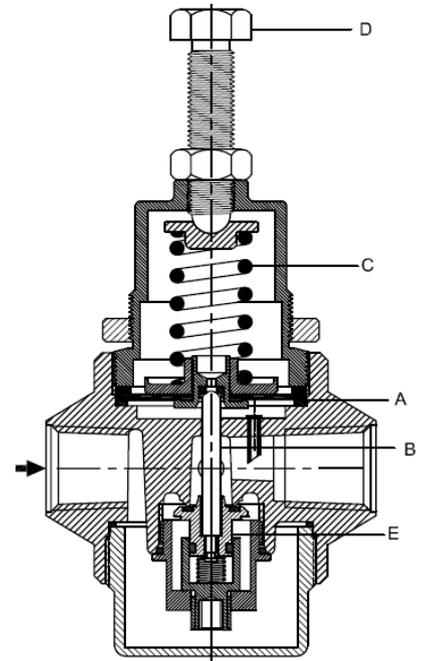


PRESSURE REGULATOR

SPECIFICATIONS:

Fluid:	Compressed Air
Pipe Size:	1/4" – 1" (Edelstahl 1.4401) 1/4" – 1 1/2" (Edelstahl-Guss 1.4401)
Port Thread:	BSP
Max. Inlet pressure:	30 bar
Operating Temp range:	-20 to +80°C (for Nitrile Elastomer)
Material:	Stainless Steel as per AISI 316
External Metallic Parts:	S.S.316
Diaphragm Assembly:	Synthetic rubber with PTFE / Synthetic rubber without PTFE for casted units
Elastomers:	Nitrile
Type:	Relieving
Pressure Adjustment:	Adjusting screw with lock-nut
Regulated sec. pr. Ranges*:	0.40 – 4.14 bar 1.7 – 17.5 bar
Gauge Port:	1/4" BSPT
Mounting:	Wall mounting bracket, optional



*These are not minimum or maximum outlet pressure limits. Regulator can be adjusted to zero bar outlet pressure and generally, to pressures in excess at those specified. The use of these regulators to control pressures outside the specified ranges is not recommended

OPERATION:

The working elements of a pressure regulator consist mainly of a flexible diaphragm (A) which controls a valve pin (B) and an adjusting spring (C) which is loaded by means of an adjusting screw (D).

The pressure side of the diaphragm is connected to the outlet port of the regulator so that regulated pressure will be exerted against the diaphragm. When the adjusting knob is retracted so that no load is applied to the adjusting spring the regulator valve (E) is closed.

As the adjusting screw (D) is turned in, it applies a load to the adjusting spring (C) which is transmitted to the valve through the diaphragm (A) and valve pin (B) thus opening the valve (E). As the regulated pressure increases, the pressure against the diaphragm increases forcing the diaphragm to compress the adjusting spring until the load exerted by the adjusting spring is equal to the load exerted by the regulated pressure. If there is no flow demand this state of equilibrium will occur with the valve closed. If there is a flow demand this state of equilibrium will occur with the valve open just the amount necessary to compensate for the demand, thus maintaining the desired regulated pressure.

WARNING:

These products are intended for use in industrial compressed air systems only.
Do not use these products where pressures and temperatures are likely to be more than specified under Technical data.

Before using these products with fluids other than air, for non-industrial applications or for life-support systems consult our technicians.

MAINTENANCE:

To disassemble, shut-off and bleed down the air pressure and turn the adjusting screw anti-clockwise to relieve compression on the spring.

A spanner flat is provided to unscrew the bonnet and remove the spring.

Remove slip ring and the diaphragm assembly. Unscrew the bottom cap. Unscrew valve retainer assembly to remove valve assembly and valve spring.

Clean and inspect each item carefully replacing damaged parts.

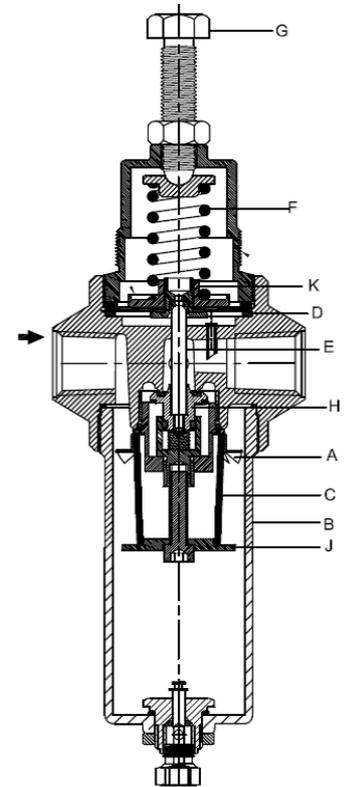
When reassembling lightly smear O-rings and valve rubber with silicon grease.

Assemble with regulator in vertical position. Tighten bonnet to 30-40 Nm torque. Tighten bottom cap to 10-14 Nm torque.

FILTER REGULATOR

SPECIFICATIONS:

Fluid:	Compressed Air
Pipe Size:	G 1/4" – G 1" (Edelstahl 1.4401) G 1/4" – G 1 1/2" (Edelstahl-Guss 1.4401)
Max. Inlet pressure:	30 bar
Operating Temp range:	-20 to +80°C (for Nitrile Elastomer)
Particle Removal:	25 Micron std.
Filter Element Material:	S.S.316
Material of construction:	Stainless Steel as per AISI 316
Diaphragm Assembly:	Synthetic rubber with PTFE / Synthetic rubber without PTFE for casted units
Elastomers:	Nitrile
Drain:	Manual
Type:	Relieving
Pressure Adjustment:	Adjusting screw with lock-nut
Regulated sec. pr. Ranges*:	0.40 – 4.00 kg/sq.cm 1.75 – 17.5 kg/sq.cm
Gauge Port:	1/4" BSPT



*These are not minimum or maximum outlet pressure limits. Regulator can be adjusted to zero bar outlet pressure and generally, to pressures in excess at those specified. The use of these regulators to control pressures outside the specified ranges is not recommended

OPERATION:

Fluid entering the filter - regulator is guided into a swirling pattern by the louver (A). Coarse solid particles and liquid are forced to the wall of the bowl (B). Air leaving the bowl passes through the filter element (C) where finer solid particles are removed and retained. Keep filter clean for best performance and minimum pressure drop. The filtered air enters the valve area of the unit.

The working elements of the regulator consist mainly of a flexible diaphragm (D) which controls a valve pin (E) and an adjusting spring (F) which is loaded by means of an adjusting screw (G).

The pressure side of the diaphragm is connected to the outlet port of the filter - regulator so that regulated pressure will be exerted against a diaphragm. When the adjusting screw reacted so that no load is applied to the adjusting spring, the valve (H) is closed.

As the adjusting screw is turned in, it applies a load to the adjusting spring which is transmitted to the valve through the diaphragm and the valve pin thus opening the valve. As the regulated pressure increases, the pressure against the diaphragm increases forcing the diaphragm to compress the adjusting spring until the load exerted by the adjusting spring is equal to the load exerted by the regulated pressure. If there is no flow demand this state of equilibrium will occur with the valve closed. If there is a flow demand this state of equilibrium will occur with the valve open just the amount necessary to compensate for the demand, thus maintaining the desired regulated pressure. On relieving type models excess build-up in secondary pressure is immediately through relief hole (K). It is important to drain the manual drain type filter bowl regularly the liquid level should never be petrified to rise above the baffle (J), or else liquid will carry over down-stream.

WARNING:

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures are likely to be more than specified under technical data.

Before using these products with fluids other than air, for non-industrial applications or for life-support systems consult our technicians.

MAINTENANCE:

To remove the filter element, shut off and bleed down air pressure and unscrew the bowl anti- clockwise. Unscrew the stud and with draw baffle and the element.

To disassemble the regulator side turn the adjusting screw anti-clock wise to relieve compression on the spring. A spanner flat is provided to unscrew the bonnet and remove spring. Slip ring and diaphragm assembly. Unscrew retainer assembly to remove valve assembly and valve spring.

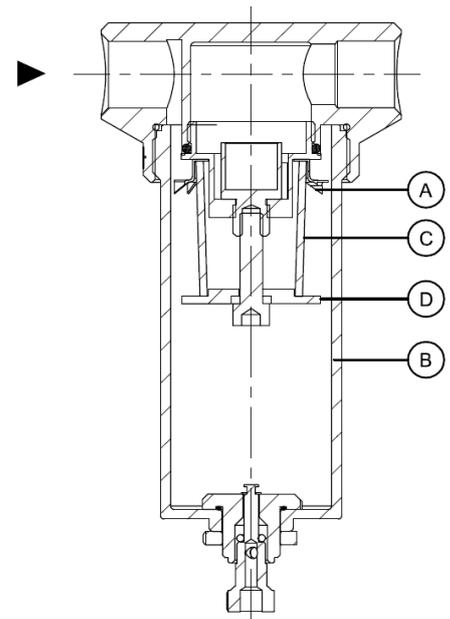
Clean and inspect each item carefully, replacing damaged parts. When reassembling, lightly smear seals, and valve rubber with silicon grease

Assemble with filter regulator in vertical position.

FILTER

SPECIFICATIONS:

Fluid:	Compressed Air
Pipe Size:	G 1/4" – G 1" (Edelstahl 1.4401) G 1/4" – G 1 1/2" (Edelstahl-Guss 1.4401)
Max. Inlet pressure:	30 bar
Operating Temp range:	-20 to +80°C (for Nitrile Elastomer)
Particle Removal:	25 Micron std.
Material of construction:	Stainless Steel as per AISI 316
All external parts:	SS 316 with NACE compliance
Elastomers:	Nitrile
Drain:	Manual



INSTALLATION:

Install the filter upstream of regulator and as near as possible to the device it is to serve. Connect primarily (inlet) airline to port marked 'IN' piping to and from the filter should be the same size as the porting of the filter.

OPERATION:

Fluid entering the filter is guided into a swilling pattern by the louver [A]. Coarse solid particles and liquids are forced to the wall of the bowl [B]. Fluid leaving the bowl passes through the element [C] where finer solid particles are removed and retained.

It is important to drain the manual drain type filter bowl regularly. The liquid level should never be permitted to rise above the baffle [D] or else liquid will carry over down-stream.

Automatic drain models expel liquid automatically when the liquid cumulates above a certain level.

WARNING:

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures are likely to be more than specified under technical data.

Use metal bowl in applications where a plastic bowl might be exposed to substances that are incompatible with polycarbonate.

Before using these products with fluids other than air, for non-industrial applications or for life-support systems consult SHAVO.

MAINTENANCE:

To remove the filter element shut off and bleed down air pressure and unscrew the bowl anti-clockwise.

Unscrew the baffle and withdraw the element. To clean filter element wash in kerosene and blowout thoroughly with compressed air. Keep filter clean for best performance and minimum pressure drop.

After cleaning inspect O ring and gasket for nicks and cuts. On re-assembly ensure they are not twisted and slightly smear with silicon grease.

Do not crush plastic filter element by over-tightening baffle.

The automatic drain assembly can be removed by loosening the knurled retaining ring and withdrawing the component from the bowl. The float and automatic drain assemblies are not repairable items.

Care should be taken on re-assembly to ensure that the gasket is in position on the bottom of the automatic drain assembly.

Applies to the following articles:

Stainless steel pressure regulator with secondary venting (reversible) and stainless steel pressure gauge (stainless steel 1.4401)

Article No.	Type No.
133525 to 133534	580RM1-14-4 to 580RM4-1-17

Stainless steel casting pressure regulator with secondary venting (reversible) and stainless steel pressure gauge (stainless steel casting 1.4401)

Article No.	Type No.
137323 to 137334	580RC1-14-4 to 580R4-112-17

Stainless steel filter regulator with secondary venting (reversible), manual drain valve and stainless steel pressure gauge (stainless steel 1.4401)

Article No.	Type No.
133539 to 133548	580FRM1-14-4 to 580FRC4-112-17

Stainless steel casting filter regulator with secondary venting (reversible), manual drain valve and stainless steel pressure gauge (stainless steel casting 1.4401)

Article No.	Type No.
137335 to 137346	580FRC1-14-4 to 580FRC4-112-17

Stainless steel filter (stainless steel 1.4401)

Article No.	Type No.
133549 to 133553	580FM1-14 to 580FM4-1

Stainless steel casting filter (stainless steel casting 1.4401)

Article No.	Type No.
137347 to 137352	580FC1-14 to 580FC4-112