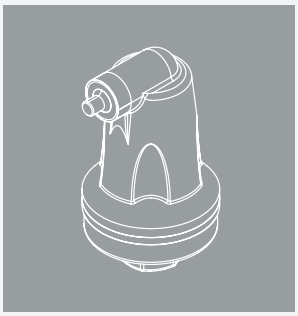
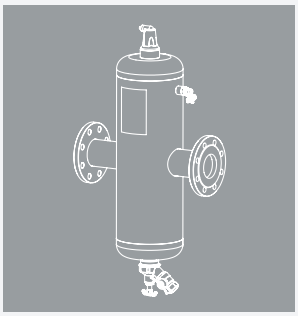
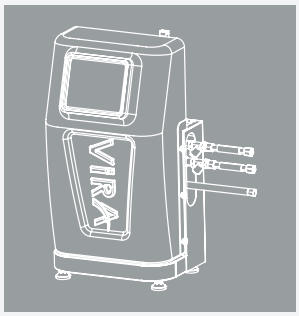
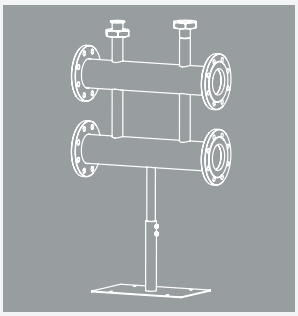
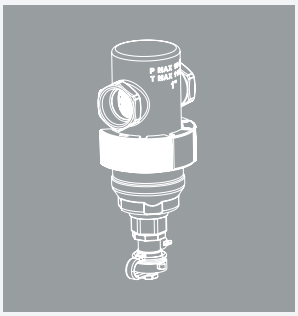
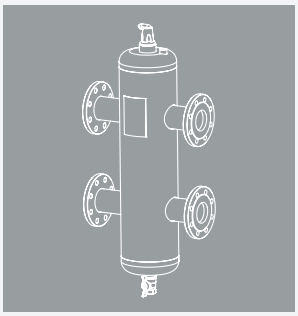
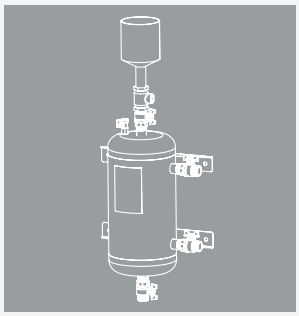
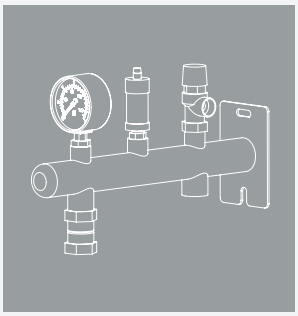
2024

DEAERATORS AND DIRT SEPARATORS

VIRA®


ALASKA (USA)
CANADA
(USA)
UNITED STATES OF AMERICA
MEXICO
VENEZUELA
COLOMBIA
ECUADOR
PERU
BRAZIL
BOLIVIA
PARAGUAY
URUGUAY
ARGENTINA
CHILE
IRELAND
UNITED KINGDOM
FRANCE
SPAIN
PORTUGAL
MOROCCO
ALGERI
AURITANIA
MALI
GUINEA
CÔTE D'IVOIRE
GHANA


SVALBARD (NORWAY)
RUSSIA
SWEDEN
FINLAND
NORWAY
ESTONIA
LATVIA
LITHUANIA
BELARUS
POLAND
GERMANY
UKRAINE
MOLDOVA
ROMANIA
BULGARIA
KAZKAHSTAN
MONGOLIA
UZBEKISTAN
TURKMENISTAN
ITALY
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TURKEY
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IRAN
AFGHANISTAN
PAKISTAN
KASHMIR
NEPAL
INDIA
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LAOS
THAILAND
CAMBODIA
NORTH KOREA
SOUTH KOREA
JAPAN
TAIWAN
PHILIPPINES
MALAYSIA
INDONESIA
PAPUA NEW GUINEA
SOLOMON ISLANDS
VANUATU
NEW CALEDONIA (FRANCE)
AUSTRALIA
NEW ZELAND
LIBYA
EGYPT
SAUDI ARABIA
OMAN
YEMEN
NIGER
CHAD
SUDAN
ERITREA
NIGERIA
CAMEROON
CENTRAL AFRICAN REPUBLIC
SOUTSUDAN
ETHIOPIA
SOMALIA
GABON
CONGO
DEMOCRATIC REPUBLIC OF THE CONGO
UGANDA
KENYA
TANZANIA
ANGOLA
ZAMBIA
ZIMBAWE
MOZAMBIQUE
MADAGASCAR
NAMIBIA
BOTSWANA
SOUTH AFRICA

AIR VENT



SS



ST

VIRADEG



ViraDeg V3-V6-V9

VIRAVENT



SV-D-Y



SV-D-D



SV-F

VIRACLEAN



SD-F



SD-F-M



SD-F-T

VIRACLEAN



SD-D-Y



SD-D-Y-M



SD-D-D



SD-D-D-M

VIRAJAC



VIRADOSING



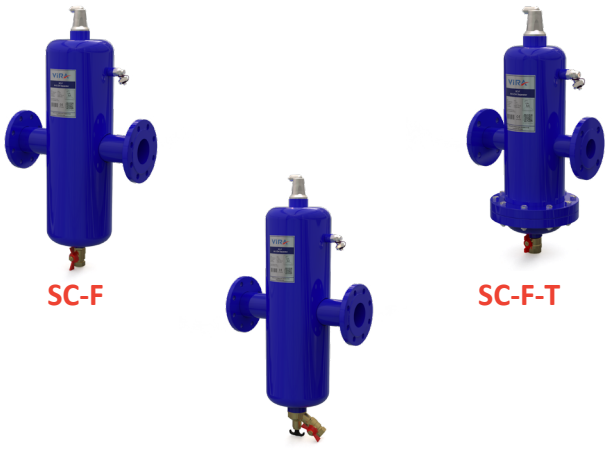
VCDK VDK

VIRABALANCE



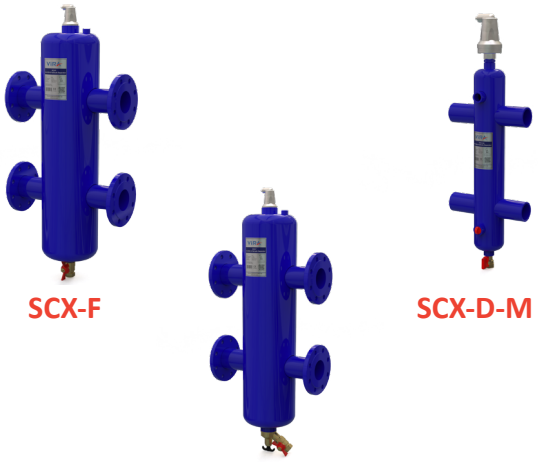
SB-F SB-D

VIRAPLUS



SC-F SC-F-M SC-F-T

VIRAFIX



SCX-F SCX-F-M SCX-D-M

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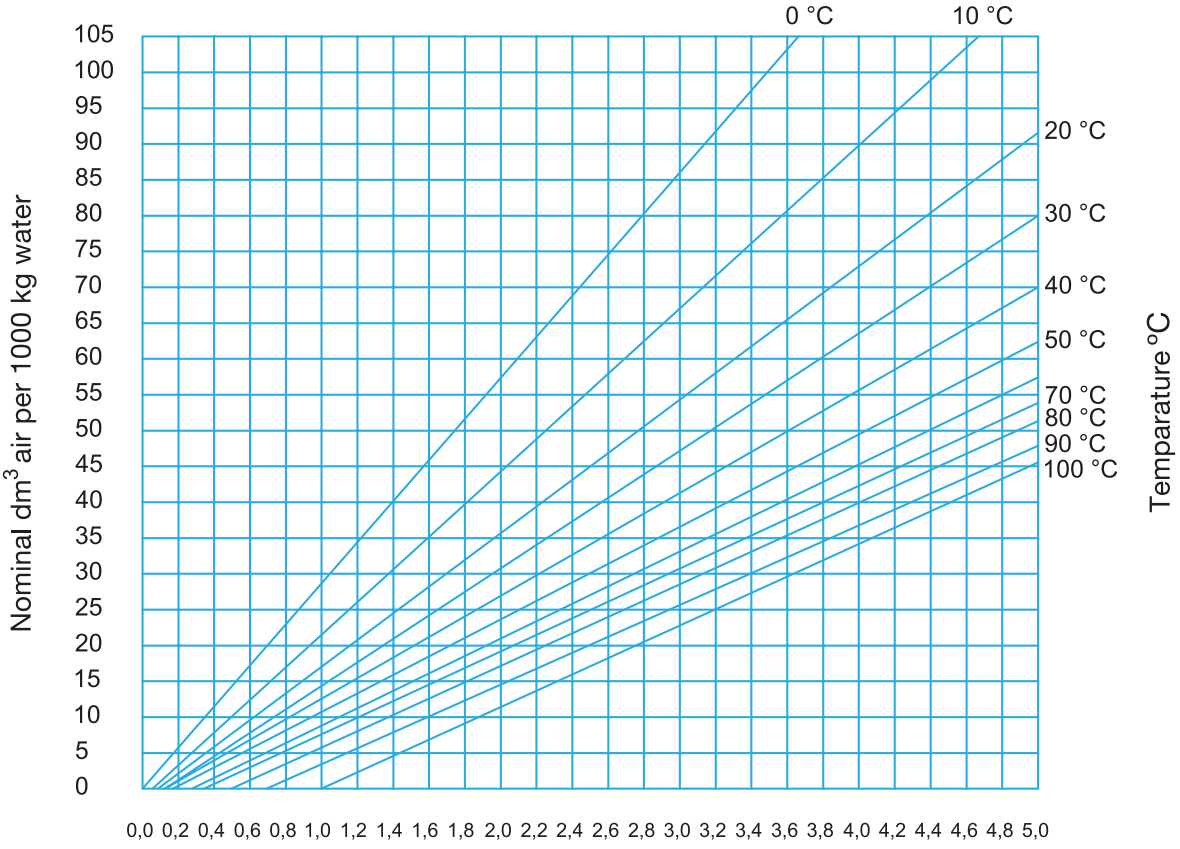
PRESSURE DROP 43

The Problems Caused by Air

Air in heating and cooling systems causes the following problems:



- Noise in radiators, heat exchangers, pipes and pumps,
- Rapid wear and tear of heat exchangers, controllers, shut-off valves and pumps,
- Insufficient heat emission or cooling efficiency, reduced heat transfer,
- Increased energy consumption,
- Needing to deaerate by hand,
- Higher maintenance costs,
- Corrosion



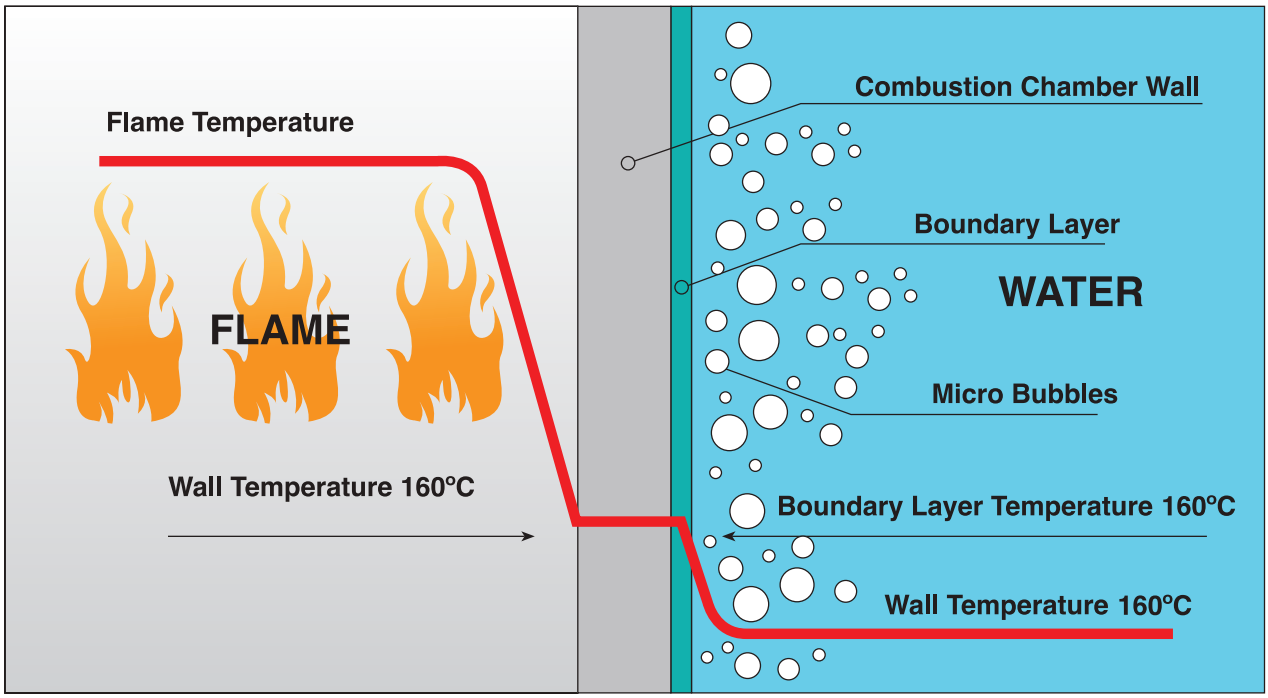
Graphic 1

Occurring and Source of Air in System

- Air is present before filling the system and trapped in the system when filled.
- Air is entrained in mains water when filling the system.
- Air dissolved in water is released when the temperature rises or the pressure falls during system runs. (Graphic 1)

Air in Heating System

The amount of air dissolved in water depends on both temperature and pressure. Air dissolved in water is released when the temperature rises or the pressure falls. (Graphic1) The release of microbubbles takes place continuously in the boiler and in any device operating under cavitation conditions. When high temperatures occur at the combustion chamber wall of the boiler, small air bubbles are released from the air containing water. (Figure 1) Microbubbles should be removed as soon as they leave the boiler.



Air in Cooling System

Pressure has the greatest effect on the formation of air bubbles in a cooling system.

As the temperature of the water in the coil decreases, some of the air bubbles will dissolve in the water. To prevent air bubbles from causing pump damage due to cavitation, air bubbles should be vented upstream of the pump.



The Problems Caused by Dirt

Dirt in heating and cooling systems causes the following problems:

- Increased system noise,
- Heat exchangers, boilers, and radiators can become clogged. This restricts the flow of water and reduces heat transfer.
- Clogging of strainers, resulting in increased pressure drop and hence additional pump costs or loss of capacity,
- The seals on the pump will be exposed to the abrasive effect of the particles in the water and will wear out more quickly.
- Low-velocity pipework (such as underfloor heating) can accumulate debris. This reduces the heat transfer surface,
- Higher maintenance costs,
- The build-up of sludge and dirt in a system will have a detrimental effect on the efficiency of the system,



Accumulation and Source of Dirt in the System

- Dirt enters the system during production (e.g. sand, pipe cuttings and welding slag).
- Once in operation, there will also be an accumulation of scale and particles from corrosion - the dissolved oxygen is the cause of corrosion.

The reaction between iron, water and oxygen will forms magnetite, and if oxygen is then present, the magnetite is converted to haematite.

VIRADEG VACUUM DEGASSER

Desciription

Vacuum degassing is the process of removing dissolved gas from a liquid solution by reducing the pressure inside a vessel containing the solution. The reduced pressure in the vessel causes the gas to become less soluble and separate from the liquefied material. When vacuum degassing is complete, the gas is removed from the vessel and the pressure returns to normal.

ViraDeg vacuum degassers are installed in a bypass in the main flow of heating and cooling systems. Part of the system fluid is temporarily placed under vacuum. Gases dissolved in the fluid are released, separated and removed from the system. When the degassed fluid is reintroduced into the system, it can absorb further free air pockets from the circuit. Air-free installation ensures optimum system performance and also significantly reduces commissioning times. As well as optimising system efficiency, all standard ViraDeg models save additional energy thanks to the integrated SmartSwitch. This device ensures that the deaerator only operates when necessary.



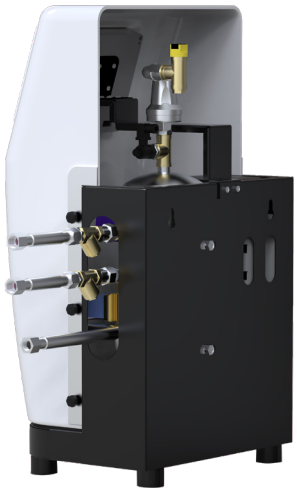
ViraDeg V6



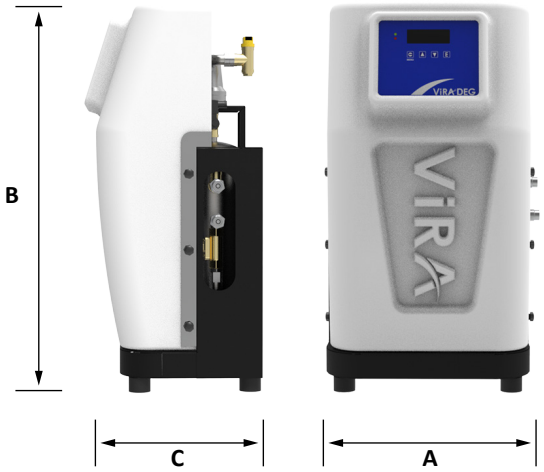
ViraDeg V3

Features

System Voltage	:	220, 230 V ± 10% / 50 Hz
Connection Sizes	:	1/2'' - 3/4''
Operating Temp.	:	0 - 90 °C
Ambient Temp.	:	0 - 40 °C
Feature	:	Standby Mode



Dimensions



	A (mm)	B (mm)	C (mm)
V3	435	770	365
V3-R	435	770	365
V6	435	770	390
V6-R	435	770	390

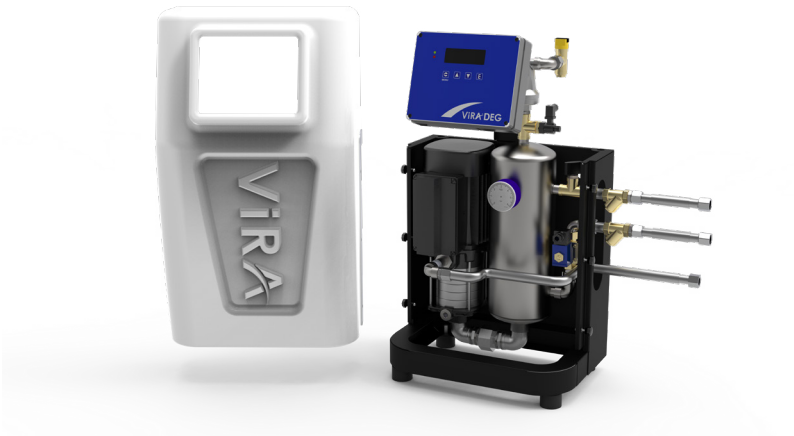
Benefits

- Removes all gases, free air, microbubbles and dissolved gases.
- The absorbent liquid also helps to remove trapped bubbles.
- Easy to install, which greatly reduces commissioning and handover.
- Energy efficient with the lowest possible gas consumption.
- Concentration thanks to SmartSwitch.
- Degassed (re)filling and sustained pressure.
- Warns of excessive (re-)filling.
- An extensive range for a wide variety of systems.
- Can be teamed with all common expansion systems.

Functional Description

The main purpose of the vacuum deaerator is to release the dissolved gases circulating in Closed-loop heating and cooling systems and to REMOVE them from the system.

ViraDeg vacuum degasser is connected to the system as a by-pass and after pressurising the water it has taken from the system, it applies a vacuum, to release the dissolved gasses in the water. The released gases are vented via air vents. Vacuum degassing is the technique of removing dissolved gas from a liquid solution by reducing the pressure in a vessel containing the solution.



V-FORCE MAGNETIC FILTER

Dirt / Sediment Separator

V-FORCE magnetic separators are designed to be the most effective way of separating magnetic particles circulating in heating and cooling systems. Thanks to the powerful magnets inside, the magnetic particles circulating with the water are captured by the magnetic field created in the V-FORCE and will be prevented from circulating in the system.

Installer Benefits

- Available for DN50 - DN300 pipe dimensions with PN16 flanges
- Supplied with EPDM flange and lid gaskets for robust sealing at high temperatures
- Individual magnet assemblies can be lifted independently for ease of cleaning & maintenance, removing the need to disassemble and replace the filter lid during servicing.
- Installers do not need additional airvent to release microbubbles from the system.

Technical Specifications

- PN16, supplied with EPDM gaskets
- Material: Carbon Steel / Stainless steel
- Drain point: 1” BSP hole,
- Maximum working pressure: 10 bar
- Maximum working temperature: 100°C
- Product side seal: EPDM
- Magnet: Neodymium
- ViraTop high capacity nickel-coated air vent



Customization

- Vira, which is an expert manufacturer in the field of filtration, can have a custom design for any of its products.

Description

The ViraTop reliably discharges air and other gases from the system. The purging of free gas bubbles is necessary to enable the heat transfer medium to circulate in liquid-filled system circuits. This purging can either be done manually or, better still, automatically operated devices. In the case of the automatic variant, a key requirement for the relevant fitting is sustained reliability and, above all, freedom from leaks. The ViraTop has been developed with this in mind.

It automatically purges air and other gases from the system into the surrounding atmosphere. This enables problem-free filling and draining operations when filling or refilling heating, solar or cooling systems, for example. The ViraTop discharges the air that has collected at high points or specifically designated collection points quickly and reliably into the atmosphere.



ViraTop SS



ViraTop ST

Technical data for the ViraTop

- Housing made of brass
- For vertical installation
- With system connection Rp ½ and a connecting thread G ½ at the vent valve
- Application limits: 110 or 160 °C and 10 bar overpressure

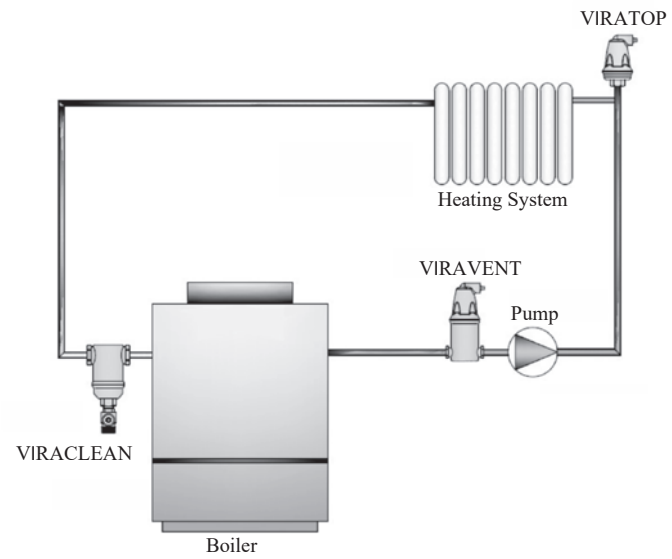


Fields of application

- Venting during billing operations after draining or new construction
- In-service venting of things, high points, and air collection points
- Automatic pressurization during draining operations
- High venting capacity
- Solid brass design
- Designed for simple pressurization and venting of the system with consistently high reliability
- Reliable operation, even if the medium is dirty
- Range of products for different temperatures and applications

Functional description

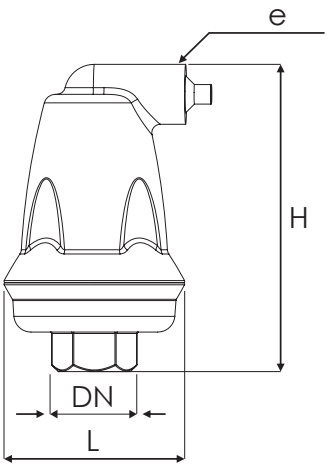
The air collection chamber of the ViraTop contains a float-controlled vent valve. If the freely suspended float loses buoyancy due to the air that has accumulated in the collection chamber, it sinks and in the process opens the vent valve. The oat has enough space to move freely even if there are dirt deposits in the air collection chamber. The special design of the vent valve ensures smooth operation even under difficult conditions.



Benefits

- Effectively evacuates gases and microbubbles freely circulating in the installation
- Prevents wear and erosion in heat exchangers, valves and pumps
- Prevents corrosion
- Provides automatic air evacuation instead of manually removing air from the system
- Prevents noise in radiators, heat exchangers, pipes and pumps
- Helps to provide high heat transfer

Dimensions



	Connection DN	H (mm)	h (mm)	L (mm)	e (inch)	Weights (kg)
ST	1/2”	106,6	-	59,8	1/2”	0,595
SS	1/2”	106,6	-	59,8	1/2”	0,595

VIRAVENT

Description

The Viravent is a high-efficiency in-line air separator suitable for use on heating and chilled systems. In sealed heating systems free and dissolved air causes a number of problems. Micro-bubbles form on the pump suction as a direct result of localized pressure drop. This directly affects the liquid displacement of rotary pumps, reducing the ow capacity and therefore the efficiency of the system. The presence of micro-bubbles and dissolved gas can reduce the liquid displacement of a pump by 10 to 45%. Heat will also allow dissolved gasses to be drawn out of the solution, following Henry's law, placement of this equipment is important to guarantee effective operation. Effective removal of free air is essential for increasing the operational life of the system as a whole.



SV-F



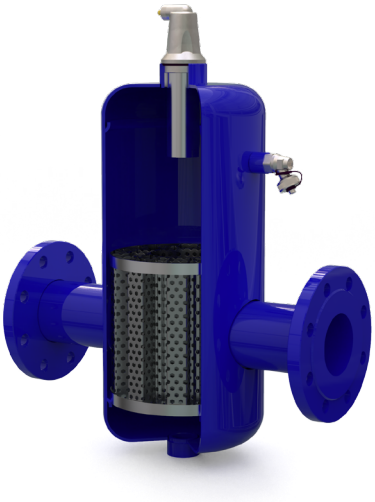
SV-D-Y



SV-D-D

Features

Body	:	Carbon Steel - ST37 / Nickel Coated
Size	:	DN 50 - 600
Max. Work.Temp.	:	110 °C
Max. Work. Pressure	:	10 Bar
Product Code	:	SV



Benefits

- Removes all circulating air and micro bubbles effectively.
- Removes trapped air when installed at the correct location.
- Greatly reduces the need for manual venting.
- Constant low-pressure drop.
- No unnecessary shutdown.
- Connection diameters from ¾" to DN600 and above.
- A complete range, suitable for various pressures and temperatures.
- Exceptional guarantee.

Where to Install for better performance?



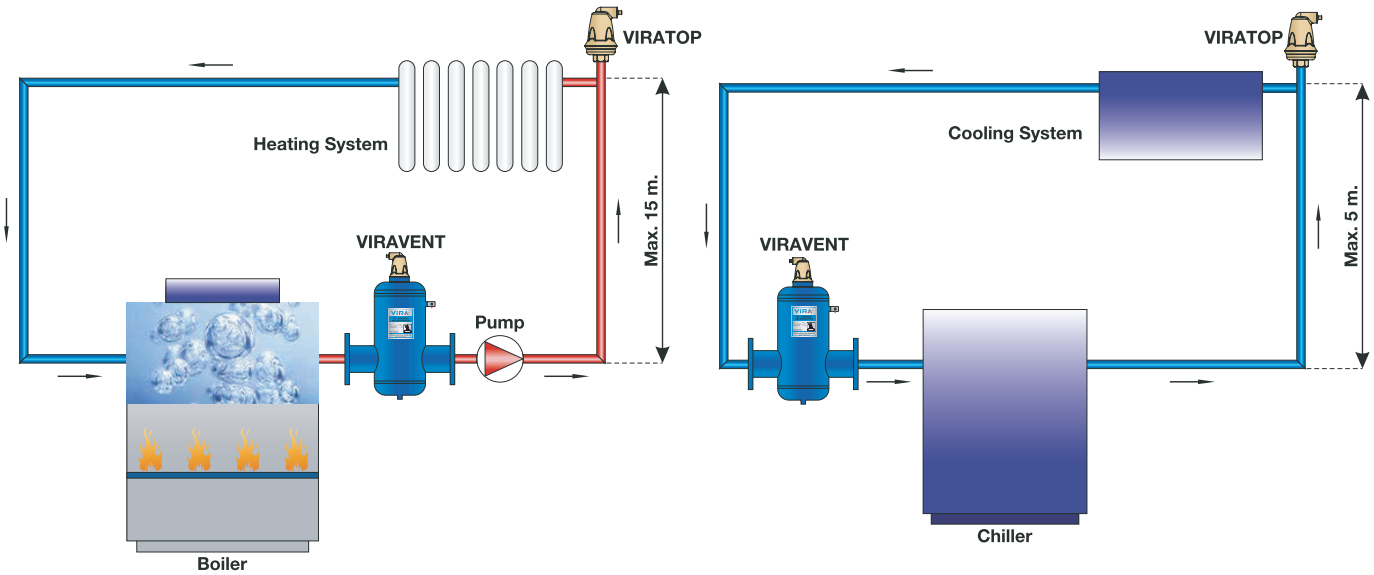
The Viravent, air must be installed at the hottest point in the system. For a heating installation, this is in the flow from the boiler. Microbubbles are released at the hottest spot in an installation. This release of gas is determined by the solubility of gases in water. The solubility reduces with an increase in temperature. In case of a decrease in pressure, Henry's law implies further solubility. In simple terms, the air is released from the water as the temperature increases or the pressure decreases.

Installations

Viravent units must be installed at the hottest part of the system for optimum performance. The static head must not exceed 15m far heating system and 5m far cooling system.
The efficiency of the unit will be reduced if;

- The static head is exceeded.
- The maximum flow velocity of 3m/s is exceeded.

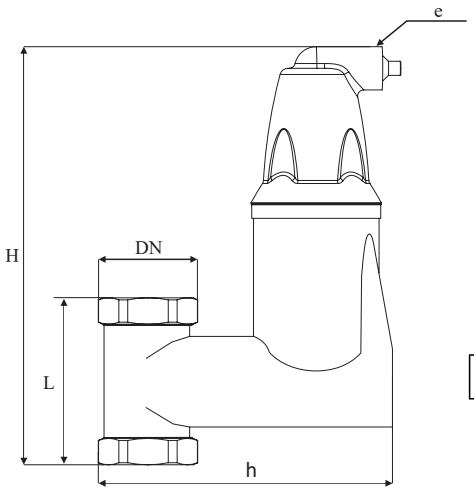
In heating systems the deaerator should be in the flow, preferably at the highest temperature (next to the heat source) and low pressure if possible. Viravent, Deaerator should be installed after the boiler and on the pump suction side, as these are the points where the formation of microbubbles is greatest. In chilled water systems, the unit must be located in the return close to the chiller.



Advantages

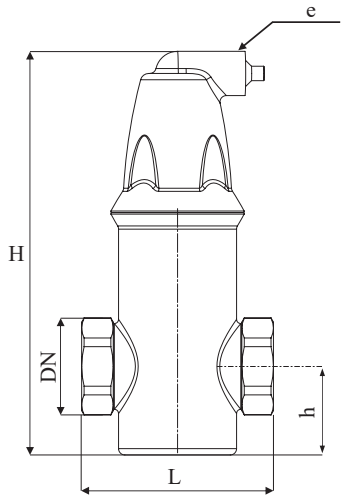
- Greatly reduced commissioning times after initial fill, no more venting required.
- Optimum heat transfer.
- Increased component life.
- No pump cavitation.
- Quiet operation.
- Two-year guarantee.

Dimensions



SV-D-D

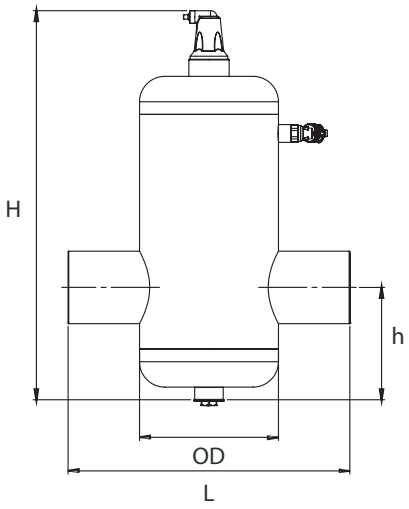
	Connection DN	H (mm)	L (mm)	h (mm)	e (inch)	Weights (kg)	Max.Flow (L/s)	Max.Flow (m3/h)
SV-D-D	1”	208	86	119,16	1”	1,870	0,86	3,10



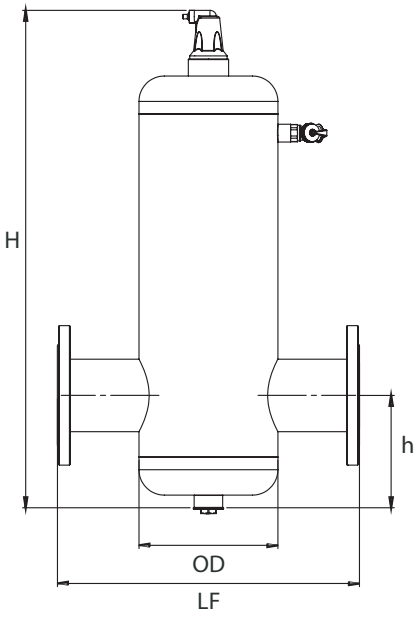
SV-D-Y

	Connection DN	H (mm)	L (mm)	h (mm)	e (inch)	Weights (kg)	Max.Flow (L/s)	Max.Flow (m3/h)
SV-D-Y	3/4”	191	86	28	1/2”	1,010	0,74	2,65
SV-D-Y	1”	191	85	40	1/2”	1,053	0,86	3,10
SV-D-Y	1-1/4”	197	87	40	1/2”	1,150	1,28	4,60
SV-D-Y	1-1/2”	206	86	50	1/2”	1,260	1,94	7,00
SV-D-Y	2”	212	100	52	1/2”	1,410	3,40	12,25

Dimensions



SV



SVH (High-Flow)

					Standart; Nom. 1,5 m/s							Hi-Flow; Nom. 3 m/s						
					Nom. = 1,5 m/s							Max. = 3 m/s						
	Connection DN	Connection OD (mm)	L(mm)	LF(mm)	H(mm)	h(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight	H(mm)	h(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight
SV	50	168,3	330	350	482	138	3,3	12	3	16	12	650	150	5,8	21	11,8	25	18
SV	65	168,3	330	350	482	138	6,3	22,5	2,7	17	12	650	150	10	36	11,6	26	18
SV	80	219,1	450	470	607	177	8,3	30	2,9	27	21	730	200	15	54	12,4	28	22
SV	100	219,1	455	475	607	177	12,5	45	3,7	29	22	730	200	23,3	84	14,6	30	23
SV	125	323,9	615	635	797	267	20,8	75	4,2	52	44	1067	250	36,7	132	16,8	58	50
SV	150	323,9	615	635	797	267	31,3	112,5	4,9	54	46	1067	250	52,8	190	19,4	60	52
SV	200	400	745	775	997	297	52,1	187,5	5,8	70	55	1317	300	94,2	339	23,1	110	95
SV	250	500	860	890	1237	357	83,3	300	6,9	120	90	1677	360	146,9	529	27,7	145	115
SV	300	600	975	1005	1557	395	114,6	412,5	7,7	190	150	2032	410	211,9	763	31	220	180
SV	350	700	1098	1128	1940	430	143,8	517,5		260	210	2430	543	288,3	1038		320	270
SV	400	800	1194	1226	2170	480	188,3	678		343	285	2707	609	376,7	1356		390	330
SV	450	900	1300	1330	2388	540	238,3	858		400	330	3000	650	476,7	1716		570	490
SV	500	1000	1400	1430	2680	590	294,2	1059		530	440	3220	703	588,6	2119		690	605
SV	600	1200	1600	1630	3020	680	423,8	1525,5		650	540	3870	820	847,8	3052		850	740

VIRACLEAN

Description

The life and the efficiency of a heating or cooling system are greatly dependent on clean system water. Dirt can cause many problems such as increased component wear and frequent break-downs. Corrosion, pump wear, and reduced efficiency result in increased maintenance, unnecessarily high costs, and dissatisfied customers. Traditionally strainers or filters are fitted to overcome dirt problems. However, these require frequent maintenance and if not cleaned on a regular basis cause increased pressure drops and eventually blockages.



SD-D-Y



SD-D-Y-M



SD-D-D



SD-D-D-M



SD-F



SD-F-M



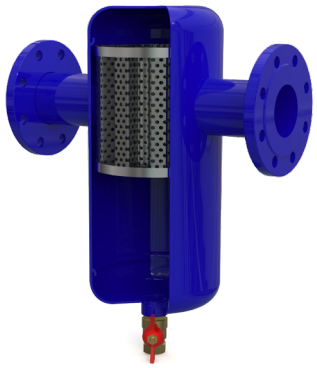
SD-F-T

Features

Body	:	Carbon Steel - ST37 / Nickel Coated
Size	:	DN 50 - 600
Max. Work.Temp.	:	110 °C
Max. Work. Pressure	:	10 Bar
Product Code	:	SD

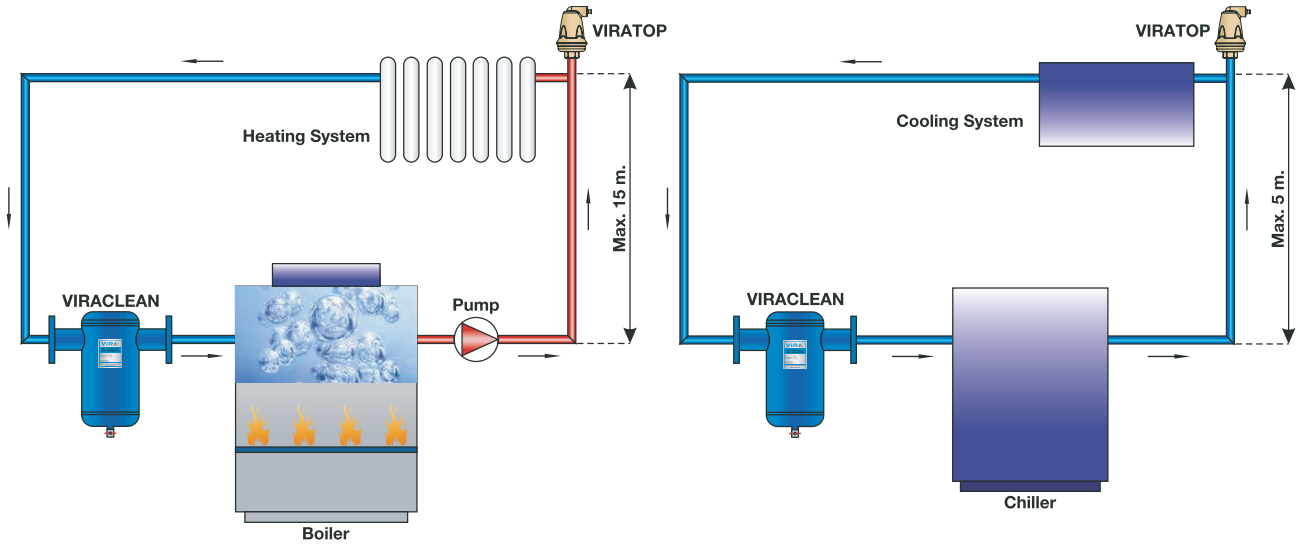
Benefits

- Very small particles, from 5 µm (= 0.005 mm) and up are separated and removed.
- Dirt can be drained while the system is in operation.
- No shut-off valves or bypass required.
- Constant low-pressure drop.
- Maintenance only takes a few seconds and is not a dirty job.
- Compared to a filter solution.
- No unnecessary shutdown.
- Connection diameters from ¾” to DN 600 and above.
- A complete range, suitable for various pressures and temperatures.



Installations

Dirt Separators should always be installed before equipment (ie. boilers, chillers, control valves, pumps, etc.) That needs protection from dirt, sludge, etc. In heating systems, this should be in return. In chilled water systems, the unit must be located in the return close to the chiller.



The Solution...

A system totally without dirt is possible.
There is a unique device that will remove all dirt down to the smallest particle. It works continuously and is maintenance-free.

In heating and air conditioning control systems, the circulation of water containing impurities may result in rapid wear and damage to components such as pumps and control valves. It also causes blockages in heat exchangers, heating elements, and pipes, resulting in lower thermal efficiency within the system.

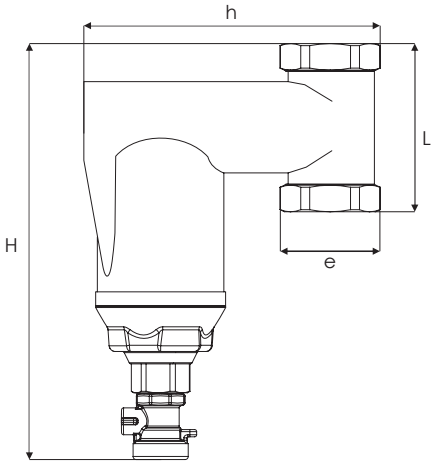
The dirt separator removes these dirt particles, collecting them in a large collection chamber from which they can be flushed even while the system is in operation. This device is capable of efficiently removing even the smallest particles, with very low head loss.

The ViraClean® magnetic dirt separator removes both ferrous and non-ferrous impurities continuously, featuring powerful removable magnets that remove up to 100% of the ferrous impurities, including magnetite, that can form in a hydronic system.

Advantages

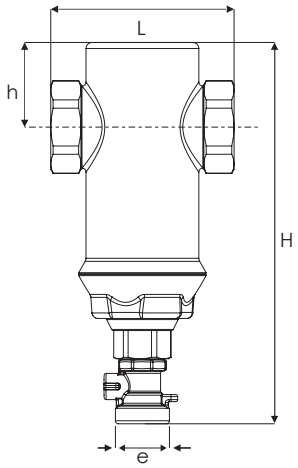
- Dirt can be used while the system is fully operational.
- All dirt can be removed in one central location in the plant room with virtually no maintenance and no replacement filters.
- No by-pass or isolating valves required minimum pressure drop, always constant can not block the flow.
- In addition to conventional dirt, it also removes microscopic dirt particles.
- Three-year guarantee.

Dimensions



SD-D-D

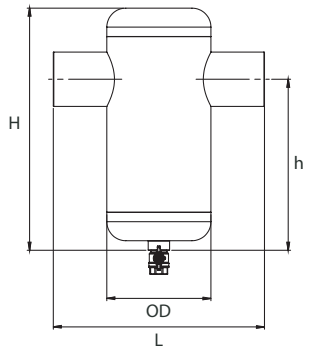
	Connection DN	H (mm)	L (mm)	h (mm)	e (inch)	Weights (kg)	Max.Flow (L/s)	Max.Flow (m3/h)
SD-D-D	1”	210,5	86	119,6	1”	1,790	0,86	3,10



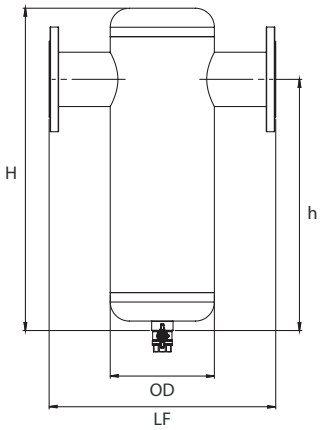
SD-D-Y

	Connection DN	H (mm)	L (mm)	h (mm)	e (inch)	Weights (kg)	Max.Flow (L/s)	Max.Flow (m3/h)
SD-D-Y	3/4”	194	85,8	25	1/2”	1,010	0,74	2,65
SD-D-Y	1”	194	85,8	40	1/2”	1,053	0,86	3,10
SD-D-Y	1-1/4”	199	85	40	1/2”	1,150	1,28	4,60
SD-D-Y	1-1/2”	207,5	93,5	44,5	1/2”	1,260	1,94	7,00
SD-D-Y	2”	214	98	44,5	1/2”	1,410	3,40	12,25

Dimensions



SD



SDH (High-Flow)

					Standart; Nom. 1,5 m/s							Hi-Flow; Nom. 3 m/s						
					Nom. = 1,5 m/s							Max. = 3 m/s						
	Connection DN	Connection OD (mm)	L(mm)	LF(mm)	H(mm)	h(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight	H(mm)	h(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight
SD	50	168,3	330	350	385	267	3,3	12	3	16	12	521	368	5,8	21	11,8	22	18
SD	65	168,3	330	350	385	267	6,3	22,5	2,7	17	12	521	368	10	36	11,6	23	18
SD	80	219,1	450	470	510	353	8,3	30	2,9	27	21	700	490	15	54	12,4	28	22
SD	100	219,1	455	475	510	353	12,5	45	3,7	29	22	700	490	23,3	84	14,6	30	23
SD	125	323,9	615	635	700,6	454	20,8	75	4,2	52	44	970	710	36,7	132	16,8	58	50
SD	150	323,9	615	635	700,6	454	31,3	112,5	4,9	54	46	970	710	52,8	190	19,4	60	52
SD	200	400	745	775	900	623	52,1	187,5	5,8	70	55	1220	970	94,2	339	23,1	110	95
SD	250	500	860	890	1135	820	83,3	300	6,9	120	90	1580	1250	146,9	529	27,7	145	115
SD	300	600	975	1005	1460	1095	114,6	412,5	7,7	190	150	1935	1555	211,9	763	31	220	180
SD	350	700	1098	1128	1656	1256	143,8	517,5		260	210	2140	1650	288,3	1038		320	270
SD	400	800	1194	1226	1886	1436	188,3	678		343	285	2400	1860	376,7	1356		390	330
SD	450	900	1300	1330	2104	1594	238,3	858		400	330	2700	2100	476,7	1716		570	490
SD	500	1000	1400	1430	2396	1836	294,2	1059		530	440	3000	2330	588,6	2119		690	605
SD	600	1200	1600	1630	2736	2086	423,8	1525,5		650	540	3570	2780	847,8	3052		850	740

VIRAPLUS

Description

Air and dirt-free system water through a single unit.

ViraPlus combined dirt and air separators can be used in place of individual deaerators and dirt separators. These combined units are highly efficient and extremely cost-effective and are becoming becoming the preferred standard option throughout the industry. In heating systems, the units should be installed in the flow loop, situated immediately after the boiler and before the pump. In a chilled water system, the unit must be located in the return loop close to the chiller.



SC-F



SC-F-M



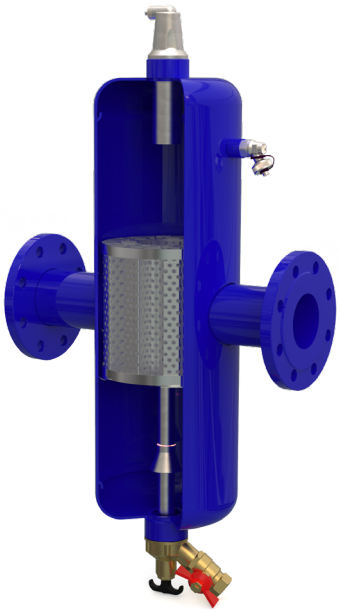
SC-F-T

Features

Body	:	Carbon Steel - ST37 / Nickel Coated
Size	:	DN 50 - 600
Max. Work.Temp.	:	110 °C
Max. Work. Pressure	:	10 Bar
Product Code	:	SC

Benefits

- Very small particles, from 5 µm (= 0.005 mm) are separated and removed
- Removes circulating air and micro bubbles effectively
- Dirt can be discharged while the system is in operation
- Constant low pressure drop
- Exceptional guarantee



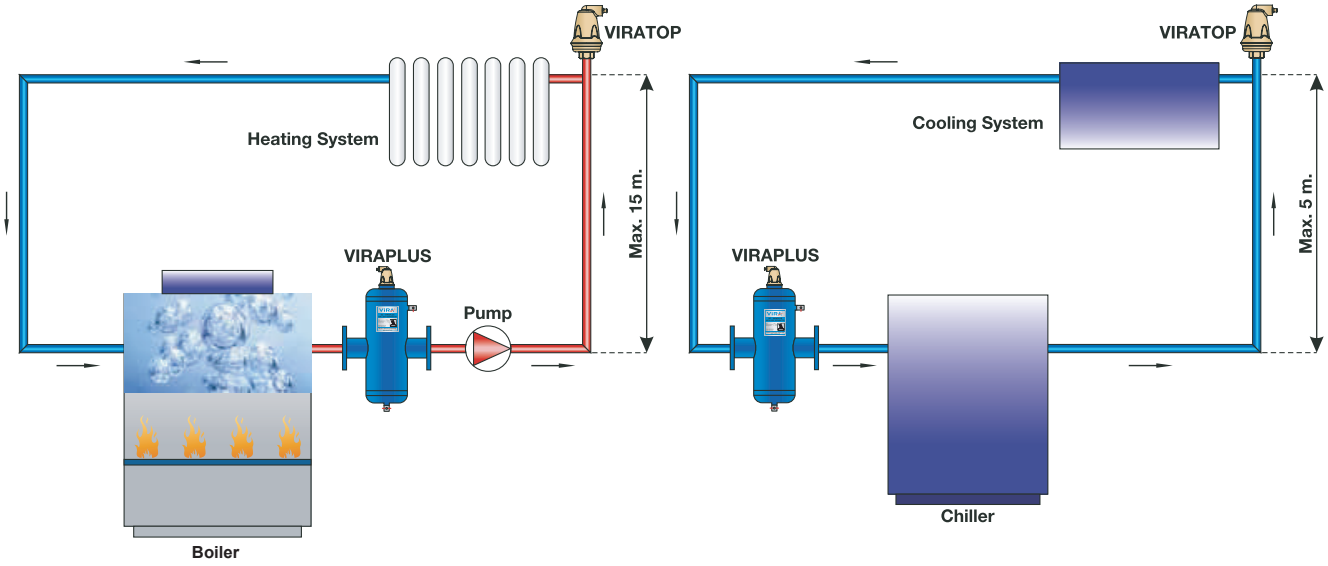
Where do air and dirt come from?



Air particles and gases are always present in the water of heating and cooling systems. They are generally a consequence of activities performed (maintenance, draining and filling, etc.), micro-leaks, diffusion, and chemical processes in the water. Dirt is caused by corrosion processes, maintenance of the system, or failing system parts. It can build up and cause blockages. The use of filters is not ideal as they do not do not trap smaller particles, silt up, cause high flow resistance, require regular maintenance, and replacement of components.

Installations

Viraplus is a combination of a deaerator and dirt separator that effectively removes circulating air and micro bubbles and dirt. In heating systems, the Viraplus should be in the flow and installed after the boiler. In chilled water systems, the unit must be located in the return pipe close to the chiller.



Air and Dirt-free System Water Through a Single Unit

ViraPlus combined dirt and air separators can be used in place of individual deaerators and dirt separators. These combined units are highly efficient and extremely cost-effective and are becoming the preferred standard option throughout the industry. In heating systems, the units should be installed in the ow loop, situated immediately after the boiler and before the pump. In a chilled water system, the unit must be located in the return loop close to the chiller.

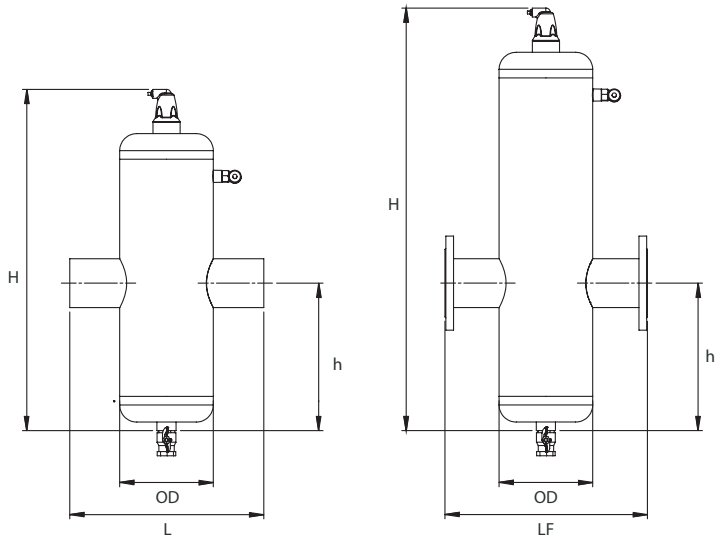
Solution

A system completely free of air and dirt is possible. There is a unique device whose combined action will removes all gases including dissolved air and dirt down to the smallest particle keeping the system free from air and dirt, permanently. It is maintenance-free as it works without strainers or filters. Less maintenance fewer costs.

Advantages

- Shortened system life due to corrosion.
- Reduced comfort due to less heat transfer and noises.
- Cavitation and magnetite damage pumps.
- Disruptions of the system.
- Loss of image for installers and component suppliers.
- Constant low-pressure drop
- Exceptional guarantee

Dimensions



SC **SCH (High-Flow)**

					Standart; Nom. 1,5 m/s							Hi-Flow; Nom. 3 m/s						
					Nom. = 1,5 m/s							Max. = 3 m/s						
	Connection DN	Connection OD (mm)	L(mm)	LF(mm)	H(mm)	h(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight	H(mm)	h(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight
SC	50	168,3	330	350	385	267	3,3	12	3	19	15	521	368	5,8	21	11,8	27	20
SC	65	168,3	330	350	385	267	6,3	22,5	2,7	20	15	521	368	10	36	11,6	28	20
SC	80	219,1	450	470	510	353	8,3	30	2,9	30	24	700	490	15	54	12,4	34	28
SC	100	219,1	455	475	510	353	12,5	45	3,7	32	25	700	490	23,3	84	14,6	35	28
SC	125	323,9	615	635	700,6	454	20,8	75	4,2	60	52	970	710	36,7	132	16,8	75	67
SC	150	323,9	615	635	700,6	454	31,3	112,5	4,9	62	54	970	710	52,8	190	19,4	77	69
SC	200	400	745	775	900	623	52,1	187,5	5,8	80	65	1120	970	94,2	339	23,1	120	105
SC	250	500	860	890	1135	820	83,3	300	6,9	136	106	1580	1250	146,9	529	27,7	184	154
SC	300	600	975	1005	1460	1095	114,6	412,5	7,7	216	176	1935	1555	211,9	763	31	316	276
SC	350	700	1098	1128	1656	1256	143,8	517,5		390	340	2140	1650	288,3	1038		440	390
SC	400	800	1194	1226	1886	1436	188,3	678		450	392	2400	1860	376,7	1356		520	460
SC	450	900	1300	1330	2104	1594	238,3	858		570	500	2700	2100	476,7	1716		630	550
SC	500	1000	1400	1430	2396	1836	294,2	1059		650	560	3000	2330	588,6	2119		850	765
SC	600	1200	1600	1630	2736	2086	423,8	1525,5		800	690	3570	2780	847,8	3052		1100	990

VIRAFIX

Description

A good hydraulic balance is highly important for HVAC and process systems with separated circuits or several groups and pumps. The effective removal of air and dirt also ensures water heating systems perform at their best. Hydraulic balancing and air and dirt separation are combined in the ViraFix.

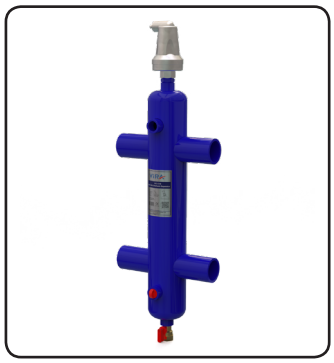
The combination of three functions in one, not only helps you reduce costs and increase your water heating system's energy efficiency but also saves on space, installation, and maintenance costs. The ViraFix can be used for both new builds, refurbishment, and projects for refurbishing heating, cooling, and process systems, and improving energy efficiency.



SCX-F



SCX-F-M



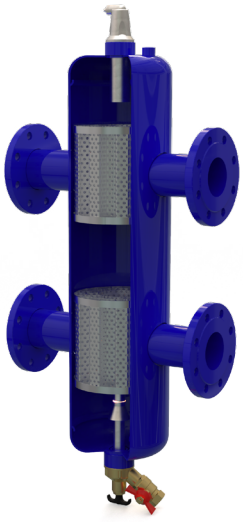
SCX-D-M



SCX-D-M -T

Features

Body	:	Carbon Steel - ST37 / Nickel Coated
Size	:	DN 50 - 600
Max. Work.Temp.	:	110 °C
Max. Work. Pressure	:	10 Bar
Product Code	:	SC

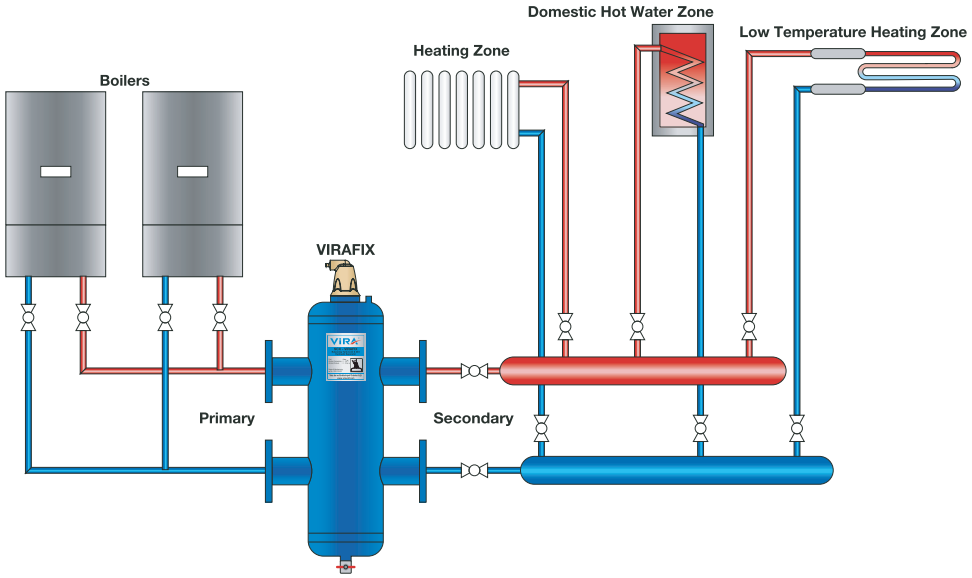


Benefits

- Three functions in a single component
- Just four connections instead of eight
- Optimum hydraulic balance between primary and secondary pumps
- Viratube guarantees minimal fluid mixing and thus the best temperature differential
- Real, active deaeration and dirt separation
- Constant low pressure drop
- Even the tiniest air bubbles and dirt particles are separated and remove
- Compact design and limited built-in height, thanks to the Viratube
- Exceptional guarantee

Installations

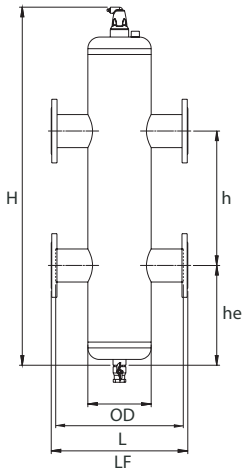
Installation of a hydraulic separator in a heating system provides proper mixing when the flow in the boiler circuit is different from the flow in the distribution circuit. Also, Virafix is a combination of a deaerator, dirt separator, and hydraulic separator which removes circulating air and micro bubbles also dirt effectively.



How Do Hydraulic Separators Work?

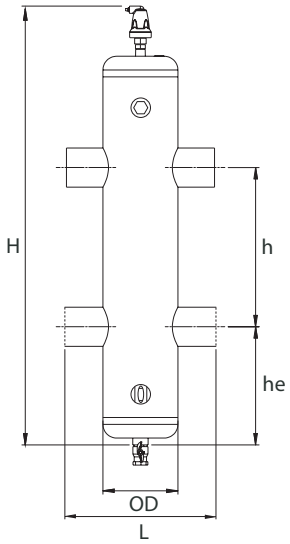
A hydraulic separator balances the differences in volumetric flow between a primary circuit (supply=Qp) and a secondary circuit (demand = Qs). Three operating situations can occur if a hydraulic separator is installed in a system and these are shown below and to the right.

Dimensions



SCX-F

					Standart; Nom. 1,5 m/s									
					Nom. = 1,5 m/s									
	Connection DN	Connection OD (mm)	L(mm)	LF(mm)	H(mm)	h(mm)	he(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight	ΔT=15°C kW	ΔT=6°C kW
SCX	50	168,3	330	350	811,5	247,5	240	3,3	12	3	25	17	218	87
SCX	65	168,3	330	350	926,5	272,5	305	6,3	22,5	2,7	36	28	349	140
SCX	80	219,1	450	470	981,5	272,5	360	8,3	30	2,9	45	33	471	188
SCX	100	219,1	455	475	1232	345	464,8	12,5	45	3,7	56	38	820	328
SCX	125	323,9	615	635	1532	448	559,5	20,8	75	4,2	94	77	1256	502
SCX	150	323,9	615	635	1832	543	669,5	31,3	112,5	4,9	106	84	1884	753
SCX	200	400	745	775	2336	695	869,5	52,1	187,5	5,8	158	117	3143	1256
SCX	250	500	860	890	2886	860	1099,5	83,3	300	6,9	279	216	5023	2009
SCX	300	600	975	1005	3402	1020	1295,5	114,6	412,5	7,7	390	310	7064	2826
SCX	350	700	1098	1128	3970	1130	1420	143,8	517,5		490	400		
SCX	400	800	1194	1226	4470	1280	1620	188,3	678		570	460		
SCX	450	900	1300	1330	4860	1365	1830	238,3	858		660	520		
SCX	500	1000	1400	1430	5400	1540	2030	294,2	1059		890	715		
SCX	600	1200	1600	1630	6395	1825	2445	423,8	1525,5		1080	890		



SCX-D-M

	Connection DN	Connection OD (mm)	H (mm)	L (mm)	h (mm)	he (inch)	Weights (kg)	Max.Flow (L/s)	Max.Flow (m3/h)
SCX-D-M	1”	168,3	811,5	330	247,5	240	1,053	0,56	2,0
SCX-D-M	1-1/4”	168,3	926,5	330	272,5	305	1,15	1,00	3,6
SCX-D-M	1-1/2”	219,1	981,5	450	272,5	360	1,260	1,39	5,0
SCX-D-M	2”	219,1	1231	455	345,1	464,8	1,41	1,94	7,0

VIRABALANCE

Description

VIRABALANCE Hydraulic Balance Tanks are compact economical units that allow fast and efficient installation of primary/secondary piping for many different boiler systems. When more than one boiler is used at the primary loop, more than one pump will run and create abnormal variations in circuit flow rates and pressures. A hydraulic balance Tank is installed between the primary and secondary loops and eliminates the need for an additional pump to circulate fluid through the primary loop. Thereby boilers and the heating circuits can have the proper flow rate independently.



SB-F



SB-D

Features

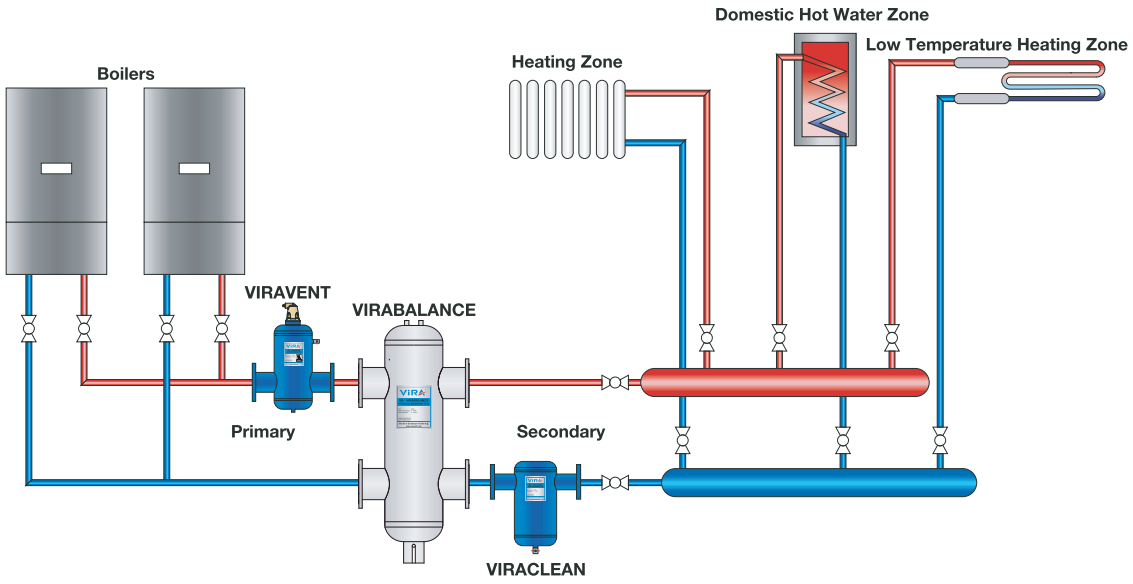
Body	:	Carbon Steel - ST37 / Nickel Coated
Size	:	DN 50 - 600
Max. Work.Temp.	:	110 °C
Max. Work. Pressure	:	10 Bar
Product Code	:	SB

Benefits

- The flow over the boiler is constant
- More than one boiler application hydraulic balance is provided
- Water flow rate can be adjusted in the system
- Separates the primary and secondary circuit
- Balances the pressure difference between the hot water line and cold water line

Installations

installation of a hydraulic balance tank in a heating system provides proper mixing when flow in the boiler circuit from flow in the distribution circuit.



Balance Tank Selection

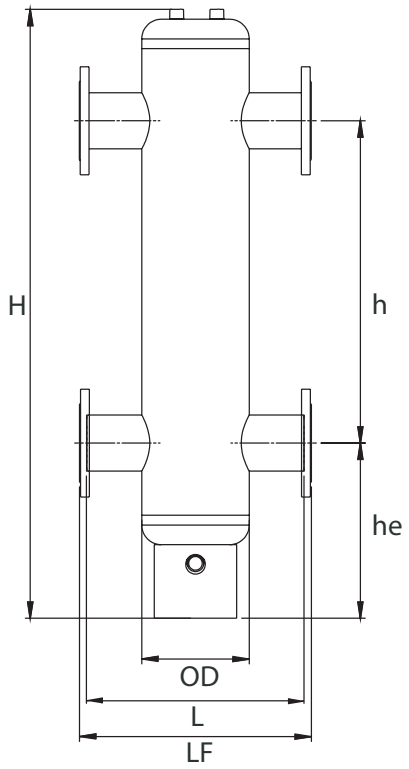


- When sizing, the max. The heating water flow rate should be taken as a basis.
- Water ow in the hydraulic balance tank max. Dimensioning should be done at 0.2 m/s.
- The pump on the primary side must be selected to overcome the resistances of the boiler and the primary side installation. The pump on the secondary side must be selected to overcome the resistance of the secondary side installation. All heating circuits on the secondary side must have a separate pump. The resistance of the balance tank is atnegligible levels.
- The low temperature is measured by the flow temperature sensor in a welded sensor sleeve near the secondary side flow over the hydraulic balance tank.

The Difference Between ViraBalance and ViraFix

- ViraBalance has holed metal steel inside.
- Provided without air vent and drain valve.
- ViraFix has stainless steel filters in primary and secondary lines.
- Contains an automatic air vent.
- The magnetic filtering option is available.

Dimensions



SB-F

					Standart; Nom. 1,5 m/s									
					Nom. = 1,5 m/s									
	Connection DN	Connection OD (mm)	L(mm)	LF(mm)	H(mm)	h(mm)	he(mm)	Max.Flow (L/s)	Max. Flow m3/h	Max. Flow (kPa)	Flanged Weight	Welded Weight	ΔT=15°C kW	ΔT=6°C kW
SB	50	168,3	350	350	562	109	343	3,3	12	3	10	10	70	28
SB	65	168,3	330	350	862	179	505	6,3	22,5	2,7	30	18	100	40
SB	80	219,1	450	470	1242	357	657	8,3	30	2,9	43	30	140	56
SB	100	219,1	455	475	1242	357	657	12,5	45	3,7	45	31	210	84
SB	125	323,9	615	635	1535	423	819	20,8	75	4,2	72	52	350	140
SB	150	323,9	615	635	1793	478	972	31,3	112,5	4,9	120	80	550	220
SB	200	400	745	775	2197	554	1219	52,1	187,5	5,8	210	150	900	360
SB	250	500	860	890	2694	650	1523	83,3	300	6,9	350	270	1300	520
SB	300	600	975	1005	3300	900	1800	114,6	412,5	7,7	420	315	1750	700
SB	350	700	1098	1128	3914	1000	2103	143,8	517,5		580	460		
SB	400	800	1194	1226	4320	1100	2404	188,3	678		620	496		
SB	450	900	1300	1330	4830	1200	2700	238,3	858		950	786		
SB	500	1000	1400	1430	5330	1300	3000	294,2	1059		1350	1165		
SB	600	1200	1600	1630	6300	1500	3600	423,8	1525,5		1800	1620		

CUSTOMIZED MODELS / OEM PRODUCTIONS

Description

Below are the products manufactured in the models specified by our customers. Vira can manufacture these models or according to the drawings you send us.







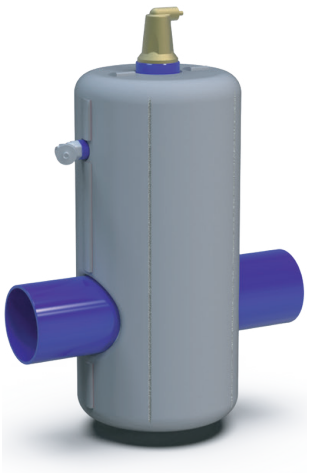
VIRAJAC

Description

Designed to minimise heat loss from Vira separators and to prevent potential industrial accidents in the area of operation. They are the most commonly used jacket type with the shortest payback period. ViraJac jackets are fully removable and can be used in heating and cooling systems.



Benefits



- Energy Saving
- Improves workplace safety and comfort
- Easy to service and remove
- Water-resistant
- Suitable for retrospective installation
- Low density and low thermal conductivity
- Resilience and resistance to thermal shock
- Flexible and easy to install
- Excellent obstructing voice and mechanism strength

Layers of ViraJac Insulation Jackets

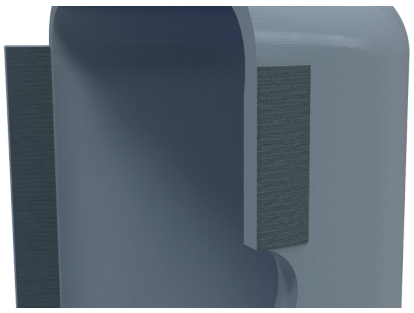
- Silicone-coated glass fiber fabric
- Polyurethane-coated glass fiber fabric
- Aluminium-coated glass fiber fabric as insulation material
- Elastomeric rubber foam in cold lines
- Rock wool and glass wool in warm and hot lines





Technical Details

- Touch Temperature (Exterior) : < 45°C
- Classification Temperature : 260°C
- Working Temperature: 230°C
- Density : 140 kg/m3
- Color : Gray



CHEMICAL DOSING POT

Description

Chemical Dosing Pots allow you to add chemicals such as corrosion inhibitors, cleaning agents, and Glycolantifreeze rapidly into a closed heating or chilled water system. Chemical dosing pots should be sized in accordance with the size of the system. We offer Stainless Steel and Carbon Steel dosing pots that have a capacity from 5 liters up to 50 liters.

These carbon steel and stainless steel chemical dosing pots are ideally placed across the main flow and return pipework with the flow from the bottom of the pot and the return at the top. This will create the ideal conditions for the rapid intake of chemicals.



Carbon Steel Stainless Steel

If a modern system is dosed correctly it

- Increases efficiency
- reduces energy costs
- Drops CO2 Output
- Improves the life cycle of the system

Benefits

- It is ergonomic.
- It is convenient for use in different climate conditions.
- It is convenient for operating in parallel with the solar energy systems and heater boilers.
- It produces hot water at high capacities in narrow volumes.
- It can be used as natural circulation or with a circulation pump.

Sizing

The size of the dosing pot installed in a system is not critical as multiple doses of chemicals can be put into the system to reach the correct concentration. The benefits of using a smaller unit are that it is easier to physically handle and also allows for more accurate dosing. However, the time on site for performing multiple doses has to be considered; this factor should influence your decision when selecting dosing pots.

Note : Chilled water systems often require large volumes of glycol to be dosed into the system; a larger dosing pot may be required for chilled water systems.

The formula below can be used as a guide to help you in your selection:

Boiler Power (kW) x 12 Litres/kW x 0.01 (based on 1% concentration*) = Volume of chemical required

Example: Boiler Power 250kW x 12kW x 0.01 = 30 litres of chemical

You could may of the following dosing pots for this installation

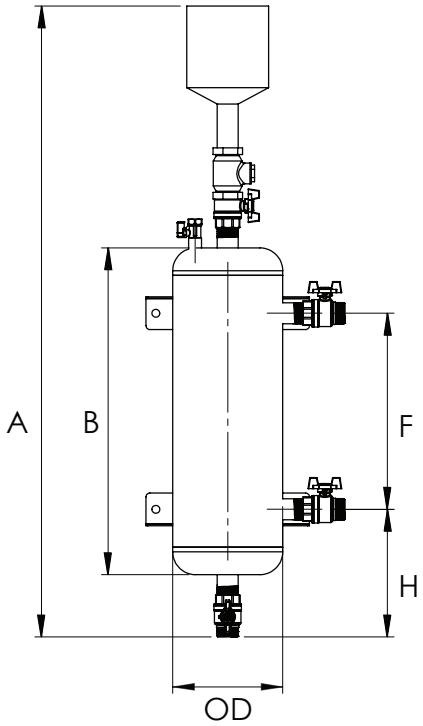
5 liter - dose 6 times
10 liter - dose 3 times
15 liter - dose 2 times

Confirm the required concentration level for the chemical being used.

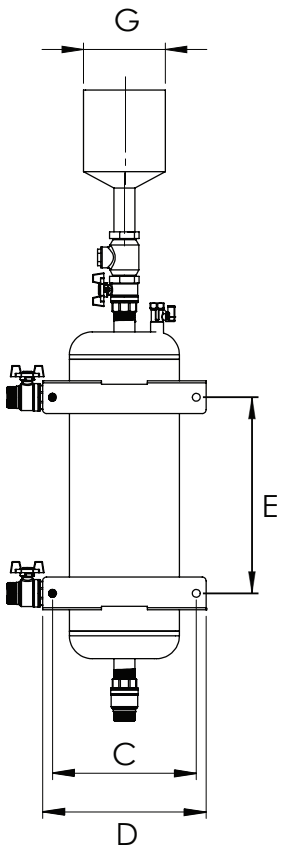


To ensure a fast, but safe dispersal of chemical dose, it is important that the unit is installed correctly. Install the unit between the flow and return pipework at the point with the highest differential pressure. Ensure the unit is securely fixed to a wall using the integral wall mounting brackets. Make certain that the drainage point is either piped to waste or that there is suitable space beneath the unit for the collection of discharged fluid.	For correct operation of the unit follow the instructions and diagram below. Where multiple dosing is required, repeat the steps as necessary until the correct system concentration is achieved. *ISOLATE THE UNIT Close all Valves *DRAIN THE UNIT Open the drain valve first, followed by the fill valve. *FILL THE UNIT Close the drain valve and pour the dosing chemical into the unit through the tundish. *BEGIN DOSING Fully open the inlet and outlet valves slowly. *COMPLETE DOSING Close all valves when dosing has been completed. Repeat the above steps if necessary.

Dimensions



VDK



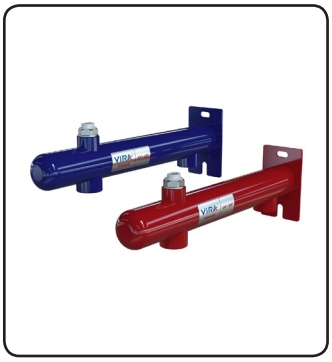
VDK

	Capacity (Liter)	Connection OD (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
VDK	5	168,3	847,9	324	220	250	180	180	125	167,3
VDK	10	168,3	965,5	500	220	250	300	300	125	195,3
VDK	15	219,1	923,9	450	350	400	250	250	125	195,3
VDK	20	219,1	1073,9	600	350	400	400	400	125	195,3
VDK	25	219,1	1173,9	700	350	400	500	500	125	195,3
VDK	35	273	1125,9	652	400	450	392	392	125	225,3
VDK	50	323,9	1279,2	800	450	500	550	550	125	220,3

VIRACONSOLE

Description

A complete product for hanging expansion vessels up to 25 liters attached to the water supply and to the wall. As the conventional Viraconsole but includes accessories.





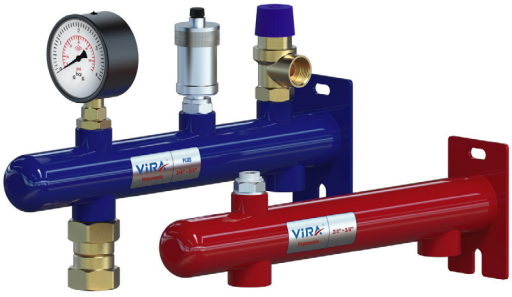


Advantages

- Equipped with a wall plate with two slots for accurate wall mounting.

Technical Specifications

- Supplied with;
  Viraconsole pressure gauge (0 - 4 bar) with shut off valve, Viraconsole ⅜” floatvent with shut off valve, Safety valve ½” (set pressure: 3 bar), Viraconsole quick-release coupling, Fixing set.



VIRAEXPAN

Description

Expansion vessels, also known as expansion tanks, can be found in most domestic pressurized heating systems. If you have a combi boiler, you will have an expansion vessel. This vessel contains air and water from the central heating system, and its purpose is to maintain the right level of pressure in the system.

There are various expansion tank designs, but the most common among modern boiler designs is the bladder-type system. This design consists of a cylinder or disc which is split into two parts by a thin rubber sheet known as a 'diaphragm'. One side is filled with water from the central heating system, while the other is filled with nitrogen. An expansion vessel also has an air valve that allows for the system to be depressurized and repressurized over time.

Where to install the expansion vessel?

It is likely that your expansion vessel is located inside the boiler casing. However, make sure to refer to your boiler manual to double-check this. If you are having trouble identifying the vessel or need advice on finding a replacement, speak to a qualified heating engineer.



What causes an expansion vessel to fail?

An expansion vessel can fail due to rust and subsequent water leakage, although this is unlikely in most modern sealed water heating systems. It is more common for the diaphragm to become thinner and perforate over time, causing the whole system to fail. The filling valve can also leak air and cause pressure failure if left unchecked.

Hot Water Boiler

Boilers, which are full of copper tubes, are complex heating appliances that turn water into steam. They heat water rapidly for two different uses: hot water and home heating and are typically powered by electricity or natural gas. A boiler system heats water to the point that it boils, and the steam is used to transport heat throughout your house. Water is usually heated to approximately 125 degrees. It's kept at a consistent temperature until it's needed — aka when someone in your home takes a shower, washes the dishes, or does laundry. Water is pulled from the top of the tank and pushed through your pipes. Cold water then fills the bottom of your water heater to be heated. The key take away here is that a water heater stores water until it is needed in a certain area of the house, while a boiler does not store water – it simply heats water as the water passes through the tubes.

MULTIZONE MANIFOLDS

Description

Compact manifolds are used in heating systems to allow different heat settings in the various rooms when there is only one heat generator.

The various configurations are compact and can be easily fitted in any kind of hydraulic circuit, with the advantages of ease of installation and saving of useful living space. The manifolds have pre-formed shell insulation to guarantee perfect thermal insulation.

The ViraFix is a complete unit which is installed between the boiler and the manifold. This contains an air separator and a dirt trap with a magnetite separator (to protect the heat emitter and circulation pumps) and can be delivered either with or without a hydraulic diverter.

The connections are designed to fit the manifold, ensuring easy installation.

Installer Benefits

- Planning/costing made simple thanks to the configuration of prefabricated modules to create complex systems
- Perfect system integration thanks to a comprehensive range of connectable accessories
- Short assembly times thanks to a high degree of prefabrication and matched components
- No unwanted heat transfer thanks to the thermal separation of flow and return lines
- Clean professional finish

Technical Specifications

Body	:	Carbon Steel
Max. Work. Pressure	:	10 Bar
Max. Work.Temp.	:	5 - 110 °C
Medium	:	Water, non-hazerdous glycol
Main Connections	:	Flanged / Threaded / Victualic
Centre Distance	:	125 mm



Customization

- Vira, which is an expert manufacturer in filtration, can produce according to customer requests in all products it produces.

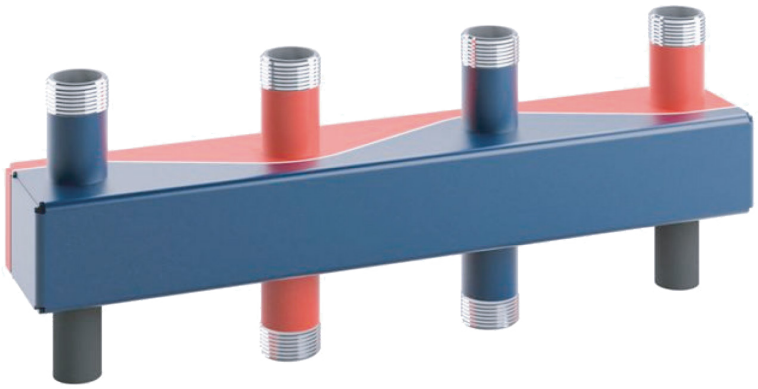
Description

Heating manifold with hydronic junction

The ViraColl, consisting of a heating manifold with an integrated hydronic junction, incorporates many positive characteristics in one component. On the one hand, the integrated hydraulic separator ensures optimum hydraulic separation of the boiler circuit from the consumer circuits, on the other hand, the heating manifold horizontally positioned above enables space-saving arrangement of the heating circuits.

In the domestic services field, specially designed for use in one-boiler systems, the small ViraColl offers the optimum solution for combined and space-saving heating circuit manifolds. In a system with two or more heating circuits, neither an increased amount of installation work nor additional space is required. If the condensing unit is equipped with a hydraulic separator control with primary volume flow rate adjustment, the return flow boost is avoided. The flow temperature of the system is registered in the ViraColl and compared with the flow temperature of the boiler. Thus, the volume flow rate ratios in the hydraulic separator can be concluded therefrom, enabling a reaction by changing the speed of the internal pump.

The advantages particularly apply to the ViraColl in large-sized design. Savings in installation time, hydraulic separation and minimized space required have a particularly positive effect on the construction costs and on the efficiency of the system. There are several reasons in favour of the combination of heating manifold and low-loss header.

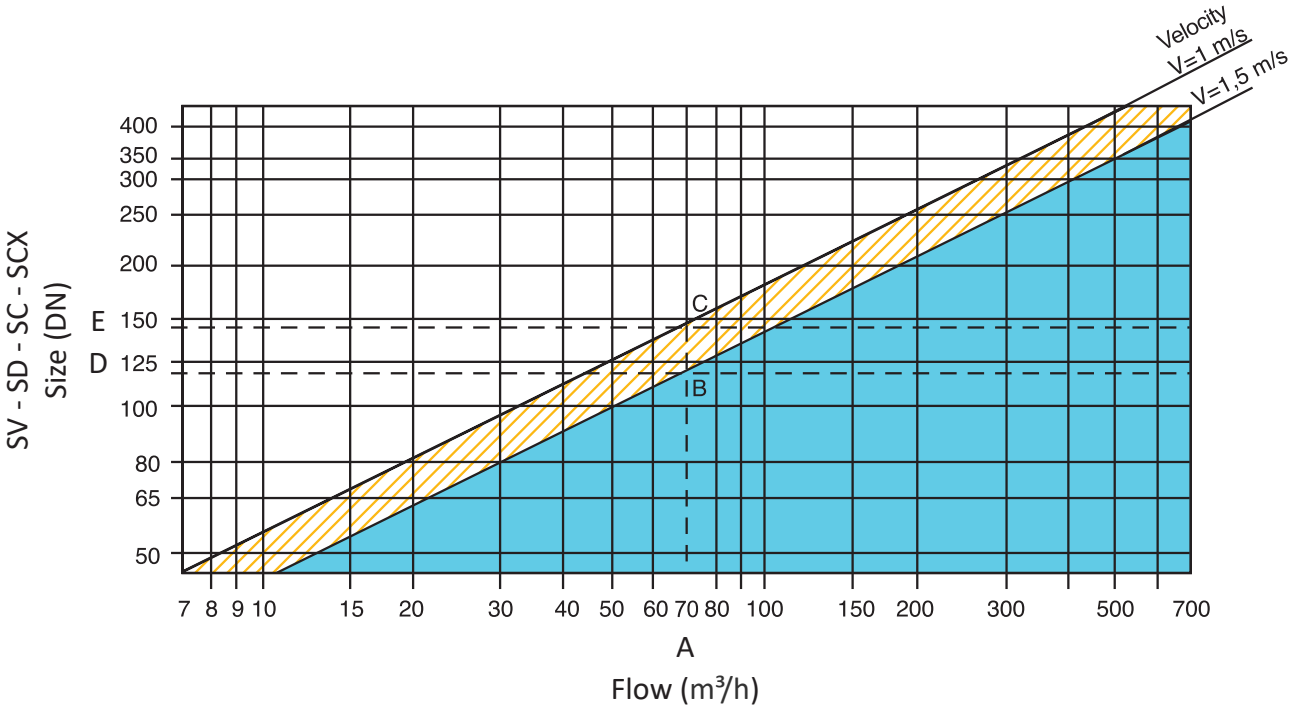


SIZING

This selection can be used for heating and cooling systems.
For optimum results, a flow velocity should be less than 1,5 m/s. Above 1,5 m/s flow velocities will affect the Smartvent deaerators and dirt separators' ability to eliminate air. Two examples of different installation place possibilities :

A) If the installation place is low pressure and high temperature, the velocity should be 1,5 m/s.
1. From the 'Flow' axis at 70 m³/h at point A, move vertically to the 1,5 m/s water velocity curve at point B.
2. Move left from point B to meet the "Smartvent Dimension" axis at point D.
3. Always choose the dimension that is the nearest above the endpoint on the axis, for this example choose DN125.

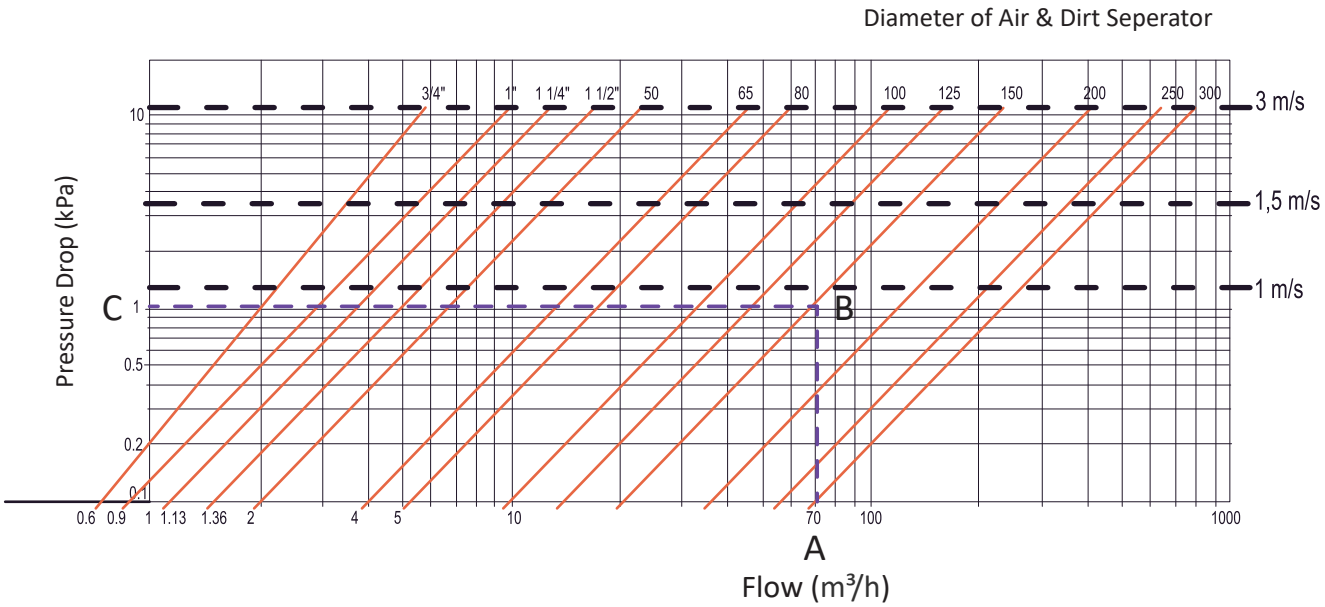
B) If the installation place is high pressure and high temperature, the velocity should be 1,5 m/s.
1. From the 'Flow' axis at 70 m³/h at point A, move vertically to the 1 m/s water velocity curve at point C.
2. Move left from point C to meet the "Smartvent Dimension" axis at point E.
3. Always choose the dimension that is the nearest to the endpoint on the axis, for this example choose DN150.



PRESSURE DROP

Resistance graph to flow various diameters of Smartvent Air and Dirt Separator as below.

PRESSURE DROP CHART



Example :
When the water flow is 70 m³/h pressure drop for the DN 150 Smartvent Air and Dirt Separators :

1. From the 'Flow' axist at 70 m³/h at point A, move vertically to the "Smartvent Dimension" DN 150 curve at point B.
2. Move left from point B to meet the "Pressure Drop" axis at point C, for this example, Pressure Drop will be 1 kPa.

NOTES

NOTES

Vira Products Provide Solutions to The Prblems.

Vira is a young, dynamic and expert company in the production of separators, valves and steam-related products. To meet our customer's needs, we offer customers a combination of our application experience, ongoing technical support, correct installation, and commissioning ability with our high-quality products.

Vira provides durable, high-quality valves and steam-related products that are used in many kinds of applications, from unique custom jobs to large-scale installations.

- **Automatic Air Vent**
- **Solar Automatic Air Vent**
- **Deaerators**
- **Dirt Separators**
- **Hydraulic Balance Tanks**
- **Butterfly Valves**
- **Ball Valves**
- **Check Valves**
- **Expansion Joints**
- **Safety Valves**
- **Actuators**
- **Steam Separators**
- **Condensate Pump**
- **Sample Coolers**
- **Steam Boiler Automation**
- **Automatic Blowdown System**
- **Steam Flow Meters**
- **Steam Traps**





DEALERS





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