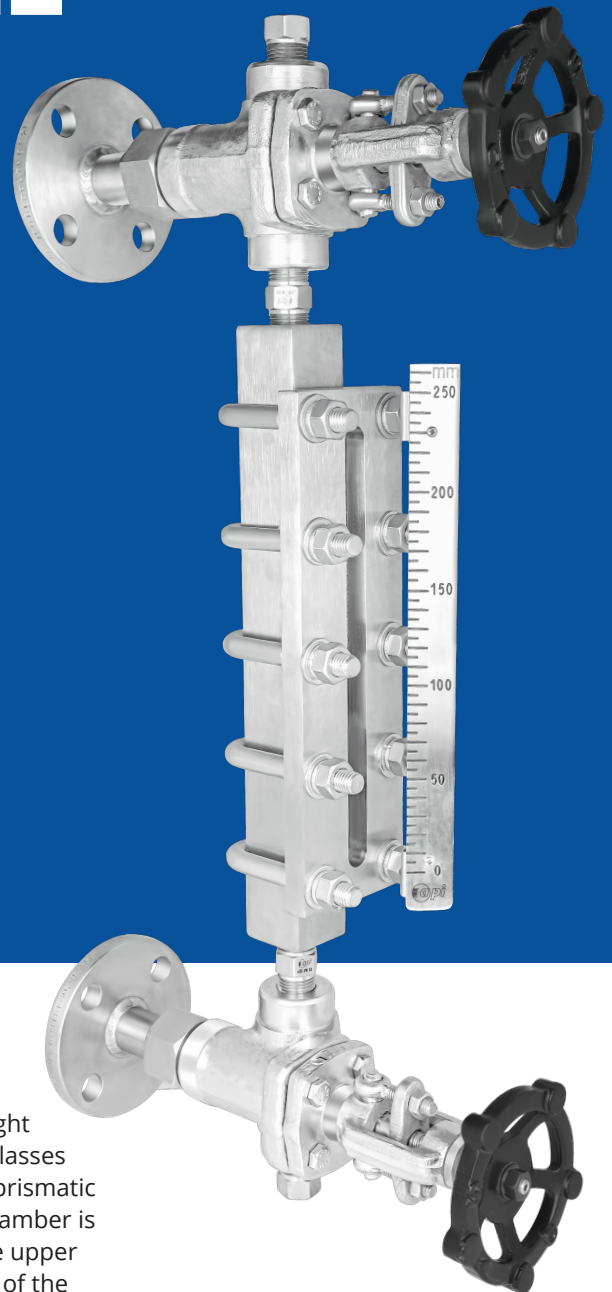


REFLEX LEVEL GAUGE

MODEL
M4.02



PRODUCT DESCRIPTION

Reflex glass level gauges working principle is based on the light refraction and reflection laws. Reflex glass level gauges use glasses having the face fitted towards the chamber shaped to have prismatic grooves with section angle of 90° . When in operation, the chamber is filled with liquid in the lower zone and gases or vapors in the upper zone; the liquid level is distinguished by different brightness of the glass in the liquid and in the gas/vapor zone. The product is designed for safe and positive visual indication of liquid level in vessels under high pressure & temperature conditions



REFLEX LEVEL GAUGE

MODEL M4.02

KEY FEATURES

- Simple & rugged design
- Reflex glass system
- Side-Side / Top-bottom mountable
- High Pressure version (Optional)
- Stainless Steel Version (Optional)
- Easy installation & maintenance
- Working principle based on light refraction & reflection laws
- Optional ATEX approved II 2 GD Ex h T6

SPECIFICATIONS

Max. Operating Temp.	:	Up to 320°C
Max. Operating Pressure	:	100 kg/cm ²
Gauge Valves	:	Off-set Screwed bonnet, ball-check
Process Connection	:	Flanged & Screwed
C-C Distance	:	300mm to 3000mm
Drain Connection	:	½" NPT (M) Plug
Vent Connection	:	½" NPT (M) Plug

APPLICATION

- Chemical & Fertilizer plants
- Pharmaceutical plants
- Power industries
- Process industries
- For Clear liquid in pressurized chamber or boiler drum

MATERIAL OF CONSTRUCTION

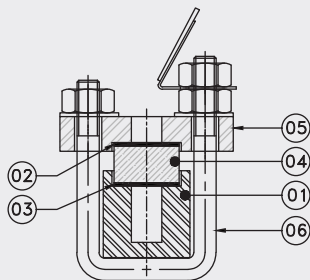
Center Chamber	:	ASTM A105
Cover Plate	:	ASTM A105
Gauge Glass	:	Toughened Glass as per DIN 7080
U-Bolts & Nuts	:	A193 Gr.B7 & A194 Gr.2H
Scale	:	Aluminum
Cushioning & Gasket	:	PTFE
Auto Shut off Isolation valve	:	Screwed Bonnet type
Valve body material	:	ASTM A105
Trim Material	:	SS 316
Ball Material	:	SS 316
Packing	:	PTFE

REFLEX LEVEL GAUGE

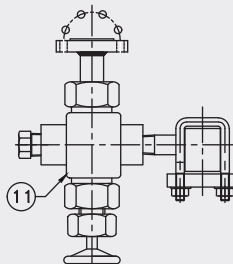
MODEL
M4.02

DIMENSIONAL DRAWINGS

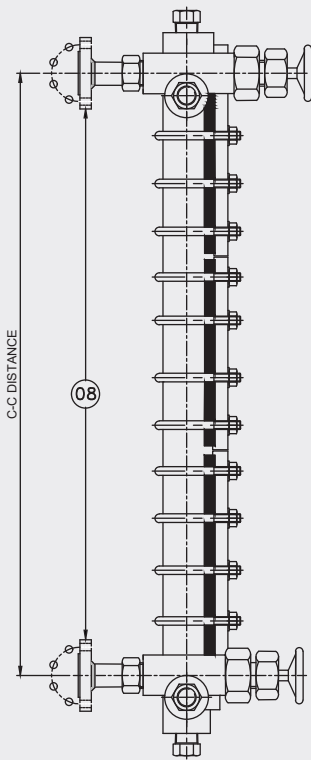
Reflex Level Gauge
(Side - Side)



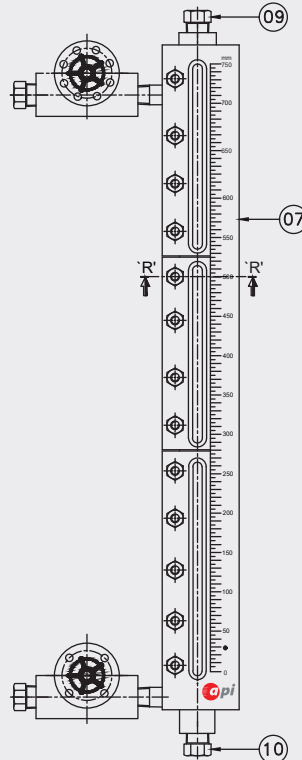
SECTION R-R



TOP VIEW



SIDE VIEW



FRONT VIEW

Bill of Material	
Sr.No.	Parameter
01	Center Chamber
02	Cushion Gaskets
03	Sealing Gaskets
04	Gauge Glasses
05	Cover plates
06	`U' Bolts + Nuts
07	Scale
08	Process connection
09	Vent connection
10	Drain connection
11	Valve Body

Important Notes: • Above drawings are not to scale • All Dimension are in mm

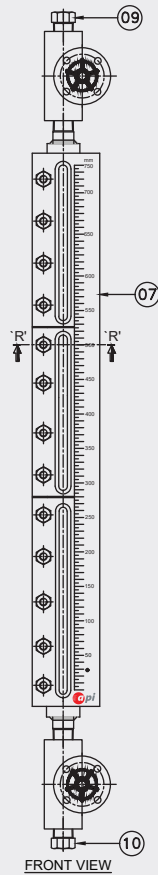
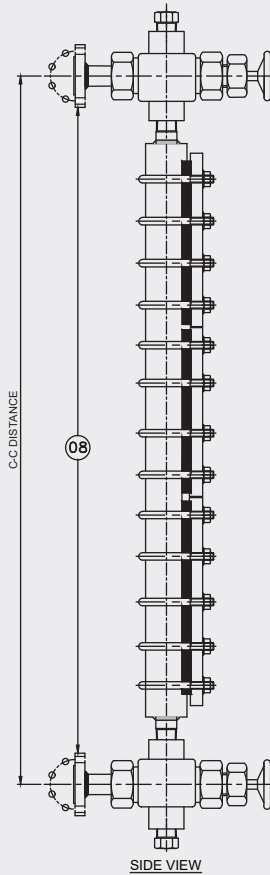
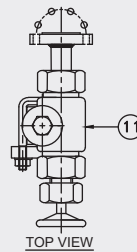
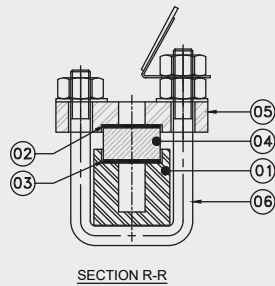


REFLEX LEVEL GAUGE

MODEL M4.02

DIMENSIONAL DRAWINGS

Reflex Level Gauge
(Top-bottom)



Bill of Material	
Sr.No.	Parameter
01	Center Chamber
02	Cushion Gaskets
03	Sealing Gaskets
04	Gauge Glasses
05	Cover plates
06	'U' Bolts + Nuts
07	Scale
08	Process connection
09	Vent connection
10	Drain connection
11	Valve Body

Important Notes: • Above drawings are not to scale • All Dimension are in mm

REFLEX LEVEL GAUGE

MODEL M4.02

MODEL CODING & ORDERING INFORMATION

DESCRIPTION	CODE	M4.02	SS	A15	S4	SN	A15	S6	LW1	SSR	BS	W1	AH	12NM
Model Reflex Level Gauge	M4.02	M4.02												
Mounting Side-Side Top-Bottom	SS TB		SS											
Center chamber ASTM A105 SS 304 SS 316 SS 316L Inconel 825 Inconel 625 Duplex SS 2205 Monel 400	A15 S4 S6 SL I5 I2 SD M4			A15										
Cover Plate ASTM A105 SS 304 SS 316	A15 S4 S6				S4									
Auto Shut off Isolation valve Screwed Bonnet type Bolted Bonnet type Without Valve	SN BB WT					SN								
Valve Body ASTM A105 ASTM A316	A15 A36						A15							
Trim & Ball-Check SS 316 SS 316L Inconel 825 Inconel 625 Duplex SS 2205 Monel 400	S6 SL I5 I2 SD M4							S6						
Valve Packing PTFE Graphite	LW1 GR								LW1					
Valve Orientation Top-Bottom Side-Side (Right) Side-Side (Left) Side-Side (Back)	TB SSR SSL SSB									SSR				
Gauge Glass Indigenous Borosilicate Aluminosilicate	IG BS AS										BS			
Cushioning & Gasket PTFE Grafoil reinforced with SS316	W1 GF											W1		
U-Bolts & Nuts A193 Gr.B7/ A194 Gr.2H A3193 Gr.B8/ A194 Gr.8A A193 Gr.B8M/ A194 Gr.8M	AH WA AM												AH	
Process Connection (Size & Type) ½" NPT (M) ½" NPT (F) ¾" NPT (M) ¾" NPT (F) 1" NPT (M) 1" NPT (F) Flange as per table-1	12NM 12NF 34NM 34NF 25NM 25NF XXX													12NM

REFLEX LEVEL GAUGE

MODEL M4.02

MODEL CODING & ORDERING INFORMATION

DESCRIPTION	CODE	P1M	N1F	AL	XXX	X18
Vent Connection						
Plug -1/2" NPT (M)	P1M	P1M				
Needle Valve -1/2" NPT (F)	N1F					
Ball Valve -1/2" NPT (F)	B1F					
Customized Design	XXX					
Flange as per table-1	XXX					
Drain Connection						
Plug -1/2" NPT (M)	P1M		N1F			
Needle Valve -1/2" NPT (F)	N1F					
Ball Valve -1/2" NPT (F)	B1F					
Customized Design	XXX					
Flange as per table-1	XXX					
Scale						
Aluminum	AL			AL		
SS 304	S4					
SS 316	S6					
Acrylic	AC					
Center to Center Distance						
As per customer requirement	XXX				XXX	
Other Options						
ATEX Conformity acc. to RL 2014/34/EU II 2 GD Ex h T6	XAT					X18
Material Test Certificate	X17					
IBR Certification	X18					
Tested to NACE Standard	X20					
SS Tag Plates	X26					
Anti-frost protection	X72					
Body Paint	X73					
Performance Test Certificate	X96					
Hydrostatic Test Certificate	X97					

Note: Visible length shall be less by 150mm to 200mm than center to center distance for Top-Bottom mounting.

Table - 1 (Flange Connection) AS PER ANSI B 16.5

NOMINAL SIZE	RATING/ CLASS	CODE	NOMINAL SIZE	RATING/ CLASS	CODE	NOMINAL SIZE	RATING/ CLASS	CODE	NOMINAL SIZE	RATING/ CLASS	CODE
1/2"	150	B09	1"	150	B21	1 1/2"	150	B33	2 1/2"	150	B45
	300	B10		300	B22		300	B34		300	B46
	600	B11		600	B23		600	B35		600	B47
	900	B12		900	B24		900	B36		900	B48
	1500	B13		1500	B25		1500	B37		1500	B49
	2500	B14		2500	B26		2500	B38		2500	B50
3/4"	150	B15	1 1/4"	150	B27	2"	150	B39	3"	150	B51
	300	B16		300	B28		300	B40		300	B52
	600	B17		600	B29		600	B41		600	B53
	900	B18		900	B30		900	B42		900	B54
	1500	B19		1500	B31		1500	B43		1500	B55
	2500	B20		2500	B32		2500	B44		2500	B56

SAMPLE ORDERING CODE:

M4.02-SS.A15.S4.SN.A15.S6.LW1.SSR.BS.W1.AH.12NM.P1M.N1F.AL.XXX.X18

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.