

Series 11-22-MHZ2 Air gripper ø10, ø16, ø20, ø25

How to Order

• **Clean series**

11	Vacuum suction type
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• **Copper, fluorine and silicon-free + Low particle generation**

22	Vacuum suction type
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Bore size

10	10mm
16	16mm
20	20mm
25	25mm

Action

D	Double acting
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Finger option

Nil: Basic style	1: Side tapped mounting	2: Through-holes in opening / closing direction	3: Flat type fingers
N: Basic style	N1: Side tapped mounting	N2: Through-holes in opening / closing direction	

• **Number of auto switches**

Nil	2 pcs.
S	1 pc.

• **Auto switch**

Nil	Without auto switch (Built-in magnet)
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Auto switch specifications (Refer to Best Pneumatics catalog for further information on auto switches.)

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m) ^{Note 1)}			Applicable load		Applicable model			
					DC	AC	Perpendicular	In-line	0.5 Nil	3 (L)	5 ^{Note 2)} (Z)			ø10	ø16	ø20	ø25
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24V	5V	M9NV	M9N	●	●	○	IC circuit	Relay PLC	●	●	●	●
				3-wire (PNP)			F8N	—	●	●	○			●	●	●	●
				2-wire			M9PV	M9P	●	●	○			●	●	●	●
							F8P	—	●	●	○			—	—	●	●
					12V	—	M9BV	M9B	●	●	○	—		—	—	●	●
							F8B	—	●	●	○			—	—	●	●

Note 1) Lead wire length symbols: 0.5 m.....Nil (Example) M9N
 3 m.....L (Example) M9NL
 5 m.....Z (Example) M9NZ

Note 2) Auto switches marked with a "○" symbol are produced upon receipt of order.

Refer to page 235 for a list of applicable auto switches.

Specifications

Fluid	Air
Operating pressure	ø10: 0.2 to 0.7 MPa ø16 to ø25: 0.1 to 0.7 MPa
Ambient and fluid temperature	-10 to 60°C
Repeatability	±0.01
Maximum operating frequency	180 c.p.m.
Lubrication	Not required
Action	Double acting
Grease	11-: Fluorine grease 22-: Lithium soap based grease
Particle generation grade (Refer to front matter pages 13 to 22 for details.)	11-/22-: Grade 2

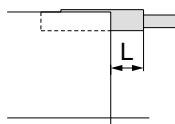
Suction flow rate of vacuum suction type (Reference values)

Size	Suction flow rate ℓ/min (ANR)
10/16	1
20/25	2

Protrusion of auto switch from edge of body

- The amount of auto switch protrusion from the body's end surface is as shown in the table below.
- Use this as a standard when mounting, etc.
- D-F8□ has no protrusion from the body's end surface.

Model	Lead wire type Explanatory drawing Auto switch Finger position	In-line electrical entry type
		D-M9□
¹¹⁻²²⁻ MHZ2-10□	Open	8
	Closed	10
¹¹⁻²²⁻ MHZ2-16□	Open	4
	Closed	7
¹¹⁻²²⁻ MHZ2-20□	Open	—
	Closed	5
¹¹⁻²²⁻ MHZ2-25□	Open	—
	Closed	2



Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

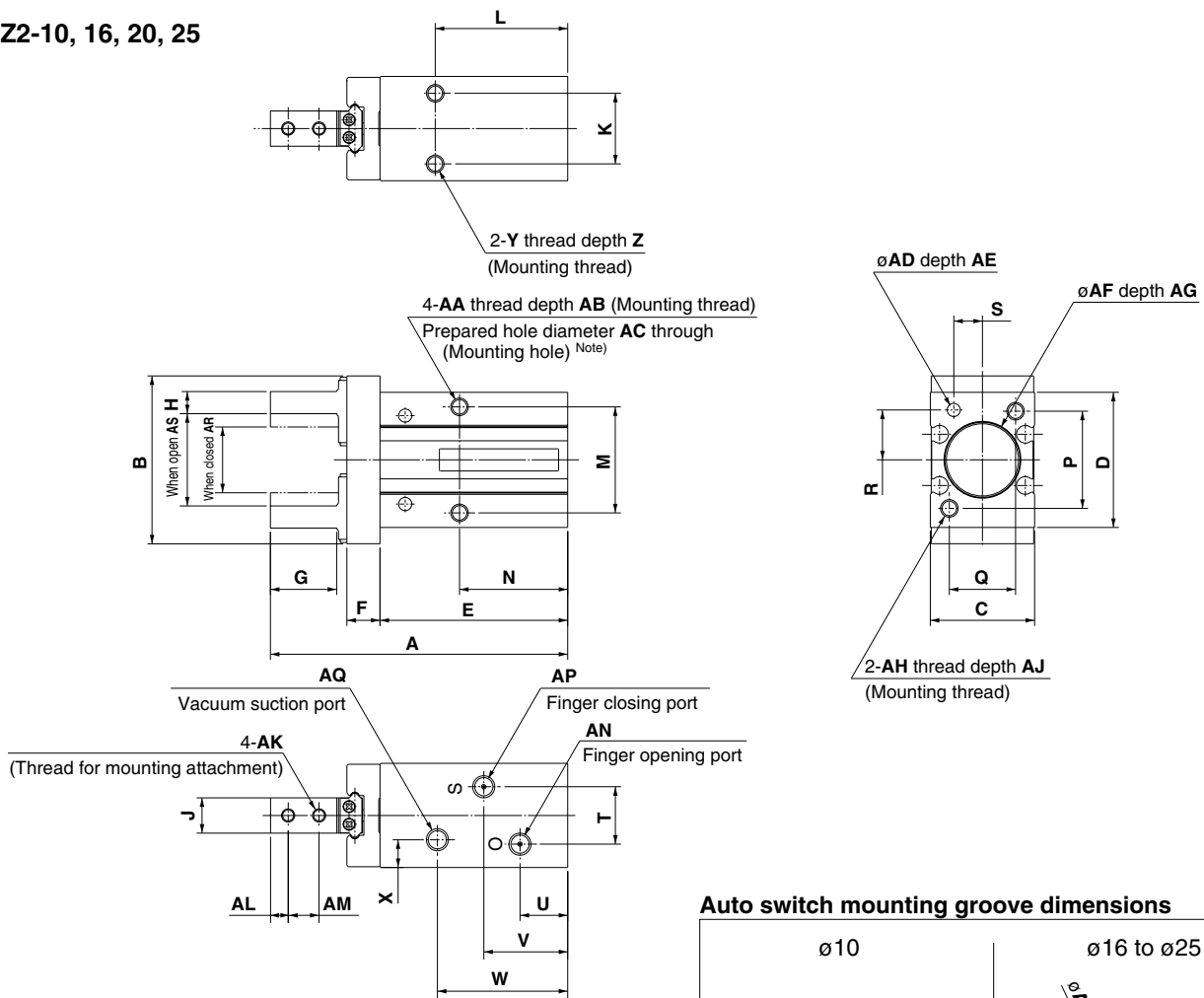
Air preparation equipment

Pressure switch

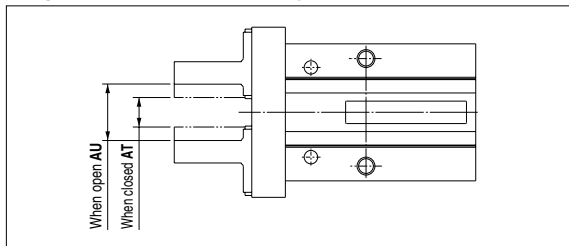
Clean gas filter

Dimensions

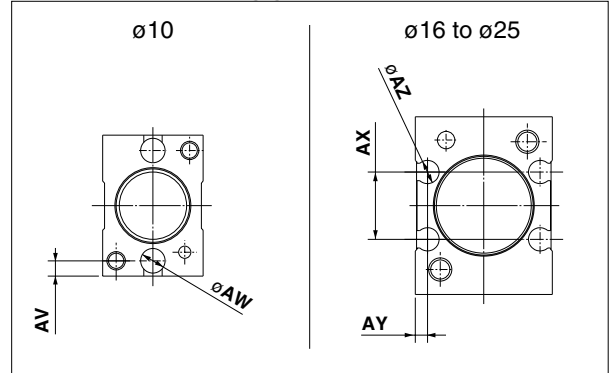
11-22-MHZ2-10, 16, 20, 25



Finger position / Narrow type (N)



Auto switch mounting groove dimensions



Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
11-22-MHZ2-10D□	57	29	16.4±0.05	23	37.8	6	12	4 ⁰ _{-0.1}	5 ⁰ _{-0.05}	11.4	27	16	23	18	12	7.6±0.02	5.2±0.02	10
11-22-MHZ2-16D□	67.3	38	23.6±0.05	30.6	42.5	7.5	15	5 ⁰ _{-0.1}	8 ⁰ _{-0.05}	16	30	24	24.5	22	15	11±0.02	6.5±0.02	13
11-22-MHZ2-20D□	84.8	50	27.6±0.05	42	52.8	9.5	20	8 ⁰ _{-0.1}	10 ⁰ _{-0.05}	18.6	35	30	29	32	18	16.8±0.02	7.5±0.02	15
11-22-MHZ2-25D□	102.7	63	33.6±0.05	52	63.6	11	25	10 ⁰ _{-0.1}	12 ⁰ _{-0.05}	22	36.5	36	30	40	22	21.8±0.02	10±0.02	20

Model	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK
11-22-MHZ2-10D□	12	19.5	28.2	5.5	M3 x 0.5	6	M3 x 0.5	5.5	2.6	2H9 ^{+0.025} ₀	3	12.4H9 ^{+0.043} ₀	1.5	M3 x 0.5	6	M2.5 x 0.45
11-22-MHZ2-16D□	10.8	19	29.5	6.5	M4 x 0.7	4.5	M4 x 0.7	8	3.4	3H9 ^{+0.025} ₀	3	17.4H9 ^{+0.043} ₀	1.5	M4 x 0.7	8	M3 x 0.5
11-22-MHZ2-20D□	12	23	39.8	8.3	M5 x 0.8	8	M5 x 0.8	10	4.3	4H9 ^{+0.030} ₀	4	22.4H9 ^{+0.052} ₀	2	M5 x 0.8	10	M4 x 0.7
11-22-MHZ2-25D□	13	37	49.7	10.8	M6 x 1	10	M6 x 1	12	5.1	4H9 ^{+0.030} ₀	4	27.4H9 ^{+0.052} ₀	3	M6 x 1	12	M5 x 0.8

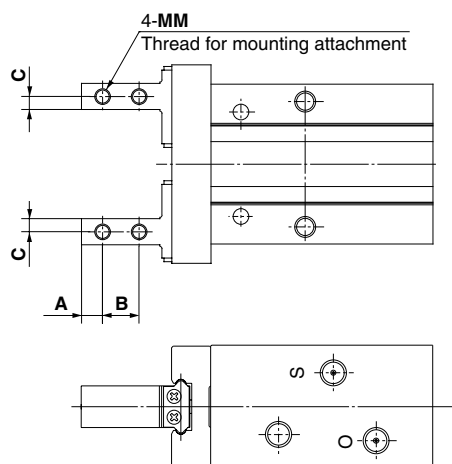
Model	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ
11-22-MHZ2-10D□	3	5.7	M3 x 0.5	M3 x 0.5	M3 x 0.5	11.2 ^{+0.5} _{-0.2}	15.2 ^{+2.2} ₀	5.7 ^{+0.5} _{+0.1}	9.7 ^{+2.2} ₀	2.5	4	—	—	—
11-22-MHZ2-16D□	4	7	M5 x 0.8	M5 x 0.8	M5 x 0.8	14.9 ^{+0.5} _{-0.2}	20.9 ^{+2.2} _{-0.2}	6.6 ^{+0.5} _{+0.1}	12.6 ^{+2.2} ₀	—	—	11.6	2.1	4
11-22-MHZ2-20D□	5	9	M5 x 0.8	M5 x 0.8	M5 x 0.8	16.3 ^{+0.5} _{-0.2}	26.3 ^{+2.2} _{-0.2}	7.2 ^{+0.5} _{+0.1}	17.2 ^{+2.2} ₀	—	—	14	2.1	4
11-22-MHZ2-25D□	6	12	M5 x 0.8	M5 x 0.8	M5 x 0.8	19.3 ^{+0.5} _{-0.3}	33.3 ^{+2.5} _{-0.2}	8.8 ^{+0.5} _{+0.1}	22.8 ^{+2.5} ₀	—	—	19	3.5	4

Note) Through-hole mounting is not possible for size 10.

Standard type / Series ¹¹⁻²²⁻MHZ2

Finger option

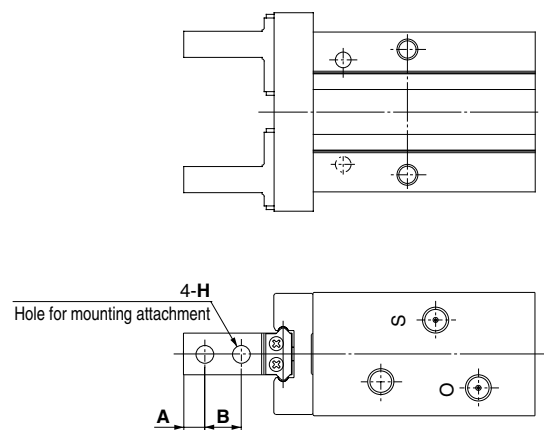
Side tapped mounting [1/N1]



Model	A	B	C	MM
¹¹⁻²²⁻ MHZ2-10D ¹ _{N1}	3	5.7	2	M2.5 x 0.45
¹¹⁻²²⁻ MHZ2-16D ¹ _{N1}	4	7	2.5	M3 x 0.5
¹¹⁻²²⁻ MHZ2-20D ¹ _{N1}	5	9	4	M4 x 0.7
¹¹⁻²²⁻ MHZ2-25D ¹ _{N1}	6	12	5	M5 x 0.8

* Specifications and dimensions other than the above are the same as the basic type (including narrow type).

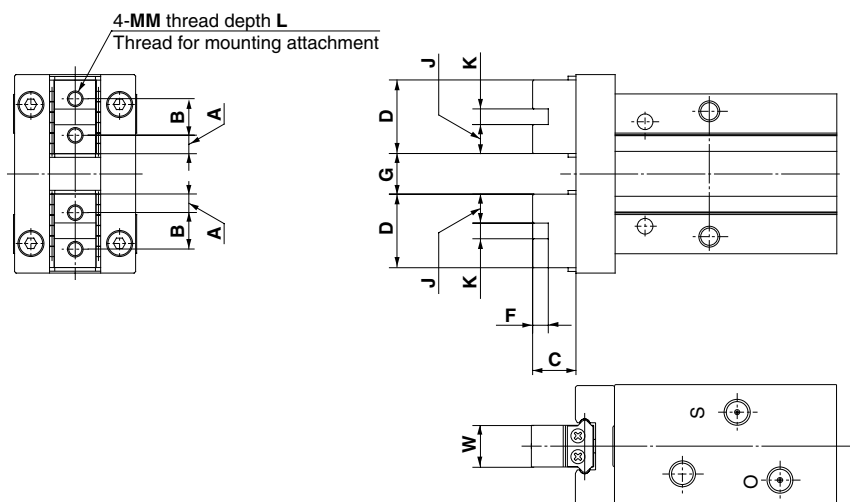
Through-holes in opening / Closing direction [2/N2]



Model	A	B	H
¹¹⁻²²⁻ MHZ2-10D ² _{N2}	3	5.7	2.9
¹¹⁻²²⁻ MHZ2-16D ² _{N2}	4	7	3.4
¹¹⁻²²⁻ MHZ2-20D ² _{N2}	5	9	4.5
¹¹⁻²²⁻ MHZ2-25D ² _{N2}	6	12	5.5

* Specifications and dimensions other than the above are the same as the basic type (including narrow type).

Flat type fingers [3]



Model	A	B	C	D	F	G		J	K	MM	L	W	Weight (g)
						Open	Closed						
¹¹⁻²²⁻ MHZ2-10D3 * 1), * 2)	2.45	6	5.2	10.9	2	5.4 ^{+2.2} ₀	1.4 ^{+0.5} _{+0.3}	4.45	2H9 ^{+0.025} ₀	M2.5 x 0.45	5	5 ⁰ _{0.05}	60
¹¹⁻²²⁻ MHZ2-16D3 * 1), * 2)	3.05	8	8.3	14.1	2.5	7.4 ^{+2.2} ₀	1.4 ^{+0.5} _{+0.3}	5.8	2.5H9 ^{+0.025} ₀	M3 x 0.5	6	8 ⁰ _{0.05}	125
¹¹⁻²²⁻ MHZ2-20D3 * 1), * 2)	3.95	10	10.5	17.9	3	11.6 ^{+2.3} ₀	1.6 ^{+0.5} _{+0.3}	7.45	3H9 ^{+0.025} ₀	M4 x 0.7	8	10 ⁰ _{0.05}	250
¹¹⁻²²⁻ MHZ2-25D3 * 1), * 2)	4.9	12	13.1	21.8	4	16 ^{+2.5} ₀	2 ^{+0.5} _{+0.3}	8.9	4H9 ^{+0.030} ₀	M5 x 0.8	10	12 ⁰ _{0.05}	450

* 1) Specifications and dimensions other than the above are the same as the basic type (Narrow type is not available for D3).

* 2) The overall length is the same as the MHQ(G) flat finger type.