

**ALL STAINLESS STEEL MICROBUBBLE AIR & DIRT SEPARATORS
SIZE, FLOW RATE AND PRESSURE DROP GUIDELINES**

SIZE MM	FLOW RATE IN LITRES/SEC.	PRESSURE DROP IN KPA
50	1 – 2	0.19 – 0.78
65	3 – 4	0.61 – 1.09
80	5 – 7	0.74 – 1.46
100	8 – 11	0.78 – 1.47
125	12 – 18	0.72 – 1.62
150	19 – 26	0.87 – 1.63
200	27 – 47	0.55 – 1.68
250	48 – 73	0.72 – 1.66
300	74 – 106	0.82 – 1.69
350	107 – 144	0.93 – 1.68
400	145 – 188	1.00 – 1.68
450	189 – 238	1.06 – 1.68
500	239 – 294	1.11 – 1.68
600	295 – 424	0.82 – 1.69

ALL OUR STAINLESS STEEL MICROBUBBLE AIR & DIRT SEPARATORS ARE SUITABLE FOR A WATER VELOCITY UP TO 3 METRES PER SECOND – THESE WERE PREVIOUSLY PRODUCED IN CARBON STEEL AND ONLY SUITABLE FOR A VELOCITY UP TO 1.5 METRES PER SECOND

FOR SIZES ABOVE 600 MM CONSULT US

ALSO SEE OUR BRASS SCREWED BSP COMBINED UNITS IN SIZES ¾” – 1” – 1 ½” & 2” (THE 2” SCREWED UNITS ARE IN STAINLESS STEEL)

DOSING POT SIZING TABLE

DP SIZE – LITRES	BOILER KW RATING	SYSTEM – LITRES
3.5	0 – 83	0 – 996
5	84 – 209	1008 – 2508
6	210 – 416	2520 – 4992
10	417 – 625	5004 – 7500
11	626 – 833	7512 – 9996
13.5	834 – 1041	10008 – 12492
15	1042 – 1250	12504 – 15000
16	1251 – 1458	15012 – 17496
18	1457 – 1666	17508 – 19992
20	1667 – 2083	20004 – 24996
25	2084 – 2500	25008 – 30000
30	2501 – 2916	30012 – 34992
35	2017 – 3333	35004 – 39996
40	3334 – 3750	40008 – 45000
45	3751 – 4166	45012 – 49992
50	4167	50004

**THE ABOVE IS BASED ON 12 LITRES PER KW FOR LPHW BOILERS
FOR CHW PLANT 10 IS COMMONLY USED**

CONSULT US IF YOU REQUIRE LARGER SIZES

STAINLESS STEEL AIR & DIRT SEPARATORS, CHEMICAL DOSING POTS IN HEATING AND COOLING WATER SYSTEMS

WHY STAINLESS IS CLEARLY ADVANTAGEOUS AND BENEFICIAL OVER THE OLD INFERIOR CARBON STEEL AIR DIRT SEPARATORS

OVERALL SAVINGS INCLUDING OPERATING COSTS

- 1. Smooth surfaces with SS lead to lower friction therefore less energy for pumping/fuel costs (reduced energy bills). Corroded iron and carbon steel uses more energy (higher fuel bills) due to rougher interior surfaces.**
- 2. SS is far superior and outlasts carbon steel. Low maintenance means SS is the lowest lifecycle comparison.**
- 3. SS is easier to install, unload and store on site. Lighter (by 40 to 50%), easy to lift and position.**
- 4. Less HSE issues regarding handling, lifting and installing by using SS, compared with much heavier CS units.**
- 5. SS will not degrade in service thanks to its excellent resistance to corrosion.**
- 6. Reduced downtime and costs for inspection, maintenance and repair.**
- 7. Lighter SS components can be used, needing less structural support.**
- 8. An internal and external coating is not required for SS.**
- 9. SS is extensively more resistant to oxidation by water and biocides than CS. Therefore SS is not contributing to oxidation, sludge's etc.**
- 10. Effects of Aeration – ** Increased oxygen levels as in an aeration process, which can cause corrosion of CS are NOT harmful to SS. ** Abstract from Jan 1999 doc. The Steel Construction Institute (SCI) in association with Avesta Sheffield, the Nickel Development Institute (NiDI) and the guidance of USWGI (user of steel in water industry group) SS working group.**
- 11. Thermal properties of SS. They are far superior to CS. SS resulting in cheaper energy bills. You lose heat over three times faster by using CS.**

12. **SS is highly resistant against micro bacteria attacks plus lower bacteria colonization.**
13. **SS works at higher pressure and temperature compared to CS.**
14. **Hygienic and cleanable material (Smooth surface internally & externally). Due to their very high passive film protecting surface.**
15. **Lower adhesion of deposits (dirt & sludge) with the smooth internals of SS. Sludge & magnetite is washed/removed from the collection chamber far easier than the inferior CS.**
16. **Stability, SS is basically inert in water. Leaching of alloying elements is within safe limits. As a result, they provide better quality water. No turbidity problems. All resulting in less bacterial slime, low energy consumption, low cleaning costs, good for conveying wet solids.**
17. **Excellent strength and toughness, exceptional impact strength.**
18. **Excellent durability and abrasion resistance, as SS is resistant to crevice corrosion, cavitations and wear in polluted waters as well as in atmosphere (even polluted). They are cost effective even for long term use and do not cause environmental pollution.**
19. **Excellent ductility and resistance to stress corrosion cracking, corrosion fatigue and erosion. In particular, SS materials have higher mechanical properties when compared to CS.**
20. **SS is 100% recyclable and part of the initial cost may be recoverable when recycled.**
21. **Flow of water. High velocities can limit the performance of other materials, such as CS and copper alloys. However, SS has excellent erosion-corrosion (impingement) characteristics, being able to handle turbulent flow and flow velocities up to 30 metres per second.**
22. **Sludge. SS can tolerate wet sludge contact conditions. Aeration and agitation of sludge also reduces the tendency to adhere to the SS surfaces. Whereas CS has the opposite effect, the rough surfaces are perfect for adhesion of dirt and sludge (oxides). This accelerates failure when the process starts.**
23. **ALL OUR SS FLANGED AIR & DIRT SEPARATORS ARE OF BRITISH DESIGN AND MANUFACTURE. SPECIFYING THEM IS GOOD FOR THE BRITISH ECONOMY**

VACUUM DEGASSERS UNITS

MICROBUBBLE AIR & DIRT SEPARATORS NORMALLY WORK WELL TO REMOVE BOTH AIR & DIRT FROM LPHW AND CHW SYSTEMS UP TO APPROXIMATELY 15 METRES STATIC HEAD.

AFTER 15 METRES STATIC HEAD THE EFFICIENCY FOR REMOVING DISSOLVED GASES STARTS TO FALL BELOW 100%. BY 30 METRES THEY HAVE LITTLE OR NO EFFECT WHATSOEVER.

DON'T WASTE YOUR CLIENTS MONEY BY PUTTING IN VDU'S BELOW 15 METRES. ABOVE THIS, YOU SHOULD START TO CONSIDER IT. USE THEM IN CONJUNCTION WITH DIRT SEPARATORS ONLY. ABOVE 30 METRES THEY ARE VERY MUCH REQUIRED.

VACUUM DEGASSERS ARE QUITE AN EXPENSIVE PIECE OF EQUIPMENT. PLEASE CONSULT US REGARDS TO WHAT WE CAN OFFER ON THIS.

