



# BCSR3 Blowdown Control System

## Typical installation

**Warning: This document does not contain sufficient information to install the system safely. See the Installation and Maintenance Instructions supplied with the products for full details.**

The Spirax Sarco BCSR3 Blowdown Control System provides accurate, automatic control of boiler water total dissolved solids (TDS) and is suitable for shell and water tube boilers. Accurate control of TDS minimises blowdown and reduces the risk of carryover. Carryover of boiler water can cause waterhammer, corrosion and deposits within a steam system. The accumulation of deposits in control valves, steam traps and on heat transfer surfaces will adversely affect their performance resulting in decreased productivity and reduced efficiency.

An automatic TDS control system can significantly reduce operating costs whilst maintaining good quality steam production.

## Operation

The CP40 probe continuously monitors the conductivity of the boiler water, which is directly related to the level of TDS present. This measured value is compared with a 'set point' utilising the controller. If the measured value is lower than the 'set point', the BCV blowdown valve remains closed. If it is higher, the blowdown valve will open, purging the boiler of high TDS concentration water. The boiler water is replenished by clean make-up water, lowering the measured conductivity and closing the blowdown valve.

The optional SCS20 sample cooler system provides a safe and effective method of taking regular boiler water samples for analysis. The cooling water jacket prevents flashing due to the pressure drop and sub-cools the boiler water sample to an acceptable analysis temperature.

The BCR3250/BHD50 can operate a bottom blowdown valve by a real time clock controlled timer.

## Available options

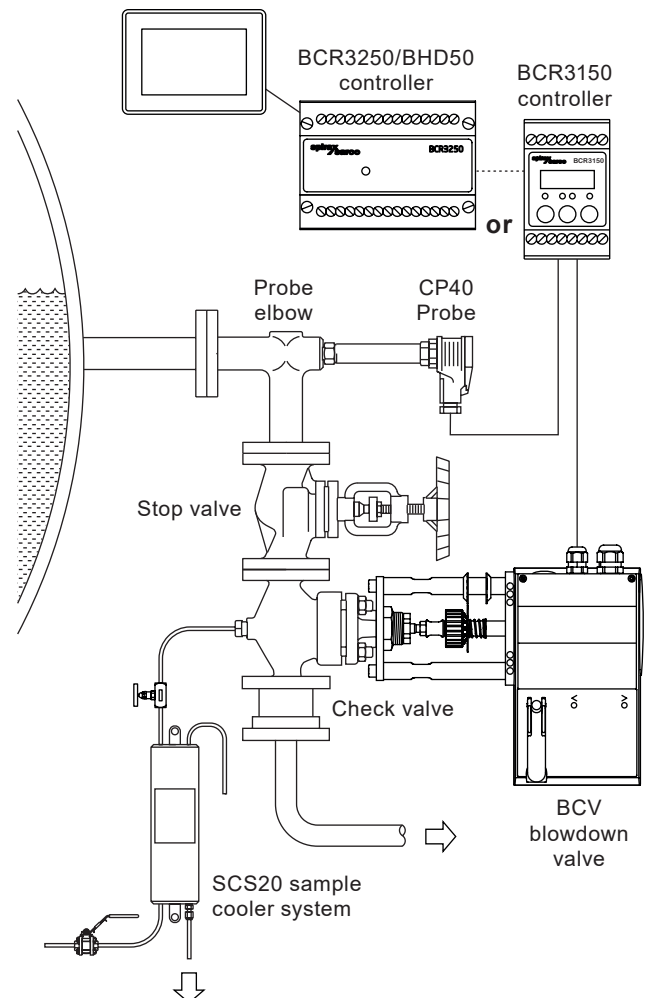
Blowdown valve	Actuation	Connections
BCV	230 Vac	see BCV TI
	24 Vac	
	Pneumatic	

Controller	Voltage	Min. conductivity
BCR3250/BHD50 BCR3150	24 Vdc	≥ 1 µS @ 25 °C

Conductivity probe	Probe length
CP40	300 mm
	500 mm
	1000 mm
	1500 mm

Probe elbow	Size/connection (boiler)
PE1	DN15/PN40
PE2	DN20/PN40
PE3	DN25/PN40
PE4	DN20/BS10 Table H
PE5	DN25/BS10 Table H

Available options continued on next page



Note: See specific product TI's for further information.

## Available options - continued

ABV Bottom Blowdown valve	Connections
DN25 ABV21i	PN40/ANSI 300
DN32 ABV21i	PN40
DN40 ABV21i	PN40/ANSI 300
DN50 ABV21i	PN40/ANSI 300
DN65 ABV21i	PN40/ANSI 300

Solenoid valve	Voltage
MV11	230 Vac
MV12	110 Vac
MV13	24 Vac
MV14	24 Vdc

**Note:** See specific product TI's for further information.

