

# LUMINA AUTOMATIC SPRAY GUN



*Lumina*<sup>®</sup>

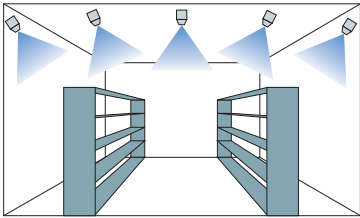
# HM SERIES

# LUMINA AUTOMATIC SPRAY GUN

## APPLICATION EXAMPLES

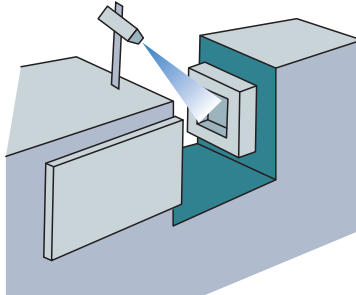
### FACTORY HUMIDIFICATION

Spraying water in printing factories or for mushroom cultivation



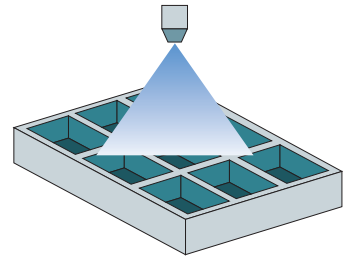
### MOLDING

Spraying release agents into die casting or molding



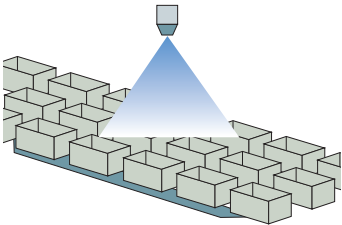
### COOLING

Spraying water to cool, or to release molds



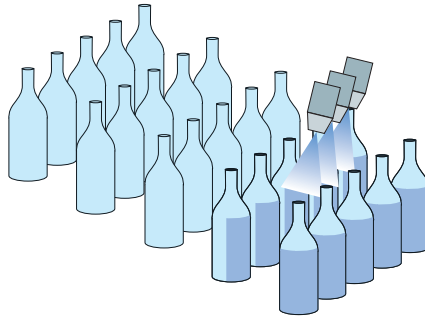
### FOOD PROCESSING

Spraying cooking oils onto a baking pan



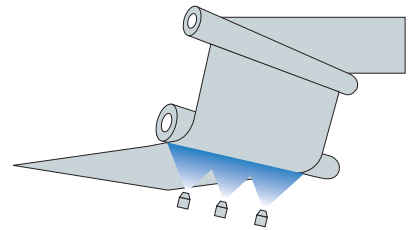
### BOTTLE COATING

Spraying coating agents onto bottle surfaces to prevent scratching



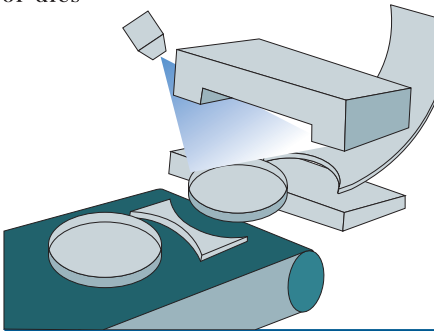
### SURFACE TREATMENT

Spraying waterproof or antistatic agents onto paper



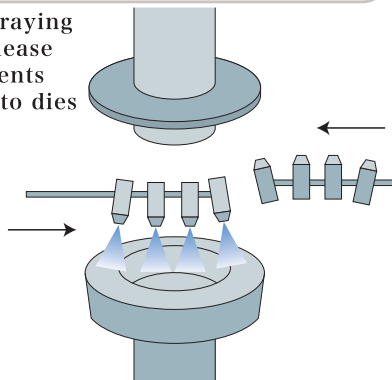
### METAL STAMPING

Applying lubricants to sheet metal or dies



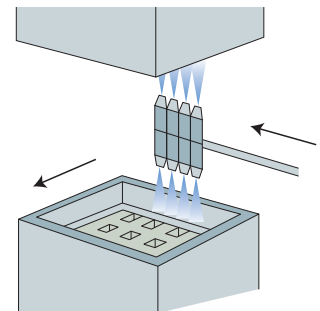
### DIE CASTING

Spraying release agents onto dies



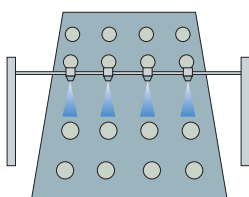
### RUBBER MOLDING

Spraying release agents in narrow spaces by connected HM-7 series spray guns



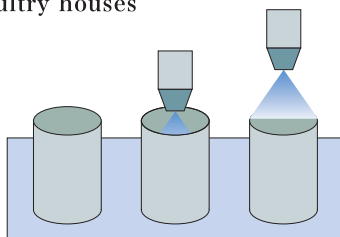
### FOOD HUMIDIFICATION

Spraying water to dampen bread or cookie surfaces



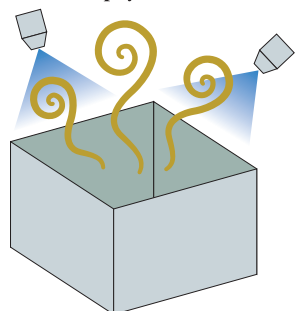
### DISINFECTION

Spraying disinfectant liquids in food factories, pig pens and poultry houses



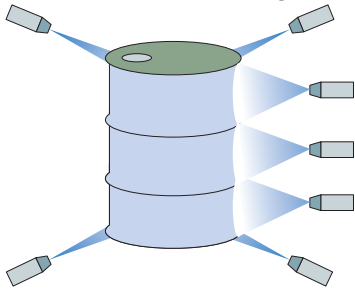
### ODOR REMOVAL

Spraying deodorizing agents in pig pens, dump yards



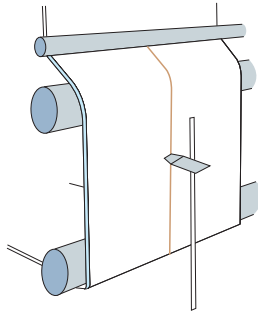
## LEAKAGE TEST

Feeding compressed air into steel barrels and spraying water on them to check for leakages



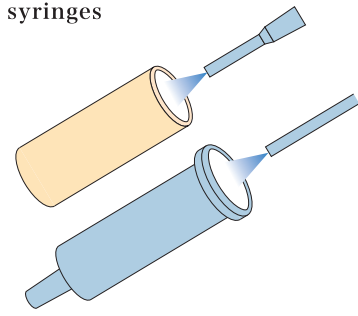
## LINE MARKING

Line marking in printing machines



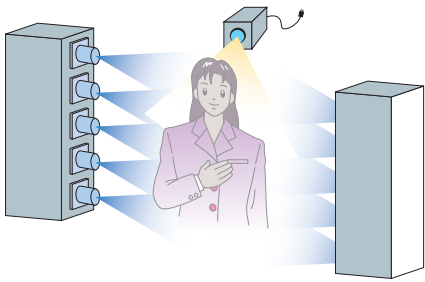
## COATING

Silicone coatings to smooth the inner surfaces of lipsticks or syringes



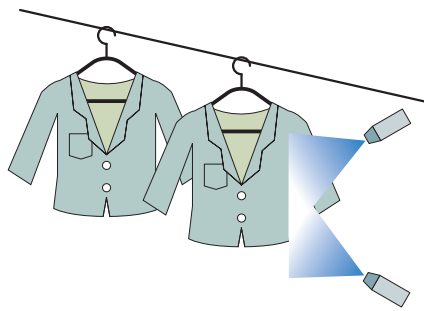
## FOG SCREEN

Spraying water to create walls onto which to project fantastic images



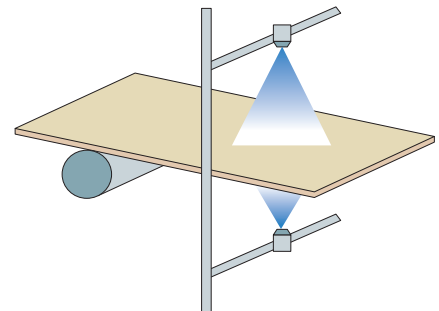
## SOFT COATING

Spraying softener on clothing



## CHEMICAL SPRAYING

Coating lumber with water-repellent chemicals



## OTHER USES

- Water (humidification)** — Printing plants, semiconductor plants, timber factories, paper mills
- Water (cooling)** — Plastic molds, vacuum forming machines
- Antistatic agents** — Plastic labels, tissue papers, textiles
- Deodorizer** — Food plants, feed plants, onion peelings, leather factories
- Coating agents** — Camera lenses, electric parts, cosmetics factories
- Alcohol** — Disinfection of food conveyors. Defoaming bubbles during the filling process of puddings, fruit jellies, tofu
- Press working lubricant** — Lubrication for metal stamping dies or sheet metal
- Ink (line marking)** — Business form printing, identification markings for industrial products
- Silicone** — Molding of IC packages

### HM-1/3 series

Common air inlet for atomizing and piston-actuated air

1 air inlet : Recommended air pressure 0.2–0.5 MPa  
 : (At air pressure below 0.2 MPa the piston is not actuated  
 : and no liquid comes out.)

<b>Fan Pattern</b>	Fan	HM-1 (p6)
	Wide Fan	HM-1W (p6)
	Made of plastic	HMP-1X (p14)
	Made of plastic, Wide Fan	HMP-1WX (p14)
	Two-sided	HM-4 (p10)
	Two-sided, Wide Fan	HM-4W*
	Two-sided, with two liquid adjusters	HM-4T (p10)
	Two-sided, Wide Fan, with two liquid adjusters	HM-4TW*
<b>Round Pattern</b>	Thin parallel	HM-7 (p11)
	Round	HM-3 (p6)
	Wide Round	HM-3W (p6)
	Small Round	HM-3P (p6)
	Overspray preventive	HM-3K (p6)
	Overspray preventive, Wide Round	HM-3KW (p7)
	Needle nozzled	HM-3L (p7)
	Made of plastic	HMP-3X (p14)
	Made of plastic, Wide Round	HMP-3WX (p14)
	Made of plastic, overspray preventive	HMP-3KX (p15)
	Made of plastic, overspray preventive, Wide Round	HMP-3KW (p15)
	Made of plastic, Needle nozzled	HMP-3LX (p15)
	Two-sided	HM-5 (p10)
	Two-sided, Wide Round	HM-5W*
	Two-sided, with two liquid adjusters	HM-5T (p10)
	Two-sided, with two liquid adjusters, Wide Round	HM-5TW*
	Thin parallel	HM-7R (p11)
	Thin parallel, Small Round	HM-7P*
	Thin, with air and liquid adjusters, Small Round	EM1-3AX (p11)
	Thin, with air and liquid adjusters	EM1-3X (p11)
	Thin, with air and liquid adjusters, Needle nozzled	EM1-3LX (p11)
	Valveless, continuous spraying	HM-9 (p9)

\*These products are not described. Please contact us directly for details.

## Number of Air Inlets

Lumina automatic spray guns include the HM-1/HM-3 series, with common air inlet for atomizing and piston-actuated air, and the HM-6 series with separate air lines.

The automatic spray gun works by feeding high-pressure air of approximately 0.2 MPa to open a valve.

The HM-1 and HM-3 have a single air inlet, so they always produce a fine mist of strong atomizing air.

The HM-6 series has 2 air inlets, so by setting the air pressure low ( $\leq 0.1$  MPa) liquid can be applied gently without overspraying. This series can be used for many different purposes, such as the application of oils, paints, and adhesives without overspraying.

## Fan Pattern or Round Pattern

There are 2 basic types of spray patterns: fan and round. To spray paint or other substance over a wide area, fan is better. Round pattern is best for small areas or markings.

### Fan Pattern



A wide fan-shaped pattern. To switch to round pattern, close the pattern adjuster.

### Round Pattern



Pattern that spreads in the shape of a 15° cone

## Installation Space

Even the standard HM-6 and HM-1/HM-3 series are very compact, making them suitable for use in confined spaces. The needle-nozzled HM-6L is particular suited for spraying deep inside narrow openings; and the HM-7 series is ideal when using multiple guns in a narrow space.

## Liquid

The HM series is not suitable for use with paints and liquids that harden. For corrosive liquids and chemical agents, the HMP series, made of PPS resin, is recommended. We can also supply this series in stainless steel.

# HM-6 series

Separate air lines for atomizing and piston-actuated air

- 2 air inlets
- Recommended piston-actuated air pressure 0.2–0.5 MPa
- Recommended atomizing air pressure 0.01–0.2 MPa
- Since atomizing air and piston-actuated air are separate,
- low pressure can be used for gently spraying, without overspraying.

Fan Pattern	Fan	HM-6 (p8)
	Wide Fan	HM-6W (p8)
	Made of plastic	HMP-6X (p15)
	Made of plastic, Wide Fan	HMP-6WX (p15)
Round Pattern	Round	HM-6R (p8)
	Wide Round	HM-6RW (p8)
	Small Round	HM-6P (p8)
	Needle nozzled	HM-6L (p8)
	Made of plastic	HMP-6RX (p15)
	Made of plastic, Wide Round	HMP-6RWX (p15)
	Made of plastic, Needle nozzled	HMP-6LX (p15)

## Spray Data HM-6X

Atomizing Air Pressure (MPa)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)
0.03	50	150	70	22
0.05	50	200	46	33
0.07	50	240	30	40
0.1	50	280	23	50

## Atomizing Air Pressure and Particle Size

0.03MPa      0.3MPa



Large-droplet mist without overspray

Fine mists to produce beautiful finishes

Data conditions for above: using water, 1-meter gravity fed, 300-mm distance (for particle size, 200-mm distance).

# HM-1 HM-3 series

High-pressure  
spray type

For use only at  
air pressure over 0.2 MPa.

**No nipple type**

To order a product  
without nipples,  
add an "X" to the end  
of the product number.



## HM-1



High-pressure spray model,  
fan pattern.  
Suitable for humidification  
or cooling.

Spray Pattern

Fan



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-1	$\phi$ 1.0	0-100	200	12	65	130

## HM-1W



Offers a fan pattern much  
wider than that of HM-1.  
**Pressure-fed liquid required.**  
The data below were  
obtained at 0.2 MPa  
liquid pressure.

Spray Pattern

Wide Fan



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-1W	$\phi$ 1.0	0-300	700	19	120	130

## HM-3



High-pressure spray model,  
round pattern.  
Suitable for spraying  
small areas.

Spray Pattern

Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-3	$\phi$ 1.0	0-200	$\phi$ 90	23	55	130

## HM-3W



Offers a round pattern,  
larger than that of HM-3.  
A spiral stream enables  
effective application on  
concave surfaces.  
It reduces dirt and  
clogging of caps.

Spray Pattern

Wide Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-3W	$\phi$ 1.0	0-220	$\phi$ 130	50	115	130

## HM-3K



Atomizing air is held at low  
pressure inside the body to  
prevent overspraying.  
Particles are larger.  
Suitable for preventing  
overspraying and when a  
single air hose is preferred.

Spray Pattern

Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-3K	$\phi$ 1.0	0-60	$\phi$ 120	67	5	130

## HM-3KW



Overspray-prevention type,  
which is the same as  
HM-3K.  
Spiral round pattern larger  
than that of HM-3K.

Spray Pattern

Wide Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-3KW	$\phi$ 1.0	0-60	$\phi$ 220	63	5	130

\*Data conditions for above: 0.29 MPa air pressure, 1-meter gravity-fed, 300-mm distance (for particle size 100- or 200-mm distance), using water.

# HM-1 HM-3 series

High-pressure  
spray type

For use only at  
air pressure over 0.2 MPa.

**No nipple type**

To order a product  
without nipples,  
add an "X" to the end  
of the product number.



## HM-3P



Consumes little air and  
enables very fine spray.  
Suitable for marking and  
drawing lines.  
Spray pattern is  $\phi 2$  to 40.

Spray Pattern

Small Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-3P	$\phi 0.4$	0-35	$\phi 40$	11	20	135

## HM-3L



Suitable for spraying the inner  
surface of small-diameter pipe  
and the inside of intricate openings.  
We can also handle custom length  
and diameter (inner and outer),  
as well as bending. (See p12.)

Spray Pattern

Small Round



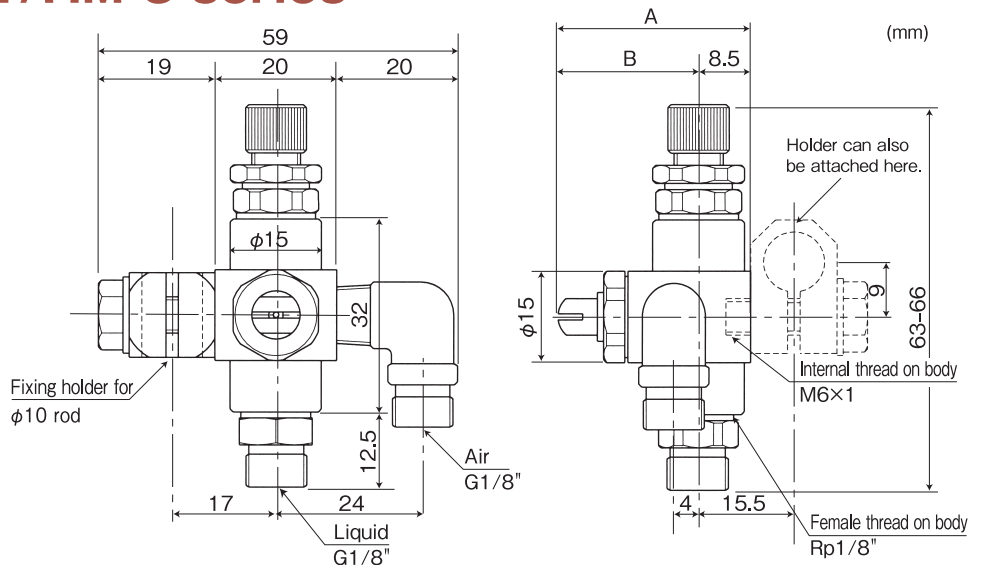
\*Standard length 100 mm

Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-3L	$\phi 0.7$	0-35	$\phi 50$	13	26	130

## Dimensions HM-1/HM-3 series

Model	A	B
HM-1	31.5	23
HM-1W	31.5	23
HM-3	24	15.5
HM-3W	24	15.5
HM-3P	37	28.5
HM-3K	24	15.5
HM-3KW	24	15.5
HM-3L	128	119.5

We can manufacture to special  
specifications, e.g.,  
solvent-resistance and  
stainless steel.



## HM-1/HM-3 series Materials

Body	Air Cap, Nozzle	Other Parts	O-rings
Chrome-plated brass	Chrome-plated brass	Chrome-plated brass	Viton

## Reversed Pipe Gun

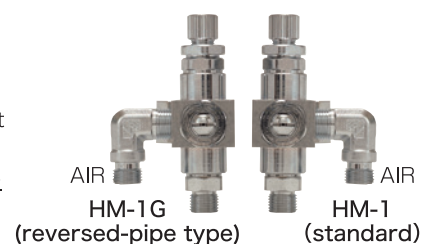
The HM-1/HM-3 series offer reversed piping specifications,  
with air connections swapped left-right.

Combining one of these with a standard spray gun enables more compact  
installation by avoiding a collision of air lines.

To order a reversed pipe gun, please add a "G" to the end of the product number.

e.g., HM-1, reversed-pipe type  $\Rightarrow$  HM-1G

HM-1, reversed-pipe type, without nipples  $\Rightarrow$  HM-1GX




# HM-6 series

Overspray-prevention type

Atomizing air pressure can be set freely from 0.01 MPa upwards.

**No nipple type**  
To order a product without nipples, add an "X" to the end of the product number.



## HM-6



Standard model for fan-pattern spraying. The gentle mist is well suited for spraying lubricants or release agents.

### Spray Pattern

Fan 

Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-6	$\phi 1.0$	0-110	200	39	35	145

## HM-6W



Offers a fan pattern much wider than that of HM-6. **Pressure-fed liquid required.** The data below were obtained at 0.2 MPa liquid pressure.

### Spray Pattern

Wide Fan 

Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-6W	$\phi 1.0$	0-300	600	70	76	145

## HM-6R



Standard model for round-pattern spraying. Suitable for small areas or markings.

### Spray Pattern

Round 

Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-6R	$\phi 1.0$	0-180	$\phi 110$	41	25	145

## HM-6RW



Offers a round pattern, larger than that of HM-6R. A spiral stream enables effective application on concave surfaces. It reduces dirt and clogging of caps.

### Spray Pattern

Wide Round 

Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-6RW	$\phi 1.0$	0-160	$\phi 130$	36	73	145

## HM-6P



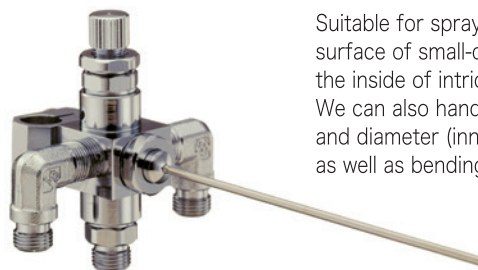
Consumes little air and enables very fine spray. Suitable for marking and drawing lines. Spray pattern is  $\phi 2$  to 40 mm.

### Spray Pattern

Small Round 

Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-6P	$\phi 0.4$	0-28	$\phi 40$	21	12	130

## HM-6L



Suitable for spraying the inner surface of small-diameter pipe and the inside of intricate openings. We can also handle custom length and diameter (inner and outer), as well as bending. (See p12.)

### Spray Pattern

Small Round 

\*Standard length 100 mm

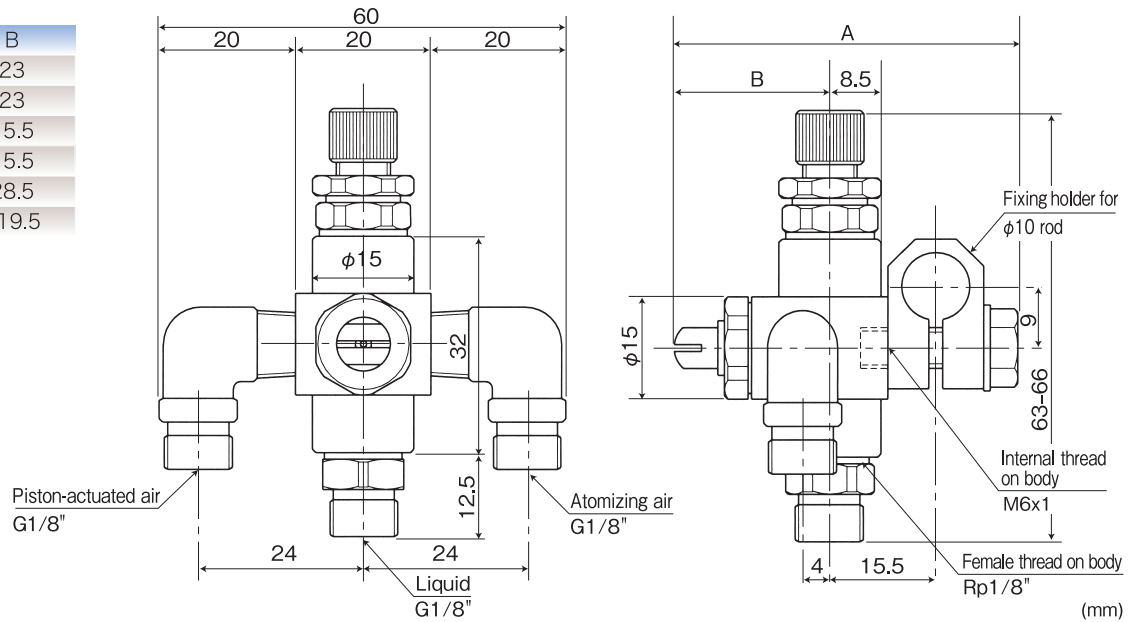
Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-6L	$\phi 0.7$	0-30	$\phi 50$	35	16	145

\*Data conditons for above: 0.1 MPa air pressure, 1-meter gravity-fed, 300-mm distance (for particle size, 200-mm distance), using water.



## Dimensions HM-6 series

Model	A	B
HM-6	50.5	23
HM-6W	50.5	23
HM-6R	43	15.5
HM-6RW	43	15.5
HM-6P	56	28.5
HM-6L	147	119.5



### HM-6 series Material List

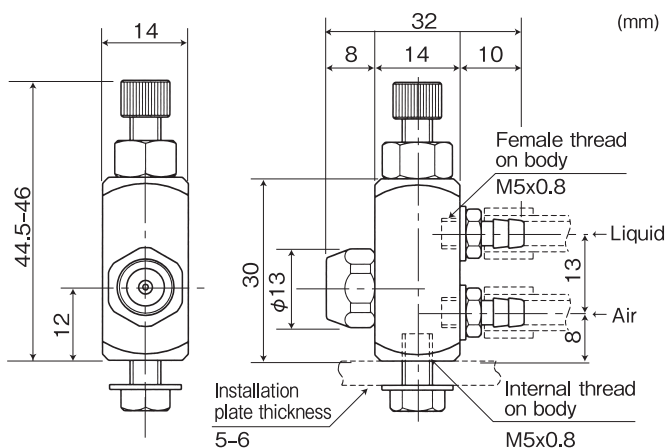
Body	Air Cap, Nozzle	Other Parts	O-rings
Chrome-plated brass	Chrome-plated brass	Chrome-plated brass	Viton

## HM series Materials

The standard HM series models have brass bodies and Viton (fluorine rubber) O-rings and are not suitable for use with paints or corrosive liquids.

For guns made of PPS resin, see pages 14 to 16.

## Dimensions HM-9



**HM-9 Material List** For use only with  $\phi 4$  mm  $\times \phi 6$  mm hoses.

Body	Air Cap, Nozzle	Other Parts	O-rings
Chrome-plated brass	Chrome-plated brass	Chrome-plated brass	NBR

## HM-9



This type is a super mini gun for continuous spraying. It is valveless, so even if the air is stopped, the liquid does not stop. Used for humidification.

### Spray Pattern

Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu$ m)	Air Consumption (L/min)	Mass (g)
HM-9	$\phi 1.0$	0-150	$\phi 80$	25	20	60

\*Data conditions for above: 0.29 MPa air pressure, 1-meter gravity-fed, 300-mm distance (for particle size, 200-mm distance), using water.

# HM-4 HM-5 series

Two-sided  
spraying type

For use only at  
air pressure over 0.2 MPa.

No nipple type

To order a product without nipples, add an "X" to the end of the product number.



## HM-4



Two-sided, fan-pattern spraying.  
A single adjuster is used to adjust the liquid volume on both sides.

Spray Pattern

Fan



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-4	$\phi 1.0$	0-160	200	16	120	145

## HM-5



Two-sided, round-pattern spraying.  
A single adjuster is used to adjust the liquid volume on both sides.

Spray Pattern

Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-5	$\phi 1.0$	0-280	$\phi 80$	19	110	145

## HM-4T



Two liquid adjusters make it possible to set different liquid volume on each side.  
The body is made of aluminum, with electroless nickel plating.  
Corrosive liquids cannot be used. Made to order.

Spray Pattern

Fan



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-4T	$\phi 1.0$	0-160	200	16	125	180

## HM-5T



Two liquid adjusters make it possible to set different liquid volume on each side.  
The body is made of aluminum, with electroless nickel plating.  
Corrosive liquids cannot be used. Made to order.

Spray Pattern

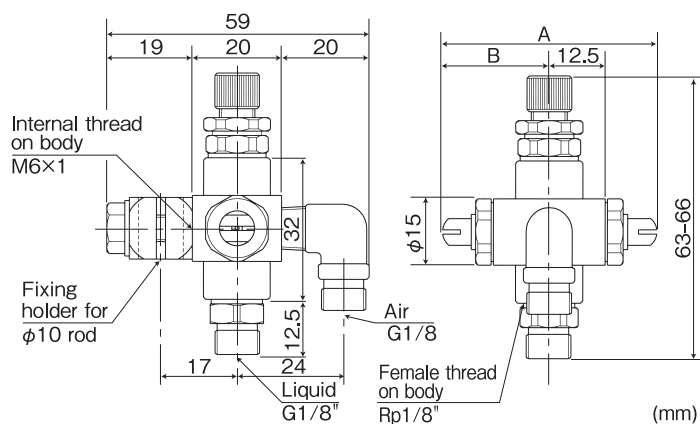
Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-5T	$\phi 1.0$	0-350	$\phi 120$	20	105	180

\*Data conditions for above: 0.29 MPa air pressure, 1-meter gravity-fed, 300-mm distance (for particle size, 200-mm distance), using water.

## Dimensions HM-4/HM-5



### HM-4/HM-5 Materials

Body	Air Cap, Nozzle	Other Parts	O-rings
Chrome-plated brass	Chrome-plated brass	Chrome-plated brass	Viton

Model	A	B
HM-4	48	24
HM-5	33	16.5

### HM-4T/HM-5T Materials

Body	Air Cap, Nozzle	Other Parts	O-rings
Aluminum with electroless nickel plating	Chrome-plated brass	Chrome-plated brass	Viton

Model	A	B
HM-4T	61	30.5
HM-5T	46	23

# HM-7 EM1-3 series

Thin parallel type

For use only at air pressure over 0.2 MPa.

No nipple type

To order a product without nipples, add an "X" to the end of the product number.



## HM-7



Thin parallel type/fan pattern. Thin body, only 15 mm thick. Multiple guns can be installed in parallel in narrow spaces. Made to order.

Spray Pattern

Fan



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-7	$\phi 1.0$	0-100	200	12	70	175

## HM-7R



Thin parallel type/round pattern. Thin body, only 15 mm thick. Multiple guns can be installed in parallel in narrow spaces. Made to order.

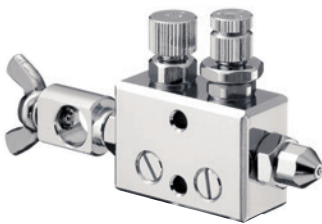
Spray Pattern

Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
HM-7R	$\phi 1.0$	0-200	$\phi 90$	23	55	175

## EM1-3AX



Fine  $\phi 0.6$ -diameter nozzle, ideal for spraying small volume of liquid. Multiple devices can be connected in series. The adjusters on top can be used to regulate the volume of liquid and air. External mix spraying.

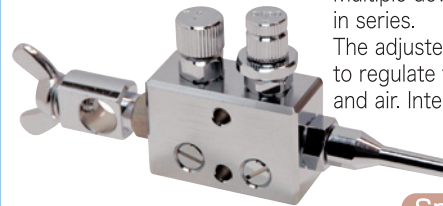
Spray Pattern

Small Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
EM1-3AX	$\phi 0.6$	0-50	$\phi 80$	11	55	205

## EM1-3X



Fine  $\phi 0.6$ -diameter nozzle, ideal for spraying small volume of liquid. Multiple devices can be connected in series. The adjusters on top can be used to regulate the volume of liquid and air. Internal mix spraying.

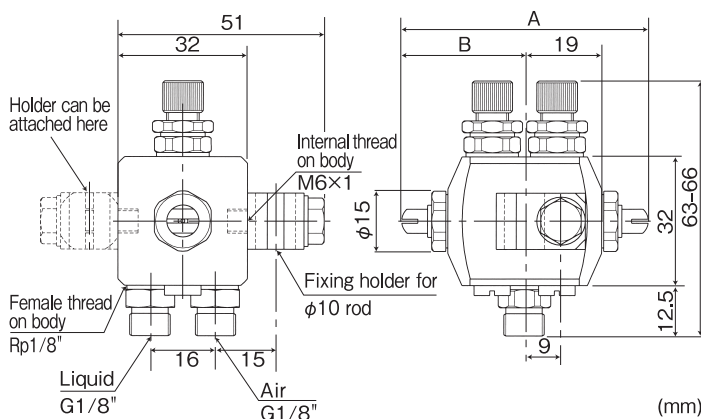
Spray Pattern

Small Round



Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
EM1-3X	$\phi 0.6$	0-35	$\phi 75$	12	60	210

## Dimensions HM-4T/HM-5T



## EM1-3LX



Features 100-mm needle nozzle. Multiple devices can be connected in series. The adjusters on top can be used to regulate the volume of liquid and air.

Spray Pattern

Small Round

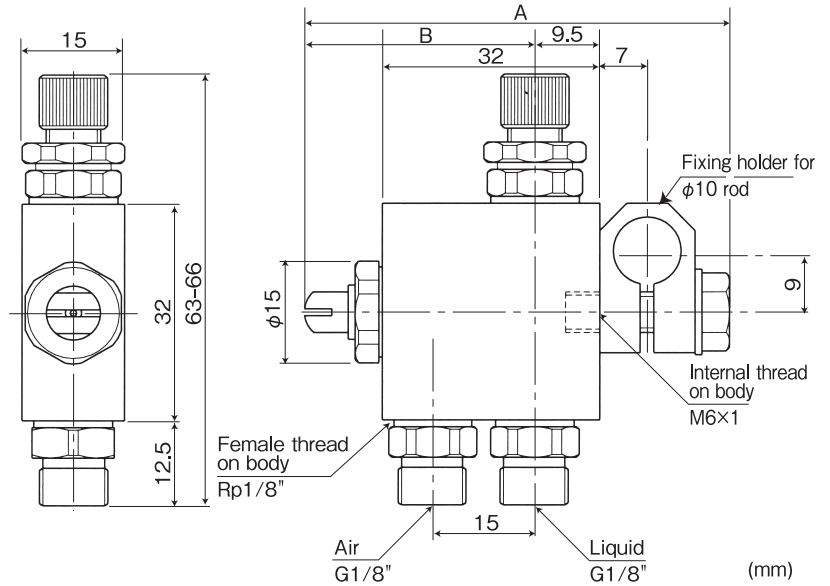


Model	Nozzle Size (mm)	Flow Rate (mL/min)	Pattern Width (mm)	Particle Size (SMD $\mu\text{m}$ )	Air Consumption (L/min)	Mass (g)
EM1-3LX	$\phi 0.7$	0-35	$\phi 50$	13	22	195

\*Data conditions for above: 0.29 MPa air pressure, 1-meter gravity-fed, 300-mm distance (for particle size, 200-mm distance), using water.

# Dimensions HM-7

Model	A	B
HM-7	62.5	34
HM-7R	55	26.5



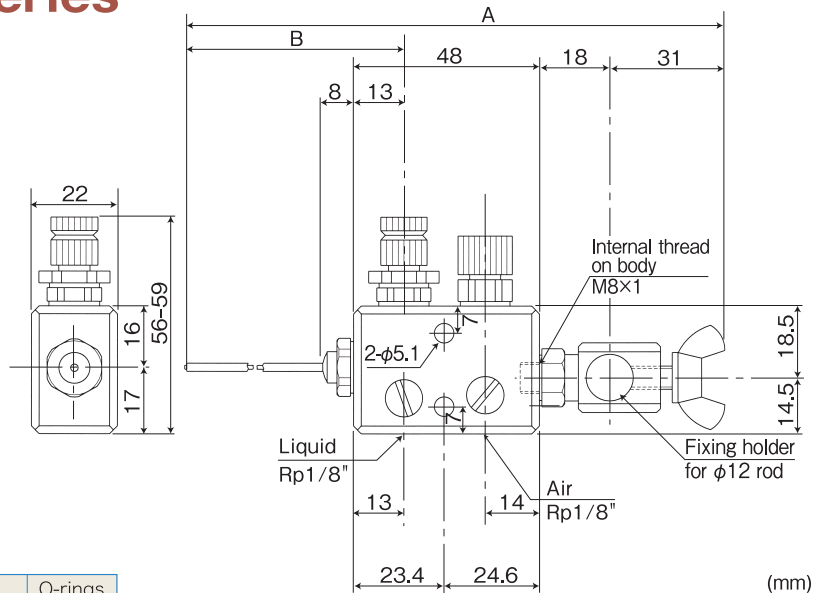
## HM-7 Materials

Body	Air Cap, Nozzle	Other Parts	O-rings
Chrome-plated brass	Chrome-plated brass	Chrome-plated brass	Viton

# Dimensions EM1-3 series

Model	A	B
EM1-3AX	115	31
EM1-3X	138.5	54.5
EM1-3LX	205	121

The liquid and air inlet connections are at the bottom of the body, but liquid and air can also be supplied from side plugs (separately sold B plugs (code 19520) are needed).



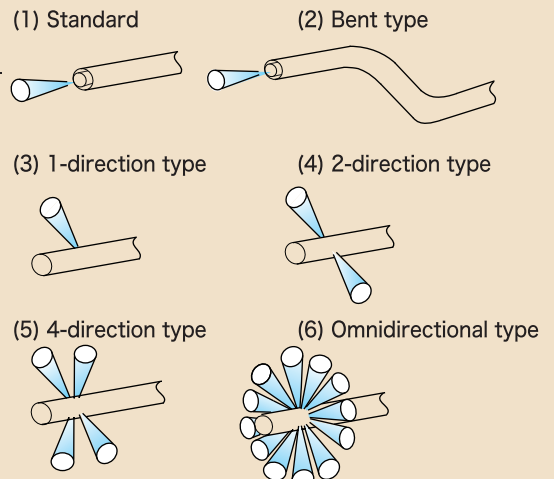
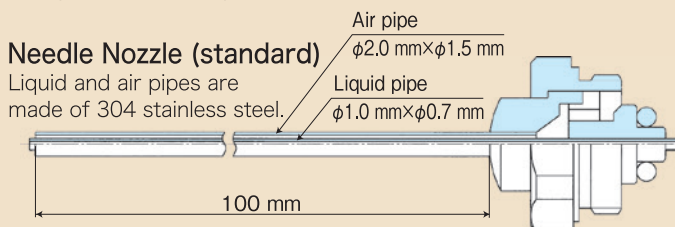
## EM1-3 series Materials

Body	Air Cap, Nozzle	Other Parts	O-rings
Chrome-plated aluminum	Chrome-plated brass	Chrome-plated brass	Viton

## Long Nozzle Cap Set (Needle Nozzle)

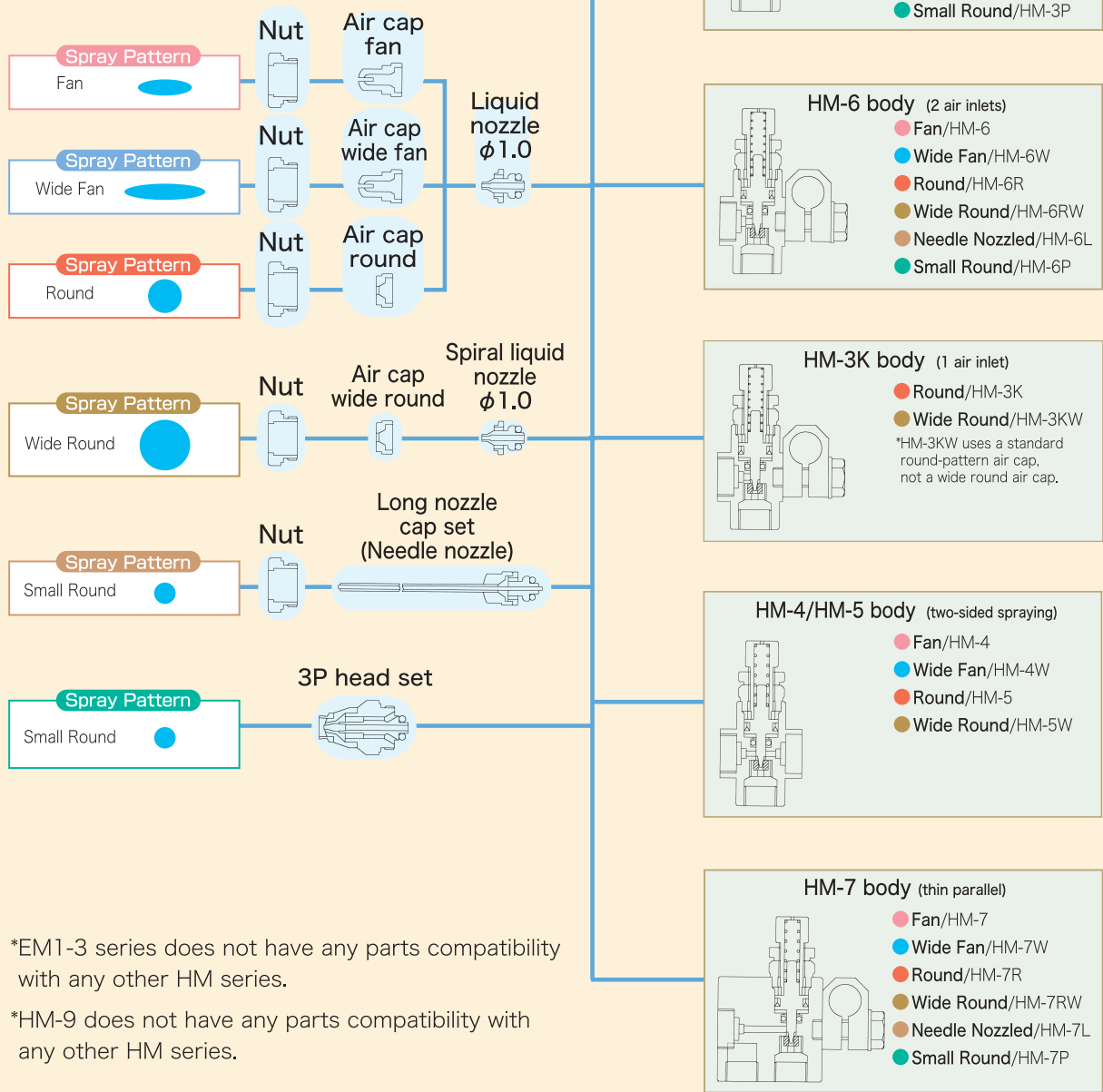
The needle nozzle is particularly suited for spraying the inner surfaces of tubular workpieces or deep inside narrow openings.

- Standard product is made of 304 stainless steel, φ2.0 mm-outer diameter air line, φ0.7 mm-inner diameter liquid line, and length 100 mm. We can also produce custom items with modified nozzle diameter or length.
- We can also handle bending, as in (2). Please specify the angle of bending and distance of bend from tip.
- (3) to (6) show a type with holes in the pipe for spraying from the side. Can be produced at outer diameters of φ2.5 mm and larger. The liquid needs to be pressure-fed.



# HM series Compatibility Chart

The spray pattern of the HM series can be changed easily, just by replacing the cap and nozzle. The models that correspond to combinations of cap, nozzle, and body are as shown below.



\*EM1-3 series does not have any parts compatibility with any other HM series.  
 \*HM-9 does not have any parts compatibility with any other HM series.

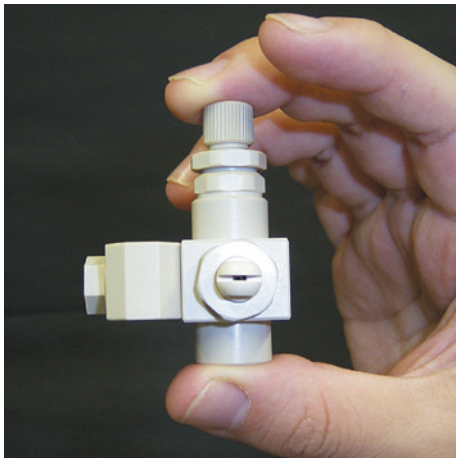
## Please do not hesitate to contact us.

- Selection of spray guns.
- Manufacturing of customized products.
- Changes to specifications.
- Improvement advice to counter clogging, overspraying or any other troubles.
- How to maintain spray guns, how to replace spare parts.

# High resistance against chemicals

## HMP series

Made of super-engineering plastic (polyphenylene sulfide, PPS resin).  
Extremely high resistance against corrosive liquids and strong chemicals.



### Features

- ◆ Wide range of resistances against corrosive liquids, chemicals, heat, acids, alkalines and so on. In compliance with the Food Sanitation Act of Japan.
- ◆ Continuous use temperature of approximately 220°C.
- ◆ Super light body of 20 g.

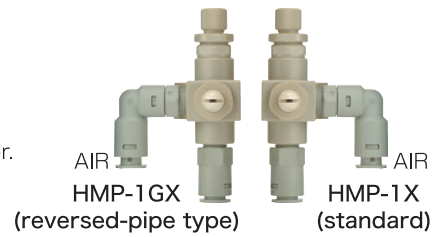
### Applications

Semiconductor and LCD manufacturing equipment, Food processing, Food-wrapping machines, electric parts, precision equipment, chemical plants.

### Reversed Pipe Gun

The HMP-1X/HMP-3X series offer reversed piping specifications, with air connections swapped left-right. Combining one of these with a standard spray gun enables more compact installation by avoiding a collision of air lines. To order a reversed pipe gun, please add a "G" to the end of the product number.  
e.g., HMP-1X, reversed-pipe type ⇒ HMP-1GX

Tube fittings in the right figure are sold separately (see p16).



### HMP-1X



Fan pattern spraying, high-pressure spray type. For spray data, refer to HM-1 on p6.

#### Spray Pattern

Fan



### HMP-1WX



Wide fan pattern spraying, high-pressure spray type. **The liquid needs to be pressure-fed.** For spray data, refer to HM-1W on p6.

#### Spray Pattern

Wide Fan



### HMP-3X



Round pattern spraying, high-pressure spray type. For spray data, refer to HM-3 on p6.

#### Spray Pattern

Round



### HMP-3WX



Wide round spraying, high-pressure spray type. A spiral stream enables effective application on concave surfaces. For spray data, refer to HM-3W on p6.

#### Spray Pattern

Wide Round



## HMP-3KX



Round pattern spraying. Atomizing air is held at low pressure inside the body to prevent overspraying. Suitable for preventing overspraying and when a single air hose is preferred. For spray data, refer to HM-3K on p6.

### Spray Pattern

Round



## HMP-3KWX



Overspray-prevention type, which is the same as HMP-3KX. A spiral stream enables effective application on concave surfaces. For spray data, refer to HM-3KW on p6.

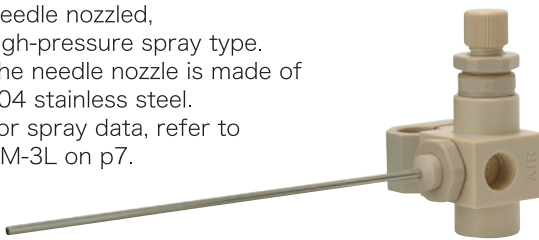
### Spray Pattern

Wide Round



## HMP-3LX

Needle nozzleed, high-pressure spray type. The needle nozzle is made of 304 stainless steel. For spray data, refer to HM-3L on p7.



### Spray Pattern

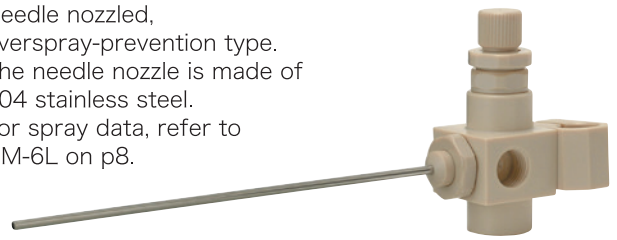
Small Round



\*Standard length 100 mm

## HMP-6LX

Needle nozzleed, overspray-prevention type. The needle nozzle is made of 304 stainless steel. For spray data, refer to HM-6L on p8.



### Spray Pattern

Small Round



\*Standard length 100 mm

## HMP-6X



Standard model of the HMP series. Fan pattern spraying, overspray-prevention type. For spray data, refer to HM-6 on p8.

### Spray Pattern

Fan



## HMP-6WX



Overspray-prevention type. Fan pattern much wider than that of HMP-6X. [Pressure-fed liquid required.](#) For spray data, refer to HM-6W on p8.

### Spray Pattern

Wide Fan



## HMP-6RX



Standard model of the HMP series. Round pattern spraying. Overspray-prevention type. For spray data, refer to HM-6R on p8.

### Spray Pattern

Round



## HMP-6RWX



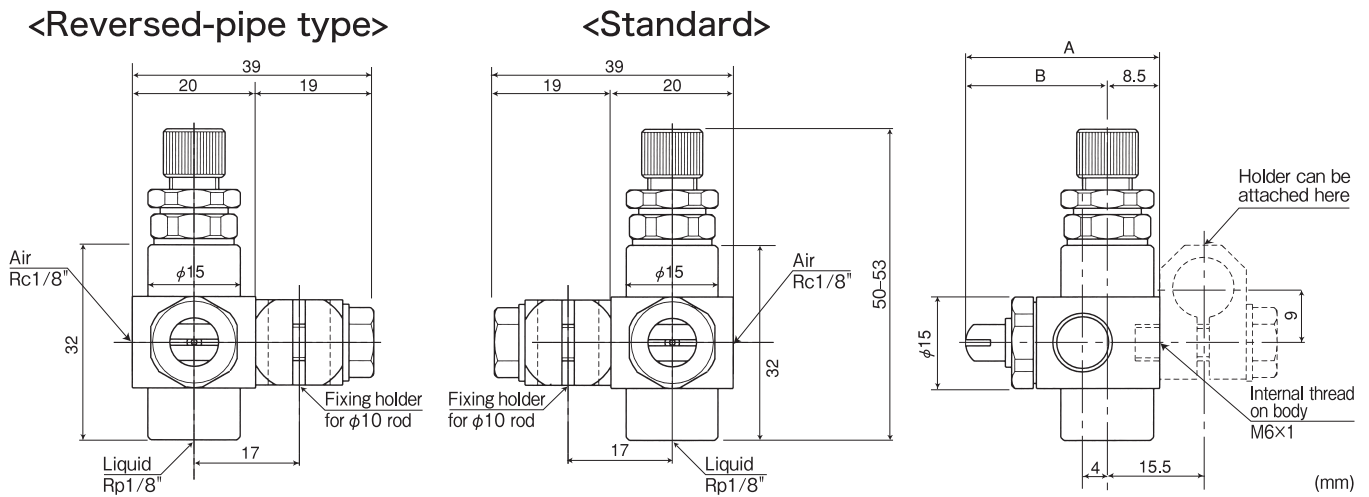
Round pattern, larger than that of HMP-6RX. Overspray-prevention type. A spiral stream enables effective application on concave surfaces. For spray data, refer to HM-6RW on p8.

### Spray Pattern

Wide Round

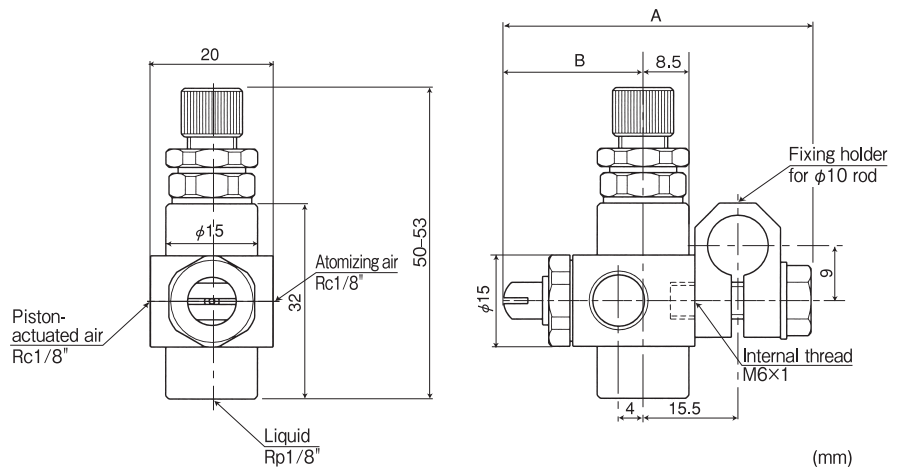
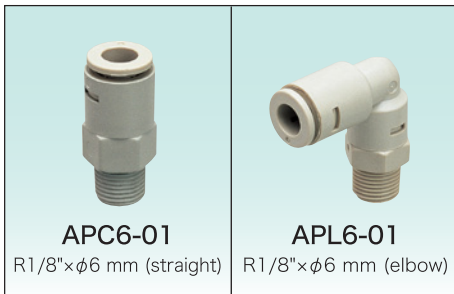


# Dimensions HMP-1X/HMP-3X series



# Dimensions HMP-6X series

## Tube fittings for HMP series (option)



For hoses, we recommend chemical and heat-resistant fluorocarbon polymer (PFA) products. Please contact us for more details.

Model	A	B
HMP-1X	31.5	23
HMP-1WX	31.5	23
HMP-3X	24	15.5
HMP-3WX	24	15.5
HMP-3KX	24	15.5
HMP-3KWX	24	15.5
HMP-3LX	128	119.5

Model	A	B
HMP-6X	50.5	23
HMP-6WX	50.5	23
HMP-6RX	43	15.5
HMP-6RWX	43	15.5
HMP-6LX	147	119.5



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