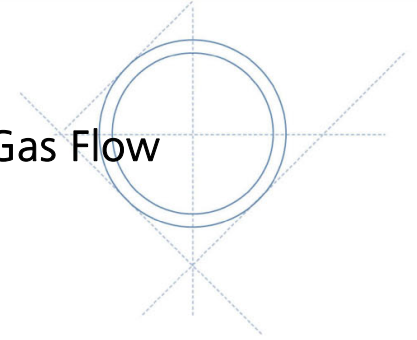


## EMCO Venturi Tube Type RH for High Pressure Gas Flow

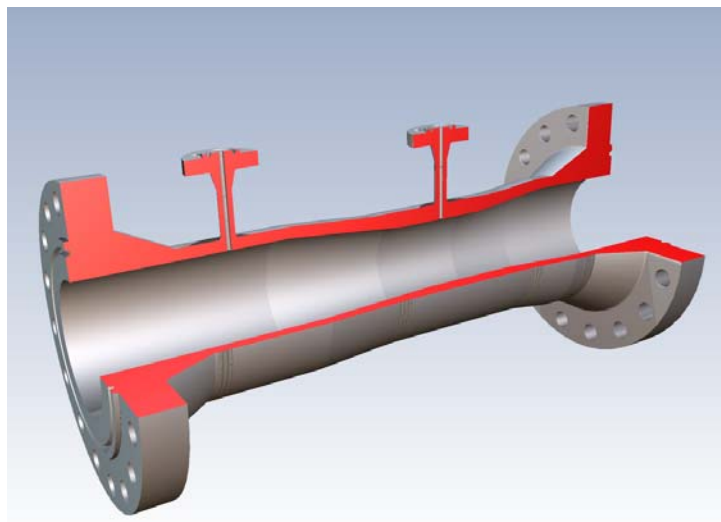


### Principle

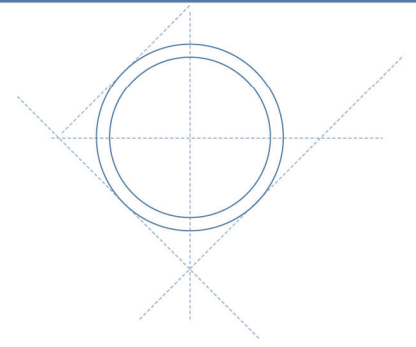
EMCO venturi tubes are used as primary elements in flow measurement of high pressure gas and steam according to the differential pressure principle. In high pressure gas flow, the discharge coefficient increase for venturi tubes according to ISO 5167-4, whereas the venturi type RH having a total inlet convergent angle of 10,5° provides a discharge coefficient more in accordance to a physical model.

### Construction

Design Standards	: ISO/TR 15377, ISO 5167-4, ASME MFC-3M
Sizes	: DN 50 – 200, 2" – 8" according to ISO/TR 15377.
Beta (d/D)	: $0,4 \leq \beta \leq 0,75$
Pressure rating	: PN 40-640, 300-2500 lbs, ISO PN 50-420.
Material	: Carbon steel, AISI 316, Duplex, 254 SMO others on request.
Mounting style	: Weld ends according to EN 9692-1 or ANSI B16.25. Flanges acc. to DIN or ANSI B16.5 standards or Grayloc Clamp connections.
Pressure taps	: Weld ends $\varnothing$ 21.3 mm, 26.9 mm, thread connection 1/2" BSP, 1/2" NPT, or flanged, others on request.
Tapping hole size	: 4 mm
Tappings	: Single pressure tappings or 2x4 tappings each arranged with an external annular ring to equalise the pressure.
Inlet cone	: 10,5°
Outlet cone	: 7 – 15°



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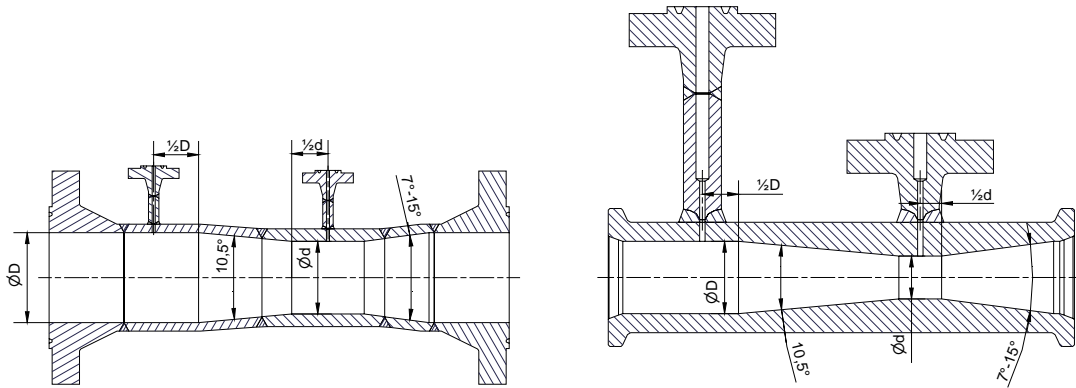


### Technical Data

- Accuracy : 1 % (according to ISO/TR 15377) uncalibrated, ¼ % calibrated
- Pressure loss : Depending on outlet cone between 10 - 15 % of the differential pressure measured
- Limits for Re. No. :  $3 \times 10^5 < ReD$ ,  $24000 < Re^*$  ( $Re^* = (\text{throat tapping inner } d / \text{venturi throat } d) \times ReD$ )
- Accessories : Shut-off valves and condensing chambers for steam flow.

### Installation

#### Flanged



#### Clamp connection

The required straight pipe run in front of the venturi tube depends on the disturbance and beta (d/D).

Diameter ratio $\beta$	Single 90° bend		Two or more 90° bends in the same plane or different planes		
	1	2	3		
		A	B	A	B
0,30		3	a	3	0
0,40		3	a	3	0
0,50		3	a	3	0
0,60		6	3	6	3
0,70		17	3	22	3
0,75		24	6	27	6

Column A: without additional uncertainty  
 Column B: with 0,5 % additional uncertainty.  
 a: Data not available.