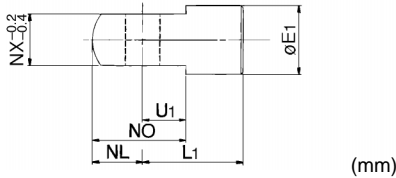
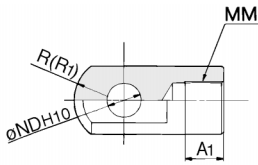


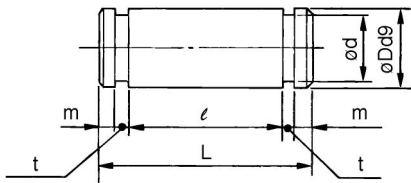
Single Knuckle Joint



| Part No. | Size | A1 | E1 | L1 | MM |
|----------|--------|------|----|----|------------|
| I-MU02 | 25 | 10.5 | 16 | 27 | M10 X 1.25 |
| I-MU03 | 32 | 12 | 18 | 31 | M12 X 1.25 |
| I-MU04 | 40 | 14 | 20 | 36 | M14 X 1.5 |
| I-MU05 | 50, 63 | 18 | 28 | 46 | M18 X 1.5 |

| Part No. | NDH10 | NL | NO | NX | R1 | U1 |
|----------|-----------------------------------|-----|------|----|-----|----|
| I-MU02 | 8 ^{+0.058} ₀ | 8.5 | 19.5 | 9 | 8.5 | 11 |
| I-MU03 | 10 ^{+0.058} ₀ | 10 | 24 | 11 | 10 | 14 |
| I-MU04 | 10 ^{+0.058} ₀ | 11 | 26 | 13 | 11 | 15 |
| I-MU05 | 14 ^{+0.070} ₀ | 16 | 36 | 16 | 16 | 20 |

Clevis Pin, Knuckle Pin

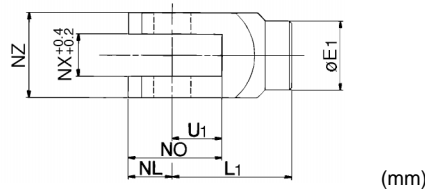
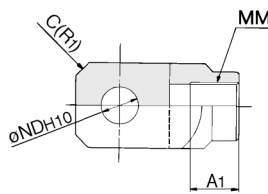


| Part No. | Size | Dd9 | L | d | ℓ |
|----------|--------|--|----|------|------|
| CD-MU02 | 25 | 8 ^{-0.040} _{-0.076} | 23 | 7.6 | 18.2 |
| CD-MU03 | 32 | 10 ^{-0.040} _{-0.076} | 27 | 9.6 | 22.2 |
| CD-MU04 | 40 | 10 ^{-0.040} _{-0.076} | 31 | 9.6 | 26.2 |
| CD-MU05 | 50, 63 | 14 ^{-0.050} _{-0.093} | 38 | 13.4 | 32.2 |

| Part No. | m | t | Snap ring |
|----------|------|------|--------------------|
| CD-MU02 | 1.5 | 0.9 | C shape for axis8 |
| CD-MU03 | 1.25 | 1.15 | C shape for axis10 |
| CD-MU04 | 1.25 | 1.15 | C shape for axis10 |
| CD-MU05 | 1.75 | 1.15 | C shape for axis14 |

* These are installed with double clevis style and double knuckle joint style as standard.

Double Knuckle Joint

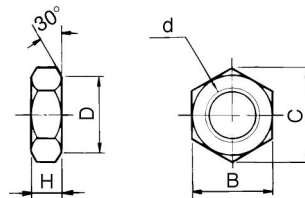


| Part No. | Size | A1 | E1 | L1 | MM | NDH10 |
|----------|--------|------|----|----|------------|-----------------------------------|
| Y-MU02 | 25 | 10.5 | 14 | 27 | M10 X 1.25 | 8 ^{+0.058} ₀ |
| Y-MU03 | 32 | 12 | 18 | 31 | M12 X 1.25 | 10 ^{+0.058} ₀ |
| Y-MU04 | 40 | 14 | 20 | 36 | M14 X 1.5 | 10 ^{+0.058} ₀ |
| Y-MU05 | 50, 63 | 18 | 28 | 46 | M18 X 1.5 | 14 ^{+0.070} ₀ |

| Part No. | NL | NO | NX | NZ | R1 | U1 | Applicable pin |
|----------|----|----|----|----|----|----|----------------|
| Y-MU02 | 8 | 21 | 9 | 18 | 3 | 13 | CD-MU02 |
| Y-MU03 | 10 | 24 | 11 | 22 | 4 | 14 | CD-MU03 |
| Y-MU04 | 10 | 27 | 13 | 26 | 5 | 17 | CD-MU04 |
| Y-MU05 | 16 | 39 | 16 | 32 | 6 | 23 | CD-MU05 |

* Knuckle pin and snap ring are packed with the double clevis style.

Rod End Nut



| Part No. | Size | d | H | B | C | D |
|----------|--------|------------|----|----|------|------|
| NT-03 | 25 | M10 X 1.25 | 6 | 17 | 19.6 | 16.5 |
| NT-MU03 | 32 | M12 X 1.25 | 7 | 19 | 21.9 | 18 |
| NT-04 | 40 | M14 X 1.5 | 8 | 22 | 25.4 | 21 |
| NT-05 | 50, 63 | M18 X 1.5 | 11 | 27 | 31.2 | 26 |

* A nut is attached with rod end male thread as standard. (Double rod style: 2 pcs.)

⚠ Precautions

Be sure to read before handling. Refer to p.0-39 to 0-43 for Safety Instructions and common precautions.

Mounting

⚠ Caution

- To secure a workpiece to the end of the piston rod, make sure to retract the piston rod entirely. Place a wrench on the wrench flats at the end of the rod, and tighten it without applying torque to the piston rod in excess of the allowable installation torque.
- Operate in such a way that the load to the piston rod is always applied in the axial direction. Furthermore, avoid operations that could apply rotational torque to the piston rod. If rotational torque must be applied due to unavoidable circumstances, use the table below as a guide to make sure the allowable rotational torque is not exceeded.

Allowable Rotating Torque (Nm)

| Size | 25 | 32 | 40 | 50 | 63 |
|--------------------------------|------|------|------|------|-----|
| Allowable rotating torque | 0.25 | 0.25 | 0.55 | 1.25 | 2.0 |
| Work mounting allowable torque | 1.7 | 1.9 | 2.0 | 4.9 | 7.3 |

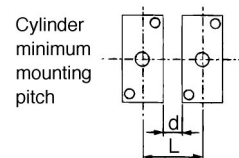
- Operating the cylinder by connecting the piping directly to the cylinder can cause the piston speed to exceed the maximum operating speed of 500mm/s. Therefore, to operate the cylinder, make sure to use an SMC speed controller and adjust the piston speed to 500mm/s or less.

Auto Switch Precaution

Be sure to read before handling. Refer to p.0-44 to 0-46 for auto switch common precautions.

⚠ Warning

- If multiple cylinders are operated adjacent to each other, the magnets that are enclosed in the adjacent cylinders could affect the operation of the auto switches, causing the switches to malfunction. Therefore, make sure that the mounting pitch of the cylinders is at least that indicated in the table below.



| Size | ø25 | ø32 | ø40 | ø50 | ø63 |
|------|--------|-------|-------|-------|-------|
| L(d) | 33(10) | 32(5) | 36(5) | 38(0) | 49(0) |

If the cylinders must be operated with the mounting pitch less than indicated above, they must be shielded with steel plates or magnetic shield plates (Part No.: MU-S025). Contact SMC for details.