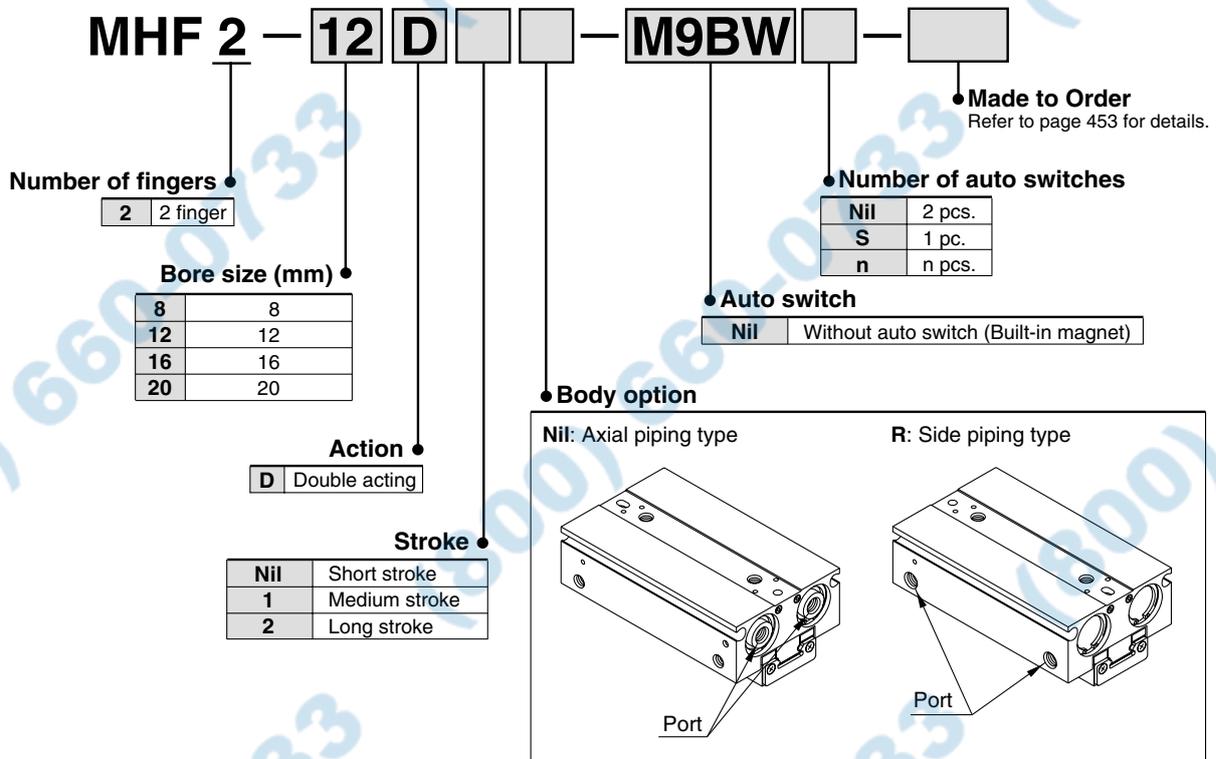


Low Profile Air Gripper Series *MHF2*

How to Order



Applicable Auto Switches

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

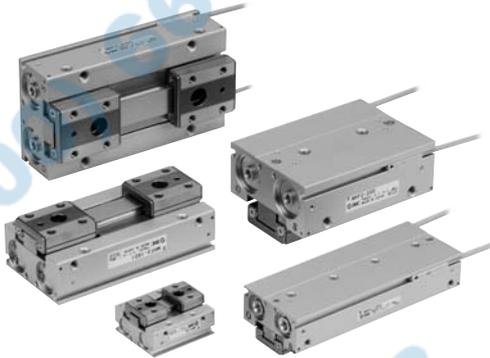
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)*				Pre-wired connector	Applicable load	
					DC	AC	Electrical entry direction		0.5 (Nil)	1 (M)	3 (L)	5 (Z)		IC circuit	Relay, PLC
							Perpendicular	In-line							
Solid state switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)			M9PV	M9P	●	●	●	○	○		
				2-wire	12 V	M9BV	M9B	●	●	●	○	○	—		
	3-wire (NPN)			5 V, 12 V	M9NVV	M9NV	●	●	●	○	○	IC circuit			
	3-wire (PNP)				M9PVV	M9PV	●	●	●	○	○				
	2-wire			12 V	M9BVV	M9BV	●	●	●	○	○	—			

* Lead wire length symbols: 0.5 m Nil (Example) M9NW
 1 m M (Example) M9NWM
 3 m L (Example) M9NWL
 5 m Z (Example) M9NWZ

* 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.

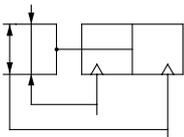
Model

Action	Model	Cylinder bore (mm)	Gripping force ^{Note 1)}		Opening /closing stroke (Both sides) mm	Mass ^{Note 2)} (g)	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.

JIS Symbol
Double acting



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-□