

FLANGED DOUBLE WINDOW
SIGHT FLOW INDICATOR
HIGH PRESSURE - #300, #600

Douglass

See more, see better



SIGHT FLOW INDICATORS

FLANGED DOUBLE WINDOW HP

Overview:

Sight Flow Indicators are devices used in piping systems to provide a visual indication of the flow of liquids, gases, or slurries within the system. They are crucial for monitoring and verifying the flow and condition of the media without disrupting the process.

The Double Window Sight Flow indicator allows for a higher number of configurations in terms of types of gaskets and types of sight glass; allowing for greater usage parameters in terms of pressure rating and high temperature applications.

HP Model:

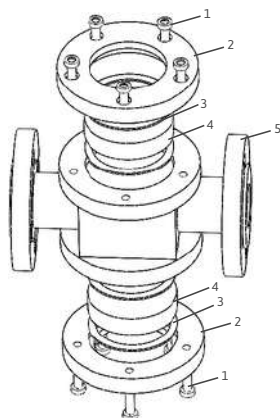
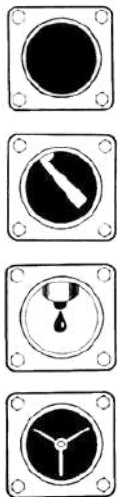
The Douglass HP Double Window sight flow indicator has its body forged in one piece, which grants additional robustness and durability. After that, flanges are welded to the ends of the forged pipes, enabling this model to have any type of flange for every type of application.



Add-ons to improve flow visibility

These sight flow indicators can have additions which help the user have a clearer view of the process,

- **Full View**
 - For easily visible fluids, with color, turbulence, and clarity. They easily detect the presence of solids or foreign products in the handled fluid. They can be mounted in any position.
- **Flapper**
 - Internally mounted with a PTFE Flapper, where the position indicates the direction of the fluid. Used in clear fluids that are difficult to observe, they are normally mounted horizontally, only mounted in a vertical positions with ascending fluids.
- **Drip**
 - Allow for the formation of drops of low-volume or intermittent fluids, for example in unitary distillation operations. They are mounted only in a vertical position and descending flows.
- **Spinner**
 - Internally mounted with a PTFE spinner that rotates with the passage of the fluid, widely facilitating the flow-observation of dark, translucent, and clear fluids that are difficult to observe with the naked eye. They can be mounted interchangeably in any horizontal or vertical position.



Parts and Materials:

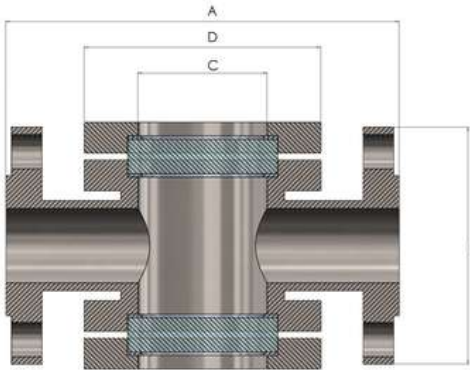
Item	Part name	Material options
1	Bolts	<ul style="list-style-type: none"> • Stainless Steel 316L • HSS
2	Covers	<ul style="list-style-type: none"> • Stainless Steel 304 • Carbon Steel w/ coating
3	Gaskets	<ul style="list-style-type: none"> • Graphite • Neoprene • Teflon • Sanitary Rubber • EPDM • Viton
4	Sight Glass	<ul style="list-style-type: none"> • Tempered Borosilicate • Tempered Soda Lime • Quartz
5	Body	<ul style="list-style-type: none"> • Stainless Steel 316L • Stainless Steel 304 • Carbon Steel w/ coating

Satisfaction Guarantee



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TECHNICAL INFORMATION				
ID	1"	1 - 1/2"	2"	3"
A (Dist between faces)	7" (177.8 mm)	8" (203.2 mm)	9" (228.6 mm)	9" (228.6 mm)
B (Dist between caps)	5" (127.0 mm)	5.5" (139.7 mm)	5.5" (139.7 mm)	5.5" (139.7 mm)
C (Visible process)	2" (50.8 mm)	2.5" (63.5 mm)	3" (76.2mm)	3" (76.2mm)
D (Caps diameter)	4" (101.6 mm)	4.5" (114.3 mm)	5" (127.0 mm)	5" (127.0 mm)
Glass (Total Diameter)	2.5" (63.5 mm)	3" (76.2 mm)	3.5" (88.9 mm)	3.5" (88.9 mm)
Glass (Glass thickness)	5/8" (15.87 mm)	5/8" (15.87 mm)	5/8" (15.87 mm)	5/8" (15.87 mm)

Installation Instructions

1. Safety First:

- Ensure the system is depressurized and drained.
- Wear appropriate PPE, such as gloves, safety glasses, and protective clothing.

2. Prepare the Flanges:

- Clean the flange faces on the pipe ends where the sight flow indicator will be installed. Ensure they are free of debris, rust, or old gasket material.
- Inspect the flanges for any damage or irregularities. Replace any damaged parts as necessary.

3. Position the Gaskets:

- Place the gaskets between the flanges of the sight flow indicator and the pipe flanges. Ensure the gaskets are properly aligned with the bolt holes.

4. Align the Sight Flow Indicator:

- Align the sight flow indicator between the pipe flanges, ensuring that the flow direction marked on the indicator matches the flow direction of the system.
- Use pipe alignment tools if necessary to ensure proper alignment.

5. Insert the Bolts:

- Insert the bolts through the flange holes. Place washers and nuts on the bolts.
- Hand-tighten the nuts to hold the sight flow indicator in place. Ensure the sight flow indicator remains aligned and that the gaskets are correctly positioned.

6. Tighten the Bolts:

- Using a torque wrench, tighten the bolts in a cross-pattern (star pattern) to ensure even compression of the gasket and proper sealing.
- Gradually increase the torque in increments, following the manufacturer's recommended torque values for the bolts and flanges. Typically, you would tighten to 30%, 60%, and then 100% of the final torque value.
- Re-check the torque on each bolt after the initial tightening sequence to ensure all bolts are evenly tightened.

7. Final Inspection:

- Inspect the installation to ensure there are no gaps between the flanges and that the sight flow indicator is securely fastened.
- Verify that the sight windows are clean and undamaged.

8. Test the System:

- Gradually pressurize the system and check for leaks around the sight flow indicator flanges.
- If any leaks are detected, depressurize the system and re-check the flange bolts for proper torque. Tighten if necessary.

9. Operational Check:

- Once the system is confirmed to be leak-free, check the operation of the sight flow indicator to ensure that fluid flow can be observed through the windows.
- Ensure the sight flow indicator is functioning as intended and that the flow direction is correct.

Installation:

Materials and Tools Needed:

- Double window sight flow indicator with flanged connections
- New Sight Glass acc DIN 7080
- Appropriate gaskets for flanged connections
- Bolts, nuts, and washers compatible with the flange specifications
- Torque wrench
- Pipe alignment tools
- Personal protective equipment (PPE)

DO'S

- DO periodically inspect the sight flow indicator for any signs of wear, damage, or leaks.
- DO keep the sight flow indicator clean to ensure visibility and proper operation. Use appropriate cleaning agents that are compatible with the materials of the indicator.
- DO immediately replace any damaged or worn components to maintain the integrity of the system.
- DO use adequate supports and clamps to secure the sight flow indicator and prevent vibration or movement.

DON'TS

- DON'T overtighten the bolts or clamps as this can stress and crack the sight glass or body.
- DON'T use abrasive cleaning agents or tools that could scratch or damage the sight glass.
- DON'T use with Incompatible Fluids.
- DON'T ignore leaks; address them immediately to prevent system contamination or damage.
- DON'T subject the sight flow indicator to pressures beyond its rated capacity.
- DON'T use any installation methods or operational practices that are not recommended by the manufacturer.
- DON'T expose the sight flow indicator to rapid temperature changes, which can cause thermal shock and damage the glass.
- DON'T neglect regular maintenance, as this is crucial for the longevity and reliability of the sight flow indicator.

Maintenance

- Perform regular visual inspections to identify any damage, corrosion, or residue buildup on the glass or frames. Inspections should be more frequent in highly corrosive or high-pressure environments.

Cleaning

- Use non-abrasive cleaners for ZIGHT glass. If needed, use diluted hydrochloric acid, but avoid wire brushes or abrasive materials.

Inspection

- Examine the glass for scratches, corrosion, chips, cracks, or flaws with bright, angled light. Replace glass that is cloudy, roughened, or doesn't clean well.