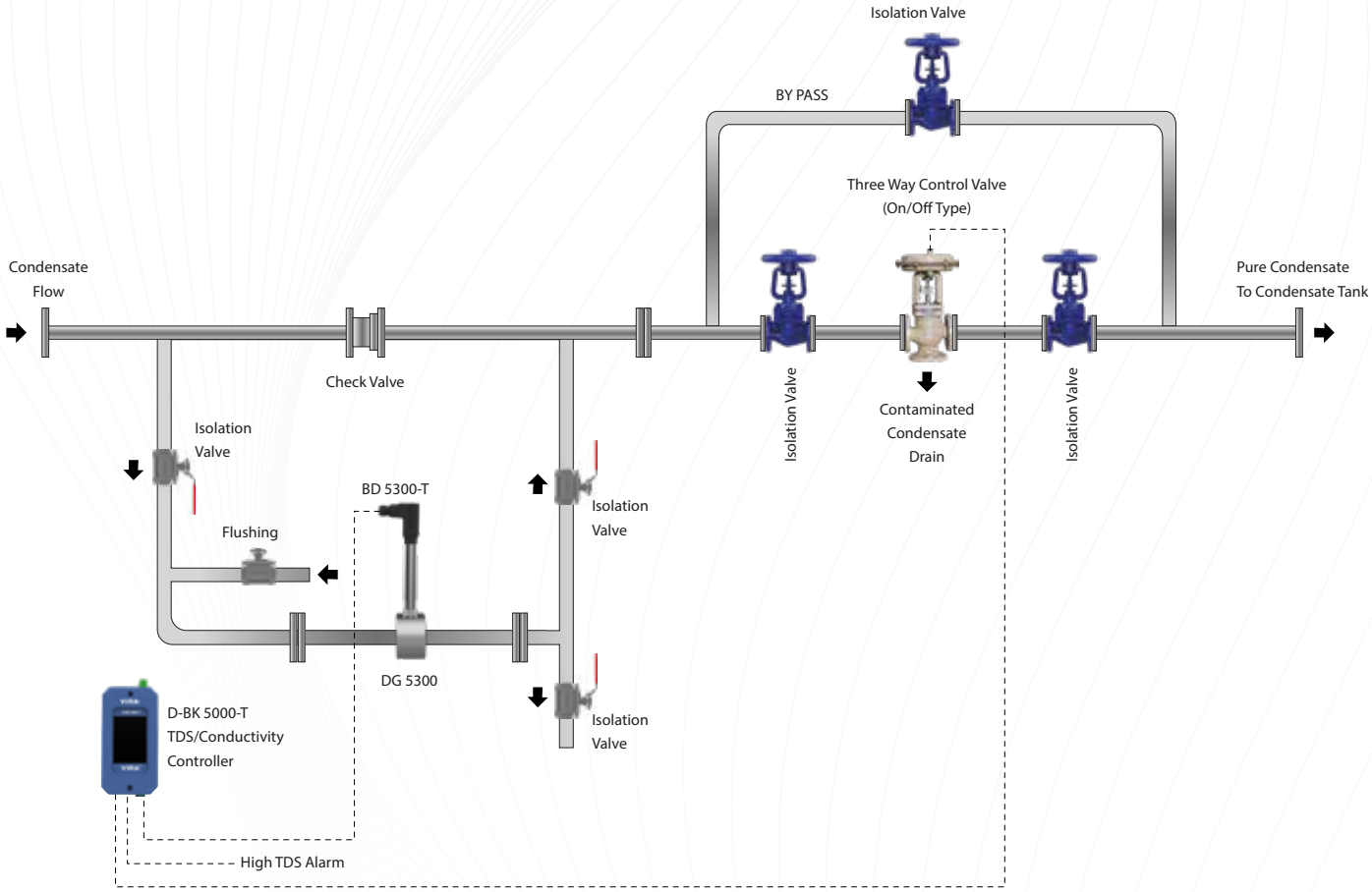
Condensate Contamination Control System

Condensate is very valuable for steam producing plants and needs to be recycled. It must be ensured that the returned condensate is clean. Leakage in one of the devices used for heat transfer may cause the heated fluid to mix into the condensate water.

The condensate contamination control system monitors and displays the conductivity of the condensate. It automatically diverts the condensate to drain by a 3 way valve instead of back to the boiler system.

When the conductivity drops to the desired level, the condensate is allowed to return to the boiler system, thus minimizing heat and water wastage, as well as avoiding the possibility of contaminating the feedwater.

Note: BS3-T and D-BS3-T Vira Condensate Contamination Control system performs contamination control with electrical conductivity measurement.

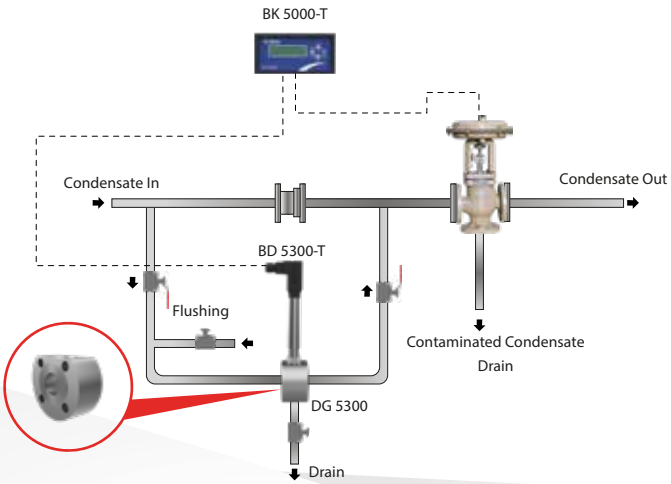


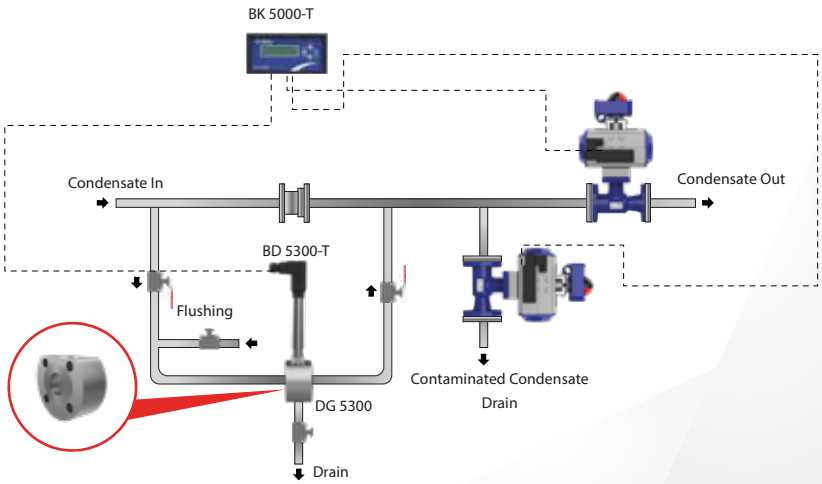
BS3-T Condensate Conductivity Control System

Temp. Compensation Type Conductivity Controller	
Type	: BK 5000-T
Supply Voltage	: 230 VAC (+5% / -10%) 50/60Hz
Enclosure	: Panel-mount Type
Functions	: Conductivity Measurement and Valve Control, High TDS Alarm, Adjustable Setpoints and Hysteresis Points, LCD Display, 4 Buttons
Outputs	: 1 Valve Control Relay, 1 High TDS Alarm Relay, 4–20 mA Analog Conductivity Output, RS485 Modbus
Features	: Conductivity Set Value, Alarm Set Value, Valve Relay Test, Alarm Relay Test, Temp. Compensation
Compliance	: CE (EMC 2014/30/EU, LVD 2014/35/EU), Type Approval (Module B + D), EN 12952 & EN 12953

Temp. Compensation Type Conductivity Probe	
Type	: BD 5300-T
Nominal Pressure	: PN 40
Max. Operat. Temp.	: 239 °C
Max. Operat. Press.	: 32 Bar g
Connection	: 1/2" BSPT (Optional NPT)
Max. Ambient Temp.	: 75 °C
Compliance	: CE (PED 2014/68/EU), Type Approval (Module B + D), EN 12952 & EN 12953

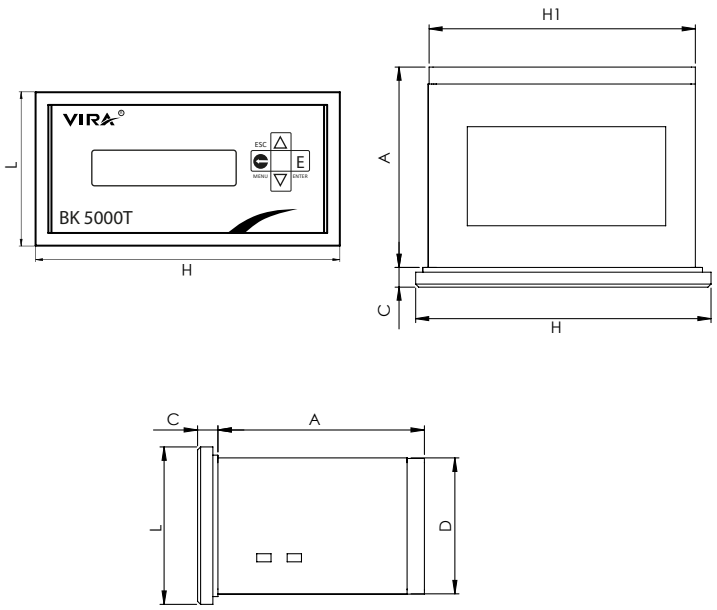
BS3-T Typical Installations





TECHNICAL SPECIFICATION

BK 5000-T Conductivity Controller



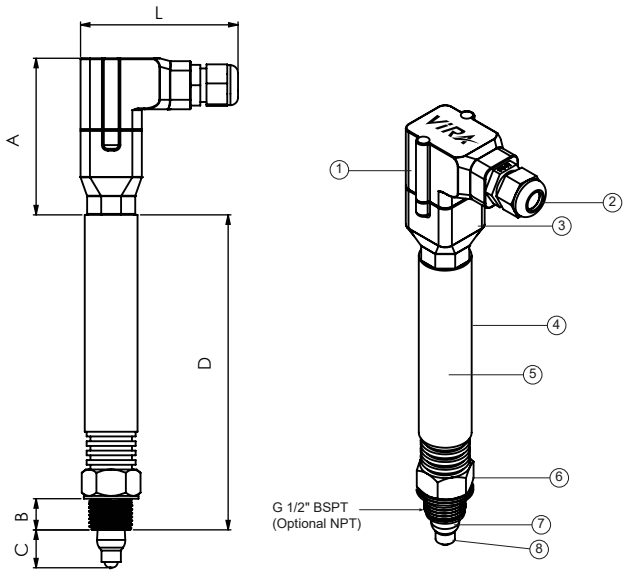
Technical Data

Controller	BK 5000-T
Supply Voltage	230VAC (+5%/-10%), 50/60Hz
Functions	Conductivity Measurement and Valve Control, High TDS Alarm, Adjustable Setpoints and Hysteresis Points, LCD Display, 4 Buttons
Inputs	Level Probe Input, Ground, 0-1k Ohm Potentiometer, Control Valve
Outputs	1 Valve Control Relay, 1 High TDS Alarm Relay, 4–20 mA Analog Conductivity Output, RS485 Modbus
Range	0-1.000 µS/cm (default)
Display	LCD
Label	Lexan
Max. Ambient Temp.	55℃
Enclosure	PA (Polyamide)
Type	Panel-mount
Protection Class	IP40

Dimensions

H (mm)	H1 (mm)	L (mm)	A (mm)	C (mm)	D (mm)
144	135	72	101	9	67

BD 5300-T Conductivity Probe



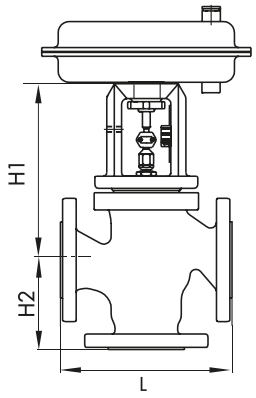
No	Part	Material
1	Upper Connector Housing	GF-PP (Glass Fiber Reinforced Polypropylene)
2	Cable Gland	PA6 (Polyamide)
3	Lower Connector Housing	GF-PP (Glass Fiber Reinforced Polypropylene)
4	Label	Laser Marking
5	Cover Tube	Austenitic Stainless Steel 304
6	Probe Body	Austenitic Stainless Steel 316L
7	Probe Tip Sleeving	Politetrafloroetilen (PTFE)
8	Probe Tip	Austenitic Stainless Steel 316L

Dimensions

L (mm)	A (mm)	B (mm)	C (mm)	D (mm)
83,5	83	16,5	20	167

Control Valve for Condensate Conductivity Control

Type	: SKV 3300-3
Body Material	: ENJL 1040 PN 16, ENJS 1049 PN 25, 1.0619 PN 40
Leakage Class	: Class I
Flow Characteristic	: Lineer
Operating Temp.	: -10 - + 220°C (High Temp. on Request)
Sealing	: Metal to Metal
Actuator	: Pneumatic



Technical Data

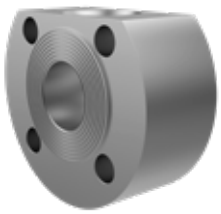
Model	SKV 3300-3
Type	Diverting Valve
Pressure Class	PN 16, PN 25, PN 40
Body Material	EN-JL1040 - PN16 EN-JS1049 - PN25 1.0619 - PN40
Operat. Temp.	-10 - +220 °C
Sealing	Metal to Metal
Actuator	Pneumatic

Dimensions

Valve	DN	15	20	25	32	40	50	65	80	100	125	150
L	-	130	150	160	180	200	230	290	310	350	400	480
H1	-	235	235	235	235	235	235	270	270	360	375	375
H2	-	70	80	85	100	105	120	130	140	150	200	210

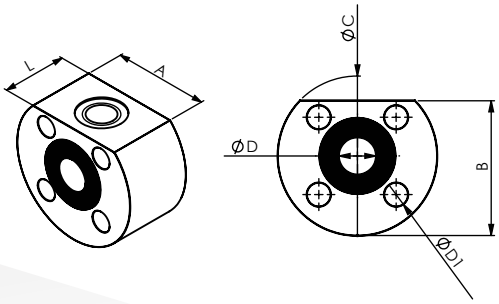
Conductivity Probe Body

Type	: DG 5300
Nominal Pressure	: PN 40
Sizes	: DN 20, DN 25, DN32, DN 40, DN 50
Max. Operat. Temp.	: 239 °C
Max. Operat. Press.	: 32 Bar g
Body	: Stainless Steel



Technical Data

Type	DG 5300
Body	Carbon Steel, Stainless Steel
Pressure Class	PN 40
Process Connection	Threaded
Probe Connection	Threaded



Dimensions

Type	Size	L (mm)	A (mm)	B (mm)	⌀ C (mm)	⌀ D (mm)	⌀ D1 (mm)
DG 5320	**DN 20**	47	68	92,5	105	27,6	14 x 4
DG 5325	**DN 25**	47	82,5	97,5	115	34,5	14 x 4
DG 5332	**DN 32**	47	104	117	140	43	18 x 4
DG 5340	**DN 40**	47	112	125	150	49	18 x 4