

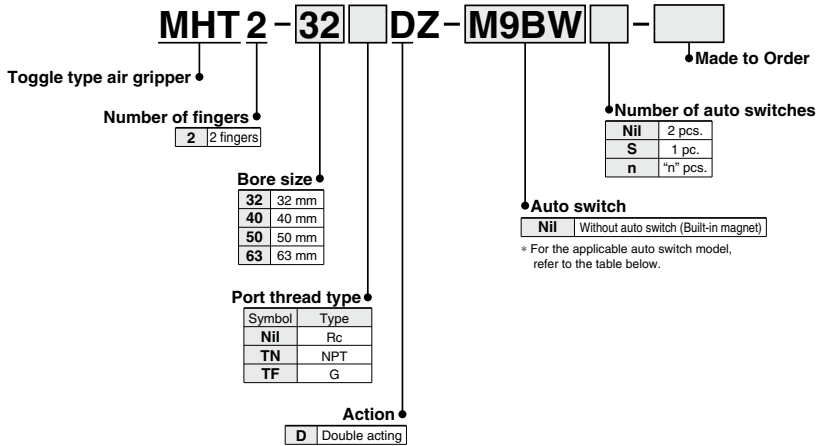


Toggle Type Air Gripper

MHT2 Series

ø32, ø40, ø50, ø63

How to Order

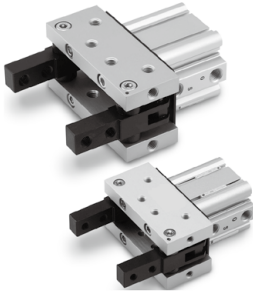


Applicable Auto Switches

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load	
					DC	AC	Electrical entry direction		0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)		IC circuit	Relay, PLC
							Perpendicular	In-line								
Solid state auto switch	—	Grommet	No	3-wire (NPN)	24 V	—	M9NV	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC
				3-wire (PNP)			M9PV	M9P	●	●	●	○	—	○		
				2-wire			M9BV	M9B	●	●	●	○	—	○		
				3-wire (NPN)			M9NWV	M9NW	●	●	●	○	—	○		
	Diagnosis (2-color indicator)	Grommet	Yes	3-wire (PNP)	24 V	—	M9PWV	M9PW	●	●	●	○	—	○	IC circuit	Relay, PLC
				2-wire			M9BWW	M9BW	●	●	●	○	—	○		
				3-wire (NPN)			M9NAV	M9NA	○	○	○	○	—	○		
				3-wire (PNP)			M9PAV	M9PA	○	○	●	○	—	○		
Water resistant (2-color indicator)	Grommet	No	2-wire	24 V	—	M9BAV	M9BA	○	○	●	○	—	○	IC circuit	Relay, PLC	
			3-wire (NPN)			A96V	A96	●	●	●	—	—	—			
			3-wire (PNP)			A93V	A93	●	●	●	●	—	—			
			2-wire			A90V	A90	●	—	●	—	—	—			
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	24 V	—	A96V	A96	●	●	●	—	—	IC circuit	—	
				2-wire			A93V	A93	●	●	●	●	—	—	IC circuit	Relay, PLC
Reed auto switch	—	Grommet	No	3-wire (NPN equivalent)	24 V	—	A90V	A90	●	—	●	—	—	IC circuit	—	
				2-wire			A93V	A93	●	●	●	●	—	—	IC circuit	Relay, PLC

Toggle Type Air Gripper *MHT2 Series*

- Ideal for gripping heavy workpiece.
- The toggle mechanism holds workpiece even when pressure drops.
- Auto switch is attachable.



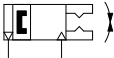
Model/Specifications

Model	MHT2-32□□DZ	MHT2-40□□DZ	MHT2-50□□DZ	MHT2-63□□DZ
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 (g)	790	1070	1890	2720
Gripping moment ^{Note)} (Effective value) (N-m)	12.4	36.0	63.0	106

Note) At the pressure of 0.5 MPa

Symbol

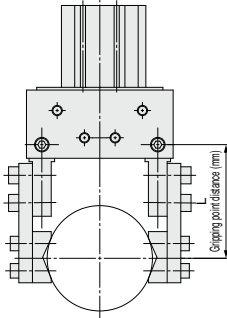
Double acting/External grip





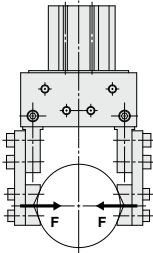
Effective Gripping Force

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



• Indication of effective gripping force

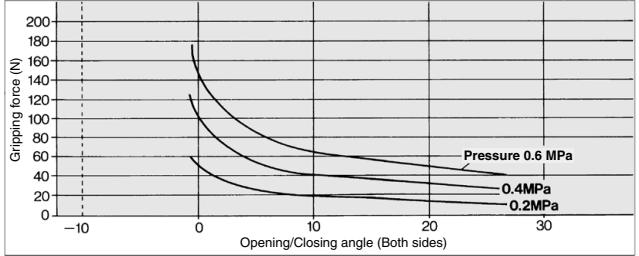
The effective gripping force shown in the graphs to the right is expressed as F , which is the thrust of one finger, when both fingers and attachments are in full contact with the workpiece as shown in the figure below.



MHT2 Series

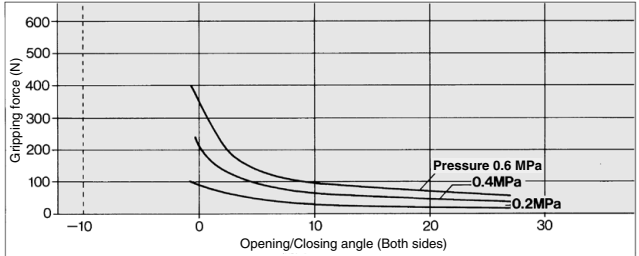
MHT2-32DZ

L = 100 mm



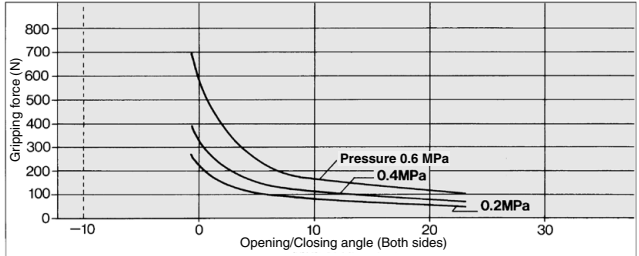
MHT2-40DZ

L = 120 mm



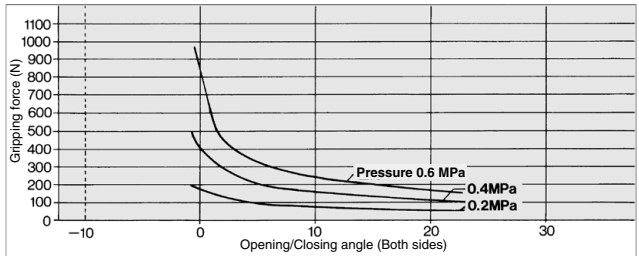
MHT2-50DZ

L = 150 mm



MHT2-63DZ

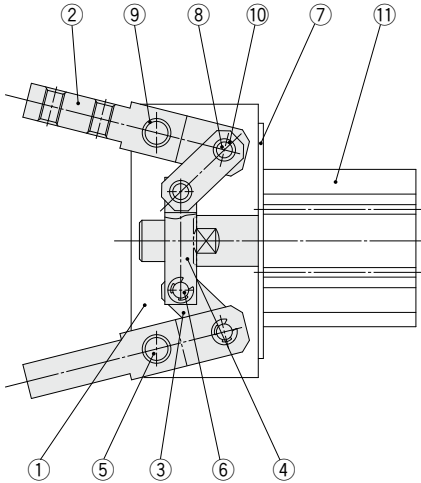
L = 180 mm





Construction

Toggle Type Air Gripper **MHT2 Series**



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 infilled acetal resin bearing
10	Bearing		Steel lined oil infilled acetal resin bearing
11	Cylinder		Compact cylinder

Replacement Parts

Description	MHT2-32□□DZ	MHT2-40□□DZ	MHT2-50□□DZ	MHT2-63□□DZ	Main parts
Finger assembly	MH-TA3201	MH-TA4001	MH-TA5001	MH-TA6301	②/⑨
Lever assembly	MH-TA3202	MH-TA4002	MH-TA5002	MH-TA6302	③/⑩
Link parts assembly	MH-TA3203	MH-TA4003	MH-TA5003	MH-TA6303	<ø32, ø50> ②/③/④/⑥/⑧/⑨/⑩ <ø40, ø63> ②/③/④/⑥/⑧/⑨/⑩
Compact cylinder	CDQ2A32-15DZ	CDQ2A40-15DZ	CDQ2A50-20DZ	CDQ2A63-20DZ	①/MHT2-□□DZ
	CDQ2A32TN-15DZ	CDQ2A40TN-15DZ	CDQ2A50TN-20DZ	CDQ2A63TN-20DZ	①/MHT2-□□TNDZ
	CDQ2A32TF-15DZ	CDQ2A40TF-15DZ	CDQ2A50TF-20DZ	CDQ2A63TF-20DZ	①/MHT2-□□TFDZ

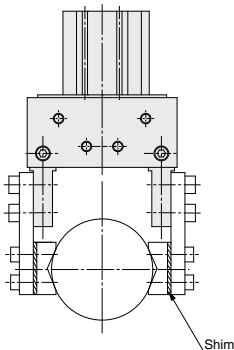
* For finger assembly, lever assembly, order 2 pieces per one unit.

Replacement part/Grease pack part no.

For finger part: MH-G01 (30 g)

For cylinder part: GR-S-010 (10 g)

Attachment Design



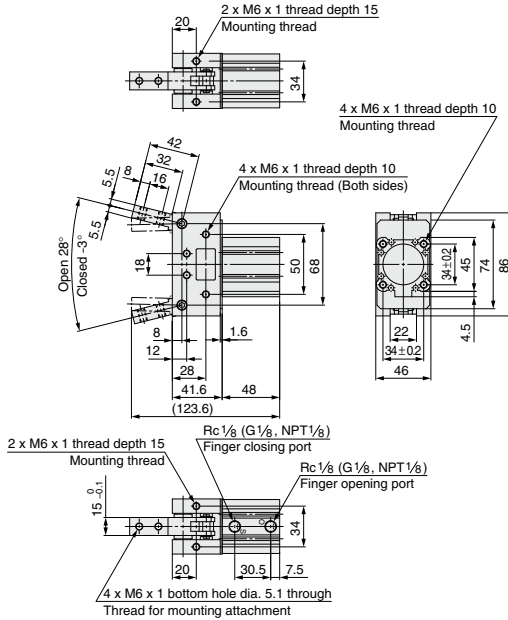
- ① Design the attachment so that both fingers grip the workpiece when they are in parallel with each other.
- ② Take considerations so that the fine adjustment of the attachment can be made by putting the adjustment shim.
- ③ When the shim is thin, the gripping force becomes insufficient and the workpiece may become unstable. Conversely, when the shim is thick, the toggle mechanism is difficult to activate and a large impulsive sound may sometimes be produced. Carefully check this point.
- ④ The gripping status may become unstable due to continual wear of the bearing or shaft during operation. If this happens, make the adjustment, such as use of thicker shim according to the conditions.



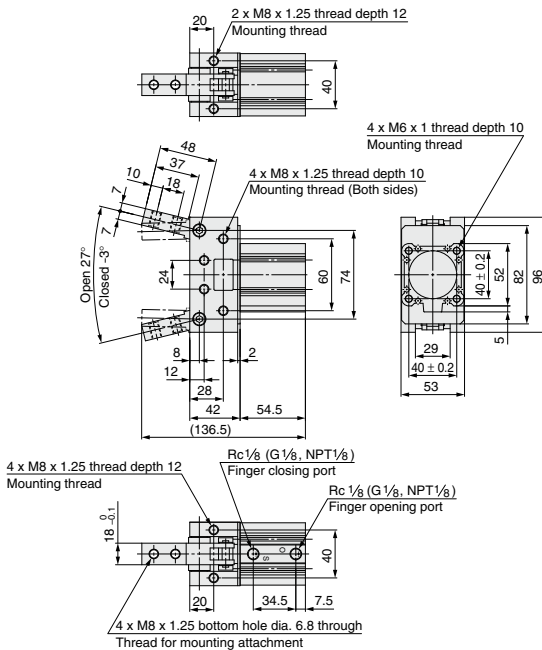
Dimensions

MHT2 Series

MHT2-32DZ



MHT2-40DZ

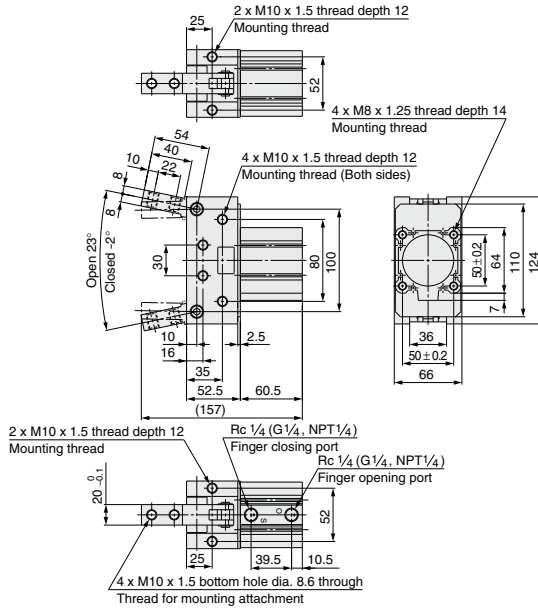




Dimensions

Toggle Type Air Gripper *MHT2 Series*

MHT2-50DZ



MHT2-63DZ

