

VU50

Forbes Marshall View Glass

Description

The Forbes Marshall View Glass, VU50, is a novel product that allows you to visualize the flow of steam, water or oil inside pipeline. The visualization of flow will help you diagnose problems occurring in equipment upstream or downstream of the VU50. It overcomes the problems of poor visibility and improper distinction between vapour and condensate. This new design is ideal for applications in which one wants a clear indication of flow, such as downstream of paper drying cylinders. In DM water lines or for monitoring steam traps and heat exchangers.

The two large windows of oil-lapped toughened borosilicate glass, which resist the etching and sludge build up common to the normal glass used in other sight glasses, further improve visibility in the VU50. The borosilicate glass remains clear preventing the frequent glass replacement, necessary with other sight glasses and the double glass configuration keeps the flow back lit for better viewing.

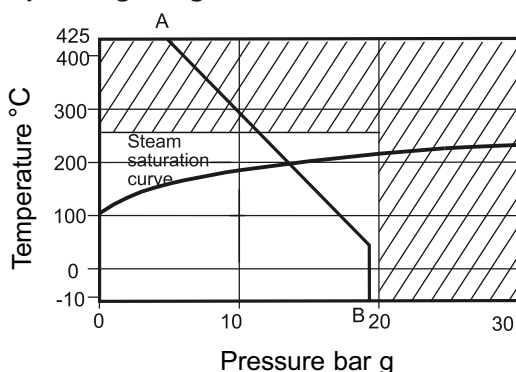
Sizes and Pipe Connections


DN 15, 20, 25, 40 and 50
 Socket welded
 Screwed BSPT, NPT, BSP
 Flanged BS 10, DIN (DN25, DN40)
 ANSI (Class 150 and 300)

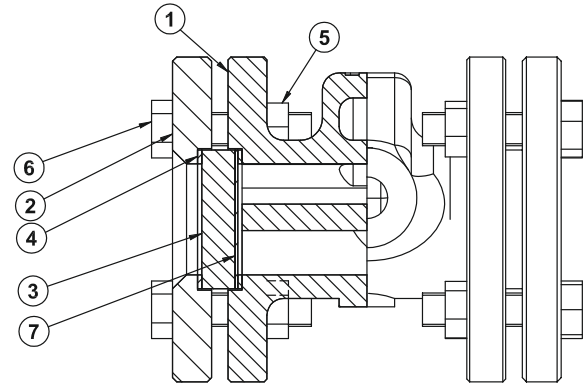
Limiting Conditions

Maximum operating pressure	20 bar g
Maximum operating temperature	250°C
Cold hydraulic test pressure	30 bar g
Min Operating Temperature	0°C

Operating Range



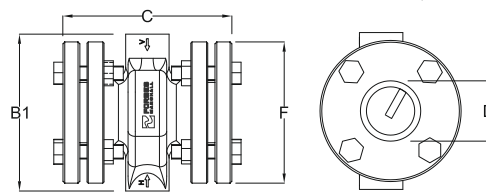
 This product must not be used in this region.
 A - B Flanged ANSI 150



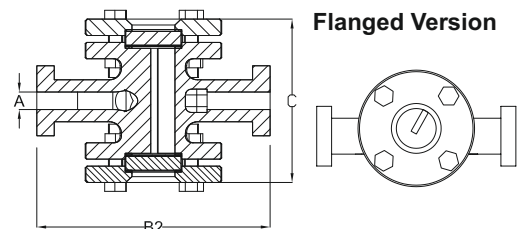
Material

Sr.No.	Part	Material	Standard
1	Body	Cast steel	ASTM A 216 WCB
2	Flange	Carbon steel	SA 516 Gr.70
3	Toughened Glass	Borosilicate oil-lapped glass	DIN 7080 / 2081
4	Gasket	Reinforced ex-foliated graphite	
5	Nut	-	A 194 Gr.2H
6	Stud Bolt	-	A 194 Gr.2H
7	Mica Disc	Mica	

Screwed, Socket Weld Version



Flanged Version

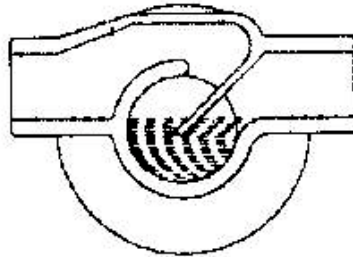


Dimensions (approx.) in mm and kg

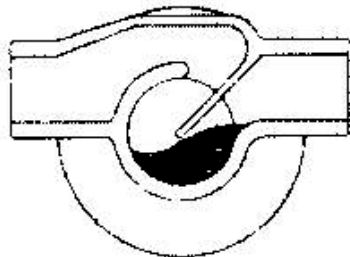
	A	B1	B2	C	D	E	F	W(kg)
DN 15/20	130	230	132	40	M12	110	8	
DN 25	190	290	170	55	M12	135	10	
DN 40	206	306	212	70	M16	160	12	
DN 50	230	330	232	70	M16	160	14	

Clear Flow Viewing

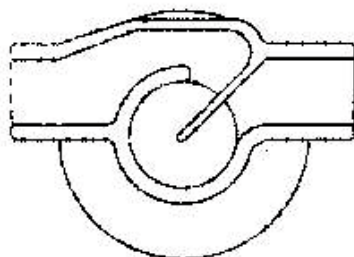
Vu50 is designed to give you a clear visualization of flow conditions with the unique feature of its deflector plate stationed in the sight chamber. Under normal conditions a pool of condensate / liquid forms at the bottom of the sight chamber. When vapour is also passing through the pipeline, chamber. When vapour is also passing through the pipeline, the vapour is guided by the deflector plate into the pool of liquid. The density between the vapour and liquid causes the pool of liquid to become depressed, thereby indicating flow of vapour.



Direction of flow
Liquid flow only



Direction of flow
Condensate and vapour flow



Direction of flow
Vapour flow only

How to Order

Example: Forbes Marshall View Glass, VU50 DN25 with BSPT connections.

Installation

The arrow with the letter 'H' for horizontal and 'V' for vertical mounting on the casting indicates the flow direction. Refer fig. for position of baffle plate. It is necessary to fit the view glass before inlet of the steam trap.

Applications

Condensate Lines

Vu50 can be fitted on a condensate line to monitor steam flowing with the condensate. Because of the improved visibility it offers, VU50 is especially suited for use in lines with high speed flow.

DM Water Lines

Due to the turbulence effect at the deflector plate, very clear fluids can be monitored using VU50. Thus, a VU50 fitted on a DM water line can indicate flow of DM water.

Oil Lines

The flow of oil and oil vapour can be visualized using VU50.

Heat Exchangers

VU50 can be used to check the efficiency of heat exchangers, especially in condensers. A VU50 can be fitted downstream of a condenser, and flow of steam indicates a loss of performance in the condenser or a change in coolant conditions.

Warning

It is recommended that the view glass is periodically checked. If there is evidence of thinning or erosion damage, then the window(s) should be replaced immediately. Always wear eye protection when viewing the contents of the view glass.

Recommended Tightening Torque for Bezel

Flange Nut, Bolts

Size (DN)	Torque (Nm)
15,20	15-20
25,40,50	25-30

Available Spares

- Glass and Gasket kit
- Mica disc

How to Order Spares

Always order spares by using the description given in the column headed "Available Spares" in the user manual.



www.forbesmarshall.com

Forbes Marshall Arca

Codel International

Krohne Marshall

Forbes Vyncke

Forbes Marshall Steam Systems

A: Forbes Marshall Pvt. Ltd.
Opp. 106th Milestone, CTS 2220,
Mumbai-Pune Road, Kasarwadi,
Pune MH 411034 INDIA
P: +91(0)20-68138555
F: +91(0)20-68138402

E: ccmidc@forbesmarshall.com

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Forbes Marshall International Pte. Ltd.
16A, Tuas Avenue 1,
#05-21, JTC Space @Tuas
Singapore - 639533
P: +65 6219 3890

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