

Parallel Style Air Gripper Standard Type/With Dust Cover Series MHZ2/MHZJ2

Size MHZ2: $\phi 6$, $\phi 10$, $\phi 16$, $\phi 20$, $\phi 25$, $\phi 32$, $\phi 40$

Size MHZJ2: $\phi 6$, $\phi 10$, $\phi 16$, $\phi 20$, $\phi 25$

Features

- Autoswitches can be added.
- Single and double acting design.
- MHZ2: General purpose compact grippers with integral linear guide that provides high rigidity and high accuracy.
- MHZJ2: Air grippers with dust-protected and drip-proof construction. Interchangeable in mounting dimensions with the standard models.

How to Order

Standard type MHZ2 – 16 D

2 fingers

Bore size

6	6 mm	25	25 mm
10	10 mm	32	32 mm
16	16 mm	40	40 mm
20	20 mm		

Action

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

Finger position/option

Standard (MHQG2 compatible type)	Narrow type (only $\phi 10$ to $\phi 25$) (MHQ2 compatible type)
–: Basic type	N: Basic type
1: Side tapped mounting	N1: Side tapped mounting
2: Through-holes in opening/closing direction	N2: Through-holes in opening/closing direction
3: Flat type fingers (flat type fingers do not have standard and narrow options)	

Body option (only $\phi 10$ to $\phi 25$)

–	Basic type
E	End boss type Side ported
K	End boss type Axial ported with $\phi 4$ one-touch fitting (single acting)
M	End boss type Axial M5 port (single acting)
W	End boss type Axial ported with $\phi 4$ one-touch fitting for coaxial tubing (Double acting)

With Dust Cover MHZJ2 – 16 D

2 fingers

Bore size

6	6 mm	20	20 mm
10	10 mm	25	25 mm
16	16 mm		

Action

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

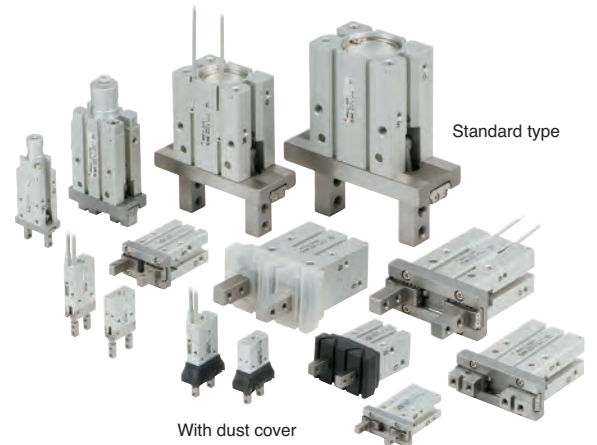
Refer to next pages for MHZJ Specifications

Dust cover type

–	Chloroprene rubber (CR)
F	Fluororubber (FKM)
S	Silicon rubber (SI)

Body option ($\phi 6$ is only applicable with basic type)

–	Basic type
E	End boss type Side ported
K	End boss type Axial ported with $\phi 4$ one-touch fitting for coaxial tubing (single acting)
M	End boss type Axial ported with $\phi 5$ port (single acting)
W	End boss type Axial ported with $\phi 4$ one-touch fitting for coaxial tubing (Double acting)



Product Recommendation



Stocked items for fast delivery

Part Number	Stroke (□)	Part Number	Stroke (□)
MHZ2-□C	6, 10, 16, 20, 25, 32, 40	MHZ2-□S2	6
MHZ2-□CN	10, 16, 20, 25	MHZ2-□S3	10, 16
MHZ2-□D	6, 10, 16, 20, 25, 32, 40	MHZ2-□SM	16, 20
MHZ2-□D1	6, 16	MHZ2-□SN	10, 16, 20, 25
MHZ2-□D2	6, 10, 16, 20, 32, 40	MHZJ2-□C	6, 10, 16, 20, 25
MHZ2-□D3	10, 16, 20, 25, 40	MHZJ2-□D	6, 10, 16, 20
MHZ2-□DN	10, 16, 20, 25	MHZJ2-□DF	20, 25
MHZ2-□DN2	10, 20	MHZJ2-□DS	6, 10, 16, 20, 25
MHZ2-□DNW	10, 20	MHZJ2-□S	10, 20, 25
MHZ2-□S	6, 10, 16, 20, 25, 40	MHZJ2-□SM	25



Auto Switches

- D-M9PWL (PNP 2-colour indication)
- D-M9NWL (NPN 2-colour indication)
- D-M9PL (PNP)
- D-M9NL (NPN)

Note) For more options see the Auto Switch section, page XXX



Related Products

- Series D-7K/D-RK - Speed Controllers - page 1032
- Series AS - Speed Controllers - page 1238
- Series SY - Valves - page 65, 101, 417
- Series SV - Valves - page 20
- Series VQC - Valves - page 193, 211
- Series AC - Air Preparation - page 1076
- Series IDK - Moisture Control Tube - page 1149
- Series TU - Tubing - page 1223
- Series KQ2 - Fittings - page 1184



For more product options and details see our specific catalogues or on-line information.

Specifications MHZ2

Finger position/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.	Narrow type [MHQ2 compatible type] N: Basic type N1: Side tapped mounting N2: Through holes in opening/closing direction
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Body option

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) 	

Replacement parts: Seal kits

Seal kit no.					
MHZ2-10D	MHZ2-16D	MHZ2-20D	MHZ2-25D	MHZ2-32D	MHZ2-40D
MHZ10-PS	MHZ16-PS	MHZ20-PS	MHZ25-PS	MHZ32-PS	MHZ40-PS

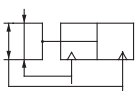
Specifications

Fluid	Air	
Operating pressure	Double acting	ø6: 0.15 to 0.7 MPa ø10: 0.2 to 0.7 MPa ø16 to ø40: 0.1 to 0.7 MPa
	Single acting	Normally open ø6: 0.3 to 0.7 MPa ø10: 0.35 to 0.7 MPa ø16 to ø40: 0.25 to 0.7 MPa Normally closed
Ambient and fluid temperature	-10 to 60°C	
Repeatability	ø6 to ø25: ±0.01 mm ø32, ø40: ±0.02 mm	
Max. operating frequency	ø6 to ø25: 180 c.p.m. ø32, ø40: 60 c.p.m.	
Lubrication	Not required	
Action	Double acting/Single acting	
Auto switch (Option) ^{Note)}	Solid state switch (3-wire, 2-wire)	

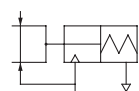
Model

Action	Model	Bore size [mm]	Gripping force ⁽¹⁾		Opening/Closing stroke (Both sides) [mm]	
			Gripping force per finger Effective value [N]			
			External	Internal		
Double acting	MHZ2-6D	6	3.3	6.1	4	
	MHZ2-10D	10	11	17	4	
	MHZ2-16D	16	34	45	6	
	MHZ2-20D	20	42	66	10	
	MHZ2-25D	25	65	104	14	
	MHZ2-32D	32	158	193	22	
Single acting	Normally open	MHZ2-6S	6	1.9	-	4
		MHZ2-10S	10	7.1		4
		MHZ2-16S	16	27		6
		MHZ2-20S	20	33		10
		MHZ2-25S	25	45		14
		MHZ2-32S	32	131		22
	Normally closed	MHZ2-40S	40	217	30	
		MHZ2-6C	6	-	3.7	4
		MHZ2-10C	10		13	4
		MHZ2-16C	16		38	6
		MHZ2-20C	20		57	10
		MHZ2-25C	25		83	14
MHZ2-32C	32	161	22			
MHZ2-40C	40	267	30			

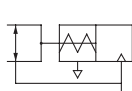
Symbol Double acting



Single acting type, Normally open



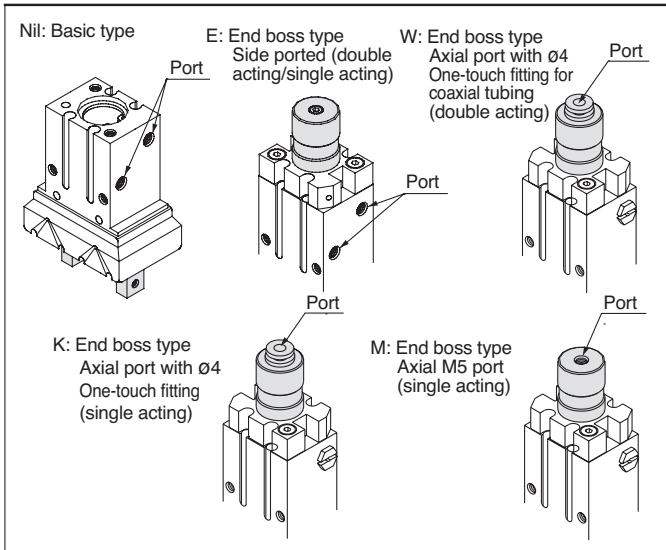
Single acting type, Normally closed



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

Note 2) Except auto switch.

Specifications MHZJ2



* ø6 is only applicable with basic type.

Specifications

Fluid		Air
Operating pressure	Double acting	ø6: 0.15 to 0.7MPa ø10: 0.2 to 0.7MPa ø16 to ø25: 0.1 to 0.7MPa
	Single acting	Normally open ø6: 0.3 to 0.7MPa ø10: 0.35 to 0.7MPa Normally closed ø16 to ø25: 0.25 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, Single acting
Auto switch (option) ^{Note)}		Solid state switch (3 wire, 2 wire)

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	MHZJ2- 6D	6	3.3	6.1	4	28	
	MHZJ2-10D	10	9.8	17	4	60	
	MHZJ2-16D	16	30	40	6	130	
	MHZJ2-20D	20	42	66	10	250	
	MHZJ2-25D	25	65	104	14	460	
Single acting	Normally open	MHZJ2- 6S	6	1.9	—	4	28
		MHZJ2-10S	10	6.3		4	60
		MHZJ2-16S	16	24		6	130
		MHZJ2-20S	20	28		10	255
		MHZJ2-25S	25	45		14	465
	Normally closed	MHZJ2- 6C	6	—	3.7	4	28
		MHZJ2-10C	10		12	4	60
		MHZJ2-16C	16		31	6	130
		MHZJ2-20C	20		56	10	255
		MHZJ2-25C	25		83	14	465

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.

Replacement Parts

Replacement parts: Dust covers

Material	Part no.
CR	MHZJ2-J6
FKM	MHZJ2-J6F
Si	MHZJ2-J6S

Replacement parts: Seal kits

Seal kit no.				Description
MHZJ2-10□	MHZJ2-16□	MHZJ2-20□	MHZJ2-25□	Kits include ^{Note 2)} items 19, 20 and 21 from the table on the left
MHZJ10-PS	MHZJ16-PS	MHZJ20-PS	MHZJ25-PS	

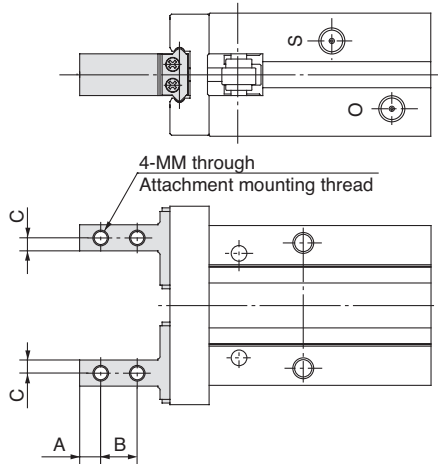
Replacement parts: Dust covers

Material	Part no.			
	MHZJ2-10□	MHZJ2-16□	MHZJ2-20□	MHZJ2-25□
CR	MHZJ2-J10	MHZJ2-J16	MHZJ2-J20	MHZJ2-J25
FKM	MHZJ2-J10F	MHZJ2-J16F	MHZJ2-J20F	MHZJ2-J25F
Si	MHZJ2-J10S	MHZJ2-J16S	MHZJ2-J20S	MHZJ2-J25S



Finger Options MHZ2

Side Tapped Mounting [1/N1]

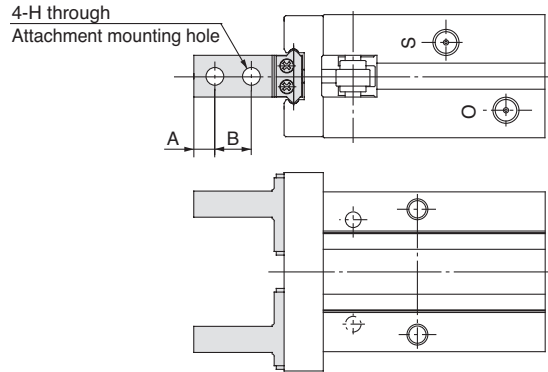


Unit: mm

Model	A	B	C	MM
MHZ2- 6□1	2.5	5	2	M2
MHZ2-10□ ¹ _{N1} □	3	5.7	2	M2.5
MHZ2-16□ ¹ _{N1} □	4	7	2.5	M3
MHZ2-20□ ¹ _{N1} □	5	9	4	M4
MHZ2-25□ ¹ _{N1} □	6	12	5	M5
MHZ2-32□1□	7	14	6	M6
MHZ2-40□1□	9	17	7	M8

* 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]

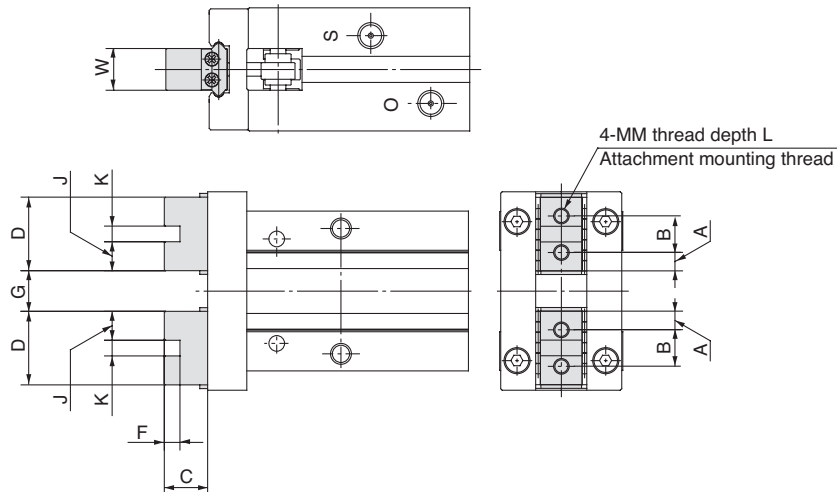


Unit: mm

Model	A	B	H
MHZ2- 6□2	2.5	5	2.4
MHZ2-10□ ² _{N2} □	3	5.7	2.9
MHZ2-16□ ² _{N2} □	4	7	3.4
MHZ2-20□ ² _{N2} □	5	9	4.5
MHZ2-25□ ² _{N2} □	6	12	5.5
MHZ2-32□2□	7	14	6.6
MHZ2-40□2□	9	17	9

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

Flat Type Fingers [3]



Unit: mm

Model	A	B	C	D	F	G		J	K	MM	L	W	Weight g
						Open	Closed						
MHZ2- 6□3 *1)	2	3.5	7.2	7.5	-	5 ^{+1.2} _{-0.8}	1 ^{+0.2} ₀	-	-	M2	3	4 ⁰ _{-0.05}	26
MHZ2-10□3□ *2), *3)	2.45	6	5.2	10.9	2	5.4 ^{+2.2} ₀	1.4 ⁰ _{-0.2}	4.45	2H9 ^{+0.025} ₀	M2.5	5	5 ⁰ _{-0.05}	55
MHZ2-16□3□ *2), *3)	3.05	8	8.3	14.1	2.5	7.4 ^{+2.2} ₀	1.4 ⁰ _{-0.2}	5.8	2.5H9 ^{+0.025} ₀	M3	6	8 ⁰ _{-0.05}	115
MHZ2-20□3□ *2), *3)	3.95	10	10.5	17.9	3	11.6 ^{+2.3} ₀	1.6 ⁰ _{-0.2}	7.45	3H9 ^{+0.025} ₀	M4	8	10 ⁰ _{-0.05}	235 (240)
MHZ2-25□3□ *2), *3)	4.9	12	13.1	21.8	4	16 ^{+2.5} ₀	2 ⁰ _{-0.2}	8.9	4H9 ^{+0.030} ₀	M5	10	12 ⁰ _{-0.05}	420 (425)
MHZ2-32□3□	7.3	20	18	34.6	5	25 ^{+2.7} ₀	3 ⁰ _{-0.2}	14.8	5H9 ^{+0.030} ₀	M6	12	15 ⁰ _{-0.05}	740 (785) *4)
MHZ2-40□3□	8.7	24	22	41.4	6	33 ^{+2.9} ₀	3 ⁰ _{-0.2}	17.7	6H9 ^{+0.030} ₀	M8	16	18 ⁰ _{-0.05}	1335 (1430) *4)

*1) To mount attachments, use M2 hexagon socket head cap screws with ø3.3 top diameter, or JISB1101 type M2 round head screws.

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

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

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

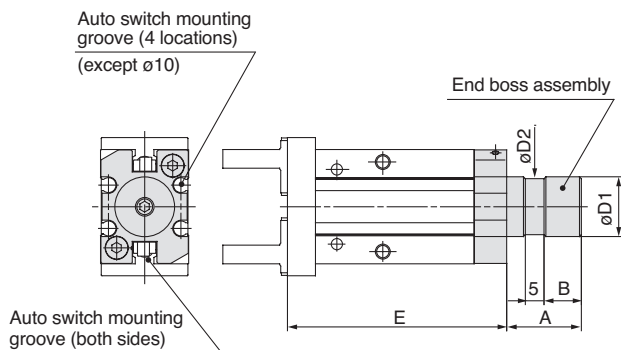
Body Options MHZ2

End Boss Type

Applicable Models

Symbol	Piping port position	Type of Piping Port				Applicable model		
		MHZ2-10	MHZ2-16	MHZ2-20	MHZ2-25	Double acting	Single acting	
						Normally open	Normally closed	
E	Side ported	M3	M5		●	●	●	
W	Axial port	With $\phi 4$ One-touch fitting for coaxial tube				●	—	—
K		With $\phi 4$ One-touch fitting				—	●	●
M		M5 x 0.8				—	●	●

Side Ported [E]



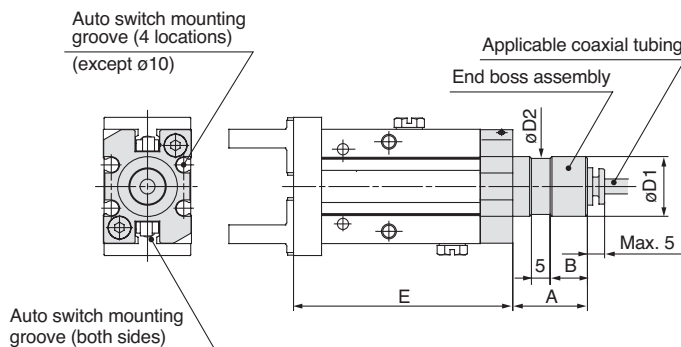
- * Refer to the dimension table.
- * When auto switches are used, side mounting with through holes is not possible.

Unit: mm

Model	Kit no.	A	B	D1	D2	E
MHZ2-10□□E	MHZ-A1010	15	7	12f8 ^{-0.016} _{-0.043}	11	52.8
MHZ2-16□□E	MHZ-A1610	20	10	16f8 ^{-0.016} _{-0.043}	15	58.7
MHZ2-20□□E	MHZ-A2010	22	12	20f8 ^{-0.020} _{-0.053}	19	70.5
MHZ2-25□□E	MHZ-A2510	25	15	25f8 ^{-0.020} _{-0.053}	24	82.9

Other dimensions and specifications correspond to the standard type.

Axial Port (One-Touch Fitting for Coaxial Tubing) [W]



- * Refer to the dimension table.
- * When auto switches are used, side mounting with through holes is not possible.

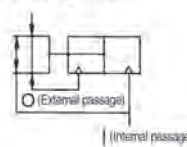
Unit: mm

Model	A	B	D1	D2	E
MHZ2-10D□W	15	7	12f8 ^{-0.016} _{-0.043}	11	52.8
MHZ2-16D□W	20	10	16f8 ^{-0.016} _{-0.043}	15	58.7
MHZ2-20D□W	22	12	20f8 ^{-0.020} _{-0.053}	19	70.5
MHZ2-25D□W	25	15	25f8 ^{-0.020} _{-0.053}	24	82.9

Other dimensions and specifications correspond to the standard type.

Applicable coaxial tubing

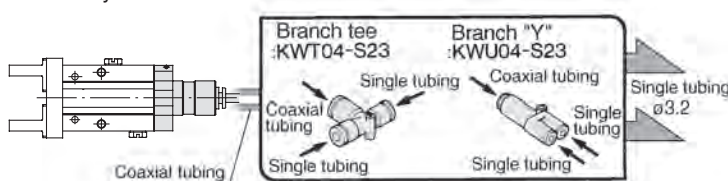
Reference symbol



Specification	Model	TW04B-20
Outside diameter		4mm
Max. operating pressure		0.6MPa
Min. bending radius		10mm
Operating temperature		-20 to 60C
Material		Nylon 12

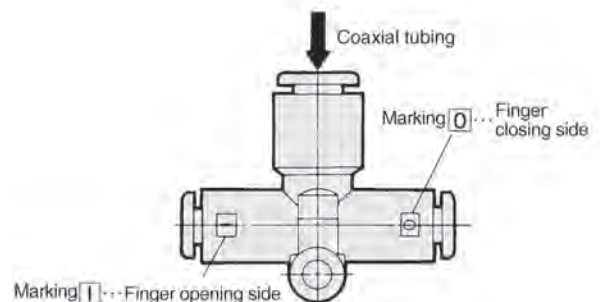
Changing from Coaxial to Single Tubing

Changing to single tubing is possible by using a branch "Y" or branch tee fitting. In this case particularly, single tube fittings and tubing for $\phi 3.2$ will be necessary.



Branch tee, Different diameter tee, Branch "Y", Male run tee

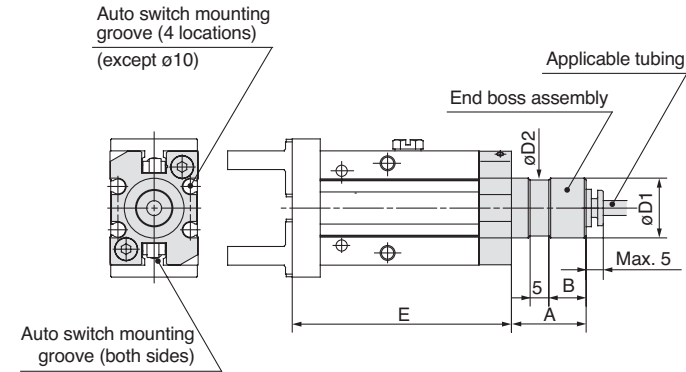
Refer to catalogue CAT.E004-A "Coaxial Air Tubing System" regarding coaxial tubing.



Body Options MHZ2

End Boss Type

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



* Refer to the dimension table.
 * When auto switches are used, side mounting with through holes is not possible.

Unit: mm

Model	A	B	D1	D2	E
MHZ2-10□□K	15	7	12f8 ^{-0.016} _{-0.043}	11	52.8
MHZ2-16□□K	20	10	16f8 ^{-0.016} _{-0.043}	15	58.7
MHZ2-20□□K	22	12	20f8 ^{-0.020} _{-0.053}	19	70.5
MHZ2-25□□K	25	15	25f8 ^{-0.020} _{-0.053}	24	82.9

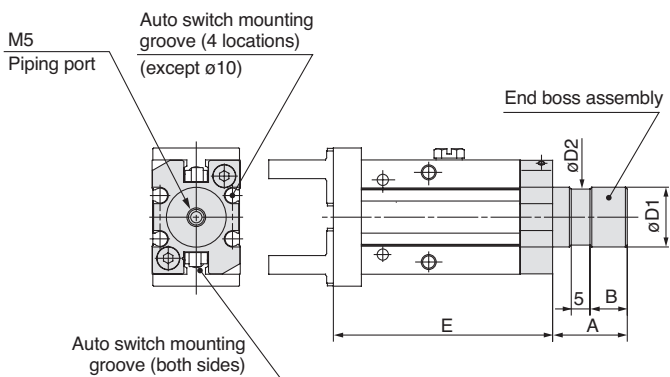
Other dimensions and specifications correspond to the standard type.
 □: Either S or C is available.

Applicable tubing

Description/ Model	Nylon tubing	Soft nylon tubing	Polyurethane tubing	Polyurethane coiled tubing
	T0425	TS0425	TU0425	TCU0425B-1
Specification				
Outside diameter [mm]	4	4	4	4
Max. operating pressure [MPa]	1.0	0.8	0.5	0.5
Min. 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. E501-B "Air Fittings and Tubing" regarding One-touch fittings and tubing.

Axial Port (M5 Port) [M]



* Refer to the dimension table.
 * When auto switches are used, side mounting with through holes is not possible.

Unit: mm

Model	A	B	D1	D2	E
MHZ2-10□□M	15	7	12f8 ^{-0.016} _{-0.043}	11	52.8
MHZ2-16□□M	20	10	16f8 ^{-0.016} _{-0.043}	15	58.7
MHZ2-20□□M	22	12	20f8 ^{-0.020} _{-0.053}	19	70.5
MHZ2-25□□M	25	15	25f8 ^{-0.020} _{-0.053}	24	82.9

Other dimensions and specifications correspond to the standard type.
 □: Either S or C is available.

Weights

Unit: g

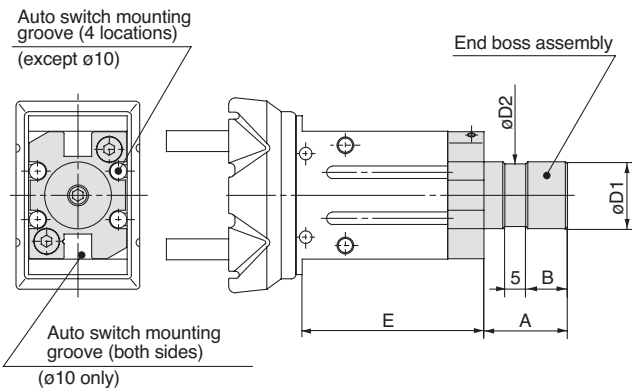
Model	End boss type (symbol)			
	E	W	K	M
MHZ2-10□□	65	64	66	65
MHZ2-16□□	148	147	148	147
MHZ2-20□□	277	277	277	277
MHZ2-25□□	495	495	496	494

Body Options End Boss Type MHZJ2

Applicable Models

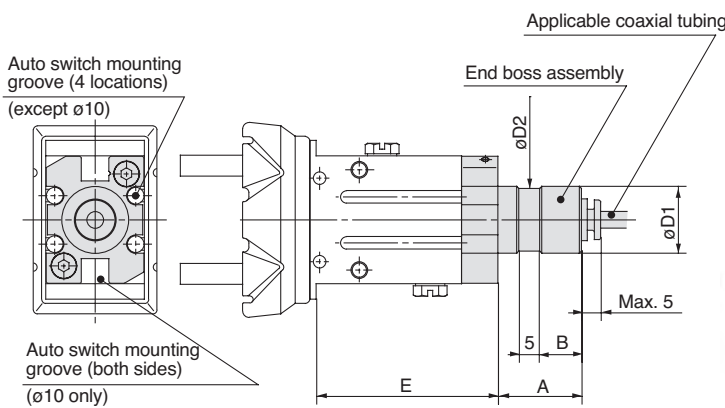
Symbol	Piping port position	Type of piping port				Applicable model		
		MHZJ2-10	MHZJ2-16	MHZJ2-20	MHZJ2-25	Double acting	Single acting	
		With $\phi 4$ One-touch fitting for coaxial tube					Normally open	Normally closed
E	Side ported	M3	M5			●	●	●
W	Axial port	With $\phi 4$ One-touch fitting				●	—	—
K		With $\phi 4$ One-touch fitting				—	●	●
M		M5 x 0.8				—	●	●

Side Ported [E]



- * Refer to the dimension table.
- * When auto switches are used on $\phi 10$, side mounting with through holes is not possible.

Axial Port (One-touch Fitting for Coaxial Tubing) [W]



- * Refer to the dimension table.
- * When auto switches are used on $\phi 10$, side mounting with through holes is not possible.

Unit: mm

Model	A	B	D1	D2	E
MHZJ2-10□□E	15	7	12f8 ^{-0.016} _{-0.043}	11	40
MHZJ2-16□□E	20	10	16f8 ^{-0.016} _{-0.043}	15	43.5
MHZJ2-20□□E	22	12	20f8 ^{-0.020} _{-0.053}	19	51.7
MHZJ2-25□□E	25	15	25f8 ^{-0.020} _{-0.053}	24	61.3

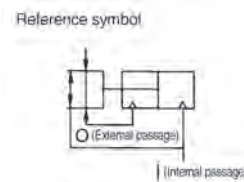
Other dimensions and specifications correspond to the standard type.

Unit: mm

Model	A	B	D1	D2	E
MHZJ2-10D□W	15	7	12f8 ^{-0.016} _{-0.043}	11	40
MHZJ2-16D□W	20	10	16f8 ^{-0.016} _{-0.043}	15	43.5
MHZJ2-20D□W	22	12	20f8 ^{-0.020} _{-0.053}	19	51.7
MHZJ2-25D□W	25	15	25f8 ^{-0.020} _{-0.053}	24	61.3

Other dimensions and specifications correspond to the standard type.

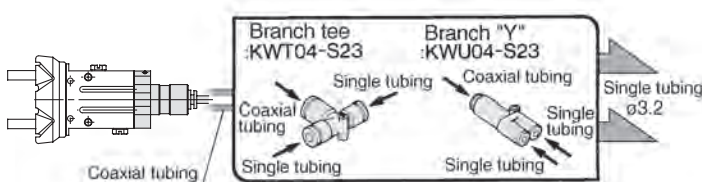
Applicable coaxial tubing



Specification	Model	TW04B-20
Outside diameter		4mm
Max. operating pressure		0.6MPa
Min. bending radius		10mm
Operating temperature		-20 to 60C
Material		Nylon 12

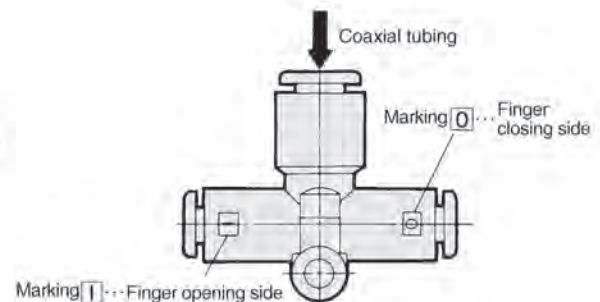
Changing from Coaxial to Single Tubing

Changing to single tubing is possible by using a branch "Y" or branch tee fitting. In this case particularly, single tube fittings and tubing for $\phi 3.2$ will be necessary.



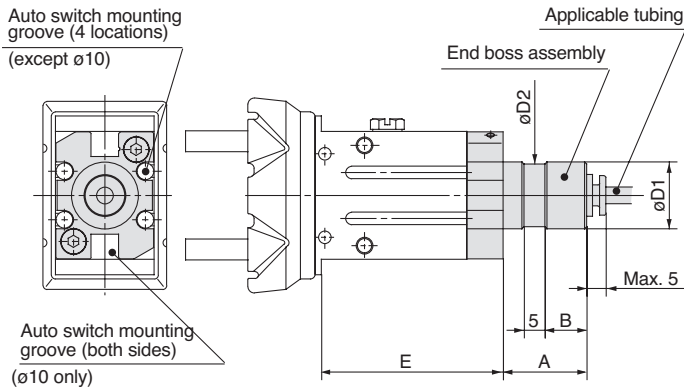
Branch tee, Different diameter tee, Branch "Y", Male run tee

Refer to catalogue CAT.E004-A "Coaxial Air Tubing System" regarding coaxial tubing.



Body Options End Boss Type MHZJ2

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



- * Refer to the dimension table.
- * When auto switches are used on ø10, side mounting with through holes is not possible.

Unit: mm

Model	A	B	D1	D2	E
MHZJ2-10□□K	15	7	12f8 ^{-0.016} _{-0.043}	11	40
MHZJ2-16□□K	20	10	16f8 ^{-0.016} _{-0.043}	15	43.5
MHZJ2-20□□K	22	12	20f8 ^{-0.020} _{-0.053}	19	51.7
MHZJ2-25□□K	25	15	25f8 ^{-0.020} _{-0.053}	24	61.3

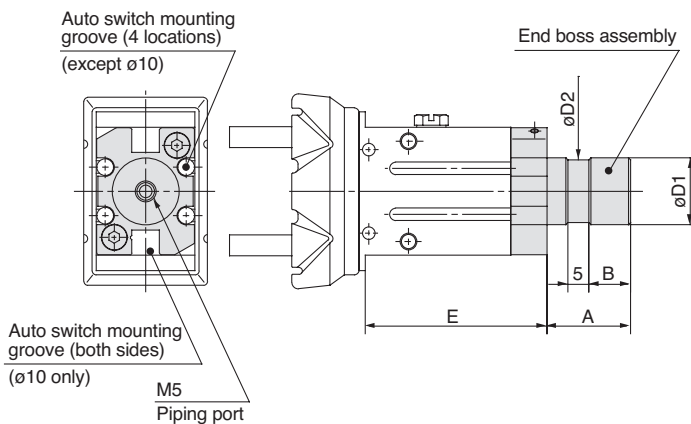
Other dimensions and specifications correspond to the standard type.
□: Either S or C is available.

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
Min. 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. E501-B "Air Fittings and Tubing" regarding One-touch fittings and tubing.

Axial Port (M5 Port) [M]



- * Refer to the dimension table.
- * When auto switches are used on ø10, side mounting with through holes is not possible.

Unit: mm

Model	A	B	D1	D2	E
MHZJ2-10□□M	15	7	12f8 ^{-0.016} _{-0.043}	11	40
MHZJ2-16□□M	20	10	16f8 ^{-0.016} _{-0.043}	15	43.5
MHZJ2-20□□M	22	12	20f8 ^{-0.020} _{-0.053}	19	51.7
MHZJ2-25□□M	25	15	25f8 ^{-0.020} _{-0.053}	24	61.3

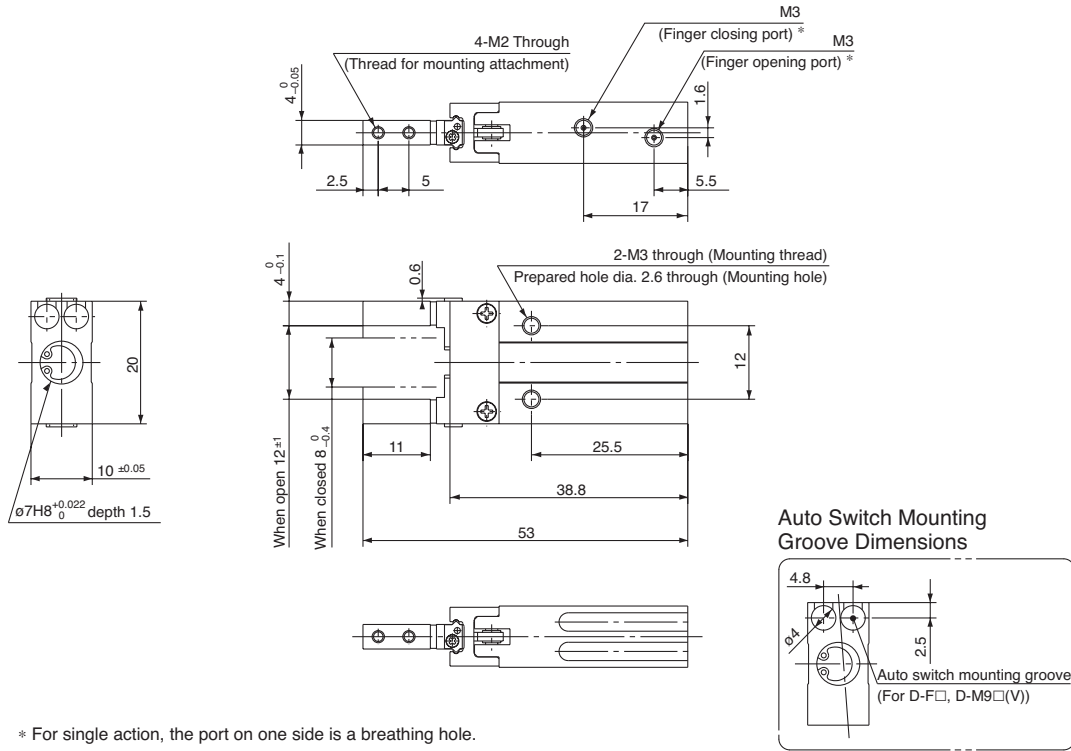
Other dimensions and specifications correspond to the standard type.
□: Either S or C is available.

Weights

Unit: g

Model	End boss type (symbol)			
	E	W	K	M
MHZJ2-10□□	70	70	70	70
MHZJ2-16□□	165	165	165	165
MHZJ2-20□□	290	290	290	290
MHZJ2-25□□	525	525	525	525

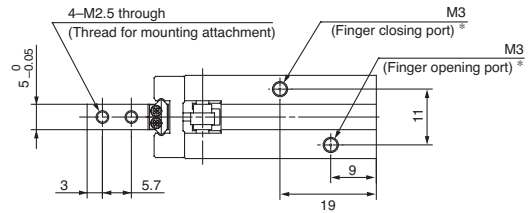
Dimensions MHZ2-6□ Double acting/Single acting. Basic type



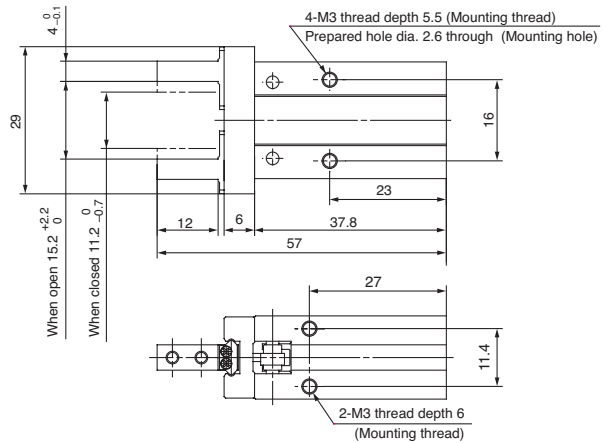
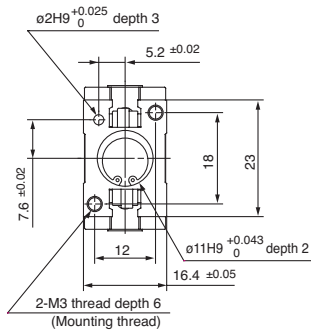
* For single action, the port on one side is a breathing hole.



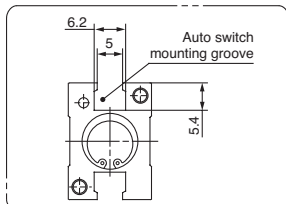
Dimensions MHZ2-10 □ Double acting/Single acting. Basic type



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

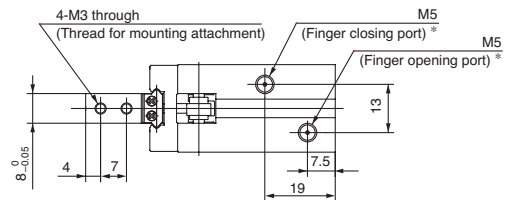


Auto Switch Mounting Groove Dimensions

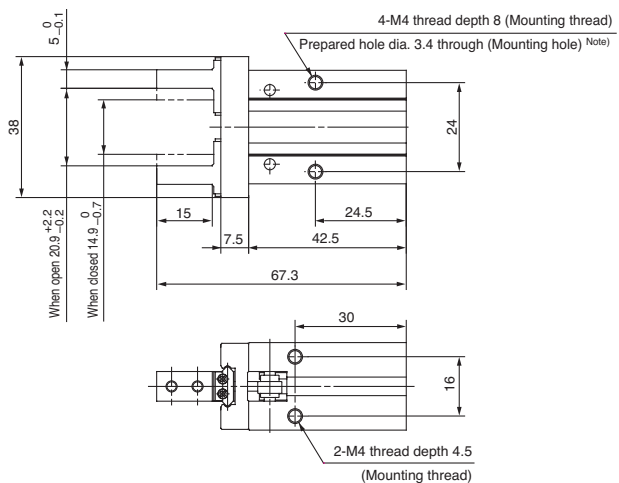
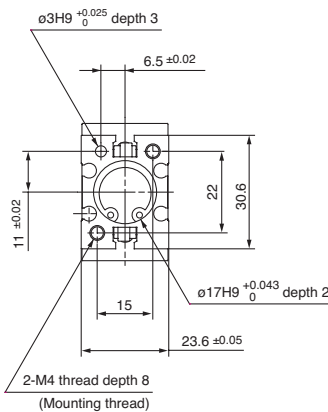


Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through-hole mounting is not possible.

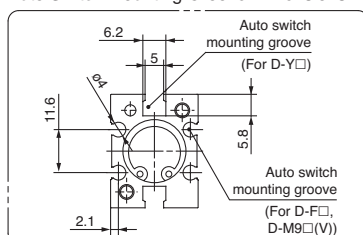
Dimensions MHZ2-16 □ Double acting/Single acting. Basic type



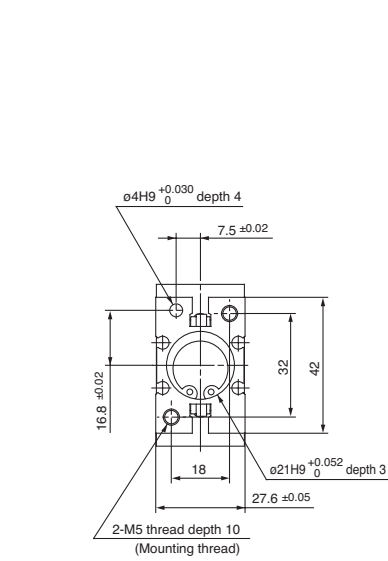
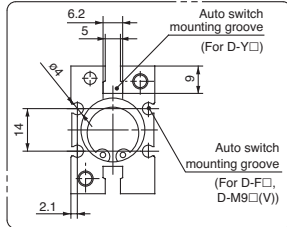
* For single action, the port on one side is a breathing hole.



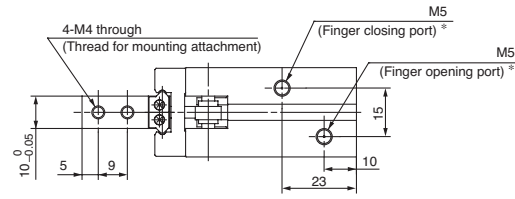
Auto Switch Mounting Groove Dimensions



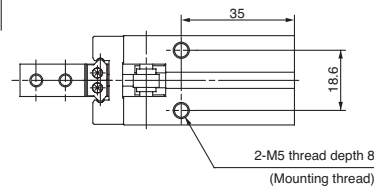
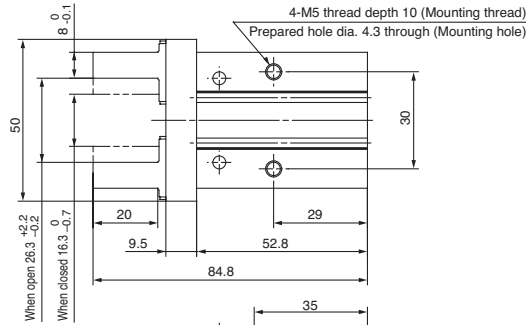
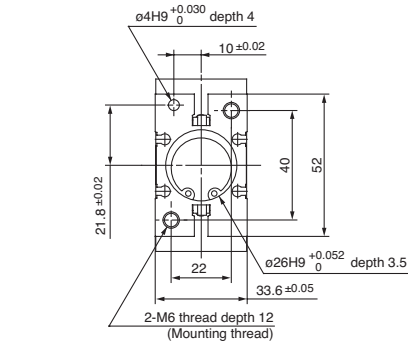
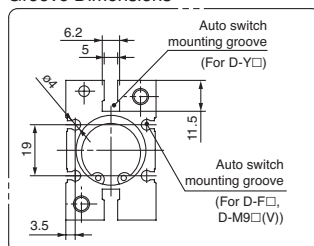
Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through-hole mounting is not possible.

Dimensions MHZ2-20□ Double acting/Single acting. Basic type

Auto Switch Mounting Groove Dimensions


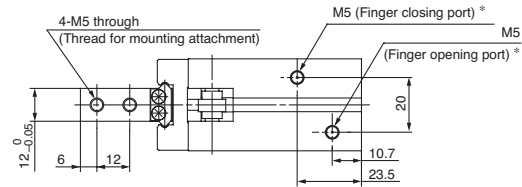
Note) When using D-Y59, D-Y69 and D-Y7 type auto switches, through-hole mounting is not possible.



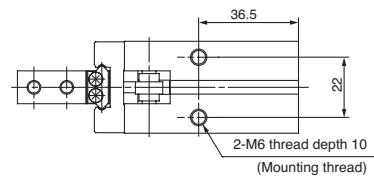
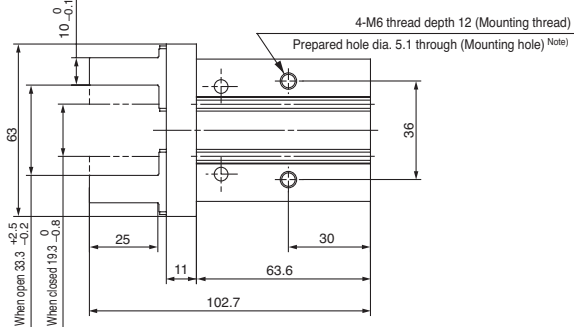
* For single action, the port on one side is a breathing hole.


Dimensions MHZ2-25□ Double acting/Single acting. Basic 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.

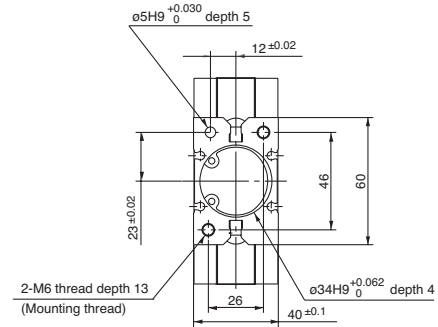


* For single action, the port on one side is a breathing hole.

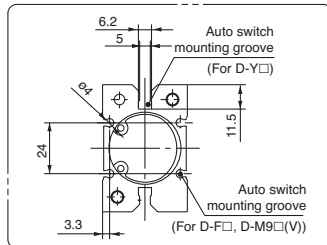


Dimensions MHZ2-32□ Double acting/Single acting. Basic type

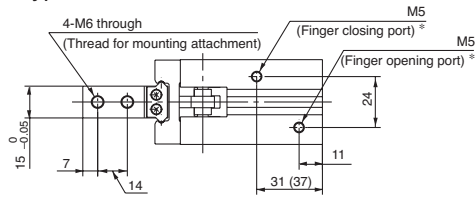
The values inside () are dimensions for the single acting type.



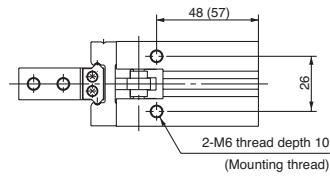
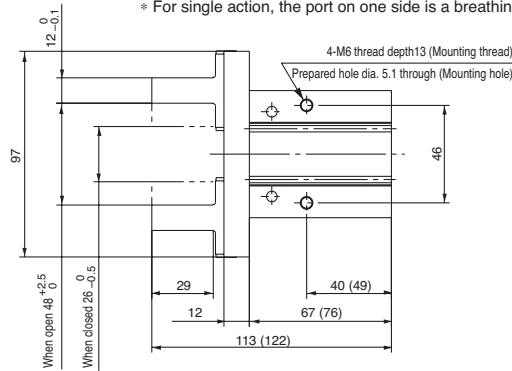
Auto Switch Mounting Groove Dimensions



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

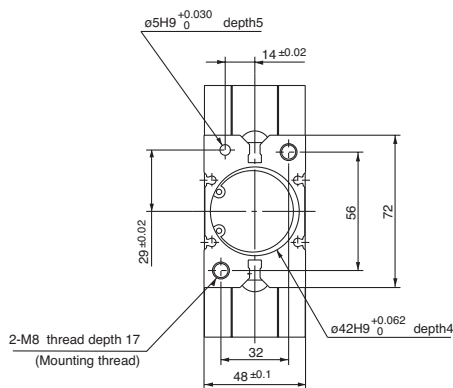


* For single action, the port on one side is a breathing hole.

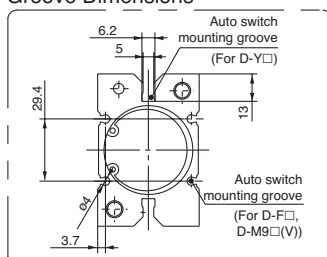


Dimensions MHZ2-40□ Double acting/Single acting. Basic type

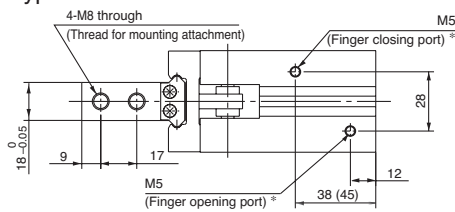
The values inside () are dimensions for the single acting type.



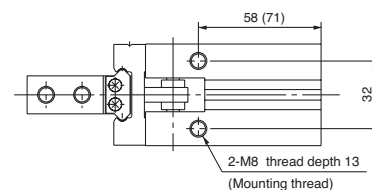
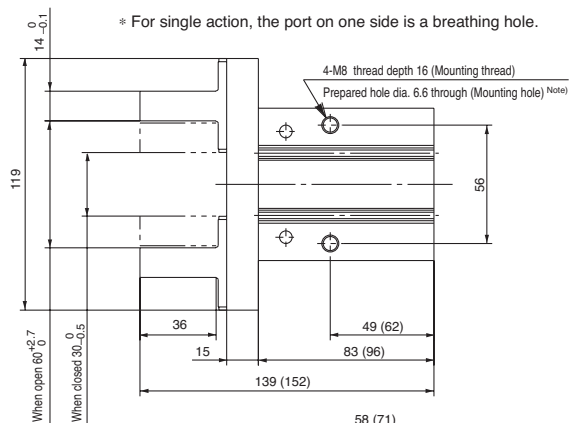
Auto Switch Mounting Groove Dimensions



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

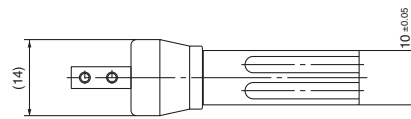
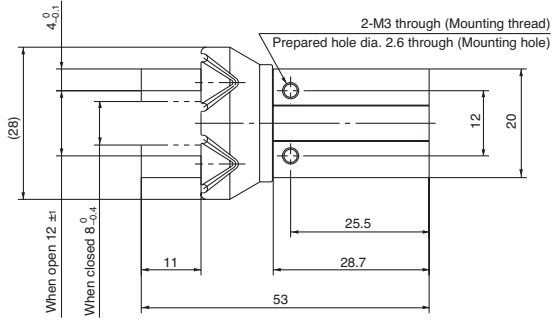
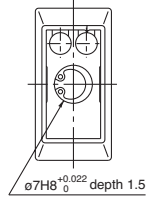
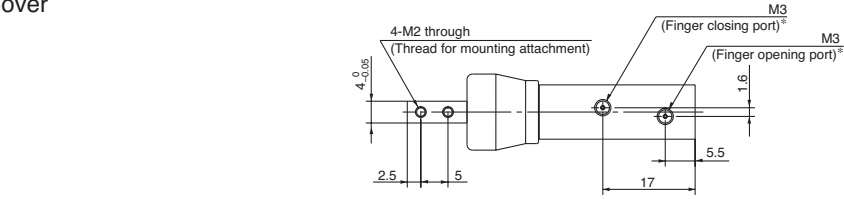


* For single action, the port on one side is a breathing hole.

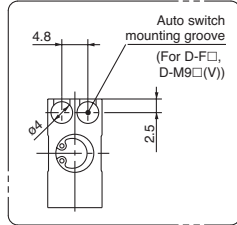


Dimensions MHZJ2-6□ Double acting/Single acting. Basic type

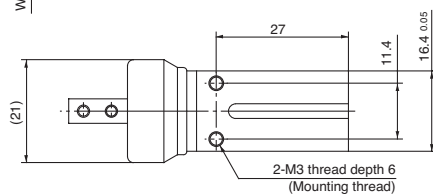
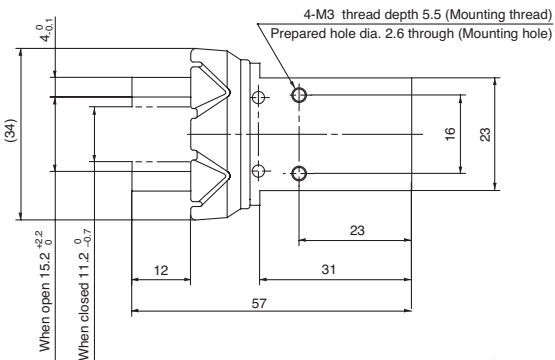
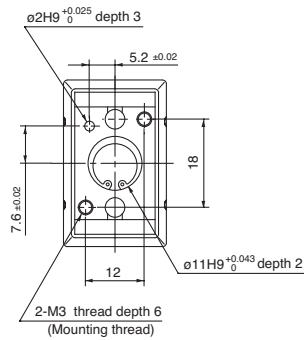
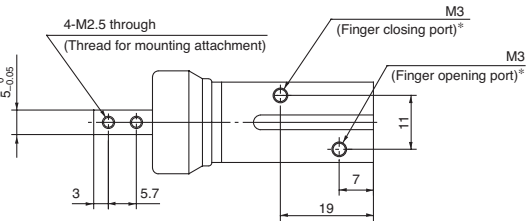
With Dust Cover



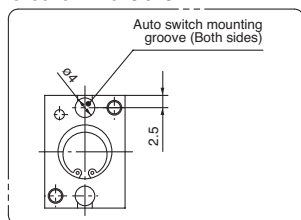
* For single action, the port on one side is a breathing hole.

Auto Switch Mounting Groove Dimensions

Dimensions MHZJ2-10□ Double acting/Single acting. Basic type

With Dust Cover



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

Auto Switch Mounting Groove Dimensions


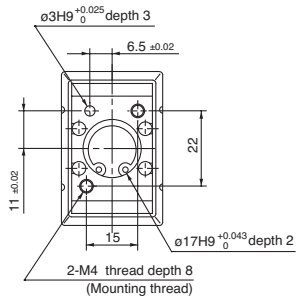
Note) When using auto switches, through-hole mounting is not possible.



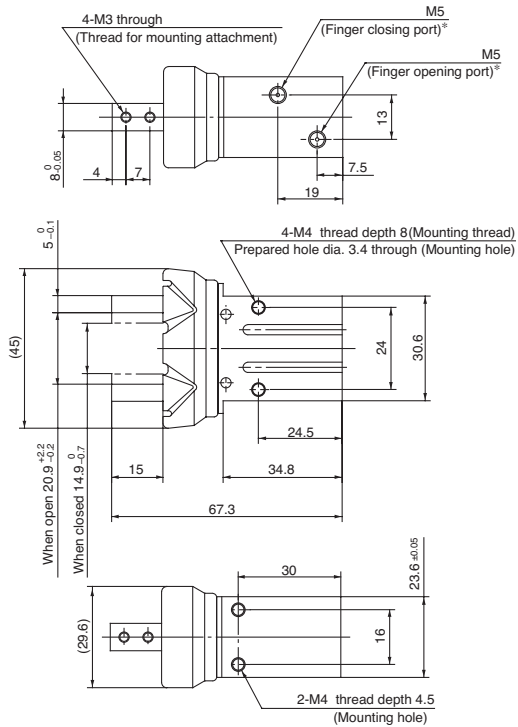
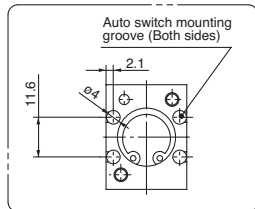
For more product options and details see our specific catalogues or on-line information.

Dimensions MHZJ2-16□ Double acting/Single acting. Basic type

With Dust Cover



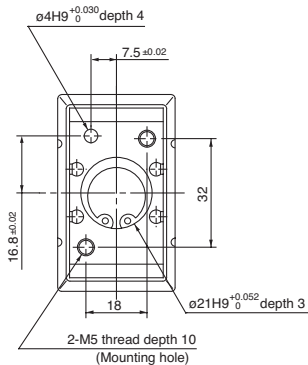
Auto Switch Mounting Groove Dimensions



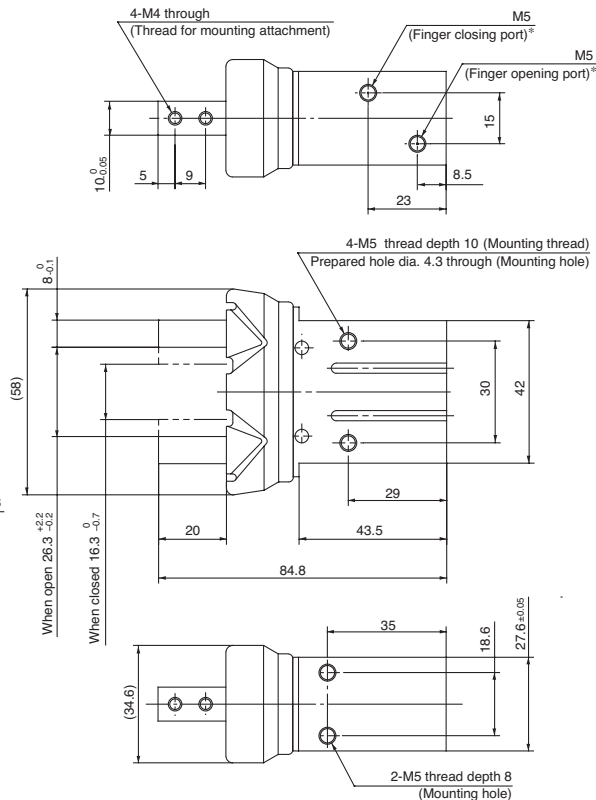
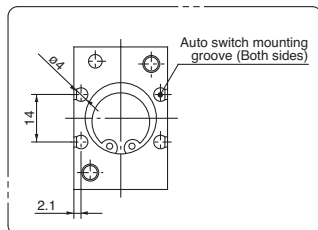
* For single action, the port on one side is a breathing hole.

Dimensions MHZJ2-20□ Double acting/Single acting. Basic type

With Dust Cover



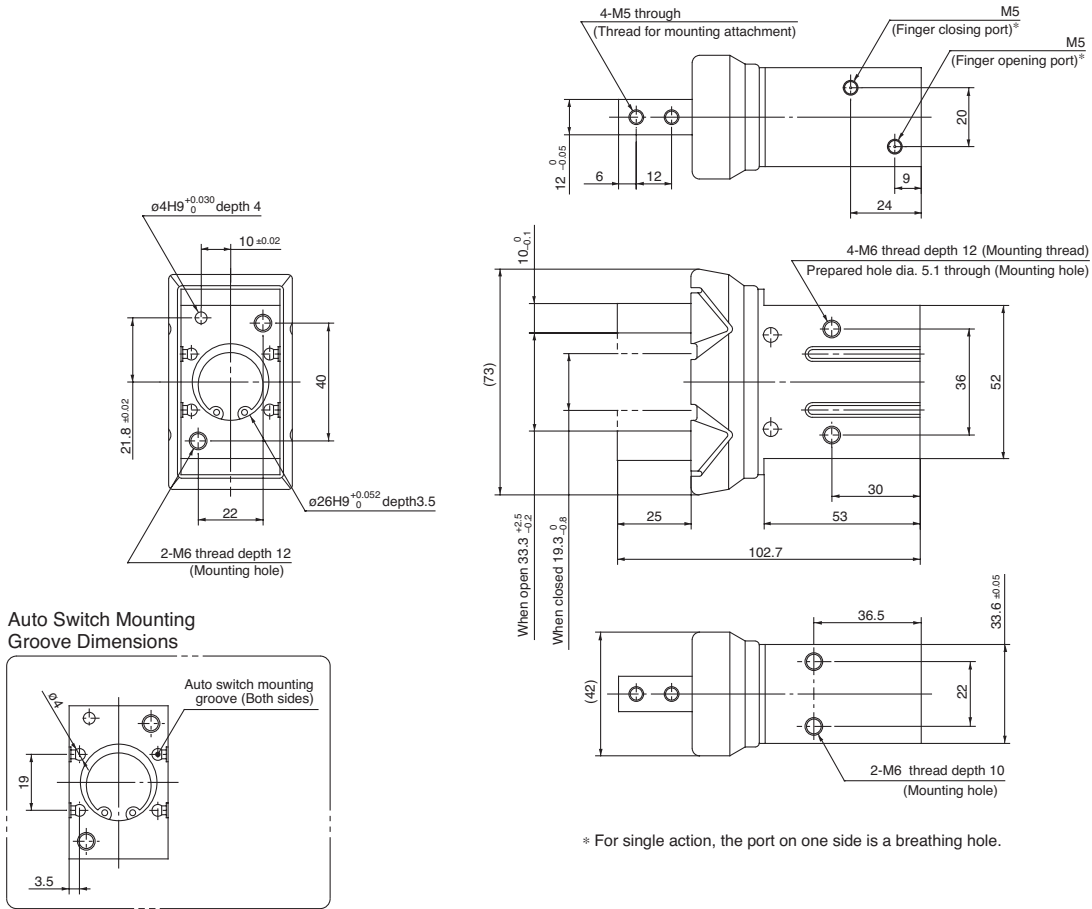
Auto Switch Mounting Groove Dimensions



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

Dimensions MHZJ2-25 □ Double acting/Single acting. Basic type

With Dust Cover



Low Profile Air Gripper

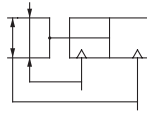
Series MHF2

Size: $\varnothing 8$, $\varnothing 12$, $\varnothing 16$, $\varnothing 20$

Features

- Height is approximately the 1/3 size of an equivalent Series MHZ2.
- Different strokes available.
- Autoswitches can be added.

Symbol



How to Order

MHF 2 – **12** **D** **□** **□** **□**

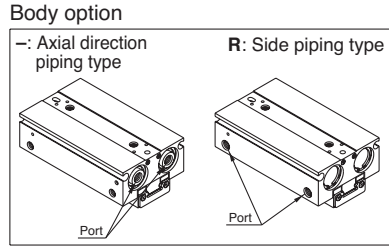
Number of fingers: 2 (2 fingers)

Bore size [mm]: 8, 12, 16, 20

Stroke: — (Short stroke), 1 (Medium stroke), 2 (Long stroke)

Action: D (Double acting)

Body option: — (Axial piping type), R (Side piping type)



Product Recommendation



Stocked items for fast delivery

MHF2-8D	MHF2-8D2R	MHF2-12DR	MHF2-16D1	MHF2-16D2R	MHF2-20DR
MHF2-8D1	MHF2-12D	MHF2-12D1R	MHF2-16D2	MHF2-20D	MHF2-20D1R
MHF2-8D2	MHF2-12D1	MHF2-12D2R	MHF2-16DR	MHF2-20D1	MHF2-20D2R
MHF2-8DR	MHF2-12D2	MHF2-16D	MHF2-16D1R	MHF2-20D2	



Auto Switches

- D-M9PWL (PNP 2-colour indication)
- D-M9NWL (NPN 2-colour indication)

Note) For more options see the Auto Switch section, page XXX

Specifications

Fluid		Air	
Operating pressure		$\varnothing 8$: 0.15 to 0.7 MPa $\varnothing 12$ to 20 : 0.1 to 0.7 MPa	
Ambient and fluid temperature		– 10 to 60°C (with no condensation)	
Repeatability		± 0.05 mm ^{Note 1)}	
Maximum operating frequency	Short stroke	120 c.p.m.	
	Medium stroke	120 c.p.m.	
	Long stroke	60 c.p.m.	
Lubrication		Not required	
Action		Double acting	

Note 1) This is the value when no offset load is applied to the finger.
When an offset load is applied to the finger, the maximum value is ± 0.15 mm due to the influence of backlash of the rack and pinion.

Model

Action	Model	Cylinder bore [mm]	Gripping force ^{Note 1)}		Opening /closing stroke (Both sides) [mm]	Weight ^{Note 2)}		Volume [cm ³]	
			Effective gripping force per finger [N]			[g]		Finger open side	Finger close side
Double acting	MHF2-8D	8	19		8	65	0.7	0.6	
	MHF2-8D1				16	85	1.1	1.0	
	MHF2-8D2				32	120	2.0	1.9	
	MHF2-12D	12	48		12	155	1.9	1.6	
	MHF2-12D1				24	190	3.3	3.0	
	MHF2-12D2				48	275	6.1	5.8	
	MHF2-16D	16	90		16	350	4.9	4.1	
	MHF2-16D1				32	445	8.2	7.4	
	MHF2-16D2				64	650	14.9	14.0	
	MHF2-20D	20	141		20	645	8.7	7.3	
	MHF2-20D1				40	850	15.1	13.7	
	MHF2-20D2				80	1,225	28.0	26.6	

Note 1) At the pressure of 0.5 MPa, when gripping point L is 20 mm.
Note 2) Excluding the auto switch weight



Related Products

- Series AS - Speed Controllers - page 1238
- Series SY - Valves - page 65, 101, 417
- Series SV - Valves - page 20
- Series VQC - Valves - page 193, 211
- Series AC - Air Preparation - page 1076
- Series IDK - Moisture Control Tube - page 1149
- Series TU - Tubing - page 1223
- Series KQ2 - Fittings - page 1184

Replacement Parts

Replaceable parts list

Description	Kit No.		
	MHF2-8D	MHF2-8D1	MHF2-8D2
Seal kit	MHF8-PS	MHF8-PS	MHF8-PS-2
Finger assembly	MHF-A0802	MHF-A0802-1	MHF-A0802-2

Replacement part/Grease pack

Description	Kit No.
Guide unit	GR-S-010 (10g)
Cylinder unit	GR-L-005 (5 g)

Replaceable parts list

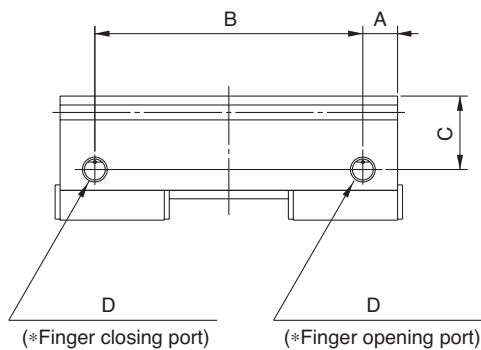
Description	Kit No.		
	MHF2-12D	MHF2-12D1	MHF2-12D2
Seal kit	MHF12-PS	MHF12-PS	MHF12-PS
Finger assembly	MHF-A1202	MHF-A1202-1	MHF-A1202-2

Description	Kit No.		
	MHF2-16D	MHF2-16D1	MHF2-16D2
Seal kit	MHF16-PS	MHF16-PS	MHF16-PS
Finger assembly	MHF-A1602	MHF-A1602-1	MHF-A1602-2

Description	Kit No.		
	MHF2-20D	MHF2-20D1	MHF2-20D2
Seal kit	MHF20-PS	MHF20-PS	MHF20-PS
Finger assembly	MHF-A2002	MHF-A2002-1	MHF-A2002-2

Body Option Side Piping Type

MHF2-□D□R



*For dimensions not given above, please refer to the table of dimensions on pages 9 through 20.

Body option dimension table

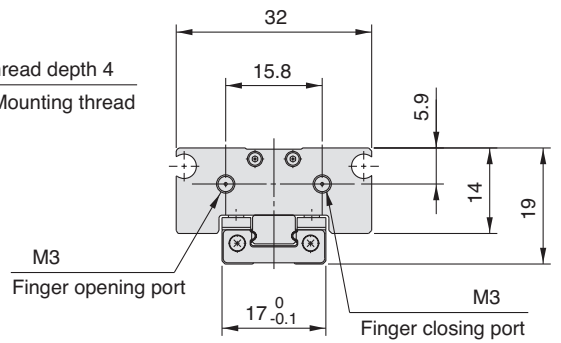
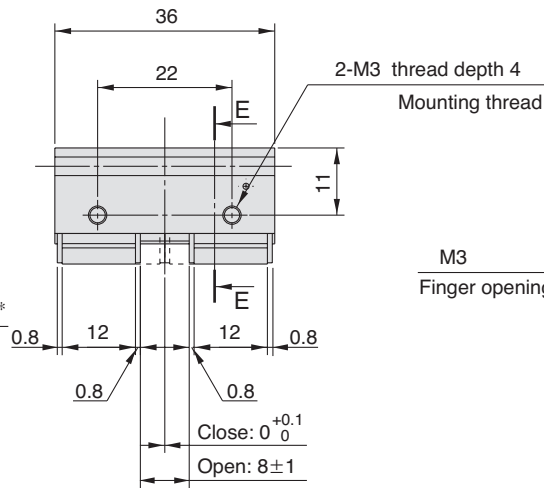
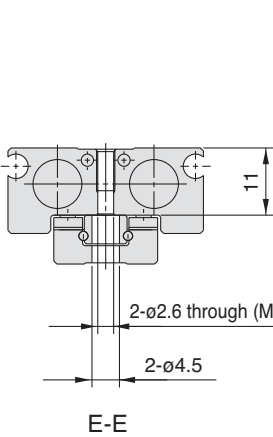
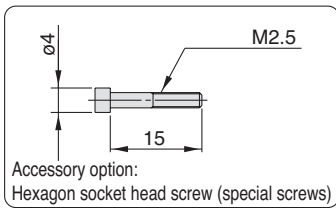
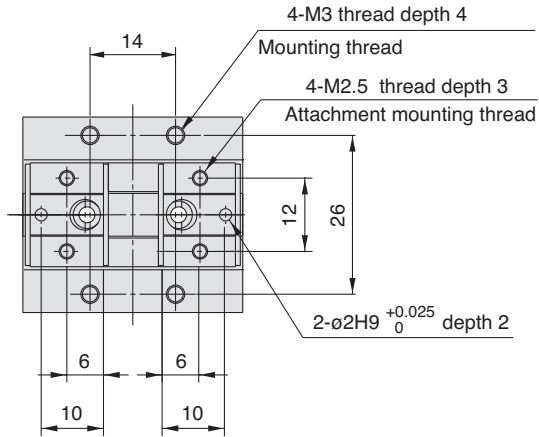
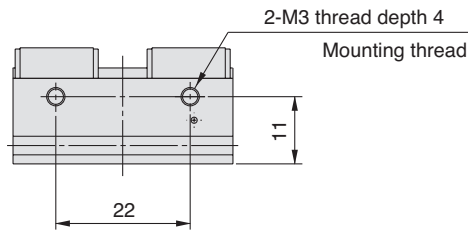
Unit: mm

Model	A	B	C	D
MHF2-8DR	5.5	25	11	M3 x 0.5
MHF2-8D1R		37		
MHF2-8D2R		61		
MHF2-12DR	7	38	14.8	M5 x 0.8
MHF2-12D1R		54		
MHF2-12D2R		90		
MHF2-16DR	9	54	19	M5 x 0.8
MHF2-16D1R		76		
MHF2-16D2R		124		
MHF2-20DR	10	66	23	M5 x 0.8
MHF2-20D1R		94		
MHF2-20D2R		154		



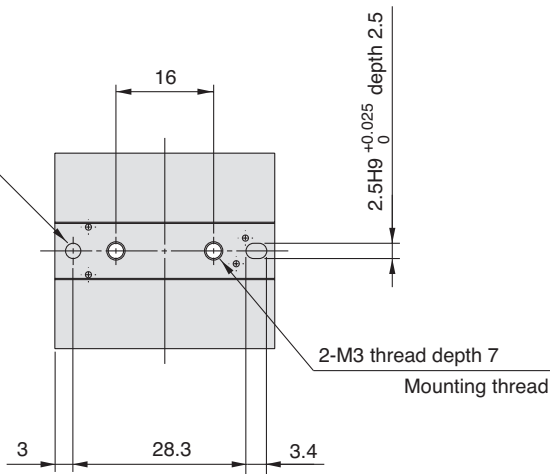
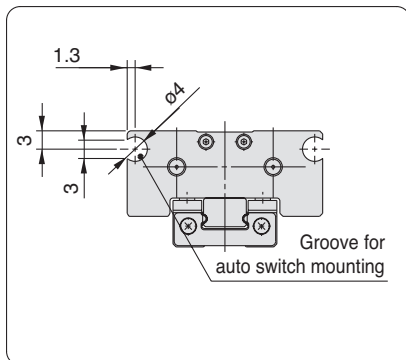
For more product options and details see our specific catalogues or on-line information.

Dimensions MHF2-8D

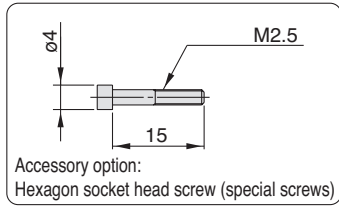
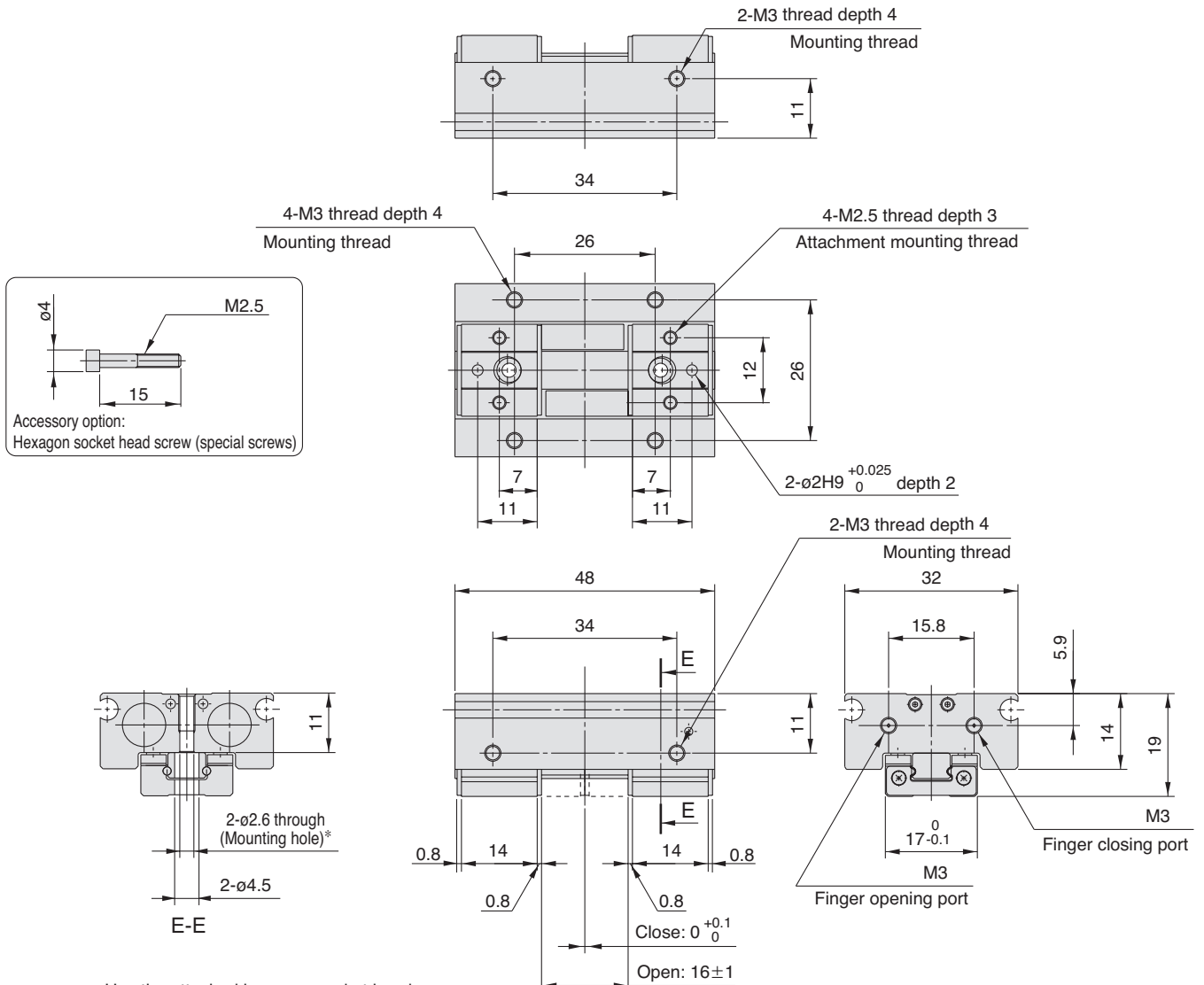


* Use the attached hexagon socket head screws for mounting holes.

Auto Switch Mounting Groove Dimensions

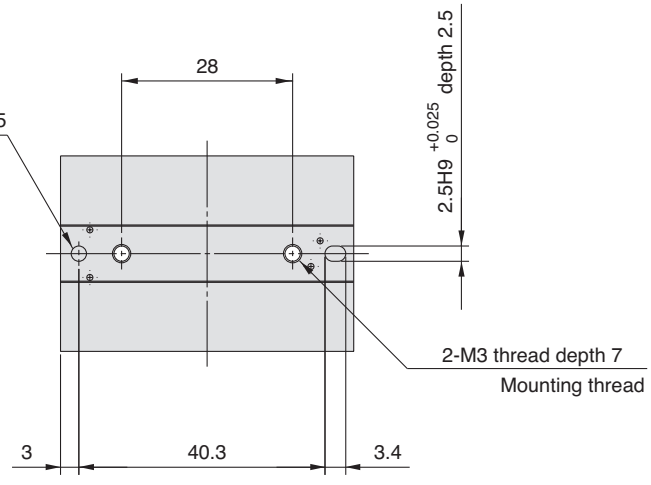
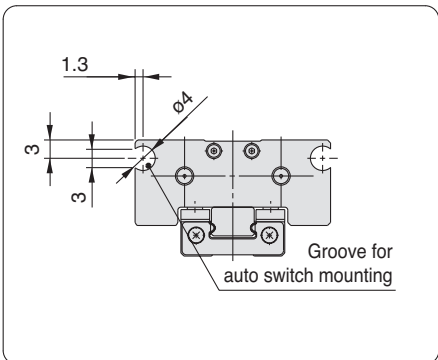


Dimensions MHF2-8D1

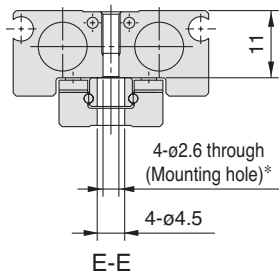
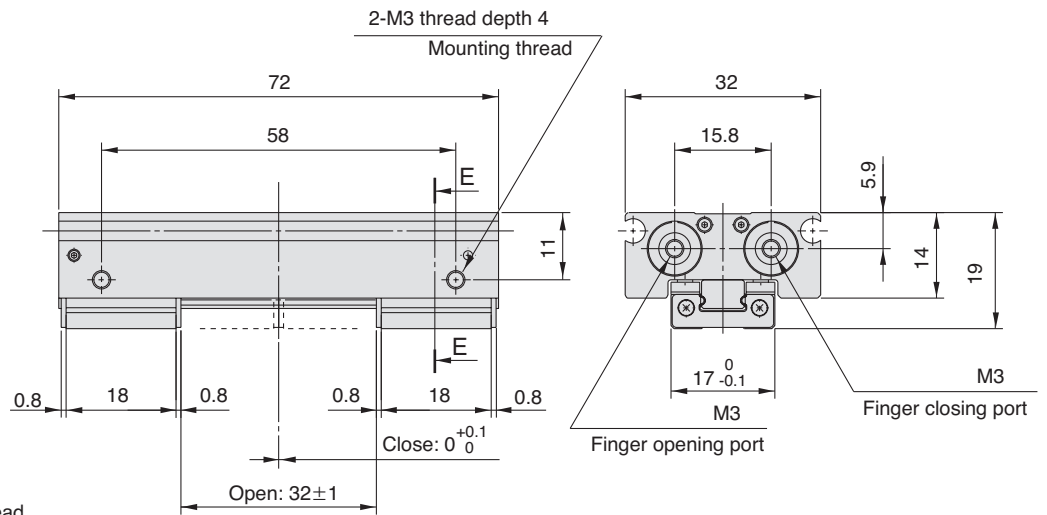
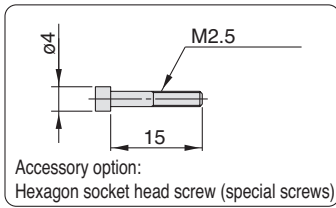
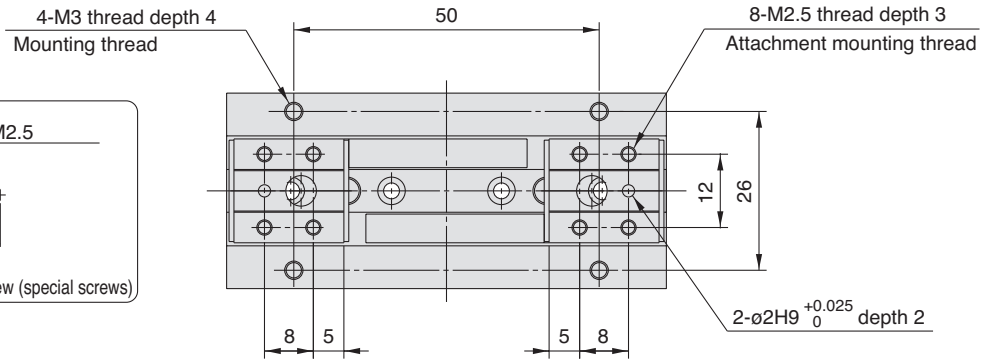
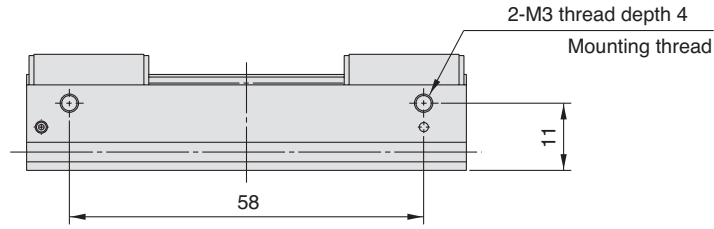


* Use the attached hexagon socket head screws for mounting holes.

Auto Switch Mounting Groove Dimensions

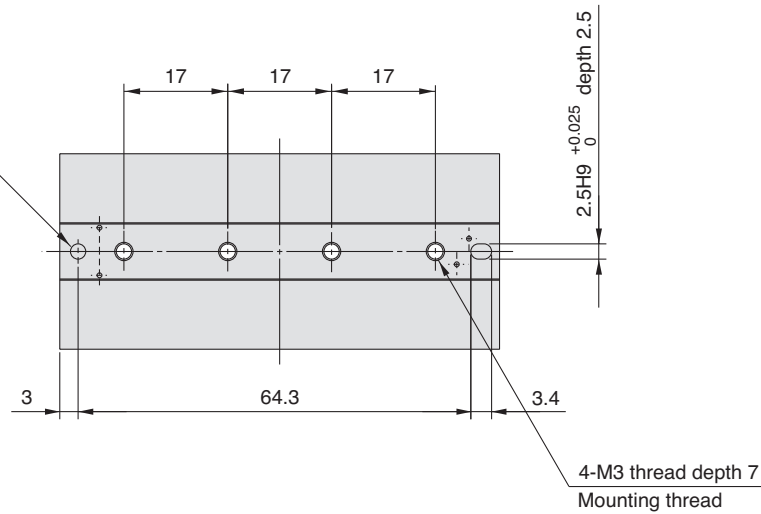
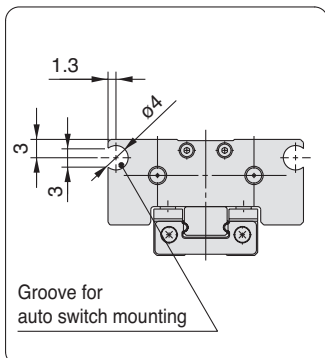


Dimensions MHF2-8D2

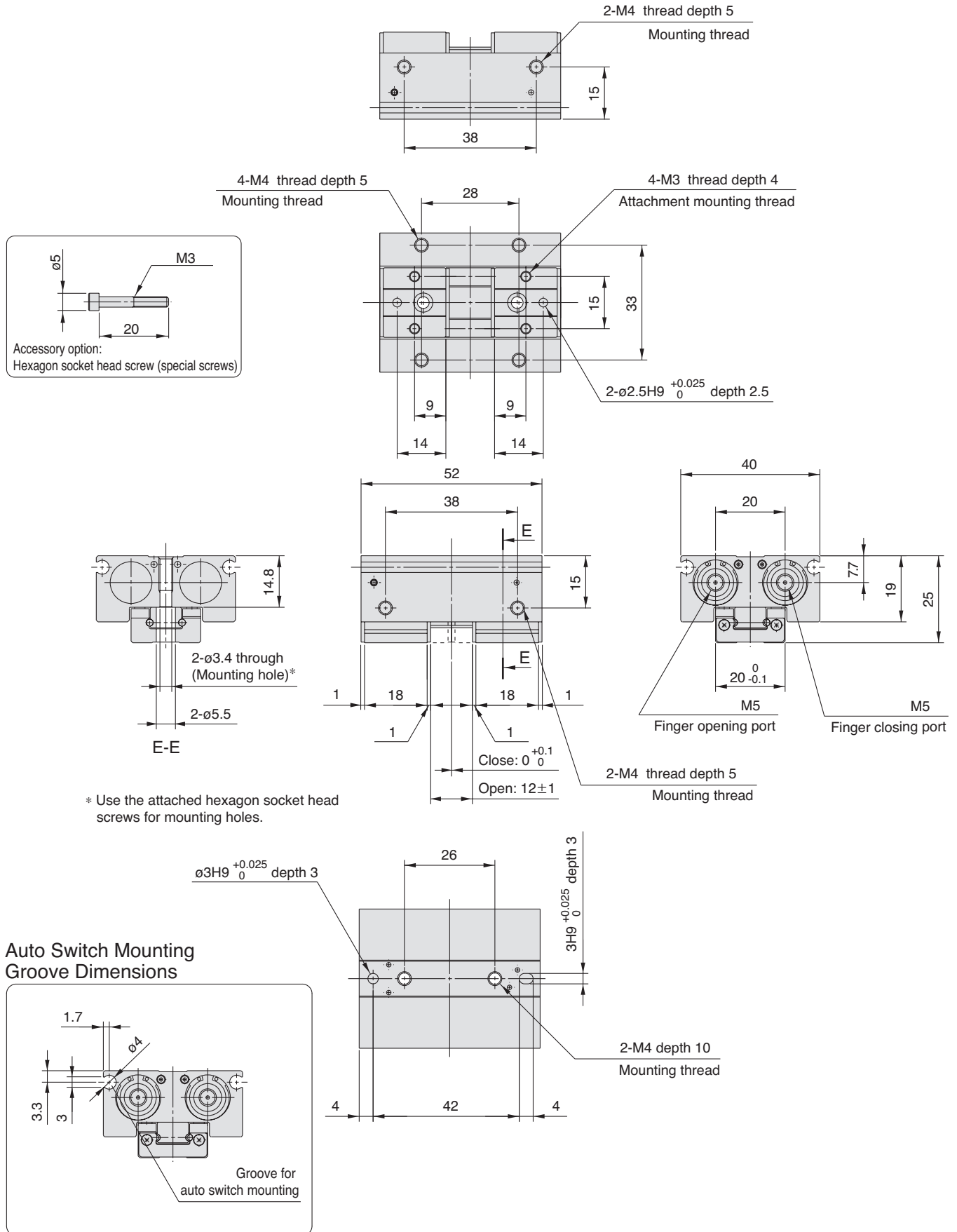


* Use the attached hexagon socket head screws for mounting holes.

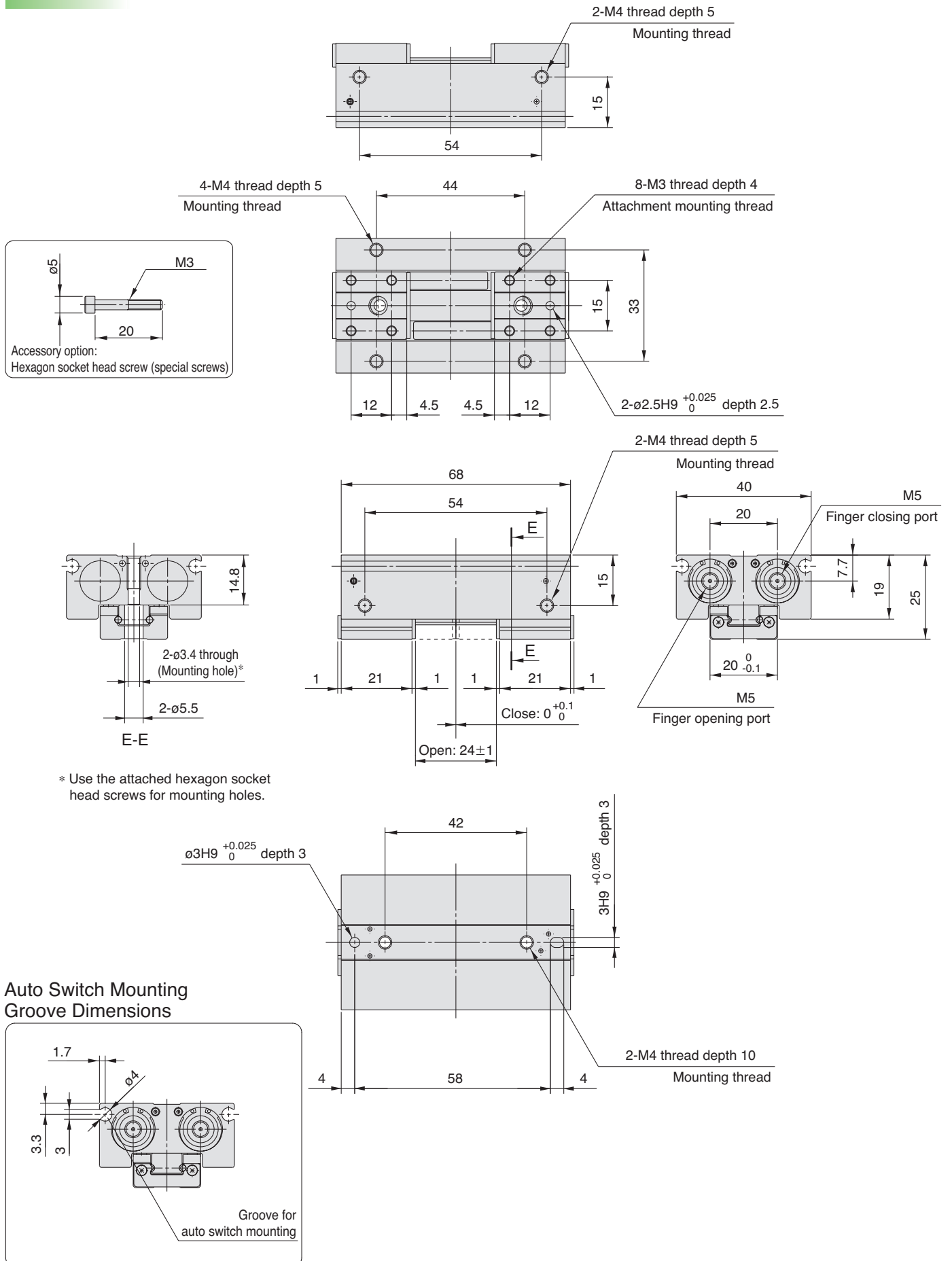
Auto Switch Mounting Groove Dimensions



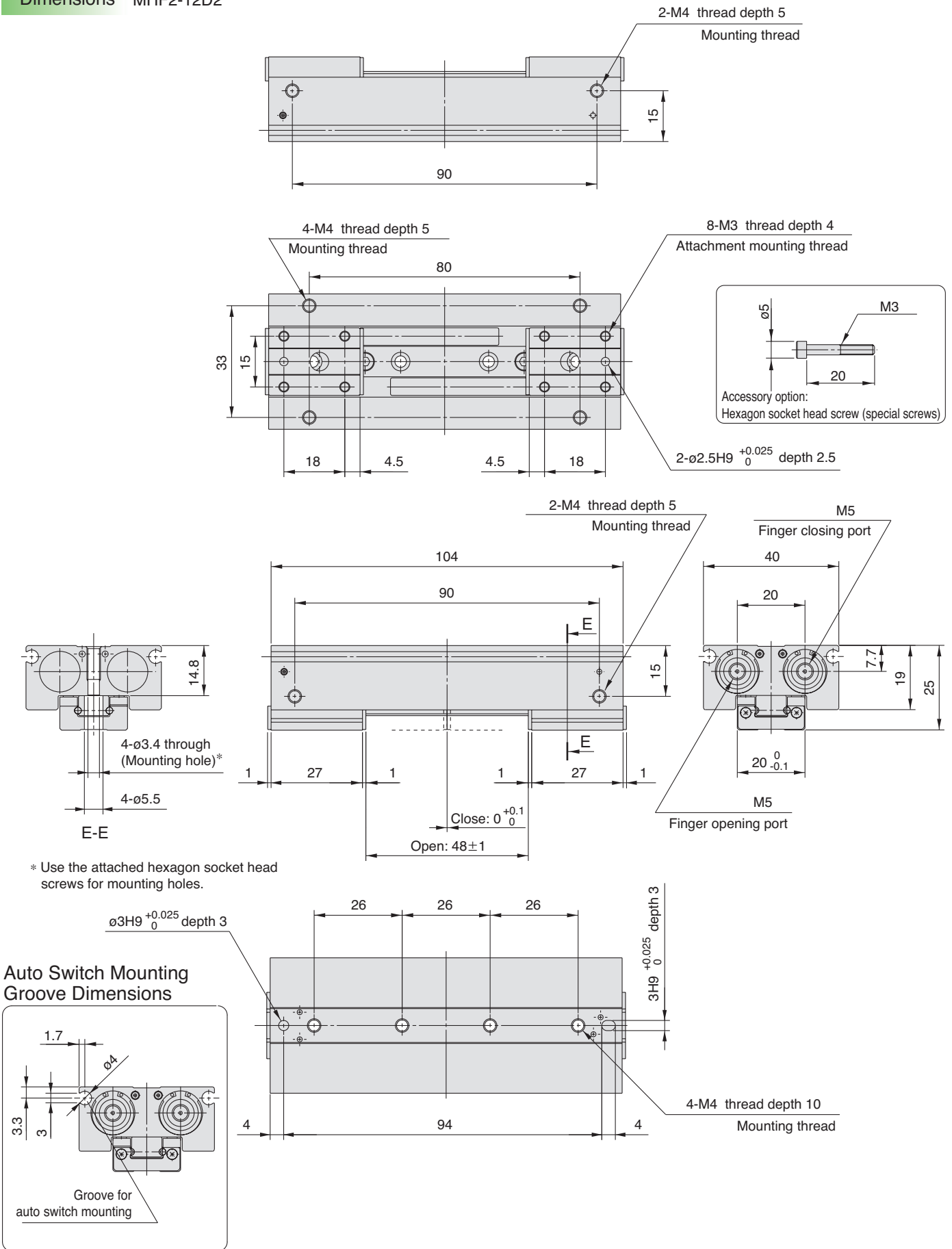
Dimensions MHF2-12D



Dimensions MHF2-12D1

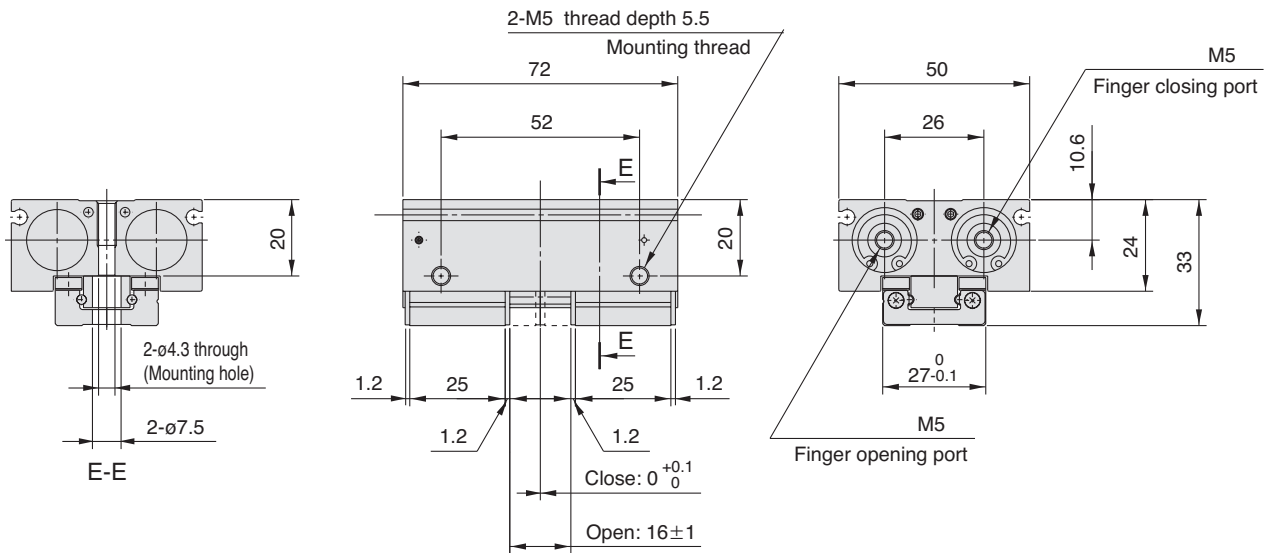
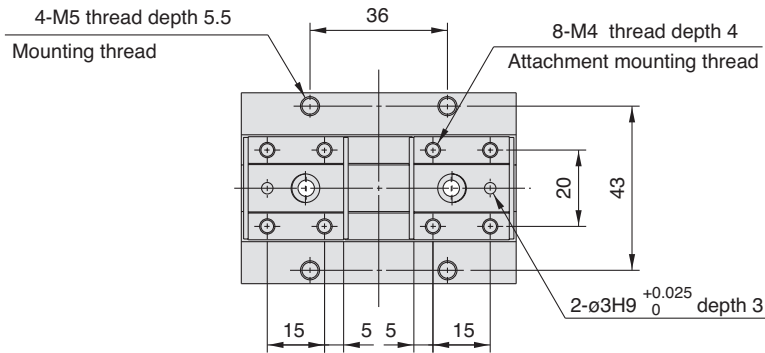
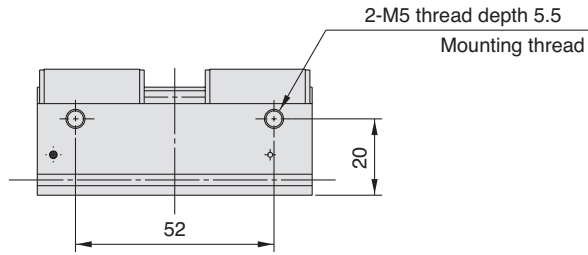


Dimensions MHF2-12D2

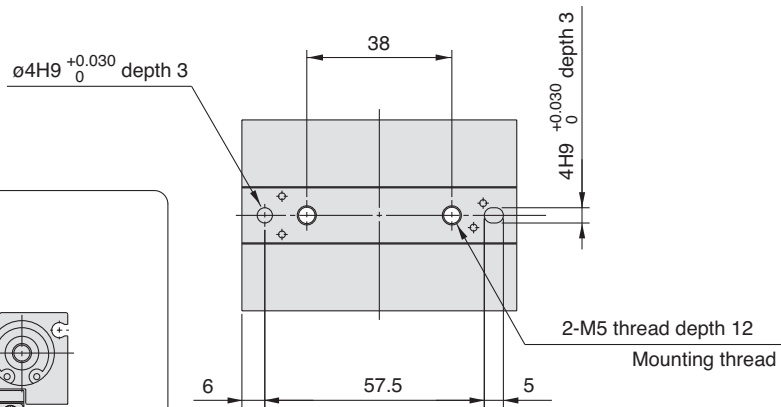
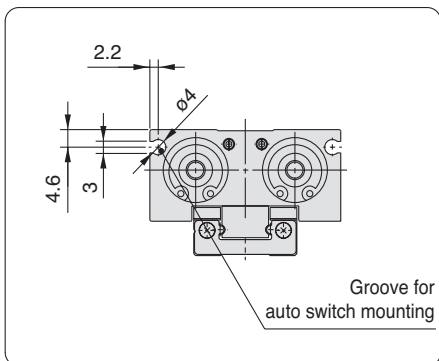


Grippers

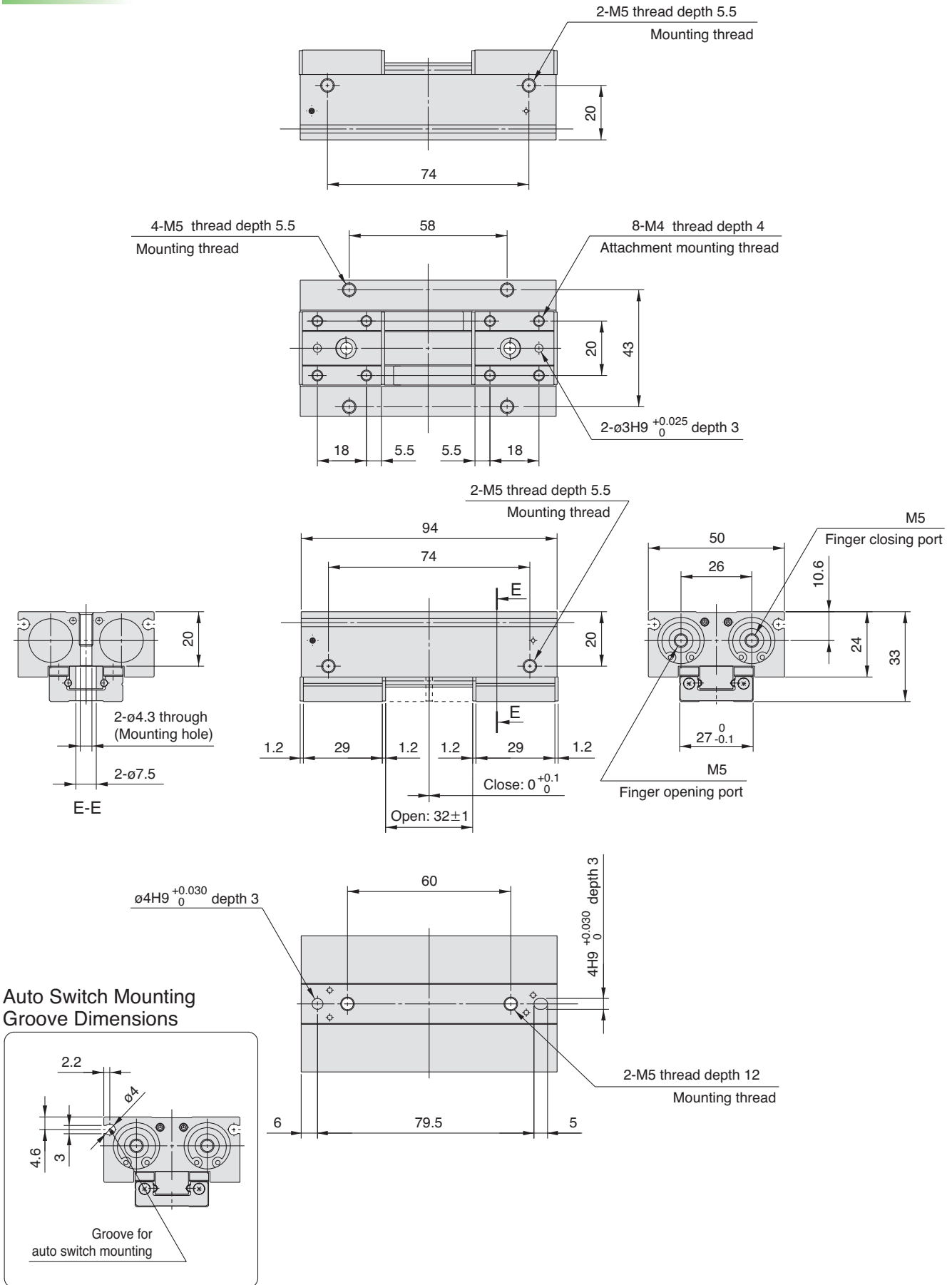
Dimensions MHF2-16D



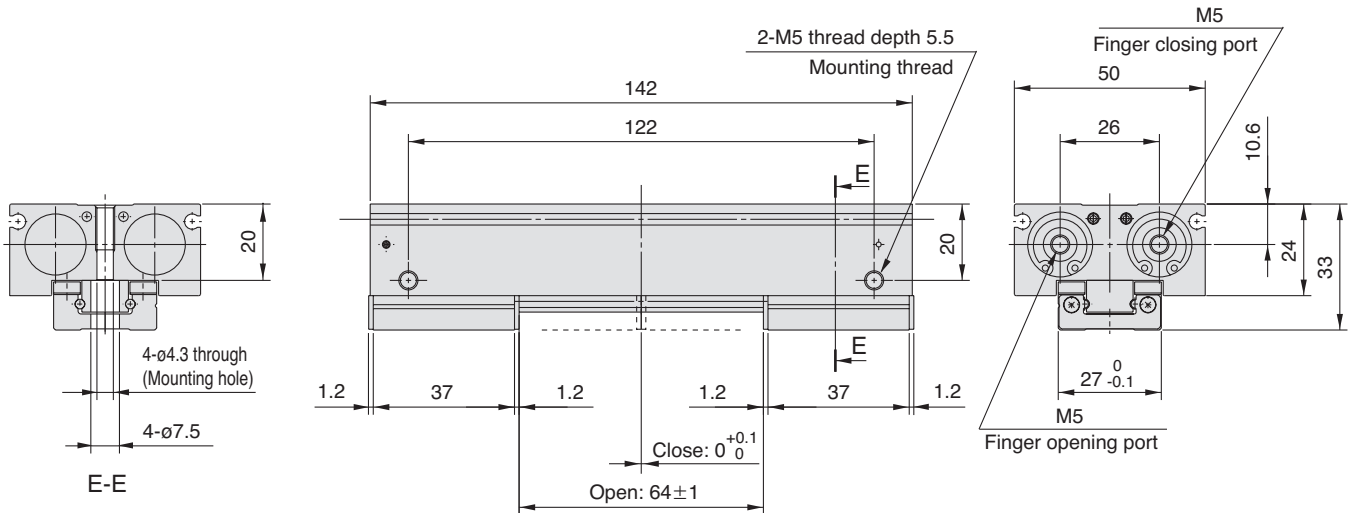
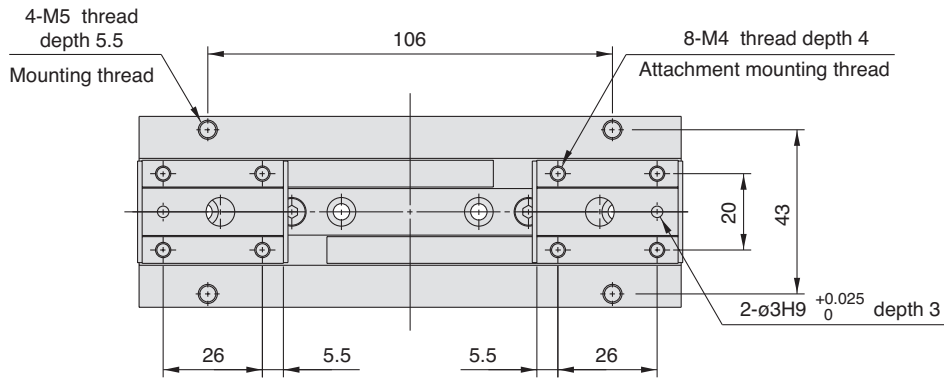
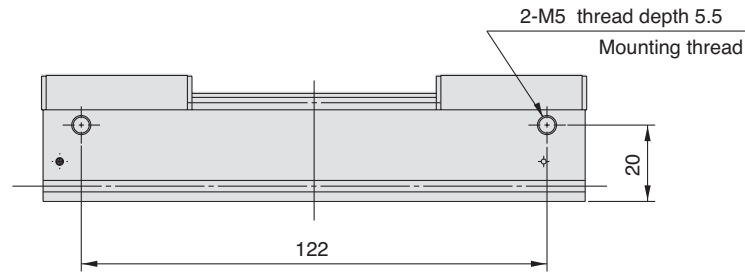
Auto Switch Mounting Groove Dimensions



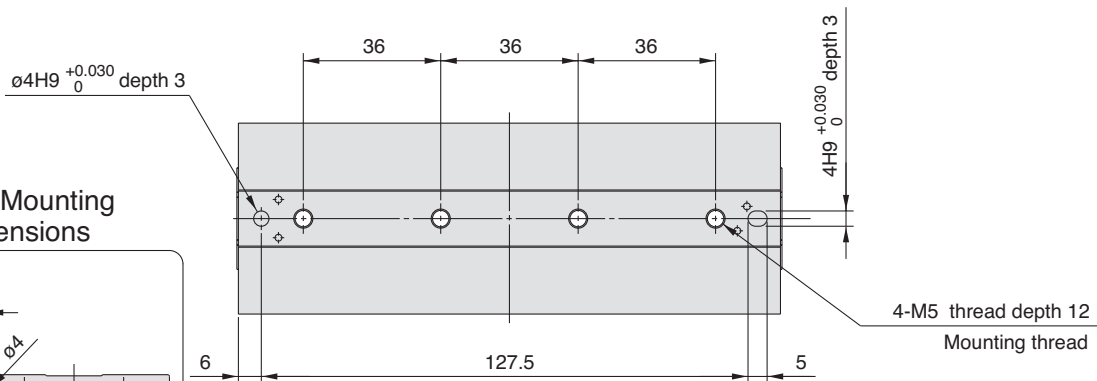
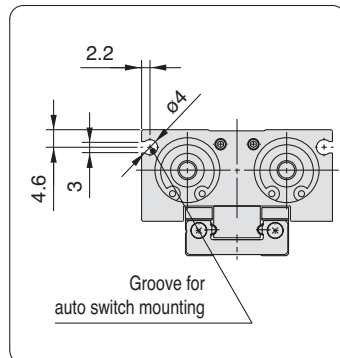
Dimensions MHF2-16D1



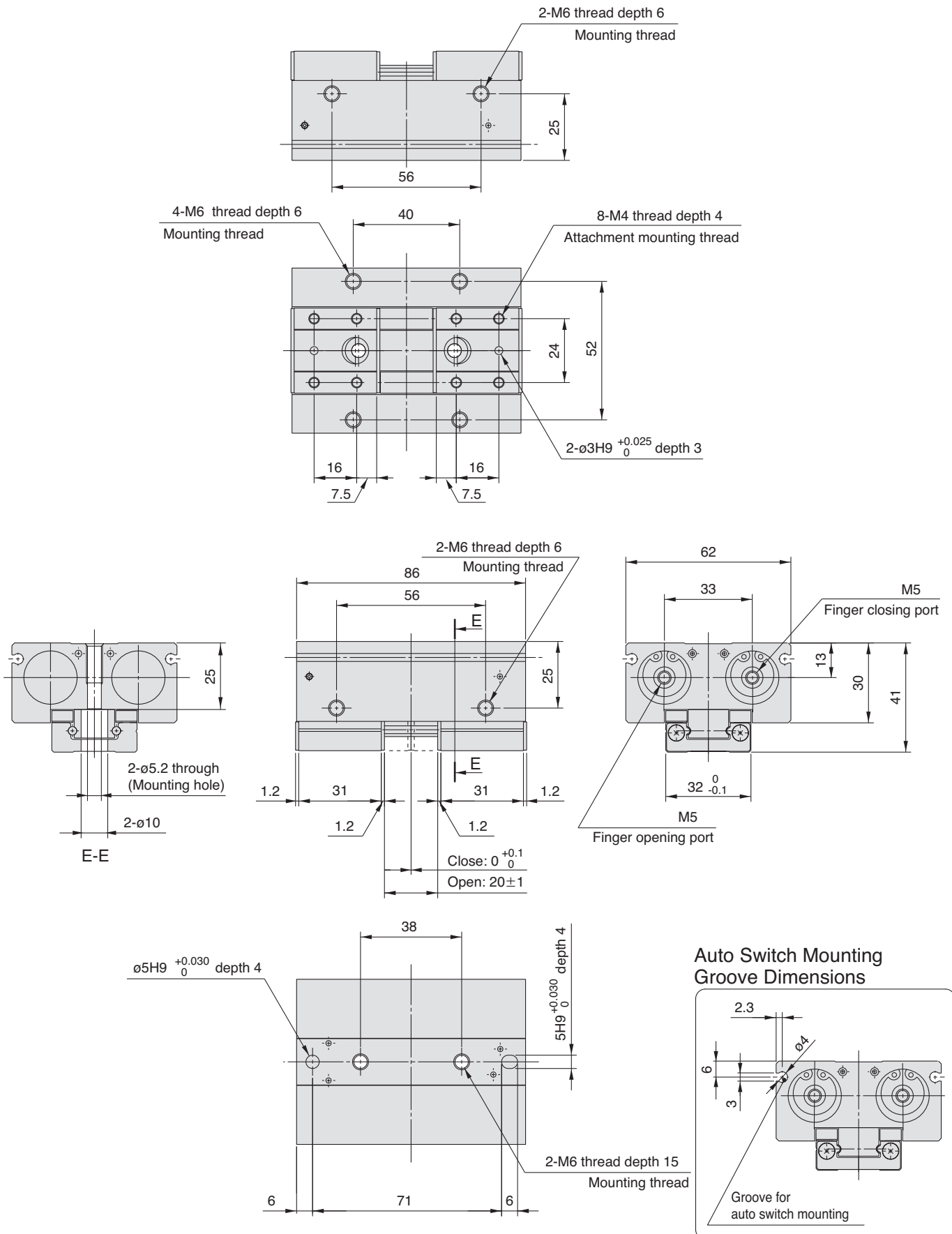
Dimensions MHF2-16D2



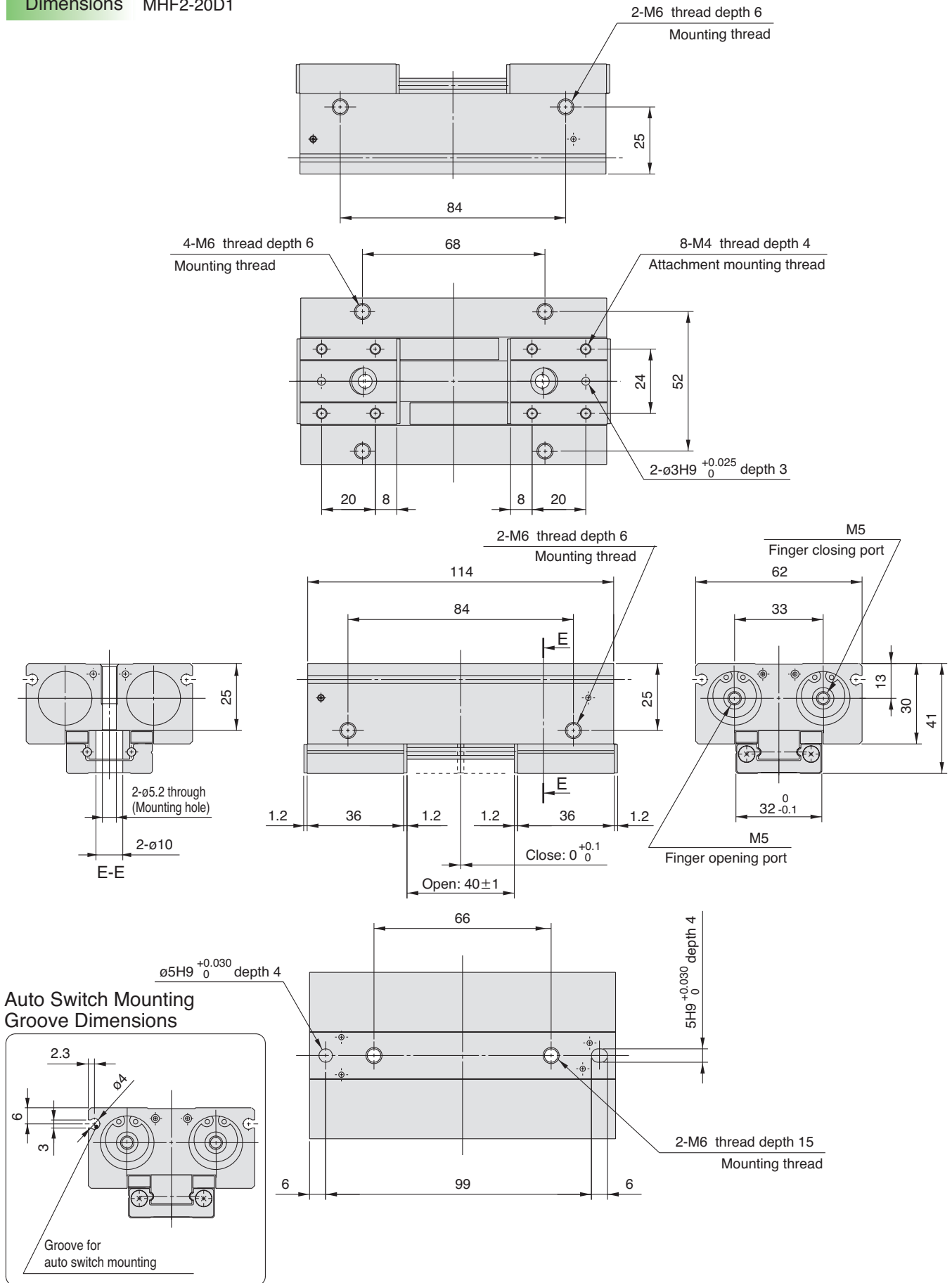
Auto Switch Mounting Groove Dimensions



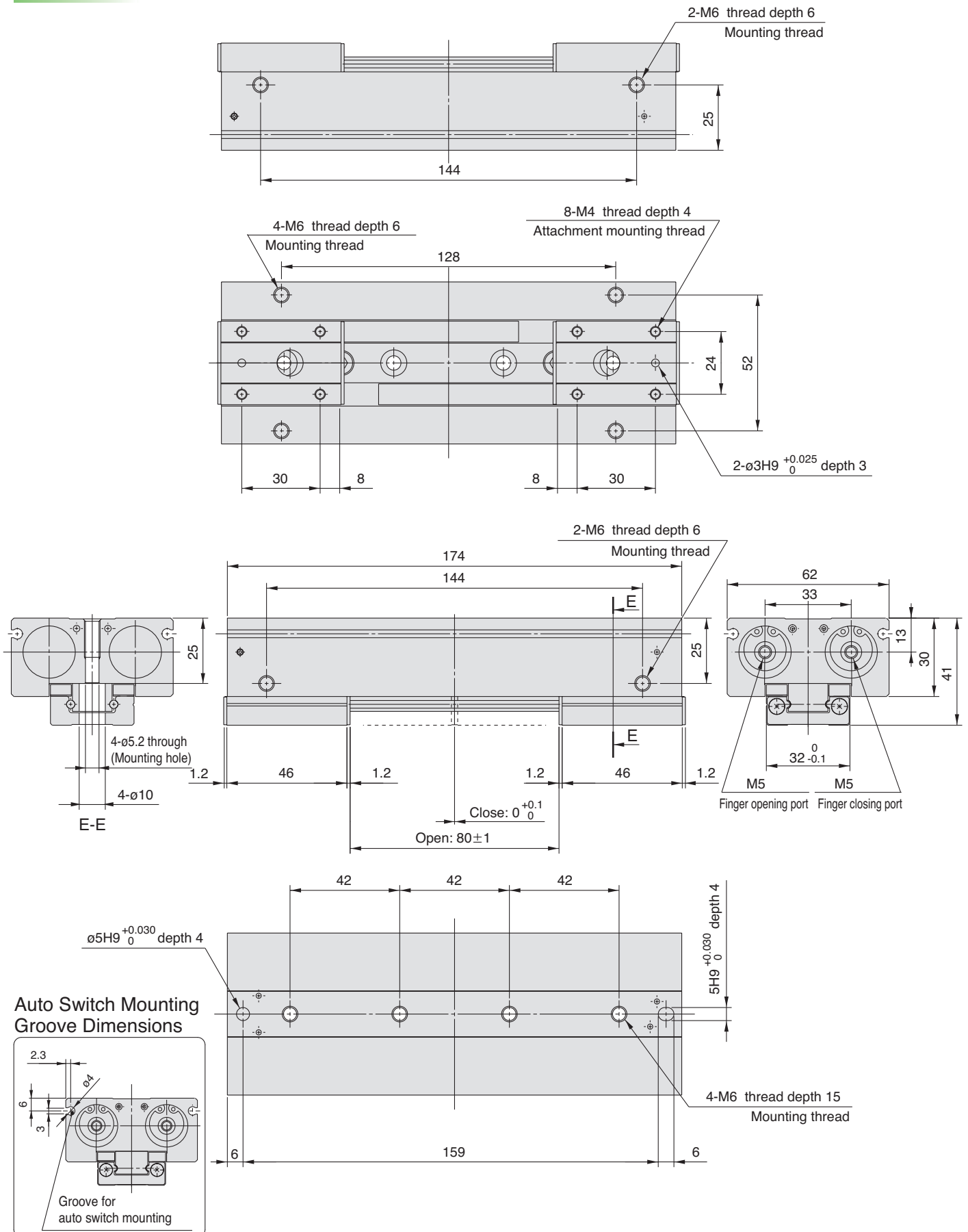
Dimensions MHF2-20D



Dimensions MHF2-20D1



Dimensions MHF2-20D2

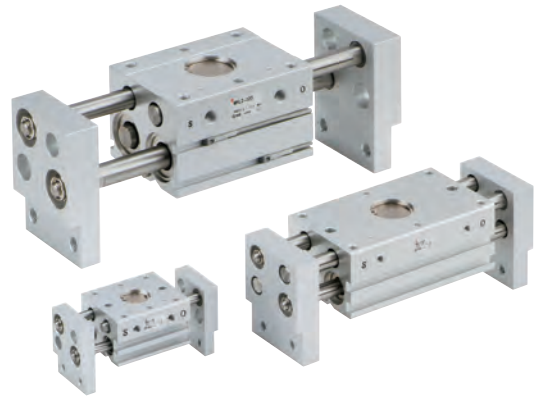


Parallel Style Wide Opening Air Gripper Series MHL2

Size: 10, 16, 20, 25, 32, 40

Features

- Easy to mount body and jaw accessories.
- A wide opening with large open/close stroke.
Optimally used for holding large-size workpieces that have dimensional variances.
- The double pistons provide a large gripping force.
- Autoswitches can be added.



How to Order

MHL 2 - 32 D 1

- Wide opening
- Number of fingers: 2 | 2 fingers
- Bore size:

10	10 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
- Opening/Closing stroke [mm]

Symbol	ø10	ø16	ø20	ø25	ø32	ø40
-	20	30	40	50	70	100
1	40	60	80	100	120	160
2	60	80	100	120	160	200
- Action:

D	Double acting
---	---------------
- Thread port type

-	M5	ø10 to ø25
	Rc	
TF	G	ø32, ø40

Product Recommendation



Stocked items for fast delivery

MHL2-10D	MHL2-16D	MHL2-20D	MHL2-25D	MHL2-32D	MHL2-40D
MHL2-10D1	MHL2-16D1	MHL2-20D1	MHL2-25D1	MHL2-32D1	MHL2-40D1
MHL2-10D2	MHL2-16D2	MHL2-20D2	MHL2-25D2	MHL2-32D2	MHL2-40D2

Specifications

Bore size [mm]	10	16	20	25	32	40
Fluid	Air					
Action	Double acting					
Operating pressure [MPa]	0.15 to 0.6		0.1 to 0.6			
Ambient and fluid temperature	-10 to 60°C					
Repeatability	±0.1					
Lubrication	Not required					
Effective gripping force [N] at 0.5 MPa	14	45	74	131	228	396

Note) Gripping point = Bore size 10, 16, 20, 25: 40 mm,
Bore size 32, 40: 80 mm.

Model/Stroke

Model	Bore size [mm]	Max. operating frequency [c.p.m.]	Opening/Closing stroke [mm] L2 - L1	Width at closing [mm] L1	Width at opening [mm] L2	Weight [g]	
MHL2-10D	10	60	20	56	76	280	
MHL2-10D1			40	78	118	345	
MHL2-10D2			60	96	156	425	
MHL2-16D	16	60	30	68	98	585	
MHL2-16D1			60	110	170	795	
MHL2-16D2			80	130	210	935	
MHL2-20D	20	60	40	82	122	1025	
MHL2-20D1			80	142	222	1495	
MHL2-20D2			100	162	262	1690	
MHL2-25D	25	60	50	100	150	1690	
MHL2-25D1			40	100	182	2560	
MHL2-25D2			120	200	320	2775	
MHL2-32D	32	30	70	150	220	2905	
MHL2-32D1			20	120	198	318	3820
MHL2-32D2				160	242	402	4655
MHL2-40D	40	30	100	188	288	5270	
MHL2-40D1			20	160	246	406	6830
MHL2-40D2				200	286	486	7905

Note) The open and close time spans represent the value when the exterior of the workpiece is being held.

Auto Switches

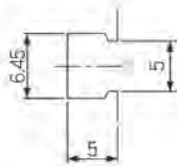
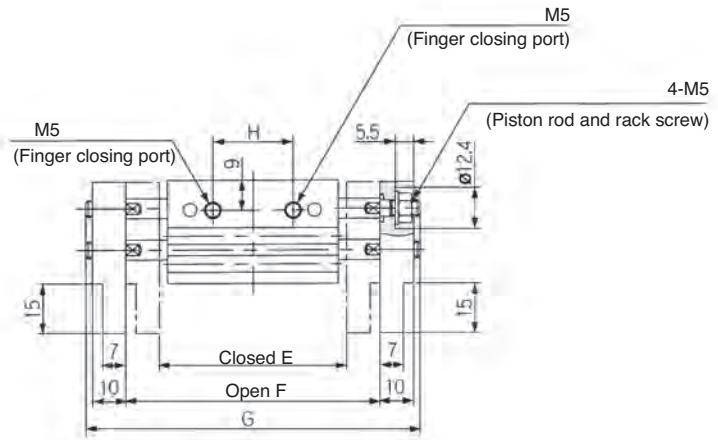
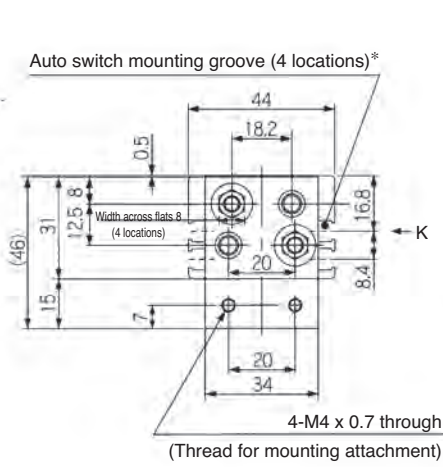
- D-M9PWL (PNP 2-colour indication)
- D-M9NWL (NPN 2-colour indication)

Note) For more options see the Auto Switch section, page XXX

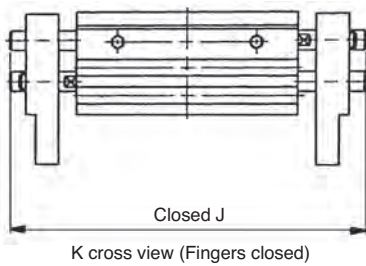
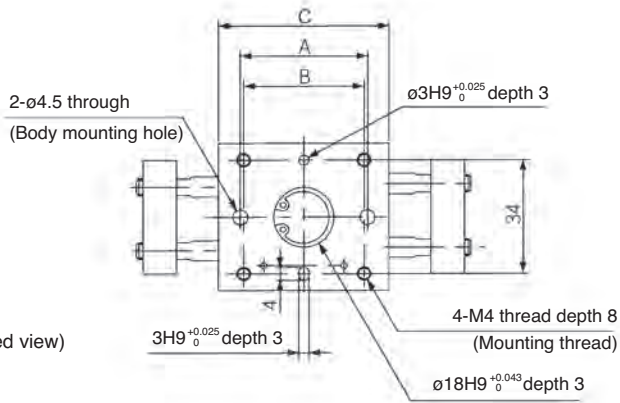
Related Products

- Series D-7K/D-RK - Speed Controllers - page 997
- Series AS - Speed Controllers - page 1238
- Series SY - Valves - page 65, 101, 417
- Series SV - Valves - page 20
- Series VQC - Valves - page 193, 211
- Series AC - Air Preparation - page 1076
- Series IDK - Moisture Control Tube - page 1149
- Series TU - Tubing - page 1223
- Series KQ2 - Fittings - page 1184

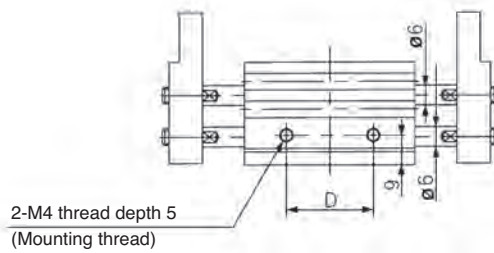
Dimensions MHL2-10D□



* Dimensions of auto switch mounting groove (Enlarged view)



K cross view (Fingers closed)



2-M4 thread depth 5 (Mounting thread)

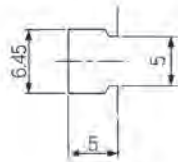
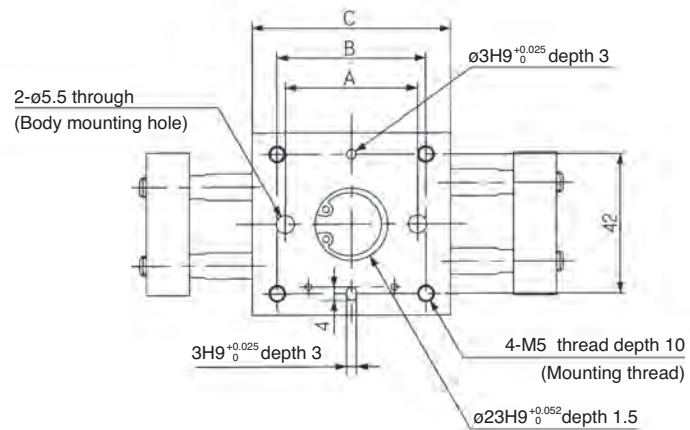
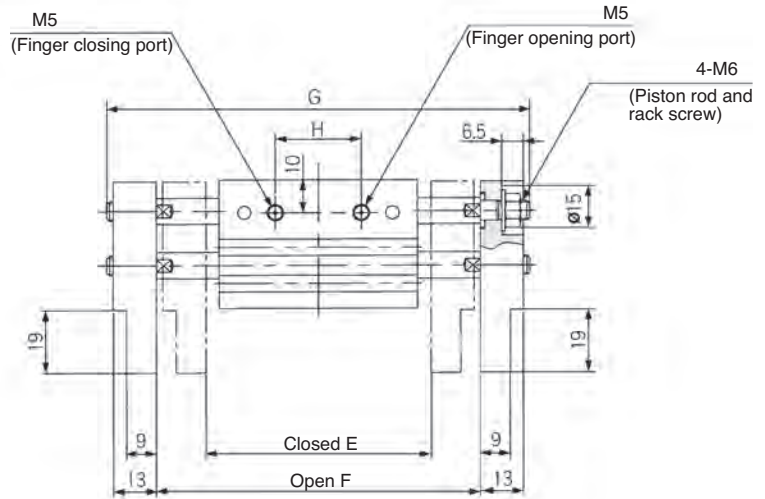
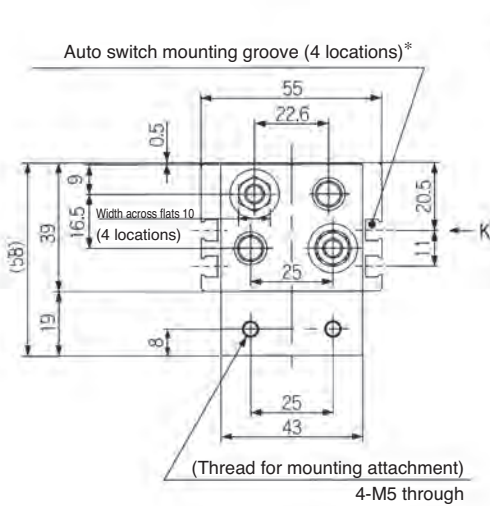
[mm]

Model	A	B	C	D	E	F	G	H	J
MHL2-10D	38	36	51	26	56	76	100	24	80
MHL2-10D1	54	52	67	42	78	118	142	39	108
MHL2-10D2	72	70	85	60	96	156	180	57	146

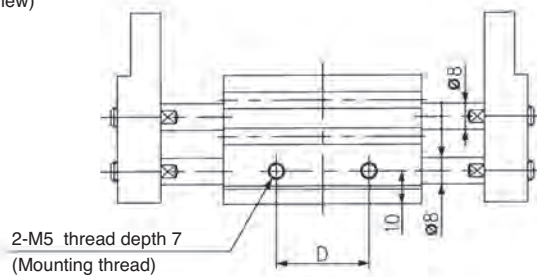
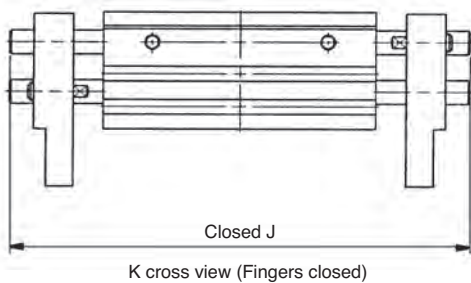


Note 1) J dimension is at fully closed.
 Note 2) D1 is different from D2 at finger closed because shaft is ejected from finger end. J dimension is different from the value which is subtracted stroke from G dimension.

Dimensions MHL2-16D□



* Dimensions of auto switch mounting groove (Enlarged view)

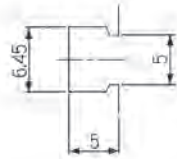
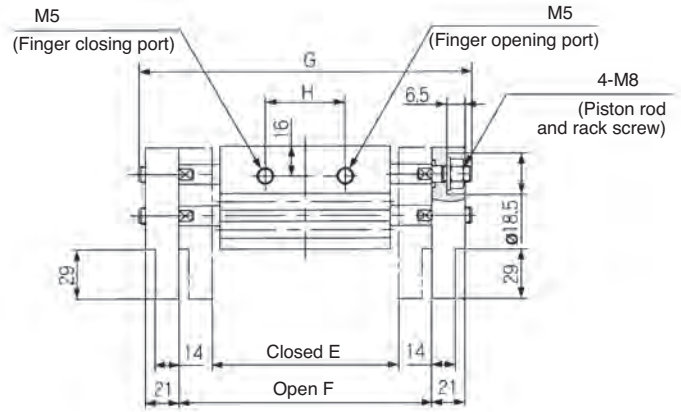
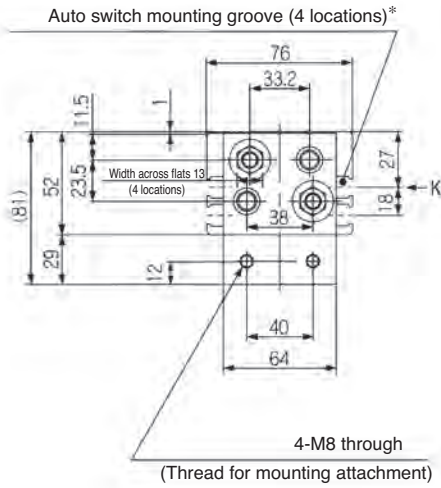


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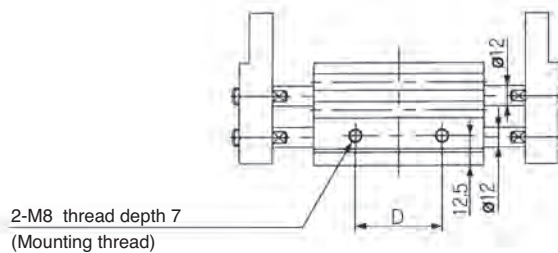
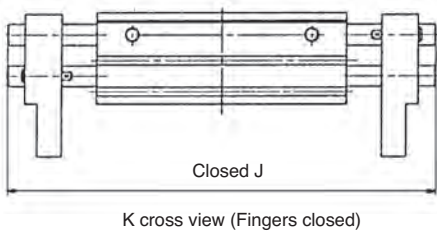
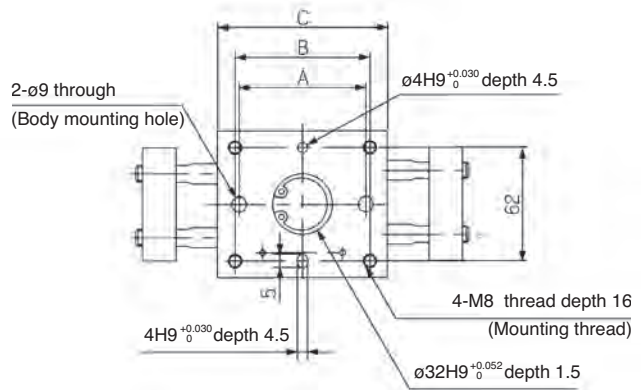
Model	A	B	C	D	E	F	G	H	J
MHL2-16D	40	45	60	28	68	98	128	26	98
MHL2-16D1	70	75	90	58	110	170	200	50	152
MHL2-16D2	90	95	110	78	130	210	240	70	192

Note 1) J dimension is at fully closed.
 Note 2) D1 is different from D2 at finger closed because shaft is ejected from finger end. J dimension is different from the value which is subtracted stroke from G dimension.

Dimensions MHL2-25D□



* Dimensions of auto switch mounting groove (Enlarged view)

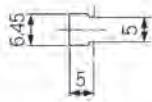
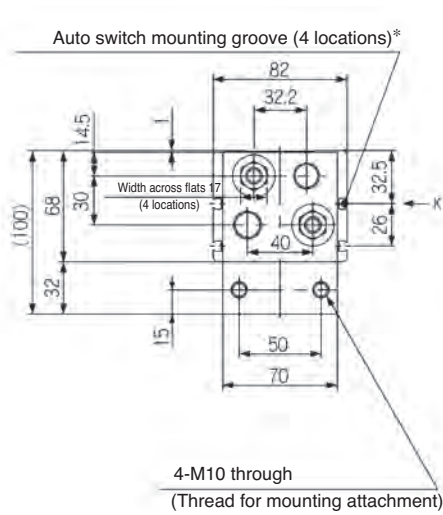


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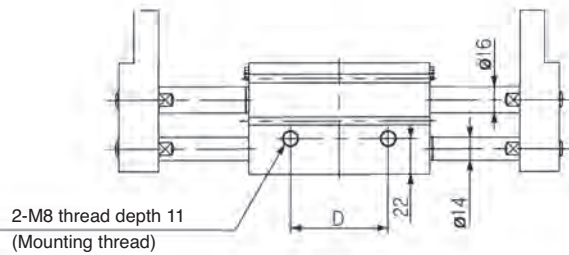
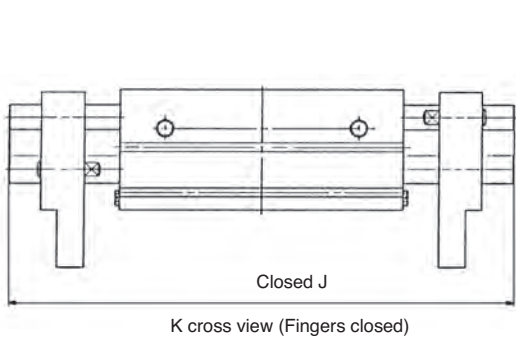
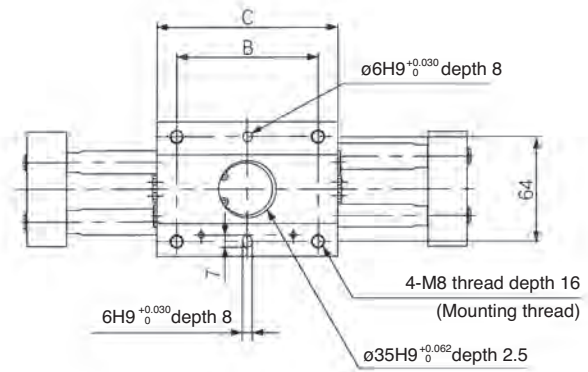
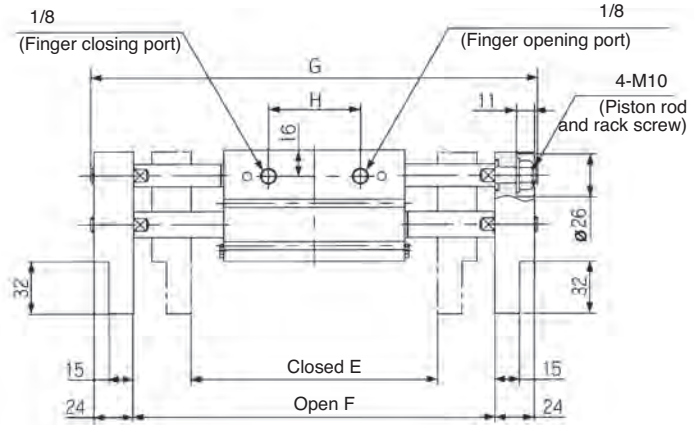
Model	A	B	C	D	E	F	G	H	J
MHL2-25D	66	70	88	48	100	150	196	38	146
MHL2-25D1	120	124	142	102	182	282	328	86	244
MHL2-25D2	138	142	160	120	200	320	366	104	282

Note 1) J dimension is at fully closed.
 Note 2) D1 is different from D2 at finger closed because shaft is ejected from finger end. J dimension is different from the value which is subtracted stroke from G dimension.

Dimensions MHL2-32D□



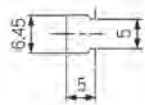
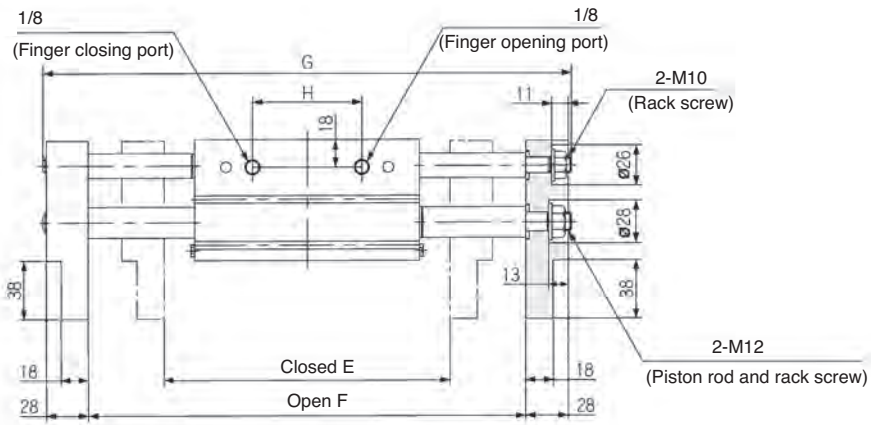
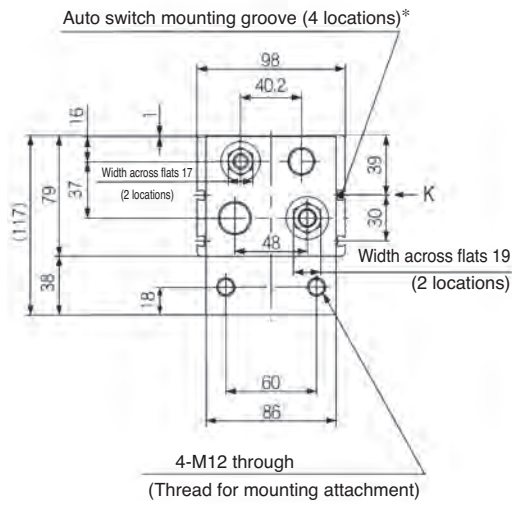
* Dimensions of auto switch mounting groove (Enlarged view)



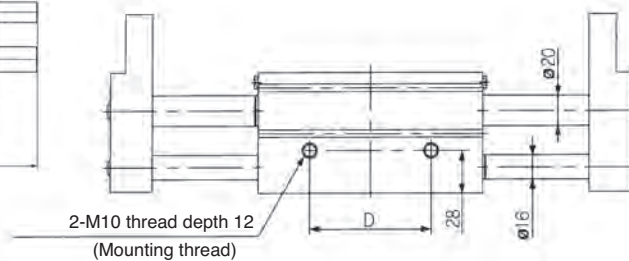
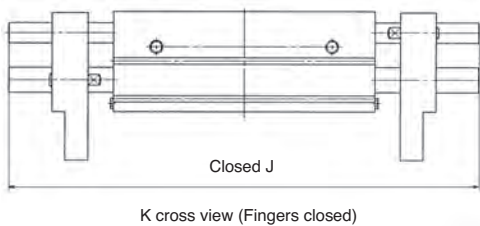
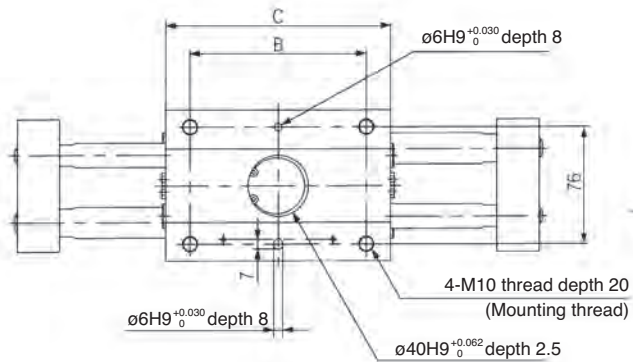
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Model	B	C	D	E	F	G	H	J
MHL2-32D	86	110	60	150	220	272	56	202
MHL2-32D1	134	158	108	198	318	370	104	282
MHL2-32D2	178	202	152	242	402	454	148	366

- Note 1) J dimension is at fully closed.
 Note 2) D1 is different from D2 at finger closed because shaft is ejected from finger end. J dimension is different from the value which is subtracted stroke from G dimension.

Dimensions MHL2-40D□



* Dimensions of auto switch mounting groove (Enlarged view)



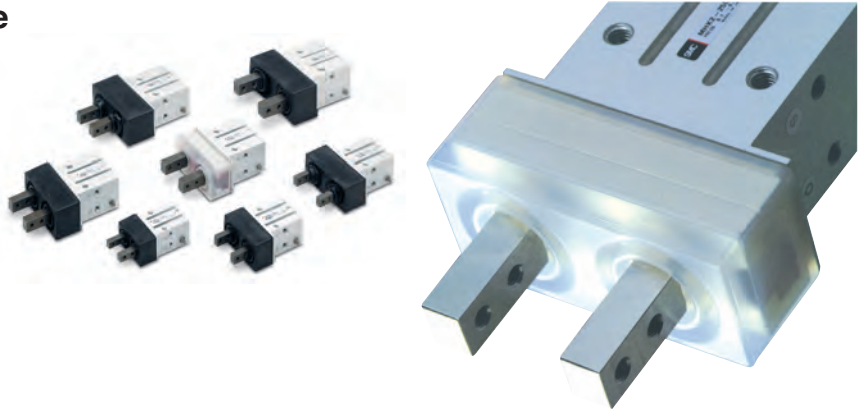
[mm]

Model	B	C	D	E	F	G	H	J
MHL2-40D	116	148	80	188	288	348	72	252
MHL2-40D1	174	206	138	246	406	466	130	336
MHL2-40D2	214	246	178	286	486	546	170	450

- Note 1) J dimension is at fully closed.
- Note 2) D1 is different from D2 at finger closed because shaft is ejected from finger end. J dimension is different from the value which is subtracted stroke from G dimension.

Wedge Cam Operation Slide Guide Air Gripper Series MHK2

Size: \varnothing 12, \varnothing 16, \varnothing 20, \varnothing 25



Features

- Standard and long stroke types.
- Double acting or single acting versions.

How to Order

Standard type	MHK 2	20	D		
Long stroke type	MHKL 2	20	D		

Number of fingers

2	2 fingers
---	-----------

Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm

Dust cover material

-	Chloroprene rubber (CR)
F	Fluororubber (FKM)
S	Silicon rubber (Si)

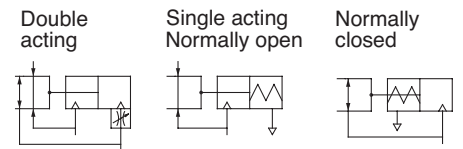
Finger material

-	Carbon steel
1	Stainless steel

Action

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

Symbol



Also available

To suit different environments, a selection of dust cover materials (fluoro and silicon rubber) and stainless steel 304 fingers is available, refer to Best Pneumatics catalogue.

Product Recommendation



Stocked items for fast delivery

MHK2-12D	MHK2-16D	MHK2-20S	MHK2-25S	MHK2-25DF	MHKL2-20C
MHK2-12S	MHK2-16S	MHK2-20C	MHK2-25C	MHKL2-12D	MHKL2-25D
MHK2-12C	MHK2-16C	MHK2-20D1F	MHK2-25DS	MHKL2-16D	MHKL2-25S
MHK2-12D1S	MHK2-20D	MHK2-25D	MHK2-25D1S	MHKL2-20D	

Specifications

Fluid	Air	
Operating pressure	Double acting	
	Single acting	Normally open
		Normally closed
Ambient and fluid temperature	-10 to 60°C	
Repeatability	±0.01 mm	
Lubrication	Not required	
Action	Double acting/Single acting	



Auto Switches

- D-M9PL (PNP)
- D-M9NL (NPN)

Note) For more options see the Auto Switch section, page XXX



Related Products

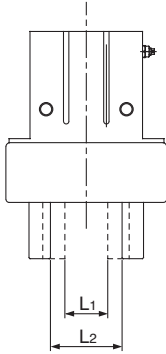
- Series AS** - Speed Controllers - page 1238
- Series SY** - Valves - page 65, 101, 417
- Series SV** - Valves - page 20
- Series VQC** - Valves - page 193, 211
- Series AC** - Air Preparation - page 1076
- Series IDK** - Moisture Control Tube - page 1149
- Series TU** - Tubing - page 1223
- Series KQ2** - Fittings - page 1184



For more product options and details see our specific catalogues or on-line information.

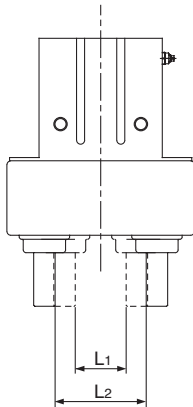
Model

Series MHK2/Standard Type



Action	Model	Bore size [mm]	Max. operating frequency [c.p.m.]	Effective gripping force per finger [N]	Opening/Closing stroke [mm] L2-L1	Width at closing [mm] L1	Width at opening [mm] L2	Weight [g]	
Double acting	MHK2-12D	12	120	External grip : 15 Internal grip : 16	4	9	13	75	
	MHK2-16D	16		External grip : 31 Internal grip : 36	6	14.6	20.6	113	
	MHK2-20D	20		External grip : 46 Internal grip : 56	10	16	26	235	
	MHK2-25D	25		External grip : 80 Internal grip : 86	14	19	33	440	
Single acting	Normally open	MHK2-12S		12	9	4	9	13	76
		MHK2-16S		16	23	6	14.6	20.6	114
		MHK2-20S		20	34	10	16	26	237
		MHK2-25S		25	58	14	19	33	443
	Normally closed	MHK2-12C		12	12	4	9	13	76
		MHK2-16C		16	25	6	14.6	20.6	115
		MHK2-20C		20	44	10	16	26	237
		MHK2-25C		25	73	14	19	33	443

Series MHKL2/Long Stroke Type



Action	Model	Bore size [mm]	Max. operating frequency [c.p.m.]	Effective gripping force per finger [N]	Opening/Closing stroke [mm] L2-L1	Width at closing [mm] L1	Width at opening [mm] L2	Weight [g]	
Double acting	MHKL2-12D	12	90	External grip : 14 Internal grip : 16	11	9	20	104	
	MHKL2-16D	16		External grip : 27 Internal grip : 30	14	14.6	28.6	164	
	MHKL2-20D	20		External grip : 45 Internal grip : 53	18	16	34	312	
	MHKL2-25D	25		External grip : 79 Internal grip : 90	22	19	41	562	
Single acting	Normally open	MHKL2-12S		12	9	11	9	20	105
		MHKL2-16S		16	17	14	14.6	28.6	165
		MHKL2-20S		20	32	18	16	34	314
		MHKL2-25S		25	53	22	19	41	565
	Normally closed	MHKL2-12C		12	11	11	9	20	105
		MHKL2-16C		16	22	14	14.6	28.6	166
		MHKL2-20C		20	40	18	16	34	314
		MHKL2-25C		25	63	22	19	41	565

Note) At the pressure of 0.5 MPa, when gripping point L is 20 mm.
Single acting normally open: External holding force, Single acting normally closed: Internal gripping force.

Replacement Parts

MHK2 Replacement Parts

Description	MHK2-12□	MHK2-16□	MHK2-20□	MHK2-25□		
Seal kit	MHK12-PS	MHK16-PS	MHK20-PS	MHK25-PS		
Piston assembly	MHK-A1201	MHK-A1601	MHK-A2001	MHK-A2501		
Cam	P3318103	P3318203	P3318303	P3318403		
Finger	Material	Carbon steel	P3318104	P3318204	P3318304	P3318404
	Stainless steel	P3318104-1	P3318204-1	P3318304-1	P3318404-1	
Needle assembly	MH-A1006					
Dust cover	Material	CR	MHK2-J12	MHK2-J16	MHK2-J20	MHK2-J25
	FKM	MHK2-J12F	MHK2-J16F	MHK2-J20F	MHK2-J25F	
	Si	MHK2-J12S	MHK2-J16S	MHK2-J20S	MHK2-J25S	

* Order 2 pieces per one finger unit.
Replacement part/Grease pack part no.: MH-G01 (30 g)

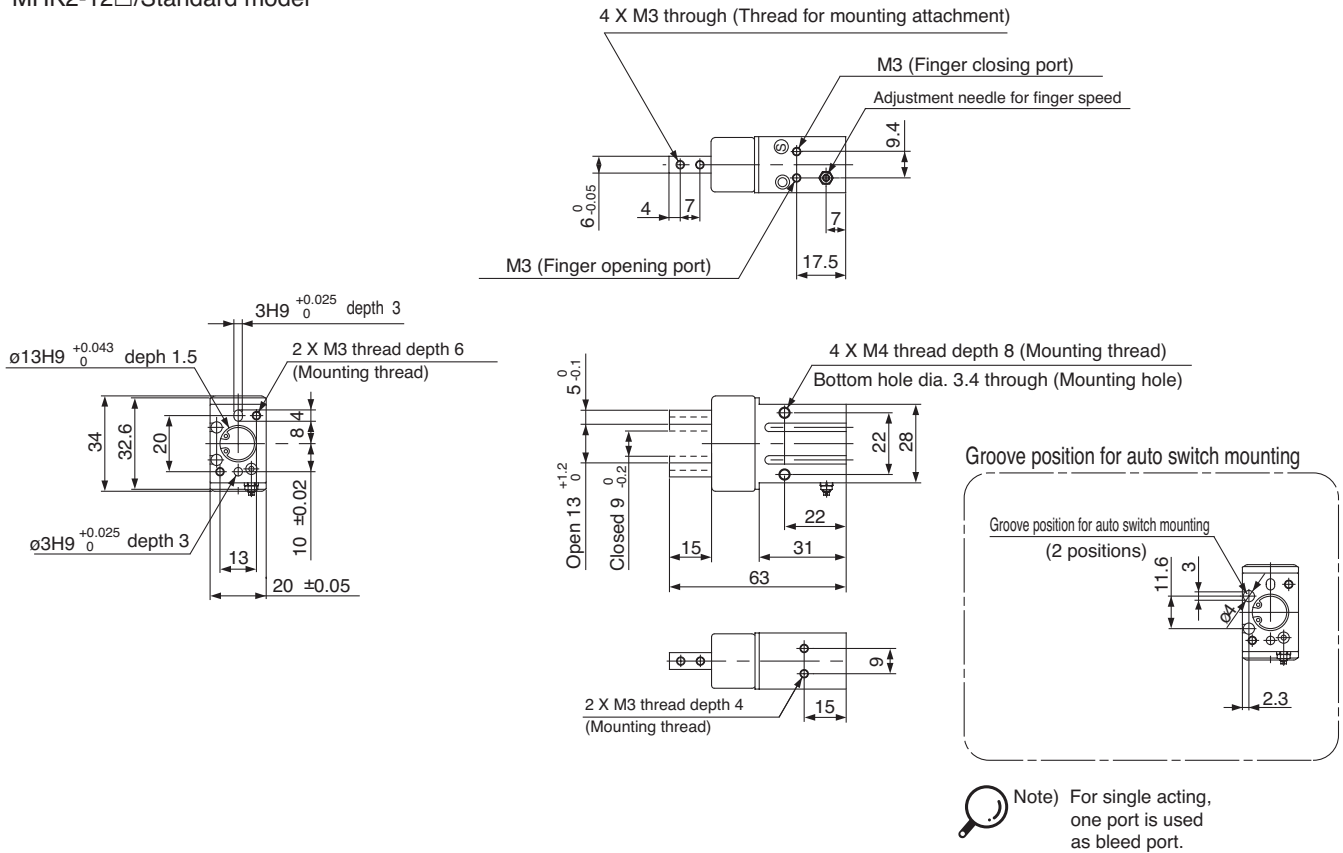
MHKL2 Replacement Parts

Description	MHKL2-12□	MHKL2-16□	MHKL2-20□	MHKL2-25□		
Seal kit	MHK12-PS	MHK16-PS	MHK20-PS	MHK25-PS		
Piston assembly	MHK-A1201	MHK-A1601	MHK-A2001	MHK-A2501		
Cam	P3318111	P3318211	P3318311	P3318411		
Finger	Material	Carbon steel	P3318112	P3318212	P3318312	P3318412
	Stainless steel	P3318112-1	P3318212-1	P3318312-1	P3318412-1	
Needle assembly	MH-A1006					
Dust cover	Material	CR	MHKL2-J12	MHKL2-J16	MHKL2-J20	MHKL2-J25
	FKM	MHKL2-J12F	MHKL2-J16F	MHKL2-J20F	MHKL2-J25F	
	Si	MHKL2-J12S	MHKL2-J16S	MHKL2-J20S	MHKL2-J25S	

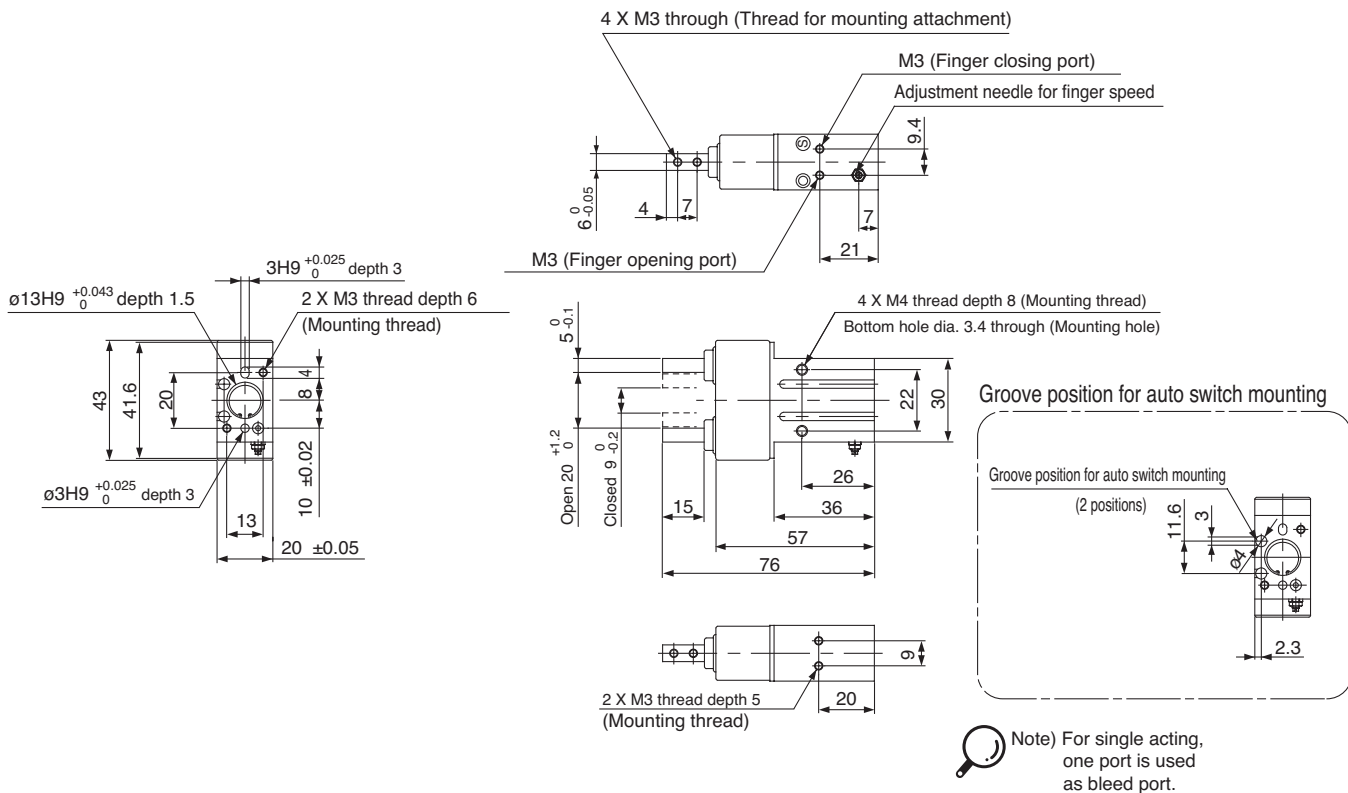
* Order 2 pieces per one finger unit.
Replacement part/Grease pack part no.: MH-G01 (30 g)

Dimensions

MHK2-12□/Standard model

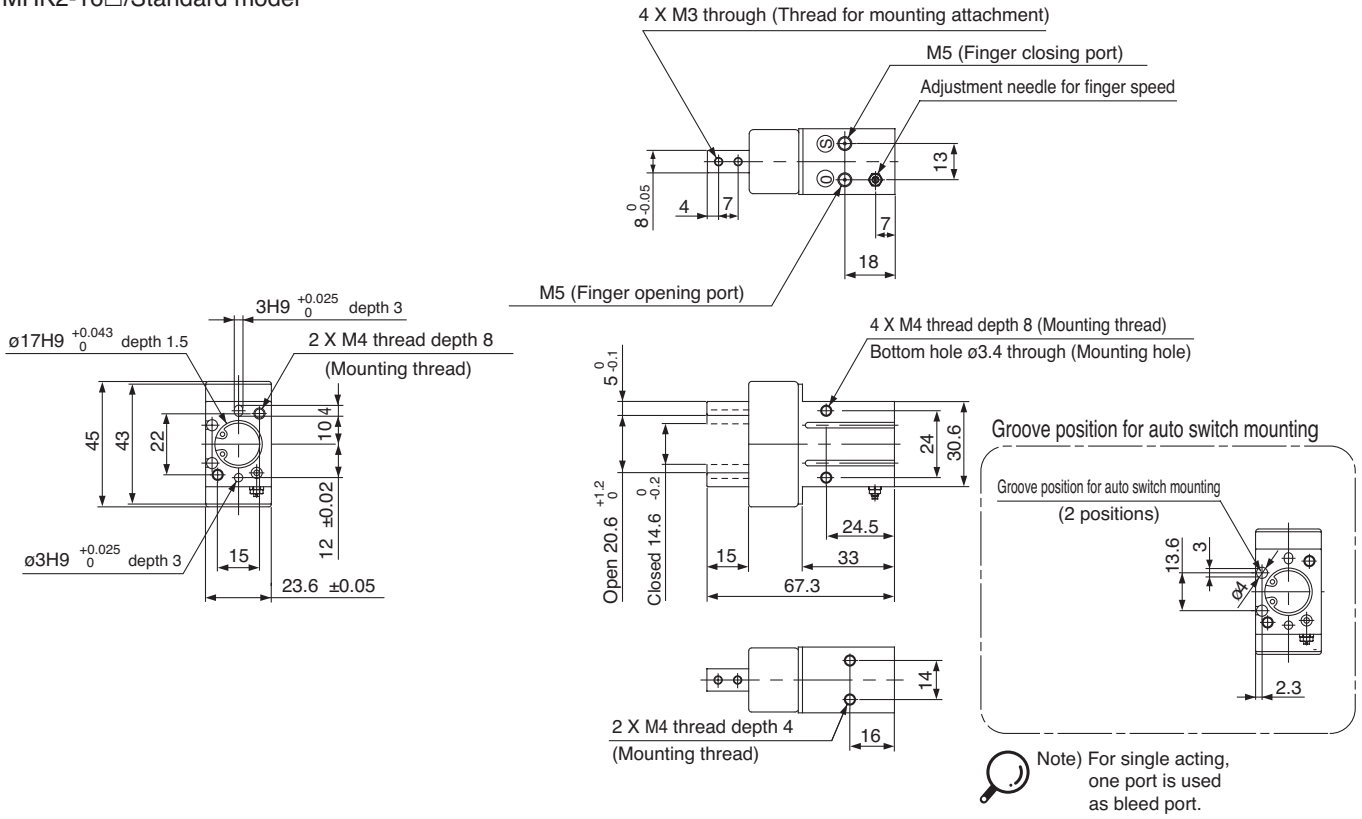


MHKL2-12□/Long stroke model

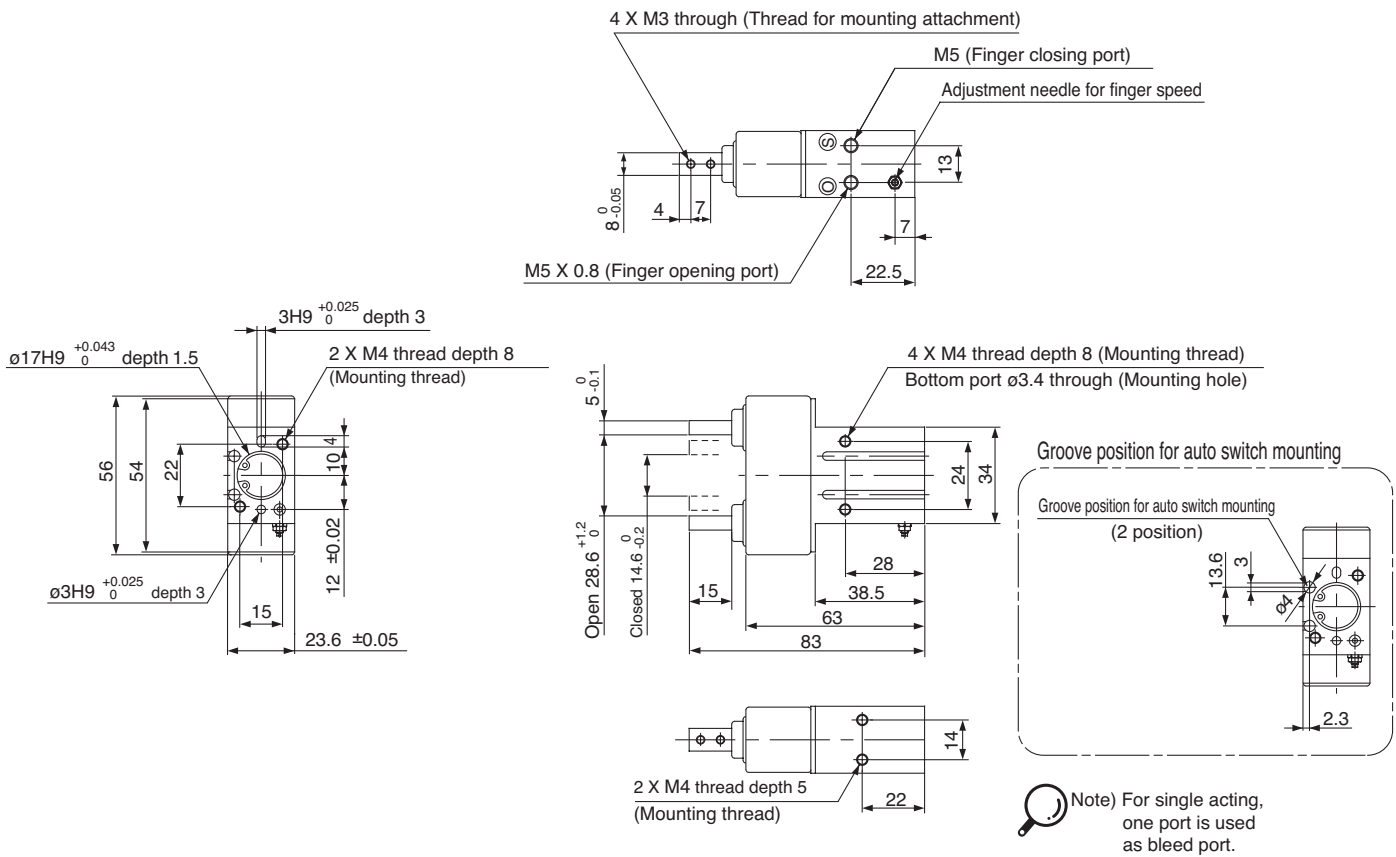


Dimensions

MHK2-16□/Standard model

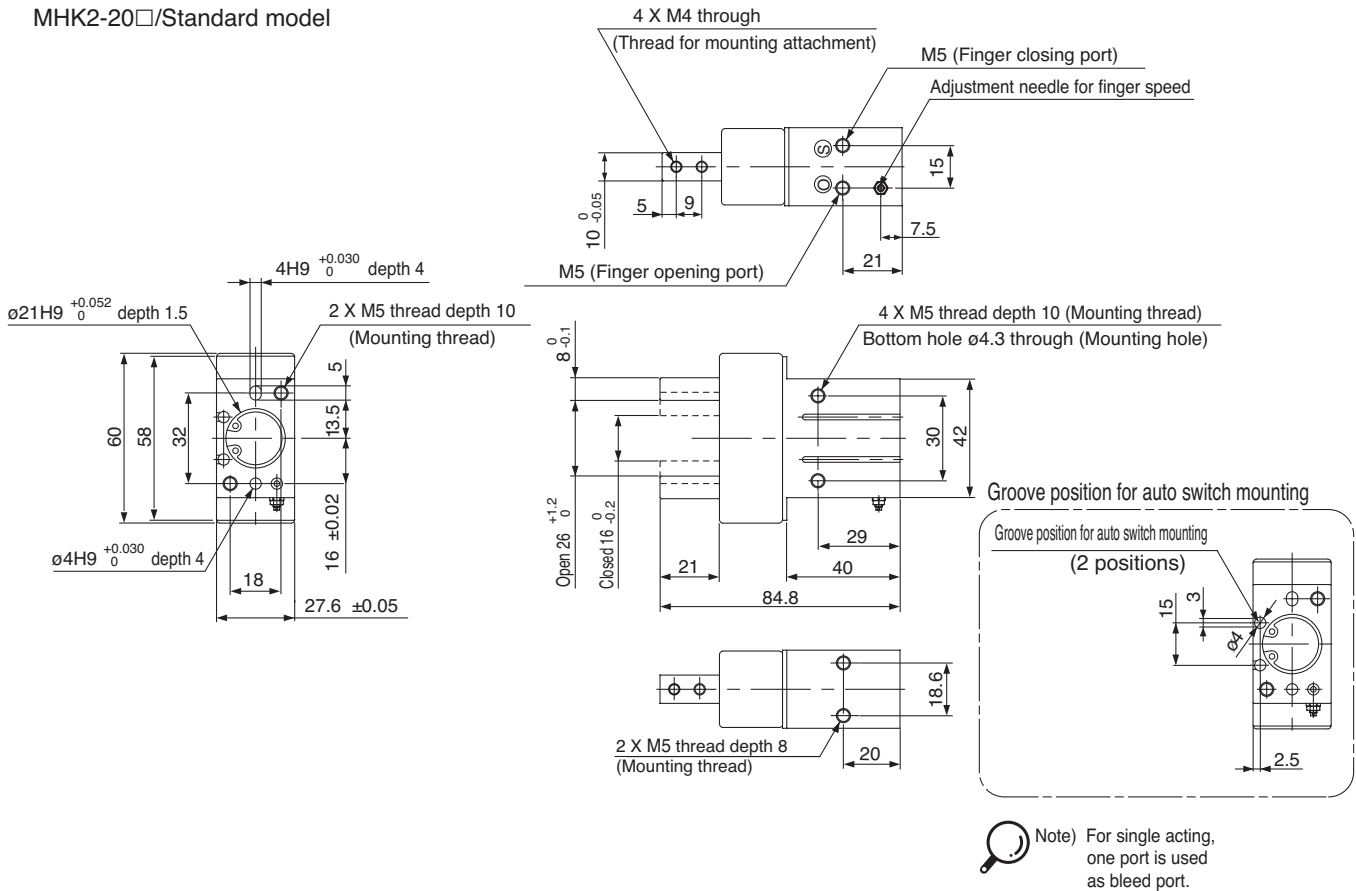


MHKL2-16□/Long stroke model

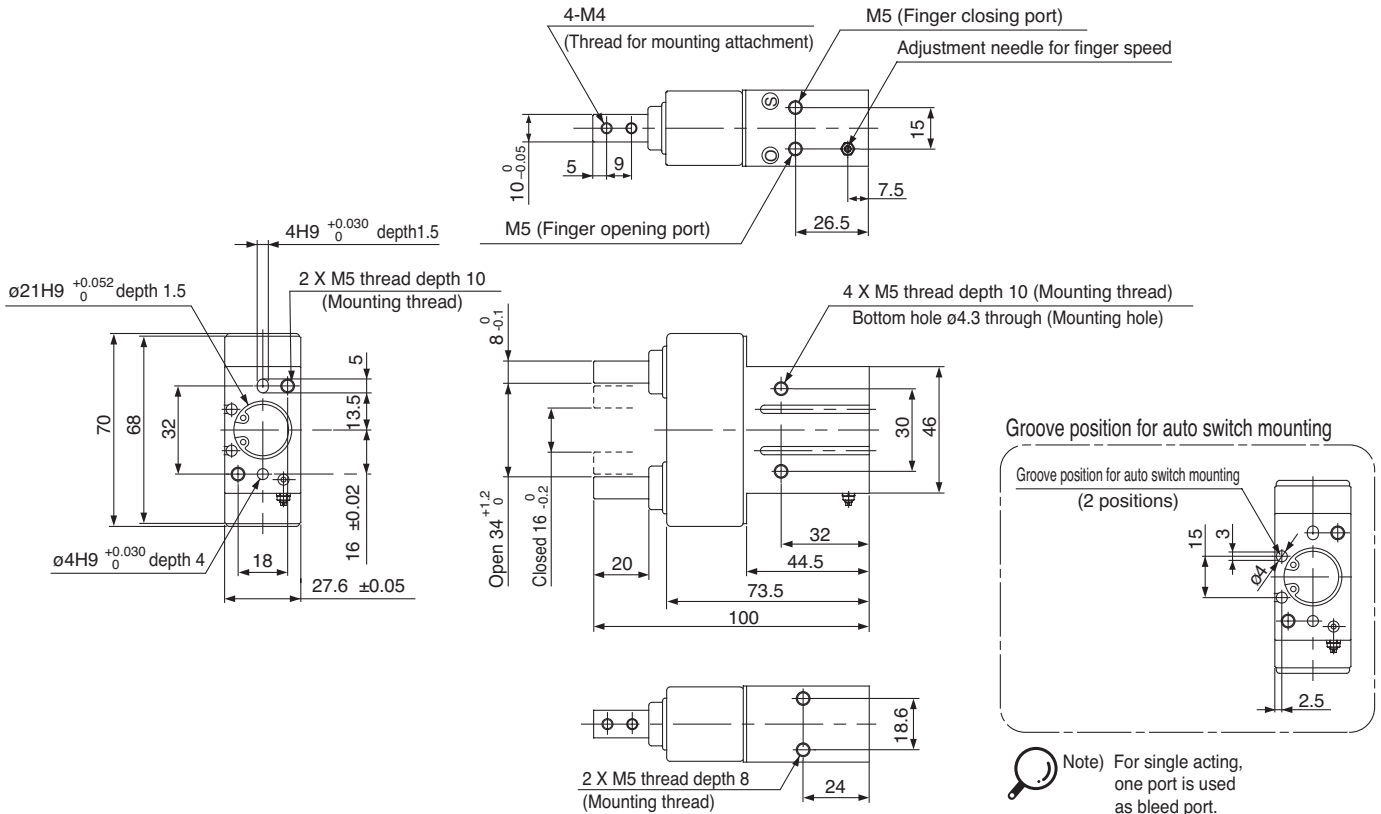


Dimensions

MHK2-20□/Standard model

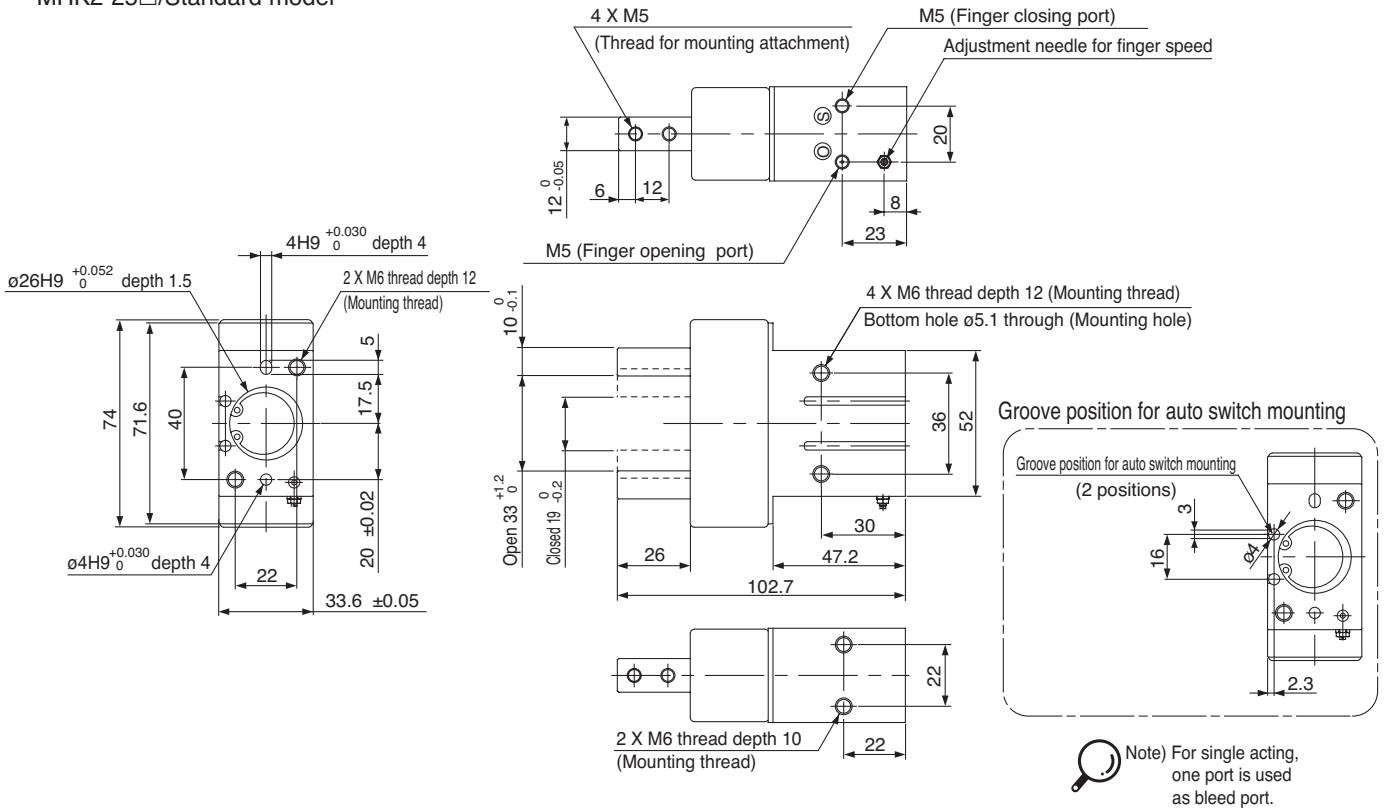


MHKL2-20□/Long stroke model

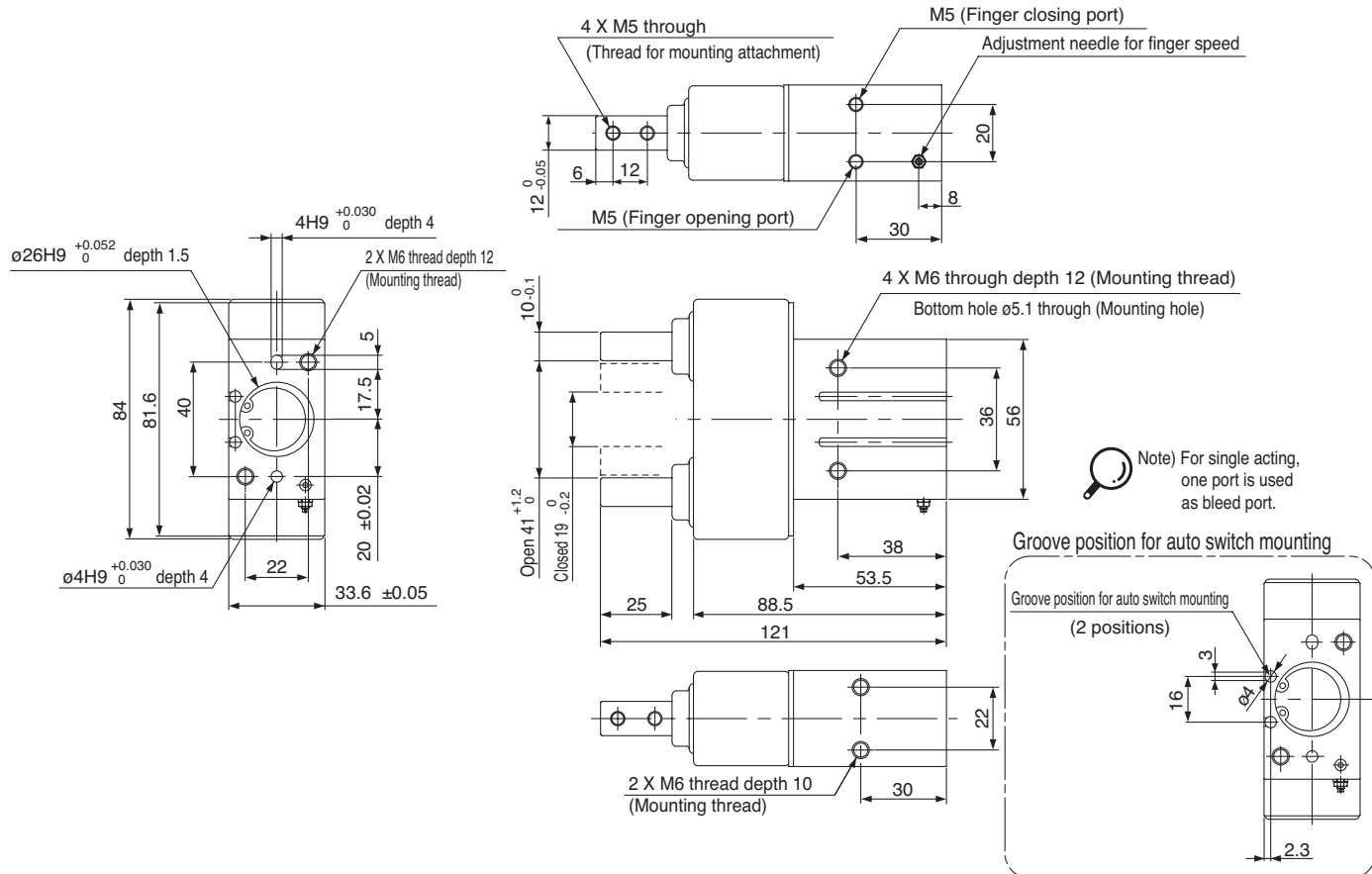


Dimensions

MHK2-25□/Standard model



MHKL2-25□/Long stroke model



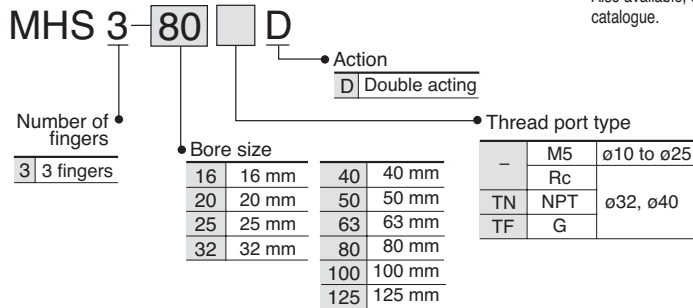
3 Finger Parallel Style Air Gripper Series MHS3

Size: 16, 20, 25, 32, 40, 50, 63, 80, 100, 125

Features

- Autoswitches can be added, and wide range sizes available.
- Vertically compact due to its wedge-shape cam construction. Optimally used inloading/unloading cylindrically shaped workpieces onto machine tools and in operations that require the application of an external force, such as in press fitting operations.

How to Order

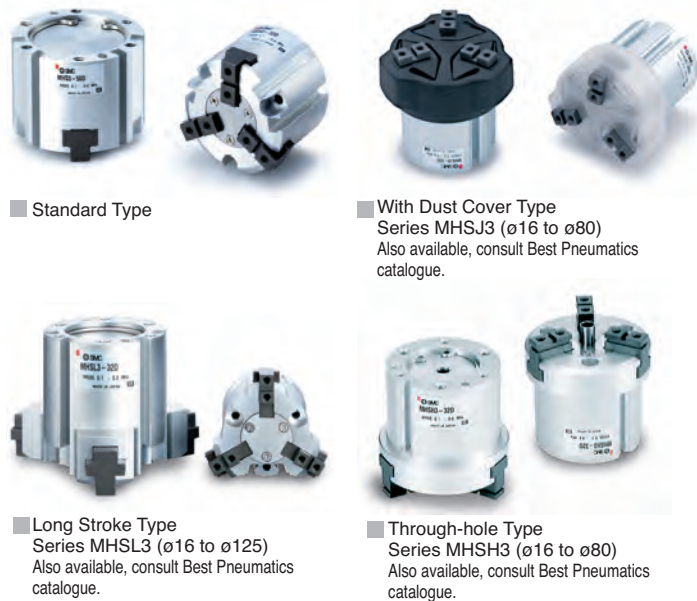


Product Recommendation



Stocked items for fast delivery

MHS3-16D	MHS3-25D	MHS3-40D	MHS3-63D	MHS3-100D
MHS3-20D	MHS3-32D	MHS3-50D	MHS3-80D	MHS3-125D



Auto Switches

- D-M9PWL (PNP 2-colour indication)
- D-M9NWL (NPN 2-colour indication)
- D-M9PL (PNP)
- D-M9NL (NPN)

Note) For more options see the Auto Switch section, page XXX

Related Products

- Series D-□7K / D-R□K - Trimmer Auto Switch - page 1032
- Series AS - Speed Controllers - page 1238
- Series SY - Valves - page 65, 101, 417
- Series SV - Valves - page 20
- Series VQ - Valves - page 241
- Series AC - Air Preparation - page 1076
- Series IDK - Moisture Control Tube - page 1149
- Series TU - Tubing - page 1223
- Series KQ2 - Fittings - page 1184

Model/Specifications

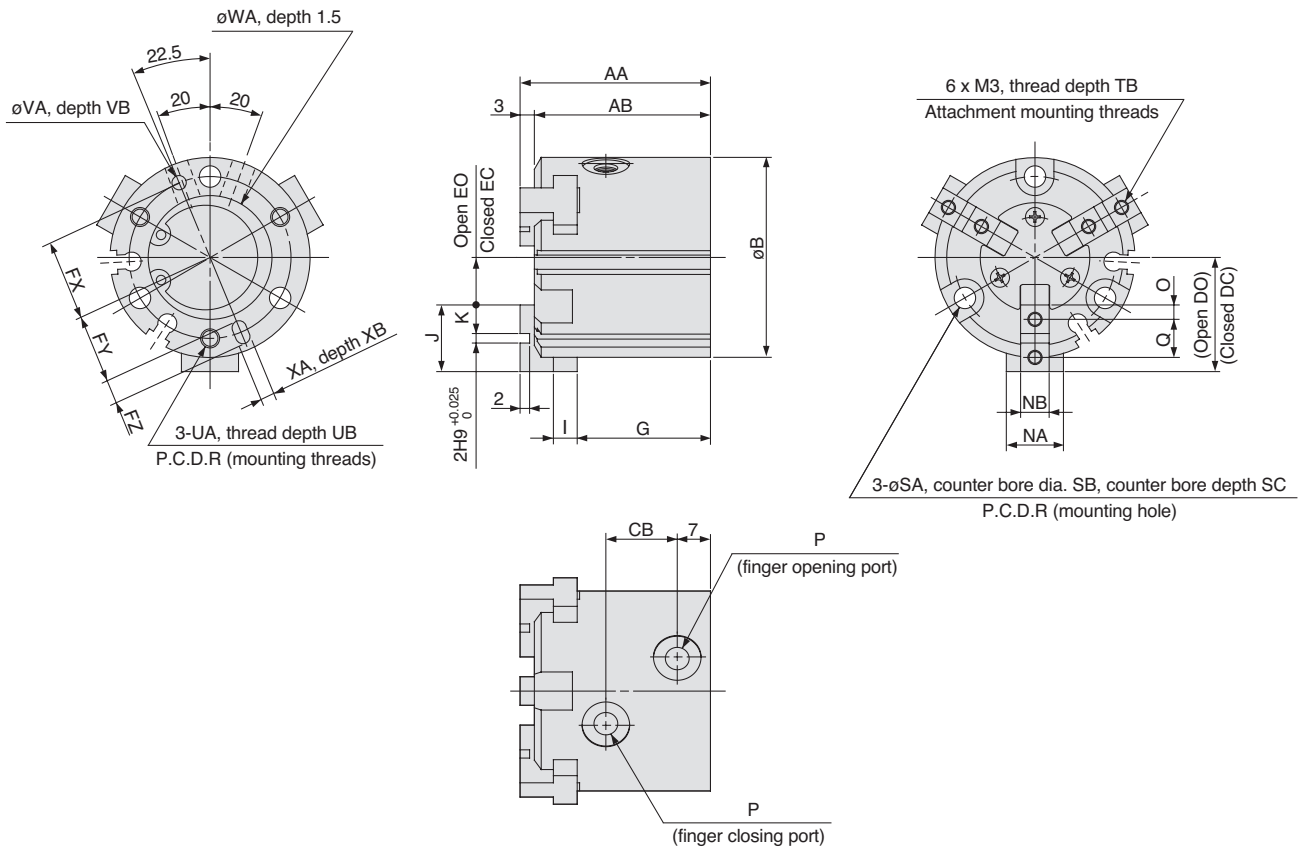
Model	MHS3-16D	MHS3-20D	MHS3-25D	MHS3-32D	MHS3-40D	MHS3-50D	MHS3-63D	MHS3-80D	MHS3-100D	MHS3-125D	
Cylinder bore size [mm]	16	20	25	32	40	50	63	80	100	125	
Fluid	Air										
Operating pressure [MPa]	0.2 to 0.6					0.1 to 0.6					
Ambient and fluid temperature [°C]	-10 to 60										
Repeatability [mm]	±0.01										
Max. operating frequency [c.p.m.]	120					60			30		
Lubrication	Not required										
Action	Double acting										
Effective gripping force [N] at 0.5 MPa ⁽¹⁾	External grip	14	25	42	74	118	187	335	500	750	1,270
	Internal grip	16	28	47	82	130	204	359	525	780	1,320
Opening/Closing stroke [mm] (dia.)	4	4	6	8	8	12	16	20	24	32	
Weight [g]	60	100	140	237	351	541	992	1,850	3,340	6,460	

Note 1) Values for ø16 to ø25 are with gripping point L = 20 mm, for ø32 to ø63 with gripping point L = 30 mm, and for ø80 to ø125 with gripping point L = 50 mm.
 Note 2) Open and closed diameter values apply for external gripping of workpieces.

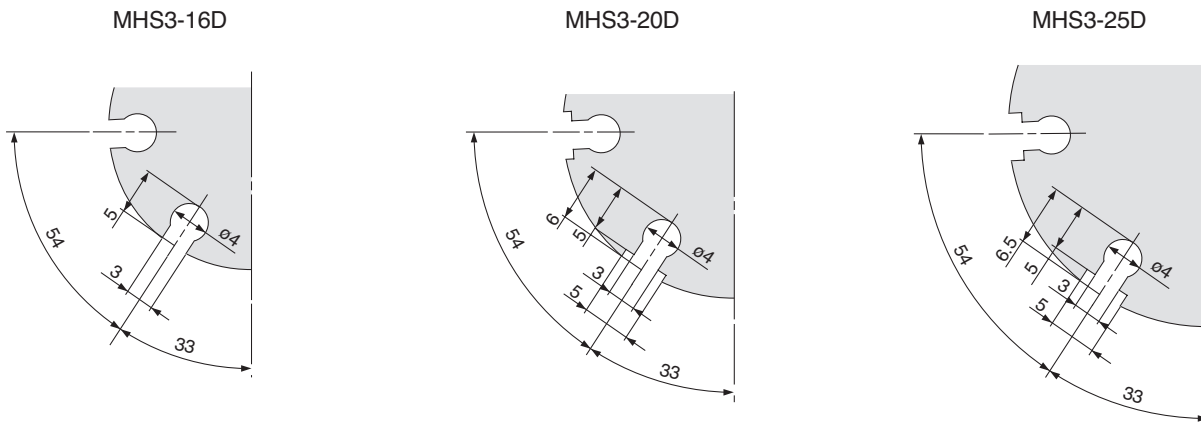


For more product options and details see our specific catalogues or on-line information.

Dimensions MHS3-16D to 25D



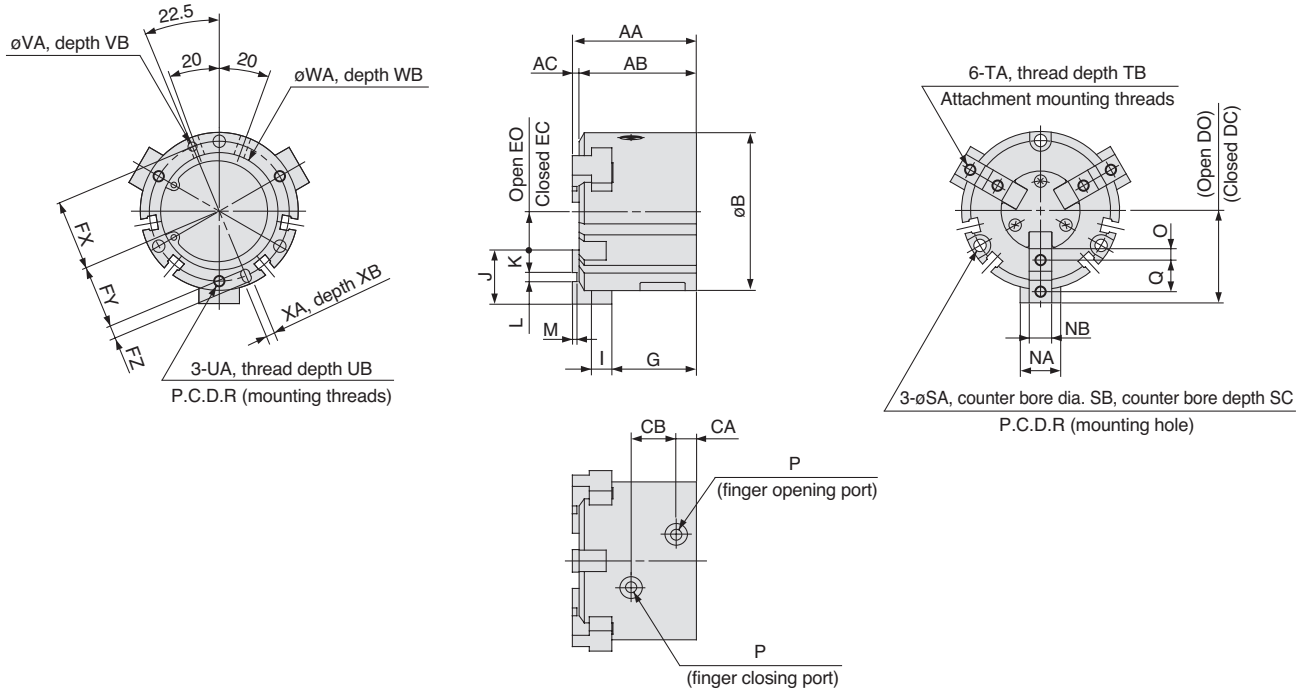
Auto switch mounting groove positions (2 locations)



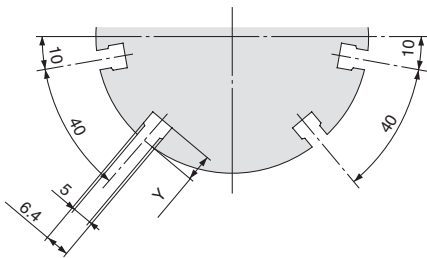
Model	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q	R
MHS3-16D	35	32	30	11	15	17	5	7	12.5	11	3	25	4	10	4	8	5h9 ₀ ^{+0.030}	2	M3	6	25
MHS3-20D	38	35	36	13	18	20	6	8	14.5	13	3	27	5	12	5	10	6h9 ₀ ^{+0.030}	2.5	M5	7	29
MHS3-25D	40	37	42	15	21	24	7	10	17	14.5	5	28	5	14	6	12	6h9 ₀ ^{+0.030}	3	M5	8	34

Model	SA	SB	SC	TB	UA	UB	VA	VB	WA	XA	XB
MHS3-16D	3.4	6.5	8	5	M3	4.5	2H9 ₀ ^{+0.025}	2	17H9 ₀ ^{+0.043}	2H9 ₀ ^{+0.025}	2
MHS3-20D	3.4	6.5	9.5	6	M3	6	2H9 ₀ ^{+0.025}	2	21H9 ₀ ^{+0.052}	2H9 ₀ ^{+0.025}	2
MHS3-25D	4.5	8	10	6	M4	6	3H9 ₀ ^{+0.025}	3	26H9 ₀ ^{+0.052}	3H9 ₀ ^{+0.025}	3

Dimensions MHS3-32D to 80D



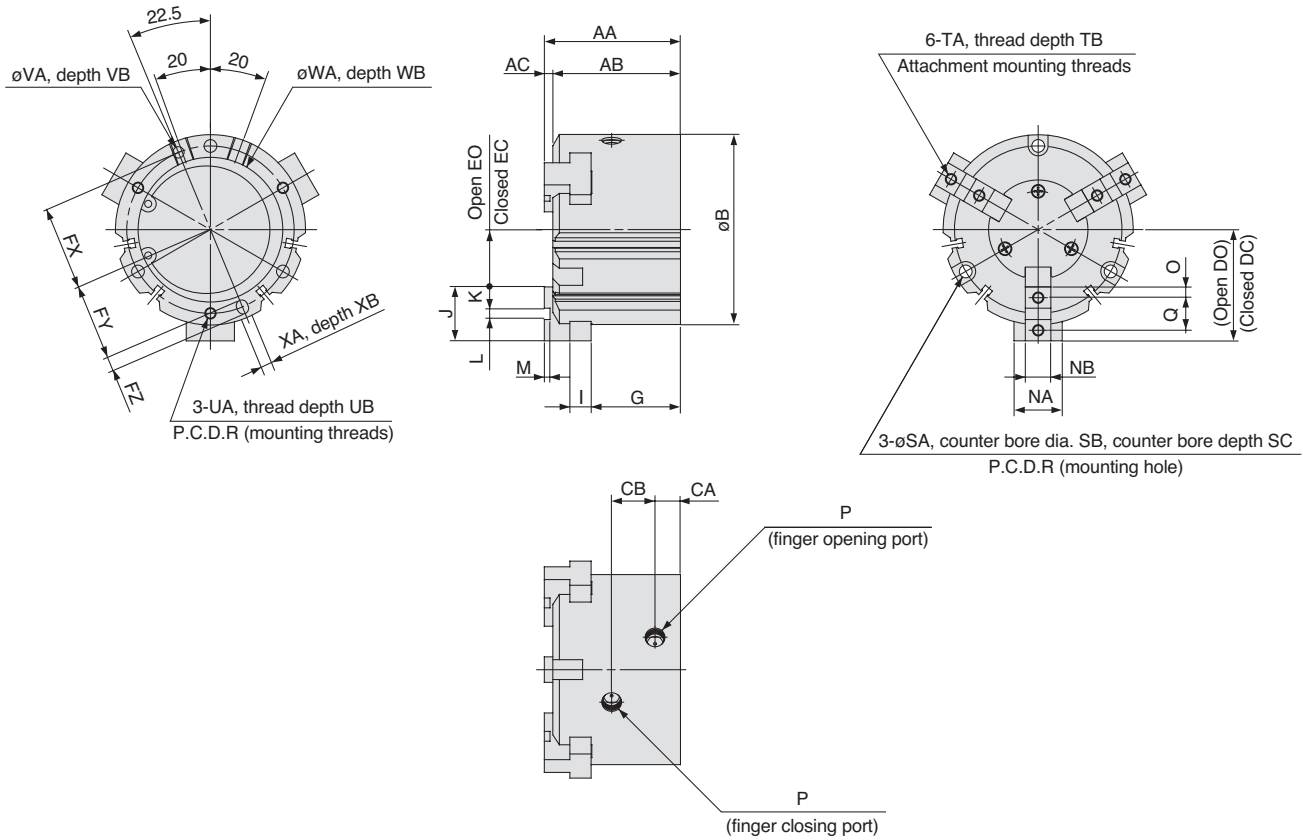
Auto switch mounting groove positions (4 locations)



Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS3-32D	44	41	3	52	8	16	28	32	8	12	22	19.5	5	30.5	6	20	9	2H9 ^{+0.025} ₀	2	14	8h9 ⁰ _{-0.036}
MHS3-40D	47	44	3	62	9	17	31	35	10	14	26.5	23.5	6	32	7	21	9	3H9 ^{+0.025} ₀	2	16	8h9 ⁰ _{-0.036}
MHS3-50D	55	52	3	70	9	20	35	41	11	17	31	28	6	37.5	9	24	10	4H9 ^{+0.030} ₀	2	18	10h9 ⁰ _{-0.036}
MHS3-63D	66	62	4	86	12	22	43	51	15	23	38	34.5	7	44	11	28	11	6H9 ^{+0.030} ₀	3	24	12h9 ⁰ _{-0.043}
MHS3-80D	82	77	5	106	13.5	27	53.5	63.5	21.5	31.5	47.5	43.5	8	56	12	32	12	8H9 ^{+0.036} ₀	4	28	14h9 ⁰ _{-0.043}

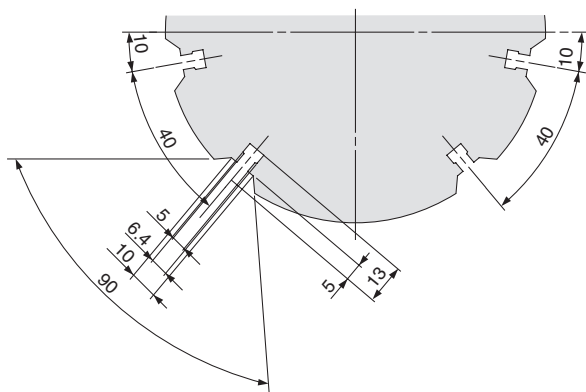
Model	O	P	Q	R	SA	SB	SC	TA	TB	UA	UB	VA	VB	WA	WB	XA	XB	Y
MHS3-32D	4.5	M5	11	44	4.5	8	9	M4 x 0.7	8	M4	6	3H9 ^{+0.025} ₀	3	34H9 ^{+0.062} ₀	2	3H9 ^{+0.025} ₀	3	6
MHS3-40D	4.5	M5	12	53	5.5	9.5	9	M4 x 0.7	8	M5	7.5	4H9 ^{+0.030} ₀	4	42H9 ^{+0.062} ₀	2	4H9 ^{+0.030} ₀	4	8
MHS3-50D	5	M5	14	62	5.5	9.5	12	M5 x 0.8	10	M5	10	4H9 ^{+0.030} ₀	4	52H9 ^{+0.074} ₀	2	4H9 ^{+0.030} ₀	4	7
MHS3-63D	5.5	M5	17	76	6.6	11	14	M5 x 0.8	10	M6	9	5H9 ^{+0.030} ₀	5	65H9 ^{+0.074} ₀	2.5	5H9 ^{+0.030} ₀	5	7.5
MHS3-80D	6	1/8	20	95	6.6	11	19	M6 x 1	12	M6	12	6H9 ^{+0.030} ₀	6	82H9 ^{+0.087} ₀	3	6H9 ^{+0.030} ₀	6	9

Dimensions MHS3-100D, 125D

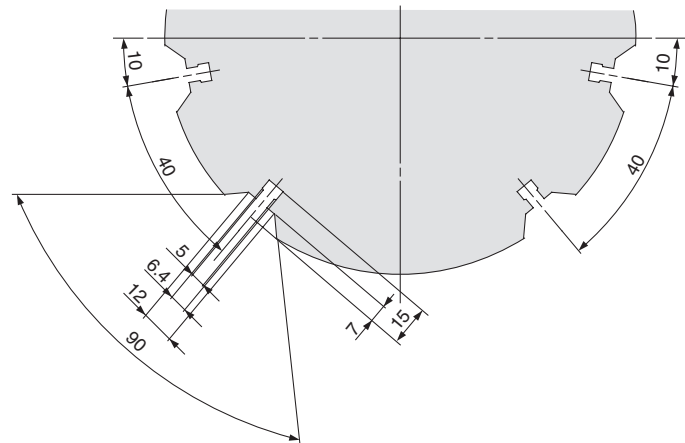


Auto switch mounting groove positions (4 locations)

MHS3-100D



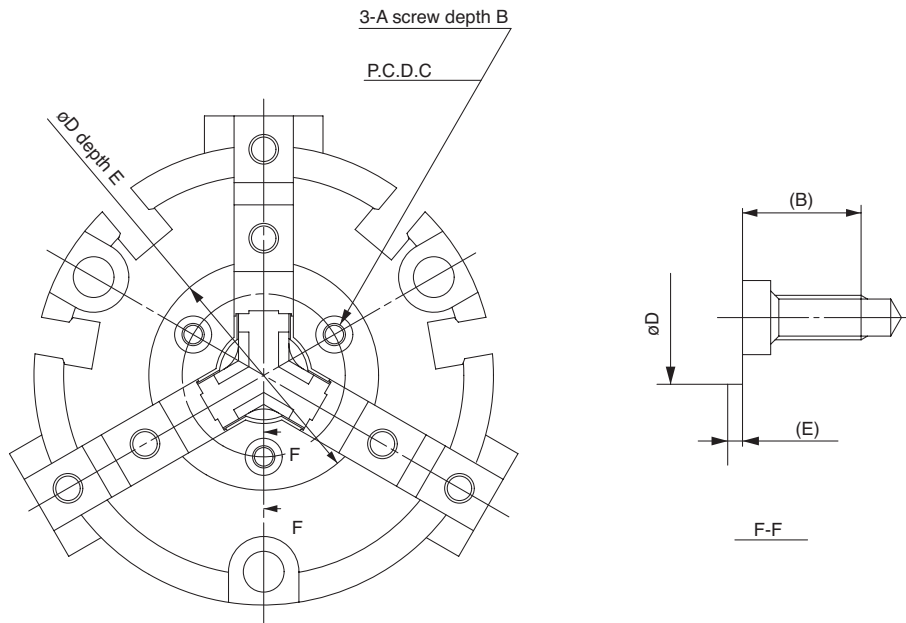
MHS3-125D



Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS3-100D	96	90	6	134	18	30.6	66	78	28	40	59	54	10	63	15	38	15	8H9 ^{+0.036} ₀	4	34	18h9 ⁰ _{-0.043}
MHS3-125D	122	114	8	166	23.5	38	82	98	30	46	74	68	12	84	18	52	21	10H9 ^{+0.036} ₀	6	40	22h9 ⁰ _{-0.052}

Model	O	P	Q	R	SA	SB	SC	TA	TB	UA	UB	VA	VB	WA	WB	XA	XB
MHS3-100D	7.5	1/4	23	118	9	14	21	M8	16	M8	16	8H9 ^{+0.036} ₀	6	102H9 ^{+0.087} ₀	4	8H9 ^{+0.036} ₀	6
MHS3-125D	10.5	3/8	31	148	11	17.5	34	M10	20	M10	20	10H9 ^{+0.036} ₀	8	130H9 ^{+0.100} ₀	6	10H9 ^{+0.036} ₀	8

[mm]

Dimensions Detailed Dimensions of Mounting Portion of End Plate


[mm]					
Model	A	B	C	øD	E
MHS3-16D	M2	5.5	12.5	18H8 ^{+0.027} ₀	0.5
MHS3-20D		5.4	15	21H8 ^{+0.033} ₀	0.6
MHS3-25D			17	23H8 ^{+0.033} ₀	
MHS3-32D		5.2	21	27H8 ^{+0.033} ₀	0.8
MHS3-40D	M3	8	22	31H8 ^{+0.039} ₀	1
MHS3-50D			26	35H8 ^{+0.039} ₀	
MHS3-63D			33	42H8 ^{+0.039} ₀	
MHS3-80D	M4	9.5	40	52H8 ^{+0.046} ₀	1.5
MHS3-100D			54	70H8 ^{+0.046} ₀	
MHS3-125D			62	82H8 ^{+0.054} ₀	



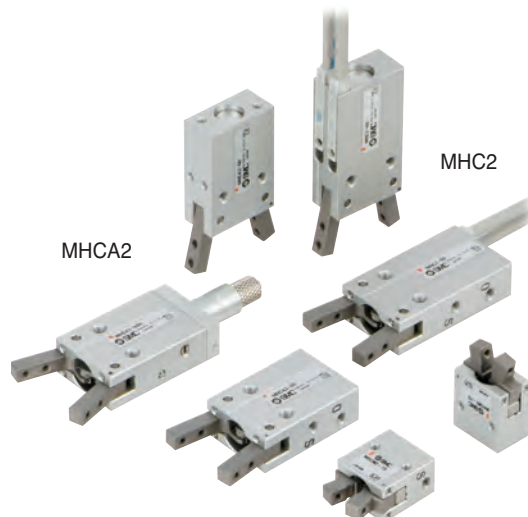
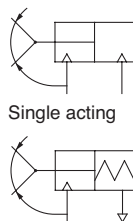
Angular Style Air Gripper Standard Type/Short Body Type Series MHC2/MHCA2

ø6, ø10, ø16, ø20, ø25

Features

- MHC2:
Angular style air gripper Series MHC.
Auto switch is attachable.
- MHCA2:
Short body. Auto switch not attachable.
- Single or double acting versions.
- Mounting holes on several faces.

Symbol



How to Order

Standard type	MHC	2	6	D	Action D Double acting S Single acting
Short body type	MHCA	2	6	D	

Short body (Auto switch not attachable) (Only ø6)

Bore size [mm]

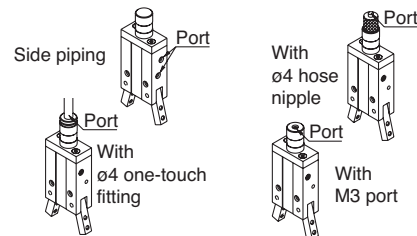
6	6 mm
10	10 mm
16	16 mm
20	20 mm
25	25 mm

Number of fingers

2	2 fingers
---	-----------

Also available

The MHCA2-6 type offers 4 additional body options in addition to those shown in this catalogue



Please contact SMC for further information.

Product Recommendation



Stocked items for fast delivery

MHC2-6D	MHC2-10S	MHC2-16S	MHC2-20S	MHC2-25S
MHC2-10D	MHC2-16D	MHC2-20D	MHC2-25D	MHCA2-6D

Specifications

Fluid	Air	
Operating pressure	Double acting	ø6: 0.15 to 0.6 MPa
	Single acting	ø6: 0.3 to 0.6 MPa
Ambient and fluid temperature	-10 to 60°C	
Repeatability	±0.01 mm (ø6:±0.02 mm)	
Max. operating frequency	180 c.p.m	
Lubrication	Not required	
Action	Double acting, Single acting	

Model

Action	Model	Cylinder bore [mm]	Gripping moment ^{Note 1)} (Effective value) [N·m]	Opening/Closing angle (Both sides)	Weight [g] ^{Note 2)}
Double acting	MHC2-6D	6	0.038	30° to -10°	22
	MHCA2-6D	6			19
Single acting (Normally open)	MHC2-6S	6	0.024	30° to -10°	22
	MHCA2-6S	6			19
Double acting	MHC2-10D	10	0.10	30° to -10°	39
	MHC2-16D	16	0.39		91
	MHC2-20D	20	0.70		180
	MHC2-25D	25	1.36		311
Single acting	MHC2-10S	10	0.070	30° to -10°	39
	MHC2-16S	16	0.31		92
	MHC2-20S	20	0.54		183
	MHC2-25S	25	1.08		316

Note 1) At pressure 0.5 MPa.

Note 2) Weight except auto switch.



Auto Switches

- D-M9PL (PNP)
- D-M9NL (NPN)

Note) For more options see the Auto Switch section, page XXX



Related Products

- Series D-□7K/D-R□K - Trimmer Auto Switch - page 1032
- Series AS - Speed Controllers - page 1238
- Series SY - Valves - page 65, 101, 417
- Series AC - Air Preparation - page 1076
- Series IDK - Moisture Control Tube - page 1149
- Series TU - Tubing - page 1223
- Series KQ2 - Fittings - page 1184

Replacement Parts

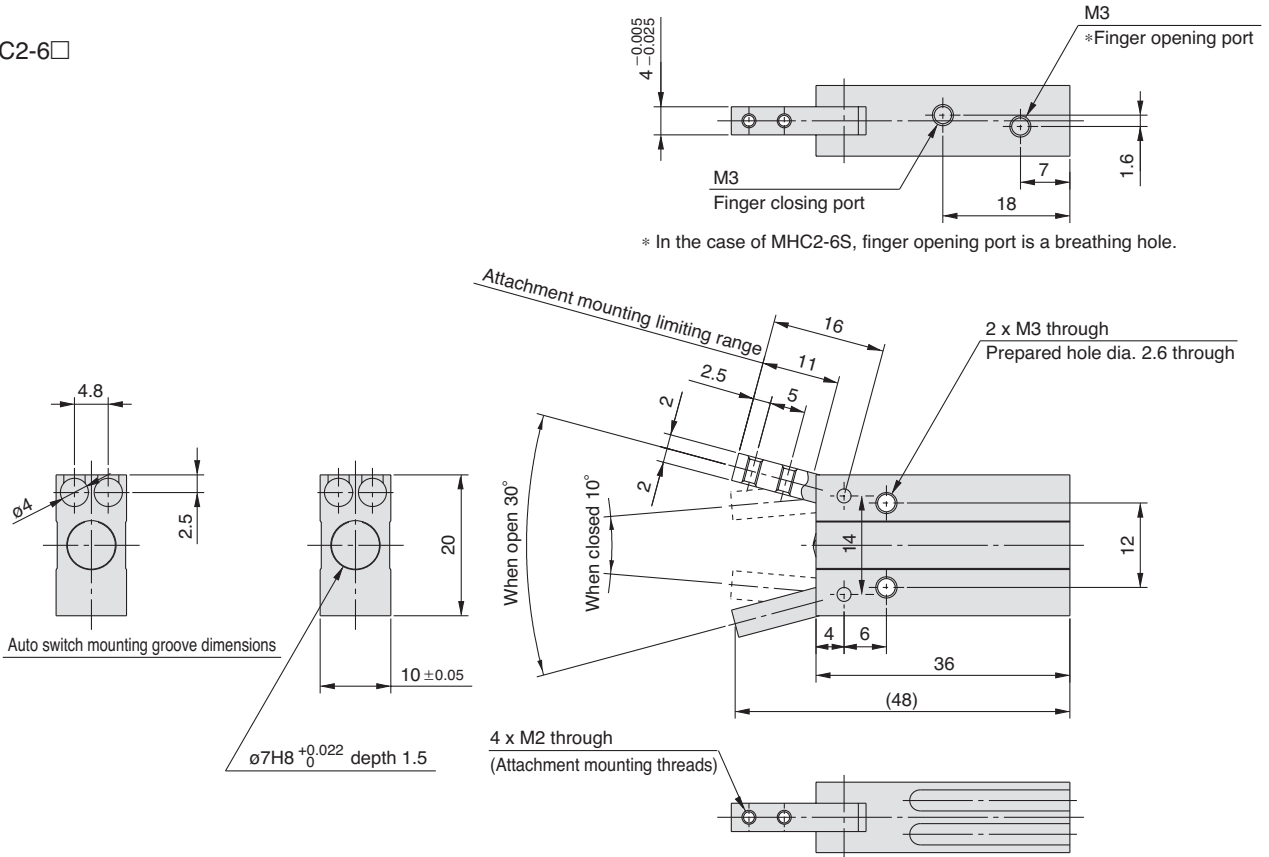
Description	MHC2-10□	MHC2-16□	MHC2-20□	MHC2-25□
Seal kit	MHC10-PS	MHC16-PS	MHC20-PS	MHC25-PS
Finger assembly	MHC-A1003	MHC-A1603	MHC-A2003	MHC-A2503
Piston assembly set	MHC-A1002	MHC-A1602	MHC-A2002	MHC-A2502
Needle assembly	MH-A1006	MH-A1606	MH-A1606	MH-A1606

* Order 1 piece finger assembly per one unit.

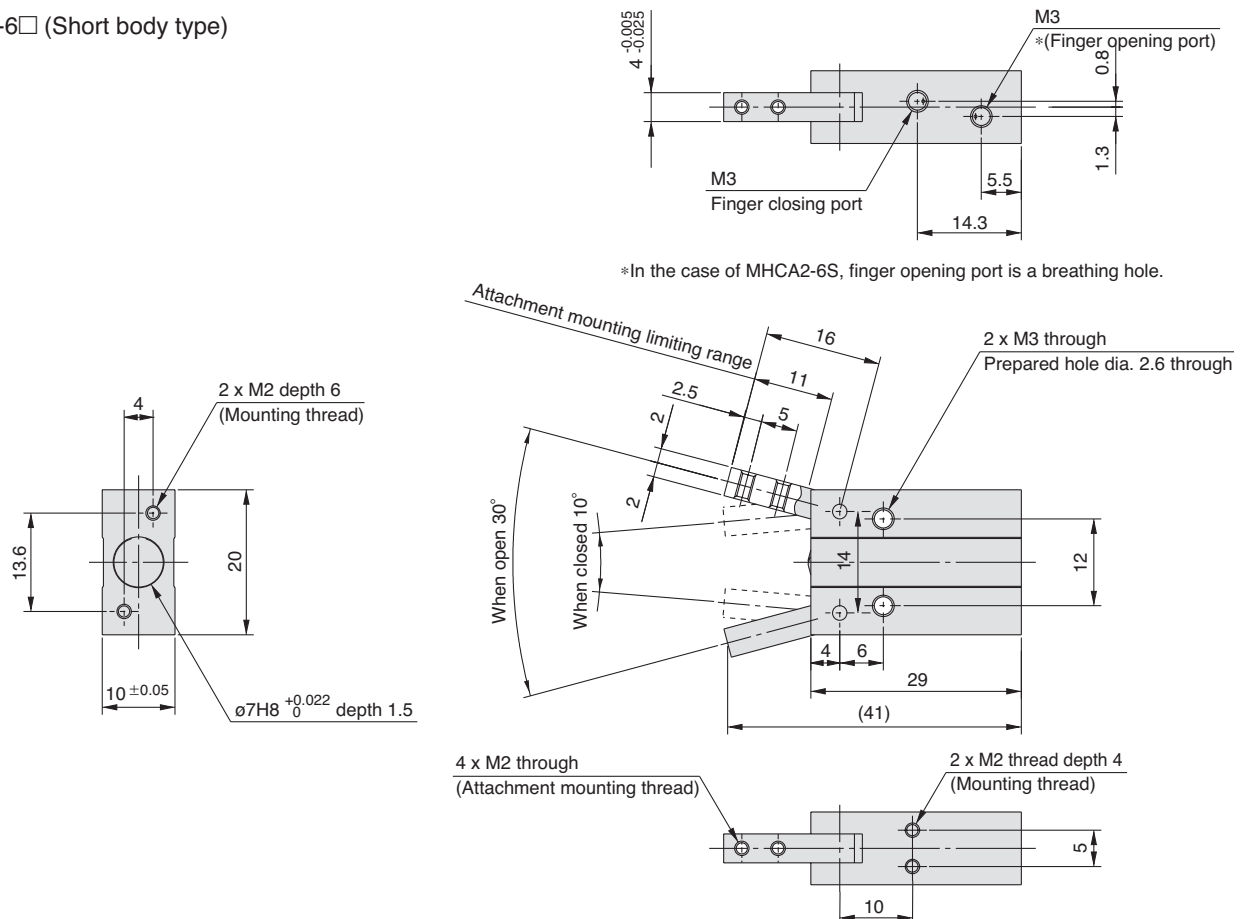
Replacement part/Grease pack part no.: GR-S-10 (10 g)

Dimensions Double Acting ø6

MHC2-6□

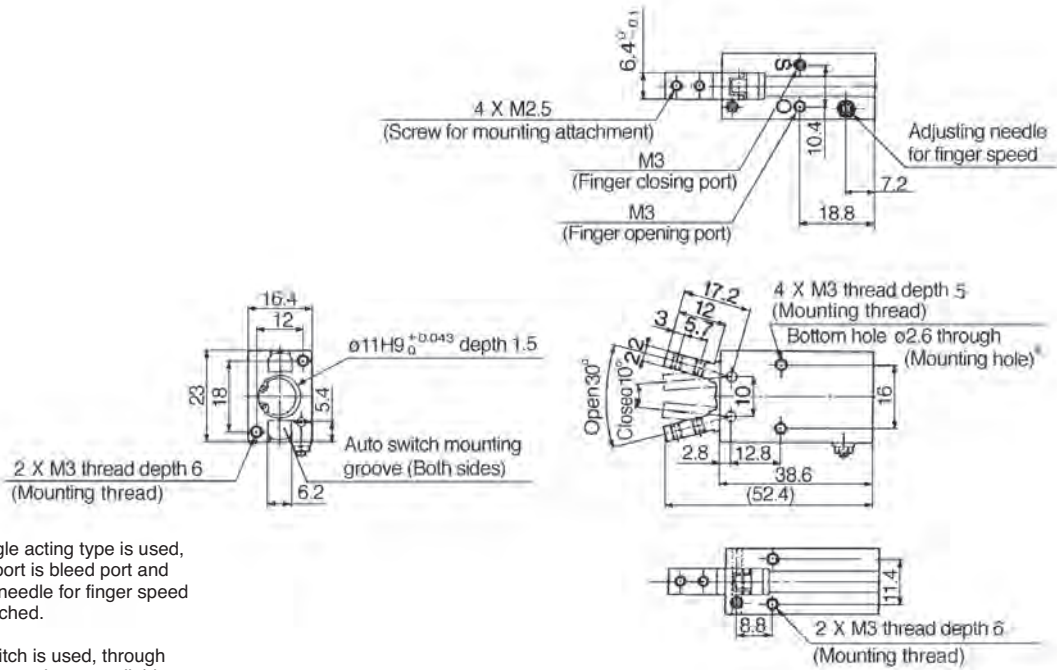


MHCA2-6□ (Short body type)



Dimensions Double Acting $\phi 10, \phi 16$

MHC2-10□

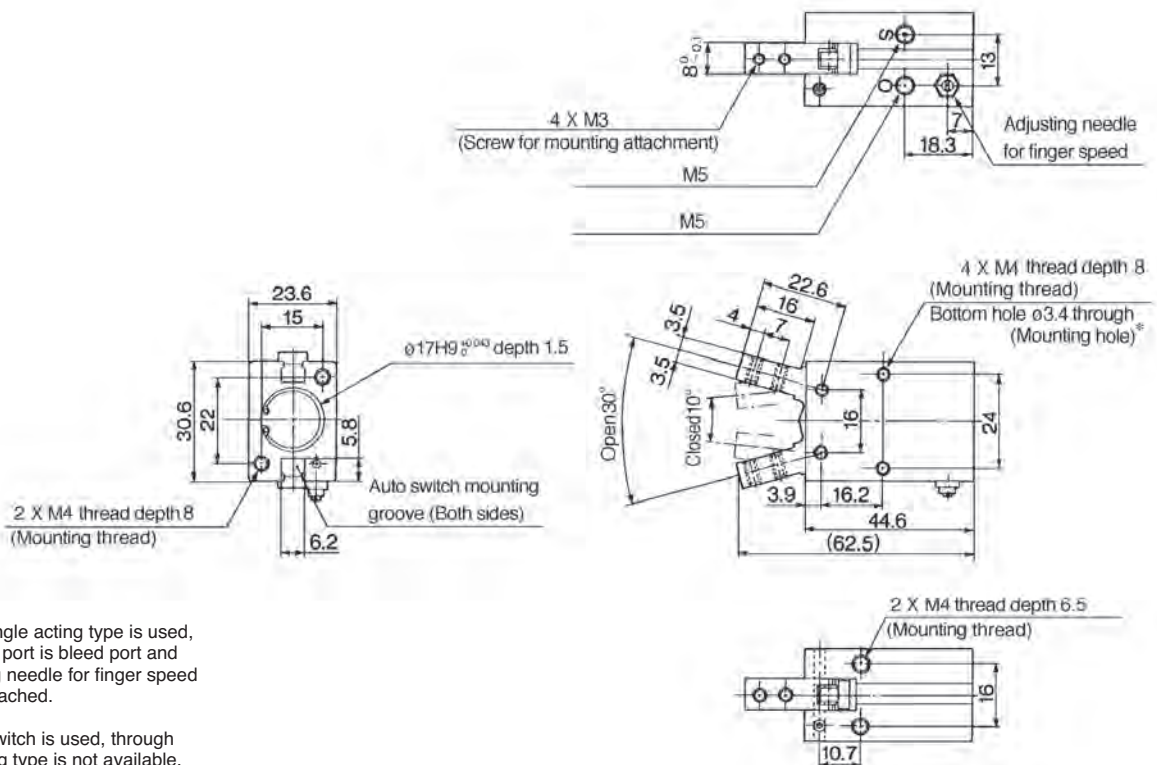


Note) When single acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

* When auto switch is used, through hole mounting type is not available.

Grippers

MHC2-16□

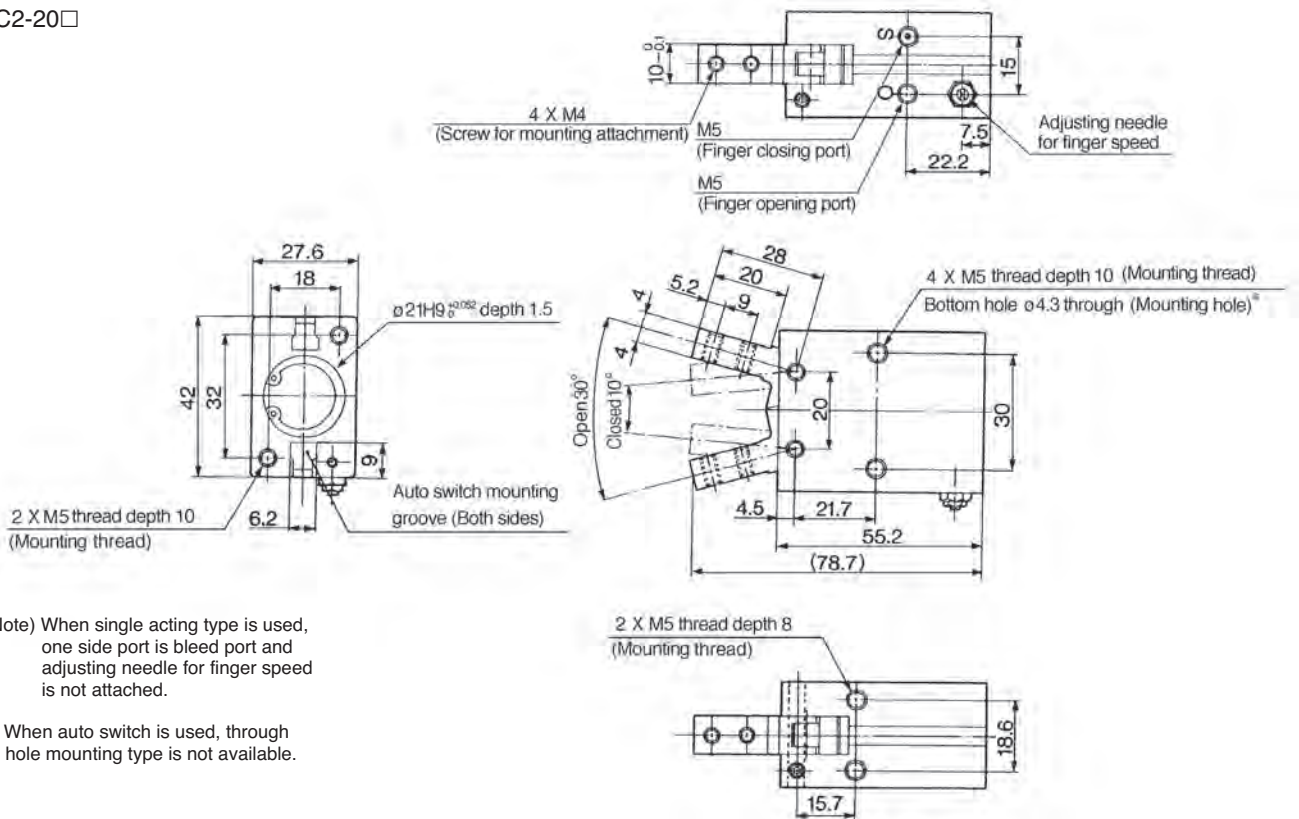


Note) When single acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

* When auto switch is used, through hole mounting type is not available.

Dimensions Double Acting $\phi 20, \phi 25$

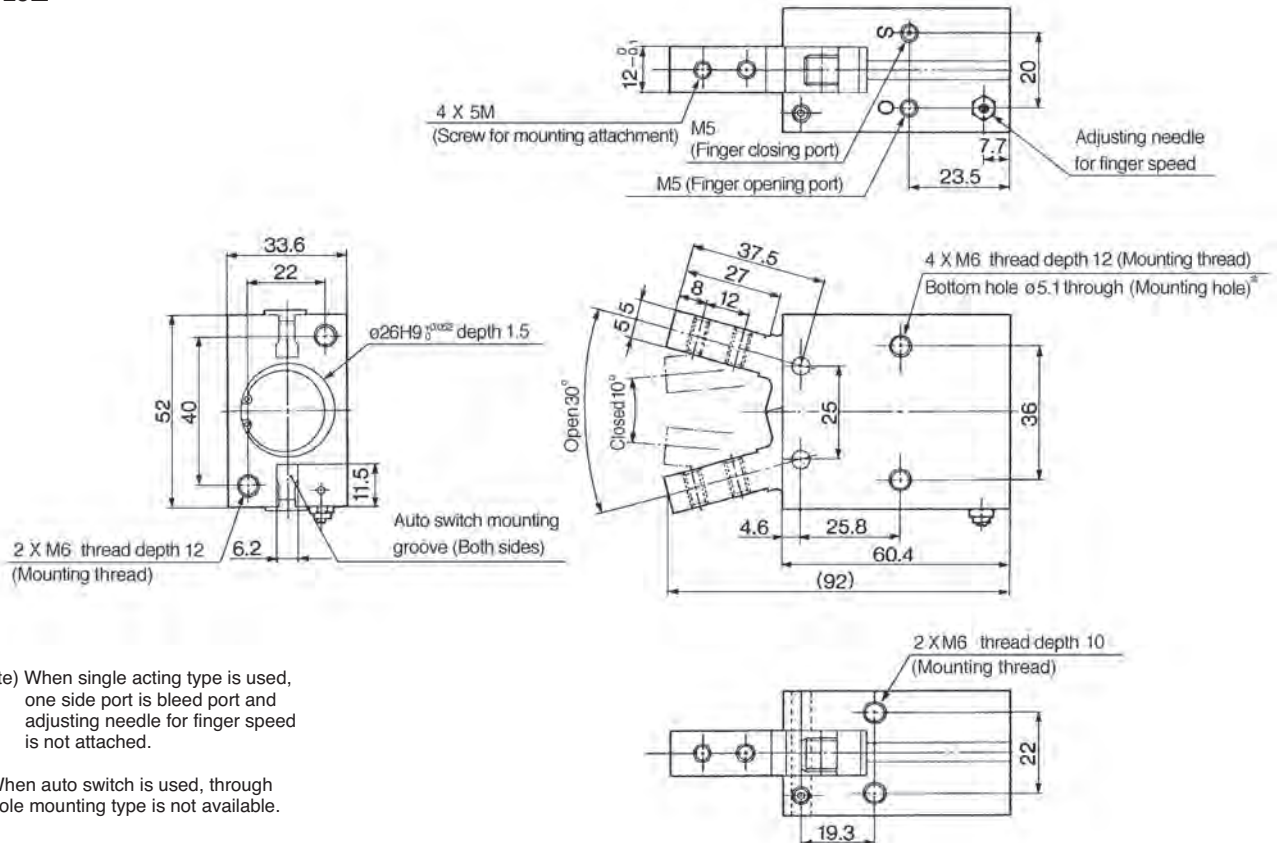
MHC2-20□



Note) When single acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

* When auto switch is used, through hole mounting type is not available.

MHC2-25□



Note) When single acting type is used, one side port is bleed port and adjusting needle for finger speed is not attached.

* When auto switch is used, through hole mounting type is not available.

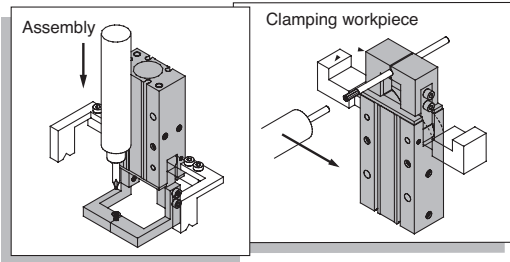


180° Angular Style Air Gripper Cam Style Series MHY2

Size: $\varnothing 10$, $\varnothing 16$, $\varnothing 20$, $\varnothing 25$

Features

- Lightweight and compact size through the use of a cam mechanism.



- Butterfly gripper.
- No Z axis required in pick and place.
- Eases jig and fixture design.

How to Order

MHY 2 – 16 D

Number of fingers: 2 (2 fingers)

Bore size: 10 (10 mm), 16 (16 mm), 20 (20 mm), 25 (25 mm)

Action: D (Double acting)

Finger option:

- : Standard tap mounting
- 2: Opening/closing direction through hole

Model

Model	Bore size [mm]	Effective gripping force [N·m] ^{Note 1)}	Opening/Closing angle (Both sides)		Weight [g] ^{Note 2)}
			Opening side	Closing side	
MHY2-10D	10	0.16	180°	-3°	70
MHY2-16D	16	0.54			150
MHY2-20D	20	1.10			320
MHY2-25D	25	2.28			560

Note 1) At the pressure of 0.5 MPa
Note 2) Except auto switch

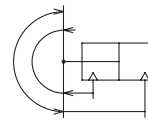
Replacement Parts

Description	MHY2-10D	MHY2-16D	MHY2-20D	MHY2-25D	
Seal kit	MHY10-PS	MHY16-PS	MHY20-PS	MHY25-PS	
Finger assembly	MHY2-□D	MHY-A1001	MHY-A1601	MHY-A2001	MHY-A2501
	MHY2-□D2	MHY-A1001-2	MHY-A1601-2	MHY-A2001-2	MHY-A2501-2
Joint assembly	MHY-A1002	MHY-A1602	MHY-A2002	MHY-A2502	

* Order 1 piece of finger assembly per one unit.
Replacement part/grease pack part no. : MH-G04 (30g)



Symbol



Product Recommendation



Stocked items for fast delivery

MHY2-10D	MHY2-20D	MHY2-10D2
MHY2-16D	MHY2-25D	MHY2-16D2



Auto Switches

- D-M9PWL (PNP 2-colour indication)
- D-M9NWL (NPN 2-colour indication)

Note) For more options see the Auto Switch section, page XXX



Related Products

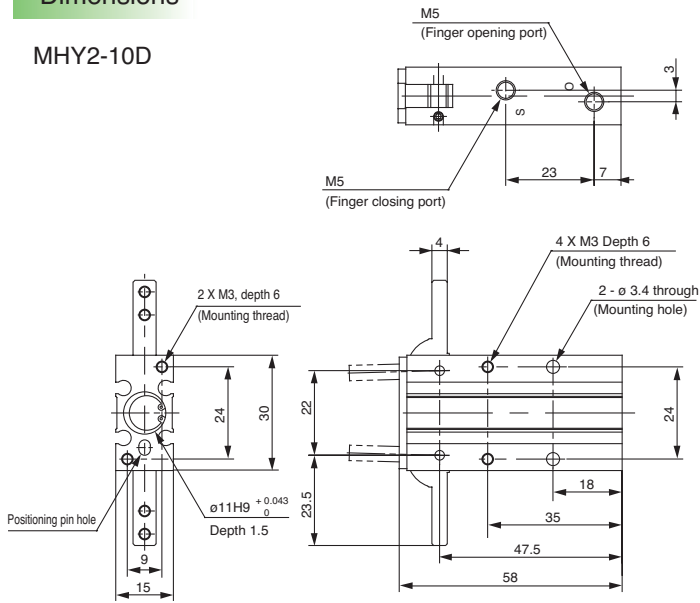
- Series AS** - Speed Controllers - page 1238
- Series SY** - Valves - page 65, 101, 417
- Series SV** - Valves - page 20
- Series VQC** - Valves - page 193, 211
- Series AC** - Air Preparation - page 1076
- Series IDK** - Moisture Control Tube - page 1149
- Series TU** - Tubing - page 1223
- Series KQ2** - Fittings - page 1184

Model/Specifications

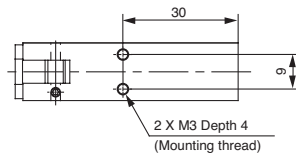
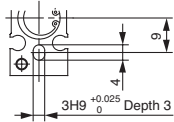
Fluid	Air
Operating pressure	0.1 to 0.6 MPa
Ambient and fluid temperature	-10 to 60°C
Repeatability	±0.2 mm
Max. operating frequency	60 c.p.m.
Lubrication	Not required
Action	Double acting

Dimensions

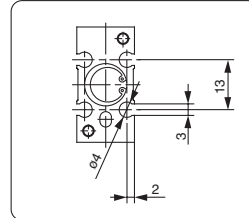
MHY2-10D



Pin hole positioning



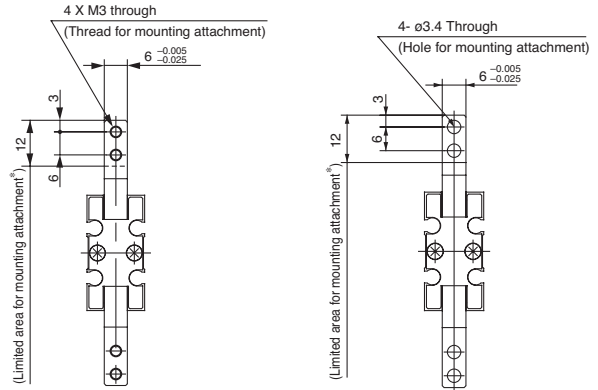
Auto switch mounting groove position



MHY2-10D2

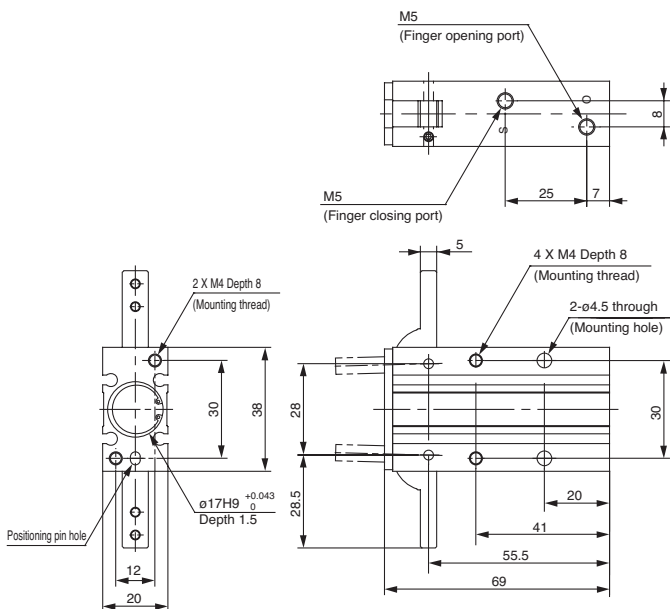
Opening/closing direction through hole type

* Do not extend the attachment from limited area for mounting to avoid interference with the attachment or main body.

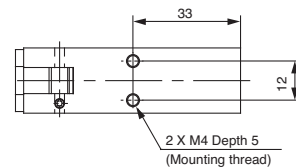
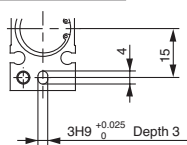


Dimensions

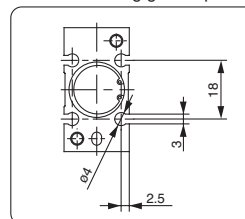
MHY2-16D



Pin hole positioning



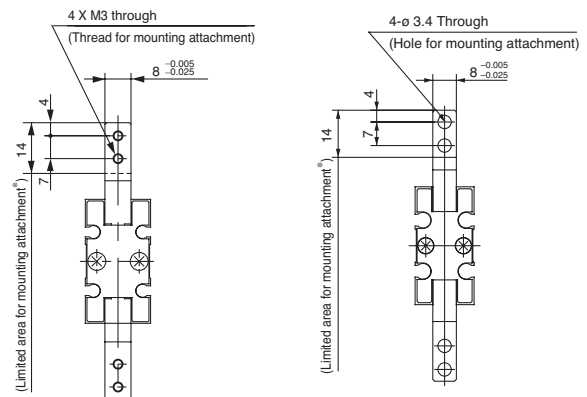
Auto switch mounting groove position



MHY2-16D2

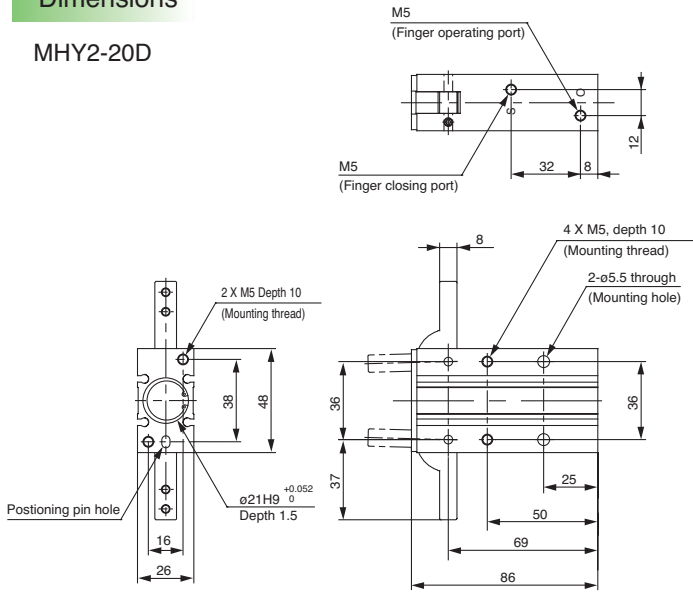
Opening/closing direction through hole type

* Do not extend the attachment from limited area for mounting to avoid interference with the attachment or main body.



Dimensions

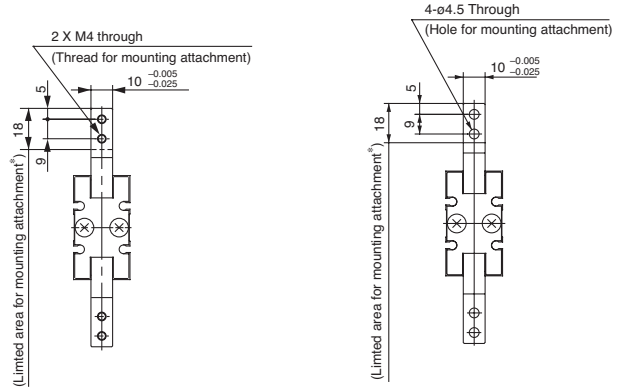
MHY2-20D



MHY2-20D2

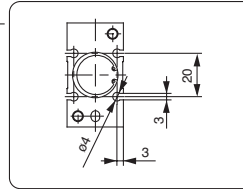
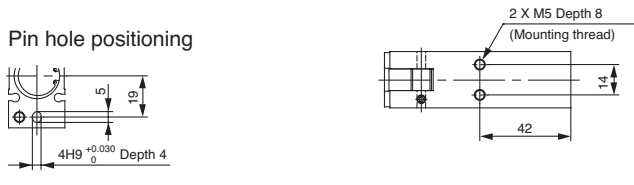
Opening/closing direction through hole type

* Do not extend the attachment from limited area for mounting to avoid interference with the attachment or main body.



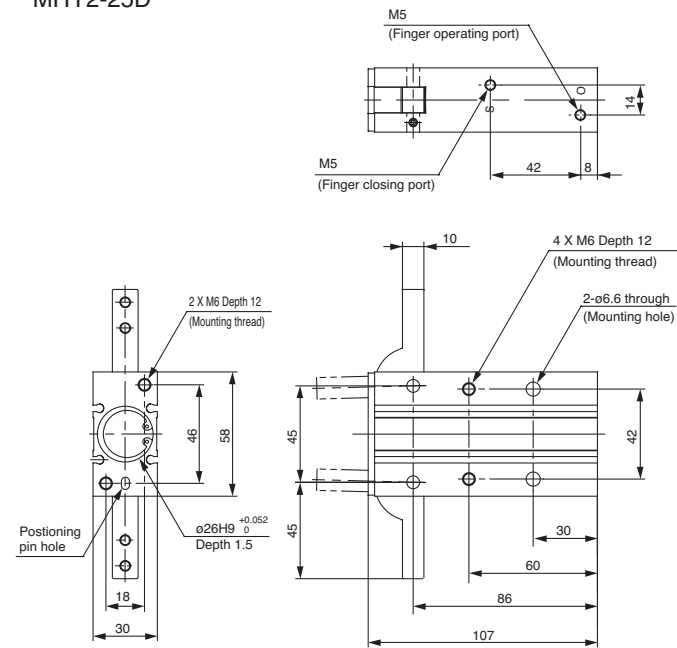
Auto switch mounting groove position

Pin hole positioning



Dimensions

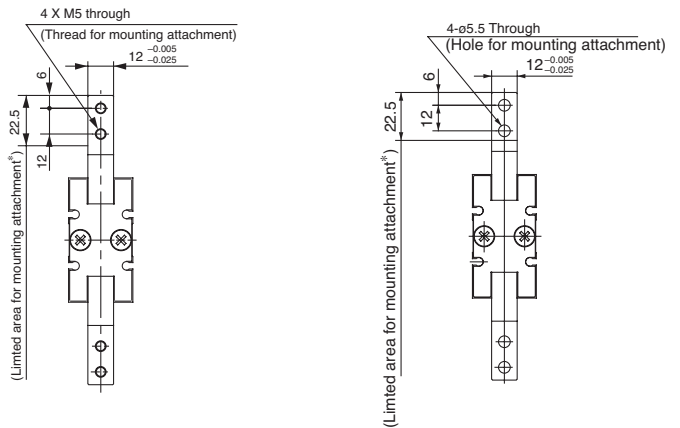
MHY2-25D



MHY2-25D2

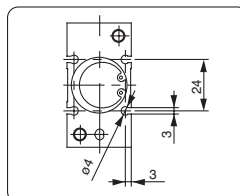
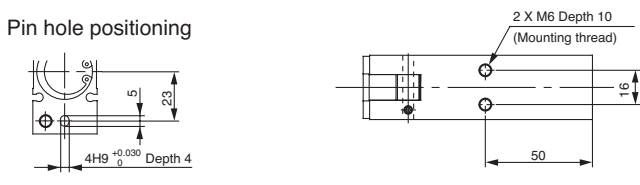
Opening/closing direction through hole type

* Do not extend the attachment from limited area for mounting to avoid interference with the attachment or main body.



Auto switch mounting groove position

Pin hole positioning



Rotary Gripper Series MRHQ

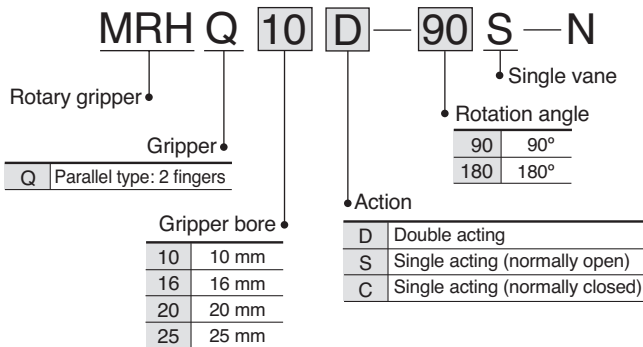
Size: $\varnothing 10$, $\varnothing 16$, $\varnothing 20$, $\varnothing 25$

Features

- The gripper function and the rotating function have been integrated in a compact package.
- Eliminates the peripheral piping and wiring of the previous product (rotary table + adapter + air gripper).
- Length reduced by approx. 20% compared with the previous product.
- 2 standard rotation angles of 90° and 180° and angle adjustment bolts are standard.
- Equipped with standard magnet for auto switch retrofitting.



How to Order



Product Recommendation



Stocked items for fast delivery

MRHQ10D-90S-N	MRHQ10S-180S-N	MRHQ16C-90S-N	MRHQ20D-90S-N	MRHQ25D-90S-N
MRHQ10C-90S-N	MRHQ10C-180S-N	MRHQ16D-180S-N	MRHQ20D-180S-N	MRHQ25D-180S-N
MRHQ10D-180S-N	MRHQ16D-90S-N	MRHQ16S-180S-N	MRHQ20C-180S-N	

Model/Specifications

Model		MRHQ10	MRHQ16	MRHQ20	MRHQ25
Fluid		Air			
Operating pressure	Rotary unit	0.25 to 0.7 MPa		0.25 to 1.0 MPa	
	Gripper unit	Double acting	0.25 to 0.7 MPa		0.1 to 0.7 MPa
Single acting		0.35 to 0.7 MPa		0.25 to 0.7 MPa	
Rotation angle		90° ±10°, 180° ±10°			
Gripper action		Double acting, single Acting			
Finger opening/closing repeatability		±0.01mm			
Gripper maximum operating frequency		180 c.p.m			
Ambient and fluid temperature		5 to 60°C			
Adjustable rotation time ^{Note)}		0.07 to 0.3 s/90° (at 0.5 MPa)			
Allowable kinetic energy		0.0046 J	0.014 J	0.034 J	0.074 J

Note) Operate within the speed adjustment range, as speed control exceeding the limit value of the low speed may cause sticking or failure to operate.

Auto Switches

- D-M9PVL (PNP) - for gripper opening/closing
- D-M9NVL (NPN) - for gripper opening/closing
- D-M9PL-746 (PNP) - for detection rotation
- D-M9NL-746 (NPN) - for detection rotation

Note) For more options see the Auto Switch section, page XXX

Related Products

- Series AS** - Speed Controllers - page 1238
- Series SY** - Valves - page 65, 101, 417
- Series SV** - Valves - page 20
- Series VQC** - Valves - page 193, 211
- Series AC** - Air Preparation - page 1076
- Series IDK** - Moisture Control Tube - page 1149
- Series TU** - Tubing - page 1223
- Series KQ2** - Fittings - page 1184



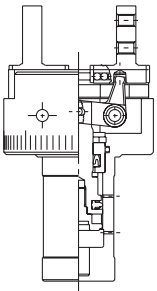
Model

Action	Model	Cylinder bore [mm]	Opening/Closing stroke [mm]	Rotating angle [°]	Note) Weight [g]
Double acting	MRHQ10D	10	4	90	306
				180	305
	MRHQ16D	16	6	90	593
				180	591
	MRHQ20D	20	10	90	1055
				180	1052
	MRHQ25D	25	14	90	1561
				180	1555
Single acting	MRHQ10S MRHQ10C	10	4	90	307
				180	306
	MRHQ16S MRHQ16C	16	6	90	594
				180	592
	MRHQ20S MRHQ20C	20	10	90	1060
				180	1057
	MRHQ25S MRHQ25C	25	14	90	1566
				180	1560

Note) Values do not include auto switch weight.

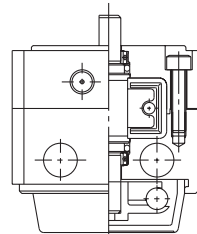
Unit List

Gripper unit



Model	Unit part no.
MRHQ10D	P407090-3D
MRHQ10S	P407090-3S
MRHQ10C	P407090-3C
MRHQ16D	P407060-3D
MRHQ16S	P407060-3S
MRHQ16C	P407060-3C
MRHQ20D	P407080-3D
MRHQ20S	P407080-3S
MRHQ20C	P407080-3C
MRHQ25D	P408080-3D
MRHQ25S	P408080-3S
MRHQ25C	P408080-3C

Rotary unit

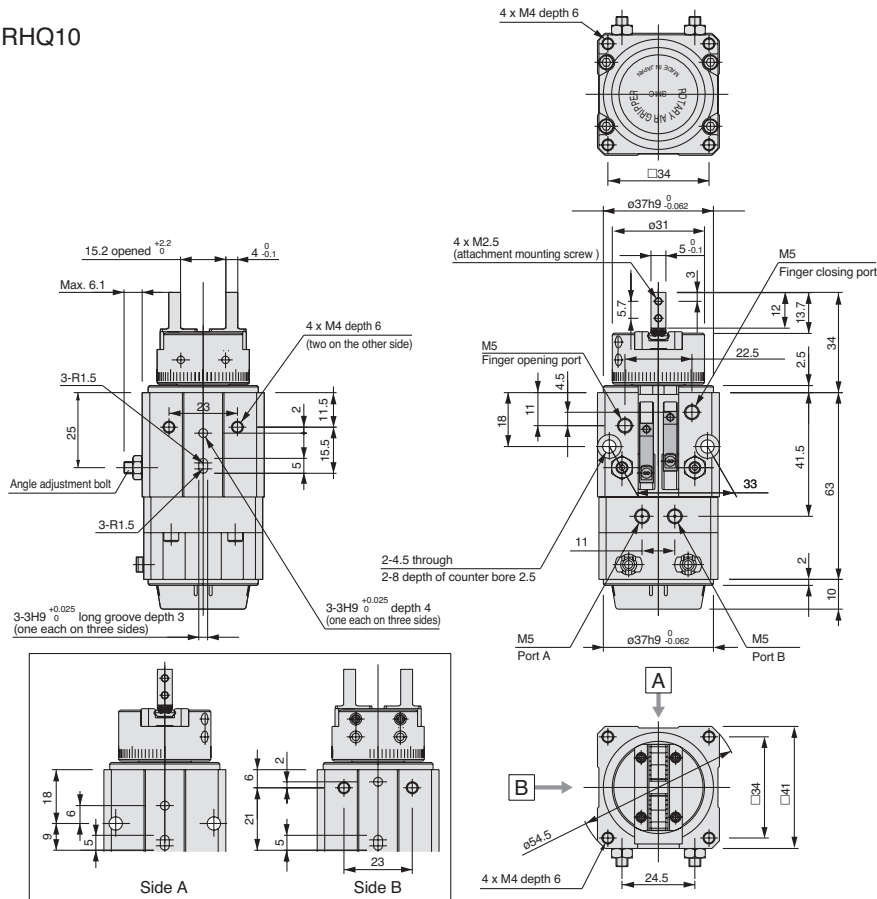


Model	Unit part no.
MRHQ10□- 90S	P406090-2A
MRHQ10□-180S	P406090-2B
MRHQ16□- 90S	P406060-2A
MRHQ16□-180S	P406060-2B
MRHQ20□- 90S	P407080-2A
MRHQ20□-180S	P407080-2B
MRHQ25□- 90S	P408080-2A
MRHQ25□-180S	P408080-2B

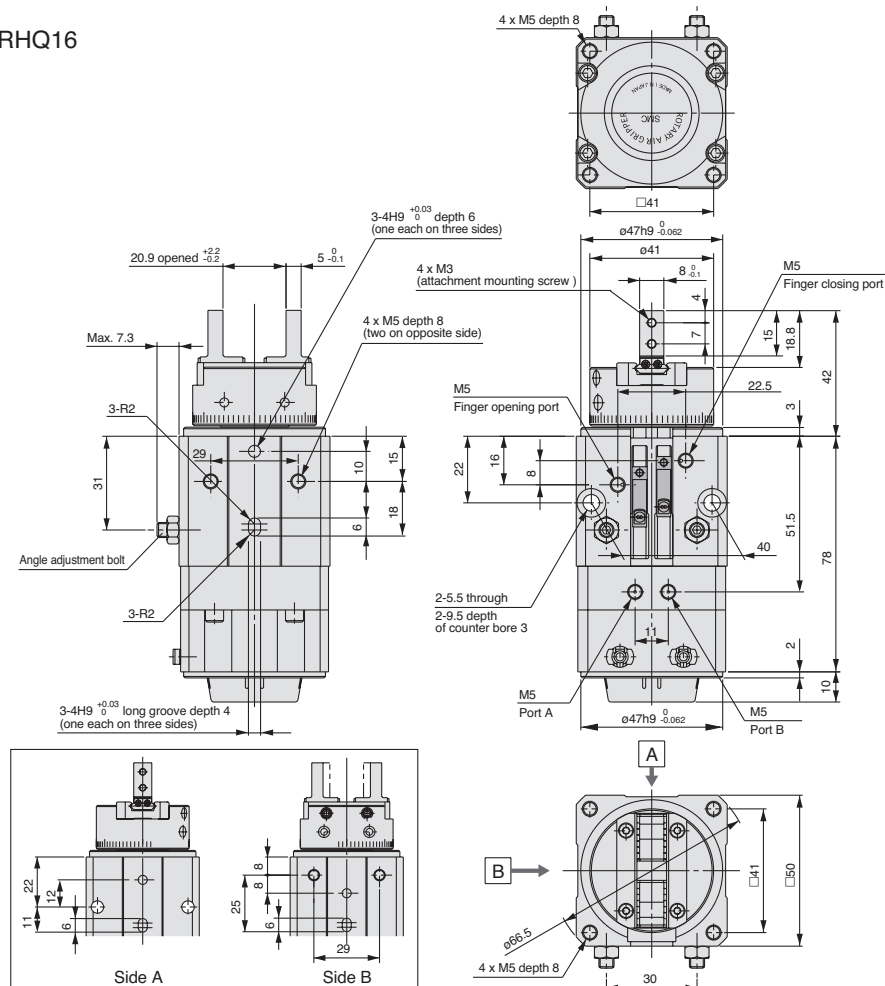
* Note that the rotation angle cannot be changed even though the rotary unit has been changed.

For maintenance, order units with a part number suitable for the model being used.

Dimensions MRHQ10

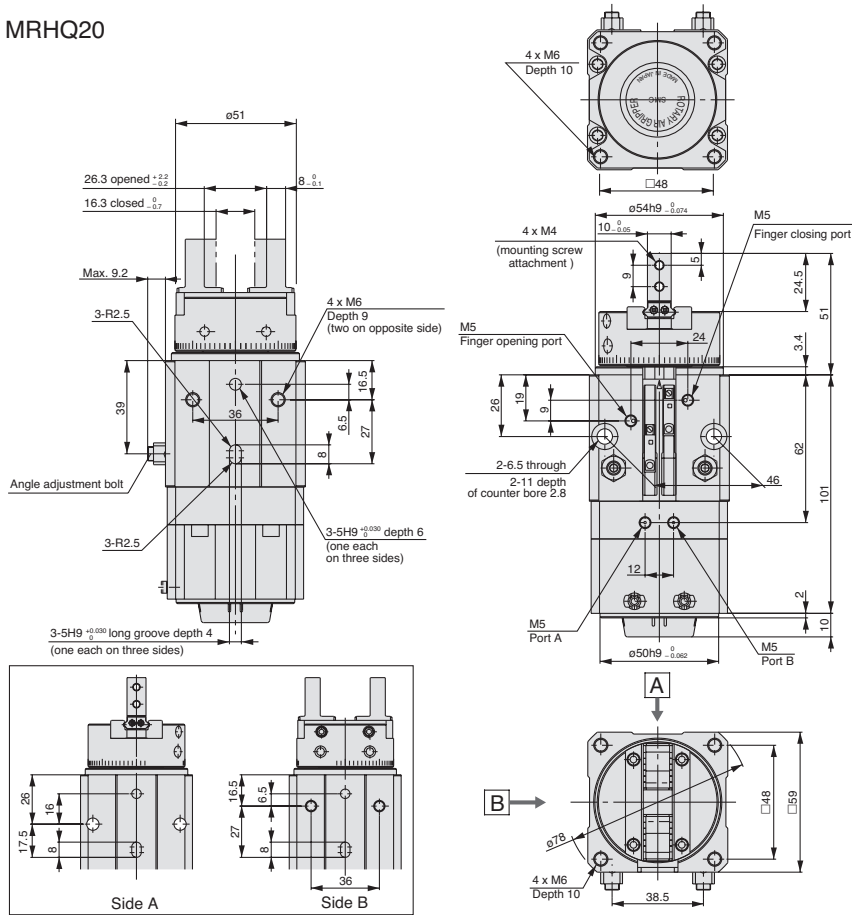


Dimensions MRHQ16



For more product options and details see our specific catalogues or on-line information.

Dimensions MRHQ20



Dimensions MRHQ25

