

TN Series Cylinder



Ordering code

TN

Series code
TN: Dual-rod
double acting

20

Bore

X

50

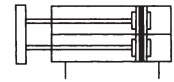
Stroke

-

S

Magnet
Blank: Without magnet
S: With magnet

Symbol



Specifications

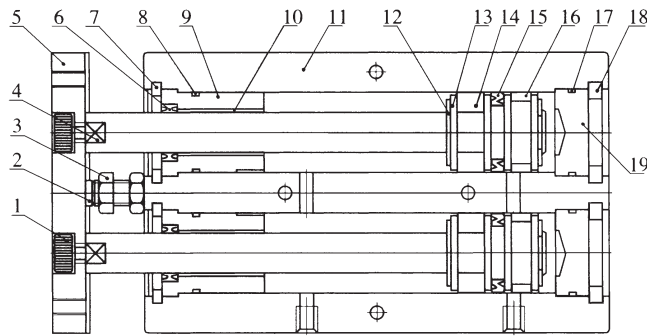
| Bore (mm) | 10 | 16 | 20 | 25 | 32 |
|------------------------|---------------|----------------------------|----|----|--------|
| Fluid | Air | | | | |
| Operation | Double acting | | | | |
| Operating pressure | 0.1~0.9MPa | | | | |
| Proof pressure | 1.35MPa | | | | |
| Operating temperature | 0~70°C | | | | |
| Operating piston speed | 100~500 mm/s | | | | |
| Adjustable stroke | -10~0 mm | | | | |
| Cushioning | No | Rubber bumper at both ends | | | |
| Non-rotary precision | 0.4° | | | | 0.3° |
| Port size | M5×0.8 | | | | PT1/8" |

Stroke

| Bore (mm) | Standard stroke | | | | | | | | | | | | | Max. Stroke | Allowable stroke |
|-----------|-----------------|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-------------|------------------|
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | | | | | | | 70 | 100 |
| 16 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 150 | 150 | 200 | |
| 20 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 150 | 150 | 200 | |
| 25 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 150 | 150 | 200 | |
| 32 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 150 | 150 | 200 | |

TN Series Cylinder

Construction



Component parts

| No. | Name | Material |
|-----|-------------------------------|---------------------|
| 1 | Hexagon socket head cap screw | - |
| 2 | Bumper | PU |
| 3 | Adjusting screw | - |
| 4 | Axes | - |
| 5 | Front board | Free machining iron |
| 6 | Front compaction | - |
| 7 | "C" type clip | Spring steel |
| 8 | Front cover "O" ring | NBR |
| 9 | Front cover | Aluminum alloy |
| 10 | Axes axletree | - |
| 11 | Housing | Aluminum alloy |

| No. | Name | Material |
|-----|----------------------|-------------------|
| 12 | Bumper | PU |
| 13 | Piston | Aluminum alloy |
| 14 | Magnet | Magnetic material |
| 15 | Piston "O" ring | NBR |
| 16 | Wearing ring | - |
| 17 | Rear cover "O" oring | NBR |
| 18 | "C" type clip | Spring steel |
| 19 | Rear cover | Aluminum alloy |

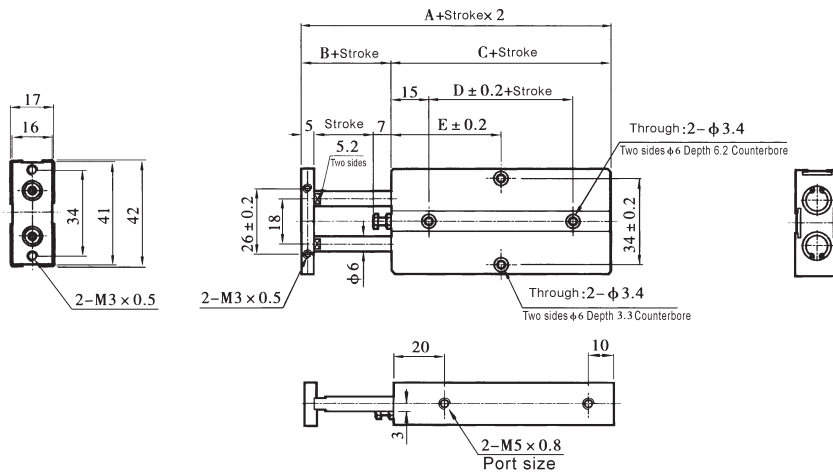
O-ring list

| | Front cover seal ring | Piston "O" ring | Front & rear cover "O" ring | Piston rod "O" ring |
|-------------|-----------------------|-----------------|-----------------------------|---------------------|
| Bore/Number | 1 | 2 | 2 | 1 |
| 10 | PDU-6 | APA-10 | 10×1.5 | P12 |
| 16 | PDU-8 | APA-16 | 16×1.5 | P16 |
| 20 | PDU-10 | APA-20 | 20×1.5 | P20 |
| 25 | PDU-12 | APA-25 | 25×1.5 | P20 |
| 32 | PDU-16 | APA-32 | 32×1.5 | P25 |

TN Series Cylinder

● Dimensions

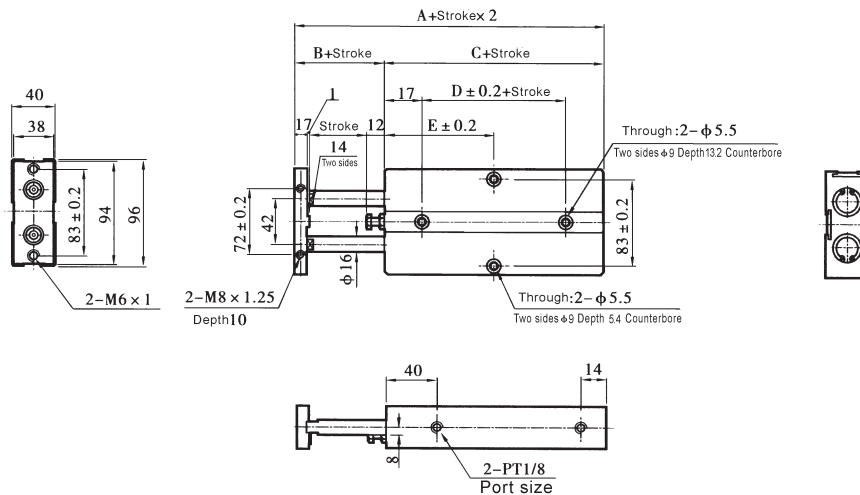
φ 10



| Symbol Bore/Symbol | A | B | C | D | E | | | | | | |
|-----------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| 10 | 58 | 12 | 46 | 10 | 30 | 30 | 35 | 40 | 45 | 50 | 55 |

● Dimensions

φ 32

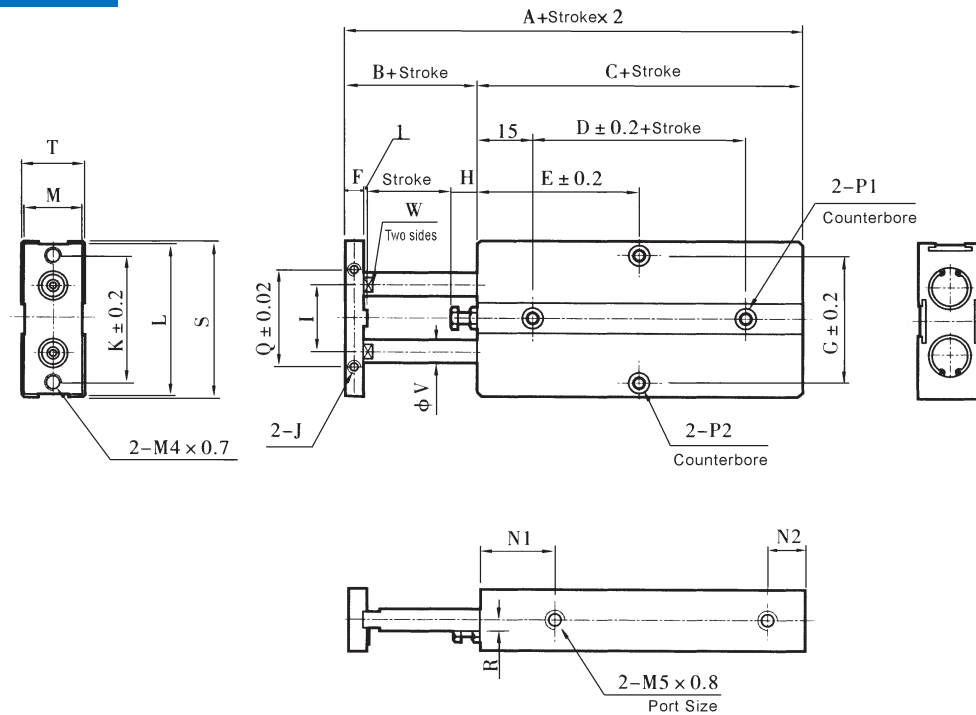


| Symbol Bore/Symbol | A | B | C | D | E | | | | | | | | | | | |
|-----------------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-------|-----|
| | | | | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 150 |
| 32 | 108 | 30 | 78 | 35 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 102.5 | 115 |

TN Series Cylinder

● Dimensions

φ 16 ~ φ 25



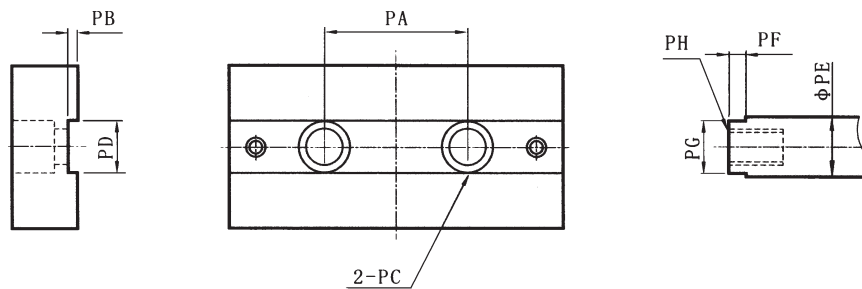
| Symbol Bore/Symbol | A | B | C | D | E | | | | | | | | | | | F | G | H | I | |
|-----------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|------|-----|----|----|---|-----|
| | | | | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | | | | | 150 |
| 16 | 68 | 15 | 53 | 20 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 87.5 | 100 | 8 | 47 | 6 | 24 |
| 20 | 78 | 20 | 58 | 20 | 35 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 87.5 | 100 | 10 | 55 | 9 | 28 |
| 25 | 81 | 19 | 62 | 30 | 40 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 92.5 | 105 | 10 | 66 | 8 | 34 |

| Bore/Symbol | J | K | L | M | N1 | N2 | P1 | P2 | Q | R | S | T | V | W |
|-------------|------------------|----|----|----|----|----|---|---|----|---|----|----|----|------|
| 16 | M4 × 0.7 Depth 5 | 47 | 53 | 20 | 22 | 10 | 2 Sides φ 7.5 Depth 7.2mm. Through: φ 4.5 | 2 Sides φ 8 Depth 4.4mm. Through: φ 4.5 | 34 | 4 | 54 | 21 | 8 | 6.2 |
| 20 | M4 × 0.7 Depth 5 | 55 | 61 | 24 | 25 | 12 | 2 Sides φ 7.5 Depth 7.2mm. Through: φ 4.5 | 2 Sides φ 8 Depth 4.4mm. Through: φ 4.5 | 44 | 6 | 62 | 25 | 10 | 8.2 |
| 25 | M4 × 0.8 Depth 6 | 66 | 72 | 29 | 30 | 12 | 2 Sides φ 7.5 Depth 7.2mm. Through: φ 4.5 | 2 Sides φ 8 Depth 4.4mm. Through: φ 4.5 | 56 | 7 | 73 | 30 | 12 | 10.2 |

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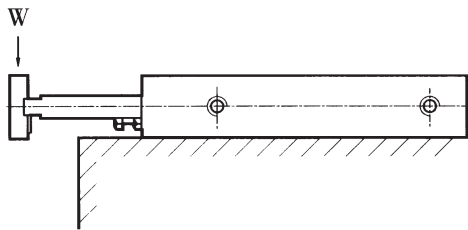
● Front board dimensions

φ 16 ~ φ 25



| Bore/Symbol | PA | PB | P1 | PD | PE | PF | PG | P2 |
|-------------|----|-----|-----------------------------------|------|----|----|------|--------------------|
| 10 | 18 | 0.5 | φ 6.2 Depth 3.5mm, Through: φ 4.5 | 5.2 | 6 | 3 | 5.2 | M3×0.5 Depth 5mm |
| 16 | 24 | 1 | φ 7.8 Depth 4.6mm, Through: φ 4.5 | 6.2 | 8 | 3 | 6.2 | M4×0.7 Depth 46mm |
| 20 | 28 | 1 | φ 11 Depth 6.8mm, Through: φ 4.5 | 8.2 | 10 | 3 | 8.2 | M6×1 Depth 48mm |
| 25 | 34 | 1 | φ 11 Depth 6.8mm, Through: φ 4.5 | 10.2 | 12 | 3 | 10.2 | M6×1 Depth 48mm |
| 32 | 42 | 2 | φ 17 Depth 12mm, Through: φ 4.5 | 14 | 16 | 3 | 14 | M10×1.5 Depth 14mm |

● Allow the side toward load



*1Kgf=9.81N

