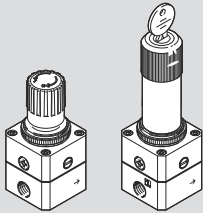


LRP(S)-1/4


Precision pressure regulator



FESTO

Festo SE & Co. KG
Ruiter Straße 82
73734 Esslingen
Germany
+49 711 347-0

www.festo.com


8195686

Operating instruction

8195686
2023-09k
[8195688]

Translation of the original instructions

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1 Applicable documents

All available documents for the product → www.festo.com/sp.

2 Safety

2.1 Safety instructions

- Only use the product in its original condition without unauthorised modifications.
- Only use the product if it is in perfect technical condition.
- Observe the identifications on the product.
- Take into account the ambient conditions at the location of use.
- Before working on the product, switch off the compressed air supply and lock it to prevent it from being switched on again.

2.2 Intended use

The precision pressure regulator regulates the compressed air in the downstream string at the specified outlet pressure. The function includes an integrated secondary exhaust with backflow response.

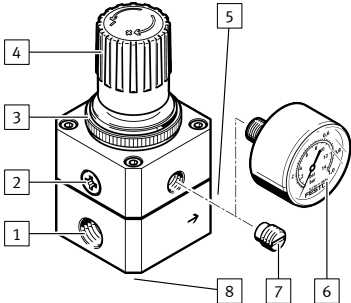
2.3 Training of qualified personnel

Work on the product may only be carried out by qualified personnel who can evaluate the work and detect dangers. The qualified personnel have knowledge and experience in pneumatics.

3 Additional information

- Contact the regional Festo contact if you have technical problems → www.festo.com.
- Accessories and spare parts → www.festo.com/catalogue.

4 Product design



- 1 Pneumatic port 1
- 2 Filter flow control screw
- 3 Knurled nut
- 4 Rotary knob
- 5 Pneumatic port 2
- 6 Pressure gauge
- 7 Plug screw
- 8 Secondary exhaust plug screw

Fig. 1: Product design

5 Assembly

5.1 Direct mounting of product

- Space required above the product: ≥ 20 mm
 - Space required under the product: ≥ 30 mm
 - Shut-off valves are installed in the compressed air supply line.
 - The maximum permissible wall thickness is 2.5 mm
1. Unscrew the knurled nut.
 2. Slide the regulator head through the hole in the mounting surface.
 3. Tighten the knurled nut. Tightening torque: $9 \text{ Nm} \pm 10\%$

5.2 Mounting product on the wall

- Space required above the product: ≥ 20 mm
- Space required under the product: ≥ 30 mm
- Shut-off valves are installed in the compressed air supply line.
- Mount the product on the mounting surface with the mounting accessories → 3 Additional information.

5.3 Mounting pressure gauge

1. Remove the plug screw [7] on the pressure gauge connection.
2. Turn the pressure gauge [6] clockwise to the stop. The pressure gauge can be turned back a maximum of one rotation for alignment.

6 Installation

1. Use fittings, seals and suitable tubing from the Festo catalogue → 3 Additional information.
2. Screw the fittings into the pneumatic ports.
3. Insert suitable tubing into the fitting to the stop.
 - Position the tubing axial to the pneumatic ports.

7 Commissioning

For use with reduced particle emission:

- Remove abraded particles and soil from the product:
 - Prior to initial commissioning
 - Regularly during operation
1. Pull the rotary knob to unlock it.
For LRPS: turn the key anticlockwise until it stops.
 2. Turn the rotary knob completely in the – direction.
 3. Pressurise the system slowly: turn the rotary knob in the + direction until the desired outlet pressure is reached.
Maintain the permissible pressure range → Tab. 4 Technical data, pneumatic. The input pressure p_1 should be at least 0.05 MPa (0.5 bar; 7.3 psi) higher than the set output pressure p_2 at all times.
 4. Press the rotary knob to lock it.
For LRPS: turn the key clockwise until it stops.

8 Maintenance

8.1 Replacing filter flow control screw

If there is contamination inside the product, the filter flow control screw must be replaced.

1. Exhaust the product completely.
2. Unscrew the filter flow control screw [2] anticlockwise.
3. Lightly coat the sealing ring of the new filter flow control screw with oil. Use special oil according to ISO VG 32: OFSW-32
4. Screw in the filter flow control screw clockwise. Tightening torque: $0.4 \text{ Nm} \pm 25\%$

8.2 Cleaning product

- Clean the product with a clean, soft cloth and non-abrasive cleaning agents.

9 Fault clearance

Malfunction	Cause	Remedy
Low flow rate. The operating pressure falls greatly with air consumption.	The supply line is constricted.	– Check the line.
The pressure increases above the set working pressure.	The valve disc at the sealing seat is defective.	– Replace the product.
A continuous audible blowing noise at the rotary knob.	The valve seat is damaged.	– Replace the product.
An audible, continuous blowing noise at the secondary plug screw.	The valve seat is damaged.	– Replace the product.

Tab. 1: Fault clearance

10 Technical data

10.1 Technical data, general

LRP(S)-1/4	-0.7	-2.5	-4.4	-10
Mounting position	Any			
Pneumatic port 1	G 1/4			
Pneumatic port 2				
Vibration resistance in accordance with IEC 60068-2-6	Severity level 2			
Shock resistance in accordance with IEC 60068-2-27	Severity level 2			
Temperature of medium	[°C]	–10 ... +60		
Ambient temperature	[°C]	–10 ... +60		
Storage temperature	[°C]	–10 ... +60		

Tab. 2: Technical data, general

Type of severity level (SL)		
Vibration load		
Frequency range [Hz]	Acceleration [m/s²]	Deflection [mm]
SG2	SG2	SG2
2 ... 8	–	±3.5
8 ... 27	10	–
27 ... 60	–	±0.35
60 ... 160	50	–
160 ... 200	10	–
Shock load		
Acceleration [m/s²]	Duration [ms]	Shocks per direction
SG2	SG2	SG2
±300	11	5
Continuous shock load		
Acceleration [m/s²]	Duration [ms]	Shocks per direction
±150	6	1000

Tab. 3: Type of severity level (SL)

10.2 Technical data, pneumatic

LRP(S)-1/4		-0.7	-2.5	-4.4	-10
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]			
		Inert gases			
Information on the operating medium		Lubricated operation possible, in which case lubricated operation will always be required			
Operating pressure	[MPa]	0.1 ... 1.2			
	[bar]	1 ... 12			
	[psi]	14.5 ... 174			
Pressure regulation range	[MPa]	0.005 ... 0.07	0.005 ... 0.25	0.005 ... 0.4	0.01 ... 1
	[bar]	0.05 ... 0.7	0.05 ... 2.5	0.05 ... 4	0.1 ... 10
	[psi]	0.73 ... 10.2	0.73 ... 36.3	0.73 ... 58	1.45 ... 145
Standard nominal flow rate	[l/min]	800	1800	2000	2300

Tab. 4: Technical data, pneumatic