ISO CYLINDER (ISO 6431, VDMA24562)

FAQ2R Series
FAQ2R Series

ISO CYLINDER (ISO 6431, VDMA 24562)

Features

1. Magnetic piston is standard in all sizes.
2. Adjustable air cushions at both ends are standard in all sizes.
3. ISO 6431 dimensional interchange.
4. Machined male rod thread with jam nut is standard in all sizes.
6. Cylinders can be operated with or without additional lubrication.
7. Position sensors ordered separately (see page 8).

Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>FAQ2R</th>
<th>FAQ2RW</th>
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</thead>
<tbody>
<tr>
<td>Action</td>
<td>Single rod</td>
<td>Double rod</td>
</tr>
<tr>
<td>Bore (mm)</td>
<td>Ø32, Ø40, Ø50, Ø63, Ø80, Ø100, Ø125</td>
<td></td>
</tr>
<tr>
<td>Operating media</td>
<td>Compressed air</td>
<td></td>
</tr>
<tr>
<td>Min. Operating pressure</td>
<td>0.07 MPa (0.7 kgf/cm²) 10 psi</td>
<td></td>
</tr>
<tr>
<td>Max. Operating pressure</td>
<td>1MPa (10.5 kgf/cm²) 150 psi</td>
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</tr>
<tr>
<td>Piston speed range</td>
<td>50<del>500 mm/sec. (1.97</del>19.7 in./sec.)</td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>–10°C (14°F) – +70°C (158°F) filtered dry air required at temperatures below 0°C (32°F)</td>
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<tr>
<td>Lubrication</td>
<td>Not required or use ISO VG32</td>
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Conversions

- psi = kgf/cm² x 14.2
- psi = MPa x 145
- inch = mm x 0.0394
- lb force = N x 0.22

Effective Piston Areas

<table>
<thead>
<tr>
<th>Bore (mm)</th>
<th>Push</th>
<th>Pull</th>
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<tr>
<td></td>
<td>cm²</td>
<td>in²</td>
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<tr>
<td>32</td>
<td>8.0</td>
<td>1.25</td>
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<tr>
<td>40</td>
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<tr>
<td>125</td>
<td>122.7</td>
<td>19.0</td>
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</table>

Conversions

- Force lb = psi x in²
- N = lbf x 4.45

Position Sensors

9G49 Series Sensors
Order sensors, adapters and cord sets separately. See page 8.

FAQ2R 50 LB

40 x 50 LB

Series Str

oke Mounting

Al Standard

troke Mounting

CA Eye mount

CB Pivot mount includes pin

CBB Eye mount base combined with pivot mount (see pg. 6)

Tapped holes at both ends – leave blank

FAQ2RW

Series Bore (mm) Stroke

FAQ2R Standard type

FAQ2RW Double rod

How to order

Page 2

Specifications and prices subject to change without notice or incurring obligation
Note: Piston magnet is standard on all sizes.

Non-standard strokes are available upon request.

Position sensors (see back page)
- Mounting – The sensor, combined with an adapter, clamps rigidly to the extrusion slot and can be clamped anywhere along the length of the cylinder for very precise piston position sensing.
- Reliability – The annular piston magnet is permanently bonded into a groove in the piston. It is a polarized permanent magnet of rubber bonded barium ferrite that is very stable and is not affected by shock. Under normal usage it will remain magnetized indefinitely.
- Warning – External magnetic fields and/or ferrous objects may affect the strength of the piston magnet therefore affecting sensor actuation and piston position indication.
- Warning – Do not exceed sensor ratings. Permanent damage to sensor may occur. Power supply polarity MUST be observed for proper operation of sensors. See wiring diagrams included with each sensor.
### FAQ2R Series Dimensions (mm)

**ISO CYLINDER (ISO 6431, VDMA24562)**

#### Single Rod End (FAQ2R □□ x □□)

- Port location
- 2x, cushion adjustment screws
- 4-RT at both ends

#### Double Rod End (FAQ2RW □□ x □□)

- Port location both ends
- ZA + 2 x Stroke
- ZY + 2 x Stroke

#### Eye Mount Base combined with Pivot Mount and Pin (CBB)

- 4-RT at both ends

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**Bore** | **AM** | **ØB** | **BG** | **ØD** | **EE** | **G** | **KK** | **L2** | **L8** | **L9** | **L12** | **PL** | **R** | **RT** | **SW** | **VA** | **VD** | **WA** | **WH** | **ZX** | **ZZ**
**Ø32** | 22 | 30 | 15 | 12 | 47 | G1/8" | 26 | M10X1.25 | 16 | 94 | 6 | 10 | 32.5 | M6 | 10 | 4 | 7 | 4 | 26 | 120 | 146 |
**Ø40** | 24 | 35 | 15 | 16 | 53 | G1/4" | 30 | M12X1.25 | 20 | 105 | 6 | 8 | 15 | M6 | 13 | 5 | 9 | 4 | 30 | 135 | 164 |
**Ø50** | 32 | 40 | 18 | 20 | 65 | G1/4" | 30 | M16X1.5 | 25 | 106 | 6 | 8 | 15 | M8 | 17 | 5 | 11 | 4 | 37 | 143 | 180 |
**Ø63** | 32 | 45 | 18 | 20 | 75 | G3/8" | 32 | M16X1.5 | 25 | 121 | 6 | 8 | 16 | 65.5 | M8 | 17 | 5 | 13 | 7 | 37 | 158 | 195 |
**Ø80** | 40 | 45 | 22 | 25 | 95 | G3/8" | 38 | M20X1.5 | 32 | 128 | 6 | 10 | 19 | 72 | M10 | 22 | 4 | 15 | 7 | 46 | 174 | 218 |
**Ø100** | 40 | 56 | 22 | 25 | 115 | G1/2" | 40 | M20X1.5 | 34.5 | 138 | 6 | 10 | 19.5 | 89 | M10 | 22 | 6 | 16 | 7 | 51 | 189 | 235 |
**Ø125** | 54 | 60 | 22 | 35 | 140 | G1/2" | 40 | M27X2.0 | 40 | 160 | 6 | 15 | 16 | 110 | M12 | 32 | 8 | 8 | 0 | 65 | 225 | 287 |

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Please visit [http://portal.fabco-air.com/configure.php](http://portal.fabco-air.com/configure.php) for current pricing. Specifications and prices subject to change without notice or incurring obligation.
### FAQ2R Series Dimensions (mm)

#### ISO CYLINDER (ISO 6431, VDMA24562)

#### Foot mounting (LB)

- **Trunnion (TC):**
  - $\Theta_{32} = 7, 32, 8, 5, 47, 142, 32, 144$
  - $\Theta_{40} = 9, 36, 10, 5, 53, 161, 36, 163$
  - $\Theta_{50} = 9, 45, 10, 5, 65, 170, 45, 175$
  - $\Theta_{63} = 9, 50, 10, 5, 75, 185, 50, 190$
  - $\Theta_{80} = 12, 63, 13, 6, 95, 210, 63, 215$
  - $\Theta_{100} = 14, 71, 15, 6, 115, 220, 75, 230$
  - $\Theta_{125} = 16, 90, 25, 8, 140, 250, 90, 270$

- **Rear Flange (FB):**
  - Dim. $TA''$ is adjustable by the customer if necessary.
  - Loosen clamp screws and adjust to desired position.
  - Apply Loctite 242 (blue) to clamp screw threads and tighten.

#### Eye Mount (CA)

- **Pivot Mount (CB):**

#### Front flange (FA)

- **ZQ + Stroke:**

#### Rear Flange (FB)

- **ZF + Stroke:**

#### Trunnion (TC)

- **Notes:**
  - A: B+ clamp screws lock TC mount to extruded housing rails. Dim. TA'' is adjustable by the customer if necessary.
  - Loosen clamp screws and adjust to desired position. Apply Loctite 242 (blue) to clamp screw threads and tighten.
  - TC mount may interfere with application of piston position sensors when using short strokes, sensing mid-stroke positions or if the TC mount is placed near either end-of-stroke.
  - Mount is steel and may affect magnetic field required for effective position sensing. All trunnion pins are steel.
**Rod clevis and pin (YI)**
ISO 8140
DIN 71752

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<th>C</th>
<th>D</th>
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<th>F</th>
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**Spherical rod end (P)**
DIN 648
DIN 24335

**NOTES**

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**Rod clevis and pin (Y)**

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<th>Part No.</th>
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Sensors for FAQ2R Series Cylinders

Position Sensors

A "no charge" adapter # TEZ73047 is included with the sensors to fit FAQ2R Series air cylinders.

Please order sensors and female cordsets separately.

Reed (LED)
5-120 VDC/VAC, 0.03 Amp Max., 0.005 Amp Min.,
4 Watt Max., 2.0 Voltage Drop
Prewired 9 ft. Leadwire
Part No.
9G49-000-002
Quick Disconnect*
Part No.
9G49-000-302

Electronic (LED)
Source, PNP, 5-26 VDC, 0.20 Amp Max., 0.5 Voltage Drop
Prewired 9 ft. Leadwire
Part No.
9G49-000-031
Quick Disconnect*
Part No.
9G49-000-331

Electronic (LED)
Sinking, NPN, 5-28VDC, 0.20 Amp Max., 0.5 Voltage Drop
Prewired 9 ft. Leadwire
Part No.
9G49-000-032
Quick Disconnect*
Part No.
9G49-000-332

Sensor Adapter

Part No.
TEZ73047
Fits All Bore Sizes
No charge

Female Cord Sets

Cord length

1 Meter
Part No.
CFC-1
2 Meters
Part No.
CFC-2M
5 Meters
Part No.
CFC-5M

Installing sensors in the mounting slot

1. Insert an adapter into a groove.
2. Insert a sensor into a groove.
3. Slide the sensor into the adapter.
4. After the sensor is positioned, tighten the clamp screw.

Note:
Quick Disconnect Sensor has a 6” pigtail with male connector.