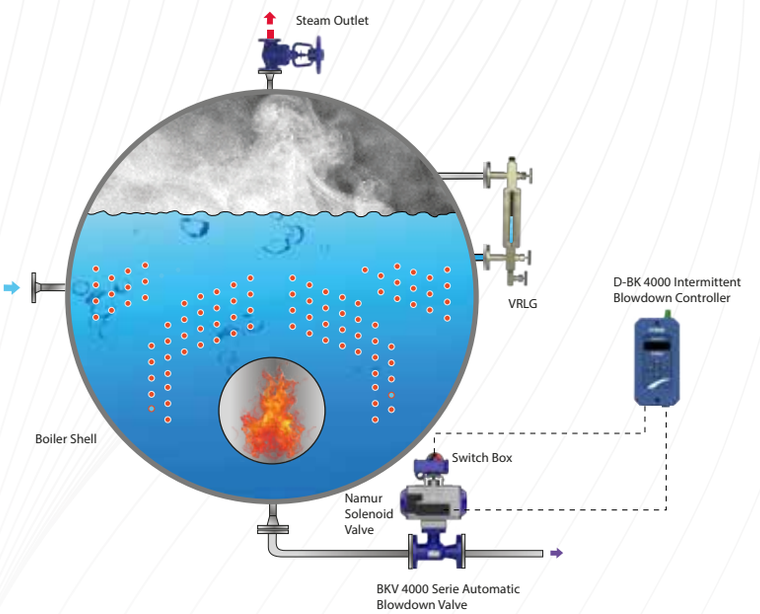
Automatic Bottom Blowdown System

Some impurities, and salts (rust, oil and dirt that may come from the installation) precipitate to the bottom of the boiler to form a sludge layer. By an actuated valve, at least four-second blowdown is performed in every eight hours (once in a shift). As a result of this process, the sludge and sediment accumulated at the bottom of the boiler are moved out of the boiler. Thus blowdown is made on time and enough by an automatic blowdown valve. By this way, both over blowdown and forgetting of blowdown is avoided.



Advantages

- Ensures timely and consistent blowdown, preventing excessive energy and water losses.
- Prevents sludge accumulation, improving boiler heat transfer and efficiency.
- Protects boiler tubes and shell from corrosion and scaling.
- Reduces operator dependency – fully automated periodic blowdown.
- Compatible with all boiler types, including shell and fire tube boilers.
- Can be integrated with the boiler's main control panel.

Difference between Vira Bottom Blowdown Controller and Ordinary Timers

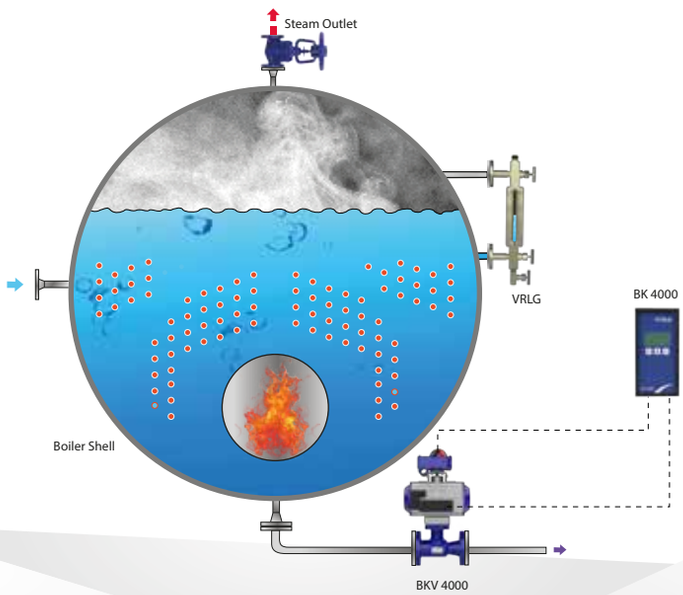
1. It controls the position of the valve. If the valve is in a different position than it should be, it gives an alarm.
2. It prevents simultaneous blowdown in boilers operating side by side and connected to a single blowdown line.
Before the blowdown process in a boiler is finished, other boilers are prevented from blowdown.
3. If desired, the blowdown during burner operation is delayed until the burner is switched off.

DB2 Automatic Bottom (Intermittent) Blowdown System

Bottom Blowdown (Intermittent) Controller	
Type	: BK 4000
Supply Voltage	: 230 VAC (+5% / -10%) 50/60Hz
Enclosure	: Panel-mount Type
Functions	: Bottom Blowdown Valve Control, Bottom Blowdown Valve Stuck-Open Alarm, Bottom Blowdown Valve Stuck-Closed Alarm, LCD Display, Alarm Reset, 3 Buttons, Blowdown Timer, Adjustable Bottom Blowdown Interval and Duration.
Outputs	: 1 Bottom Blowdown Valve Control Relay, 1 Alarm Relay.
Max. Ambient Temp	: 55 °C
Compliance	: CE (EMC 2014/30/EU, LVD 2014/35/EU), Type Approval (Module B + D), EN 12952 & EN 12953

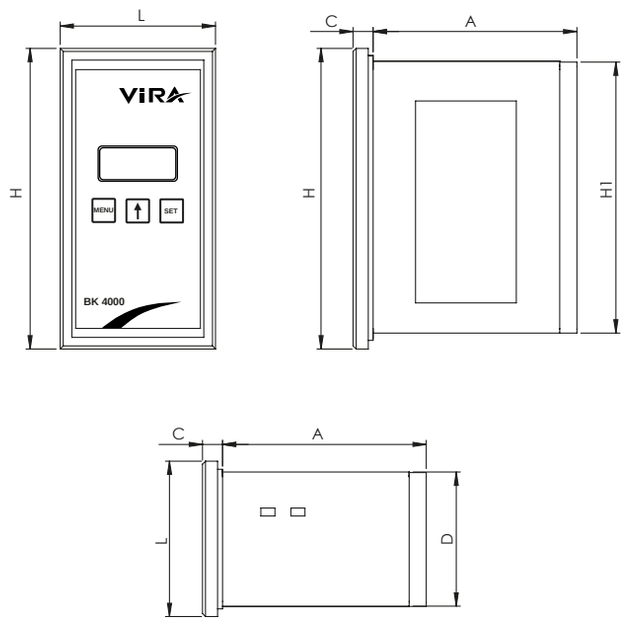
Bottom (Intermittent) Blowdown Valve	
Type	: BKV 4000
Nominal Pressure	: PN 40
Max. Operat. Temp.	: 220 °C
Max. Operat. Press.	: 27 Bar g
Size	: DN 25 - DN 50
Body	: WCB, Monoblock
Accessories	: Namur Solenoid Valve, Switch Box
Compliance	: CE (PED 2014/68/EU)

DB2 Typical Installation



TECHNICAL SPECIFICATION

BK 4000 Blowdown Timer Controller



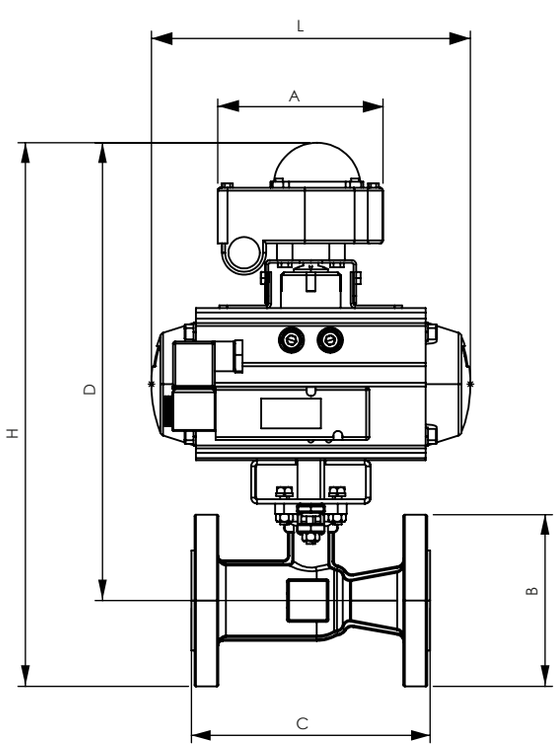
Technical Data

Type	BK 4000
Supply Voltage	230 VAC (+5% / -10%) 50/60Hz
Functions	Bottom Blowdown Valve Control, Bottom Blowdown Valve Stuck-Open Alarm, Bottom Blowdown Valve Stuck-Closed Alarm, LCD Display, Alarm Reset, 3 Buttons, Blowdown Timer, Adjustable Bottom Blowdown Interval and Duration.
Inputs	Limit Switch, Namur Solenoid Valve
Outputs	1 Bottom Blowdown Valve Control Relay, 1 Alarm Relay
Display	LCD
Max. Ambient Temp.	55°C
Enclosure	PA (Polyamide)
Type	Panel-mount
Protection Class	IP 40

Dimensions

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

BKV 4000 Intermittent Blowdown Valve



Technical Data

Valve	BKV 4000
Size	DN 25, 32, 40, 50
Actuator	Pneumatic
Motor Type	On-Off, Spring Return (Fail-Safe)
Pressure Class	PN 40
Body	WCB
Supply	220VAC, 24VDC (please ask)
Operat. Temp.	-10 - +220 °C
Structure	Reduced Bore

Dimensions

Type	Size	H (mm)	L (mm)	A (mm)	B (mm)	C (mm)	D (mm)
BKV 4025	**DN 25**	364	214	111	115	160	307
BKV 4032	**DN 32**	390	251,5	111	140	180	320
BKV 4040	**DN 40**	395	251,5	111	150	200	320
BKV 4050	**DN 50**	431,3	270	111	165	230	349