

MCHA series

30° ANGULAR GRIPPER



Features

- Hardened gripping fingers for longer service life.
- Simple structure with high stability.
- Magnetic as standard.

Specification

Model		MCHA				
Acting type		Double acting / Single acting (N.O.)				
Tube I.D. (mm)		12	16	20	25	32
Port size		M3×0.5	M5×0.8			
Medium		Air				
Operating pressure range	Double acting	0.15~0.7 MPa				
	Single acting	0.3~0.7	0.2~0.7 MPa			
Ambient temperature		-5~+60°C (No freezing)				
Max. frequency		180 Cycles/min				
Lubrication	Cylinder	Not required				
	Lever	Grease (Joint parts)				
Max. arm length (L) (*1)		30	40	60	70	85
Clamp / Release angle		-10~+30°				
Sensor switch (*2)		RDE, RDE-D				
Weight (g)		53	103	193	327	525

*1. L: Arm length (mm)

*2. RDE, RDE-D specification, please refer to page 5-6.

Order example

MCHA — 20 — □

MODEL

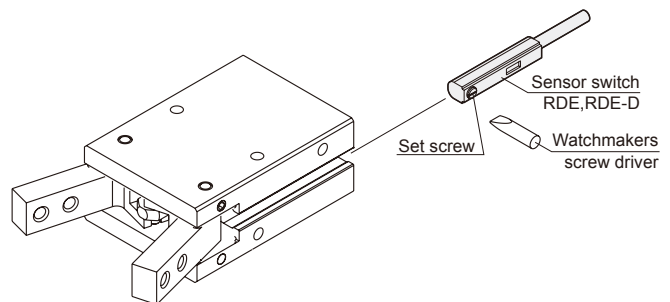
TUBE I.D.

ACTING TYPE

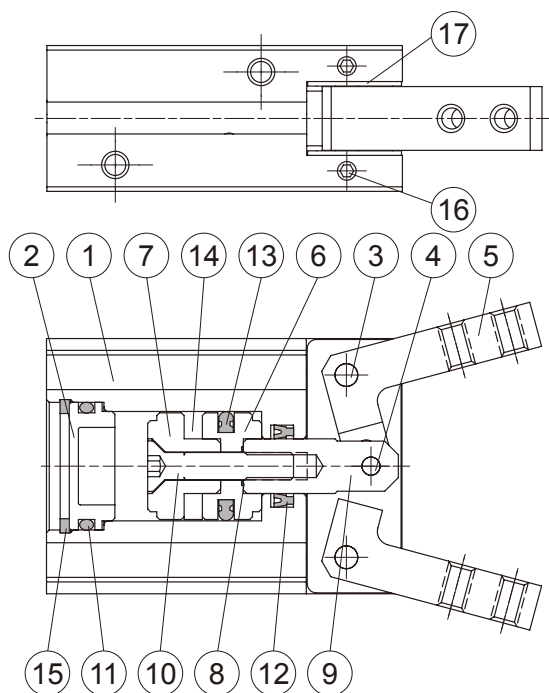
Blank: Double acting
S: Single acting (Normally open)

12
16
20
25
32

Installation of sensor switch

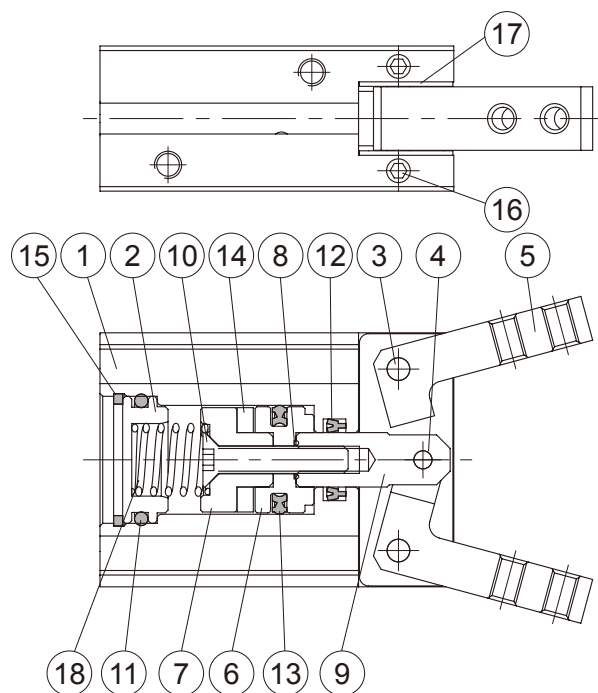


Double acting



Single acting

Normally Open



Material

No.	Part name	Material	Q'ty	Repair kits (inclusion)
1	Body	Aluminum alloy	1	
2	Head cover	Aluminum alloy	1	
3	Grip rivet	Carbon steel	2	
4	Spindle rivet	Bearing steel	1	
5	Y-finger	Medium carbon steel	2	
6	Piston-R	Aluminum alloy	1	
7	Piston-H	Aluminum alloy	1	
8	Gasket	NBR	1	●
9	Piston rod	Stainless steel	1	
10	Screw	Stainless steel	1	
11	Cover ring	NBR	1	●
12	Rod packing	NBR	1	●
13	Piston packing	NBR	1	●
14	Magnet ring	Magnet material	1	
15	Stop ring	Spring steel	1	
16	Screw	SCM	4	
17	Washer	Stainless steel	2	
18	Spring	SWB-P	1	

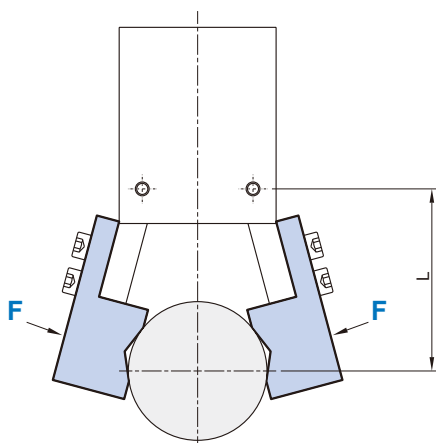
Order example of repair kits

Tube I.D.	Repair kits
ø12	PS-MCHA-12
ø16	PS-MCHA-16
ø20	PS-MCHA-20
ø25	PS-MCHA-25
ø32	PS-MCHA-32

Effective gripping force

Indication of effective 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.

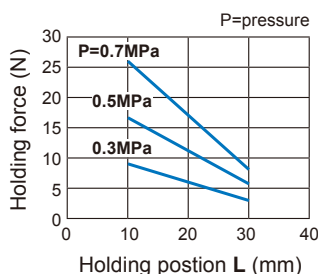


$$1\text{N} = 0.102 \text{ kgf}$$

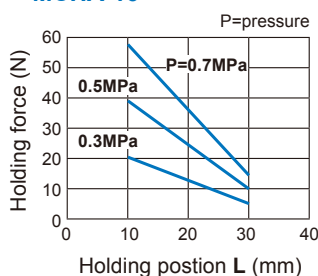
$$1\text{MPa} = 10.2 \text{ kgf/cm}^2$$

Double acting

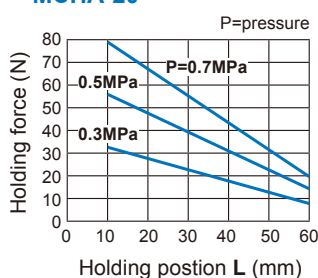
MCHA-12



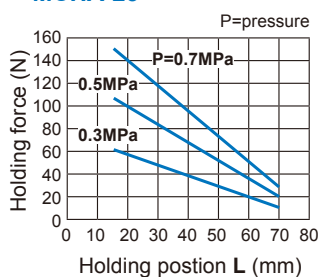
MCHA-16



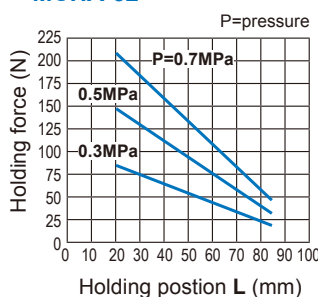
MCHA-20



MCHA-25

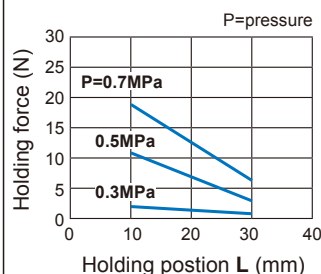


MCHA-32

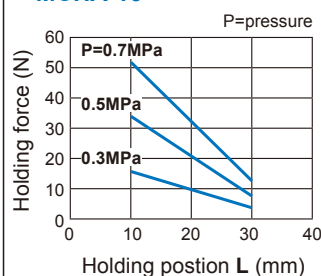


Single acting (Normally open)

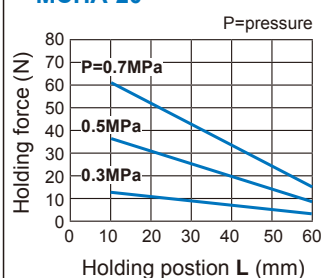
MCHA-12



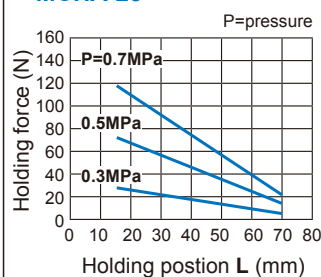
MCHA-16



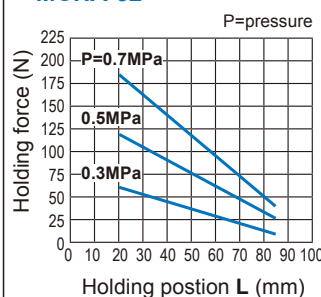
MCHA-20

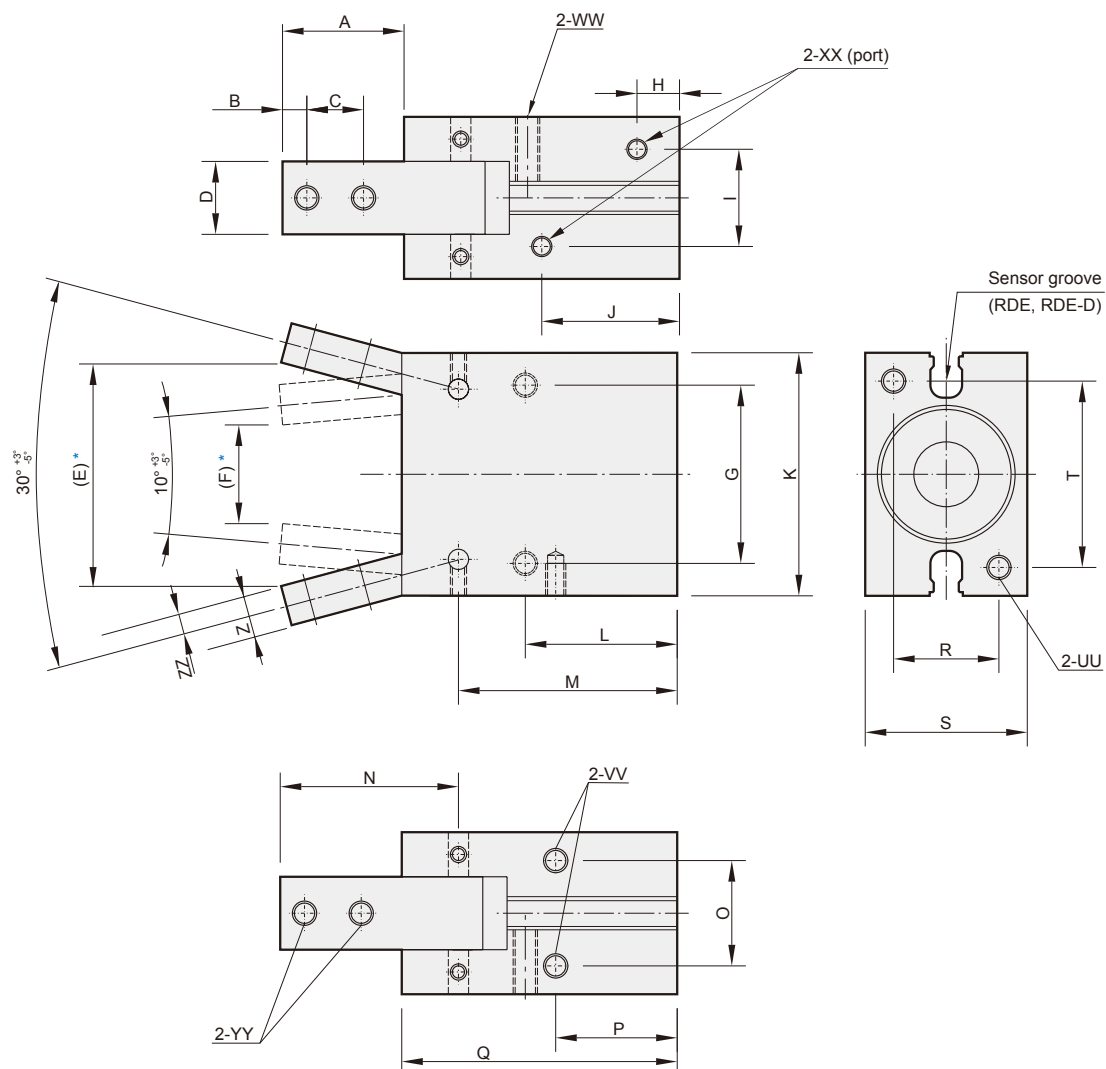


MCHA-25



MCHA-32





* Reference value.

Code Tube I.D.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	UU	VV
12	15.4	3	6	7	26.3	9	20	7.5	10.2	23	28	20	32.9	21.5	10.2	16	39	10	16	22	M3×5depth	M3×5depth
16	17.5	3	8	9	31.1	14	24	7.5	12	22	34	22.5	35	25	14	18	42.5	14	22	26	M4×7depth	M4×7depth
20	22	4	10	12	40.1	18	30	8.0	13	25	45	25	39.5	32.5	16	19	50	16	26	35	M5×8depth	M5×8depth
25	26	5	12	14	47.9	21	36	8.5	18	28	52	28.5	45.5	38.5	20	21.5	58	20	32	40	M6×10depth	M6×8depth
32	30	6	14	18	55.1	24	44	10.5	24	34	60	37.5	54	44	26	30	68	26	40	46	M6×10depth	M6×8depth

Code Tube I.D.	WW	XX	YY	Z	ZZ
12	M3×8depth	M3×5 depth	M3	5	2.5
16	M4×11depth	M5×5 depth	M3	6	3
20	M5×12depth	M5×5 depth	M4	7	3.5
25	M6×16depth	M5×5 depth	M5	9	4
32	M6×20depth	M5×5 depth	M6	10	5