

Accessories



Value Series Gauges

Diaphragm Seals



Pressure Indicators



MPS 8

Manual Panel Station

Description

Marsh Bellofram's Manual Panel Stations offer a precision high flow regulator with a quality gauge in a space saving package for ease of installation and versatility. Most often found in laboratory panels, and control rooms, they are ideally suited for applications that require maintaining and monitoring critical pressures in a system. The addition of a three-way valve allows for operation in either a manual mode where the pressure is set and monitored at the panel, or automatic mode where the pressure is established from a remote location but monitored at the panel.

Standard Features

- Uses a Marsh Bellofram Type 41 Precision Regulator
- Self Relieving
- High flow capacity
- Direct or reverse acting styles
- Clockwise or counterclockwise adjustment rotation



MPS 8 Ordering Information

MPS8					
	↑	↑↑↑	↑↑↑↑	↑↑↑↑↑	Regulator
	41				Type 41
	44				Type 41 Left Hand Thread*
					Regulator Range
		315			3-15 PSIG
		630			6-30 PSIG
		153**			15 to 3 PSIG*
		306**			30 to 6 PSIG*
					Gauge Style
			DPG		Dual Plain Gauge Direct Acting
			DRG		Dual Receiver Gauge Direct Acting
			DPR		Dual Plain Gauge Reverse Acting
			DRR		Dual Receiver Gauge Reverse Acting
					Pressure Gauge Range
				015	15 PSI
				030	30 PSI

* Type 44 is used to decrease pressure with clockwise knob rotation

** Must order either DPR or DRR Reverse Acting Receiver Gauges

MPS 8

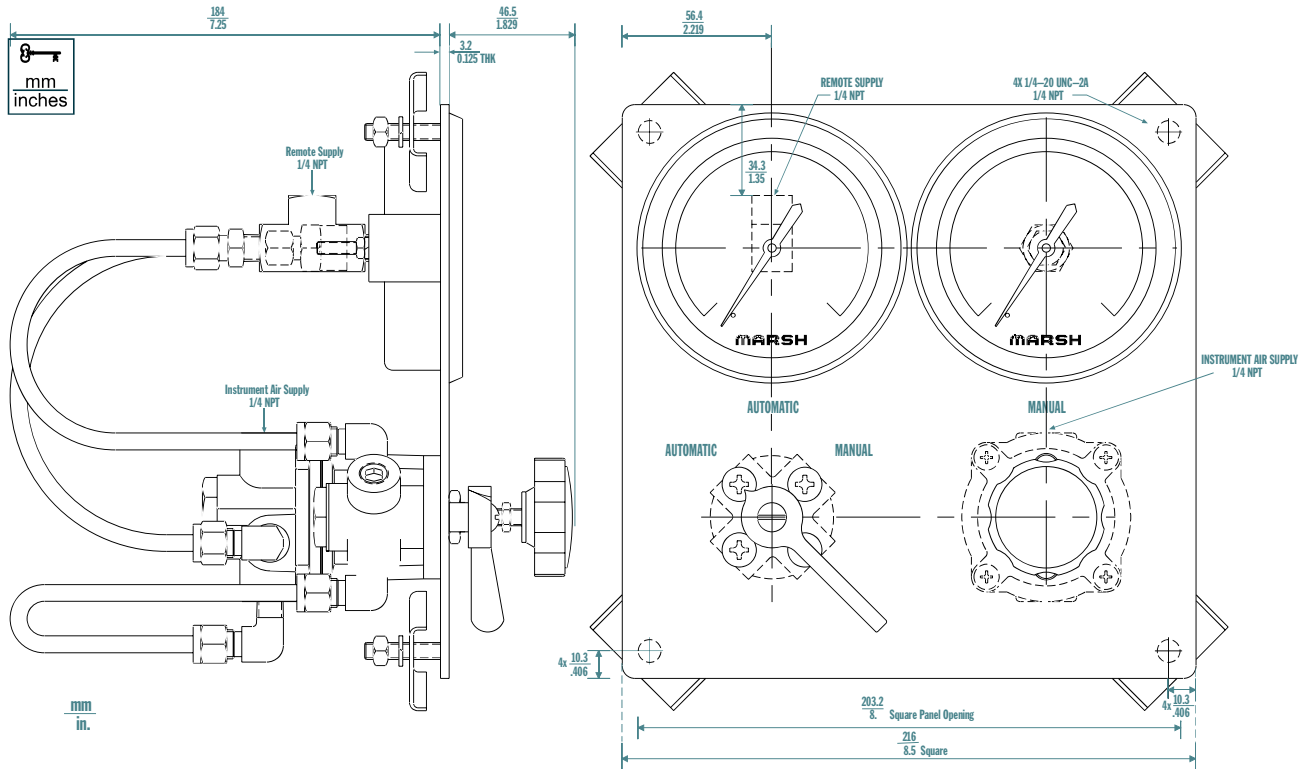
Regulator Specifications

Ranges	0-15 PSIG 0-30 PSIG	0-1 BAR 0-2.1 BAR
Flow Capacity	25 SCFM	700 LPM
Sensitivity	1" w.c.	25 mm
Port size	1/4 NPT	
Supply Pressure (max)	250 PSIG	17.2 BAR
Temperature Range	-20 to 160 °F	-29 to 71 °C

Gauge Specifications

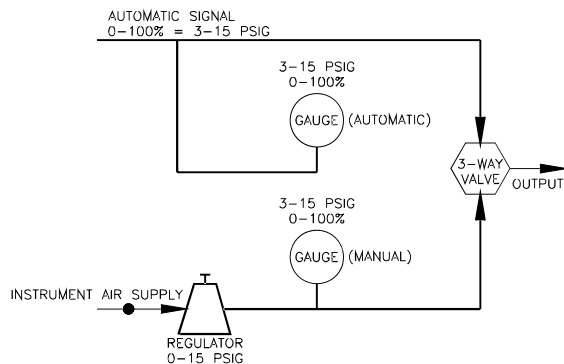
Accuracy	ASME Grade B or $\pm 3/2/3\%$ ($\pm 2\%$ of range across middle half of scale)
Case	3-1/2" rust resistant drawn steel, acrylic window, brass tube, socket and movement.
Dial Face	Black markings on white background, dual scale psi and kPa, or 0-100% linear

MPS 8 Dimensional Drawings



MPS 8 Principles of Operation

Panel Loading Station MPS 8 consists of a T41 regulator and a standard 3-1/2" gauge configured as shown. The three-way valve allows switching the load to a panel-mounted regulator which is manually adjusted or to a controller external to the panel loading station. In either case, the regulated output to the load is monitored.



mm
inches



Type 41
Pressure Regulator Series
See Page 10

Marshalltown

Value Series Gauges

Features

- ASME Grade B Accuracy
- Extra Savings with Quantity Pricing
- 4 Standard Mounting Options: LM, CB, Right and Left

Marshalltown Value Series are the most economical, general purpose gauge in the Marshalltown gauge line. Suited for use with water, oil, air, gas, and other non-corrosive media. Typical applications include FRL's, compressors, pumps, boilers, regulators, dryers as well as commercial and industrial equipment.

Specifications

Accuracy

ASME Grade B = $\pm 3/2/3\%$
($\pm 2\%$ of range across middle half of scale)

Case Material

Steel, black painted

Tube and Socket

Copper alloy

Movement

Brass

Ranges

15 to 160 PSI

Dial Standard

Dual scale PSI and kPa standard

Dial

Black markings on white

Pointer

Aluminum, black painted

Window

Flat plastic with steel friction ring



Value Series
Gauges

MARSHALLTOWN

Value Series

Marshalltown Value Series Standard Ranges and Part Numbers

Size	1-1/2"				2"			
	LM	CB	Right	Left	LM	CB	LM	CB
Mounting								
Connection NPT	1/8	1/8	1/8	1/8	1/4	1/4	1/8	1/8
0 to 15 PSI		GG1515C8						
0 to 30 PSI	GG1530L8	GG1530C8	GG1530G8	GG1530F8	GG2030L4	GG2030C4	GG2030L8	GG2030C8
0 to 60 PSI	GG1560L8	GG1560C8	GG1560G8	GG1560F8	GG2060L4	GG2060C4		
0 to 100 PSI	GG15100L8	GG15100C8			GG20100L4	GG20100C4	GG20100L8	GG20100C8
0 to 160 PSI	GG15160L8	GG15160C8			GG20160L4	GG20160C4	GG20160L8	GG20160C8
0 to 200 PSI		GG15200C8				GG20200C4		GG20200C8
0 to 300 PSI						GG20300C9		

Diaphragm Seals

Features

Diaphragm seals are isolation devices which separate pressure gauges and other instruments from the process media while allowing the instrument to measure the process pressure. The service life of the instrument is greatly extended, because it is protected from corrosion, clogging, freezing, and pulsation.

Liquid Fillings

The selection of the fill depends on the temperature expected in any given application. Temperature ratings for available fillings are listed below.

Glycerine	0 to 400 °F
Silicone	-40 to 600 °F



Diaphragm Seals
Filled and Calibrated
to your specifications

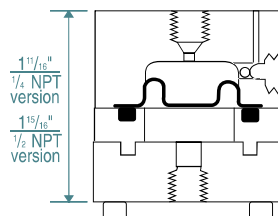
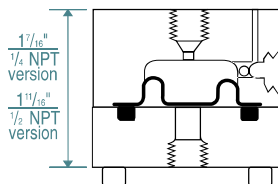
Model 12000

Mini Serviceable Rubber Diaphragm Seal

Description

The Model 12000 Serviceable Mini Diaphragm Seal is designed for gauges and instruments with operating pressure to 2500 psi with stainless and 500 PSI with PVC models. Ideally suited for small applications and corrosive installations. The optional 'Easy Clean Out' feature allows the removal of the process side housing without losing the instrument side fill fluid. Fill/bleed screw port in the instrument side housing, and stainless steel build screws are standard.

Filled and calibrated to Gauges only.



Model 12000 Ordering Info

12000				
↑↑	↑↑	↑	↑	↑
22				Upper Housing
24				1/4 316SS
				1/2 316SS
52				1/4 PVC
54				1/2 PVC
				Lower Housing
22				1/4 316SS
24				1/2 316SS
52				1/4 PVC
54				1/2 PVC
				Diaphragm
3				Nitrile
4				Fluorocarbon
5				Neoprene
				Easy Clean Out
0				None
2				Clean Out
				Fill
0				No Fill
G				Glycerine
S				Silicone

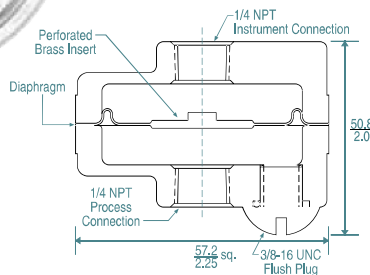
Model B8498

Gauge Protector with Rubber Diaphragm Seal

Description

The Model B8498 Gauge Protector is designed for extremely high volume displacement. Ideally suited for gauges and instruments with operating pressures up to 200 psi and vacuum applications. Available in 1/4 NPT threaded connections and chrome plated zinc construction. A 3/8" flush plug is standard in the process side housing.

Filled and calibrated to gauges only.



Model B8498 Ordering Info

B8498				
↑↑	↑↑	↑	↑	↑
22				Assembly
				1/4
				Diaphragm
3				Nitrile
4				Fluorocarbon
5				Neoprene
				Fill
0				No Fill
G				Glycerine
S				Silicone

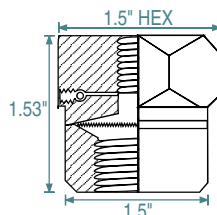
Model 13000

Mini / All Welded Diaphragm Seal

Description

The Model 13000 Mini Welded Seal is designed for 2" to 3-1/2" bourdon tube gauges with a minimum pressure of 100 PSI. The maximum operating pressure is 2000 PSI at 100° F. Available in all 316 SS or Hastelloy C process housing and diaphragm.

Filled and calibrated to gauges only.



Model 13000 Ordering Info

13000				
↑↑	↑↑	↑	↑	↑
22				Upper Housing
				1/4 316SS
				Lower Housing
22				1/4 316SS
24				1/2 316SS
42				1/4 Hastelloy
44				1/2 Hastelloy
				Diaphragm
1				316SS
2				Hastelloy C
				Fill
0				No Fill
G				Glycerine
S				Silicone

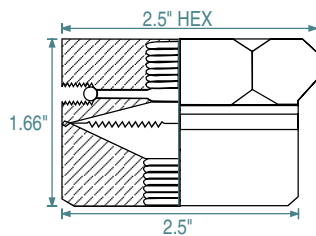
Model 13040

All Welded Diaphragm Seal

Description

The Model 13040 All Welded Seal is designed for 2" to 4-1/2" bourdon tube gauges with pressure ranges from vacuum to 1000 psi. Available in all 316SS or Hastelloy C process housing and diaphragm, with threaded connections. Optional flushing connections also available.

Filled and calibrated to gauges only.



Model 13040 Ordering Info

13040			
↑	↑	↑	↑
22		1/4	316SS
24		1/2	
Lower Housing			
22		1/4	316SS
24		1/2	
26		3/4	
28		1	
42		1/4	Hastelloy
44		1/2	
46		3/4	
48		1	
Diaphragm			
1			316SS
2			Hastelloy C
Flush Connection			
0			None
2			1/4
Fill			
0			No Fill
G			Glycerine
S			Silicone

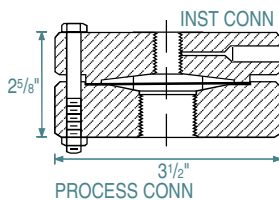
Model 14000

Diaphragm Seal

Description

The Model 14000 Diaphragm Seal is a clamped metal design featuring interlocking construction inside of the bolt circle for perfect alignment. The upper and lower housings clamp the diaphragm in place and allow for field servicing. The 14000 is available in threaded connections for pressures vacuum to 2500 PSI. Fill/bleed port screw in the upper is standard and an optional flush connection is available.

Filled and calibrated to gauges only.



Model 14000 Ordering Info

14000			
↑	↑	↑	↑
12		1/4	Steel
14		1/2	
22		1/4	316SS
24		1/2	
Lower Housing			
12		1/4	Steel
14		1/2	
16		3/4	
18		1	
22		1/4	316SS
24		1/2	
26		3/4	
28		1	
Diaphragm			
1			316SS
2			Hastelloy C
3			Tantalum
Flush Connection			
0			None
2			1/4"
Bolts and Nuts			
0			Steel
1			Stainless
Fill			
0			No Fill
G			Glycerine
S			Silicone

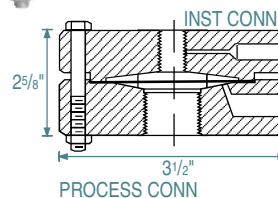
Model 14040

Removable Diaphragm Seal

Description

The Model 14040 Removable Diaphragm Seal is a welded diaphragm-to-upper design allowing the upper housing to be removed with the instrument in place without losing fill. The same interlocking feature as the 14000 is used to assure alignment of the upper to the lower. Available in threaded connections for pressures vacuum to 2500 PSI. Fill/bleed port screw in the upper is standard and an optional flush connection is available.

Filled and calibrated to gauges only



Model 14040 Ordering Info

14040															
															Upper Housing
12										1/4					Steel
14										1/2					
22										1/4					316SS
24										1/2					
															Lower Housing
12										1/4					
14										1/2					Steel
16										3/4					
18										1					
22										1/4					
24										1/2					316SS
26										3/4					
28										1					
															Diaphragm
1															316SS
2															Hastelloy C
3															Tantalum
															Flush Connection
0															None
2															1/4
															Bolts and Nuts
0															Steel
1															Stainless
															Fill
0															No Fill
G															Glycerine
S															Silicone

Hand Held Digital Pressure Indicator

Features

- Converts Pressure Input to LCD Digital Readout
- High Accuracy in Lightweight, Portable Package
- State of the Art Semi-Conductor

Marsh Instruments offers the Handheld Digital Pressure Indicator and Calibrator ideal for calibrating DP cells, I/P's and P/I's. The indicator tests installed instruments and transmitters, verifies operation and settings of valves and switches, detects system leaks, and is used for other testing or maintenance applications.

Specifications

Pneumatic Range

Range: -14.7 to 200 psig; with corresponding inches of water column and inches of mercury

Wetted Material

Brass fitting, silicone wafer diaphragm, suitable for instrument air (clean and dry) or any clean, non-conductive fluid

Pressure Fitting

5/16" quick-connect tube fitting standard, with mating nickel-plated brass locking quick-connector and 8" of 1/4" O.D. plastic tubing.

Display

3-1/2 digit LCD, 1/2" high black numerals on light background, with polarity and low battery indicators

Accuracy

±0.5% of reading ±1 count, must be zeroed at barometric pressure

Temperature

Calibration range: 50°-90°F.

Operating range: 30°-130°F.

Effect of temperature outside calibration range is ±0.01% per degree F

Power

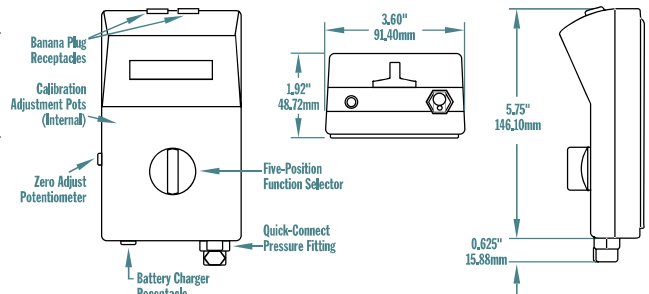
Internal: 9-volt transistor battery Ni-Cad chargeable. External: 12-volt adapter will power unit or charge battery in approx. 14 hours. Approximate operation is 8-10 hours per charge

Case Size

3.60" wide x 5-3/4" long x 1.92" high, ABS plastic

Includes

Carrying case, battery charger, 8" plastic hose, quick-connect fitting, and technical manual



4-DP Series Master Test Digital Pressure Indicator

Connection	5/16" quick connect tube fitting
Range	
-14.7 to 50psi	4-DPP-20050-BBC
-14.7 to 60psi	4-DP-20060-B3
-14.7 to 200psi	4-DPP-20200-BBC

To Our Customers

Terms and Conditions

Marsh Bellofram Group of Companies is the consolidation of pneumatics, electronics and electrical components for the industrial, process and automation markets. Electro-pneumatic and pneumatic controls, pressure and temperature instruments, digital counters and timers, motor controls and motion control instrumentation make up the main stay of the Companies products. The Groups include Marsh and Marshalltown pressure instruments, Bellofram pneumatic products, Automatic Timing and Controls counters and timers, Diversified Electronics motor protection products, Thermo-Couple Products temperature instruments and our new line of BelGAS oil, gas and industrial products.

Marsh Bellofram is an ISO 9001:2000 firm, we also recognize the importance of quality throughout our entire organization, and constantly strive to deliver value in our product and throughout our whole company.

Remember that orders are accepted via fax or mail:

Sales Fax: 304-387-4417

Mail: Marsh Bellofram, State Route 2, Box 305, Newell, WV 26050

Statement of Warranty

Warranty extends for 18 months from the manufacturing date code to be free of defects in materials and workmanship in normal use. The warranty is limited to repair or replacement of the defective product at the discretion of Bellofram. Products returned for repair under warranty will be guaranteed for the remainder of the warranty period or 90 days which ever is longer. Products returned for repair under non-warranty will be guaranteed for a period of 90 days.

Important Notice

Our Recommendations, if any, for the use of our products are based on tests believed to be reliable. The greatest care is exercised in the selection of raw materials and in our manufacturing operations. However, since the use of this product is beyond the control of the manufacturer, no guarantee or warranty, expressed or implied is made as to such use or effects incidental to such use, handling or possession or 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 or use.

Standard Additional Fees

Drop Ship Fee: There is a \$10.00 fee per shipment for products shipped to someone other than the Distributor. The exception to this fee is if the product is late and it is Bellofram's error. Remember we can only ship to one address for each factory order per day. Note — cylinders are exempt from this fee.

Expedite Fee: There is a \$15.00 fee per factory order line item for this service. This applies to any order that must ship within two business days after receipt of the order. It also applies to accelerate delivery of product on existing order, if the product is available. The Distributor can expedite without charge if the product does not have to ship until the third business day after notification. Note—cylinders are exempt from this fee.

Retesting Fee: There is a \$25.00 fee per unit on products returned which successfully test within Quality Control Specifications. For example, if three units came back on an RGA and all three tests within our testing specification there would be a \$25.00 per unit fee imposed, for a total

of \$75.00 for the three units. However, if a unit is returned and does not meet our Quality Control Specifications there will not be a charge for the defective unit. Note: If the product lists for \$50.00 or less, the Retesting Fee will be equal to the repair charge which is less than \$25.00.

Restocking Fee: On rare occasions Bellofram may authorize a credit return, when this occurs there will be a 25% restocking fee imposed. If Bellofram ships a product in error the fee will be waived. It is important that all communication be written and faxed such as order cancellations, additions, corrects, release date changes (the number release change can be limited). If a product ships and you had canceled it there will not be a restocking fee provided there is a written cancellation request on file.

Handling Fee: A \$10.00 handling fee will be imposed on RGA's out of warranty. However, if you decide to pay to have the product repaired this fee would not apply.

Evaluation Fee: For mechanical products, there will be a \$25.00 fee per unit if the product is out of warranty. For electro-mechanical, the fee is \$25.00 to \$75.00 depending on product.

Return Goods Authorization Procedure

Returns can be made for such reasons as defective product, authorized 90-day samples, wrong product shipped, duplicate shipment or warranty repair. Defective product will be confirmed prior to credit being issued.

The following procedure must be adhered to before material can be authorized for return:

1. An RGA number must be issued with all questions answered and information blocks completed. The more information obtained on the RGA will better help Bellofram to correct the problem.
2. The customer is to be notified that the RGA number MUST accompany the package on the outside of the box and on the packing slip.
3. All RGA's are to be shipped to Bellofram freight pre-paid. Freight for duplicate shipments, wrong products and defective product will be issued as credit.
4. All RGA's must be authorized by the Bellofram CS Manager or VP Sales and are valid for only 45 days from issue.

NOTE: All RGA's must have as a minimum the following information before being approved:

- Customer invoice number
- Customer account number
- Customer PO number
- Bellofram system number
- Product catalog number and quantity
- Product description
- Reason for return