

Multi-hole orifice plate

Model FLC-MP

WIKA data sheet FL 10.15

Applications

- Power generation
- Oil production and refining
- Water treatment and distribution
- Gas processing and transmission
- Chemical and petrochemical industries

Special features

- For requirements in short straight up- and downstream pipes
- Suitable for liquid, gas and steam flow measurement
- Compact version available
- Accuracy 1 % ... 2 % depending on beta ratio and Reynolds number
- Repeatability 0.1 % of flow rate



Multi-hole orifice plate, model FLC-MP

Description

Multi-hole orifice plates are variants of orifice plates like square edge, eccentric or segmental orifice plates. The main difference consists in the 4 bores radially displaced relative to the plate centre. The model FLC-MP requires only 2 diameters downstream and 2 diameters upstream. Due to this configuration the multi-hole orifice plates ensure a uniform flow of the medium. This enhances the accuracy of flow measurement and minimises disturbances in flow, offering high performance even in short upstream and downstream pipes.

A simple and cost-efficient solution

Due to their rectifying effect on flow and easy installation, model FLC-MP multi-hole orifice plates increase cost-effectiveness and flexibility in terms of application areas.

Going beyond international standards

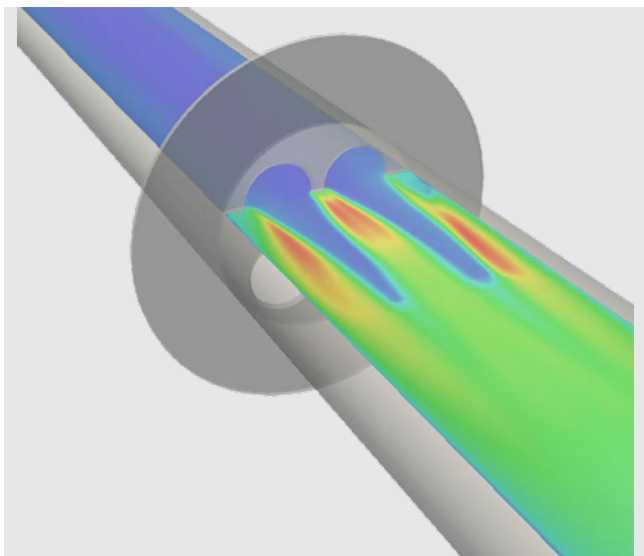
The multi-hole orifice plates are designed and produced in accordance with WIKA standards, based on the requirements of ISO 5167, AGA Report Number 3 and ASME MFC 3M. Another contribution comes from Computational Fluid Dynamics (CFD) simulations and analyses. Their results show, for example, that the deviation of the discharge coefficient does not exceed 2 % of the value of standardised solutions.

Optimised to customer requirements

Our multi-hole orifice plates are suitable for liquid, gas and steam flow measurement and optimised with respect to customers' requirements to perfectly match the respective final application. The bore diameters are calculated to generate the specified differential pressure at full scale flow rate.

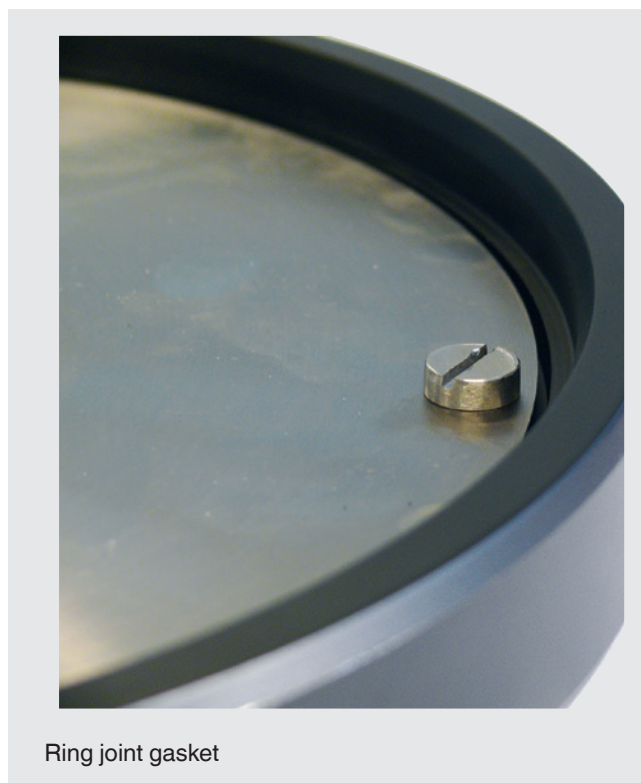
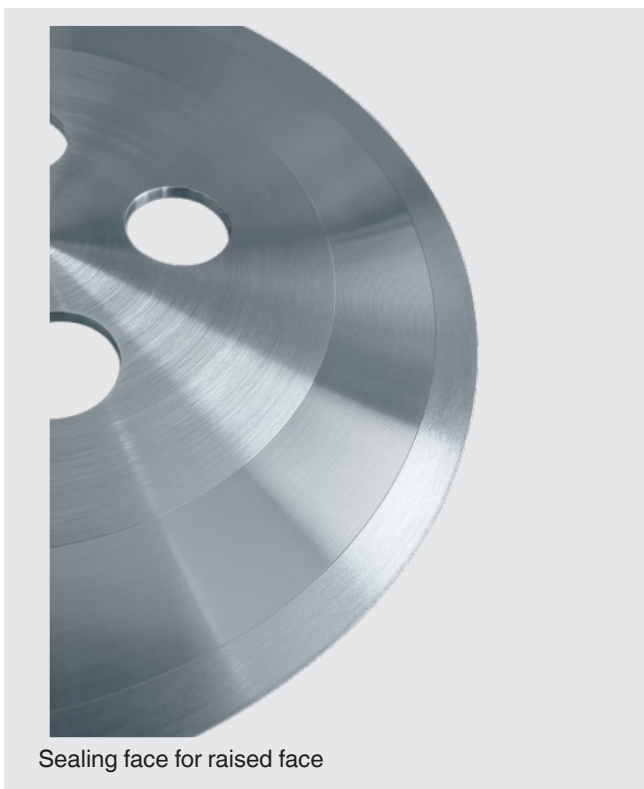
Specifications

Functional principle of flow with Computational Fluid Dynamics



Basic information	
Surface finish in accordance with standard	<ul style="list-style-type: none"> ■ API 6A ■ ASME B16.36 ■ ASME B16.47 Form A ■ ASME B16.47 Form B ■ BS 1560 ■ EN 1092-1 <p>→ Other standards on request → The ANSI accredited ASME standard B 16.5 requires that the flange face or the sealing face of the orifice plate have a specified roughness to ensure a high quality seal.</p>
Nominal size	2" ... 24" → Larger versions on request
Nominal pressure ratings	150 ... 10,000 psi [10 ... 769 bar]
Beta ratio	0.2 ... 0.65
Accuracy	1 % ... 2 % depending on beta ratio and Reynolds number
Repeatability	0.1 % of flow rate
Maximum operating pressure and temperature	Limited only by material and flange pressure rating
Features	
Materials	<ul style="list-style-type: none"> ■ SS 316 (standard) ■ Superior material on request
Assembly	RF or RTJ flanges
Min. required straight pipe length	2 x diameter upstream 2 x diameter downstream
Available seals	
Raised face (RF)	125 ... 250 AARH or 250 ... 500 AARH
Ring joint gasket	<ul style="list-style-type: none"> ■ Octagonal ■ Oval

Dimensions in mm [in]



Dimensions of multi-hole orifice plates for flanges with raised face (RF)	
Nominal size	Plate thickness
2" ... 6"	3 mm [0.12 in]
8" ... 14"	6 mm [0.24 in]
16" ... 24"	10 mm [0.39 in]

Other plate thicknesses on request.

Ordering information

Nominal size / Nominal pressure rating / Sealing face / Material

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The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.
In case of a different interpretation of the translated and the English data sheet, the English wording shall prevail.



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