

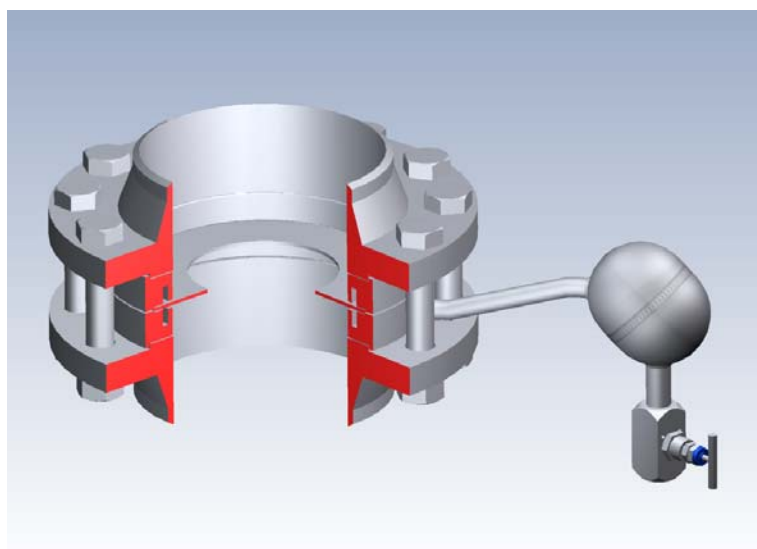
## EMCO Orifice Plate with Carrier Rings and Corner Pressure Tappings Series MRK for Insertion Between Flanges

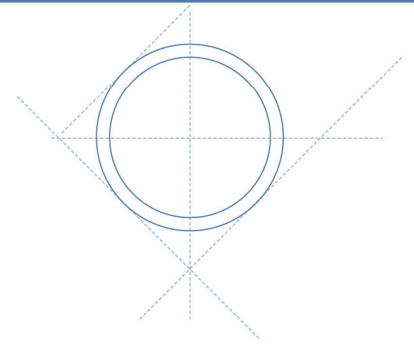
### Principle

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

### Construction

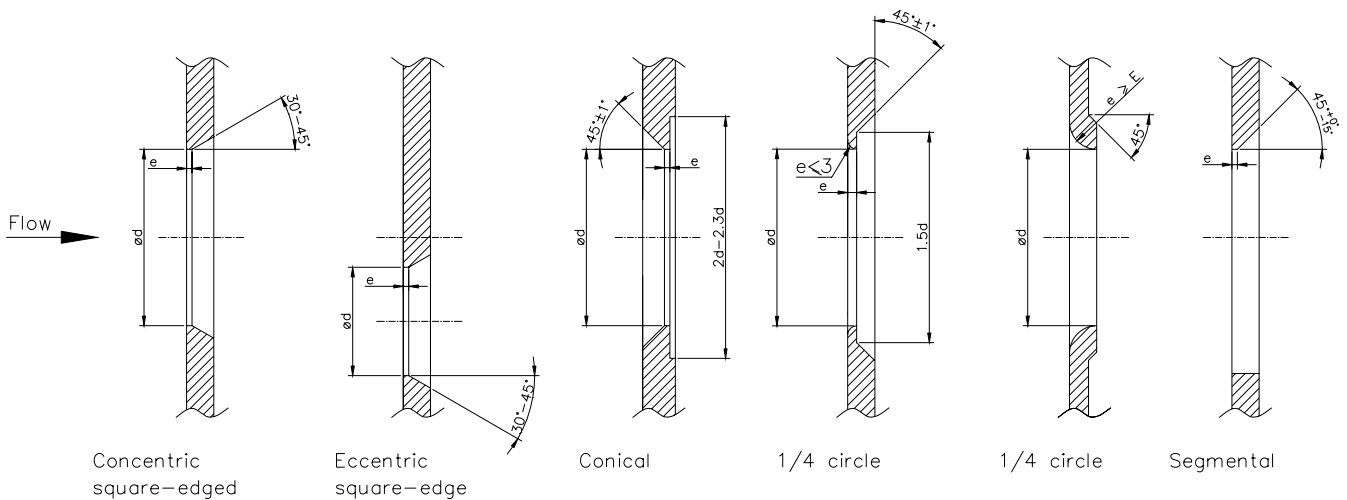
- Design and calculation standards : ISO 5167, ASME MFC-3M, DIN 19205, Shell Flow Meter Engineering Handbook, L. K. Spink, AGA no. 3.
- Sizes : DN 50 - 1200, 2" - 42" .
- Pressure rating : PN 10 - 400, 150 - 2500 lbs
- Plate thickness : 3 - 10 mm depending on plate size.
- Vent or drain hole : On request.
- Plate material : AISI 316, other on request.
- Carrier ring material : Carbon steel P265GH, AISI 316, 16Mo3, 13CrMo4-5, other materials on request.





Mounting style : Between flanges with flat or raised face or groove according to DIN 2526, 2513 or 2512, RF according to B 16.5

Orifice plate shapes : Square edge concentric, square edge eccentric, conical, 1/4 circle, segment. Orifice plates in sizes up to DN 150 the plate is bevelled on the down stream side except for 1/4 circle orifice plate.



Pressure taps : 3/8", 1/2" BSP male, Ø 12 mm, 1/2" NPT.

Tap lengths : 150 mm, other on request.

Tap location : Normally same side of carrier rings, except for vertical mounting where an angle of minimum 90° is required otherwise to be stated with order.

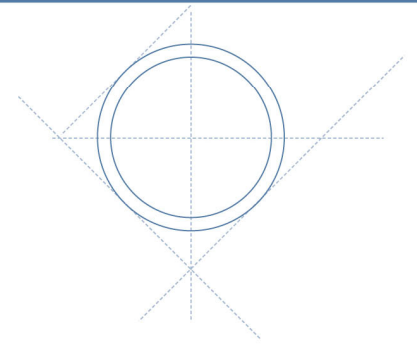
Marking : In case of bevelled orifice plate the carrier rings are marked with "+" and "-" and flow direction.

**Technical Data**

Accuracy : +/- 0,6 % for  $\beta < 0,6$  and equal to  $\beta$  for  $\beta$  values above 0,6

Pressure loss : Depending on  $\beta$ , for  $\beta$  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



## EMCO Orifice Plate Series MRK

**Accessories** : Shut-off valves and condensing chambers for steam flow measurement.  
Flange assembly complete with bolts, nuts and gaskets.

### Dimensions for DIN flanges

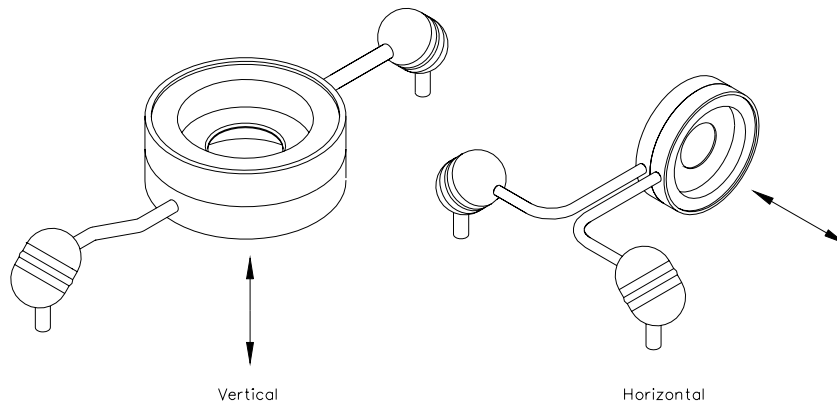
Size DN	Pipe OD	PN 10		PN 16		PN 25		PN 40		PN 64		PN 100		d1=
		D	d4	D	d4	D	d4	D	d4	D	d4	D	d4	D+
50	60.3	54.5	107	54.5	107	54.5	107	54.5	107	54.5	113	53.9	119	1
65	76.1	70.3	127	70.3	127	70.3	127	70.3	127	69.7	138	68.9	144	1
80	88.9	82.5	142	82.5	142	82.5	142	82.5	142	81.7	148	80.9	154	1
100	114.3	107.1	162	107.1	162	107.1	168	107.1	168	106.3	174	104.3	180	1
125	133.0	125.0	192	125.0	192	125.0	194	125.0	194	124.0	210	120.4	217	2
125	139.7	131.7	192	131.7	192	131.7	194	131.7	194	130.7	210	127.1	217	2
150	159.0	150.0	218	150.0	218	150.0	224	150.0	224	147.8	247	144.8	257	2
150	168.3	159.3	218	159.3	218	159.3	224	159.3	224	157.1	247	154.1	257	2
175	193.7	-	-	182.9	248	182.5	254	182.5	265	181.1	277	176.1	287	2
200	219.1	207.3	273	207.3	273	206.5	284	206.5	290	204.9	309	199.1	324	2
250	273.0	260.4	328	260.4	329	258.8	340	258.8	352	255.4	364	248.0	391	2
300	323.9	309.7	378	309.7	384	307.9	400	307.9	417	301.9	424	295.5	458	2
350	355.6	341.4	438	339.6	444	339.6	457	338.0	474	330.6	486	323.6	512	2
350	368.0	353.8	438	353.8	444	352.0	457	350.4	474	343.0	486	336.0	512	2
400	406.4	392.2	489	390.4	495	388.8	514	384.4	546	378.0	543	-	-	2
400	419.0	404.8	489	403.0	495	401.4	514	397.0	546	390.6	543	-	-	2
500	508.0	493.8	594	492.9	617	488.0	624	479.6	628	-	-	-	-	4
600	610.0	595.8	695	592.4	734	588.0	731	-	-	-	-	-	-	4
700	711.0	695.0	810	693.4	804	686.0	833	-	-	-	-	-	-	4
800	813.0	797.0	917	793.0	911	784.6	942	-	-	-	-	-	-	4
900	914.0	896.0	1017	894.0	1011	882.0	1042	-	-	-	-	-	-	4

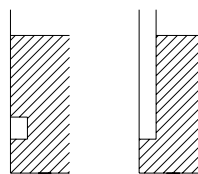
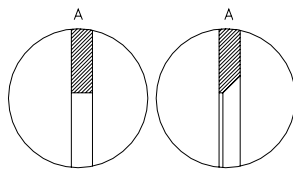
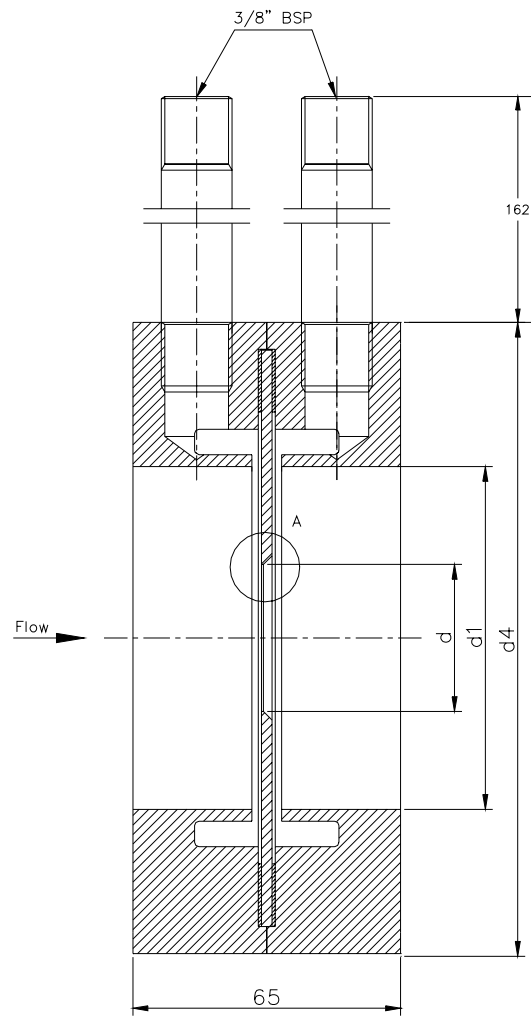
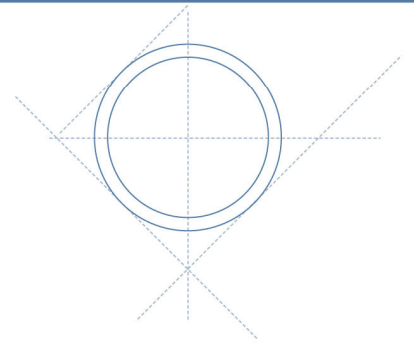
All dimensions in mm

D : Inner pipe diameter

d4 : Outer diameter of carrier rings when mounted between flanges with facing according to DIN 2526.

d1 : Inner diameter of carrier rings. When mounted between flanges with facing according to DIN 2512 and 2513, the inner diameter is  $D + 1.2$  mm.





DIN 2512

DIN 2513