

# **THE NEW** **SPIROVENT SUPERIOR S250**

**THE SOLUTION THAT EVEN SOUNDS PERFECT**



**MEET OUR UNIQUE,  
SMOOTH AND  
POWERFUL  
NEW ADDITION**



**THE SOLUTION THAT EVEN SOUNDS PERFECT**

# LOW NOISE.. AS QUIET AS A WHISPER.. AT ONLY 41dB

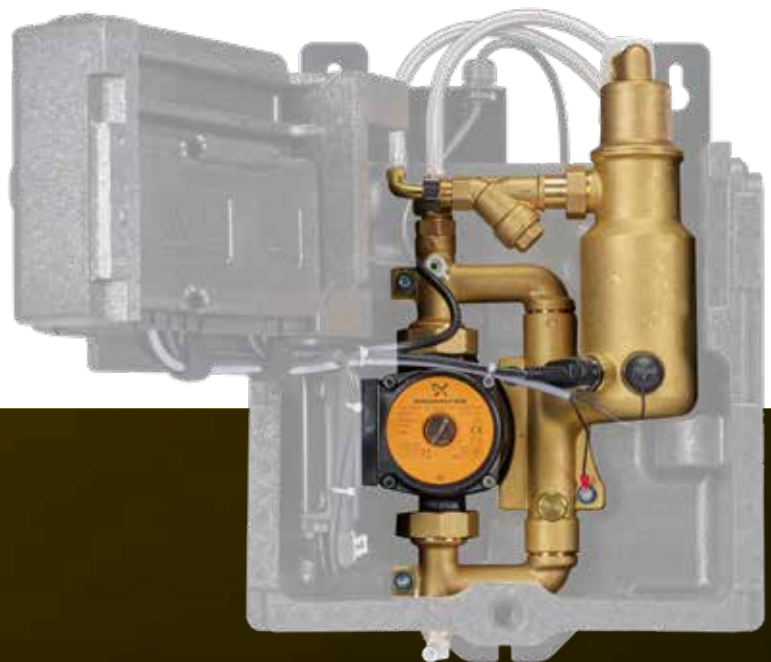


The word is out about our degassing technology being quieter than ever. The almost silent secret is kept by our **Patented Venturi Loop**, a speed-controlled centrifugal pump combined with a Venturi.

A sensor continuously monitors the vessel pressure as degassing takes place, and the pump is adjusted accordingly. This ensures smooth pressure steps and accurate vessel pressure control.

In real terms, this means very low resonance and barely discernible system noise. Just imagine a sound level of only 41dB(A)!

Let's not forget that expelling all the air from a system means there will be no air left to cause noise there either.



# WHAT IS VACUUM DEGASSING?

A vacuum degasser subjects system water to very low pressure, far below atmospheric pressure, and this releases the dissolved gasses.

Water, by its very nature, absorbs gases easily until saturated. The level of saturation depends on the pressure and temperature. At low pressures, less gas can be absorbed. Vacuum degassing treats water from the system in small set volumes. The water is subjected to vacuum pressure, releasing all the dissolved gases. It is a bit like opening a fizzy drinks bottle. As soon as you start to unscrew the cap, you hear and see the gas appear.

The small volumes of degassed water are returned to the system. The system water is now “hungry” for gas and quickly dissolves any gas pockets it encounters in the system. The saturated water is fed back to the degasser and once again subjected to a vacuum to remove the dissolved gases. This is how the entire system can be kept free of air/gas.

## IT MAKES PERFECT SENSE... COVERING EVERY EVENTUALITY

If it is impossible to predict where air will be released in a system, how can you know where to install a deaerator? This is the most important reason for choosing a vacuum degasser over a microbubble deaerator. Using a deaerator in the above situation is very likely to cause air problems further down the road.

Situations where it is impossible to predict gas accumulation can include

- Large static heights above the hottest point in the system
- Underfloor heating with hoses that do not run completely horizontally
- Low temperature heating with a low flow temperature
- Heat pumps with a low heat transfer temperature in the heat exchanger

Why you need to expel air from your system.  
Get the lowdown on this here

[spirotech.co.uk/air](https://www.spirotech.co.uk/air)

# GETTING THE RIGHT PRODUCT **FIRST TIME RIGHT**

## **FAMILY SOLUTIONS**

The SpiroVent Superior S250 has been designed for light commercial applications, in other words, for smaller volume systems. Adding this product expands the degassing family, so that we can accommodate the growing demand from new systems which operate at lower temperatures. As the SpiroVent Superior family becomes increasingly comprehensive, our customers do not need to compromise

in selecting the perfect solution for the systems they encounter.

**We created the following chart to help speed up the selection of the right product. With a visualization of the differences between the various products in the Superior range.**





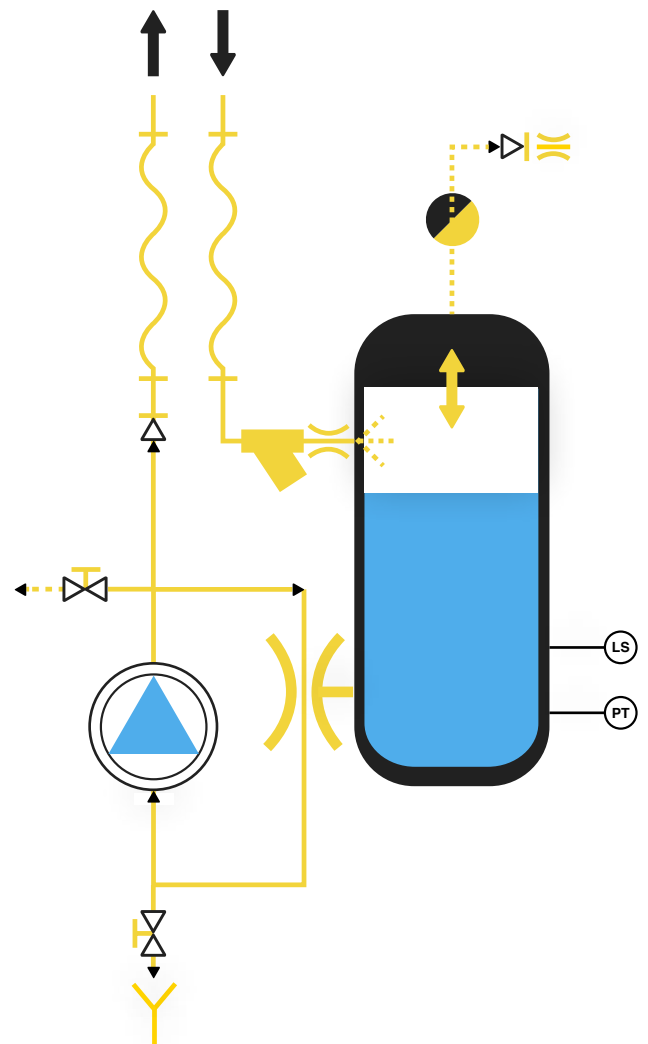
# IT EVEN SOUNDS PERFECT.. AND THAT'S JUST FOR STARTERS

## IN ADDITION TO BEING WHISPER-QUIET

- 1 SMOOTH DEGASSING OPERATION
- 2 LOW DEFECT RATE & REPLACEMENT COSTS
- 3 LOW SERVICE & MAINTENANCE
- 4 HIGH DEGASSING PERFORMANCE

The SpiroVent Superior S250 is an automatic vacuum degasser. It removes dissolved and free gases from the system water in closed heating and cooling systems. The great advantage of the SpiroVent Superior S250 is that no matter where it is installed it will remove air.

The only condition for the location of the S250 next to pressure is its working temperature range of 15-70°C. As a rule of thumb, the system return normally is a good point to install the SpiroVent Superior S250.



## LOW DEFECT RATE & REPLACEMENT COSTS

As well as providing flawless and silent degassing, the Venturi Loop has another inherent advantage. The loop between the pump and the Venturi protects the pump and this seriously extends the product life span. In operation, it is the Venturi that creates the vacuum and not the pump. So the pump NPSH\* is kept close to the system pressure. This helps in preventing cavitation in the pump.

## LOW SERVICE & MAINTENANCE

The hydraulic components are extremely robust. These unique components are few in number to minimize the risk of damage or failure. Valves are unnecessary and the single moving part in the unit is the centrifugal pump. As explained before, the pump is protected by the Venturi Loop. With as little effort as cleaning the filter every 12 months and replacing the air vent every 24 months, you can ensure years of smooth service.

*\*NPSH (Net Positive Suction Head)*

*Cavitation occurs when the liquid in the pump becomes a vapour due to pressure imbalances. The lower the pressure on the suction side of the pump, the higher the risk of cavitation. Cavitation can lead to damage to the impeller, bearings and pump housing. This will adversely affect the life span of the pump. It is advisable to avoid or resolve cavitation issues quickly to avert escalating maintenance and replacement costs.*

## HIGH DEGASSING PERFORMANCE

We could go on and on about our degassing technology with its patented Venturi Loop right down to the very last detail. However, that is not everyone's cup of tea, in the end it is all about the performance of this degassing technology you are interested in. While the SpiroVent Superior S250 was in development, we road-tested its degassing performance with a number of customers. And this is what they had to say:



*"Our radiators normally have a lot of air in them by the autumn. With the SpiroVent Superior S250 running for 3 weeks I only de-aerated them for the first time this season today. No air! Perfect!"*



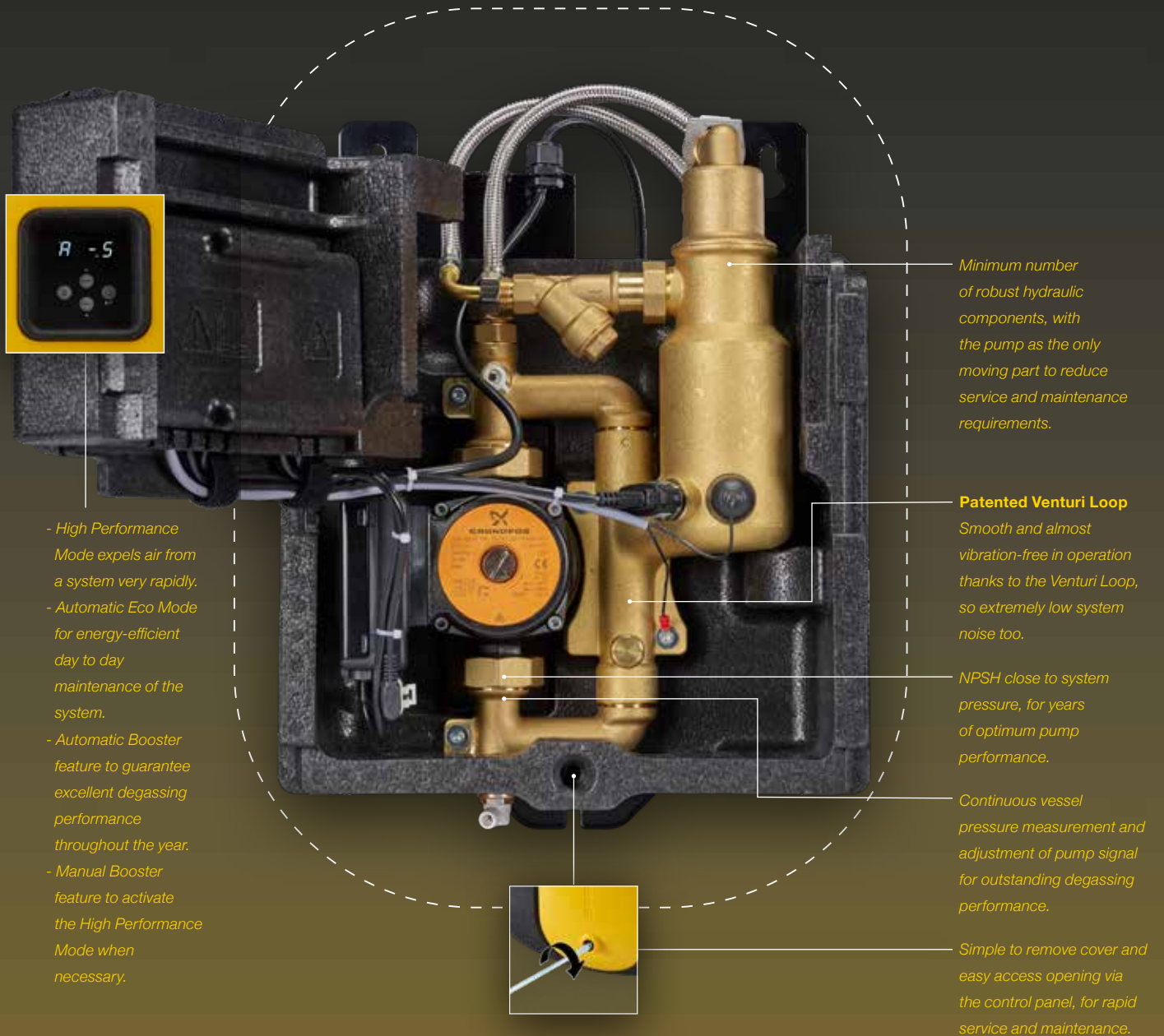
*"We have many years of experience with degassing, the performance of the SpiroVent Superior S250 is as solid as all other Superiors from Spirotech."*



*"After three weeks we noticed the system was free of air, magnificent."*

If you are curious about the test results from the real-life conditions, please visit our website [spirotech.co.uk](http://spirotech.co.uk).

# FEATURES



- High Performance Mode expels air from a system very rapidly.
- Automatic Eco Mode for energy-efficient day to day maintenance of the system.
- Automatic Booster feature to guarantee excellent degassing performance throughout the year.
- Manual Booster feature to activate the High Performance Mode when necessary.

Minimum number of robust hydraulic components, with the pump as the only moving part to reduce service and maintenance requirements.

**Patented Venturi Loop**  
Smooth and almost vibration-free in operation thanks to the Venturi Loop, so extremely low system noise too.

NPSH close to system pressure, for years of optimum pump performance.

Continuous vessel pressure measurement and adjustment of pump signal for outstanding degassing performance.

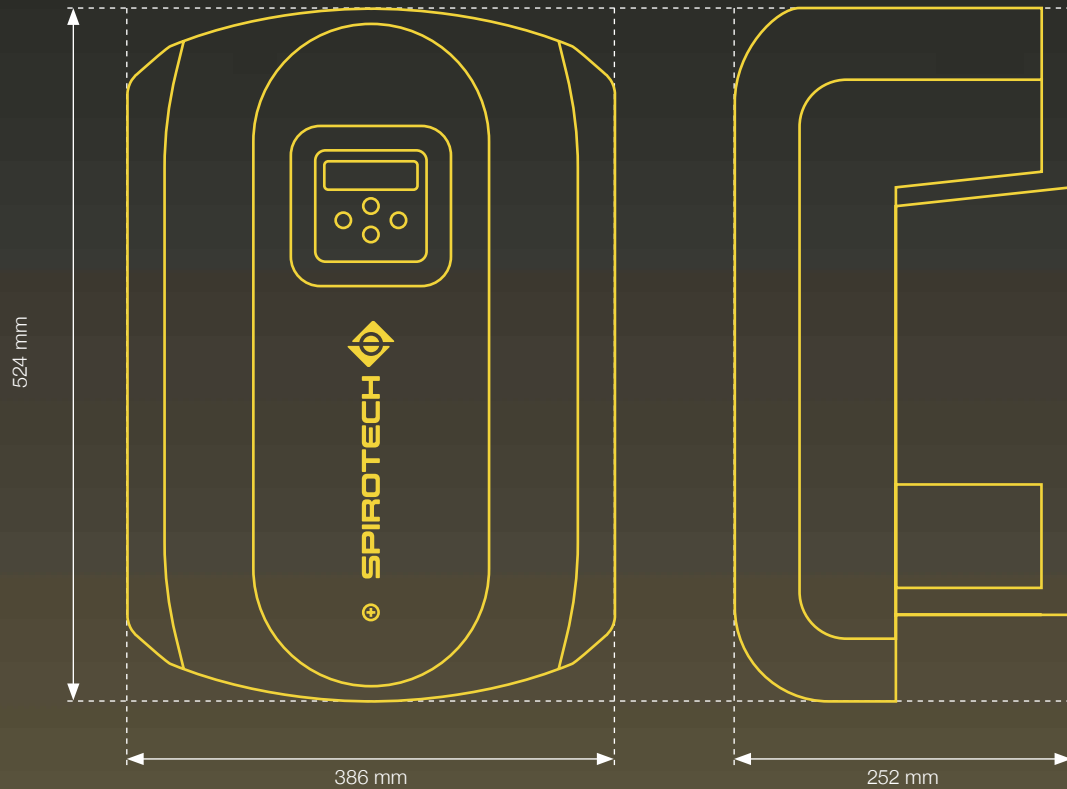
Simple to remove cover and easy access opening via the control panel, for rapid service and maintenance.

Low carbon footprint, thanks to the technology itself, the recyclable nature of the materials (brass, EPP etc.) and the high efficiency pump.

TO LEARN MORE, GO TO [SPIROTECH.CO.UK/S250](https://www.spirotech.co.uk/S250)



# SPECIFICATIONS



## GENERAL SPECIFICATIONS

Empty weight	11 kg
Noise level	41 dB[A]
Fluid connections	Swivel G1/2"

## OPERATING CHARACTERISTICS

System pressure	0.5 - 2.5 bar-g
Working temperature	15 - 70 °C non-condensing
Expansion volume	Ve + 0,5 l
Ambient temperature	0 - 40 °C
Maximum system volume	~5 m3
Minimum conductivity	50 µS/cm

## ELECTRICAL SPECIFICATIONS

Supply voltage	230 V +/- 10%
Frequency	50
Protection class	IP 44
Common fault	Max 24V 1A
Fuse	4 A (T)
Connection	Plug F type
Power consumption	Max 145 Watt

## PERFORMANCE SPECIFICATIONS

Degassing condition	-0.5 bar-g
Processing capacity	Max 74 l/h

Note: Spirotech advises to follow the VDI2035 guidelines regarding system water quality.

# 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, suppliers and investors that improve the operation of residential and commercial properties, as well as industrial processes. Our comprehensive network of selected importers in over 70 countries means there is always a Spirotech expert near to you.

If like us, you believe silence is golden, and you would like to know more about our SpiroVent Superior products, please visit our website [spirotech.co.uk](http://spirotech.co.uk). 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.

**SO IF WE HAVE CAUGHT YOUR INTEREST AND YOU WOULD LIKE TO KNOW MORE ABOUT OUR SPIROVENT SUPERIOR PRODUCTS, PLEASE VISIT OUR WEBSITE [SPIROTECH.CO.UK](http://SPIROTECH.CO.UK).**

