

Cone flow meter

For high performance in applications with limited mounting space

Model FLC-FC

WIKA data sheet FL 10.11

Applications

- Oil and gas processing
- Petrochemical industry
- Water and wastewater
- Mining and basic materials industry
- Power generation

Special features

- Suitable for liquids, gases and steam
- Wide turndown
- Low requirements for straight upstream and downstream pipes
- Low costs and low maintenance effort

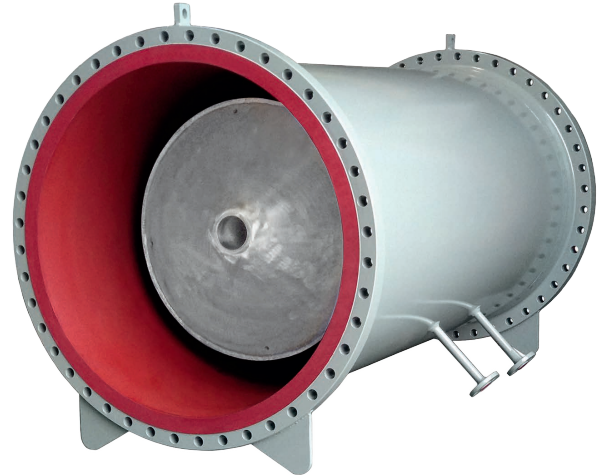
Description

The model FLC-FC cone flow meter uses differential pressure to determine the flow in applications with limited mounting space.

Thanks to its special design, the flow meter ensures low pressure loss, high accuracy and repeatability, even under difficult conditions. The model FLC-FC is produced in accordance with the ISO 5167 reference standard.

Low maintenance effort

The external surface of the flow meter is protected from particles in the medium, which ensures a long service life even in applications with abrasive liquid.



Cone flow meter, model FLC-FC

Short upstream and downstream pipes possible

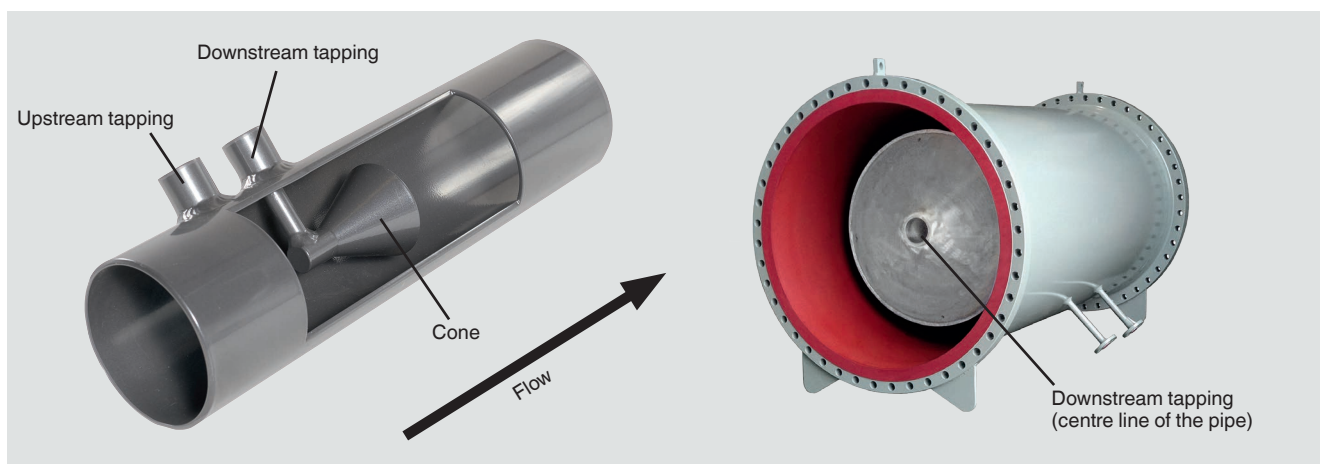
The optimised flow profile prevents asymmetric flow effects and enables operation with very short upstream and downstream pipes.

High quality

Only high-quality and traceable materials are used for the cone flow meter.

Each flow meter is subjected to strict controls and non-destructive tests before delivery in order to ensure WIKA's quality standard.

Functional principle



Specifications

Specifications	
Nominal size	DN 50 ... 1,600 (2 ... 64")
Accuracy	±5 % of measured value (uncalibrated) (Option: ±0.5 % of measured value (calibrated)) WIKA recommends a calibration of every cone flow meter. Optimal accuracy is only achieved when a calibration of the full measuring range is performed.
Repeatability	±0.1 %
Turndown	Typically 10:1
Beta ratio	<ul style="list-style-type: none"> ■ 0.45 ■ 0.6 ■ 0.75 Others on request
Max. operating pressure	The max. operating pressure depends on the pipe class, the flange and the end connection.
Materials	
Base body	<ul style="list-style-type: none"> ■ Carbon steel ■ Low-temperature carbon steel ■ Stainless steel Other materials on request (e.g. Duplex SS, Hastelloy, Monel, ...)
Primary element (cone)	Stainless steel 316/316L Other materials on request

Options

- Direct mounting of a differential pressure transmitter for an even more space-saving installation.
- Integrated temperature sensor for mass flow measurement.

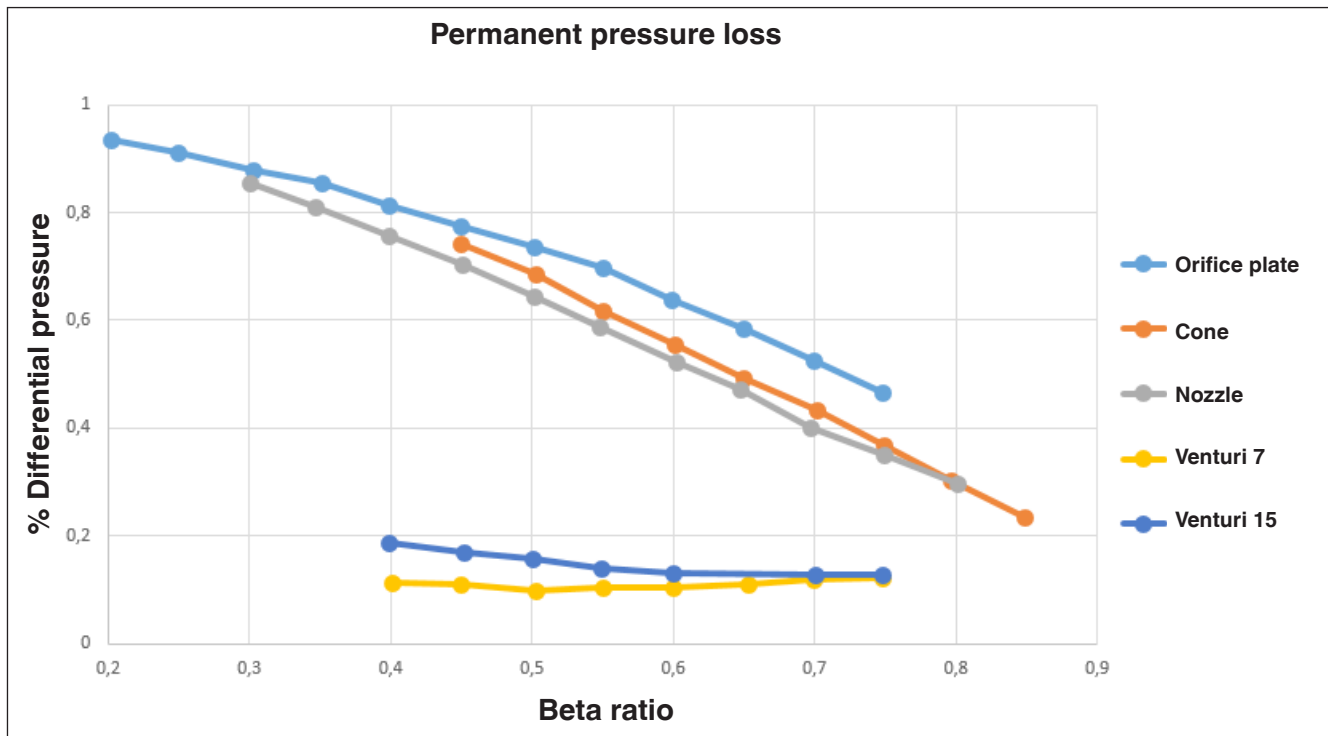
Installation requirements

The length of the upstream pipe is measured from the downstream side of the nearest fitting to the centre of the first pressure tapping of the flow meter. The length of the downstream pipe is measured from the beta edge of the primary element to the upstream side of the nearest fitting. Fittings which are located within 2 D at the downstream side of the flow meter introduce no additional errors.

Fitting	$\beta \leq 0.45 \dots < 0.60$	$\beta \geq 0.60 \dots < 0.75$
Single 90° bend	0 ... 3 D	6 D
Two 90° bends (perpendicular)	0 ... 3 D	6 D
Partially closed valve	10 D	10 D
Shut-off ball valve	0 ... 3 D	3 ... 5 D
T-piece	0 ... 1 D	3 D

D = Diameter

Permanent pressure loss comparison



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