EasiHeat
Compact heat exchange solution
EasiHeat

A complete, compact steam heat exchange solution for process and hot water heating requirements from the experts.

The core unit occupies a maximum of 1.2 m³ space. The EH-PT-DHW unit with all options, occupies a maximum of 4.6 m³ space.

The EasiHeat unit covers a wide range of domestic and process hot water duties from 110 kW to 1 800 kW.
### Key features

| Precisely matched control elements | EasiHeat’s control system consists of carefully matched Spirax Sarco equipment. It is designed to provide precise accurate control whatever the operating conditions. | Our pneumatically and electrically actuated control valves have characteristics specifically designed for use with steam, while our new generation electropneumatic positioner provides precise control of valve position. The positioner’s smart features reduce set up and commissioning time. |
| Unique Alfa Laval Steam Plate & Frame Heat Exchanger | The fully functioned P+I+D SX100e controller designed specifically for EasiHeat is easily set up and commissioned. | EasiHeat can be provided with a completely independent high limit valve and control system; to provide people and processes protection against high secondary water temperatures should there be a problem. |
| Choice of condensate drainage options | Our strategic partner, Alfa Laval, provides the unique TS6M steam plate & frame heat exchanger, designed specifically for steam use. This innovative design overcomes the problems found when standard plate and frame designs are used on steam applications, but retains all the advantages. | Our ground-breaking APT combined pump and steam trap as a condensate drainage option, we can ensure the EasiHeat operates effectively against high condensate backpressures, even under low load conditions. |
| Modular compact rugged construction | The TS6M requires minimal maintenance with a design and operation that discourages scaling, even in open systems. Plates can easily be added to, or removed from the TS6M to alter the capacity of an EasiHeat unit even after it has been installed. | If secondary scaling or product spoilage is a risk; use of the APT allows us to engineer EasiHeat to condense at a very low steam temperature, even against a high backpressure, to eliminate the risk. |
|  | Its stainless steel plates provide superior corrosion resistance and tolerance to the thermal fatigue that can damage traditional designs of heat exchanger when used on steam applications. | When an APT is not necessary, our float and thermostatic steam trap will ensure condensate is effectively drained away from the EasiHeat unit. |
|  | By using our ground-breaking APT combined pump and steam trap as a condensate drainage option, we can ensure the EasiHeat operates effectively against high condensate backpressures, even under low load conditions. | With its compact design and low weight, EasiHeat is easily installed, even in the tightest of spaces. As EasiHeat is a complete solution you simply choose the package that suits your hot water requirements, saving you significant pre-purchase costs. Or, why not just call us with your application needs and we will choose the correct unit for you. |

All units are supplied with certification, approvals and documentation to meet local statutory requirements.
Applications

EasiHeat is designed for applications where steam is the primary medium and water is the secondary medium. We can also provide complete solutions for other media combinations.

Applications include heating water for heating systems, process applications and potable water for domestic use. EasiHeat is designed as a true instantaneous heater, with tight temperature control at its outlet without the need for a storage or buffer tank, whatever the application.

We will guarantee this performance even under the most exacting of application requirements, such as domestic hot water production where a high differential temperature is coupled with a secondary load that changes very quickly.

Many years of steam engineering experience has taught us that a variety of needs and operating conditions are found in steam to water heating applications. Unless these are understood and addressed correctly, a safe, efficient, effective solution is rarely provided.

The performance graph opposite illustrates how a steady secondary temperature is maintained within ±5°C on an instantaneous duty, without a storage tank or buffer vessel in the secondary circuit. The application is water heating, with a high secondary temperature rise and large sudden load changes; a duty typical of domestic hot water service.

Installation

EasiHeat, with its full range of option packages, provides a complete solution to your steam to water heat exchange needs. The basic unit contains the matched key components that will effect the control of the system. If needed, various options can then be added to this basic design to provide extra safety features and steam quality improvements.

In most cases, because of the high maximum operating pressure and temperature limits of EasiHeat’s components, extra pressure reducing valve stations and safety valves are not required.

EasiHeat is a fully assembled, tested unit that is delivered to site ready to be connected to your utilities. The whole process of assessing your requirements, through to installation, start-up and commissioning can be completed by us in a very short time.
Performance

EasiHeat performance (with no buffer tank or storage vessel) on instantaneous duty

The application is water heating, with a high secondary temperature rise and large sudden load changes; a duty typical of domestic hot water service.

![Graph showing secondary water flowrate and temperature over time.]

- **Secondary flowrate**: This is the cold water being delivered to the EasiHeat unit.
- **Secondary temperature**: This is the flow of hot water at a constant temperature for the domestic hot water requirements.

Performance benefit

EasiHeat always provides a stable secondary temperature, therefore a secondary circuit buffer tank is not necessary to smooth out the large temperature swings that can occur with conventional heat exchange units, servicing instantaneous domestic hot water duties.

This provides savings in space, weight and eliminates the need to inspect for legionella in vessels which store potable water.
Range capabilities

The table below gives examples of the load capabilities of a single EasiHeat unit. Consult your local Spirax Sarco representative or engineer to determine your precise requirements.

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Range</th>
<th>Piping Configuration</th>
<th>Valve Actuation</th>
<th>Condensate Removal</th>
</tr>
</thead>
<tbody>
<tr>
<td>EH-1</td>
<td>100 kW to 360 kW</td>
<td>DHW or HTG</td>
<td>Electric or Pneumatic</td>
<td>Steam trap or Pump-trap</td>
</tr>
<tr>
<td>EH-2</td>
<td>360 kW to 600 kW</td>
<td>DHW or HTG</td>
<td>Electric or Pneumatic</td>
<td>Steam trap or Pump-trap</td>
</tr>
<tr>
<td>EH-3</td>
<td>600 kW to 900 kW</td>
<td>DHW or HTG</td>
<td>Electric or Pneumatic</td>
<td>Steam trap or Pump-trap</td>
</tr>
<tr>
<td>EH-4</td>
<td>900 kW to 1 100 kW</td>
<td>DHW or HTG</td>
<td>Electric or Pneumatic</td>
<td>Steam trap or Pump-trap</td>
</tr>
<tr>
<td>EH-5</td>
<td>1 100 kW to 1 300 kW</td>
<td>DHW or HTG</td>
<td>Electric or Pneumatic</td>
<td>Steam trap or Pump-trap</td>
</tr>
<tr>
<td>EH-6</td>
<td>1 300 kW to 1 500 kW</td>
<td>DHW or HTG</td>
<td>Electric or Pneumatic</td>
<td>Steam trap or Pump-trap</td>
</tr>
</tbody>
</table>

Steam pressure before the control valve is 9 bar g. Secondary temperature is 10°C up to 65°C.

Available options

- High limit package
- Stop valve package
- Stop valve + Separator package
- High limit + Stop valve package
Throughout its long history Spirax Sarco has helped its customers control the effective and efficient use of steam in their processes and utilities.

As a customer of Spirax Sarco you just have to tell us what you want to achieve and we will provide the system that meets your requirements.

We will make a technical assessment of the application, provide pre-engineering services, supply and advise on the installation of the package, and assist in start-up, and commissioning.

You will deal with one vendor throughout the whole process, who will take on the responsibility for everything, leaving you to do what you do best – running your business.

EasiHeat is a packaged solution to your heat exchange needs. Its compact, simple design provides accurate control with low ownership costs over a long life span.

Spirax Sarco - Your heat exchanger solution provider
Some of the products may not be available in certain markets
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