Pen size cylinder





Specification

| Bore size(mm) | | 4 | 6 | 10 | 12 | 16 | | | | | | |
|------------------|---------------|--|----------|--------|---------------|----|--|--|--|--|--|--|
| Acting type | | Double acting, Single acting_push Double acting, Single acting_push, Single acting | | | | | | | | | | |
| Fluid | | Air(to be filtered by 40 μ m filter element) | | | | | | | | | | |
| Operating | Double acting | .2~0.7MPa(28~100psi)(2.0~7.0bar) 0.1~0.7MPa(15~100psi)(1.0~7.0bar) | | | | | | | | | | |
| pressure | Single acting | 0.3~0.7MPa(36~100psi)(3.0~7.0bar) | | | | | | | | | | |
| Proof pres | sure | 1.1MPa(160psi)(11bar) | | | | | | | | | | |
| Temperatu | re °C | -20~70 | | | | | | | | | | |
| Speed range mm/s | | 50~500 | 50~800 | | | | | | | | | |
| Stroke tole | erance | +1.0 0 | | 0~250+ | 1.0 >250 +1.5 | i | | | | | | |
| Cushion type | | No cushion | Bumper | | | | | | | | | |
| Port size | | Tube | M5 × 0.8 | | | | | | | | | |

Add) Refer to P457~480 for detail of sensor switch.

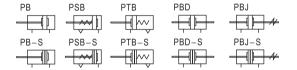
Stroke

PB

| | Bore size (mm) | |) | Standard stroke (mm) | Max. std stroke | Max. stroke | Bore size (mm) | | | Standard stroke (mm) | | |
|--------------|----------------|-----|----|---|-----------------|-------------|----------------|-----|----|---------------------------|--|--|
| 4 5 10 15 20 | | | | 5 10 15 20 | 20 | 20 | | - | 4 | 5 10 15 20 | | |
| | РВ | | 6 | 10 15 20 25 30 40 50 60 | 60 | 60 | | | 6 | 5 10 15 20 25 30 40 50 60 | | |
| 1 | | | 10 | 10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 | 200 | 200 | PSB | PTB | 10 | 5 10 15 20 25 30 40 50 60 | | |
| | | | 12 | 10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 | 200 300 | | | | 12 | 5 10 15 20 25 30 40 50 60 | | |
| | 16 | | 16 | 10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 | 300 | 300 |] | | 16 | 5 10 15 20 25 30 40 50 60 | | |
| | | - | 6 | 5 10 15 20 25 30 40 50 | 50 | _ | | | | | | |
| | PBD PBJ | | 10 | 10 15 20 25 30 40 50 60 75 80 100 | 100 | _ | | | | | | |
| | | PBJ | 12 | 10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 | 200 | _ | | | | | | |
| | | | 16 | 10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 | 200 | _ | | | | | | |

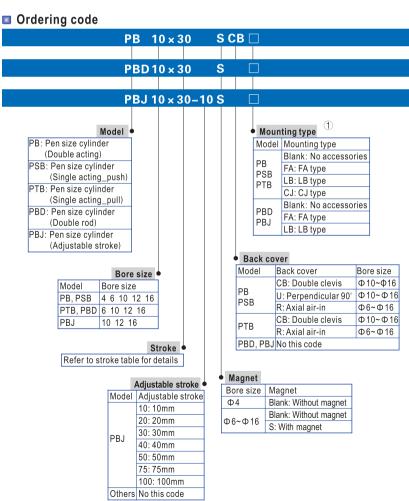
Note) Consult us for non-standard stroke.

Symbol



Product feature

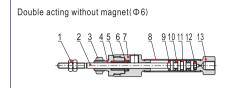
- 1. JIS standard is implemented.
- 2. It belongs to mini cylinder that has compact structure, small volume and light weight.
- 3. The guide precision of piston rod is high and no additional lubricant is
- 4. PB4 and PB6 can only be front mounted. PB10, PB12 and PB16 has the flexibility of both front and rear mount.
- 5. Piston rod stainless steel barrel make the cylinder adapt general corrosive working environment.
- 6. There are cylinders and accessories with several specifications for installation for your choice.
- 7. It has small cylinder diameter and quick reaction, suitable for the working environment with higher frequency.



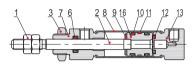
1) Please refer to page 232 for accessory parts.

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Inner structure and material of major parts

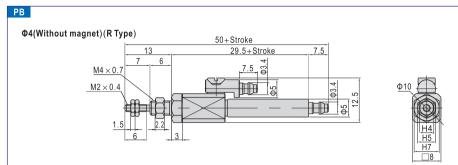


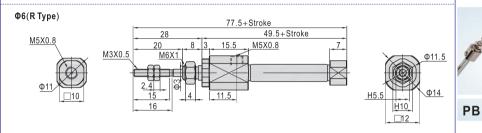
Double acting without magnet(Φ 10 ~ Φ 16)



| NO. | Item | Material |
|-----|--------------------|---|
| 1 | Rod nut | Carbon steel |
| 2 | Piston rod | SUS304 |
| 3 | Front cover nut | Carbon steel |
| 4 | Packing retainer | Brass(Φ4)\Aluminum alloy(Others) |
| 5 | Bushing | Wear resistant material |
| 6 | Front cover O-ring | NBR |
| 7 | Front cover | $Brass(\Phi 4)\Aluminum\ alloy(Others)$ |
| 8 | Barrel | Bronze(Φ4)\SUS304(Others) |
| 9 | Bumper | TPU |
| 10 | Piston seal | NBR |
| 11 | Wear ring | Wear resistant material |
| 12 | Bumper | TPU |
| 13 | Back cover | Brass(Φ4)\Aluminum alloy(Others) |

Dimensions

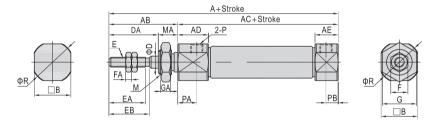




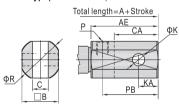
Note) Only axial air intake type of back cover is available for $\Phi4$, $\Phi6$ mm bore size.

Ф10~Ф16

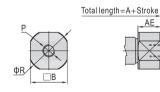
U Type(Perpendicular 90°)



CB Type(Double clevis)







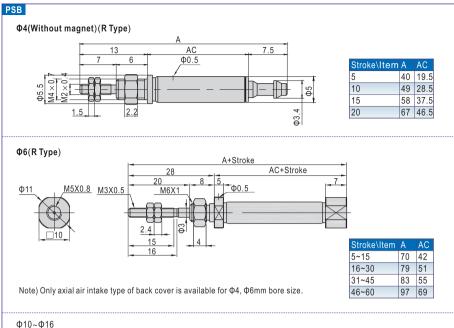
| Bore size\Item | Α | | AB | B AC | AD | AE | | Б | С | CA | | DA | - | E.A. | ED | |
|----------------|--------|----|----|------|----|------|-----|------|----|-----|---------|----|----|--------|----|------|
| Back cover | U CB R | | AB | | ΑD | U/R | СВ | В | U | CA | יט ו | DA | E | EA | EB | |
| 10 | 74 | 87 | 74 | 28 | 46 | 11.5 | 9.5 | 22.5 | 12 | 3.3 | 13 | 4 | 20 | M4×0.7 | 15 | 16.5 |
| 12 | 74 | 92 | 74 | 28 | 46 | 11.5 | 9.5 | 27.5 | 15 | 6.6 | 18 | 5 | 20 | M5×0.8 | 15 | 16.5 |
| 16 | 76 | 94 | 76 | 28 | 48 | 12 | 9.5 | 27.5 | 18 | 6.6 | 18 | 5 | 20 | M5×0.8 | 15 | 16.5 |

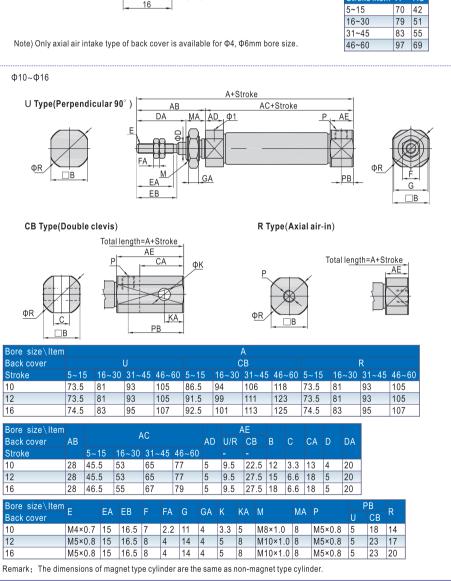
| Bore size\Item | _ | - | FA | G | GA | K | KA | М | MA | Р | PA | PB | | Ь |
|----------------|---|-----|----|----|-----|----|---------|------|--------|-----|----|----|----|---|
| Back cover | Г | FA | G | GA | IV. | NΑ | IVI | IVIA | Г | ГА | U | СВ | ^ | |
| 10 | 7 | 2.2 | 11 | 4 | 3.3 | 5 | M8×1.0 | 8 | M5×0.8 | 7.5 | 5 | 18 | 14 | |
| 12 | 8 | 4 | 14 | 4 | 5 | 8 | M10×1.0 | 8 | M5×0.8 | 7.5 | 5 | 23 | 17 | |
| 16 | 8 | 4 | 14 | 4 | 5 | 8 | M10×1.0 | 8 | M5×0.8 | 7.5 | 5 | 23 | 20 | |

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

PB Series

PB





PR Series

