

Product Description

The Flow-Mon Double Window Sight Flow Indicators are designed to provide the means of visual inspection for process operations and plant protection. The straight through windows allow the operator to view immediate flow and to monitor the colour and condition of pipeline applications.

The plain spout enables visual inspection only while the flap variant with its graduated scale provides an indication of flow rate and repeatability of valve positioning. This variant is also available with a sprung flap to manage approximate flow that can be increased up to three times. It is an ideal solution for use in vertical lines where gravity prevents the use of an un-tensioned flap.

A spinner variant, equipped with an 8 blade PTFE spinner and stainless steel internals, is ideally suited for chemical applications providing excellent corrosion resistance. All designs can be mounted in any pipeline orientation capable of managing a wide flow range.

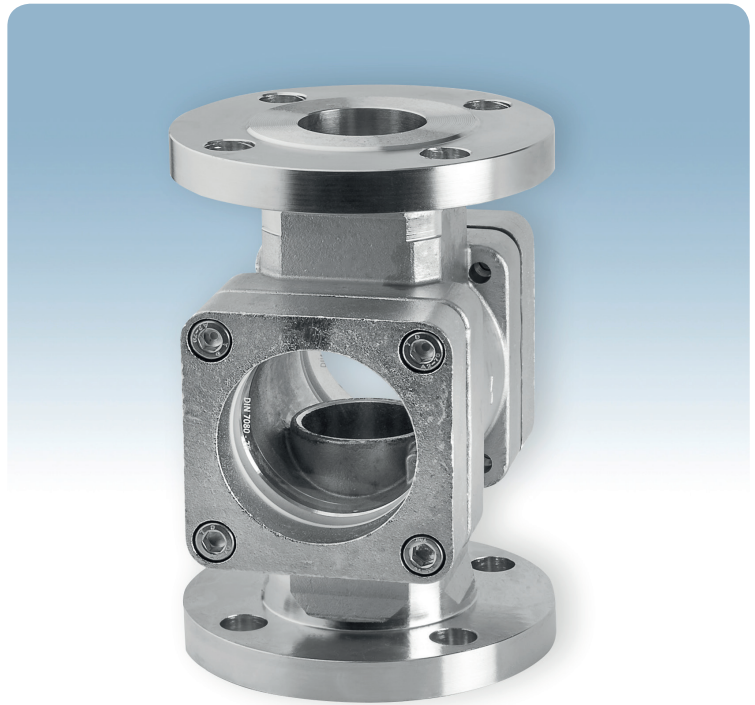
These high quality, robust units are designed for a broad range of industrial applications with working temperatures up to 250°C and working pressures up to 16 bar for the standard range and 40 bar for the high pressure range.

Connections

- Available for any threaded, socket weld or flanged connection type.

Features & Benefits

- High quality robust design
- Body cast in stainless steel or carbon steel (other materials available)
- Threaded or flanged connections
- Pressures up to 40 Bar
- Temperatures up to 250 degrees
- Can be mounted in any orientation (flap design horizontal and up only)
- CE Marked and fully compliant with the Pressure Equipment Directive



Technical Data

Body	- Stainless steel 316: ASTM-A-351-2000 GR CF8M - Carbon steel: ASTM-A-216-2000 GR WCB
Spindle	- Stainless steel 316
Glass	- Toughened borosilicate (DIN7080) (16 bar) or, - Toughened soda lime (BIS 3463) (40 bar)
Gasket	- PTFE
Flap	- Stainless steel 316
Spinner	- PTFE
Scale	- Polycarbonate
Fasteners	- Stainless steel A2

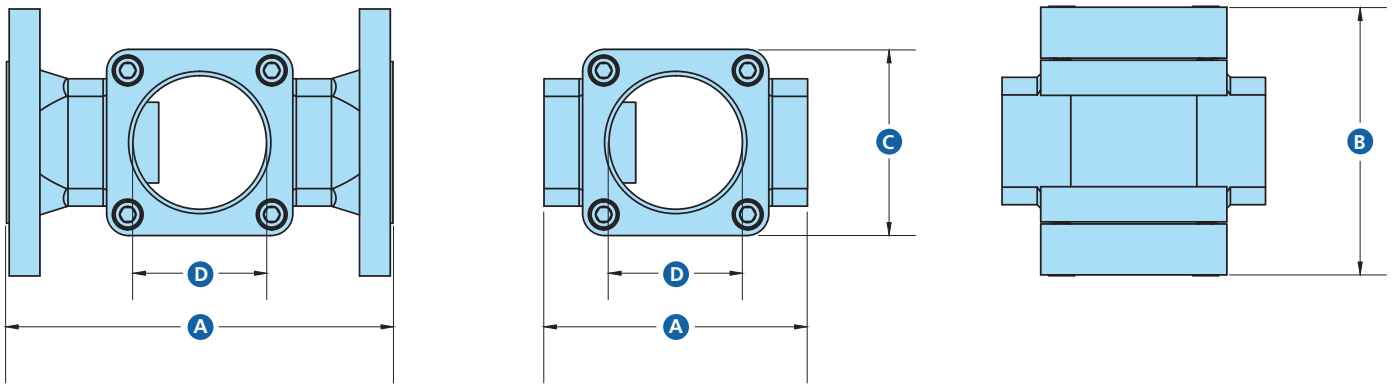
Pressure - 16 Bar (maximum working pressure)

Temperature - 250°C (maximum working temperature)

Connections - Threaded up to 2 inch BSP/NPT
- Flanged up to 16 inch; PN, ANSI, JIS
- Other connection types and larger sizes available on request

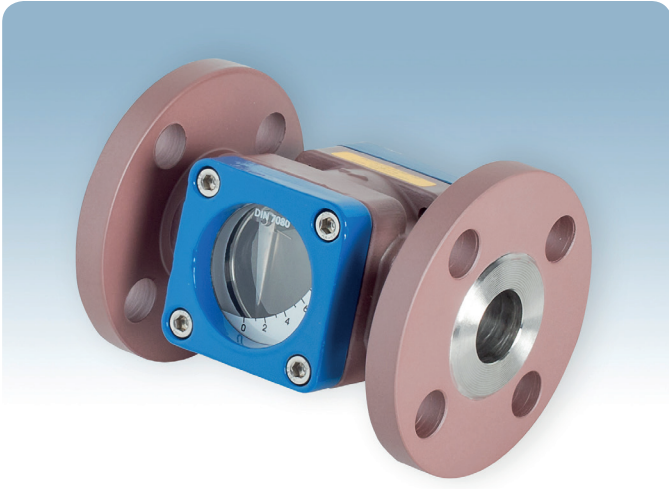
Flow Requirements

Size	Weight (kg) (mm)		A (mm)		B (mm)	C (mm)	D (mm)	2	4	6	8	Top	Max Flow
	T	F	T	F									
8	2	4	95	140	89	66	48	2.5	3.5	4.5	7	22	100
10	2	4	95	140	89	66	48	2.5	4	4.5	7	24	150
15	2	4	95	140	89	66	48	3	4.5	6	8.5	20	250
20	2	4	95	140	89	66	48	3	5	6	9	20	250
25	2	4	95	140	89	66	48	3.5	6	8	10	25	250
32	4	7	120	180	120	89	62	7	11	14	24	40	550
40	4	7	120	180	120	89	62	8	12	15	25	50	600
50	4.5	9	150	220	170	110	77	9	15	28	50	75	1000
80	-	19.5	-	258	160	165	100	24	32	52	128	220	
100	-	25	-	258	160	165	100	46	70	100	150	220	
150		67		360	333	279							
200		79		360	333	279							

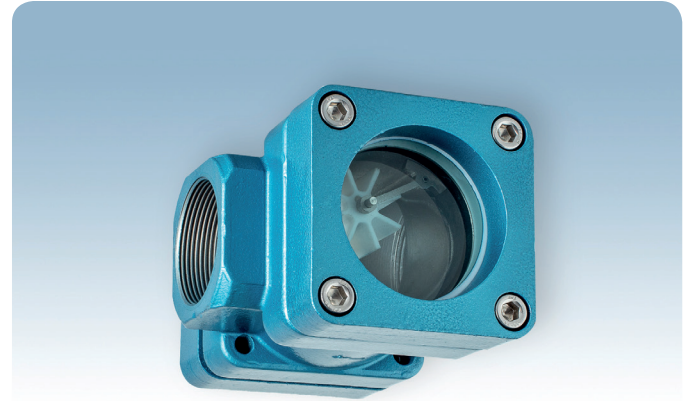


Example Parts List

FMF	SS	B	50	F16
<p>STYLE</p> <p>FMF = Flap FMP = Spout FMS = Spinner FMFS = Flap Sprung</p>	<p>MATERIAL</p> <p>B = Bronze SS = Stainless Steel CS = Carbon Steel</p>	<p>GLASS</p> <p>B = Borosilicate S = Sodalime Q = Quartz</p> <p>Specials please contact Flow-Mon</p>	<p>SIZE</p> <p>8 = 1/4" 10 = 3/8" 15 = 1/2" 20 = 1/4" 25 = 1" 32 = 1 1/4" 40 = 1 1/2" 50 = 2" 80 = 3" 100 = 4" 150 = 6" 200 = 8"</p> <p>Std thread BSP. For NPT add N. For socket weld add SW. Larger sizes available on request.</p>	<p>FLANGE</p> <p>For ANSI or DIN flanges add one of the following:</p> <p>F16 F40 F150 F300</p>



Above: Double Window showing flapper arrangement



Above: Double Window showing spinner arrangement

Installation Instructions

General

The flow indicators are in-line devices. Mounting can be in any position and no straight length of pipe is required before or after the unit. The unit is fitted between two flanges.

Under the pressure equipment directive (PED), these products are pressure accessories and are not approved for use as safety accessories, as defined by the PED. If used for safety purposes, it is the responsibility of the user/installer to assess the suitability of the product in the pressure equipment or system in which it is used.

Essential Safety Requirements

- Do not exceed minimum/maximum working temperature as stated.
- The instrument must be installed in accordance with the instructions provided.
- Prior to installation drain pipelines to ensure they are free from any solid particles or pressure.
- Care must be taken to avoid introducing torsional stress on the instrument when installing into the pipeline. Tighten sufficiently to avoid leaks and check at regular intervals during maintenance.
- Ensure pipelines are fully primed before commencing normal use.
- Valves must be opened or closed gradually to avoid shock/vibration.
- Do not exceed maximum working pressure as stated on the label.
- Only use with the fluid/gas stated on the label.
- Do not exceed minimum/maximum working temperature as stated.

User Responsibilities

- The product is installed and used by suitably trained personnel in accordance with all relevant local and national regulations and codes.
- Safe working practices for the media and processes concerned are followed during installation and maintenance.
- The materials of construction are suitable for the application.
- The product is protected from fire.
- The product is protected from impact/vibration.
- For outdoor use in exposed positions, the instrument must be additionally protected/shielded from heavy rainfall.
- Regular inspection for corrosion/erosion and wear are carried out.

Maintenance

- The operating system must be depressurised and drained before removing the unit from the pipeline.
- The instrument is only cleaned by washing with detergent. Abrasive cleaners or solvents must not be used.
- Remove any sludge or debris and clean out thoroughly.
- The glass windows must be frequently inspected to identify any damage or erosion. If they appear scratched, cloudy or show any signs of erosion these are to be replaced at the earliest opportunity.
- New gaskets must be used when replacing the glass windows.
- The fastening bolts must be tightened in a diagonally opposed sequence to ensure equal compression. Torque ratings should not exceed the following settings:

Small series

8mm – 25mm	5Nm
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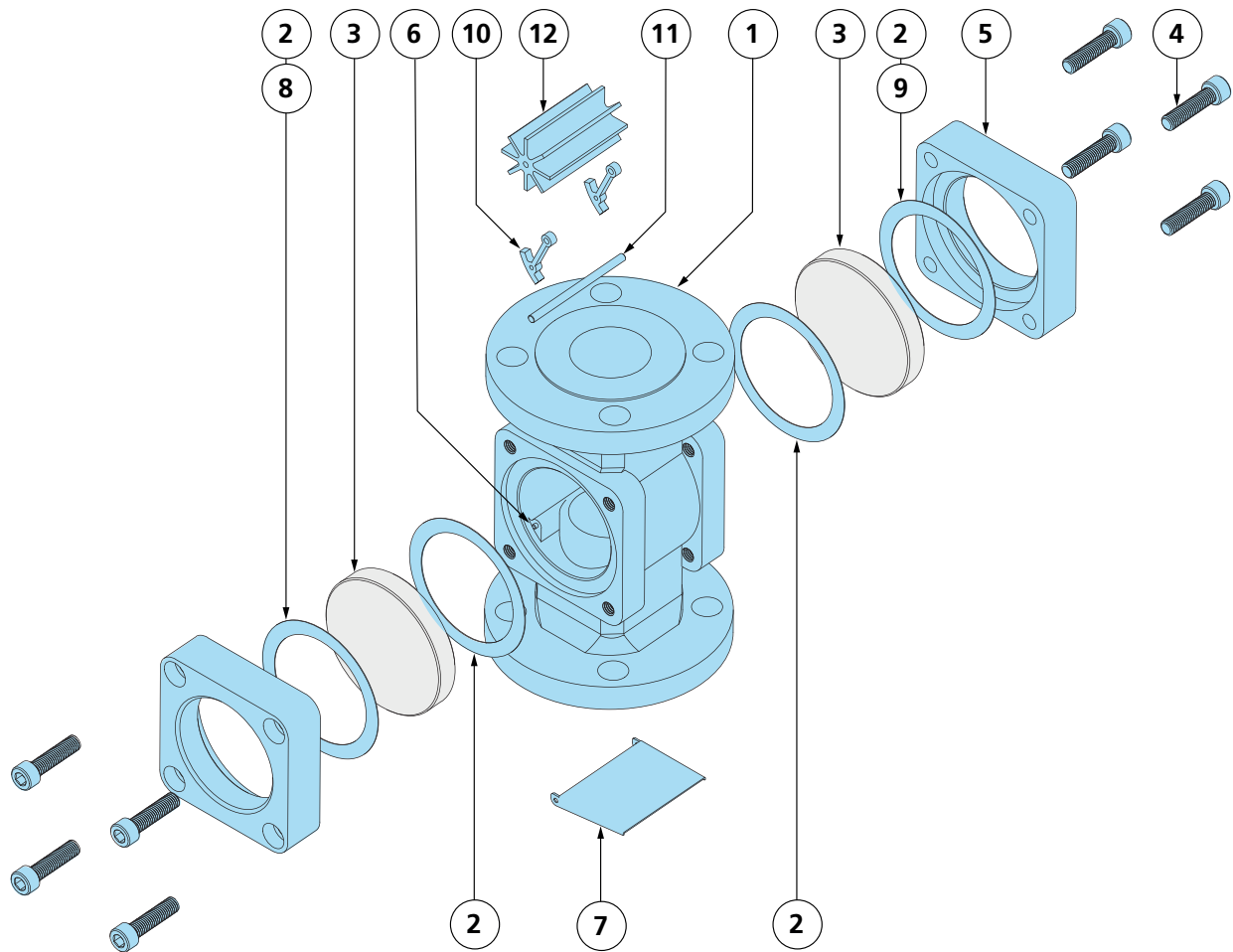
Medium series

32mm – 50mm	15Nm
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Large series

80mm – 100mm	30Nm
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150mm – 200mm	55Nm
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Parts List - Common Parts

Item	Qty	Description	Material
1	1	Flanged Spout Body	Stainless Steel
2	4	Window Gasket	Polytetrafluoroethylene
3	2	Spout Window	Glass
4	8	Socket Cap Head	Stainless Steel
5	2	Window Cap	Stainless Steel

Flap type

Item	Qty	Description	Material
6	1	Sel-Lok Pin 3 x 12mm	Stainless Steel
7	4	Flapper	Stainless Steel
8	2	LH Indicating Gasket	Polycarbonate
9	8	RH Indicating Gasket	Polycarbonate

Spinner type

Item	Qty	Description	Material
6	1	Sel-Lok Pin 3 x 12mm	Stainless Steel
10	4	Anchor	Stainless Steel
11	2	Dowel Pin	Stainless Steel
12	8	Spinner	Polytetrafluoroethylene

Double Window Indicator Options

