


Type 50 & Type 50 NACE

Filter Regulator Series

Features

- Superior regulation characteristics
- Rugged, corrosion-resistant construction
- Excellent stability and repeatability
- Self-relieving
- Integral, 40 micron, self cleaning filter
- Low droop at high flow
- Several mounting options
- Meets ATEX  II 2 G Dc T 6 (Non-electrical certification)

Applications

The design of these regulators is well suited to pilot-operated controllers, and instruments, applications such as air chucks, air spray guns, air cylinders and actuators, and a wide range of industrial pneumatic systems and equipment.

Description

Marsh Bellofram's General Purpose Type 50 and Type 50 NACE Filter Regulators are reliable precision units designed for instrumentation and general purpose use in both standard environments (Type 50), and corrosive environments (Type 50 NACE). The Type 50 NACE complies with NACE material requirement #MR0175 for sulfide stress cracking resistant metallic material for oilfield equipment.

Test data for these regulators show excellent performance characteristics compared with those of similar units presently on the market. These Marsh Bellofram regulators are generally superior in regulated pressure vs. flow, forward-to-reverse flow offset, supply pressure sensitivity, repeatability and stability.

Ruggedly designed and constructed, the regulators have housings of die cast aluminum. The Type 50 Regulator is finished with vinyl paint (which resists scratching, weathering and other physical abuse), while the Type 50 NACE is finished with epoxy paint for added protection. Both models are pressure and leak tested prior to shipment from the factory.



Careful design and quality materials throughout assure long, trouble-free operation in the most difficult industrial environments. A rubberized, soft-seat valve stem provides positive shut-off and "forgives" dirt or other foreign matter. An aspirator maintains downstream pressure and compensates for droop when high flow occurs. The gauge port is convenient for gauge installation and can also be used as an additional full flow outlet. The Type 50 regulators include a unique self-cleaning 40 micron nylon mesh filter (316 stainless steel in the Type 50 NACE) that can be easily removed.



Type 50

Pressure Regulator Series



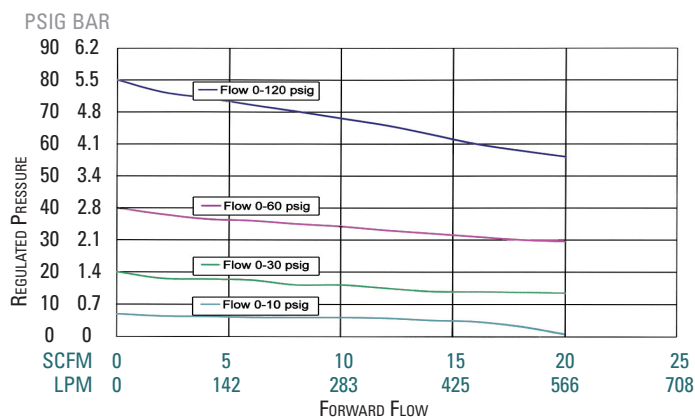
Type 50 NACE

Pressure Regulator Series

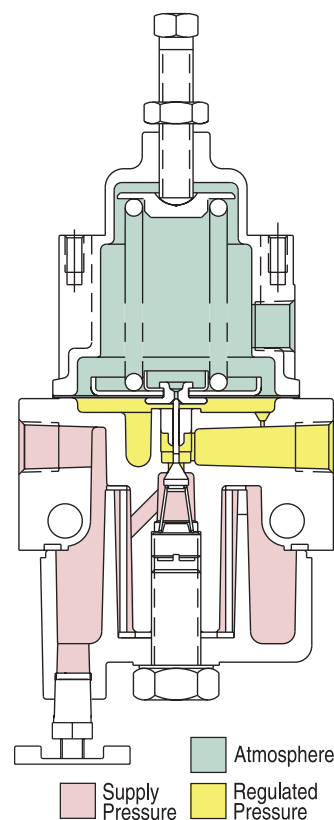
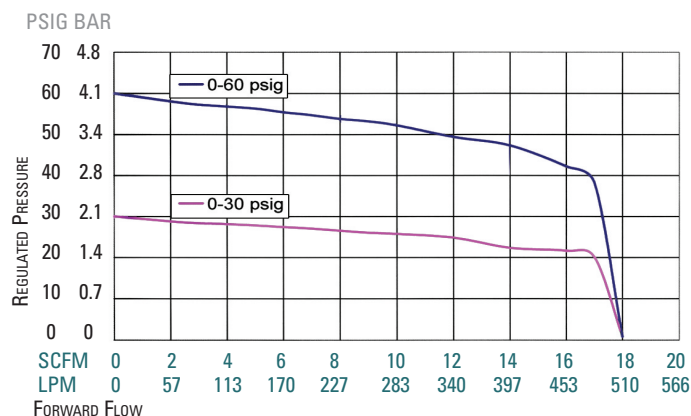
Type 50 and 50 NACE Specifications

| | Type 50 | Type 50 NACE |
|---|---|--|
| Sensitivity | 1" Water Column (2.5 cm) | 1" Water Column (2.5 cm) |
| Flow Capacity @ 100 PSIG (6.9 BAR) Supply and 20 PSIG (1.4 BAR) outlet | 20 SCFM (566 LPM) | 18 SCFM (510 LPM) |
| Effect of Supply Pressure Variation (25 PSIG/1.7 BAR) on Outlet Pressure | < 0.2 psig (0.01 BAR) | < 0.2 PSIG (0.01 BAR) |
| Exhaust Capacity 5 psig (0.35 BAR) above 20 psig set point | 0.1–0.45 SCFM Typical (2.8 - 12.7 LPM) | 0.1–0.45 SCFM Typical (2.8 - 12.7 LPM) |
| Maximum Supply Pressure | 250 PSIG (17.2 BAR) | 250 PSIG (17.2 BAR) |
| Effect of Changes in Flow on Regulated Pressure (100 PSIG / 6.9 BAR Supply) | 4 PSIG / 0.3 BAR over flow of 10 SCFM / 283 LPM (1/4 NPT, 20 PSIG / 1.4 BAR set point) | 5 PSIG / 0.3 BAR over flow of 10 SCFM / 283 LPM (1/4 NPT, 20 psig / 1.4 BAR set point) |
| Output Pressure Ranges | 0-10 PSIG (0-0.7 BAR) 0-35 PSIG (0-2.4 BAR) 0-60 PSIG (0-4.1 BAR) 0-120 PSIG (0-8.3 BAR) | 0-30 PSIG (0-2.1 BAR) 0-60 PSIG (0-4.1 BAR) 0-120 PSIG (0-8.3 BAR) |
| Temperature Range | 0-160°F (-18 to 71°C) | -20 to 180°F (-29 to 82°C) |
| Total Air Consumption @ Maximum Output | 6 SCFH (2.8 LPM) | 6 SCFH (2.8 LPM) |
| Port Size | 1/4 NPT, BSPT | 1/4 NPT, BSPT |
| Size | 3.19" X 3.19" X 7.25" (81 X 81 X 184 mm) | 3.19" X 3.19" X 7.25" (81 X 81 X 184 mm) |
| Weight | 1.81 lb. (0.8 kg) | 1.81 lb. (0.8 kg) |
| Materials of Construction | Body: Die cast aluminum with vinyl paint Adjusting Screw: Plated steel Trim: Plated Steel, Brass, Acetal Resin Diaphragm: Buna-N Elastomer and Polyester Fabric Knob: Phenolic Plastic (option) Spring: Music wire | Body: Die cast aluminum with epoxy paint Adjusting Screw: Stainless steel Trim: Stainless steel, Neoprene, EPDM Diaphragm: Neoprene, Polyester Fabric Spring: Inconel |
| Tamper Resistant Cover | Yes | Yes |
| Mounting Options | Pipe, Panel, Bracket or Thru Body Holes | Pipe, Panel, Bracket or Thru Body Holes |

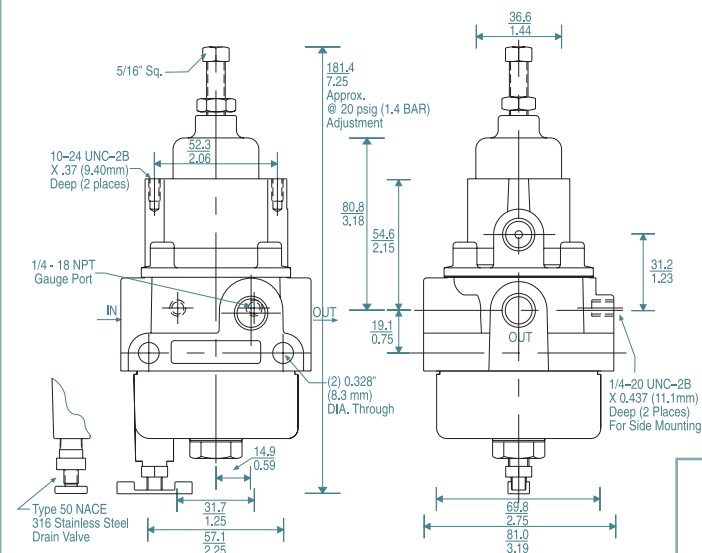
Type 50: Regulated Pressure VS. Flow



Type 50 NACE: Regulated Pressure VS. Flow

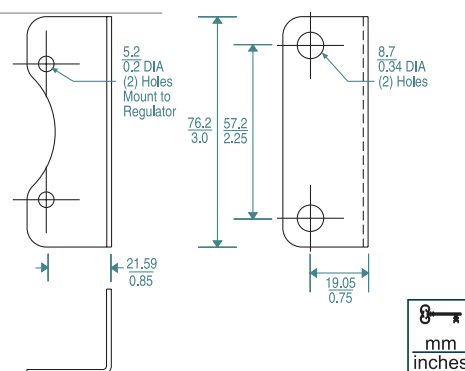


Type 50 Dimensional Drawing



Optional Mounting Bracket

607-000-057



Type 50 Ordering Information

| | Part Number | Port Size (NPT) | Set Point Range | |
|----------|-------------|-----------------|-----------------|-------|
| | | | BAR | PSIG |
| T50 | 960-062-000 | 1/4 | 0-0.7 | 0-10 |
| | 960-067-000 | | 0-2.4 | 0-35 |
| | 960-068-000 | | 0-4.1 | 0-60 |
| | 960-069-000 | | 0-8.3 | 0-120 |
| T50 NACE | 960-300-000 | 1/4 | 0-2.1 | 0-30 |
| | 960-301-000 | | 0-4.1 | 0-60 |
| | 960-302-000 | | 0-8.3 | 0-120 |

Type 50 Regulator Options and Accessories

Fluorocarbon Pintle

A special elastomeric pintle used where elements in the supply air, such as flame retardant synthetic lubricants, are particularly destructive to ordinary pintle material.

Non Relieving

Used in applications where it is desirable to relieve pressure downstream of the regulator, for some constant flow applications, and where the gas flowing through the regulator must not escape at the regulator. Non-relieving regulators should not be used for low or no flow applications.

Knob

Option to replace the square head pressure adjusting screw.

5 Micron Filter

Replaces the 40 micron filter supplied with the standard Type 50 for more complete air filtration.

Corrosive Resistant Epoxy Finish

An epoxy paint applied to the body and dripwell of the regulator exterior surfaces to provide increased corrosion resistance. (Standard with Type 50 NACE)

Tapped Vent

Allows installation of plumbing to capture exhaust air. (Standard with T-50 NACE)

Mounting Bracket: Type 50

Steel (dichromate finish) bracket for side mounting.

Type 50 Option Ordering Matrix

Replace last three digits of part number with digits from table below.

| Option | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 Fluorocar-carbon Pintle | 001 | 021 | 031 | 041 | 051 | 061 | 071 | 081 | 091 | 101 | 111 |
| 2 Non-Relieving | | 002 | 032 | 042 | 052 | | 072 | 082 | 092 | | 112 |
| 3 Knob | | | 003 | 043 | 053 | 063 | 073 | 083 | | 103 | 113 |
| 4 5 Micron Filter | | | | 004 | 054 | 064 | 074 | 084 | 094 | 104 | 114 |
| 5 Epoxy Finish | | | | | 005 | 065 | 075 | 085 | 095 | 105 | 115 |
| 6 Tapped Vent | | | | | | 006 | 076 | 086 | 096 | 106 | 116 |
| 7 Mounting Bracket | | | | | | | 007 | 087 | 097 | 107 | 117 |
| 8 Pressure Gauge | | | | | | | | 008 | 098 | 108 | 118 |
| 9 Tamper-Resistant Cover | | | | | | | | | 009 | 109 | 119 |
| 10 Soft Relief Seat | | | | | | | | | | 010 | 110 |
| 11 Fluorocarbon Diaphragm | | | | | | | | | | | 011 |

Type 50 NACE

Stainless Steel bracket for side mounting.

Pressure Gauge: Type 50

Dual scale 2 in. (50.8 mm) gauges. Ranges include 0-30 PSIG (0-200 kPa), 0-60 PSIG (0-400 kPa), 0-100 PSIG (0-700 kPa) and 0-160 PSIG (0-1100 kPa). When specified with regulator, the correct range will be supplied.

Type 50 NACE

A dual scale, 0-60 PSIG (0-400 kPa) P/N 625-000-016, or 0-200 PSIG (0-1400 kPa) P/N 625-000-018, 2.47" diameter (63mm) stainless steel pressure gauge is available. NOTE: Although the case is stainless steel, the internal components are not made of NACE qualified materials.

Tamper Resistant Cover

An aluminum tubular cover placed over a slotted head adjusting screw and screwed onto the bonnet of the regulator with a wrench. Prevents ordinary hand adjustments. Supplied with an o-ring that is designed to seal the adjusting screw threads in capture bleed applications.

Soft Relief Seat

Used in applications where it is desirable to reduce the standard bleed rate from 6 SCFH [0.17 m3/hr] to less than 0.1 SCFH [0.003 m3/hr].