

## Bourdon Tube Pressure Gauge with Switch Options



measuring  
•  
monitoring  
•  
analyzing

MAN-R



- Heavy-Duty Bourdon Tube Design
- Easy to Read 4" or 6" Diameter Dials
- Brass or Stainless Steel Wetted Parts
- Stainless Steel Housing
- Bottom or Rear Process Connections
- Magnetic, Sliding, or Inductive Switches
- Optional Oil Filled Indicators



Order from: **C A Briggs Company**  
622 Mary Street; Suite 101; Warminster, PA 18974  
Phone: 267-673-8117 - Fax: 267-673-8118  
[Sales@cabriggs.com](mailto:Sales@cabriggs.com) - [www.cabriggs.com](http://www.cabriggs.com)



**Description**

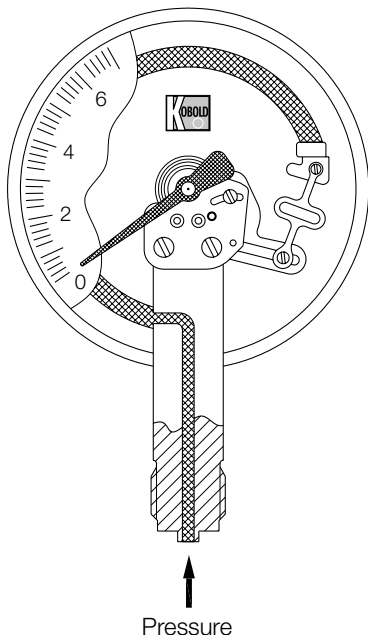
KOBOLD's MAN-R Pressure Gauges provide both pressure indication and optional switching capabilities within a single device. The bourdon tube sensing element and internal movement is available in a rugged copper alloy or chemically resistive stainless steel. The housings are made of stainless steel with NPT fitting choices with a back or bottom mount configuration. Those with rear mount fittings are also available with a panel mounting front flange. The MAN-R offers a choice of up to four magnetic, sliding, or highly reliable inductive switches. Glycerin oil filling is available as an option to dampen excessive pointer movement caused by machine vibrations and offers increased service life under extreme operating conditions. Paraffin oil is specified when higher temperature conditions or optional switches are required.

Resistance to aggressive media and environments is achieved by using high-grade materials such as stainless steel both for the movement and the housing. They can be used for liquid or gaseous substances which do not crystallize and are not highly viscous. The extensive range of options allows the user to adapt the instruments to his own special requirements. All the pressure gauges comply with general international guidelines and take account of standard as well as application-specific requirements. They are the result of the over 70 years experience we have in building pressure gauges.

**Measuring Principle**

Mechanical pressure measurement uses the principle of an elastic measuring element, which generates a precisely defined, reproducible deflection when subjected to pressure. The motion works convert this into a rotary motion of the pointer. The pressure at the measuring element can be read on the scale of the dial.

**Pressure Port Mechanical Drawing**



**Specifications**

- Available Ranges:** -30" Hg...15,000 PSIG
- Usable Range**

  - Static Load:** 0-100 % of Full Scale
  - Dynamic Load:** 0-90% of Full Scale

- Sensing Element:** Bourdon Tube
- DIN Accuracy Class:** 1.6
- Operating Temperature**

  - Media:** Non-Freezing Media, 32...176 °F
  - Ambient:** -4...140 °F

- Process Connection:** 1/4" or 1/2" MNPT
- Materials of Construction**

  - Wetted Parts**

    - Element:** < 1000 PSIG = Copper/Tin Alloy  
> 1000 PSIG = Stainless Steel
    - Fitting:** Brass or Stainless Steel

  - Exterior**

    - Movement:** Brass or Stainless Steel
    - Housing:** 304 SS
    - Bezel:** 304 SS
    - Pointer:** Black Aluminum
    - Indicator Dial:** White Aluminum
    - Window:** Instrument Glass

- Magnetic Spring Switch**

  - Repeatability:** ± 5% of Full Scale
  - Max. Ratings:** 250 VAC/VDC, 0.6 A, 10 W or 18 VA

- Inductive Switch**

  - Repeatability:** ± 0.5% of Full Scale
  - Logic:** NAMUR (DIN 19234)
  - Power Supply/Relay:** Required, see our KFA/KFD Series

- Environmental Protection**

  - Unfilled Housings:** IP 65
  - Glycerin/Paraffin Oil Filled:** IP 67



Order Details (Example: **MAN-R F 2 L P090 S 12**)

Model	Housing Size	Housing Material/ Fill Option	Connection Material/ Position	Pressure Range	Switch Options											
					Switch Type	Switch Function										
MAN-R..	..F.. = 4" Dial	..2.. = Stainless Steel	..L.. = Brass 1/4" NPT Bottom	..H315 = -30"...0" Hg	..M.. = Magnetic	..10 = 1x, N/O										
				..H325 = -30"...15 PSIG			..S.. = Sliding	..20 = 1x, N/C								
				..H345 = -30"...30 PSIG					..I.. = Inductive	..30 = 1x, SPDT*						
				..H360 = -30"...60 PSIG							..11 = N/O Low & N/O High					
				..H365 = -30"...100 PSIG								..12 = N/O Low & N/C High				
				..H375 = -30"...150 PSIG									..21 = N/C Low & N/O High			
				..H385 = -30"...200 PSIG										..22 = N/C Low & N/C High		
				..P015 = 0...10 PSIG											..3A = 3x, N/O	
				..P025 = 0...15 PSIG												..3Z = 3x, N/C
				..P045 = 0...30 PSIG												
	..P060 = 0...60 PSIG	..4A = 4x, N/O														
	..P065 = 0...100 PSIG		..4Z = 4x, N/C													
	..P075 = 0...150 PSIG			..4G = 4x, N/O or N/C**												
	..P085 = 0...200 PSIG															
	..P090 = 0...300 PSIG															
	..P105 = 0...600 PSIG															
	..P115 = 0...1000 PSIG															
	..P126 = 0...1500 PSIG															
	..P130 = 0...2000 PSIG															
	..P140 = 0...3000 PSIG															
..P150 = 0...5000 PSIG																
..P160 = 0...6000 PSIG																
..P170 = 0...7500 PSIG																
..P175 = 0...10000 PSIG																
..P185 = 0...15000 PSIG																
..R025 = 0...15 PSIA																
..R045 = 0...30 PSIA																
..R060 = 0...60 PSIA																
..R065 = 0...100 PSIA																
..R075 = 0...150 PSIA																
..R085 = 0...200 PSIA																
..E = Custom Range***																
..G.. = 6" Dial	..7.. = Stainless Steel with Glycerin Fill Fluid****	..R.. = Stainless Steel 1/4" NPT Bottom	..PV.. = Brass 1/2" NPT Back with Front Flange													
			..S.. = Stainless Steel 1/2" NPT Bottom													
			..T.. = Stainless Steel 1/4" NPT Back													
			..U.. = Stainless Steel 1/2" NPT Back													
			..TV.. = Stainless Steel 1/4" NPT Back with Front Flange													
			..UV.. = Stainless Steel 1/2" NPT Back with Front Flange													

\* Only for switch types M or S

\*\* Please specify switch logic per each contact

\*\*\* Please specify in clear writing the requested range and units; additional pricing may apply

\*\*\*\* Paraffin fill fluid for gauges for higher temperatures or for gauges specified with switch contacts

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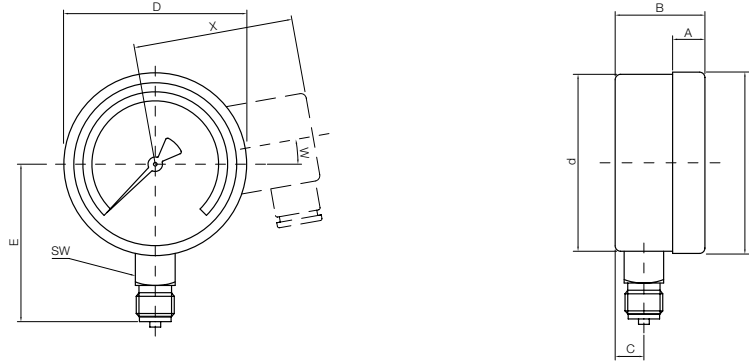


## Bourdon Tube Pressure Gauge Model MAN-R

### Dimensions (mm)

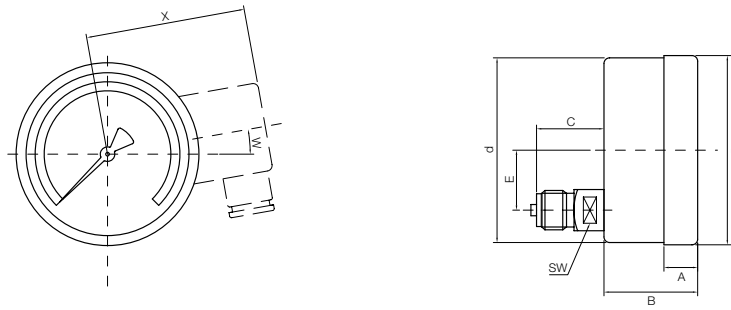
#### Bottom Connection

Code	Dial Size	A	B without contact	B 1 or 2 contacts	B 3 contacts	B 4 contacts	C	d	D	E	SW	W	X
MAN-RF	4 Inch	17	48	82	97	110	15	100	101	86.5	22	0	88
MAN-RG	6 Inch	21	50	101	120	120	15	159	162	117	22	0	118



#### Back Connection

Code	Dial Size	A	B without contact	B 1 or 2 contacts	B 3 contacts	B 4 contacts	C	d	D	E	SW	W	X
MAN-RF	4 Inch	17	49	82	97	110	34	100	101	32.5	22	0	88
MAN-RG	6 Inch	21	50	101	120	120	34	159	162	32.5	22	0	118



#### Front Flange

Code	Dial Size	A	B without contact	B 1 or 2 contacts	B 3 contacts	B 4 contacts	C	d	D	D2	E	LK	S	SW	W	X
MAN-RF..V	4 Inch	6	43	86	92	105	34	104	101	132	32.5	116	2	22	15	42
MAN-RG..V	6 Inch	6	43	95	110	110	34	164	161	196	32.5	178	2	22	15	42

