

rigidity and high precision

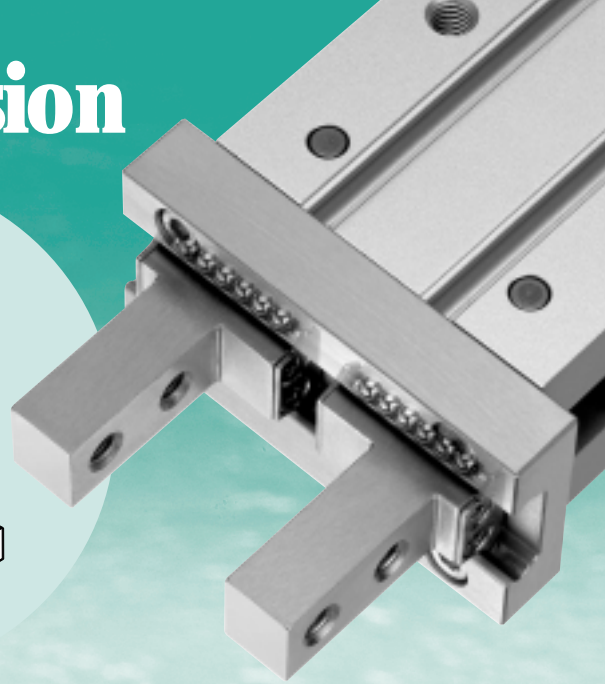
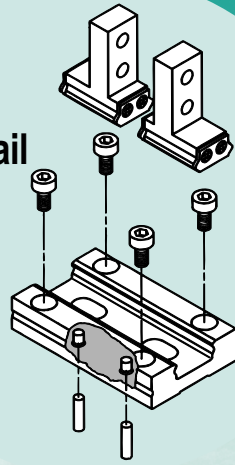
-- Body thickness tolerance: $\pm 0.05\text{mm}$

-- No guide protrusion in direction of body thickness

-- Improved remounting accuracy
Positioning dowel pin holes provided

-- Top mounting centering location
Mounting is more secure with a depth 0.5 to 2mm greater than conventional types

Integral guide rail construction



Compact Series
MHZA2-6/MHZA2-6

Standard Type
MHZ2

Long Stroke
MHZL2

With Dust Cover
MHZJ2

Auto Switches

Order Made

Model Selection

Precautions

New

Accommodates diverse work piece diameters with a single unit

- Nearly double the standard stroke
- Long strokes are also compact and light weight

Series	Opening/Closing stroke mm (Open — Closed)	Weight g	Body thickness mm
MHZL2-10	8 (4)	60	16.4
MHZL2-16	12 (6)	135	23.6
MHZL2-20	18 (10)	270	27.6
MHZL2-25	22 (14)	470	33.6

Values inside () are for standard series MHZ2.

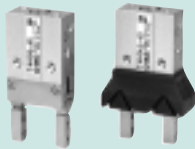
Long strokes MHZL2



A wide variety of types and broad size variations

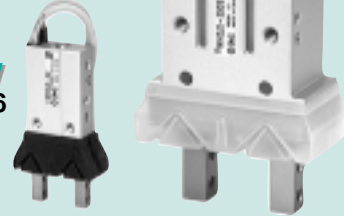
Compact series (without auto switch)

New
ø6



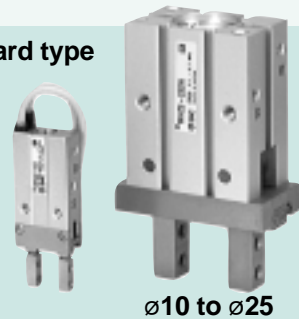
With dust cover
ø10 to ø25

New
ø6



Standard type

New
ø6



ø10 to ø25

New
ø32, ø40



New
Long stroke
ø10 to ø25



Compact Series (Without Auto Switch)

Series *MHZA2-6/MHZAJ2-6*

How to Order

MHZA **2** — **6** **D** □ □

MHZAJ **2** — **6** **D** □ □

With dust cover ●

Number of fingers ●

2	2 fingers
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Bore size ●

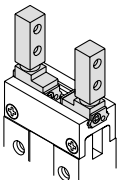
6	6mm
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Action ●

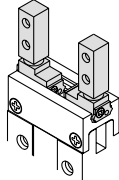
D	Double acting
S	Single acting (normally open)
C	Single acting (normally closed)

Finger option ●

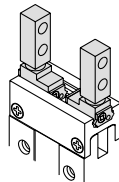
[Standard type]
Nil: Basic



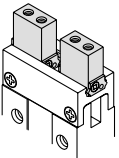
1: Side tapped mounting



2: Through holes in opening/closing direction



3: Flat type fingers

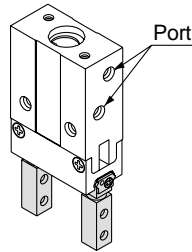


● Dust cover type

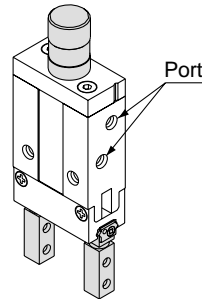
Nil	Chloroprene rubber (CR)
F	Fluoro rubber (FKM)
S	Silicon rubber (Si)

● Body option

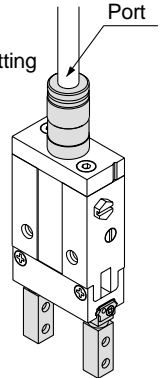
Nil: Basic



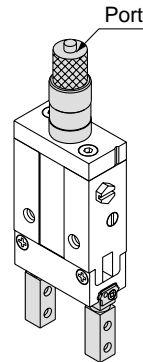
E: End boss type
 Side ported
 (double acting/single acting)



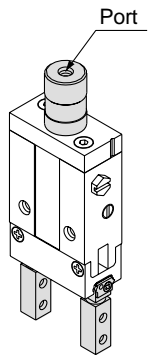
K: End boss type
 Axial port with
 ø4 One-touch fitting
 (single acting)



H: End boss type
 Axial port with
 ø4 hose nipple
 (single acting)



M: End boss type
 Axial M3 port
 (single acting)



Specifications



Fluid			Air
Operating pressure	Double acting		0.15 to 0.7MPa
	Single acting	Normally open	0.3 to 0.7MPa
		Normally closed	
Ambient and fluid temperature			-10 to 60 °C
Repeatability			±0.01mm
Maximum operating frequency			180c.p.m.
Lubrication			Non-lube
Action			Double acting, Single acting

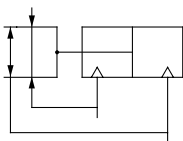
Models

Action	Model	Bore size (mm)	Gripping force ^{Note 1)}		Opening/Closing stroke (both sides) mm	Weight g	
			Gripping force per finger Effective value N				
			External gripping force	Internal gripping force			
Double acting	MHZA2-6D	6	3.3	6.1	4	26	
	MHZAJ2-6D	6					
Single acting	Normally open	MHZA2-6S	1.9	—	4	26	
		MHZAJ2-6S					6
	Normally closed	MHZA2-6C	6	—	3.7	4	26
		MHZAJ2-6C	6				

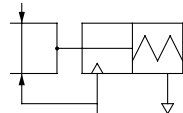
Note 1) Values based on pressure of 0.5MPa, gripping point L = 20mm, at center of stroke.

Symbols:

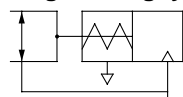
Double acting type



Single acting type, normally open



Single acting type, normally closed



Options

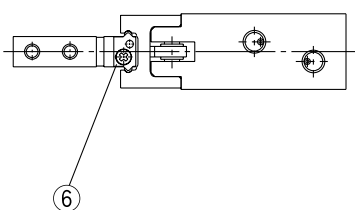
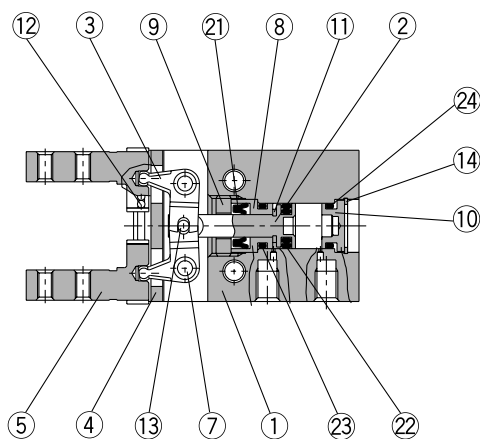
• Body options/End boss type

Symbol	Piping port position	Type of piping port	Applicable model	
		MHZA2-6/MHZAJ2-6	Double acting	Single acting
Nil	Standard	M3 x 0.5	●	●
E	Side ported	M3 x 0.5	●	●
K	Axial port	With ø4 One-touch fitting	—	●
H		With ø4 hose nipple	—	●
M		M3 x 0.5	—	●

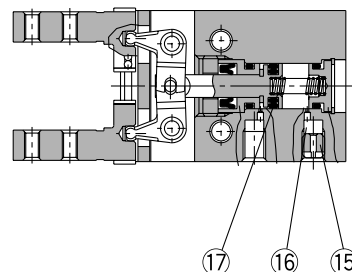
Series MHZA2-6/MHZAJ2-6

Construction/Standard Type MHZA2-6

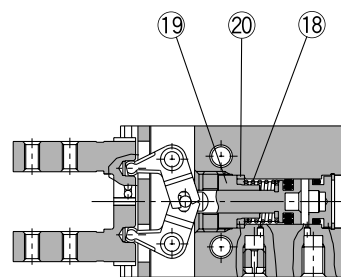
Double acting/with fingers open



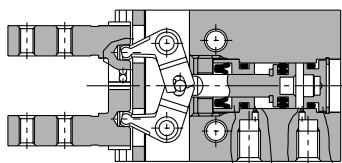
Single acting/normally open



Single acting/normally closed



Double acting/with fingers closed



Parts list

No.	Description	Material	Note
1	Body	Aluminum alloy	Hard anodized
2	Piston	Stainless steel	
3	Lever	Stainless steel	Heat treated
4	Guide	Stainless steel	Heat treated
5	Finger	Stainless steel	Heat treated
6	Roller stopper	Stainless steel	
7	Lever shaft	Stainless steel	Nitrided
8	Holder	Brass	Electroless nickel plated
9	Holder lock	Stainless steel	
10	Cap	Aluminum alloy	Clear anodized
11	Bumper	Urethane rubber	
12	Steel balls	High carbon chromium bearing steel	
13	Needle roller	High carbon chromium bearing steel	

Parts list

No.	Description	Material	Note
14	C type snap ring	Carbon steel	Nickel plated
15	Exhaust plug	Brass	Electroless nickel plated
16	Exhaust filter	Polyvinyl formal	
17	N.O. spring	Stainless steel spring wire	
18	N.C. spring	Stainless steel spring wire	
19	N.C. holder	Brass	Electroless nickel plated
20	N.C. spacer	Stainless steel	
21	Rod seal	NBR	
22	Piston seal	NBR	
23	Gasket	NBR	
24	Gasket	NBR	

Replacement parts: Seal kits

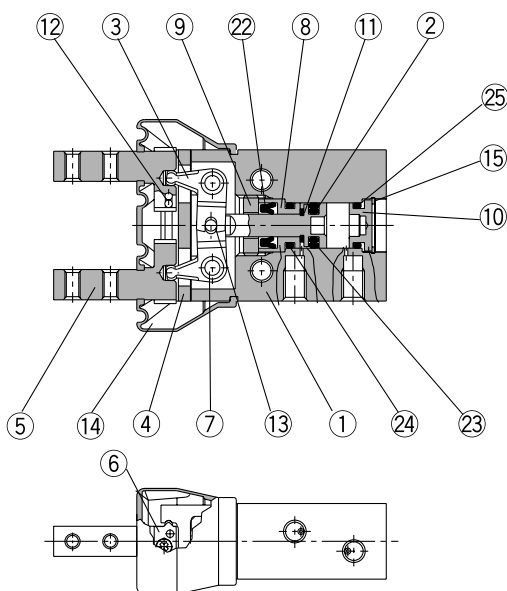
Seal kit no.	Description
MHZA6-PS	Kit includes items 21, 22, 23 and 24 from the table above.

* Seal kits consist of items 21, 22, 23 and 24 in one kit, and can be ordered using the seal kit number.

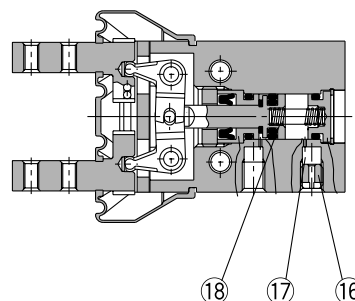
Note) Contact SMC when replacing seals.

Construction/With Dust Cover MHZAJ2-6

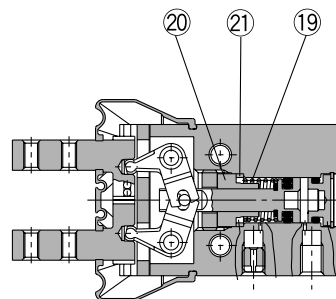
Double acting/with fingers open



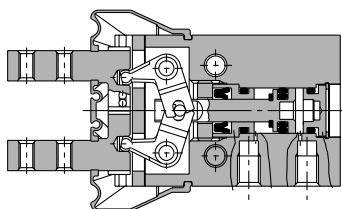
Single acting/normally open



Single acting/normally closed



Double acting/with fingers closed



Parts list

No.	Description	Material	Note
1	Body	Aluminum alloy	Hard anodized
2	Piston	Stainless steel	
3	Lever	Stainless steel	Heat treated
4	Guide	Stainless steel	Heat treated
5	Finger	Stainless steel	Heat treated
6	Roller stopper	Stainless steel	
7	Lever shaft	Stainless steel	Nitrided
8	Holder	Brass	Electroless nickel plated
9	Holder lock	Stainless steel	
10	Cap	Aluminum alloy	Clear anodized
11	Bumper	Urethane rubber	
12	Steel balls	High carbon chromium bearing steel	
13	Needle roller	High carbon chromium bearing steel	

Replacement parts: Seal kits

Seal kit no.	Description
MHZAJ6-PS	Kit includes items 22, 23, 24 and 25 from the table above.

* Seal kits consist of items 22, 23, 24 and 25 in one kit, and can be ordered using the seal kit number.

Note) Contact SMC when replacing seals.

Parts list

No.	Description	Material	Note
14	Dust cover	CR	Chloroprene rubber
		FKM	Fluoro rubber
		Si	Silicon rubber
15	C type snap ring	Carbon steel	Nickel plated
16	Exhaust plug	Brass	Electroless nickel plated
17	Exhaust filter	Polyvinyl formal	
18	N.O. spring	Stainless steel spring wire	
19	N.C. spring	Stainless steel spring wire	
20	N.C. holder	Brass	Electroless nickel plated
21	N.C. spacer	Stainless steel	
22	Rod seal	NBR	
23	Piston seal	NBR	
24	Gasket	NBR	
25	Gasket	NBR	

Replacement parts: Dust covers

Material	Part number
CR	MHZAJ2-J6
FKM	MHZAJ2-J6F
Si	MHZAJ2-J6S

Series MHZA2-6/MHZAJ2-6

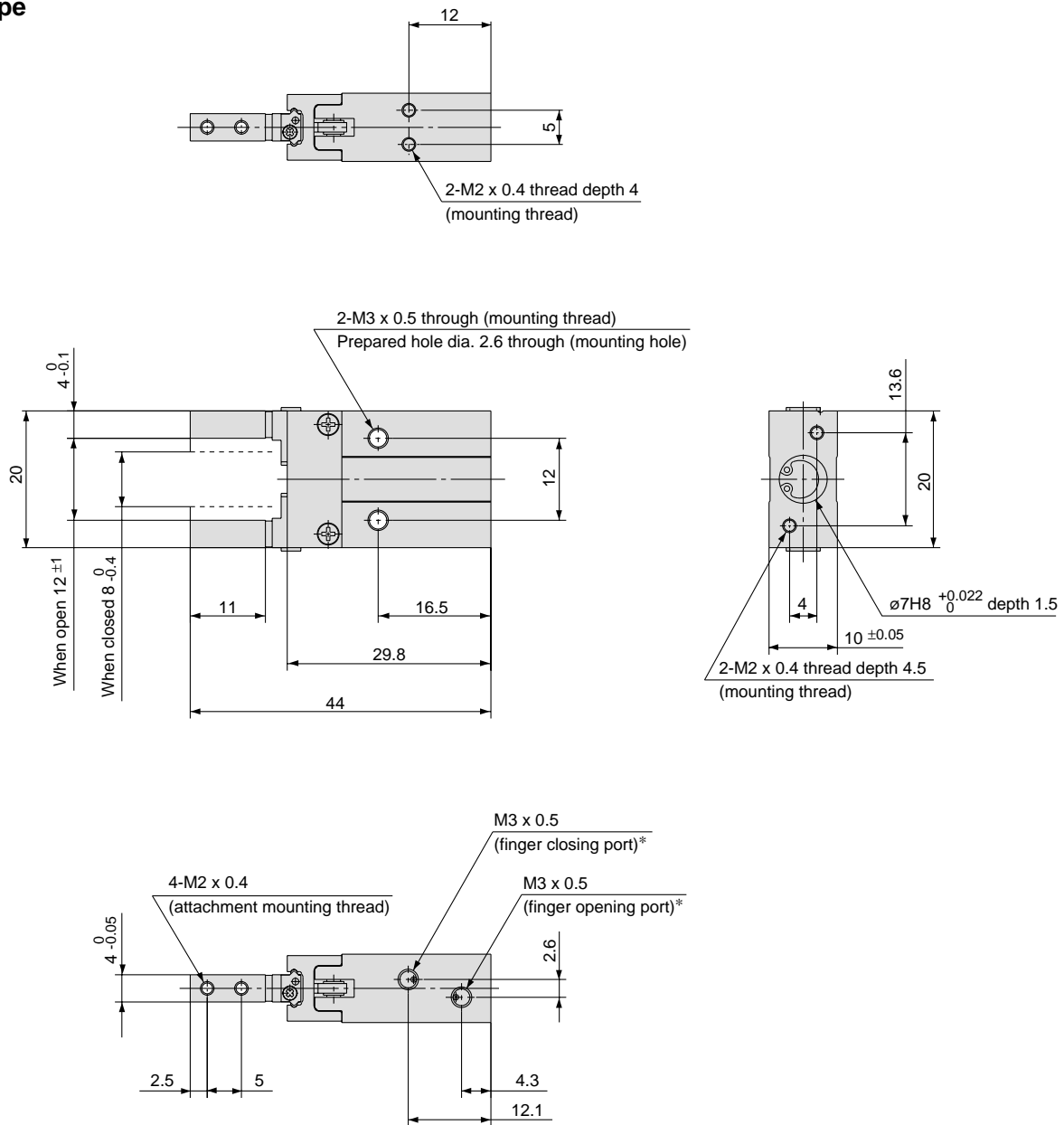
Dimensions/Standard Type

MHZA2-6□

Double acting/Single acting

Basic Type

Scale: 100%



* For single action, the port on one side is a breathing hole

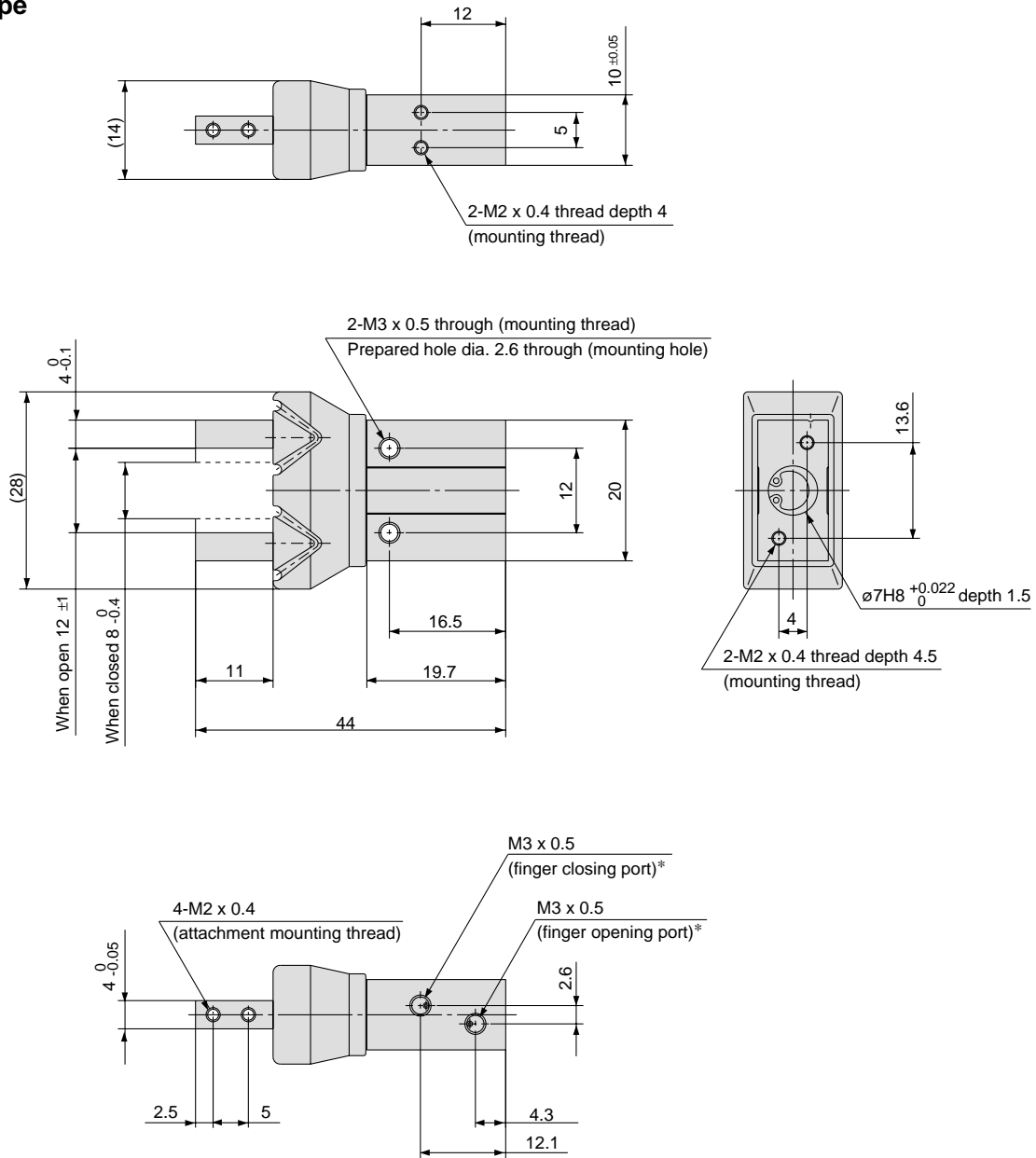
Dimensions/With dust cover

MHZAJ2-6 □

Double acting/Single acting

Basic Type

Scale: 100%



* For single action, the port on one side is a breathing hole.

Compact Series
MHZA2-6/MHZAJ2-6

Standard Type
MHZ2

Long Stroke
MHZL2

With Dust Cover
MHZJ2

Auto Switches

Order Made

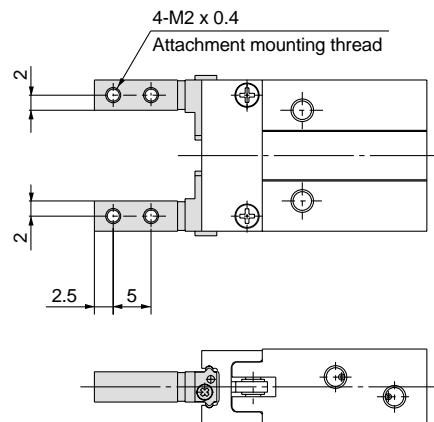
Model Selection

Precautions

Series MHZA2-6

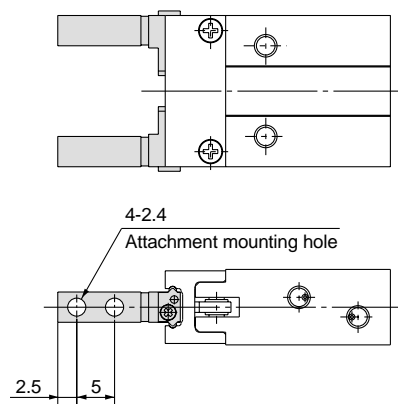
Finger Options

Side Tapped Mounting [1]



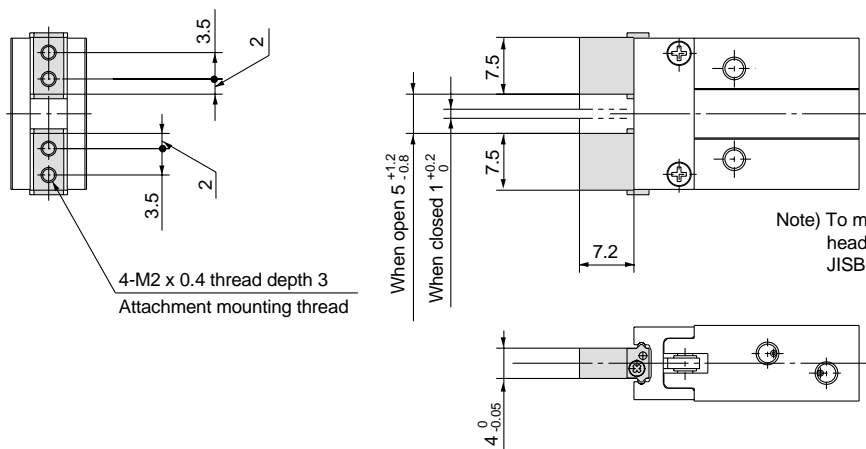
* Specifications and dimensions other than the above are the same as the basic type.

Through Holes in Opening/Closing Direction [2]



* Specifications and dimensions other than the above are the same as the basic type.

Flat Type Fingers [3]



Note) To mount attachments, use M2 hexagon socket head cap screws with $\phi 3.3$ top diameter, or JISB1101 type M2 round head screws.

Weight: 25g

* Specifications and dimensions other than the above are the same as the basic type.

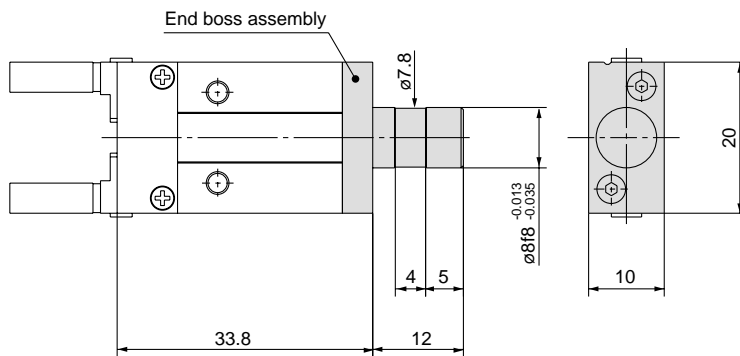
Body Options: End Boss Type

Applicable Models

Symbol	Piping port position	Type of piping port		Applicable model	
		MHZA2	MHZAJ2	Double acting	Single acting
E	Side ported	M3 x 0.5		●	●
H	Axial port	With ø4 hose nipple		—	●
K		With ø4 One-touch fitting		—	●
M		M3 x 0.5		—	●

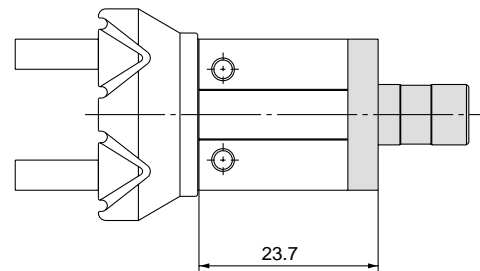
Side Ported [E]

MHZA2-6□□E



* Specifications and dimensions other than the above are the same as the basic type.

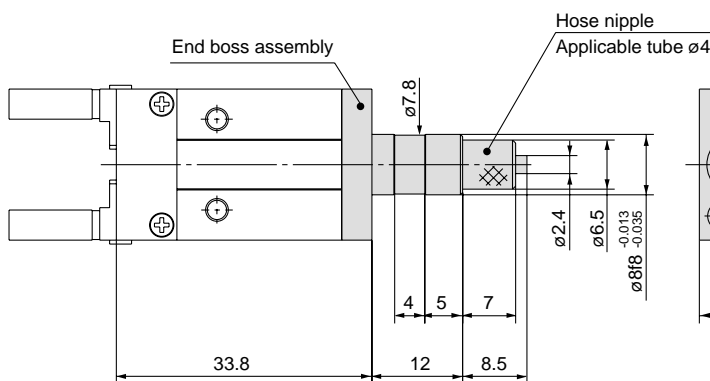
MHZAJ2-6□□E



* Specifications and dimensions other than the above are the same as the basic type or the end boss dimensions of the MHZA type.

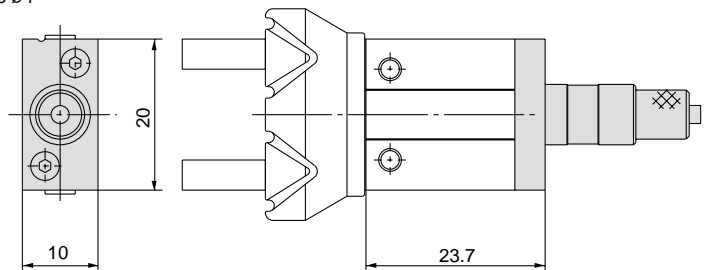
Axial Port (with Hose Nipple) [H]

MHZA2-6^S□□H



* Specifications and dimensions other than the above are the same as the basic type.

MHZAJ2-6^S□□H



* Specifications and dimensions other than the above are the same as the basic type or the end boss dimensions of the MHZA type.

Applicable Tubing

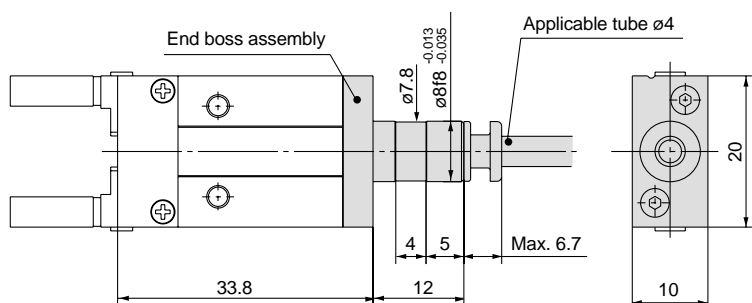
Description/Model	Nylon tubing	Soft nylon tubing	Polyurethane tubing	Polyurethane coiled tubing
Specification	T0425	TS0425	TU0425	TCU0425B-1
Outside diameter mm	4	4	4	4
Max. operating pressure MPa	1.0	0.8	0.5	0.5
Minimum bending radius mm	13	12	10	—
Operating temperature °C	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Material	Nylon 12	Nylon 12	Polyurethane	Polyurethane

Refer to catalog CAT.501-B "Air Fittings and Tubing" regarding One-touch fittings and tubing.

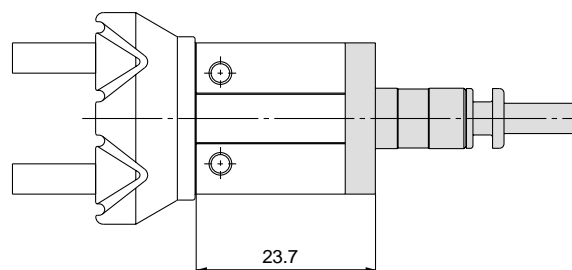
Series MHZA2-6/MHZAJ2-6

Axial Port (with One-touch Fitting) [K]

MHZA2-6 $\frac{6}{8}$ □□K



MHZAJ2-6 $\frac{6}{8}$ □□K



* Specifications and dimensions other than the above are the same as the basic type.

* Specifications and dimensions other than the above are the same as the basic type or the end boss dimensions of the MHZA type.

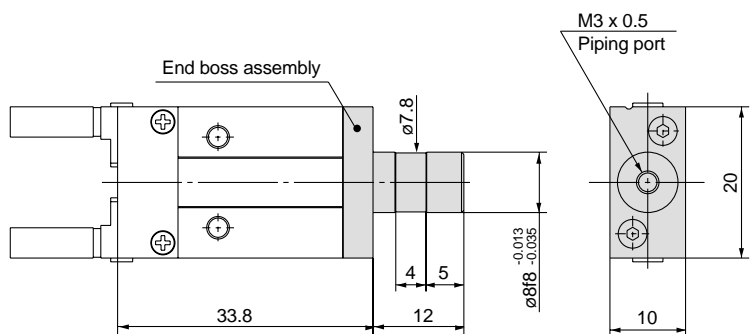
Applicable tubing

Description/Model	Nylon tubing	Soft nylon tubing	Polyurethane tubing	Polyurethane coiled tubing
	T0425	TS0425	TU0425	TCU0425B-1
Outside diameter mm	4	4	4	4
Max. operating pressure MPa	1.0	0.8	0.5	0.5
Minimum bending radius mm	13	12	10	—
Operating temperature °C	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Material	Nylon 12	Nylon 12	Polyurethane	Polyurethane

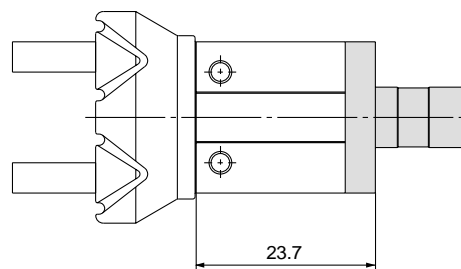
Refer to catalog CAT. 501-B "Air Fittings and Tubing" regarding One-touch fittings and tubing.

Axial Port (M3 Port) [M]

MHZA2-6 $\frac{6}{8}$ □□M



MHZAJ2-6 $\frac{6}{8}$ □□M



* Specifications and dimensions other than the above are the same as the basic type.

* Specifications and dimensions other than the above are the same as the basic type or the end boss dimensions of the MHZA type.

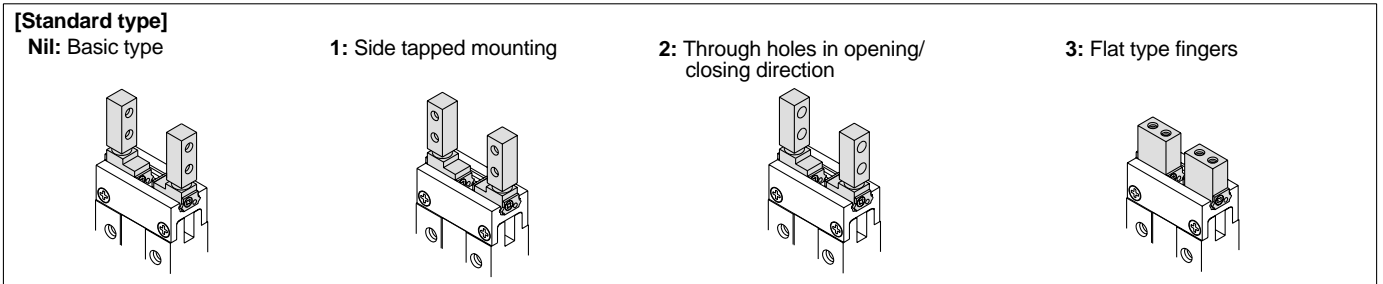
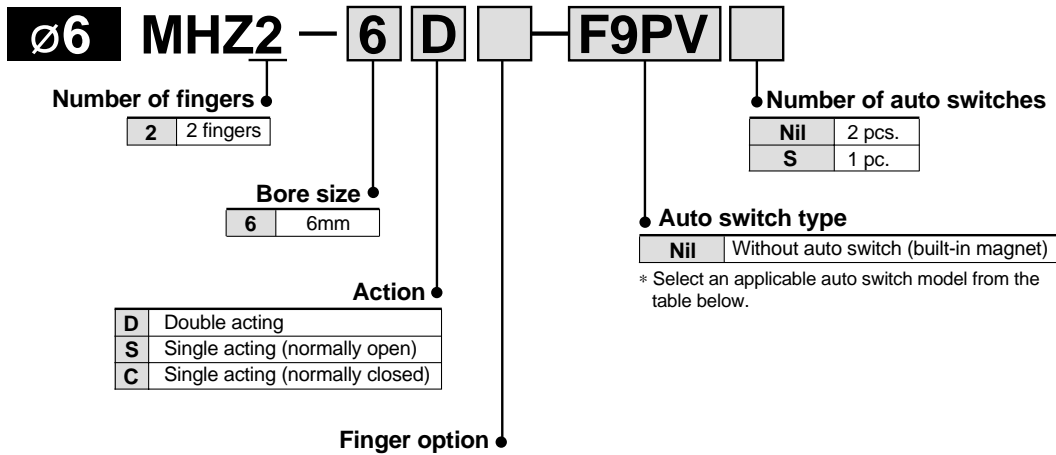
Weights

Model	End boss type (symbol)			
	E	H	K	M
MHZA2-6□□	28	28	28	28
MHZAJ2-6□□	29	29	29	29

Unit: g

Standard Type Series MHZ2

How to Order



Applicable auto switches/* Refer to pages 48 through 60 for detailed auto switch specifications.

Type	Special function	Electrical entry	Indicator light	Wiring (output)	Load voltage		Auto switch part no.		Lead wire length (m) [*]				Applicable load		
					DC	AC	Electrical entry direction		0.5 (Nil)	3 (L)	5 (Z)	Flexible lead wire (-61)			
							Perpendicular	In-line							
Solid state switch	—	Grommet	Yes	3 wire (NPN)	24V	12V	—	F9NV	F9N	●	●	—	○	—	Relay, PLC
				3 wire (PNP)				F8N	—	●	●	○	○		
				2 wire				F9PV	F9P	●	●	—	○		
				F8P				—	●	●	○	○			
				F9BV				F9B	●	●	—	○			
F8B	—	●	●	○	○										

* Lead wire length symbols: 0.5m Nil (Example) F9N
3m L (Example) F9NL
5m Z (Example) F9NZ

* Auto switches marked with a "○" symbol are produced upon receipt of order.

Note 1) When using a D-F8□ switch, mount it at a distance of 10mm or more from magnetic substances such as iron, etc.

Note 2) Add "-61" at the end of the part number for the flexible lead wire.

(Examples)

When ordering with an air gripper

MHZ□ 2-16D-F9NVS-61

● Flexible lead wire

When ordering auto switches only

D-F9PL-61

● Flexible lead wire

How to Order

ø10 to ø25 MHZ2 - 16 D - F9PV

Number of fingers

2	2 fingers
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Bore size

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

Action

D	Double acting
S	Single acting (normally open)
C	Single acting (normally closed)

Number of auto switches

Nil	2 pcs.
S	1 pc.

Auto switch type

Nil	Without auto switch (built-in magnet)
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* Select an auto switch model from the table below.

Finger position/Option

Body option

Standard type
[MHQG2 compatible type]
Nil: Basic type

1: Side tapped mounting

2: Through holes in opening/closing direction

3: Flat type fingers

The flat type fingers do not have standard and narrow options. When MHQG2/MHQ2 compatible types are required, see the -X51 order made specifications on page 63.

Narrow type
[MHQ2 compatible type]
N: Basic type

N1: Side tapped mounting

N2: Through holes in opening/closing direction

Nil: Basic type

E: End boss type
Side ported (double acting/single acting)

W: End boss type
Axial port with ø4
One-touch fitting for coaxial tubing (double acting)

K: End boss type
Axial port with ø4
One-touch fitting (single acting)

M: End boss type
Axial M5 port (single acting)

Applicable auto switches/* Refer to pages 48 through 60 for detailed auto switch specifications.

Type	Special function	Electrical entry	Indicator light	Wiring (output)	Load voltage		Auto switch part no.		Lead wire length (m)*			Applicable load	Applicable model							
					DC	AC	Electrical entry direction	In-line	0.5 (Nil)	3 (L)	5 (Z)		Flexible lead wire (-61)	ø10	ø16	ø20	ø25			
Solid state auto switch	—	Grommet	Yes	3 wire (NPN)	24V	—	Perpendicular	Y69A	Y59A	●	●	○	Standard	IC circuit	●	●	●	●		
							In-line	F9NV	F9N	●	●	—	○	—	—	●	●	●	●	
				3 wire (PNP)	24V	—	Perpendicular	Y7PV	Y7P	●	●	○	Standard	IC circuit	●	●	●	●	●	●
							In-line	F9PV	F9P	●	●	—	○	—	—	●	●	●	●	
				2 wire	24V	—	Perpendicular	Y69B	Y59B	●	●	○	Standard	—	●	●	●	●	●	●
							In-line	F9BV	F9B	●	●	—	○	—	—	●	●	●	●	
	Diagnostic indication (2 color indicator)	Grommet	Yes	—	3 wire (NPN)	24V	—	Perpendicular	Y7NWV	Y7NW	●	●	○	Standard	IC circuit	—	—	●	●	
								In-line	F9NWV	F9NW	●	●	—	○	—	—	—	—	●	●
					3 wire (PNP)	24V	—	Perpendicular	Y7PWV	Y7PW	●	●	○	Standard	IC circuit	—	—	●	●	●
								In-line	F9PWV	F9PW	●	●	—	○	—	—	—	—	●	●
					2 wire	24V	—	Perpendicular	Y7BWV	Y7BW	●	●	○	Standard	—	—	—	—	●	●
								In-line	F9BWV	F9BW	●	●	—	○	—	—	—	—	—	●

* Lead wire length symbols: 0.5m Nil (Example) F9N
3m L (Example) F9NL
5m Z (Example) Y59AZ

* Auto switches marked with a "○" symbol are produced upon receipt of order.

Note 1) Use caution regarding hysteresis in the 2 color indicator types. When using this type, refer to "Auto Switch Hysteresis" on page 56.

Note 3) Through hole mounting is not possible when using auto switch types D-Y59, D-Y69, or D-Y7.

Note 2) Add "-61" at the end of the part number for the flexible lead wire.

(Examples)

When ordering with an air gripper

MHZ □2-16D-F9NVS-□61

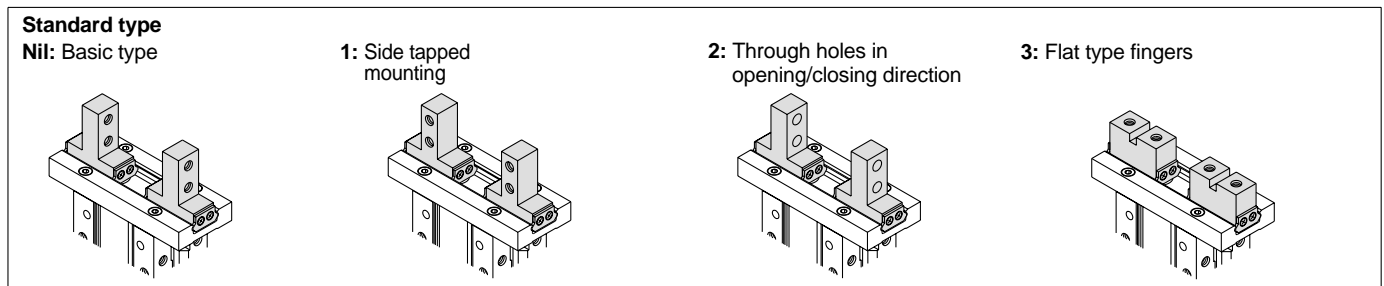
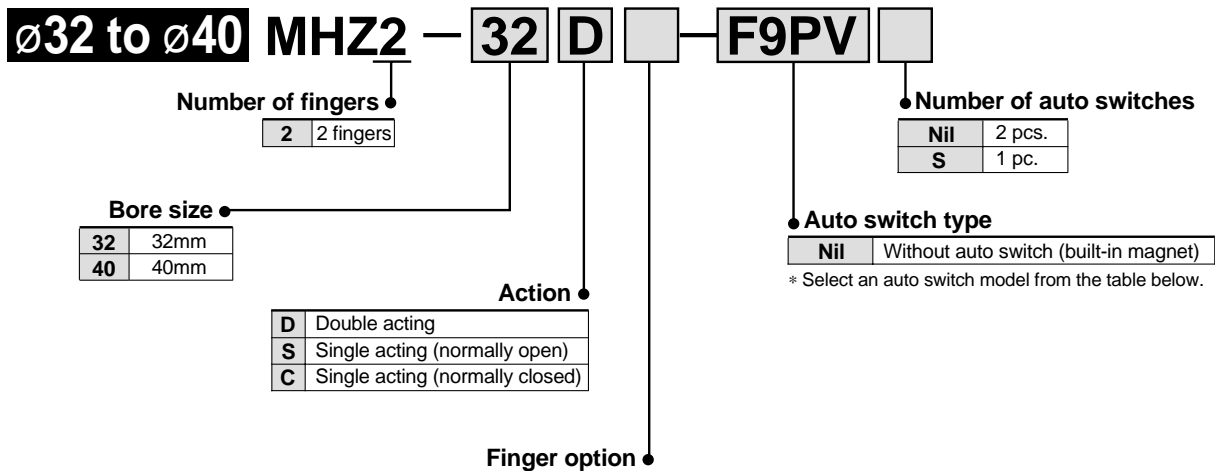
Flexible lead wire ●

When ordering auto switches only

D-F9PL-□61

Flexible lead wire ●

How to Order



Applicable auto switches/* Refer to pages 48 through 60 for detailed auto switch specifications.

Type	Special function	Electrical entry	Indicator light	Wiring (output)	Load voltage		Auto switch part no.		Lead wire length (m)*			Applicable load	Applicable model						
					DC	AC	Electrical entry direction		0.5 (Nil)	3 (L)	5 (Z)		Flexible lead wire (-61)	ø32	ø40				
							Perpendicular	In-line											
Solid state auto switch	—	Grommet	Yes	3 wire (NPN)	5V, 12V	—	Y69A	Y59A	●	●	○	Standard	IC circuit	●	●				
							F9NV	F9N	●	●	—			○	—	—	●	●	
				3 wire (PNP)	5V, 12V	—	Y7PV	Y7P	●	●	○	Standard	IC circuit	●	●				
							F9PV	F9P	●	●	—			○	—	—	●	●	
				2 wire	12V	—	Y69B	Y59B	●	●	○	—	Relay, PLC	●	●				
							F9BV	F9B	●	●	—			○	—	—	●	●	
				Diagnostic indication (2 color indicator)	—	—	—	3 wire (NPN)	5V, 12V	—	Y7NWV	Y7NW	●	●	○	Standard	IC circuit	●	●
											F9NWV	F9NW	●	●	○			○	—
								3 wire (PNP)	5V, 12V	—	Y7PWV	Y7PW	●	●	○	Standard	IC circuit	●	●
											F9PWV	F9PW	●	●	○			○	—
	2 wire	12V	—	Y7BWV	Y7BW	●	●	○	Standard	—	●	●							
				F9BWV	F9BW	●	●	○			○	—	—	●	●				

* Lead wire length symbols: 0.5m Nil (Example) F9N
3m L (Example) F9NL
5m Z (Example) Y59AZ

* Auto switches marked with a "○" symbol are produced upon receipt of order.

Note 1) Use caution regarding hysteresis in the 2 color indicator types. When using this type, refer to "Auto Switch Hysteresis" on page 56.

Note 2) Add "-61" at the end of the part number for the flexible lead wire.

(Examples)

When ordering with an air gripper

MHZ□2-16D-F9NVS-**61**

● Flexible lead wire

When ordering auto switches only

D-F9PL-**61**

● Flexible lead wire

Note 3) Through hole mounting is not available when using auto switch types D-Y59, D-Y69, or D-Y7.

Series MHZ2

ø6



ø10 to ø25

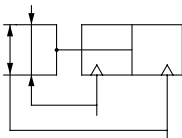


ø32, ø40

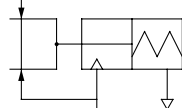


Symbols:

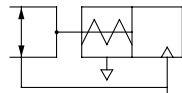
Double acting type



Single acting type, normally open



Single acting type, normally closed



Specifications

Fluid		Air	
Operating pressure	Double acting	ø6: 0.15 to 0.7MPa ø10: 0.2 to 0.7MPa ø16 to ø40: 0.1 to 0.7MPa	
	Single acting	Normally open	ø6: 0.3 to 0.7MPa ø10: 0.35 to 0.7MPa ø16 to ø40: 0.25 to 0.7MPa
		Normally closed	ø6: 0.3 to 0.7MPa ø10: 0.35 to 0.7MPa ø16 to ø40: 0.25 to 0.7MPa
Ambient and fluid temperature		-10 to 60°C	
Repeatability		ø6 to ø25: ±0.01mm ø32, ø40: ±0.02mm	
Maximum operating frequency		ø6 to ø25: 180c.p.m. ø32, ø40: 60c.p.m.	
Lubrication		Non-lube	
Action		Double acting, Single acting	
Auto switch (option) ^{Note}		Solid state switch (3 wire, 2 wire)	

Note) Refer to pages 48 through 60 for details regarding auto switch specifications.

Models

Action	Model	Bore size (mm)	Gripping force ^{Note 1)}		Opening/Closing stroke (both sides) mm	Weight ^{Note 2)} g	
			Gripping force per finger Effective value N				
			External gripping force	Internal gripping force			
Double acting	MHZ2-6D	6	3.3	6.1	4	27	
	MHZ2-10D(N)	10	11	17	4	55	
	MHZ2-16D(N)	16	34	45	6	115	
	MHZ2-20D(N)	20	42	66	10	235	
	MHZ2-25D(N)	25	65	104	14	430	
	MHZ2-32D	32	158	193	22	715	
	MHZ2-40D	40	254	318	30	1275	
Single acting	Normally open	MHZ2-6S	6	1.9	—	4	27
		MHZ2-10S(N)	10	7.1		4	55
		MHZ2-16S(N)	16	27		6	115
		MHZ2-20S(N)	20	33		10	240
		MHZ2-25D(N)	25	45		14	435
		MHZ2-32S	32	131		22	760
		MHZ2-40S	40	217		30	1370
	Normally closed	MHZ2-6C	6	—	3.7	4	27
		MHZ2-10C(N)	10		13	4	55
		MHZ2-16C(N)	16		38	6	115
		MHZ2-20C(N)	20		57	10	240
		MHZ2-25C(N)	25		83	14	430
		MHZ2-32C	32		161	22	760
		MHZ2-40C	40		267	30	1370

Note 1) Values based on pressure of 0.5MPa, gripping point L = 20mm, at center of stroke.

Note 2) Values excluding weight of auto switch.

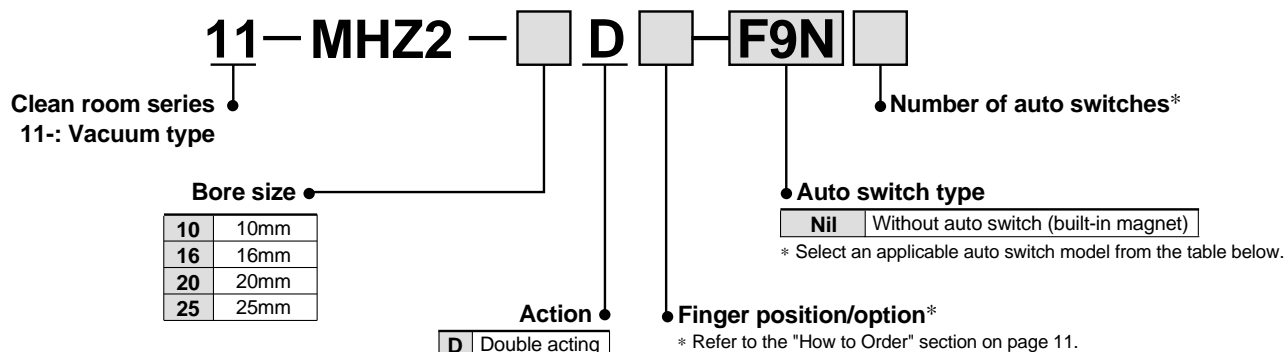
Options

• Body options/End boss type

Symbol	Piping port position	Type of piping port							Applicable model	
		MHZ2-6	MHZ2-10	MHZ2-16	MHZ2-20	MHZ2-25	MHZ2-32	MHZ2-40	Double acting	Single acting
Nil	Basic type	M3 x 0.5	M5 x 0.8					—	●	●
E	Side ported	—	M3 x 0.5	M5 x 0.8			—	—	●	●
W	Axial port	—	With ø4 One-touch fitting for coaxial tube				—	—	●	—
K	Axial port	—	With ø4 One-touch fitting				—	—	—	●
M	Axial port	—	M5 x 0.8				—	—	—	●

* For detailed body option specifications, refer to option specifications on page 25.

Clean Room Series: Air Gripper



Applicable auto switches/* Refer to pages 48 through 60 for detailed auto switch specifications

Type	Special function	Electrical entry	Indicator light	Wiring (output)	Load voltage		Auto switch part no.		Lead wire length (m)*			Applicable load		
					DC	AC	Electrical entry direction		0.5 (Nil)	3 (L)	5 (Z)		Flexible lead wire (-61)	
							Perpendicular	In-line						
Solid state switch	—	Grommet	Yes	3 wire (NPN)	24V	12V	—	F9NV	F9N	●	●	—	○	Relay, PLC
				3 wire (PNP)				F9PV	F9P	●	●	—	○	
				2 wire				F9BV	F9B	●	●	—	○	
								F8N	—	●	●	○	○	
								F8P	—	●	●	○	○	
								F8B	—	●	●	○	○	

* Lead wire length symbols: 0.5m Nil (Example) F9N
3m L (Example) F9NL
5m Z (Example) F9NZ

* Auto switches marked with a "O" symbol are produced upon receipt of order.

Note 1) When using a D-F8□ switch, mount it at a distance of 10mm or more from magnetic substances such as iron, etc.

Note 2) Add "-61" at the end of the part number for the flexible lead wire.

(Examples)

When ordering with an air gripper

MHZ 2-16D-F9NVS-61

When ordering auto switches only

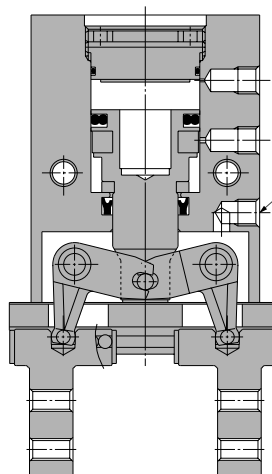
D-F9PL-61

● Flexible lead wire

● Flexible lead wire

Specifications

Fluid	Air
Operating pressure	ø10: 0.2 to 0.7MPa ø16 to ø25: 0.1 to 0.7MPa
Ambient and fluid temperature	-10 to 60°C
Repeatability	±0.01mm
Maximum operating frequency	180c.p.m.
Lubrication	Non-lube
Action	Double acting
Particulate generation grade	Grade 2
Auto switch (option)	Solid state switch (3 wire, 2 wire)



Relief port

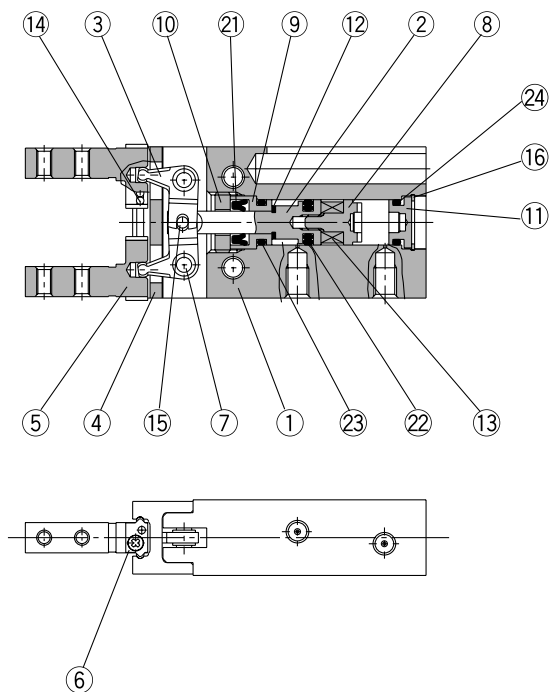
The concentrated vacuuming of internally generated particulates prevents them from spreading into the clean room.

For details, refer to SMC Information "Clean Series: Air Gripper Series 11-MHZ2" (98-E461).

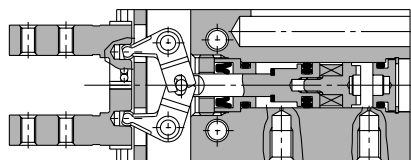
Series MHZ2

Construction/MHZ2-6□

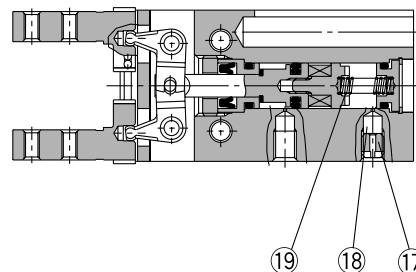
Double acting/with fingers open



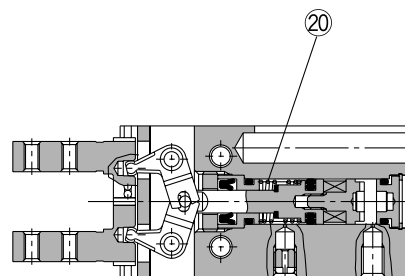
Double acting/with fingers closed



Single acting/normally open



Single acting/normally closed



Parts list

No.	Description	Material	Note
1	Body	Aluminum alloy	Hard anodized
2	Piston	Stainless steel	
3	Lever	Stainless steel	Heat treated
4	Guide	Stainless steel	Heat treated
5	Finger	Stainless steel	Heat treated
6	Roller stopper	Stainless steel	
7	Lever shaft	Stainless steel	Nitrided
8	Magnet holder	Stainless steel	
9	Holder	Brass	Electroless nickel plated
10	Holder lock	Stainless steel	
11	Cap	Aluminum alloy	Clear anodized
12	Bumper	Urethane rubber	
13	Magnet	Rare earth magnet	Nickel plated

Parts list

No.	Description	Material	Note
14	Steel balls	High carbon chromium bearing steel	
15	Needle roller	High carbon chromium bearing steel	
16	C type snap ring	Carbon steel	Nickel plated
17	Exhaust plug	Brass	Electroless nickel plated
18	Exhaust filter	Polyvinyl formal	
19	N.O. spring	Stainless steel spring wire	
20	N.C. spring	Stainless steel spring wire	
21	Rod seal	NBR	
22	Piston seal	NBR	
23	Gasket	NBR	
24	Gasket	NBR	

Replacement parts: Seal kits

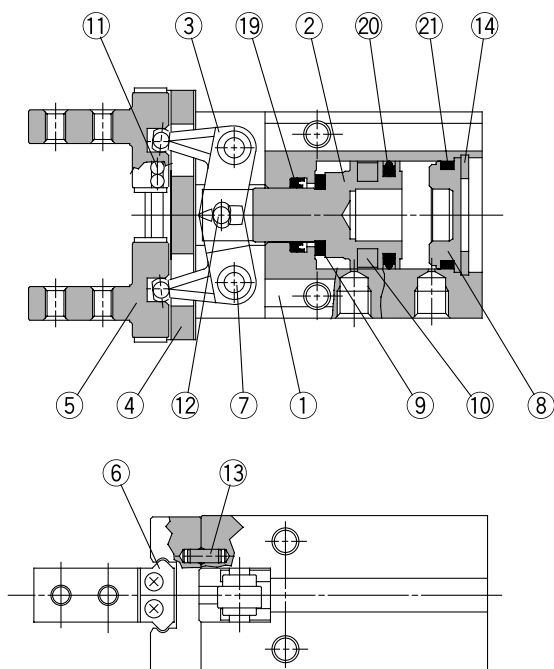
Seal kit no.	Description
MHZ6-PS	Kit includes items 21, 22, 23 and 24 from the table above.

* Seal kits consist of items 21, 22, 23 and 24 in one kit, and can be ordered using the seal kit number.

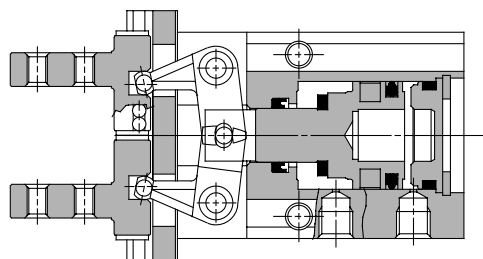
Note) Contact SMC when replacing seals.

Construction/MHZ2-10□ to 40□

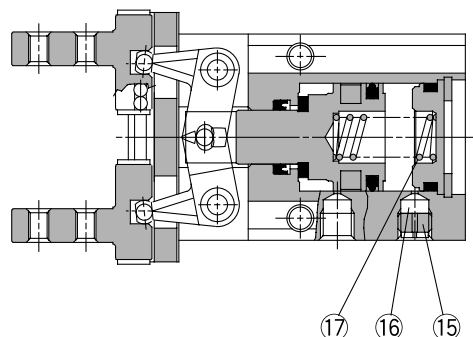
Double acting/with fingers open



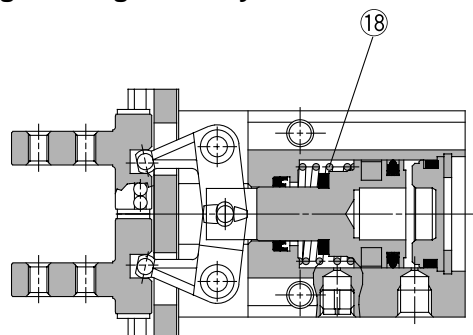
Double acting/with fingers closed



Single acting/normally open



Single acting/normally closed



Parts list

No.	Description	Material	Note
1	Body	Aluminum alloy	Hard anodized
2	Piston	ø10, ø16: Stainless steel ø20 to ø40: Aluminum alloy	ø20 to ø40: Hard anodized
3	Lever	Stainless steel	Heat treated
4	Guide	Stainless steel	Heat treated
5	Finger	Stainless steel	Heat treated
6	Roller stopper	Stainless steel	
7	Lever shaft	Stainless steel	Nitrided
8	Cap	ø10 to ø25: Synthetic resin ø32, ø40: Aluminum alloy	ø32, ø40: Clear anodized
9	Bumper	Urethane rubber	
10	Rubber magnet	Synthetic rubber	

Parts list

No.	Description	Material	Note
11	Steel balls	High carbon chromium bearing steel	
12	Needle roller	High carbon chromium bearing steel	
13	Parallel pin	Stainless steel	
14	C type snap ring	Carbon steel	Nickel plated
15	Exhaust plug A	Brass	Electroless nickel plated
16	Exhaust filter A	Polyvinyl formal	
17	N.O. spring	Stainless steel spring wire	
18	N.C. spring	Stainless steel spring wire	
19	Rod seal	NBR	
20	Piston seal	NBR	
21	Gasket	NBR	

Replacement parts: Seal kits

Seal kit no.						Description
MHZ2-10D	MHZ2-16D	MHZ2-20D	MHZ2-25D	MHZ2-32D	MHZ2-40D	Kits include items 19, 20 and 21 from the table above.
MHZ10-PS	MHZ16-PS	MHZ20-PS	MHZ25-PS	MHZ32-PS	MHZ40-PS	

* Seal kits consist of items 19, 20 and 21 in one kit, and can be ordered using the seal kit number for each cylinder bore size.

Series MHZ2

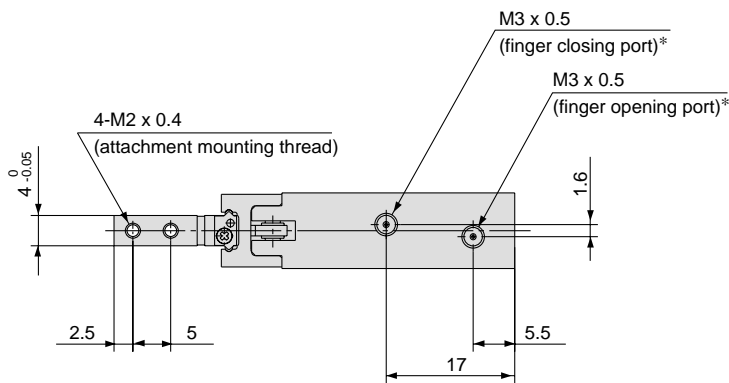
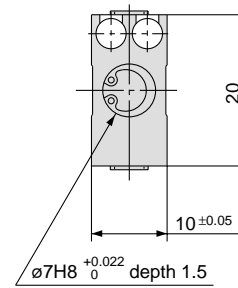
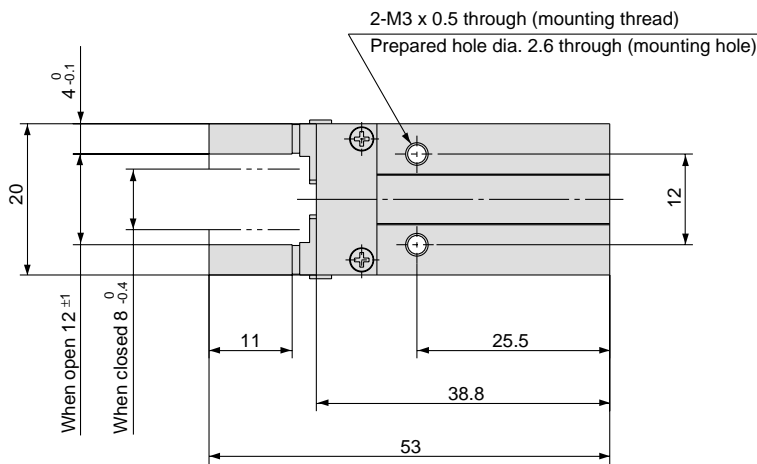
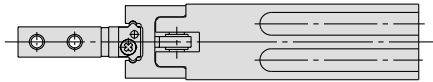
Dimensions

Scale: 100%

MHZ2-6□

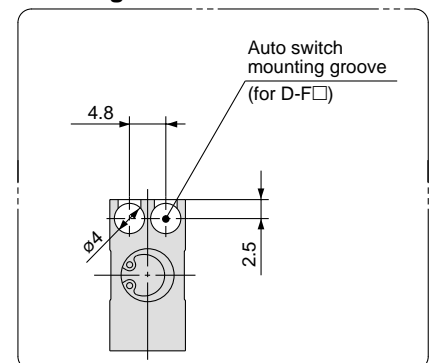
Double acting/Single acting

Basic type



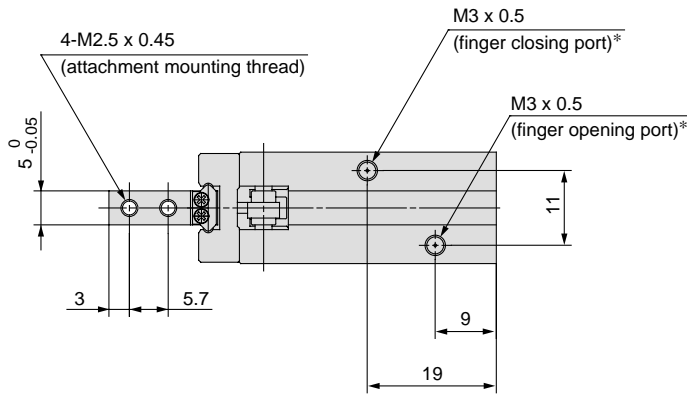
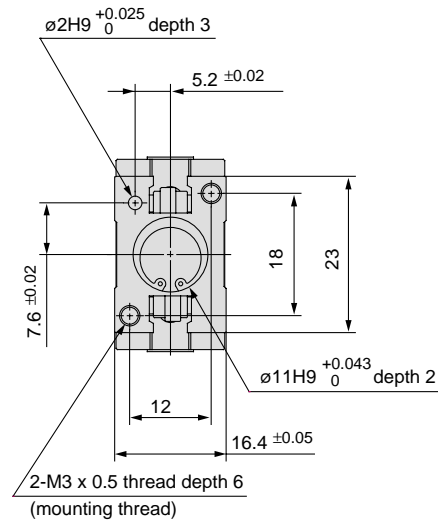
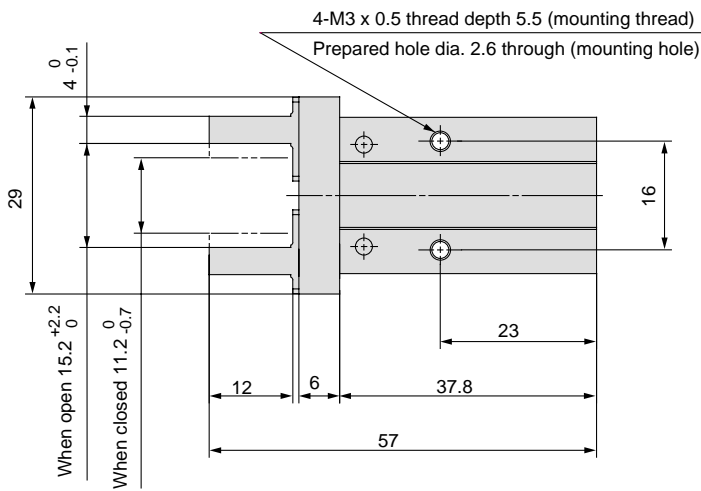
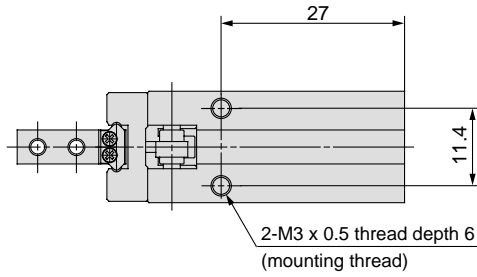
* For single action, the port on one side is a breathing hole.

Auto switch mounting groove dimensions



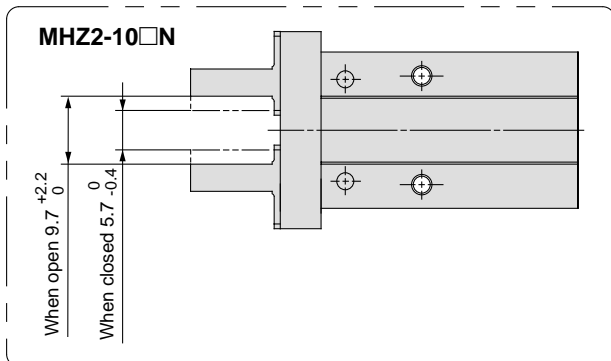
Scale: 90%

MHZ2-10□
Double acting/Single acting
Basic type

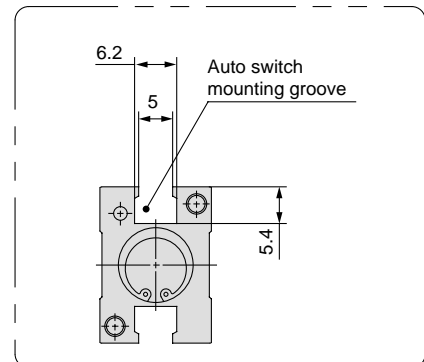


* For single action, the port on one side is a breathing hole.

Finger position/Narrow type



Auto switch mounting groove dimensions



Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through hole mounting is not possible.

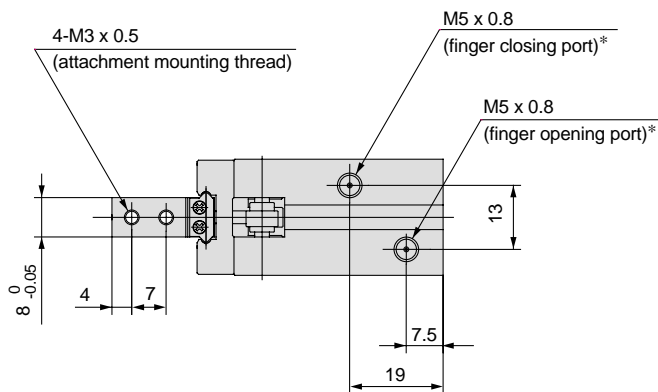
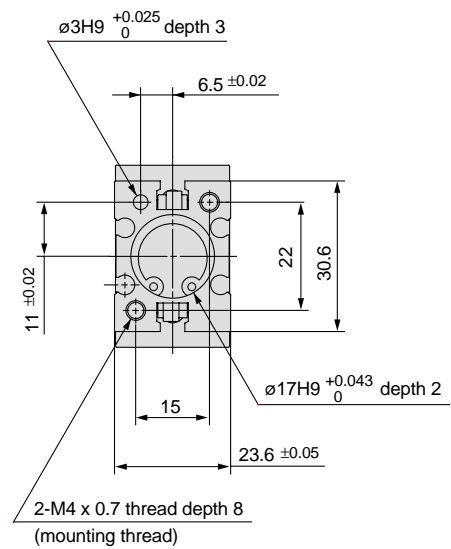
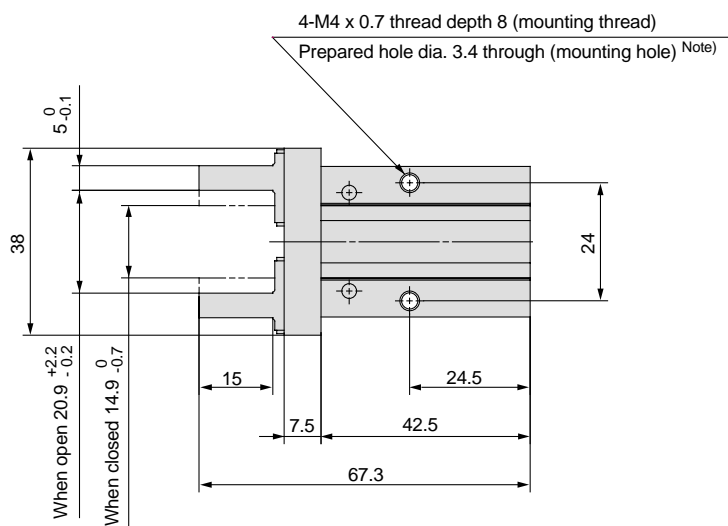
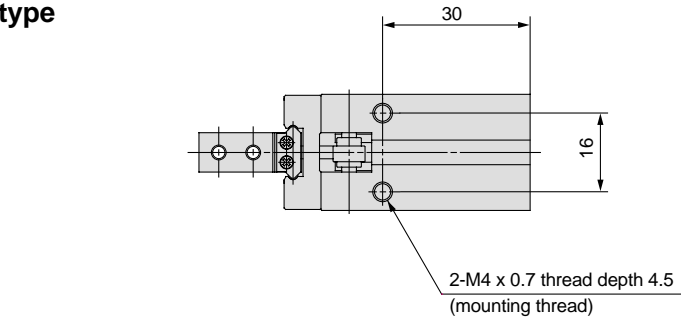
Series MHZ2

Dimensions

MHZ2-16□

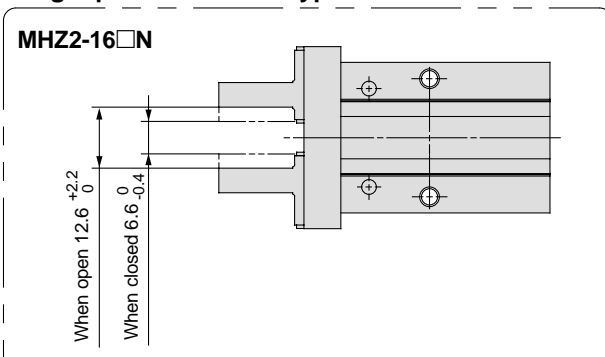
Double acting/Single acting
Basic type

Scale: 65%

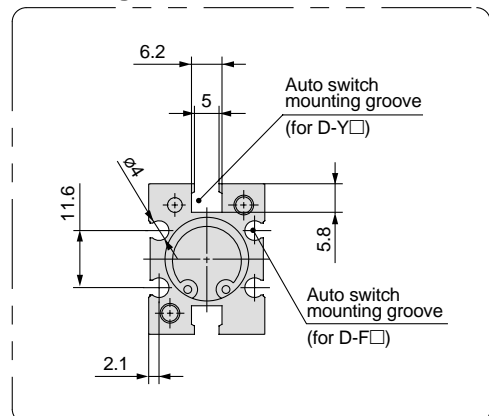


* For single action, the port on one side is a breathing hole.

Finger position/Narrow type



Auto switch mounting groove dimensions

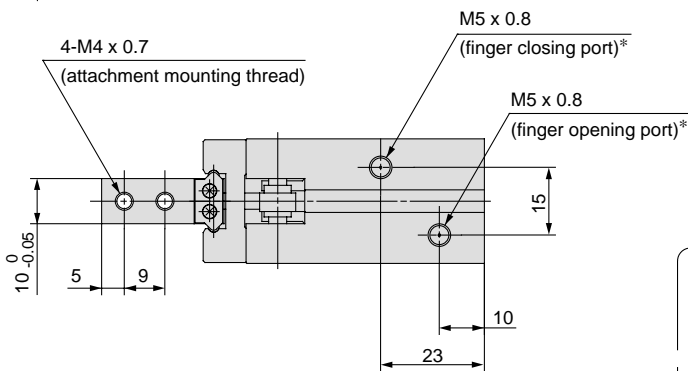
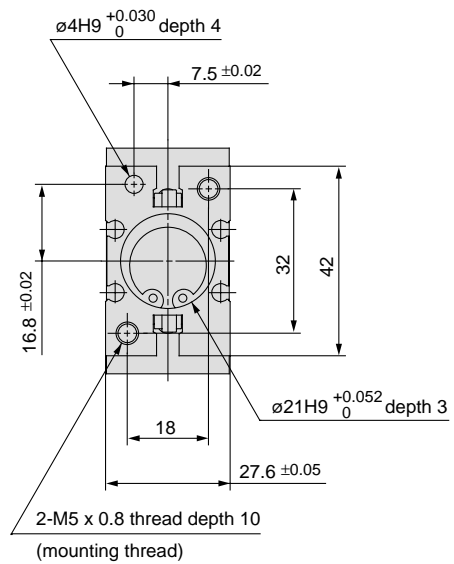
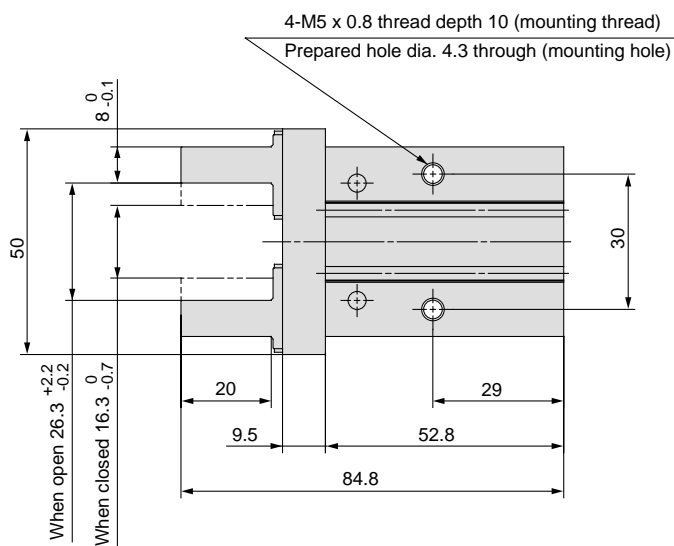
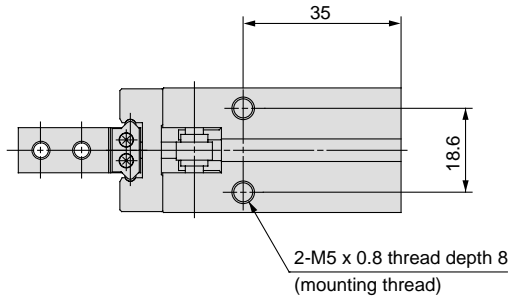


Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through hole mounting is not possible.

MHZ2-20□

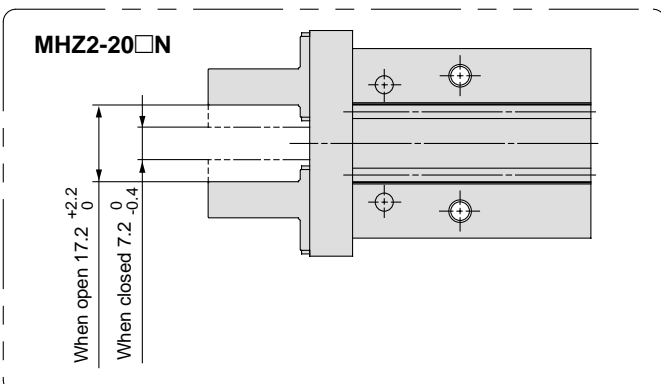
Double acting/Single acting
Basic type

Scale: 60%

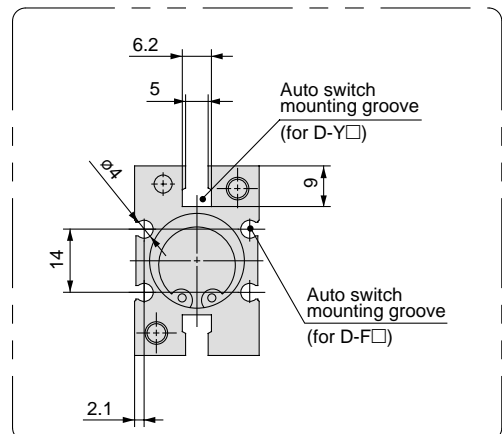


* For single action, the port on one side is a breathing hole.

Finger position/Narrow type



Auto switch mounting groove dimensions



Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through hole mounting is not possible.

Series MHZ2

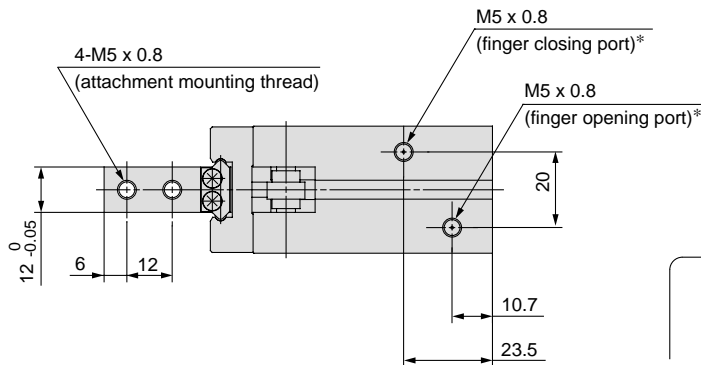
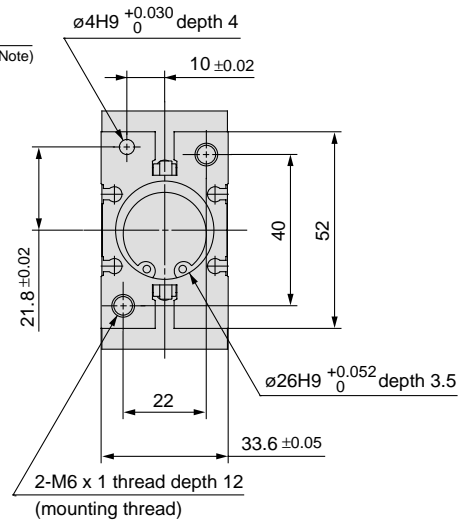
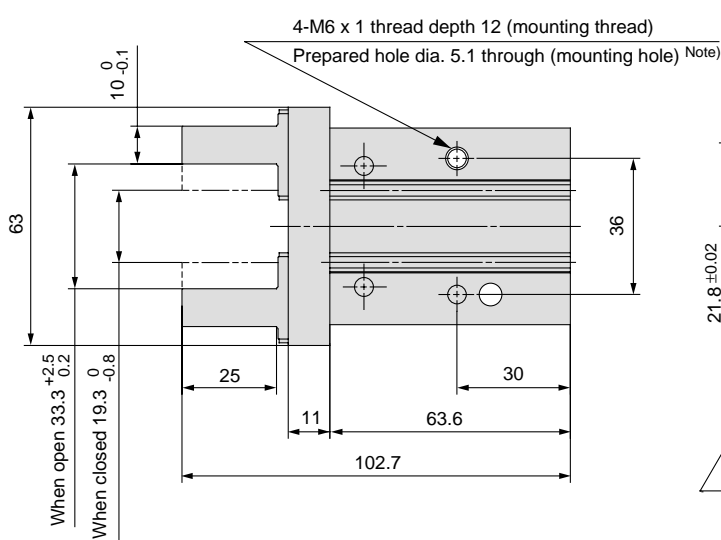
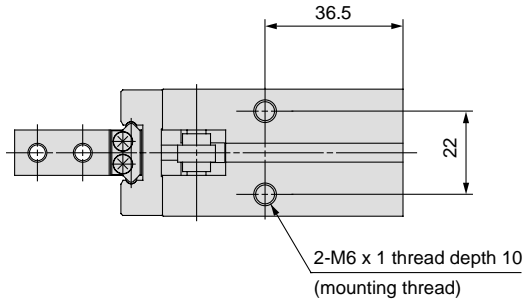
Dimensions

MHZ2-25□

Double acting/Single acting

Basic type

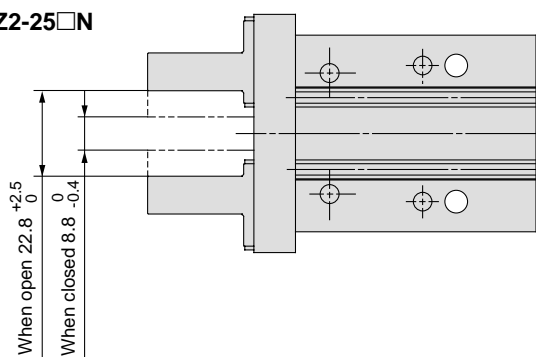
Scale: 50%



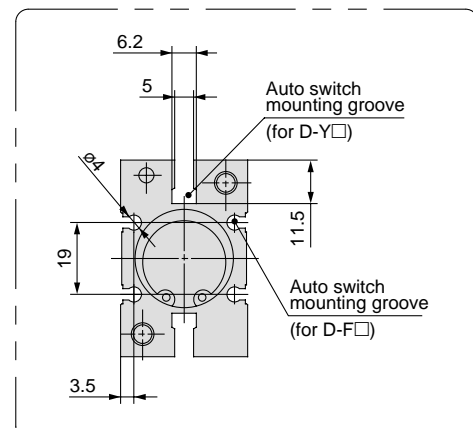
* For single action, the port on one side is a breathing hole.

Finger position/Narrow type

MHZ2-25□N



Auto switch mounting groove dimensions

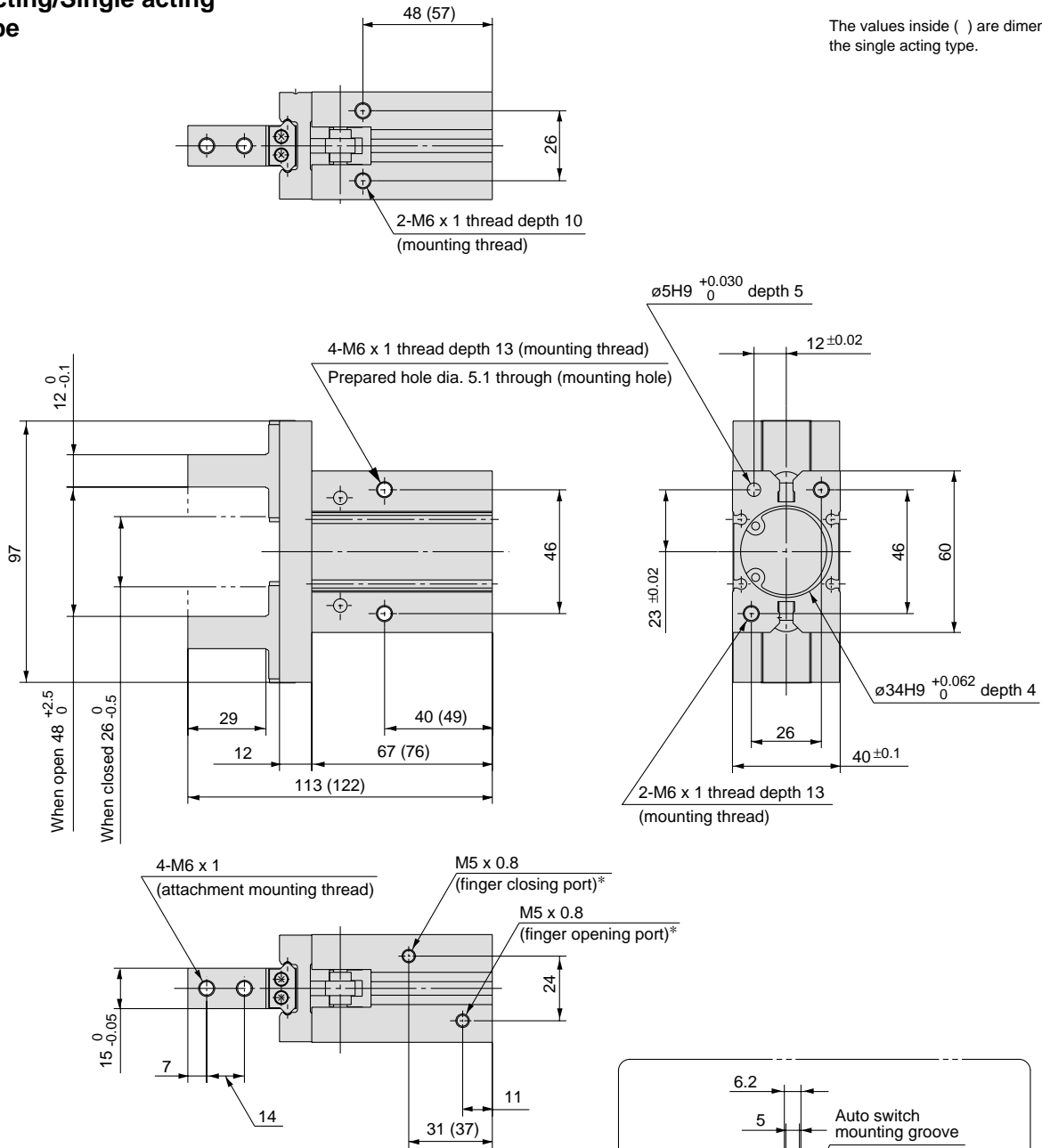


Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through hole mounting is not possible.

Scale: 40%

MHZ2-32□
Double acting/Single acting
Basic Type

The values inside () are dimensions for the single acting type.



* For single action, the port on one side is a breathing hole.

Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through hole mounting is not possible.