SUPAFLEX

Combined Threaded Air & Dirt Separators

Air and dirt free system water through a single device

The life and efficiency of a heating or cooling system are greatly dependent on the quality of the system water. Air and dirt problems cause frequent breakdowns and increased customer complaints. Corrosion, cavitation, and component wear are consequences of air-saturated, dirty system water.

Recurring problems and increased maintenance results in unnecessary costs and dissatisfied owners.

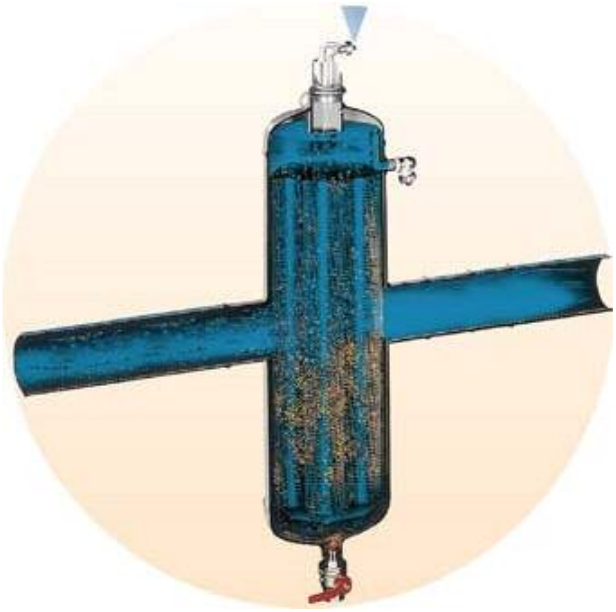
There is a solution!

A system without air and dirt is possible! There is a unique dual-purpose device that will remove air and dirt down to the smallest particle, keeping the system free from air and dirt, permanently. It works differently over traditional filters, with less maintenance and fewer costs.

The name...SupaflexA&D **Combined Air & Dirt Separator**.

Distinguishing features

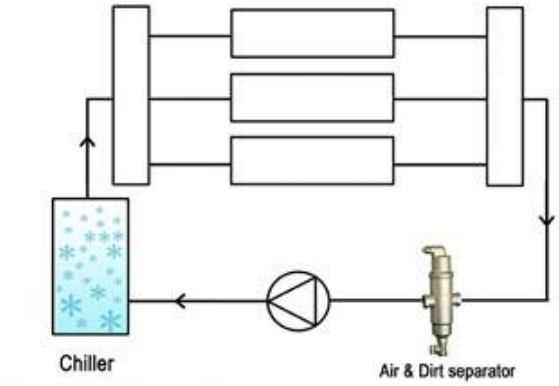
- Water throughout the device can protect system to greatest extent
- Improved efficiency
- Reduce the risk of system failure
- Increased component life
- Reduced oxygen-based corrosion and pump cavitation
- Quiet operation
- No bypass, isolating valves or replacement filters to clog and reduce pressure drop
- Dirt can be flushed while system is operating



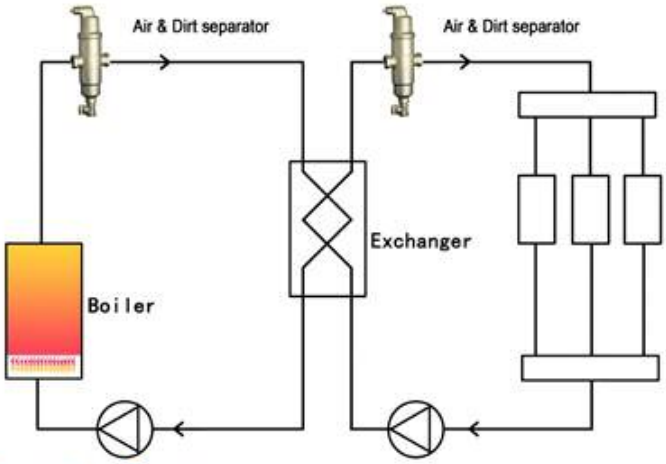
Install the device for optimum performance

Microbubbles are mostly released when system temperature is highest based on Henry's Law, which states that air is released from water as the temperature increases or the pressure decreases. For this reason, the Microbubble deaerators and dirt separators is typically installed in the hottest point in the system. For a heating system, installation should be in the outlet pipe of the boiler. For cooling system, the hottest point is on the water return pipe. When for dirt clean use, the most important conditions are the separation performance of microbubble, not the location of device installation.

Installation Diagram

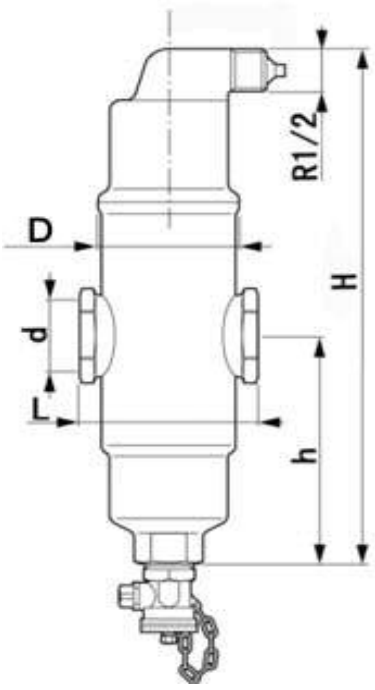


Chilled Water System



Heating System

Model	Size	H (mm)	h (mm)	d (mm)	D (mm)	e (mm)	L (mm)	Flow Rate (m³/h)	Weight (kg)
CAD-DN20	¾ "	265	112	20	Φ 65	DN15	100	1.25	1.7
CAD-DN25	1"	265	112	25	Φ 65	DN15	100	2	1.7
CAD-DN40	1½ "	265	112	40	Φ 65	DN15	100	5	1.7
CAD-DN50	2"	332	137	50	Φ 88	DN15	134	8	6



Models :

- ¾" - CAD-20
- 1" - CAD-25
- 1½" - CAD-40
- 2" - CAD-50

The Air-Free and Clean Solution

An air and dirt free water system through one unit. Solves problems arising with air and dirt in water systems.

Deaeration

Deaeration describes the removal of dissolved gases from liquids such as air from water. When water is heated or the pressure reduced gas microbubbles are released into the system. Microbubbles can be the cause of major problems such as pump failure, corrosion and energy loss.

The Solution

The SupaflexA&D combines the removal of air and dirt through a single unit. Installed at the hottest point in the system the unit will eliminate these microbubbles from heating and chilled water systems.

Dirt Removal

The SupaflexA&D is also used to remove dirt particles from heating and chilled water systems. Installed it will eliminate all dirt particles down to 10 microns.

Features

- Greatly reduced commissioning times after initial fill
- Longer system life (through air and dirt elimination)
- Low pressure drop
- Bi-directional flow
- Max temp 110 ºC
- Max working pressure 10 Bar
- Tested to 21 Bar
- Standard carbon steel shell (stainless on request)
- Air collects in the air chamber before being automatically vented
- Floating dirt can be removed by opening the valve situated on the side of the unit
- The same valve is used for releasing air when filling the system
- Large collector ensures that flushing is only required now and then
- Can be flushed while fully operational (no need to shut down)
- An internal stainless steel concentrator to aid removal of air and dirt

Location

This unit must be installed at the hottest part of the system. In a heating system this is the main flow from the boilers. The static head must not exceed 15 metres. In a chilled water system the unit must be located in the return close to the chiller. Maximum static head must not exceed 10 metres.

N.B. if the static head is greater than these figures the efficiency of the unit is reduced. The maximum flow rate through the unit is 3m/sec. If these values are exceeded the efficiency is reduced.

Commissioning

The SupaflexA&D requires no special commissioning. All units are fitted with a fast bleed valve, which should be used when initially filling the system. The same valve is used for draining off floating scum and also prevents the possibility of dirt clogging the air vent.

Maintenance will be required to remove trapped dirt and sludge. This is done by opening the ball valve at the bottom of the unit. The valve may be opened while the system is under pressure. Scalding is a danger at high pressures and temperatures. Ensure that the water is safely piped to drain before opening the valve.

The system pressure will flush the dirt out, leave the valve open until the collected dirt has been flushed out, repeat this operation every few days. Once the water is clear, it may be possible to drain every 6 months or so, depending on the size and age of the system. Most of the dissolved air will be removed in a few days.

However this may vary from system to system. In large system it may take several weeks. Dirt separators can only remove dirt that is circulating.

Drain Valve

All models are supplied with a ball valve for draining the collected dirt and sludge.

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