



Horizontal rotary clamp cylinder——QDK Series

Compendium of QDK Series



Criteria for selection: Cylinder thrust

Unit: Newton(N)

| Bore size | Rod size | Acting type | Operating pressure(MPa) | | | | | | | |
|-----------|----------|-------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| | | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 |
| 20 | 12 | IN(Clamp) | - | 20.1 | 40.2 | 60.3 | 80.4 | 100.5 | 120.6 | 140.7 |
| 25 | 12 | IN(Clamp) | 17.7 | 55.5 | 93.3 | 131.1 | 168.9 | 206.7 | 244.5 | 282.3 |
| 32 | 12 | IN(Clamp) | 43.1 | 111.2 | 181.3 | 250.4 | 319.5 | 388.6 | 457.7 | 526.8 |
| 40 | 16 | IN(Clamp) | 75.2 | 180.7 | 286.2 | 391.7 | 497.2 | 602.7 | 708.2 | 813.7 |

Installation and application



1. Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of impurities into the cylinder.
2. The medium used by cylinder shall be filtered to 40μm or below.
3. Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
4. If the cylinder is dismantled and stored for a long time, please conduct anti-rust treatment to the surface. Anti-dust jam cap shall be added in air inlet and outlet ports.
5. To insure the life-span of cylinder and jig, please use flow control valve to control the speed of cylinder.



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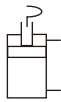


Specification

| Bore size(mm) | 20 | 25 | 32 | 40 |
|----------------------|--|----|----|------|
| Acting type | Double acting | | | |
| Fluid | Air(to be filtered by 40µm filter element) | | | |
| Operating pressure | 0.15~1.0MPa(22~145psi) | | | |
| Proof pressure | 1.5MPa(220psi) | | | |
| Temperature | -20~70℃ | | | |
| Rotation angle | 90° | | | |
| Repeatability | ±2° | | | |
| Rotation direction | Turn left or turn right | | | |
| Rotation stroke(mm) | 0(Horizontal rotary) | | | |
| Clamping stroke (mm) | 5 | | | |
| Cushion type | Bumper | | | |
| Port size | M5×0.8 | | | 1/8" |

Add) please refer to Page 353 for the specific content of sensor switch.

Symbol



Product feature

1. Complete rotation on horizontal plane, so more save space compare with QCK series.
2. Boss front end cap and flush front end cap are available.
3. Double pins in the rotation guide groove to increase stability.
4. There are magnetic switch slots around the cylinder body convenient to install inducting switch.

Ordering code

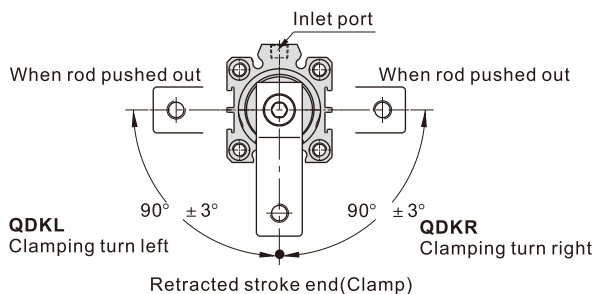
QDK L 32 × 5 S U □

① ② ③ ④ ⑤ ⑥ ⑦

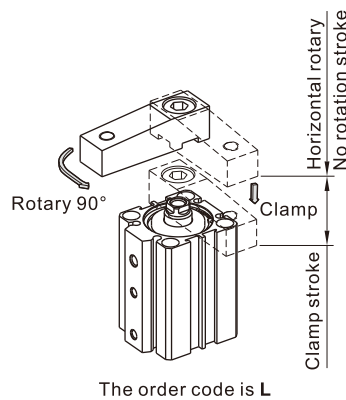
| ① Model | ② Rotation direction | ③ Bore size | ④ Clamping stroke | ⑤ Magnet | ⑥ Front cover type | ⑦ Thread type [Note1] |
|---------------------------------------|---|-------------|-------------------|----------------|---|-----------------------|
| QDK: Horizontal rotary clamp cylinder | L: Push and turn left R: Push and turn right | 20 25 32 40 | 5: 5mm | S: With magnet | Blank: Boss front end cap U: Flush front end cap | Blank: PT G: G |

[Note1] When the thread is standard, the code is blank.

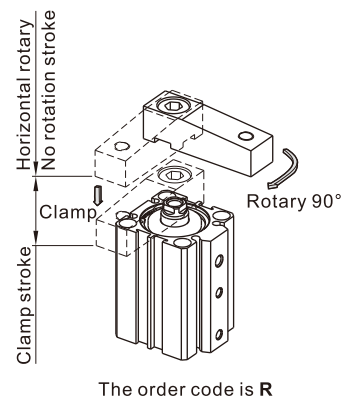
The definition of rotation direction and angle



Levorotatory(QDKL):
When the piston of cylinder moves downward, the swivel arms moves anticlockwise, this is call edlevorotatory.



Dextrorotatory(QDKR):
When the piston of cylinder moves downward, the swivel arms moves clockwise. this is called dextrorotatory.

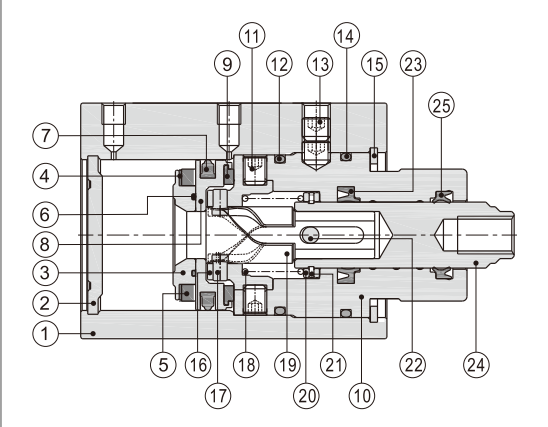


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Inner structure and material of major parts

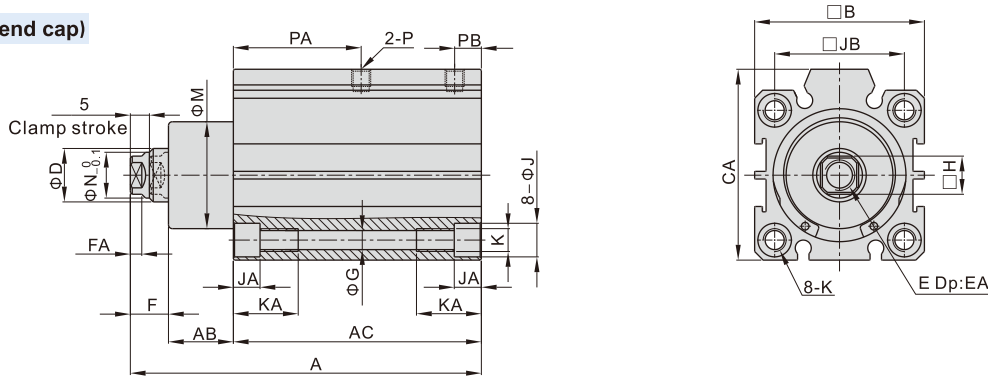
QDK(Boss front end cap)



| NO. | Item | Material | NO. | Item | Material |
|-----|---------------|--|-----|---------------------|-----------------|
| 1 | Body | Aluminum alloy | 13 | Fixing screw | Carbon steel |
| 2 | Back cover | Aluminum alloy | 14 | O-ring | NBR |
| 3 | Magnet holder | Aluminum alloy | 15 | C clip | Spring steel |
| 4 | Magnet washer | NBR | 16 | Middle seat | SCR440 |
| 5 | Magnet | Sintered metal (Neodymium-iron-boron) | 17 | Pin | SUJ2 |
| | | | 18 | Spring | Stainless steel |
| 6 | O-ring | NBR | 19 | Rotary axis | Scr440 |
| 7 | Piston seal | NBR | 20 | Stop flake | Stainless steel |
| 8 | Piston | Aluminum alloy(Φ40)/brass(Other) | 21 | C clip | Spring steel |
| 9 | Bumper | TPU | 22 | Pin | SUJ2 |
| 10 | Front cover | Aluminum alloy | 23 | Front cover parking | NBR |
| 11 | Fixing screw | Carbon steel | 24 | Piston rod | Scr440 |
| 12 | O-ring | NBR | 25 | Front cover parking | NBR |

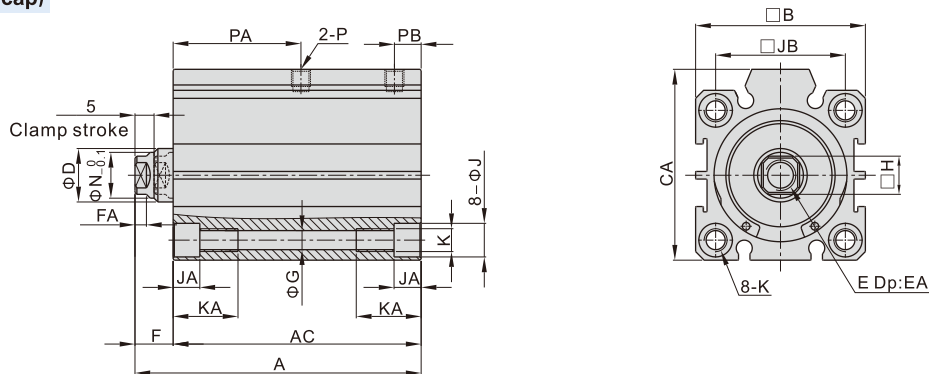
Dimensions

QDK(Boss front end cap)



| Bore size\Item | A | AB | AC | B | CA | D | E | EA | F | FA | G | H | J | JA | JB | K | KA | M | N | P | PA | PB |
|----------------|------|------|----|------|------|----|---------|-----|----|----|-----|----|------|-----|----|---------|----|----|----|--------|------|----|
| 20 | 86.5 | 16.5 | 60 | 34 | - | 12 | M6X1.0 | 7.5 | 10 | 3 | 4.2 | 8 | 7.3 | 4.5 | 24 | M5X0.8 | 14 | 24 | 10 | M5X0.8 | 31.5 | 7 |
| 25 | 86.5 | 16.5 | 60 | 40 | - | 12 | M8X1.25 | 8 | 10 | 3 | 5.2 | 10 | 9 | 5.5 | 28 | M6X1.0 | 17 | 26 | - | M5X0.8 | 31 | 7 |
| 32 | 92 | 17 | 65 | 44.5 | 50 | 14 | M8X1.25 | 10 | 10 | 3 | 5.2 | 10 | 9 | 5.5 | 34 | M6X1.0 | 17 | 28 | 12 | M5X0.8 | 33.5 | 7 |
| 40 | 98 | 18 | 70 | 52 | 58.5 | 16 | M8X1.25 | 10 | 10 | 3 | 6.8 | 14 | 10.5 | 6.5 | 40 | M8X1.25 | 20 | 30 | - | 1/8" | 35 | 9 |

QDK-U(Flush front end cap)



| Bore size\Item | A | AC | B | CA | D | E | EA | F | FA | G | H | J | JA | JB | K | KA | N | P | PA | PB |
|----------------|----|----|------|------|----|---------|-----|----|----|-----|----|------|-----|----|---------|----|----|--------|------|----|
| 20 | 70 | 60 | 34 | - | 12 | M6X1.0 | 7.5 | 10 | 3 | 4.2 | 8 | 7.3 | 4.5 | 24 | M5X0.8 | 14 | 10 | M5X0.8 | 31.5 | 7 |
| 25 | 70 | 60 | 40 | - | 12 | M8X1.25 | 8 | 10 | 3 | 5.2 | 10 | 9 | 5.5 | 28 | M6X1.0 | 17 | - | M5X0.8 | 31 | 7 |
| 32 | 75 | 65 | 44.5 | 50 | 14 | M8X1.25 | 10 | 10 | 3 | 5.2 | 10 | 9 | 5.5 | 34 | M6X1.0 | 17 | 12 | M5X0.8 | 33.5 | 7 |
| 40 | 80 | 70 | 52 | 58.5 | 16 | M8X1.25 | 10 | 10 | 3 | 6.8 | 14 | 10.5 | 6.5 | 40 | M8X1.25 | 20 | - | 1/8" | 35 | 9 |