPER FINE NOZZLE [ID0.03MM DOUBLE TREAD SCREWED]	68G300
	FN-0.03N-F	FN-0.03N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.03MM LUER LOCK]	68G500
	FN-0.03ND-F	FN-0.03ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.03MM 2THREADSCREW]	068G6000
	FN-0.04N	FN-0.04N	15	SUPER FINE NOZZLE [ID0.04MM LUER LOCK]	68H200
	FN-0.04ND	FN-0.04ND	15	SUPER FINE NOZZLE [ID0.04MM DOUBLE TREAD SCREWED]	68H300
	FN-0.04N-F	FN-0.04N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.04MM LUER LOCK]	68H500
	FN-0.04ND-F	FN-0.04ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.04MM 2THREADSCREW]	068H6000
	FN-0.05N	FN-0.05N	15	SUPER FINE NOZZLE [ID0.04MM LUER LOCK]	683200
	FN-0.05ND	FN-0.05ND	15	SUPER FINE NOZZLE [ID0.04MM DOUBLE TREAD SCREWED]	683300
	FN-0.05N-F	FN-0.05N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.04MM LUER LOCK]	683500
	FN-0.05ND-F	FN-0.05ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.05MM 2THREADSCREW]	6836000
	FN-0.10N	FN-0.10N	15	SUPER FINE NOZZLE [ID0.10MM LUER LOCK]	684200
	FN-0.10ND	FN-0.10ND	15	SUPER FINE NOZZLE [ID0.10MM DOUBLE TREAD SCREWED]	684300
	FN-0.10N-F	FN-0.10N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.10MM LUER LOCK]	684500
	FN-0.10ND-F	FN-0.10ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.10MM 2THREADSCREW]	6846000
	FN-0.15N	FN-0.15N	15	SUPER FINE NOZZLE [ID0.15MM LUER LOCK]	685200
	FN-0.15ND	FN-0.15ND	15	SUPER FINE NOZZLE [ID0.15MM DOUBLE TREAD SCREWED]	685300
	FN-0.15N-F	FN-0.15N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.15MM LUER LOCK]	685500
	FN-0.15ND-F	FN-0.15ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.15MM 2THREADSCREW]	6856000
FN-0.20N	FN-0.20N	15	SUPER FINE NOZZLE [ID0.20MM LUER LOCK]	686200	
FN-0.20ND	FN-0.20ND	15	SUPER FINE NOZZLE [ID0.20MM DOUBLE TREAD SCREWED]	686300	
FN-0.20N-F	FN-0.20N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.20MM LUER LOCK]	686500	
FN-0.20ND-F	FN-0.20ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.20MM 2THREADSCREW]	6866000	

	Model	Former model	Page	Item name	Former product code
FN-	FN-0.25N	FN-0.25N	15	SUPER FINE NOZZLE [ID0.25MM LUER LOCK]	687200
	FN-0.25ND	FN-0.25ND	15	SUPER FINE NOZZLE [ID0.25MM DOUBLE TREAD SCREWED]	687300
	FN-0.25N-F	FN-0.25N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.25MM LUER LOCK]	687500
	FN-0.25ND-F	FN-0.25ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.25MM 2THREADSCREW]	6876000
	FN-0.30N	FN-0.30N	15	SUPER FINE NOZZLE [ID0.30MM LUER LOCK]	688200
	FN-0.30ND	FN-0.30ND	15	SUPER FINE NOZZLE [ID0.30MM DOUBLE TREAD SCREWED]	688300
	FN-0.30N-F	FN-0.30N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.30MM LUER LOCK]	688500
	FN-0.30ND-F	FN-0.30ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.30MM 2THREADSCREW]	6886000
	FN-0.40N	FN-0.40N	15	SUPER FINE NOZZLE [ID0.40MM LUER LOCK]	689200
	FN-0.40ND	FN-0.40ND	15	SUPER FINE NOZZLE [ID0.40MM DOUBLE TREAD SCREWED]	689300
	FN-0.40N-F	FN-0.40N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.40MM LUER LOCK]	689500
	FN-0.40ND-F	FN-0.40ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.40MM 2THREADSCREW]	6896000
	FN-0.50N	FN-0.50N	15	SUPER FINE NOZZLE [ID0.50MM LUER LOCK]	68A200
	FN-0.50ND	FN-0.50ND	15	SUPER FINE NOZZLE [ID0.50MM DOUBLE TREAD SCREWED]	69A300
	FN-0.50N-F	FN-0.50N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.50MM LUER LOCK]	68A500
	FN-0.50ND-F	FN-0.50ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.50MM 2THREADSCREW]	068A6000
	FN-0.60N	FN-0.60N	15	SUPER FINE NOZZLE [ID0.60MM LUER LOCK]	68B200
	FN-0.60ND	FN-0.60ND	15	SUPER FINE NOZZLE [ID0.60MM DOUBLE TREAD SCREWED]	69B300
FN-0.60N-F	FN-0.60N-F	15	SUPER FINE NOZZLE TIP THICK 15MICROMETER [ID0.60MM LUER LOCK]	68B500	
FN-0.60ND-F	FN-0.60ND-F	15	SUPER-FINE NOZZLE TIP THICK15MICROMETER [ID0.60MM 2THREADSCREW]	068B6000	
FS/W-	FS/W-2-1604P	FS/W-2-1604P	28	FOOT SWITCH [TYPE 16 4PIN]	C12300
FS/W-	FS/W-2-DSUB25-2.0M	FS/W-2-DSUB25-2.0M	28	FOOT SWITCH [DSUB 25 PIN 2.0M]	—
FSV-	FSV-1-1P-1N	—	38	FINE SPRAY VALVE MINIVAL [TYPE 1 1 PORT]	—

	Model	Former model	Page	Item name	Former product code
GAT-	GAT-3G	GAT-3G	46	GALLON TANK [3 GALLONS]	834100
GAT-	GAT-5G	GAT-5G	46	GALLON TANK [5 GALLONS]	835100
GC-	GC-1	GC-1	13	PROTECTIVE CAP FOR SYRINGE TIP [E TYPE]	5D9100

	Model	Former model	Page	Item name	Former product code
HB-	HB-2BN	—	26	FLUID FEEDING MANUAL 2-WAY VALVE [R1/4 RC1/4] JOINT	A47F00
	HB-2N	—	26	FLUID FEEDING MANUAL 2-WAY VALVE [RC1/4 RC1/4] JOINT	A47D00
HC-	HC-1E-H	HC-1E-H	13	SYRINGE HEAD CAP [1ML HTYPE]	13200005
	HC-3E	HC-3E	13	SYRINGE HEAD CAP [3ML]	5C2100
	HC-3EU-B	HC-3EU-B	13	SYRINGE HEAD CAP [3ML UV TYPE]	13200019
	HC-5E	HC-5E	13	SYRINGE HEAD CAP [5ML]	5C3100
	HC-5EU-B	HC-5EU-B	13	SYRINGE HEAD CAP [5ML UV TYPE]	13200020
	HC-10C	HC-10C	13	SYRINGE HEAD CAP [10ML]	5C4200
	HC-10U-B	HC-10U-B	13	SYRINGE HEAD CAP [10ML UV TYPE BLACK]	13200021
	HC-50E	HC-50E	13	SYRINGE HEAD CAP [20/30/50/70ML]	5C7100
HD-	HC-50EU-B	HC-50EU-B	13	SYRINGE HEAD CAP [20/30/50ML UV TYPE]	13200022
	HC-100E-2-CL	HC-100E-2-CL	13	SYRINGE HEAD CAP [100ML TYPE2 CLEAR]	—
	HD-5E-H	HD-5E-H	29	HAND DISPENSER [WITH STOPPER 5ML]	—
	HD-10E-H	HD-10E-H	29	HAND DISPENSER [WITH STOPPER 10ML]	—
	HD-20E-H	HD-20E-H	29	HAND DISPENSER [WITH STOPPER 20ML]	—
	HD-30E-H	HD-30E-H	29	HAND DISPENSER [WITH STOPPER 30ML]	—
	HD-50E-H	HD-50E-H	29	HAND DISPENSER [WITH STOPPER 50ML]	—
	HN-	HN-0.1N	HN-0.1N	14	PRECISION NOZZLE [ID0.1MM LUER LOCK]
HN-0.1ND		HN-0.1ND	14	PRECISION NOZZLE [ID0.1MM DOUBLE THREAD SCREWED]	651300
HN-0.15N		HN-0.15N	14	PRECISION NOZZLE [ID0.15MM LUER LOCK]	652200
HN-0.15ND		HN-0.15ND	14	PRECISION NOZZLE [ID0.15MM DOUBLE TREAD SCREWED]	652300
HN-0.2N		HN-0.2N	14	PRECISION NOZZLE [ID0.2MM LUER LOCK]	653200
HN-0.2ND		HN-0.2ND	14	PRECISION NOZZLE [ID0.2MM DOUBLE THREAD SCREWED]	653300
HN-0.25N		HN-0.25N	14	PRECISION NOZZLE [ID0.25MM LUER LOCK]	654200
HN-0.25ND		HN-0.25ND	14	PRECISION NOZZLE [ID0.25MM DOUBLE THREAD SCREWED]	654300
HN-0.3N		HN-0.3N	14	PRECISION NOZZLE [ID0.3MM LUER LOCK]	655200
HN-0.3ND		HN-0.3ND	14	PRECISION NOZZLE [ID0.3MM DOUBLE THREAD SCREWED]	655300
HN-0.4N		HN-0.4N	14	PRECISION NOZZLE [ID0.4MM LUER LOCK]	656200
HN-0.4ND		HN-0.4ND	14	PRECISION NOZZLE [ID0.4MM DOUBLE THREAD SCREWED]	656300
HN-0.5N		HN-0.5N	14	PRECISION NOZZLE [ID0.5MM LUER LOCK]	657200
HN-0.5ND		HN-0.5ND	14	PRECISION NOZZLE [ID0.5MM DOUBLE THREAD SCREWED]	657300
HN-0.6N		HN-0.6N	14	PRECISION NOZZLE [ID0.6MM LUER LOCK]	658200
HN-0.6ND		HN-0.6ND	14	PRECISION NOZZLE [ID0.6MM DOUBLE THREAD SCREWED]	658300
HPV-	HPV-2NC-2P	—	35	HIGH PRESSURE CORRESPONDING NEEDLE CONTROL VALVE [20MPa 2NC TYPE 2PORTS]	—
HS-	HS-1	HS-1	29	H-TYPE STAND	—

	Model	Former model	Page	Item name	Former product code
J-B	J-B1B-6	—	26	FLUID FEEDING TUBE CONNECTOR [R1/8 OD6MMID4MM FLUOROCARBON RESIN]	A34500
	J-B2B-6	J-B2B-6	26	FLUID FEEDING TUBE CONNECTOR [R1/4 OD6MMID4MM FLUOROCARBON RESIN] JOINT	A34E00
J-E	J-E-6	J-E-6	27	PNEUMATIC T-SOCKET [OD6MM USE] JOINT	AC3500

	Model	Former model	Page	Item name	Former product code
J-H	J-H2B	J-H2B	27	PNEUMATIC COUPLING [PLUG R1/4] JOINT	—
	J-H2N	J-H2N	27	PNEUMATIC COUPLING [PLUG RC1/4] JOINT	AB2300
	J-HS2N	—	27	PNEUMATIC COUPLING [SOCKET RC1/4] JOINT	—
J-L	J-L1B-6	—	26	FLUID FEEDING ELBOW TUBE CONNECTOR [R1/8 OD6MM ID4MM SUS]	A32500
	J-L1N	J-L1N	26	FLUID FEEDING ELBOW SOCKET [RC1/8 RC1/8 SUS] JOINT	A42100
	J-L2B-6	J-L2B-6	26	FLUID FEEDING ELBOW TUBE CONNECTOR [R1/4 OD6MM ID4MM USE SUS] JOINT	A32E00
	J-L2N	J-L2N	26	FLUID FEEDING ELBOW SOCKET [RC1/4 RC1/4 SUS] JOINT	A42A00
	J-LU1B-6	J-LU1B-6	27	PNEUMATIC ELBOW UNION [R1/8 OD6MM USE] JOINT	AA2500
	J-LU2B-6	J-LU2B-6	27	PNEUMATIC ELBOW UNION [R1/4 OD6MM USE] JOINT	AA2E00
J-N	J-N1B	J-N1B	26	FLUID FEEDING NIPPLE [R1/8 R1/8 SUS HEXAGONAL] JOINT	A4A100
	J-N1B-6	—	26	FLUID FEEDING TUBE CONNECTOR [R1/8 OD6MM ID4MM SUS]	1A100011
	J-N2B	J-N2B	26	FLUID FEEDING NIPPLE [R1/4 R1/4 SUS] JOINT	A41D00
	J-N2B-6	J-N2B-6	26	FLUID FEEDING TUBE CONNECTOR [R1/4 OD6MM ID4MM SUS] JOINT	A31E00
J-R	J-R-1.6	J-R-1.6	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUER LOCKPLUG OD1.6MM] JOINT	A61100
	J-R-2	J-R-2	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUER LOCKPLUG OD2MM] JOINT	A61200
	J-R-3	J-R-3	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUER LOCKPLUG OD3MM] JOINT	A61300
	J-R-4	J-R-4	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUER LOCKPLUG OD4MM] JOINT	A61400
	J-R-6	J-R-6	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUER LOCKPLUG OD6MM] JOINT	A61500
	J-RT-1.6	J-RT-1.6	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREW LUERLOCK OD1.6MM] JOINT	A62100
	J-RT-2	—	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUERLOCK SOCKET OD2MM] JOINT	A62200
	J-RT-3	—	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUERLOCK SOCKET OD3MM] JOINT	A62300
	J-RT-4	J-RT-4	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUERLOCK SOCKET OD4MM] JOINT	A62400
	J-RT-6	—	26	FLUID FEEDING TUBE CONNECTOR [2THREAD SCREWED LUERLOCK SOCKET OD6MM] JOINT	A62500
J-U	J-U1B-6	J-U1B-6	27	PNEUMATIC HALF UNION [R1/8 OD6MM USE] JOINT	AA1500
	J-U2B-6	—	27	PNEUMATIC HALF UNION [R1/4 OD6MM USE] JOINT	AA1E00
J-Y	J-Y-6	J-Y-6	27	PNEUMATIC Y-SOCKET [OD6MM] JOINT	AC4500

	Model	Former model	Page	Item name	Former product code
LPP-	LPP-1	—	47	LIQUID PRESSURE PUMP LPP-1	—
LS-	LS-2T-DSUB25-1.5M	—	28	HANDY SWITCH [LS-2T DSUB 25 PIN 1.5M]	—
	LS-2T-1604P	—	28	HANDY SWITCH [LS-2T TYPE 16 4PIN]	—
	LS-3T-DSUB25-1.5M	—	28	HANDY SWITCH [LS-3T DSUB 25 PIN 1.5M]	—
	LS-3T-1604P	LS-3T-1604P	28	HANDY SWITCH [LS-3T TYPE 16 4PIN]	C11700
LS-NH3-	LS-NH3-1604P	LS-NH3-1604P	29	DISPENSER PEN [LS-NH3 TYPE 16 4PIN]	C13700
	LS-NH3-C1	LS-NH3-C1	29	TUBE COLLAR [C1 LS-NH3]	C1W105
	LS-NH3-C2	LS-NH3-C2	29	TUBE COLLAR [C2 LS-NH3]	C1W106
	LS-NH3-C3	LS-NH3-C3	29	TUBE COLLAR [C3 LS-NH3]	C1W107
	LS-NH3-C4	LS-NH3-C4	29	TUBE COLLAR [C4 LS-NH3 USE]	C1W108
	LS-NH3-TG1	LS-NH3-TG1	29	CAP [TG1 LS-NH3]	C1W205
	LS-NH3-TG2	LS-NH3-TG2	29	CAP [TG2 LS-NH3]	C1W206
	LS-NH3-TG3	LS-NH3-TG3	29	CAP [TG3 LS-NH3]	C1W207
	LS-NH3-TG4	LS-NH3-TG4	29	CAP [TG4 LS-NH3]	C1W208
	LS-NH3-TG5	LS-NH3-TG5	29	CAP [TG5 LS-NH3]	C1W209
	LS-NH3-TG6	LS-NH3-TG6	29	CAP [TG6 LS-NH3]	C1W210
	LS-NH3-TG7	LS-NH3-TG7	29	CAP [TG7 LS-NH3 USE]	C1W211
	LS-NH3-TG8	LS-NH3-TG8	29	CAP [TG8 LS-NH3 USE]	C1W212
	LT-	LT-23EX	LT-23EX	27	LUER LOCK TYPE EXTENSION TUBE
LT-46		—	27	FLUID FEEDING TUBE [OD6MM ID4MM NYLON]	962100
LT-46T		LT-46T	27	FLUID FEEDING TUBE [OD6MM ID4MM FLUOROCARBON POLYMERS WHITE]	962500
LT-46TB		LT-46TB	27	FLUID FEEDING TUBE [OD6MM ID4MM FLUOROCARBON POLYMERS BLACK]	962600
LT-48HP		LT-48HP	27	FLUID FEEDING TUBE [OD8MM ID4MM HIGH PRESSURE]	967100

	Model	Former model	Page	Item name	Former product code
MC-	MC-1604P	MC-1604P	29	METAL CONNECTOR [PLUG TYPE 16 4PIN]	C56300
ME-	ME-5000CV	—	32	DIGITAL CONTROLLED COATING VALVE CONTROLLER SPRAY MASTER	—
	ME-5000P	—	32	PUMPMASER ME-5000P PUMP CONTROLLER	—
	ME-5000SP	—	32	DIGITAL CONTROLLED SPRAY VALVE CONTROLLER SPRAY MASTER	—
	ME-5000VT	—	32	DIGITAL CONTROLLED VALVE CONTROLLER VALVE MASTER	—
	ME-8000SP-AA-V[05/5]	—	31	DIGITAL CONTROLLED SPRAY CONTROLLER WITH UPPER-LEVEL COMMUNICATION SUPPORT ME-8000SP [V05/V5]	—
MIJ	MJ1000	—	53	INK JET, HIGH PRECISION DISPENSING SYSTEM LABO DISPENSE MASTER	—
MJET-	MJET-A-2-4CTR	MJET-A-HU○-R/L (○:S,M,L)	51	NON-CONTACT JET DISPENSER AEROJET	*1
	MJET-S-3-HP-HU-L/M	—	51	NON-CONTACT JET DISPENSER SUPERJET 3 HI POWER	—
MJP-	MJP-05	—	37	JUSTRO PUMP [05mL use]	—
	MJP-13	—	37	JUSTRO PUMP [13mL use]	—
ML-	ML-6000X	—	50	HIGH PRECISION DIGITAL DISPENSER ML-6000X	—
	ML-6000X Pro	—	50	HIGH PRECISION DIGITAL DISPENSER ML-6000X Pro	—
	ML-8000X	—	50	HIGH PRECISION DIGITAL DISPENSER WITH UPPER-LEVEL COMMUNICATION SUPPORT ML-8000X	—
MLC-	MLC-6500	MLC-6500	53	FULLY AUTOMATED SEAL DISPENSING MACHINE	—

	Model	Former model	Page	Item name	Former product code
MLP-	MLP-5E	MLP-5E	12	MIRACLE WIPER PLUNGER	5B3700
	MLP-10E	MLP-10E	12	MIRACLE WIPER PLUNGER	5B4700
	MLP-50E	MLP-50E	12	MIRACLE WIPER PLUNGER	5B7700
	MLP-B-5E	MLP-B-5E	12	MIRACLE WIPER PLUNGER [5mL BLUE]	13200017
	MLP-B-10E	MLP-B-10E	12	MIRACLE WIPER PLUNGER	13200018
	MLP-B-50E	MLP-B-50E	12	MIRACLE WIPER PLUNGER	5B7N00
	MLP-R-5E	MLP-R-5E	12	MIRACLE WIPER PLUNGER	13200016
	MLP-R-10E	MLP-R-10E	12	MIRACLE WIPER PLUNGER [10mL RED]	5B4F00
	MLP-R-50E	MLP-R-50E	12	MIRACLE WIPER PLUNGER	5B7F00
	MPP-	MPP-5-M	—	51	VOLUME MEASURING TYPE DIGITAL CONTROL DISPENSER MEASURING MASTER MPP-5 [TYPE M]
MS-	MS-1	MS-1	50	HIGH PRECISION ECO DISPENSER SMART SHOT	11100236
	MS-1D	MS-1D	50	HIGH PRECISION ECO DISPENSER SMART SHOT	11100279
MSD-	MSD-3-2SE	—	51	HIGH-PERFORMANCE SCREW DISPENSER SCREWMASTER3 [TYPE 2SE]	—
MT-	MT-410	MT-410	51	ROTARY TUBING DISPENSER	*1
MU	MUCADV	—	53	MUCADV DISPENSE PATTERN EDITING SOFTWARE	—

	Model	Former model	Page	Item name	Former product code
NC-	NC-3E	NC-3E	13	SYRINGE TIP CAP [DOUBLE THREAD SCREWED LONG TRANSPARENT]	5D5100
	NC-3EU-B	NC-3EU-B	13	SYRINGE TIP CAP [DOUBLE THREAD SCREWED UV TYPE]	13200023
	NC-3FH	—	13	HEAT-RESISTANT SYRINGE TIP CAP	—
	NC-5E	NC-5E	13	SYRINGE TIP CAP [LUER LOCK KNURLED HARD WHITE]	5D7200
	NC-7E	NC-7E	13	SYRINGE TIP CAP [DOUBLE THREAD SCREWED KNURLED BLUE]	13200008
	NC-7EU-B	NC-7EU-B	13	SYRINGE TIP CAP [DOUBLE THREAD SCREWED KNURLED UV TYPE BLACK]	13200024
NCV-	NCV-7DV-2P	NCV-7DV	34	NEEDLE CONTROL VALVE [TYPE 7 2PORT ANAEROBIC WITH NCV-7DV-25]	723100
	NCV-12S-2P	NCV-12S	34	NEEDLE CONTROL VALVE [TYPE 12S 2PORT]	725500
	NCV-17-1P-1N	NCV-17-1P-1N	33	NEEDLE CONTROL VALVE [TYPE 17 1PORT]	727A00
	NCV-17-1P-56	NCV-17-1P-56	33	NEEDLE CONTROL VALVE [TYPE 17 1PORT OD6MM SUS PIPE ATTACHED]	727D00
	NCV-17-L-1P-2N	NCV-17-L-1P-2N	33	NEEDLE CONTROL VALVE [TYPE 17 1PORT HIGH FLOW]	16100001
	NCV-17-L-1P-2N-2N	—	33	NEEDLE CONTROL VALVE [TYPE 17 1PORT Rc1/4 HIGH FLOW]	—
	NCV-17-L-1P-2N-RS	—	33	NEEDLE CONTROL VALVE MINIVAL [TYPE 17 1PORT HIGH FLOW RATE RESIN SPECIFICATION]	—
NK	NK-2	—	20	NOZZLE KIT [TYPE 2]	12300001
	NKC-2	—	20	NOZZLE KIT CASE [TYPE 2]	12300002

	Model	Former model	Page	Item name	Former product code
ORG-	ORG-1.5-N-B-1	AON-1E	11	ORING [PHI 1.5 MATERIAL N COLOR B #1]	13200003
	ORG-1.5-P-B-1	AOP-1E	11	ORING [PHI 1.5 MATERIAL P COLOR B #1]	13200025
	ORG-1.5-S-R-1	AOS-1E	11	ORING [PHI 1.5 MATERIAL S COLOR R #1]	13200002
	ORG-1.5-V-B-1	AOV-1E	11	ORING [PHI 1.5 MATERIAL V COLOR B #1]	13200001
	ORG-6-N-B-1	AON-3	11	ORING [PHI 6 MATERIAL N COLOR B #1]	5G2300
	ORG-6-P-B-1	AOP-3	11	ORING [PHI 6 MATERIAL P COLOR B #1]	13200011
	ORG-6-S-R-1	AOS-3	11	ORING [PHI 6 MATERIAL S COLOR R #1]	5G2C00
	ORG-6-V-B-1	AOV-3	11	ORING [PHI 6 MATERIAL V COLOR B #1]	5G2M00
	ORG-8-V-B-1	CS-BT-002	25	ORING [PHI 8 MATERIAL V COLOR B #1]	55W212
	ORG-9-N-B-1	AON-5E	11	ORING [PHI 9 MATERIAL N COLOR B #1]	5G3100
	ORG-9-P-B-1	AOP-5E	11	ORING [PHI 9 MATERIAL P COLOR B #1]	13200012
	ORG-9-S-R-1	AOS-5E	11	ORING [PHI 9 MATERIAL S COLOR R #1]	5G3A00
	ORG-9-V-B-1	AOV-5E	11	ORING [PHI 9 MATERIAL V COLOR B #1]	5G3K00
	ORG-11-N-B-2	AON-10E	11	ORING [PHI 11 MATERIAL N COLOR B #2]	5G4100
	ORG-11-P-B-1	AOP-10E	11	ORING [PHI 11 MATERIAL P COLOR B #1]	13200013
	ORG-11-S-R-1	AOS-10E	11	ORING [PHI 11 MATERIAL S COLOR R #1]	5G4A00
	ORG-11-V-B-1	AOV-10E	11	ORING [PHI 11 MATERIAL V COLOR B #1]	5G4K00
	ORG-12-V-B-1	CS-BT-003	25	ORING [PHI 12 MATERIAL V COLOR B #1]	55W213
	ORG-14-V-B-1	SCS-P-004-4B	24	ORING [PHI 14 MATERIAL V COLOR B #1]	55W36D
	ORG-16-V-B-1	SCS-P-004-4A	24	ORING [PHI 16 MATERIAL V COLOR B #1]	55W36C
	ORG-18-N-B-1	AON-50E	11	ORING [PHI 18 MATERIAL N COLOR B #1]	5G7100
	ORG-18-P-B-1	AOP-50E	11	ORING [PHI 18 MATERIAL P COLOR B #1]	13200014
	ORG-18-S-R-1	AOS-50E	11	ORING [PHI 18 MATERIAL S COLOR R #1]	5G7A00
	ORG-18-V-B-1	AOV-50E	11	ORING [PHI 18 MATERIAL V COLOR B #1]	5G7K00
ORG-20-V-B-1	SCS-P-003-1	24	ORING [PHI 20 MATERIAL V COLOR B #1]	55W351	
ORG-24-N-B-2	AON-100E	11	ORING [PHI 24 MATERIAL N COLOR B #2]	13200009	
ORG-24-P-B-1	AOP-100E	11	ORING [PHI 24 MATERIAL P COLOR B #1]	13200015	
ORG-24-S-R-1	AOS-100E	11	ORING [PHI 24 MATERIAL S COLOR R #1]	5G8A00	
ORG-24-V-B-1	AOV-100E	11	ORING [PHI 24 MATERIAL V COLOR B #1]	5G8K00	
ORG-34-V-B-1	CS-P-001-1C	23	ORING [PHI 34 MATERIAL V COLOR B #1]	14100017	
ORG-42-V-B-1	CS-P-001-1B	23	ORING [PHI 42 MATERIAL V COLOR B #1]	14100016	
OTT-	OTT-1L	OTT-1L	45	ONE TOUCH TANK [1L]	842100
	OTT-2L	OTT-2L	45	ONE TOUCH TANK [2L]	843100
	OTT-3L	OTT-3L	45	ONE TOUCH TANK [3L]	844100
	OTT-5L	OTT-5L	45	ONE TOUCH TANK [5L]	845100
	OTT-10L	OTT-10L	45	ONE TOUCH TANK [10L]	846100
	OTT-20L	OTT-20L	45	ONE TOUCH TANK [20L]	847100
OTT-30L	OTT-30L	45	ONE TOUCH TANK [30L]	848100	

P

	Model	Former model	Page	Item name	Former product code
PB-	PB-100B	PB-100B	23	BARREL [100ML TYPE B]	518500
	PB-170BT	PB-170BT	25	TUBE CARTRIDGE BARREL [170ML]	519600
	PB-170C	PB-170C	23	BARREL [170ML TYPE C]	519H00
	PB-170CU-OR	—	23	UV BLOCK BARREL [170ML TYPE C]	—
	PB-340CU-OR	—	23	UV BLOCK BARREL [340ML TYPE C]	—
	PB-230BT	PB-230BT	25	TUBE CARTRIDGE BARREL [230ML]	51A600
PB-340C	—	23	BARREL [340ML TYPE C]	—	
PCV-	PCV-12-2P	PCV-12-2P	36	PISTON CONTROL VALVE [TYPE 12 2PORT]	715100
	PCV-12-L-2P-2N	—	36	PISTON CONTROL VALVE MINIVAL [TYPE 12 2 PORT LARGE FLOW RATE]	—
P-LADP-	P-LADP-1	CS-BT-001	25	LUER LOCK ADAPTER [NO.1]	55W211
PN-	PN-15G-A	PN-15G-A	16	PLASTIC NEEDLE [15G NEEDLE LENGTH 8MM]	614100
	PN-15G-B	PN-15G-B	16	PLASTIC NEEDLE [15G NEEDLE LENGTH 13MM]	614A00
	PN-16G-A	PN-16G-A	16	PLASTIC NEEDLE [16G NEEDLE LENGTH 8MM]	615100
	PN-16G-B	PN-16G-B	16	PLASTIC NEEDLE [16G NEEDLE LENGTH 13MM]	615A00
	PN-17G-A	PN-17G-A	16	PLASTIC NEEDLE [17G NEEDLE LENGTH 8MM]	616100
	PN-17G-B	PN-17G-B	16	PLASTIC NEEDLE [17G NEEDLE LENGTH 13MM]	616A00
	PN-18G-A	PN-18G-A	16	PLASTIC NEEDLE [18G NEEDLE LENGTH 8MM]	617100
	PN-18G-B	PN-18G-B	16	PLASTIC NEEDLE [18G NEEDLE LENGTH 13MM]	617A00
	PN-19G-A	PN-19G-A	16	PLASTIC NEEDLE [19G NEEDLE LENGTH 8MM]	618100
	PN-19G-B	PN-19G-B	16	PLASTIC NEEDLE [19G NEEDLE LENGTH 13MM]	618A00
	PN-20G-A	PN-20G-A	16	PLASTIC NEEDLE [20G NEEDLE LENGTH 8MM]	619100
	PN-20G-B	PN-20G-B	16	PLASTIC NEEDLE [20G NEEDLE LENGTH 13MM]	619A00
	PN-21G-A	PN-21G-A	16	PLASTIC NEEDLE [21G NEEDLE LENGTH 8MM]	61A100
	PN-21G-B	PN-21G-B	16	PLASTIC NEEDLE [21G NEEDLE LENGTH 13MM]	61AA00
	PN-22G-A	PN-22G-A	16	PLASTIC NEEDLE [22G NEEDLE LENGTH 8MM]	61B100
	PN-22G-B	PN-22G-B	16	PLASTIC NEEDLE [22G NEEDLE LENGTH 13MM]	61BA00
	PN-23G-A	PN-23G-A	16	PLASTIC NEEDLE [23G NEEDLE LENGTH 8MM]	61C100
	PN-23G-B	PN-23G-B	16	PLASTIC NEEDLE [23G NEEDLE LENGTH 13MM]	61CA00
	PN-24G-A	PN-24G-A	16	PLASTIC NEEDLE [24G NEEDLE LENGTH 8MM]	61D100
	PN-24G-B	PN-24G-B	16	PLASTIC NEEDLE [24G NEEDLE LENGTH 13MM]	61DA00
	PN-25G-A	PN-25G-A	16	PLASTIC NEEDLE [25G NEEDLE LENGTH 8MM]	61E100
	PN-25G-B	PN-25G-B	16	PLASTIC NEEDLE [25G NEEDLE LENGTH 13MM]	61EA00
	PN-26G-A	PN-26G-A	16	PLASTIC NEEDLE [26G NEEDLE LENGTH 8MM]	61F100
	PN-26G-B	PN-26G-B	16	PLASTIC NEEDLE [26G NEEDLE LENGTH 13MM]	61FA00
	PN-27G-A	PN-27G-A	16	PLASTIC NEEDLE [27G NEEDLE LENGTH 8MM]	61G100
	PN-27G-B	PN-27G-B	16	PLASTIC NEEDLE [27G NEEDLE LENGTH 13MM]	61GA00
	P-NADP-	P-NADP-11	NA-2	24,26	NEEDLE ADAPTER [NO.11]
P-NADP-12		NA-2V	23,26	NEEDLE ADAPTER [NO.12]	6B5100
P-NADP-13		NA-2VT	23,26	NEEDLE ADAPTER [NO.13]	6B6100
P-NADP-14		NA-1	26	NEEDLE ADAPTER [NO.14]	6B1100
P-NADP-15		NA-1T	26	NEEDLE ADAPTER [NO.15]	6B2100
P-NADP-17		—	26	NEEDLE ADAPTER [NO.17]	—
P-NADP-18		—	26	NEEDLE ADAPTER [PCV-12-L USE]	—
PP-		PP-B1	PP-B1	23	BARREL PLUNGER [TYPE B1]
	PP-W1	PP-W1	23	BARREL PLUNGER [TYPE W1]	14100001
P-PKG-	P-PKG-15	SCS-P-004-1A	24	PACKING [NO.15]	55W36A
	P-PKG-23	SCS-P-001-1B	24	PACKING [NO.23]	55W33B
	P-PKG-46	P-PKG-46	24	PACKING [NO.46]	—
PPN-	PPN-15G	PPN-15G	19	SOFT NEEDLE [15G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	694100
	PPN-16G	PPN-16G	19	SOFT NEEDLE [16G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	695100
	PPN-18G	PPN-18G	19	SOFT NEEDLE [18G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	697100
	PPN-20G	PPN-20G	19	SOFT NEEDLE [20G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	699100
	PPN-22G	PPN-22G	19	SOFT NEEDLE [22G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	69B100
PPN-25G	PPN-25G	19	SOFT NEEDLE [25G NEEDLE LENGTH 35.9MM] RESIN NOZZLE	69E100	
PPV-	PPV-5-2P-SUS	—	35	PLUNGER PUMP VALVE [TYPE 5 2PORT SUS]	—
P-S	P-SCW-2	CS-P-001-1D	23	SCREW [NO.2]	14100018
	P-SCW-17	SCS-P-001-1D	24	SCREW [NO.17]	55W33D
	P-SSP-1	SCS-P-001-1A	23,24	SEAL SPRING [CARTRIDGE CAP USE]	55W33A
PSY-	PSY-1E2-M	PSY-1E2-M	7	CLEAR SYRINGE [1ML WITH SCALE]	13100005
	PSY-3E	PSY-3E	7	CLEAR SYRINGE [3ML]	512100
	PSY-3E-M	—	7	CLEAR SYRINGE [3ML WITH SCALE]	—
	PSY-3EU-OR	PSY-3EU-OR	7	UV BLOCK SYRINGE [3ML]	13100007
	PSY-3EU-OR-M	—	7	UV BLOCK SYRINGE [3ML WITH SCALES]	—
	PSY-5E	PSY-5E	7	CLEAR SYRINGE [5ML]	513100
	PSY-5E-M	PSY-5E-M	7	CLEAR SYRINGE [5ML WITH SCALE]	513200
	PSY-5E-PG	PSY-5E-PG	8	COLOR SYRINGE [5ML]	543100
	PSY-5EU-OR	PSY-5EU-OR	7	UV BLOCK SYRINGE [5ML]	13100008
	PSY-5EU-OR-M	PSY-5EU-OR-M	7	UV BLOCK SYRINGE [5ML WITH SCALES]	13100014
	PSY-10E	PSY-10E	7	CLEAR SYRINGE [10ML]	514100
	PSY-10E-M	PSY-10E-M	7	CLEAR SYRINGE [10ML WITH SCALE]	514200
	PSY-10E-PG	PSY-10E-PG	8	COLOR SYRINGE [10ML PEPPERMINT GREEN]	544100
	PSY-10E-SEP	PSY-10E-SEP	9	ANTI STATIC SYRINGE [10ML]	534100
	PSY-10EU-OR	PSY-10EU-OR	7	UV BLOCK SYRINGE [10ML]	13100009
	PSY-10EU-OR-M	PSY-10EU-OR-M	7	UV BLOCK SYRINGE [10ML WITH SCALES]	13100015

	Model	Former model	Page	Item name	Former product code
PSY-	PSY-20F	—	7	CLEAR SYRINGE [20ML F TYPE]	—
	PSY-20F-M	—	7	CLEAR SYRINGE [20ML F TYPE WITH GRADUATIONS]	—
	PSY-20F-PG	—	8	COLOR SYRINGE [20ML TYPE F PEPPERMINT GREEN]	—
	PSY-20FU-OR	—	7	UV BLOCK SYRINGE [20ML F TYPE]	—
	PSY-20FU-OR-M	—	7	UV BLOCK SYRINGE [20ML F TYPE WITH GRADUATIONS]	—
	PSY-20P	PSY-20P	8	MOUNTER-SPECIFIC SYRINGE [20ML]	515800
	PSY-30E-SEP	PSY-30E-SEP	9	ANTI STATIC SYRINGE [30ML]	536100
	PSY-30F	—	7	CLEAR SYRINGE [30ML F TYPE]	—
	PSY-30F-M	—	7	CLEAR SYRINGE [30ML TYPE F WITH GRADUATIONS]	—
	PSY-30F-PG	—	8	COLOR SYRINGE [30ML TYPE F PEPPERMINT GREEN]	—
	PSY-30FH-P	—	8	HEAT-RESISTANT SYRINGE [30ML F TYPE GRADE P]	—
	PSY-30FH2-P	—	8	HEAT-RESISTANT SYRINGE [30ML F2 TYPE GRADE P]	—
	PSY-30FU-OR	—	7	UV BLOCK SYRINGE [30ML F TYPE]	—
	PSY-30FU-OR-M	—	7	UV BLOCK SYRINGE [30ML TYPE F WITH GRADUATIONS]	—
	PSY-50E-SEP	PSY-50E-SEP	9	ANTI STATIC SYRINGE [50ML]	537100
	PSY-50F	—	7	CLEAR SYRINGE [50ML F TYPE]	—
	PSY-50F-M	—	7	CLEAR SYRINGE [50ML TYPE F WITH GRADUATIONS]	—
	PSY-50F-PG	—	8	COLOR SYRINGE [50ML TYPE F PEPPERMINT GREEN]	—
	PSY-50FU-OR	—	7	UV BLOCK SYRINGE [50ML F TYPE]	—
	PSY-50FU-OR-M	—	7	UV BLOCK SYRINGE [50ML TYPE F WITH GRADUATIONS]	—
PSY-70F	—	7	CLEAR SYRINGE [70ML F TYPE]	—	
PSY-70F-M	—	7	CLEAR SYRINGE [70ML TYPE F WITH GRADUATIONS]	—	
PSY-70FU-OR	—	7	UV BLOCK SYRINGE [70ML F TYPE]	—	
PSY-70FU-OR-M	—	7	UV BLOCK SYRINGE [70ML TYPE F WITH GRADUATIONS]	—	
PSY-100E	PSY-100E	7	CLEAR SYRINGE [100ML]	518100	
PSY-100EU-OR	—	7	UV BLOCK SYRINGE [100ML]	—	
P-TADP-	P-TADP-2	CS-BT-009	25	TUBE ADAPTER [NO.2]	55W232
	P-TADP-3	CS-BT-004	25	TUBE ADAPTER [NO.3]	55W231

Q

	Model	Former model	Page	Item name	Former product code
QP-	QP-1B	QP-1B	23,27	PNEUMATIC QUICK JOINT [PLUG R1/8]	AB1200
	QP-1N	QP-1N	27	PNEUMATIC QUICK JOINT [PLUG RC1/8] JOINT	AB1100
	QP-2B	QP-2B	27	PNEUMATIC QUICK JOINT [PLUG R1/4] JOINT	AB1400
	QP-2N	QP-2N	27	PNEUMATIC QUICK JOINT [PLUG RC1/4] JOINT	AB1300
QS-	QS-1N	QS-1N	27	PNEUMATIC QUICK JOINT [SOCKET RC1/8] JOINT	AB1A00
	QS-2B	QS-2B	27	PNEUMATIC QUICK JOINT [SOCKET R1/4] JOINT	AB1D00
	QS-2N	QS-2N	27	PNEUMATIC QUICK JOINT [SOCKET RC1/4] JOINT	AB1C00

R

	Model	Former model	Page	Item name	Former product code
RA-	RA-2B-PS	RA-2B-PS	28	REGULATOR/AIR GAUGE [0.2MPA WITH QJ]	C33300
	RA-7B-PS	RA-7B-PS	28	REGULATOR/AIR GAUGE [0.7MPA WITH QJ]	C33400

S

	Model	Former model	Page	Item name	Former product code
SBP-	SBP-0.5L-01	SBP-0.5L-01	46	INTERNAL CONTAINER [0.5L FLUID FEED TANK USE]	17200001
	SBP-1L-01	SBP-1L-01	46	INTERNAL CONTAINER [1L FLUID FEED TANK USE]	17200002
	SBP-2L-01	SBP-2L-01	46	INTERNAL CONTAINER [2L FLUID FEED TANK]	17200003
	SBP-3L-01	SBP-3L-01	46	INTERNAL CONTAINER [3L FLUID FEED TANK USE]	17200004
	SBP-5L-01	SBP-5L-01	46	INTERNAL CONTAINER [4L FLUID FEED TANK USE]	17200005
	SBP-10L-01	SBP-10L-01	46	INTERNAL CONTAINER [5L FLUID FEED TANK USE]	17200006
	SBP-20L	SBP-20L	46	INTERNAL CONTAINER [6L FLUID FEED TANK USE]	8A7100
SCS-	SCS-330	SCS-330-MI	24	SEALANT CARTRIDGE [WITHOUT HOOK]	14100028
		SCS-330-MO			14100032
		SCS-330-S			55C800
		SCS-330-TB			55C600
		SCS-330-TR			55C700
	SCS-330-HK	SCS-330-TS	24	SEALANT CARTRIDGE [WITH HOOK]	55C900
		SCS-330-MI-HK			14100029
		SCS-330-MO-HK			14100033
		SCS-330-S-HK			55C801
		SCS-330-TB-HK			55C601
	SCS-P-001-1	SCS-330-TR-HK	24	CARTRIDGE CAP [WITHOUT HOOK]	55C701
		SCS-330-TS-HK			55C901
		SCS-P-001-1			55W331
		SCS-P-001-1C			55W33C
SCS-P-001-2	SCS-P-001-2	24	SEAL RETAINER [CARTRIDGE CAP USE]	55W332	
SCS-P-002-1	SCS-P-002-1	24	CARTRIDGE CAP [WITH HOOK]	55W33C	
SCS-P-004-1	SCS-P-004-1	24	CARTRIDGE HOLDER [FOR SEALANT]	55W341	
SCS-P-004-3	SCS-P-004-3	24	TIP ADAPTER [TB TYPE]	55W361	
SCS-P-004-3	SCS-P-004-3	24	TIP ADAPTER [S TYPE]	55W363	

	Model	Former model	Page	Item name	Former product code	
SCS-	SCS-P-004-4	SCS-P-004-4	24	TIP ADAPTER [TS USE]	55W364	
	SCS-P-004-5	SCS-P-004-5	24	TIP ADAPTER [TR TYPE]	55W365	
	SCS-P-004-6	SCS-P-004-6	24	TIP ADAPTER [MI TYPE]	14100030	
	SCS-P-004-7	SCS-P-004-7	24	TIP ADAPTER [MO TYPE]	14100034	
	SCS-P-004-8	—	24	TIP ADAPTER [C TYPE]	—	
	SCS-P-005-1	SCS-P-005-1	23,24	CARTRIDGE CAP HOOK	55W335	
SH-	SH-2	SH-2	29	H-TYPE STAND UNIT CLAMP	C22101	
SHN-	SHN-0.1N	SHN-0.1N	14	PRECISION SOLID NOZZLE [ID0.1MM]	651500	
	SHN-0.15N	SHN-0.15N	14	PRECISION SOLID NOZZLE [ID0.15MM]	652500	
	SHN-0.2N	SHN-0.2N	14	PRECISION SOLID NOZZLE [ID 0.2MM]	653500	
	SHN-0.25N	SHN-0.25N	14	PRECISION SOLID NOZZLE [ID 0.25MM]	654500	
	SHN-0.3N	SHN-0.3N	14	PRECISION SOLID NOZZLE [ID 0.3MM]	655500	
	SHN-0.35N	SHN-0.35N	14	PRECISION SOLID NOZZLE [ID 0.35MM]	656500	
	SHN-0.4N	SHN-0.4N	14	PRECISION SOLID NOZZLE [ID 0.4MM]	657500	
	SHN-0.45N	SHN-0.45N	14	PRECISION SOLID NOZZLE [ID 0.45MM]	658500	
	SHN-0.5N	SHN-0.5N	14	PRECISION SOLID NOZZLE [ID 0.5MM]	659500	
	SHN-0.6N	—	14	PRECISION SOLID NOZZLE [ID 0.6MM]	—	
SJ-	SJ-1B	—	26	SYRINGE JOINT [R1/8 DOUBLE THREAD SCREW LUER LOCK PLUG] SYRINGE JOINT	—	
	SJ-2B	—	26	SYRINGE JOINT [R1/4 DOUBLE THREAD SCREW LUER LOCK PLUG] SYRINGE JOINT	—	
	SJ-CAP	—	26	SYRINGE JOINT CAP	—	
SM-	SM□SX-[3A/4A]-SS	—	52	DESKTOP ROBOT SHOTMINI 100-200SX/SHOTMASTER 300-500SX	—	
SNA-	SNA-0.10N-4L-F	—	15	THIN-WALLED METAL NEEDLE [SNA ID0.10MM NEEDLE LENGTH4MM]	—	
	SNA-0.10N-6L-F	—	15	THIN-WALLED METAL NEEDLE [SNA ID0.10MM NEEDLE LENGTH6MM]	—	
	SNA-0.20N-4L-F	—	15	THIN-WALLED METAL NEEDLE [SNA ID0.20MM NEEDLE LENGTH4MM]	—	
	SNA-0.20N-6L-F	—	15	THIN-WALLED METAL NEEDLE [SNA ID0.20MM NEEDLE LENGTH6MM]	—	
	SNA-0.30N-4L-F	—	15	THIN-WALLED METAL NEEDLE [SNA ID0.30MM NEEDLE LENGTH4MM]	—	
	SNA-0.30N-6L-F	—	15	THIN-WALLED METAL NEEDLE [SNA ID0.30MM NEEDLE LENGTH6MM]	—	
	SNA-12G-B	SNA-12G-B	15	METAL NEEDLE [SNA 12G NEEDLE LENGTH13MM]	621600	
	SNA-12G-C	SNA-12G-C	15	METAL NEEDLE [SNA 12G NEEDLE LENGTH15MM]	621700	
	SNA-13G-B	SNA-13G-B	15	METAL NEEDLE [SNA 13G NEEDLE LENGTH13MM]	622600	
	SNA-13G-C	SNA-13G-C	15	METAL NEEDLE [SNA 13G NEEDLE LENGTH15MM]	622700	
	SNA-14G-B	SNA-14G-B	15	METAL NEEDLE [SNA 14G NEEDLE LENGTH13MM]	623600	
	SNA-14G-C	SNA-14G-C	15	METAL NEEDLE [SNA 14G NEEDLE LENGTH15MM]	623700	
	SNA-15G-B	SNA-15G-B	15	METAL NEEDLE [SNA 15G NEEDLE LENGTH13MM]	624600	
	SNA-15G-C	SNA-15G-C	15	METAL NEEDLE [SNA 15G NEEDLE LENGTH15MM]	624700	
	SNA-16G-B	SNA-16G-B	15	METAL NEEDLE [SNA 16G NEEDLE LENGTH13MM]	625600	
	SNA-16G-C	SNA-16G-C	15	METAL NEEDLE [SNA 16G NEEDLE LENGTH15MM]	625700	
	SNA-17G-B	SNA-17G-B	15	METAL NEEDLE [SNA 17G NEEDLE LENGTH13MM]	626600	
	SNA-17G-C	SNA-17G-C	15	METAL NEEDLE [SNA 17G NEEDLE LENGTH15MM]	626700	
	SNA-18G-B	SNA-18G-B	15	METAL NEEDLE [SNA 18G NEEDLE LENGTH13MM]	627600	
	SNA-18G-C	SNA-18G-C	15	METAL NEEDLE [SNA 18G NEEDLE LENGTH15MM]	627700	
	SNA-19G-B	SNA-19G-B	15	METAL NEEDLE [SNA 19G NEEDLE LENGTH13MM]	628600	
	SNA-19G-C	SNA-19G-C	15	METAL NEEDLE [SNA 19G NEEDLE LENGTH15MM]	628700	
	SNA-20G-B	SNA-20G-B	15	METAL NEEDLE [SNA 20G NEEDLE LENGTH13MM]	629600	
	SNA-20G-C	SNA-20G-C	15	METAL NEEDLE [SNA 20G NEEDLE LENGTH15MM]	629700	
	SNA-21G-B	SNA-21G-B	15	METAL NEEDLE [SNA 21G NEEDLE LENGTH13MM]	62A600	
	SNA-21G-C	SNA-21G-C	15	METAL NEEDLE [SNA 21G NEEDLE LENGTH15MM]	62A700	
	SNA-22G-B	SNA-22G-B	15	METAL NEEDLE [SNA 22G NEEDLE LENGTH13MM]	62B600	
	SNA-22G-C	SNA-22G-C	15	METAL NEEDLE [SNA 22G NEEDLE LENGTH15MM]	62B700	
	SNA-23G-B	SNA-23G-B	15	METAL NEEDLE [SNA 23G NEEDLE LENGTH13MM]	62C600	
	SNA-23G-C	SNA-23G-C	15	METAL NEEDLE [SNA 23G NEEDLE LENGTH15MM]	62C700	
	SNA-24G-B	SNA-24G-B	15	METAL NEEDLE [SNA 24G NEEDLE LENGTH13MM]	62D600	
	SNA-24G-C	SNA-24G-C	15	METAL NEEDLE [SNA 24G NEEDLE LENGTH15MM]	62D700	
	SNA-25G-B	SNA-25G-B	15	METAL NEEDLE [SNA 25G NEEDLE LENGTH13MM]	62E600	
	SNA-25G-C	SNA-25G-C	15	METAL NEEDLE [SNA 25G NEEDLE LENGTH15MM]	62E700	
	SNA-26G-B	SNA-26G-B	15	METAL NEEDLE [SNA 26G NEEDLE LENGTH13MM]	62F600	
	SNA-26G-C	SNA-26G-C	15	METAL NEEDLE [SNA 26G NEEDLE LENGTH15MM]	62F700	
	SNA-27G-B	SNA-27G-B	15	METAL NEEDLE [SNA 27G NEEDLE LENGTH13MM]	62G600	
	SNA-27G-C	SNA-27G-C	15	METAL NEEDLE [SNA 27G NEEDLE LENGTH15MM]	62G700	
	SNA-28G-B	SNA-28G-B	15	METAL NEEDLE [SNA 28G NEEDLE LENGTH13MM]	62H600	
	SNA-28G-C	SNA-28G-C	15	METAL NEEDLE [SNA 28G NEEDLE LENGTH15MM]	62H700	
	SNA-30G-B	SNA-30G-B	15	METAL NEEDLE [SNA 30G NEEDLE LENGTH13MM]	62J600	
	SNA-30G-C	SNA-30G-C	15	METAL NEEDLE [SNA 30G NEEDLE LENGTH15MM]	62J700	
	SNA-31G-B	—	15	METAL NEEDLE [SNA 31G NEEDLE LENGTH13MM]	—	
	SNA-31G-C	—	15	METAL NEEDLE [SNA 31G NEEDLE LENGTH15MM]	—	
	SNA-32G-B	—	15	METAL NEEDLE [SNA 32G NEEDLE LENGTH13MM]	—	
	SNA-32G-C	—	15	METAL NEEDLE [SNA 32G NEEDLE LENGTH15MM]	—	
	SOT-	SOT-4.6L	SOT-1L	44	STRAIGHT ONE TOUCH TANK [4.6L]	872100
		SOT-5.6L	SOT-2L	44	STRAIGHT ONE TOUCH TANK [5.6L]	873100
		SOT-6.3L	SOT-3L	44	STRAIGHT ONE TOUCH TANK [6.3L]	874100
		SOT-12.7L	SOT-5L	44	STRAIGHT ONE TOUCH TANK [12.7L]	875100
		SOT-21.3L	SOT-10L	44	STRAIGHT ONE TOUCH TANK [21.3L]	876100

	Model	Former model	Page	Item name	Former product code	
SPN-	SPN-0.12-6.5L	SPN-0.12-6.5L	16	SHARP NEEDLE [ID0.12MM NEEDLE LENGTH 6.5MM] BODY: PLASTIC	6DN100	
	SPN-0.17-9.5L	SPN-0.17-9.5L	16	SHARP NEEDLE [ID0.17MM NEEDLE LENGTH 9.5MM] BODY: PLASTIC	6DL200	
	SPN-0.25-12.7L	SPN-0.25-12.7L	16	SHARP NEEDLE [ID0.25MM NEEDLE LENGTH 12.7MM] BODY: PLASTIC	6DL400	
	SPN-0.33-12.7L	SPN-0.33-12.7L	16	SHARP NEEDLE [ID0.33MM NEEDLE LENGTH 12.7MM] BODY: PLASTIC	6DK400	
	SPN-0.41-38.1L	SPN-0.41-38.1L	16	SHARP NEEDLE [ID0.41MM NEEDLE LENGTH 38.1MM] BODY: PLASTIC	6DK300	
SPN-	SPN-0.58-38.1L	SPN-0.58-38.1L	16	SHARP NEEDLE [ID0.58MM NEEDLE LENGTH 38.1MM] BODY: PLASTIC	6DJ300	
	SPN-0.84-12.7L	SPN-0.84-12.7L	16	SHARP NEEDLE [ID0.84MM NEEDLE LENGTH 12.7MM] BODY: PLASTIC	6DJ400	
SST-	SST-1.7L	SST-0.5L	45	TANK FOR SAFETY LOCK [1.7L]	851100	
	SST-2.2L	SST-1L	45	TANK FOR SAFETY LOCK [2.2L]	852100	
	SST-5.5L	SST-2L	45	TANK FOR SAFETY LOCK [5.5L]	853100	
	SST-6.2L	SST-3L	45	TANK FOR SAFETY LOCK [6.2L]	854100	
	SST-12.7L	SST-5L	45	TANK FOR SAFETY LOCK [12.7L]	855100	
	SST-20.3L	SST-10L	45	TANK FOR SAFETY LOCK [20.3L]	856100	
	SST-38.5L	SST-20L	45	TANK FOR SAFETY LOCK [38.5L]	857100	
SSV-	SSV-1-1P-1N-ST04	—	39	SHAPE SPRAY VALVE MINIVAL [TYPE 1 1 PORT ST0.4]	—	
	SSV-1-1P-1N-ST08	—	39	SHAPE SPRAY VALVE MINIVAL [TYPE 1 1 PORT ST0.8]	—	
	SSV-1-1P-1N-ST12	—	39	SHAPE SPRAY VALVE MINIVAL [TYPE 1 1 PORT ST1.2]	—	
	SSV-1-1P-1N-TP04	—	39	SHAPE SPRAY VALVE MINIVAL [TYPE 1 1 PORT TP0.4]	—	
	SSV-1-1P-1N-TP08	—	39	SHAPE SPRAY VALVE MINIVAL [TYPE 1 1 PORT TP0.8]	—	
	SSV-1-1P-1N-TP12	—	39	SHAPE SPRAY VALVE MINIVAL [TYPE 1 1 PORT TP1.2]	—	
SSY-	SSY-1B	SSY-1B	9	STAINLESS SYRINGE [1ML]	551B00	
	SSY-3E	—	9	STAINLESS SYRINGE [3ML]	552B00	
	SSY-5E	—	9	STAINLESS SYRINGE [5ML]	553100	
	SSY-10E	—	9	STAINLESS SYRINGE [10ML]	554100	
	SSY-30E	—	9	STAINLESS SYRINGE [30ML]	556100	
	SSY-50E	—	9	STAINLESS SYRINGE [50ML]	557100	
SUPER-	SUPER-SIGMA-CM4-V[2/5]	—	50	FULLY DIGITAL CONTROLLED DISPENSER SUPERSIGMACMIV-V [2/5]	—	
SV-	SV-6-0.5X	SV-6-0.5X	40	SPRAY VALVE [SV-6 NOMINAL SIZE 0.5MM]	16100035	
	SV-6-1.0X	SV-6-1.0X	40	SPRAY VALVE [SV-6 NOMINAL SIZE 1.0MM]	16100036	
	SV-6-1.3X	SV-6-1.3X	40	SPRAY VALVE [SV-6 NOMINAL SIZE 1.3MM]	16100037	
	SV-6-2.0X	SV-6-2.0X	40	SPRAY VALVE [SV-6 NOMINAL SIZE 2.0MM]	16100038	
	SV-6R-0.5X	SV-6R-0.5X	40	SPRAY VALVE [SV-6R NOMINAL SIZE 0.5MM]	16100041	
	SV-6R-1.0X	SV-6R-1.0X	40	SPRAY VALVE [SV-6R NOMINAL SIZE 1.0MM]	16100042	
	SV-6R-1.3X	SV-6R-1.3X	40	SPRAY VALVE [SV-6R NOMINAL SIZE 1.3MM]	16100043	
	SV-6R-2.0X	SV-6R-2.0X	40	SPRAY VALVE [SV-6R NOMINAL SIZE 2.0MM]	16100044	
	SV-6RW-1.0X	SV-6RW-1.0X	40	SPRAY VALVE [SV-6RW NOMINAL SIZE 1.0MM]	16100045	
	SV-6RW-1.3X	SV-6RW-1.3X	40	SPRAY VALVE [SV-6RW NOMINAL SIZE 1.3MM]	16100046	
	SV-6RW-2.0X	SV-6RW-2.0X	40	SPRAY VALVE [SV-6RW NOMINAL SIZE 2.0MM]	16100047	
	SV-6SK-0.5X	SV-6SK-0.5X	40	SPRAY VALVE [SV-6SK NOMINAL SIZE 0.5MM]	16100039	
	SV-6SK-1.0X	SV-6SK-1.0X	40	SPRAY VALVE [SV-6SK NOMINAL SIZE 1.0MM]	16100040	
	SVM-	SVM-6LX	SVM-6LX	40	SPRAY VALVE [SVM-6LX]	16100048
	SYS-	SYS-1A	SYS-1A	28	SYRINGE STAND [5ML USE TYPE A]	11200002
SYS-2A		SYS-2A	28	SYRINGE STAND [10ML USE TYPE A]	11200003	
SYS-3A		SYS-3A	28	SYRINGE STAND [20/30/50ML TYPE A]	11200004	
SYS-5B		—	28	SYRINGE STAND [FOR 5ML SYRINGE LS-3T/2T USE]	—	
SYS-10B		—	28	SYRINGE STAND [FOR 10ML SYRINGE LS-3T/2T USE]	—	
SYS-20B		—	28	SYRINGE STAND [FOR 20ML SYRINGE LS-3T/2T USE]	—	
SYS-30B		—	28	SYRINGE STAND [FOR 30ML SYRINGE LS-3T/2T USE]	—	
SYS-50B		—	28	SYRINGE STAND [FOR 50ML SYRINGE LS-3T/2T USE]	—	
SYS-CAP		SYS-CAP	28	NOZZLE DRY PREVENTION CAP [SYS-1/2/3A USE]	11200005	
SYS-CAP-7		—	28	NOZZLE DRY REDUCTION CAP [FOR SYS-B ID: 7.0 WITH LS-3T]	—	
SYS-CAP-8.5		—	28	NOZZLE DRY REDUCTION CAP [FOR SYS-B ID: 8.5 WITH LS-3T]	—	
SYS-CAP-10		—	28	NOZZLE DRY REDUCTION CAP [FOR SYS-B ID: 10.0 WITH LS-2T/NO HANDY SWITCH]	—	

T

	Model	Former model	Page	Item name	Former product code
TCV-	TCV-S3-1-10KP	TCV-S3-1-10KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP LUER LOCK PLUG]	761100
	TCV-S3-1-20KP	TCV-S3-1-20KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP LUER LOCK PLUG]	762100
	TCV-S3-1-30KP	TCV-S3-1-30KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP LUER LOCK PLUG]	763100
	TCV-S3-1-50KP	TCV-S3-1-50KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP LUER LOCK PLUG]	764100
	TCV-S3-1-70KP	TCV-S3-1-70KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP LUER LOCK PLUG]	765100
	TCV-S3-1-100KP	TCV-S3-1-100KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP LUER LOCK PLUG]	766100
	TCV-S3-1-150KP	TCV-S3-1-150KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP LUER LOCK PLUG]	767100
	TCV-S3-1-200KP	TCV-S3-1-200KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP LUER LOCK PLUG]	768100
	TCV-S3-1-220KP	TCV-S3-1-220KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP LUER LOCK PLUG]	769100
	TCV-S3-2-10KP	TCV-S3-2-10KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP R1/4]	761200
	TCV-S3-2-20KP	TCV-S3-2-20KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP R1/4]	762200
	TCV-S3-2-30KP	TCV-S3-2-30KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP R1/4]	763200
	TCV-S3-2-50KP	TCV-S3-2-50KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP R1/4]	764200
	TCV-S3-2-70KP	TCV-S3-2-70KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP R1/4]	765200
	TCV-S3-2-100KP	TCV-S3-2-100KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP R1/4]	766200
	TCV-S3-2-150KP	TCV-S3-2-150KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP R1/4]	767200
	TCV-S3-2-200KP	TCV-S3-2-200KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP R1/4]	768200

	Model	Former model	Page	Item name	Former product code	
TCV-	TCV-53-2-220KP	TCV-53-2-220KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP R1/4]	769200	
	TCV-53-3-10KP	TCV-53-3-10KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP R1/8]	761300	
	TCV-53-3-20KP	TCV-53-3-20KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP R1/8]	762300	
	TCV-53-3-30KP	TCV-53-3-30KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP R1/8]	763300	
	TCV-53-3-50KP	TCV-53-3-50KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP R1/8]	764300	
	TCV-53-3-70KP	TCV-53-3-70KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP R1/8]	765300	
	TCV-53-3-100KP	TCV-53-3-100KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP R1/8]	766300	
	TCV-53-3-150KP	TCV-53-3-150KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP R1/8]	767300	
	TCV-53-3-200KP	TCV-53-3-200KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP R1/8]	768300	
	TCV-53-3-220KP	TCV-53-3-220KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP R1/8]	769300	
	TCV-53-4-10KP	TCV-53-4-10KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP M6]	761400	
	TCV-53-4-20KP	TCV-53-4-20KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP M6]	762400	
	TCV-53-4-30KP	TCV-53-4-30KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP M6]	763400	
	TCV-53-4-50KP	TCV-53-4-50KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP M6]	764400	
	TCV-53-4-70KP	TCV-53-4-70KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP M6]	765400	
	TCV-53-4-100KP	TCV-53-4-100KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP M6]	766400	
	TCV-53-4-150KP	TCV-53-4-150KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP M6]	767400	
	TCV-53-4-200KP	TCV-53-4-200KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP M6]	768400	
	TCV-53-4-220KP	TCV-53-4-220KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP M6]	769400	
	TCV-53T-1-10KP	TCV-53T-1-10KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 10KP LUER LOCK PLUG FLUOROCARBON COATED]	761600	
	TCV-53T-1-20KP	TCV-53T-1-20KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 20KP LUER LOCK PLUG FLUOROCARBON COATED]	762600	
	TCV-53T-1-30KP	TCV-53T-1-30KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 30KP LUER LOCK PLUG FLUOROCARBON COATED]	763600	
	TCV-53T-1-50KP	TCV-53T-1-50KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 50KP LUER LOCK PLUG FLUOROCARBON COATED]	764600	
	TCV-53T-1-70KP	TCV-53T-1-70KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 70KP LUER LOCK PLUG FLUOROCARBON COATED]	765600	
	TCV-53T-1-100KP	TCV-53T-1-100KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 100KP LUER LOCK PLUG FLUOROCARBON COATED]	766600	
	TCV-53T-1-150KP	TCV-53T-1-150KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 150KP LUER LOCK PLUG FLUOROCARBON COATED]	767600	
	TCV-53T-1-200KP	TCV-53T-1-200KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 200KP LUER LOCK PLUG FLUOROCARBON COATED]	768600	
	TCV-53T-1-220KP	TCV-53T-1-220KP	42	FLUID DRIP PREVENTION VALVE [SPRING PRESSURE 220KP LUER LOCK PLUG FLUOROCARBON COATED]	769600	
	TN-	TN-0.1-13.7-SUSG	TN-0.1-13.7-SUSG	18	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	18	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	18	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	18	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	18	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	18	PTFE NEEDLE WITH SUS GUIDE [ID0.3MM OD0.5MM NEEDLE LENGTH 26.4MM]	63MC00	
TN-13G		TN-13G	17	PTFE NOZZLE [13G NEEDLE LENGTH 8MM] RESIN NOZZLE	632100	
TN-13G-U		—	17	UV BLOCK PTFE NOZZLE [13G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-14G		TN-14G	17	PTFE NOZZLE [14G NEEDLE LENGTH 8MM] RESIN NOZZLE	633100	
TN-14G-U		—	17	UV BLOCK PTFE NOZZLE [14G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-15G		TN-15G	17	PTFE NOZZLE [15G NEEDLE LENGTH 8MM] RESIN NOZZLE	634100	
TN-15G-U		—	17	UV BLOCK PTFE NOZZLE [15G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-16G		TN-16G	17	PTFE NOZZLE [16G NEEDLE LENGTH 8MM] RESIN NOZZLE	635100	
TN-16G-U		—	17	UV BLOCK PTFE NOZZLE [16G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-16G-□L-13G-□L		TN-16G-□L-13G-□L	18	PTFE NOZZLE WITH SUS GUIDE [16G, NEEDLE LENGTH □MM, GUIDE 13G □MM]	—	
TN-17G		TN-17G	17	PTFE NOZZLE [17G NEEDLE LENGTH 8MM] RESIN NOZZLE	636100	
TN-17G-U		—	17	UV BLOCK PTFE NOZZLE [17G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-17G-□L-14G-□L		TN-17G-□L-14G-□L	18	PTFE NOZZLE WITH SUS GUIDE [17G, NEEDLE LENGTH □MM, GUIDE 14G □MM]	—	
TN-18G		TN-18G	17	PTFE NOZZLE [18G NEEDLE LENGTH 8MM] RESIN NOZZLE	637100	
TN-18G-U		—	17	UV BLOCK PTFE NOZZLE [18G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-18G-□L-14G-□L		TN-18G-□L-14G-□L	18	PTFE NOZZLE WITH SUS GUIDE [18G, NEEDLE LENGTH □MM, GUIDE 14G □MM]	—	
TN-19G		TN-19G	17	PTFE NOZZLE [19G NEEDLE LENGTH 8MM] RESIN NOZZLE	638100	
TN-19G-U		—	17	UV BLOCK PTFE NOZZLE [19G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-19G-□L-15G-□L		TN-19G-□L-15G-□L	18	PTFE NOZZLE WITH SUS GUIDE [19G, NEEDLE LENGTH □MM, GUIDE 15G □MM]	—	
TN-20G		TN-20G	17	PTFE NOZZLE [20G NEEDLE LENGTH 8MM] RESIN NOZZLE	639100	
TN-20G-U		—	17	UV BLOCK PTFE NOZZLE [20G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-20G-□L-16G-□L		TN-20G-□L-16G-□L	18	PTFE NOZZLE WITH SUS GUIDE [20G, NEEDLE LENGTH □MM, GUIDE 16G □MM]	—	
TN-21G		TN-21G	17	PTFE NEEDLE [21G NOZZLE LENGTH 8MM] RESIN NOZZLE	63A100	
TN-21G-U		—	17	UV BLOCK PTFE NOZZLE [21G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-21G-□L-17G-□L		TN-21G-□L-17G-□L	18	PTFE NOZZLE WITH SUS GUIDE [21G, NEEDLE LENGTH □MM, GUIDE 17G □MM]	—	
TN-22G		TN-22G	17	PTFE NOZZLE [22G NEEDLE LENGTH 8MM] RESIN NOZZLE	63B100	
TN-22G-U		—	17	UV BLOCK PTFE NOZZLE [22G NEEDLE LENGTH 8MM] RESIN NOZZLE	—	
TN-22G-□L-18G-□L	TN-22G-□L-18G-□L	18	PTFE NOZZLE WITH SUS GUIDE [22G NEEDLE LENGTH □MM, GUIDE 18G □MM]	—		
TPND-	TPND-12G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [12G]	—	
	TPND-14G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [14G]	—	
	TPND-16G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [16G]	—	
	TPND-18G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [18G]	—	
	TPND-20G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [20G]	—	
	TPND-22G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [22G]	—	
TPND-	TPND-25G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [25G]	—	
	TPND-27G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [27G]	—	
	TPND-30G-U	—	17	DOUBLE THREAD SCREWED TAPERED NOZZLE [30G]	—	
TPP-	TPP-5E	—	12	SHUTTLE TYPE PLUNGER [5ML CLEAR]	5B3100	
	TPP-10E	—	12	SHUTTLE TYPE PLUNGER [10ML CLEAR]	5B4100	
	TPP-30/50E	—	12	50ML TYPE PLUNGER	5B7100	

	Model	Former model	Page	Item name	Former product code
TT-	TT-10	TT-10	29	PTFE TUBE [OD3.29MM ID2.69MM]	911100
	TT-10B	TT-10B	29	PTFE TUBE [OD3.29MM ID2.69MM BLACK]	921100
	TT-11	TT-11	29	PTFE TUBE [OD3.01MM ID2.41MM]	91H100
	TT-11B	TT-11B	29	PTFE TUBE [OD3.01MM ID2.41MM BLACK]	92H100
	TT-12	TT-12	29	PTFE TUBE [OD2.76MM ID2.16MM]	91G100
	TT-12B	TT-12B	29	PTFE TUBE [OD2.76MM ID2.16MM BLACK]	92G100
	TT-13	TT-13	29	PTFE TUBE [OD2.53MM ID1.93MM]	91F100
	TT-13B	TT-13B	29	PTFE TUBE [OD2.53MM ID1.93MM BLACK]	92F100
	TT-14	TT-14	29	PTFE TUBE [OD2.28MM ID1.68MM]	91E100
	TT-15	TT-15	29	PTFE TUBE [OD2.10MM ID1.50MM]	91D100
	TT-15B	TT-15B	29	PTFE TUBE [OD2.10MM ID1.50MM BLACK]	92D100
	TT-16	TT-16	29	PTFE TUBE [OD1.95MM ID1.35MM]	91C100
	TT-16B	TT-16B	29	PTFE TUBE [OD1.95MM ID1.35MM BLACK]	92C100
	TT-17	TT-17	29	PTFE TUBE [OD1.79MM ID1.19MM]	91B100
	TT-17B	TT-17B	29	PTFE TUBE [OD1.79MM ID1.19MM BLACK]	92B100
	TT-18	TT-18	29	PTFE TUBE [OD1.67MM ID1.07MM]	91A100
	TT-18B	TT-18B	29	PTFE TUBE [OD1.67MM ID1.07MM BLACK]	92A100
	TT-19	TT-19	29	PTFE TUBE [OD1.56MM ID0.96MM]	919100
	TT-19B	TT-19B	29	PTFE TUBE [OD1.56MM ID0.96MM BLACK]	929100
	TT-20	TT-20	29	PTFE TUBE [OD1.46MM ID0.86MM]	918100
	TT-20B	TT-20B	29	PTFE TUBE [OD1.46MM ID0.86MM BLACK]	928100
	TT-21	TT-21	29	PTFE TUBE [OD1.31MM ID0.81MM]	917100
	TT-21B	TT-21B	29	PTFE TUBE [OD1.31MM ID0.81MM BLACK]	927100
	TT-22	TT-22	29	PTFE TUBE [OD1.18MM ID0.68MM]	916100
	TT-22B	TT-22B	29	PTFE TUBE [OD1.18MM ID0.68MM BLACK]	926100
	TT-24	TT-24	29	PTFE TUBE [OD1.06MM ID0.56MM]	915100
	TT-24B	TT-24B	29	PTFE TUBE [OD1.06MM ID0.56MM BLACK]	925100
	TT-26	TT-26	29	PTFE TUBE [OD0.92MM ID0.46MM]	914100
	TT-26B	TT-26B	29	PTFE TUBE [OD0.92MM ID0.46MM BLACK]	924100
	TT-28	TT-28	29	PTFE TUBE [OD0.84MM ID0.38MM]	913100
	TT-28B	TT-28B	29	PTFE TUBE [OD0.84MM ID0.38MM BLACK]	923100
	TT-30	TT-30	29	PTFE TUBE [OD0.76MM ID0.30MM]	912100
TT-30B	TT-30B	29	PTFE TUBE [OD0.76MM ID0.30MM BLACK]	922100	
TT-32	TT-32	29	PTFE TUBE [OD0.75MM ID0.25MM]	911100	

	Model	Former model	Page	Item name	Former product code
VSD-	VSD-1	—	51	HIGH-PERFORMANCE MOHNO DISPENSER MOHNO MASTER	—

	Model	Former model	Page	Item name	Former product code
XM	XM□RX-3A-L-[SBA/AAS]	—	52	CROSSMASTER □RX MAIN BODY [3-AXIS L TYPE FINISHED PRODUCTS WITH BASES/AXIS ASSEMBLY SET]	—

	Model	Former model	Page	Item name	Former product code
Other	350PCS-SM□OMEGAX	—	52	IMAGE RECOGNITION DISPENSING SYSTEM 350PC SMART SM□OX	—
	—	—	20	CUSTOM-MADE NOZZLE	—
	—	—	53	GREASE JET DISPENSING SYSTEM GREASE JET	—
	—	—	20	NOZZLES WITH STOPPERS	—
	—	—	21	SLIT NOZZLE	—
	—	—	25	O-RING FOR A TUBE	—
	—	—	53	SCREW TIGHTENING ROBOT	—
	—	—	21	MULTI NOZZLE MN10-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN13-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN15-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN17-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN19-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN21-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN23-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN25-□G-□L-□P [STANDARD]	—
	—	—	21	MULTI NOZZLE MN27-□G-□L-□P [STANDARD]	—
	—	—	46	SIMPLIFIED SYRINGE FILLER FILLING MATE	—
	—	—	53	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.

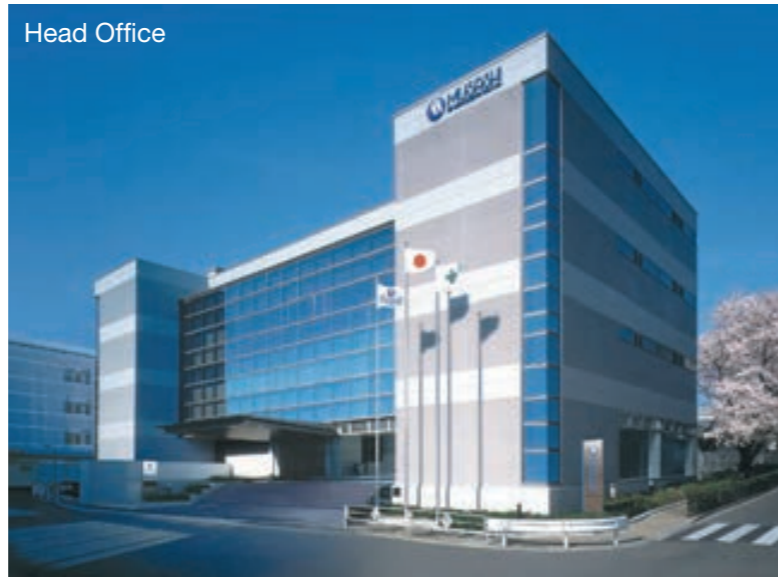
Note: 1. Select a product according to the volumes, shapes, and others shown in the bracket [] in the above table.
The value of selected specifications shall be entered into the square mark □ of a model name.
2. Refer to the separate General Catalog or contact our sales department for further information about dispenser controllers and dispensing systems marked with ◆.

PROFILE

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

The world's first pioneer of Dispense Hi-Tech, challenging the "Unexplored Territory."

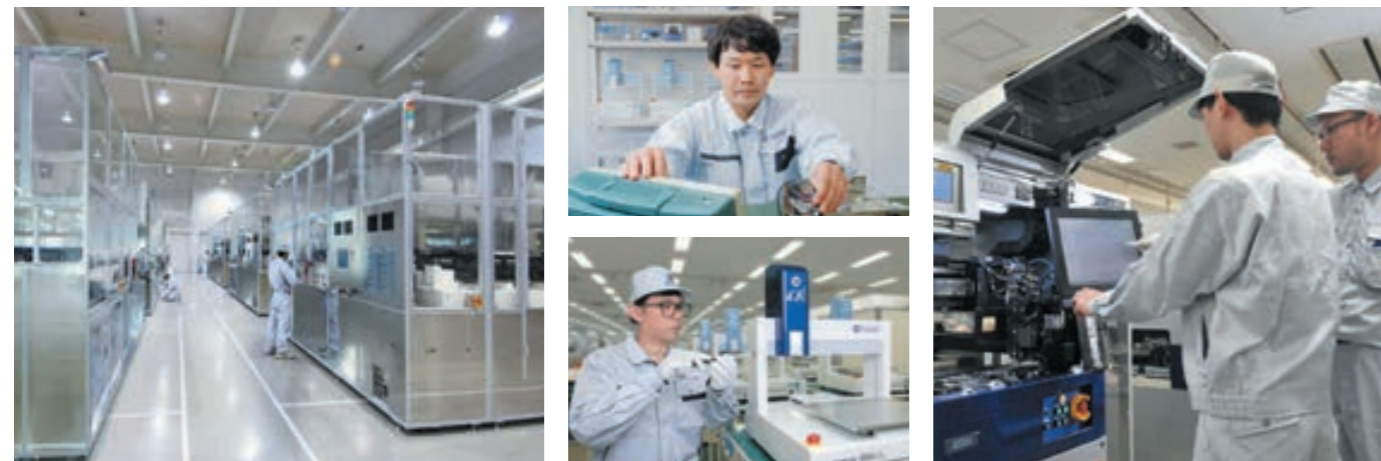
MUSASHI is a comprehensive dispenser manufacturer that focuses on the development, manufacture, and sale of "Dispensing system" that precisely control fluid materials.



Head Office



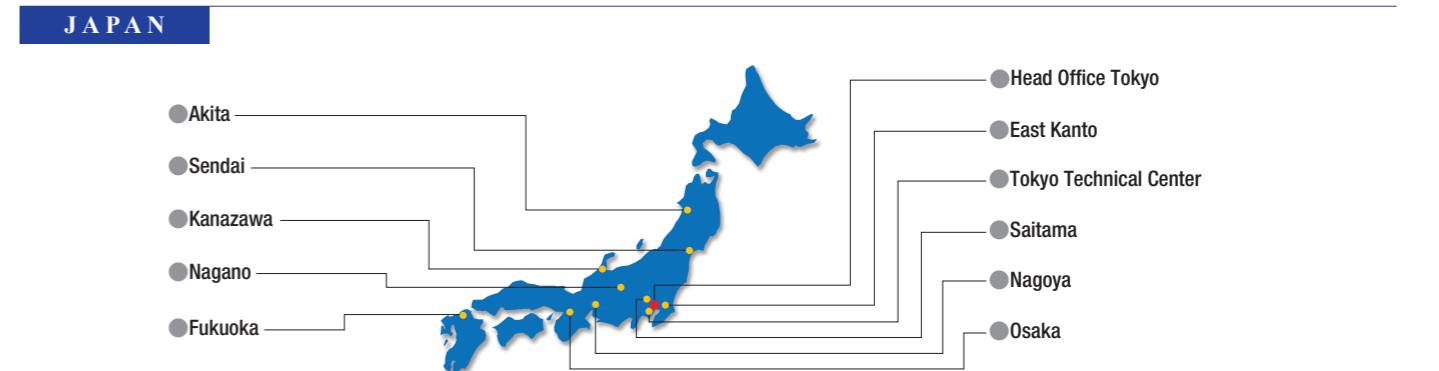
Production base: Tokyo Technical Center




WORLDWIDE

A global company, MUSASHI's business stages

Domestic bases: 11 locations
Foreign bases: 11 locations

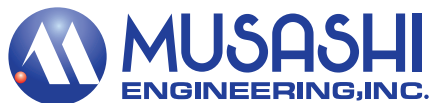


PRECISION DISPENSER ACCESSORY SERIES

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

*These specifications are subject to change without any notice.
*This specification indicates performance under our standard conditions and is not a guaranteed value. Please contact the sales department for details.
*The copyright of this catalog belongs to our company. Reproduction and distribution of the pictures, illustrations and any other information in this catalog to any other media without prior written permission are strictly prohibited; doing so will result in copyright infringement.

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



<https://musashi-engineering.com/>



**World Leading Dispenser
MUSASHI ENGINEERING, INC.**

HEAD OFFICE
8-7-4, Shimorenjaku, Mitaka-shi, Tokyo, 181-0013, Japan TEL:(81)422-76-7111 / FAX:(81)422-76-7122
BRANCH
TOKYO, OSAKA, NAGOYA, SENDAI, FUKUOKA, SAITAMA, NAGANO, EAST-KANTO, AKITA, KANAZAWA

GERMANY Marcel-Breuer-Str. 15, D-80807 Munich, Germany
TEL:(49)89-321996-06 / FAX:(49)89-321996-07

SINGAPORE 10 Ubi Crescent #05-24 Ubi Techpark Lobby B Singapore 408564
TEL:(65)6258-2422 / FAX:(65)6258-4844

THAILAND No.36 Soi Bangna-Trad25, Bangnanuea, Bangna, Bangkok 10260 Thailand
TEL:(66)2-022-9015 / FAX:(66)2-769-5450

INDONESIA Jl. MH. Thamrin, Robson Square, Block A-15, Lippo Cikarang, Bekasi 17550, Jawa Barat, Indonesia
TEL:(62)21-8990-5005 / FAX:(62)21-8990-5004

KOREA (902 No. 9 F. #C, Korea Bio Park.) 700, Daewangpangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13488, Korea
TEL:(82)31-702-3811 / FAX:(82)31-702-3881

TAIWAN 8F-2, No. 158, Sec. 2, Gongdao 5th Road, Hsinchu, Taiwan 30070
TEL:(886)3-572-9200 / FAX:(886)3-572-9300

CHINA

HONG KONG Unit 1706, 17/F., Greenfield Tower, (South)Concordia Plaza, No.1 Science Museum Road, T.S.T.East, Kowloon, H.K.
TEL:(852)2620-5799 / FAX:(852)2620-5771

SHANGHAI Room 102, Building 4, No.1999 Shenkun Road, Minhang District, Shanghai, China
TEL:(86)21-6446-7881 / FAX:(86)21-6446-7882

SHENZHEN 1st floor 102, building 3 of Winlead, Fada road, Bantian Street, Longgang District, Shenzhen
TEL:(86)755-8346-6822

TIANJIN Room 1601, Sino Ocean International Center, No. 40 Huachang Road, Hedong District, Tianjin
TEL:(86)22-5856-2051

SUZHOU Room 1010, No.188 Wang Dun Road, GENWAY BUILDING, Suzhou City Industrial estate Distric, Jiangsu, CHINA
TEL:(86)512-6878-4428 / FAX:(86)512-6878-4438