PRESSURE RETAINING VALVE

Data Sheet

ADVANTAGE

- constant, low vibration control
- low-maintenance
- low pressure increase until the valve is fully opened
- frictionless components
- hermetically sealed by a chambered flat diaphragm
- for viscous media and media containing solid particles

UTILISATION

Pressure retaining valves are used where a constant back pressure is required for operating process systems. When installed as a bypass, it can also be used as a relief valve for reducing pressure peaks. It has an almost zerostatic lower body that makes it particularly suitable for use in very high-purity water applications. The variety of available materials covers a wide range of applications.

VALVE FUNCTION

The set spring force presses the diaphragm onto the seal seat. If the system pressure exceeds the operating pressure value, the valve opens.

FEATURES

- Compact construction
- Good control characteristics
- Low maintenance due to uncomplicated design
- Control unit is hermetically separated from flow medium by EPDM/PTFE-coated diaphragm
- Zero static lower body
- Mounting position depends on flow direction
- Valve mounting with threaded insert on lower body
- Valve can also be adjusted under working pressure

Via Donatori di Sangue, 1 - 02100 Rieti (Italy)
+39 074622841 | emecpumps.com

emec
SIMPLE AS WATER

qualityaustria
SYSTEM CERTIFIED
ISO 9001:2015
ISO 14001:2015
BS OHSAS 18001:2007

PRESSURE RETAINING VALVE

Data Sheet

FEATURES

size d(mm)	16
DN (inch)	10
PN(bar)	10
setting range (bar)	0.5-10

Working Pressure: set pressure plus flow dependent pressure increase (see characteristic curves).
Opening Pressure: DN 10: 0,5 bar
Hysteresis: ≤ 0,5 bar
Flow Direction: see arrow direction on the body

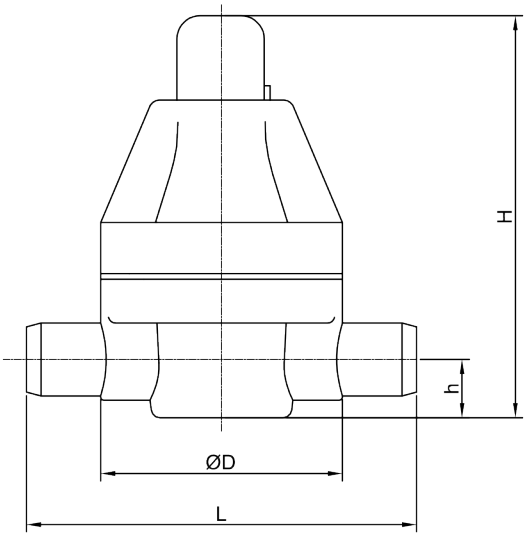
MATERIALS

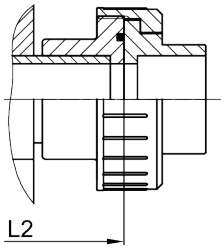
Housing	Operating temperature	Diaphragm
PVC-U	0 to + 60 °C	EPDM
PP	- 10 to + 80 °C	EPDM / PTFE coated
PVDF	- 20 to + 100 °C	

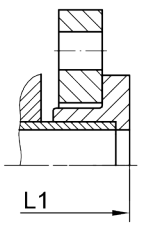
DIMENSIONS in mm

d	DN	L	L1	L2	D	h	H
16	10	134	140	154	83	20	137

L = standard connection, L1 = with flange, L2 = with screw connection







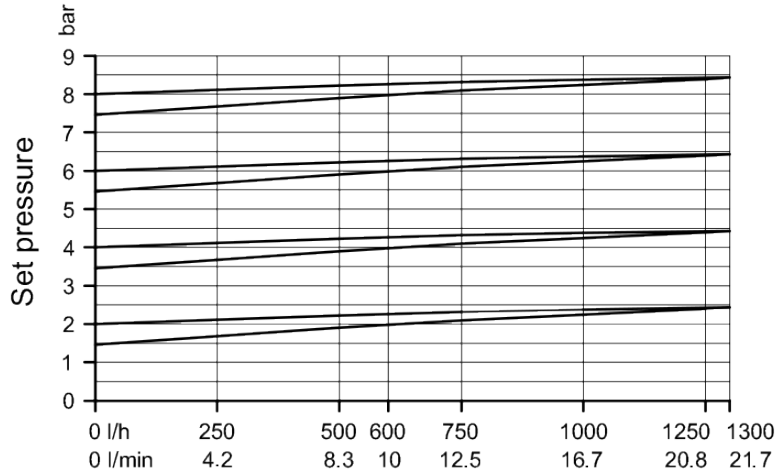
The pressure retaining valve can be set to a specified opening pressure at our plant if desired.

Via Donatori di Sangue, 1 - 02100 Rieti (Italy)
+39 074622841 | emecpumps.com

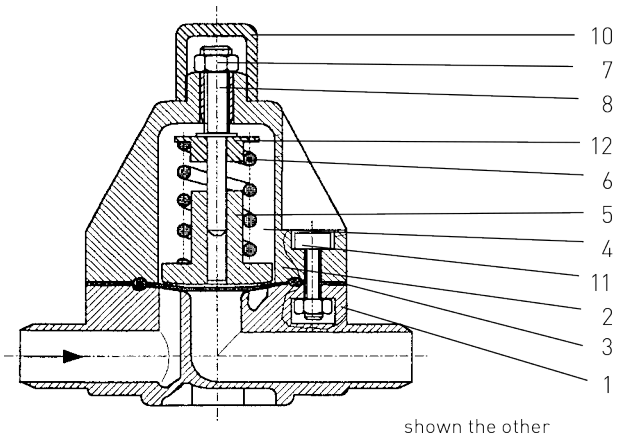
emec
SIMPLE AS WATER

PRESSURE/TEMPERATURE DIAGRAM

The pressure/temperature limits are applicable for the stated nominal pressures and a computed operating life factor of 25 years. These are standard values for harmless media (DIN 2403), to which the valve material is resistant.



DISMANTLING INSTRUCTIONS



shown the other way around

No.	Description
1.	Valve body
2.	Upper valve body
3.*	Diaphragm
4.*	Piston
5.	Compressor
6.*	Compression spring
7.	Lock nut
8.	Adjusting screw
9.	Cylinder screw
10.	Cap
11.	Hexagonal socket-head bolt with nut and covering cup
12.	Spring plate

* Parts subject to wear or recommended spare parts

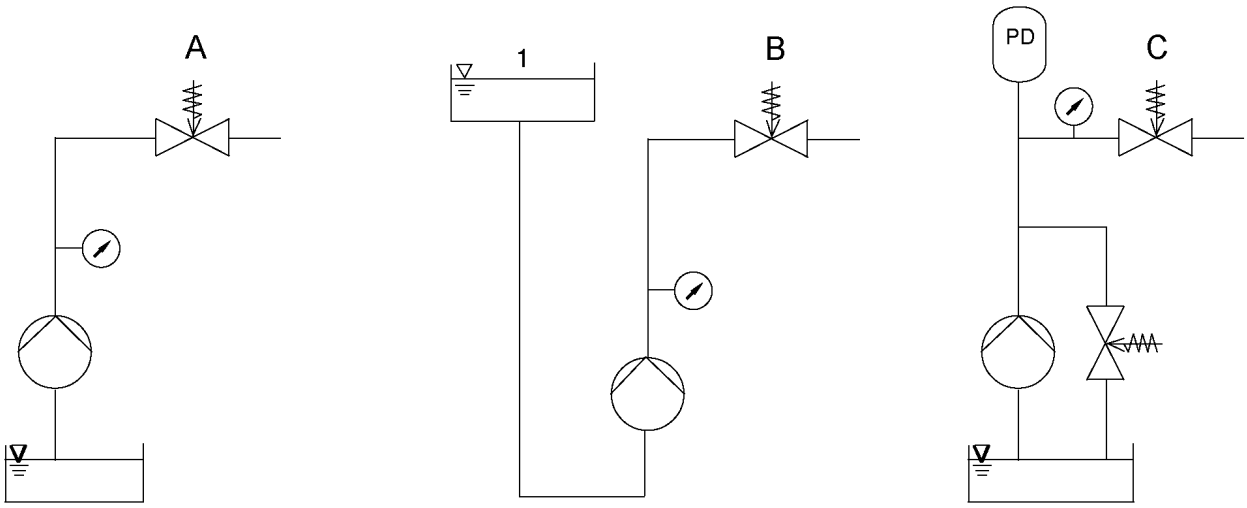
1. Dismantle the upper valve body:
   1.1 Put the valve in an upright position
   1.2 Unscrew the cap (14)
   1.3 Undo the locknut (7) on the adjusting screw (8) and undo the adjusting screw until the compression spring (6) is fully released
   1.4 Remove the covering caps on the screws (11) of the upper body and undo the screws
   1.5 Lift the upper body (2) upwards and remove the spring plate (12) and the spring (6)

Assembly is done in the reverse order!

Operating faults and possible causes

Fault	Cause	Correction
Valve not sealed at the diaphragm	Diaphragm not pressed on hard enough	Tighten screws (10)
Pressure falls below the set value	Piston base (2) not sealed	Check piston and piston base seal and possibly replace. Dismantle lower body 1.1-2.4
	Diaphragm (3) not sealed	Replace diaphragm, dismantle lower valve body 1.1-2.4
Medium leaks out at the adjusting screw	Diaphragm is faulty	Replace diaphragm, dismantle lower valve body 1.1-2.4

Applications



A = generation of a constant working pressure
B = use at high inlet pressure
C = optimal solution for the reduction of pressure surges with overflow valve to protect the system