

# 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  $\text{Ex}$  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 #MR-01-75 for sulfide stress cracking resistant metallic material for oil field 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 diecast 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.



**The Type 50 NACE is available for use in corrosive environments. This complies with NACE material requirement #MR0175 for sulfide stress cracking resistant metallic material for oil field equipment.**

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.

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



**Type 50**  
Pressure Regulator Series



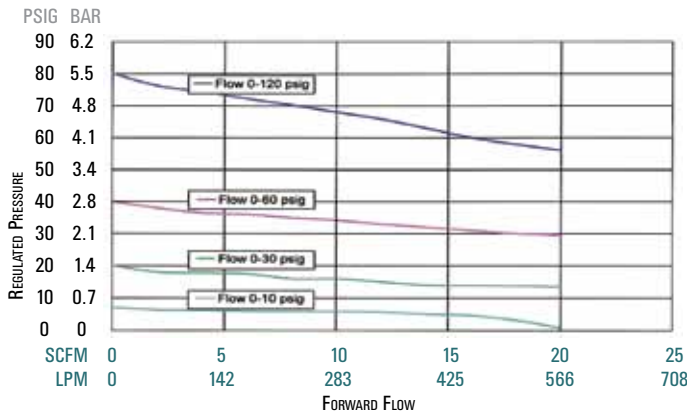
**Type 50 NACE**  
Pressure Regulator Series

**Contact Us About  
IP65 Compatible  
T50 FR**

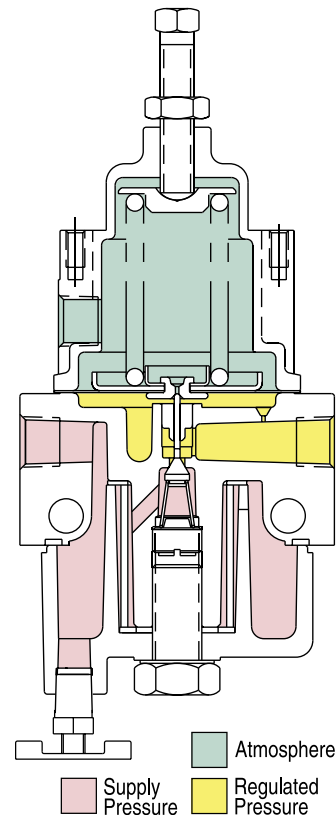
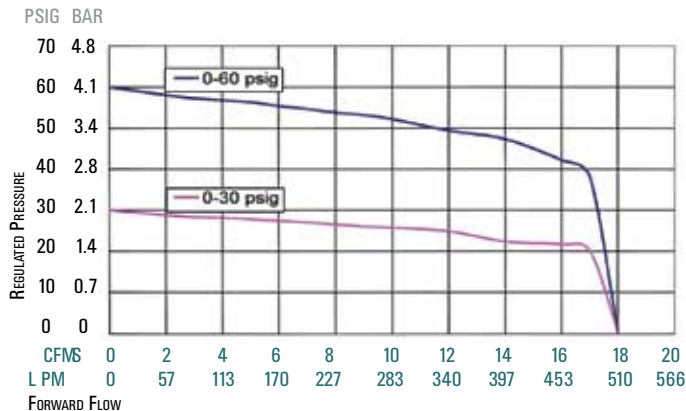
## Type 50 and 50 NACE Specifications

	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	<b>Body:</b> Die cast aluminum with vinyl paint <b>Adjusting Screw:</b> Plated steel <b>Trim:</b> Plated Steel, Brass, Acetal Resin <b>Diaphragm:</b> Buna-N Elastomer and Polyester Fabric <b>Knob:</b> Phenolic Plastic (option) <b>Spring:</b> Music wire	<b>Body:</b> Die cast aluminum with epoxy paint <b>Adjusting Screw:</b> Stainless steel <b>Trim:</b> Stainless steel, Neoprene, EPDM <b>Diaphragm:</b> Neoprene, Polyester Fabric <b>Spring:</b> Inconel
Tamper Resistant Cover	Yes	Yes
Mounting Options	Pipe, Panel, Bracket or Thru Body Holes	Pipe, Panel, Bracket or Thru Body Holes

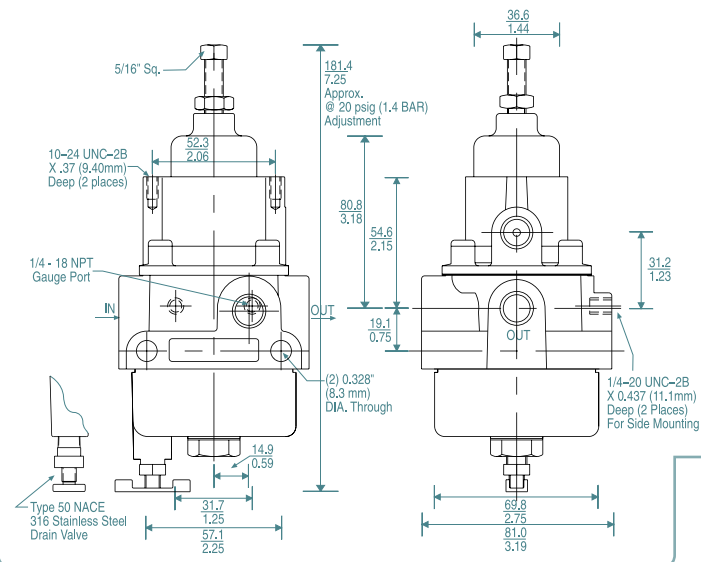
### Type 50: Regulated Pressure VS. Flow



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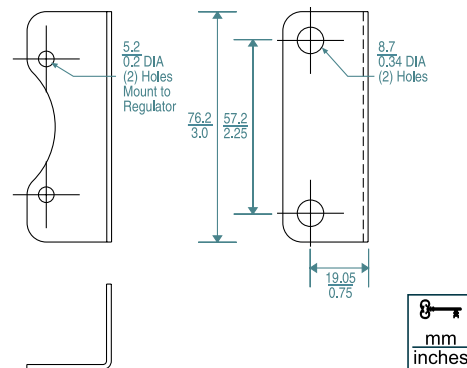


## Type 50 Dimensional Drawing



## 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 NACE

Stainless Steel 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 Fluorocarbon 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

### 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 and must be ordered separately. 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 m3hr] to less than 0.1 SCFH [0.003 m3hr]. (Not available with Type 50 NACE)

### Fluorocarbon Diaphragm

Diaphragm as well as all seals are made of fluorocarbon elastomer to prevent deterioration from elements in the air supply, such as flame retardant synthetic lubricants normally destructive to standard Buna-N material.

To order BSPT add "BSPT" to end of part number.