

# Series MHS3

## Models/Specifications



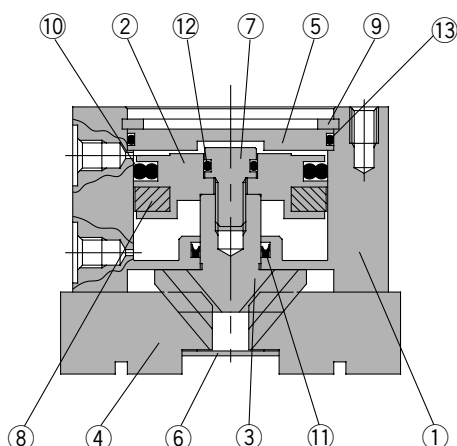
| Model                                                  |               | MHS3-16D      | MHS3-20D | MHS3-25D | MHS3-32D   | MHS3-40D | MHS3-50D | MHS3-63D | MHS3-80D | MHS3-100D | MHS3-125D |
|--------------------------------------------------------|---------------|---------------|----------|----------|------------|----------|----------|----------|----------|-----------|-----------|
| Cylinder bore size (mm)                                |               | 16            | 20       | 25       | 32         | 40       | 50       | 63       | 80       | 100       | 125       |
| Fluid                                                  |               | Air           |          |          |            |          |          |          |          |           |           |
| Operating pressure (MPa)                               |               | 0.2 to 0.6    |          |          | 0.1 to 0.6 |          |          |          |          |           |           |
| Ambient and fluid temperature (°C)                     |               | −10 to 60     |          |          |            |          |          |          |          |           |           |
| Repeatability (mm)                                     |               | ±0.01         |          |          |            |          |          |          |          |           |           |
| Max. operating frequency (c.p.m.)                      |               | 120           |          |          | 60         |          |          |          | 30       |           |           |
| Lubrication                                            |               | Not required  |          |          |            |          |          |          |          |           |           |
| Action                                                 |               | Double acting |          |          |            |          |          |          |          |           |           |
| Effective gripping force (N) at 0.5 MPa <sup>(1)</sup> | External grip | 14            | 25       | 42       | 74         | 118      | 187      | 335      | 500      | 750       | 1,270     |
|                                                        | Internal grip | 16            | 28       | 47       | 82         | 130      | 204      | 359      | 525      | 780       | 1,320     |
| Opening/Closing stroke (mm) (dia.)                     |               | 4             | 4        | 6        | 8          | 8        | 12       | 16       | 20       | 24        | 32        |
| Weight (g)                                             |               | 60            | 100      | 140      | 237        | 351      | 541      | 992      | 1,850    | 3,340     | 6,460     |

Note 1) Values for  $\phi 16$  to  $\phi 25$  are with gripping point L = 20 mm, for  $\phi 32$  to  $\phi 63$  with gripping point L = 30 mm, and for  $\phi 80$  to  $\phi 125$  with gripping point L = 50 mm. Refer to "Effective Gripping Force" data on pages 12-7-15 through 12-7-17 for the gripping force at each gripping position.

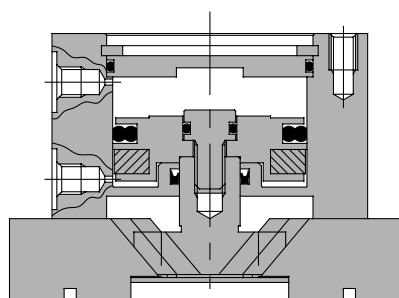
Note 2) Open and closed diameter values apply for external gripping of workpieces.

## Construction

Closed condition



Open condition



## Component Parts

| No. | Description | Material        | Note                            |
|-----|-------------|-----------------|---------------------------------|
| ①   | Body        | Aluminum alloy  | Hard anodized                   |
| ②   | Piston      | Aluminum alloy  | Hard anodized                   |
| ③   | Cam         | Carbon steel    | Heat treated, Specially treated |
| ④   | Finger      | Carbon steel    | Heat treated, Specially treated |
| ⑤   | Cap         | Aluminum alloy  | Hard anodized                   |
| ⑥   | End plate   | Stainless steel |                                 |
| ⑦   | Piston bolt | Stainless steel |                                 |

| No. | Description      | Material         | Note          |
|-----|------------------|------------------|---------------|
| ⑧   | Rubber magnet    | Synthetic rubber |               |
| ⑨   | Type C snap ring | Carbon steel     | Nickel plated |
| ⑩   | Piston seal      | NBR              |               |
| ⑪   | Rod seal         | NBR              |               |
| ⑫   | Gasket           | NBR              |               |
| ⑬   | Gasket           | NBR              |               |

## Replacement Parts

| Description     | MHS3-16D  | MHS3-20D  | MHS3-25D  | MHS3-32D  | MHS3-40D  | Main parts |
|-----------------|-----------|-----------|-----------|-----------|-----------|------------|
| Seal kit        | MHS16-PS  | MHS20-PS  | MHS25-PS  | MHS32-PS  | MHS40-PS  | ⑩⑪⑫⑬       |
| Finger          | P3316004  | P3346104  | P3316204  | P3316304  | P3316404  | ④          |
| Cam             | P3316003  | P3316103  | P3316203  | P3316303  | P3316403  | ③          |
| Piston assembly | MHS-A1601 | MHS-A2001 | MHS-A2501 | MHS-A3201 | MHS-A4001 | ②⑦⑧        |

| Description     | MHS3-50D  | MHS3-63D  | MHS3-80D  | MHS3-100D  | MHS3-125D  | Main parts |
|-----------------|-----------|-----------|-----------|------------|------------|------------|
| Seal kit        | MHS50-PS  | MHS63-PS  | MHS80-PS  | MHS100-PS  | MHS125-PS  | ⑩⑪⑫⑬       |
| Finger          | P3316504  | P3316604  | P3316704  | P3316804   | P3316904   | ④          |
| Cam             | P3316503  | P3316603  | P3316703  | P3316803   | P3316903   | ③          |
| Piston assembly | MHS-A5001 | MHS-A6301 | MHS-A8001 | MHS-A10001 | MHS-A12501 | ②⑦⑧        |

\* Order 3 pieces of fingers for one unit.