

Parallel Style Air Gripper: Wide Type *Series MHL2*

Long stroke

One unit can handle workpieces with various diameters.

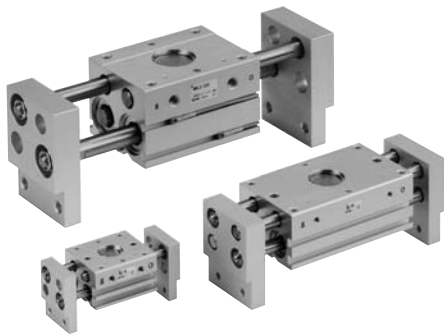
A large amount of gripping force is provided through the use of a double piston mechanism, while maintaining a compact design.

Double-end type oil-impregnated resin bearings with a metal backing are used for all shafts.

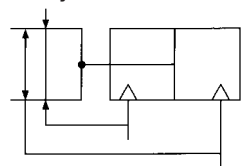
Built-in dust-protection mechanism

A high degree of freedom for mounting

Auto switch mountable



JIS Symbol



Made to Order

(Refer to pages 683 to 713 for details.)

Symbol	Specifications/Description
-X4	Heat resistance (100°C)
-X5	Fluororubber seal
-X28	With adjuster bolts for adjusting closing width
-X50	Without magnet
-X53	EPDM seal/Fluorine grease
-X63	Fluorine grease
-X79	Grease for food

Specifications

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



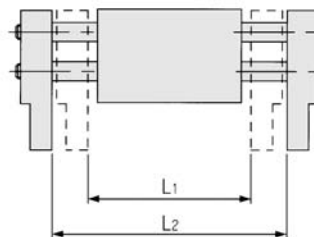
Note) Gripping point = Bore size 10, 16, 20, 25: 40 mm, Bore size 32, 40: 80 mm.

Model/Stroke

Model	Bore size (mm)	Max. operating frequency c.p.m	Opening/Closing stroke (mm) (L2-L1)	Width at closing (mm) (L1)	Width at opening (mm) (L2)	Mass (g)
MHL2-10D	10	60	20	56	76	280
MHL2-10D1		40	40	78	118	345
MHL2-10D2			60	96	156	425
MHL2-16D	16	60	30	68	98	585
MHL2-16D1		40	60	110	170	795
MHL2-16D2			80	130	210	935
MHL2-20D		20	60	40	82	122
MHL2-20D1	40		80	142	222	1495
MHL2-20D2			100	162	262	1690
MHL2-25D	25	60	50	100	150	1690
MHL2-25D1		40	100	182	282	2560
MHL2-25D2			120	200	320	2775
MHL2-32D	32	30	70	150	220	2905
MHL2-32D1		20	120	198	318	3820
MHL2-32D2			160	242	402	4655
MHL2-40D	40	30	100	188	288	5270
MHL2-40D1		20	160	246	406	6830
MHL2-40D2			200	286	486	7905



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



⚠ Precautions

- Be sure to read before handling.
- Refer to front matters 38 and 39 for Safety Instructions and pages 358 to 365 for Air Gripper and Auto Switch Precautions.

⚠ Warning

If a workpiece is hooked onto the attachment, make sure that excessive impact will not be created at the start and the end of the movement. Failure to observe this precaution may result in shifting or dropping the workpiece, which could be dangerous.

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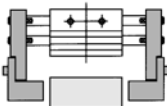
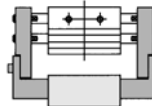
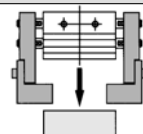












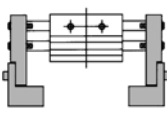
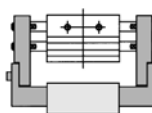
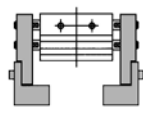
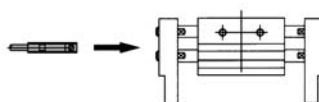
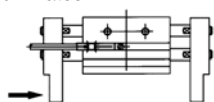
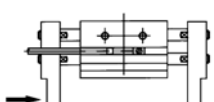
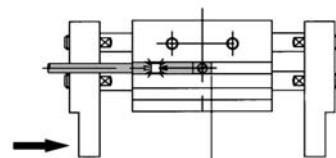
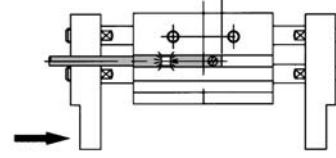
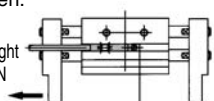
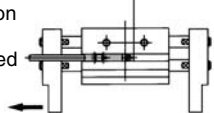
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Series MHL2/Related Products Auto Switch Installation Examples and Mounting Positions

Various auto switch applications are possible through different combinations of auto switch quantities and detecting positions.

1) Detection when Gripping Exterior of Workpiece

Detection example		1. Confirmation of fingers in reset position	2. Confirmation of workpiece held	3. Confirmation of workpiece released
Position to be detected		Position of fingers fully opened 	Position when gripping a workpiece 	Position of fingers fully closed 
Operation of auto switch		Auto switch turned ON when fingers return. (Light ON)	Auto switch turned ON when gripping a workpiece. (Light ON)	When a workpiece is held (Normal operation): Auto switch to turn OFF (Light not illuminating) When a workpiece is not held (Abnormal operation): Auto switch to turn ON (Light illuminating)
Detection combinations	One auto switch			
				
	Two auto switches			
				
How to determine auto switch installation position		Step 1) Fully open the fingers. 	Step 1) Position fingers for gripping a workpiece. 	Step 1) Fully close the fingers. 
At no pressure or low pressure, connect the auto switch to a power supply, and follow the directions.		Step 2) Insert the auto switch into the auto switch installation groove in the direction shown in the following drawing. 		
		Step 3) Slide the auto switch in the direction of the arrow until the indicator light illuminates. 	Step 3) Slide the auto switch in the direction of the arrow until the light illuminates and fasten it at a position 0.3 to 0.5 mm in the direction of the arrow beyond the position where the indicator light illuminates. In case of 2-color indicator type, fasten it at the location where the indicator light color changes from red to green.	
		Step 4) Slide the auto switch further in the direction of the arrow until the indicator light goes out. 	Position where light turns ON  Position to be secured 	
		Step 5) Move the auto switch in the opposite direction and fasten it at a position 0.3 to 0.5 mm beyond the position where the indicator light illuminates. In case of 2-color indicator type, fasten it at the location when the indicator light color changes from red to green. Position where light turns ON  0.3 to 0.5 mm Position to be secured 		

Note 1) It is recommended that gripping of a workpiece be performed close to the center of the finger stroke.

Note 2) When holding a workpiece close at the end of open/close stroke of fingers, detecting performance of the combinations listed in the above table may be limited, depending on the hysteresis of an auto switch, etc.

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