

heat transfer  
solutions

# Spirax EasiHeat™ DHW

incorporating **SIMS**  
TECHNOLOGY



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# Spirax EasiHeat™ DHW

## Incorporating SIMS technology

Meet the challenge of managing your energy costs by improving the energy performance of your domestic and process hot water applications.

The Spirax EasiHeat™ DHW incorporating SIMS technology (see page 9) is a complete, compact and energy efficient heat transfer solution, that will deliver a constant supply of instantaneous hot water at a stable temperature on demand (even with sudden and wide load changes) for a full range of domestic and process hot water applications up to 1100 kW.

Of all the costs your organisation is able to control, your energy bill is probably amongst the most significant. Which is why, with fuel prices on the rise, it is more important than ever to improve the energy performance of your plant. The Spirax EasiHeat™ DHW incorporating SIMS technology is a compact, instantaneous heat transfer package with a series of optional modules that can not only help you make valuable savings, but can also tackle waste, mitigate your environmental impact and make a positive change towards a more sustainable future.



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Key features		Key benefits
	<b>No waste design</b>	Optimised design for low energy consumption. Efficient use of steam.
	<b>Compact design</b>	Reduced radiated energy losses. Fits through standard doorway. Save floor space.
	<b>Touch screen control</b>	Ease of use. Clear visual access to all system parameters. Optional access to energy consumption data.
	<b>Unique Spirax Intelligent Control</b>	Intelligent control, increasing energy efficiency. Low cost of ownership.
	<b>Pre-assembled, tested unit</b>	High quality low maintenance components. Minimal installation time. Trouble free commissioning. Single source of supply.
	<b>Precisely matched controls</b>	Safe, performance and guaranteed operation. Accurate control and responsiveness under all load conditions. No need for storage or buffer tank required, reducing risk of Legionella.
	<b>Communications</b>	Easy integration with on-site building management systems. E-mail and SMS messaging of system performance and alarms reducing maintenance. Remote access to control unit by the internet.



## The more energy efficient alternative

- As the world's leading authority on steam system engineering, we precisely size all of the unit's components to ensure accurate control and responsiveness under all load conditions. This helps to drive optimum performance, so you can heat the same amount of water for less cost by ensuring none of the energy available in the steam goes to waste.
- Providing hot water on demand eliminates the need for storage, removing a possible breeding ground for Legionella bacteria, whilst also reducing radiated energy losses, lowering your total life cycle cost.
- Accurate and reliable monitoring and measuring of your hot water systems, is provided by our new innovative control system incorporating SIMS technology (Spirax Intelligent Monitoring System). With its 7" colour touch screen you have complete and easy access to the data required to understand how and where you use your energy, so you can make more informed energy management decisions and increase efficiency quickly.

### Benefits:

- Energy efficient – helps reduce costs and reduces CO<sub>2</sub> emissions.
- Instantaneous hot water without storage - reducing energy losses, reducing risk of Legionella growth.
- SIMS technology - intelligent control logic and monitoring to help you improve efficiency.
- Compact – core unit occupies only 2 m<sup>3</sup>, up to 3.8 m<sup>3</sup> for the largest output unit.

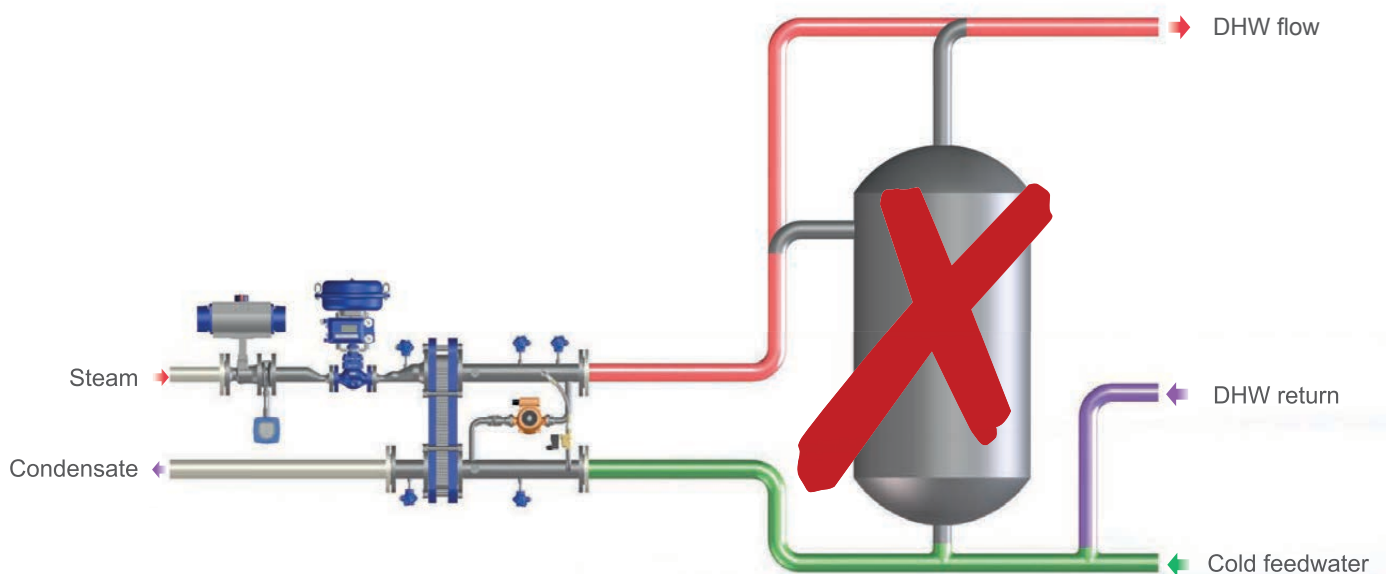


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## Potable and open water circuits

The Spirax EasiHeat™ DHW offers you an extremely compact heat transfer solution with superior energy efficiency to help reduce fuel bills and reduce CO<sub>2</sub> emissions compared to other steam-to-water heat transfer options.

- Maximum output for minimum footprint. The core unit only occupies 2 m<sup>3</sup> with even the largest output unit, fitted with all available options, only taking up 3.8 m<sup>3</sup> to save floor space in the plant room.
- All of the useful energy in the steam is used in the Spirax EasiHeat™ DHW unit, eliminating the waste that occurs in more traditional systems. This reduces the amount of steam required, which in turn reduces fuel demand and the associated CO<sub>2</sub> emissions.
- High quality, low maintenance components reduce maintenance costs. The Spirax EasiHeat™ DHW seldom requires an insurance inspection due to the very low volume of the heat exchanger. Having no storage or buffer tanks also eradicates a potential breeding place for Legionella or other bacteria and dispenses with the need for regular inspections.
- Quicker, easier installation. The Spirax EasiHeat™ DHW is supplied as a preconfigured, tested, pre-assembled, skid mounted unit. Offsite fabrication reduces installation time and helps with speedy, trouble-free commissioning.
- Due to its precisely matched and unique Spirax Sarco intelligent control, you can trust the Spirax EasiHeat™ DHW to deliver safe, accurate hot water at the point of use.
- The Spirax EasiHeat™ DHW can operate at low and even sub-atmospheric conditions to minimise the risk of scaling in areas where it is prevalent.



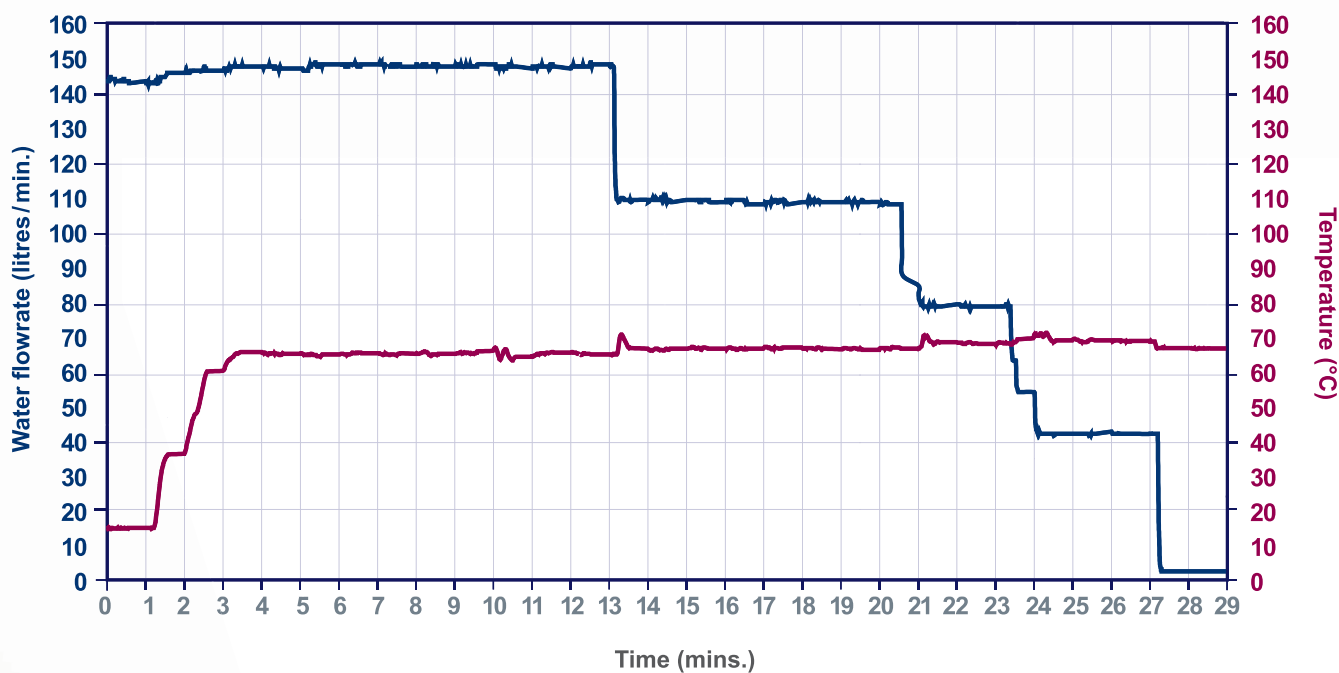
## Process heating

The Spirax EasiHeat™ DHW design is also suitable for process applications where precise control of water temperature is required. The Spirax EasiHeat™ DHW will deliver accurate hot water to the process, increasing production output and efficiencies.

The Spirax EasiHeat™ DHW can satisfy a wide range of duties and can operate with low temperature heating mediums for sensitive fluids where necessary and it delivers accurate stable secondary temperature even with sudden and wide load changes, without the need for a secondary circuit buffer tank. The Spirax EasiHeat™ DHW will control at  $\pm 1^\circ\text{C}$ . Even where there are large and sudden secondary load changes, the Spirax EasiHeat™ DHW is guaranteed to control at  $\pm 5^\circ\text{C}$ .

## The Spirax EasiHeat™ DHW performance (with no buffer tank or storage vessel)

The graph below shows the performance of the Spirax EasiHeat™ DHW on instantaneous duty. The application is water heating, with a high secondary temperature rise and large sudden load changes; a duty typical of process hot water. The graph shows that even with the large sudden load changes, a safe, constant hot water temperature is maintained.



### Water flowrate

This is the flowrate of cold water being delivered to the Spirax EasiHeat™ DHW.



### Water temperature

This is the temperature of hot water being delivered by the Spirax EasiHeat™ DHW.

SAN ANTONIO, TEXAS



## case study

### Spirax EasiHeat™ achieves five-figure annual savings for hospital

A Hospital in San Antonio, Texas, originally had hot water delivered by four storage-tank hot water generators which had been in service for a long time, had become inefficient, and needed upgrading.

A consulting engineer's solution was to install four new hot water storage tanks, with four instantaneous hot water heaters. However, Spirax Sarco used their expertise and advised the hospital's project engineer that the heat exchangers were oversized and that the storage tanks were unnecessary. Even when insulated, the large hot water tanks would act as huge radiators, emitting heat constantly and wasting boiler fuel.

The solution proposed by Spirax Sarco was for Spirax EasiHeat™ instantaneous hot water packages, as when selected and installed, these proved to be more energy efficient and compact whilst meeting the hospital's demand for domestic hot water under all load conditions. The installation was able to save the customer an estimated \$11,000/year in reduced maintenance and energy costs.







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## Introducing SIMS technology - the innovative new Spirax Intelligent Monitoring System

The Spirax EasiHeat™ DHW now comes complete with a new innovative control system incorporating SIMS technology.

This new Spirax Sarco technology enables monitoring, diagnostics and communications across steam plant and packaged systems. The technology delivers meaningful energy management and system performance data to the user allowing the optimisation of the steam system and subsequent efficiency improvements. The information can be accessed a number of ways; remotely over the internet, through improved compatibility with existing onsite communication systems, or via mobile devices through SMS text messaging, e-mail and smart phone applications.

- 7" colour, intuitive touch screen control with advanced graphics as standard.
- Complete visual access to all key parameters. Easy to interrogate and obtain the required data, such as energy consumption and CO<sub>2</sub> emissions.
- No complex controls, with SIMS technology a package can be operated with limited previous controls and instrumentation experience.
- Advanced communications to help you access and control the overall efficiency of your Spirax EasiHeat™ DHW from any location. SIMS technology is compatible for connection to existing proprietary networks and can interact with systems including Ethernet, Modbus, Profibus, CANopen, EtherCAT and DeviceNet, and many more. To meet the growing demand for increased connectivity within building and energy management systems, it has also been developed with BACnet capability.
- Optional web server allows secure remote access to monitor and control the unit through a standard web browser. It provides access 24 hours a day, 7 days a week, globally, via the internet. You can even interrogate historical trends or diagnose faults without stepping into the plant room.
- SIMS technology automatically generates text or e-mail alerts if an event occurs, allowing you to manage alarm notifications and will alert you when a routine service is due, speeding up service and repairs.

Data at a glance -  
control at your  
fingertips.



## A complete Spirax EasiHeat™ DHW system

### The standard unit

The standard unit contains all the key components that contribute to the unmatched performance of the Spirax EasiHeat™ DHW.

### Fail-safe high limit option

High limit temperature control should always be specified to ensure the heater will automatically and safely shut down should a problem occur. The Spirax EasiHeat™ DHW can be specified with an independent, fail-safe high limit.

### Pipeline ancillaries option

The Spirax EasiHeat™ DHW can be provided with a range of optional pipeline ancillary equipment to suit.

### SIMS technology options

The energy monitoring option allows interrogation of energy, CO<sub>2</sub> and carbon data. There are a number of remote access options including text message and e-mail of system alarms and full remote access via the internet. A wide number of communication protocol options provides the Spirax EasiHeat™ DHW with the flexibility to integrate with many existing communication and building management systems.

“ We wanted to make energy, CO<sub>2</sub> and carbon information **readily available** to the customer. With SIMS technology, Energy Managers have access to key information to produce their reports **simply and quickly.** ”

Chris Rowlands,  
Group Product Manager for Heat Transfer Solutions



## Contact Spirax Sarco today...

for more details on how our Spirax EasiHeat™ DHW incorporating SIMS technology can help you reduce the costs of your domestic or process hot water applications.

For more information, please visit [www.spiraxsarco.com/easiheat](http://www.spiraxsarco.com/easiheat)





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