SOLID FRONT PRESSURE GAUGES

MODEL M1.02

PRODUCT DESCRIPTION

A solid partition wall between the front of the gauge and the Bourdon tube system will redirect the released energy to the back of the gauge in which the blow-out back of the safety case design redirects any lose parts or media to exit through the back of the gauge. The solid front gauge is reinforced at the front, providing a blow-out back safety case design. Usually Solid front s are used for services having very high process pressure.

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KEY FEATURES

- Design according to EN 837-1
- Dry & Liquid Filled Version
- Socket case, Direct welded
- Optional ATEX approved II 2 GD Ex h T6
- For corrosive gasses and liquids
- Solid front design features baffle wall interposed Between the sensing system & the window, & Pressure relieving back for increased safety.

APPLICATION

- Oil & Gas
- Chemical & Petrochemical
- Power Industries
- Nuclear power plants
- Specialized OEM equipment & Machine Building
- Fertilizer

SPECIFICATIONS

Design Standard	:	According to EN 837-1
Sensing Element	:	Bourdon Tube (<100 Bar: C - Type, >100 Bar: Helical)
Accuracy	:	± 1% of Span (Standard)
Dial Size	:	100mm (4”), 150mm (6”)
Range	:	Vacuum/Compound: -1 to 24 kg/cm2 Pressure : 0-1600 bar (Other custom ranges on request)
Process Conn. Location	:	Direct Bottom
Process Conn. Size & Type	:	¼” BSP (M), ¼” NPT (M), ½” BSP (M), ½” NPT (M), M20 × 1.5 (M), (Other sizes on request)
Weld Joints	:	TIG Argon Arc Welding
Ingress Protection	:	IP68
Approvals	:	ATEX: Conformity acc. to RL 2014/34/EU Article 13 paragraph 1 for mechanical equipment in potential hazardous areas II 2 GD Ex h T6 (Optional)

MATERIAL OF CONSTRUCTION

Case & Bezel Ring	:	SS 304 (Optional SS 316)
Bourdon Tube	:	Wetted : SS 316 (Optional Monel 400)
Movement	:	SS 304 (Optional SS 316)
Pointer	:	Aluminum, Black colored Micrometer zero adjustable
Dial	:	Aluminum, Black graduation on white background
Window	:	Shatter proof safety (Optional: Toughened glass)
Window gasket & Blowout disk	:	Neoprene

Pressure Limits

Steady Pressure	:	Up to FSV
Fluctuating Pressure	:	0.9 x FSV
Over Range Pressure (Short Term)	:	≤ 100 bar: 1.3 x FSV ≥ 100 bar: 1.15 x FSV

Temperature Limits

Version	Ambient	Process
Dry	-40 to 65 °C	-40 to 200 °C
Glycerin filled	-20 to 65 °C	-20 to 100 °C
Silicone filled	-40 to 65 °C	-40 to 100 °C

Note: The variation of indication caused by the effect of temperature shall not exceed: ± 0.4% / 10K FSV

Case Filling (Optional)

The gauges can be filled with different kind of fill fluids. Available fill fluids are:

- Glycerin fluid (99.7%)
- Silicon fluid
- Other fill fluids can be offered on request

SPECIFICATIONS

Calibration Certificate	:	Gauges are factory calibrated to full range by default 5-Point Calibration Cert.
Material Certification	:	Only For Wetted parts With Chemical Composition
NACE Compliance	:	Available as per MR 01 75/ MR 01 03 (ISO 15156) for wetted parts (Optional)
Approvals	:	ATEX: Conformity acc. to RL 2014/34/EU II 2 GD Ex h T6 (Optional)

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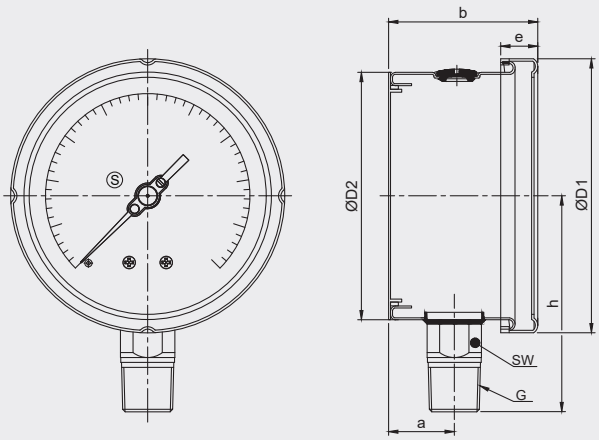
DIMENSIONAL DRAWINGS

Direct Bottom connection



NS	Dimensions in mm								Weight in gm	
	a	b	ØD1	ØD2	e	G	h±1	SW	Weight in gm	Weight in gram (Glycerin)
100	33	65	111	100	15	1/2"	90	22	690	980
150	33	65	166	150	15	1/2"	115	22	1060	1795

Important Notes: Above drawings are not to scale. All Dimension are in mm.
NS = Nominal size. Weights mentioned are approximate and for standard product.
Weight can be different after selection of options.

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TABLE-1 PRESSURE RANGE

bar		kg/cm2		psi		kPa		MPa	
Code	Range	Code	Range	Code	Range	Code	Range	Code	Range
CB36	-1...0.6	CG36	-1...0.6	HP37	-30 inHg/15psi	CK36	-100...60	CM36	-0.1...0.06
CB38	-1...1.5	CG38	-1...1.5	HP39	-30 inHg/30psi	CK38	-100...150	CM38	-0.1...0.15
CB40	-1...3	CG40	-1...3	HP41	-30 inHg/60psi	CK40	-100...300	CM40	-0.1...0.3
CB42	-1...5	CG42	-1...5	HP44	-30 inHg/100psi	CK42	-100...500	CM42	-0.1...0.5
CB45	-1...9	CG45	-1...9	HP46	-30 inHg/150psi	CK45	-100...900	CM45	-0.1...0.9
CB50	-1...15	CG50	-1...15	HP50	-30 inHg/220psi	CK50	-100...1500	CM50	-0.1...1.5
CB54	-1...24	CG54	-1...24	HP53	-30 inHg/300psi	CK54	-100...2400	CM54	-0.1...2.4
BR01	-1...0	KG01	-1...0	PS32	0...10	KP01	-100...0	MP01	-0.1...0
BR04	-0.6...0	KG04	-0.6...0	PS35	0...15	KP04	-60...0	MP04	-0.06...0
BR31	0...0.6	KG31	0...0.6	PS37	0...30	KP31	0...60	MP31	0...0.06
BR35	0...1	KG35	0...1	PS40	0...60	KP35	0...100	MP35	0...0.1
BR36	0...1.6	KG36	0...1.6	PS43	0...100	KP36	0...160	MP36	0...0.16
BR38	0...2.5	KG38	0...2.5	PS46	0...160	KP38	0...250	MP38	0...0.25
BR40	0...4	KG40	0...4	PS48	0...200	KP40	0...400	MP40	0...0.4
BR42	0...6	KG42	0...6	PS51	0...300	KP42	0...600	MP42	0...0.6
BR45	0...10	KG45	0...10	PS55	0...400	KP45	0...1000	MP45	0...1
BR50	0...16	KG50	0...16	PS56	0...500	KP50	0...1600	MP50	0...1,6
BR54	0...25	KG54	0...25	PS57	0...600	KP54	0...2500	MP54	0...2,5
BR57	0...40	KG57	0...40	PS58	0...800	KP57	0...4000	MP57	0...4
BR58	0...60	KG58	0...60	PS59	0...1000	KP58	0...6000	MP58	0...6
BR60	0...100	KG60	0...100	PS60	0...1500	KP60	0...10000	MP60	0...10
BR62	0...160	KG62	0...160	PS61	0...2000	KP62	0...16000	MP62	0...16
BR65	0...250	KG65	0...250	PS64	0...3000	KP65	0...25000	MP65	0...25
BR69	0...400	KG69	0...400	PS66	0...4000	KP69	0...40000	MP69	0...40
BR71	0...600	KG71	0...600	PS68	0...5000	KP71	0...60000	MP71	0...60
BR73	0...1000	KG73	0...1000	PS69	0...6000	KP73	0...100000	MP73	0...100
BR76	0...1600	KG76	0...1600	PS72	0...10000	KP76	0...160000	MP76	0...160
				PS73	0...15000				
				PS75	0...20000				

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MODEL M1.02

MODEL CODING & ORDERING INFORMATION

DESCRIPTION	CODE	M1.02	4	1	B	12NM	XXX	X16
Model								
Solid Front Pressure Gauge	M1.02	M1.02						
Dial Size								
100 mm (4”)	4		4					
150 mm (6”)	6							
Version								
Dry (but fillable)	1			1				
Glycerin filled	2							
Silicon Oil filled	3							
Type of Mounting/Connection Orientation								
Direct, Bottom connection	B				B			
Process Connection (Size & Type)								
¼” BSP (M)	14BM							
⅜” BSP (M)	38BM							
½” BSP (M)	12BM							
¼” NPT (M)	14NM							
⅜” NPT (M)	38NM							
½” NPT (M)	12NM					12NM		
M20 × 1.5 (M)	M20M							
1“ TC	38TC							
1 ½” TC	50TC							
2“ TC	80TC							
Range								
To be selected from Table 1 (Other custom ranges available on request)	XXX						XXX	
Other Options								
“U” Clamp mounting for lower back mounting (SS 304)	XUB							
Bourdon & socket in Monel 400	XM4							
Tag number marking on Dial	XTM							
ATEX Conformity acc. to RL 2014/34/EU II 2 GD Ex h T6	XAT							
Movement in SS 316	X06							
Over range protection 150% FSD	X10							
Calibration Certificate	X16							X16
Material test certificate	X17							
Wetted parts complied to NACE	X20							
Certificate for Oxygen Service	X21							
Custom Dial Design / Private labeling	X29							
Case & Bezel ring in SS 316	X31							
External Zero Adjustment	X45							

SAMPLE ORDERING CODE:

M1.02-4.1.B.12NM.XXX.X16

Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and material specified may be replaced by others without prior notice.