MCHH series

PARALLEL GRIPPER (2-Finger)

Model selection

Technical data

Caution for safety
(Read before installing)



Features

- With the same tube I.D., the griping stroke is longer compare with other grippers.
- The plain bearing parts are hardened for longer effective life time.
- Three mounting directions are available.
- Magnetic as standard.

Specification

Model	MCHH		
Acting type	Double acting		
Tube I.D. (mm)	20	25	40
Stroke per-jaw (mm)	8	13	21
Medium	Air		
Operating pressure range	0.3~0.7 MPa		
Ambient temperature	–10~+60°C (No freezing)		
Lubrication (*)	Not required		
Repeatability	± 0.03 mm		
Max. operating frequency	60 c.p.m		
Sensor switch	RDC(V), RQC(V), RDFE(V)		
Weight (kg)	0.27	0.59	1.46

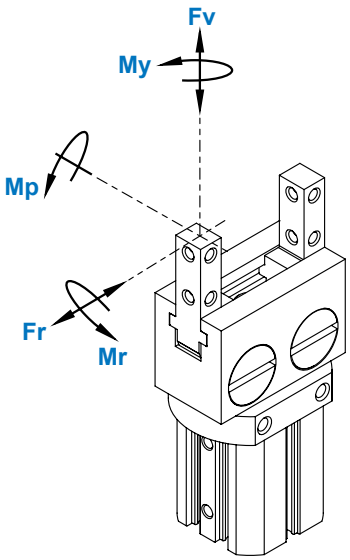
* Sliding area of jaws need scheduled relubrication.

Order example

MCHH — 25 M

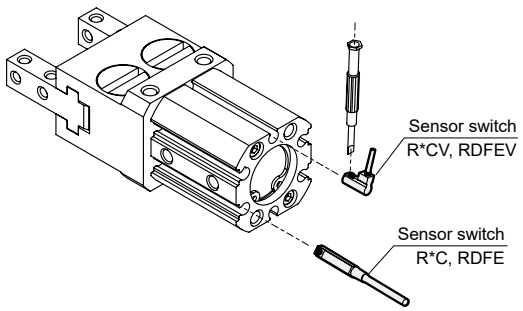
- MODEL
- TUBE I.D.: **20**, **25**, **40**
- **M**: Magnet
  * Magnetic as standard.

Load limit



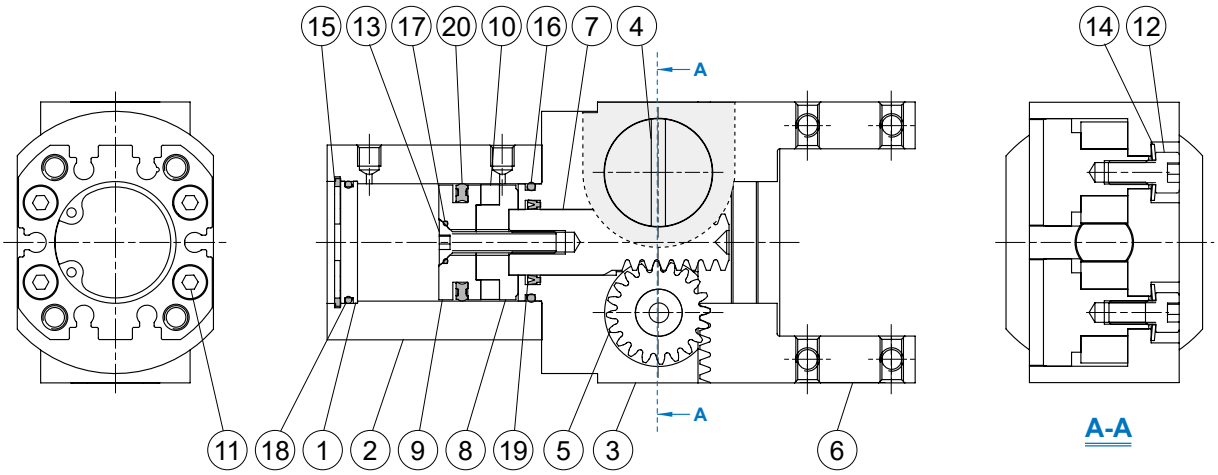
Code / Tube I.D.	**Mr** max. (Nm)	**Mp** max. (Nm)	**My** max. (Nm)	**Fv** max. (N)	**Fr** max. (N)
20	0.83	0.41	0.41	56.55	37.70
25	1.56	0.78	0.78	80.86	53.91
40	9.17	4.58	4.58	371.56	247.71

Installation of sensor switch



MCHH Inside structure & Parts list

PARALLEL GRIPPER (2-Finger)



Material

No.	Part name	Material	Q'y	Repair kits (inclusion)
1	End cover	Aluminum alloy	1	
2	Body	Aluminum alloy	1	
3	Finger rail	Aluminum alloy	1	
4	Pinion holder	Carbon steel	2	
5	Pinion	Alloy steel	2	
6	Finger	Alloy steel	2	
7	Piston rod	Alloy steel	1	
8	Magnet holder	Aluminum alloy	1	
9	Piston	Aluminum alloy	1	
10	Magnet ring	Magnet material	1	
11	Hexgon bolt (*)	Steel	2 or 4	
12	Hexgon bolt	Steel	2	
13	Countersink bolt	Steel	1	
14	Washer	Spring steel	2	
15	Snap ring	Spring steel	1	
16	O-ring	NBR	1	●
17	O-ring	NBR	1	●
18	O-ring	NBR	1	●
19	Rod packing	NBR	1	●
20	Piston packing	NBR	1	●

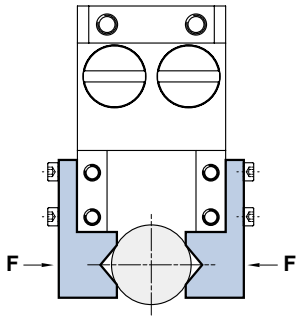
* ø20 Q'y: 2 pcs, ø25 & ø40 Q'y: 4 pcs

Order example of repair kits

Tube I.D.	Repair kits
ø20	**PS-MCHH-20**
ø25	**PS-MCHH-25**
ø40	**PS-MCHH-40**

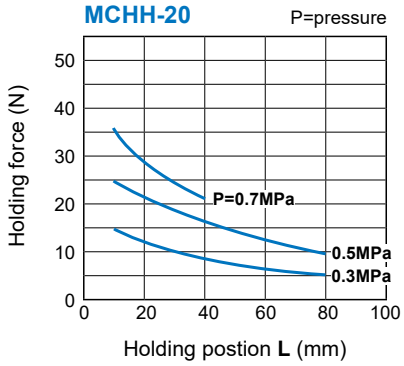
Effective gripping force

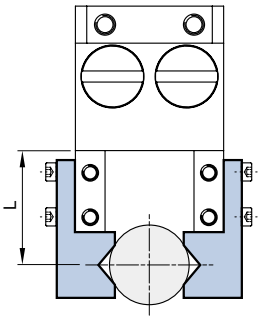
Indication of effective force.
The effective gripping force shown in the graphs to the right is expressed as F, which is the thrust of one finger, when both fingers and attachments are in full contact with the workpiece as shown in the figure below.



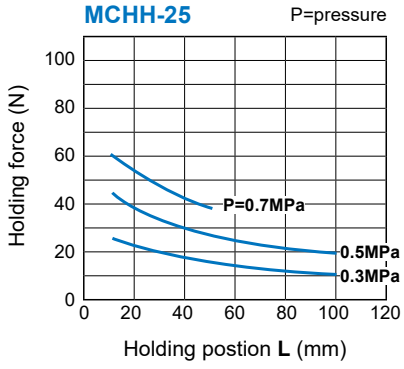
1N=0.102 kgf
1MPa=10.2 kgf/cm^2

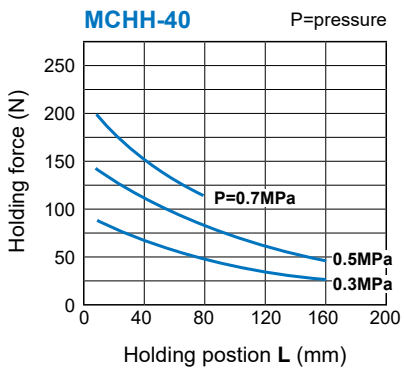
External grip



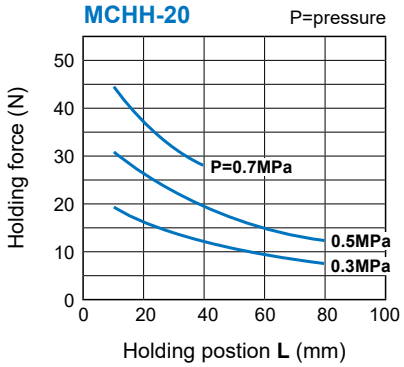


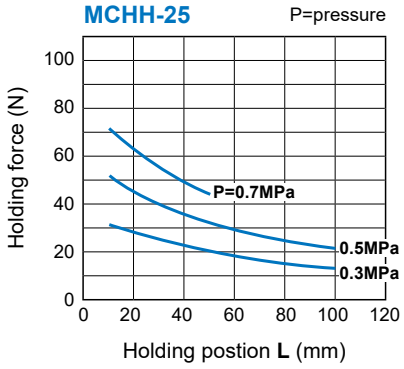
External grip

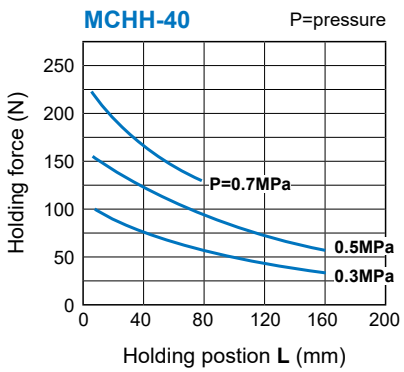


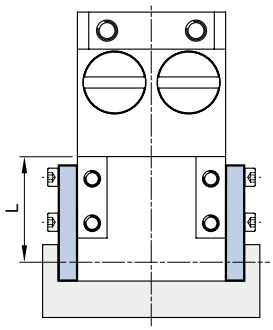


Internal grip



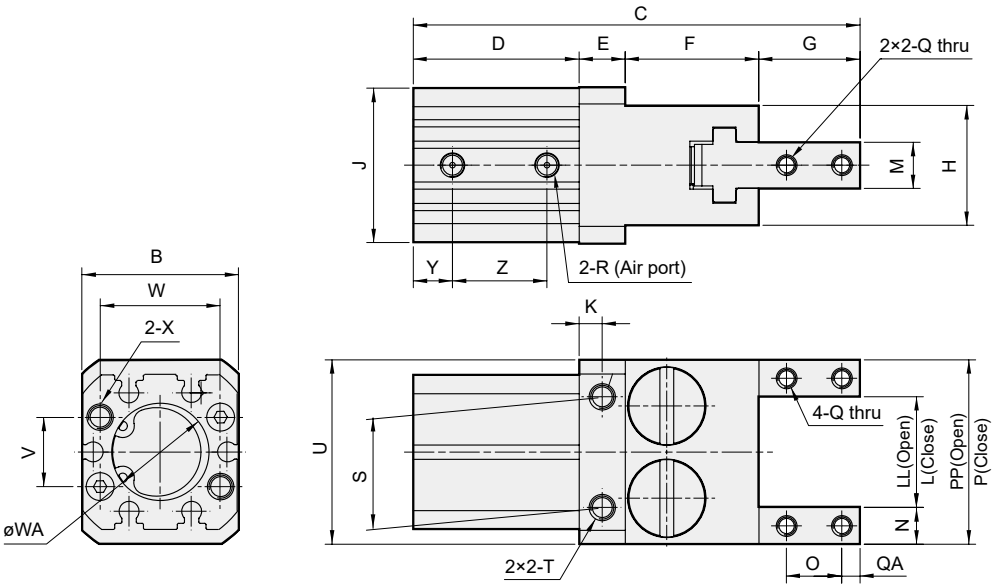




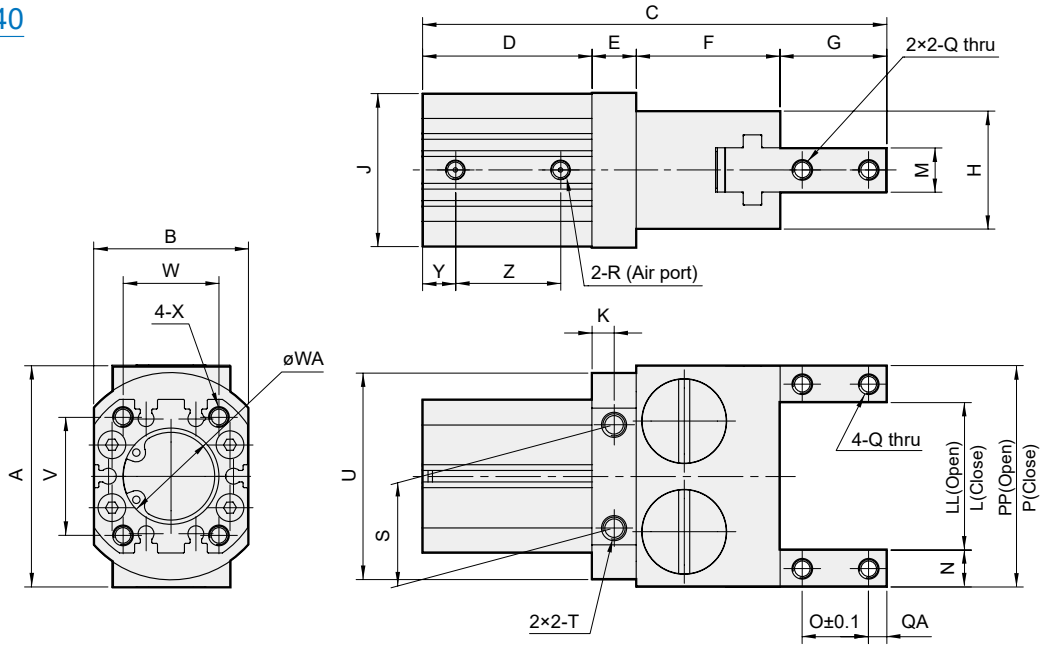


Internal grip

ø20



ø25, ø40



Code / Model	A	B	C	D	E	F	G	H	J	K	L	LL	M	N	O	P	PP	Q	QA	R	S	T	U
MCHH-20	–	34	97	36	10	29	22	26	33.5	5	8	24	$10^{-0.01}_{-0.06}$	8	12	24	40	M4×0.7	4	M5×0.8	24	M5×0.8×12 dp	40
MCHH-25	60	42	126	46	12	39	29	32	41.5	6	14	40	$12^{-0.01}_{-0.06}$	10	18	34	60	M5×0.8	5	M5×0.8	28	M6×1.0×14 dp	ø56
MCHH-40	92	60	167	57	15	58	37	38	58	8	26	68	$14^{-0.01}_{-0.06}$	12	20	50	92	M6×1.0	7	Rc1/8	42	M8×1.25×14 dp	ø82

Code / Model	V	W	WA	X	Y	Z
MCHH-20	15	26	$ø22^{+0.05}_{0}$×1.5 dp	M5×0.8×10 dp	8.5	20.5
MCHH-25	32	26	$ø26^{+0.05}_{0}$×1.5 dp	M5×0.8×10 dp	9	28.5
MCHH-40	44	34	$ø42^{+0.05}_{0}$×2 dp	M6×1.0×12 dp	11	28.5