

# Precision Pressure Regulator with High Flow Rate and Exhaust

R03

**Description**

Regulator provides precision regulation in high flow and high relief applications. A sensitive rolling diaphragm and balanced inner valve ensure constant outlet pressure even with changing supply pressure and flow fluctuations. The regulator is silicone-free and suitable for panel mounting.

**Media**

oil-free and 5 µm filtered compressed air or non-corrosive gases

**Supply pressure**

max. 16 bar

**Accuracy**

at supply pressure change from 2 bar to 7 bar: < 6 mbar pressure deviation  
 at volume flow change from 0 l/min to 20 l/min: < 20 mbar pressure deviation  
 response sensitivity: < 4 mbar

**Air consumption**

< 1.5 l/min at P<sub>1</sub> = 5 bar, < 2 l/min at P<sub>1</sub> = 7 bar, < 4 l/min at P<sub>1</sub> = 10 bar, < 1% of volume flow

**Adjustment**

by handwheel with locknut, suitable for panel mounting

**Relieving function**

relieving

**Relief capacity**

700 l/min at 6 bar outlet and 0.35 bar overpressure above setpoint

**Gauge port**

G<sub>1/4</sub> on both sides of the body, one screw plug supplied

**Mounting position**

any

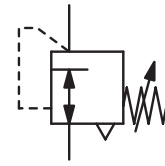
**Temperature range**

0 °C to 60 °C / 32 °F to 140 °F, for appropriately conditioned compressed air down to -35 °C / -31 °F

**Material**

Body: zinc die-cast

Elastomer: NBR/Buna-N



G<sub>1/4</sub> up to G<sub>1/2</sub>  
4500 l/min

| Dimensions |      |      | K <sub>v</sub> value (m <sup>3</sup> /h) | Flow rate           |         | Connection thread G | Pressure range bar | Order number |
|------------|------|------|--|---------------------|---------|---------------------|--------------------|--------------|
| A mm       | B mm | C mm |  | m <sup>3</sup> /h*1 | l/min*1 |                     |                    |              |

**Precision pressure regulator**

supply pressure max. 16 bar, relieving, with constant bleed

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|    |     |    |     |     |      |                     |             |         |
|----|-----|----|-----|-----|------|---------------------|-------------|---------|
| 82 | 200 | 41 | 2.1 | 198 | 3300 | G <sub>1/4</sub> *3 | 0.01 ... 3  | R03-02A |
|    |     |    |     |     |      |                     | 0.02 ... 5  | R03-02B |
|    |     |    |     |     |      |                     | 0.04 ... 7  | R03-02C |
|    |     |    |     |     |      |                     | 0.05 ... 10 | R03-02D |
| 82 | 200 | 41 | 2.4 | 228 | 3800 | G <sub>3/8</sub> *3 | 0.01 ... 3  | R03-03A |
|    |     |    |     |     |      |                     | 0.02 ... 5  | R03-03B |
|    |     |    |     |     |      |                     | 0.04 ... 7  | R03-03C |
|    |     |    |     |     |      |                     | 0.05 ... 10 | R03-03D |
| 82 | 200 | 41 | 2.9 | 270 | 4500 | G <sub>1/2</sub>    | 0.01 ... 3  | R03-04A |
|    |     |    |     |     |      |                     | 0.02 ... 5  | R03-04B |
|    |     |    |     |     |      |                     | 0.04 ... 7  | R03-04C |
|    |     |    |     |     |      |                     | 0.05 ... 10 | R03-04D |



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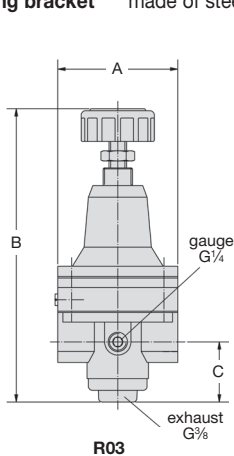
**Special options, add the appropriate letter**

tamper-proof cap total height 204 mm R03-0...T

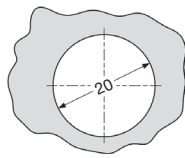
**Accessories, enclosed**

pressure gauge Ø 50 mm, 0...\*2 bar, G<sub>1/4</sub> MA5002-...\*2

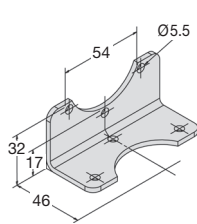
mounting bracket made of steel BW00-36



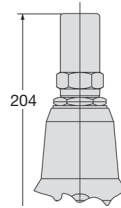
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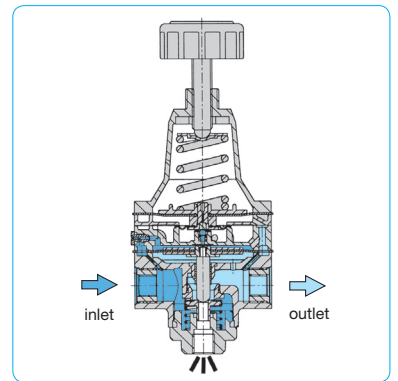
panel cut-out



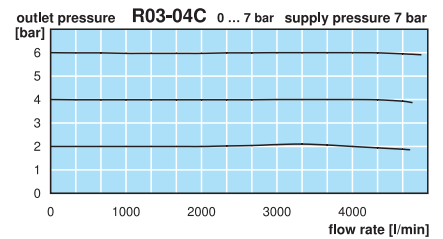
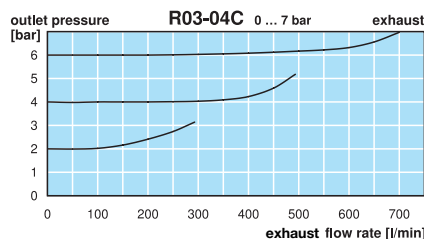
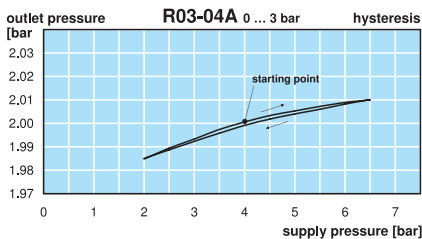
BW00-36



tamper-proof cap



cross section



\*1 at 7 bar supply pressure and 6 bar outlet pressure

\*2 04 = 0...4 bar, 06 = 0...6 bar, 10 = 0...10 bar

\*3 standard unit G<sub>1/2</sub> is reduced to smaller threads by fittings

Gauges: see chapter for measuring devices

PDF CAD  
www.aircom.net



Order example:  
R03-02A