Spirax Sarco offers a complete range of steam to water heat transfer solutions for domestic (potable) hot water applications.

These skid mounted packaged systems utilize feed-forward or feed-back steam control, and where appropriate closed-loop condensate control for effective removal of condensate that prevents stall, improves thermal efficiency, reduces maintenance and prolongs life of the package and connecting system components. All Spirax Sarco Heat Transfer Packages, unless otherwise stated, are delivered as a fully assembled and tested (hydrostatic and dry function) skid mounted system ready for installation.
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 advised the hospital’s project engineer that the proposed heat exchangers were oversized and that the storage tanks were unnecessary and that even when insulated, the tanks would act as huge radiators, emitting heat constantly and wasting boiler fuel.

The solution proposed by Spirax was for Spirax EasiHeat™ domestic hot water packages. When selected and installed, these proved to be more energy efficient and compact while 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.
EasiHeat
A plate and frame heat exchange package utilizing feed-back steam control to provide instantaneous hot water for domestic and process applications up to 4 million BTU’s.

The EasiHeat offers an extremely compact heat transfer solution with superior energy efficiency that utilizes all of the useful energy in steam, reducing the amount of steam required which in turn reduces fuel demand and the associated CO2 emissions. The EasiHeat can operate at low and even sub-atmospheric conditions to minimize the risk of scaling. This complete system delivers a constant stable temperature within +/-3°F under stable load conditions for instantaneous duty without the need for a storage tank or buffer vessel in the secondary circuit.

The onboard PLC, accessed via a full color touch screen, offers a wealth of capabilities including PID control, data logging, self-diagnostics, energy consumption, cost and omissions calculations, optional web server, remote alarms via SMS text and email, and communication protocols including Ethernet, Modbus, BACnet, DeviceNet, CANopen, Profibus, Profinet & LonTalk (LonWorks)

The plate and frame heat exchange package is also available as the LegionHeat, a steam to hot water generator designed specifically to conform to all the requirements of ASHRAE 188P in the mitigation of Legionellosis within the domestic hot water system. Additional features of the LegionHeat include the measurement, real time monitoring and data-logging of all critical temperatures and other engineering data, and a manually initiated “Superheat and Flush” disinfection process activated when deemed necessary by the end user for thermal eradication of Legionella Pneumophila CFU.
Base Model Specification

- **Duty:** Domestic Hot Water
- **Steam Supply Pressure:** 30 psig
- **Temperature Differential:** 100°F (40 - 140°F)
- **Heat Exchanger:** Plate & Frame, Single Wall
- **Control:** Steam (Feed-back)
- **Valve Actuation:** Electric
- **Condensate Removal:** Closed Loop Pump Trap
- **High Limit Alarm:** Integral
- **Steam Isolation:** Ball Valve
- **Gasket Material:** EPDM

Options

- Double wall
- Pneumatic Actuation
- Steam trap for condensate removal
- Steam pressures up to 300 psig
- Larger capacities (GPM)
- LegionHeat – Legionella Mitigation
- Building Heat/Hydronic configuration utilizing condensate control

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RediHeat
The Spirax Sarco RediHeat is a steam to water heater that incorporates a unique feed-forward temperature control system to instantly produce hot water within +/-4°F of the set temperature under widely varying demands.

Water temperature is controlled by a mechanical blending valve that operates based on demand. A manual adjustment compensates for seasonal changes in cold water supply temperature. The unit requires no external power sources, controls or temperature sensors making installation simple. The RediHeat only consumes energy when responding to demand. This mode of operation can save as much as 40% in energy costs when compared to a hot water tank system. The blending valve has a fail-safe design meaning that if any potential failure or damage occurs, the unit can produce only cold water.

The RediHeat features a spiral tubed helical heat exchanger for efficient heat transfer in a compact space. The rugged casing and bourdon tube configuration allows the entire assembly to expand and contract without localized stressing, ideal for intermittent cycling common with domestic hot water applications. When the coil expands with changing temperature, any scale that has hardened on the inside of the tubes is broken up by the changing shape of the coil. With a footprint of only 6.5 square feet and a height of 33.5” for the largest unit, the RediHeat is the most compact instantaneous water heater available – important when space is at a premium. When maintenance on the helical heat exchanger is required, the coiled tube bundle can be either cleaned in place or removed for cleaning. Due to the helical design removal is easy and does not require the withdraw space typical with other shell and tube designs.

*Note: Maximum allowable steam pressure to the RediHeat is 15 psig. "H" pressure reduction packages are available for higher steam pressures. Steam traps, strainers, pressure and temperature gauges are supplied loose as standard.
Base Model Specification

- **Duty:** Domestic Hot Water
- **Steam Supply Pressure:** 15 psig
- **Temperature Differential:** 100°F (40 - 140°F)
- **Heat Exchanger:** Shell & Helical Coil
- **Shell:** Cast Iron
- **Coil:** Copper, single wall
- **Control:** Steam (Feed-forward)
- **Valve Actuation:** Self-acting (Differential Pressure)
- **Condensate Removal:** Steam Trap

Options

- **Shell:** Cast Steel
- **Coil:** Admiralty Brass, 70/30 Cupro Nickel, & 316SS
- Double wall (copper only) in RH-30 & RH-60 sizes
- “H” Pressure reduction package for pressures above 15 psig
- Floor mounting stand
- Thermal diverting recirculation valve
- Solenoid shut-off system
- Thermal insulation blanket
- OSHA hard cover

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The Spirax Sarco SVH-125 steam fired, vertical hot water heater is a complete factory packaged system that offers safe, economic, tight temperature control response to changing hot water demand.

The vertical design, which can pass through a standard 36" doorway, occupies a compact footprint of less than 4 sq. ft. saving valuable floor space. As with all Spirax Sarco products, the SVH-125 has been carefully designed and engineered with the benefit of field experience allowing easy removal of the tube bundle with minimal pipe work and downtime for easy and cost effective maintenance.

The Spirax Sarco SVH-125 is a vertical shell and tube, steam to water heat transfer package for domestic hot water applications. Standard features include ASME coded stainless steel shell with ASME code stamped temperature pressure combination relief valve, 20 gauge copper seamless tubes in a cross flow design U-tube bundle, double safety high limit shutdown system that opens shell drain valve and closes steam inlet control valve simultaneously on predetermined high limit set point. A NEMA 4 UL temperature and pressure instrument panel provides full PID control with auto-tune, integrated high limit alarm, remote set point and Modbus EIA 485 communications.
Base Model Specification

- **Duty**: Domestic Hot Water
- **Steam Supply Pressure**: 30 psig
- **Temperature Differential**: 100°F (40 - 140°F)
- **Heat Exchanger**: Vertical Shell & Tube, Single Wall
- **Shell**: Stainless Steel
- **Tube**: Seamless Copper
- **Control**: Steam (Feed-back)
- **Valve Actuation**: Electric
- **Condensate Removal**: Closed Loop Pump Trap
- **High Limit Alarm**: Integral

Options

- **Tubes**: 90/10 Cupro Nickel, 304 & 316 Stainless Steel
- **Double wall** (copper only)
- **Pneumatic Actuation**
- **Steam trap for condensate removal**
- **Steam pressures up to 125 psig**
- **Larger capacities**
- **Condensate sub cooler**
- **Feed forward demand anticipator**
- **Pressure gradient shutdown system**
- **BACnet communication protocol**

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SHH-125

The Spirax Sarco SHH-125 steam fired, horizontal hot water heater is a complete factory packaged system that offers safe, economic, tight temperature control response to changing hot water demand. As with all Spirax Sarco products, the SHH-125 has been carefully designed and engineered with the benefit of field experience allowing easy removal of the tube bundle with minimal pipe work and downtime for easy and cost effective maintenance. The features of the horizontal SHH-125 are similar to the vertical SVH-125 save for the vessel orientation and subsequent height and footprint.

The Spirax Sarco SHH-125 is a horizontal shell and tube, steam to water heat transfer package for domestic hot water applications. Standard features include ASME coded stainless steel shell with ASME code stamped temperature pressure combination relief valve, 20 gauge copper seamless tubes in a cross flow design U-tube bundle, double safety high limit shutdown system that opens shell drain valve and closes steam inlet control valve simultaneously on predetermined high limit set point. A NEMA 4 UL temperature and pressure instrument panel provides full PID control with auto-tune, integrated high limit alarm, remote set point and Modbus EIA 485 communications.

Base Model Specification

- **Duty**: Domestic Hot Water
- **Steam Supply Pressure**: 30 psig
- **Temperature Differential**: 100°F (40 - 140°F)
- **Heat Exchanger**: Horizontal Shell & Tube, Single Wall
- **Control**: Steam (Feed-back)
- **Valve Actuation**: Electric
- **Condensate Removal**: Closed Loop Pump Trap
- **High Limit Alarm**: Integral

Options

- Tubes: 90/10 Cupro Nickel, 304 & 316 Stainless Steel
- Double wall (copper only)
- Pneumatic Actuation
- Steam trap for condensate removal
- Steam pressures up to 125 psig
- Larger capacities
- Condensate sub cooler
- Feed forward demand anticipator
- Pressure gradient shutdown system
- BACnet communication protocol

![steam to water heat transfer](image)

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Contact Spirax Sarco today...

for more details on our Heat Transfer Package solutions. Contact your local Spirax Sarco representative at 1-800-883-4411 or visit us on the web at spiraxsarco.com/us.
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