

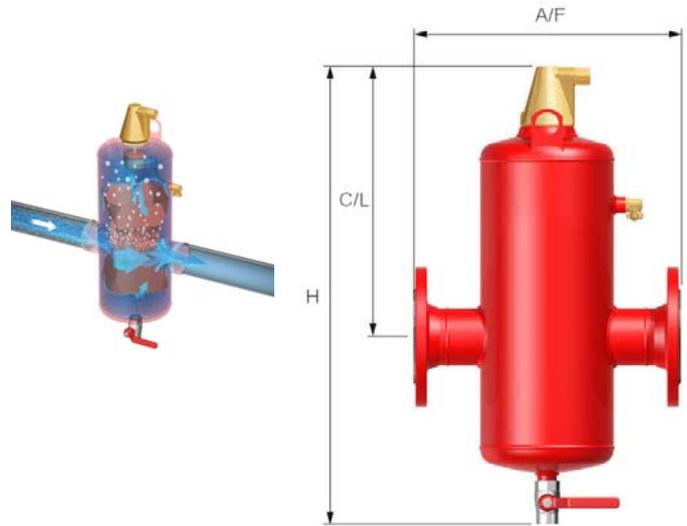
BOSS MBC Combined Air & Dirt Separator (Micro Bubble Clean)

Description: The MBC is a high efficiency in-line air separator combined with a dirt trap, suitable for use on heating and chilled systems.

Placement: The MBC should preferably be installed in the hottest part of the system, (typically the flow pipe from the heat exchanger).

- Features:**
- ▶ PALL Ring Technology
 - ▶ Additional manual air vent for rapid air release during commissioning
 - ▶ Manual dirt / sludge drain valve

Maximum Working Pressure	10 bar(g)
Working Temperature Range	-10°C to 110°C
Maximum Velocity	3 m/s
Efficient Dirt Particle Removal	>32µm (micron)
Connections	PN16 Flanged



Type	Volume	System Connections	Across Face	C/L	Height	Weight	Order Code
	(l)	(DN)	(mm)	(mm)	(mm)	(Kg)	
BOSS MBC 50F Clean De-aerator	8	50	350	333	560	15	18710305
BOSS MBC 65F Clean De-aerator	8	65	350	333	560	15.7	18710316
BOSS MBC 80F Clean De-aerator	25	80	470	435	756	26	18710327
BOSS MBC 100F Clean De-aerator	25	100	470	435	756	28.5	18710338
BOSS MBC 125F Clean De-aerator	59	125	635	515	970	52	18710349
BOSS MBC 150F Clean De-aerator	60	150	635	515	970	56	18710360
BOSS MBC 200F Clean De-aerator	123	200	774	705	1193	89	18710371
BOSS MBC 250F Clean De-aerator	287	250	990	892	1577	175	18710382
BOSS MBC 300F Clean De-aerator	333	300	1016	1032	1742	202	18710393
BOSS MBC 350F Clean De-aerator	646	350	1214	1109	1986	322	18710401
BOSS MBC 400F Clean De-aerator	731	400	1220	1252	2159	364	18795752
BOSS MBC 500F Clean De-aerator	1384	500	1580	1470	2590	663	18711200
BOSS MBC 600F Clean De-aerator	2390	600	1870	1757	3085	1098	18711211

PRESSURE DROP

The expression for the calculation of pressure drop in relation to flow rate on Air and Dirt removal equipment is as follows:

- Δp** Pressure Drop (KPa)
f Water Flow Rate (l/s)
K Equipment Co-efficient (see right)

$$\Delta p = f^2 * K$$

Size	K
50	0.225
65	0.0864198
80	0.046875
100	0.015625
125	0.0073
150	0.0034444
200	0.00125
250	0.0005
300	0.0002667
350	0.0001667
400	0.0001041
500	4.444E-05
600	2.089E-05



PALL RINGS

The cross section presented to the flowing water has no clear path through, all the water is diverted over the PALL rings. The increased surface area and hydrofoil action of the PALL rings allow further pockets of lower pressure to develop accelerating the de-aeration process and promoting coalescence (microbubbles merging into larger more buoyant bubbles) on the large stainless steel surface area of the PALL rings. The automatic air vent on the top of the unit is then used to vent the larger bubbles to atmosphere.

The MBC also utilises a sump / sludge trap. As water borne debris hits the Pall rings the forward momentum is lost, the debris is then free to fall into the sludge trap ready for manual venting at a later stage.