



Certificate No. FM163

ISO 9001

spirax
sarco

TI-P570-03 / 4079xxA 1/4

CH Issue 3

Spirax-Monnier SR3 Standard Compressed Air Regulator



Spirax-Monnier Regulator to provide accurate pressure control for general purpose pneumatic systems.

Types:- SR3 - Self relieving
SRN3 - Non-relieving

Sizes:- 3/4" & 1"

Connections:-Screwed BSP (BS21-Rp)

- Good flow and regulation characteristics
- Fast response
- Dead tight shut-off on no flow.
- For line, panel or bracket mounting
- Black epoxy finish - internal & external
- Tamper resistant control

Operating limits

Maximum primary pressure 21 bar
Maximum working temperature 70°C

Secondary pressure ranges

There is a choice of reduced pressure range as follows:-
0.2 - 4 bar
0.3 - 9 bar

All regulators can be adjusted to zero pressure, or above the figures shown. The operating pressure range of the SR3 (and SRN3) regulators can be changed by simply fitting a new pressure control spring assembly.

Capacities

See TI-P570-04 (TIS 7.567) for sizing. THE FULL LIFT capacities for safety valve purposes are:-

| Size | 3/4" | 1" |
|------|------|-----|
| Kvs | 3.4 | 4.4 |

Materials

| Part | Material |
|----------------|--------------------------------|
| Body | Aluminium - Epoxy coated |
| Valve | Synthetic Rubber Faced |
| Spring Housing | Aluminium Alloy - Epoxy coated |

How to order

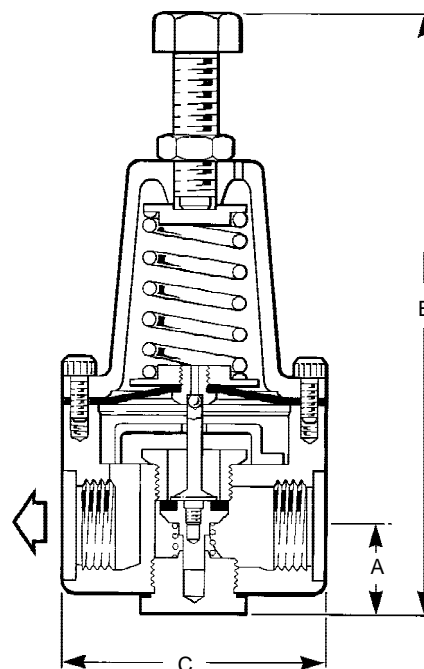
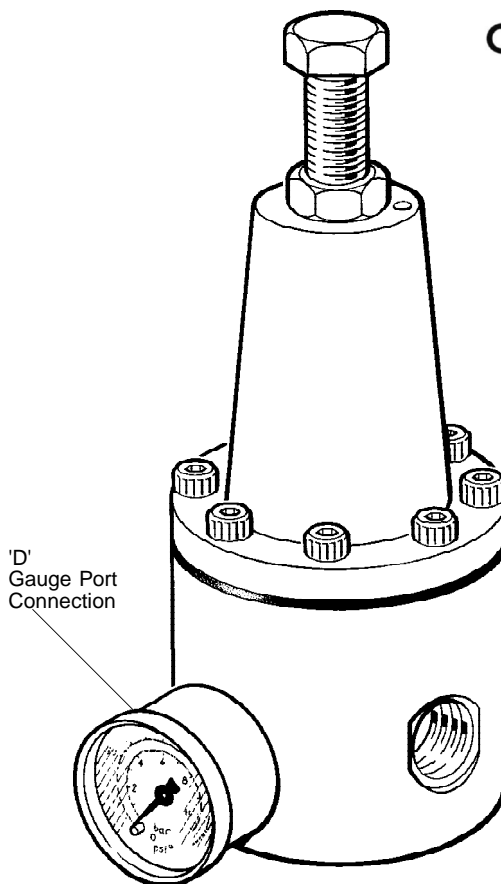
Please state: quantity, size (3/4" or 1") Spirax-Monnier regulator type SR3 and operating pressure range. Specify accessories separately; see optional extras overleaf. If regulator is to be panel mounted order Type 4 Bracket.**Note:** A control spring (0.3 to 9 bar) will be supplied as standard.

Dimensions (approximately) in millimetres

| Size | A | B | C | D | Weight |
|-----------|----|-----|----|------|--------|
| 3/4" & 1" | 33 | 216 | 94 | 1/8" | 1.8kg |

How to fit

The regulator should be sited as close as possible to the equipment it is serving. Connect regulator so that air flow is in the direction shown by the arrow on the body. A pressure gauge (supplied as an accessory, when ordered) fitted to one of the gauge ports is recommended (to show the secondary pressure). A filter should be installed in front of the regulator to keep dirt out.





To adjust

Loosen lock nut 1. Turn adjustment handle 2 clockwise to increase secondary pressure, or anti-clockwise to decrease. Tighten lock nut (make sure in doing so you do not alter the pressure setting). It is recommended that adjustments are made under flow conditions - there may be a slight increase in set pressure when flow stops.

How does it work

With adjustment handle 2 rotated fully anti-clockwise, the valve return spring 3 will keep the main valve 4 shut. Clockwise rotation of the adjustment knob will compress the main pressure control spring 5, deflect the diaphragm 6 downwards, opening the main valve 4. As air flows to the downstream 7 side of the regulator, the secondary pressure increases. The secondary pressure is sensed on the underside of the diaphragm. As the controlled pressure varies, so does the force on the underside of the diaphragm. When this force (proportional to the secondary pressure) equals the compression force in the main control spring, the main valve will shut. Any fall in secondary pressure will cause the main valve to open sufficiently to meet the air flow requirements and accurately maintain the set secondary pressure.

Self relieving regulators

Any appreciable rise in the secondary pressure from its set value will cause the diaphragm to lift clear of the valve spindle, the end of which forms the self-relieving valve. This will allow air to escape through the seat in the centre of the main diaphragm to atmosphere. When excess pressure has been vented the orifice in the centre of the diaphragm will reseal.

Non-relieving regulators

Are recommended for use with other gases, such a nitrogen, carbon dioxide, etc.

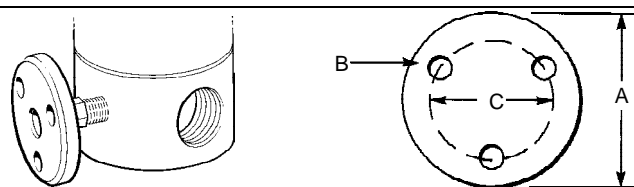
Optional extras

Type 1 Mounting Bracket

This is a circular aluminium bracket which is attached to the regulator by means of a screwed nipple, fitted to one of the gauge ports.

Dimensions (approximate) in millimetres

| A | B(diameter) | C |
|----|-------------|----|
| 51 | 6.4 | 38 |

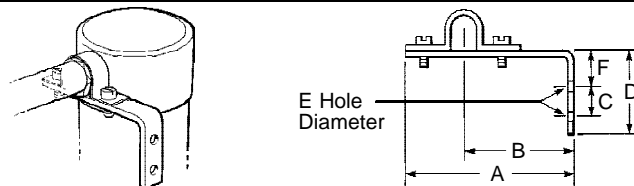


Type 3 Mounting Bracket

This is a zinc plated, mild steel angle bracket which can be attached to any flat surface by means of screws or bolts.

Dimensions (approximate) in millimetres

| A | B | C | D | E | F |
|------|----|------|----|---|------|
| 96.5 | 61 | 22.1 | 41 | 5 | 12.7 |

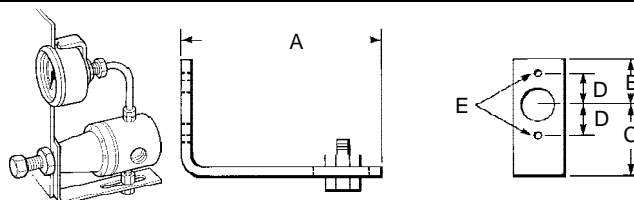


Type 4 Mounting Bracket

An angle bracket in zinc plated mild steel to enable the regulator to be mounted behind the panel. The regulator is attached to the bracket by a screwed nipple.

Dimensions (approximate) in millimetres

| A | B | C | D | E |
|-----|----|----|----|---------|
| 160 | 25 | 56 | 16 | 1/4"UNF |



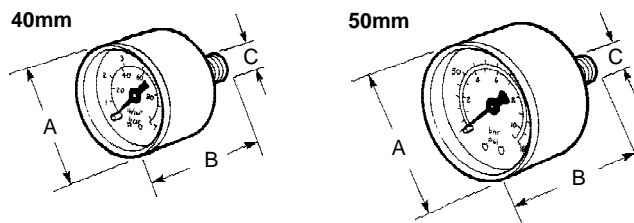
Pressure gauges

Available in two sizes, with 4 pressure ranges. The face is marked in both bar and lb/in². The 40mm gauge will be supplied unless the 50mm is ordered.

| | | |
|--------------|-----------------------------|------------------|
| 0 to 2 bar | 0 to 30 lb/in ² | |
| 0 to 7 bar | 0 to 100 lb/in ² | |
| 0 to 11 bar | 0 to 160 lb/in ² | |
| 0 to 21 bar* | 0 to 300 lb/in ² | *50mm size only. |

Dimensions (approximate) in millimetres

| Size | A | B | C | Size | A | B | C |
|------|----|----|------|------|----|----|-------|
| 40mm | 40 | 47 | R1/8 | 50mm | 49 | 45 | R1/8" |



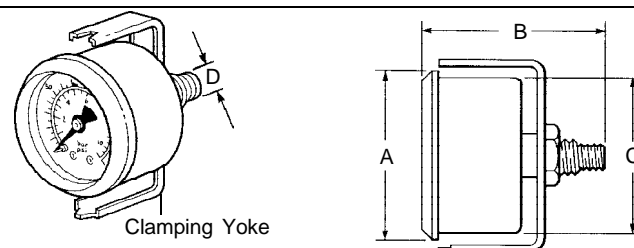
Pressure gauges for panel mounting

With Chromium plated bezel available in two ranges, the face being marked in bar and lb/in² as follows:-

| | |
|-------------|----------------|
| 0 to 2 bar | - 0 to 30 psi |
| 0 to 11 bar | - 0 to 160 psi |

Dimensions (approximate) in millimetres

| A | B | C | D |
|----|----|----|-------|
| 53 | 56 | 48 | R1/8" |





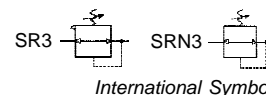
Certificate No. FM163

ISO 9001

spirax sarco

TI-P570-04 / 4079xxA 3/4

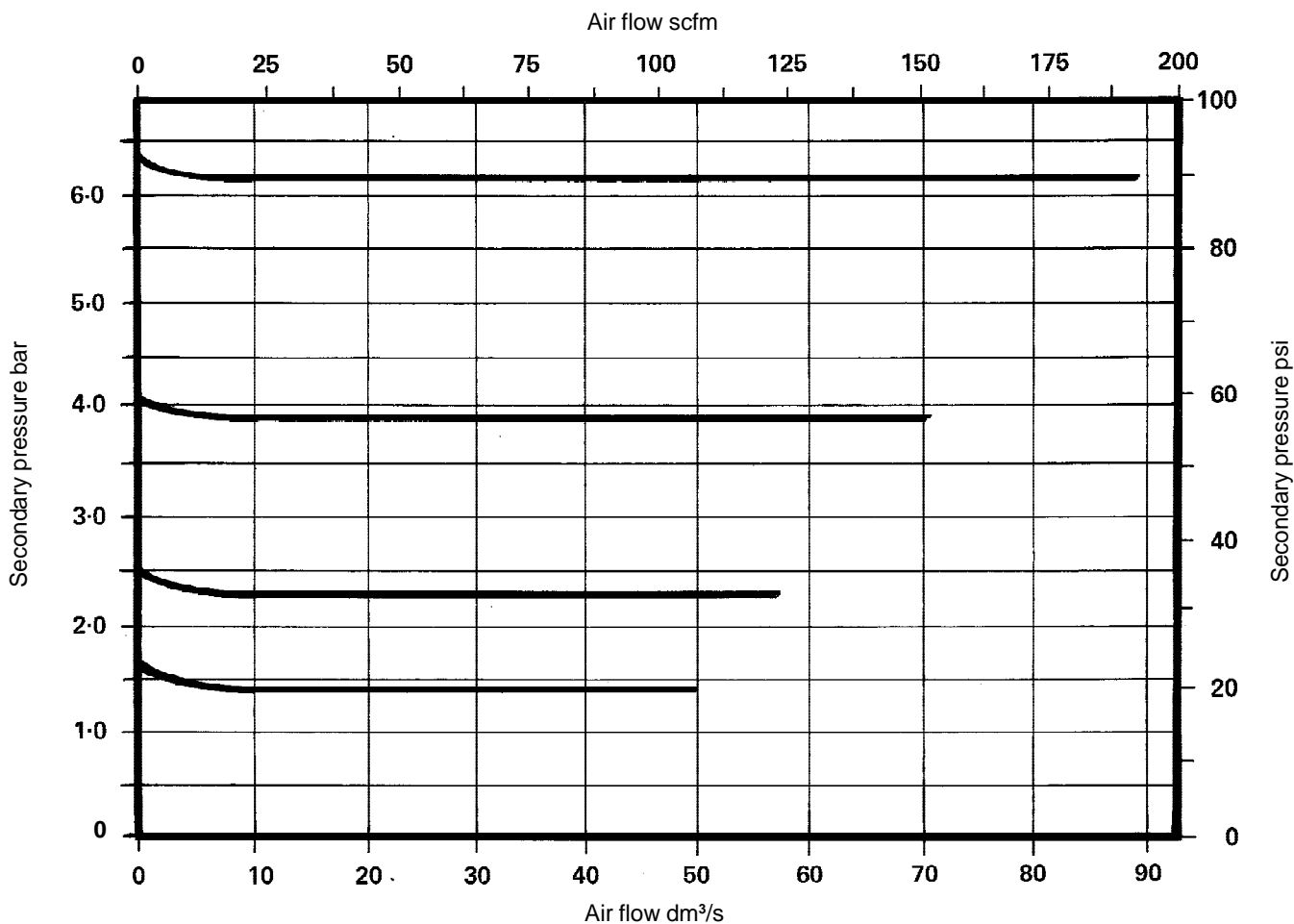
CH Issue 3



Spirax-Monnier SR3 Standard Compressed Air Regulator

Performance

Flow characteristics 3/4" and 1" with primary pressure 10 bar



CHRYSSAFIDIS

Spare parts

SR3/SRN3 ¾" and 1"

AVAILABLE SPARE

| | |
|---|----------------------|
| Pressure control spring | J, L |
| Valve and seat assembly | A, B, C, E, G, O |
| Diaphragm assembly SR3 relieving type | F, G |
| Diaphragm assembly SRN3 non-relieving type | F, G |
| Set of spring housing bolts and flow diverter bolts | M (2 off), N (6 off) |
| Gasket set (Packet of 3 of each) | E, G, O |

How to order

1 - Valve and seat assembly for 1" Spirax-Monnier SR3

To service

Shut off main air supply. Undo locknut and vent system by unscrewing adjustment knob until there is no tension on the control spring. Remove control spring housing. Unscrew valve retaining plate and remove return spring and valve. Remove deflector plate to gain access to valve seat. Unscrew valve seat. Replace parts or clean as necessary. Reassemble in reverse order.

Assembly torque

| | |
|-------------------------|---------|
| Diverter bolts (M) | 6.5 N m |
| Spring housing bolts(N) | 6.5 N m |
| Valve seat (B) | 30 N m |
| Valve plug (D) | 30 N m |



CHRYSSAFIDIS

