New Product Technical Material

Miracle fog MINI

Model No. Wet AAA

Precision Resin Molding

Patent Registered

This technical material is subject to change without notice to improve performance

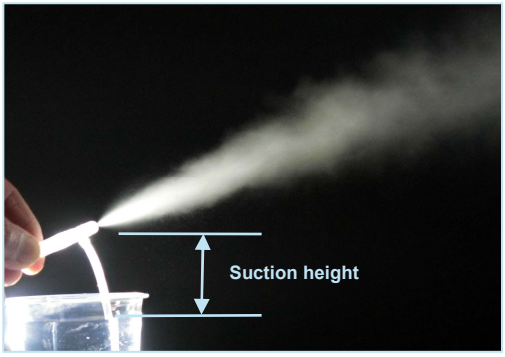
Nozzle Network Co., Ltd.

Siphon-type Air Spray Nozzle Based on a New Principle (Patent Registered in Japan)

Average particle diameter: 2.76 μm (experimental value at air pressure of 500 kPa and suction height of 100 mm)

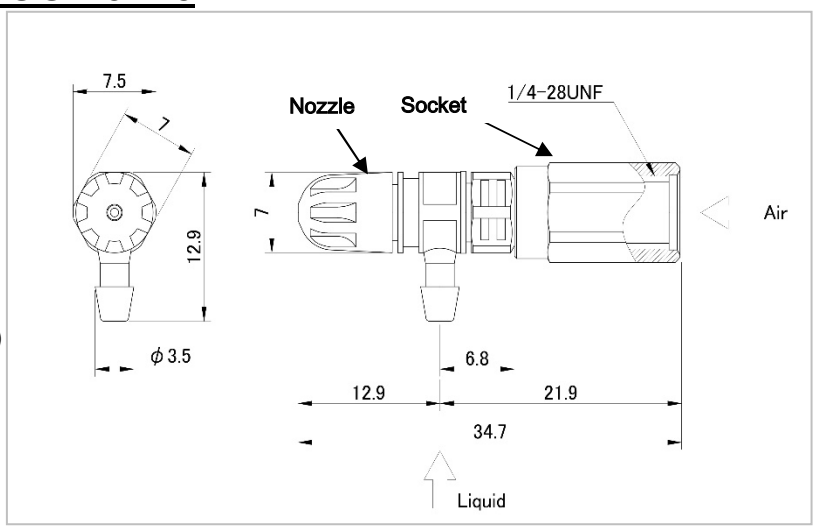
No orifice wear after 1000 hours of continuous spraying (reference: Air pressure 300 kPa, purified water spraying experiment value)

Precision injection molding nozzle



Siphon (self-feeding) spray with compressed air

1. Product Name: MIRACLE FOG Nozzle
Model No.: Wet AAA



2. Product specifications

- Material: Polypropylene
- Weight: 1 gram
- Minimum passage size for foreign matters
  - Air: Rectangular (0.35 x 0.15 mm)
  - Liquid: φ0.2 mm

3. Quality assurance

① Full quantity shipment inspection on spray
② Reference variation in spray volume: ±8%
(For production volume of 20,000 pcs/month)
Guaranteed variability for custom order: ±3%
③ A small amount of adhesive (LOCTITE 401) is used inside the nozzle
④ Withstand pressure: 500 kPa (please be sure to inquire in advance if you want to use normal withstand pressure of 300 kPa or more)
⑤ Corrosion due to chemical spraying cannot be guaranteed.
⑥ The user is responsible for spraying liquid which is harmful to human body.
⑦ Important: Never disassemble the nozzle, as it will significantly reduce its performance.
⑧ In the unlikely event that there is a problem with our delivered product, we will replace it free of charge.

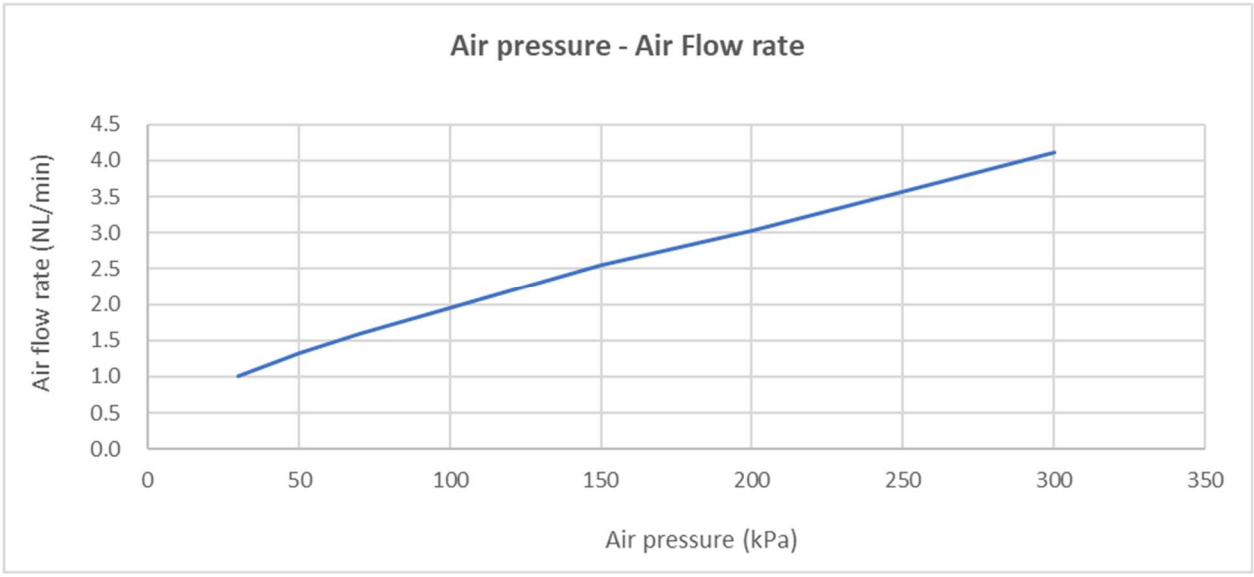
4. Spray performance (spray solution: Purified water)

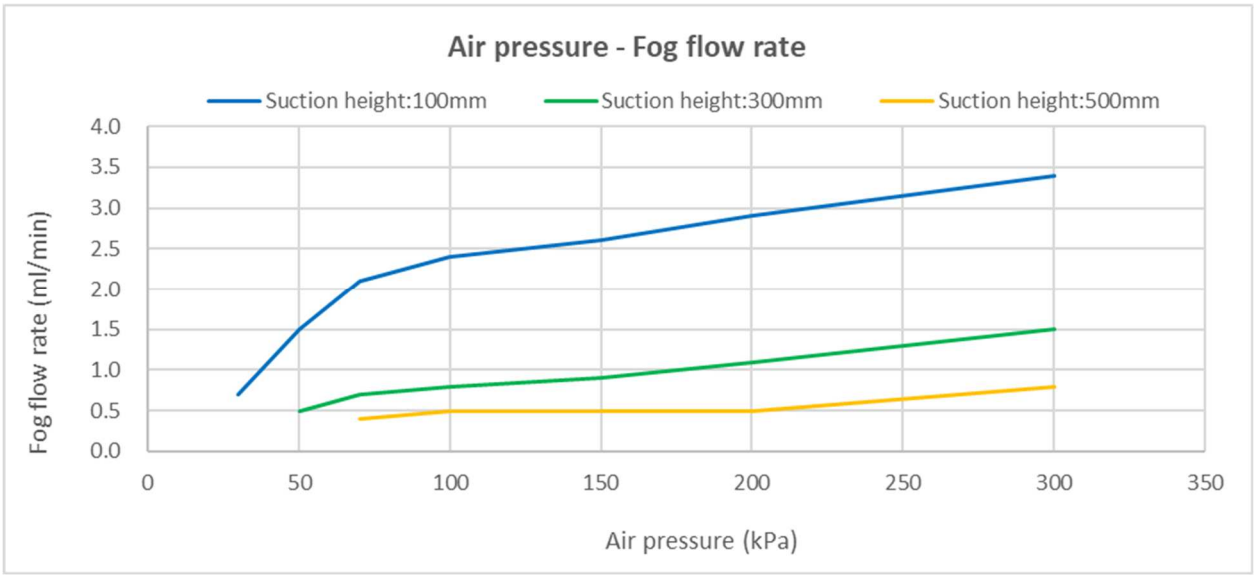
Recommended air pressure range: 30 to 300 kPa

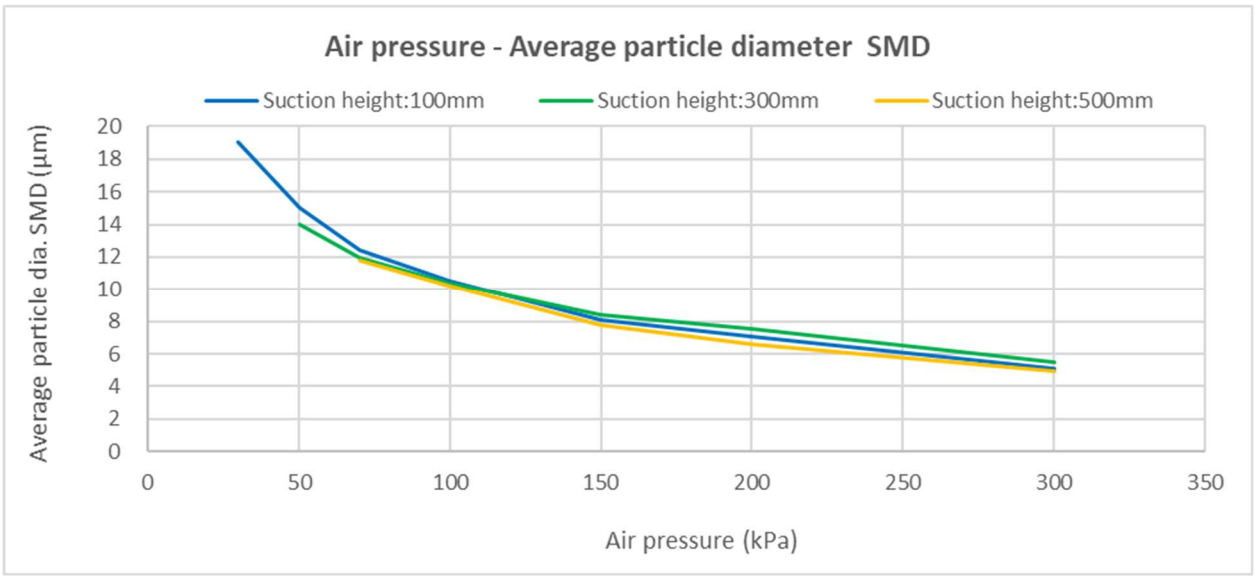
*1 "Suction height" refers to the vertical distance between the water surface and the nozzle, where the liquid surface is located below the nozzle.
The siphon force (suction force) decreases and the spray volume also decreases as the suction height is larger.

Suction heigh*1 (mm)	Air pressure (kPa)	Air volume (Nl/min)	Flow rate of atomization (ml/min)	Average particle diameter SMD (μm)
100	30	1.00	0.7	19.02
	50	1.32	1.5	15.04
	70	1.59	2.1	12.45
	100	1.95	2.4	10.52
	150	2.55	2.6	8.07
	200	3.03	2.9	7.06
	300	4.12	3.4	5.07
300	30	0.9	---	---
	50	1.2	0.5	14.04
	70	1.5	0.7	11.97
	100	1.9	0.8	10.41
	150	2.4	0.9	8.44
	200	2.9	1.1	7.51
	300	3.9	1.5	5.47
500	30	0.9	---	---
	50	1.2	0.1	13.88
	70	1.5	0.4	11.79
	100	1.9	0.5	10.22
	150	2.4	0.5	7.80
	200	2.9	0.5	6.58
	300	3.9	0.8	4.95

Various characteristic data







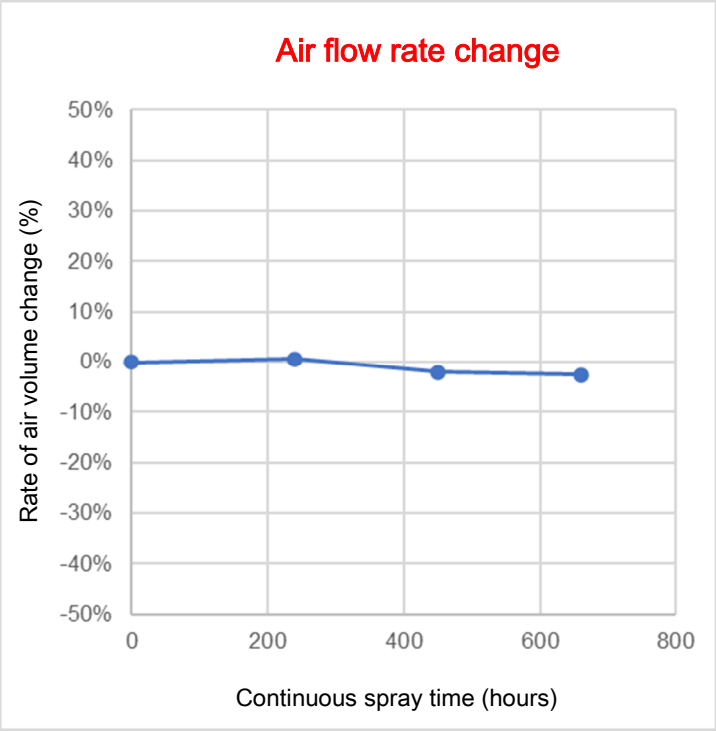
The data from actual measurements below are for reference only and do not guarantee performance.

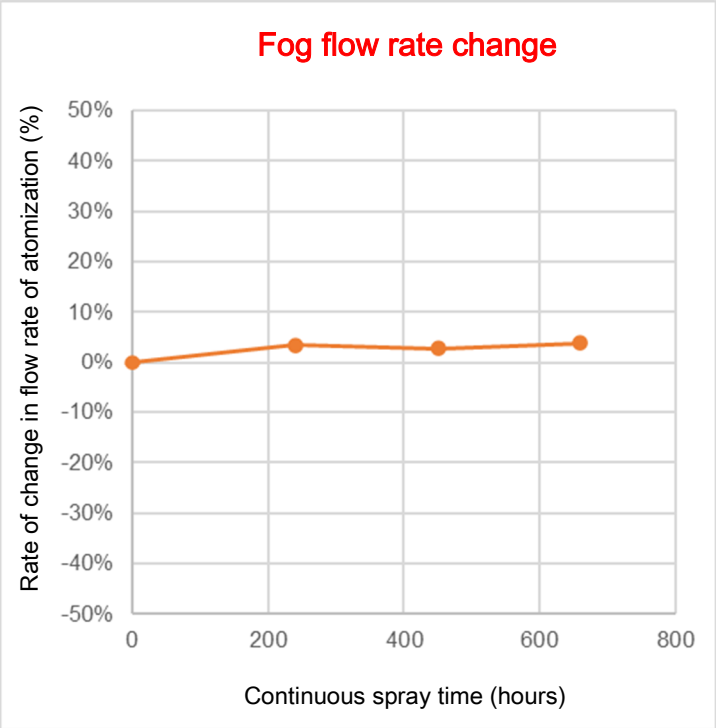
MIRACLE FOG Wet AAA abrasion test

Spray liquid: Tap water in Japan

Spray air pressure: 300 kPa

Average value for 5 nozzles





5. Reference photographs of MIRACLE FOG Nozzle assembly

[5-1] Fog turbo fan

[5.2] Connected spraying (with use of some commercial parts)

[5-3] SUS header spray

[5-4] Multi-fog (3 nozzles)

[5-5] 6-volt air pump set

End of document

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