NORGREN

Stainless Steel Filter/Regulator

B05 - ★★★ - ★★★★

B05

Installation & Maintenance Instructions

Port	Bowl	Relief Type	Gauge	Substitute	Drain	Element	Spring (Outlet Pressure Range) *	Thread Form
2....1/4"	Metal.....Relieving .....Without.....33				A....Automatic	1....5 µm	E....0,3 to 3,5 bar (5 to 50 psig)	A....PTF
	Metal.....Non-relieving ...Without.....35				M...Manual	2....40 µm	L....0,3 to 8,5 bar (5 to 125 psig)	

* Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

TECHNICAL DATA

Fluid: Compressed air
Maximum pressure: 17 bar (250 psig)
Operating temperature**: -34° to +65°C (-30° to +150°F)
** Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).
Particle removal: 5 µm or 40 µm filter element
Air quality: Within ISO 8573-1, Class 3 and Class 5 (particulates)
Typical flow with 7 bar (100 psig) inlet pressure, 6,3 bar (90 psig) set pressure, and a droop of 1 bar (15 psig) from set: 3,3 dm^3/s (7 scfm)
Nominal bowl size: 31 ml (1 fluid ounce)
Gauge ports:1/8" PTF
Drain connection: 1/8" female pipe thread
Automatic drain operation: Spitter type drain operates momentarily when a rapid change in air flow occurs or when the supply pressure is reduced.
Materials - Metallic parts are NACE (National Association of Corrosion Engineers) approved metals meeting hardness requirements. NACE Recommendation MR-01-1975 (1980 Revision) "Material requirement - sulfite stress cracking resistant metallic material for oil field equipment".
Body, bowl: 316 stainless steel
Bonnet : Acetal with stainless steel adjusting screw
Valve: Stainless steel with fluorocarbon elastomer
Valve seat: Acetal
Springs: Stainless steel
Drain: Acetal
Element: Sintered polypropylene
Elastomers: Fluorocarbon

REPLACEMENT ITEMS

Service Kit (includes items circled on exploded view):
Relieving.....3820-08
Non-relieving.....3820-09

PANEL MOUNTING DIMENSIONS

Panel mounting hole diameter: 30 mm (1.19")
Maximum panel thickness: 6 mm (0.25")

INSTALLATION

1. Shut off air pressure. Install filter/regulator in air line -
   - vertically (bowl down),
   - with inlet air connected to the port marked ***IN***,
   - upstream of lubricators and cycling valves,
   - as close as possible to the air supply when used as a main line filter,
   - as close as possible to the device being serviced when used as a final filter.
2. Connect piping to proper ports using pipe thread sealant on male threads only. Do not allow sealant to enter interior of unit.
3. Turn bowl fully clockwise into body before pressurizing.
4. Install a pressure gauge or plug the gauge ports. Gauge ports can also be used as additional outlets for regulated air.

ADJUSTMENT

1. Before applying inlet pressure to filter/regulator, turn adjustment (1) counterclockwise to remove all force on regulating spring (2).
2. Apply inlet pressure, then turn adjustment (1) clockwise to increase and counterclockwise to decrease pressure setting.
3. Always approach the desired pressure from a lower pressure. When reducing from a higher to a lower setting, first reduce to some pressure less than that desired, then bring up to the desired pressure.

NOTE

With non-relieving filter/regulators, make pressure reductions with some air flow in the system. If made under no flow (dead-end) conditions, the filter/regulator will trap the over-pressure in the downstream line.

4. Push lockring on adjusting knob downward to lock pressure setting. Pull lockring upward to release.

SERVICING

1. Open manual drain to expel accumulated liquids. Keep liquids below element (26).
2. Clean or replace filter element when dirty.

DISASSEMBLY

1. Filter/regulator can be disassembled without removal from air line.
2. Shut off inlet pressure. Reduce pressure in inlet and outlet lines to zero.
3. Turn adjustment (1) fully counterclockwise.
4. Turn bowl and bonnet counterclockwise and remove from body.
5. Disassemble in general accordance with the item numbers on exploded view. Do not remove the drains unless replacement is necessary. Remove and replace only if malfunction occurs.

CLEANING

1. Clean parts with warm water and soap.
2. Rinse and dry parts. Blow out internal passages in body (9) with clean, dry compressed air. Blow air through filter element (26) from inside to outside to remove surface contaminants.
3. Inspect parts. Replace those found to be damaged.

ASSEMBLY

1. Lubricate seals and o-rings with o-ring grease. Apply a small amount of anti-seize lubricant to full length of threads on metal bowl.
2. Assemble the unit as shown on the exploded view.
3. Torque Table

Item	Nm (inch-pounds)
1 (Bonnet)	7,34 to 8,47 (65 to 75)
5 (Valve seat)	0,45 to 0,68 (4 to 6) †
17, 24, 26 (Bowl, element)	0,56 to 1,13 (5 to 10)
12, 21 (drain nut)	2,26 to 2,83 (20 to 25)

† Diaphragm pin (4) must slide freely thru valve seat after torquing.

CAUTION

Water vapor will pass through these units and could condense into liquid form downstream as air temperature drops. Install an air dryer if water condensation could have a detrimental effect on the application.

WARNING

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under ***Technical Data***.

Polycarbonate plastic bowls can be damaged and possibly burst if exposed to such substances as certain solvents, strong alkalies, compressor oils containing ester-based additives or synthetic oils. Fumes of these substances in contact with the polycarbonate bowl, externally or internally, can also result in damage. Clean with warm water only.

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

If outlet pressure in excess of the filter/regulator pressure setting could cause downstream equipment to rupture or malfunction, install a pressure relief device downstream of the filter/regulator. The relief pressure and flow capacity of the relief device must satisfy system requirements.

The accuracy of the indication of pressure gauges can change, both during shipment (despite care in packaging) and during the service life. If a pressure gauge is to be used with these products and if inaccurate indications may be hazardous to personnel or property, the gauge should be calibrated before initial installation and at regular intervals during use.

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