

**MB** MARSH *BELLOFRAM*<sup>®</sup>

# Type-51ss



Stainless Steel  
Precision  
Air Regulators  
& Filter Assemblies

ISO 9002  
certified

**MB T-51ss** Stainless Steel Precision Air Regulators

PRECISION CONTROL DEVICE

## FEATURES

- Ideal for sour gas and corrosive applications or environments
- Excellent stability and repeatability
- Low droop
- Tapped vent for exhaust gas capture
- Built-in filter assemblies and dripwells
- Manual or automatic drain options
- Filter only assemblies available
- Panel, bracket or pipe mounting

## DESCRIPTION

The Type 51SS regulator product line is designed for service with a wide variety of corrosive gases and environments. Special construction features include 316 stainless steel for the housing and filter assemblies, with fluorocarbon elastomers used for the control diaphragm and the supply valve.

These corrosion resistant materials are compatible with sour gas and for use in off-shore environments. Typical applications include petrochemical processing, chemical plants, food processing and paper/pulp mills.

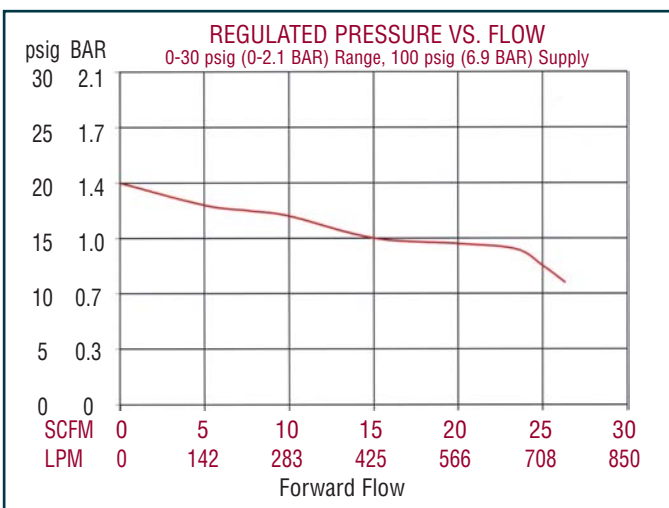
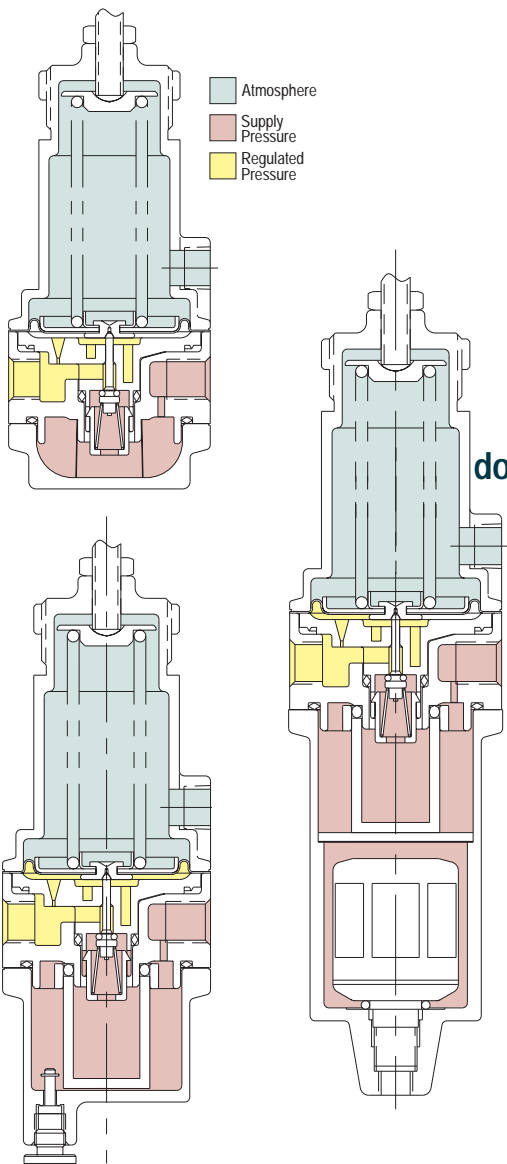
This ruggedly built regulator operates in pressure ranges up to 150 psig (10.3 BAR). The Type 51SSFR and Type 51SSAR Regulators and the Type 51SSF and Type 51SSAF filter assemblies have built-in dripwells which trap water, oil and other contaminants. The contaminants are easily flushed out of the dripwell via a convenient manual or automatic drain valve. The 40-48 Micron Filter is constructed of sintered 316 stainless steel, and is easily removed.

The Type 51SS products can be through-panel mounted with the mounting nut supplied (regulators only), bracket-mounted using the optional bracket (regulators only), or pipe mounted by its ports (regulators and filters).

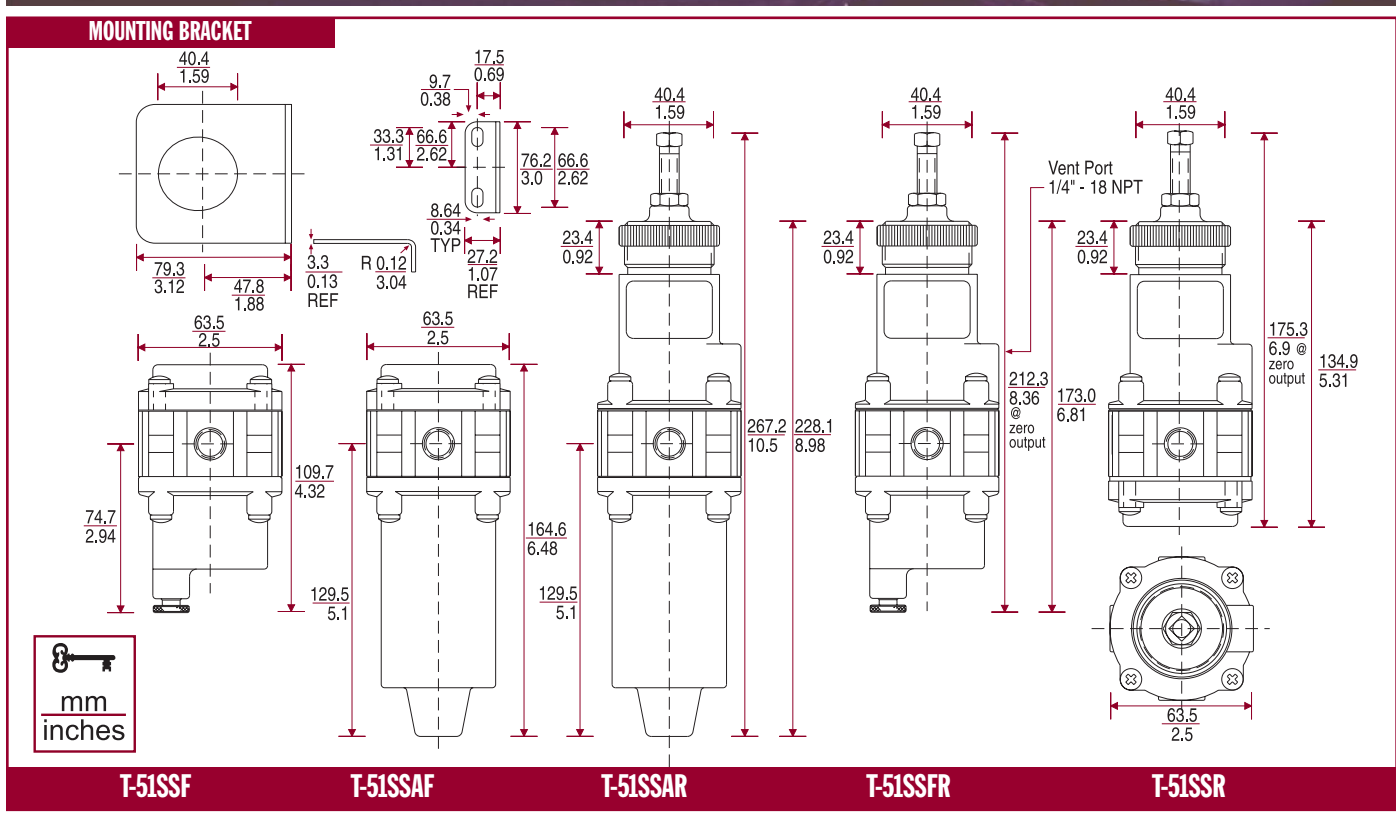
The regulators and filter assemblies comply with NACE material requirement #MR-01-75 for sulfide stress cracking resistant metallic material for oil field equipment.



Once set to a desired pressure, the Marsh Bellofram Type 51 Stainless Steel Regulators maintain their settings permanently. The integral convoluted diaphragm provides constant adjustment to downstream pressure drop, downstream pressure increase & changes in forward flow.



	TYPE 51SSR Regulator	TYPE 51SSFR Filter Regulator	TYPE 51SSAR Auto Filter Regulator	TYPE 51SSF	TYPE 51SSAF
<b>Filter</b>	n/a	built in 40 micron filter with manual drain	built in 40 micron filter with auto-drain	40 micron filter	40 micron filter
<b>Maximum Supply Pressure</b>	250 psig (17.3 BAR)	250 psig (17.3 BAR)	250 psig (17.3 BAR)	250 psig (17.3 BAR)	250 psig (17.3 BAR)
<b>Output Pressure Range</b>	0-30 psig (0-2.1 BAR) 0-60 psig (0-4.1 BAR) 0-100 psig (0-6.9 BAR) 2-150 psig (0.1-10.3 BAR)	0-30 psig (0-2.1 BAR) 0-60 psig (0-4.1 BAR) 0-100 psig (0-6.9 BAR) 2-150 psig (0.1-10.3 BAR)	0-30 psig (0-2.1 BAR) 0-60 psig (0-4.1 BAR) 0-100 psig (0-6.9 BAR) 2-150 psig (0.1-10.3 BAR)	n/a	n/a
<b>Supply Pressure Sensitivity @ 25 psig / 1.7 BAR change in supply</b>	0.45 psig (0.03 BAR) output change	0.45 psig (0.03 BAR) output change	0.45 psig (0.03 BAR) output change	n/a	n/a
<b>Sensitivity</b>	1" water column	1" water column	1" water column	n/a	n/a
<b>Repeatability</b>	0.1 psig (0.01 BAR)	0.1 psig (0.01 BAR)	0.1 psig (0.01 BAR)	n/a	n/a
<b>Flow @ 100 psig (6.9 BAR) Supply 20 psig (1.4 BAR) outlet</b>	20 SCFM (566 LPM)	20 SCFM (566 LPM)	20 SCFM (566 LPM)	n/a	n/a
<b>Exhaust Capacity @ 5 psig (0.3 BAR) above setpoint</b>	0.1 SCFM (2.8 LPM)	0.1 SCFM (2.8 LPM)	0.1 SCFM (2.8 LPM)	n/a	n/a
<b>Temperature Limits</b>	-20° to 180°F (-29° to 82°C)	-20° to 180°F (-29° to 82°C)	-20° to 180°F (-29° to 82°C)	-20° to 180°F (-29° to 82°C)	-20° to 180°F (-29° to 82°C)
<b>Air Consumption</b>	6 SCFH (2.84 LPM) Maximum	6 SCFH (2.84 LPM) Maximum	6 SCFH (2.84 LPM) Maximum	n/a	n/a
<b>Port Size</b>	1/4" NPT or 3/8" NPT	1/4" NPT or 3/8" NPT	1/4" NPT or 3/8" NPT	1/4" NPT or 3/8" NPT	1/4" NPT or 3/8" NPT
<b>Materials of Construction</b>	316 Stainless Steel housing & screen fluorocarbon elastomers	316 Stainless Steel housing & filter assemblies fluorocarbon elastomers	316 Stainless Steel housing & filter assemblies fluorocarbon elastomers	316 Stainless Steel housing & filter assemblies fluorocarbon elastomers	316 Stainless Steel housing & filter assemblies fluorocarbon elastomers



**ORDERING INFORMATION**

**PART NUMBER:**

Part Type	Number	Control Range	
		psig	BAR
51SSR	960-245-000	0-30	0-2.1
	960-246-000	0-60	0-4.1
	960-247-000	0-100	0-6.9
	960-248-000	2-150	0.1-10.3
51SSFR	960-242-000	0-30	0-2.1
	960-243-000	0-60	0-4.1
	960-244-000	0-100	0-6.9
	960-241-000	2-150	0.1-10.3
51SSAR	960-249-000	0-30	0-2.1
	960-250-000	0-60	0-4.1
	960-251-000	0-100	0-6.9
	960-252-000	2-150	0.1-10.3
51SSF	960-253-000	-	-
51SSAF	960-254-000	-	-

**REGULATOR OPTIONS & ACCESSORIES**  
**COALESCING FILTER**

Replaces the 40 micron filter for both moisture and particulate filtration. (T-51SSAR & T-51SSAF only) P/N 010-312-000

**NON RELIEVING**

Used in applications where it is desirable to relieve pressure downstream and not at the regulator. Non-relieving regulators should not be used for low or no flow applications.

**SOCKET HEAD BUILD SCREW**

Socket head build screws are provided in place of phillips drive screws.

**5 MICRON FILTER**

Replaces the 40 micron filter for more complete air filtration. (Except T-51SSR) P/N 836-000-002

**MOUNTING BRACKET**

316 Stainless Steel bracket for side mounting. P/N 607-000-128

**PRESSURE GAUGE**

Dual scale (psi / kPa) 2 1/2" (63mm) gauges. Ranges include 0-60 psi (0-410 kPa), 0-100 psi (0-690 kPa) and 0-200 psi (0-1400 kPa). When specified with regulator, the correct range will be supplied. Note: Gauges do not meet MR-01-75 NACE requirement) P/N: 0-60 psi 625-000-016  
0-100 psi 625-000-017  
0-200 psi 625-000-018

**OPTIONS**

• = option is available

	T-51SSR	T-51SSFR	T-51SSAR	T-51SSF	T-51SSAF
1 Coalescing Filter			•		•
2 Non-Relieving	•	•	•		
3 Socket Head Build Screw	•	•	•	•	•
4 5 Micron Filter		•	•	•	•
7 Mounting Bracket	•	•	•		
8 Pressure Gauge	•	•	•	•	•
9 Tamper Proof Cover	•	•	•		
10 Low Bleed	•	•	•		
11 3/8" Port	•	•	•	•	•

**OPTION ORDERING MATRIX:**

Add three digits from table below to end of part number.

OPTION	1	2	3	4	7	8	9	10	11
1 Coalescing Filter	001	021	031		071	081	091	101	111
2 Non-Relieving		002	032	042	072	082	092		112
3 Socket Head Build Screw			003	043	073	083	093	103	113
4 5 Micron Filter				004	074	084	094	104	114
7 Mounting Bracket					007	087	097	107	117
8 Pressure Gauge						008	098	108	118
9 Tamper-Resistant Cover							009	109	119
10 Low Bleed								010	110
11 3/8" NPT Port									011

**TAMPER RESISTANT COVER**

A 316 stainless steel hexagonal cover placed over the adjusting screw and threaded onto the bonnet of the regulator with a wrench, prevents ordinary hand adjustments.

**LOW BLEED DIAPHRAGM**

(Soft Relief Seat): Used in applications where it is desirable to minimize the standard bleed rate of the regulator while maintaining the ability to relieve excess pressure at the regulator. (Bleed rate is reduced from less than 6 SCFH (2.8 LPM) to less than 0.1 SCFH (0.05 LPM)).



**IMPORTANT NOTICE**

Our recommendations, if any, for the use of this product are based on tests believed to be reliable. The greatest care is exercised in the selection of our raw materials and in our manufacturing, no guarantee or warranty, express or implied is made as to such use or effects incidental to such use, handling or possession or the results to be obtained, whether in accordance with the directions or claimed so to be. The manufacturer expressly disclaims responsibility therefor. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing laws and/or patents covering any material use.