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.

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, 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.

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 (145 psi a)
Maximum secondary pressure	
Maximum secondary temperature	105 °C (221 °F)
Maximum gasket temperature	180 °C (356 °F)

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 (58.0 to 87.0 psi 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 (inches)

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 (52.1)	1625 (64.0)	825 (32.5)	DN50 (2")	DN40 (1½")	DN25 (1")
180	280	**EHD2**	EL and PN	1344 (52.9)	1635 (63.0)				
280	470	**EHD3**	EL and PN	1378 (54.3)	1625 (64.0)				
470	730	**EHD4**	EL and PN	1381 (54.37)					DN40 (1½")
730	980	**EHD5**	EL and PN	1382 (54.4)				DN50 (2")	
980	1300	**EHD6**	EL and PN	1460 (57.5)	1675 (65.9)				

Notes:

1. The height of the system will increase by 25 mm (0.98 in) if the wheels are fitted.
2. The heat load has been based on a steam inlet pressure of 5 bar g (72.5 psi g) and 1 bar (14.5 psi) backpressure.

Spirax EasiHeat™ DHW nomenclature

Compulsory selection	Domestic hot water	EHD	= Spirax EasiHeat™ DHW	EHD
	CV size	1	= DN20 (¾")	2
		2	= DN25 (1")	
		3	= DN32 (1¼")	
		4	= DN40 (1½")	
		5	= DN50 (2")	
		6	= DN65 (2½")	
	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.