

Orifice plate, flow-meters DB Series



- For aggressive liquids
- Direct reading indicator on pipes from ND 50 up to ND 200
- Mounting in all positions
- According standard NF X 10-102
- Options: Flow contact; Output signal

APPLICATIONS

- Clean waters: Tap water, swimming pool water
- Aggressive liquids (acidic or basic)

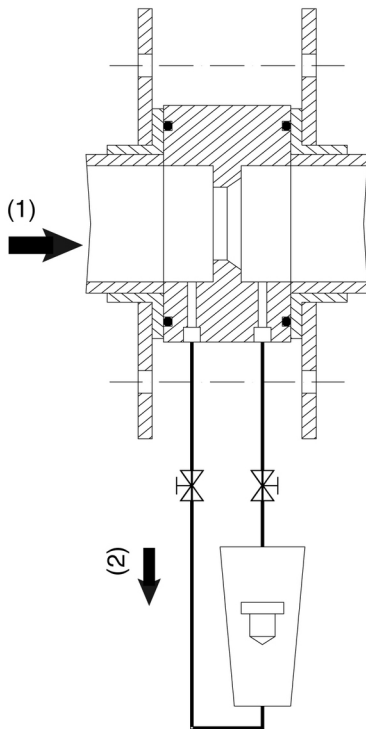
DESCRIPTION

Wafer mounting: The orifice plate is inserted between 2 flanges. The differential pressure is between the inlet and outlet, one on each side of the plate. The differential pressure is related to the flow rate inside the main pipe. The flow indicator is part of the bypass, allowing a direct reading.

In order to obtain a proportional relation to the main flow, a BORDA nozzle is inserted before the flow indicator.

Option with output signal:

Instead of an indicator, a flow transmitter may be installed.



(1) : Main line
(2) : Differential flow

TECHNICAL FEATURES

Flow ranges	From 2 up to 350 m ³ /h (water)
Accuracy	± 4 %
Repeatability	± 0,4 %
Scale amplitude	2 to 10
Pressure limit	10 bar (water at 20 °C)
Temperature limits	PVC: 50 °C; PPH: 90 °C; PVDF: 120 °C
Pressure drop	On request

Materials:

Orifice plate (standard)	PVC
Associated flow indicator	PVC or polysulfone
Diver	PVDF
Bypass	Same as the orifice plate
Stop valves	Same as the orifice plate
Seals	EPDM
BORDA injector	PVC, PPH or PVDF

Options:

- Reed contact: See data-sheet da731-03
- Output signal: Transmitter on request

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29-12-2020

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CODE NUMBERS AND REFERENCES

Ranges indicated on the table are for DB/PDP flow indicators.
These scales, are not contractual, may be modified according operating conditions.
Higher flow rates, greater diameters: On request

Flow rates are indicated for pipes in PVC and PN 10.
In all events, the thickness and the real inner diameter of pipe have to be specified, so we may assure the specifications of the system.

DB Series, [m ³ /h] (water at 20 °C)				
ND	Scale N° 1	Scale N° 2	Scale N° 3	Scale N° 4
50	2...10	5...25	-	-
65	2...10	6...30	-	-
80	3...15	6...30	10...50	-
100	4...20	6...30	15...80	-
125		6...30	15...80	30...150
150		10...50	20...100	40...200
200		20...100	40...200	70...350

INSTALLATION REQUIREMENTS

The respect of requirements is necessary to warrant a coherent measurement with the accuracy of the system.
The straight distances upstream the plate, are the strict necessary minimum (depend on the final calculation of the system).

Number of D (diameter), see the table N° 3 of standard NFX 10 102

↓

6 to 23	Single elbow at 90° or a Tee (flow rate by one way)
17 to 40	2 elbows at 90°, 2 different planes
5 to 15	Reducing from 2 D to 1 D along distance of 1.5 D to 3 D
6 to 15	Valve 100 % opening (type ball valve)

The upstream distance depends on the ratio between the inner diameter (D) of the pipe and the diameter of the orifice plate.
The exact lengths to be observed in order to maintain the accuracy are communicated after study of each case.

WAFER MOUNTING

The loose sockets will be centered with the flanges.
The inner diameter of the sockets must be exactly the same one of the pipe to avoid turbulences.

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DEFINITION OF THE FLOWMETER

The DB flow-meter is manufactured in accordance with operating conditions: to provide before any quote.

Liquid :
Density : (kg/m³)
Pressure : (bar)
Temperature : (°C)
Max. flow-rate : (m³/h)
Piping : (Ø in mm)
 : (thickness in mm)
 : Material

Flow direction : VA Uprising liquid
 : VD Liquid going down
 : GD Liquid flowing to the RIGHT
 : DG Liquid flowing to the LEFT

Mounting : VB (VERTICAL pipe / bottom reading)
 : VH (VERTICAL pipe / Top reading)
 : HB (HORIZONTAL pipe / bottom reading)
 : HH (HORIZONTAL PIPE / Top reading)

VERTICAL pipe - Uprising flow



VB

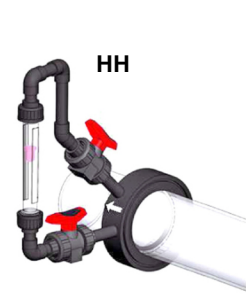


VH

HORIZONTAL pipe - Liquid flowing to the left



HB



HH

VERTICAL pipe - Liquid going down



VB

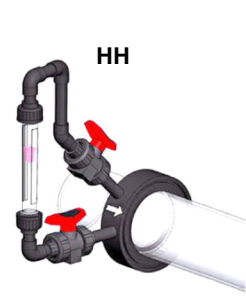


VH

HORIZONTAL pipe - Liquid flowing to the right



HB



HH

Flow contact: See data-sheet da 731-03

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