

# VU30

## Forbes Marshall View Glass

### Description

The Forbes Marshall View Glass, VU30, is a novel product that allows you to visualise the flow of steam, water or oil inside a pipeline. The visualisation of flow will help you diagnose problems occurring in equipment upstream or downstream of the sight glass. The VU30 overcomes the problem of poor visibility and improper distinction between vapour and condensate flow by using a deflector plate to separate the 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.

### Sizes and Pipe Connections

DN 15,20 and 25 Screwed BSPT/NPT/BSP

**Note:** Available with IBR certificate

### Limiting Conditions

PMO-Max. operating pressure	13 bar g
TMO-Max. operating temperature	220 °C
Cold Hydraulic pressure	20 bar g
Min.working temperature	0 °C

### Operating Range

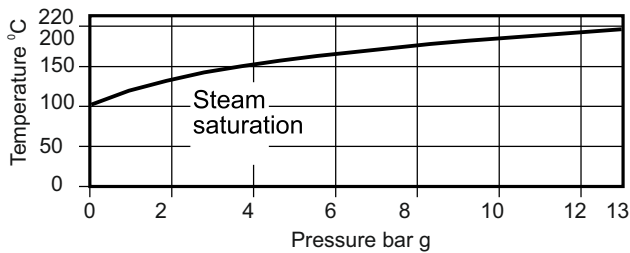


Fig.1: Installation

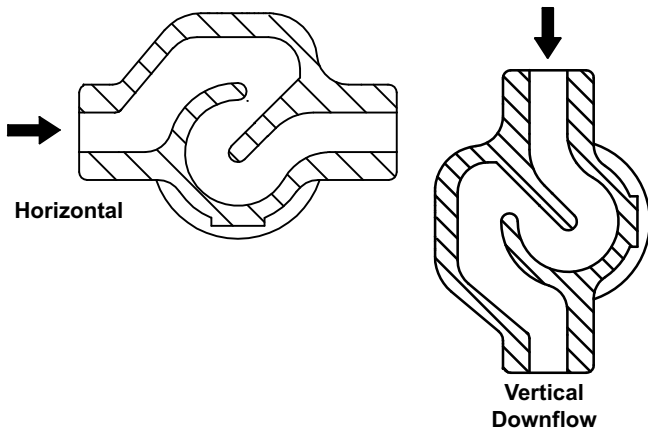
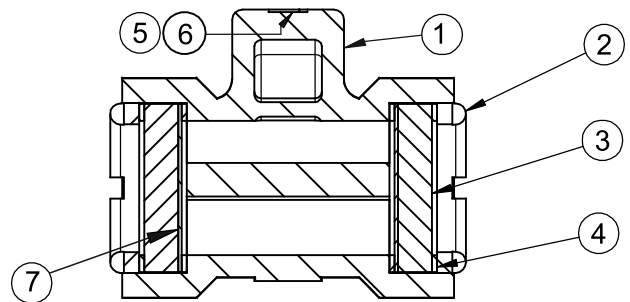


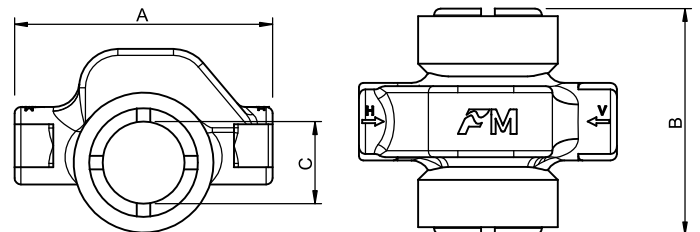
Fig. 2



### Material

Sr.No.	Part	Material	Standard
1	Body	Cast Iron	IS 210 Gr. FG 260
2	Bezel Cap	Brass	IS 6912
3	Glass	Borosilicate oil lapped glass	DIN 7080 / 7081
4	Gasket	SS Exfoliated Graphite	
5	Name Plate	Stainless Steel	AISI 304
6	Rivets	Mild Steel	
7	Mica Disc	Mica	

Fig. 3



### Dimensions (approx. in mm)

Size	A	B	C	Wt (kg)
DN 15	120	105	40	2.5
DN 20	120	105	40	2.5
DN 25	120	105	53	4.0

### How to Order

Example: DN 15 BSPT Forbes Marshall View Glass VU30

### Salient Features

The two large windows of oil lapped toughened borosilicate glass, which resist the etching and sludge built up (common to the normal glass used in other sight glasses) further improve visibility in the VU30. The borosilicate glass remains clear, reducing the need for replacements necessary with other sight glasses. And the double glass configuration keeps the flow back for better viewing.

### Installation

The arrow with the letter 'H' for horizontal and 'V' for vertical mounting on the casting indicates the flow direction. Refer fig. No.1 for position of baffle plate. It is necessary to fit the VU30 before the inlet of the steam trap.

### 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.

### Applications

**Condensate lines:** VU30 can be fitted on a condensate line to monitor steam flowing with the condensate. Because of the improved visibility it offers, VU30 is especially suited for use in lines with high speed flow.

**DM water lines:** Due to turbulence effect at the deflector plate, very clear fluids can be monitored using VU30. Thus, VU30 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 VU30.

**Heat exchangers:** VU30 can be used to check the efficiency of heat exchangers, especially in condenser. A VU30 can be fitted downstream of a condenser. The flow of steam indicates a loss of performance in the condenser or a change in coolant

### Clear Flow Viewing (Refer Fig. 4)

Vu30 is designed to give you 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, the vapour is guided by the deflector plate into the pool of liquid. The density difference between the vapour and liquid causes the pool of liquid to become depressed, thereby indicating flow of vapour.

### Servicing

Vu30 is self-operated and does not require manual intervention. It also does not require any elaborate or frequent maintenance.

However, for trouble free service ensure the following,

1. After every shut off, open the drain plug to allow the water to drain off. Static retention of water for long periods may cause rust formation and may stain the glass.
2. Do not allow dust / dirt / grime to settle on external surface of VU30 especially on the glasses. Regularly clean the glass with a mild detergent.
3. When re-assembling always use new gaskets.

### Recommended Tightening Torques for Bezel Cap

Size	Torque (Nm)
15,20	15
25	20

### Available Spares

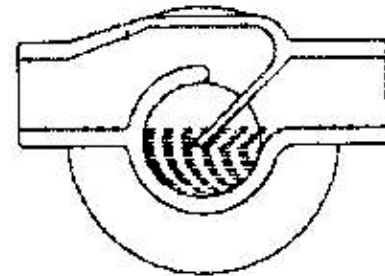
Glass and Gasket are available as spares.

### How to order spares

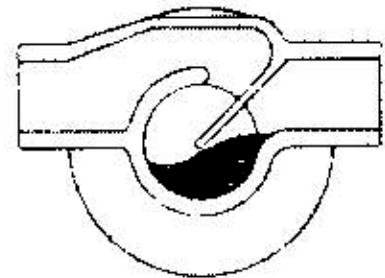
Always order spares by using the description given under the column headed "Available Spares" in the user manual stating the size and type of VU30.

**Example:** Glass and Gasket for DN 15 Forbes Marshall View Glass, VU30.

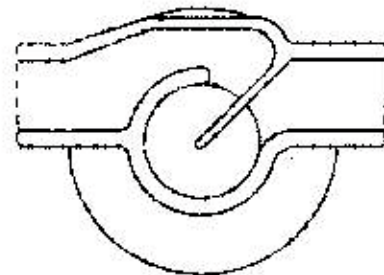
Fig. 4 Flow Viewing



Liquid flow only



Condensate and vapour flow



Vapour flow only



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Codel International

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Forbes Vyncke

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