

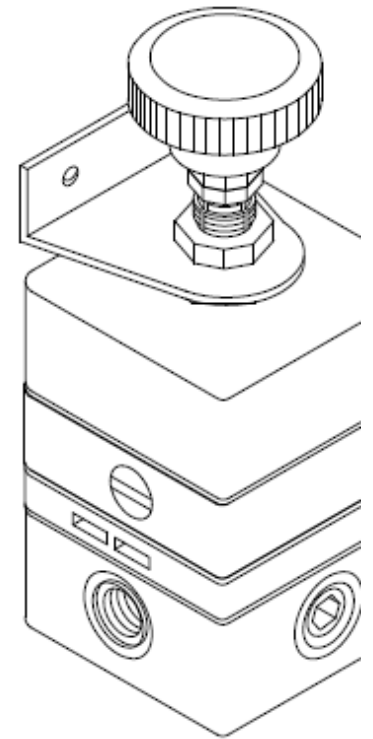


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INSTRUMENT MANUAL
MANOSTAT
PRECISION PRESSURE REGULATOR



Ref: YM05002 – (03/06)

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Health and Safety

Manostats are simple pressure control instruments and present few safety hazards. Installation should normally be in accordance with BS6739 or other relevant national standards.

Compressed air can produce accidents if not correctly used, and the user is urged to adhere to established compressed air safety standards.

These instruments contain no substances which present hazards in normal use. The measuring capsule is constructed of beryllium copper, which can present disposal hazards; if a satisfactory disposal procedure is not available, scrap instruments should be returned to the factory.

LIMITED WARRANTY, DISCLAIMER & LIMITATION OF REMEDIES

Items sold by NORGREN are warranted to be free from defects in materials and workmanship for a period of two years from the date of manufacture, provided said items are used according to NORGRENS recommended usages. NORGREN'S liability is limited to the repair of, refund of purchase price paid for, or replacement in kind of, at NORGREN'S sole option, any items prove defective, provided the allegedly defective items are returned to NORGREN prepaid. The warranties expressed above are in lieu of and exclusive of all other warranties.

There are no other warranties, expressed or implied, except as stated herein. There are no implied warranties of merchantability or fitness for a particular purpose, which are specifically disclaimed. NORGREN'S liability for breach of warranty as herein stated is the exclusive remedy, and in no event shall NORGREN be liable or responsible for incidental or consequential damages, even if the possibility of such incidental or consequential damages has been made know to NORGREN.

NORGREN reserve the right to discontinue manufacture of any produce or change product materials, design, or specification without notice.

Our policy is one of continuous research and development. We therefore reserve the right to amend without notice the specifications given in this document. Customers are responsible for ensuring that the product is used only for the purpose for which it is intended. In case of doubt Norgren will be pleased to advise.

INSTALLATION

Mounting

The Manostat is usually panel mounted into a minimum 11.5mm hole. Direct pipe mounting is also possible. To install on a panel remove the knob (6BA grub screw) tension nut and mounting nut. Insert into the panel and replace the nuts and knob. The mounting nut should be re-tightened to a torque of 5Nm; set the tension nut to give adequate friction for the desired service. It is not necessary to remove the locknuts for installation; these may be reset if required to give a maximum pressure below the factory setting.

Pneumatics

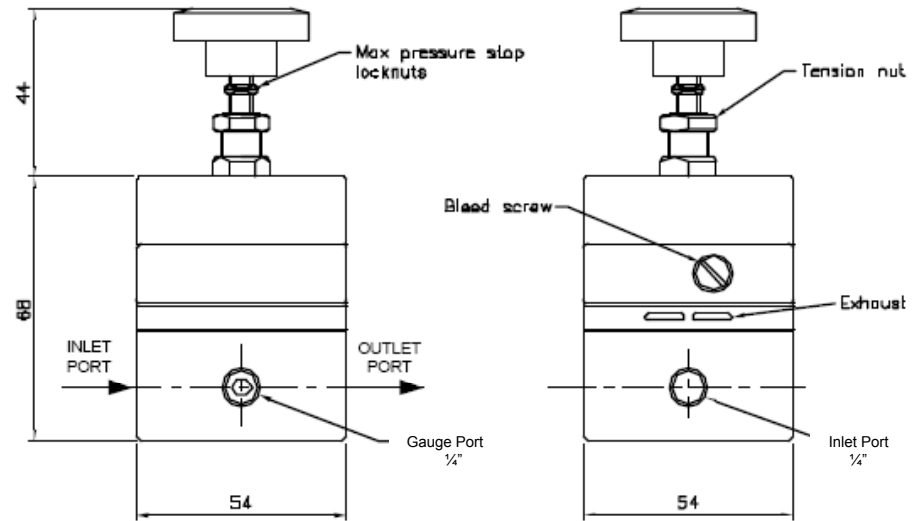
All pneumatic ports are threaded ¼" NPT (G ¼ available on request). Two gauge ports may be used as required, and are supplied sealed with pipelugs.

The following installation precautions are ESSENTIAL:

Air Supply – This can be between limits of 0.2 bar (3 psi) above the maximum required outlet pressure and 10 bar (150 psi). The air supply must be filtered to 25 micron, with oil content below 1ppm and dew point at least 10°C below lowest ambient temperature. Filtering and oil removal are vital for long life.

Pipe Fitting – fit appropriate pipe fittings for the pipe sizes required. **DO NOT USE PTFE TAPE.** Thread sealing can be easily achieved with loctite hydraulic seal or similar anaerobic compounds.

Pipe Sizes – 6mm plastic tubes are commonly used, but increase to 8 or 10mm is desirable if pipe runs or high flows are present. Plastic tubes (e.g nylon) are convenient and clean.



Ø 11.5mm hole required for panel mounting

Diagram 1 – Dimensional Drawing

SERVICING

No routine service is necessary. Manostats will provide a minimum of 10 years maintenance free service if installed correctly.

A repair kit is available consisting of :- Diaphragm, Servo Assembly, Bleed Screw, Bonnet Gasket.

To replace these components, disassemble the Manostat by removing the four M4 screws holding the castings together. Note the orientation of the castings (mark if necessary), rebuild from the base upwards; ensure that the diaphragms and castings are correctly aligned or the internal air transfer holes will be blocked. The correct sequence of parts from the bottom upwards is:

- Base
- Servo Assembly
- Spacer
- Diaphragm
- Control Spring
- Housing (including Bleed Screw)
- Bonnet Gasket
- Bonnet (including Capsule)
- Nuts and Knob

OPERATION

Manostats are normally provided in standard pressure ranges :-

0.14 - 2 bar	(2 – 30psi)
0.14 - 4 bar	(2 – 60psi)
0.14 - 8 bar	(2 – 120psi)

Other pressure ranges, assemblies and model variations are available to special order, see the technical data sheets for details.

The Manostat is a precision pressure regulator, normally used with compressed air. It has specifically been designed for zero flow "dead end" service, but can provide large airflows up to 300 L/min (10scfm) when required. It maintains a highly stable outlet pressure against variation in supply pressure, flow, temperature and vibration. Normally Manostats are supplied in the handwheel operated version, with panel nut for fixing, locknuts to limit maximum pressure, and variable tension nut.

The advanced design uses a precision measurement capsule and high gain servo amplifier to achieve high performance. These instruments use small quantities of air for operation (0.5 to 2 nlpm) and can be set to a minimum below 0.14 bar (2psi). Tight shut off is not possible.

