

Low Profile Air Gripper Series *MHF2*

How to Order

MHF 2 — 12 D — M9BW

Number of fingers
2 2 finger

Bore size (mm)

8	8
12	12
16	16
20	20

Action
D Double acting

Stroke

Nil	Short stroke
1	Medium stroke
2	Long stroke

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	n pcs.

Auto switch
Nil Without auto switch (Built-in magnet)

Body option

Nil: Axial piping type R: Side piping type

Port

Applicable Auto Switches/Refer to pages 761 to 809 for further information on auto switches.

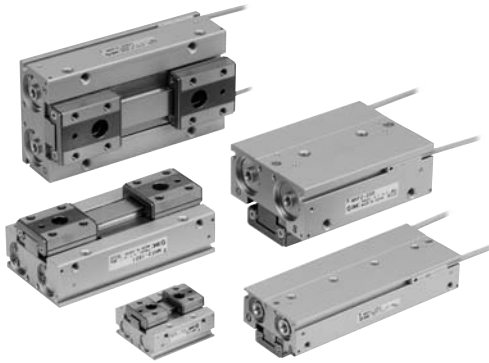
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)*				Pre-wired connector	Applicable load	
					DC	AC	Electrical entry direction		0.5 (Nil)	1 (M)	3 (L)	5 (Z)			
Solid state switch	Diagnostic indication (2-color display)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	Perpendicular	M9NV	M9N	●	●	●	○	○	IC circuit — IC circuit —
				3-wire (PNP)						●	●	●	○	○	
				2-wire						●	●	●	○	○	
				3-wire (NPN)						●	●	●	○	○	
				3-wire (PNP)	24 V	5 V, 12 V	In-line	M9NWV	M9NW	●	●	●	○	○	
				3-wire (PNP)						●	●	●	○	○	
				2-wire						●	●	●	○	○	
				2-wire						●	●	●	○	○	

* Lead wire length symbols: 0.5 m Nil (Example) M9NW
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWX

* Auto switches marked with "○" are made to order specification.

Note 1) Take note of hysteresis with 2-color indication type switches. When using, refer to page 471 for auto switch hysteresis.

Specifications



Fluid		Air
Operating pressure		ø8: 0.15 to 0.7 MPa
		ø12 to 20: 0.1 to 0.7 MPa
Ambient and fluid temperature		-10 to 60°C (with no condensation)
Repeatability		±0.05 mm ^{Note 1)}
Maximum operating frequency	Short stroke	120 c.p.m.
	Medium stroke	120 c.p.m.
	Long stroke	60 c.p.m.
Lubrication		Not required
Action		Double acting
Auto switch (Option) ^{Note 2)}		Solid state auto switch (3-wire, 2-wire)

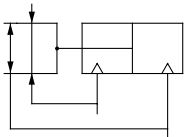
Note 1) This is the value when no offset load is applied to the finger.

When an offset load is applied to the finger, the maximum value is ±0.15 mm due to the influence of backlash of the rack and pinion.

Note 2) Refer to pages 761 to 809 for further information on auto switches.

Model

JIS Symbol
Double acting



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

Note 1) At the pressure of 0.5 MPa, when gripping point L is 20 mm.

Note 2) Excluding the auto switch mass.



Made to Order

Refer to pages 683 to 713 for details.

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

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

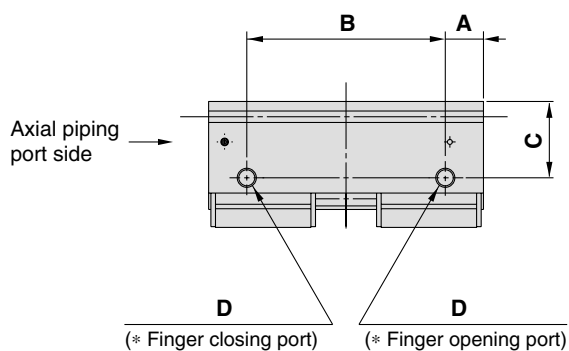
MA

D-□

Series **MHF2**

Body Option: Side Piping Type

MHF2-□D□R



* For dimensions not given above, please refer to the table of dimensions on pages 456 to 467.

Body Option Dimension

(mm)

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