spirax sarco

TI-P403-57 EMM Issue 5

Blowdown to heat recovery system

BCS₁ **Pipeline Set**

Blowdown from boiler Please note: The interconnecting pipework is to be supplied by the customer. M10 ball valve 1/4" BSP plug BCV1 blowdown valve Fig 12 strainer PT2 plug tail LCV1 check valve CP10 sensor S10 sensor chamber M10 ball valve Description

The BCS1 pipeline set is a kit of components selected to enable straightforward installation of a TDS control system where the probe assembly is to be mounted in the pipeline, rather than directly in the boiler shell.

The BCS1 pipeline set consists of the following items:

- 1 x S10 sensor chamber 1/2" BSP.
- 1 x CP10 sensor and gasket.
- 1 x PT2 plug tail.
- 1 x Sensor chamber plug 1/4" BSP.
- 1 x BCV1 solenoid valve 1/2" BSP, 230 V.
- 1 x LCV1 check valve 1/2" BSP.
- 1 x Fig 12 SG iron strainer 1/2" BSP.
- 2 x M10 ball valves 1/2" BSP.

Alternative products are available, but not as part of a kit. A controller is also required, and should be selected from the Spirax Sarco range.

The BC3150 and BC3250 are both suitable, and offer a choice of features. Full details are available in separate literature.

Principal features:

- For TDS systems with probe in pipeline.
- Complete pipeline kit choice of controller.
- Suitable for boiler pressures of 14 bar g (203 psi g).
- For blowdown rates up to 590 kg/h (1,300 lb/h).

Weight

Boxed kit approximately 3.7 kg (8.2 lb).

Materials

S10 sensor chamber	Stainless steel	BS 970 303 S31	
CP10 sensor body and pin	Stainless steel	BS 970 303 S31	
PT2 plug tail	Brass body		
Sensor chamber plug	Carbon steel		
BCV1 solenoid valve	Brass body, stainless steel seat, PTFE seal.		
LCV1 check valve	Bronze		
Fig 12 strainer	SG iron		
M10 ball valve	Zinc plated forged carbon	n steel	

See individual product literature for further information.

Pressure/temperature limits

Maximum boiler pressure 14 bar g (203 psi g).

Capacities

The capacity of the system is limited by the blowdown valve capacity at various boiler pressures.

Boiler pressure		Low to medium flowrates (Standard setting*)		Medium to high flowrates (High setting*)	
bar g	(psi g)	kg/hr	(lb/hr)	kg/hr	(lb/hr)
1	(14.5)	60	(132)	175	(386)
2	(29)	85	(187)	250	(551)
4	(58)	115	(254)	350	(771)
6	(87)	130	(287)	385	(849)
8	(116)	150	(331)	445	(981)
10	(145)	165	(364)	495	(1,091)
14	(203)	200	(441)	590	(1,300)

^{*} At 'Standard setting' the controller is set to open the valve for 10 seconds every 30 seconds. When blowing down at 'High setting' the controller opens the valve continuously.

Electrical data

BCV1 solenoid (blowdown) valve		
Voltage range	209 V to 264 V	
Frequency range	50 to 60 Hz	
	40 VA (inrush)	
Power consumption	16 VA/10 W (hold)	
Protection rating	IP65	

Safety information, installation and maintenance

For full details see the installation and maintenance instructions supplied with the product.

Warning

The BCV1 valve and CP10 sensor contain PTFE which can give off toxic fumes if exposed to excessive heat.

Installation note

The products contained in the BCS1 pipeline set are designed and constructed to withstand the forces encountered during normal use. Use of the BCS1 pipeline set other than for the control of TDS could cause damage to the products and may cause injury or fatality to personnel.

Spare parts

Armature and spring set for the BCV1 blowdown valve (kit)

Stock No. 4034080

How to order example: 1 off Spirax Sarco BCS1 pipeline set.