



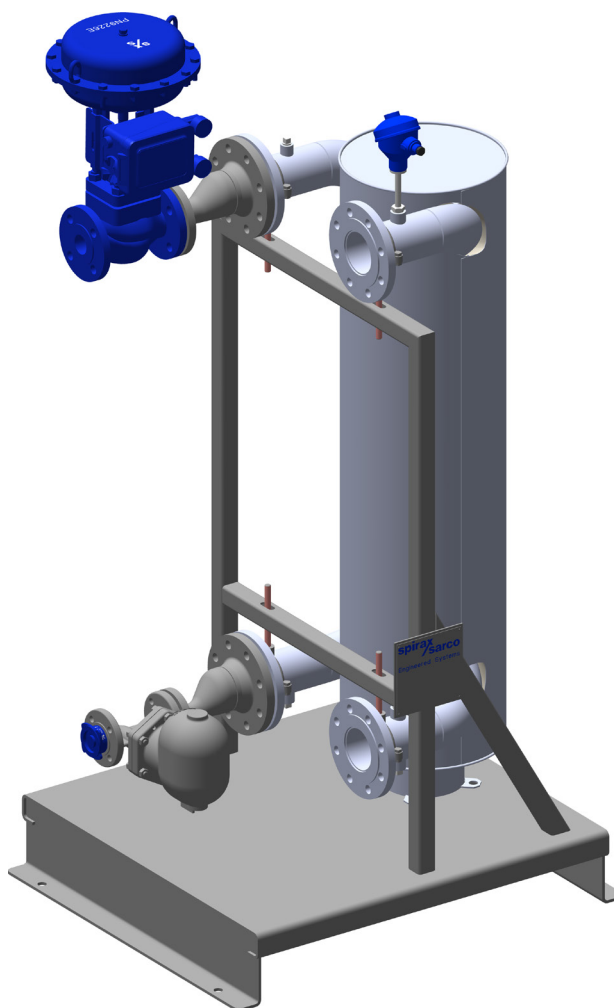
Spirax SpiraHeat™ Heating System Process Controller Based Compact Heat Transfer System

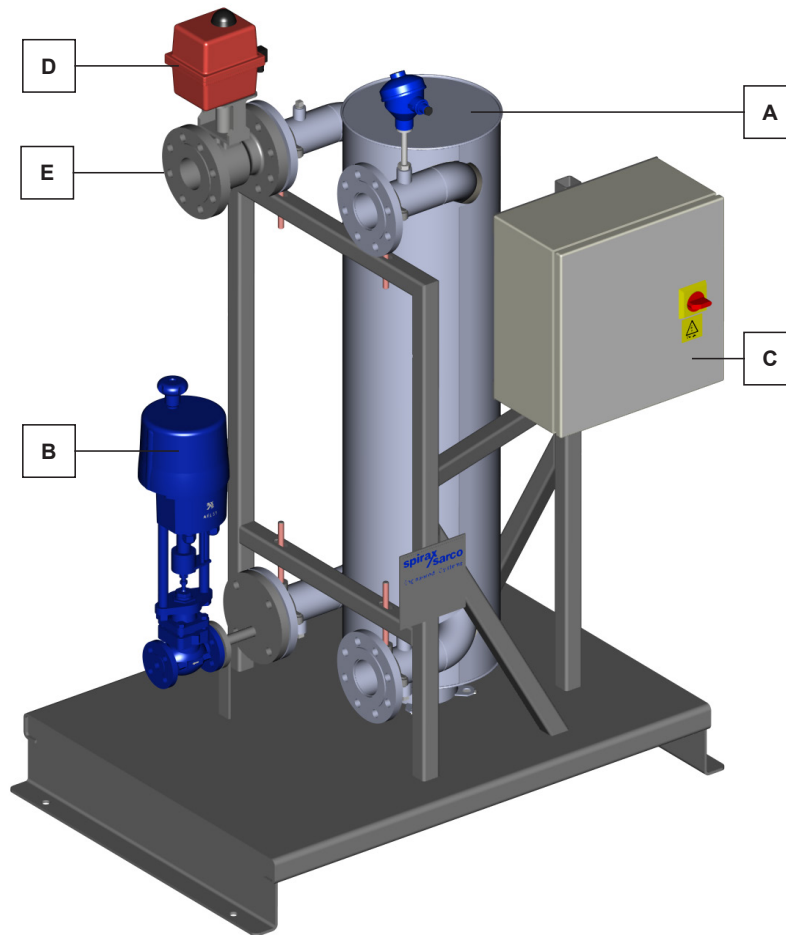
Description

The SpiraHeat™ is a compact steam-to-water energy transfer solution with a nominal range of 0.1 to 4.9 MMbtu/hr. Suitable for applications with steady and predictable load conditions to produce an accurate water temperature.

Principle features and benefits

- Compact heat transfer solution.
- Produces hot water for heating or process.
- Maintains a stable temperature on slowly changing loads.
- A fully assembled package with matched heat exchanger and temperature control equipment.
- Able to easily install additional safety and control and steam conditioning systems (where required).





A Heat exchanger

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

B 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 process controller for precise control.

C Control panel

The Spirax SpiraHeat™ features our well established simplified controls, monitoring and communications. Simple push button controls allows access to all system parameters.

D Condensate control option

One of the components that guarantees system performance is the correctly selected control valve with actuator, ensuring all of the useful energy in the steam is used within the unit. This results in less waste than other available alternatives which, in turn, reduces both fuel demand and your CO₂ emissions.

E 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 trap	Cast iron
Heat exchanger	Stainless steel

Pressure and temperature limits

Pipework design condition	ASME125	
Maximum saturated steam supply pressure to heat exchanger	145 psi g	10 bar g
Maximum secondary pressure	145 psi g	10 bar g
Maximum secondary temperature	230°F	110 °C
Maximum steam temperature	363°F	184 °C

Operating conditions

Operating ambient temperature	32 °F to 131 °F (0 °C to 55 °C)
Relative humidity	5 to 85% non-condensing
Atmosphere	Not suitable for use above 6500 ft (1981 m) or in explosive or corrosive atmospheres
IP rating:	IP54*

*Excluding some 'EL' option systems which are reduced to IP31

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/50-60Hz
	Pneumatic	20 to 85 psi g (1.4 to 5.9 bar g)

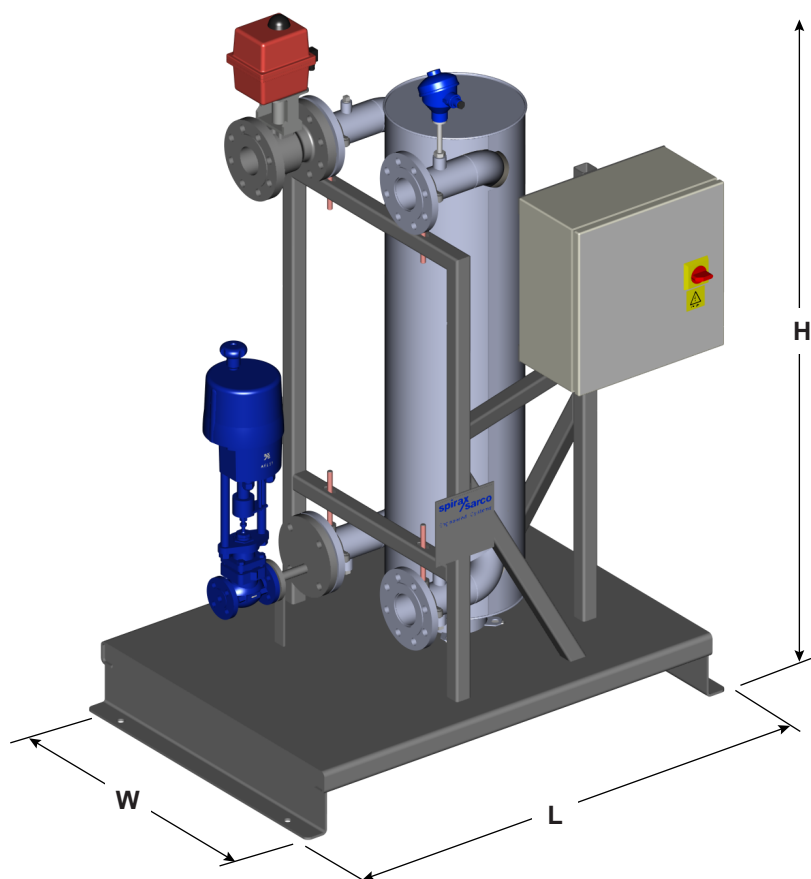
Support frame

The Spirax SpiraHeat™ heating system is delivered pre-assembled on a compact frame and baseplate ready to move with a fork lift truck to the position of installation.

Example dimensions (approximate) in inches (mm)

A small selection of SpiraHeat™ system dimensions are listed below. Each package is supplied with detailed drawings.

Type	Valve actuation	Maximum dimensions (in)			Piping connections (in)		
		H	L	W	Steam	Water	Condensate
SC-FFHAD1-Cv7.3-A-PN	Pneumatic	63 ¹ / ₈ (1603)	68 ¹ / ₂ (1736)	35 ¹ / ₂ (890)	³ / ₄ (19.1)	1 ¹ / ₂ (38.1)	1 ¹ / ₂ (38.1)
CC-FFHAD3-Cv1.2-A-EL	Electric	66 ¹ / ₂ (1691)	68 ¹ / ₂ (1736)	37 ¹ / ₂ (950)	2 ¹ / ₂ (63.5)	2 ¹ / ₂ (63.5)	1 (25.4)
SC-FFHAD3-Cv29-A-PN	Pneumatic	70 ¹ / ₈ (1795)	68 ¹ / ₂ (1736)	37 ¹ / ₂ (950)	1 ¹ / ₂ (38.1)	2 ¹ / ₂ (63.5)	1 ¹ / ₂ (38.1)
CC-FFHAD5-Cv2.9-A-EL	Electric	72 ¹ / ₈ (1851)	64 (1626)	42 (1067)	4" (102)	4" (102)	1" (25.4)
SC-FFHAD4-Cv42-A-PN	Pneumatic	73 ² / ₂ (1871)	70 ⁵ / ₈ (1786)	39 ³ / ₈ (1000)	2" (50.8)	3" (76.2)	1 ¹ / ₂ (38.1)
CC-FFHAD6-Cv4.6-A-EL	Electric	67 ¹ / ₂ (1711)	76 (1930)	47 (1194)	4" (102)	5" (127)	1" (25.4)



Typical specification

The building heating unit shall be a Spirax SpiraHeat™ process controller based compact heat transfer system. The system will be pre-assembled and mounted on a compact frame with either pneumatic or electric control option.

The unit does not contain Independent High Limit (IHL) control equipment, and if this is required it must be added separately. Contact your local Spirax representative for further information and advice.

Regulation Conformance

The SpiraHeat™ is compliant to relevant ASME pressure equipment standards and the control panel is compliant to UL508A.

Spirax SpiraHeat™ nomenclature

SpiraHeat:	SC				Steam side control					
	CC				Condensate control					
	FFHAD1				Heat exchanger size 1					
	FFHAD2				Heat exchanger size 2					
	FFHAD3				Heat exchanger size 3					
	FFHAD4				Heat exchanger size 4					
	FFHAD5				Heat exchanger size 5					
	FFHAD6				Heat exchanger size 6					
	Cv0.23				Control valve size Cv0.23					
	Cv0.58				CC Control Only	Control valve size Cv0.58				
	Cv1.2					Control valve size Cv1.2				
	Cv1.8					Control valve size Cv1.8				
	Cv2.9					Control valve size Cv2.9				
	Cv4.6					Control valve size Cv4.6				
	Cv5.9				SC Control only	Control valve size 5.9				
	Cv7.3					Control valve size 7.3				
	Cv9.4					Control valve size 9.4				
	Cv12					Control valve size 12				
	Cv23.3					Control valve size 23.3				
	Cv29					Control valve size 29				
	Cv35					Control valve size 35				
	Cv42					Control valve size 42				
	Cv73					Control valve size 73				
	Cv116					Control valve size 116				
	A				ANSI flange specification					
	PN				Pneumatic actuators					
	EL				Electronic actuators					
	NO				No control panel					
EPC				EPC3008 Process controller						
PLC				EasiHeat lite control panel						
CC	-	FFHAD2	-	Cv0.23	-	A	-	PN	-	EPC

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 contact your local Spirax supplier who will size the appropriate SpiraHeat™.