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:

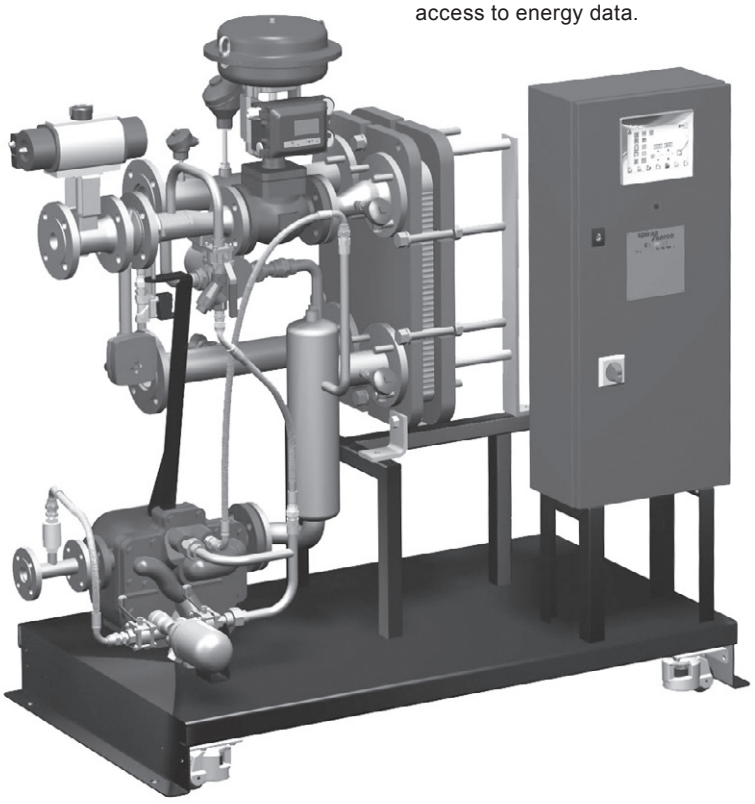
- Energy monitoring, CO_2 emission, Communications, Remote monitoring and SMS or E-mail of system alarms.
- Designed with integral condensate sub-cooling for maximum efficiency and no flash steam loss.
- Precisely engineered system and matched components that provides accurate temperature control even with wide and sudden load changes.
- Guaranteed performance.
- Fully assembled and tested ready to install.
- Options to suit all applications.

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.

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.

Metering

A key component guaranteeing accurate measurement of energy usage, CO_2 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.

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

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.

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.

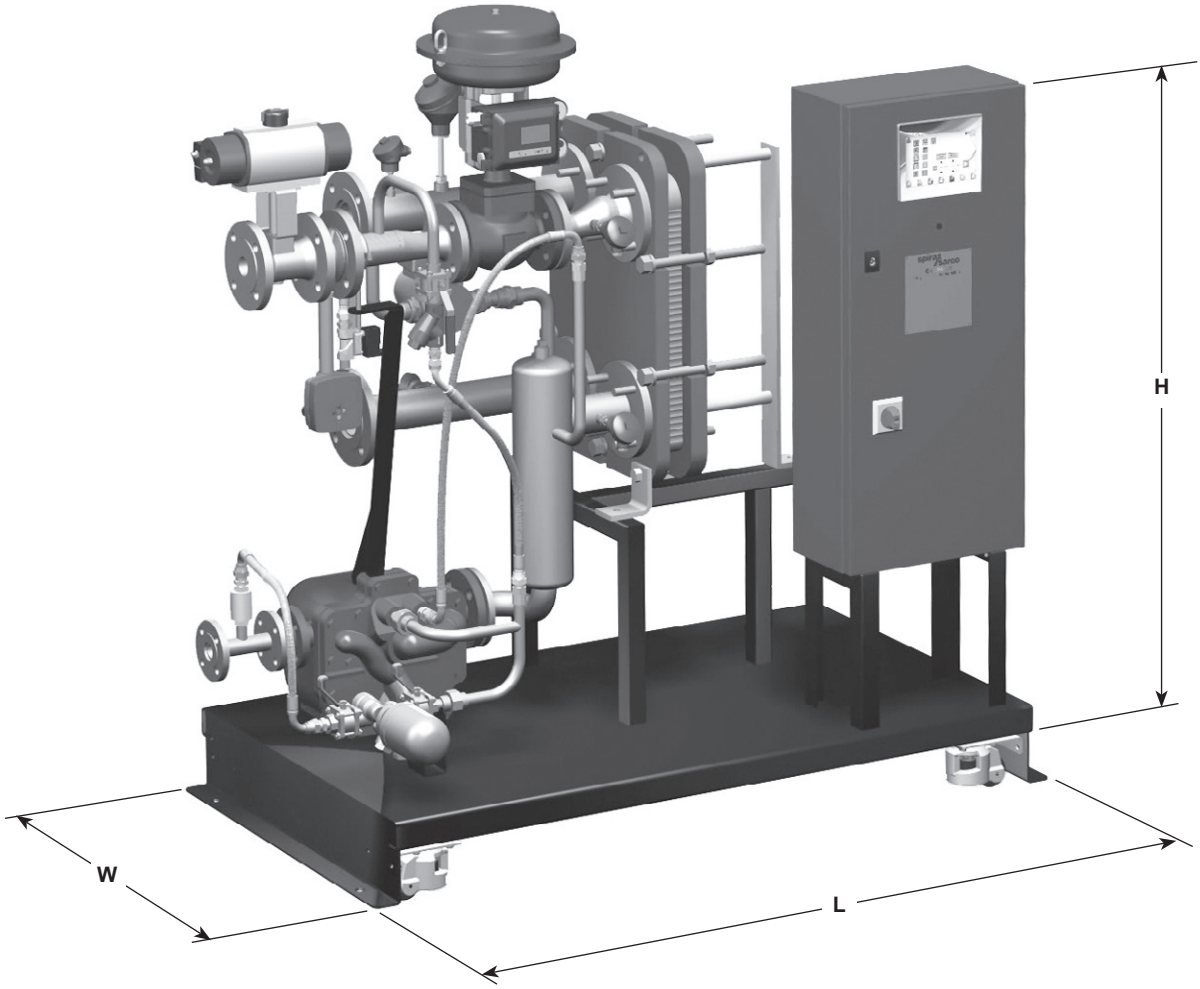
Scale formation
Spirax Sarco adapt systems to overcome scaling problems and in addition incorporates CIP connections as standard.

Dimensions (approximate) in mm

Heat load (kW)		Type	Valve actuation	Maximum dimensions			Piping connections DN		
							Steam	Condensate	
Min	Max			H	L	W		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 wheels are fitted.
2. The heat load has been based on a steam inlet pressure of 5 bar g and a 1 bar backpressure.



Spirax EasiHeat™ DHW nomenclature example:

EHD	2	P	EL	ST	-	HL	C	V2	G1	W	S	-	E	R2	C2

Spirax EasiHeat™ DHW nomenclature

Compulsory selection	Domestic hot water	EHD = Spirax EasiHeat™ DHW		**EHD**
	CV size	1 = DN20 2 = DN25 3 = DN32 4 = DN40 5 = DN50 6 = DN65		**2**
	Pressure vessel code	P = PED		**P**
	Actuation	EL = Electric PN = Pneumatic		**EL**
	Condensate removal	ST = Steam trap PT = Pump trap PTHC = Pump trap high capacity		**ST**
Mechanical options	High limit	HL = Integrated high limit IHL = Independent high limit		**HL**
	High limit actuation (EL only)	B = Battery back-p C = Super capacitor		**C**
	Isolation	V1 = Ball valve V2 = BSA V3 = DBB3		**V2**
	Gasket material	G1 = EPDMPC G2 = Heatseal		**G1**
	Extras	W = Wheels S = EN 12828 safety option		**W** **S**
Panel options	Energy monitoring	E = With energy monitoring		**E**
	Remote access	R1 = Level 1 – SMS and E-mail R2 = Level 2 – Full web access R3 = Level 3 – SMS + Remote		**R2**
Communications		C1 = Modbus RTU C2 = BACnet C3 = LonTalk (LonWorks) C4 = DeviceNet C5 = CANopen C6 = Profinet C7 = Profibus		**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.

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.