

Angular Style Air Gripper  
Toggle Type

# Series *MHT2*

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

**MHT**

MHY

MHW

MRHQ

Misc.

D-

20-



# Angular Style Air Gripper Toggle Type

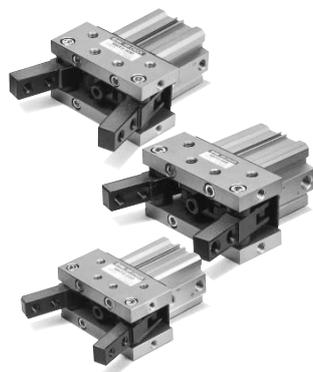
# Series MHT2

Size: 32, 40, 50, 63

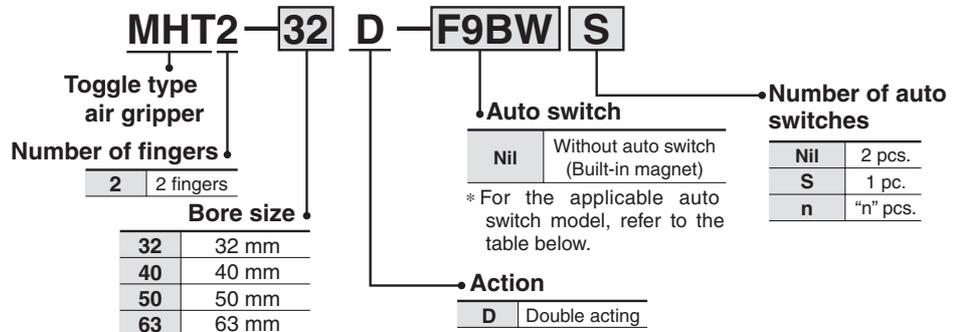
Ideal for gripping heavy workpiece.

The toggle mechanism holds workpiece even when pressure drops.

Auto switch is attachable.



## How to Order



## Applicable Auto Switch/Refer to page 12-13-1 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Rail mounting		Direct mounting		Lead wire length (m)*				Pre-wire connector	Applicable load
					DC	AC	Perpendicular	In-line	Perpendicular	In-line	0.5 (Nil)	3 (L)	5 (Z)	None (N)		
Reed switch	—	Grommet	Yes	3-wire (NPN equi.)	—	5 V	—	A76H	A96V	A96	●	●	—	—	—	IC circuit
						200 V	A72	A72H	—	—	●	●	—	—		
				24 V	12 V	100 V	A73	A73H	—	—	●	●	●	—	—	
					12 V	—	A73C	—	—	—	●	●	●	●	—	
Solid state switch	—	Grommet	Yes	3-wire (NPN)	—	5 V	—	F7NV	F79	M9NV	M9N	●	●	○	○	IC circuit
								12 V	F7PV	F7P	M9PV	M9P	●	●	○	
				24 V	12 V	—	F7BV	J79	M9BV	M9B	●	●	○	○	—	
							J79C	—	—	—	●	●	●	●	—	
Diagnosis (2-color indication)	Grommet	Yes	3-wire (NPN)	—	5 V	—	F7NWW	F79W	F9NWW	F9NW	—	●	○	○	IC circuit	
							12 V	—	F7PW	F9PW	F9PW	●	●	○		○
			24 V	12 V	—	F7BWW	J79W	F9BWW	F9BW	●	●	○	○	—		
						F7BAV	—	—	—	—	●	○	—	—		
Water resistant (2-color indication)	Grommet	Yes	2-wire	—	12 V	—	—	F7BA	—	F9BA	—	●	○	○	—	
							F7BAV	—	—	—	—	●	○	—		—
With diagnosis output (2-color indication)	Grommet	Yes	4-wire (NPN)	—	5 V	—	—	F79F	—	—	●	●	○	○	IC circuit	
							12 V	—	—	—	—	—	—	—		—

\* Lead wire length symbols: 0.5 m ..... Nil (Example) F9BW  
 3 m ..... L (Example) F9BWL  
 5 m ..... Z (Example) F9BWZ  
 None ..... N (Example) J79CN

\* "○" marked solid state switches are produced upon receipt of order.  
 • Refer to page 12-9-7 for details, because there are other auto switches available than above models.



Refer to page 12-13-25 for auto switch specifications.

## Switch Mounting Bracket Part No.

Bore size (mm)	Bracket no.	Note	Applicable auto switch
32, 40, 50, 63	BQ-2	<ul style="list-style-type: none"> <li>Switch mounting screw (M3 x 0.5 x 10)</li> <li>Switch spacer</li> <li>Switch mounting nut.</li> </ul>	Reed switch D-A7/A8 D-A73C/A80C D-A7□H/A80H D-A79W Solid state switch D-F7□/J79 D-F7□V D-J79C D-F7□W/J79W D-F7□WV D-F7BAL/F78AVL D-F79F

## Model/Specifications

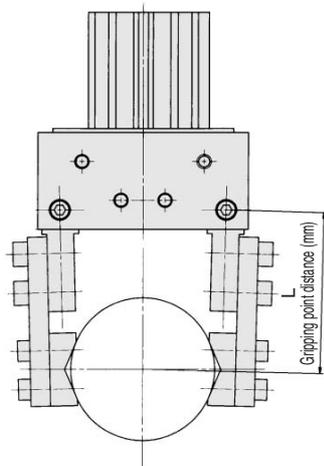
Model	MHT2-32D	MHT2-40D	MHT2-50D	MHT2-63D
Bore size (mm)	32	40	50	63
Action	Double acting			
Fluid	Air			
Operating pressure	0.1 to 0.6 MPa			
Ambient and fluid temperature	5 to 60°C			
Lubrication	Not required			
Finger opening angle (Total)	-3 to 28°	-3 to 27°	-2 to 23°	-2 to 23°
Weight (kg)	0.80	1.09	1.93	2.8
Gripping moment (Note)	12.4	36.0	63.0	106
(Effective value) (N-m)				



(Note) At the pressure of 0.5 MPa

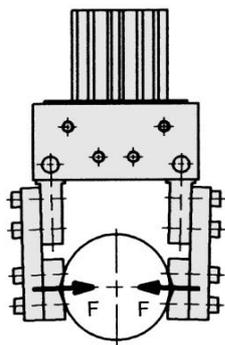
## Effective Gripping Force

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



### • 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.



## ⚠ Precautions

Be sure to read before handling. Refer to pages 12-15-3 to 12-15-4 for Safety Instructions and Common Precautions on the product mentioned in this catalog, and refer to pages 12-1-4 to 12-1-6 for Precautions on every series.

## ⚠ Warning

### Maintenance

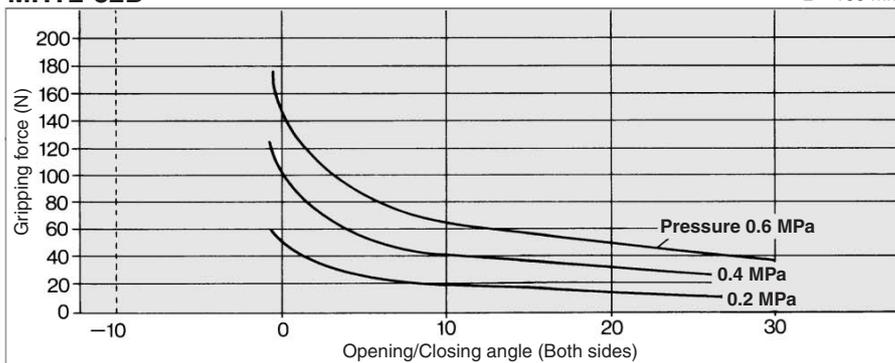
If a workpiece is to be gripped by using the toggle, make sure to periodically check that the workpiece has not shifted during the acceleration of the movement. If the workpiece is not gripped in a stable manner, it could shift or drop and create a dangerous situation.

If the workpiece is not gripped in a stable manner, use shims on the attachment to adjust the gripped.

To verify the gripping condition or to make any adjustments, make sure to do so in an area where the air gripper or the workpiece will not fall.

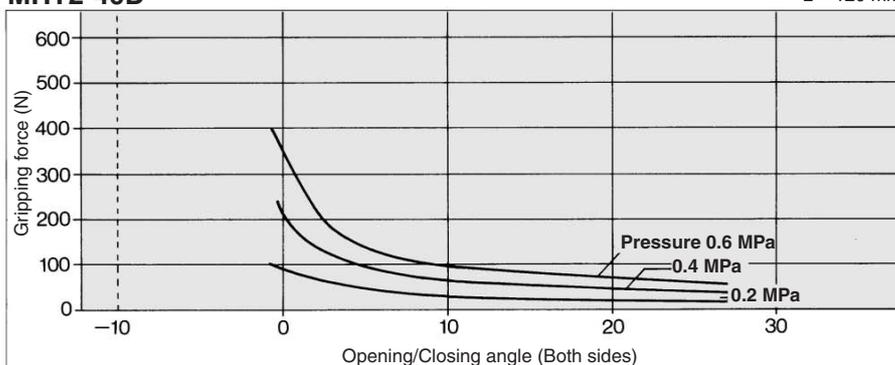
### MHT2-32D

L = 100 mm



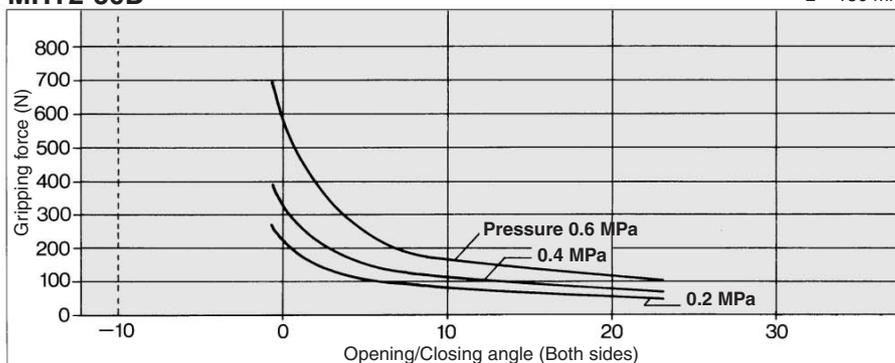
### MHT2-40D

L = 120 mm



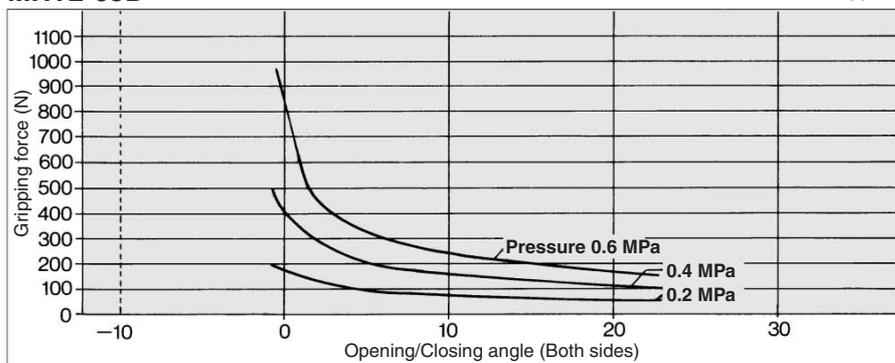
### MHT2-50D

L = 150 mm



### MHT2-63D

L = 180 mm



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MHY

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Misc.

D-

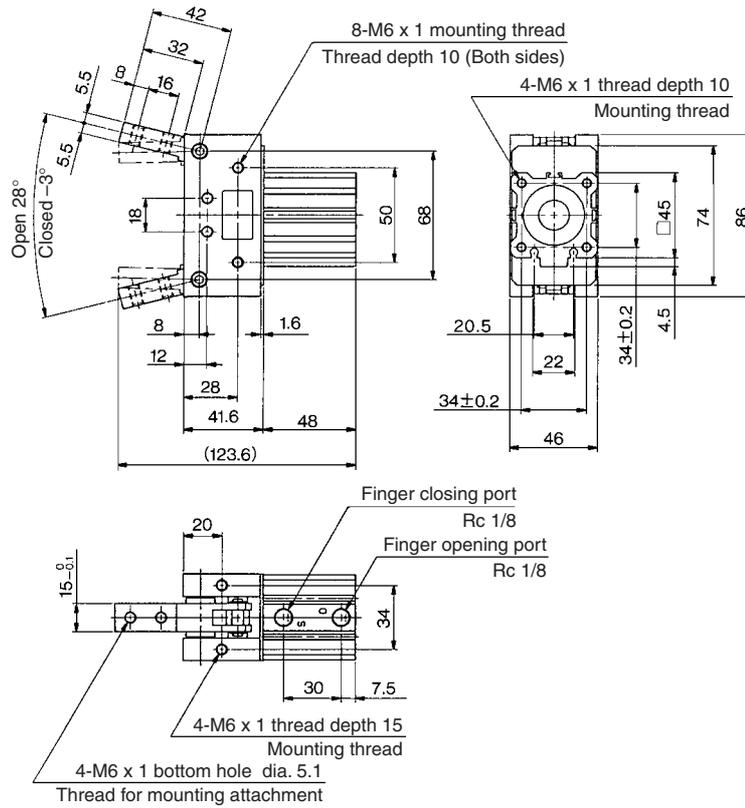
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# Series MHT2

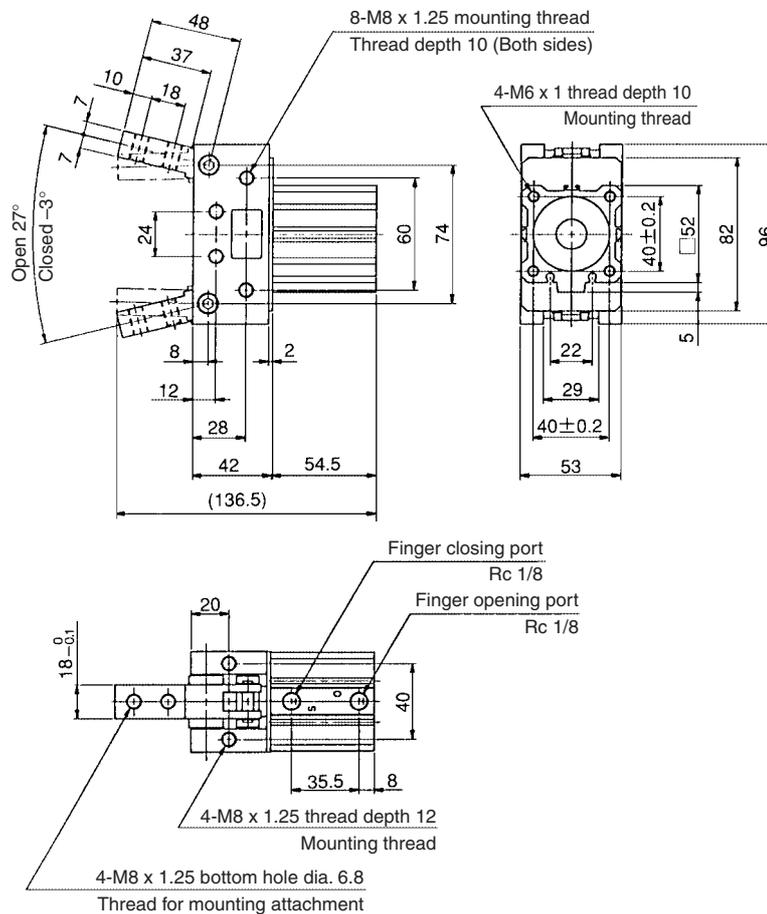


## Dimensions

### MHT2-32D



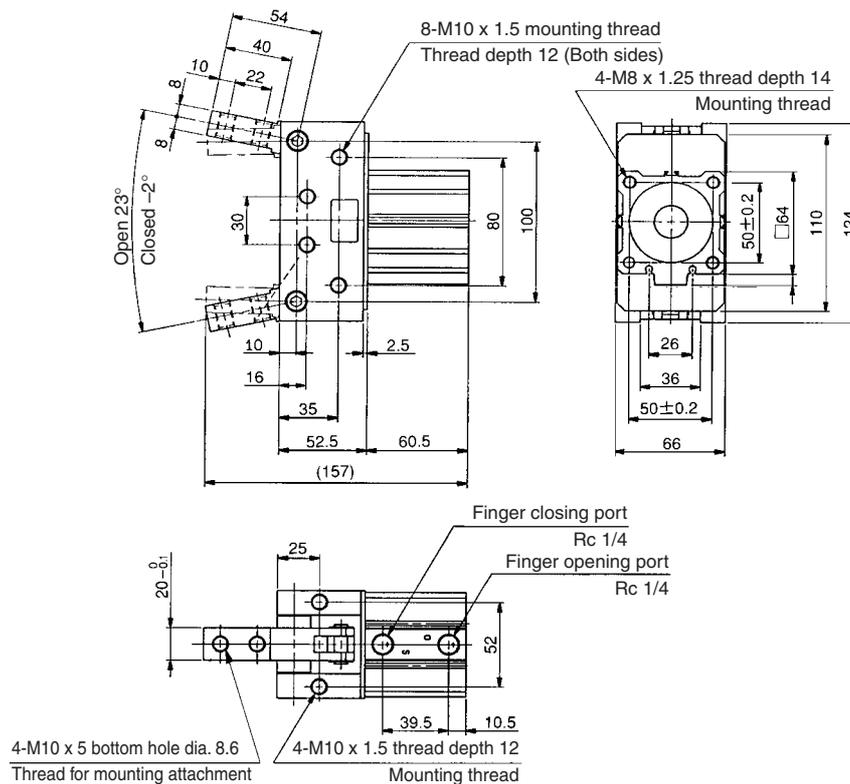
### MHT2-40D



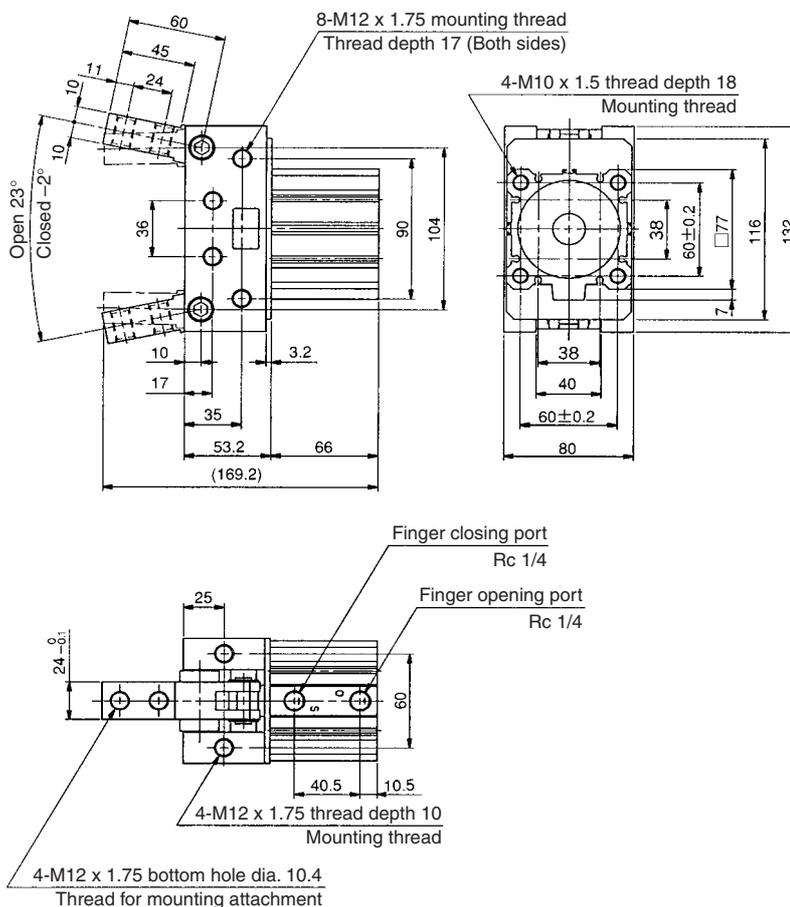
# Angular Style Air Gripper Toggle Type Series MHT2

## Dimensions

### MHT2-50D



### MHT2-63D



MHZ

MHF

MHL

MHR

MHK

MHS

MHC

**MHT**

MHY

MHW

MRHQ

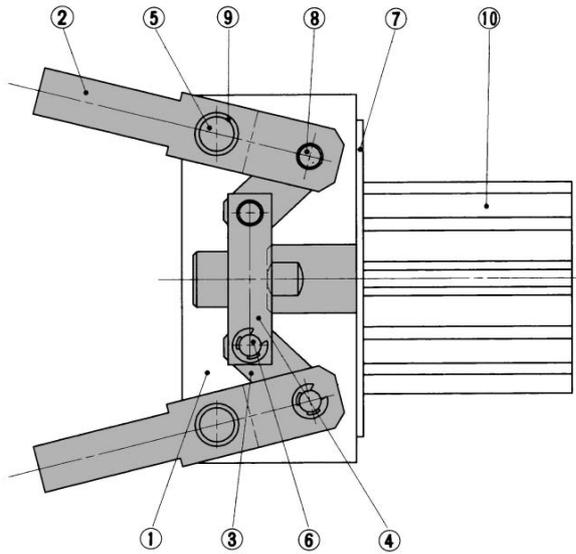
Misc.

D-

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# Series MHT2

## Construction



### Component Parts

No.	Description	Material	Note
①	Side plate	Aluminum alloy	Hard anodized
②	Finger	Carbon steel	Black zinc chromated
③	Lever	Carbon steel	Black zinc chromated
④	Joint	Carbon steel	Black zinc chromated
⑤	Shaft	Stainless steel	
⑥	Joint pin	Stainless steel	
⑦	Cylinder plate	Soft steel	Black zinc chromated
⑧	Lever pin	Stainless steel	
⑨	Bearing		Steel lined oil imfilled acetal resin bearing
⑩	Cylinder		Compact cylinder

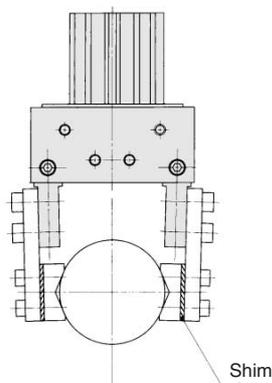
### Replacement Parts

Description	MHT2-32D	MHT2-40D	MHT2-50D	MHT2-63D	Main parts
Finger assembly	MH-TA3201	MH-TA4001	MH-TA5001	MH-TA6301	②⑨
Lever assembly	MH-TA3202	MH-TA4002	MH-TA5002	MH-TA6302	③
Link parts assembly	MH-TA3203	MH-TA4003	MH-TA5003	MH-TA6303	<ø32, ø40> ②③④⑥⑧⑨ <ø50, ø63> ②③④⑧⑨
Compact cylinder	CDQ2A32-15D	CDQ2A40-15D	CDQ2A50-20D	CDQ2A63-20D	⑩

\* For finger assembly, lever assembly, order 2 pieces per one unit.

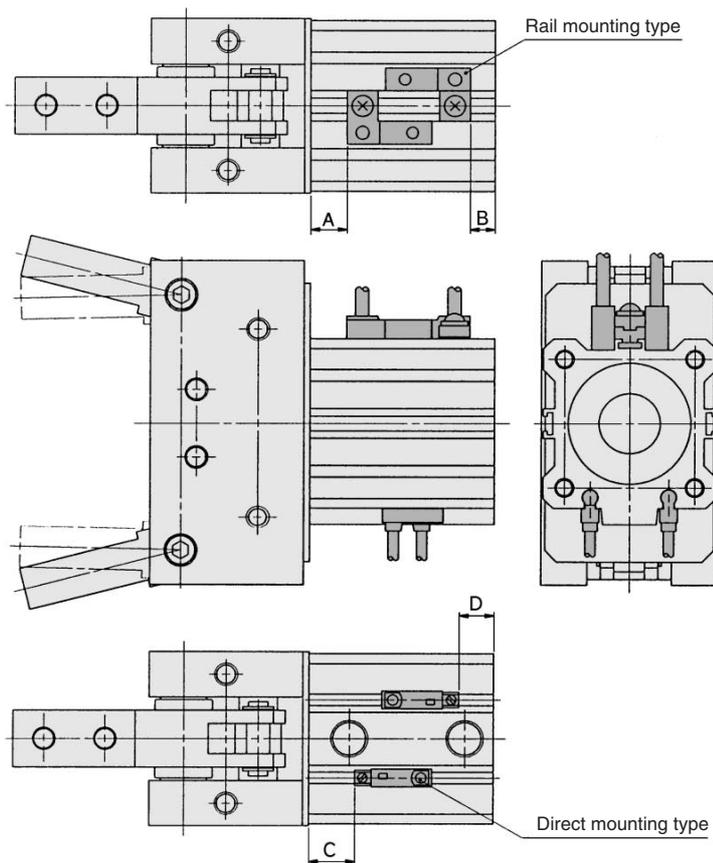
### Attachment Design

Use shims for fine adjustment of the attachment.

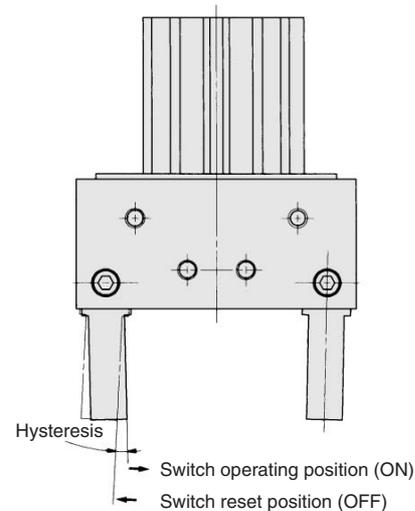


## Mounting of Auto Switch

## Auto Switch Hysteresis



D-A7, D-A8: Rail mounting type  
D-M9□V: Direct mounting type are shown above.



Model	Hysteresis (Max.) angle
MHT2-32D	3
MHT2-40D	3
MHT2-50D	3
MHT2-63D	3

Bore size (mm)	Rail mounting						Direct mounting					
	D-A7□/A80		D-A7□H/A80H D-A73C/A80C D-F7BAL/F7BAVL D-F7□/J79 D-F7□V/J79C D-F7□W/F79F D-F7□WV D-J79W		D-A79W		D-A9□ D-A9□V		D-M9□ D-M9□V D-F9□W D-F9□WV		D-F9BA	
	A	B	A	B	A	B	C	D	C	D	C	D
32	9	6	9.5	6.5	6.5	3.5	8	5	12	9	11	8
40	13	8.5	13.5	9	10.5	6	12	7.5	16	11.5	15	10.5
50	11	11.5	11.5	12	8.5	9	10	10.5	14	14.5	13	13.5
63	13.5	14.5	14	15	11	12	12.5	13.5	16.5	17.5	15.5	16.5

Refer to page 12-13-1 for further information on other auto switches.

Type	Model	Electrical entry (direction)	Features
Reed switch	D-A80	Grommet (Perpendicular)	Without indicator light
	D-A80H	Grommet (In-line)	
	D-A80C	Connector (Perpendicular)	
	D-A90	Grommet (In-line)	
	D-A90V	Grommet (Perpendicular)	

\* For details, refer to Best Pneumatics Vol. 7/8/9/10, because there are other types of normally closed (NC = b contact) solid state switches. (D-F9G/F9H)

MHZ  
MHF  
MHL  
MHR  
MHK  
MHS  
MHC  
MHT  
MHY  
MHW  
MRHQ  
Misc.  
D-  
20-

