

Order example

MCHS – 50

MODEL

BODY SPECIFICATION
50, 66, 80, 100,
125, 160, 200, 300

Features

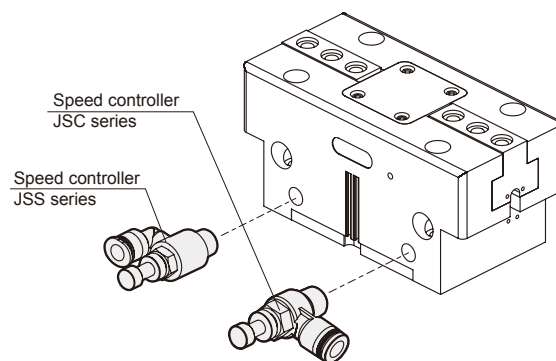
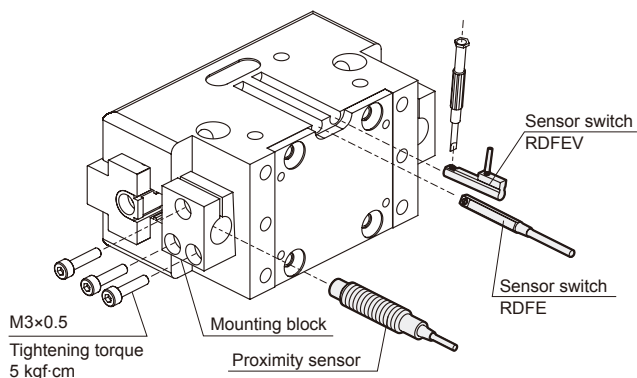
- Compact design to ensure minimum interference while operating; robust T rail design, ensure accurate gripping.
- Can reach maximum torque suitable for long jaws design.
- Oval piston-driven design ensure maximum gripping force.
- Hose-free direct connection: Air supply channel can connect directly without piping or through tread to assure the flexibility of supplying compressed air on any kind of automation system.

Specification

| Model | MCHS | | | | | | | |
|--|--------------------------------|----------------------------|-------|------|------|------|------|------|
| Acting type | Double acting | | | | | | | |
| Body specification | 50 | 66 | 80 | 100 | 125 | 160 | 200 | 300 |
| Stroke per-jaw(mm) | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 30 |
| Closing force(N) | 170 | 300 | 550 | 740 | 1290 | 1860 | 3175 | 6675 |
| Opening force(N) | 185 | 325 | 590 | 795 | 1370 | 1960 | 3330 | 6830 |
| Close/Open time(s) | 0.02 | 0.03 | 0.04 | 0.07 | 0.1 | 0.1 | 0.35 | 0.4 |
| Medium | Air | | | | | | | |
| Operating pressure range | 0.3~0.8 MPa | | | | | | | |
| Compressed air consumption(cm ³) | 4.1 | 10.1 | 23.6 | 39.3 | 85 | 85 | 330 | 1000 |
| Ambient temperature | +5°C~ +80°C | | | | | | | |
| Lubrication | Not required | | | | | | | |
| Sensor switch (*) | 2 wire | RDFE(V): Non-contact | | | | | | |
| | 3 wire | RNFE(V): NPN, RPFV(V): PNP | | | | | | |
| Accessories | Mounting block, Accessory kits | | | | | | | |
| Weight (kg) | 0.14 | 0.27 | 0.495 | 0.85 | 1.6 | 3.0 | 5.7 | 14.2 |
| Recom. workpiece weight (kg) | 0.85 | 1.4 | 2.6 | 3.6 | 6.3 | 9.2 | 15 | 32 |

* R*FE(V) specification, please refer to page 5-10.

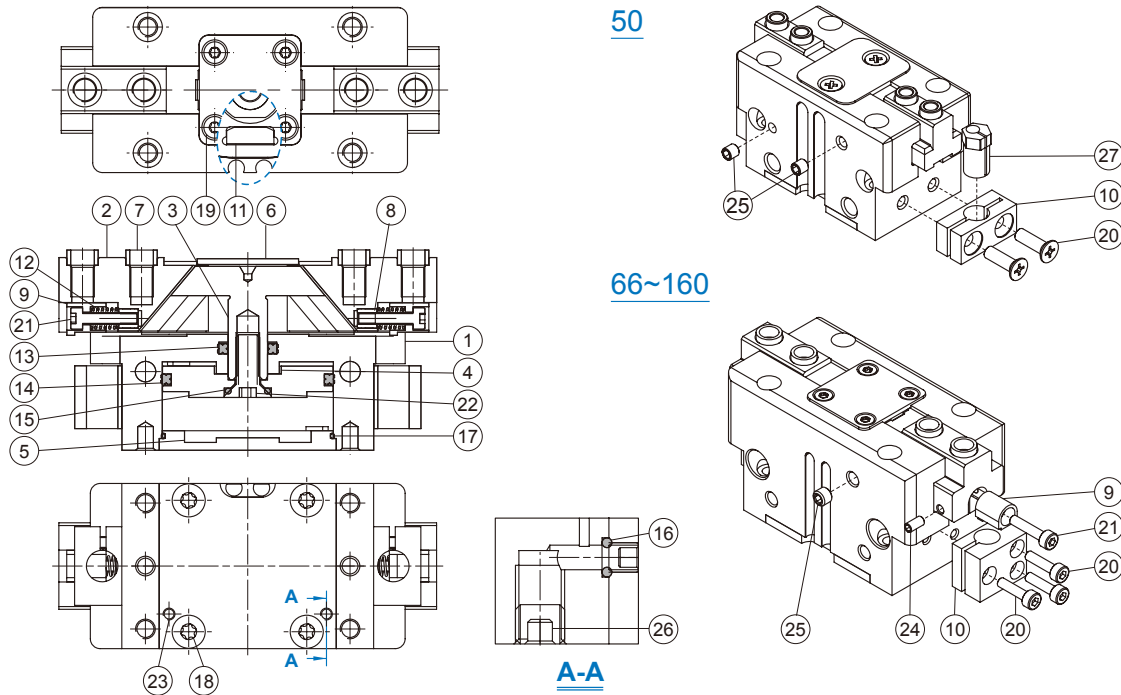
Installation of sensor switch & speed controller



* Each gripper needs at least two speed control valves to control speed.
* Speed controller specification, please refer to page 8-15~17 (Vol.1).

PARALLEL GRIPPER (2-Finger)

Mindman



Material

| No. | Part name | Material | Body spec & Q'y | | | | | | Repair kits (inclusion) |
|-----|------------------|------------------|-----------------|----|----|-----|-----|-----|-------------------------|
| | | | 50 | 66 | 80 | 100 | 125 | 160 | |
| 1 | Body | Aluminum alloy | 1 | | | | | | |
| 2 | Finger | Mid carbon steel | 2 | | | | | | |
| 3 | Rod | Mid carbon steel | 1 | | | | | | |
| 4 | Piston | Aluminum alloy | 1 | | | | | | |
| 5 | End cover | Aluminum alloy | 1 | | | | | | |
| 6 | Plate cover | Stainless steel | 1 | | | | | | |
| 7 | Centering sleeve | Stainless steel | 4 | | | | | | |
| 8 | Thread insert | Brass | - | | | 2 | | | |
| 9 | Sensor adj block | Aluminum alloy | - | | 2 | | | | |
| 10 | Magnet holder | PBT+30%GF | 2 | | | | | | |
| 11 | Magnet | Magnet material | 1 | | | | | | |
| 12 | Spring | SWP | - | | 2 | | | | |
| 13 | Rod packing | NBR | 1 | | | | | | ● |
| 14 | Piston packing | NBR | 1 | | | | | | ● |
| 15 | O-ring | NBR | 1 | | | | | | ● |
| 16 | O-ring | NBR | 3 | 4 | 2 | | | ● | |
| 17 | O-ring | NBR | 1 | | | | | | ● |
| 18 | Screw | Carbon steel | 4 | | | | | | |
| 19 | Screw | Carbon steel | 2 | 4 | | | | | |
| 20 | Bolt | Stainless steel | 4 | 6 | | | | | |
| 21 | Hex bolt | Stainless steel | - | | 2 | | | | |
| 22 | Hex bolt | Stainless steel | 1 | | | | | | |
| 23 | Hex screw | Stainless steel | 2 | | | | | | |
| 24 | Hex screw | Carbon steel | 4 | | | | | | |
| 25 | Hex screw | Stainless steel | 2 | | | | | | |
| 26 | Hex screw | Stainless steel | 2 | | | | | | |
| 27 | Adjust socket | Stainless steel | 2 | - | | | | | |

Order example of repair kits

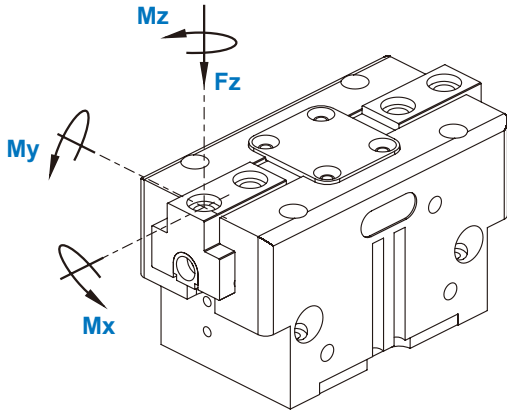
| Model | Repair kits |
|----------|--------------------|
| MCHS-50 | PS-MCHS-50 |
| MCHS-66 | PS-MCHS-66 |
| MCHS-80 | PS-MCHS-80 |
| MCHS-100 | PS-MCHS-100 |
| MCHS-125 | PS-MCHS-125 |
| MCHS-160 | PS-MCHS-160 |

Order example of accessory kits

| Model | Accessory kits |
|----------|--------------------|
| MCHS-50 | AK-MCHS-50 |
| MCHS-66 | AK-MCHS-66 |
| MCHS-80 | AK-MCHS-80 |
| MCHS-100 | AK-MCHS-100 |
| MCHS-125 | AK-MCHS-125 |
| MCHS-160 | AK-MCHS-160 |

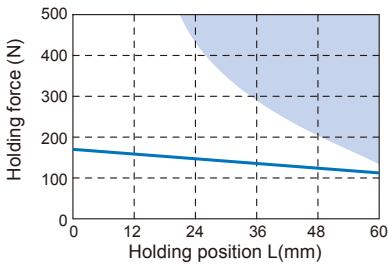
| | |
|-------------|-----------------------|
| | |
| O-ring (x2) | Iron plug (x2) |
| | |
| PIN (x2) | Centering sleeve (x4) |

Holding force

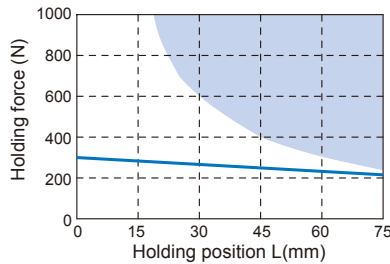


| Code Model | Mx max. (Nm) | My max. (Nm) | Mz max. (Nm) | Fz max. (N) |
|-----------------|--------------|--------------|--------------|-------------|
| MCHS-50 | 15 | 15 | 8 | 700 |
| MCHS-66 | 50 | 45 | 35 | 1200 |
| MCHS-80 | 80 | 60 | 50 | 1800 |
| MCHS-100 | 100 | 90 | 75 | 2500 |
| MCHS-125 | 120 | 120 | 100 | 3200 |
| MCHS-160 | 160 | 180 | 140 | 5000 |
| MCHS-200 | 180 | 220 | 170 | 7000 |
| MCHS-300 | 275 | 300 | 200 | 9000 |

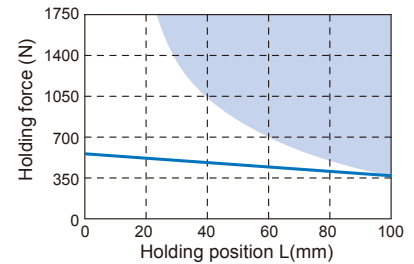
MCHS-50



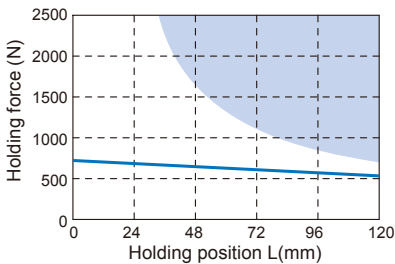
MCHS-66



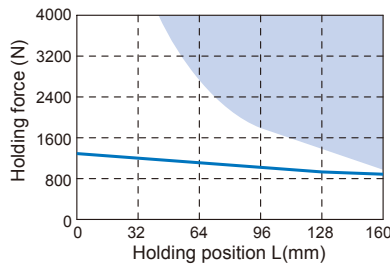
MCHS-80



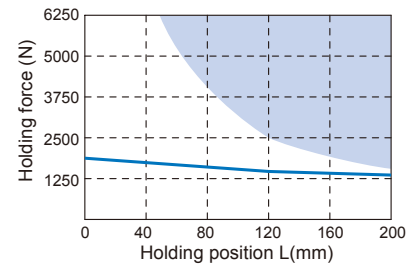
MCHS-100



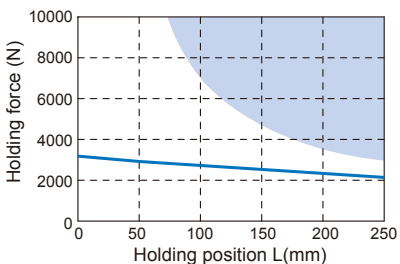
MCHS-125



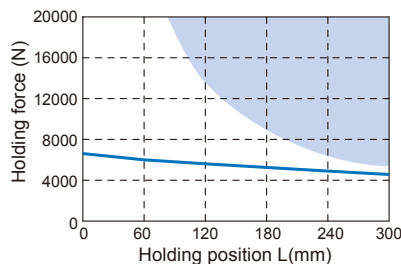
MCHS-160



MCHS-200

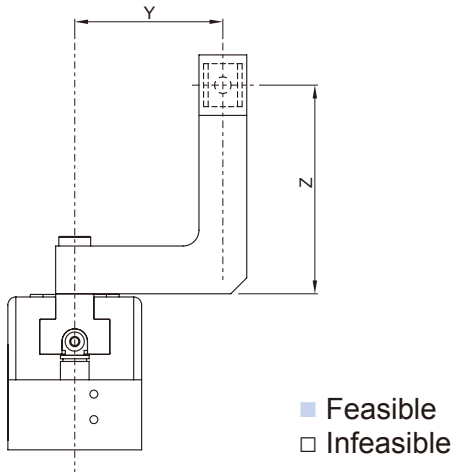


MCHS-300

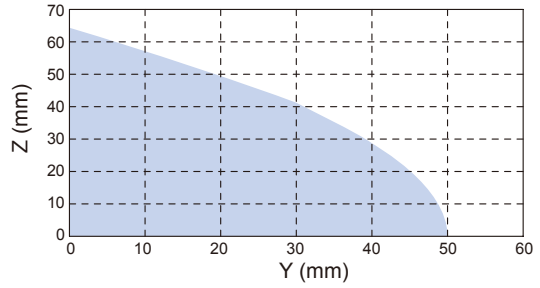


* Blue area: Less durable performance can be expected.

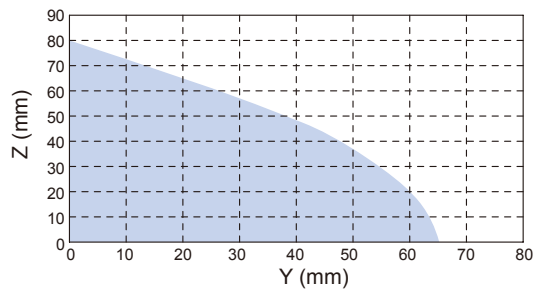
Max. feasible centrifugal degree



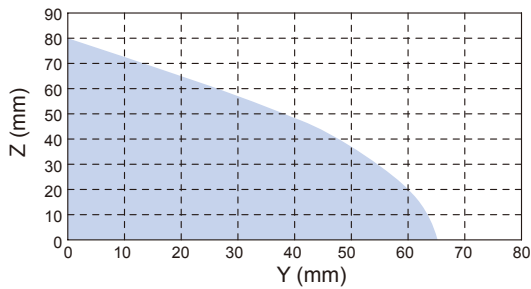
MCHS-50



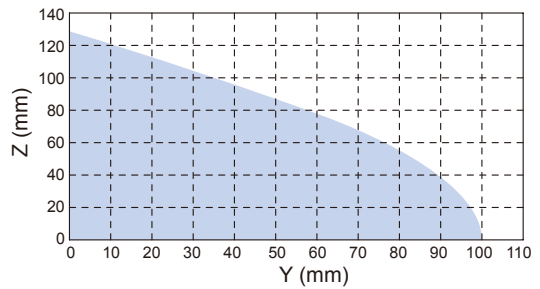
MCHS-66



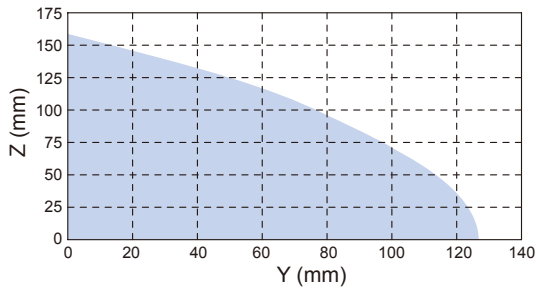
MCHS-80



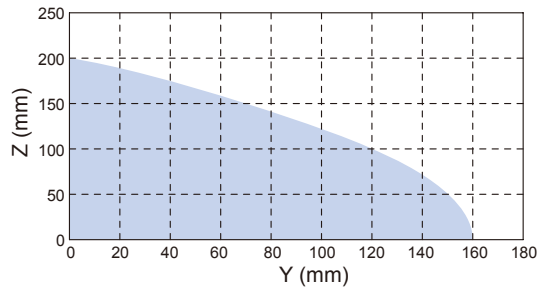
MCHS-100



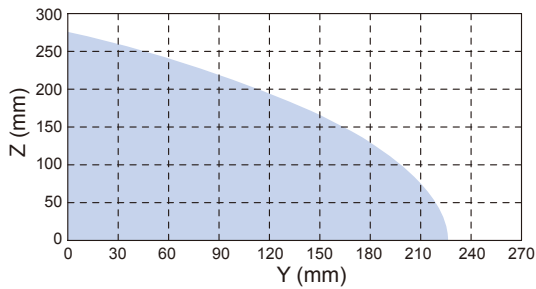
MCHS-125



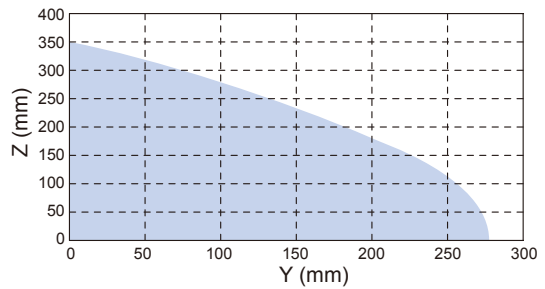
MCHS-160



MCHS-200



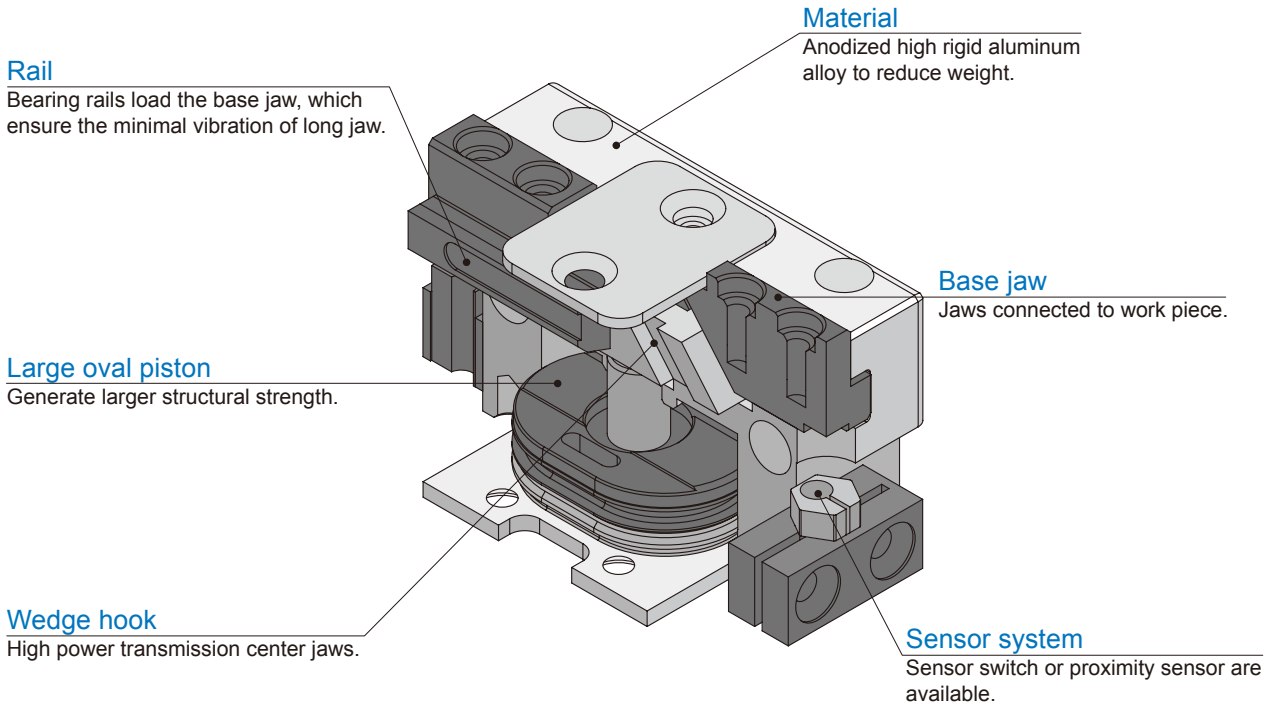
MCHS-300



PARALLEL GRIPPER (2-Finger)

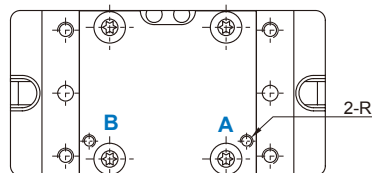
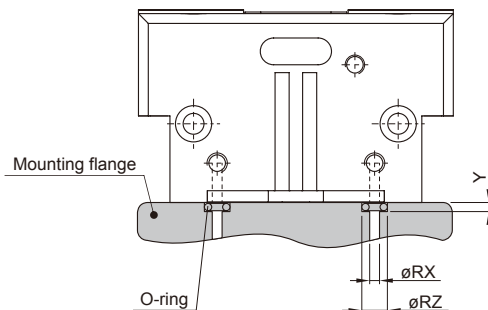
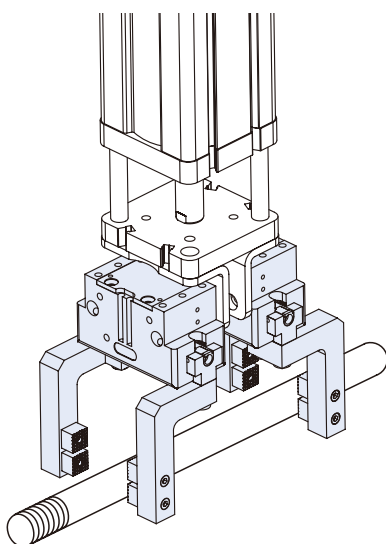
Internal structure & Movement description

Compressed air will push or press the oval piston.
By tilting the working surface, the wedge hook will transfer the movement to side movement, and initiate the action of the two base jaws simultaneously.



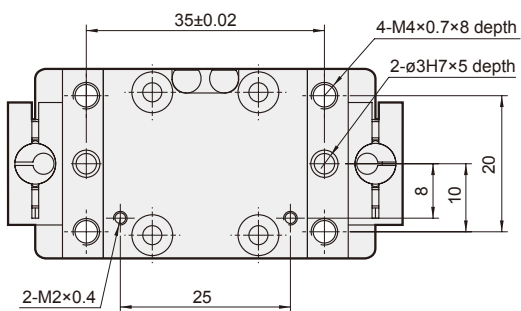
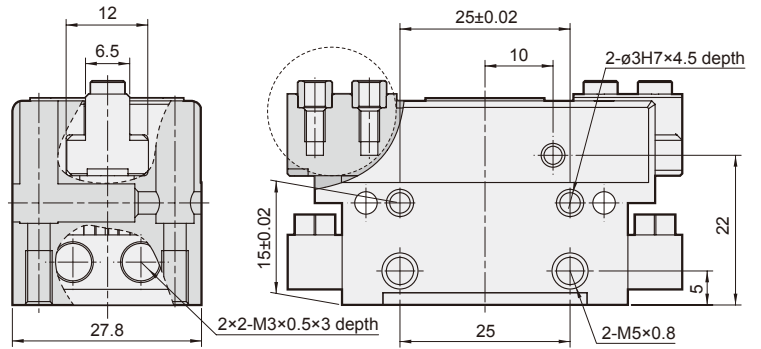
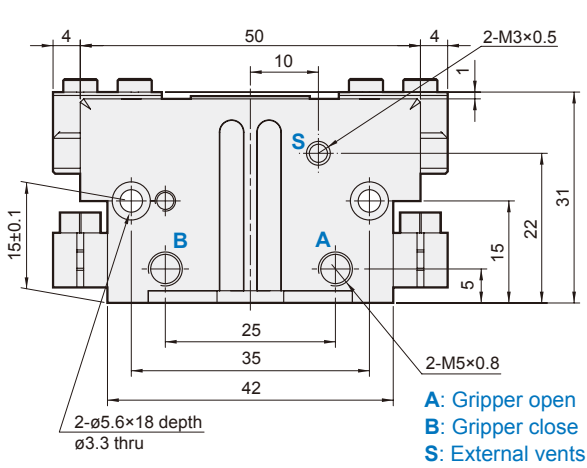
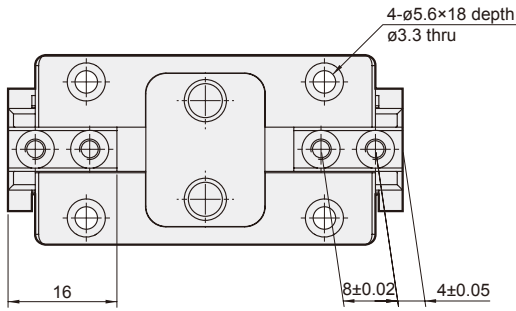
Application examples

Hose-free direct connection

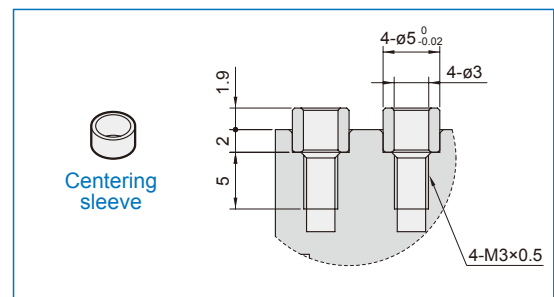


| Code Model | R | RX | RZ | Y |
|------------|----|----|----|-----|
| MCHS-50 | M2 | 2 | 4 | 0.7 |
| MCHS-66 | M3 | 3 | 5 | 0.7 |
| MCHS-80 | M3 | 3 | 5 | 0.7 |
| MCHS-100 | M5 | 5 | 8 | 1.1 |
| MCHS-125 | M5 | 5 | 8 | 1.1 |
| MCHS-160 | M5 | 5 | 8 | 1.1 |
| MCHS-200 | M5 | 5 | 8 | 1.1 |
| MCHS-300 | M5 | 5 | 8 | 1.1 |

A : Gripper open
B : Gripper close

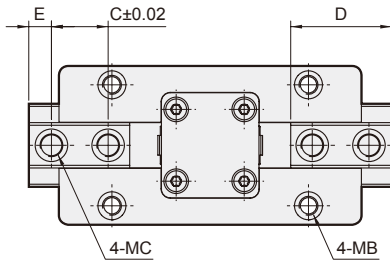


Centering sleeve

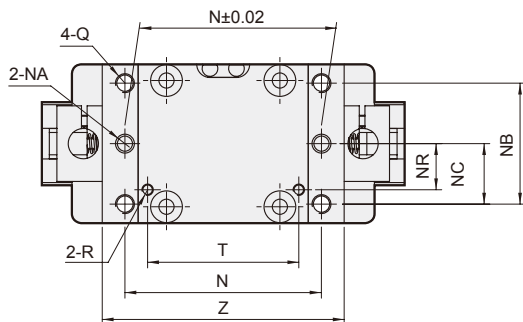
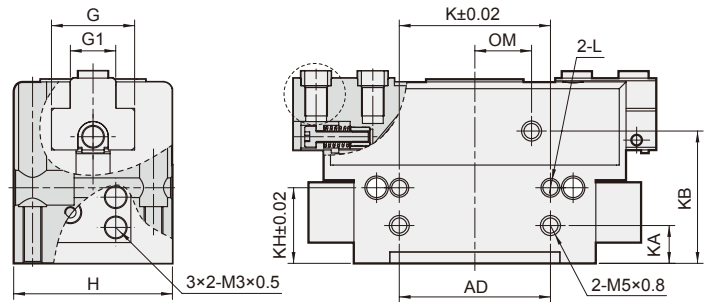
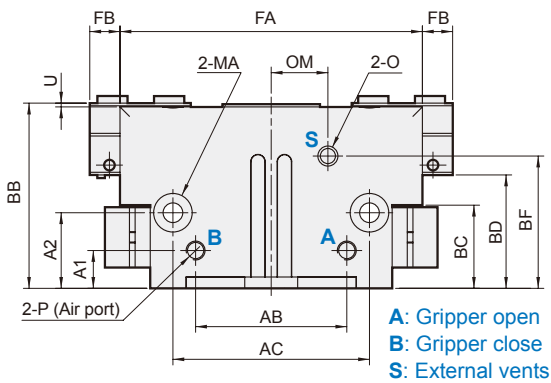
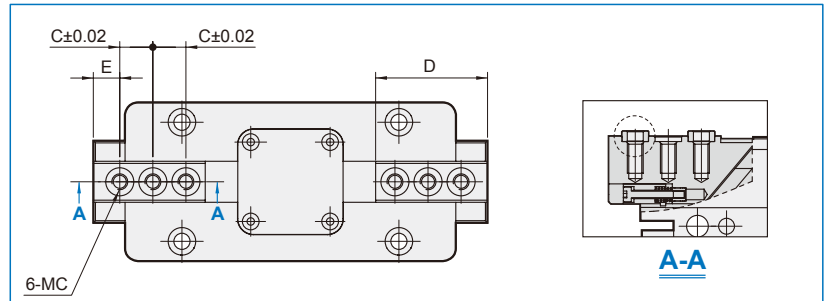


PARALLEL GRIPPER (2-Finger)

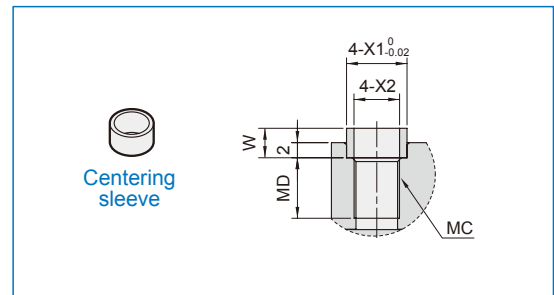
66~100



125~160



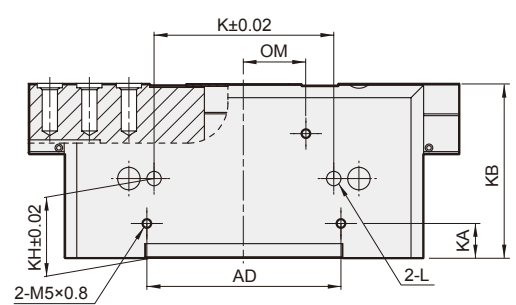
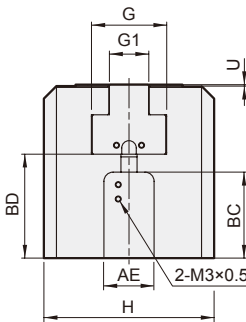
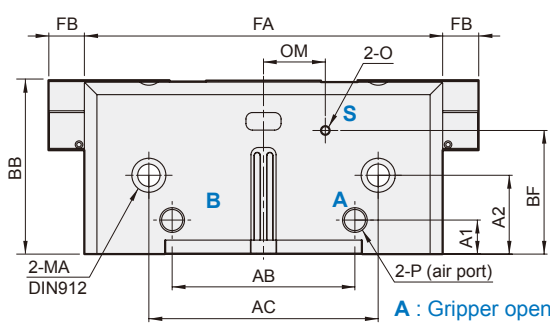
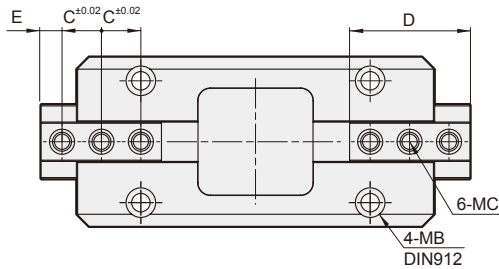
Centering sleeve



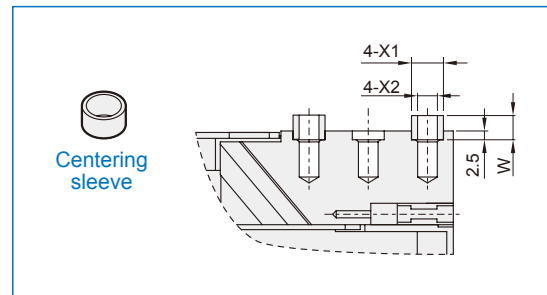
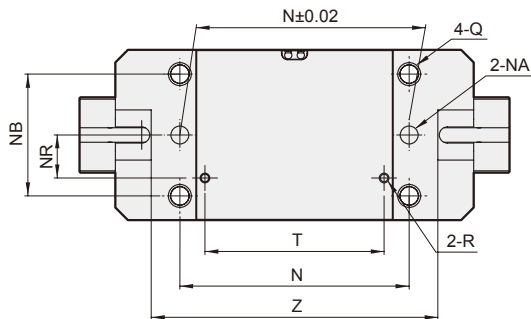
| Code Spec. | A1 | A2 | AB | AC | AD | BB | BC | BD | BF | C | D | E | FA | FB | G | G1 | H | K | KA | KB | KH | L | MA |
|------------|------|----|----|-----|----|----|------|------|------|------|------|----|-----|----|----|------|----|----|----|------|----|-----------|-----------------------|
| 66 | 5 | 18 | 28 | 42 | 28 | 39 | 18.5 | 23 | 27.5 | 12 | 22 | 5 | 64 | 6 | 17 | 10 | 36 | 20 | 28 | 5 | 18 | ø4H7×4dp | ø7.4×13dp, ø4.2 thru |
| 80 | 10 | 20 | 40 | 52 | 40 | 49 | 22 | 30 | 35 | 15 | 26.7 | 6 | 80 | 8 | 22 | 12 | 42 | 40 | 40 | 10 | 20 | ø4H7×6dp | ø9.2×16dp, ø5.2 thru |
| 100 | 12 | 25 | 48 | 66 | 54 | 55 | 28 | 33 | 38 | 18 | 34.2 | 10 | 100 | 10 | 26 | 14 | 50 | 50 | 48 | 12 | 25 | ø5H7×7dp | ø10.4×28dp, ø6.2 thru |
| 125 | 13 | 30 | 62 | 82 | 65 | 64 | 32 | 38.5 | 45 | 12.5 | 42.3 | 10 | 125 | 12 | 31 | 15.5 | 60 | 60 | 60 | 13 | 30 | ø6H7×8dp | ø13.5×34dp, ø8.2 thru |
| 160 | 15.5 | 28 | 78 | 100 | 82 | 78 | 39 | 46 | 53 | 18 | 54.8 | 10 | 160 | 16 | 39 | 20 | 72 | 76 | 76 | 15.5 | 28 | ø6H7×10dp | ø13.5×47dp, ø8.4 thru |

| Code Spec. | MB | MC | MD | N | NA | NB | NC | NR | O | OM | P | Q | R | T | U | W | X1 | X2 | Z |
|------------|-----------------------|---------|----|-----|----------|----|------|------|--------|----|--------|--------------|--------|---|-----|------|-----|----|-----|
| 66 | ø7.4×24dp, ø4.2 thru | M4×0.7 | 6 | 42 | ø4H7×6dp | 27 | 13.5 | 11 | M5×0.8 | 12 | M5×0.8 | M5×0.8×10dp | M3×0.5 | 1 | 3.9 | 27.5 | ø6 | ø4 | 52 |
| 80 | ø7.4×33dp, ø4.3 thru | M6×1.0 | 8 | 52 | ø4H7×6dp | 32 | 16 | 12.2 | M5×0.8 | 15 | M5×0.8 | M5×0.8×10dp | M3×0.5 | 1 | 3.9 | 35 | ø8 | ø6 | 64 |
| 100 | ø9×21.5dp, ø5.1 thru | M6×1.0 | 10 | 66 | ø5H7×8dp | 38 | 19 | 16 | M5×0.8 | 16 | G1/8 | M6×1.0×10dp | M5×0.8 | 1 | 3.9 | 38 | ø10 | ø6 | 80 |
| 125 | ø10.4×40dp, ø6.1 thru | M6×1.0 | 12 | 82 | ø6H7×8dp | 45 | 22.5 | 18 | M5×0.8 | 20 | G1/8 | M8×1.25×10dp | M5×0.8 | 1 | 3.9 | 45 | ø10 | ø6 | 100 |
| 160 | ø10.4×37dp, ø6.8 thru | M8×1.25 | 12 | 100 | ø6H7×8dp | 56 | 28 | 22 | M5×0.8 | 27 | G1/8 | M8×1.25×12dp | M5×0.8 | 1 | 3.9 | 53 | ø12 | ø8 | 125 |

PARALLEL GRIPPER (2-Finger)



Centering sleeve



| Code Spec. | A1 | A2 | AB | AC | AD | AE | BB | BC | BD | BF | C | D | E | FA | FB | G | G1 | H | K | KA | KB | KH | L |
|------------|----|----|-----|-----|-----|----|-----|----|----|----|----|------|----|-----|----|----|----|-----|-----|----|----|----|-------------|
| 200 | 19 | 44 | 102 | 128 | 108 | 28 | 97 | 48 | 58 | 69 | 22 | 67.5 | 12 | 200 | 20 | 42 | 22 | 95 | 100 | 19 | 69 | 44 | ø8H7×8 dp |
| 300 | 19 | 66 | 150 | 180 | 152 | 30 | 130 | 67 | 78 | 92 | 30 | 91.0 | 15 | 260 | 30 | 66 | 32 | 139 | 140 | 19 | 92 | 66 | ø10H7×12 dp |

| Code Spec. | MA | MB | MC | MD | N | NA | NB | NR | O | OM | P | Q | R | T | U | W | X1 | X2 | Z |
|------------|-----|-----|-----------|----|-----|-------------|-----|----|----|------|------|-----------|----|-----|-----|-----|-------|-------|-----|
| 200 | M12 | M10 | M10×20 dp | 20 | 128 | ø10H7×10 dp | 68 | 24 | M5 | 34.5 | G1/4 | M12×17 dp | M5 | 100 | 0.8 | 4.9 | ø14h7 | ø11 | 160 |
| 300 | M12 | M10 | M12×20 dp | 20 | 180 | ø10H7×12 dp | 100 | 24 | M5 | 43 | G1/4 | M12×16 dp | M5 | 150 | 0.8 | 4.9 | ø18h7 | ø12.5 | 220 |