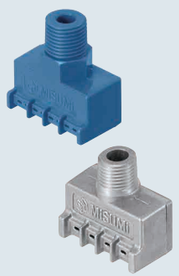
Air Nozzles

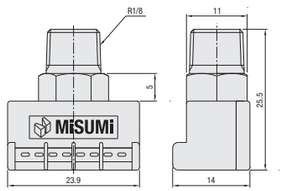
90° Type

Air Nozzles – 90° Type

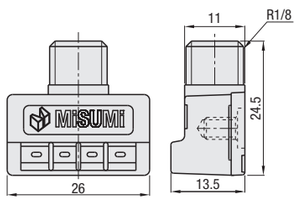


RoHS10

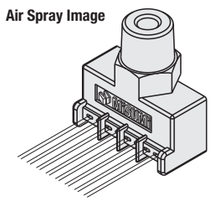
AFTR



AFTRA



Air Spray Image



Type	Material	Surface Treatment	Max. Operating Pressure	Heat Resistant Temperature
AFTR	Thermoplastic (ABS Plastic)	—	0.7 MPa	70°C
AFTRA	Aluminum Casting Alloy 383.0	Electroless Nickel Plating	0.7 MPa	200°C

Part Number Type	Part Number No.	Orifice	Air Flow Rate NL/min (for 0.3 MPa)	Weight (g)
AFTR	15	8-Ø0.6 x 1.5	210	4
AFTRA		4-Ø0.8 x 1.8	190	10

Features

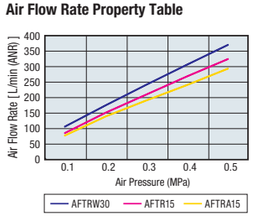
Air Nozzles are more compact than Standard Type.
(Width: Approx. 60%, Overall Length: Approx. 45% more compact)

To prevent damage
– Avoid excessive tightening of screw.
– Avoid shocks to the screw.

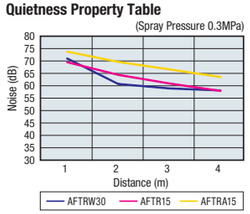
Part Number Example

Part Number
AFTR15

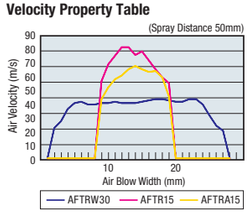
Air Flow Rate Property Table



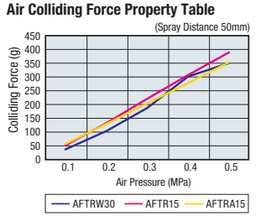
Quietness Property Table



Velocity Property Table

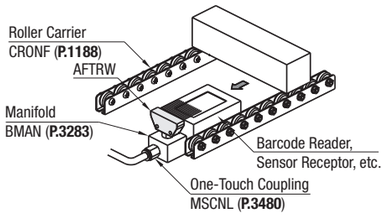


Air Colliding Force Property Table

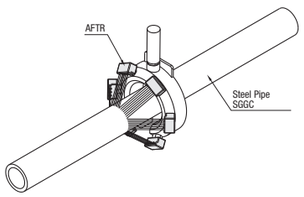


Values on the graph are for reference, not guaranteed.

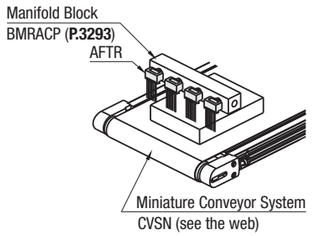
Application Example



Blow air over the sensor receiver to prevent dust adhesion.



(Surface Cleaning)



(Dry)

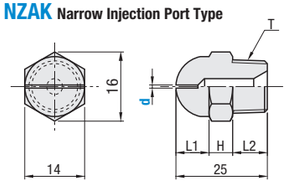
Air Nozzles

Economy Type

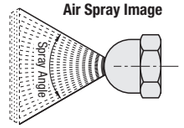
Air Nozzles – Economy Type

RoHS10

NZAK Narrow Injection Port Type



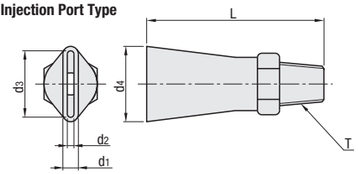
Air Spray Image



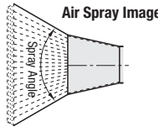
Features
Gas spreads fan-like in line to the slit.

Applications
Steam humidification, Drying, Air Blow, etc.

NZAL Wide Injection Port Type



Air Spray Image



Features
Air sprayed at wide angle.

Applications
Dust Proof, Air Blow, etc.

Material: 304 Stainless Steel

Part Number Type	No.	d Slot Width	T	L	L_1	L_2	H	B_1	B_2	Mass (g)
NZAK	1	0.6	R1/8	22	8	8	6	12	13.8	22
	2	0.8 1.0 1.2 1.6	R1/4	25	8.5	10	6.5	14	16	20

Part Number Type	No.	L	d_1	d_2	d_3	d_4	T	Mass (g)
NZAL	11	40	3.1	1.5	10	11.6	R1/8	15
	22	40	3.5	1.5	15	17		20
	33	45	3.5	1.5	18.5	20.5		30

Projection Angle

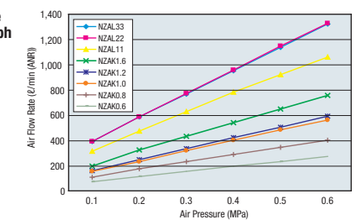
Pressure [Mpa]	Spray Angle NZAK 1–0.6	1–0.8	1–1.0	1–1.2	1–1.6	2–0.6	2–0.8	2–1.0	2–1.2	2–1.6	NZAL 11	22	33
0.1	55°	60°	65°	65°	70°	60°	60°	65°	65°	70°	25°	50°	55°
0.2	60°	65°	75°	75°	75°	65°	70°	75°	70°	70°			
0.3	65°	70°	75°	75°	70°	70°	75°	80°	75°	75°			
0.4	70°	75°	80°	80°	80°	75°	80°	85°	80°	80°			
0.5	75°	80°	80°	80°	85°	80°	85°	85°	85°	85°			
0.6	80°	80°	85°	85°	85°	85°	85°	85°	85°	85°			

Listed values are for reference, not guaranteed.

Part Number Example

Part Number	-	d
NZAK2 NZAL11	-	1.0

Air Flow Rate Property Graph

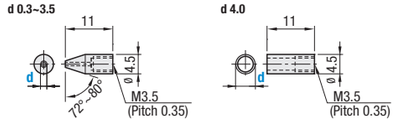


Values on the graph are for reference, not guaranteed.

Vacuum Attachments Chip Type

Type	Material	Surface Treatment	Heat Resistance Temp.	Electrical Resistance
NICR	Low Cadmium Brass	Brass (Nickel / Chrome Plating)	200°C	—
NIFE	PTFE (Teflon)	—	260°C	$10^{15}\Omega$
NIEK	Conductive PEEK	—	250°C	$10^{3}\Omega$

Tip Shape

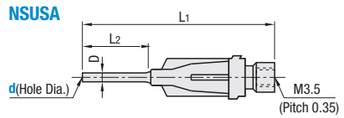


Features
Brass: Low cost and heat resistant
Teflon: As the material is soft, the adsorbing work is not easily scratched, and it is excellent in chemical resistance.
Conductive PEEK: Convenient in handling small electronic parts that require static protection.

Please use in combination with Holder for Mini-Vacuum Suction Cup Tip Threaded (MHLDK **P.3542**) and Vacuum Pen (MKPEN · MKPEL).

Vacuum Attachments Fine Type

NSUSA



Material: End Part: 304 Stainless Steel
Resin Part: Polypropylene

Part Number Type	d	D	L_1	L_2
NSUSA	0.10	0.23	29.35	6.35
	0.15	0.3	35.7	12.7
	0.20	0.41		
	0.33	0.64		
	0.51	0.81		
	0.84	1.27		
	1.37	1.65		
	1.52	1.83		

Part Number Type	d
NICR NIFE NIEK	0.3
	0.4
	0.5
	0.6
	0.7
	0.8
	1.0
	1.2
	1.5
	2.0
	2.5
	3.0
	3.5
	4.0

d3.5 is not available for NIEK.

Part Number Example

Part Number
NICR0.3 NSUSA0.15