

Description

A short boiler blowdown is performed by quickly opening the blowdown valve. This creates a short-term low-pressure area around the blowoff opening at the bottom of the boiler, causing a suction effect that removes accumulated sludge and sediments that have settled out in the lower part of the boiler.

The suction effect of an intermittent blowdown is only effective at the moment when the valve is being opened. For this reason the valve should only be opened for approx. 2 seconds. Longer opening periods waste boiler water.

For the closing process the design of the valve is of great importance. The closing force of the spring of the intermittent blowdown valves (M)PA is increased by the boiler pressure, which means that the valve is in a good condition for breaking up any dirt particles settled on the valve seat/plug, thus ensuring a positive shutoff.

The service life of the valve seat/plug is further increased by the pressure reduction that takes place in the radial stage nozzle installed downstream of the valve. The time interval between bottom blowdown processes can only be calculated indirectly by taking the boiler efficiency, the feedwater quality and the admissible boiler water quality into account.

Application

In steam boiler plants operating without constant supervision. Automation of intermittent blowdown by generating electric pulses to initiate a blowdown cycle via the GESTRA rapid-action intermittent blowdown valve MPA.

If space underneath the boiler is of concern, (M)PAs that can be tilted by 45° are available on request.

Controls

| Type | Design | Interval time | Pulse duration sec | Mains voltage | Version | | |
|----------|---|-----------------|-----------------------|------------------|---------|---|---|
| | | | | | a | b | f |
| LRR 1-40 | Continuous/intermittent blowdown controller for installation in control cabinet, with strainer and solenoid valve | 1 h – 120 h | 1 – 60 | 230 V / 50 Hz | – | ● | – |
| TA 5 | Cycling timer PRS 7 as plug-in unit in plastic case, strainer, solenoid valve | 30 min – 31.5 h | 1 – 63 | 230 V / 50 Hz | – | ● | – |
| TA 6 | Cycling timer PRS 7 in sheet-steel case, strainer, solenoid valve, all component parts assembled and interconnected on a mounting panel | 30 min – 31.5 h | 1 – 63 | 230 V / 50 Hz | ● | – | – |
| TA 7 | Cycling timer PRS 8 integrated in solenoid valve plug, strainer, solenoid valve | 30 min – 10 h | 0.5 – 10 | 230 V / 50 Hz | – | – | ● |

Three-Way Solenoid Valve

| Max. service pressure [bar] | Min. differential pressure [bar] | Connection | Protection |
|--------------------------------|-------------------------------------|------------|------------|
| 16 ¹⁾ | min. 0.5 | ¼" BSP | IP 65 |

¹⁾ Max. admissible pressure for diaphragm actuator: 6 bar

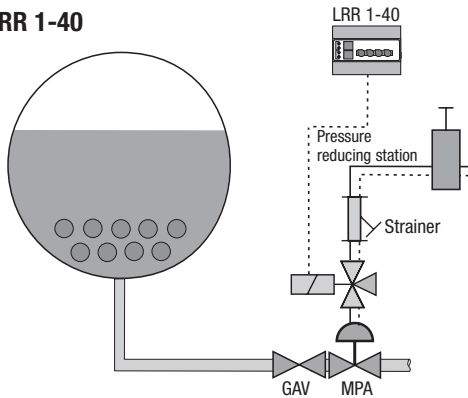
Version

- a = Field case
- b = Plug-in unit in plastic case
- c = 19" slide-in unit
- e = Case for panel mounting
- f = Integrated in solenoid valve plug

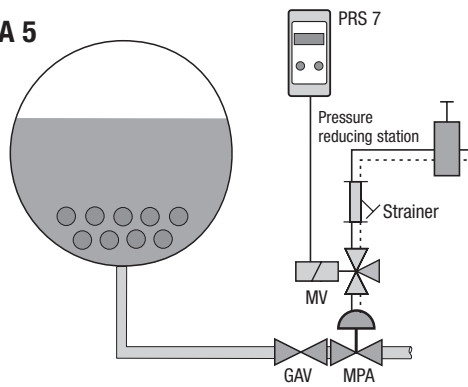
Strainer

| Body | Material | | Connection | Mesh size [mm] |
|----------------|----------|--|------------|----------------|
| | Filter | | | |
| Gun metal Rg 5 | 1.4571 | | ½" BSP | 0.5 |

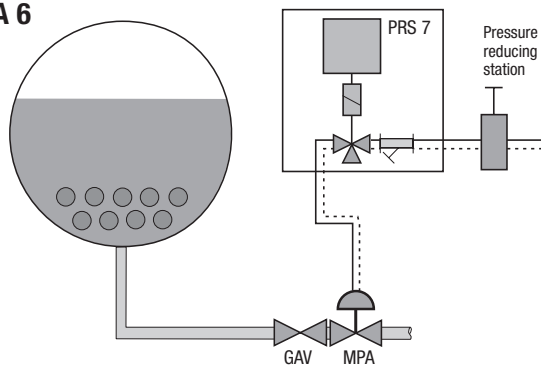
LRR 1-40



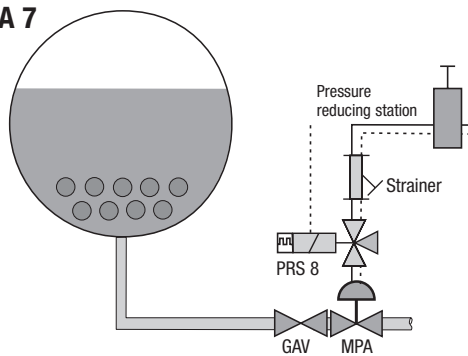
TA 5



TA 6



TA 7



| Type | DN | PN | Stock code |
|--|----|---------|------------|
| TA 5 | | | 3602040 |
| Pressure reducing station | | | 146474 |
| MPA 46 | | | |
| < 6 t/h | 25 | 50 | 3661500 |
| < 24 t/h | 40 | | 3661700 |
| MPA 47 | | | |
| < 6 t/h | 25 | 63 | 3671500 |
| < 24 t/h | 40 | | 3671700 |
| MPA 110 Δp 160 bar | 25 | 250 Fl. | 365150002 |

GAV see page 71

| Type | DN | PN | Stock code |
|--|----|---------|------------|
| TA 6 | | | 3602141 |
| Pressure reducing station | | | 146474 |
| MPA 46 | | | |
| < 6 t/h | 25 | 50 | 3661500 |
| < 24 t/h | 40 | | 3661700 |
| MPA 47 | | | |
| < 6 t/h | 25 | 63 | 3671500 |
| < 24 t/h | 40 | | 3671700 |
| MPA 110 Δp 160 bar | 25 | 250 Fl. | 365150002 |

GAV see page 71

| Type | DN | PN | Stock code |
|----------------------------------|----|----|------------|
| TA 7 | | | 3602242 |
| Pressure reducing station | | | 146474 |
| MPA 46 | | | |
| < 6 t/h | 25 | 50 | 3661500 |
| < 24 t/h | 40 | | 3661700 |
| MPA 47 | | | |
| < 6 t/h | 25 | 63 | 3671500 |
| < 24 t/h | 40 | | 3671700 |

GAV see page 71