SPIROTECH

Maximising Performance for You

English

PRODUCT CATALOGUE

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FLUID CONDITIONING – THE PRESSURE IS RISING FOR PLANNERS AND PLANT MANUFACTURERS!

The development of technical solutions for heating and cooling systems is progressing faster and faster, thus mounting the pressure on planners and plant manufacturers.

The results of these developments are consistently positive for investors, operators and owners, and lead to heating and cooling systems and their components becoming more and more efficient, effective and powerful. This conserves valuable resources, increases efficiency, saves a lot of energy and ultimately reduces the operating and energy procurement costs. However, this also means that the tasks for you as a planner, plant manufacturer or engineer are becoming increasingly complex at the same time.

As with a racing car, all components have to be optimally selected so that the full potential of the entire system is realised, and you can reap the rewards of your investment.

It is therefore clear that detailed and systematic planning and consideration of all components – including the heating or cooling water – as well as all influencing factors, whether from a mechanical, physical or chemical point of view, are now more important than ever before.

EACH SYSTEM IS ONLY AS GOOD AS ITS WEAKEST COMPONENT

Heat boilers, heat pumps, cooling units, high efficiency pumps, hydraulic valves and heat exchangers are now highly optimised in terms of efficiency, and already seem to be at the pinnacle of their performance.

In the case of modern pumps, for example, this is achieved by means of smaller clearances, whereas, for a better hydraulic alignment, control valves are now used which only have minimal openings.

It is easy to imagine that the quality and composition of heating or cooling water as a medium of heat transfer can influence the efficiency and, above all, trouble-free operation of heating and cooling systems in a way that is often underestimated.

Today, each and every component of the system has an important function, and the weakest link in the chain defines the overall quality. This is a valid reason for paying close attention to the often underestimated and unloved system fluid and its optimal conditioning. This is good news for operators, owners, controllers and service staff!

THE SYSTEM FLUID – THE LIFEBLOOD OF EVERY HEATING AND COOLING SYSTEM

If we were to attempt to make an anatomical comparison, we could consider heating and cooling generators, the pumps and valves in heating and cooling systems, as the central and vital body organs, such as the heart and lungs, and the system fluid as the blood.

As the condition of blood in the human body is of key importance for all organs to work efficiently and to survive the elements of everyday life, so is the fluid in a HVAC system. When the blood is in good condition, the organs can work and the whole organism is capable of surviving. The same is true when it comes to HVAC systems. The moment the quality of the system water fails to meet the standards and guidelines, significant errors, serious damage and loss of efficiency may occur. This may lead to legal or regulatory implications and can have a negative effect on warranty, operational costs as well as repair and maintenance costs.

CORROSION IS JUST ONE OF MANY CONSEQUENCES OF INADEQUATE WATER CONDITIONING

There are numerous factors that pose negative effects on inadequately conditioned system fluid.

Chemical processes, deposits, particles or air in the system fluid, can all influence the functionality of individual components and also the effectiveness of the entire system. They can lead to serious damage in individual vital parts, to an incorrect pH value, which provokes corrosion on metallic materials, up to microbiological film formation and the resulting clogging of small cross-sections in the heating or cooling system.

The system really does not reveal its full power until everything is coordinated. When there is constant
pressure in the system, when there is a consistent absence of air pockets, when particles such as magnetite are automatically removed from the system, when the pH value is correct, you will get consistent high performance and economic value from your installation.

SYSTEM BREAKDOWN DUE TO A HEATING OBSTRUCTION

Even with the best system water, unpleasant effects such as corrosion and the resulting corrosion particles in the system water of heating, cooling and processing systems cannot be completely prevented.

The risk of contamination of plant water is commonly underestimated or overseen completely by planners and operators because the corrosive particles such as magnetite and other dirt generated in the system are often so small that they cannot be seen with the naked eye. Initially, even systems designed without a dirt separator such as the SpiroTrap, work smoothly. However, in the medium to long term, the continuous deposition of particles and dirt on system-sensitive components such as heat exchangers, pumps, valves and throttle valves causes serious problems. In addition to significantly increased energy consumption, this leads to the impairment of important functions and to recurring faults, combined with the need for additional maintenance and economic consequences for the operator. In the end, it can even lead to a heating obstruction – that is, the failure of the entire system.

SPIROTECH SOLUTIONS FOR DIRT SEPARATION

Spirotech offers a comprehensive range of SpiroTrap dirt separators – from small brass models for all residential dwellings, to extremely robust and powerful steel models for large-scale industrial use. With the SpiroTrap MB3 and SpiroTrap Magnet series, Spirotech also has extremely powerful dirt separators with unique magnetic technology. They guarantee fast and optimal magnetite and dirt separation.

Beside non-magnetic particles, even the smallest magnetite particles are removed, maximising system performance and protecting costly system components. Thanks to the smart design, collected dirt can be removed quickly and easily during operation. In addition, with the SpiroCombi, Spirotech offers a hybrid variant which simultaneously separates air and dirt.

SPIROTRAP® MB3

SPIROTRAP® MAGNET

FROM CIRCULATION PROBLEMS TO A BLOCKAGE

There are many possibilities for air to enter the system water in heating, cooling and processing systems. In part, depending on the pressure and temperature in the system, air is already present in water.

Air in the system is frequently responsible for costly and high-maintenance failures. It causes loud noises in radiators, heat exchangers, pipes and pumps. It makes it extremely difficult to adjust systems, and promotes corrosion and thus the formation of dirt and magnetite. Air in the system leads to a significant reduction in heating and cooling performance, and premature wear and tear on major system components, or, much worse: a blockage. This, in turn, could lead to the complete failure of the system, with all the hassle that comes with it, such as dissatisfied tenants, operators or investors. It is therefore predictable as to what will happen in the medium to long term if a system is designed and operated without individual solutions for air removal, such as the SpiroTop automatic air vent, the SpiroVent microbubble deaerator and the SpiroVent Superior vacuum degasser.

SPIROTECH SOLUTIONS FOR AIR REMOVAL

Spirotech offers a comprehensive portfolio of consulting, solutions and services for three different types of air inclusion in heating, cooling and processing systems. The SpiroTop automatic air vent series is ideal for removing free air from the system. For separating and removing microbubbles from process fluid, Spirotech offers its customers the SpiroVent series. And for releasing, separating and removing free air, trapped air and even dissolved air, from the process fluid, there is the SpiroVent Superior vacuum degasser.

SPIROTOP®

SPIROVENT®

SPIROVENT® SUPERIOR

HEATING RHYTHM DISTURBANCES AND PRESSURE FLUCTUATIONS

It is undisputed that many of the problems with heating and cooling systems are caused by poor pressure retention. This can lead to a number of serious consequences.

Whether a heating, cooling or processing system is being built from scratch or it is being refurbished, the right design, installation and maintenance are decisive for an efficient and economical operation. Poorly designed or serviced pressure maintenance inevitably leads to higher operating costs: It must be constantly fed in, which leads to air problems and a higher rate of system wear (cavitation on pumps).

Maximum performance is achieved exclusively via tailor-made solutions that integrate both vacuum degassing and pressure maintenance, such as the SpiroExpand series. This is the only way to avoid heating rhythm disturbances and pressure fluctuations.

TAKE THE STRESS OUT OF PRESSURISATION

SpiroExpand includes a wide range of passive (expansion) vessels and pump controlled expansion systems. The (expansion) vessels are available in volumes from 2 to 10,000 liters, and the pump controlled expansion systems have dozens of configurations suitable for any size heating and cooling system.

Combining SpiroExpand with SpiroTrap dirt separation and SpiroVent Superior degassing increases the efficiency and reliability of a heating and cooling installation. An absolute must for installers and specifiers.

SPIROEXPAND® EVN

SPIROEXPAND® MULTICONTROL

PRODUCT OVERVIEW

SPIROTOP®

BRASS

HIGH TEMPERATURE

HIGH PRESSURE

STAINLESS STEEL

SPIROVENT®

BRASS HORIZONTAL

BRASS HORIZONTAL

SPIROCOMBI®

The hi-flow solution is available in a flange design

SPIROCOMBI MB3

STEEL FLANGE DESIGN

MAGNET FLANGE DESIGN

HI-FLOW DEMOUNTABLE FLANGE DESIGN

DEMOUNTABLE FLANGE DESIGN

SPIROTRAP®

The hi-flow solution is available in a flange design

BRASS HORIZONTAL

SPIROTRAP MB3

SPIROTRAP MBC

STEEL FLANGE DESIGN

MAGNET FLANGE DESIGN

SPIROCROSS®

BRASS

MAGNET FLANGE DESIGN

SPIROTOP® SOLAR / SPIROVENT® SOLAR

The hi-flow solution is available in a flange design

SPIROVENT RV2

STEEL
FLANGE DESIGN

SPIROTOP
SOLAR

SPIROVENT SOLAR
HORIZONTAL

SPIROVENT SOLAR
UNIVERSAL

SPIROPLUS®

MILD CLEANER

PROTECTOR

SPIROCARE®

PROLAB

SYSTEM ANALYSIS

SPIROPURE®

HOME

PRO

SPIROVENT® SUPERIOR

SUPERIOR S250

SUPERIOR S400

SUPERIOR S10/S16

SUPERIOR S600

SPIROEXPAND®

TOP UP UNIT

PRESSURISATION

EXPANSION VESSELS

OTHERS

FLUSH CONNECTOR

INSULATION SETS

Useful information

FLOW RATE SELECTION CHARTS

Brass solution

Connection size		Brass solution	
[mm]	[Int.]	[Max. l/s]	[Max. m³/h]
20	¾"	0,35	1,3
22	¾"	0,35	1,3
25	1"	0,55	2
28	1"	0,55	2
32	1 ¼"	1	3,6
40	1 ½"	1,4	5
50	2"	2,1	7,5

Max. fluid temperature
110 °C

Nom. flow velocity
1 m/s

Steel solution - Standard-flow

Connection size		Steel solution		
[mm]	[Int.]	[Max. l/s]	[Max. m³/h]	Δp at max. flow [kPa]
50	2"	3,5	12,5	3,5
65	2 ½"	5,5	20	2,7
80	3"	7,5	27	2,9
100	4"	13	47	3,7
125	5"	20	72	4,2
150	6"	30	108	4,9
200	8"	50	180	5,8
250	10"	80	288	6,9
300	12"	113	405	7,7
350	14"	136	490	7,8
400	16"	178	640	8,4
450	18"	225	810	10
500	20"	276	995	11
600	24"	399	1.435	12

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

Steel solution - Hi-flow

Connection size		Steel solution		
[mm]	[Int.]	[Max. l/s]	[Max. m³/h]	Δp at max. flow [kPa]
50	2"	7	25	11,8
65	2 ½"	11	40	11,6
80	3"	15	54	12,4
100	4"	26	94	14,6
125	5"	40	144	16,8
150	6"	60	215	19,4
200	8"	100	360	23,1
250	10"	160	575	27,7
300	12"	225	810	31,0
350	14"	275	990	31
400	16"	358	1.290	34
450	18"	458	1.650	39
500	20"	575	2.070	43
600	24"	825	2.970	47

Max. fluid temperature
110 °C

Nom. flow velocity
3 m/s

Useful information

SELECTION CHART BASED ON BOILER OUTPUT

Brass air and dirt separators

	10 KW	15 KW	20 KW	25 KW	30 KW	35 KW	40 KW	45 KW	50 KW	55 KW	60 KW	65 KW	70 KW
20 K	22 mm G¾	22 mm G¾	22 mm G¾	22 mm G¾	28mm 1"	28mm 1"	28mm 1"	28mm 1"	1 ¼"	1 ¼"	1 ¼"	1 ½"	1 ½"
15 K	22 mm G¾	22 mm G¾	22 mm G¾	28mm 1"	28mm 1"	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ½"	1 ½"	1 ½"	1 ½"
10 K	22 mm G¾	22 mm G¾	28mm 1"	1 ¼"	1 ¼"	1 ½"	1 ½"	1 ½"	1 ½"	1 ½"	2"	2"	2"
7.5 K	22 mm G¾	28mm 1"	1 ¼"	1 ¼"	1 ¼"	1 ½"	1 ½"	1 ½"	2"	2"	2"	2"	2"
5 K	28 mm 1"	1 ¼"	1 ¼"	1 ½"	1 ½"	2"	2"	2"					

	80 KW	85 KW	90 KW	100 KW	105 KW	110 KW	115 KW	120 KW	125 KW	130 KW	135 KW
20 K	1 ½"	1 ½"	1 ½"	1 ½"	1 ½"	1 ½"	1 ½"	2"	2"	2"	2"
15 K	1 ½"	1 ½"	2"	2"	2"	2"	2"	2"	2"	2"	
10 K	2"	2"									
7.5 K	2"	2"									
5 K											

Useful information

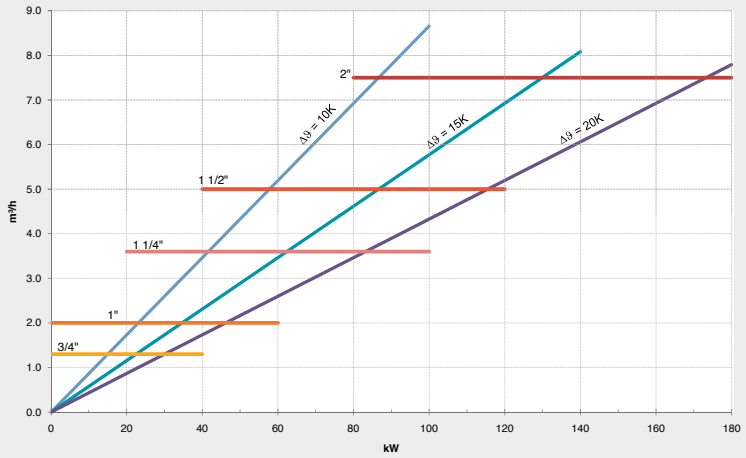
HEAT OUTPUT TABLE BASED ON FLOWS RATE

	Temperature spread			
	7.5 K	10 K	15 K	20 K
10 KW	1.146	860	573	430
15 KW	1.720	1.290	860	645
20 KW	2.293	1.720	1.146	860
25 KW	2.866	2.150	1.433	1.075
30 KW	3.439	2.580	1.720	1.290
35 KW	4.013	3.009	2.006	1.505
40 KW	4.586	3.439	2.293	1.720
45 KW	5.159	3.869	2.580	1.935
50 KW	5.732	4.299	2.866	2.150
55 KW	6.306	4.729	3.153	2.365
60 KW	6.879	5.159	3.439	2.580
65 KW	7.452	5.589	3.726	2.794
70 KW	8.025	6.019	4.013	3.009
75 KW	8.598	6.449	4.299	3.224
80 KW	9.172	6.879	4.586	3.439
85 KW	9.745	7.309	4.872	3.654
90 KW	10.318	7.739	5.159	3.869
95 KW	10.891	8.169	5.446	4.084
100 KW	11.465	8.598	5.732	4.299
105 KW	12.038	9.028	6.019	4.514
110 KW	12.611	9.458	6.306	4.729
115 KW	13.184	9.888	6.592	4.944
120 KW	13.758	10.318	6.879	5.159
125 KW	14.331	10.748	7.165	5.374
130 KW	14.904	11.178	7.452	5.589
135 KW	15.477	11.608	7.739	5.804
140 KW	16.050	12.038	8.025	6.019
145 KW	16.624	12.468	8.312	6.234
150 KW	17.197	12.898	8.598	6.449
155 KW	17.770	13.328	8.885	6.664
160 KW	18.343	13.758	9.172	6.879
165 KW	18.917	14.187	9.458	7.094
170 KW	19.490	14.617	9.745	7.309

Results in liters/h, heat requirement in kW

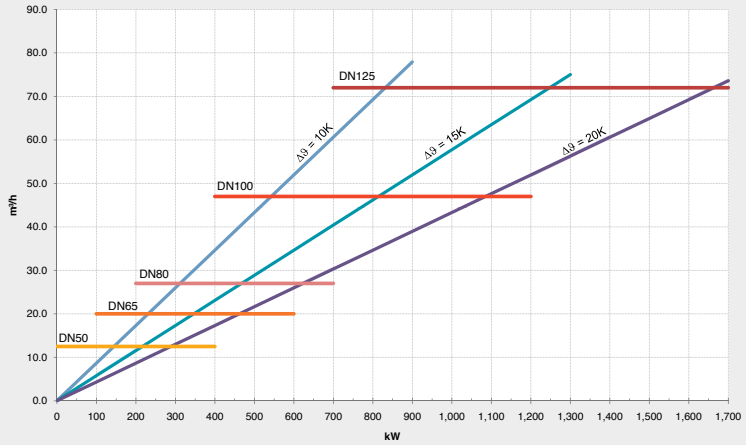
2" BRASS UNITS

Selection table SpiroVent / SpiroTrap up to 2" brass units



DN 125 STEEL UNITS

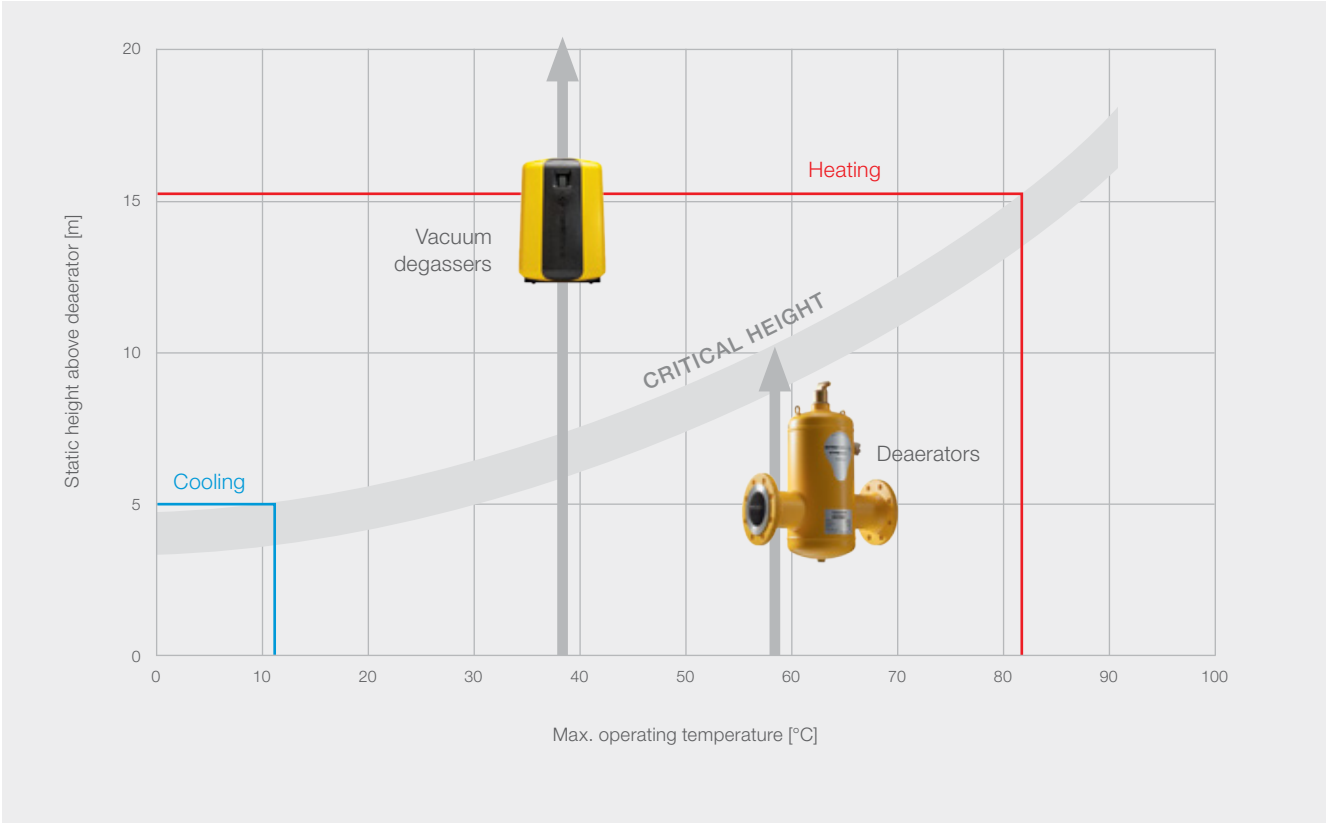
Selection table SpiroVent / SpiroTrap up to DN 125 steel units



Useful information

STATIC HEIGHT DESIGN CRITERIA FOR SPIROTECH INLINE UNITS

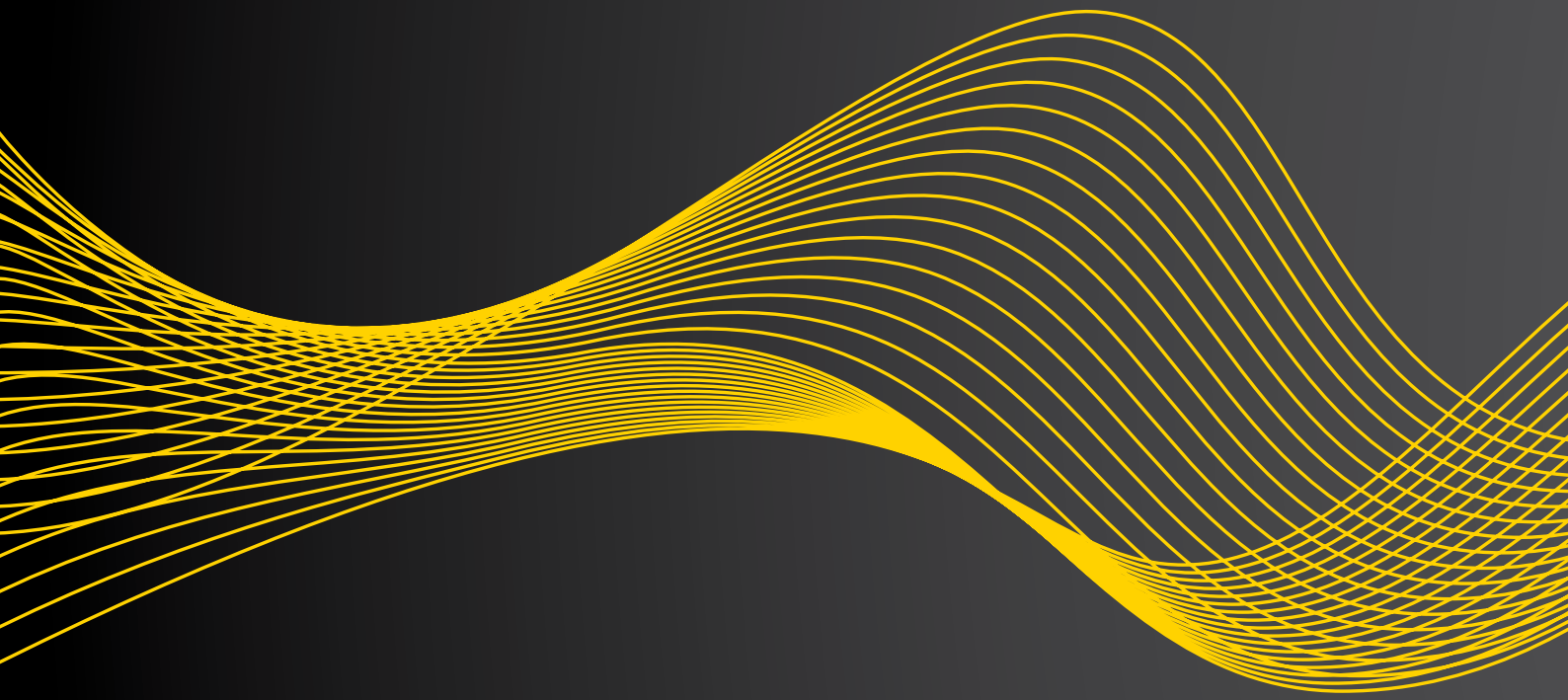
In case of an excessive static head (pressure) above a deaerator, dissolved air cannot be released from the fluid. Under these circumstances it is very hard to predict where in the system air bubbles will emerge from the fluid. Apart from that, the point where microbubbles emerge can change depending on fluid temperature and hydrostatic pressure (Henry´s Law). Rule of thumb for maximal static height: heating ≤ 15 m, cooling ≤ 5 m. Above the critical height, a vacuum degasser is generally a more effective solution. For custom made advice, please contact us.



HENRY'S LAW APPLIES TO EVERY SYSTEM AND STATES THE FOLLOWING:

Gas will dissolve in a fluid until there is a balance between the partial pressure of the gas in the fluid and the partial pressure of the same gas outside the fluid. It also applies that in a fluid under the influence of pressure and temperature, a certain maximum amount of gas can be dissolved. This also means that as the temperature or pressure changes, gases can be emitted.

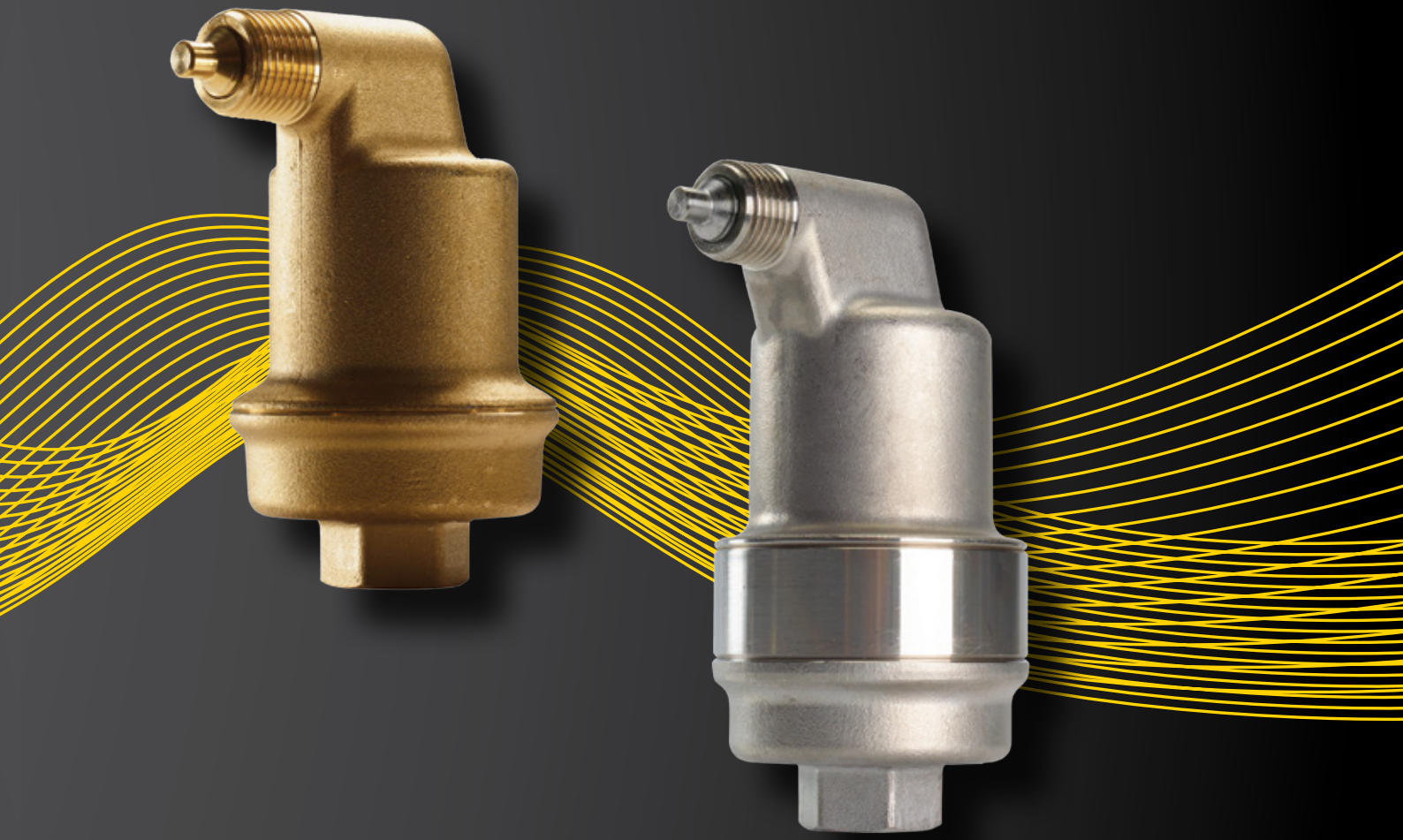
Therefore, temperature and pressure influence the property which allows water to absorb or emit air. A heating or cooling system is a constant string of pressure and temperature variations.



SPIROTECH

AUTOMATIC AIR VENTS

PRODUCT RANGE



SPIROTOP®

SpiroTop automatic air vents quickly and effectively remove free air and allow for fast, reliable deaeration when a cooling or heating system is drained.

AUTOMATIC AIR VENTS

SPIROTOP®

BENEFITS OF SPIROTOP

The combination of the characteristics listed below ensures that the automatic SpiroTop will not leak:

- The special valve construction makes sure that the valve is closed completely
- The special valve seat has a very long life expectancy
- The robust floats are made of solid plastic so they cannot rupture
- The large air gap between the valve and the water (at least 40 mm) prevents valve contamination which is one of the main causes of leaks
- The ½" connection prevents the pipette effect

SPIROTOP AUTOMATIC AIR VENTS

SpiroTop automatic air vents quickly and effectively remove free air during filling and allow for fast, reliable aeration when a system is drained. This prevents component damage and system failure. Available for pressures up to 25 bar and temperatures up to 200 °C.

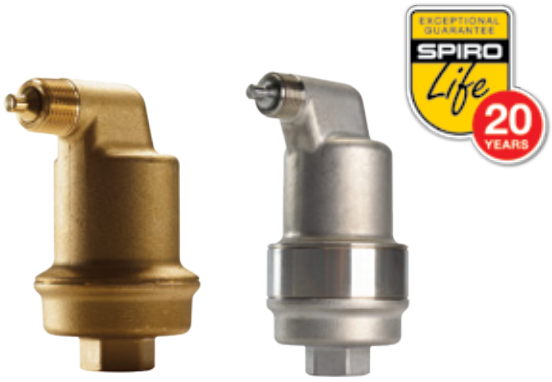
PREVENT FUTURE COSTS

Air and other gases trapped at one or more high points in a system can obstruct the flow at these spots or even stop it altogether. If gases are not sufficiently removed, commissioning problems may occur, frequent manual venting will be required and pumps will need to run at a higher rate, using more energy due to a bigger pressure drop. Bubbles travel and by doing so they may interfere with the control valves authority. Eventually, expensive system components will be damaged, leading to system and process malfunctions or even total failure.

PREVENTING CONTAMINATION AND LEAKAGE

SpiroTop provides a solution for filling and venting systems, making and keeping the high points in pipe systems air-free and preventing air pockets from forming. The significant gap between the valve and the water (at least 40 mm) prevents valve contamination, one of the main causes of leaks. Thanks to a reliable venting mechanism and special construction, the valve closes completely and is protected against leaking.

The special valve seat has a very long life. A SpiroTop is connected to the system by a female ½" connection. With smaller connections, bubble blockage may occur and the device stops working adequately.



SpiroTop is the reliable and worry-free solution ideal for:

- filling and draining systems
- making and keeping the highest points in systems air-free

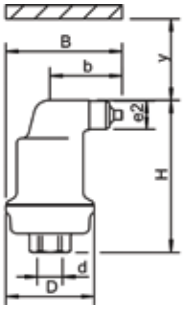
SpiroTop -Brass

A brass air vent for heating- and cooling systems with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	e2	e2 [M/F]	y [mm]	Material float	Wgt. [kg]
AB050	G½	F	112	86	52	65	R1/2	M	>50	PP	0.7

Max. op. pressure
10 bar

Max. fluid temperature
110 °C



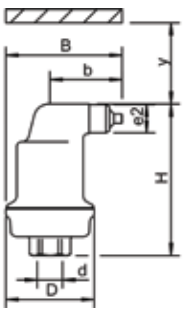
SpiroTop -Brass -HighT

A brass air vent for high-temperature systems (max. 180 °C) with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	e2	e2 [M/F]	y [mm]	Material float	Wgt. [kg]
AB050/002	G½	F	112	86	52	65	R1/2	M	>50	TPX	0.6
AB050/007	G½	F	112	86	52	65	R1/2	M	>50	AISI 316	0.7

Max. op. pressure
10 bar

Max. fluid temperature
180 °C



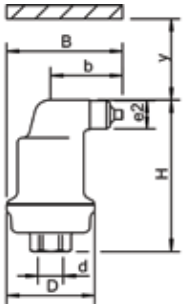
SpiroTop -Brass -HighT+P

A brass air vent for high-temperature and high-pressure systems (max. 150 °C, max. 25 bar) with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	e2	e2 [M/F]	y [mm]	Material float	Wgt. [kg]
AB050/025	G½	F	134	86	52	65	R1/2	M	>50	TPX	1

Max. op. pressure
25 bar

Max. fluid temperature
150 °C



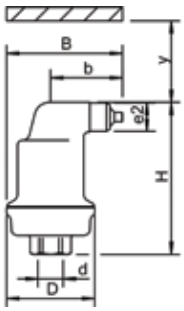
SpiroTop -Brass -HighP

A brass air vent for high-pressure systems (max. 16 bar) with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	e2	e2 [M/F]	y [mm]	Material float	Wgt. [kg]
AB050/030	G½	F	112	86	52	65	R1/2	M	>50	PP	0.7

Max. op. pressure
16 bar

Max. fluid temperature
110 °C



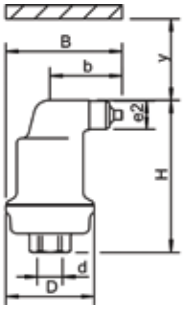
SpiroTop -St.Steel -HighT

Stainless steel air vent for high-temperature systems (max. 180 °C) with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	e2	e2 [M/F]	y [mm]	Material float	Wgt. [kg]
AB050/R002	G½	F	112	86	52	65	R1/2	M	>50	TPX	0.7
AB050/R007	G½	F	112	86	52	65	R1/2	M	>50	AISI 316	0.6

Max. op. pressure
10 bar

Max. fluid temperature
180 °C



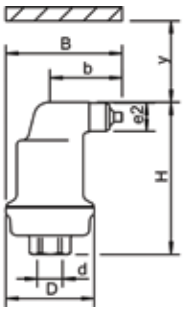
SpiroTop -St.Steel -HighT+P

A stainless steel air vent for high-temperature and high-pressure systems (max. 200 °C, max. 25 bar) with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	e2	e2 [M/F]	y [mm]	Material float	Wgt. [kg]
AB050/R004	G½	F	134	86	52	65	R1/2	M	>50	TPX	1

Max. op. pressure
25 bar

Max. fluid temperature
200 °C



Insulation SpiroTop

The SpiroTop deaerator can be fully enclosed with a prefabricated insulation shell, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation SpiroTop AB050	TAB050	181	150	Expanded polypropylene (EPP)	0.18

AUTOMATIC AIR VENTS FOR SOLAR INSTALLATIONS

PRODUCT RANGE

SPIROTOP® SOLAR

The automatic air vent for temperatures up to 180°C.

AUTOMATIC AIR VENTS FOR SOLAR INSTALLATIONS

SPIROTOP® SOLAR

BENEFITS OF SPIROTECH SOLAR SOLUTIONS

- Removes circulating air and microbubbles effectively
- Removes trapped air
- Greatly reduces commissioning times
- Minimal constant pressure drop
- No unnecessary shutdown
- The special valve seat has a very long life expectancy

SPIROTOP SOLAR AUTOMATIC AIR VENTS FOR SOLAR INSTALLATIONS

Air in a solar installation causes complaints, excessive wear, low efficiency and process interruptions. All of these are avoidable by using Spirotech Solar solutions. Furthermore, even the “boil dry” situation of the solar installation can be prevented.

AUTOCLOSE DEAERATORS FOR IMPROVED EFFICIENCY

Thanks to a patented invention, Spirotech offers solar deaerators also with an AutoClose function.

As soon as the fluid temperature rises above its boiling point, the deaeration valve closes quickly and completely, preventing the escape of air and steam and thereby the risk of boiling dry of the system.

When the temperature has dropped sufficiently, the valve is reopened for deaeration and the deaeration process is restarted. This means permanent deaeration in the ideal location. Shut-off valves are now redundant.

Thanks to the AutoClose principle, solar installations can remain free of air permanently, increasing system efficiency and preventing all kinds of discomfort and complaints.

BENEFITS OF AUTOCLOSE:

- reduces the effects of stagnation
- solar fluid will not prematurely degenerate
- system will not boil dry via the deaerator
- no more climbing the roof to deaerate
- permanent air-free, efficient installation
- suitable for new and existing installations

SPIROTOP SOLAR®

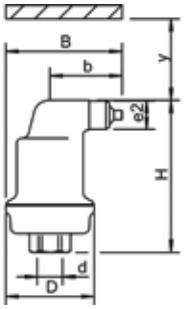
SpiroTop Solar -Brass

A brass automatic air vent for solar systems with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	y [mm]	e2	e2 [M/F]	Material float	Wgt. [kg]
AB050/008	G½	F	112	86	52	65	>50	R½	M	TPX	0.7

Max. op. pressure
10 bar

Max. fluid temperature
180 °C



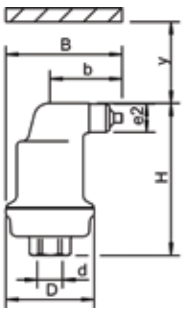
SpiroTop Solar -Brass -AutoClose

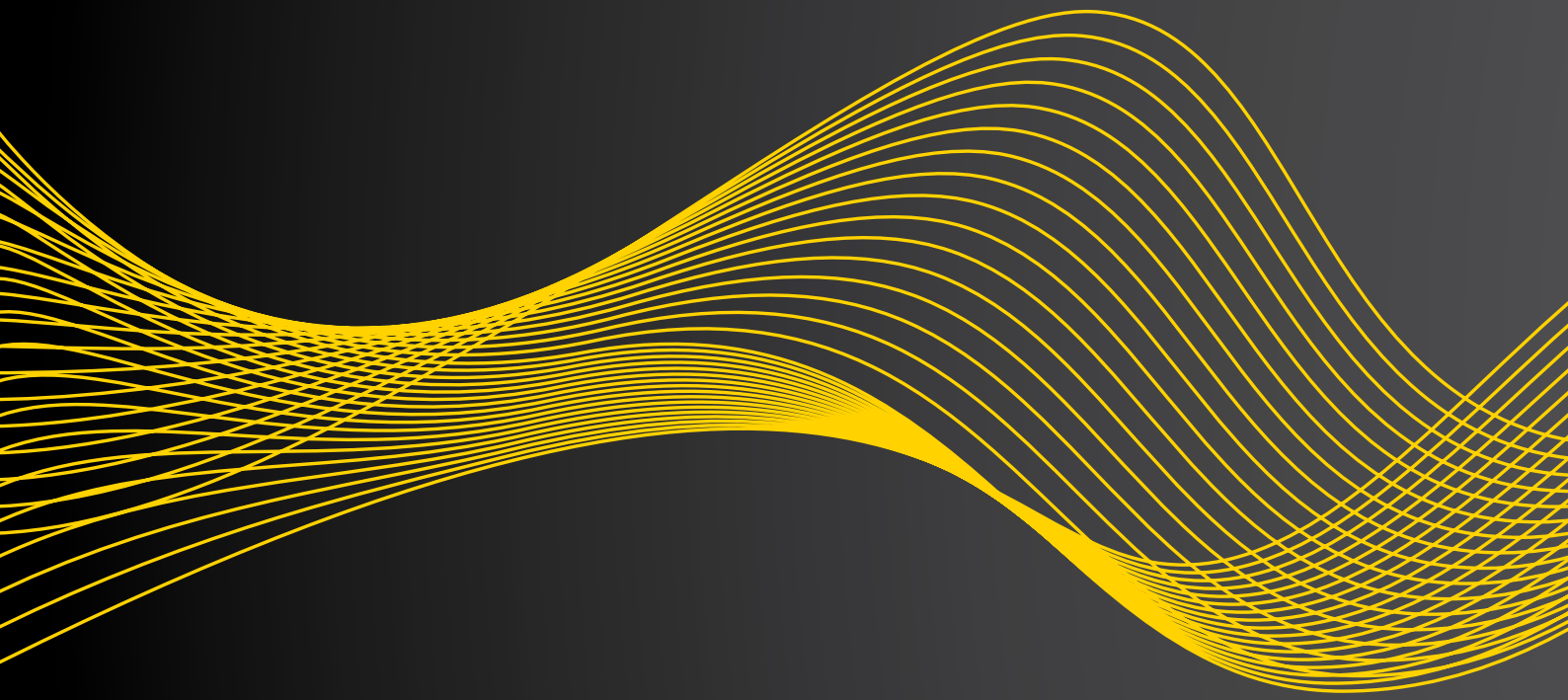
A brass automatic air vent - AutoClose for solar systems with a ½" connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	B [mm]	b [mm]	D [mm]	y [mm]	e2	e2 [M/F]	Material float	Wgt. [kg]
AB050FBA08	G½	F	112	86	52	65	>50	R½	M	TPX	0.7

Max. op. pressure
10 bar

Max. fluid temperature
180 °C





SPIROTECH

MICROBUBBLE DEAERATORS

PRODUCT RANGE

SPIROVENT®

SpiroVent microbubble deaerators effectively remove microbubbles and circulating air from system water.

MICROBUBBLE DEAERATORS

SPIROVENT®

BENEFITS OF SPIROVENT

- Removes all circulating air and microbubbles 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 DN 800
- A complete range, suitable for various pressures and temperatures
- Exceptional guarantee

WHY USE SPIROVENT PRODUCTS?

Today's highly energy-efficient heating and cooling systems offer optimal performance with air-free system water. Automatic air vents and bleeding valves cannot remove microbubbles or circulating air. Venting devices on boilers and other devices will not remove air that is present elsewhere in the system. Furthermore, presence of air is the major cause of dirt formation corrosion and related negative effects on efficiency, failure sensitivity and wear and tear.

SPIROVENT MICROBUBBLE DEAERATORS

SpiroVent microbubble deaerators are installed inline and continuously remove free air and microbubbles from the system fluid. A SpiroVent deaerator should always be installed at the hottest point within a system. In the case of a heating system, for example, this is the point where the water exits the boiler. In the case of a cooling system, it is in the return before the chiller unit. When installed in the correct location a SpiroVent has the capability to deaerate the entire system as it can make the water absorptive to remaining air in the system.

HOW DOES IT WORK?

The SpiroVent is a fully universal deaerator that works non-stop to effectively remove circulating air and microbubbles from system water. At the heart of the SpiroVent is the Spirotube separation element, which ensures that microbubbles are separated from the water flow, allowing them to rise up to the air chamber. The specially constructed air chamber provides sufficient volume to absorb pressure fluctuations and prevents valve contamination. This is one of the main causes of leaks. Thanks to the special construction and the solid valve seat, the leak-proof air release valve opens, releases the air and always closes perfectly. This avoids unwanted entry of air from outside the system.

Studies from Kiwa GASTEC, BSRIA, TNO and others show SpiroVent deaerators can save up to 6% on energy consumption.

SpiroVent RV2 -Brass -Uni

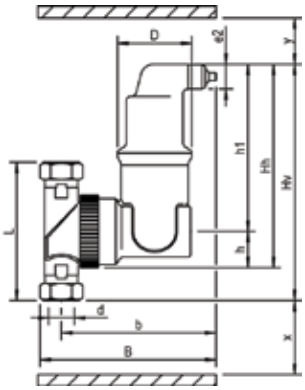
A brass (microbubble) deaerator with a 22 mm - 2” universal connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	Hh [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
UA022W	22 mm	M	201	177	32	145	152	134	64	112	R½	M	>50	>50	1.3	0.36	2.1	0.18	1.8
UA028W	28 mm	M	201	177	32	145	160	137	64	112	R½	M	>50	>50	2	0.56	3.8	0.18	1.8
UA075W	G¾	F	191	177	32	145	153	136	64	92	R½	M	>50	>50	1.3	0.35	2.1	0.38	1.6
UA100W	G1	F	191	177	32	145	163	140	64	92	R½	M	>50	>50	2	0.55	3.8	0.41	1.8
UA125W	G1 ¼	F	290	276	50	226	174	149	80	128	R½	M	>50	>50	3.6	1	2.5	1.12	4
UA150W	G1 ½	F	290	276	50	226	179	152	80	128	R½	M	>50	>50	5	1.4	4	1.16	4
UA200W	G2	F	310	296	50	246	194	159	80	128	R½	M	>50	>50	7.5	2.1	8.3	1.38	5

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1 m/s



SpiroVent -Brass -Hor

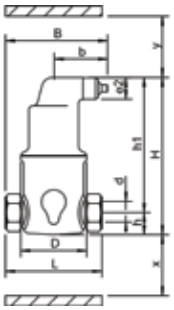
A brass (microbubble) deaerator with a 22 mm - 2” horizontal connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
AA022	22 mm	M	154	21	133	106	52	65	106	R½	M	>50	>50	1.3	0.36	1.3	0.18	1.2
AA075	G¾	F	154	21	133	96	52	65	85	R½	M	>50	>50	1.3	0.36	1.3	0.18	1
AA100	G1	F	180	35	145	97	52	65	88	R½	M	>50	>50	2	0.56	1.3	0.21	1.3
AA125	G1 ¼	F	198	39	159	97	52	65	88	R½	M	>50	>50	3.6	1	1.3	0.25	1.4
AA150	G1 ½	F	234	42	192	97	52	65	88	R½	M	>50	>50	5	1.39	1.3	0.32	1.6
AA200	G2	F	276	59	217	119	52	100	132	R½	M	>50	>50	7.5	2.08	1.4	1.1	3.9

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1 m/s



SpiroVent -St.Steel -Hor -HighT

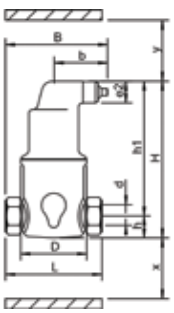
A stainless steel (microbubble) deaerator for high-temperature systems (max. 180 °C) with a horizontal 1¼” connection.

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Vol. [l]	Wgt. [kg]
AA125/R002	G1 ¼	F	198	39	159	97	52	65	88	R½	M	>50	>50	3.6	0.25	1.4
AA125/R007	G1 ¼	F	198	39	159	97	52	65	88	R½	M	>50	>50	3.6	0.25	1.4

Max. op. pressure
10 bar

Max. fluid temperature
180 °C

Nom. flow velocity
1 m/s



SpiroVent -St.Steel -Hor -HighT+P

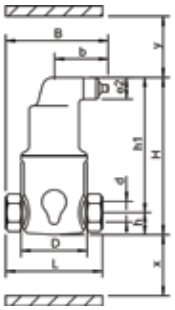
A stainless steel (microbubble) deaerator for high-temperature and high-pressure systems (max. 200 °C, max. 25 bar), with a 1¼" horizontal connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Vol. [l]	Wgt. [kg]
AA125/R004	G1 ¼	F	220	39	181	97	52	65	88	R½	M	>50	>50	3.6	0.25	1.4

Max. op. pressure **25 bar**

Max. fluid temperature **200 °C**

Nom. flow velocity **1 m/s**



SpiroVent -Brass -Hor -HighT+P

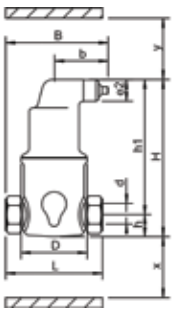
A brass (microbubble) deaerator for high-temperature and high-pressure systems (max. 150 °C, max. 25 bar), with a ¾" - 1½" horizontal connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Vol. [l]	Wgt. [kg]
AA075/025	G¾	F	176	21	155	96	52	65	85	R½	M	>50	>50	1.3	0.36	0.18	1.4
AA100/025	G1	F	202	35	167	97	52	65	88	R½	M	>50	>50	2	0.56	0.21	1.6
AA125/025	G1 ¼	F	220	39	181	97	52	65	88	R½	M	>50	>50	3.6	1	0.25	1.8
AA150/025	G1 ½	F	256	42	214	97	52	65	88	R½	M	>50	>50	5	1.39	0.32	1.9

Max. op. pressure **25 bar**

Max. fluid temperature **150 °C**

Nom. flow velocity **1 m/s**



SpiroVent -Brass -Hor -HighT

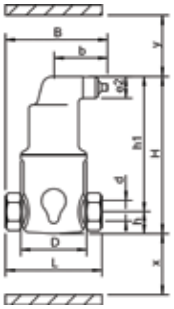
A brass (microbubble) deaerator for high-temperature systems (max. 180 °C), with a 22 mm - 1½" horizontal connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Vol. [l]	Wgt. [kg]
AA022/002	22 mm	M	154	21	133	106	52	65	106	R½	M	>50	>50	1.3	0.36	0.18	1.2
AA075/002	G¾	F	154	21	133	96	52	65	85	R½	M	>50	>50	1.3	0.36	0.18	1
AA100/002	G1	F	180	35	145	97	52	65	88	R½	M	>50	>50	2	0.56	0.2	1.3
AA125/002	G1 ¼	F	198	39	159	97	52	65	88	R½	M	>50	>50	3.6	1	0.25	1.4
AA150/002	G1 ½	F	234	42	192	97	52	65	88	R½	M	>50	>50	5	1.39	0.32	1.6

Max. op. pressure
10 bar

Max. fluid temperature
180 °C

Nom. flow velocity
1 m/s



ACCESSORIES

Insulation SpiroVent AA

SpiroVent deaerators with a horizontal connection up to 1 ½" can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation AA 22mm - 1 ½" -Hor	TAA150	267	125	Expanded polypropylene (EPP)	0.18

Insulation SpiroVent & Trap Hor

SpiroVent deaerators and SpiroTrap dirt separators with a 2” horizontal connection can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation AA & AE 2” -Hor	TAR200	400	200	Expanded polypropylene (EPP)	0.58

Insulation SpiroVent & Trap Uni

SpiroVent deaerators and SpiroTrap dirt separators with a universal connection can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation UA & UE 22mm - 1” Uni	TUR100	276	140	Expanded polypropylene (EPP)	0.22
Insulation UA & UE 1 1/4” Uni	TUR125	387	164	Expanded polypropylene (EPP)	0.3
Insulation UA & UE 1 1/2” Uni	TUR150	387	164	Expanded polypropylene (EPP)	0.3
Insulation UA & UE 2” Uni	TUR200	387	164	Expanded polypropylene (EPP)	0.3

SpiroVent -Steel -F(PN16)

A steel (microbubble) deaerator for standard flow rate (1.5 m/s) with a DN50 - DN300 PN16 flange connection

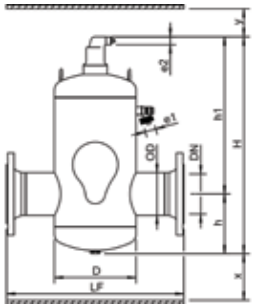
Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e1	e1 [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
BA050F	50	60.3	470	120	350	159	350	G¾	M	R½	M	>50	>50	12.5	3.47	3	5	14
BA065F	65	76.1	470	130	340	159	350	G¾	M	R½	M	>50	>50	20	5.56	2.7	5	15
BA080F	80	88.9	580	150	430	219	470	G¾	M	R½	M	>50	>50	27	7.5	2.9	17	25
BA100F	100	114.3	580	160	420	219	475	G¾	M	R½	M	>50	>50	47	13.06	3.7	17	27
BA125F	125	139.7	750	195	555	324	635	G¾	M	R½	M	>50	>50	72	20	4.2	50	54
BA150F	150	168.3	750	210	540	324	635	G¾	M	R½	M	>50	>50	108	30	4.9	50	57
BA200F	200	219.1	1000	290	710	406	775	G¾	M	R½	M	>50	>50	180	50	5.8	105	106
BA250F	250	273	1250	385	865	508	890	G¾	M	R½	M	>50	>50	288	80	6.9	210	171
BA300F	300	323.9	1465	450	1015	610	1005	G¾	M	R½	M	>50	>50	405	112.5	7.7	350	251

Products in this range are available up to DN800 and are made to order – prices on application.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s



SpiroVent -Steel -F(PN16) -HiFLow

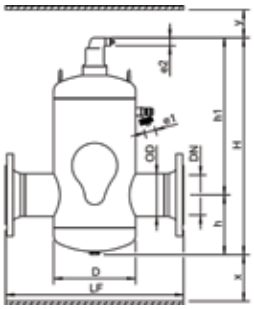
A steel (microbubble) deaerator for high flow rate (3 m/s) with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e1	e1 [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
HA050F	50	60.3	630	120	510	159	350	G¾	M	R½	M	>50	>50	25	6.94	11.7	7	17
HA065F	65	76.1	630	130	500	159	350	G¾	M	R½	M	>50	>50	40	11.11	11.9	7	19
HA080F	80	88.9	780	150	630	219	470	G¾	M	R½	M	>50	>50	54	15	12.4	25	32
HA100F	100	114.3	780	160	620	219	475	G¾	M	R½	M	>50	>50	94	26.11	14.7	25	33
HA125F	125	139.7	1030	195	835	324	635	G¾	M	R½	M	>50	>50	144	40	16.9	75	71
HA150F	150	168.3	1030	210	820	324	635	G¾	M	R½	M	>50	>50	215	59.72	19.2	75	74
HA200F	200	219.1	1340	290	1050	406	775	G¾	M	R½	M	>50	>50	360	100	23.4	150	137
HA250F	250	273	1750	385	1365	508	890	G¾	M	R½	M	>50	>50	575	159.72	27.5	300	212
HA300F	300	323.9	2060	450	1610	610	1005	G¾	M	R½	M	>50	>50	810	225	31.2	500	392

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
3 m/s



Insulation SpiroVent & Trap BA/BE

SpiroTrap BE/F-L and SpiroVent BA/F-L product series can be fully enclosed with the TB prefabricated insulation shells, made of expanded polypropylene.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation SpiroVent & Trap DN50/65	TB050	439	228	Expanded polypropylene (EPP)	2.1
Insulation SpiroVent & Trap DN80/100	TB080	556	307	Expanded polypropylene (EPP)	2.4
Insulation SpiroVent & Trap DN125/150	TB125	739	412	Expanded polypropylene (EPP)	2.58

MICROBUBBLE DEAERATORS FOR SOLAR INSTALLATIONS

PRODUCT RANGE

SPIROVENT® SOLAR

The automatic microbubble deaerator for temperatures up to 180°C.

AUTOMATIC DEAERATORS FOR SOLAR INSTALLATIONS

SPIROVENT® SOLAR

BENEFITS OF SPIROVENT SOLAR

- Removes circulating air and microbubbles effectively
- Removes trapped air
- Greatly reduces commissioning times
- Minimal constant pressure drop
- No unnecessary shutdown
- The special valve seat has a very long life expectancy

SPIROVENT SOLAR AUTOMATIC DEAERATORS FOR SOLAR INSTALLATIONS

Air in a solar installation causes complaints, excessive wear, low efficiency and process interruptions. All of these are avoidable by using Spirotech Solar solutions. Furthermore, even the “boil dry” situation of the solar installation can be prevented.

AUTOCLOSE DEARATORS FOR IMPROVED EFFICIENCY

Thanks to a patented invention, Spirotech offers solar deaerators also with an AutoClose function.

As soon as the fluid temperature rises above its boiling point, the deaeration valve closes quickly and completely, preventing the escape of air and steam and thereby the risk of boiling dry of the system.

When the temperature has dropped sufficiently, the valve is reopened for deaeration and the deaeration process is restarted. This means permanent deaeration in the ideal location. Shut-off valves are now redundant.

Thanks to the AutoClose principle, solar installations can remain free of air permanently, increasing system efficiency and preventing all kinds of discomfort and complaints.

BENEFITS OF AUTOCLOSE:

- reduces the effects of stagnation
- solar fluid will not prematurely degenerate
- system will not boil dry via the deaerator
- no more climbing the roof to deaerate
- permanent air-free, efficient installation
- suitable for new and existing installations

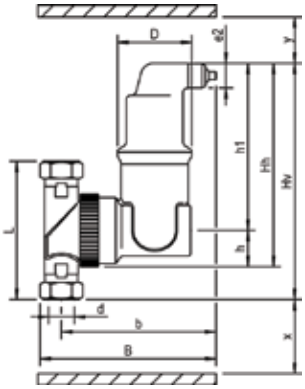
SpiroVent Solar -Brass -Uni -AutoClose -HighT

A brass (microbubble) deaerator - Autoclose for Solar & high-temperature systems (max. 180 °C) with a 22 mm - 1½" universal connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	Hh [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Vol. [l]	Wgt. [kg]
UA022WFBA08	22 mm	M	201	177	32	145	152	134	64	112	R½	M	>50	>50	1.3	0.36	0.18	1.8
UA028WFBA08	28 mm	M	210	177	32	145	160	137	64	112	R½	M	>50	>50	1.3	0.36	0.18	1.8
UA075WFBA08	G¾	F	191	177	32	145	153	136	64	92	R½	M	>50	>50	1.3	0.36	0.38	1.6
UA100WFBA08	G1	F	191	177	32	145	162	140	64	92	R½	M	>50	>50	2	0.56	0.41	1.8
UA125WFBA08	G1 ¼	F	290	276	50	226	174	149	80	128	R½	M	>50	>50	3.6	1	1.12	4
UA150WFBA08	G1 ½	F	290	276	50	226	174	149	80	128	R½	M	>50	>50	5	1.39	1.16	4

Max. op. pressure
10 bar

Max. fluid temperature
180 °C



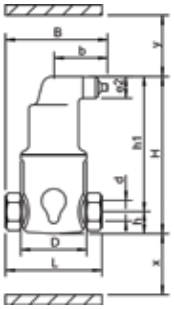
SpiroVent Solar -Brass -Hor -AutoClose -HighT

A brass (microbubble) deaerator - Autoclose for Solar & high-temperature systems (max. 180 °C) with a 22 mm - 1½" horizontal connection

Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
AA022FBA08	22 mm	M	154	21	133	106	52	65	106	R½	M	>50	>50	1.3	0.36	1.3	0.18	1.2
AA075FBA08	G¾	F	154	21	133	96	52	65	85	R½	M	>50	>50	1.3	0.36	1.3	0.18	1
AA100FBA08	G1	F	180	35	145	97	52	65	88	R½	M	>50	>50	2	0.56	1.3	0.21	1.3
AA125FBA08	G1 ¼	F	198	39	159	97	52	65	88	R½	M	>50	>50	3.6	1	1.3	0.25	1.4
AA150FBA08	G1 ½	F	234	42	192	97	52	65	88	R½	M	>50	>50	5	1.39	1.3	0.32	1.6

Max. op. pressure
10 bar

Max. fluid temperature
180 °C



VACUUM DEGASSERS

PRODUCT RANGE

SPIROVENT® SUPERIOR

The SpiroVent Superior is a fully automatic vacuum degasser for heating, cooling and process systems.

VACUUM DEGASSERS

SPIROVENT® SUPERIOR

BENEFITS OF SPIROVENT SUPERIOR

- Removes all gases, free air, microbubbles and dissolved gases
- Absorptive fluid also ensures the removal of trapped gas bubbles
- Easy installation, which greatly reduces commissioning and handover
- Energy-efficient whilst still achieving the lowest possible gas concentration thanks to SmartSwitch
- Degassed (re)filling and sustained pressure
- Warns before (re)filling becomes excessive
- An extensive range for a wide variety of systems
- Can team up with all common expansion systems
- Two-year guarantee

SPIROVENT SUPERIOR

The SpiroVent Superior is a fully automatic vacuum degasser for heating, cooling and process systems. Because of the fully electronic control system, the Superior offers numerous options for reading system information, status and logged data.

HOW DOES IT WORK?

A pump takes a quantity of system fluid from the circulating flow. Closing a solenoid valve creates a vacuum so that the dissolved gases emerge from the water. These accumulate at the top of the vessel and are released via the air vent. The degassed and absorptive fluid is then returned into the system and will absorb gases again. There are various reasons why gas will always be able to enter a system. Therefore, vacuum degassing is not a one-time process but a continuous requirement.

As soon as any gases are removed, it is registered by the integrated SmartSwitch. If the SmartSwitch has not registered anything for a set amount of time, the SpiroVent Superior detects that the quantity of all gases, including dissolved gases, has reached the minimum value.
The degassing process will then stop automatically and start again at the next pre-set time, so the device is only operated when necessary. As a result, energy consumption is kept to a minimum and the life of costly components is extended significantly.

WHEN SHOULD A VACUUM DEGASSER BE USED?

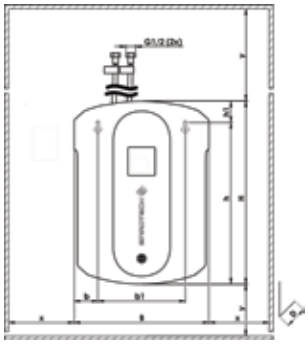
- For systems with many branches and a low flow velocity.
- When the system has a small temperature differential.
- When an inline deaerator cannot be installed.
- When it cannot be predicted where gases are released from the water or when that point has a very low flow rate.

SPIROVENT SUPERIOR®

SpiroVent Superior S250 - 0,5-2,5 bar

A fully automatic vacuum degasser for closed heating, cooling and process systems with a pressure between 0,5 and 2,5 bar

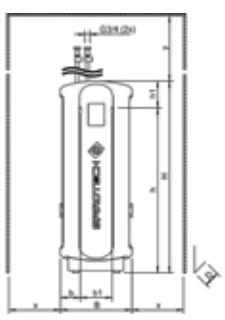
Art. No.	H/Hv [mm]	B [mm]	D [mm]	x [mm]	y [mm]	Conn. inlet	Conn. inlet [M/F]	Conn. outlet	Conn. outlet [M/F]	Max. system vol. [m3]	Temp. range [°C]	Wgt. [kg]
MV02A50	524	386	252	>250	>250	G½	F	G½	F	5	15 - 70	11



SpiroVent Superior S400 - 1-4 bar

A fully automatic vacuum degasser for closed heating, cooling and process systems with a pressure between 1 and 4 bar.
I: insulated
B: with break tank
R: with direct refill

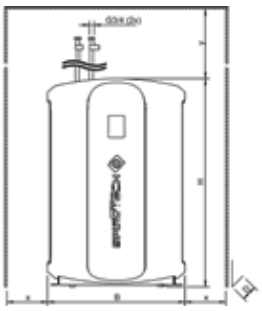
Art. No.	H/Hv [mm]	B [mm]	D [mm]	x [mm]	y [mm]	Conn. inlet	Conn. inlet [M/F]	Conn. outlet	Conn. outlet [M/F]	Conn. main refill	Conn. main refill [M/F]	Max. system vol. [m3]	Temp. range [°C]	Wgt. [kg]
MV04A50	930	346	334	>600	>600	G¾	F	G¾	F	-	-	100	0 - 90	34
MV04A50I	930	346	334	>600	>600	G¾	F	G¾	F	-	-	100	0 - 90	34
MV04B50	930	346	334	>600	>600	G¾	F	G¾	F	G¾	F	100	0 - 90	35
MV04B50I	930	346	334	>600	>600	G¾	F	G¾	F	G¾	F	100	0 - 90	35
MV04R50	930	346	334	>600	>600	G¾	F	G¾	F	G¾	F	100	0 - 90	34
MV04R50I	930	346	300	>600	>600	G¾	F	G¾	F	G¾	F	100	0 - 90	34



SpiroVent Superior S600-L - 1-3 bar

A fully automatic vacuum degasser for closed heating, cooling and process systems with a pressure between 1 and 3 bar.
I: insulated
B: with break tank
R: with direct refill

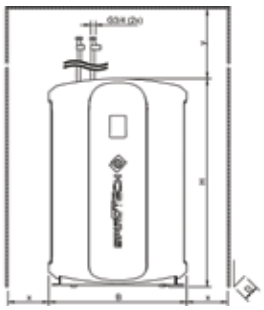
Art. No.	H/Hv [mm]	B [mm]	D [mm]	x [mm]	y [mm]	Conn. inlet	Conn. inlet [M/F]	Conn. outlet	Conn. outlet [M/F]	Conn. main refill	Conn. main refill [M/F]	Max. system vol. [m3]	Temp. range [°C]	Wgt. [kg]
MV06AL50	1020	673	360	>600	>600	G¾	F	G¾	F	-	-	325	0 - 90	62.3
MV06AL50I	1020	673	360	>600	>600	G¾	F	G¾	F	-	-	325	0 - 90	63.3
MV06BL50	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	64.3
MV06BL50I	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	65.3
MV06RL50	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	63.3
MV06RL50I	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	64.3



SpiroVent Superior S600 - 2,5-6 bar

A fully automatic vacuum degasser for closed heating, cooling and process systems with a pressure between 2.5 and 6 bar.
I: insulated
B: with break tank
R: with direct refill

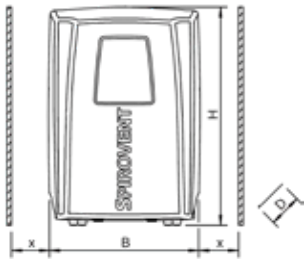
Art. No.	H/Hv [mm]	B [mm]	D [mm]	x [mm]	y [mm]	Conn. inlet	Conn. inlet [M/F]	Conn. outlet	Conn. outlet [M/F]	Conn. main refill	Conn. main refill [M/F]	Max. system vol. [m3]	Temp. range [°C]	Wgt. [kg]
MV06A50	1020	673	360	>600	>600	G¾	F	G¾	F	-	-	325	0 - 90	62.3
MV06A50I	1020	673	360	>600	>600	G¾	F	G¾	F	-	-	325	0 - 90	63.3
MV06B50	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	64.3
MV06B50I	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	65.3
MV06R50	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	63.3
MV06R50I	1020	673	360	>600	>600	G¾	F	G¾	F	G¾	F	325	0 - 90	64.3



SpiroVent Superior S10 - 5-10 bar

A fully automatic vacuum degasser for closed heating, cooling and process systems with a pressure between 5 and 10 bar.
I: insulated
R: with direct refill

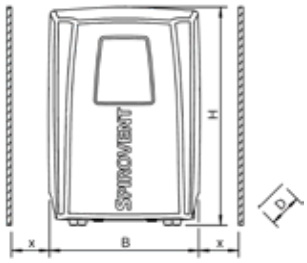
Art. No.	H/Hv [mm]	B [mm]	D [mm]	x [mm]	Conn. inlet	Conn. inlet [M/F]	Conn. outlet	Conn. outlet [M/F]	Conn. main refill	Conn. main refill [M/F]	Max. system vol. [m3]	Temp. range [°C]	Wgt. [kg]
MA10A50	1272	744	400	>600	G¾	F	G¾	F	-	-	300	0 - 90	79
MA10A50I	1272	744	400	>600	G¾	F	G¾	F	-	-	300	0 - 90	79
MA10R50	1272	744	400	>600	G¾	F	G¾	F	G¾	F	300	0 - 90	79
MA10R50I	1272	744	400	>600	G¾	F	G¾	F	G¾	F	300	0 - 90	79



SpiroVent Superior S16 - 9-16 bar

A fully automatic vacuum degasser for closed heating, cooling and process systems with a pressure between 9 and 16 bar.
I: insulated
R: with direct refill

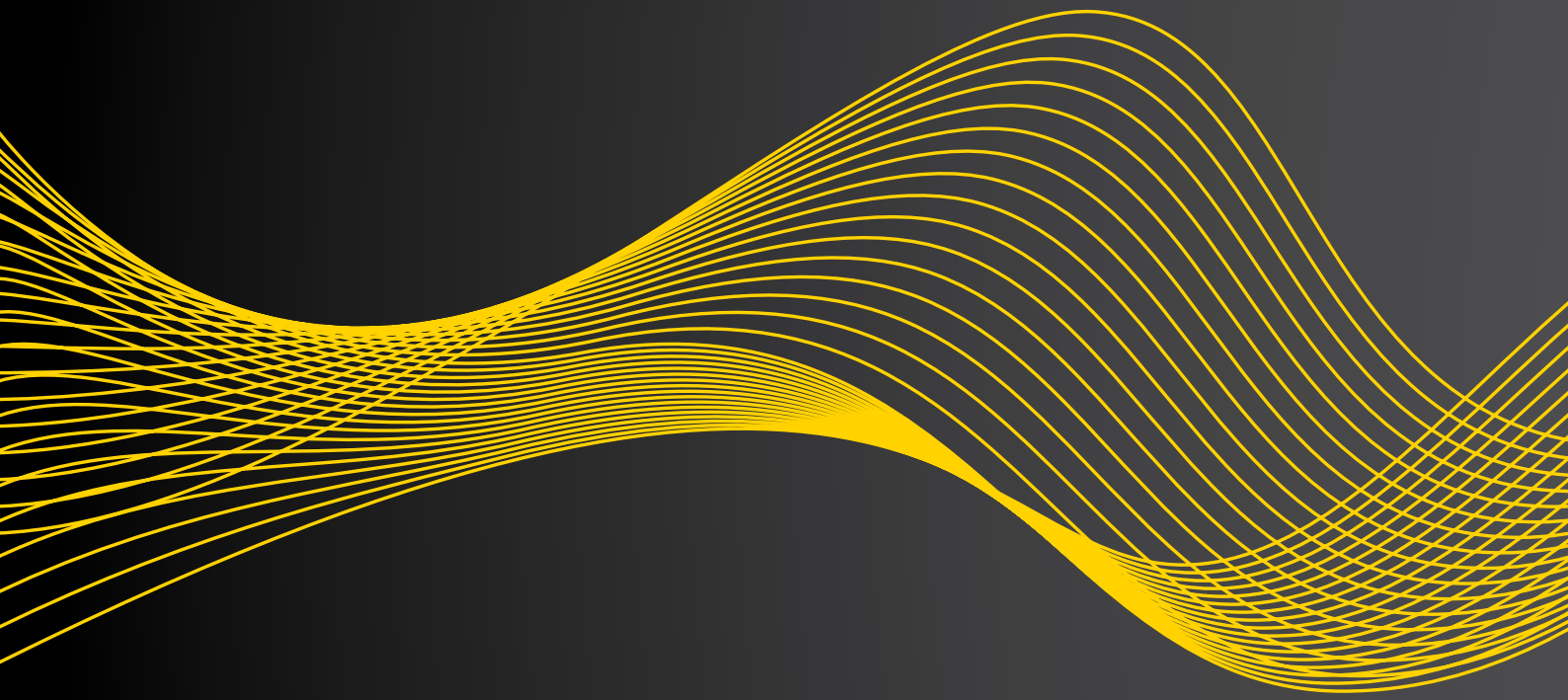
Art. No.	H/Hv [mm]	B [mm]	D [mm]	x [mm]	Conn. inlet	Conn. inlet [M/F]	Conn. outlet	Conn. outlet [M/F]	Conn. main refill	Conn. main refill [M/F]	Max. system vol. [m3]	Temp. range [°C]	Wgt. [kg]
MA16A50	1272	744	400	>600	G¾	F	G¾	F	-	-	300	0 - 90	92
MA16A50I	1272	744	400	>600	G¾	F	G¾	F	-	-	300	0 - 90	92
MA16R50	1272	744	400	>600	G¾	F	G¾	F	G¾	F	300	0 - 90	92
MA16R50I	1272	744	400	>600	G¾	F	G¾	F	G¾	F	300	0 - 90	92



Back flow preventer

Back flow preventer with a controllable low pressure zone for products with automatic refill function

Product name	Art. No.
Back flow preventer IG 1/2”	TMA05
Back flow preventer IG 3/4”	TMA06



SPIROTECH

DIRT SEPARATORS

PRODUCT RANGE

SPIROTRAP®

SpiroTrap (magnetic) dirt separators are installed inline and continuously remove even the smallest dirt particles from the system fluid.

PARTICLE AND DIRT SEPARATORS

SPIROTRAP®

BENEFITS OF SPIROTRAP

- Very small particles, from 5 µm (= 0.005 mm) 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 downtime
- Connection diameters from ¾" to DN 800 (see page 30 for additional options)
- A complete range, suitable for various pressures and temperatures

SPIROTRAP PARTICLE AND DIRT SEPARATORS

Today's highly energy-efficient heating and cooling systems can only offer optimal performance with dirt-free water. In untreated systems, dirt can accumulate in multiple places throughout the system. Studies and practical experience show that magnetite in particular, leads to greatly reduced energy efficiency and therefore higher energy costs. Ensuring quick and efficient dirt removal is essential. Spirotech offers an extensive range of SpiroTrap dirt separators from small brass solutions to heavy duty steel units, specifically designed for the removal of dirt.

MAXIMISING PERFORMANCE – PROTECT COMPONENTS WITH SPIROTRAP MB3

The unique magnetic field booster technology guarantees fast and optimal dirt separation. Beside non-magnetic dirt even the smallest magnetite particles are removed, maximising system performance as well as protecting costly system components.

Thanks to the ingenious design, collected dirt can be removed quickly and easily. The sturdy brass SpiroTrap MB3 is equipped with a swivel connection that makes them very easy to install and suitable for horizontal, vertical and even diagonal pipes. The units with compression couplings have a unique slide-over installation, allowing for quick and easy installation in existing systems.

Kiwa GASTEC has objectively proven that Spirotech's SpiroTrap MB3, which maximises magnetite removal, can bring up to 7.4 % energy savings.

SpiroTrap MB3 -Brass -Magnet -Uni

A brass dirt separator with magnet and a 22 mm - 2” universal connection

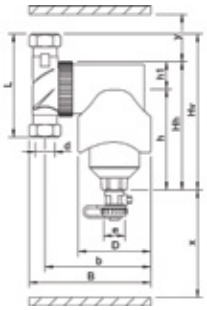
Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	Hh [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
UE022WJ	22 mm	M	173	149	117	32	141	123	84	112	G¾	F	>110	>50	1.3	0.36	2.1	0.36	2.2
UE028WJ	28 mm	M	173	149	117	32	149	127	84	112	G¾	F	>110	>50	2	0.56	3.8	0.39	2.3
UE075WJ	G¾	F	163	149	117	32	142	125	84	92	G¾	F	>110	>50	1.3	0.36	2.1	0.36	2.2
UE100WJ	G1	F	163	149	117	32	152	129	84	92	G¾	F	>110	>50	2	0.56	3.8	0.39	2.3
UE125WJ	G1 ¼	F	224	210	160	50	163	138	84	128	G¾	F	>110	>50	3.6	1	2.2	0.75	3.6
UE150WJ	G1 ½	F	224	210	160	50	168	141	84	128	G¾	F	>110	>50	5	1.39	2.6	0.75	3.7
UE200WJ	G2	F	224	210	160	50	183	148	84	128	G¾	F	>110	>50	7.5	2.08	5.8	0.75	3.9

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1 m/s

With magnet



SpiroTrap MBC -Brass -Magnet -Uni

A small brass dirt separator with magnet and a 22 mm - 1” universal connection

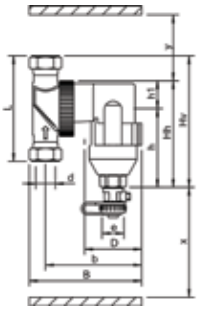
Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	Hh [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
UE022WH	22 mm	M	139	115	83	32	136	117	81	112	G¾	F	>110	>50	1.3	0.36	2.1	0.36	2.2
UE028WH	28 mm	M	139	115	83	32	144	121	18	112	G¾	F	>110	>50	2	0.56	3.8	0.3	2.3
UE075WH	G¾	F	129	115	83	32	137	119	81	92	G¾	F	>110	>50	1.3	0.36	2.1	0.36	2.2
UE100WH	G1	F	129	115	83	32	147	124	81	92	G¾	F	>110	>50	2	0.56	3.8	0.36	2.2

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1 m/s

With magnet



SpiroTrap -Brass -Hor

A brass dirt separator with a 22 mm - 2” horizontal connection

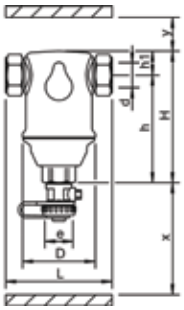
Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
AE022	22 mm	M	118	96	22	65	106	G¾	F	>70	>50	1.3	0.36	1.3	0.18	1.2
AE075	G¾	F	118	96	22	65	85	G¾	F	>70	>50	1.3	0.36	1.3	0.18	1
AE100	G1	F	143	108	35	65	88	G¾	F	>70	>50	2	0.56	1.3	0.21	1.3
AE125	G1 ¼	F	161	122	39	65	88	G¾	F	>70	>50	3.6	1	1.3	0.25	1.4
AE150	G1 ½	F	197	155	42	65	88	G¾	F	>70	>50	5	1.39	1.3	0.32	1.6
AE200	G2	F	240	180	60	65	132	G¾	F	>70	>50	7.5	2.08	1.4	1.1	3.9

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1 m/s

Without magnet



SpiroTrap -Brass -Hor -HighT

A brass dirt separator for high-temperature systems (max. 180 °C), with a 22 mm - 1½" horizontal connection.

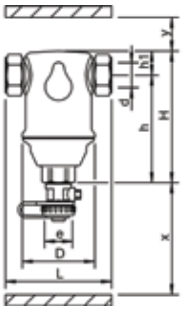
Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
AE075/026	G¾	F	118	96	22	65	85	G¾	F	>70	>50	1.3	0.36	1.3	0.18	1
AE100/026	G1	F	118	108	35	65	88	G¾	F	>70	>50	2	0.56	1.3	0.21	1.3
AE125/026	G1 ¼	F	161	122	39	65	88	G¾	F	>70	>50	3.6	1	1.3	0.25	1.4
AE150/026	G1 ½	F	197	155	42	65	88	G¾	F	>70	>50	5	1.39	1.3	0.32	1.6

Max. op. pressure
10 bar

Max. fluid temperature
180 °C

Nom. flow velocity
1 m/s

Without magnet



Insulation SpiroVent & Trap Uni

SpiroVent deaerators and SpiroTrap dirt separators with a universal connection can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation UA & UE 22mm - 1" Uni	TUR100	276	140	Expanded polypropylene (EPP)	0.22
Insulation UA & UE 1 1/4" Uni	TUR125	387	164	Expanded polypropylene (EPP)	0.3
Insulation UA & UE 1 1/2" Uni	TUR150	387	164	Expanded polypropylene (EPP)	0.3
Insulation UA & UE 2" Uni	TUR200	387	164	Expanded polypropylene (EPP)	0.3

Insulation SpiroTrap AE

SpiroTrap dirt separators with a horizontal connection up to 1 1/2" can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation AE 22mm - 1 1/2" -Hor	TAE150	180	107	Expanded polypropylene (EPP)	0.15

Insulation SpiroVent & Trap Hor

SpiroVent deaerators and SpiroTrap dirt separators with a 2” horizontal connection can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation AA & AE 2” -Hor	TAR200	400	200	Expanded polypropylene (EPP)	0.58

SpiroTrap -Steel -Magnet -F(PN16)

A steel dirt separator with magnet for standard flow rate (1.5 m/s) with a DN50 - DN300 PN16 flange connection

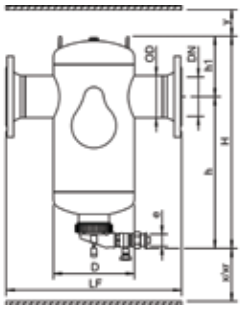
Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
BE050FM	50	60.3	471	341	130	159	350	Rp1	F	>75	>50	12.5	3.47	3	5	13
BE065FM	65	76.1	471	333	138	159	350	Rp1	F	>75	>50	20	5.56	2.9	5	14
BE080FM	80	88.9	576	424	152	219	470	Rp1	F	>100	>50	27	7.5	3.1	17	24
BE100FM	100	114.3	576	412	164	219	475	Rp1	F	>100	>50	47	13.06	3.7	17	25
BE125FM	125	139.7	798	605	193	324	635	Rp1	F	>100	>50	72	20	4.2	50	58
BE150FM	150	168.3	798	591	207	324	635	Rp1	F	>100	>50	108	30	4.9	50	61
BE200FM	200	219.1	1063	773	290	406	775	Rp1	F	>100	>50	180	50	5.8	105	107
BE250FM	250	273	1264	896	368	508	890	Rp1	F	>100	>50	288	80	7	210	162
BE300FM	300	323.9	1492	1058	434	610	1005	Rp1	F	>100	>50	405	112.5	7.8	350	261

Max. op. pressure
10 bar

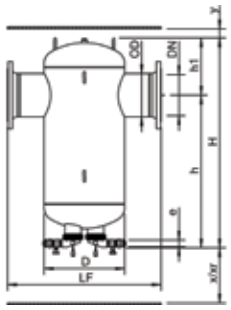
Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

With magnet



Up to size DN 150



Size DN 200 and up

SpiroTrap -Steel -F(PN16)

A steel dirt separator for standard flow rate (1.5 m/s) with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
BE050F	50	60.3	390	270	121	159	350	Rp1	F	>200	>50	12.5	3.47	3	5	13
BE065F	65	76.1	390	260	129	159	350	Rp1	F	>200	>50	20	5.56	2.7	5	15
BE080F	80	88.9	500	355	148	219	470	Rp1	F	>200	>50	27	7.5	2.9	17	25
BE100F	100	114.3	500	345	160	219	475	Rp1	F	>200	>50	47	13.06	3.7	17	26
BE125F	125	139.7	670	475	193	324	635	Rp1	F	>200	>50	72	20	4.2	50	54
BE150F	150	168.3	670	460	207	324	635	Rp1	F	>200	>50	108	30	4.9	50	56
BE200F	200	219.1	900	615	280	406	775	Rp1	F	>200	>50	180	50	5.8	105	105
BE250F	250	273	1165	800	364	508	890	Rp2	F	>200	>50	288	80	6.9	210	170
BE300F	300	323.9	1380	955	426	610	1005	Rp2	F	>200	>50	405	112.5	7.7	350	252

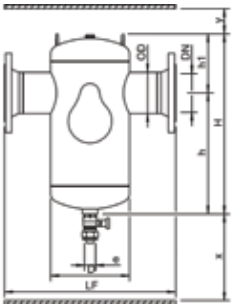
Products in this range are available up to DN800 and are made to order – prices on application.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

Without magnet



SpiroTrap -Steel -F(PN16) -Demount

A demountable steel dirt separator for standard flow rate (1.5 m/s) with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
BF050F	50	60.3	390	270	121	159	350	Rp1	F	>350	>50	12.5	3.47	3	5	33
BF065F	65	76.1	390	260	129	159	350	Rp1	F	>350	>50	20	5.56	2.7	5	34
BF080F	80	88.9	500	355	148	219	470	Rp1	F	>500	>50	27	7.5	2.9	17	48
BF100F	100	114.3	500	345	160	219	475	Rp1	F	>500	>50	47	13.06	3.7	17	50
BF125F	125	139.7	670	475	193	324	635	Rp1	F	>600	>50	72	20	4.2	50	103
BF150F	150	168.3	670	460	207	324	635	Rp1	F	>600	>50	108	30	4.9	50	106
BF200F	200	219.1	900	615	280	406	775	Rp1	F	>900	>50	180	50	5.8	105	195
BF250F	250	273	1165	800	364	508	890	Rp2	F	>1100	>50	288	80	6.9	210	319
BF300F	300	323.9	1380	955	426	610	1005	Rp2	F	>1300	>50	405	112.5	7.7	350	499

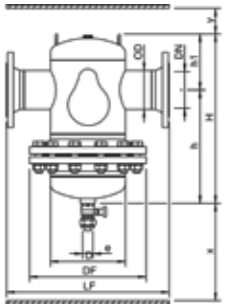
On request also demountable from the top and in other sizes.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

Without magnet



SpiroTrap -Steel -F(PN16) -HiFLow

A steel dirt separator for high flow rate (3 m/s) with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
HE050F	50	60.3	550	430	121	159	350	Rp1	F	>200	>50	25	6.94	11.7	7	17
HE065F	65	76.1	550	420	129	159	350	Rp1	F	>200	>50	40	11.11	11.9	7	18
HE080F	80	88.9	700	550	148	219	470	Rp1	F	>200	>50	54	15	12.4	25	31
HE100F	100	114.3	700	540	160	219	475	Rp1	F	>200	>50	94	26.11	14.7	25	33
HE125F	125	139.7	950	755	193	324	635	Rp1	F	>200	>50	144	40	16.9	75	71
HE150F	150	168.3	950	740	207	324	635	Rp1	F	>200	>50	215	59.72	19.2	75	73
HE200F	200	219.1	1240	955	280	406	775	Rp1	F	>200	>50	360	100	23.4	150	136
HE250F	250	273	1670	1300	364	508	890	Rp2	F	>200	>50	575	159.72	27.5	300	213
HE300F	300	323.9	1980	1550	426	610	1005	Rp2	F	>200	>50	810	225	31.2	500	393

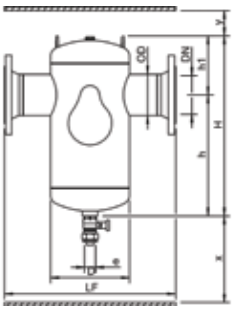
Products in this range are available up to DN800 and are made to order – prices on application.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
3 m/s

Without magnet



SpiroTrap -Steel -F(PN16) -HiFLow -Demount

A demountable steel dirt separator for high flow rate (3 m/s) with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
HF050F	50	60.3	550	430	121	159	350	Rp1	F	>500	>50	25	6.94	11.7	7	35
HF065F	65	76.1	550	420	129	159	350	Rp1	F	>500	>50	40	11.11	11.9	7	36
HF080F	80	88.9	700	550	148	219	470	Rp1	F	>700	>50	54	15	12.4	25	58
HF100F	100	114.3	700	540	160	219	475	Rp1	F	>700	>50	94	26.11	14.7	25	60
HF125F	125	139.7	950	755	193	324	635	Rp1	F	>900	>50	144	40	16.9	75	123
HF150F	150	168.3	950	740	207	324	635	Rp1	F	>900	>50	215	59.72	19.2	75	126
HF200F	200	219.1	1240	955	280	406	775	Rp1	F	>1200	>50	360	100	23.4	150	225
HF250F	250	273	1670	1300	364	508	890	Rp2	F	>1600	>50	575	159.72	27.5	300	380
HF300F	300	323.9	1980	1550	426	610	1005	Rp2	F	>1900	>50	810	225	31.2	500	599

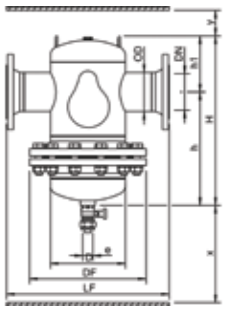
On request also demountable from the top and in other sizes.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
3 m/s

Without magnet



Insulation SpiroVent & Trap BA/BE

SpiroTrap BE/F-L and SpiroVent BA/F-L product series can be fully enclosed with the TB prefabricated insulation shells, made of expanded polypropylene.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation SpiroVent & Trap DN50/65	TB050	439	228	Expanded polypropylene (EPP)	2.1
Insulation SpiroVent & Trap DN80/100	TB080	556	307	Expanded polypropylene (EPP)	2.4
Insulation SpiroVent & Trap DN125/150	TB125	739	412	Expanded polypropylene (EPP)	2.58

Insulation SpiroTrap Steel with magnet DN125/150

SpiroTrap BE/FM-LM with sizes DN125 and DN150 can be fully enclosed with the TB prefabricated insulation shells, made of expanded polypropylene.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation SpiroTrap Steel with magnet DN125/150	TB125A01	799	412	Expanded polypropylene (EPP)	2.94

DEAERATOR AND DIRT SEPARATOR

PRODUCT RANGE

SPIROCOMBI®

SpiroCombi deaerators and dirt separators are designed for the simultaneous removal of air and dirt from system water.

DEAERATORS AND DIRT SEPARATORS

SPIROCOMBI®

BENEFITS OF SPIROCOMBI

- Removes circulating air and microbubbles effectively
- Very small particles, from 5 µm (= 0.005 mm), are separated and removed
- Dirt in steel units can be discharged while the system is in operation
- No shut-off valves or bypass required
- Constant low pressure drop
- Exceptional guarantee

SPIROCOMBI DEAERATORS AND DIRT SEPARATORS

Today's highly energy-efficient heating and cooling systems offer optimal performance with water that is free of air and dirt. In untreated systems, air may cause problems such as flow interruptions or even a complete system failure. Dirt consists mainly of magnetite, that can accumulate wherever a magnetic field is present. In valves or heat exchangers, pipes, radiators, pumps and calorimeters. Next to costs associated with repairs, parts and downtime, contamination also leads to reduced system performance and, therefore, higher energy costs.

Spirotech offers an extensive range of SpiroCombi deaerators/dirt separators, especially designed for the simultaneous removal of air and dirt. These remove air, microbubbles and dirt particles from system water continuously.

EFFECTIVE, SAFE, COMPACT AND EASY TO USE

System characteristics determine the best option; two individual separators or a single combined unit. For the fastest removal of magnetite, SpiroCombi Magnet has been added to the existing range of combined air and dirt separators.

The Spirotube separation element ensures effective separation of air and dirt with a minimal pressure drop. The reliable venting mechanism is leak-free and guarantees effective deaeration. The dry pocket magnet increases the magnetite removal substantially and features an excellent first pass efficiency. Collected dirt can be removed quickly, easily and without mess using a drag mechanism. The easy-to-clean magnet resides safely inside the unit and always remains correctly mounted. The robust device's compact design means minimal height is required for installation.

SpiroCombi MB3 -Brass -Magnet -Uni

A brass (microbubble) deaerator and dirt separator with a magnet and a 22 mm - 1” universal connection

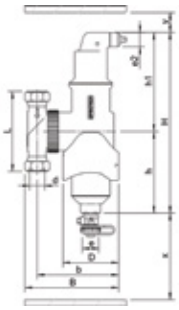
Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	B [mm]	b [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
UC022WJ	22 mm	M	272	123	149	141	123	84	112	G¾	F	R½	M	>110	>75	1.25	0.35	2.02	0.57	2.5
UC028WJ	28 mm	M	272	123	149	149	126	84	112	G¾	F	R½	M	>110	>75	2	0.55	3	0.59	5.3
UC075WJ	G¾	F	272	123	149	142	125	84	92	G¾	F	R½	M	>110	>75	1.25	0.35	2.02	0.58	2.5
UC100WJ	G1	F	272	123	149	152	129	84	92	G¾	F	R½	M	>110	>75	2	0.55	3	0.6	3
UC125WJ	G1 ¼	F	406	174	232	162	138	84	128	G¾	F	R½	M	>110	>75	3.6	1	1.82	1.47	5.2
UC150WJ	G1 ½	F	406	174	232	168	141	84	128	G¾	F	R½	M	>110	>75	5	1	2.79	1.52	5.3
UC200WJ	G2	F	406	174	252	183	148	84	128	G¾	F	R½	M	>110	>75	7.5	2.1	6.17	1.61	5.4

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1 m/s

With magnet



SpiroCombi -Steel -Magnet -F(PN16)

A steel (microbubble) deaerator and dirt separator with magnet for standard flow rate (1.5 m/s) with a DN50 - DN300 PN16 flange connection

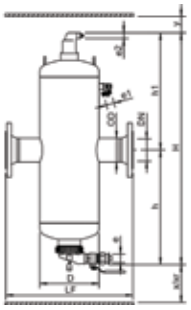
Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e1	e1 [M/F]	e2	e2 [M/F]	x [mm]	xr [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
BC050FM	50	60.3	712	351	361	159	350	Rp1	F	G¾	M	R½	M	>75	>270	>50	12.5	3.47	3	5	16
BC065FM	65	76.1	712	351	361	159	350	Rp1	F	G¾	M	R½	M	>75	>270	>50	20	5.56	2.9	5	18
BC080FM	80	88.9	858	424	434	219	470	Rp1	F	G¾	M	R½	M	>100	>310	>50	27	7.5	3.1	17	31
BC100FM	100	114.3	858	424	434	219	475	Rp1	F	G¾	M	R½	M	>100	>310	>50	47	13.06	3.7	17	32
BC125FM	125	139.7	1149	590	559	324	635	Rp1	F	G¾	M	R½	M	>100	>510	>50	72	20	4.2	50	71
BC150FM	150	168.3	1149	590	559	324	635	Rp1	F	G¾	M	R½	M	>100	>510	>50	108	30	4.9	50	74
BC200FM	200	219.1	1479	773	706	406	775	Rp1	F	G¾	M	R½	M	>100	>700	>50	180	50	5.8	105	133
BC250FM	250	273	1801	896	905	508	890	Rp1	F	G¾	M	R½	M	>100	>810	>50	288	80	7	210	197
BC300FM	300	323.9	2119	1058	1061	610	1005	Rp1	F	G¾	M	R½	M	>100	>960	>50	405	112.5	7.8	350	319

Max. op. pressure
10 bar

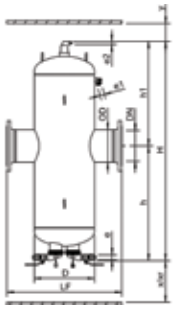
Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

With magnet



Up to size DN 150



From DN 200

SpiroCombi -Steel -F(PN16)

A steel (microbubble) deaerator and dirt separator for standard flow rate (1.5 m/s) with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e1	e1 [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
BC050F	50	60.3	630	265	365	159	350	Rp1	F	G¾	M	R½	M	>200	>50	12.5	3.47	3	7	17
BC065F	65	76.1	630	265	365	159	350	Rp1	F	G¾	M	R½	M	>200	>50	20	5.56	2.7	7	18
BC080F	80	88.9	785	345	440	219	470	Rp1	F	G¾	M	R½	M	>200	>50	27	7.5	2.9	25	31
BC100F	100	114.3	785	345	440	219	475	Rp1	F	G¾	M	R½	M	>200	>50	47	13.06	3.7	25	33
BC125F	125	139.7	1035	475	560	324	635	Rp1	F	G¾	M	R½	M	>200	>50	72	20	4.2	75	70
BC150F	150	168.3	1035	475	560	324	635	Rp1	F	G¾	M	R½	M	>200	>50	108	30	4.9	75	73
BC200F	200	219.1	1315	615	700	406	775	Rp1	F	G¾	M	R½	M	>200	>50	180	50	5.8	150	135
BC250F	250	273	1730	830	900	508	890	Rp2	F	G¾	M	R½	M	>200	>50	288	80	6.9	300	252
BC300F	300	323.9	2025	970	1055	610	1005	Rp2	F	G¾	M	R½	M	>200	>50	405	112.5	7.7	500	325

Products in this range are available up to DN800 and are made to order – prices on application.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

Without magnet

SpiroCombi -Steel -F(PN16) -Demount

A demountable steel (microbubble) deaerator and dirt separator for standard flow rate (1.5 m/s) with a DN50 - DN300 PN16 flange connection

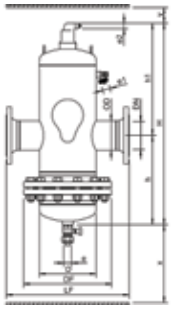
Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e1	e1 [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
BD050F	50	60.3	630	265	365	159	350	Rp1	F	G¾	M	R½	M	>510	>50	12.5	3.47	3	7	35
BD065F	65	76.1	630	265	365	159	350	Rp1	F	G¾	M	R½	M	>510	>50	20	5.56	2.7	7	36
BD080F	80	88.9	785	345	440	219	470	Rp1	F	G¾	M	R½	M	>660	>50	27	7.5	2.9	25	58
BD100F	100	114.3	785	345	440	219	475	Rp1	F	G¾	M	R½	M	>660	>50	47	13.06	3.7	25	60
BD125F	125	139.7	1035	475	560	324	635	Rp1	F	G¾	M	R½	M	>920	>50	72	20	4.2	75	123
BD150F	150	168.3	1035	475	560	324	635	Rp1	F	G¾	M	R½	M	>920	>50	108	30	4.9	75	126
BD200F	200	219.1	1315	615	700	406	775	Rp1	F	G¾	M	R½	M	>1200	>50	180	50	5.8	150	225
BD250F	250	273	1730	830	900	508	890	Rp2	F	G¾	M	R½	M	>1600	>50	288	80	6.9	300	364
BD300F	300	323.9	2025	970	1055	610	1005	Rp2	F	G¾	M	R½	M	>1900	>50	405	112.5	7.7	500	563

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

Without magnet



SpiroCombi -Steel -F(PN16) -HiFLow

A steel (microbubble) deaerator and dirt separator for high flow rate (3 m/s) with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e1	e1 [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
HC050F	50	60.3	910	405	505	159	350	Rp1	F	G¾	M	R½	M	>200	>50	25	6.94	11.7	10	23
HC065F	65	76.1	910	405	505	159	350	Rp1	F	G¾	M	R½	M	>200	>50	40	11.11	11.9	10	24
HC080F	80	88.9	1145	525	620	219	470	Rp1	F	G¾	M	R½	M	>200	>50	54	15	12.4	37	43
HC100F	100	114.3	1145	525	620	219	475	Rp1	F	G¾	M	R½	M	>200	>50	94	26.11	14.7	37	45
HC125F	125	139.7	1570	745	825	324	635	Rp1	F	G¾	M	R½	M	>200	>50	144	40	16.9	115	102
HC150F	150	168.3	1570	745	825	324	635	Rp1	F	G¾	M	R½	M	>200	>50	215	59.72	19.2	115	105
HC200F	200	219.1	1995	955	1040	406	775	Rp1	F	G¾	M	R½	M	>200	>50	360	100	23.4	230	195
HC250F	250	273	2680	1295	1385	508	890	Rp2	F	G¾	M	R½	M	>200	>50	575	159.72	27.5	500	343
HC300F	300	323.9	3190	1550	1640	610	1005	Rp2	F	G¾	M	R½	M	>200	>50	810	225	31.2	830	484

Products in this range are available up to DN800 and are made to order – prices on application.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
3 m/s

Without magnet

SpiroCombi -Steel -F(PN16) -HiFLow -Demount

A demountable steel (microbubble) deaerator and dirt separator for high flow rate (3 m/s) with a DN50 - DN300 PN16 flange connection

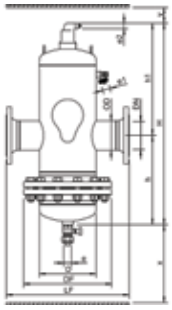
Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e1	e1 [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
HD050F	50	60.3	910	405	505	159	350	Rp1	F	G¾	M	R½	M	>790	>50	25	6.94	11.7	10	43
HD065F	65	76.1	910	405	505	159	350	Rp1	F	G¾	M	R½	M	>790	>50	40	11.11	11.9	10	44
HD080F	80	88.9	1145	525	620	219	470	Rp1	F	G¾	M	R½	M	>1020	>50	54	15	12.4	37	68
HD100F	100	114.3	1145	525	620	219	475	Rp1	F	G¾	M	R½	M	>1020	>50	94	26.11	14.7	37	70
HD125F	125	139.7	1570	745	825	324	635	Rp1	F	G¾	M	R½	M	>1450	>50	144	40	16.9	115	153
HD150F	150	168.3	1570	745	825	324	635	Rp1	F	G¾	M	R½	M	>1450	>50	215	59.72	19.2	115	156
HD200F	200	219.1	1995	955	1040	406	775	Rp1	F	G¾	M	R½	M	>1880	>50	360	100	23.4	230	295
HD250F	250	273	2680	1295	1385	508	890	Rp2	F	G¾	M	R½	M	>2560	>50	575	159.72	27.5	500	573
HD300F	300	323.9	3190	1550	1640	610	1005	Rp2	F	G¾	M	R½	M	>3070	>50	810	225	31.2	830	1018

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

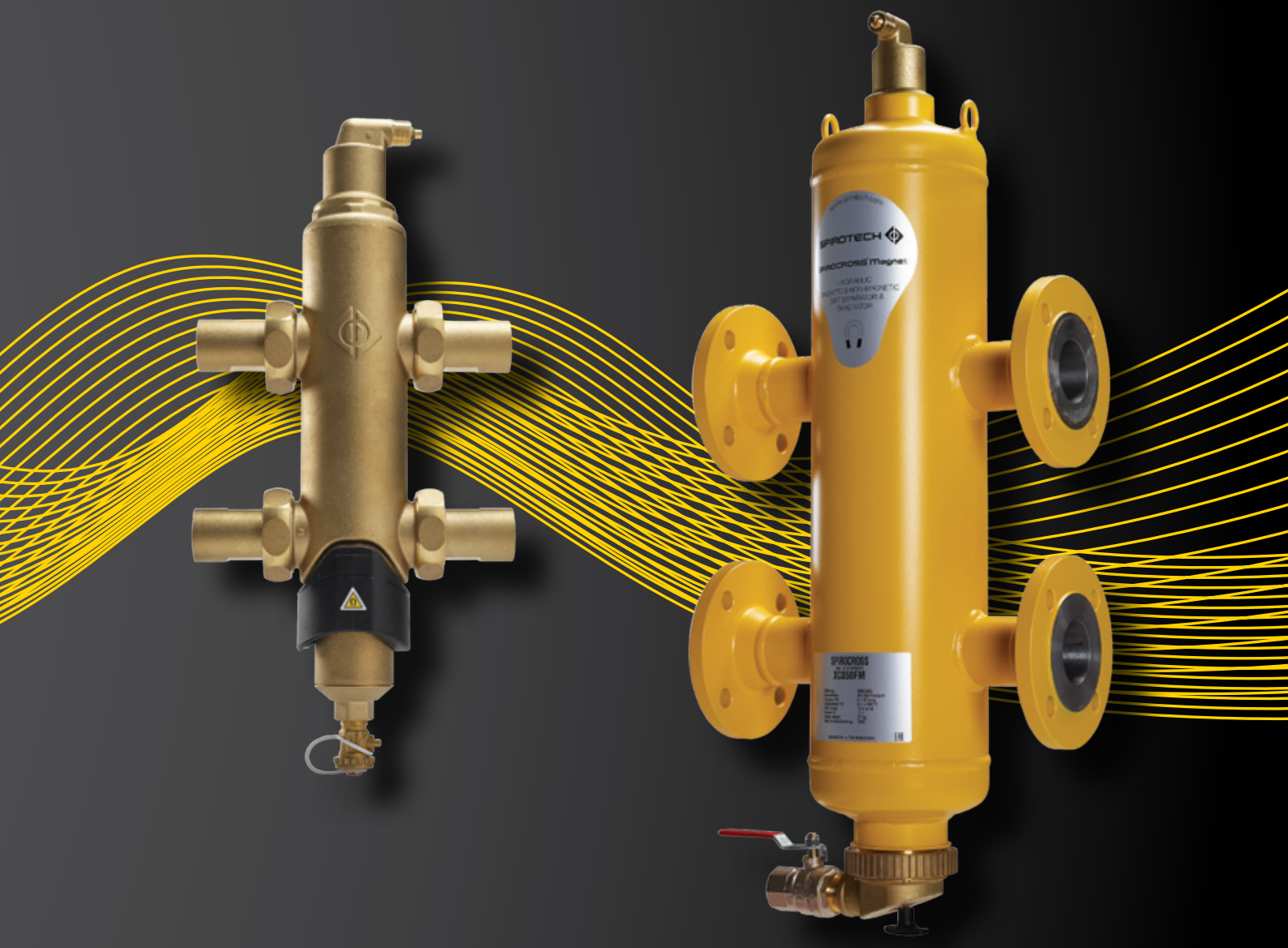
Nom. flow velocity
3 m/s

Without magnet



HYDRAULIC BALANCING WITH AIR AND DIRT SEPARATION

PRODUCT RANGE

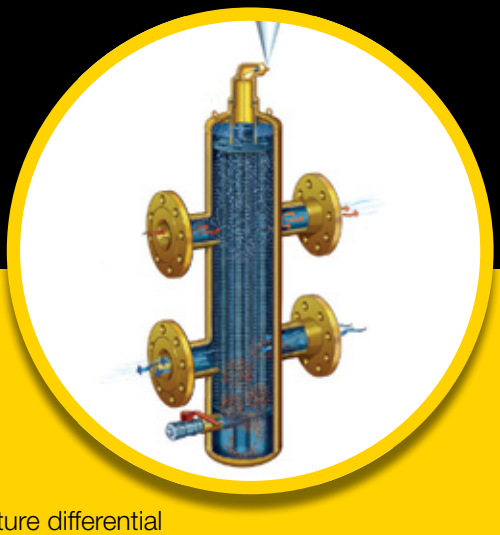


SPIROCROSS®

Hydraulic balancing and air & dirt separation are combined in the SpiroCross. The combination of 3 functions in 1 saves on space, installation and maintenance costs.

HYDRAULIC DEAERATORS AND DIRT SEPARATORS

SPIROCROSS®



BENEFITS OF SPIROCROSS

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

SPIROCROSS HYDRAULIC DEAERATORS AND DIRT SEPARATORS

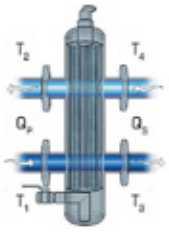
A good hydraulic balance is highly important for HVAC and process systems with separated circuits or several groups and pumps. The effective removal of air and dirt also contributes towards the achievement of optimum system performance. Hydraulic balancing and air and dirt separation are combined in the SpiroCross.

Thanks to the combination of 3 functions in 1, savings will not only be made in purchasing but also in space, installation and maintenance costs.

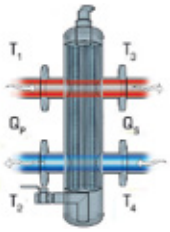
HOW DOES A HYDRAULIC SEPARATOR WORK?

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.

Situation 1: Qp = Qs ΔTp = ΔTs T2 = T4

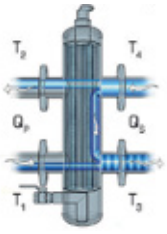


Cooling

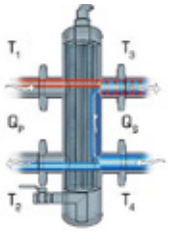


Heating

Situation 2: Qp < Qs ΔTp > ΔTs T2 = T4

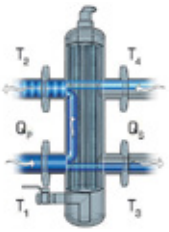


Cooling

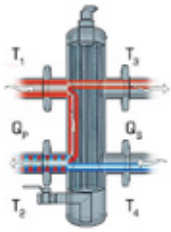


Heating

Situation 3: Qp > Qs ΔTp < ΔTs T1 = T3



Cooling



Heating

SpiroCross -Brass -Magnet

A brass hydraulic separator with (microbubble) deaerator and dirt separator with a 1” - 1½” connection and magnet

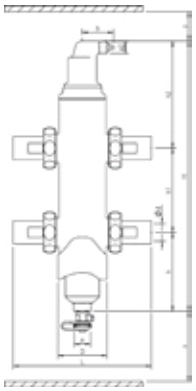
Art. No.	Conn. d	Conn. d [M/F]	H/Hv [mm]	h [mm]	h1 [mm]	h2 [mm]	b [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e2	e2 [M/F]	x [mm]	y [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
AX100J	G1	F	462	135	144	183	53	84	236	Rp¾	M	R½	M	>100	>50	2	0.56	0.8	1.3	6.5
AX125J	G1 ¼	F	462	135	144	183	52	84	236	Rp¾	M	R½	M	>100	>50	3.6	1	1.25	1.3	6.9
AX150J	G1 ½	F	462	135	144	183	53	84	236	Rp¾	M	R½	M	>100	>50	5	1.39	1.35	1.3	6.7

Max. op. pressure **10 bar**

Max. fluid temperature **110 °C**

Nom. flow velocity **1.5 m/s**

With magnet



ACCESSORIES

Insulation SpiroCross AX

SpiroCross hydraulic separators with (microbubble) deaerator and dirt separator with a connection up to 1 1/2” can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene. They encase the relevant components, including the pipe connection to secure optimal insulation.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation AX 1” - 1 1/2”	TAX150	484	150	Expanded polypropylene (EPP)	0.4

SpiroCross -Steel -Magnet -F(PN16)

A steel hydraulic separator with (microbubble) deaerator and dirt separator with magnet with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	h2 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e2	e2 [M/F]	x [mm]	xr [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
XC050FM	50	60.3	810	234	240	337	159	350	Rp1	F	R½	M	> 75	330	12.5	3.47	3	11	26
XC065FM	65	76.1	905	252	305	348	159	350	Rp1	F	R½	M	> 75	330	20	5.56	2.9	13	31
XC080FM	80	88.9	997	268	360	369	219	470	Rp1	F	R½	M	> 100	370	27	7.5	3.1	27	46
XC100FM	100	114.3	1261	351	460	450	219	475	Rp1	F	R½	M	> 100	370	47	13.06	3.7	36	57
XC125FM	125	139.7	1543	441	560	542	324	635	Rp1	F	R½	M	> 100	540	72	20	4.2	101	114
XC150FM	150	168.3	1778	503	670	604	324	635	Rp1	F	R½	M	> 100	540	108	30	4.9	119	125
XC200FM	200	219.1	2327	682	870	776	406	775	Rp1	F	R½	M	> 100	700	180	50	5.8	250	245
XC250FM	250	273	2870	835	1100	935	508	890	Rp1	F	R½	M	> 100	750	288	80	7	500	372
XC300FM	300	323.9	3394	1002	1295	1096	610	1005	Rp1	F	R½	M	> 100	900	405	112.5	7.8	863	578

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

With magnet

SpiroCross -Steel -F(PN16)

A steel hydraulic separator with (microbubble) deaerator and dirt separator with a DN50 - DN300 PN16 flange connection

Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	h2 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e2	e2 [M/F]	x [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
XC050F	50	60.3	815	238	240	337	159	350	Rp1	F	R½	M	>75	12.5	3.47	3	12	26
XC065F	65	76.1	905	251	305	349	159	350	Rp1	F	R½	M	>75	20	5.56	2.7	13	31
XC080F	80	88.9	999	270	360	369	219	470	Rp1	F	R½	M	>100	27	7.5	2.9	29	49
XC100F	100	114.3	1261	351	460	450	219	475	Rp1	F	R½	M	>100	47	13.06	3.7	38	60
XC125F	125	139.7	1546	443	560	543	324	635	Rp1	F	R½	M	>100	72	20	4.2	105	119
XC150F	150	168.3	1781	505	670	606	324	635	Rp1	F	R½	M	>100	108	30	4.9	123	140
XC200F	200	219.1	2321	675	870	776	406	775	Rp1	F	R½	M	>100	180	50	5.8	252	274
XC250F	250	273	2870	835	1100	935	508	890	Rp2	F	R½	M	>100	288	80	6.9	501	413
XC300F	300	323.9	3388	996	1295	1097	610	1005	Rp2	F	R½	M	>100	405	112.5	7.7	859	656

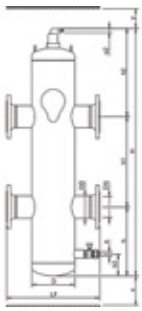
Products in this range are available up to DN800 and are made to order – prices on application.

Max. op. pressure
10 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

Without magnet



SpiroCross-R -Steel -Magnet -F(PN16)

A steel hydraulic separator with (microbubble) deaerator and dirt separator including an internal magnet with a DN65 or DN100 flange connection, developed for Remeha

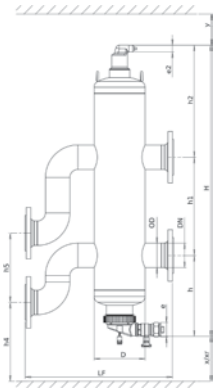
Art. No.	DN	OD [mm]	H/Hv [mm]	h [mm]	h1 [mm]	h2 [mm]	D [mm]	L/LF [mm]	e	e [M/F]	e2	e2 [M/F]	x [mm]	xr [mm]	Nom. flow rate [m3/h]	Nom. flow rate [l/s]	Δp at nom. flow [kPa]	Vol. [l]	Wgt. [kg]
XC065FMK45A01	65	76.1	905	250	305	348	159	462	Rp1	F	R½	M	>75	330	20	5.5	2.9	16	31
XC100FMK45A01	100	114.3	1261	351	460	450	219	744	Rp1	F	R½	M	100	370	47	13	3.7	51	64

Max. op. pressure
6 bar

Max. fluid temperature
110 °C

Nom. flow velocity
1.5 m/s

With magnet



Insulation SpiroCross XC-FM

SpiroCross steel hydraulic separators with flanges and (microbubble) deaerator and (magnetic) dirt separator can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene.

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation SpiroCross XC050FM	TBX050A01	787	226.5	Expanded polypropylene (EPP)	3.6
Insulation SpiroCross XC065FM	TBX065A01	876	226.5	Expanded polypropylene (EPP)	3.7
Insulation SpiroCross XC080FM	TBX080A01	987	306	Expanded polypropylene (EPP)	7.1
Insulation SpiroCross XC100FM	TBX100A01	1249	306.6	Expanded polypropylene (EPP)	7.6
Insulation SpiroCross XC125FM	TBX125A01	1444	411.4	Expanded polypropylene (EPP)	6
Insulation SpiroCross XC150FM	TBX150A01	1804	411	Expanded polypropylene (EPP)	10.8

Insulation SpiroCross XC-F/L

SpiroCross hydraulic separators with flanges and/or weld ends can be fully enclosed with prefabricated insulation shells, made of expanded polypropylene

Product name	Art. No.	Height [mm]	Diameter [mm]	Material insulation	Wgt. [kg]
Insulation SpiroCross XC050F/L	TBX050	787	226.5	Expanded polypropylene (EPP)	3.6
Insulation SpiroCross XC065F/L	TBX065	876	226.5	Expanded polypropylene (EPP)	3.7
Insulation SpiroCross XC080F/L	TBX080	987	306.6	Expanded polypropylene (EPP)	7.1
Insulation SpiroCross XC100F/L	TBX100	1249	306.6	Expanded polypropylene (EPP)	7.1
Insulation SpiroCross XC125F/L	TBX125	1540.55	411.4	Expanded polypropylene (EPP)	6.3
Insulation SpiroCross XC150F/L	TBX150	1804	411.4	Expanded polypropylene (EPP)	10.8

PRESSURISATION

PRODUCT RANGE

SPIROEXPAND®

Pressurisation is key to a good system design. Our experience, research and targeted investigations have taught us that most issues within heating and cooling systems are closely related to insufficient pressurization.

PRESSURISATION

SPIROEXPAND®

BENEFITS OF SPIROEXPAND

The Spirotech approach, combining deaeration and dirt separation along with pressurisation will render the following benefits:

- A correctly designed system
- Increase system efficiency
- Dramatically reduce maintenance costs for pump seals, fouling of control valves, blockages in heat exchangers

SPIROEXPAND PRESSURISATION

SpiroExpand enables automatic pressure monitoring and control and provides degassed makeup water. Adding a pressurisation solution to our established degassing products makes it possible to provide a total, integrated system care solution.

Today's highly energy-efficient heating and cooling systems offer optimal performance with air-free water. Most issues within HVAC systems are closely related to air being introduced into the system as a result of pressurisation issues. A poorly designed, installed or maintained pressurisation system can lead to negative pressures around the circuit. The introduction of oxygen through leaks or by refilling with non-degassed, mostly hard water also makes corrosion inhibitors significantly less effective.

HYDRONIC STABILITY

The use of fluid as the heat-transfer medium in heating and cooling systems is a dynamic process. Hydronic stability means the fluid can transfer heat or cold at any location in the system, at any given time. Pressurisation is a key factor in hydronic stability.

WIDE RANGE OF SOLUTIONS

Each heating or cooling system has different pressure maintenance system requirements. In addition, there is an increasing need for connectivity so that different systems can exchange information with each other. SpiroExpand includes a wide range of passive (expansion) vessels and active expansion sytems. The (expansion) vessels are available in volumes from 2 to 10,000 liters and the expansion systems have dozens of configurations with different pump sizes, mechanical valves and compatible vessels and accessories. Combining SpiroExpand with SpiroTrap dirt separation and SpiroVent Superior degassing reduces the risk of failure of sensitive system components and increases efficiency and operational reliability in a heating and cooling system.

PUMP CONTROLLED EXPANSION SYSTEMS

SpiroExpand PicoControl Kompakt SOLO

The PicoControl Kompakt SOLO is a compact automatic expansion and pressure-maintaining device. The unit contains 1 pump (1x 100%) and an overflow valve. An unpressurized expansion tank is integrated.

Art. No.	Upper working pressure range [bar]	Vol. [l]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EPCK-S45-4.0	1 - 4	45	0.22	230	1351	505	505	62
EPCK-S75-4.0	1 - 4	75	0.22	230	1351	505	585	65
EPCK-S125-4.0	1 - 4	125	0.22	230	1369	555	715	69
EPCK-S200-4.0	1 - 4	200	0.22	230	1478	555	715	89
EPCK-S300-4.0	1 - 4	300	0.22	230	1548	605	805	103
EPCK-S500-4.0	1 - 4	500	0.22	230	2157	605	805	118

Max. fluid temperature
70 °C

SpiroExpand MultiControl Kompakt SOLO

The MultiControl Kompakt SOLO is an automatic expansion and pressure-maintaining device, with 1 pump (1x 100%) and an overflow valve. An unpressurised expansion tank is integrated.

Art. No.	Upper working pressure range [bar]	Vol. [l]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCK-S45-4.0	1 - 4	45	0.6	230	1351	574	728	88
EMCK-S45-5.6	2.4 - 5.6	45	0.6	230	1351	574	728	88
EMCK-S45-8.1	4 - 8.1	45	0.6	230	1351	574	728	93
EMCK-S75-4.0	1 - 4	75	0.6	230	1351	574	803	91
EMCK-S75-5.6	2.4 - 5.6	75	0.6	230	1351	574	803	91
EMCK-S75-8.1	4 - 8.1	75	0.6	230	1351	574	803	96
EMCK-S125-4.0	1 - 4	125	0.6	230	1369	583	936	95
EMCK-S125-5.6	2.4 - 5.6	125	0.6	230	1369	583	936	106
EMCK-S125-8.1	4 - 8.1	125	0.6	230	1369	583	936	100
EMCK-S200-4.0	1 - 4	200	0.6	230	1478	583	936	115
EMCK-S200-5.6	2.4 - 5.6	200	0.6	230	1478	583	936	115
EMCK-S200-8.1	4 - 8.1	200	0.6	230	1478	583	936	120
EMCK-S300-4.0	1 - 4	300	0.6	230	1548	633	1026	129
EMCK-S300-5.6	2.4 - 5.6	300	0.6	230	1548	633	1026	129
EMCK-S300-8.1	4 - 8.1	300	0.6	230	1548	633	1026	134
EMCK-S500-4.0	1 - 4	500	0.6	230	2157	633	1026	144
EMCK-S500-5.6	2.4 - 5.6	500	0.6	230	2157	633	1026	144
EMCK-S500-8.1	4 - 8.1	500	0.6	230	2157	633	1026	149

Max. fluid temperature
70 °C

SpiroExpand MultiControl Kompakt DUO

The MultiControl Kompakt DUO is an automatic expansion and pressure-maintaining device, with 2 pumps (2x 50%) and an overflow valve. An unpressurised expansion tank is integrated.

Art. No.	Upper working pressure range [bar]	Vol. [l]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCK-D45-4.0	1 - 4	45	1.1	230	1351	574	728	102
EMCK-D45-5.6	2.4 - 5.6	45	1.1	230	1351	574	728	102
EMCK-D45-6.6	2.4 - 6.6	45	1.5	230	1351	574	728	106
EMCK-D45-8.1	6 - 8.1	45	1.5	230	1351	574	728	112
EMCK-D75-4.0	1 - 4	75	1.1	230	1351	574	803	105
EMCK-D75-5.6	2.4 - 5.6	75	1.1	230	1351	574	803	105
EMCK-D75-6.6	2.4 - 6.6	75	1.5	230	1351	574	803	109
EMCK-D75-8.1	6 - 8.1	75	1.5	230	1351	574	803	115
EMCK-D125-4.0	1 - 4	125	1.1	230	1369	583	936	109
EMCK-D125-5.6	2.4 - 5.6	125	1.1	230	1369	583	936	109
EMCK-D125-6.6	2.4 - 6.6	125	1.5	230	1369	583	936	113
EMCK-D125-8.1	6 - 8.1	125	1.5	230	1369	583	936	119
EMCK-D200-4.0	1 - 4	200	1.1	230	1478	583	936	129
EMCK-D200-5.6	2.4 - 5.6	200	1.1	230	1478	583	936	129
EMCK-D200-6.6	2.4 - 6.6	200	1.5	230	1478	583	936	133
EMCK-D200-8.1	6 - 8.1	200	1.5	230	1478	583	936	139
EMCK-D300-4.0	1 - 4	300	1.1	230	1548	633	1026	143
EMCK-D300-8.1	6 - 8.1	300	1.5	230	1548	633	1026	153
EMCK-D300-6.6	2.4 - 6.6	300	1.5	230	1548	633	1026	147
EMCK-D300-5.6	2.4 - 5.6	300	1.1	230	1548	633	1026	143
EMCK-D500-4.0	1 - 4	500	1.1	230	2157	881	1026	158
EMCK-D500-5.6	2.4 - 5.6	500	1.1	230	2157	881	1026	158
EMCK-D500-6.6	2.4 - 6.6	500	1.5	230	2157	881	1026	162
EMCK-D500-8.1	6 - 8.1	500	1.5	230	2157	881	1026	168

Max. fluid temperature
70 °C

SpiroExpand MultiControl Kompakt DUO Twin

The MultiControl Kompakt DUO Twin is an automatic expansion and pressure-maintaining device. The unit contains 2 pumps (2x 50%) and 2 overflow valves. An unpressurised expansion tank is integrated.

Art. No.	Upper working pressure range [bar]	Vol. [l]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCK-D45-4.0-twin	1 - 4	45	1.1	230	1351	881	728	110
EMCK-D45-5.6-twin	2.4 - 5.6	45	1.1	230	1351	881	728	110
EMCK-D45-6.6-twin	2.4 - 6.6	45	1.5	230	1351	881	728	114
EMCK-D45-8.1-twin	6 - 8.1	45	1.5	230	1351	881	728	117
EMCK-D75-4.0-twin	1 - 4	75	1.1	230	1351	881	803	113
EMCK-D75-5.6-twin	2.4 - 5.6	75	1.1	230	1351	881	803	113
EMCK-D75-6.6-twin	2.4 - 6.6	75	1.5	230	1351	881	803	117
EMCK-D75-8.1-twin	6 - 8.1	75	1.5	230	1351	881	803	120
EMCK-D125-4.0-twin	1 - 4	125	1.1	230	1369	881	936	117
EMCK-D125-5.6-twin	2.4 - 5.6	125	1.1	230	1369	881	936	117
EMCK-D125-6.6-twin	2.4 - 6.6	125	1.5	230	1369	881	936	121
EMCK-D125-8.1-twin	6 - 8.1	125	1.5	230	1369	881	936	124
EMCK-D200-4.0-twin	1 - 4	200	1.1	230	1478	881	936	137
EMCK-D200-5.6-twin	2.4 - 5.6	200	1.1	230	1478	881	936	137
EMCK-D200-6.6-twin	2.4 - 6.6	200	1.5	230	1478	881	936	141
EMCK-D200-8.1-twin	6 - 8.1	200	1.5	230	1478	881	936	144
EMCK-D300-4.0-twin	1 - 4	300	1.1	230	1548	881	1026	151
EMCK-D300-5.6-twin	2.4 - 5.6	300	1.1	230	1548	881	1026	151
EMCK-D300-6.6-twin	2.4 - 6.6	300	1.5	230	1548	881	1026	155
EMCK-D300-8.1-twin	6 - 8.1	300	1.5	230	1548	881	1026	158
EMCK-D500-4.0-twin	1 - 4	500	1.1	230	2157	881	1026	166
EMCK-D500-5.6-twin	2.4 - 5.6	500	1.1	230	2157	881	1026	166
EMCK-D500-6.6-twin	2.4 - 6.6	500	1.5	230	2157	881	1026	170
EMCK-D500-8.1-twin	6 - 8.1	500	1.5	230	2157	881	1026	173

Max. fluid temperature
70 °C

SpiroExpand MultiControl Kompakt MAXI

The MultiControl Kompakt MAXI is an automatic expansion and pressure-maintaining device, with 2 pumps (2x 100%) and an overflow valve. An unpressurised expansion tank is integrated.

Art. No.	Upper working pressure range [bar]	Vol. [l]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCK-M45-4.0	1 - 4	45	1.1	230	1351	574	728	101
EMCK-M45-5.6	2.4 - 5.6	45	1.1	230	1351	574	728	101
EMCK-M45-8.1	6 - 8.1	45	1.5	230	1351	574	728	111
EMCK-M75-4.0	1 - 4	75	1.1	230	1351	574	803	104
EMCK-M75-5.6	2.4 - 5.6	75	1.1	230	1351	574	803	104
EMCK-M75-8.1	6 - 8.1	75	1.5	230	1351	574	803	114
EMCK-M125-4.0	1 - 4	125	1.1	230	1369	583	936	108
EMCK-M125-5.6	2.4 - 5.6	125	1.1	230	1369	583	936	108
EMCK-M125-8.1	6 - 8.1	125	1.5	230	1369	583	936	118
EMCK-M200-4.0	1 - 4	200	1.1	230	1478	583	936	128
EMCK-M200-5.6	2.4 - 5.6	200	1.1	230	1478	583	936	128
EMCK-M200-8.1	6 - 8.1	200	1.5	230	1478	583	936	138
EMCK-M300-4.0	1 - 4	300	1.1	230	1548	633	1026	142
EMCK-M300-5.6	2.4 - 5.6	300	1.1	230	1548	633	1026	142
EMCK-M300-8.1	6 - 8.1	300	1.5	230	1548	633	1026	152
EMCK-M500-4.0	1 - 4	500	1.1	230	2157	633	1026	157
EMCK-M500-5.6	2.4 - 5.6	500	1.1	230	2157	633	1026	157
EMCK-M500-8.1	6 - 8.1	500	1.5	230	2157	633	1026	167

Max. fluid temperature
70 °C

SpiroExpand MultiControl Kompakt MAXI Twin

The MultiControl Kompakt MAXI Twin is an automatic expansion and pressure-maintaining device. The unit contains 2 pumps (2x 100%) and 2 overflow valves. An unpressurised expansion tank is integrated.

Art. No.	Upper working pressure range [bar]	Vol. [l]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCK-M45-4.0-twin	1 - 4	45	1.1	230	1351	881	728	108
EMCK-M45-5.6-twin	2.4 - 5.6	45	1.1	230	1351	881	728	108
EMCK-M45-8.1-twin	6 - 8.1	45	1.5	230	1351	881	728	115
EMCK-M75-4.0-twin	1 - 4	75	1.1	230	1351	881	803	111
EMCK-M75-5.6-twin	2.4 - 5.6	75	1.1	230	1351	881	803	111
EMCK-M75-8.1-twin	6 - 8.1	75	1.5	230	1351	881	803	118
EMCK-M125-4.0-twin	1 - 4	125	1.1	230	1396	881	936	115
EMCK-M125-5.6-twin	2.4 - 5.6	125	1.1	230	1396	881	936	115
EMCK-M125-8.1-twin	6 - 8.1	125	1.5	230	1396	881	936	122
EMCK-M200-4.0-twin	1 - 4	200	1.1	230	1478	583	936	135
EMCK-M200-5.6-twin	2.4 - 5.6	200	1.1	230	1478	583	936	135
EMCK-M200-8.1-twin	6 - 8.1	200	1.5	230	1478	583	936	142
EMCK-M300-4.0-twin	1 - 4	300	1.1	230	1548	881	1026	149
EMCK-M300-5.6-twin	2.4 - 5.6	300	1.1	230	1548	881	1026	149
EMCK-M300-8.1-twin	6 - 8.1	300	1.5	230	1548	881	1026	156
EMCK-M500-4.0-twin	1 - 4	500	1.1	230	2157	633	1026	164
EMCK-M500-5.6-twin	2.4 - 5.6	500	1.1	230	2157	633	1026	164
EMCK-M500-8.1-twin	6 - 8.1	500	1.5	230	2157	633	1026	171

Max. fluid temperature
70 °C

SpiroExpand EMCB-Z Secondary vessel for MultiControl Kompakt

Additional vessels for EMCK expansion system, only overflow line, without level measurement

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EMCB-Z75	75	1350	400	40.5
EMCB-Z125	125	1369	500	45.4
EMCB-Z200	200	1478	500	56.5
EMCB-Z300	300	1545	600	58.5
EMCB-Z500	500	2175	600	87

Max. fluid temperature
70 °C

Max. op. pressure
0.5 bar

SpiroExpand MultiControl Modular SOLO

The MultiControl Modular SOLO is an automatic expansion and pressure-maintaining device. The unit contains 1 pump (1x 100%) and an overflow valve. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCM-S1-4.0	1 - 4	0.6	400	1149	575	741	56
EMCM-S1-5.6	2 - 5.6	0.6	400	1149	575	741	56
EMCM-S1-8.1	4 - 8.1	0.8	400	1149	575	741	60
EMCM-S2-6.0	2 - 6	1.3	400	805	685	835	124
EMCM-S2-7.8	2 - 7.8	1.3	400	805	685	835	124
EMCM-S3-10.0	4 - 10	1.7	400	940	685	835	131
EMCM-S4-6.2	2.4 - 6.2	1.7	400	1360	685	835	140
EMCM-S5-6.2	2.4 - 6.2	1.7	400	1360	685	1015	161
EMCM-S6-6.6	2.4 - 6.6	2.4	400	1360	685	835	145
EMCM-S6-10.1	6 - 10.1	2.4	400	1360	685	835	145
EMCM-S7-6.6	2.4 - 6.6	2.4	400	1360	685	1015	167
EMCM-S0.3-16.0	8 - 16	1.3	400	1370	764	888	140
EMCM-S8-16.0	8 - 16	4.2	400	1460	685	1015	194
EMCM-S9-6.6	2.4 - 6.6	4.2	400	1460	685	1015	195
EMCM-S9-11.0	6 - 11	4.2	400	1460	685	1015	195

Max. fluid temperature
70 °C

SpiroExpand MultiControl Modular DUO

The MultiControl Modular DUO is an automatic expansion and pressure-maintaining device. The unit contains 2 pumps (2x 50%) and 1 overflow valve. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCM-D1-4.0	1 - 4	1.1	230	1149	575	741	79
EMCM-D1-5.6	2 - 5.6	1.1	230	1149	575	741	79
EMCM-D1-6.6	4 - 6.6	1.5	230	1149	575	741	82.4
EMCM-D1-8.1	6 - 8.1	1.5	230	1149	575	741	85.8
EMCM-D2-6.6	2.4 - 6.6	2.4	400	1370	1051	888	170
EMCM-D2-7.8	6 - 7.8	2.4	400	1370	1051	888	170
EMCM-D3-10.4	6 - 10.4	3.2	400	1370	1051	888	180
EMCM-D4-6.2	2.4 - 6.2	3.2	400	1360	965	1075	209
EMCM-D5-6.2	2.4 - 6.2	3.2	400	1360	1142	1075	243
EMCM-D6-6.6	2.4 - 6.6	4.6	400	1360	965	1075	220
EMCM-D6-10.1	6 - 10.1	4.6	400	1360	965	1075	220
EMCM-D7-6.6	2.4 - 6.6	4.6	400	1360	1142	1075	253
EMCM-D8-16.0	8 - 16	8.2	400	1460	1142	1075	305
EMCM-D9-6.6	2.4 - 6.6	8.2	400	1460	1142	1075	304
EMCM-D9-11.0	6 - 11	8.2	400	1460	1142	1075	304

Max. fluid temperature
70 °C

SpiroExpand MultiControl Modular DUO Twin

The MultiControl Modular DUO Twin is an automatic expansion and pressure-maintaining device. The unit contains 2 pumps (2x 50%) and 2 overflow valves. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCM-D1-4.0-twin	1 - 4	1.1	230	1149	881	824	84
EMCM-D1-5.6-twin	2 - 5.6	1.1	230	1149	881	824	84
EMCM-D1-6.6-twin	4 - 6.6	1.5	230	1149	881	824	91
EMCM-D1-8.1-twin	6 - 8.1	1.5	230	1149	881	824	91
EMCM-D2-6.6-twin	2.4 - 6.6	2.4	400	1370	1051	888	180
EMCM-D2-7.8-twin	6 - 7.8	2.4	400	1370	1051	888	180
EMCM-D3-10.4-twin	6 - 10.4	3.2	400	1370	1051	888	190
EMCM-D4-6.2-twin	2.4 - 6.2	3.2	400	1370	1051	888	248
EMCM-D5-6.2-twin	2.4 - 6.2	3.2	400	905	1142	1075	275
EMCM-D6-6.6-twin	2.4 - 6.6	4.6	400	1142	1110	1075	258
EMCM-D6-10.1-twin	6 - 10.1	4.6	400	1142	1110	1075	258
EMCM-D7-6.6-twin	2.4 - 6.6	4.6	400	1142	1110	1075	285
EMCM-D8-16.0-twin	8 - 16	8.2	400	1460	1142	1075	332
EMCM-D9-11.0-twin	6 - 11	8.2	400	1460	1142	1075	214
EMCM-D9-6.6-twin	2.4 - 6.6	8.2	400	1460	1142	1075	214

Max. fluid temperature
70 °C

SpiroExpand MultiControl Modular MAXI

The MultiControl Modular MAXI is an automatic expansion and pressure-maintaining device. The unit contains 2 pumps (2x 100%) and 1 overflow valve. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCM-M1-4.0	1 - 4	1.1	230	1149	575	741	75
EMCM-M1-5.6	2 - 5.6	1.1	230	1149	575	741	75
EMCM-M1-8.1	4 - 8.1	1.5	230	1149	575	741	81.8
EMCM-M2-6.0	2 - 6	2.4	400	1370	1051	888	170
EMCM-M2-7.8	4 - 7.8	2.4	400	1370	1051	888	170
EMCM-M3-10.0	4 - 10	3.2	400	1370	1051	888	180
EMCM-M4-6.2	2.4 - 6.2	3.2	400	1360	965	835	184
EMCM-M5-6.2	2.4 - 6.2	3.2	400	1360	965	1075	209
EMCM-M6-6.6	2.4 - 6.6	4.6	400	1360	1145	1075	194
EMCM-M6-10.1	6 - 10.1	4.6	400	1360	965	835	194
EMCM-M7-6.6	2.4 - 6.6	4.6	400	1360	965	1075	219
EMCM-M0.3-16.0	8 - 16	2.4	400	1360	1142	1075	170
EMCM-M8-16.0	8 - 16	8.2	400	1360	1142	1075	297
EMCM-M9-6.6	2.4 - 6.6	8.2	400	1360	1145	1075	308
EMCM-M9-11.0	6 - 11	8.2	400	1360	965	1075	270

Max. fluid temperature
70 °C

SpiroExpand MultiControl Modular MAXI Twin

The MultiControl Modular MAXI Twin is an automatic expansion and pressure-maintaining device. The unit contains 2 pumps (2x 100%) and 2 overflow valves. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCM-M1-4.0-twin	1 - 4	1.1	230	1149	881	824	82
EMCM-M1-5.6-twin	2 - 5.6	1.1	230	1149	881	824	82
EMCM-M1-8.1-twin	4 - 8.1	1.5	230	1149	881	824	89
EMCM-M2-6.0-twin	2 - 6	2.4	400	1370	1051	888	180
EMCM-M2-7.8-twin	4 - 7.8	2.4	400	1370	1051	888	180
EMCM-M3-10.0-twin	4 - 10	3.2	400	1370	1051	888	190
EMCM-M4-6.2-twin	2.4 - 6.2	3.2	400	1360	965	835	228
EMCM-M5-6.2-twin	2.4 - 6.2	3.2	400	1360	965	1075	248
EMCM-M6-6.6-twin	2.4 - 6.6	4.6	400	1360	1145	1075	187
EMCM-M6-10.1-twin	6 - 10.1	4.6	400	1360	965	835	187
EMCM-M7-6.6-twin	2.4 - 6.6	4.6	400	1360	965	1075	258
EMCM-M0.3-16.0-twin	8 - 16	2.4	400	1360	1142	1075	180
EMCM-M8-16.0-twin	8 - 16	8.2	400	1360	1142	1075	318
EMCM-M9-6.6-twin	2.4 - 6.6	8.2	400	1360	1145	1075	308
EMCM-M9-11.0-twin	6 - 11	8.2	400	1360	965	1075	308

Max. fluid temperature
70 °C

SpiroExpand TopControl Modular SOLO

The TopControl Modular SOLO is an automatic expansion and pressure-maintaining device. The unit contains a VFD pump (1x 100%) and an electronically controlled overflow valve. A separate EP storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
ETCM-S1-8.4	1 - 8.4	1.3	230	1149	591	750	65
ETCM-S5.4-15.7	2 - 15.7	1.7	400	958	868	1046	187
ETCM-S4.7-23.5	2.6 - 23.5	3.2	400	1205	880	1046	202
ETCM-S9.1-14.9	2 - 14.9	3.2	400	1084	869	1046	199
ETCM-S10.0-23.5	2.6 - 23.5	5.7	400	1439	880	1046	230

Max. fluid temperature
70 °C

SpiroExpand TopControl Modular DUO

The TopControl Modular DUO is an automatic expansion and pressure-maintaining device. The unit contains 2 VFD pumps (2x 50%) and an electronically controlled overflow valve. A separate EP storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
ETCM-D1-8.4	1 - 8.4	2.4	230	1149	907	750	84
ETCM-D10.8-15.7	2 - 15.7	3.2	400	958	1274	1134	240
ETCM-D9.4-23.5	2.6 - 23.5	6.2	400	1205	1296	1134	255
ETCM-D18.2-14.9	2 - 14.9	6.2	400	1084	1274	1134	252
ETCM-D20.0-23.5	2.6 - 23.5	11.2	400	1439	1296	1134	283

Max. fluid temperature
70 °C

SpiroExpand TopControl Modular DUO Twin

The TopControl Modular DUO Twin is an automatic expansion and pressure-maintaining device. The unit contains 2 VFD pumps (2x 50%) and 2 electronically controlled overflow valves. A separate EP storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
ETCM-D1-8.4-twin	1 - 8.4	2.4	230	1149	907	750	87
ETCM-D10.8-15.7-twin	2 - 15.7	3.2	400	958	1274	1134	252
ETCM-D9.4-23.5-twin	2.6 - 23.5	6.2	400	1205	1296	1134	267
ETCM-D18.2-14.9-twin	2 - 14.9	6.2	400	1084	1274	1134	264
ETCM-D20.0-23.5-twin	2.6 - 23.5	11.2	400	1439	1296	1134	294

Max. fluid temperature
70 °C

SpiroExpand TopControl Modular MAXI

The TopControl Modular MAXI is an automatic expansion and pressure-maintaining device. The unit contains 2 VFD pumps (2x 100%) and an electronically controlled overflow valve. A separate EP storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
ETCM-M1-8.4	1 - 8.4	2.4	230	1149	907	750	84
ETCM-M5.4-15.7	2 - 15.7	3.2	400	1205	1296	1106	231
ETCM-M4.7-23.5	2.6 - 23.5	6.2	400	1205	1296	1106	246
ETCM-M9.1-14.9	2 - 14.9	6.2	400	1082	1274	1106	243
ETCM-M10.0-23.5	2.6 - 23.5	11.2	400	1439	1296	1106	273

Max. fluid temperature
70 °C

SpiroExpand TopControl Modular MAXI Twin

The TopControl Modular MAXI Twin is an automatic expansion and pressure-maintaining device. The unit contains 2 VFD pumps (2x 100%) and 2 electronically controlled overflow valves. A separate EP storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
ETCM-M1-8.4-twin	1 - 8.4	2.4	230	1149	907	750	87
ETCM-M5.4-15.7-twin	2 - 15.7	3.2	400	1205	1296	1106	239.4
ETCM-M4.7-23.5-twin	2.6 - 23.5	6.2	400	1205	1296	1106	246
ETCM-M9.1-14.9-twin	2 - 14.9	6.2	400	1082	1274	1106	251.5
ETCM-M10.0-23.5-twin	2.6 - 23.5	11.2	400	1439	1296	1106	273

Max. fluid temperature
70 °C

SpiroExpand EP-R Primary vessel for MultiControl Modular and TopControl Modular

Expansion vessels for EMCM and ETCM, P max. 0,5 bar / T max. 70ºC

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EP0200R	200	1510	500	66
EP0300R	300	1570	600	80
EP0500R	500	2150	600	95
EP0800R	800	2110	800	210
EP1000R	1000	2110	900	250
EP1500R	1500	2220	1050	350
EP2000R	2000	2265	1200	500
EP2500R	2500	3200	1050	550
EP3000R	3000	3275	1200	575
EP4000R	4000	3500	1400	675
EP5000R	5000	3550	1500	775
EPX100R	10000	5310	1700	1500

Max. fluid temperature
70 °C

Max. op. pressure
0.5 bar

SpiroExpand EP-RS Secondary vessel for MultiControl Modular and TopControl Modular

Secondary expansion vessels for EMCM and ETCM, P max. 0,5 bar / T max. 70ºC, without level measurement

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EP0200RS	200	1510	500	66
EP0300RS	300	1570	600	80
EP0500RS	500	2150	600	95
EP0800RS	800	2110	800	210
EP1000RS	1000	2110	900	250
EP1500RS	1500	2220	1050	350
EP2000RS	2000	2265	1200	500
EP2500RS	2500	3200	1050	550
EP3000RS	3000	3275	1200	575
EP4000RS	4000	3500	1400	675
EP5000RS	5000	3550	1500	775
EPX100RS	10000	5319	1700	1500

Max. fluid temperature
70 °C

Max. op. pressure
0.5 bar

SpiroExpand MultiControl COOL SOLO

The MultiControl COOL SOLO is an automatic expansion and pressure-maintaining device, with 1 pump (1x 100%) and 1 overflow valve, designed for cooling systems. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCC-S1-4.0	1 - 4	0.8	230	1244	575	741	85
EMCC-S1-5.6	2 - 5.6	0.8	230	1244	575	741	85

Max. fluid temperature
70 °C

SpiroExpand MultiControl COOL DUO

The MultiControl COOL DUO is an automatic expansion and pressure-maintaining device, with 2 pumps (2x 50%) and 1 overflow valve, designed for cooling systems. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCC-D1-4.0	1 - 4	1.5	230	1244	575	741	99
EMCC-D1-5.6	2 - 5.6	1.5	230	1244	575	741	99

Max. fluid temperature
70 °C

SpiroExpand MultiControl COOL MAXI

The MultiControl COOL MAXI is an automatic expansion and pressure-maintaining device, with 2 pumps (2x 100%) and 1 overflow valve, designed for cooling systems. A separate storage tank is required.

Art. No.	Upper working pressure range [bar]	Power consumption [kW]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
EMCC-M1-4.0	1 - 4	1.5	230	1244	575	741	98
EMCC-M1-5.6	2 - 5.6	1.5	230	1244	575	741	98

Max. fluid temperature
70 °C

SpiroExpand EMCC-G Primary vessel for MultiControl Cool

Expansion vessels with level measurement for MultiControl Cool EMCC series

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EMCC-G125	125	1167	500	41.5
EMCC-G200	200	1407	500	48.5
EMCC-G300	300	1475	600	56
EMCC-G500	500	2130	600	72

Max. fluid temperature
70 °C

Max. op. pressure
0.5 bar

SpiroExpand EMCC-Z Secondary vessel for MultiControl Cool

Additional vessels for EMCC expansion system, only overflow line, without level measurement

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EMCC-Z125	125	1167	500	40
EMCC-Z200	200	1407	500	47
EMCC-Z300	300	1475	600	54.5
EMCC-Z500	500	2130	600	70.5

Max. fluid temperature
70 °C

Max. op. pressure
0.5 bar

SpiroExpand ET-T Intermediate vessel

Intermediate vessels, PN10, P max. 10 bar / T max. 110ºC

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
ET0100T1	100	1362	350	50
ET0150T1	150	1390	450	85
ET0200T1	200	1416	500	95
ET0350T1	350	1945	550	150
ET0500T1	500	1970	650	210
ET0750T1	750	2391	700	290
ET1000T1	1000	2574	800	365
ET1500T1	1500	2536	1000	525
ET2000T1	2000	2810	1100	695
ET3000T1	3000	2885	1250	1100

Max. fluid temperature
110 °C

Max. op. pressure
10 bar

SpiroExpand MultiControl Autofill Solo

MultiControl Autofill Solo for automatic, quantity-controlled replenishment of special liquids from a storage tank.

Art. No.	Wgt. [kg]
EMCA-S1-2.7	49.5
EMCA-S1-5.2	52

Max. fluid temperature
70 °C

SpiroExpand MultiControl Autofill IBC vessel

The intermediate bulk container (IBC) is a pallet mounted, industrial grade reusable container that can be used for storing bulk liquids.

Art. No.	Vol. [l]	Wgt. [kg]
EMCA-G640	640	50
EMCA-G1000	1000	63

Max. fluid temperature
70 °C

SpiroExpand Top Up unit

The SpiroExpand MB0650 is a top up pressurisation unit with a flow rate (up to 18.5 l/min max @1bar) and a 5 litre internal category 5 (AB air gap) break tank. Available as a single pump configuration.

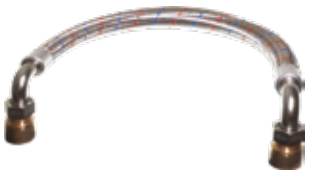
Art. No.	Upper working pressure range [bar]	Voltage [V]	Height [mm]	Width [mm]	Depth [mm]	Wgt. [kg]
MB0650	-	230	705	340	200	20.5

Max. fluid temperature
40 °C

SpiroExpand Accessories

Accessories for SpiroExpand MultiControl, TopControl and PicoControl expansion systems.

Product name	Art. No.
MultiControl Kompakt Bypass-Set	EMCB-ZB
MultiControl Kompakt connection set EMCB-Z to EMCK (extension)	EMCB-ZC
MultiControl Cool connection set EMCC-G to EMCC-_1, suction and overflow line	EMCC-G
MultiControl Cool connection set EMCC-Z to EMCC-G and EMCC-Z to EMCC-Z	EMCC-Z
MultiControl low pressure degassing module ½" for EMCM/ETCM (excluding models S1, D1 and M1)	EMAE-1
Digital test gauge with display	E50120
MultiControl Temperature sensor cable length 10 m. incl. immersion sleeve G½, PN10	E51951
MultiControl Temperature sensor, T2, 15-40 mm pipe size	E51950
Steel cover for MultiControl	E51910
Drip tray with siphon (50mm) 840 mm x 840 mm	E51995
Drip tray with siphon (50mm) 1200 mm x 800 mm	E51996
MultiControl Autofill connection set EMCA-S to SpiroExpand expansion system	E55391
MultiControl Autofill connection set EMCA-G to EMCA-S	E55390



SpiroExpand Modules

Expansion modules for SpiroExpand MultiControl, TopControl and PicoControl expansion systems

Product name	Art. No.
MultiControl post-feed module ½” for installation in EMCK, EMCM-_1...9, ETCM	EMCF-1
MultiControl post-feed module 3⁄4” for installation in EMCM- _2...9, ETCM	EMCF-3
MultiControl Cool post-feed module ½” for installation in EMCC	EMCC-N1
MultiControl Expansion module binary remote message	EMCBM
MultiControl Expansion module binary remote messages & remote acknowledgment	EMCBMR
MultiControl Expansion module analogue remote signaling	EMCAM
MultiControl SMS-Module	EMCSM
MultiControl Webmodule ethernet 100 Mbps, WLAN GH2.4 z 802.11n	EMCWE
MultiControl Busmodule Modbus TCP	EMCMO-TCP
MultiControl Busmodule Modbus RTU RS485	EMCMO
MultiControl Busmodule Profinet IO-Device	EMCPN
MultiControl Busmodule Profibus-Standard DP-V0	EMCPB

Back flow preventer

Back flow preventer with a controllable low pressure zone for products with automatic refill function

Product name	Art. No.
Back flow preventer IG 1/2”	TMA05
Back flow preventer IG 3/4”	TMA06

SpiroExpand EVN Expansion vessel

Safety expansion vessel for closed hot water, -heating and cooling systems, P max. 3 bar / T max. 70°C

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVN4	4	360	360	3.5
EVN8	8	360	360	3.5
EVN12	12	360	360	3.5
EVN18	18	360	360	3.8
EVN25	25	400	400	5
EVN35	35	440	440	7
EVN50	50	500	500	10.5
EVN80	80	600	600	14.5
EVN100	100	600	600	16
EVN140	140	600	600	20

Max. fluid temperature
70 °C

Max. op. pressure
3 bar

SpiroExpand EVNP Expansion vessel for systems with buffer tanks

Expansion vessels for systems with buffer tanks, P max. 3 bar / T max. 70ºC

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVNP115	115	750	500	26
EVNP230	230	1075	600	44.5

Max. fluid temperature
70 °C

Max. op. pressure
3 bar

SpiroExpand EVSG Pressure expansion vessel with replaceable membrane

Pressure expansion vessels with replaceable membrane, P max. 3 bar / T max. 70ºC

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVSG120	120	790	500	27
EVSG180	180	1080	500	36
EVSG250	250	1090	600	45
EVSG330	330	1340	600	53
EVSG500	500	2090	600	76.5

Max. fluid temperature
70 °C

Max. op. pressure
3 bar

SpiroExpand EVC Compact pressure expansion vessel with replaceable membrane

Compact pressure expansion vessels with replaceable membrane, P max. 3 bar / T max. 70ºC

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVC600	600	1990	700	128.5
EVC800	800	2000	800	149
EVC1000	1000	2050	900	167

Max. fluid temperature
70 °C

Max. op. pressure
3 bar

SpiroExpand EVU-6 Universal expansion vessel with replaceable membrane

Universal expansion vessels with replaceable membrane, P max. 6 bar / T max. 70ºC. Expansion vessels larger than 300 liters on request.

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVU18-6	18	365	300	7
EVU25-6	25	400	360	8.5
EVU35-6	35	500	360	10.5
EVU50-6	50	580	360	12.4
EVU90-6	90	820	440	30.5
EVU120-6	120	835	500	40
EVU200-6	200	1260	500	58
EVU300-6	300	1400	600	80.5

Size 18L - 50L hanging vessel with wall bracket / Size 90L - 300L standing vessel with 3 supports.

Max. fluid temperature
70 °C

Max. op. pressure
6 bar

SpiroExpand EVU-10 Universal expansion vessel with replaceable membrane

EVU-10 Universal expansion vessels with replaceable membrane, P max. 10 bar / T max. 70ºC. Expansion vessels larger than 300 liters on request.

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVU15-10	15	310	300	7
EVU20-10	20	360	300	8.5
EVU30-10	30	420	360	10.5
EVU60-10	60	695	360	12.4
EVU120-10	120	870	500	30.5
EVU180-10	180	1180	500	40
EVU240-10	240	1195	600	58
EVU300-10	300	1400	600	80.5

Size 15L - 60L hanging vessel with wall bracket / Size 120L - 300L standing vessel with 3 supports.

Max. fluid temperature
70 °C

Max. op. pressure
10 bar

SpiroExpand EVSan Expansion vessel for cold water sanitary systems

Safety expansion vessel for cold water sanitary installations (service water), for absorbing pressure surges or as a pressure blast vessel, water-side with flanged, replaceable and tasteless bag diaphragm. P max. 10 bar / T max. 70°C.

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVSan2	2	260	120	2.2
EVSan15	15	310	300	8
EVSan20	20	360	300	8.5
EVSan30	30	420	360	11.5
EVSan60	60	695	360	16.9
EVSan120	120	870	500	40
EVSan180	180	1180	500	55
EVSan240	240	1195	600	71
EVSan300	300	1400	600	80.5

Size 15L - 60L hanging vessel with wall bracket / Size 120L - 300L standing vessel with 3 supports.

Max. fluid temperature
70 °C

Max. op. pressure
10 bar

SpiroExpand EVSanD Expansion vessel for hot water sanitary systems

Safety expansion vessel for hot water sanitary systems to absorb the expansion of the service water when heating up water. P max. 10 bar / T max. 70°C.

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVSan20D	20	410	300	11
EVSan30D	30	445	360	14.4
EVSan60D	60	715	500	17.9
EVSan90D	90	900	360	31
EVSan120D	120	900	440	41
EVSan180D	180	1220	600	56
EVSan240D	240	1235	600	71.5
EVSan300D	300	1440	500	31

Size 20L - 60L hanging vessel with wall bracket / Size 90L - 300L standing vessel with 3 supports.

Max. fluid temperature
70 °C

Max. op. pressure
10 bar

SpiroExpand EVSolar Expansion vessel for solar systems

Safety expansion vessel for solar systems, with a flanged, replaceable and frost-proof bag membrane to hold the expansion medium. P max. 6 bar / T max. 70°C.

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVSolar18	18	365	300	7
EVSolar25	25	400	360	8.5
EVSolar35	35	500	360	10.5
EVSolar50	50	580	360	12.4
EVSolar90	90	820	440	30.5
EVSolar120	120	835	500	40
EVSolar200	200	1260	500	58
EVSolar300	300	1400	600	80.5

Size 18L - 50L hanging vessel with wall bracket / Size 90L - 300L standing vessel with 3 supports.

Max. fluid temperature
70 °C

Max. op. pressure
6 bar

SpiroExpand EVCool Expansion vessel for cool systems

Safety expansion vessels for cooling systems

Art. No.	Vol. [l]	Height [mm]	Diameter [mm]	Wgt. [kg]
EVCool18	18	365	300	7
EVCool25	25	400	360	8.5
EVCool35	35	500	360	10.5
EVCool50	50	580	360	12.4

Max. fluid temperature
70 °C

Max. op. pressure
6 bar

ACCESSORIES

Maintenance unit for expansion vessel

Maintenance unit for SpiroExpand expansion vessels

Product name	Art. No.
SpiroExpand maintenance unit 3/4" male/female threads	E50307
SpiroExpand maintenance unit 3/4" male/male threads	E50110
SpiroExpand maintenance unit 1" male/female threads	E50207

SpiroExpand Accessories

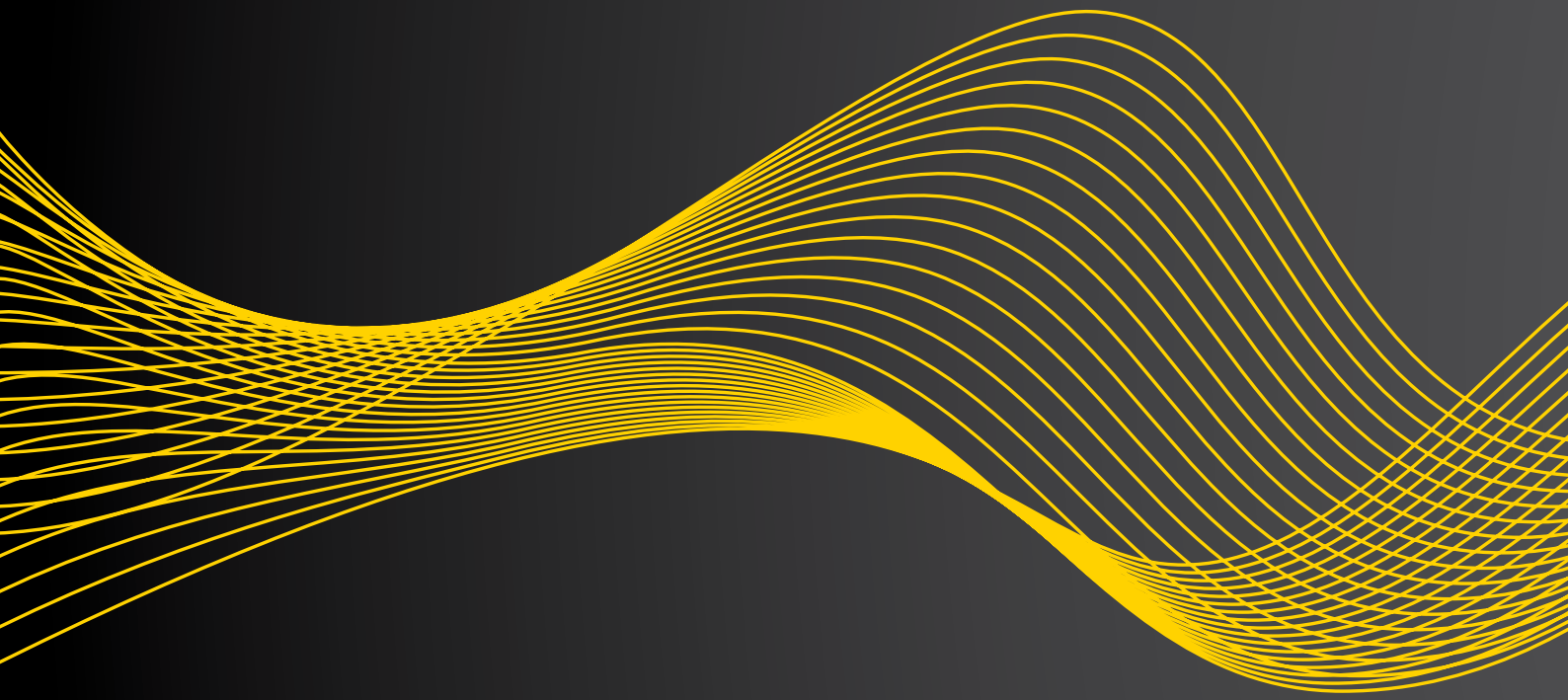
Accessories for SpiroExpand MultiControl, TopControl and PicoControl expansion systems.

Product name	Art. No.
Digital test gauge with display	E50120

Safety valve

Diaphragm safety valves for closed heating systems.

Product name	Art. No.
Safety valve ½" - 3 bar - 120 kW	E50112
Safety valve with manometer ½" - 3 bar - 120 kW	E50111
Safety valve ¾" - 3 bar - 128 kW	E50113
Safety valve ½" - 6 bar - 200 kW	E50512
Safety valve ¾" - 6 bar - 213 kW	E50513
Safety valve 1" - 3 bar - 354 kW	E52001
Safety valve 1" - 4 bar - 436 kW	E52002
Safety valve 1" - 5 bar - 515 kW	E52003
Safety valve 1" - 6 bar - 591 kW	E52004
Safety valve 5/4" - 3 bar - 729 kW	E52005
Safety valve 1" - 8 bar - 743 kW	E52017
Safety valve 1" - 10 bar - 889 kW	E52021
Safety valve 5/4" - 4 bar - 898 kW	E52006
Safety valve 6/4" - 3 bar - 949 kW	E52009
Safety valve 5/4" - 5 bar - 1060 kW	E52007
Safety valve 6/4" - 4 bar - 1168 kW	E52010
Safety valve 5/4" - 6 bar - 1216 kW	E52008
Safety valve 2" - 3 bar - 1322 kW	E52013
Safety valve 6/4" - 5 bar - 1378 kW	E52011
Safety valve 5/4" - 8 bar - 1529 kW	E52018
Safety valve 6/4" - 6 bar - 1582 kW	E52012
Safety valve 2" - 4 bar - 1626 kW	E52014
Safety valve 5/4" - 10 bar - 1830 kW	E52022
Safety valve 2" - 5 bar - 1920 kW	E52015
Safety valve 6/4" - 8 bar - 1989 kW	E52019
Safety valve 2" - 6 bar - 2203 kW	E52016
Safety valve 6/4" - 10 bar - 2380 kW	E52023
Safety valve 2" - 8 bar - 2770 kW	E52020
Safety valve 2" - 10 bar - 3315 kW	E52024



SPIROTECH

DEMINERALISATION

PRODUCT RANGE

SPIROPURE®

All SpiroPure fill and refill systems use a special mixed bed resin that not only removes the residual hardness and dissolved salts from the heating water, but also stabilizes the water pH levels.

DEMINERALISATION

SPIROPURE®

BENEFITS OF SPIROPURE

- Effective demineralisation of system water
- Stabilises the pH value for a longer period
- Removes residual hardness and dissolved salts from system water
- User-friendly installation and operation
- Both mobile and fixed units available for all heating and cooling system

With SpiroPure, the system water quality meets all requirements to improve the efficiency and reduce maintenance cost of the system. SpiroPure is a product that conditions the water being used in heating or cooling systems. This conditioning is offered to improve the quality of the system water, and therefore increase the efficiency and reliability of a heating and cooling system.

With SpiroPure you can easily condition system water to meet relevant installation guidelines like VDI2035, along with heating and cooling appliance manufacturers recommendations for warranty.

INCREASE EFFICIENCY AND REDUCE MAINTENANCE COST OF THE SYSTEM

Water is one of the best heat transfer mediums, which is why we use it in heating and cooling systems. However, water is also known as the universal solvent, because it is capable of dissolving more substances than any other liquid. Some of these dissolved substances can cause issues within heating and cooling systems.

These issues can very easily reduce the efficiency of the system, and increase the running and maintenance costs. SpiroPure solutions remove these unwanted substances from the water, therefore allowing the heating or cooling systems to run efficiently and effectively.

SpiroPure Home

The SpiroPure Home range holds fixed replenishment units for various sizes of domestic installations.

Product name	Art. No.	Size of resin [l]	Max. filling capacity [l]	Max. op. pressure [bar]	Temp. max. [°C]	Max. flow rate [l/h]
SpiroPure Home Basic+	G76.350	0.75	112.5	8	40	120
SpiroPure Home Basic	G76.347	0.75	112.5	8	40	120
SpiroPure Home XL+	G76.352	1.7	225	8	40	240
SpiroPure Home XL	G76.351	1.7	225	8	40	240
SpiroPure Home Duplex+	G76.353	3.4	450	8	40	240

*Max. filling capacity at 420µS/cm - <100µS/cm

SpiroPure Pro

The SpiroPure Pro fixed filling units are permanently installed in a heating or cooling installation.

Product name	Art. No.	Size of resin [l]	Max. filling capacity [l]	Max. op. pressure [bar]	Temp. max. [°C]	Max. flow rate [l/h]
SpiroPure Pro 9.5	G76.355	9.5	1350	8	40	600
SpiroPure Pro 23.0	G76.356	23	3420	8	40	1200

*Max. filling capacity at 420µS/cm - <100µS/cm

SpiroPure Pro GLT

The SpiroPure Pro GLT comes with a conductivity controller, -probe and motorised 2 port valve for a more accurate measurement and control of the conductivity in the system water compared to the LED monitor.

Product name	Art. No.	Size of resin [l]	Max. filling capacity [l]	Max. op. pressure [bar]	Temp. max. [°C]	Max. flow rate [l/h]
SpiroPure Pro 9.5 GLT	G76.357	9.5	1350	8	40	600
SpiroPure Pro 23.0 GLT	G76.358	23	3420	8	40	1200

*Max. filling capacity at 420µS/cm - <100µS/cm

SpiroPure ProFill

The SpiroPure ProFill products are mobile filling units, which are not permanently fixed to the installation. They are only used to fill the system, and are removed after usage.

Product name	Art. No.	Size of resin [l]	Max. filling capacity [l]	Max. op. pressure [bar]	Temp. max. [°C]	Max. flow rate [l/h]
SpiroPure ProFill 9.5	G76.359	9.5	1350	8	40	600
SpiroPure ProFill 23.0	G76.360	23	3420	8	40	1200

*Max. filling capacity at 420µS/cm - <100µS/cm

SpiroPure ProClean

The SpiroPure ProClean products are mobile cleaning and conditioning units. They are temporarily installed in an existing heating or cooling system.

Product name	Art. No.	Size of resin [l]	Max. filling capacity [l]	Max. op. pressure [bar]	Temp. max. [°C]	Max. flow rate [l/h]
SpiroPure ProClean 9.5	G76.361	9.5	1350	8	80	600
SpiroPure ProClean 23.0	G76.362	23	3420	8	80	1200

*Max. filling capacity at 420µS/cm - <100µS/cm

ACCESSORIES

SpiroPure Refill cartridges and packs

Refill cartridges and packs for the SpiroPure range.

Product name	Art. No.	Size of resin [l]	Max. op. pressure [bar]	Temp. max. [°C]
SpiroPure Refill Cartridge Basic 0.75L	G76.391	0.75	8	40
SpiroPure Refill Cartridge XL and Duplex 1.7L	G76.392	1.7	8	40
SpiroPure Refill Pack 9.5L pH Control	G76.397	9.5	8	40
SpiroPure Refill Pack 23L pH Control	G76.398	23	8	40

SpiroPure Accessories

Product name	Art. No.
SpiroPure Head 3/4” Resin out	G76.422
SpiroPure Barrel 60 liter	G76.423
SpiroPure Textil Bag 60 l. (10 pcs.)	G76.424
SpiroPure Funnel 2.5	G76.425
SpiroPure stainless steel bracket easy open tank	G76.427
SpiroPure pressure reducer	G76.508

FLUSHING AGENTS AND WATER ADDITIVES

PRODUCT RANGE

SPIROPLUS®

SpiroPlus flushing agents and water additives are designed to bring and keep system fluid and the water system itself in top condition.

SPIROPLUS®

SPIROPLUS – PROTECTION FROM THE INSIDE
SpiroPlus products are developed specifically for use in heating, cooling and process installations. Combined with our first class hardware, SpiroPlus products improve and maintain the quality of the installation fluid and the efficiency of the entire installation or process.

SPIROPLUS FLUSHING AGENTS AND ADDITIVES

Today's equipment is more sensitive to the make-up and quality of system water. Many manufacturers are even specifying water quality requirements as a precondition for their guarantees.

SpiroPlus flushing agents and additives are designed to bring and keep system fluid and the system itself in top condition. Rules, regulations and preferences concerning additives for installation fluids are changing. An important goal is to improve the total system efficiency and by doing that, to reduce energy consumption. Another reason is that modern equipment is much more sensitive to the composition and the quality of the system fluid and the effects of it. A number of boiler manufacturers even set requirements regarding the fluid quality connected to their guarantee conditions.

GUARANTEED SYSTEM FLUID QUALITY

The SpiroPlus range offers flushing agents for specific actions as well as additives that remain active inside an installation. All these product facilitate quality improvement and preservation of fluid quality. SpiroPlus Protector even exceeds the EU REACH requirements which have been adopted to protect human health and the environment.

We also develop custom additives and fluids, depending on the requirements for a specific system or process. Experts working at our specialised lab can offer you the best possible advice in every situation. Spirotech offers an extensive range of solutions for system fluid analysis and conditioning in HVAC and process systems. This includes accessories, additives and advice targeted at reducing faults, wear and maintenance as well as maximising system performance and lower energy consumption.

SPIROPLUS®

SpiroPlus Protector

Protector - Corrosion Protector

Product name	Art. No.
SpiroPlus Protector 1L	CH001
SpiroPlus Protector 10L	CH010
SpiroPlus Protector 20L	CH020

SpiroPlus Mild Cleaner

Mild Cleaner - Dirt Dissolver

Product name	Art. No.
SpiroPlus Mild Cleaner 1L	CD001
SpiroPlus Mild Cleaner 10L	CD010
SpiroPlus Mild Cleaner 20L	CD020

SpiroPlus Sealer

Sealer - Leak Sealer

Product name	Art. No.
SpiroPlus Sealer 1L	CS001

SpiroPlus Power Cleaner

Power Cleaner - Strong Dirt Dissolver

Product name	Art. No.
SpiroPlus Power Cleaner 1L	CC001
SpiroPlus Power Cleaner 10L	CC010

Flush connector

Flush connector to be used in combination with universal air and dirt separators with a 22mm or 28mm connection.

Product name	Art. No.
Flush connector	CTF075

SpiroCare Analysis

System water analysis for domestic and commercial installations.

Product name	Art. No.
UK ProLab analysis 2x100ml	CTA0101
System analysis 2x250ml	CTA1111

SpiroPlus test strips

SpiroPlus test strips used to test certain values of system water

Product name	Art. No.
SpiroPlus Protector test strips	G19.262
Water hardness test strips	G18.678
Cleaner EDTA test strips	G18.660
pH indication strip	G14.452

NOTES

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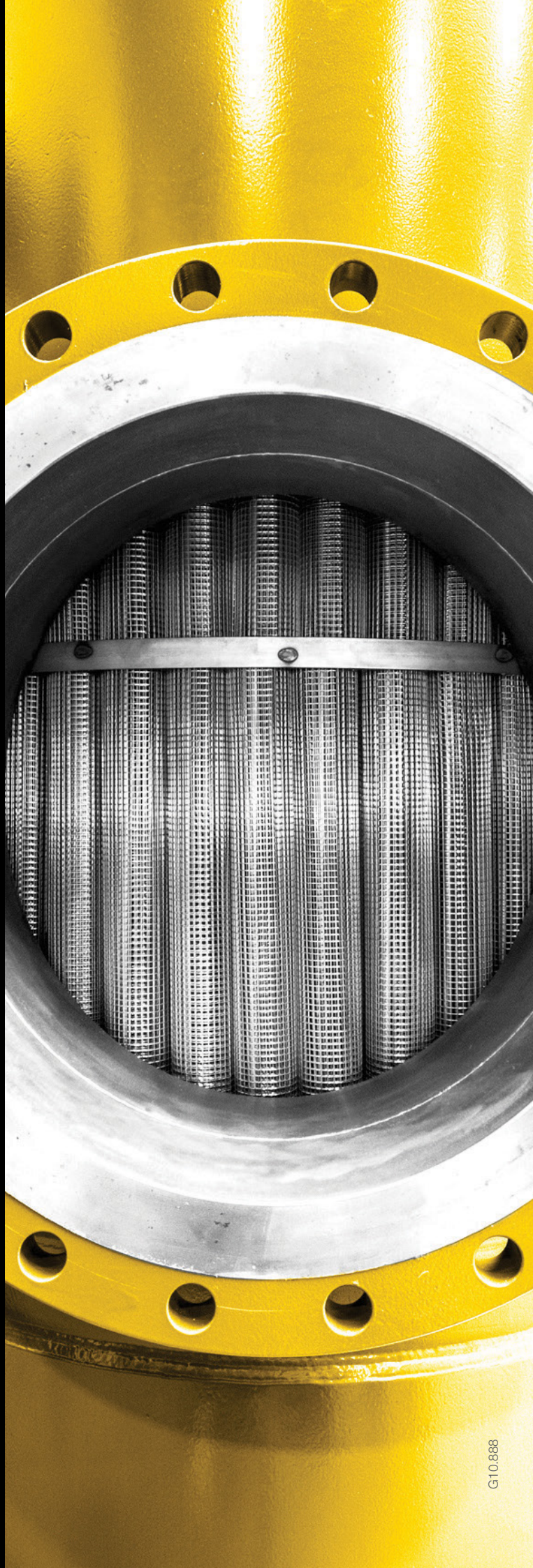
MAXIMISING PERFORMANCE FOR YOU

Spirotech is a leading expert in improving the efficiency of heating and cooling systems. Our family business has over 60 years of experience in developing solutions for removing and preventing the accumulation of air and sludge deposits in energy systems. Our products save energy, increase comfort, avoid wear and tear and maximise operating periods. Reliable and customer-oriented products that help you get top performance and protect investment in capital assets. We develop high-value solutions with our partners and suppliers that improve the operation of residential and commercial properties. Our comprehensive network of selected importers in over 70 countries means there is always a Spirotech expert near to you.

Heating and cooling systems are highly complex, particularly when they are run in conjunction with other systems and installations. So locating and analysing faults when they occur is never easy, especially with the clock ticking in the event of a system failure. Spirotech is here to support you with practical advice and solutions, helping you to pinpoint causes and rectify them. Please feel free to contact us.

IF YOU WOULD LIKE TO KNOW MORE ABOUT OUR SOLUTIONS, PLEASE VISIT OUR WEBSITE WWW.SPIROTECH.CO.UK



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