



# FLOW INSTRUMENTS for Firefighting Equipments

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# OFFICINE OROBICHE

## Solutions for Firefighting Equipments

Flow instruments are an essential equipment of modern **firefighting pumping systems**. They provide the real-time awareness needed to keep pressurization systems stable, predictable, and fully compliant. They verify that pumps deliver the required output, confirm that lines are charged and performing correctly, and trigger immediate alarms when flow conditions deviate from safe operating thresholds.

Our patented **Flowmeter FBB Series** verifies that pumps deliver the required output, confirm that lines are charged and performing correctly. Our **Paddle Flowswitch PLJ-EN** triggers immediate alarms when flow conditions deviate from safe operating thresholds.

Whether through **high-quality flowmeters** or **reliable flow switches**, our devices transform water movement into decisive control.





# FLOWMETER FBB Series

## WHAT IS IT?

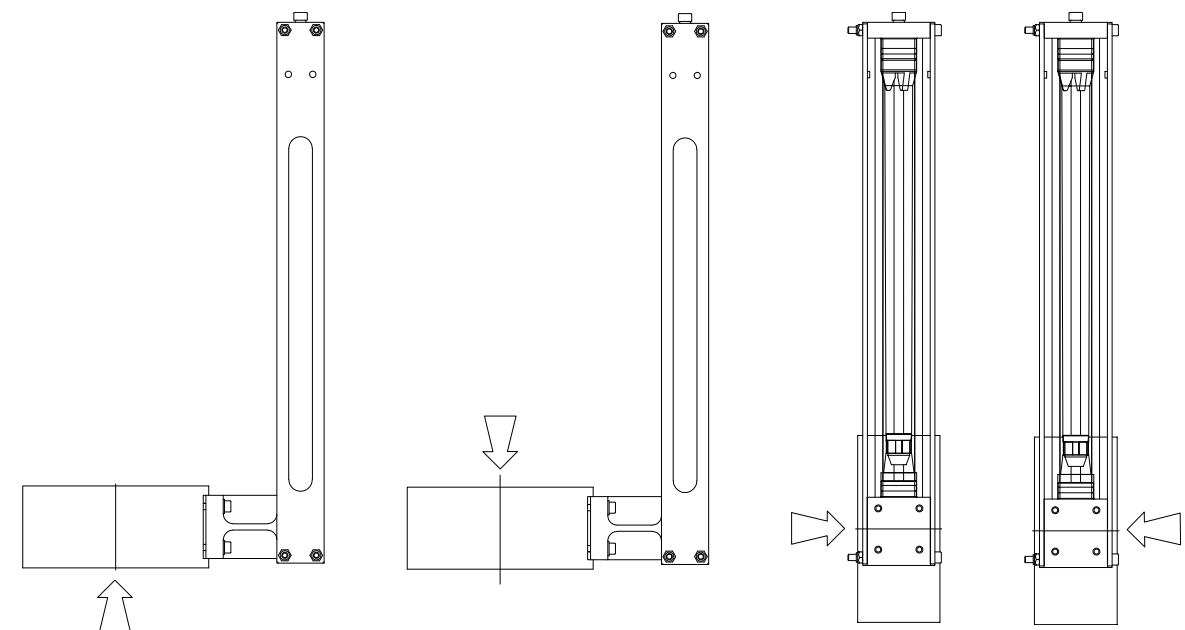
FBB Series is a patented flowmeter specifically designed to be installed in firefighting pressurization systems as prescribed by the standard EN 12845. It is wafer mounted between two flanges EN 1092-1 PN10/16 or ASME B16.5 ANSI 150. It's typically mounted on a bypass line to measure the water flow during the system inspections.

## HOW DOES IT WORK?

The calibrated diaphragm mounted on the line creates a pressure drop proportional to the water flow. The diaphragm is connected to a conical transparent tube with a guided float on the inside. The pressure drop moves the float to a tube section with an area proportional to the liquid flow making the water flow readable on the scale printed on the outside of the transparent conical tube.

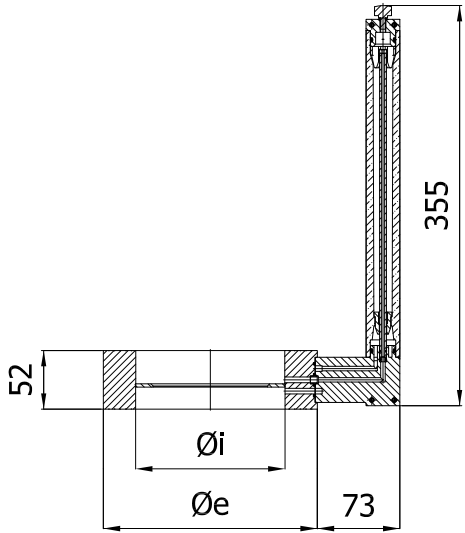
## ADVANTAGES

- Short delivery, ready on shelf
- Cost effective flow gauge solution
- Easy installation
- Wide range of flow values
- Compliant EN 12845
- The measuring tube orientation can be easily adjusted in four different positions with just four screws:



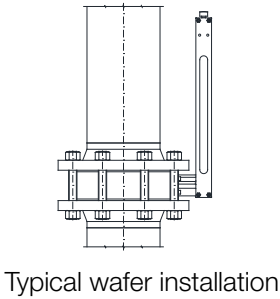
RANGES

| CODE        | DN        | Øe<br>[mm] | Øi<br>[mm] | FLOW RANGE<br>[m³/h] | ΔPmax<br>[mmH <sub>2</sub> O] | kg ~ |
|-------------|-----------|------------|------------|----------------------|-------------------------------|------|
| FBB040P025  | 40 (1½")  | 90         | 41.9       | 2.5 - 25             | 10 000                        | 2    |
| FBB040P040  |           |            |            | 4 - 40               | 10 000                        |      |
| FBB040P055  |           |            |            | 5.5 - 55             | 19 000                        |      |
| FBB050P050  | 50 (2")   | 100        | 53.1       | 5 - 50               | 10 000                        | 2    |
| FBB050P065  |           |            |            | 6.5 - 65             | 10 000                        |      |
| FBB050P090  |           |            |            | 9 - 90               | 19 000                        |      |
| FBB065P080  | 65 (2½")  | 118        | 70.9       | 8 - 80               | 10 000                        | 2    |
| FBB065P100  |           |            |            | 10 - 100             | 10 000                        |      |
| FBB065P140  |           |            |            | 14 - 140             | 19 000                        |      |
| FBB080P130  | 80 (3")   | 135        | 83.1       | 13 - 130             | 10 000                        | 2    |
| FBB080P150  |           |            |            | 15 - 150             | 10 000                        |      |
| FBB080P200  |           |            |            | 20 - 200             | 19 000                        |      |
| FBB100P150  | 100 (4")  | 159        | 107.9      | 15 - 150             | 10 000                        | 3    |
| FBB100P200  |           |            |            | 20 - 200             | 10 000                        |      |
| FBB100P280  |           |            |            | 28 - 280             | 10 000                        |      |
| FBB125P300  | 125 (5")  | 190        | 132.7      | 30 - 300             | 10 000                        | 10   |
| FBB125P420  |           |            |            | 42 - 420             | 10 000                        |      |
| FBB125P480  |           |            |            | 48 - 480             | 13 000                        |      |
| FBB150P350  | 150 (6")  | 212        | 160.5      | 35 - 350             | 10 000                        | 10   |
| FBB150P450  |           |            |            | 45 - 450             | 10 000                        |      |
| FBB150P600  |           |            |            | 60 - 600             | 10 000                        |      |
| FBB200P450  | 200 (8")  | 273        | 208.9      | 45 - 450             | 10 000                        | 13   |
| FBB200P600  |           |            |            | 60 - 600             | 10 000                        |      |
| FBB200P800  |           |            |            | 80 - 800             | 10 000                        |      |
| FBB200P1000 |           |            |            | 100 - 1000           | 10 000                        |      |
| FBB200P1600 | 250 (10") | 324        | 260.5      | 160 - 1600           | 10 000                        | 15   |
| FBB250P800  |           |            |            | 80 - 800             | 10 000                        |      |
| FBB250P1000 |           |            |            | 100 - 1000           | 10 000                        |      |
| FBB250P1600 |           |            |            | 160 - 1600           | 10 000                        |      |
| FBB300P800  | 300 (12") | 368        | 311.4      | 80 - 800             | 10 000                        | 15   |
| FBB300P1000 |           |            |            | 100 - 1000           | 10 000                        |      |



TECHNICAL DATA

- Max. pressure: 16 bar
- Max. temperature: 100 °C
- Length of reading scale: ~ 200mm
- Measurement range: ~ 1:10
- Accuracy ±5% F.S.
- Guided float
- Installation in flanges: EN 1092-1 PN10 or PN16 or ASME B16.5 cl. 150



MATERIALS

Body flange: PA6V5010 up tp DN100, painted carbon steel from DN125  
Flowmeter body: PA6V5010  
Diaphragm: SS 316  
Float: SS 316  
Gasket: NBR  
Measuring pipe: Polycarbonate

Plastic Body (small DN)



For corrosive fluids like sea water the steel parts can be completely made of SS316.



Steel Body (large DN)



For even more corrosive fluids the diaphragm can be made of polypropylene with the internal ring in Alloy C276.





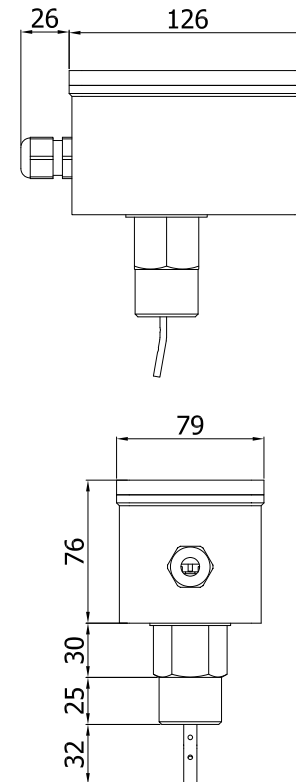
# FLOWSWITCH PLJ-EN

## WHAT IS IT?

PLJJ-EN is a flowswitch specifically designed to be installed in firefighting water lines as a flow detector certificated EN 12259-5. It shall be screwed perpendicular to the pipe, in any direction. It's typically mounted on sprinklers lines.

## HOW DOES IT WORK?

When the water flow decreases it moves the paddle connected to SPDT microswitch not in contact with the fluid. A screw inside the housing allow to calibrate the set value by changing the force needed by the water to move the paddle. The instrument is supplied with a set of paddles suitable for any pipe DN and they can also be cut on site to be adjusted to any need.



## ADVANTAGES

- Short delivery, ready on shelf
- Cost effective flow switch solution
- Easy installation and set
- EN 12259-5 certificate
- Installable in any orientation

## TECHNICAL DATA

- Connection 1" ISO 7/1-R
- Stainless steel body and paddle as prescribed by EN-12259-5
- Maximum Pressure 25 barg
- Ambient T range -25 / +80 °C
- Fluid T range -30 / +120 °C
- Ingress protection IP65
- Painted aluminium housing
- ISO M20x1.5 cable gland
- SPDT contact 15 A 125/250 VAC - 5A 24 VDC

| Pipe DN  | Min set [m³/h] |         | Max set [m³/h] |         |
|----------|----------------|---------|----------------|---------|
|          | Opening        | Closing | Opening        | Closing |
| 25 (1")  | 0.6            | 1       | 1.9            | 2       |
| 32 (1¼") | 0.8            | 1.3     | 2.8            | 3       |
| 40 (1½") | 1.1            | 1.7     | 4.1            | 4.4     |
| 50 (2")  | 2.2            | 3.1     | 6.1            | 6.6     |
| 65 (2½") | 2.8            | 4.1     | 7.3            | 7.8     |
| 80 (3")  | 4.3            | 6.2     | 11.4           | 12      |
| 100 (4") | 6.1            | 8.4     | 17.3           | 18.4    |
| 125 (5") | 9.3            | 12.9    | 25.2           | 26.8    |
| 150 (6") | 12.3           | 16.8    | 30.7           | 32.7    |
| 200 (8") | 38.6           | 46.6    | 90.8           | 94.2    |

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