

Spirax Monnier SR3/SRN3 Compressed Air Regulator

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

How to fit

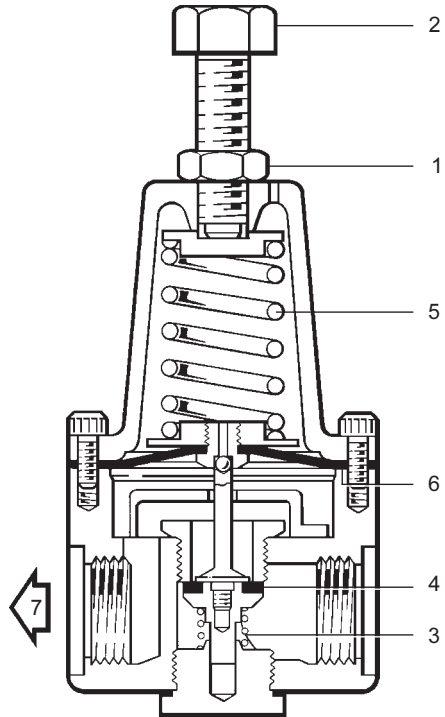
The regulator should be sited as close as possible to the equipment it is serving. Connect regulator so that air flow is in the direction shown by the arrow on the body. A pressure gauge (supplied as an accessory, when ordered) fitted to one of the gauge ports is recommended (to show the secondary pressure).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

To adjust

Loosen lock-nut 1. Turn adjustment spindle 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 spindle 2 rotated fully anti-clockwise, the valve return spring 3 will keep the main valve 4 shut. Clockwise rotation of the adjustment spindle 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 reseat.

Non-relieving regulators

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

Spare parts

SR3/SRN3 ¾" & 1"

AVAILABLE SPARE

Pressure Control Spring	J,L
Valve & Seat Assembly	B,A,C,G,E,O
Diaphragm Assembly SR3 Relieving Type	F,G
Diaphragm Assembly SRN3 Non-Relieving Type	F,G
Set of Spring Housing Bolts & Flow Diverter Bolts	N(6 off) M(2 off)
Gasket Set	(Pkt of 3 of each) E,O,G

How to order

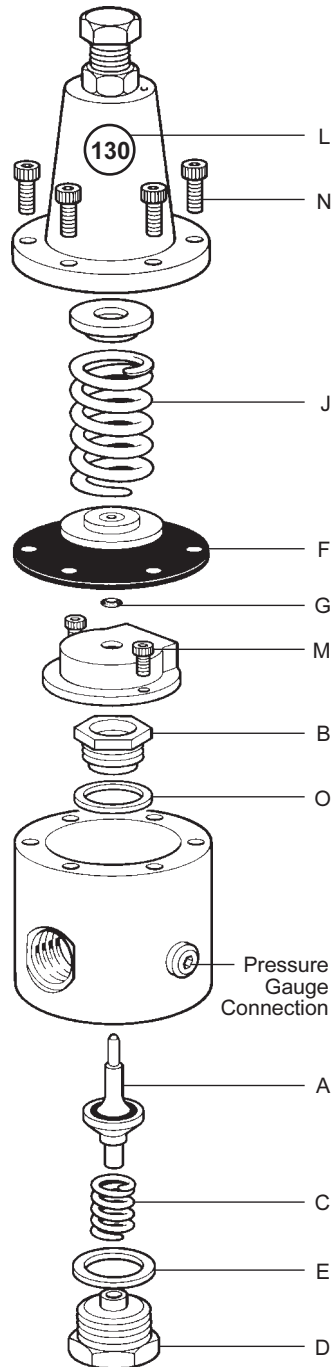
1 - Valve and Seat Assembly for 1" Spirax-Monnier SR3

How to service

Shut off main air supply. Undo lock-nut and vent system by unscrewing adjustment spindle until there is no tension on the control spring. Remove control spring housing. Unscrew valve retaining plug 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 Nm
Spring Housing Bolts(N)	6.5 Nm
Valve Seat (B)	30 Nm
Valve Plug (D)	30 Nm



Spirax-Monnier Products

General Safety, Installation and Maintenance Guidelines

WARNING

As with all Pressurised Systems, do NOT attempt ANY Installation or Maintenance function if there is ANY pressure in the product or connected system.

Spirax-Monnier

Spirax Monnier compressed air products are of well proven and simple design, with high natural levels of designed safety built in. However, used or installed incorrectly, their performance and that of the system they are protecting or controlling, may suffer. The information given indicates the product limiting conditions, maintenance and installation requirements and any specific component disposal needs.

Product Maintenance - See Over

Installation and Operation

1. Filters, Filter/Regulators, Lubricators, Flow Meters, Separators and Drain Traps should be fitted in horizontal pipelines, with the bowls vertically downwards.
2. Regulators and Ball Valves can be installed in any position.
3. On Pressure Regulators and combined Filter/regulators, a Pressure Gauge can be connected to one of the 1/8" ports. The gauge should be selected to cover the maximum pressure range of the main Control Spring. The gauge will indicate the downstream or controlled pressure.
4. Ensure that the Control Spring range for Regulators and Filter/Regulators fully meets the pressure requirements of the system.

5. There are Maximum Operating Pressures, and Maximum Operating and Environmental Temperatures for each product. These are shown in the table below.
6. Adequate space should be provided around any product to allow easy access for routine servicing requirements.
7. Products fitted with a Bowl (Polycarbonate or Metal) should be adequately drained - manually or automatically - to reduce the potentially harmful effects of water carryover.
8. **WARNING** Polycarbonate Bowls and Sight Domes, and Sight Levels fitted to Metal bowls, may be attacked by Phosphate Ester based fluids, Solvents, Chemical cleaners, Carbon Tetrachloride, etc. These and other similar substances should never be allow to come into contact with these product components. Certain compressor lubricating oils also contain additives harmful to these components. Where there is any doubt, we recommend, in the interests of safety, that Bowl Guards or Metal Bowls are fitted.
9. Local regulations may restrict the use of this product below the conditions quoted.
10. For more detailed information on any individual product, please ask for the appropriate Technical Information Sheet listed in the table.

For Maximum Pressures/Temperatures see overleaf

MAXIMUM PRESSURES/TEMPERATURES

FILTERS	Polycarbonate Bowl		Metal Bowl		Metal Bowl with Sight level		DISPOSAL CLASS	TI
	bar	°C	bar	°C	bar	°C		
MF2	10	50	-	-	-	-	1 & 3	P050-05
IF2/D/A	10	50	17	80	17	70	1 & 2	P500-01
IC3/4/DA	10	50	17	80	17	70	1 & 2	P501-01
IX1	10	50	17	70	17	70	1 & 2	P057-01
SF3/A	-	-	17	80	17	70	1 & 3	P050-03

REGULATORS

MR1/2/3	21 bar 70°C : CONTROL RANGES : 0.2/2. 0.3/4, 0.7/9 bar	1 & 3	P051-01
IRI	20 bar 70°C : CONTROL RANGES : 0.2/3.5, 0.5/1 bar	1 & 2	P058-01
SR2	21 bar 70°C : CONTROL RANGES : 1.3 - 17.0 bar	1 & 3	P570-01
SR3	21 bar 70°C : CONTROL RANGES : 0.2/4, 0.3/9 bar	1 & 3	P570-03

FILTER REGULATORS

IP2/A/D	10	50	17	80	17	70	1 & 2	P510-01
	RANGES : 0.2/3.5, 0.5/10 bar							
MP2	10	50	-	-	-	-	1 & 3	P054-01
	RANGES : 0.2/2.0, 0.3/4.0, 0.7/9.0 bar							
MPC2	10	50	-	-	-	-	-	P054-04
	RANGES : 0.2/2.0, 0.3/4.0, 0.7/9.0 bar						1 & 3	

LUBRICATORS

ML3	10	50	-	-	-	-	1 & 3	P052-07
IL1	10	50	17	80	17	70	1 & 2	P059-01
SL3	-	-	17	80	17	70	1 & 3	P052-04

OTHER PRODUCTS

IFM2	10	50	-	-	-	-	1 & 2	P580-01
S.M.S.	-	-	17	70°C	-	-	1 & 3	P050-17
BALL	all to 15 bar & 45°C							
VALVES (all)	(see performance graph on TI for full details)						1 & 4	P560-01
DRI-LINE	-	-	16	80°C	-	-	1 & 3	P050-07

DISPOSAL

1. Some plastic and/or rubber components
2. Main body Zinc - epoxy coated
3. Main body Aluminium - epoxy coated
4. Brass and Steel
5. Electronic Components

Note

Customers are reminded that under UK and EC Health, Safety and Environmental Law, when returning products to Spirax Sarco they must provide information on any hazards and the precautions to be taken due to contamination residues or mechanical damage which may present a health, safety or environmental risk. This information must be provided in writing including Health and Safety data sheets relating to any substances identified as hazardous.