OPTIVENT

Automatic Removal of Air & Dirt in
Heating, Cooling & Process Systems.

MASTERFLOW

OPTIVENT

A common assertion is that once you have bled all the air out of a system there is no need for any further separation. We know from Henrys Law that there is always a proportional relationship between the system pressure/system temperature, and the amount of dissolved gas in water.

When the system pressure/temperature changes, this gas will "bubble out" in the form of micro bubbles. Hence the presence of air in a system is always a threat.

It is equally important for the protection and longevity of the equipment throughout the piping network, that there is a method of continuously removing dirt particles resident in the system, or that may propogate from bacterial growth.

The installation of an Optivent ensures the continual removal of air from the system so that the equipment is performing at its optimum performance all the time. If the release of air in the form of micro bubbles can happen anytime, then a deaerator should be a permanent fixture in the system like any other major piece of equipment.

WHO WILL WIN

The owner because he has an efficient, cost effective system and extends the life of his overall equipment.

The consultant because he has exceeded the clients expectations.

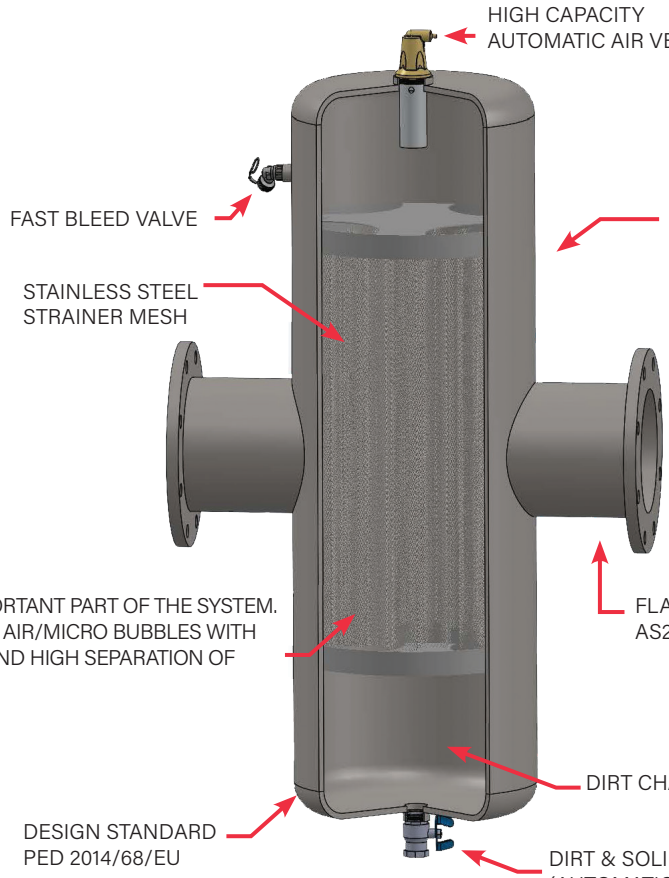
The contractor wins because he saves time commissioning the system as he no longer has the headaches associated with bleeding the air from the system. He also may reduce the losses from flushing where applicable.

The environment. Because energy costs and emissions are kept to a minimum.

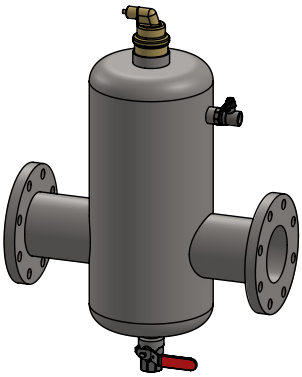
APPLICATIONS

- Chilled Water
- Condenser Water
- Heating Water
- Process Water
- Cogeneration

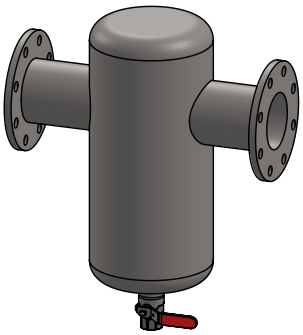
OPTIMUM DESIGN FEATURES MAKE OPTIVENT™ THE SUPERIOR CHOICE



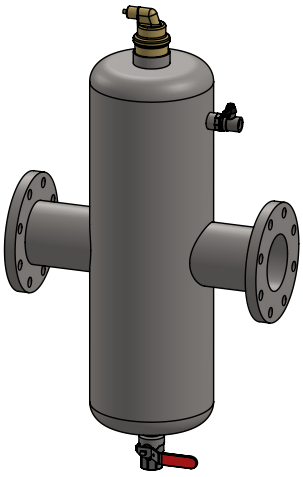
OPTIVENT COMES IN 3 DIFFERENT CONFIGURATIONS



AIR ONLY SEPARATOR
(OVA SERIES)



DIRT ONLY SEPARATOR
(OVD SERIES)



COMBINATION WITH AIR AND
DIRT IN ONE UNIT
(OVAD SERIES)

RECOMMENDED INSTALLATION

There are 2 considerations when designing for the location of an Air/Dirt Separator. The removal of air should occur at the source of the dissolved gases forming into microbubbles which is at the point of highest temperature in the circuit. In a boiler system, this is on the supply and on a chilled water system this is on the return side to the chiller.

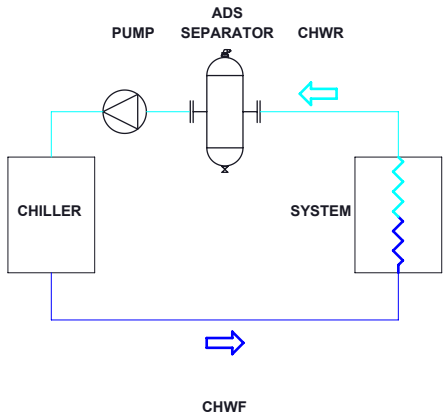
Removal of dirt particles in the system should happen prior to your major equipment, so as to protect them. For example prior to the pumps.

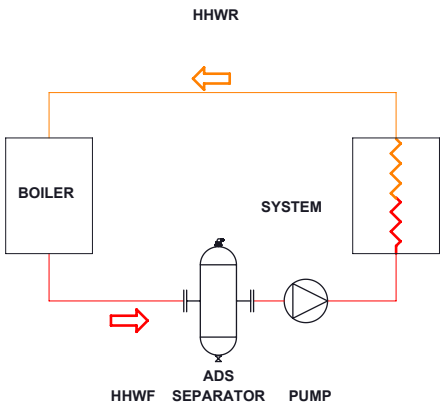
The below schematics detail out these scenarios.

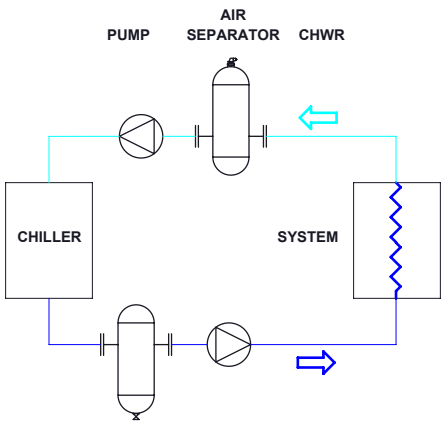
However with most applications having a combined Air & Dirt Separator installed, the ideal location is at the point of highest temperature. Dirt particles should be minimal if best practices are followed during installation and commissioning on a closed loop system, thereby reducing the potential for dirt particles.

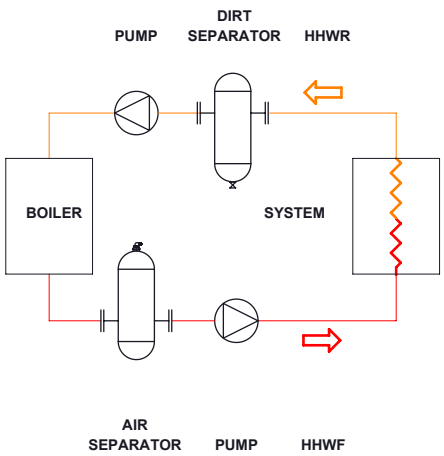
On an open condenser water application, dirt removal is the priority and therefore should be installed prior to the pumps if there is sufficient positive pressure. If the pumps and cooling tower are on the same level, it is unlikely the pressure will be sufficiently positive, especially if the top of the Separator will be above the water level in the cooling tower. Therefore installation should be immediately after the condenser water pumps.

In retrofit applications where there is old steel pipework, or heavy industrial appplications, reach out to Masterflow for further advice.

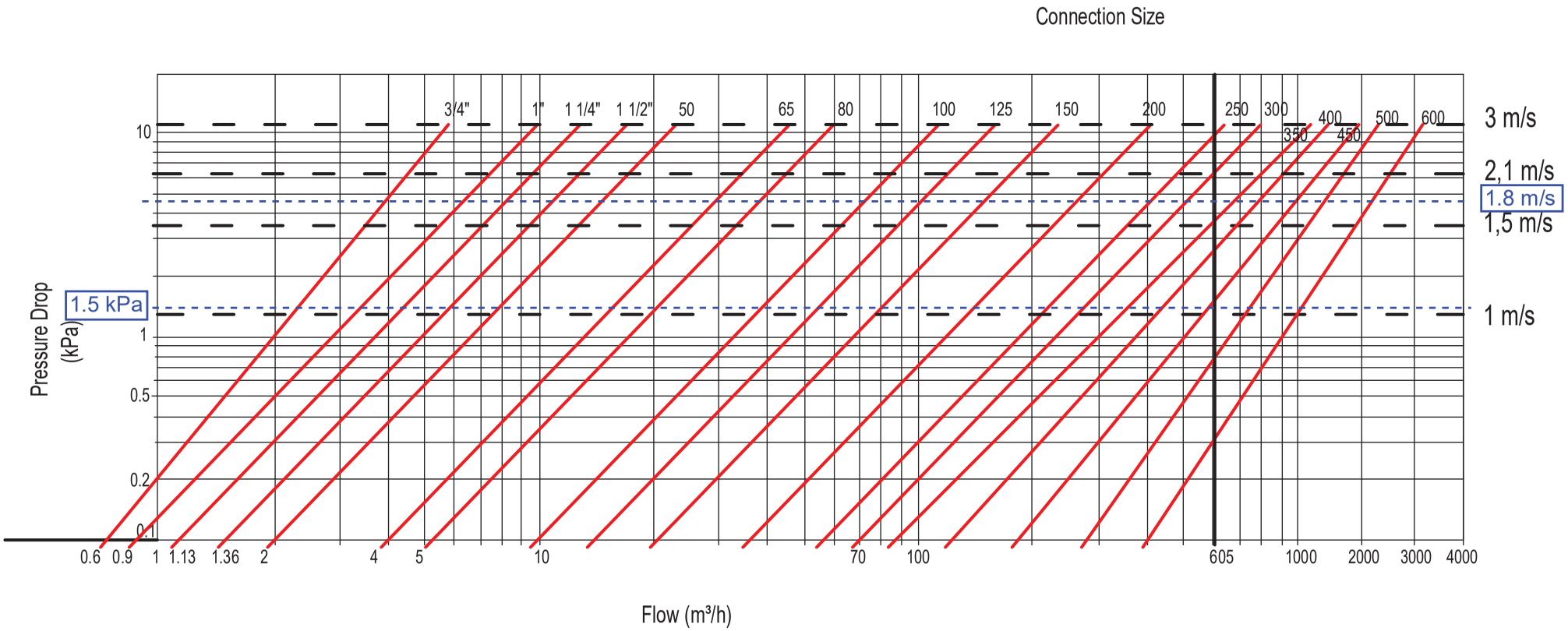








PRESSURE DROP CHART



OPTIVENT CODE GUIDE

OPTIVENT CODE GUIDE		
Code	Item	Details
OVAD080-SS	Optivent Type	OVAD – Air & Dirt
		OVA – Air Only
		OVD – Dirt Only
		OVH – Hydraulic
		OVHAD – Hydraulic Air & Dirt
		MAGOVAD – Magnetite Air & Dirt
OVAD080-SS	Connection Size	The 3 digits are the connection size
		080 – 80mm
		100 – 100mm
		250 – 250mm
OVAD080-SS		SS – Standard Flow, Sealed
		SD – Standard Flow, Demountable
		HS – High Flow, Sealed
		HD – High Flow, Demountable
ACCESSORIES		
Code	Item	Details
OVAD-STAND	Floor Mount Stand	Suits OVAD100 to OVAD250
OAAV15-ADS	Auto Air Vent	Suits the Air Dirt/Air Only Separators only
OAAV15-HD	Auto Air Vent	A stand-alone item, ideal for dead spots and high points in a system
AUTO-PURGE OPTIONS		
Code	Item	Details
GOV-AP25D	Kit	Group Optivent – Automatic Purge
GOV-AP25D	Valve Size	25 – 25mm (small Optivents)
		32 – 32mm (large Optivents)
GOV-AP25D	Optional	D – Dual, for 2x auto-purge valves feeding off a single panel
Within the above Kit is a panel and a valve. The valve code is:		
OV-MBV32	Item	Optivent Motorised Ball Valve
OV-MBV32	Valve Size	25 – 25mm
		32 – 32mm
DEGASSERS		
Code	Item	Details
OVVD-V4-R	Product	Optivent Vacuum Degasser
OVVD-V4-R	Model	V4 – 4bar max pressure
		V6 – 6bar max pressure
		V9 – 9bar max pressure
OVVD-V4-R	Optional Extra	R – with refill functionality

MASTERFLOW

Better by Degrees®

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