

Intermittent Blowdown Valves Type PB24C (Key Handle) and MPB24C (Actuated)

Time Controlled Bottom Blowdown of Steam Boilers (Max. 17 barg)



General

Automatic program controlled intermittent blowdown valve type MPB and manual intermittent blowdown valve type PB for the desludging of steam boilers from the bottom blowdown connection.

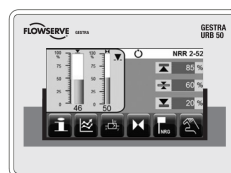
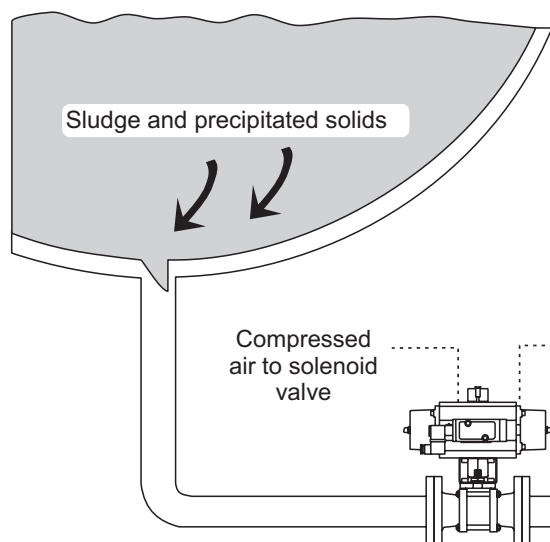
The programmable timer CT851 ensures that the blowdown is carried out precisely and regularly by controlling the frequency and duration of blowdown. This also helps to maintain the desired TDS level when no other specific TDS control equipment is fitted and also assists in the automation of the boiler towards BG01 typical arrangement 3.

The valve is actuated by air pressure and closed by a spring.

For complete drainage of the boiler, a bypass valve may be necessary.

The MPB24C may also be used for feed line 'slam shut' purposes for protection against high boiler water levels.

SECTION OF STEAM BOILER



Blowdown controller LRR1-52 can be used in lieu of the CT851 when the intermittent blowdown function is combined with an automatic TDS control system



Blowdown Timer CT851

To blowdown receiver

Design

The MPB24C is a ball valve suitable for boiler pressures of up to 17.2 barg (200 psig).

It is available as a one piece body design in sizes DN15 to 50mm.

Flanges: Integral to the body and fully machined to DIN 2543/4/5, PN16/25/40.

Face to face lengths are to DIN3202

Ball: 316 stainless steel, perfectly spherical, polished finish, cylindrical bore, floating in the closed position, perfect sealing.

Stem: Stainless steel, highly resistant to torsion, with a smooth finish perfectly adjusted to the ball and handle.

Sealing seat: High temperature Fluorofill construction. Water-tight seal on both sides. Low torque, long working life.

Lower stem seal: Reinforced PTFE, highly pressure resistant, low torque and perfect seal.

Upper stem seal: Graphite material acts as a second (safety) seal providing greater reliability to the shaft assembly.

Actuation Equipment:

Air Supply: Dry or lubricated air at between 4 and 7 barg (60 to 102 psig).

Mounting: Actuator to valve is ISO standard. Solenoid to actuator is NAMUR standard.

Angle of rotation: 90° +/- 1.5° travel adjustment.

Protection Rating: IP65

Mounting Bolts: Allows removal and change to any of four positions (90°) making valve installation and operation easier.

Tee Handle: Construction from stainless steel. Removeable from valve when in closed position only.

Solenoid Valve

With 5/2 configuration for easy installation avoiding pipes and fittings.
Pressure range: 3 to 10 barg (43.5 to 145 psig).
Temperature Range: -30°C to +50°C

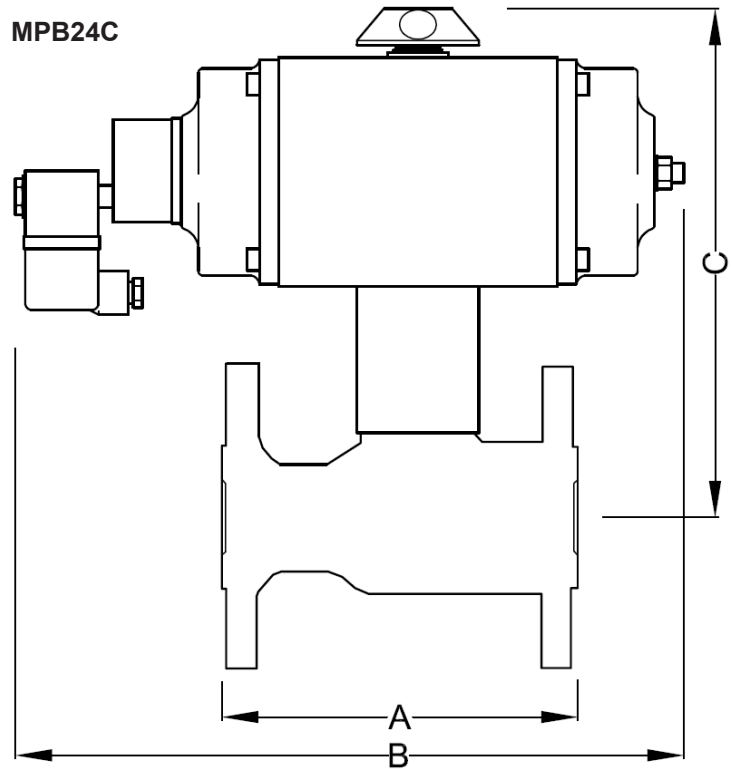
VOLTAGE OPTIONS

DC	AC
6v	12v 50/60 Hz
12v	24v 50/60 Hz
24v	48v 50/60 Hz
48v	110v 50/60 Hz
110v	230v 50/60 Hz

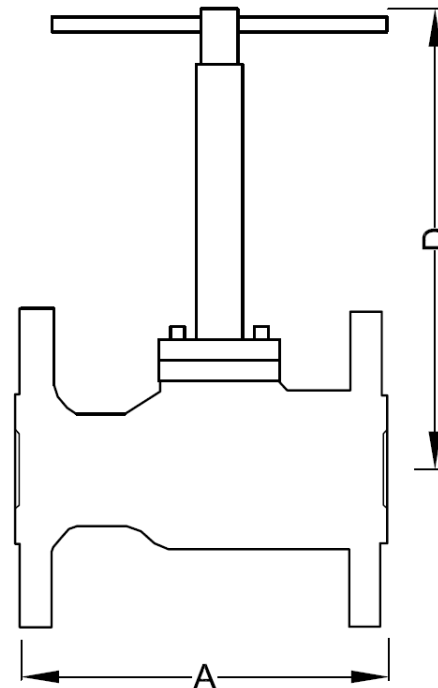
DIMENSIONS

All dimensions in mm

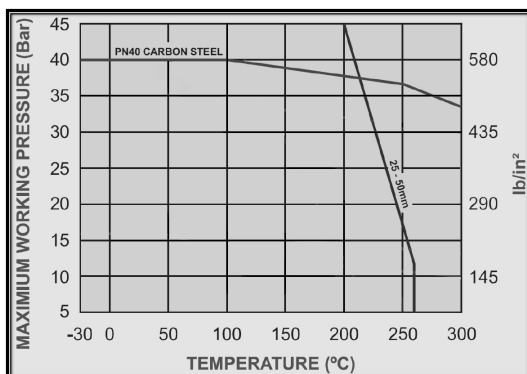
MPB24C



PB24C



FLUOROFILL TEMPERATURE LIMITATIONS



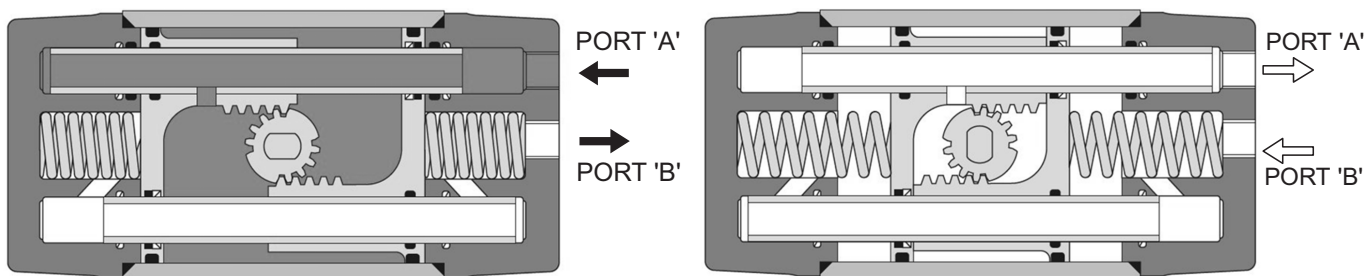
DIMENSIONS

DN	A	B	C	D	Weight, kg
15	130	275	206	216	5.5
20	150	275	208	218	6.5
25	160	275	216	226	7.1
32	175	275	216	N/A	9.5
40	200	275	227	242	10.4
50	230	275	232	247	12.5

Actuation Equipment

Rack and pinion actuator mechanism

Plan view: Spring return arrangement



Air supplied to port 'A' forces the pistons apart and toward end position, compressing springs. Exhaust air exits from port 'B' (anti-clockwise rotation is obtained).

Air or electric failure allows springs to force pistons toward the centre position with exhaust air exiting from port 'A' (clockwise rotation is obtained).

Blowdown Discharge Rates

The rate at which the boiler water is discharged when the intermittent blowdown valve opens depends mainly on the length and size of the pipework downstream of the valve.

The chart shown below gives an indication of the flow rate to be expected when discharging through a pipe of 7.5m (25 ft) equivalent straight length.

Blowdown Timer CT851

Seven day digital timer may be programmed to blowdown the boiler at any time of the day and on any days of the week. Ideal for single boiler installations.

Daily & weekly program.
PIN code protection.
Auto/Off/Man override.
Battery reserve protects settings for up to 6 years.
Supply voltage: 115VAC or 230VAC.

Blowdown Timer LRR1-52/URB50

The LRR1-52/URB50 controller can be used in lieu of the CT851 timer when the automatic bottom blowdown system is combined with an automatic total dissolved solids (TDS) control system.

URB50 HMI unit is panel mounted. Protusion from panel face: 4mm.
Depth of unit from panel face: 52mm.
Panel cut-out: 136mm x 96mm.
Supply voltage: 24VDC.
Protection rating: IP65.

LRR1-52 control unit is DIN rail mounted.

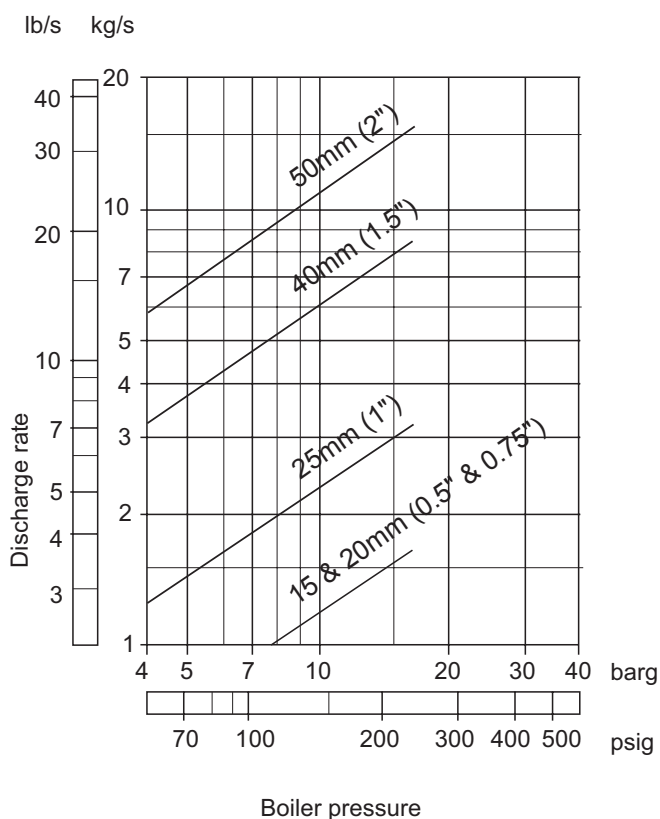
TDS controller with timer for control of frequency and duration of MPB valve is enabled by a dipswitch setting and programming.

For multiple boiler installations, a password protection feature may be used to comply with PM60.

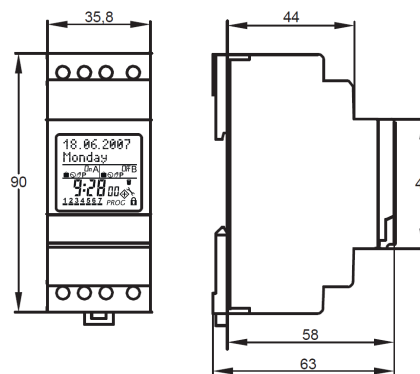
Multi-pulse blowdown feature.

H x W x D: 74 x 100 x 120 (mm).
Supply voltage: 24VDC
Protection rating:
IP40 (housing)
IP20 (terminal strip)

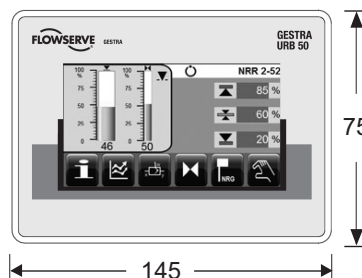
Blowdown Capacities



Blowdown Timer CT851



Controller LRR1-52/URB50



Think Gestra for your Steam & Process Fluid Control products

Steam Traps
Manifolds
Trap Monitoring Systems
Non-Return Valves
Control Valves, Actuators & Controllers
Pressure Reducers
Separators
Strainers
Safety Valves
Pressure & Temperature Gauges
Sight Glasses
Ball Valves
Stop Valves
Feedwater Tanks & Systems
Boiler Controls & Systems
Deaerators
Flowmeters
Contamination Detection
Condensate Pumps & Recovery Systems
Tank Car Valves
Plant Data Acquisition, Monitoring & Control Systems
Leaders In Systems Engineering for Steam
and Process Fluid Control