



Spirax EasiHeat™ DHW EN Potable and Process Water Heating System Compact Heat Transfer Solution

Potable and process water heating system

The Spirax EasiHeat™ DHW incorporating SIMS technology is a complete, compact system for accurate heating of potable hot water or hot water for process. These systems can be sized for any heating duty from 50 kW to approximately 1.1 MW and are supplied fully assembled and pressure tested ready for installation.

The standard Spirax EasiHeat™ system is expandable by the inclusion of additional items such as steam pressure reduction, safety valve and safety high limit shut-off should be selected separately.

Principal features and benefits:

- Energy monitoring, CO² emission, Communications, Remote monitoring and SMS or E-mail of system alarms.
- Designed with integral condensate sub-cooling for maximum efficiency and no flash steam loss.
- Precisely engineered system and matched components that provides accurate temperature control even with wide and sudden load changes.
- Guaranteed performance.
- Fully assembled and tested ready to install.
- Options to suit all applications.



Heat exchanger

One of the components that guarantees system performance is the heat exchanger, which is precisely engineered to match the specific duty requirements.

With a high efficiency and low volume to pressure ratio. The plate and frame heat exchanger ensures reduced inspection requirements whilst being fully maintainable and expandable.

Temperature control

The steam flowrate is modulated to exactly match the heat demand. The control valve is pneumatically or electrically actuated and the system uses a fast response Pt100 temperature sensor and PLC controller for precise control. The system can incorporate an energy monitoring system to measure energy usage.



Control panel

The Spirax EasiHeat™ DHW now features our new innovative control system incorporating SIMS technology, delivering increased monitoring and communications.

A colour touch screen provides ease of use and clear visual access to all system parameters and access to energy data.

Metering

A key component guaranteeing accurate measurement of energy usage, CO² emissions and cost control. The TVA flowmeter is specifically designed for large turndown on steam applications.

Condensate management

Spirax Sarco's range of combined mechanical fluid pump and steam trap units provide the total solution to all stall conditions, by removing condensate under all operating conditions.

Pipework

All pipework is correctly sized for the application and is fabricated using modern welding techniques, approved welders and weld procedures. Flanged products are used where possible for reliability and easy maintenance.

Materials

| | |
|--|-----------------|
| Steam and condensate pipework | Carbon steel |
| Steam control valve and condensate pump-trap | SG iron |
| Secondary pipework, circulation valve and pump | Stainless steel |

Pressure and temperature limits

| | |
|---|----------|
| Pipework design | PN16 |
| Maximum saturated steam supply pressure | 10 bar a |
| Maximum secondary pressure | 10 bar a |
| Maximum secondary temperature | 105 °C |
| Maximum gasket temperature | 180 °C |

Electrics and pneumatics

All control equipment is pre-wired and piped ready for connection to the air supply and power source.

| | | |
|--------------------------|--------------|----------------------|
| Electrical supply | Power supply | 110-240 Vac/50-60 Hz |
| | Supply fuse | 5A (T) |
| Actuators | Electric | 24 Vac/50-60 Hz |
| | Pneumatic | 4 to 6 bar g |

Support frame

The Spirax EasiHeat™ DHW system is delivered pre-assembled on a compact frame and baseplate ready to move with a fork lift truck to the position of installation. Optionally, the unit can be fitted with wheels for ease of moving when supplied.

Potable and process water

The fast (instantaneous) response and accuracy of control of the DHW system ensures no additional storage vessels are required.

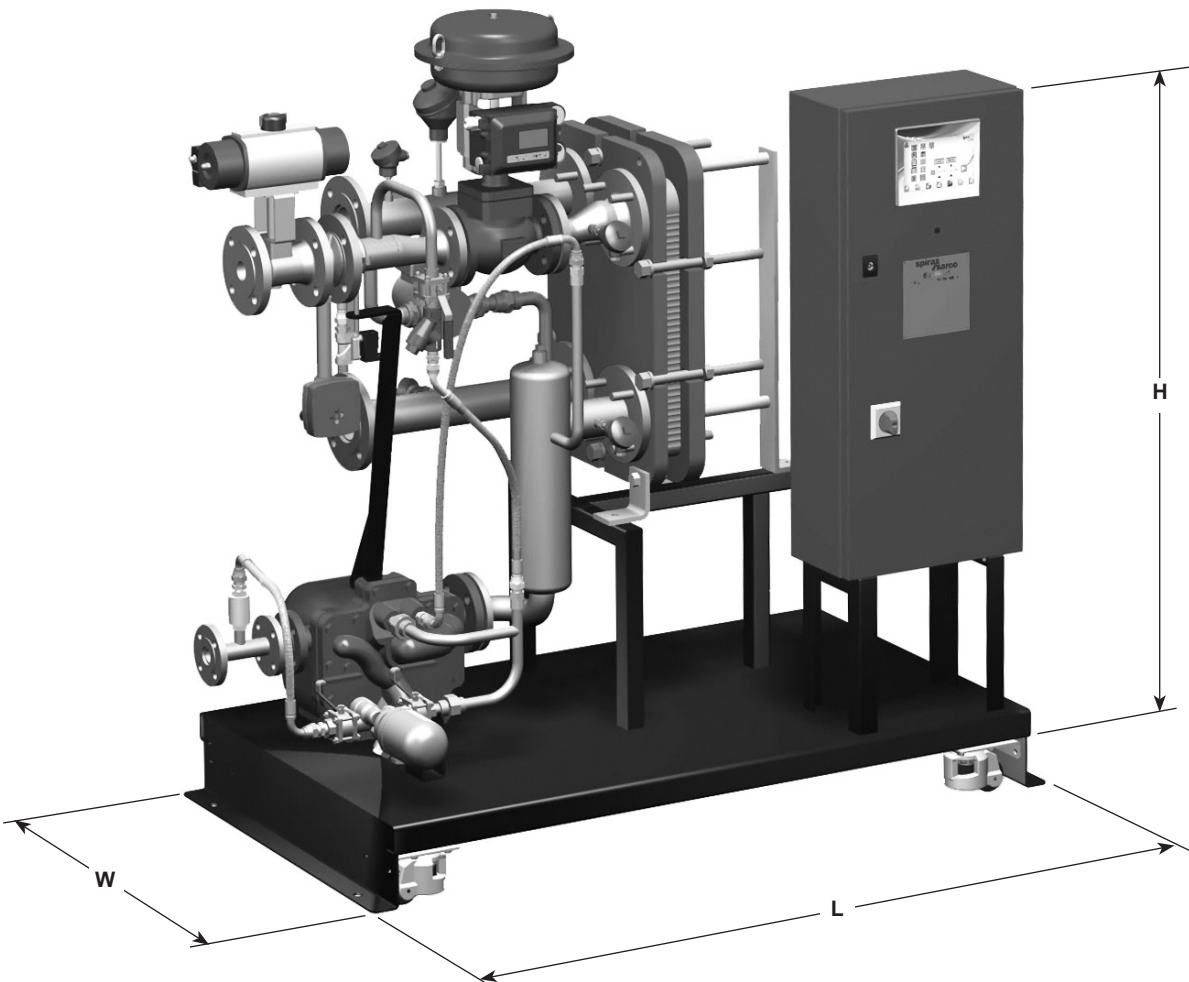
Scale formation

Spirax Sarco adapt systems to overcome scaling problems and in addition incorporates CIP connections as standard.

Dimensions (approximate) in mm

| Heat load (kW) | | Type | Valve actuation | Maximum dimensions | | | Piping connections DN | | |
|----------------|------|-------------|-----------------|--------------------|------|-----|-----------------------|------------|------|
| Min | Max | | | H | L | W | Steam | Condensate | |
| | | | | | | | Pump trap | Steam trap | |
| 50 | 180 | EHD1 | EL and PN | 1324 | 1625 | 825 | DN50 | DN40 | DN25 |
| 180 | 280 | EHD2 | EL and PN | 1344 | 1635 | 825 | DN50 | DN40 | DN25 |
| 280 | 470 | EHD3 | EL and PN | 1378 | 1625 | 825 | DN50 | DN40 | DN25 |
| 470 | 730 | EHD4 | EL and PN | 1381 | 1625 | 825 | DN50 | DN40 | DN40 |
| 730 | 980 | EHD5 | EL and PN | 1382 | 1625 | 825 | DN50 | DN50 | DN40 |
| 980 | 1300 | EHD6 | EL and PN | 1460 | 1675 | 825 | DN50 | DN50 | DN40 |

- Notes:**
1. The height of the system will increase by 25 mm if the wheels are fitted.
 2. The heat load has been based on a steam inlet pressure of 5 bar g and 1 bar backpressure.



Spirax EasiHeat™ DHW nomenclature

| | | | |
|-----------------------------------|--|--|------------|
| | Domestic hot water | EHD = Spirax EasiHeat™ DHW | EHD |
| | | 1 = DN20 | 2 |
| | | 2 = DN25 | |
| | | 3 = DN32 | |
| | | 4 = DN40 | |
| | | 5 = DN50 | |
| Compulsory selection | CV size | 6 = DN65 | |
| | Control valve trim | L = Low noise trim | L |
| | Pressure vessel code | P = PED | P |
| | Actuation | EL3 = Electric spring return | EL4 |
| | | EL4 = Electric super capacitor | |
| | | PN = Pneumatic | |
| Condensate removal | ST = Steam trap | ST | |
| | PT = Pump trap | | |
| | PTHC = Pump trap high capacity | | |
| Mechanical options | High limit | HL = Integrated high limit | HL |
| | | IHL = Independent high limit | |
| | High limit actuation (EL4 only) | B = Battery back-p | C |
| | | C = Super capacitor | |
| | Isolation | V1 = Ball valve | V2 |
| | | V2 = BSA | |
| | | V3 = DBB3 | |
| | Gasket material | G1 = EPDMP | G1 |
| | | G2 = Heatseal | |
| | | G3 = WRAS FKMFF (UK only) | |
| G4 = WRAS EPDMFF (UK only) | | | |
| Extras | W = Wheels | W | |
| | S = EN 12828 safety option | | |
| Panel options | Control panel | T2 = SIMS technology touch screen | T2 |
| | | P2 = Process controller | |
| | Energy monitoring | E = With energy monitoring | E |
| | Remote access | R1 = Level 1 – SMS and E-mail | R2 |
| | | R2 = Level 2 – Full web access | |
| | | R3 = Level 3 – SMS + Remote | |
| Communications | C1 = Modbus RTU | C2 | |
| | C2 = BACnet MS/TP | | |
| | C3 = Modbus TCP/IP | | |
| | C4 = DeviceNet | | |
| | C5 = CANopen | | |
| | C6 = BACnet IP | | |
| | C7 = Profibus | | |

Spirax EasiHeat™ DHW nomenclature example:

| | | | | | | | | | | | | | | | | |
|-----|---|---|---|-----|----|---|----|---|----|----|---|---|----|---|----|----|
| EHD | 2 | L | P | EL4 | ST | - | HL | C | V2 | G1 | W | - | T2 | E | R2 | C2 |
|-----|---|---|---|-----|----|---|----|---|----|----|---|---|----|---|----|----|

Typical specification

The potable and process water system shall be a Spirax EasiHeat™ compact heat transfer system complete with PLC functionality and SIMS technology to provide energy monitoring and remote access. The system will be pre-assembled and mounted on a compact frame with either pneumatic or electric control option.

In order to meet EU standards for Temperature Control Devices and Temperature Limiters For Heat Generating Systems, the selection of Independent High Limit (IHL) control is a compulsory selection for packages installed within the EU.

How to order

All systems are designed for the required heat load with controls to suit the application. The best way of ensuring that we have all the necessary information for quotation and manufacture is to complete our enquiry data sheet. Copies can be supplied on request and special requirements should be detailed.