

EMCO Orifice Plate with Single Pressure Tapping Series MES in all Welded Construction

Principle

EMCO orifice plate are used as primary elements in flow measurement of steam, liquid, and gas according to the differential pressure principle.

Construction

Design and calculation

standards : ISO 5167-2, ASME MFC-3M, DIN 19215, Shell Flow Meter Engineering Handbook, AGA no. 3

Sizes : DN 50 - 1000 according to DIN 2402

Pressure rating : PN 10 - 400, 150 - 2500 lbs

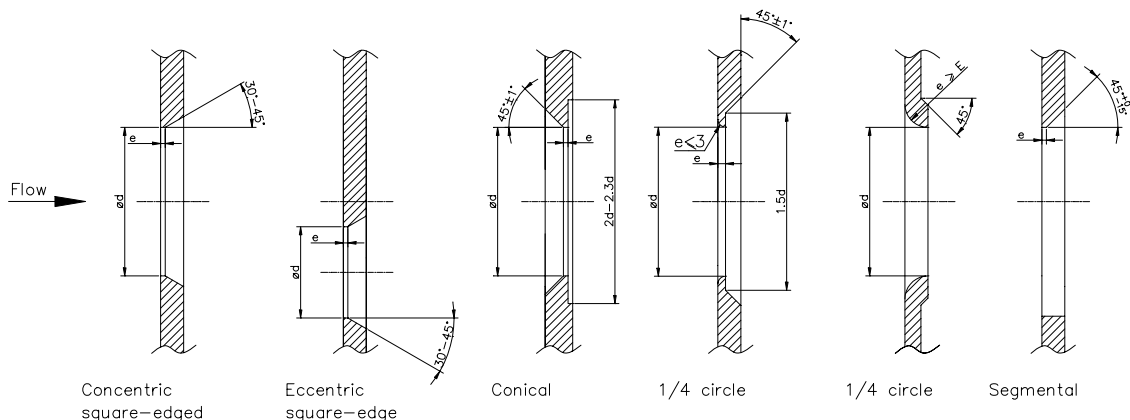
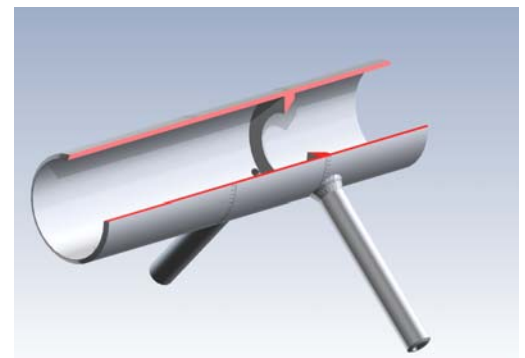
Plate thickness : 10 mm

Vent or drain hole : On request

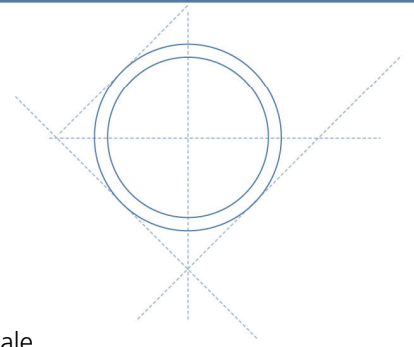
Material : Carbon steel P235GH, AISI 316, 16Mo3, 13CrMo4-5, 10CrMo9-10, WB 36, X20CrMoV121, other materials on request

Mounting style : Weld ends according to DIN 2559 or ANSI B16.25

Orifice plate shapes : Square edge concentric, square edge eccentric, conical, 1/4 circle, segment.
The plate is bevelled on the down stream side except for 1/4 circle orifice plate.



0-04-013-2e



- Pressure taps : Ø 21.3 mm, 24 mm, 26.9 mm, ½" BSP male, ½" NPT male
- Tap lengths : 150 mm, others on request.
- Tap location : Tap location for steam flow: 180°. At least 45° apart for liquid and gas. To be stated with order
- Marking : The orifice plate is marked with "+" and "-" and flow direction.
- Accessories : single and double shut-off valves and condensing chambers for steam flow measurement

Technical Data

- Accuracy : +/- 0,5 % for $\beta < 0,6$ and equal to β for β values above 0,6
- Pressure loss : Depending on β , for β equal to 0,6 : ca. 60 % of the differential pressure measured
- Limits for Reynolds No : $Re > 1260 \times \beta^2 D$ according to ISO 5167
 $2000 < Re < 10^8$ according to ASME MFC-3M

Dimensions

All dimensions in mm

DN	Ø Inner pipe	Upstream length ISO 5167	Total length ISO 5167	Upstream length DIN 19215	Total length DIN 19215
50	45 - 57	115	230	150	250
65	58 - 72	145	290	180	300
80	73 - 90	180	360	230	350
100	91 - 112	225	450	280	400
125	113 - 137	275	550	350	500
150	138 - 162	325	650	400	600
(175)	163- 187	375	750	470	700
200	188 - 225	450	900	570	800
250	226 - 275	550	1100	690	1000
300	276 - 325	650	1300	820	1200
350	326 - 375	750	1500	950	1400
400	376 - 425	850	1700	1050	1500
450	426 - 475	950	1900	1200	1700
500	476 - 550	1100	2200	1370	2000
600	551 - 650	1300	2600	1500	2000
700	651 - 750	1500	3000	1500	2000
800	751 - 850	1700	3400	1500	2000
900	851 - 950	1900	3800	1500	2000
1000	951 - 1100	2200	4400	1500	2000