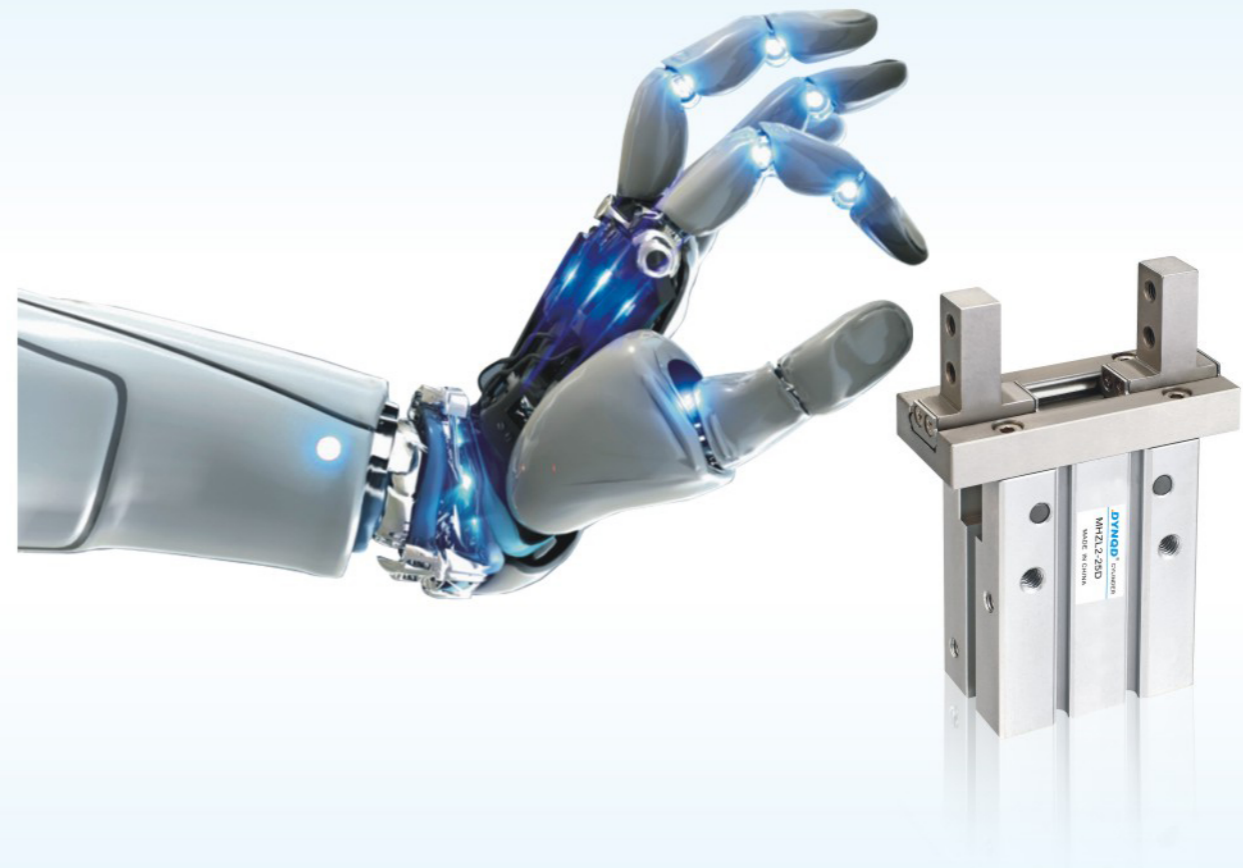


Printed on eco paper ©DIYANI PNEUMATIC

This manual is WENZHOU DIYANI PNEUMATIC CO.,LTD. Product overview. If the picture differs from the actual object, please refer to the actual product. If you need more products from our company, please contact me more marketing department.

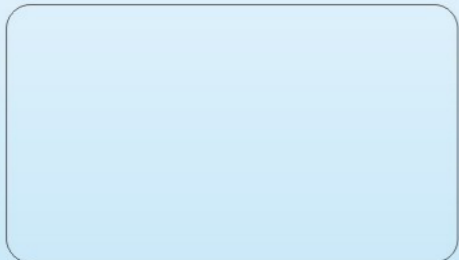
0371-8735127

DYNQD®

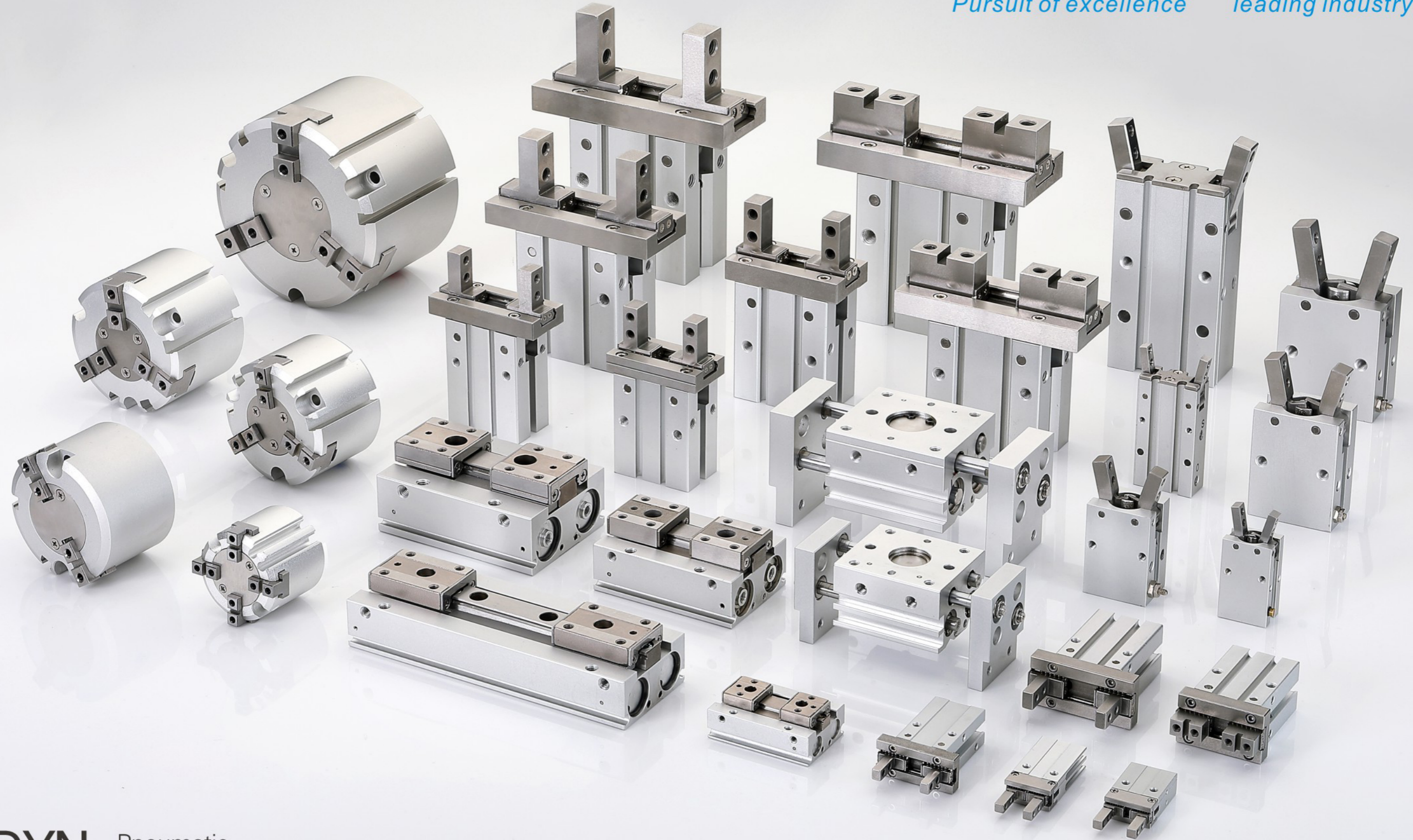


DYNQD®

WENZHOU DIYANI PNEUMATIC CO.,LTD.

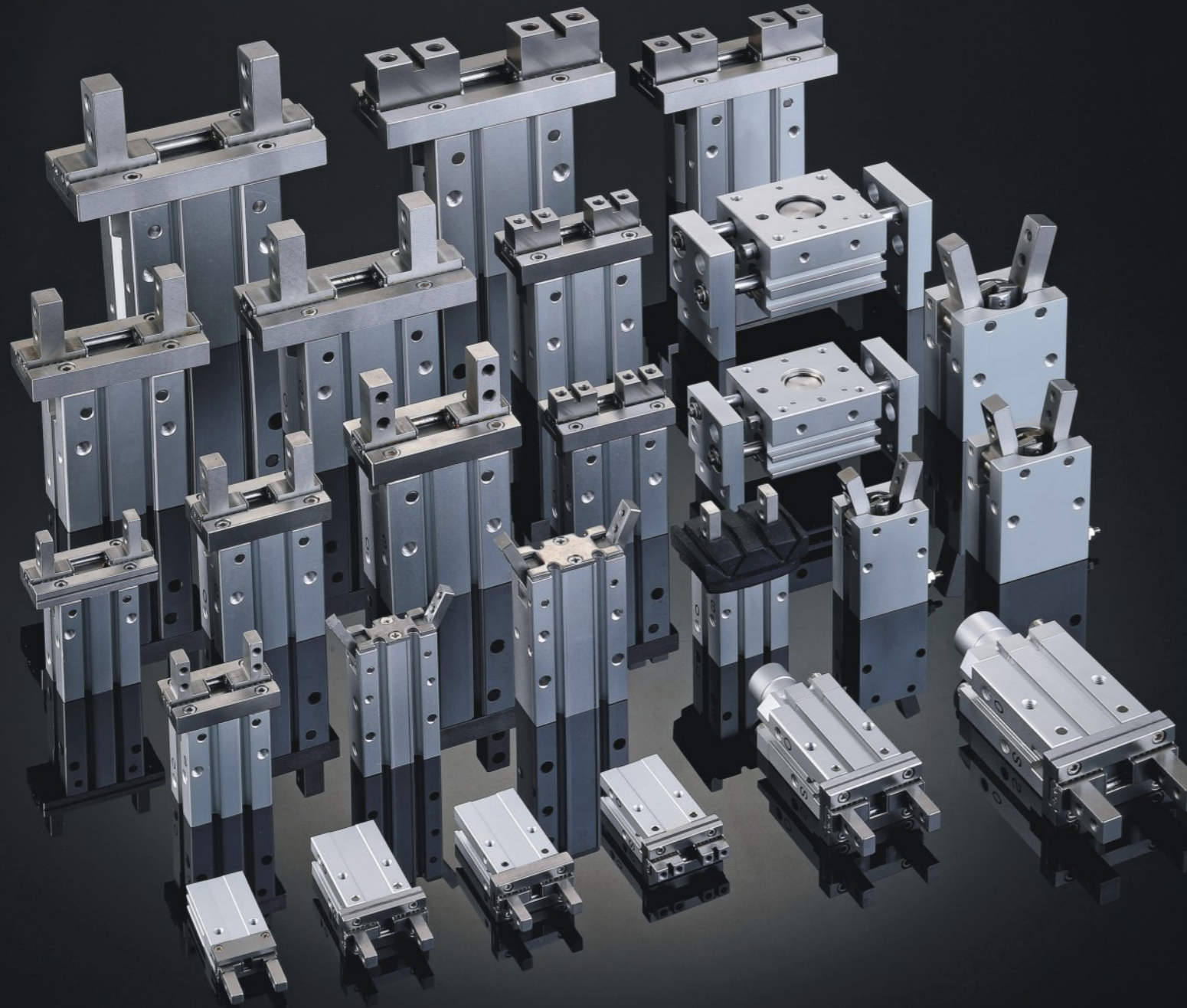


WENZHOU DIYANI PNEUMATIC CO.,LTD.



DYN • Pneumatic

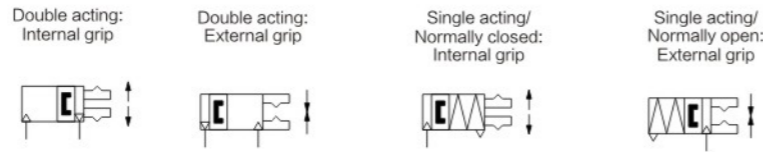
All the way from innovation
to excellence.



Be profession、focus,
So we are extraordinary

<p>Parallel openable</p> <p>MHZ2Series (Φ6-Φ40)</p>  <p>Page 05</p>	<p>Lengthen parallel openable</p> <p>MHZL2Series (Φ10-Φ25)</p>  <p>Page 14</p>	<p>Parallel open and close type</p> <p>MHZJ2Series (Φ6-Φ25)</p>  <p>Page 17</p>
<p>Thin open type</p> <p>MHF2Series (Φ8-Φ20)</p>  <p>Page 21</p>	<p>Parallel open and close type</p> <p>MHL2Series (Φ10-Φ40)</p>  <p>Page 35</p>	<p>180° Fulcrum open closed type</p> <p>MHY2Series (Φ10-Φ25)</p>  <p>Page 40</p>
<p>Fulcrum open closed type</p> <p>MHC2Series (Φ10-Φ25)</p>  <p>Page 44</p>	<p>Small fulcrum open closed type</p> <p>MHCA2Series (Φ6)</p>  <p>Page 48</p>	<p>Miniature fulcrum open closed type</p> <p>MHCM2Series (Φ7)</p>  <p>Page 50</p>
<p>Cylindrical two-jaw</p> <p>MHS2Series (Φ16-Φ63)</p>  <p>Page 51</p>	<p>Cylindrical three-claw</p> <p>MHS3Series (Φ16-Φ125)</p>  <p>Page 57</p>	<p>Cylindrical four-claw</p> <p>MHS4Series (Φ16-Φ63)</p>  <p>Page 64</p>

Symbol



Standard Specification

Bore size(mm)		6	10	16	20	25	32	40
Operating pressure(MPa)	Double-acting	0.15-0.7	0.2-0.7	0.1-0.7				
	Single acting	0.3-0.7	0.35-0.7	0.25-0.7				
Ambient fluid temperature	-10~60°C							
Repeatability(mm)		±0.01				±0.02		
The highest frequency of use(c.p.m)		180				60		
Lubrication	Not required							
Action type	Double acting · Single acting							
Auto switch (optional)	Solid state auto switch							

Ordering code

Parallel openable **MHZ 2 - 16 D** - **M9PV**

Number of fingers: 2, 2One

Bore size: 6 (6mm), 10 (10mm), 16 (16mm), 20 (20mm), 25 (25mm), 32 (32mm), 40 (40mm)

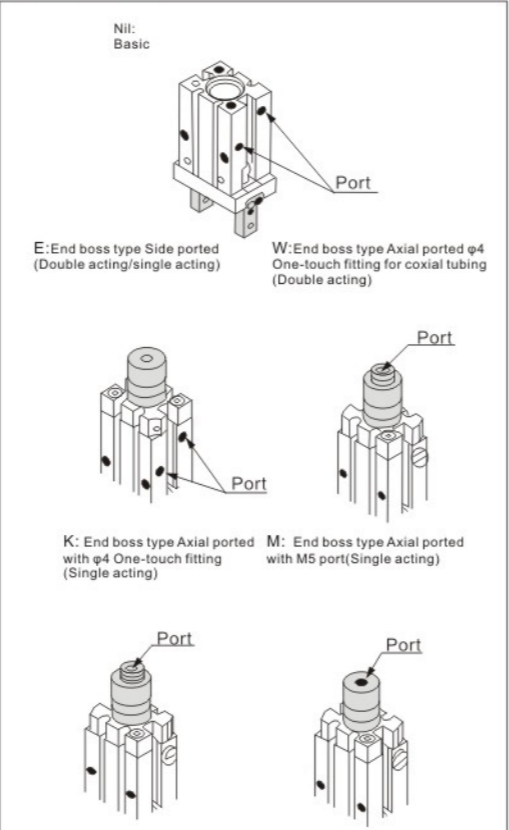
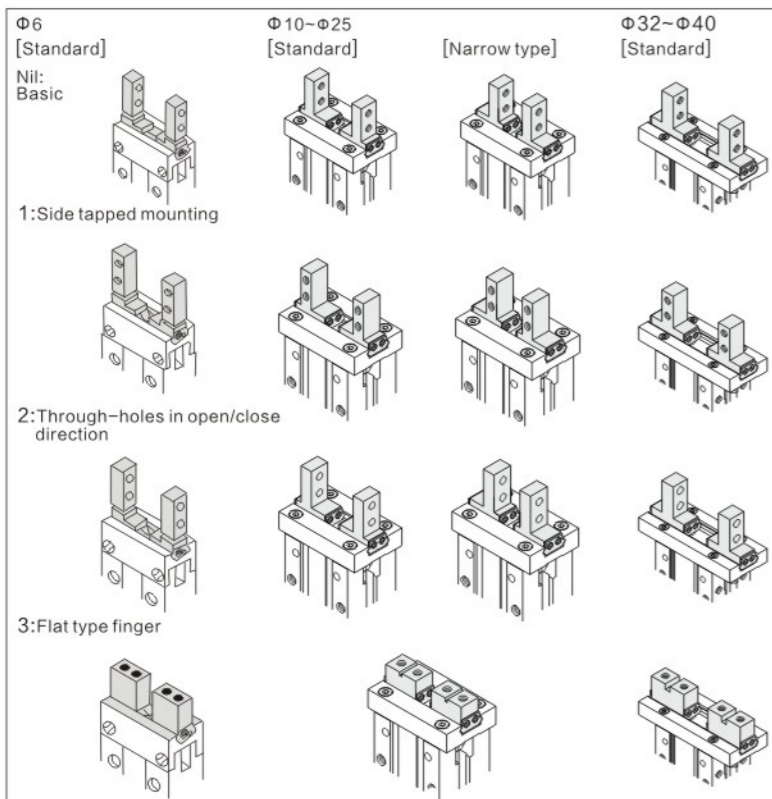
Operation mode: D (Double-acting), S (Single acting (normally open)), C (Single acting (normally closed))

Auto switch model: Nil, Without auto switch

Number of auto switches: Nil (2One), S (1One), n (nOne)

*Small (A, AJ) in the form of non-magnetic switch.

Gripper body option: Nil: Basic

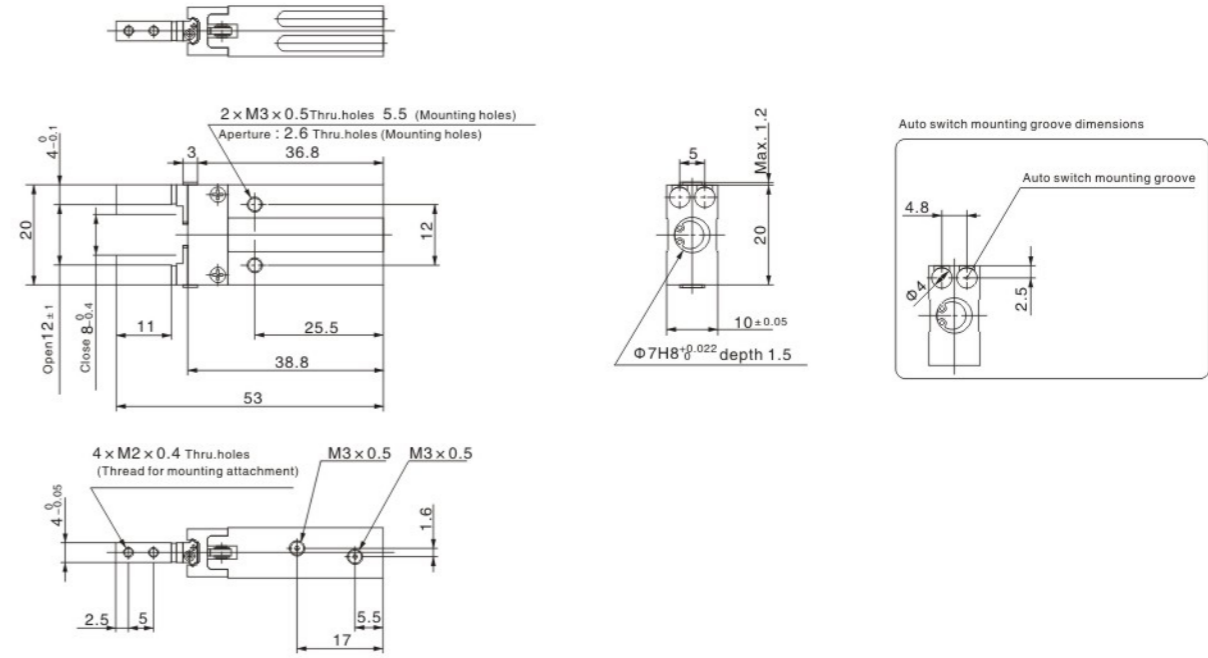


Note1) MHZ2-6/32/40 without this.

Dimensions (mm)

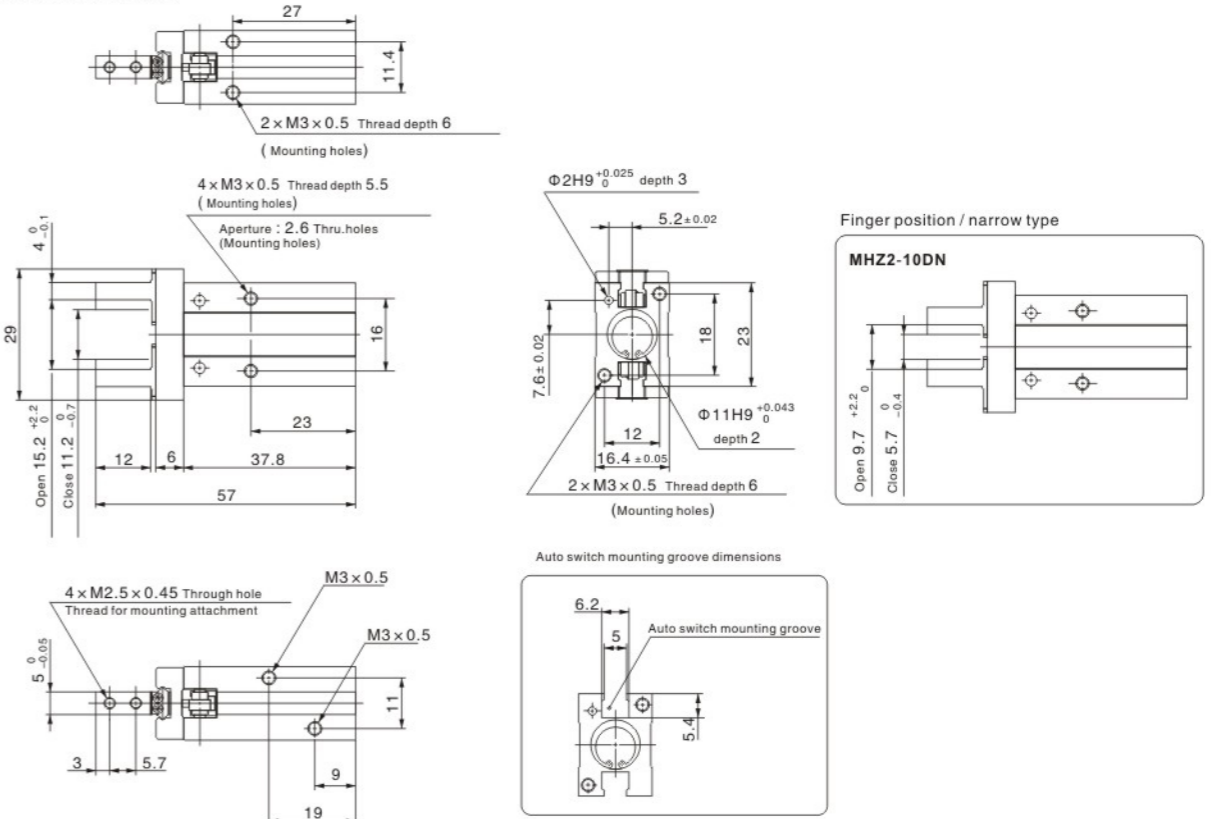
MHZ2-6D

Double acting / Basic type



MHZ2-10D

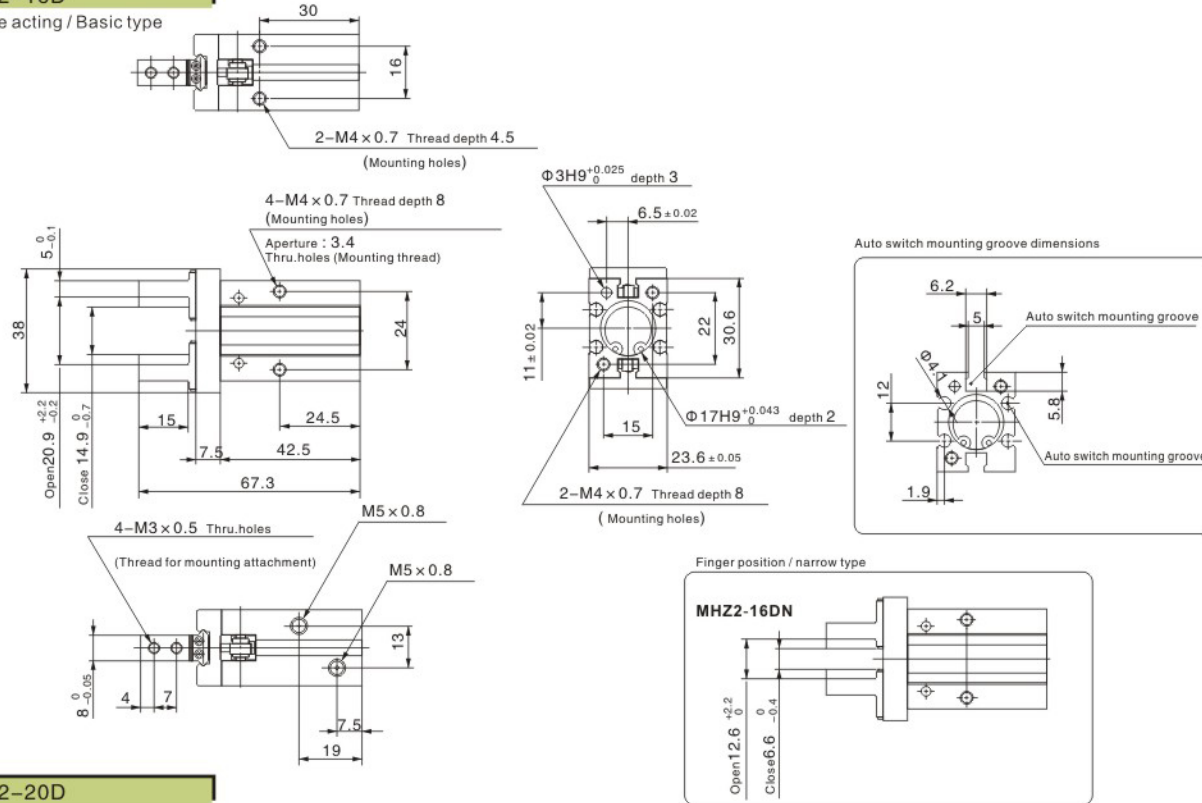
Double acting / Basic type



Dimensions (mm)

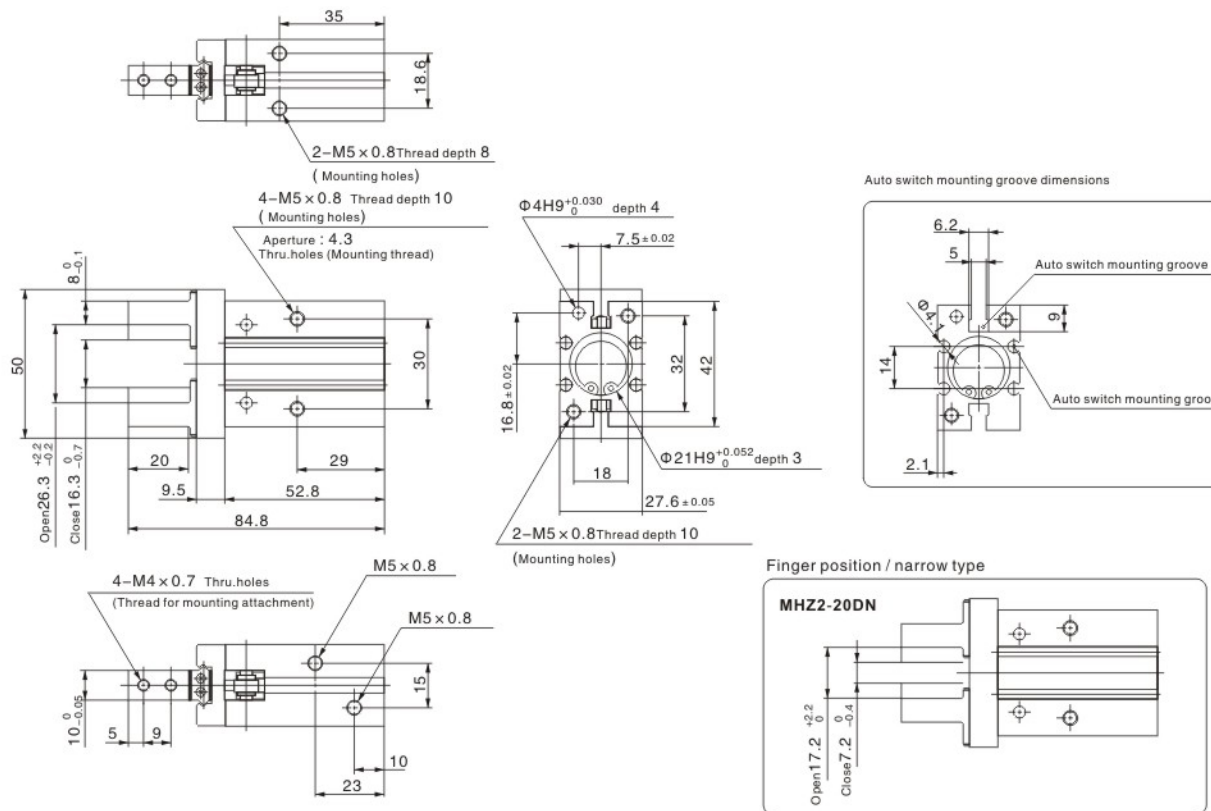
MH22-16D

Double acting / Basic type



MH22-20D

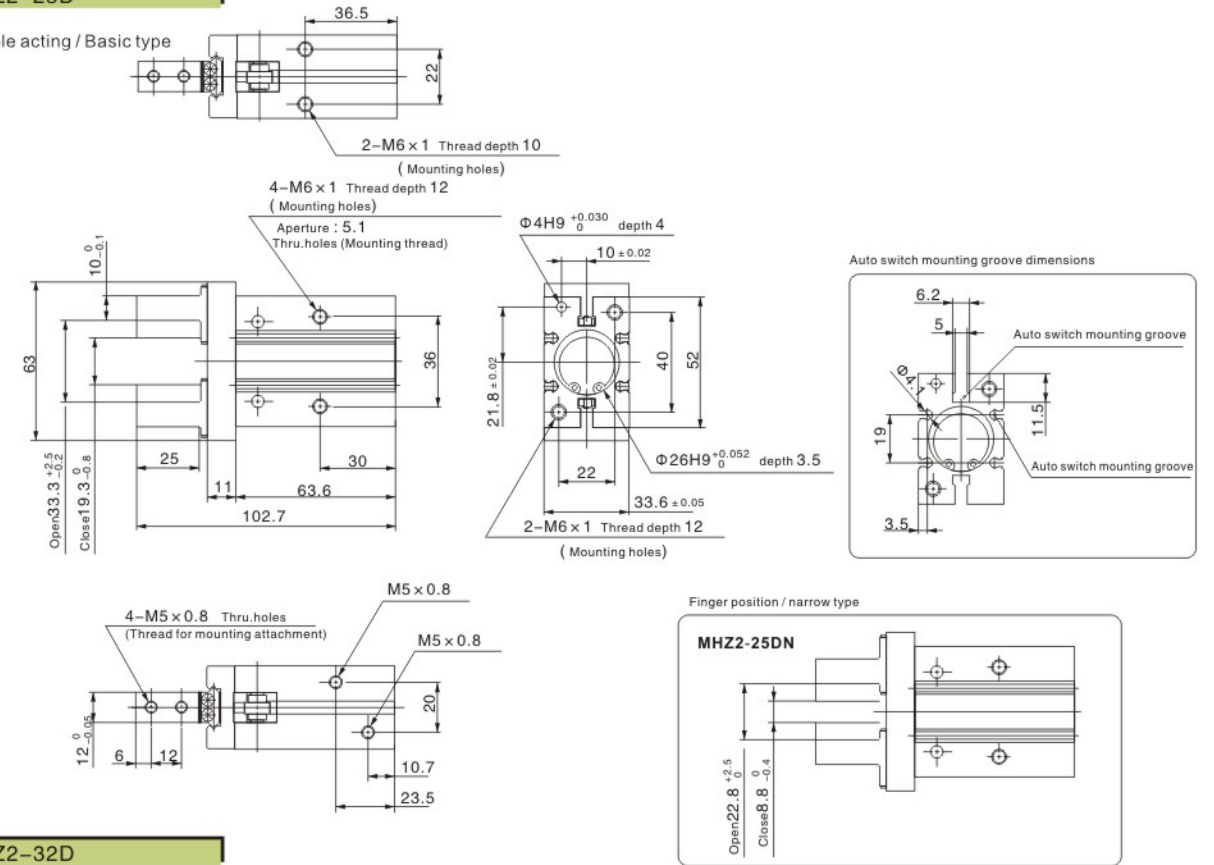
Double acting / Basic type



Dimensions (mm)

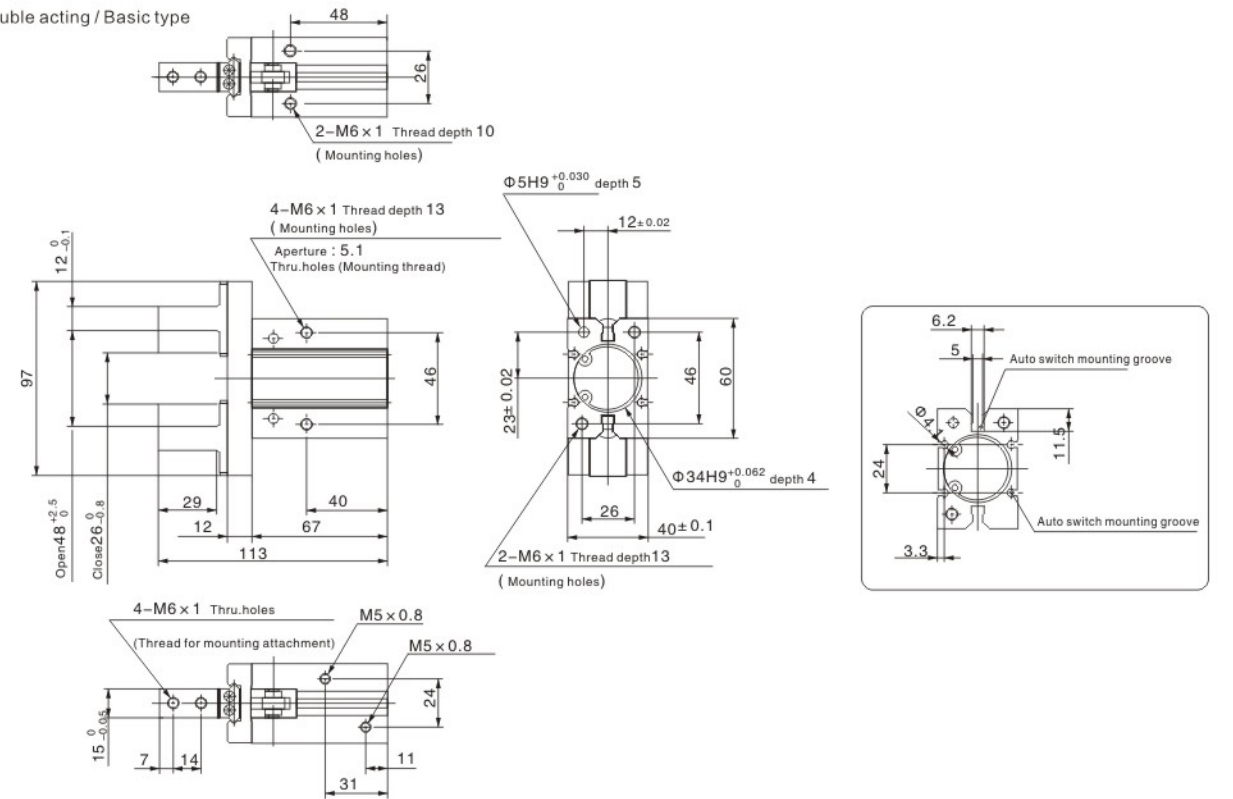
MH22-25D

Double acting / Basic type



MH22-32D

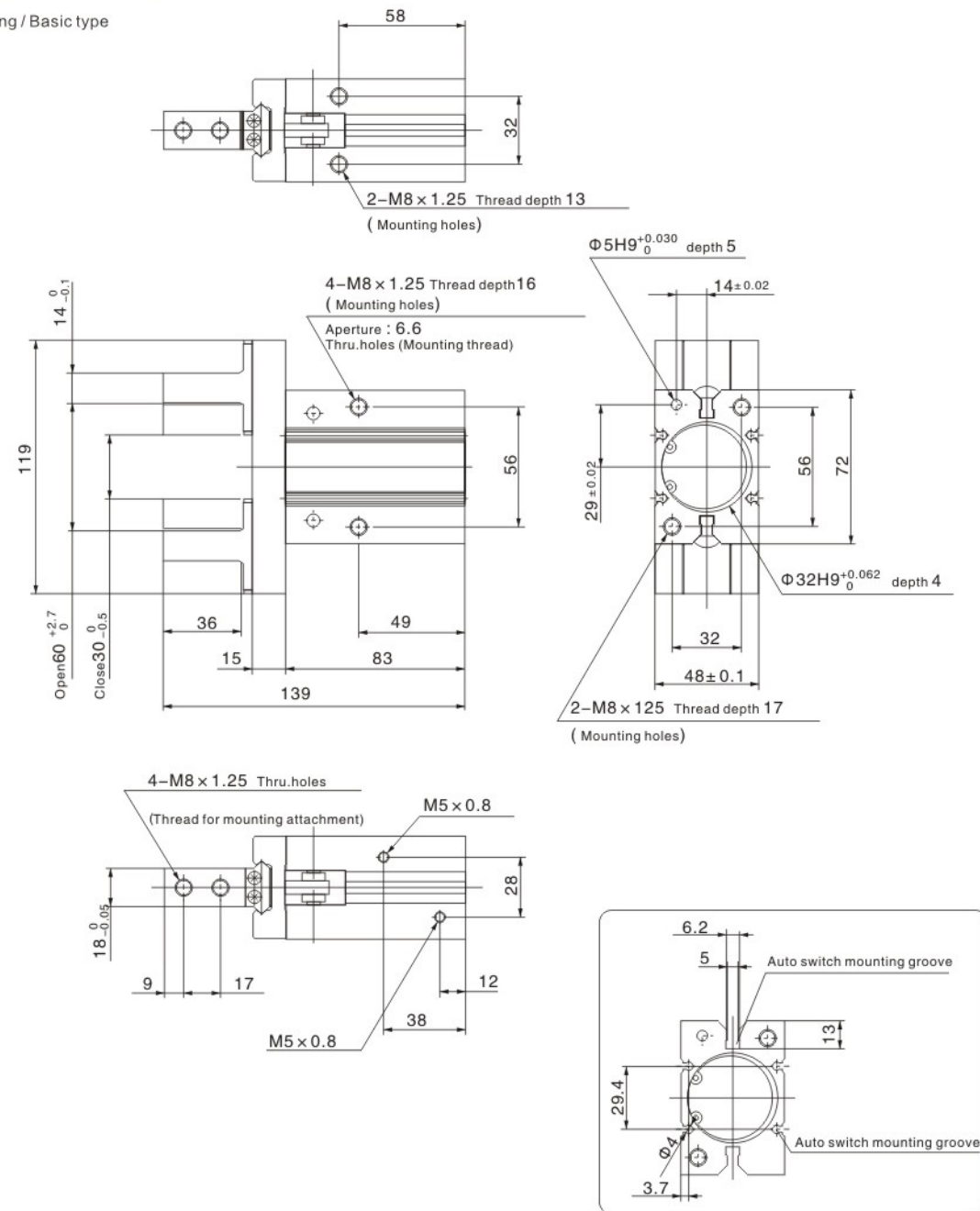
Double acting / Basic type



Dimensions (mm)

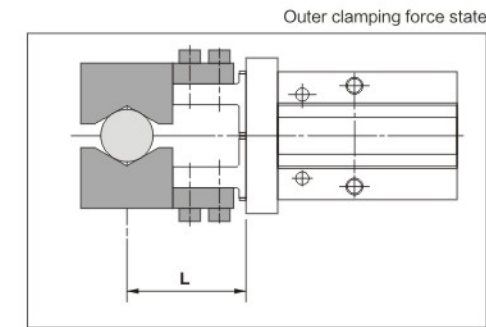
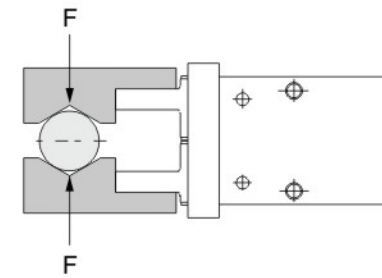
MHZ2-40D

Double acting / Basic type

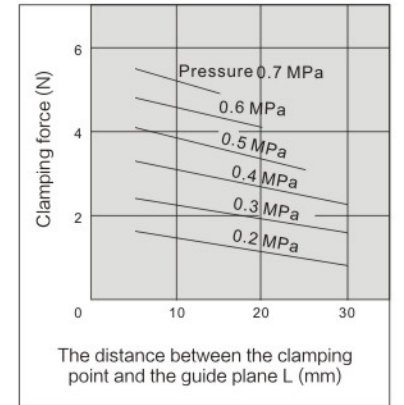


Different pressure corresponding to the performance parameters

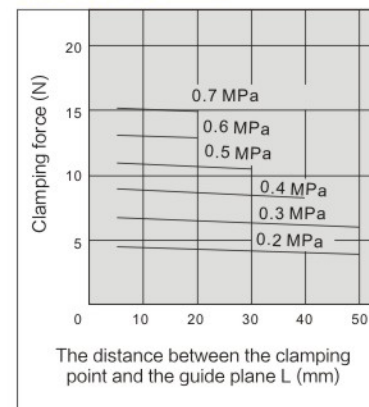
As shown in the figure below, when the fingers and accessories are in complete contact with the workpiece, the finger grip force and distance L should refer to the right figure.



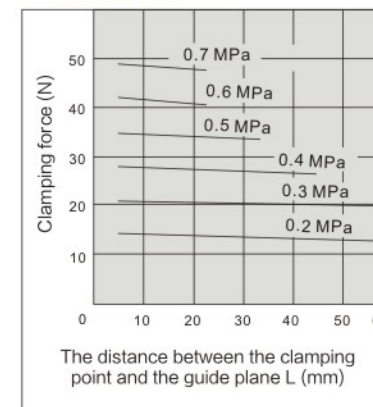
MHZ2-6D



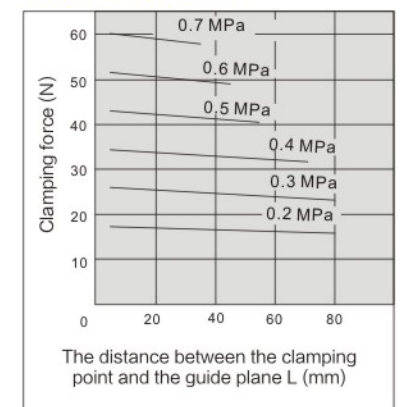
MHZ2-10D



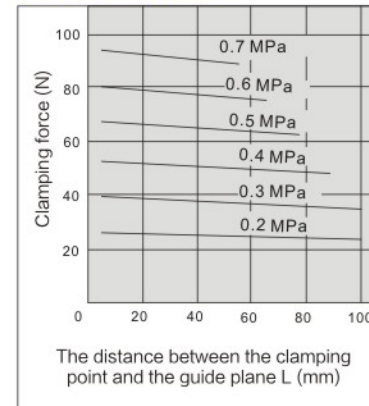
MHZ2-16D



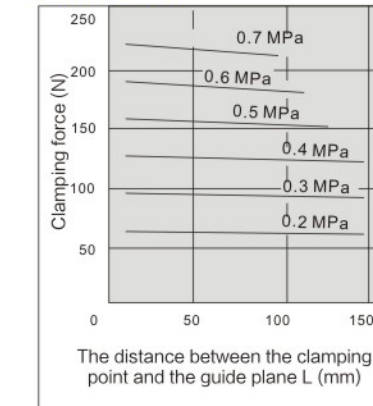
MHZ2-20D



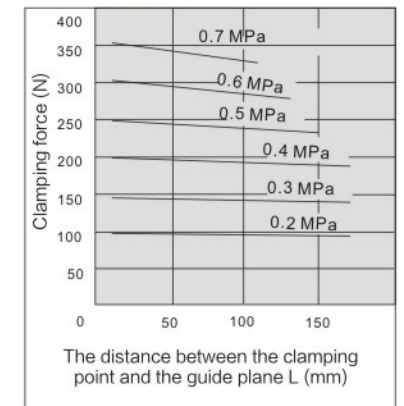
MHZ2-25D



MHZ2-32D

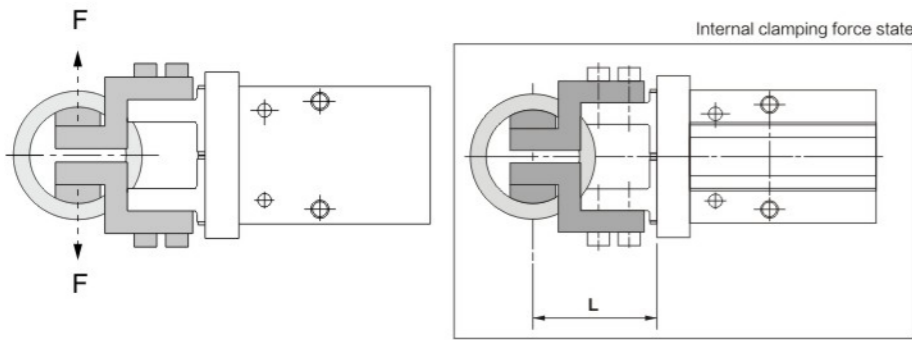


MHZ2-40D

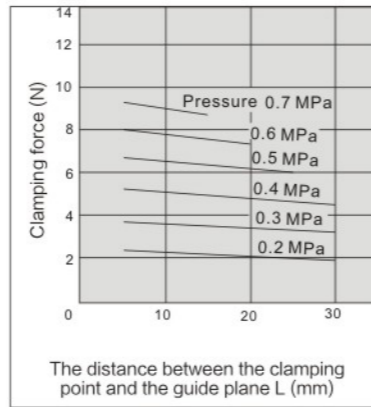


Different pressure corresponding to the performance parameters

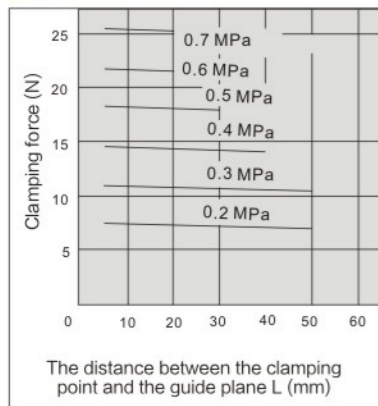
As shown in the figure below, when the fingers and accessories are in complete contact with the workpiece, the finger grip force and distance L should refer to the right figure.



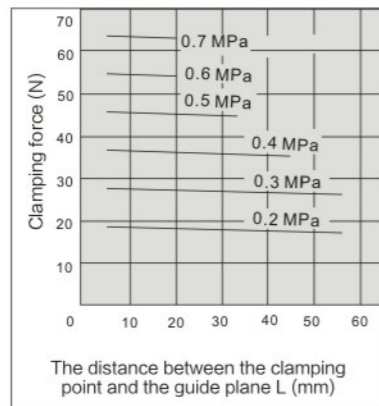
MHZ2-6D



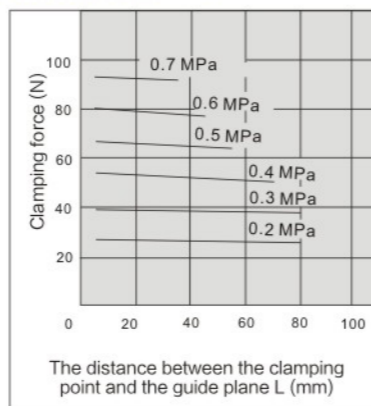
MHZ2-10D



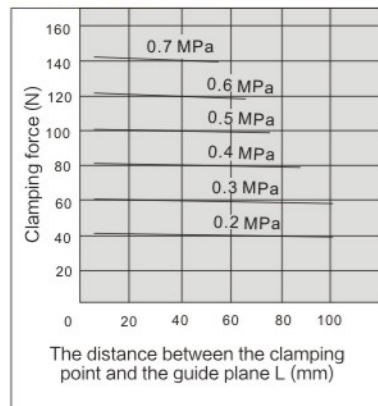
MHZ2-16D



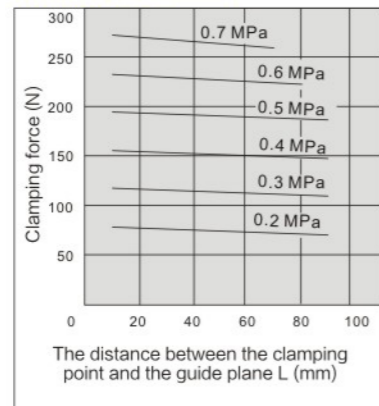
MHZ2-20D



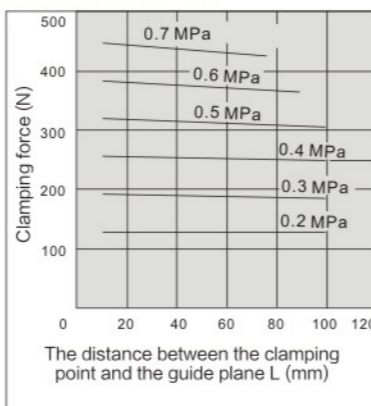
MHZ2-25D



MHZ2-32D

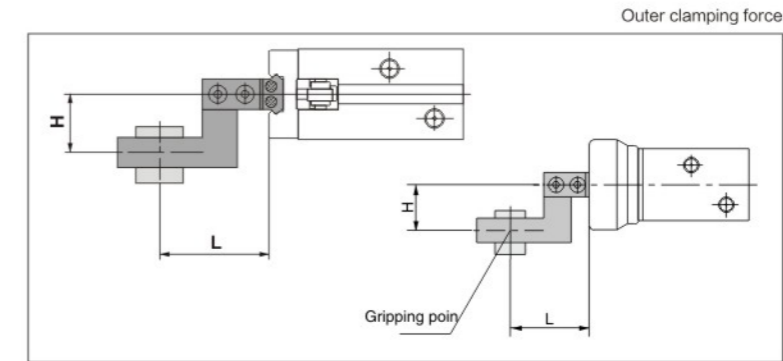


MHZ2-40D

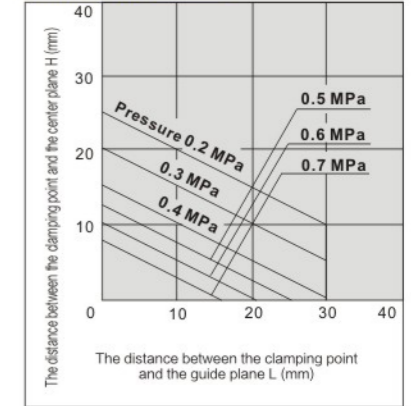


Different pressure corresponding to the performance parameters

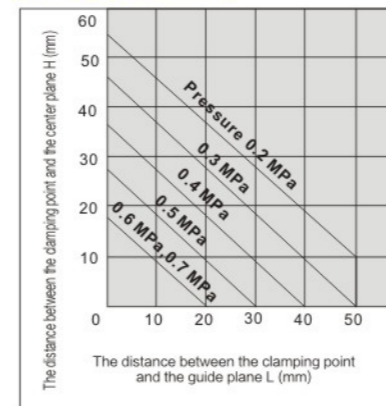
When the gripper is installed, the corresponding H and L values should conform to the right curve. If this range is exceeded, the life of the cylinder will be affected.



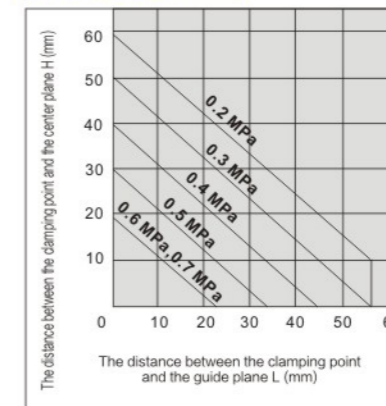
MHZ2-6D



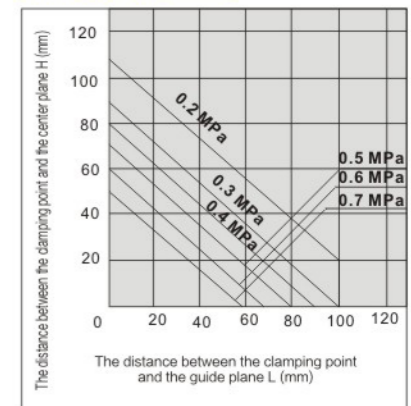
MHZ2-10D



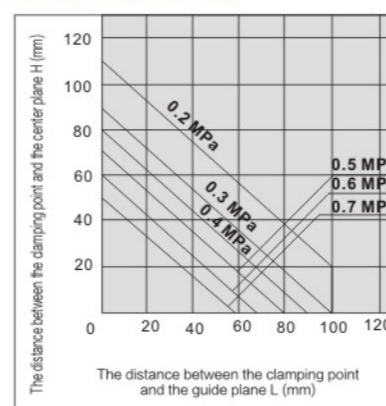
MHZ2-16D



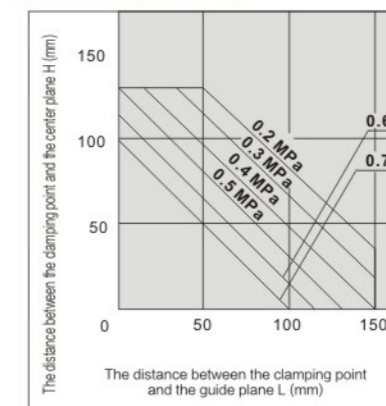
MHZ2-20D



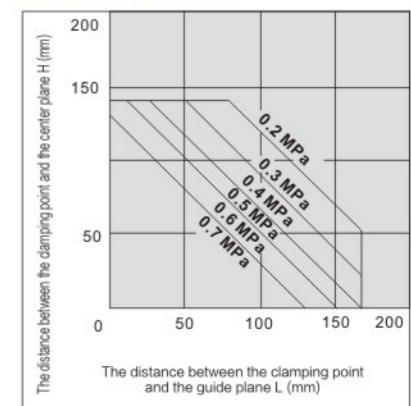
MHZ2-25D



MHZ2-32D

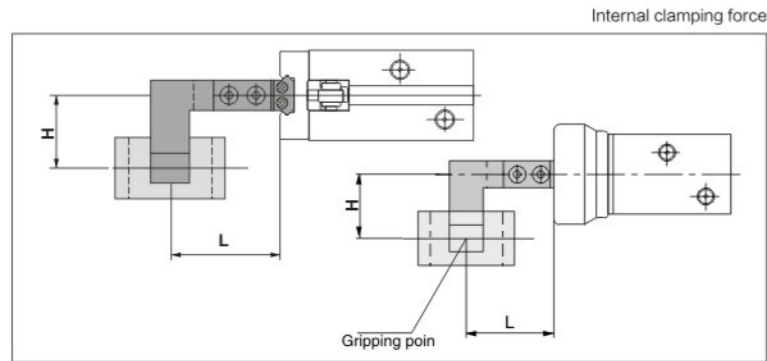


MHZ2-40D

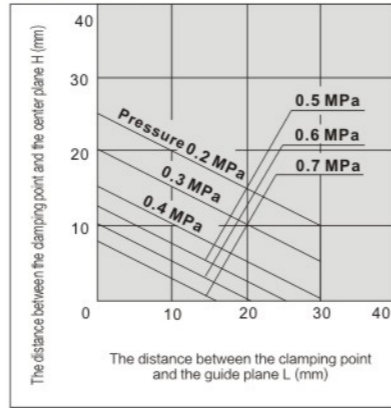


Different pressure corresponding to the performance parameters

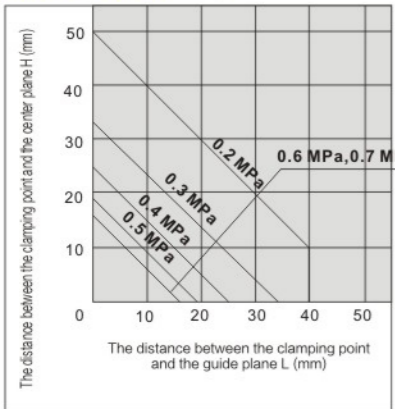
When the gripper is installed, the corresponding H and L values should conform to the right curve. If this range is exceeded, the life of the cylinder will be affected.



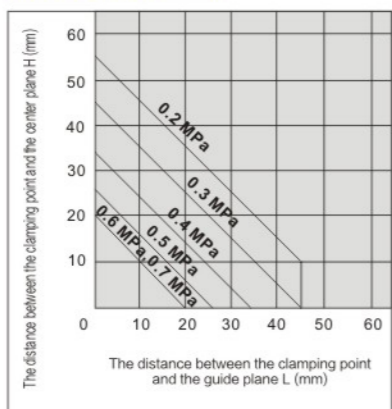
MHZ2-6D



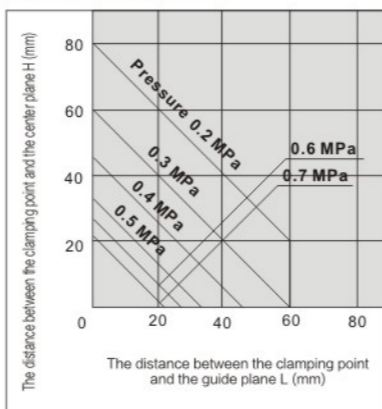
MHZ2-10D



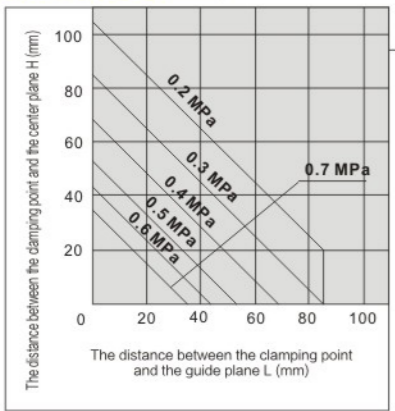
MHZ2-16D



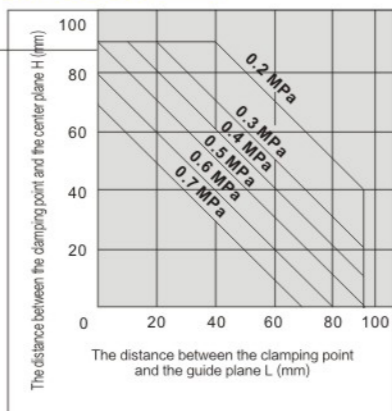
MHZ2-20D



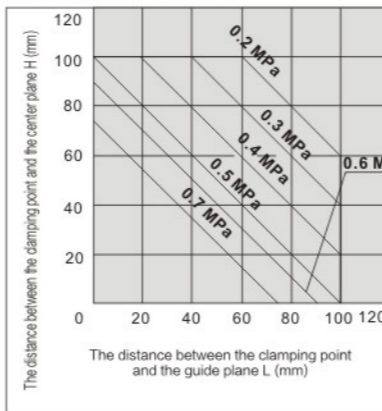
MHZ2-25D



MHZ2-32D



MHZ2-40D



Symbol

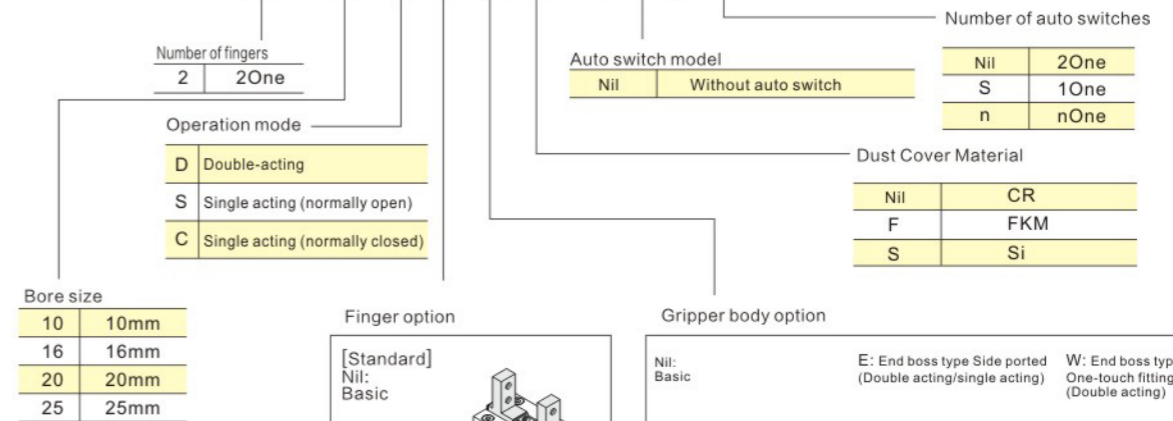


Standard Specification

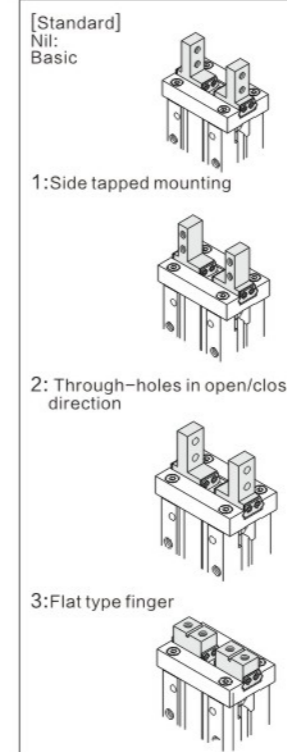
Bore size(mm)	10	16	20	25
Fluid	Air			
Operating pressure(MPa)	Double-acting	0.2-0.7		0.1-0.7
	Single acting	0.35-0.7		0.25-0.7
Ambient fluid temperature	-10~60℃			
Repeatability(mm)	±0.01			
The highest frequency of use(c.p.m)	120			
Lubrication	Not required			
Action type	Double acting · Single acting			
Auto switch (optional)	Solid state auto switch			

Ordering code

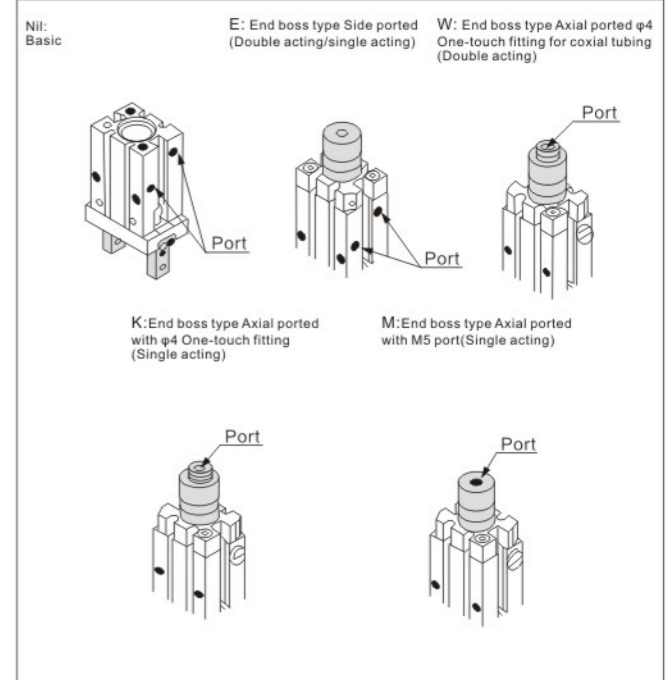
Parallel openable **MHZ L 2 - 16 D** - **M9PV**



Finger option



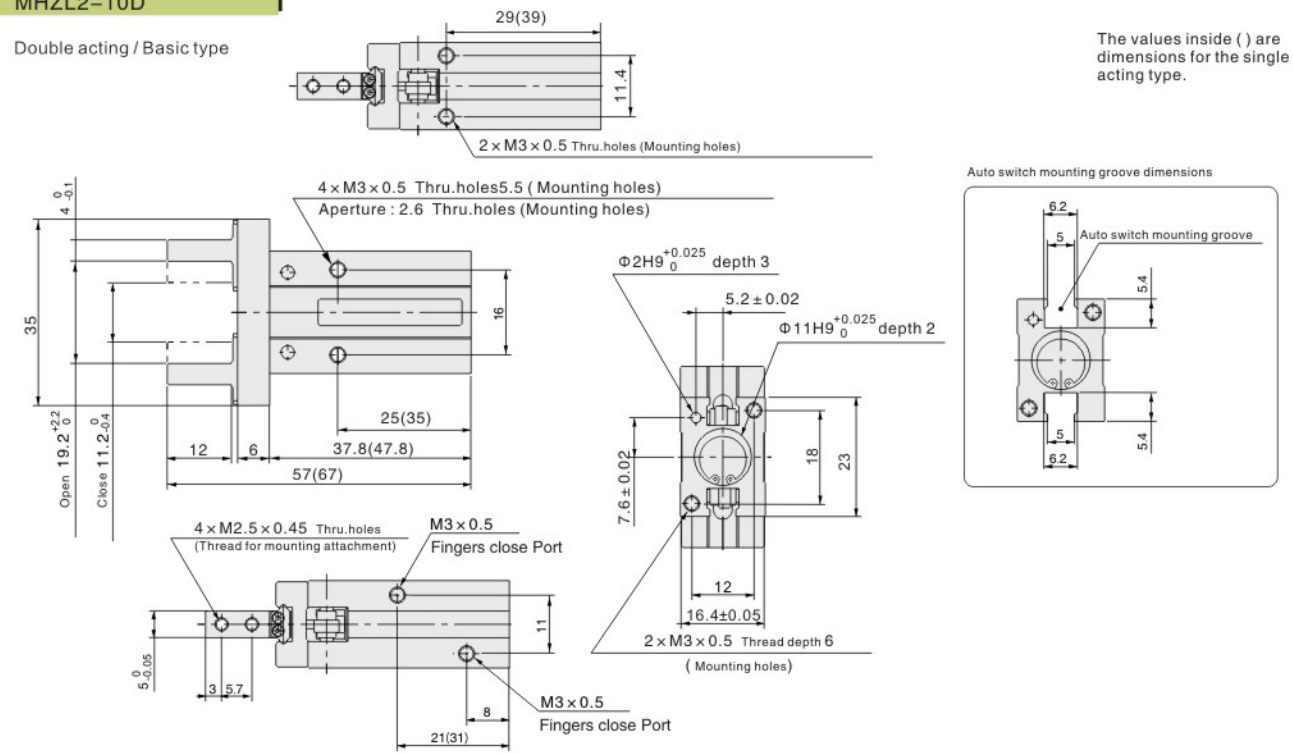
Gripper body option



Dimensions (mm)

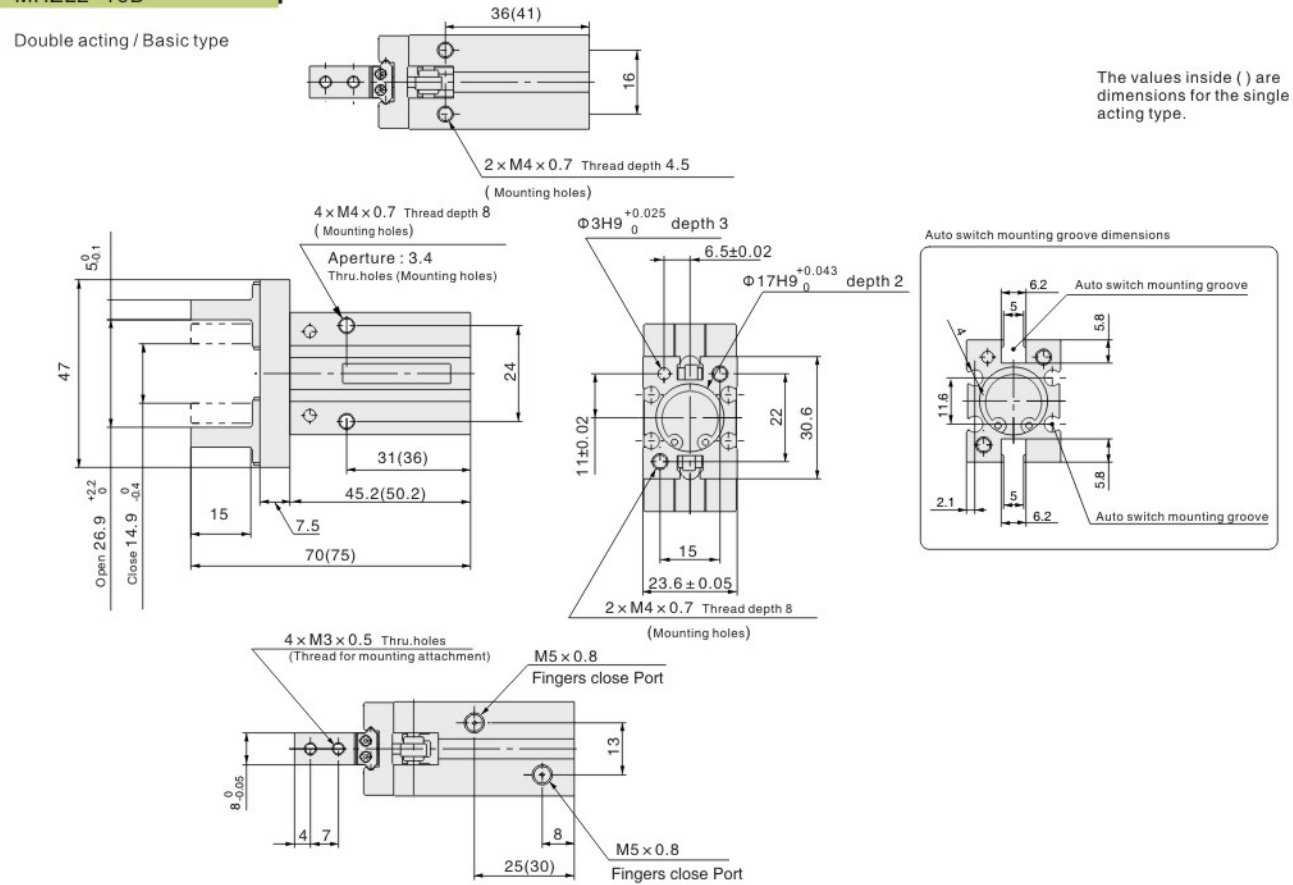
MHZL2-10D

Double acting / Basic type



MHZL2-16D

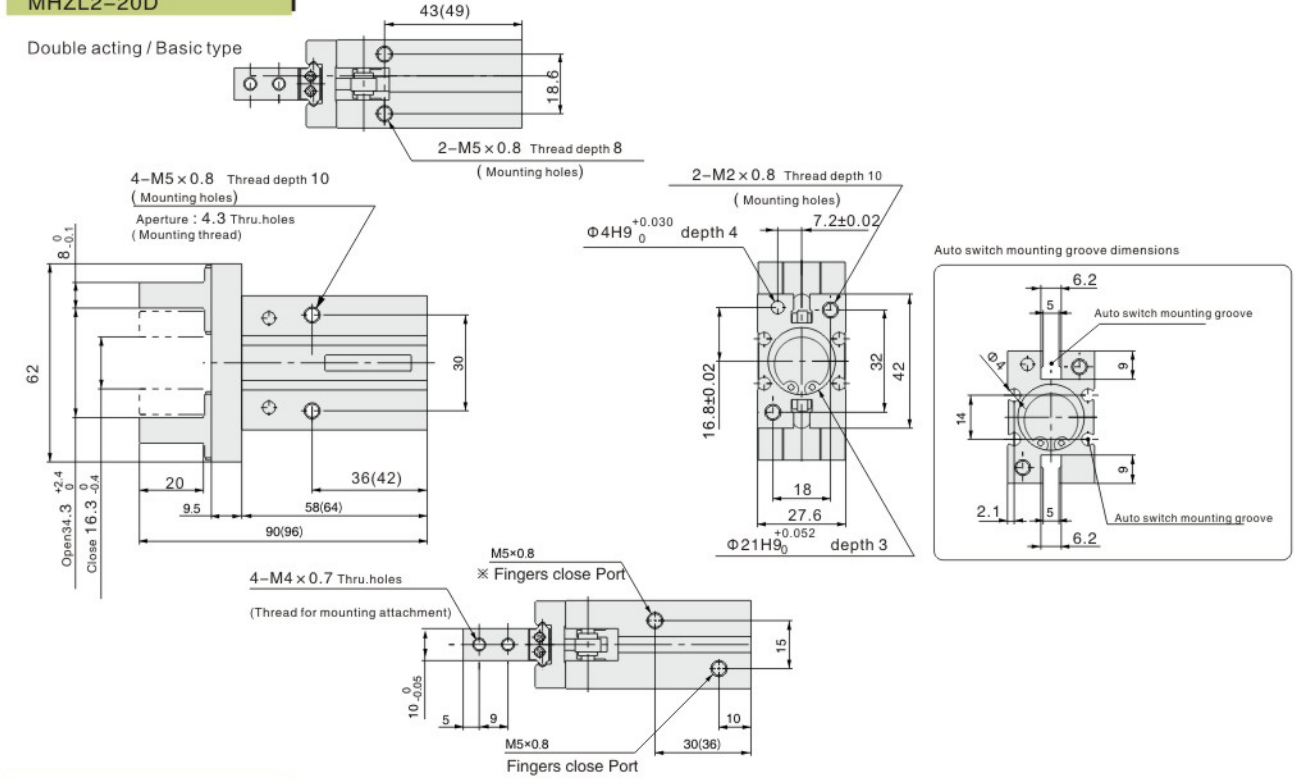
Double acting / Basic type



Dimensions (mm)

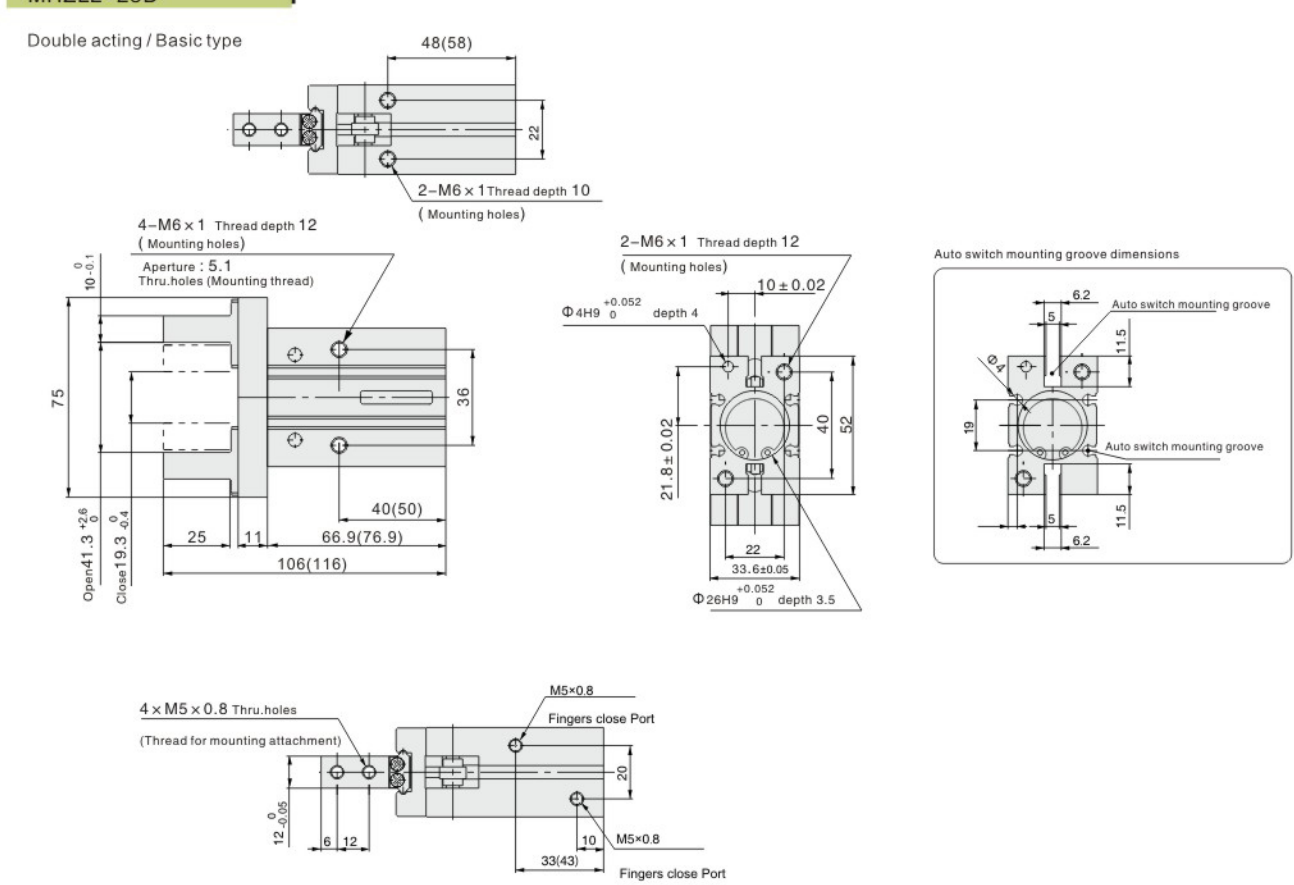
MHZL2-20D

Double acting / Basic type

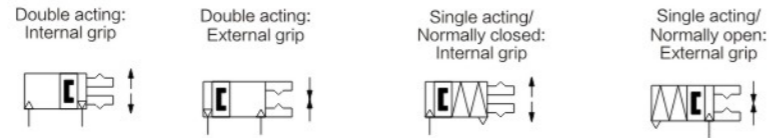


MHZL2-25D

Double acting / Basic type



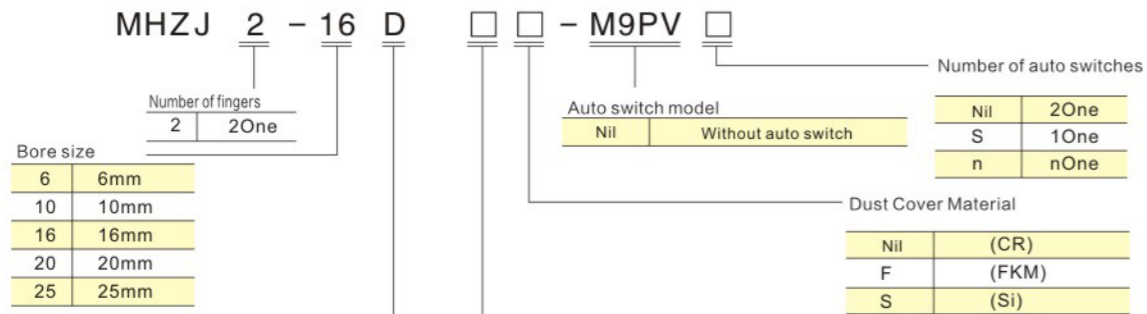
Symbol



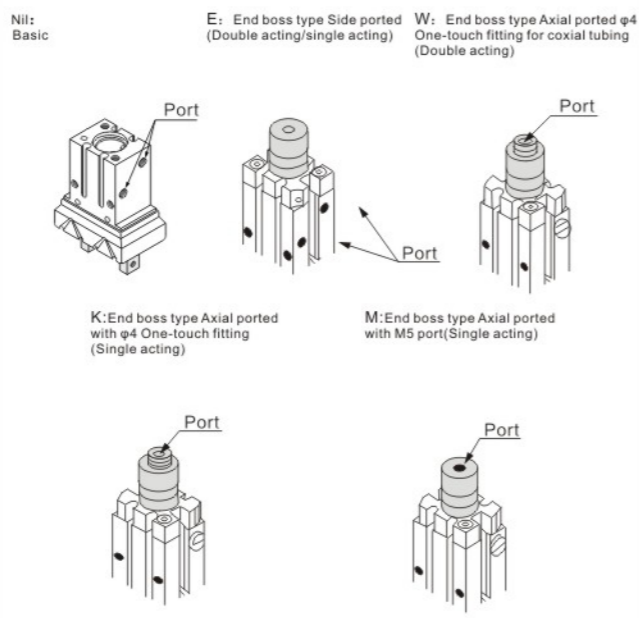
Standard Specification

Bore size(mm)		6	10	16	20	25
Fluid		Air				
Operating pressure(MPa)	Double-acting	0.15~0.7	0.2~0.7		0.1~0.7	
	Single acting	0.3~0.7	0.35~0.7		0.25~0.7	
Ambient fluid temperature		-10~60°C				
Repeatability(mm)		±0.01				
The highest frequency of use(c.p.m)		180				
Lubrication		Not required				
Action type		Double acting · Single acting				
Auto switch (optional)		Solid state auto switch(3-wire, 2-wire)				

Ordering code



Gripper body option

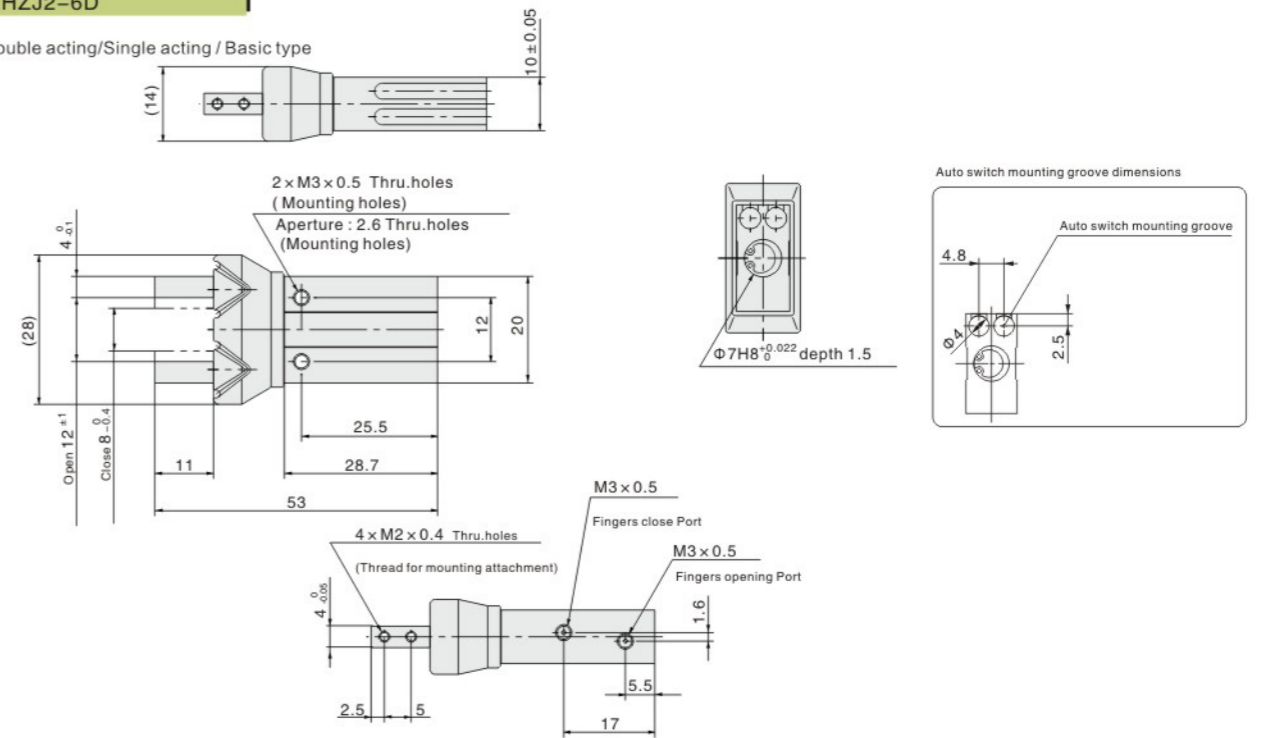


※ Φ 6 is only applicable to the basic type.

Dimensions (mm)

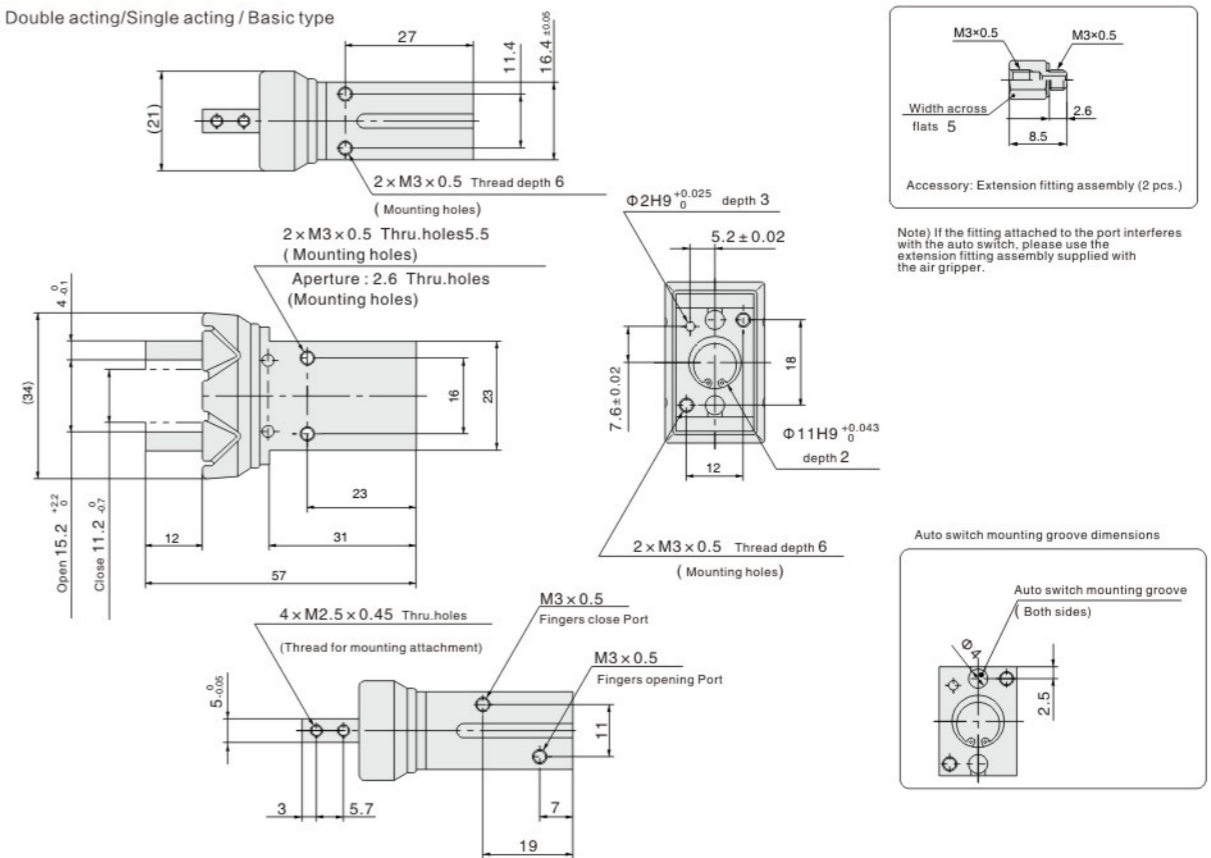
MHZJ2-6D

Double acting/Single acting / Basic type



MHZJ2-10D

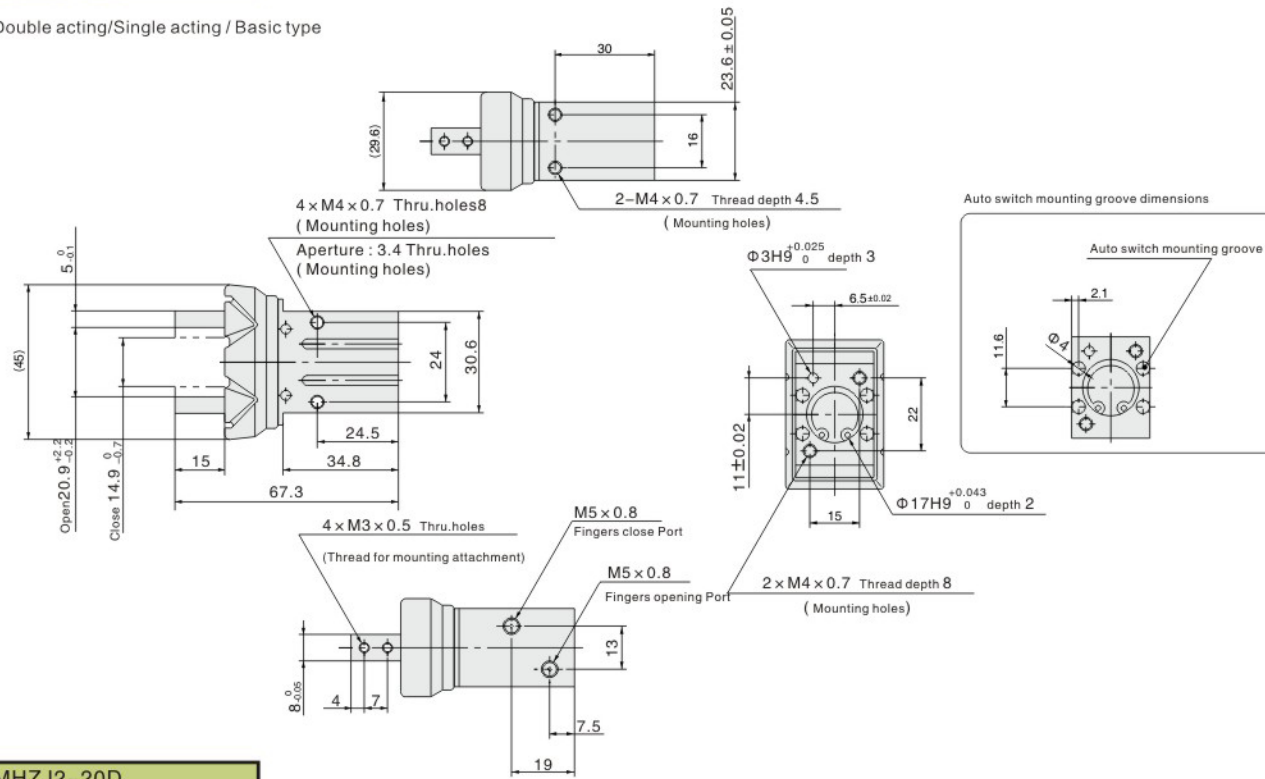
Double acting/Single acting / Basic type



Dimensions (mm)

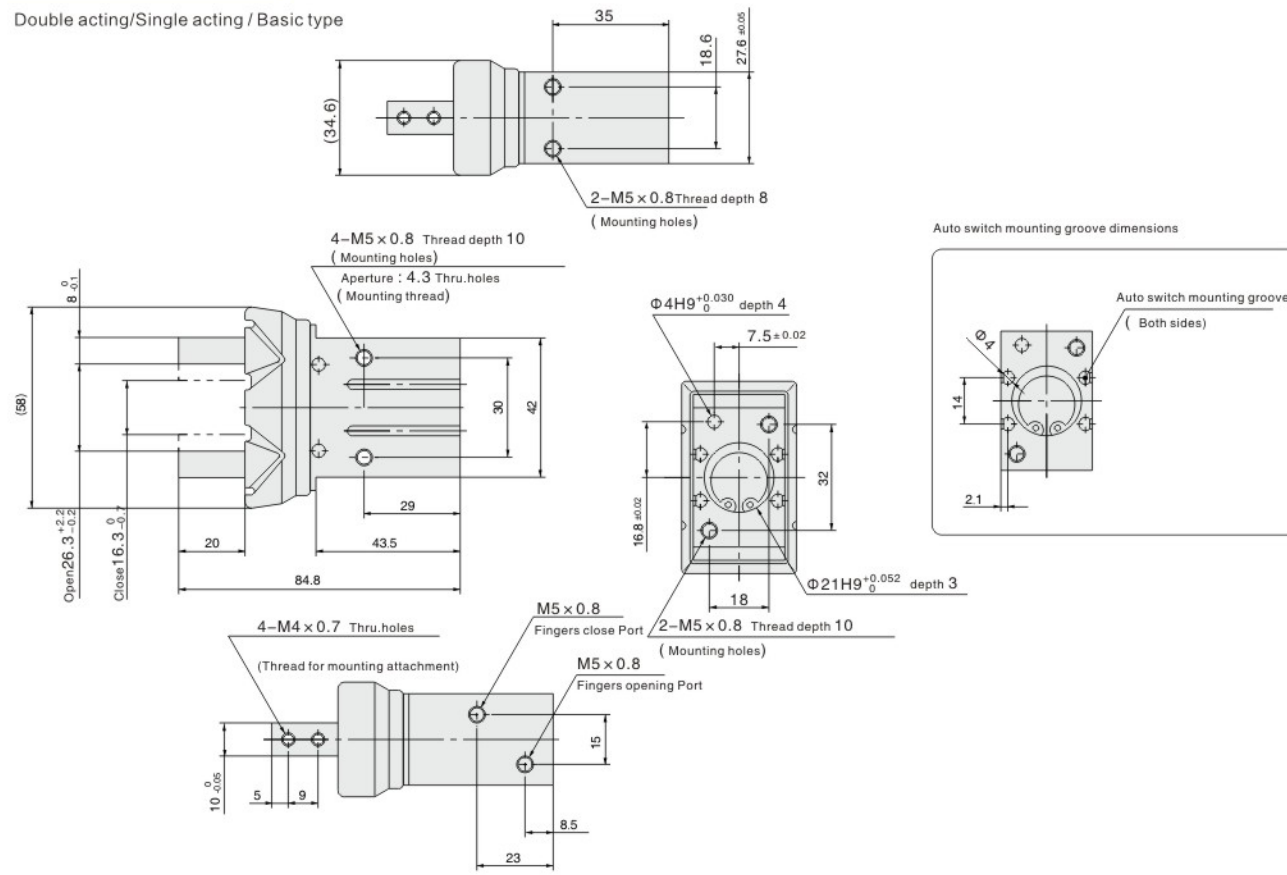
MHZJ2-16D

Double acting/Single acting / Basic type



MHZJ2-20D

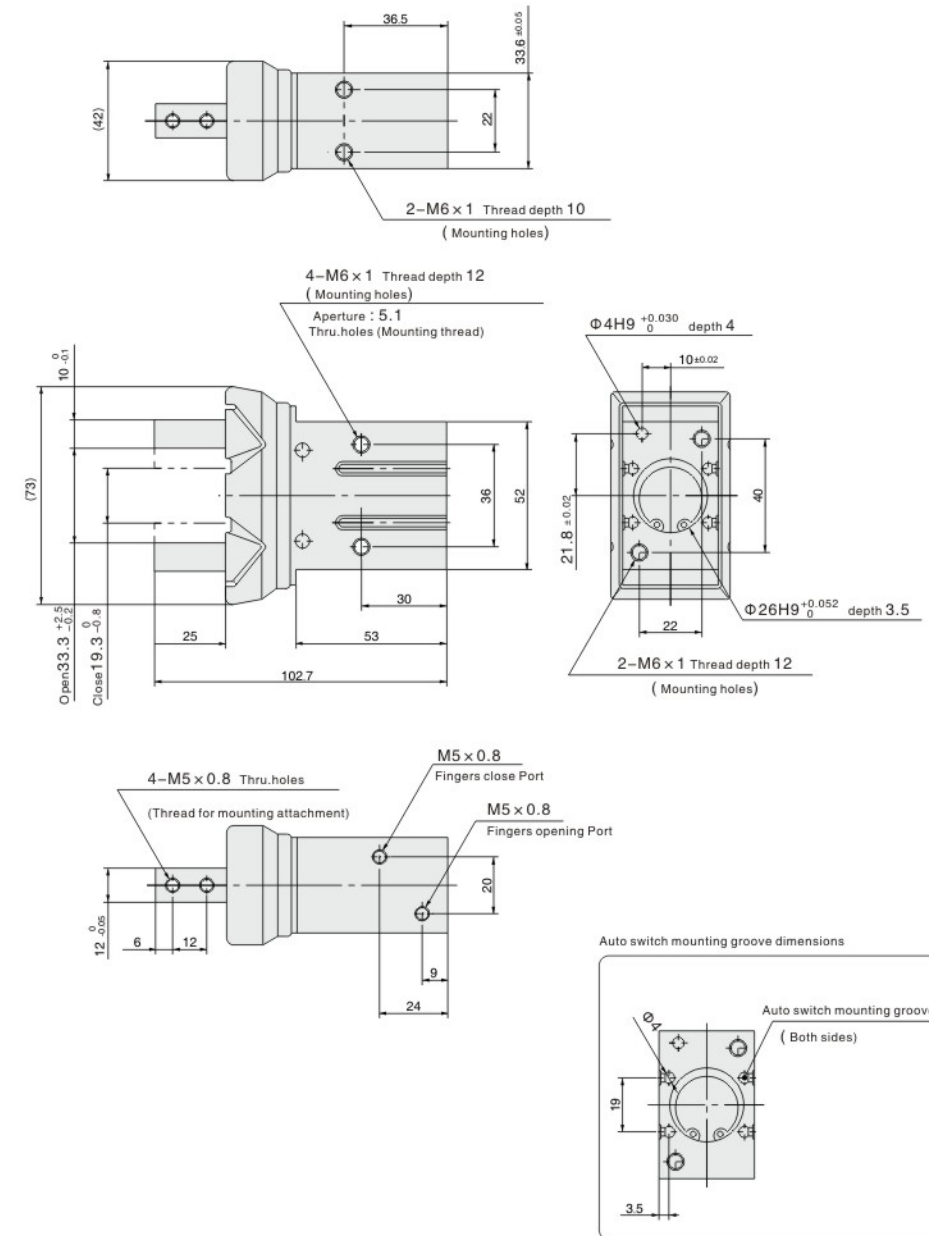
Double acting/Single acting / Basic type



Dimensions (mm)

MHZJ2-25D

Double acting/Single acting / Basic type



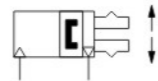


Standard Specification		
Bore size(mm)	8 12 16 20	
Fluid	Air	
Operating Pressure (MPa)	0.15-0.7 0.1-0.7	
Ambient fluid temperature	-10-60°C (No freezing)	
Repeatability	Note 1) ±0.05mm	
Max. frequency of use	Short stroke	120c.p.m.
	Medium stroke	120c.p.m.
	Long stroke	60c.p.m.
Oil supply	Non-lube	
Action type	Double acting	
Magnetic switch (optional)	Non-contact magnetic switch (3-wire, 2-wire)	

Note 1) It is the value of the finger that does not have a bias load state.
When the bias load is applied to the finger, the maximum value is ±0.15 mm due to the backlash of the rack gear.

Symbol

Double acting, Inner diameter clamping



Double acting, IOD clamping



Ordering code

MHF2 - 12 D □ □ - **M9BW** □

Hand index
2 | 2claw

Bore(mm)
8 | 8
12 | 12
16 | 16
20 | 20

Mode of action
D | Double-acting

Stroke
Nil | Short stroke
1 | Medium stroke
2 | Long stroke

Number of auto switches
Nil | 2
S | 1

Auto Switch Model
Nil | Without auto switch

Subject option
Unmarked: Axial piping type
R: Side piping type

Dimensions (mm)

MHF2-8D

2.5H9^{+0.025}₀ depth2.5

2.5H9^{+0.025}₀ depth2.5

2×M3×0.5 Thread depth7 (Mounting thread)

16

3 28.3 3.4

11.4 0.2

Part A details

M3×0.5 Fingers open Port

15.8 5.9 14 19

M3×0.5 Fingers close Port

36 22 11 11

2×M3×0.5 Thread depth4 (Mounting thread)

2×Φ2.6 Through hole (mounting holes)*

2×Φ4.5

E-E

When closed 0^{+0.1}₀

When open 8±1

4×M3×0.5 Thread depth4 (Mounting thread)

14 12 26

4×M2.5×0.45 Thread depth3 (Accessory mounting thread)

Magnetic switch mounting groove size

1.3 3 3

Φ4

Magnetic switch mounting slot

Φ4 M2.5×0.45

Accessory Hexagon Socket Screws (Special Screws)

2×Φ2H9^{+0.025}₀ depth2

2×M3×0.5 Thread depth4 (Mounting thread)

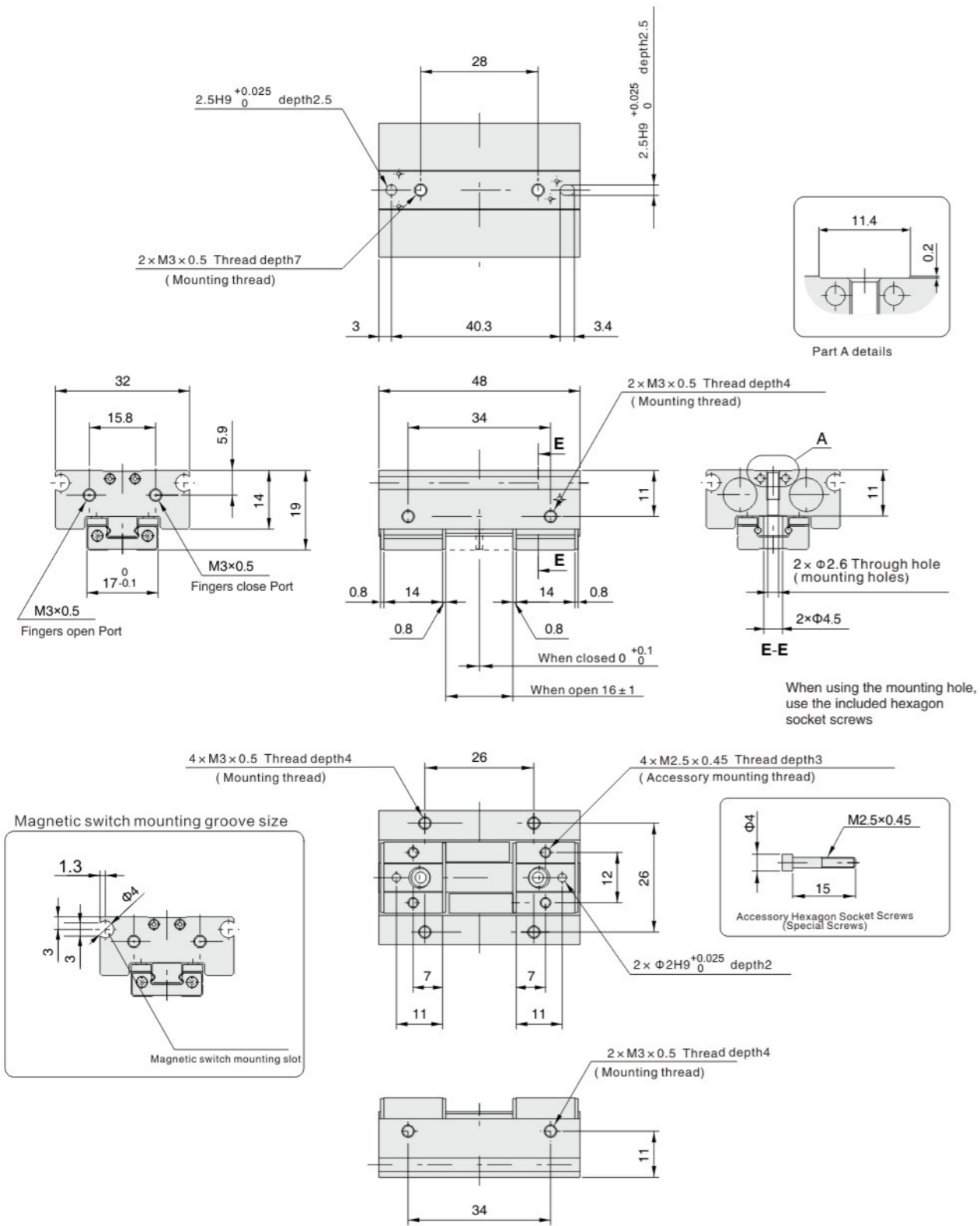
11

22

When using the mounting hole, use the included hexagon socket screws

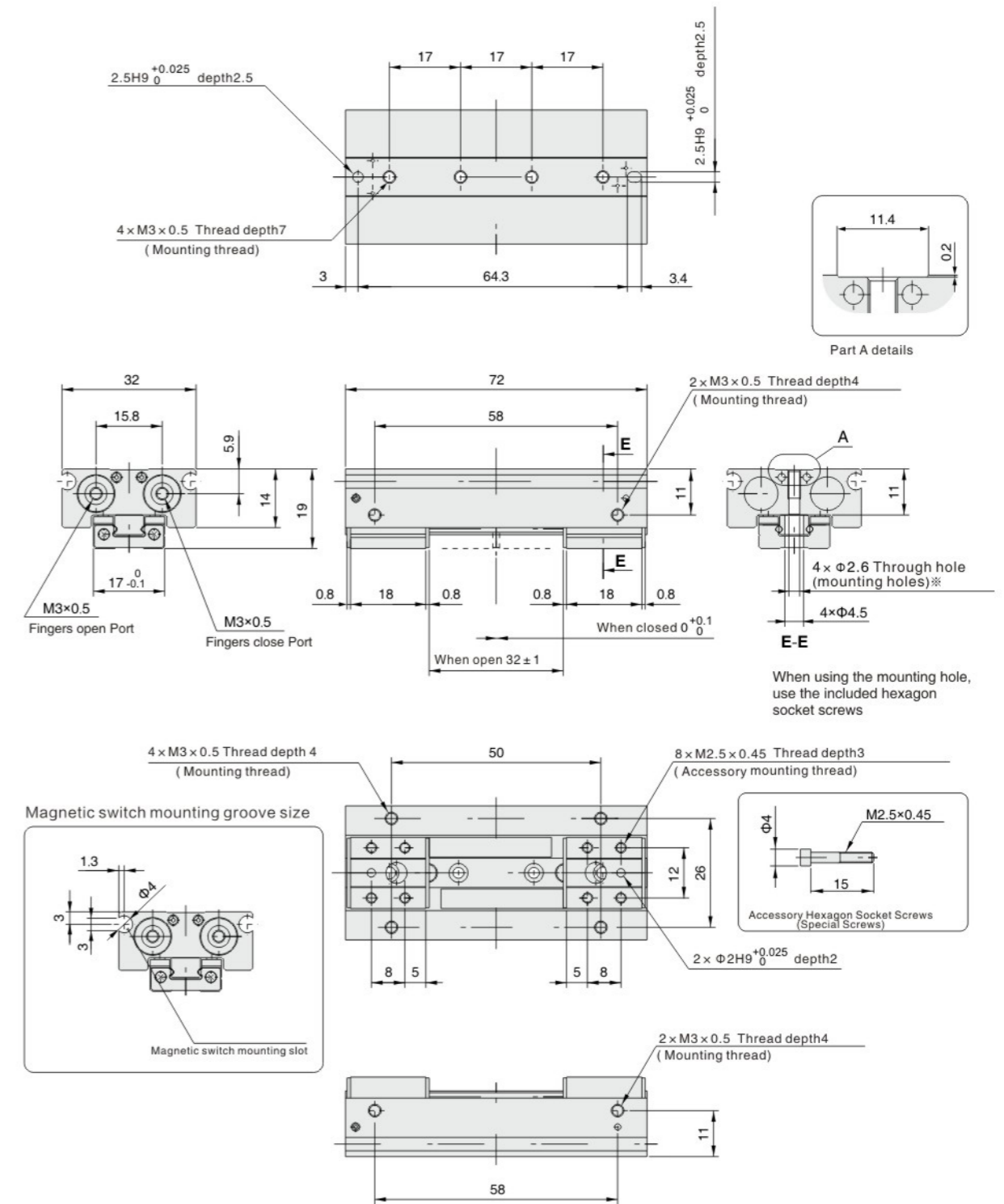
Dimensions (mm)

MHF2-8D1



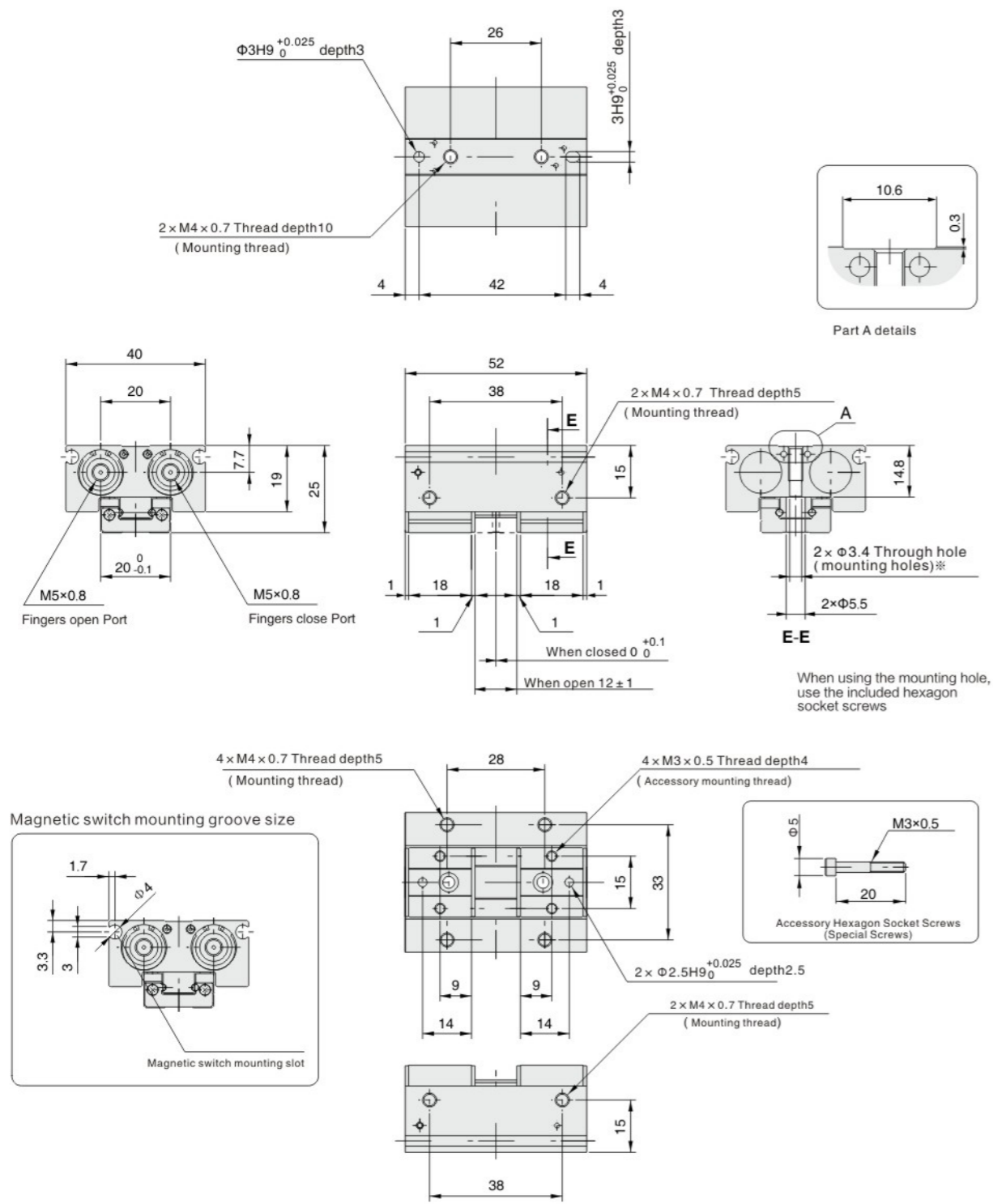
Dimensions (mm)

MHF2-8D2



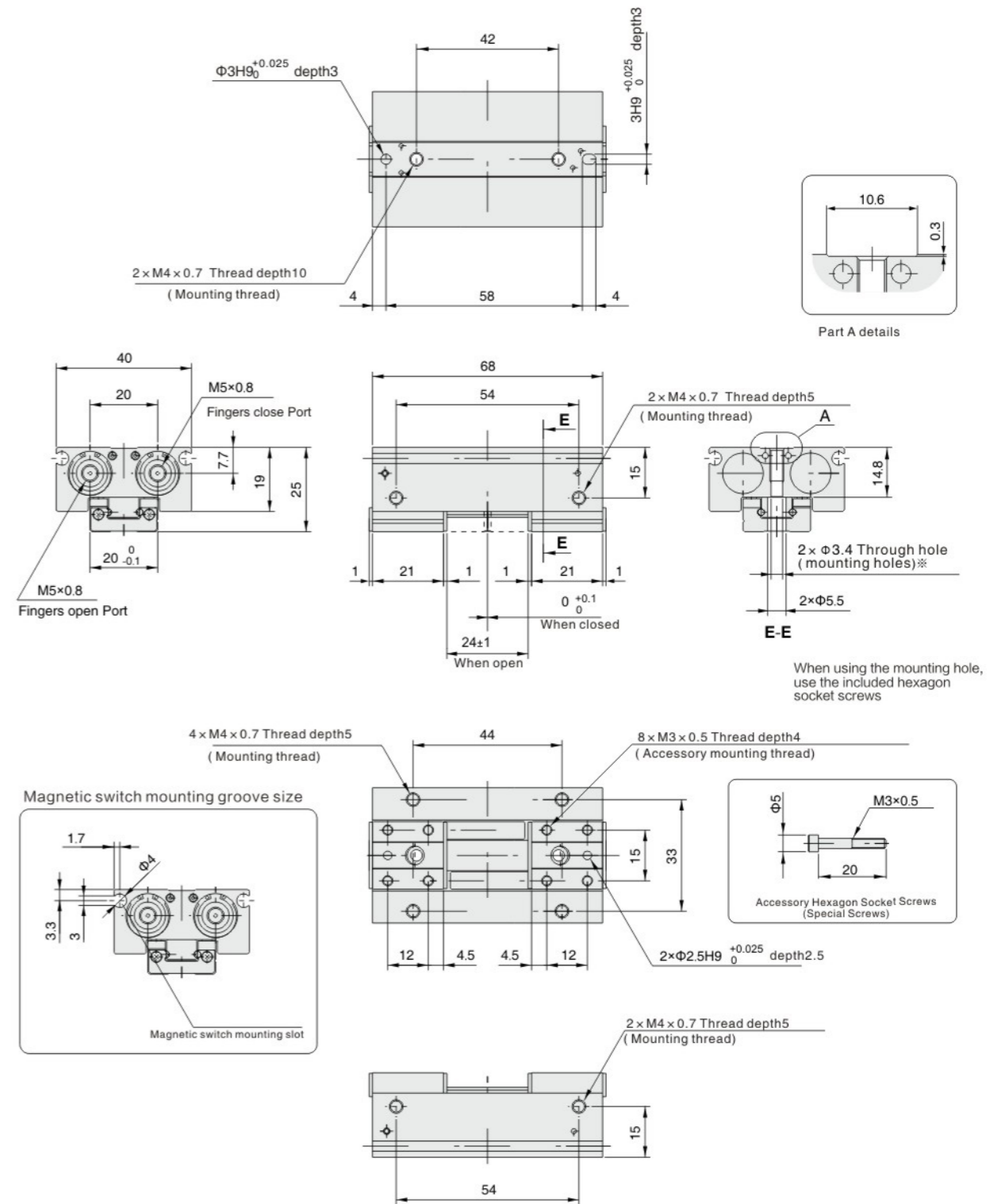
Dimensions (mm)

MHF2-12D



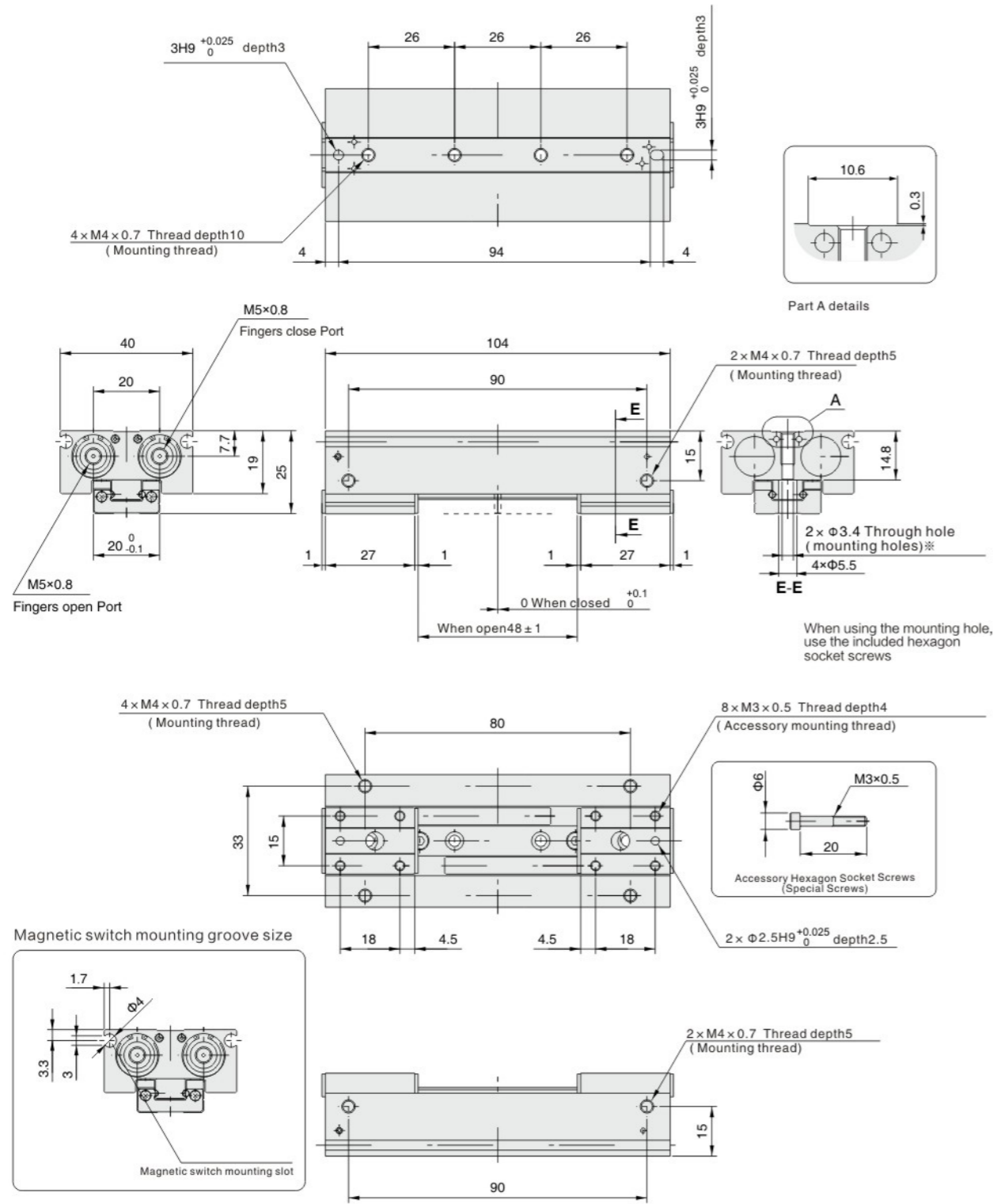
Dimensions (mm)

MHF2-12D1



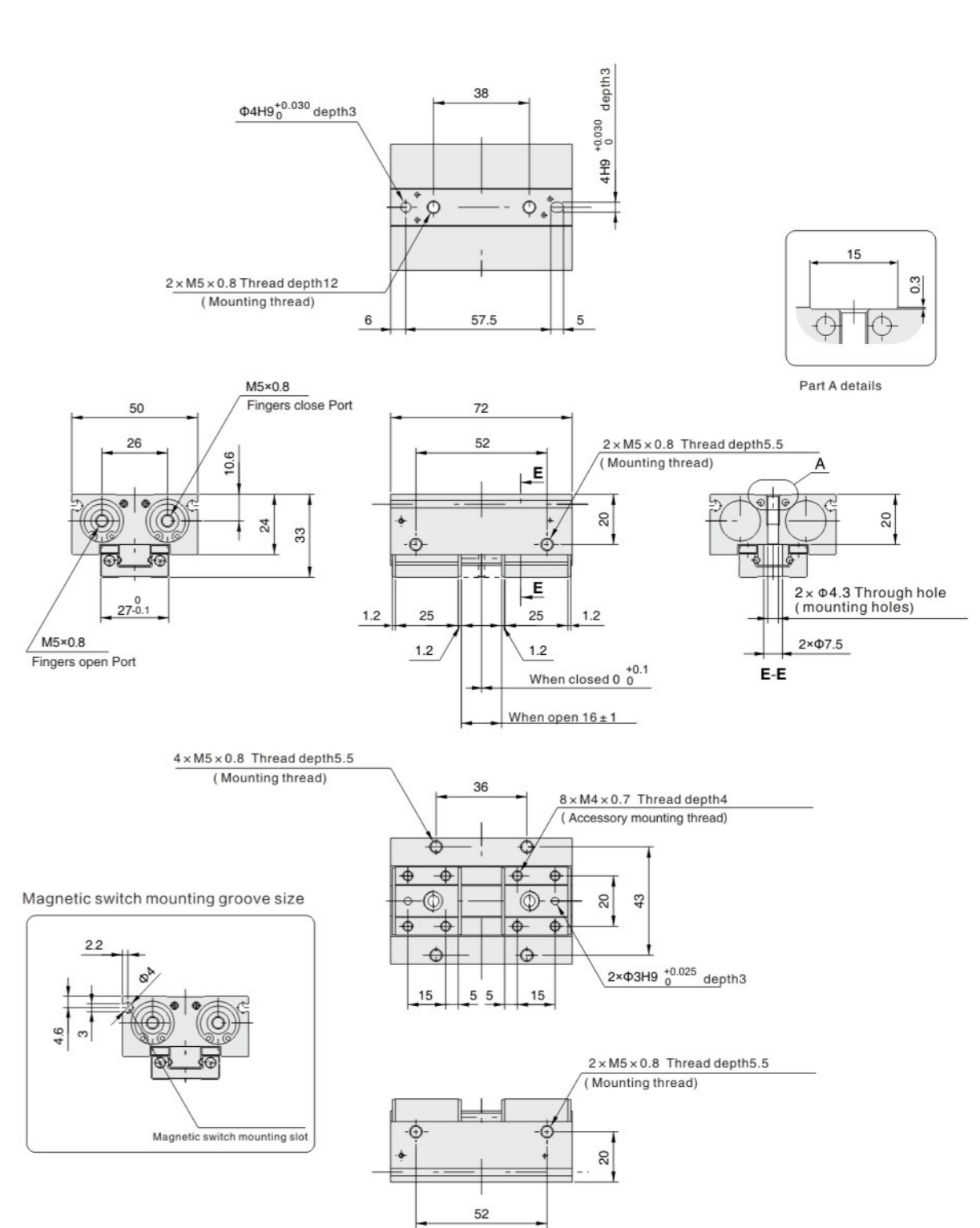
Dimensions (mm)

MHF2-12D2



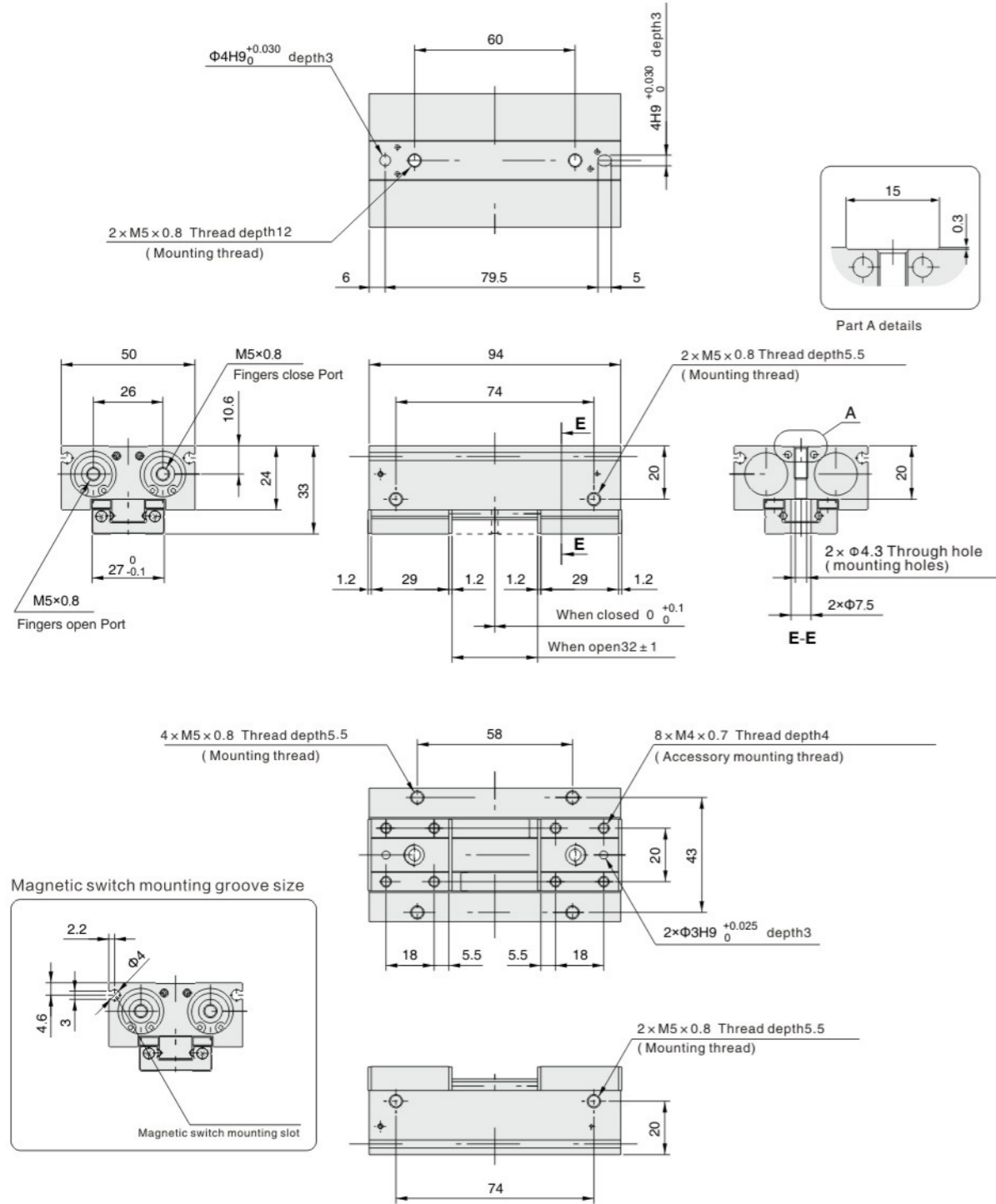
Dimensions (mm)

MHF2-16D



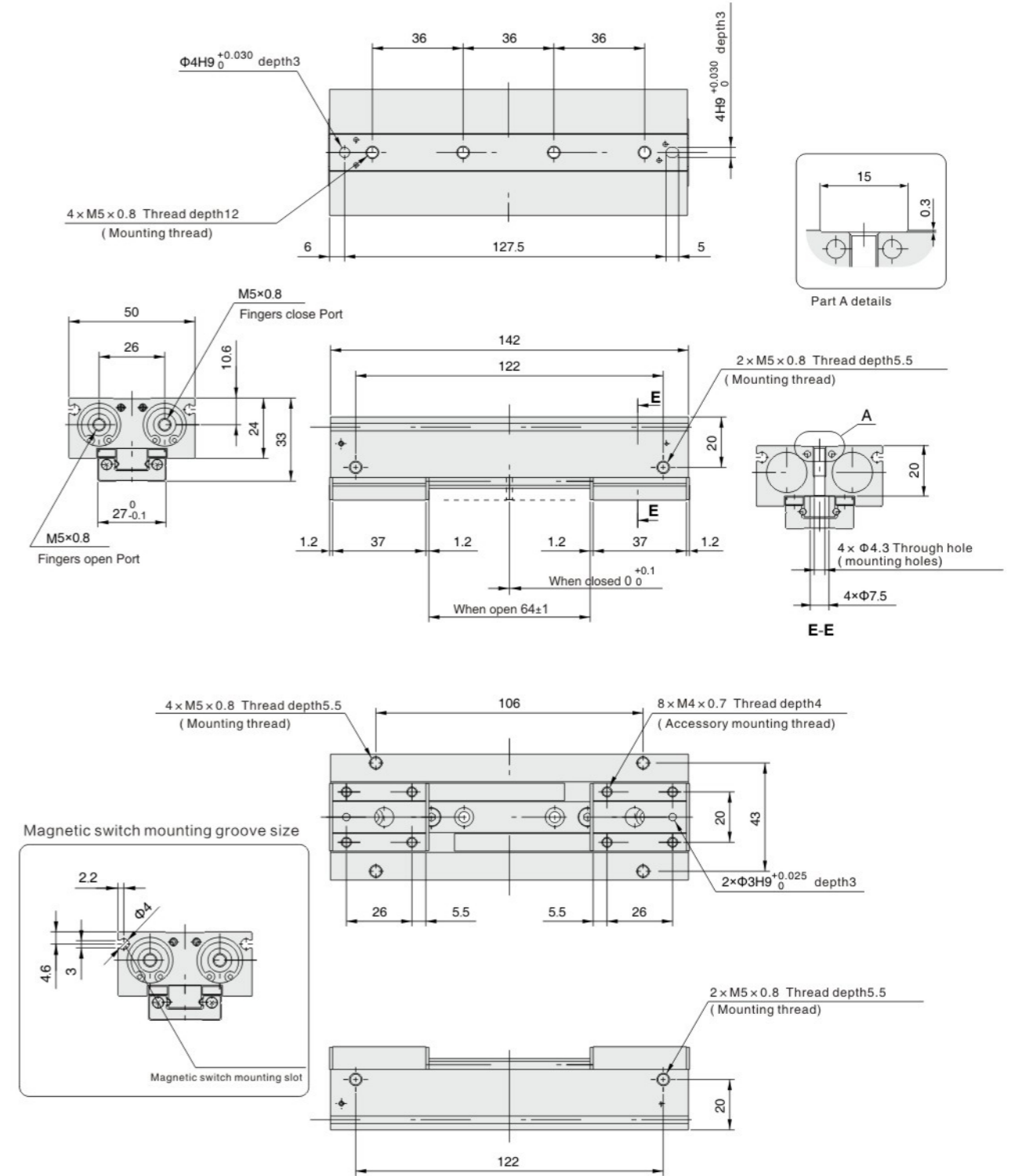
Dimensions (mm)

MHF2-16D1



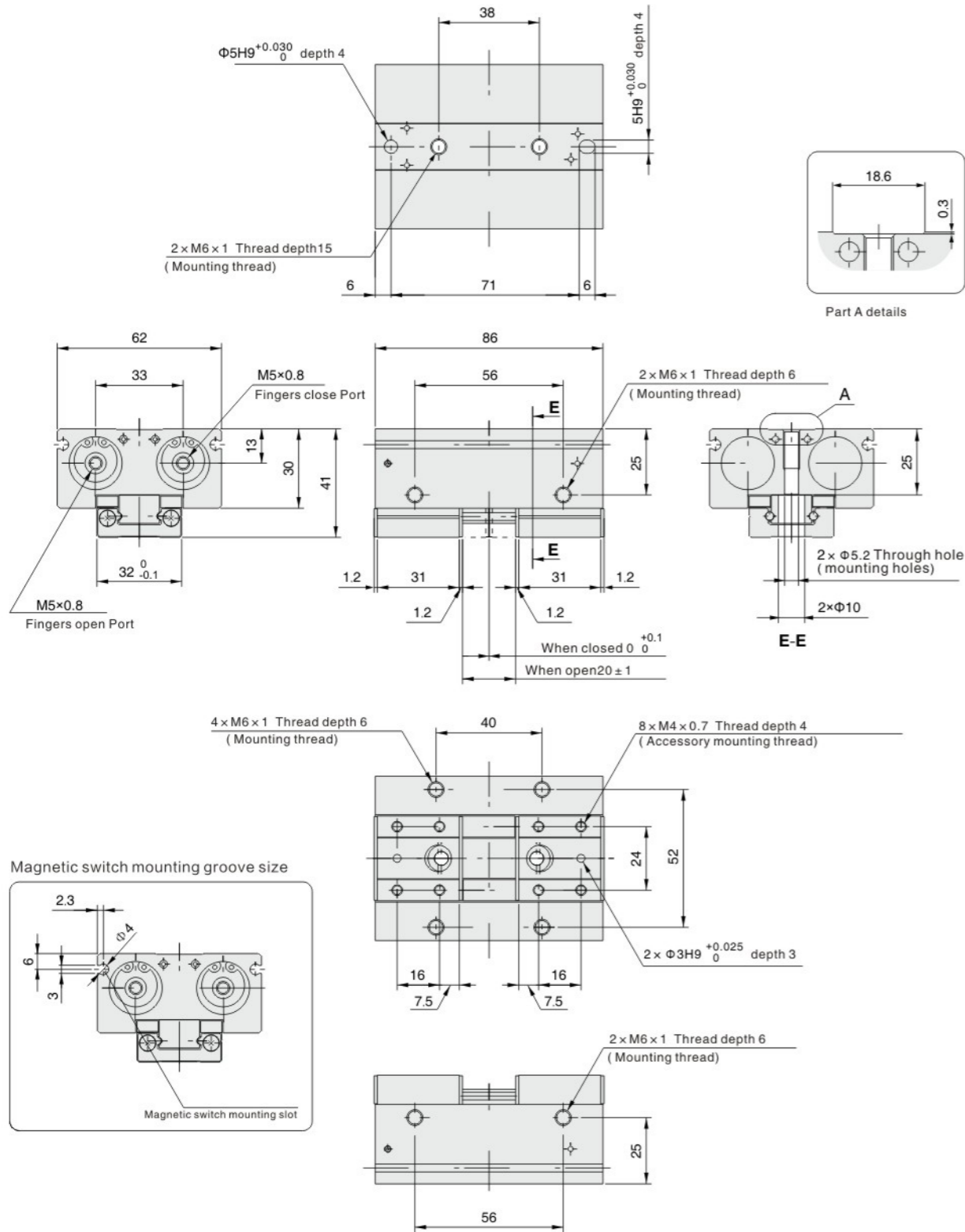
Dimensions (mm)

MHF2-16D2



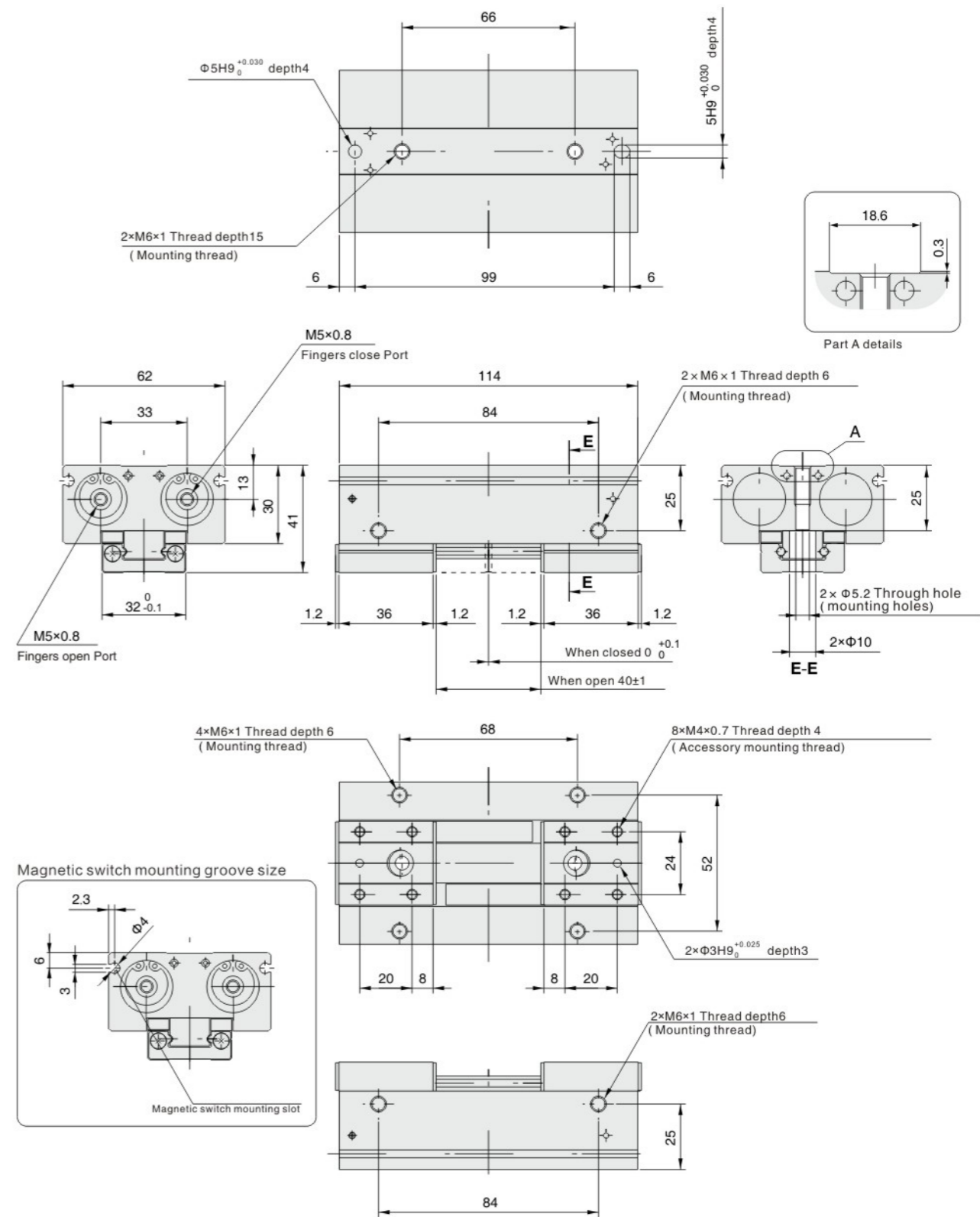
Dimensions (mm)

MHF2-20D



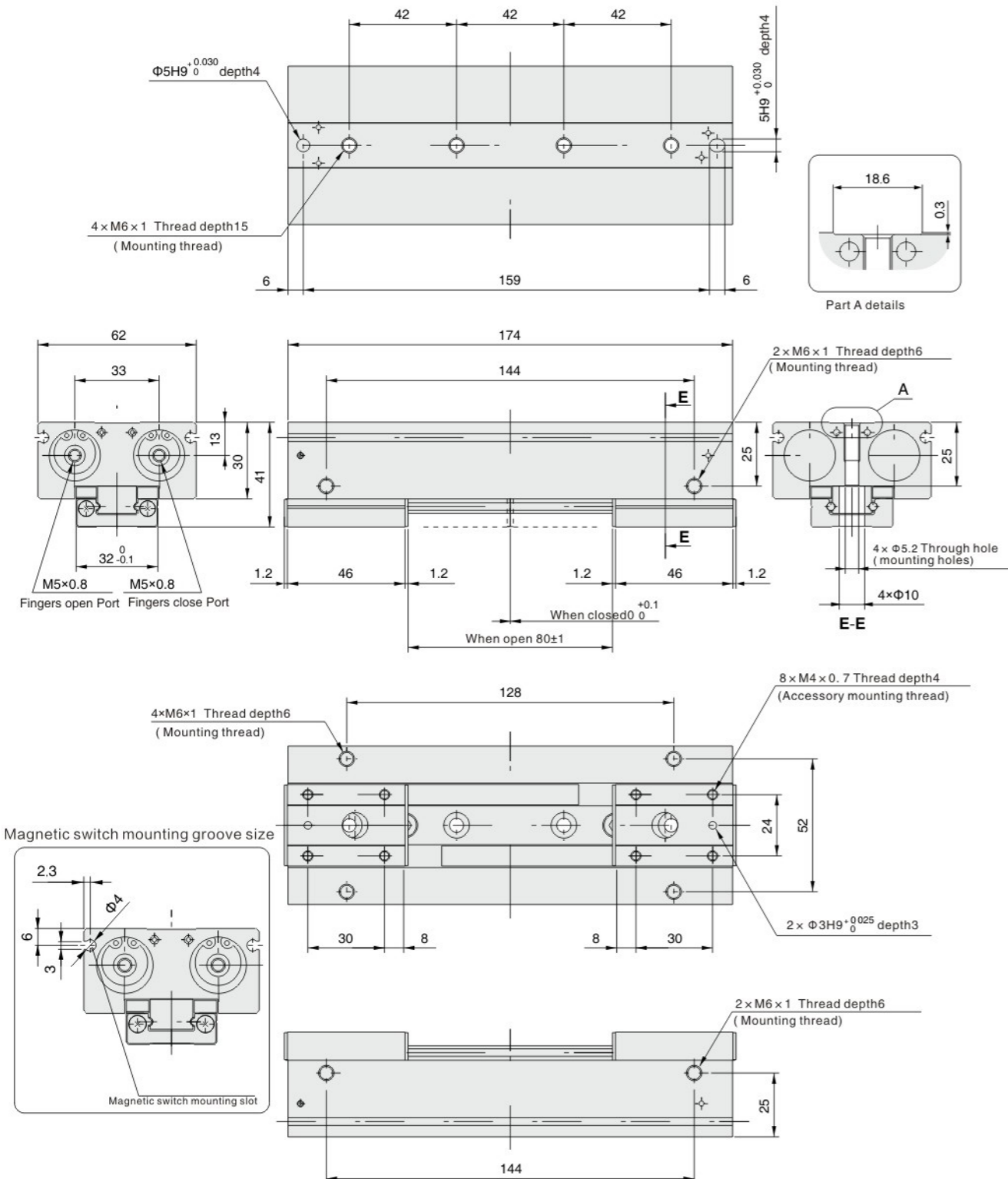
外形尺寸图(毫米)/Dimensions (mm)

MHF2-20D1



Dimensions (mm)

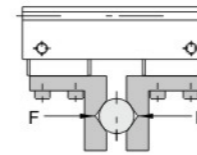
MHF2-20D2



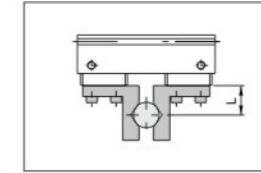
Effective Gripping Force

● Indication of effective gripping force

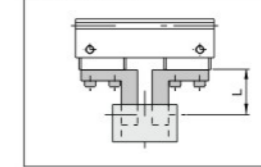
The gripping force shown in the tables represents the gripping force of one finger when all fingers and attachments are in contact with the work. F = one finger thrust.



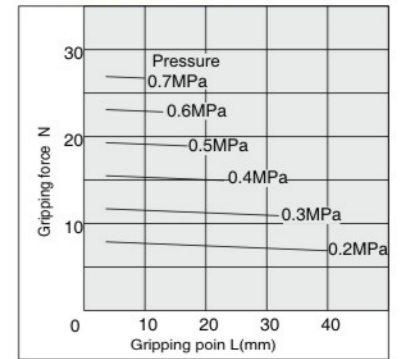
External Grip



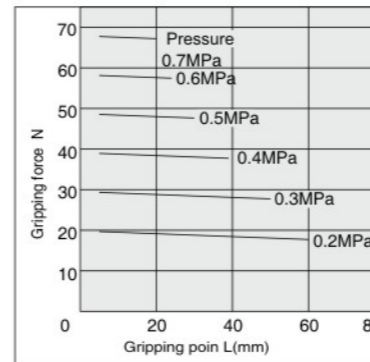
Internal Grip



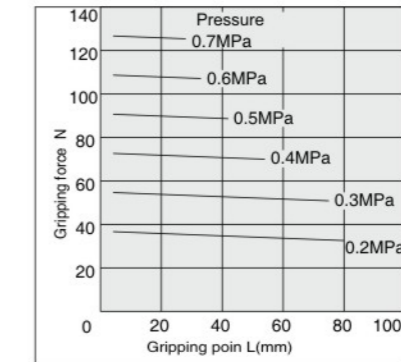
MHF2-8D



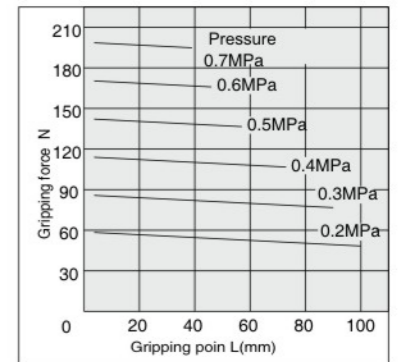
MHF2-12D



MHF2-16D



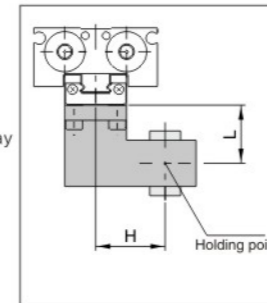
MHF2-20D



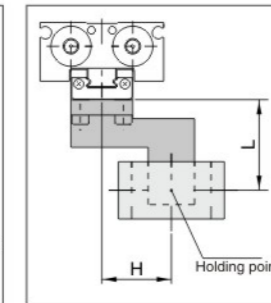
The air gripper should be operated so that the amount of overhang "H" will stay within the range given in the graphs below.

If the workpiece gripping point goes beyond the range limits, this will have an adverse effect on the life of the air gripper.

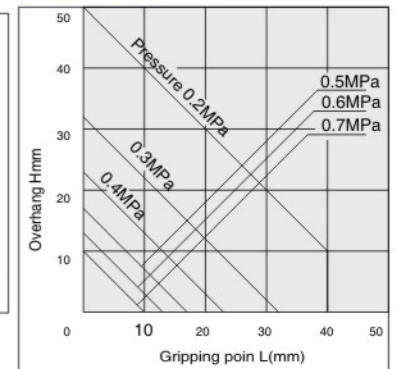
External Grip



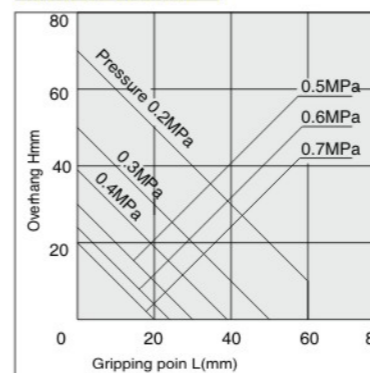
Internal Grip



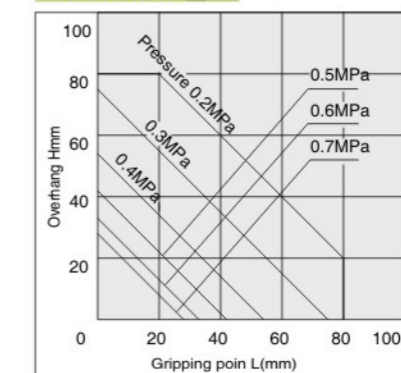
MHF2-8D



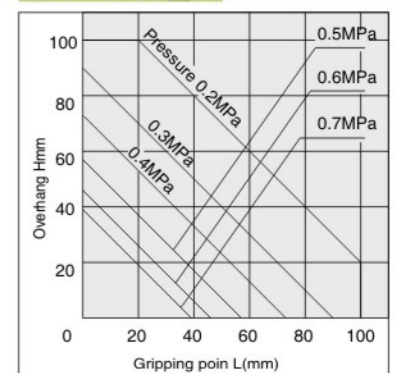
MHF2-12D

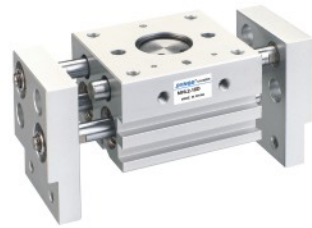


MHF2-16D



MHF2-20D

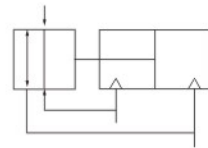




Standard Specification						
Bore size (mm)	10	16	20	25	32	40
Fluid	Air					
Action type	Double-acting					
Max. operating pressure(MPa)	0.6					
Min. operating pressure(MPa)	0.15					0.1
Ambient fluid temperature	-10~60℃					
Repeatability	±0.1mm					
Note1) Retention N	14	45	74	131	228	396
Port size	M5×0.8			Rc1/8		

Note 1) The gripping point distance is 40mm (Φ10-Φ25) 80mm (Φ32/Φ40) under the pressure of 0.5Mpa.

Symbol



- Long finger stroke, suitable for large volume workpiece.
- Dual piston design can increase retention
- Fingers synchronized by rack and pinion mechanism.
- Dust-protection design adopt special sealing.

订购码/Ordering code

MHL 2 - 16 D 1 - Y59A □

2 pcs of fingers Double-acting Auto Switch Model

Nil	Without auto switch	Number of auto switches
S		2
n		n

* Auto switch model behind, with a sign indicating the length of the wire:
Nil -0.5m, L-3m, cases Y59A, Y59AL

Auto switch model
M9B M9N M9P

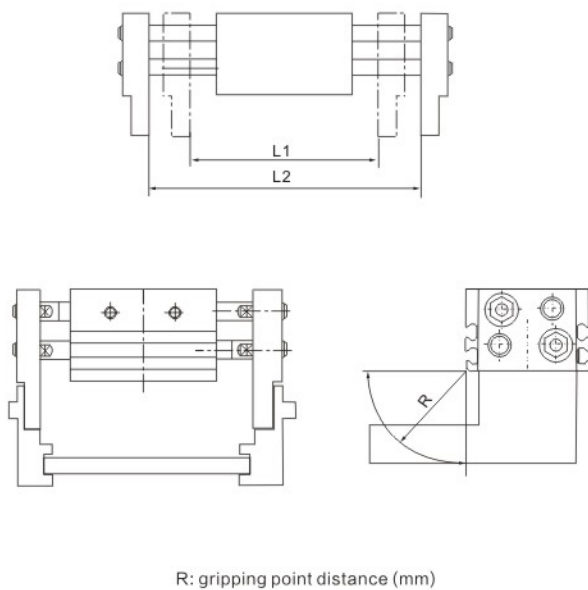
Bore size

10	ø10mm
16	ø16mm
20	ø20mm
25	ø25mm
32	ø32mm
40	ø40mm

Finger opening and closing stroke

Bore size	ø10	ø16	ø20	ø25	ø32	ø40
Nil	20	30	40	50	70	100
1	40	60	80	100	120	160
2	60	80	100	120	160	200

行程/Stroke



Model	Bore size (mm)	Max. operating frequency c.p.m	Opening / Closing stroke (L2-L1) mm	Width at closing (mm) L1	Width at the opening (mm) L2
MHL2-10D	10	60	20	56	76
MHL2-10D1		40	40	78	118
MHL2-10D2		40	60	96	156
MHL2-16D	16	60	30	68	98
MHL2-16D1		40	60	110	170
MHL2-16D2		40	80	130	210
MHL2-20D	20	60	40	82	122
MHL2-20D1		40	80	142	222
MHL2-20D2		40	100	162	262
MHL2-25D	25	60	50	100	150
MHL2-25D1		40	100	182	282
MHL2-25D2		40	120	200	320
MHL2-32D	32	30	70	150	220
MHL2-32D1		20	120	198	318
MHL2-32D2		20	160	242	402
MHL2-40D	40	30	100	188	288
MHL2-40D1		20	160	246	406
MHL2-40D2		20	200	286	486

Dimensions (mm)

MHL2-10D□

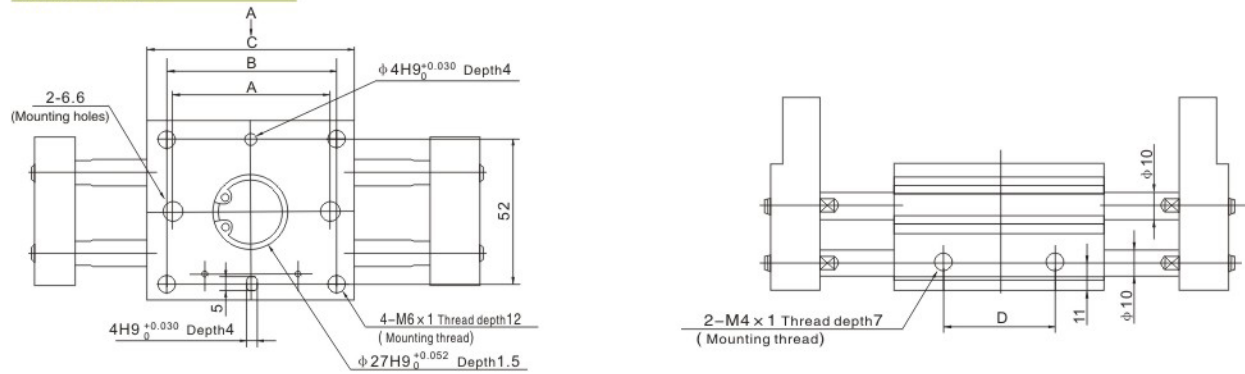
MHL2-16D□

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

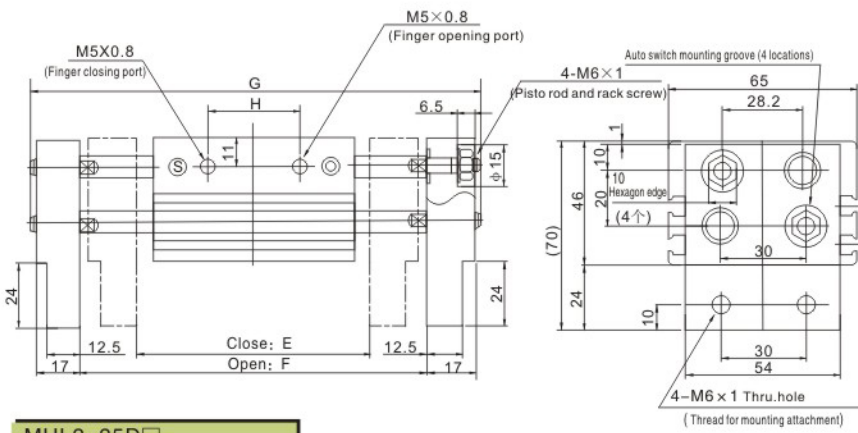
Model	A	B	C	D	E	F	G	H
MHL2-16D	40	45	60	28	68	98	128	26
MHL2-16D1	70	75	90	58	110	170	200	50
MHL2-16D2	90	95	110	78	130	210	240	70

Dimensions (mm)

MHL2-20D

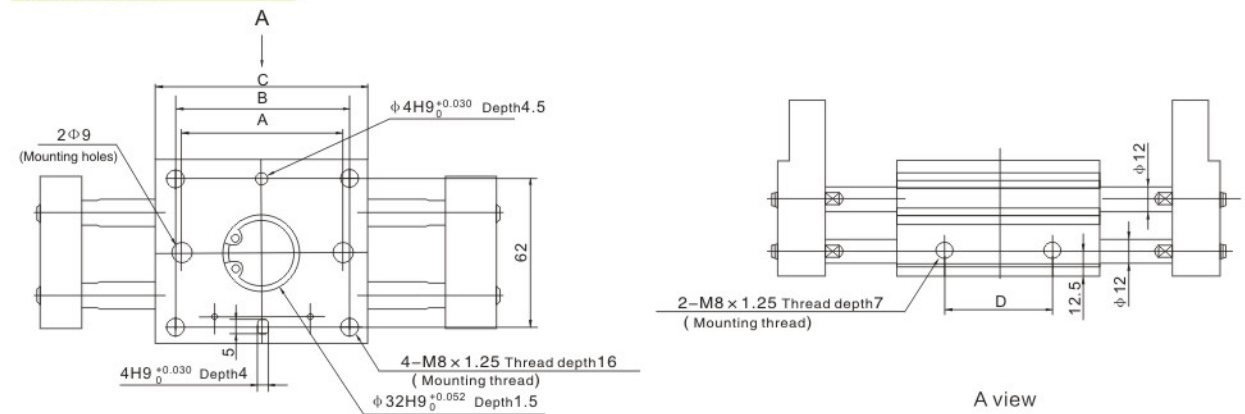


A view

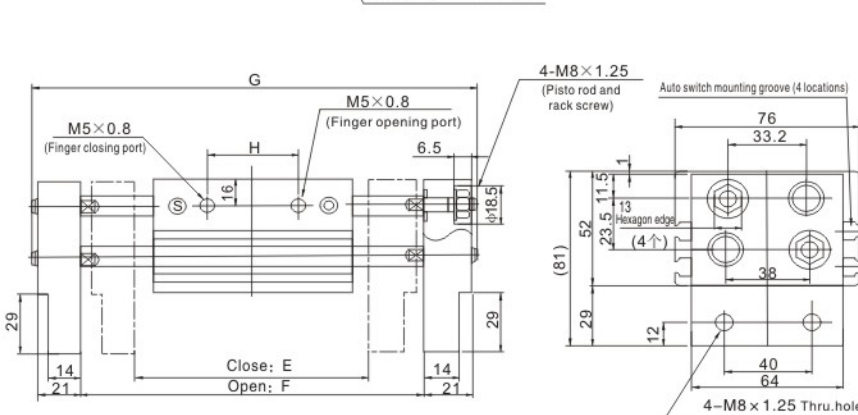


Model	A	B	C	D	E	F	G	H
MHL2-20D	54	58	71	38	82	122	160	32
MHL2-20D1	96	100	113	80	142	222	260	68
MHL2-20D2	116	120	133	100	162	262	300	88

MHL2-25D



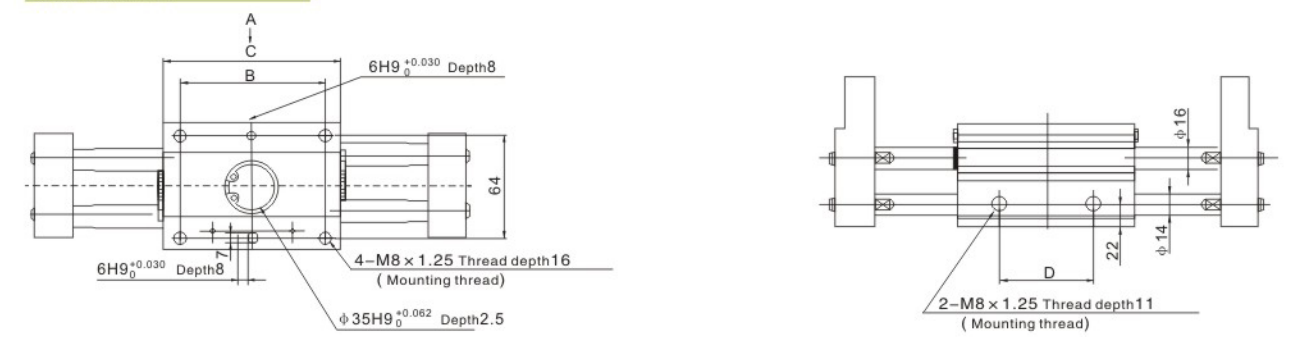
A view



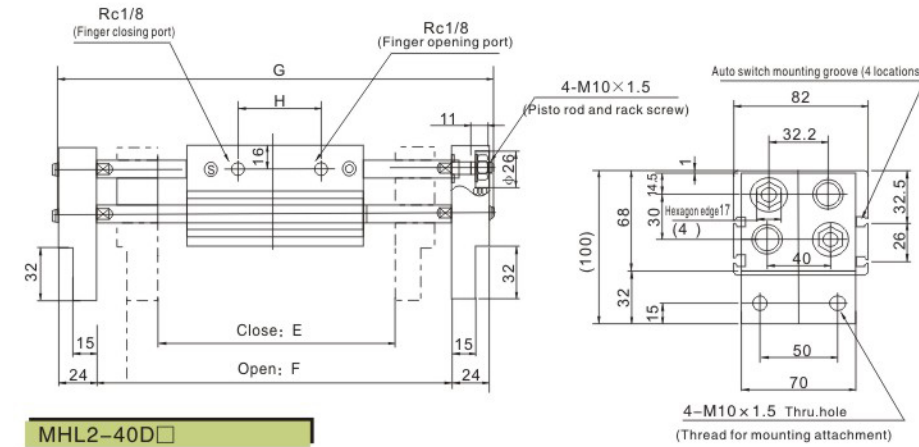
Model	A	B	C	D	E	F	G	H
MHL2-25D	66	70	88	48	100	150	196	38
MHL2-25D1	120	124	142	102	182	282	328	86
MHL2-25D2	138	142	160	120	200	320	366	104

Dimensions (mm)

MHL2-32D

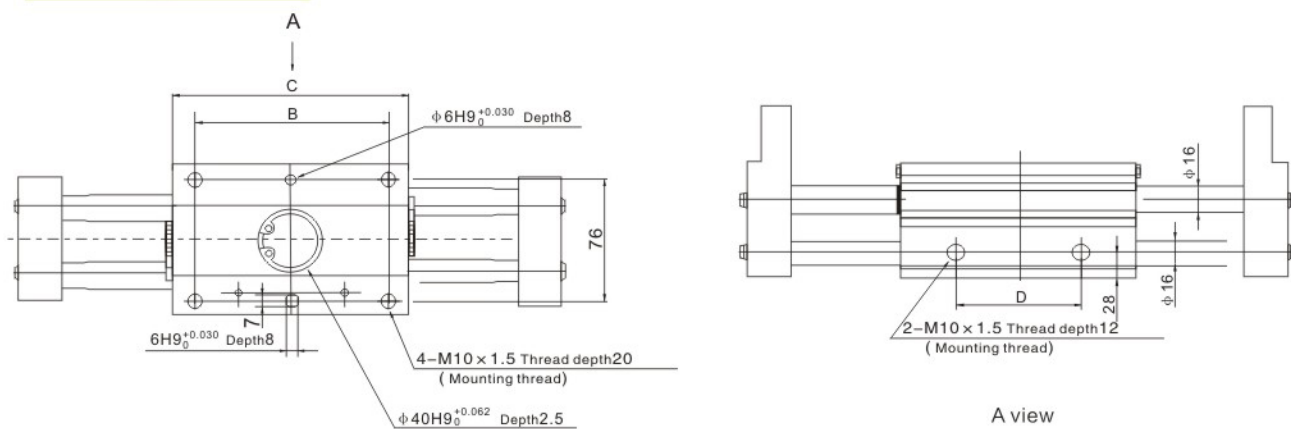


A view

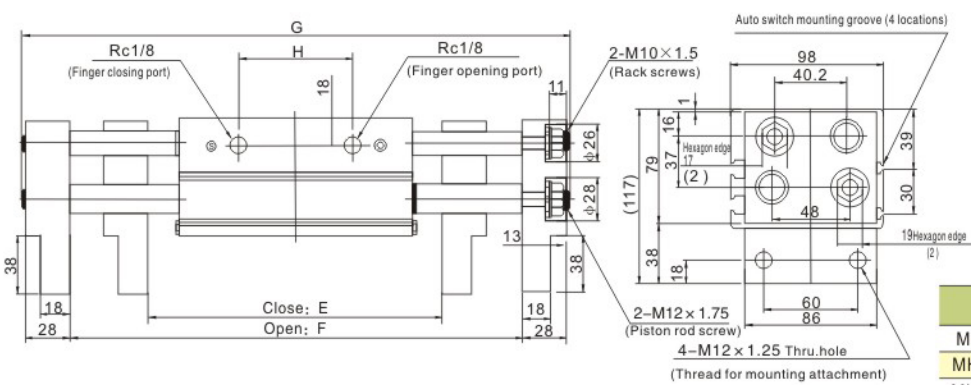


Model	B	C	D	E	F	G	H
MHL2-32D	86	110	60	150	220	272	56
MHL2-32D1	134	158	108	198	318	370	104
MHL2-32D2	178	202	152	242	402	454	148

MHL2-40D



A view

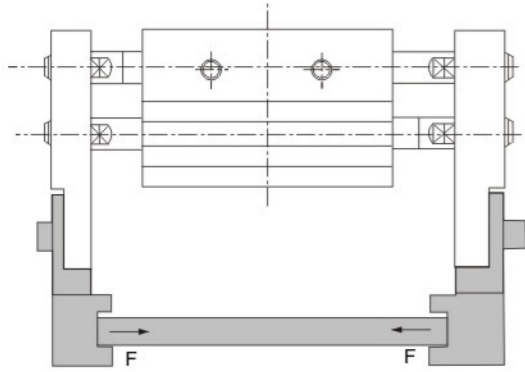


Model	B	C	D	E	F	G	H
MHL2-40D	116	148	80	188	288	348	72
MHL2-40D1	174	206	138	246	406	466	130
MHL2-40D2	214	246	178	286	486	546	170

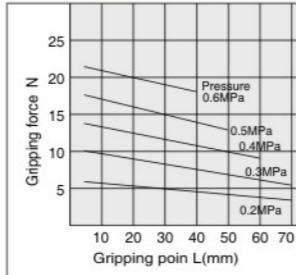
Effective Gripping Force

● Indication of effective gripping force

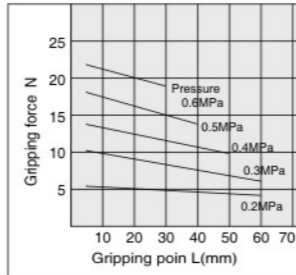
The gripping force shown in the tables represents the gripping force of one finger when all fingers and attachments are in contact with the work.
F = one finger thrust.



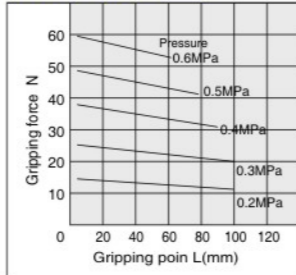
MHL2-10D



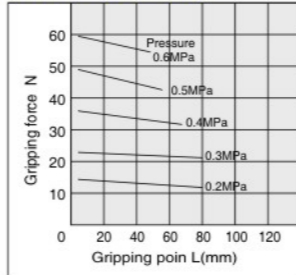
MHL2-10D1/2



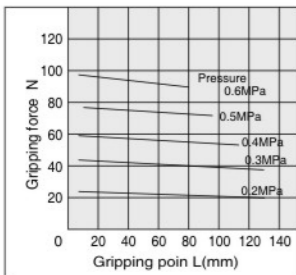
MHL2-16D



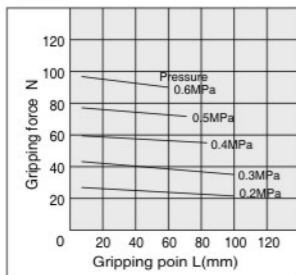
MHL2-16D1/2



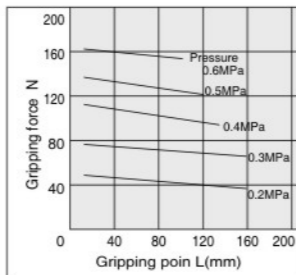
MHL2-20D



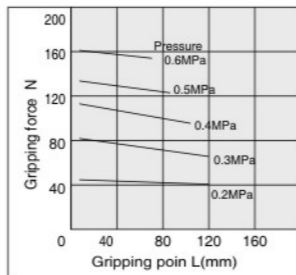
MHL2-20D1/2



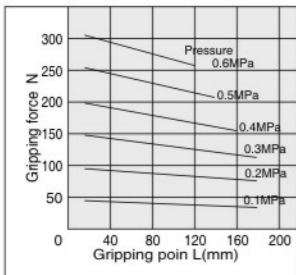
MHL2-25D



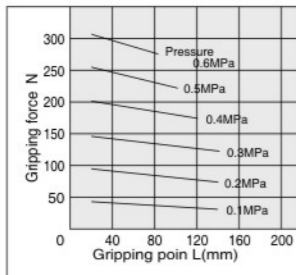
MHL2-25D1/2



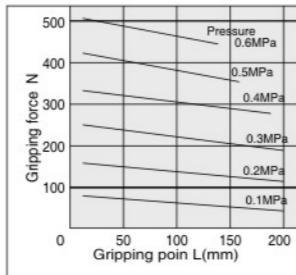
MHL2-32D



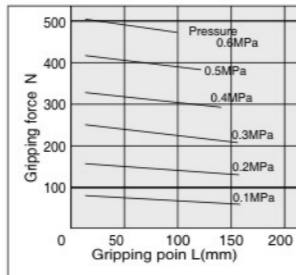
MHL2-32D1/2



MHL2-40D



MHL2-40D1/2



Specification

Model	MHY2-10D	MHY2-16D	MHY2-20D	MHY2-25D	
Fluid	Air				
Action type	Double-acting				
Max. operating pressure(MPa)	0.6				
Min. operating pressure(MPa)	0.1				
Ambient fluid temperature	-10~+60℃				
Max. operating frequency	60c.p.m				
Repeatability(mm)	±0.2mm				
Holding torque N·m	Note1)	0.16	0.54	1.10	2.28
Lubrication	Note2)	Not required			
Port size	M5 × 0.8				

Note 1) At the pressure of 0.5Mpa
Note 2) If you need lubrication, use turbine No.1 oil ISO VG32.

- * Auto switch is attachable.
- * 180° Retractable simplify pick and place operation.
- * May be suitable for use under special circumstances, the finger opening and closing part specifically designed to prevent small items from entering.
- * Easy to install, with positioning holes.

订购码/Ordering code

MHY 2 - 16 D 2 M9NL

2 pcs of fingers
Note: The opening and closing angle (both sides)
Open side: 180°
Closed side: -3°

Double-acting

Bore size

10	ø10mm
16	ø16mm
20	ø20mm
25	ø25mm

Number of auto switches

Nil	2
S	1

Auto Switch Model

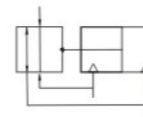
Nil	Without auto switch
M9N(V)	Specifications and characteristics of the magnetic switch series See
M9B(V)	
M9P(V)	

*Auto switch model behind, with a sign indicating the length of the wire:
无记号Nil - 0.5m, L - 3m, Z - 5m
Example: M9N, M9NL

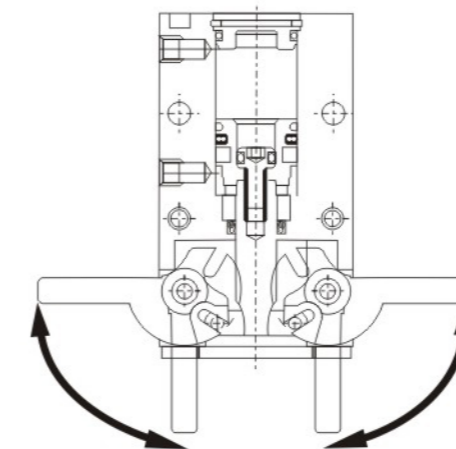
手指安装形式
Finger option

Nil	Standard tapped mounting
2	Through-hole in opening/closing direction

符号/Symbol



Chart

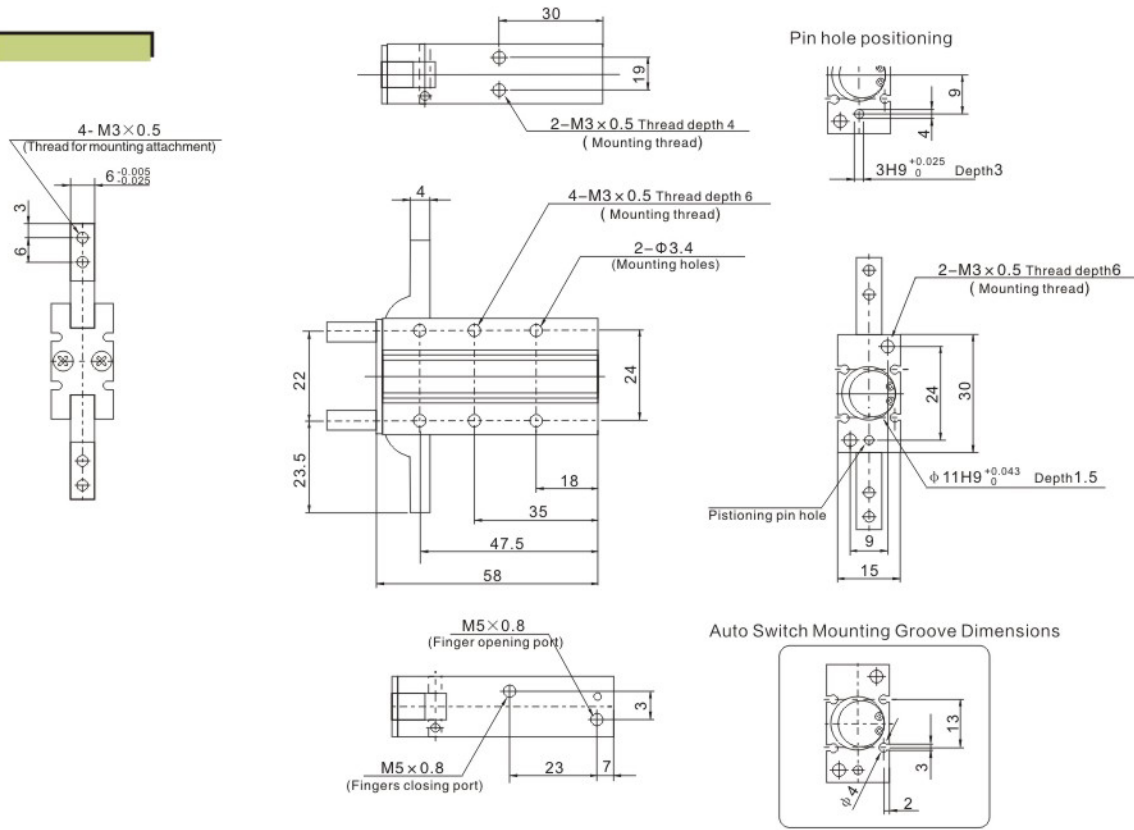


Function Example

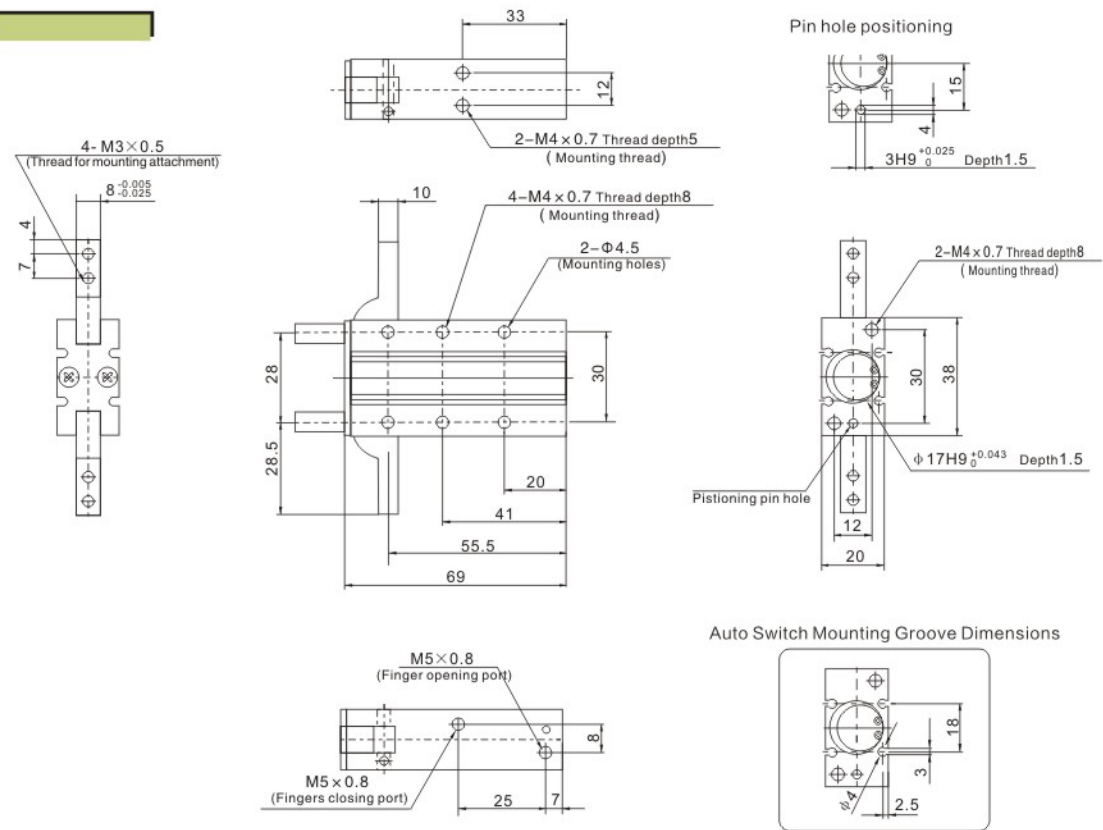
Fixing screws	Clamping wire

Dimensions (mm)

MHY2-10D

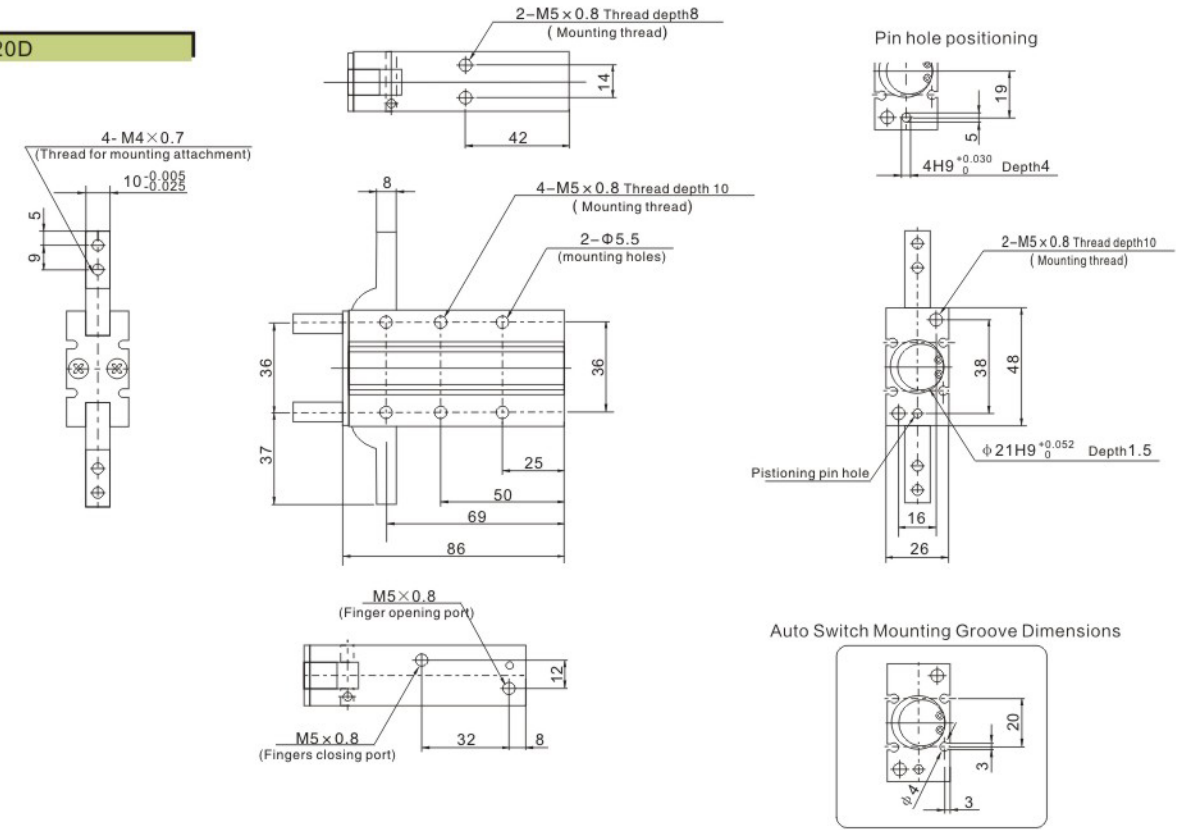


MHY2-16D

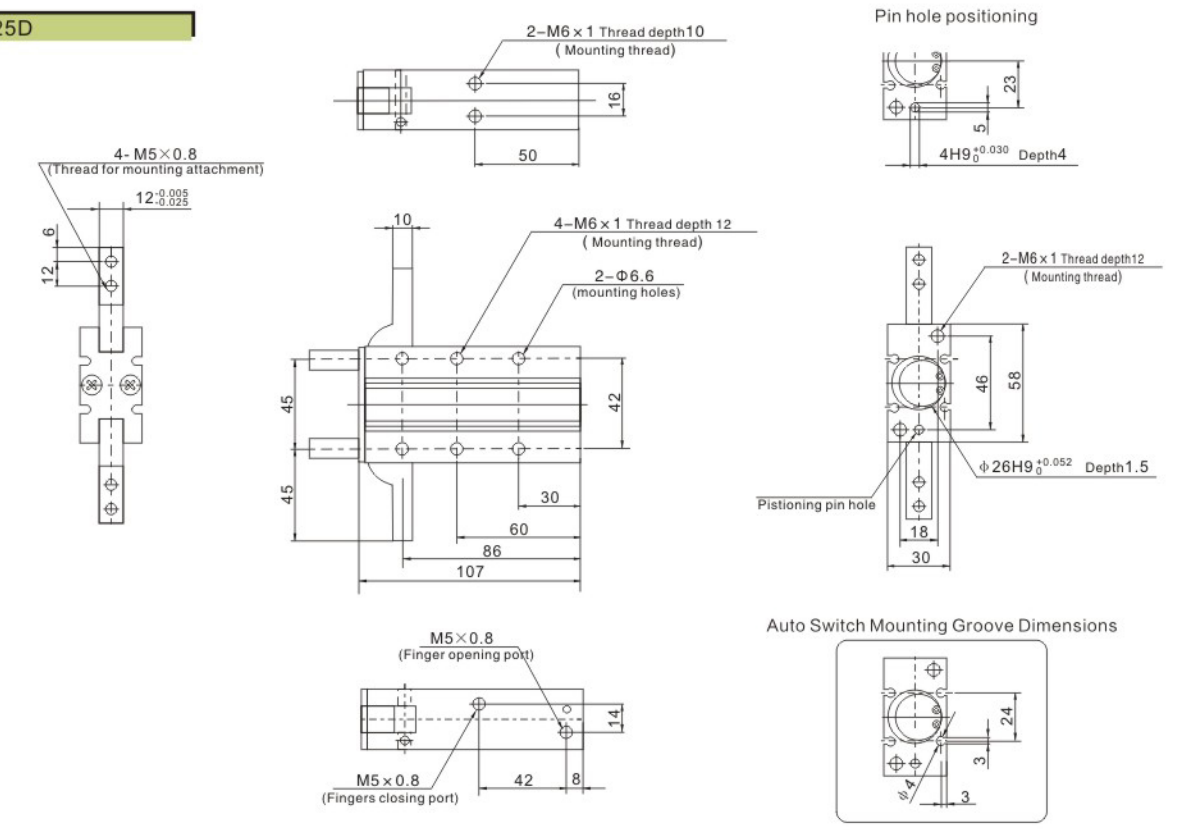


Dimensions (mm)

MHY2-20D



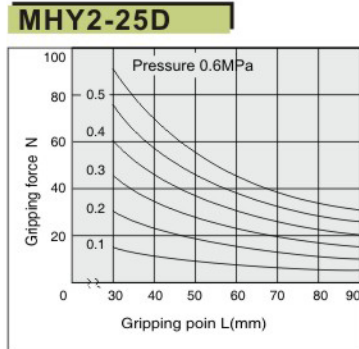
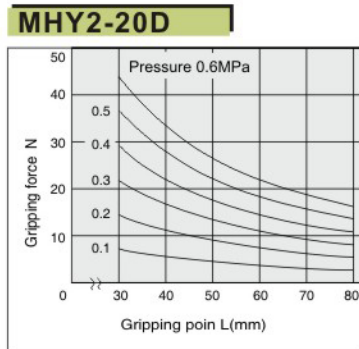
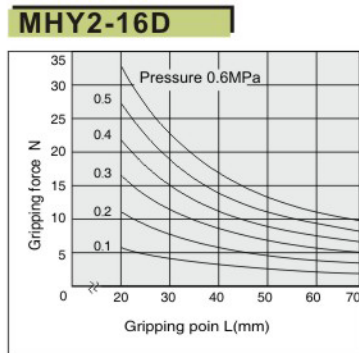
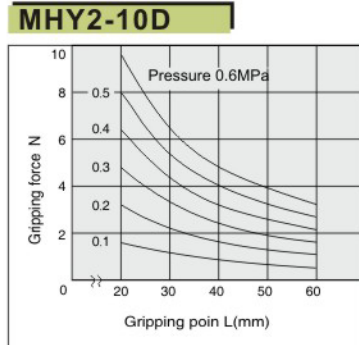
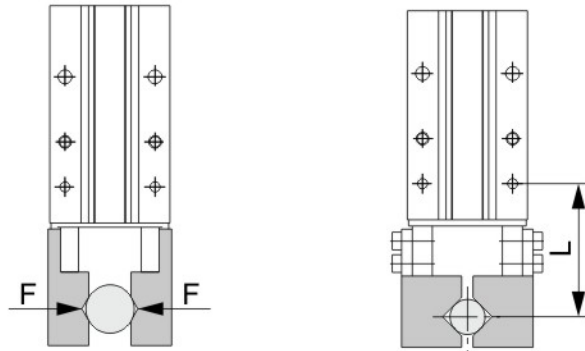
MHY2-25D



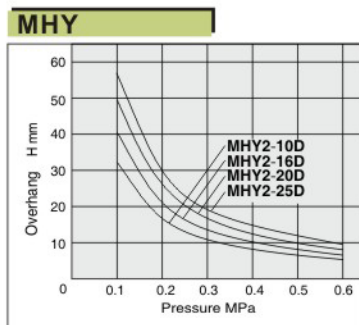
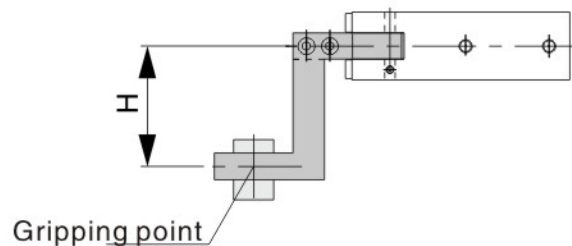
Effective Gripping Force

● Indication of effective gripping force

The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger, when both fingers and attachments are in full contact with the workpiece as shown in the figure below.



- Workpiece should be held at a point within the range of overhanging distance (H) for a given pressure indicated in the tables on the right.
- When the workpiece is held at a point outside of the recommended range for a given pressure, it may cause adverse effect on the product life.



Symbol



- A large amount of gripping force is provided through the use of a double piston mechanism, while maintaining a compact design.
- Built-in variable throttle
- A solid state auto switch with an indicator light can be mounted.

Specification

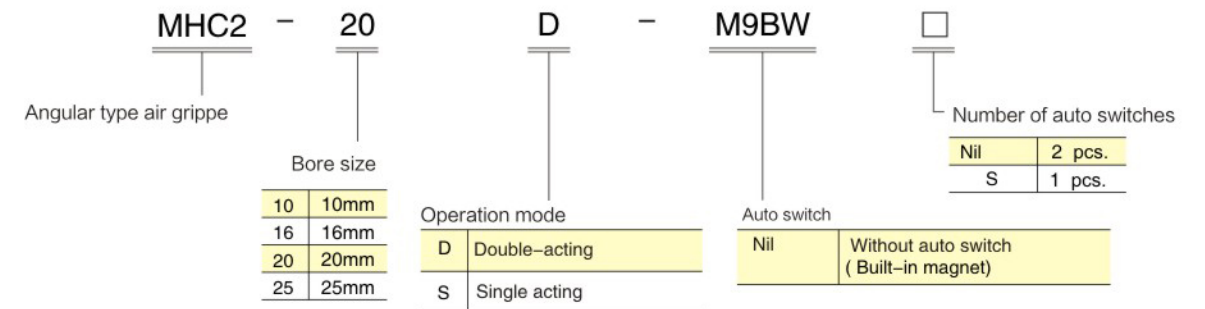
Fluid	Air	
Operating pressure	Double acting	0.1~0.6MPa
	Single acting	0.25~0.6MPa
Ambient and fluid temperature	□10~60℃	
Repeatability	±0.01mm	
Max. operating frequency	180c.p.m	
Lubrication	Not required	
Action	Double acting/ Single acting	
Auto switch (Option)	Solid state auto switch (3-wire, 2-wire)	

Model

Operation mode	Model	Bore size (mm)	Gripping moment N·m (Effective value)	Opening/closing angle (Both sides)	Note.2) Weight g
Double acting	MHC2-10D	10	0.10	30° ~-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° ~-10°	39
	MHC2-16S	16	0.31		92
	MHC2-20S	20	0.54		183
	MHC2-25S	25	1.08		316

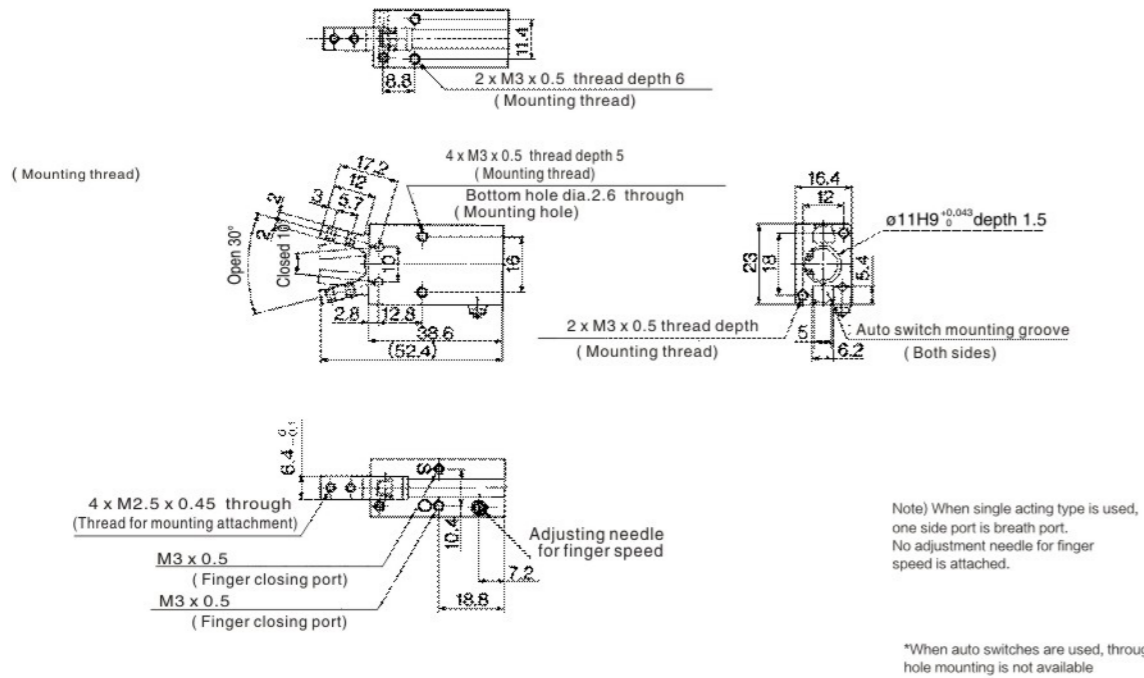
Note.1) At the pressure of 0.5 MPa.
Note.2) Except auto switch.

订购码/Ordering code

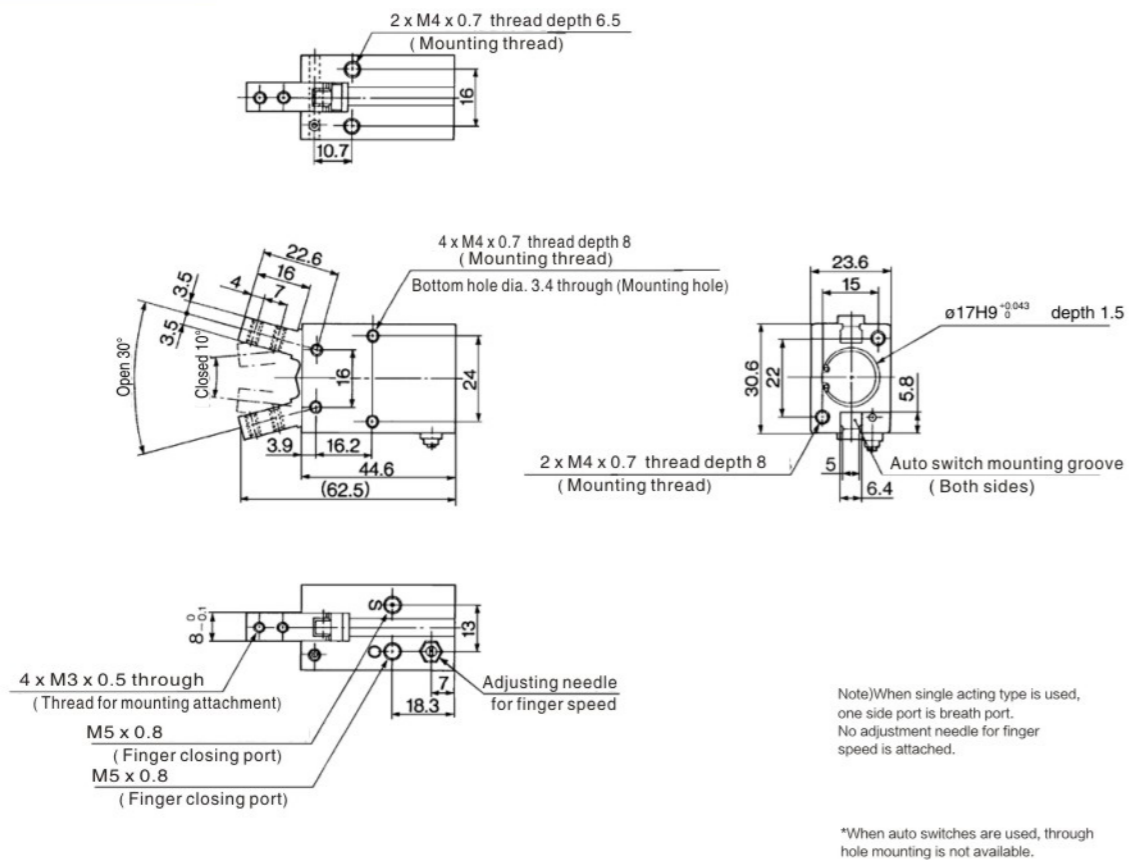


Dimensions (mm)

MHC2-10□

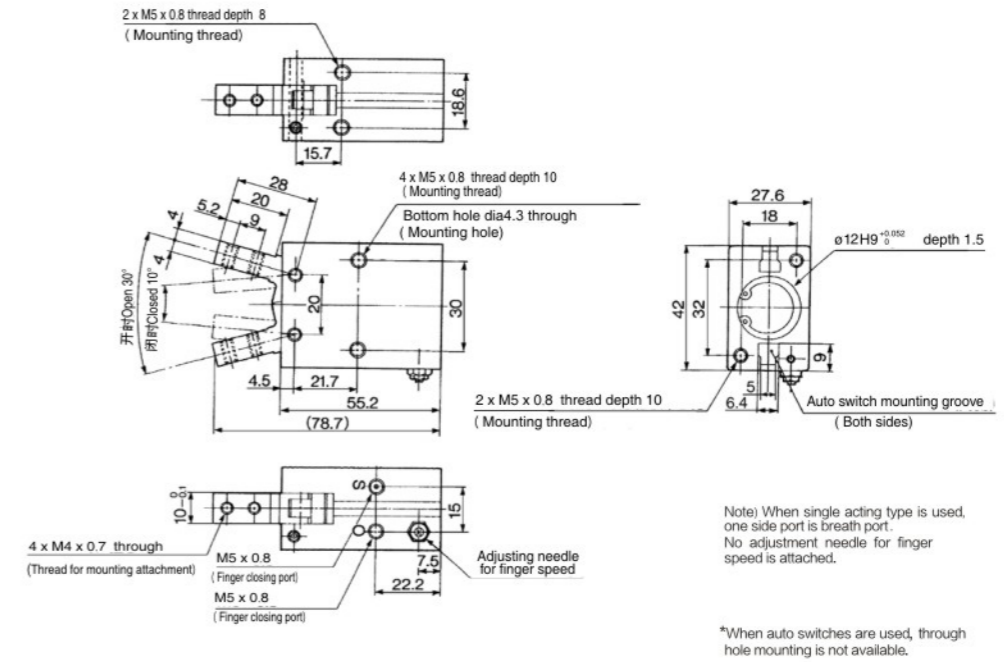


MHC2-16□

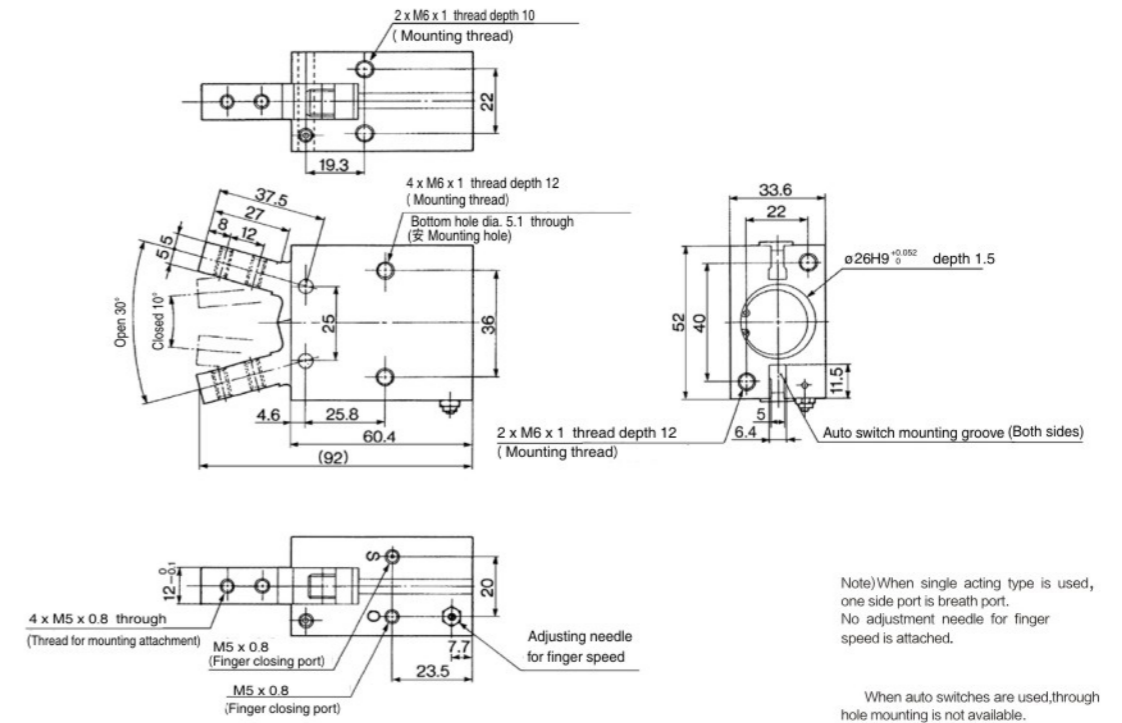


Dimensions (mm)

MHC2-20□

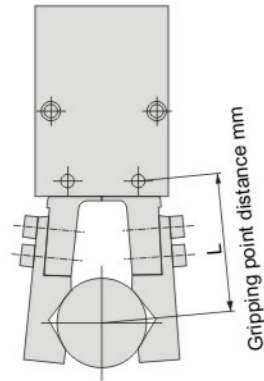


MHC2-25□

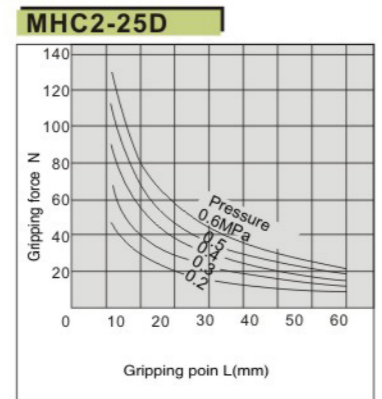
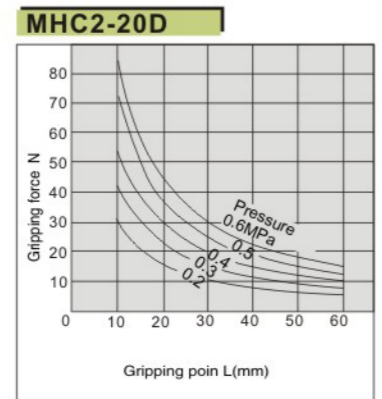
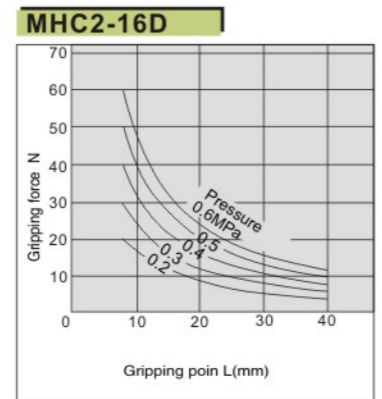
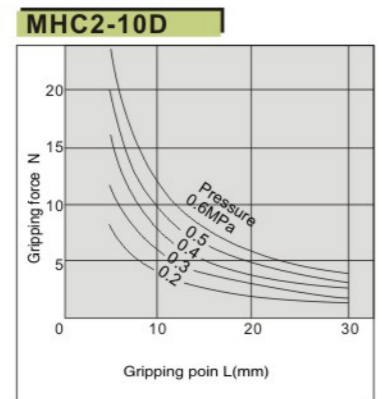


Effective Gripping Force

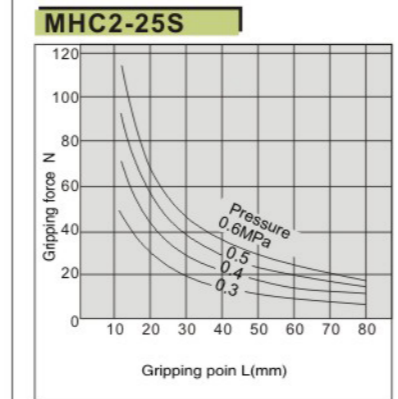
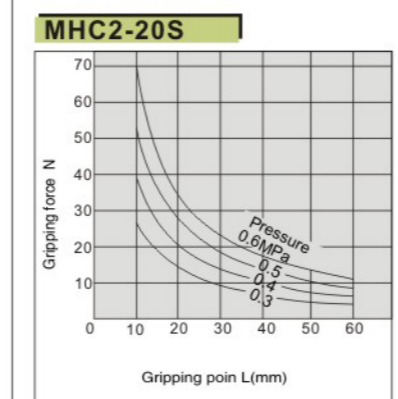
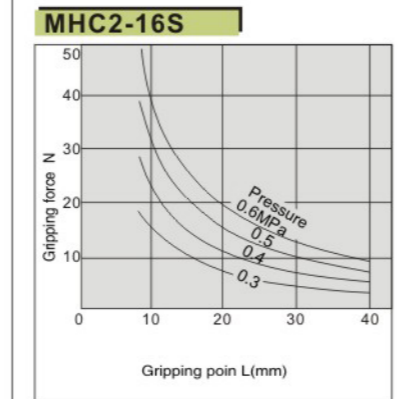
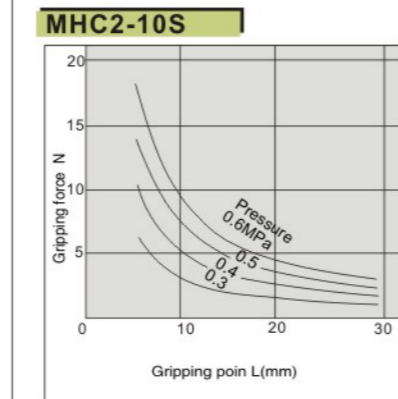
- Workpiece gripping point should be within the range indicated in the graph.



Double acting



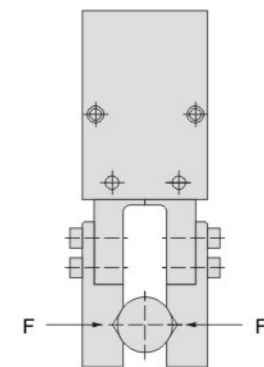
Single acting



- Guidelines for the selection of the gripper with respect to workpiece mass
- Although conditions differ according to the workpiece shape and the coefficient of friction between the attachments and the workpiece, select a model that can provide a gripping force of 10 to 20 times the workpiece mass, or more. If high acceleration, deceleration or impact forces are encountered during motion, a further margin of safety should be considered.

Indication of effective gripping force

The effective gripping force shown in the graphs below is expressed as F, which is the thrust of one finger, when both fingers and attachments are in full contact with the workpiece as shown in the figure below.

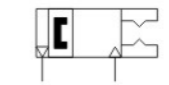


Standard Specification

Fluid	Air	
Operating pressure	Double acting	0.15-0.6MPa
	Single acting: Normally open	0.3-0.6MPa
Ambient and fluid temperature	-10-60°C	
Repeatability	± 0.02mm	
Maximum operating frequency	180c.p.m	
Lubrication	Non-lube	
Action	Double acting, Single acting (Normally open)	
Auto switch (Option)	Solid state auto switch (3-wire, 2-wire)	

Symbol

Double acting: External grip



Single acting/ Normally open: External grip



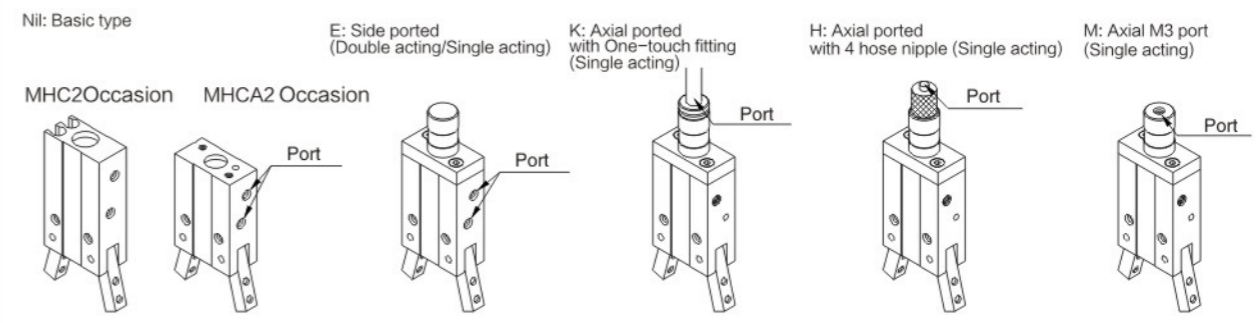
Ordering code

MHC A 2 - 6 D - **M9B**

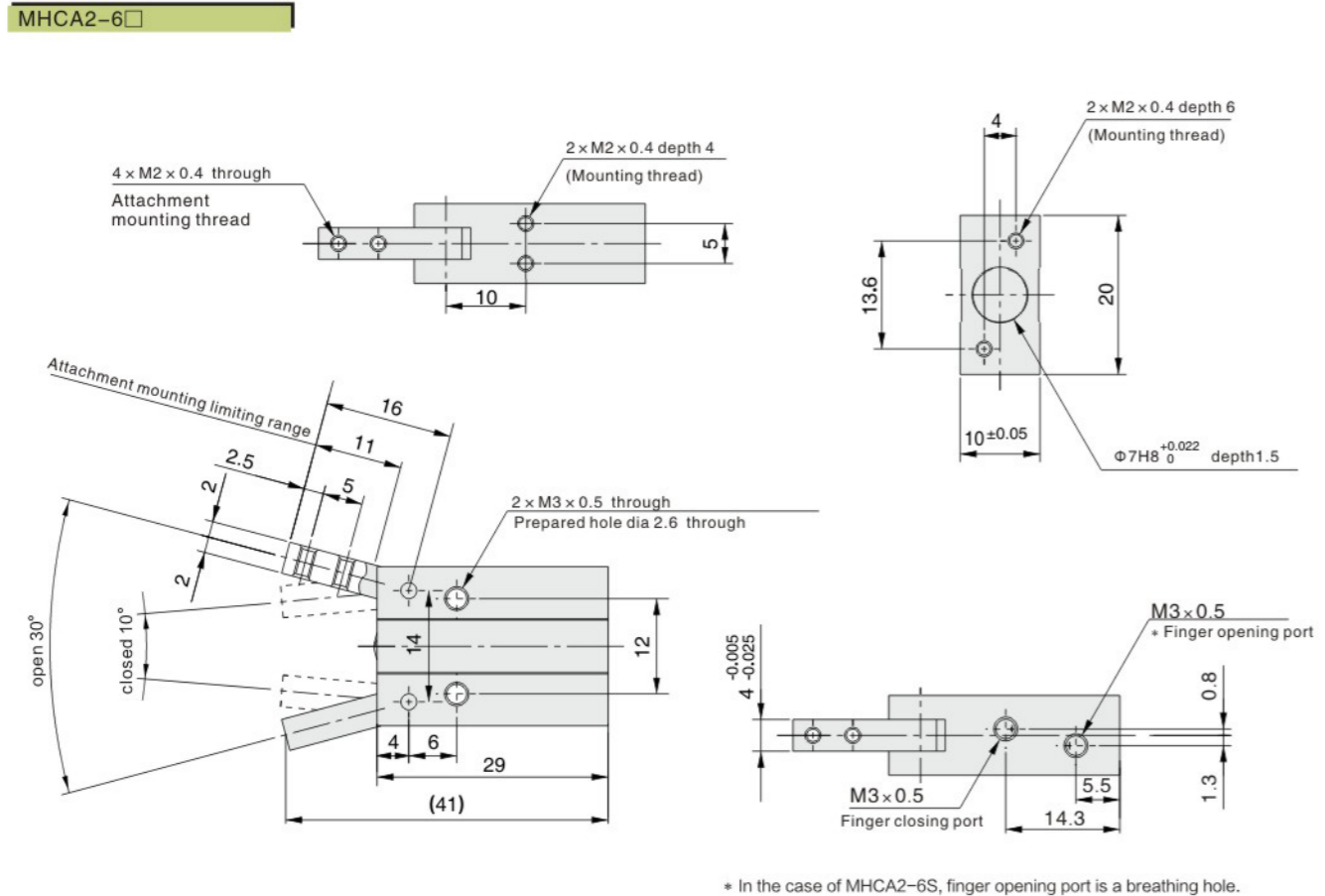
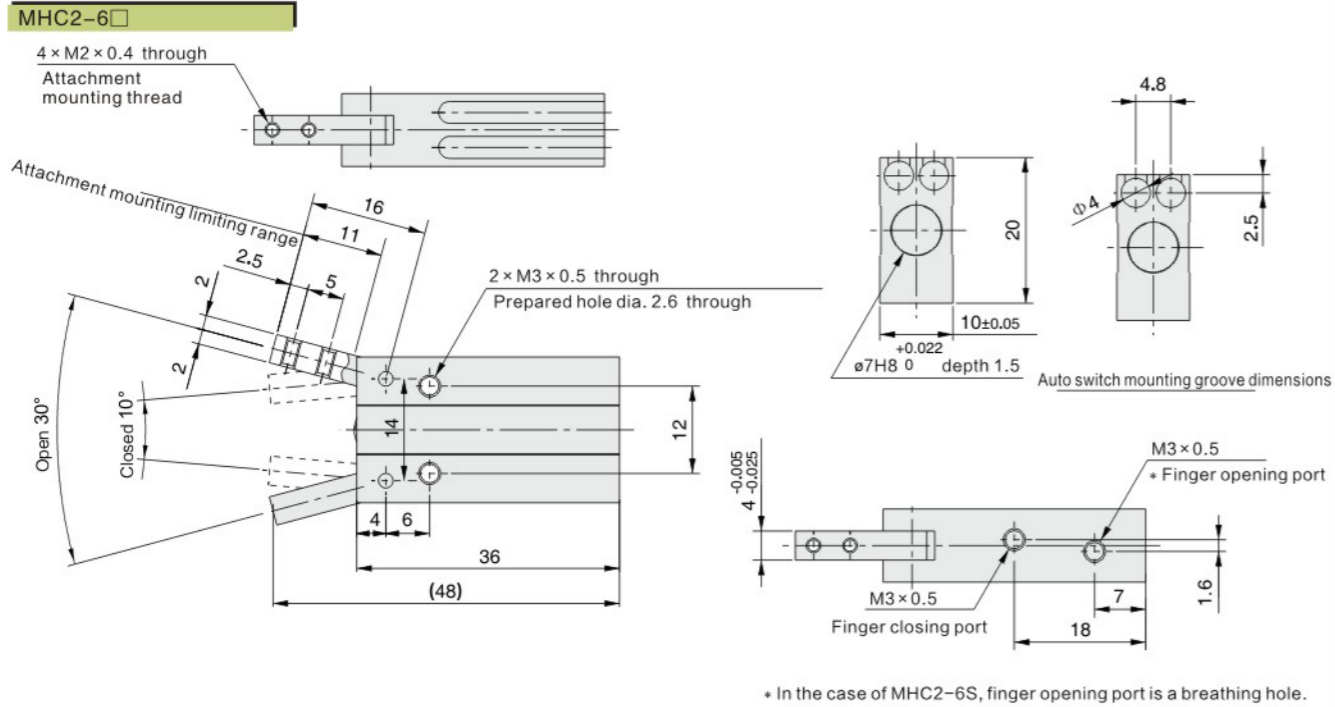
- Short body (Auto switch not attachable)
- Number of fingers: 2 (2 finger)
- Bore size: 6 (6mm)
- Action: D (Double acting), S (Single acting (Normally open))
- Body option (End boss type)
- Number of auto switches: Nil (2 Pcs.), S (1 Pcs.)
- Auto switch: Nil (Without auto switch (Built-in magnet))

For the applicable auto switch model, refer to the table below

Body option (End boss type)



Dimensions (mm)



Specification

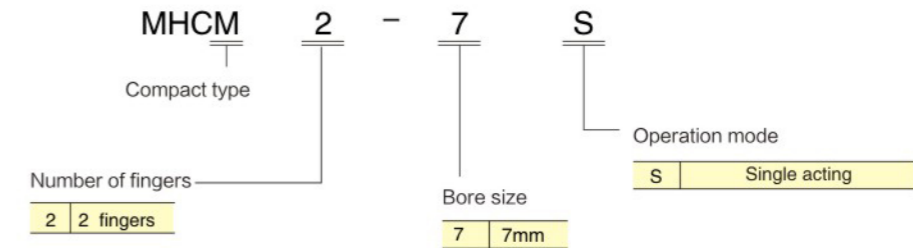
Fluid	Air
Operating pressure	0.4~0.6MPa
Ambient and fluid temperature	-10~60°C
Repeatability	± 0.02mm
Maximum operating frequency	180c.p.m.
Lubrication	Non-lube
Action	Single acting (Normally open)

Symbol

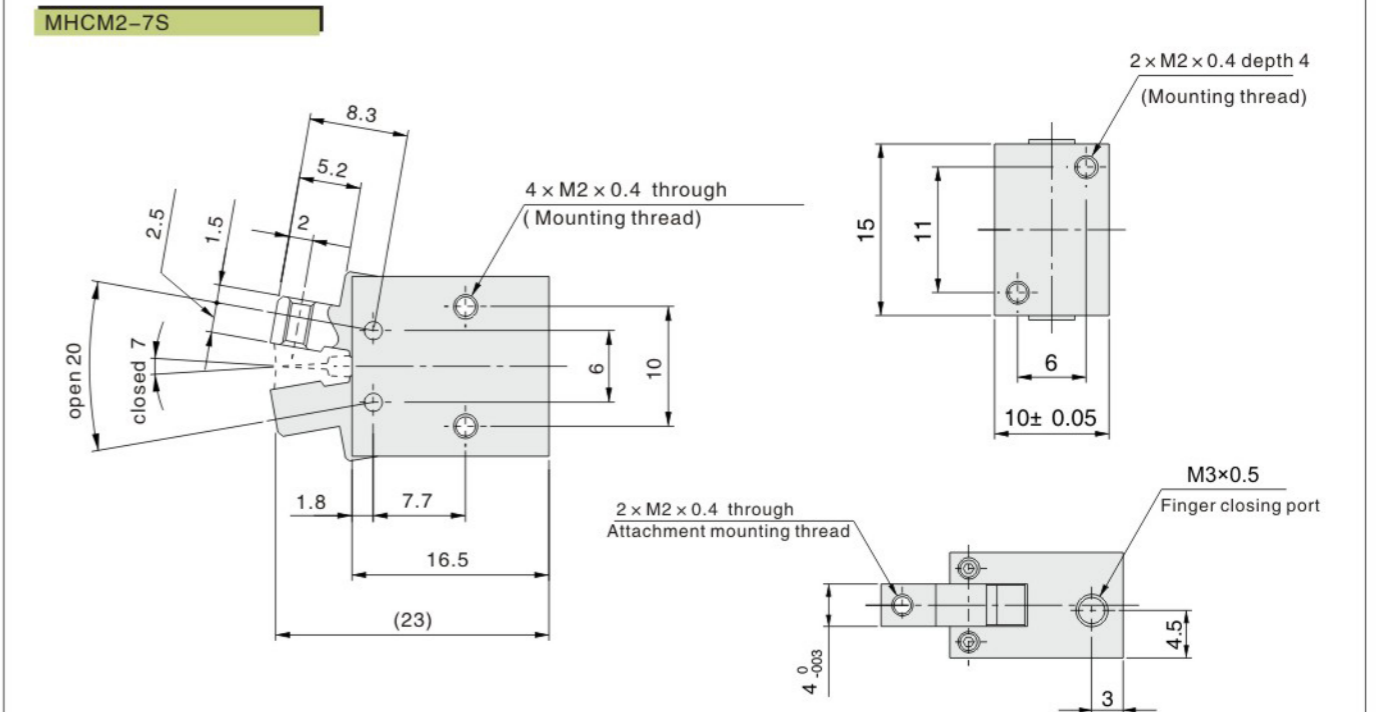
Single acting/ Normally open: External grip



Ordering code



Dimensions (mm)



Symbol

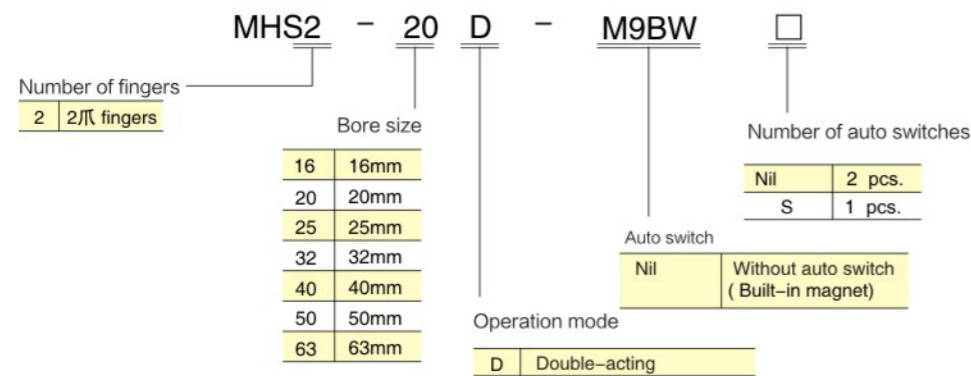


Standard Specification

Model	MHS2-16D	MHS2-20D	MHS2-25D	MHS2-32D	MHS2-40D	MHS2-50D	MHS2-63D
Bore size mm	16	20	25	32	40	50	63
Fluid	Air						
Operating pressure MPa	0.2~0.6			0.1~0.6			
Ambient and fluid temperature °C	-10~60						
Repeatability mm	±0.01						
Max. operating frequency c.p.m	120			60			
Lubrication	Not required						
Action	Double acting						
Note1)	External grip						
Effective gripping Force (N) at 0.5 MPa	21	37	63	111	177	280	502
	Internal grip						
Opening/Closing stroke (Both sides)mm	4	4	6	8	8	12	16
	Weight g						
	58	96	134	265	345	515	952

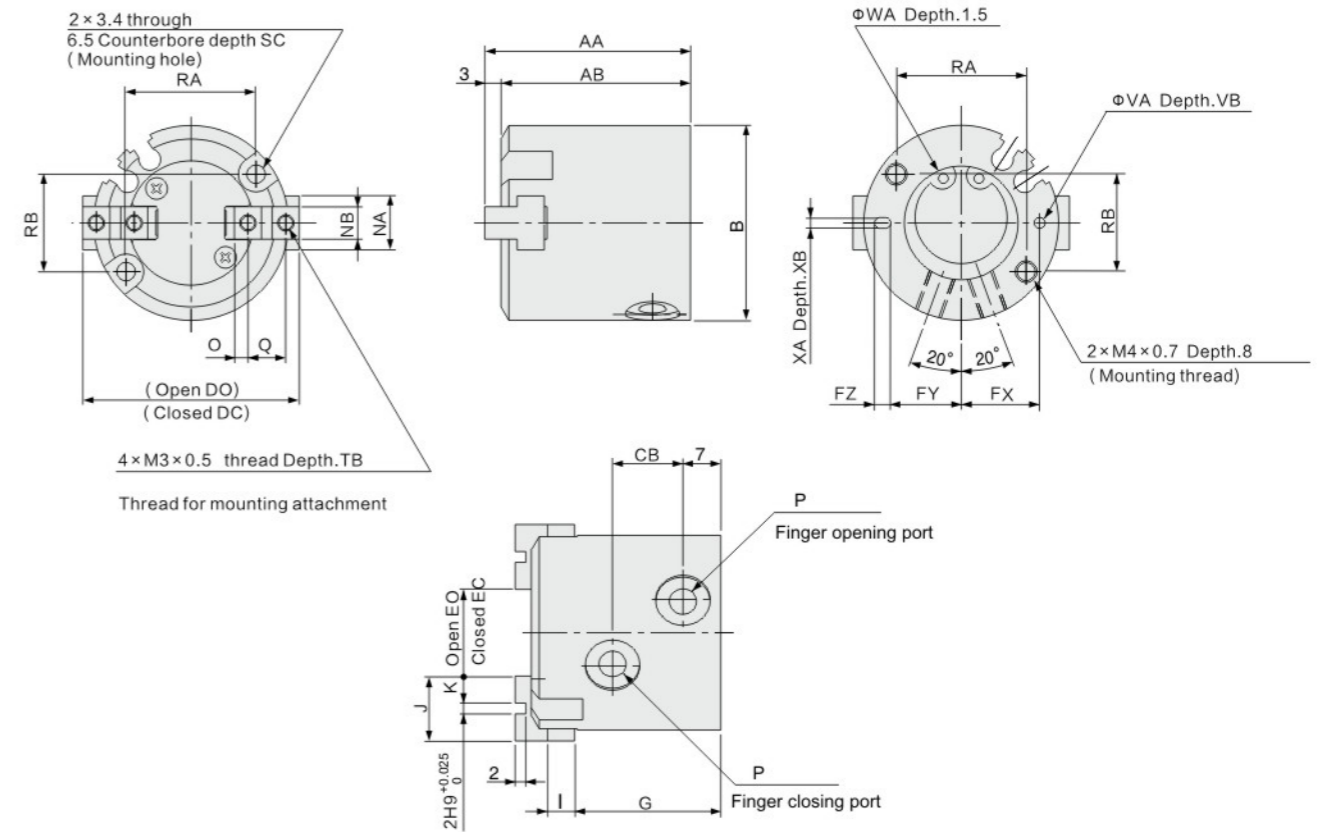
Note) Values for Φ16 to Φ25 are with gripping point L = 20 mm, and for Φ32 to Φ63 with gripping point L = 30 mm.

Ordering code



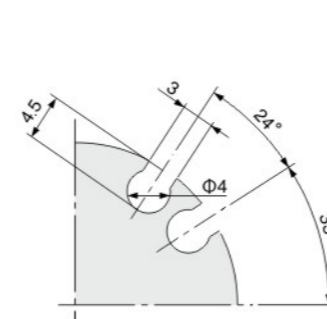
Dimensions (mm)

MHS2-16D-25D

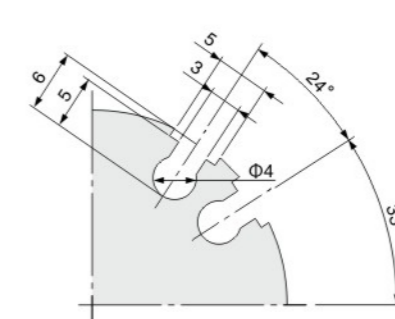


Auto switch mounting groove dimensions (2 locations)

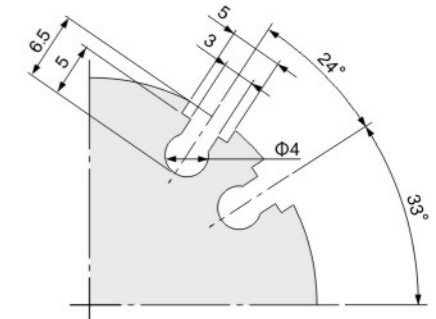
MHS2-16D



MHS2-20D



MHS2-25D

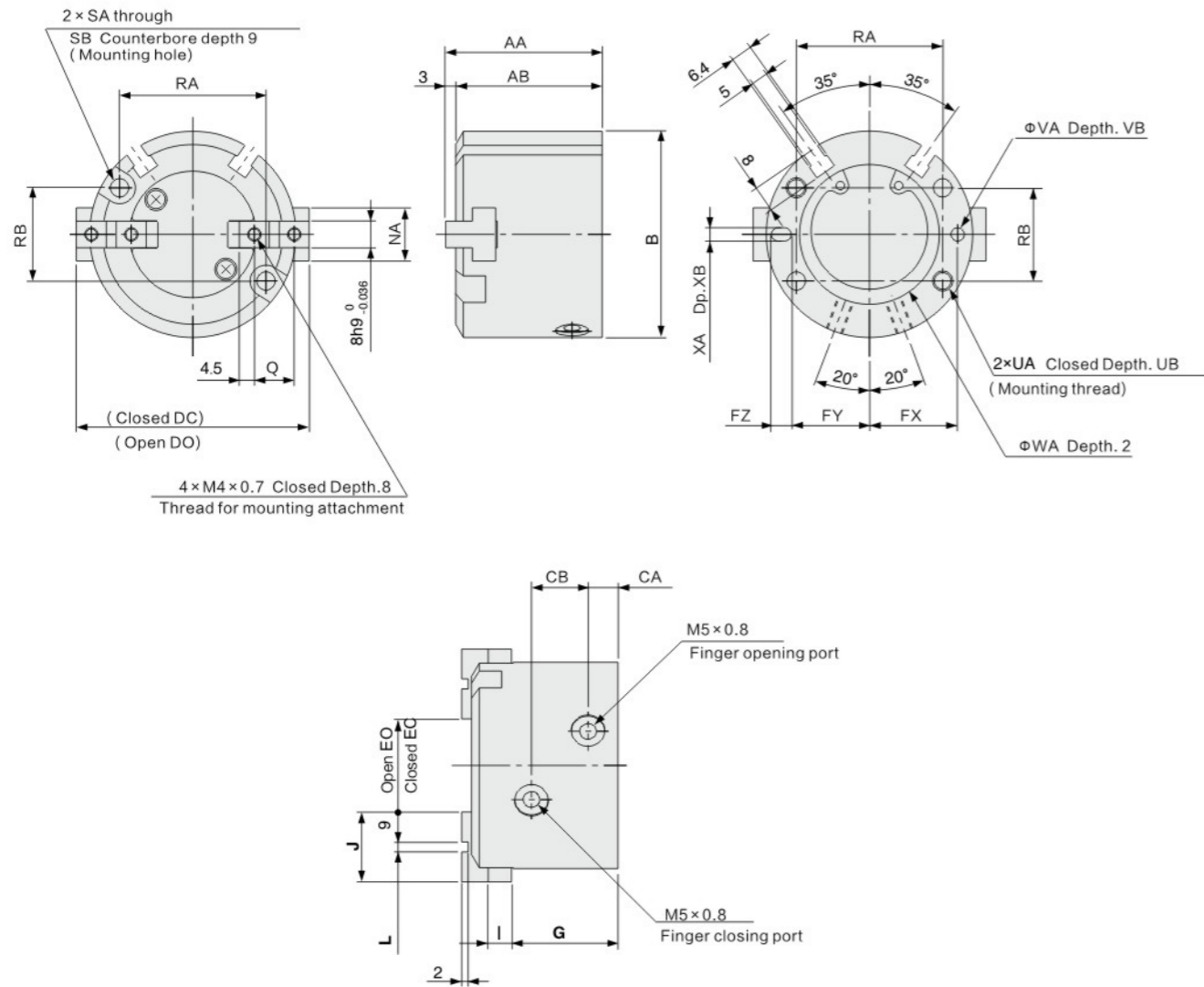


Model	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q
MHS2-16D	35	32	30	11	30	34	10	14	12.5	11	3	25	4	10	4	8	5h9 ₀ ^{0.030}	2	M3×0.5	6
MHS2-20D	38	35	36	13	36	40	12	16	14.5	13	3	27	5	12	5	10	6h9 ₀ ^{0.030}	2.5	M5×0.8	7
MHS2-25D	40	37	42	15	42	48	14	20	17	14.5	5	28	5	14	6	12	6h9 ₀ ^{0.030}	3	M5×0.8	8

Model	RA	RB	SC	TB	VA	VB	WA	XA	XB
MHS2-16D	18	16	8	5	2H9 ₀ ^{+0.025}	2	17H9 ₀ ^{+0.043}	2H9 ₀ ^{+0.025}	2
MHS2-20D	24	18	9.5	6	2H9 ₀ ^{+0.025}	2	21H9 ₀ ^{+0.052}	2H9 ₀ ^{+0.025}	2
MHS2-25D	26	22	10	6	3H9 ₀ ^{+0.025}	3	26H9 ₀ ^{+0.052}	3H9 ₀ ^{+0.025}	3

Dimensions (mm)

MHS2-32D · 40D

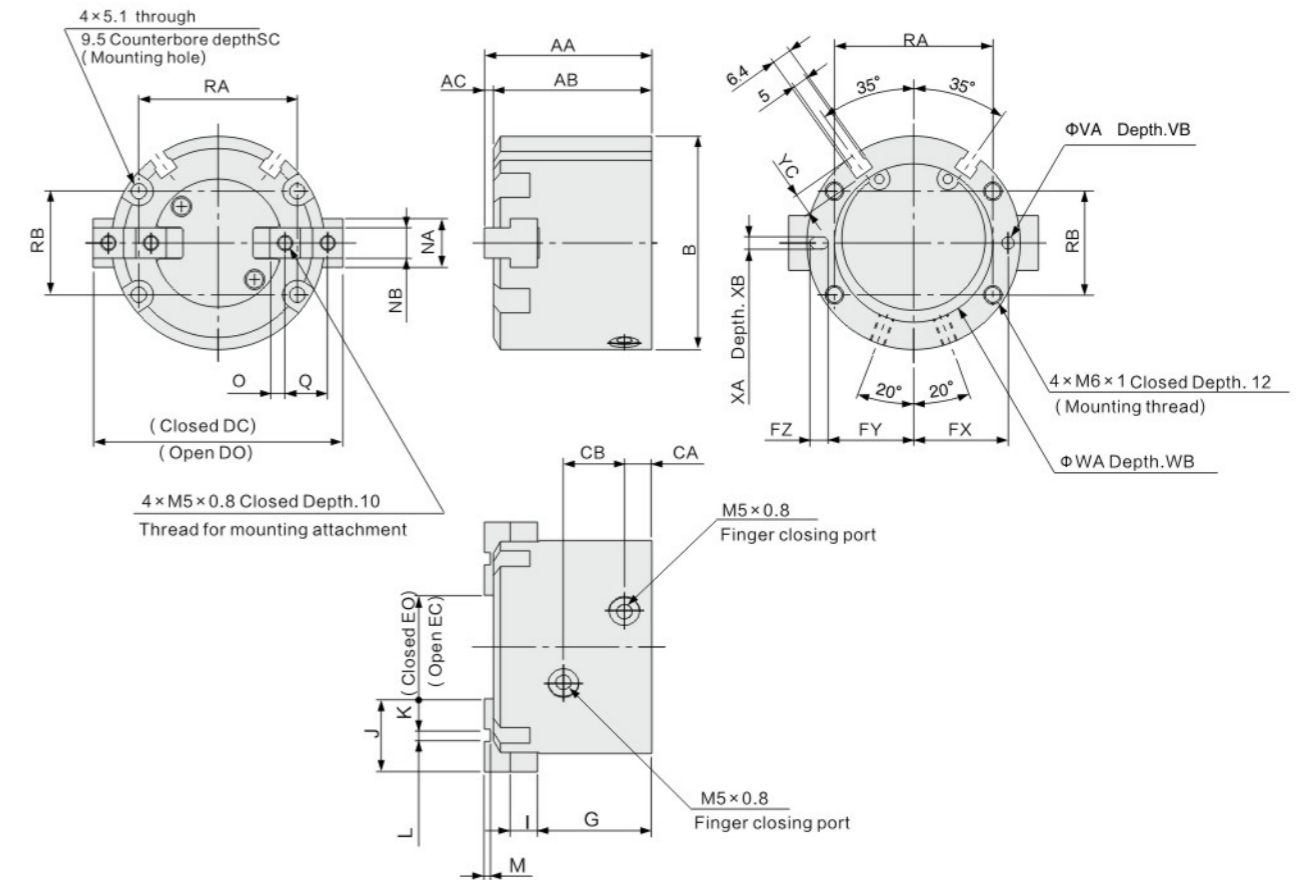


Model	AA	AB	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	L	NA	Q	RA	RB	SA
MHS2-32D	44	41	56	8	16	56	64	16	24	23	20.5	5	30.5	6	20	2H9 ^{+0.025} / ₀	14	11	38	25	4.5
MHS2-40D	47	44	62	9	17	62	70	20	28	26.5	23.5	6	32	7	21	3H9 ^{+0.025} / ₀	16	12	44	28	5.5

Model	SB	UA	UB	VA	VB	WA	XA	XB
MHS2-32D	8	M5×0.8	10	3H9 ^{+0.025} / ₀	3	34H9 ^{+0.062} / ₀	3H9 ^{+0.025} / ₀	3
MHS2-40D	9.5	M6×1	12	4H9 ^{+0.030} / ₀	4	42H9 ^{+0.062} / ₀	4H9 ^{+0.030} / ₀	4

Dimensions (mm)

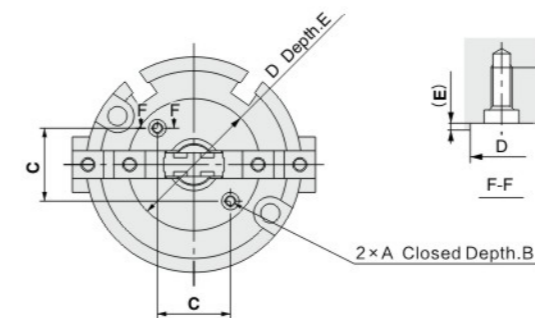
MHS2-50D · 63D



Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS2-50D	55	52	3	70	9	20	70	82	22	34	31	28	6	37.5	9	24	10	4H9 ^{+0.030} / ₀	2	18	10h9 ⁰ / _{-0.036}
MHS2-63D	66	62	4	86	12	22	86	102	30	46	38	34.5	7	44	11	28	11	6H9 ^{+0.030} / ₀	3	24	12h9 ⁰ / _{-0.043}

Model	O	Q	RA	RB	SC	VA	VB	WA	WB	XA	XB	YC
MHS2-50D	5	14	52	34	12	4H9 ^{+0.030} / ₀	4	52H9 ^{+0.074} / ₀	2	4H9 ^{+0.030} / ₀	4	7
MHS2-63D	5.5	17	66	38	14	5H9 ^{+0.030} / ₀	5	65H9 ^{+0.074} / ₀	2.5	5H9 ^{+0.030} / ₀	5	7.5

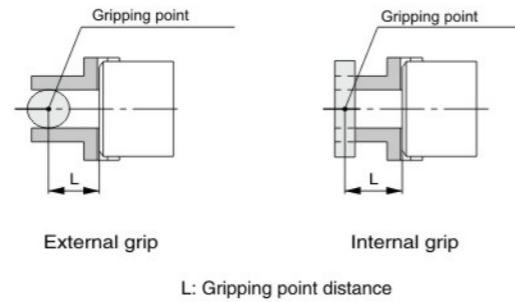
MHS2 Series Detailed dimensions of mounting portion of end plate



Model	A	B	C	D	E
MHS2-16D	M2×0.4	5.5	11	21 ^{+0.1} / ₀	0.5
MHS2-20D		5.4	13	24 ^{+0.1} / ₀	0.6
MHS2-25D		5.2	15	27 ^{+0.1} / ₀	0.8
MHS2-32D	M3×0.5	8	21	38 ^{+0.1} / ₀	1
MHS2-40D		24	42 ^{+0.1} / ₀		
MHS2-50D		32	54 ^{+0.1} / ₀		

Gripping Point

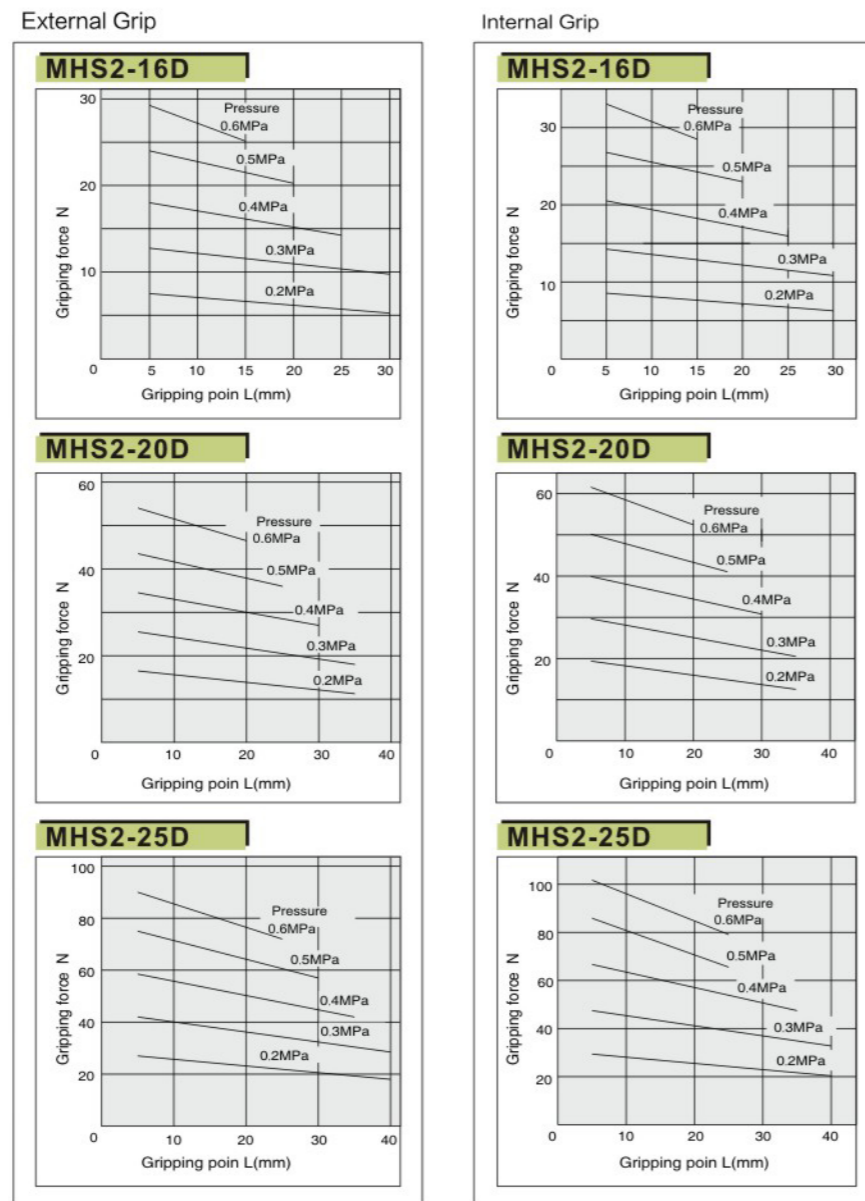
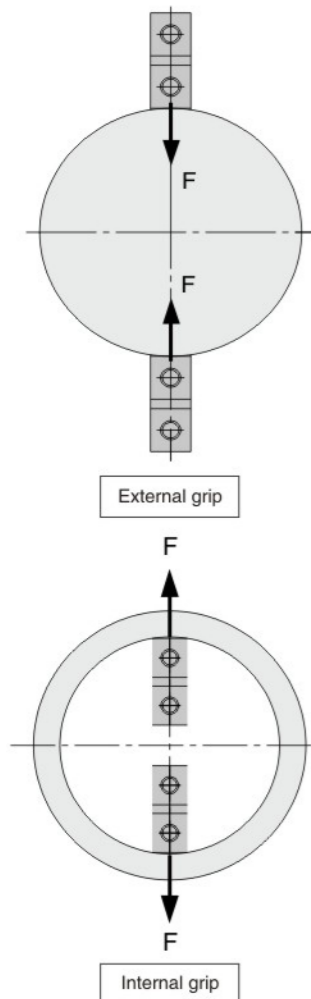
- The workpiece gripping point distance should be within the gripping force ranges given for each pressure in the effective gripping force graphs below.
- If operated with the workpiece gripping point beyond the indicated ranges, an excessive offset load will be applied to the sliding section of the fingers, which can have an adverse effect on the service life of the product.



Effective Gripping Force

- Indication of effective gripping force

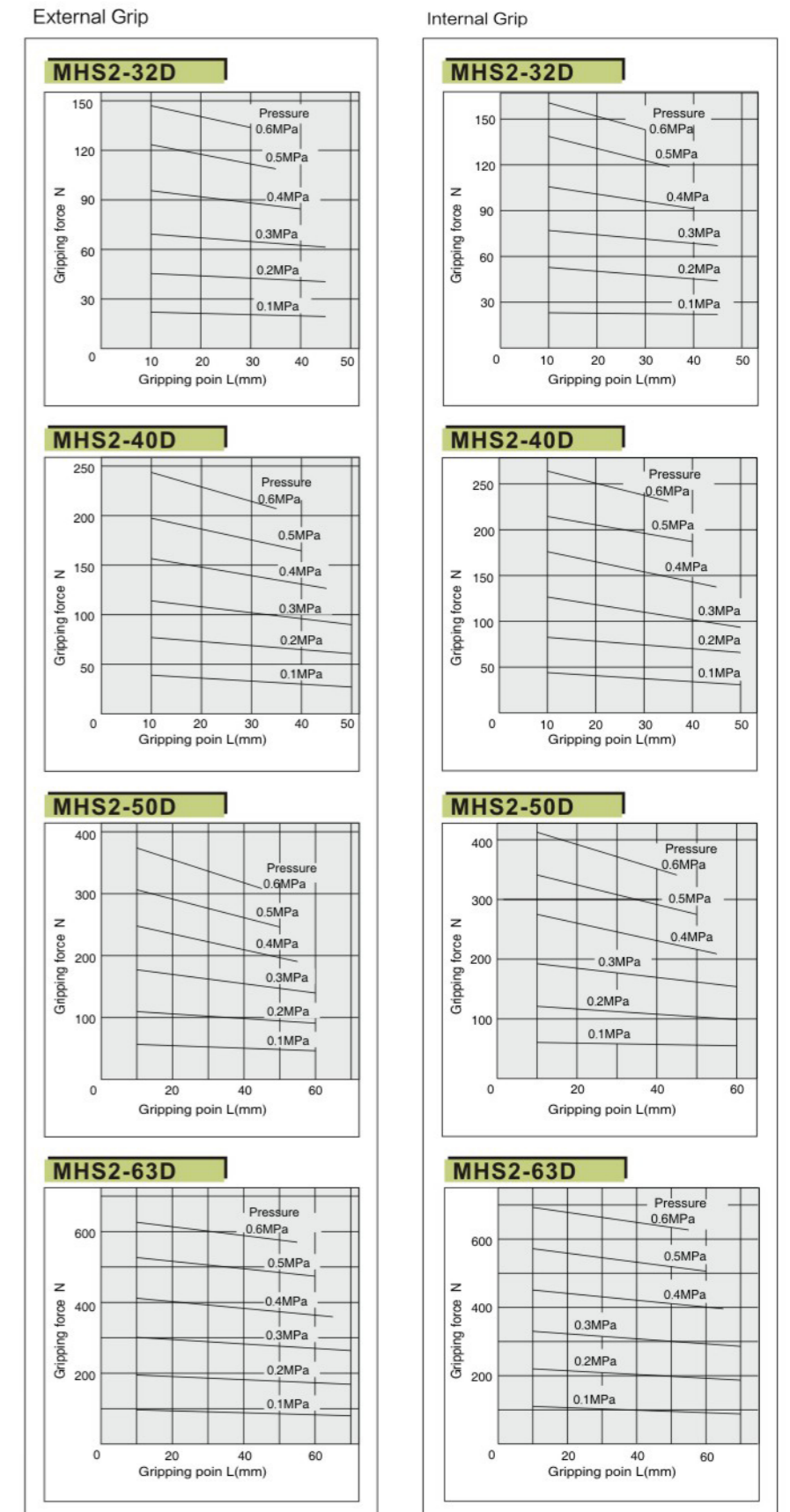
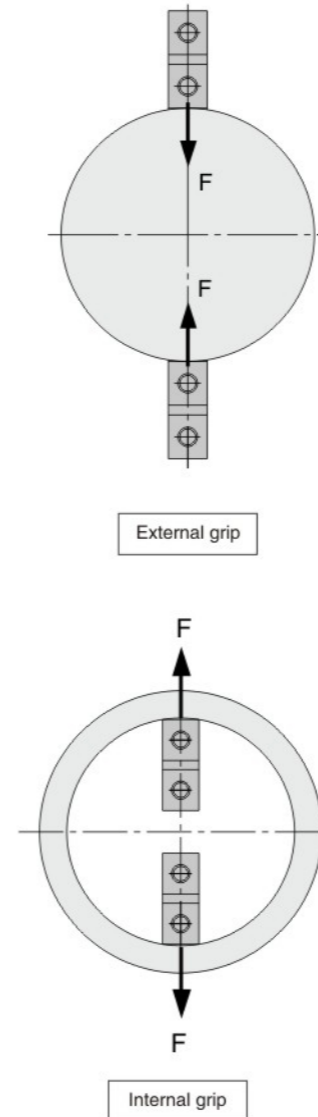
The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger, when both fingers and attachments are in full contact with the workpiece as shown in the figure below.



Effective Gripping Force

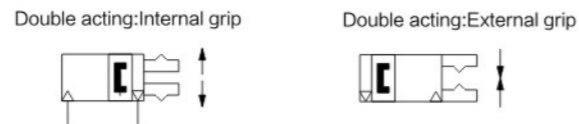
- Indication of effective gripping force

The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger when all 2 of the fingers and attachments are in full contact with the workpiece as shown in the figure below





Symbol

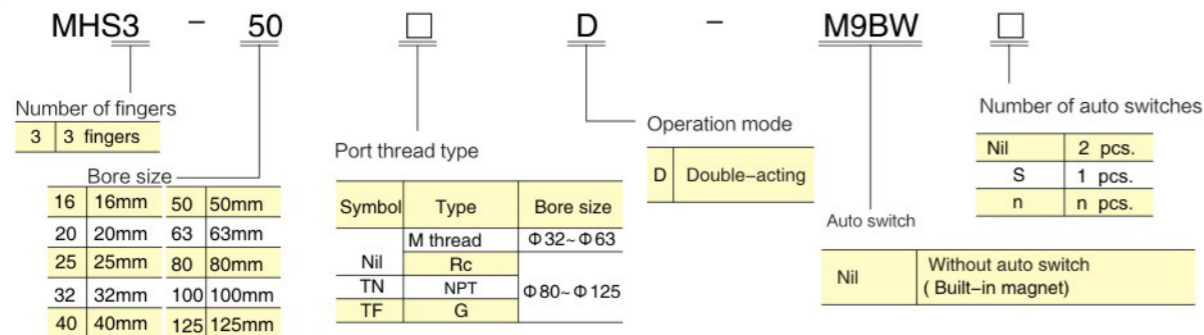


Standard Specification

Model	MHS3-16D	MHS3-20D	MHS3-25D	MHS3-32D	MHS3-40D	MHS3-50D	MHS3-63D	MHS3-80D	MHS3-100D	MHS3-125D	
Bore size (mm)	16	20	25	32	40	50	63	80	100	125	
Fluid	Air										
Operating pressure MPa	0.2~0.6					0.1~0.6					
Ambient and fluid temperature °C	-10~60										
Repeatability mm	±0.01										
Max. operating frequency c.p.m	120					60			30		
Lubrication	Not required										
Action	Double acting										
Note1) Effective gripping force (N) at 0.5 MPa	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 (dia.) mm	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	

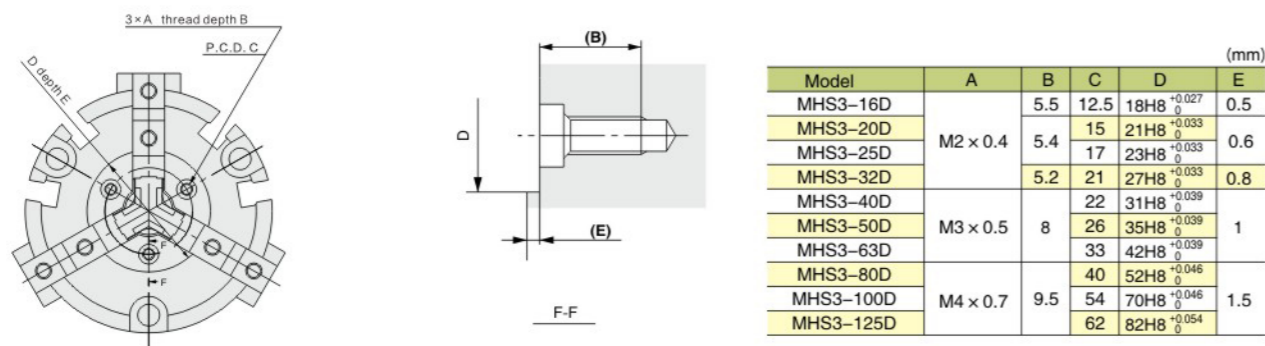
Note 1) Values for Φ16 to Φ25 are with gripping point L = 20 mm, for Φ32 to Φ63 with gripping point L = 30 mm, and for Φ80 to Φ125 with gripping point L = 50 mm.

Ordering code



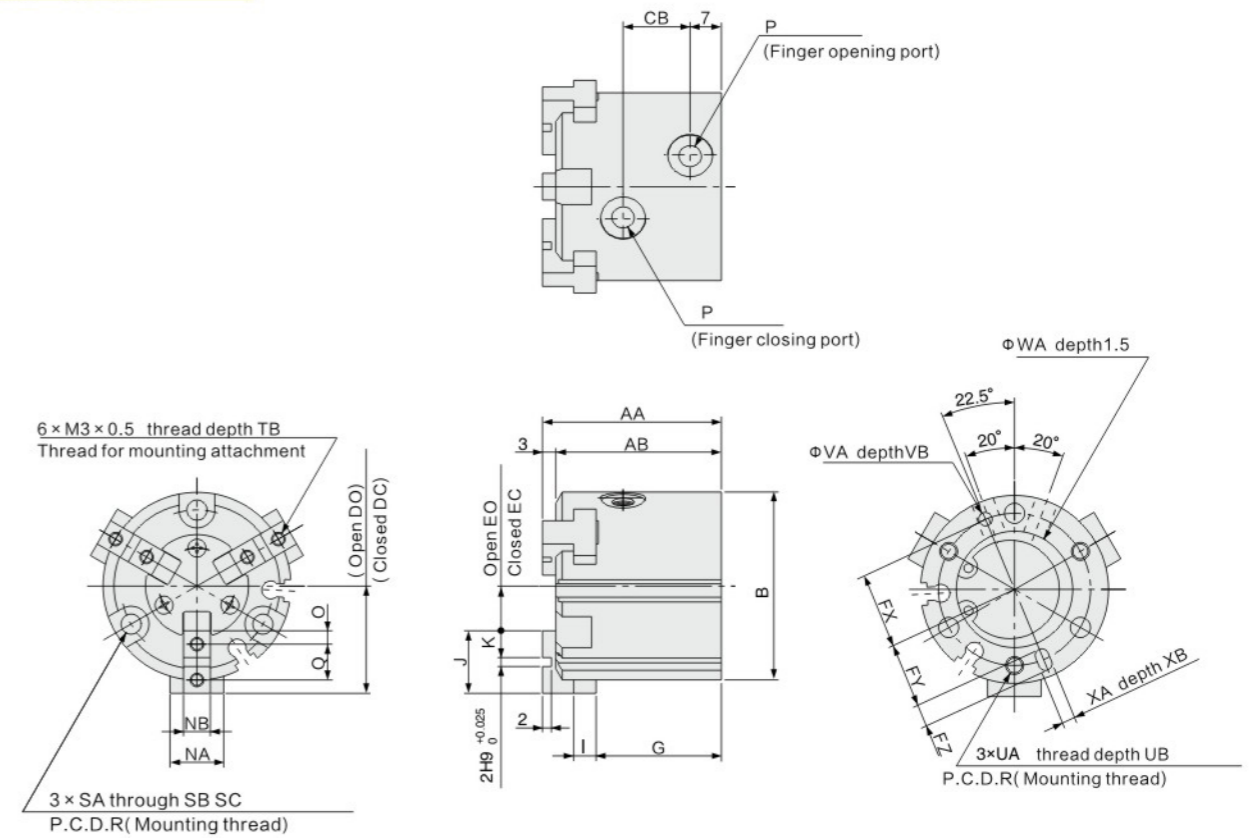
Dimensions (mm)

MHS3 Series Detailed Dimensions of Mounting Portion of End Plate

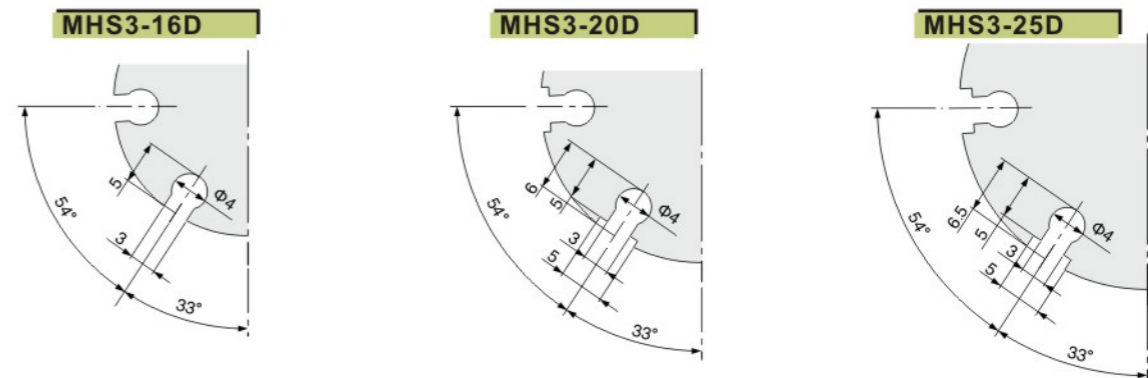


Dimensions (mm)

MHS3-16D-25D



Auto switch mounting groove dimensions (2 locations)

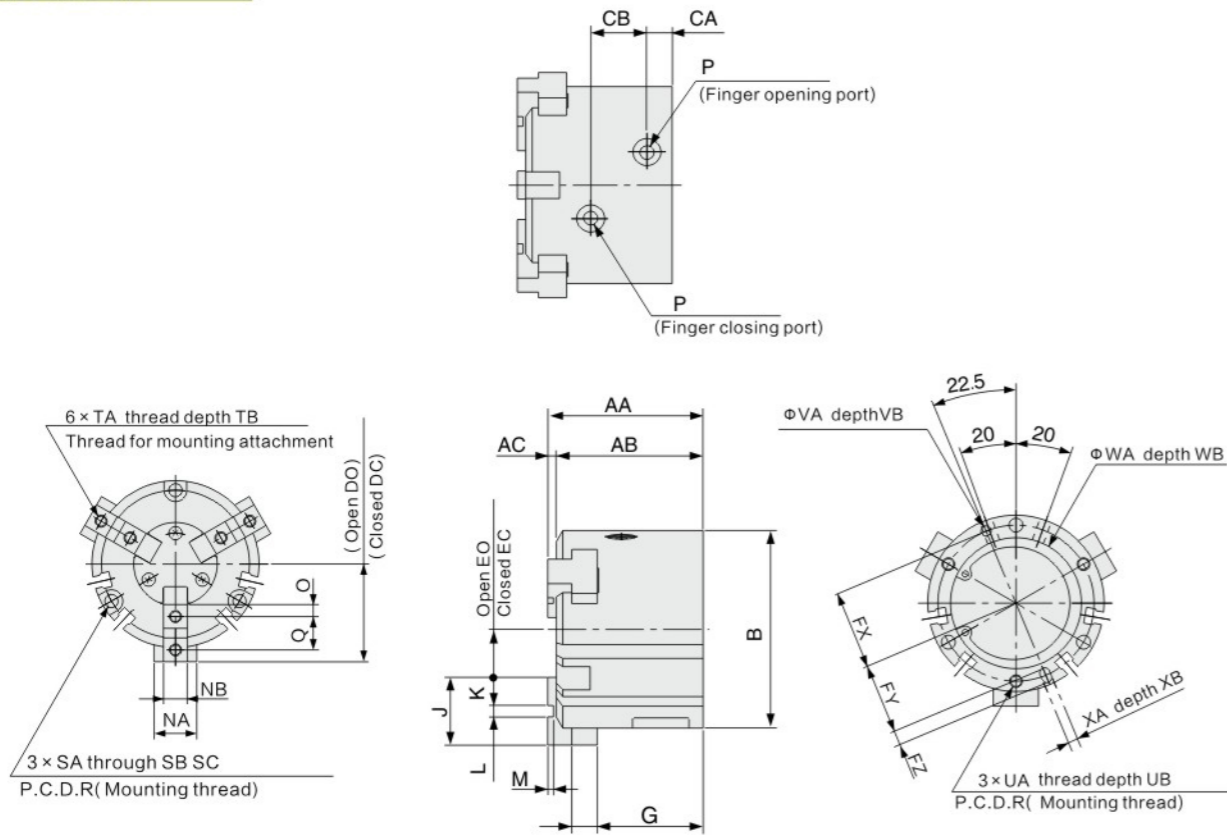


Model	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q	R
MHS3-16D	35	32	30	11	15	17	5	7	12.5	11	3	25	4	10	4	8	5h9 ^{+0.030} ₀	2	M3x0.5	6	25
MHS3-20D	38	35	36	13	18	20	6	8	14.5	13	3	27	5	12	5	10	6h9 ^{+0.030} ₀	2.5	M5x0.8	7	29
MHS3-25D	40	37	42	15	21	24	7	10	17	14.5	5	28	5	14	6	12	6h9 ^{+0.030} ₀	3	M5x0.8	8	34

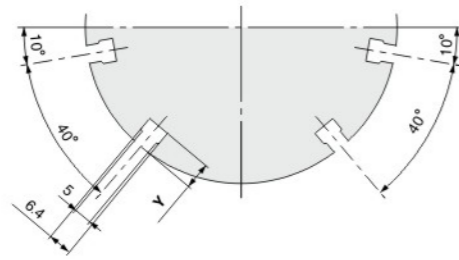
Model	SA	SB	SC	TB	UA	UB	VA	VB	WA	XA	XB
MHS3-16D	3.4	6.5	8	5	M3x0.5	4.5	2H9 ^{+0.025} ₀	2	17H9 ^{+0.043} ₀	2H9 ^{+0.025} ₀	2
MHS3-20D	3.4	6.5	9.5	6	M3x0.5	6	2H9 ^{+0.025} ₀	2	21H9 ^{+0.052} ₀	2H9 ^{+0.025} ₀	2
MHS3-25D	4.5	8	10	6	M4x0.7	6	3H9 ^{+0.025} ₀	3	26H9 ^{+0.052} ₀	3H9 ^{+0.025} ₀	3

Dimensions (mm)

MHS3-32D-80D



Auto switch mounting groove dimensions (4 locations)

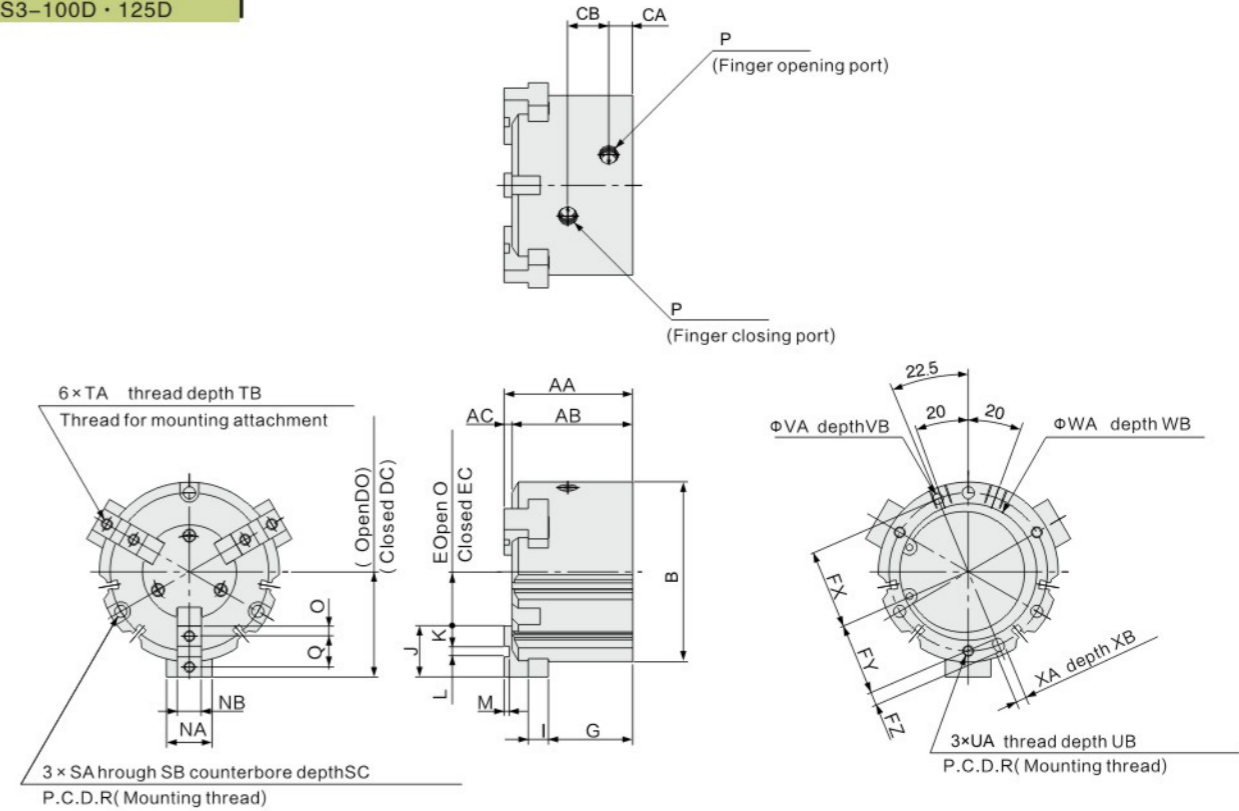


Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS3-32D	44	41	3	52	8	16	28	32	8	12	22	19.5	5	30.5	6	20	9	2H9 ^{+0.025} ₀	2	14	8h9 ⁰ _{-0.036}
MHS3-40D	47	44	3	62	9	17	31	35	10	14	26.5	23.5	6	32	7	21	9	3H9 ^{+0.025} ₀	2	16	8h9 ⁰ _{-0.036}
MHS3-50D	55	52	3	70	9	20	35	41	11	17	31	28	6	37.5	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	M5×0.8	11	44	4.5	8	9	M4×0.7	8	M4×0.7	6	3H9 ^{+0.025} ₀	3	34H9 ^{+0.062} ₀	2	3H9 ^{+0.025} ₀	3	6
MHS3-40D	4.5	M5×0.8	12	53	5.5	9.5	9	M4×0.7	8	M5×0.8	7.5	4H9 ^{+0.030} ₀	4	42H9 ^{+0.062} ₀	2	4H9 ^{+0.030} ₀	4	8
MHS3-50D	5	M5×0.8	14	62	5.5	9.5	12	M5×0.8	10	M5×0.8	10	4H9 ^{+0.030} ₀	4	52H9 ^{+0.074} ₀	2	4H9 ^{+0.030} ₀	4	7
MHS3-63D	5.5	M5×0.8	17	76	6.6	11	14	M5×0.8	10	M6×1	9	5H9 ^{+0.030} ₀	5	65H9 ^{+0.074} ₀	2.5	5H9 ^{+0.030} ₀	5	7.5
MHS3-80D	6	Rc1/8(G1/8, NPT1/8)	20	95	6.6	11	19	M6×1	12	M6×1	12	6H9 ^{+0.030} ₀	6	82H9 ^{+0.087} ₀	3	6H9 ^{+0.030} ₀	6	9

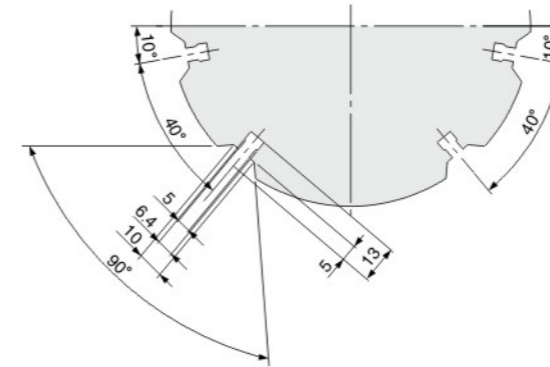
Dimensions (mm)

MHS3-100D-125D

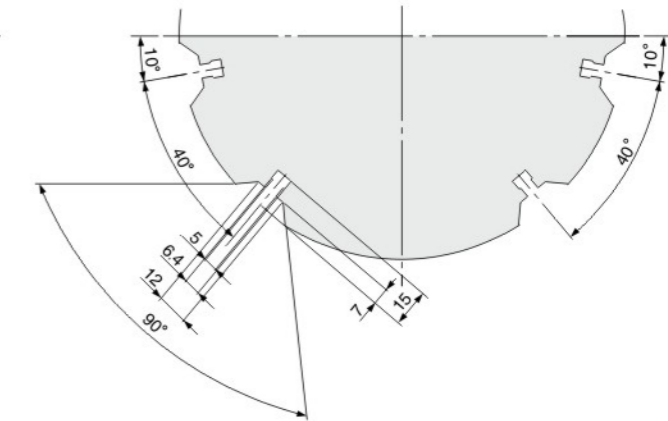


Auto switch mounting groove dimensions (4 locations)

MHS3-100D



MHS3-125D

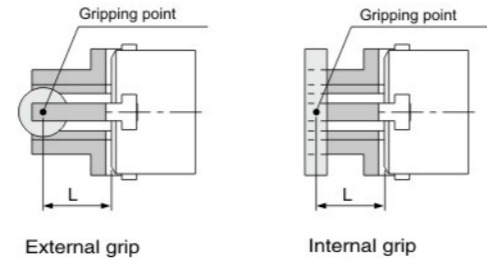


Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS3-100D	96	90	6	134	18	30.6	66	78	28	40	59	54	10	63	15	38	15	8H9 ^{+0.036} ₀	4	34	18h9 ⁰ _{-0.043}
MHS3-125D	122	114	8	166	23.5	38	82	98	30	46	74	68	12	84	18	52	21	10H9 ^{+0.036} ₀	6	40	22h9 ⁰ _{-0.052}

Model	O	P	Q	R	SA	SB	SC	TA	TB	UA	UB	VA	VB	WA	WB	XA	XB
MHS3-100D	7.5	Rc1/4(G1/4, NPT1/4)	23	118	9	14	21	M8×1.25	16	M8×1.25	16	8H9 ^{+0.036} ₀	6	102H9 ^{+0.087} ₀	4	8H9 ^{+0.036} ₀	6
MHS3-125D	10.5	Rc3/8(G3/8, NPT3/8)	31	148	11	17.5	34	M10×1.5	20	M10×1.5	20	10H9 ^{+0.036} ₀	8	130H9 ^{+0.100} ₀	6	10H9 ^{+0.036} ₀	8

Gripping Point

- The workpiece gripping point distance should be within the gripping force ranges given for each pressure in the effective gripping force graphs below.
- If operated with the workpiece gripping point beyond the indicated ranges, an excessive offset load will be applied to the sliding section of the fingers, which can have an adverse effect on the service life of the product.

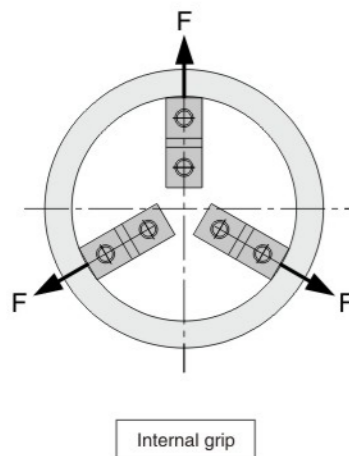
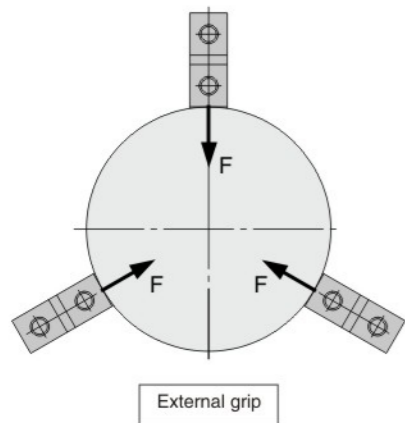


L: Gripping point distance

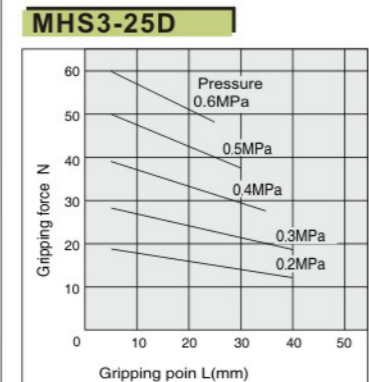
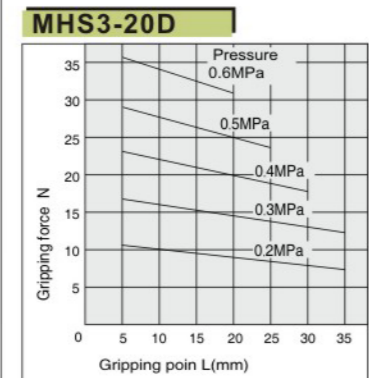
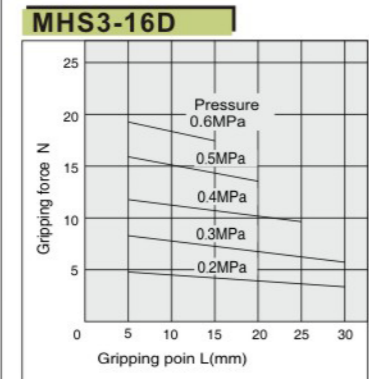
Effective Gripping Force

- Indication of effective gripping force

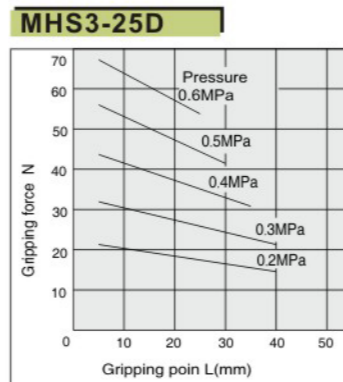
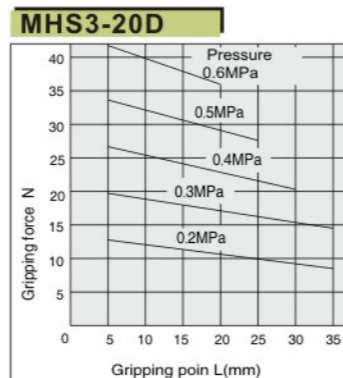
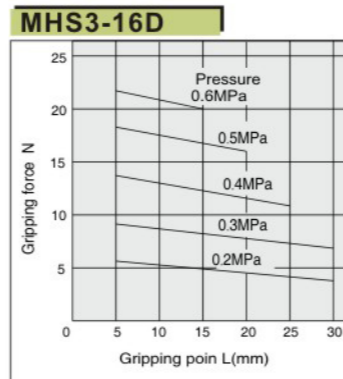
The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger when all 3 of the fingers and attachments are in full contact with the workpiece as shown in the figure below



External Grip



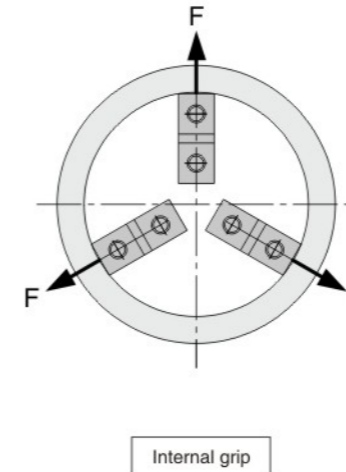
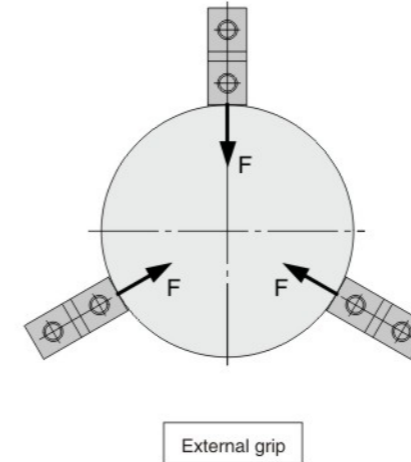
Internal Grip



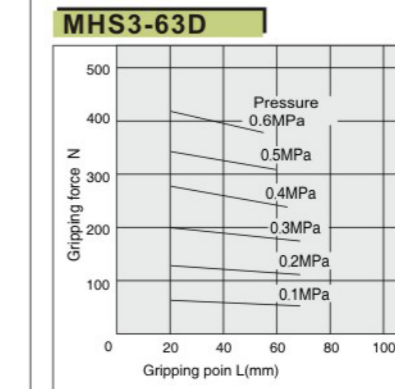
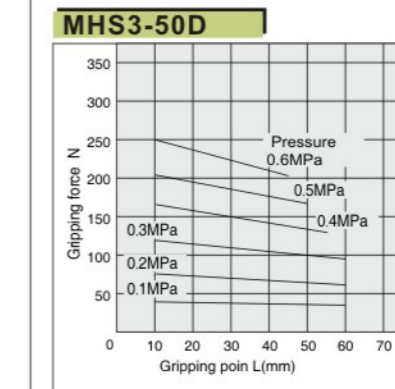
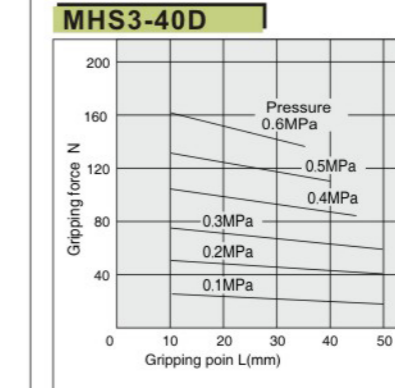
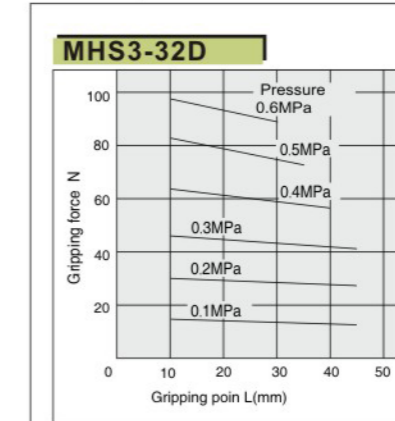
Effective Gripping Force

- Indication of effective gripping force

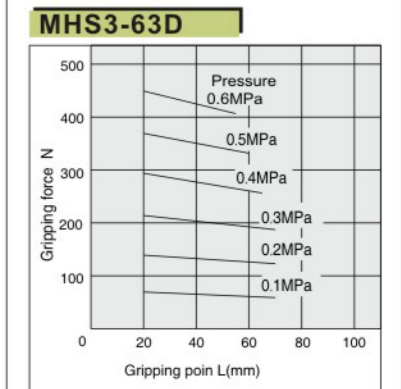
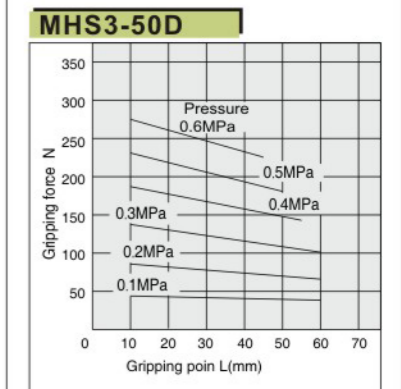
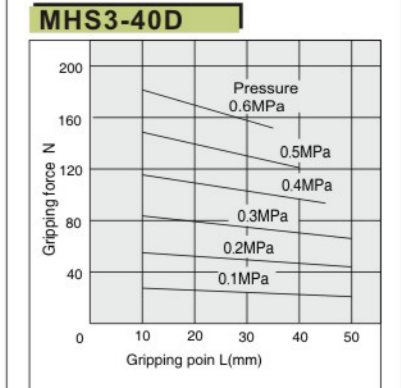
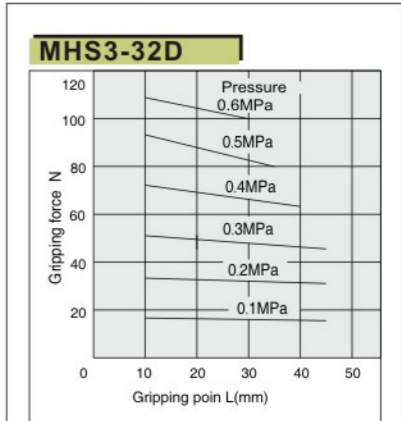
The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger when all 3 of the fingers and attachments are in full contact with the workpiece as shown in the figure below



External Grip



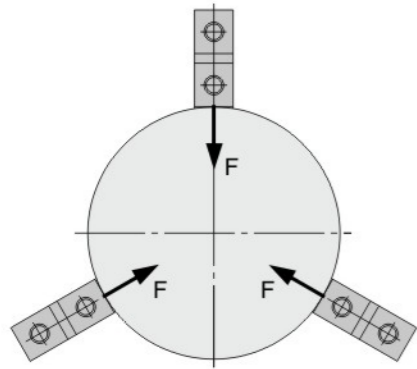
Internal Grip



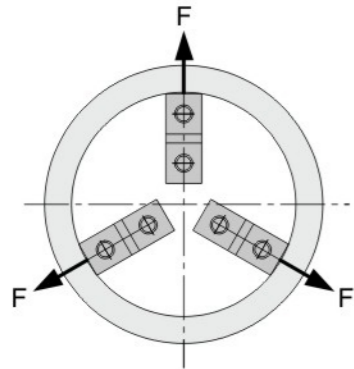
Effective Gripping Force

- Indication of effective gripping force

The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger when all 3 of the fingers and attachments are in full contact with the workpiece as shown in the figure below

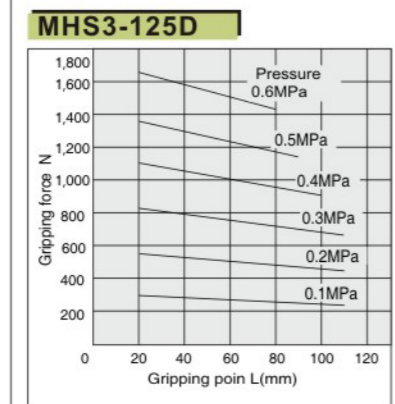
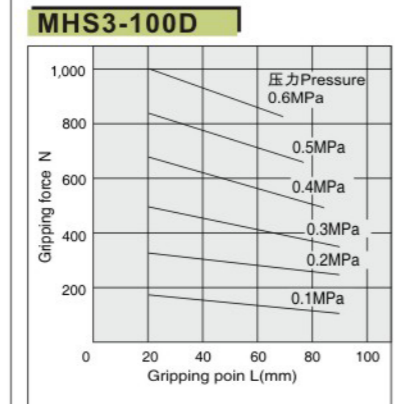
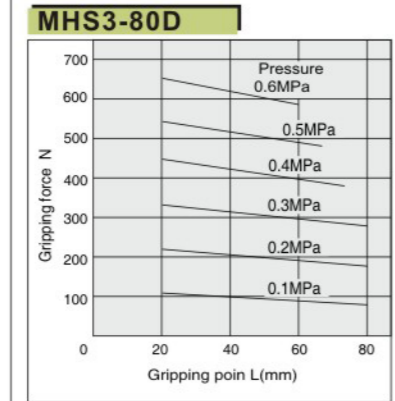


External grip

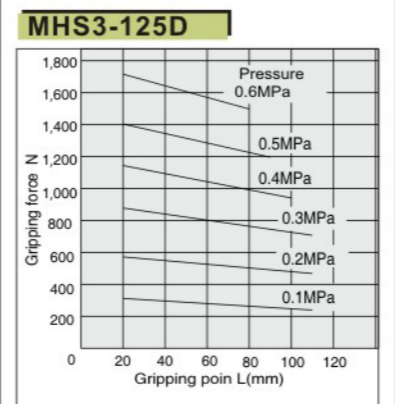
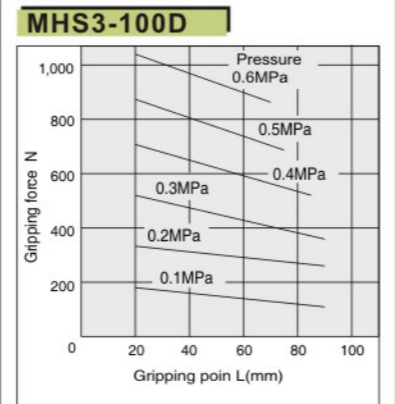
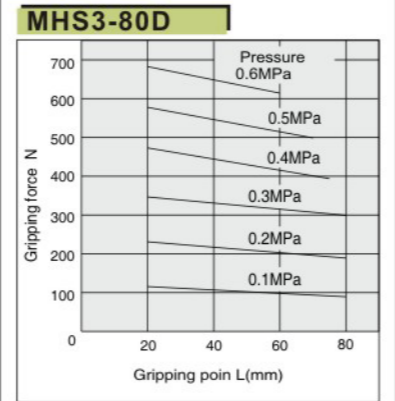


Internal grip

External Grip



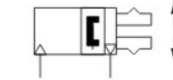
内径夹持力 Internal Grip



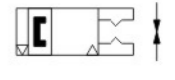
Symbol



Double acting: Internal grip



Double acting: External grip

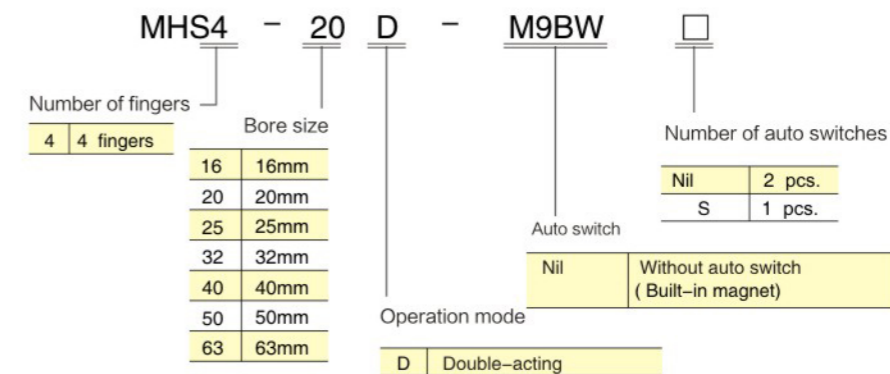


Standard Specification

Model	MHS4-16D	MHS4-20D	MHS4-25D	MHS4-32D	MHS4-40D	MHS4-50D	MHS4-63D
Bore size (mm)	16	20	25	32	40	50	63
Fluid	Air						
Operating pressure MPa	0.2~0.6			0.1~0.6			
Ambient and fluid temperature °C	-10~60						
Repeatability mm	±0.01						
Max. operating frequency c.p.m	120			60			
Lubrication	Not required						
Action	Double acting						
Note 1)							
Effective gripping force (N) at 0.5 MPa	External grip	10	19	31	55	88	251
	Internal grip	12	21	35	61	97	268
Opening/Closing stroke (dia.) mm	4	4	6	8	8	12	16
Weight g	66	110	154	300	390	590	1,095

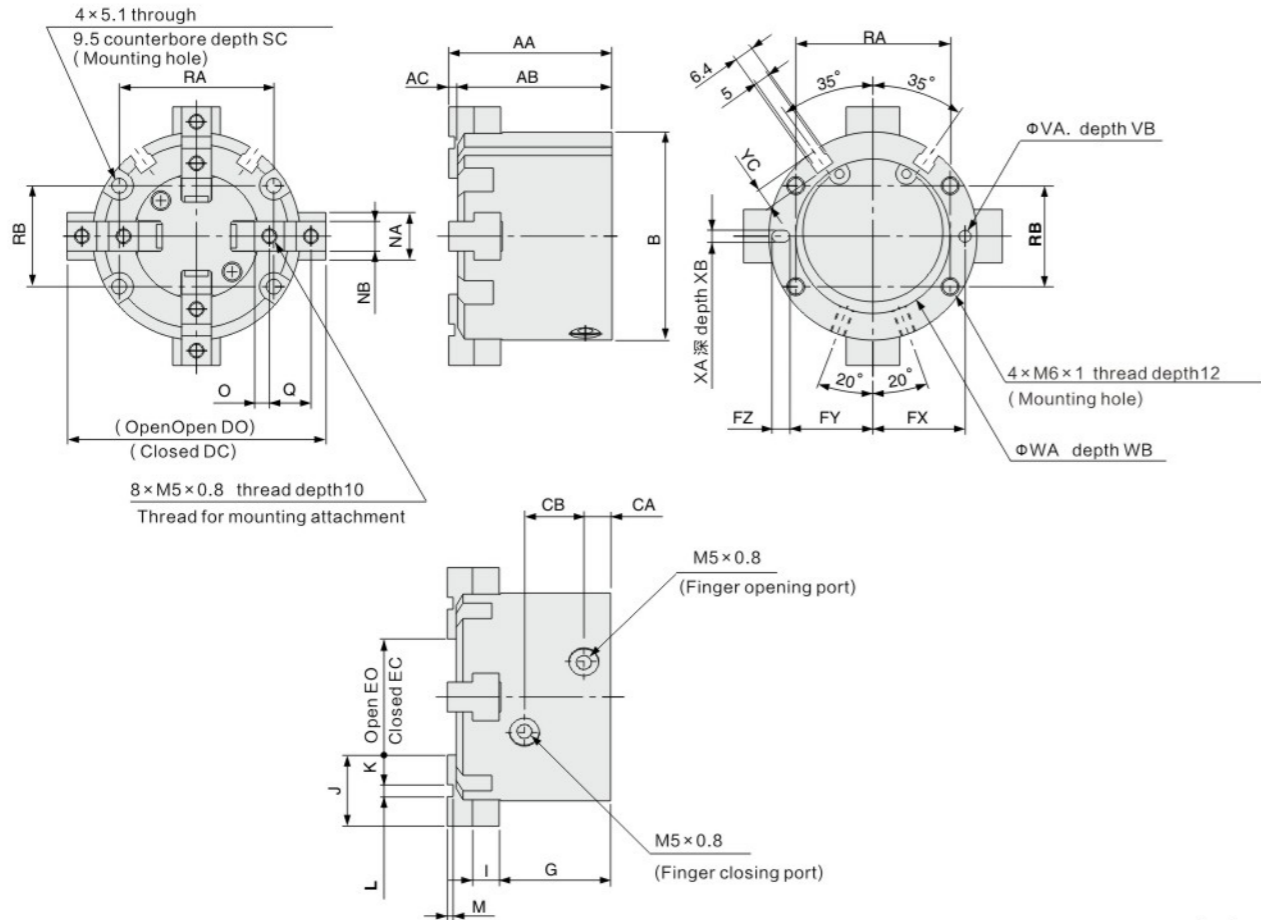
Note 1) Values for Φ16 to Φ25 are with gripping point L = 20 mm, for Φ32 to Φ63 with gripping point L = 30 mm.

Ordering code



Dimensions (mm)

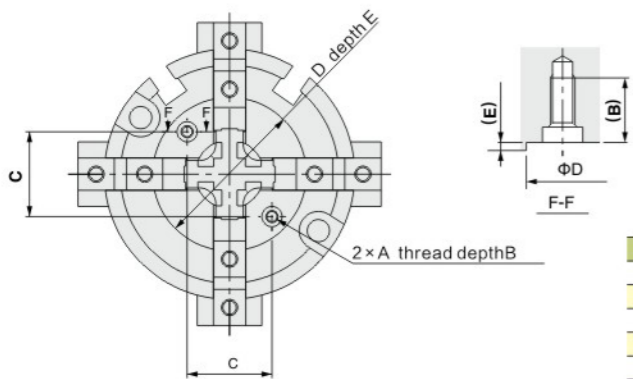
MHS4-50D · 63D



Model	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M	NA	NB
MHS4-50D	55	52	3	70	9	20	74	86	26	38	31	28	6	37.5	9	24	10	4H9 ^{+0.030} ₀	2	18	10h9 ⁰ _{-0.036}
MHS4-63D	66	62	4	86	12	22	91	107	35	51	38	34.5	7	44	11	28	11	6H9 ^{+0.030} ₀	3	24	12h9 ⁰ _{-0.043}

Model	O	Q	RA	RB	SC	VA	VB	WA	WB	XA	XB	YC
MHS4-50D	5	14	52	34	12	4H9 ^{+0.030} ₀	4	52H9 ^{+0.074} ₀	2	4H9 ^{+0.030} ₀	4	7
MHS4-63D	5.5	17	66	38	14	5H9 ^{+0.030} ₀	5	65H9 ^{+0.074} ₀	2.5	5H9 ^{+0.030} ₀	5	7.5

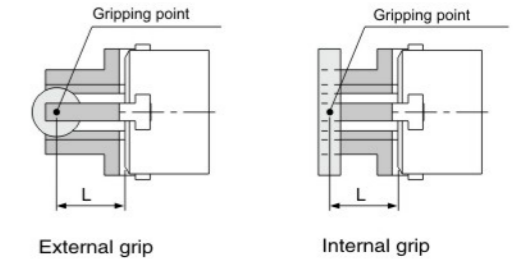
MHS4 Series Detailed Dimensions of Mounting Portion of End Plate



Model	A	B	C	D	E
MHS4-16D	M2x0.4	5.5	11	21 ^{+0.1} ₀	0.5
MHS4-20D		5.4	13	24 ^{+0.1} ₀	0.6
MHS4-25D		5.2	15	27 ^{+0.1} ₀	0.8
MHS4-32D	M3x0.5	8	18	32 ^{+0.1} ₀	1
MHS4-40D		8	21	38 ^{+0.1} ₀	1
MHS4-50D		8	24	42 ^{+0.1} ₀	1
MHS4-63D			32	54 ^{+0.1} ₀	1

Gripping Point

- The workpiece gripping point distance should be within the gripping force ranges given for each pressure in the effective gripping force graphs below.
- If operated with the workpiece gripping point beyond the indicated ranges, an excessive offset load will be applied to the sliding section of the fingers, which can have an adverse effect on the service life of the product.

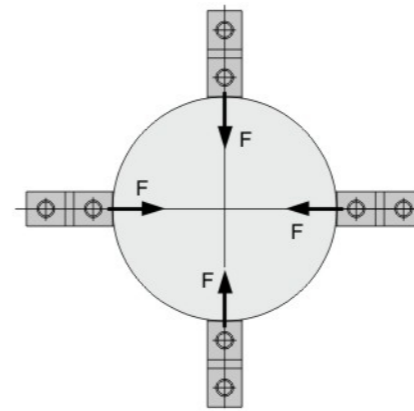


L: Gripping point distance

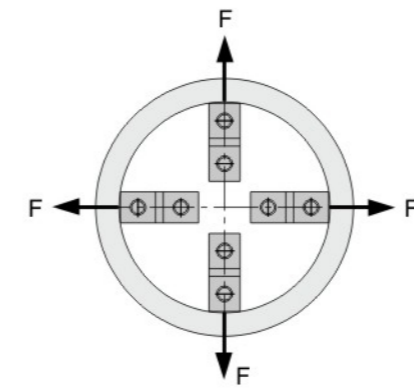
Effective Gripping Force

- Indication of effective gripping force

The gripping force shown in the tables represents the gripping force of one finger when all fingers and attachments are in contact with the workpiece. The gripping force of MHS4 series is the same as MHS2 series while one pair of opposite fingers is used to grip the workpiece and the other pair of fingers is used for positioning.

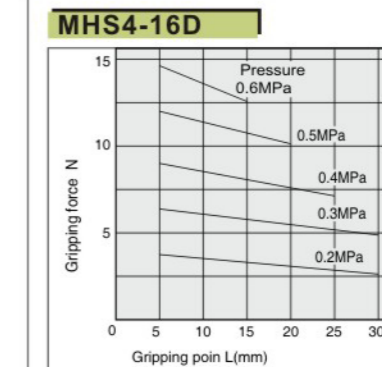


External grip

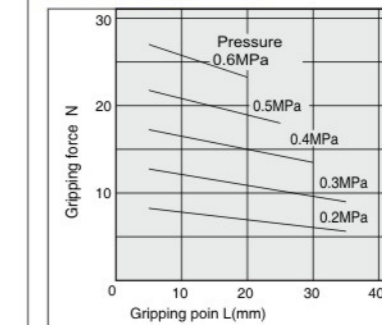


Internal grip

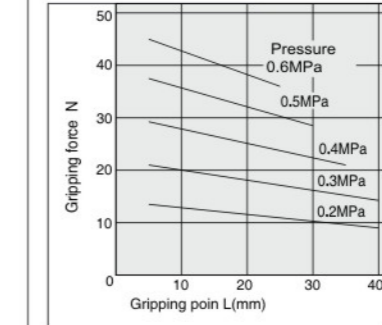
External Grip



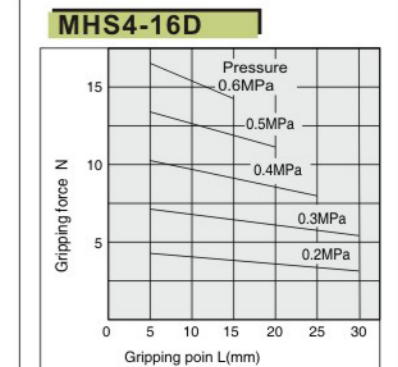
MHS4-20D



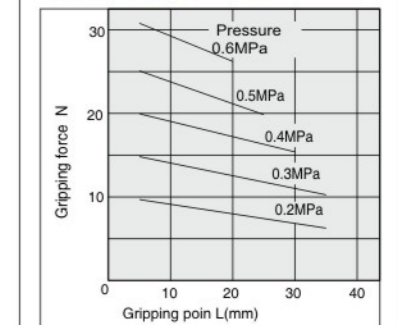
MHS4-25D



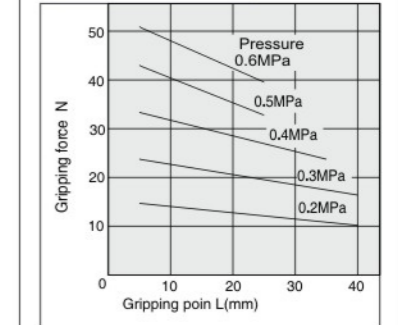
Internal Grip



MHS4-20D



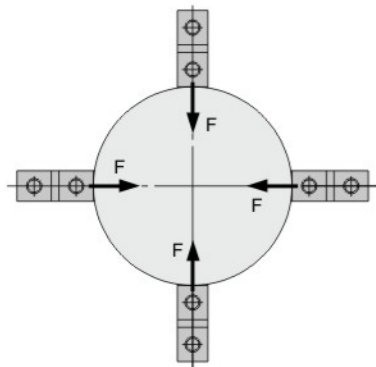
MHS4-25D



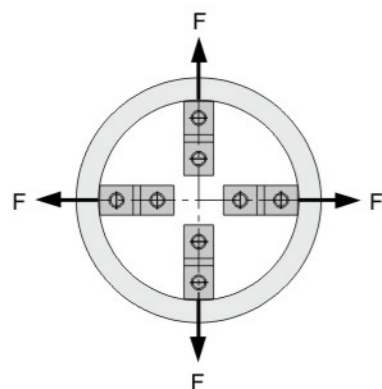
Effective Gripping Force

● Indication of effective gripping force

Indication of effective gripping force
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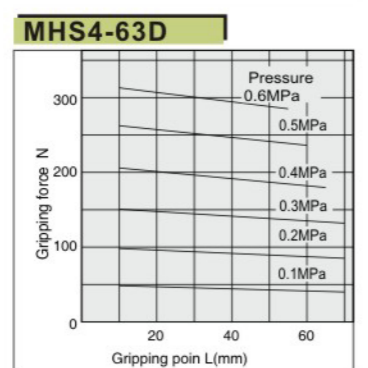
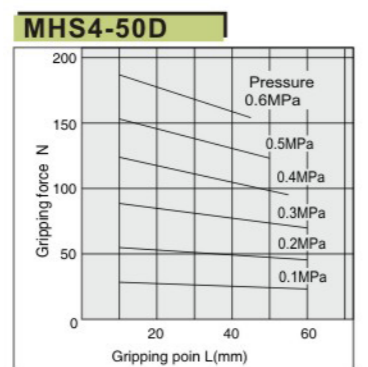
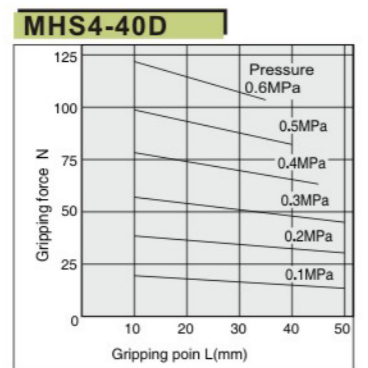
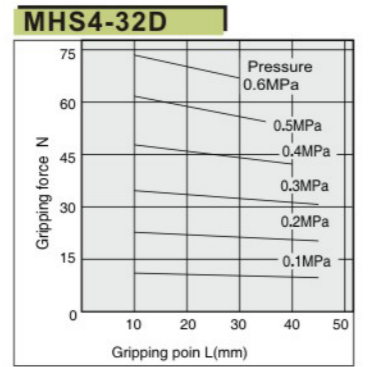


External grip

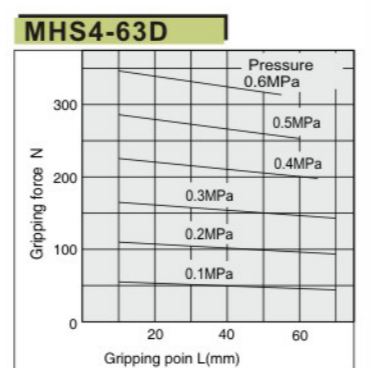
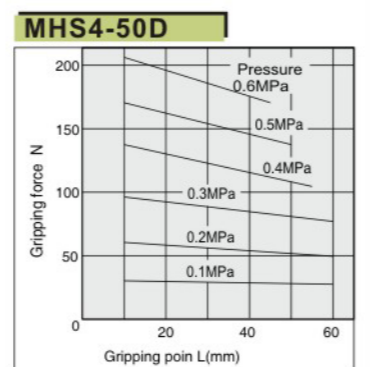
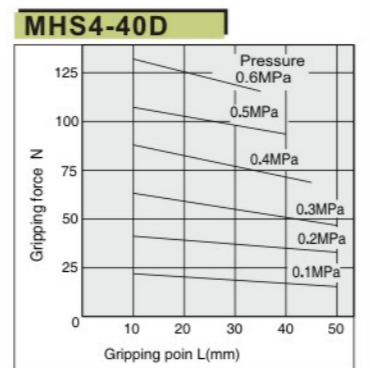
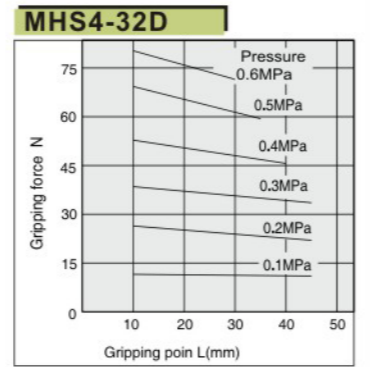


Internal grip

External Grip



Internal Grip



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