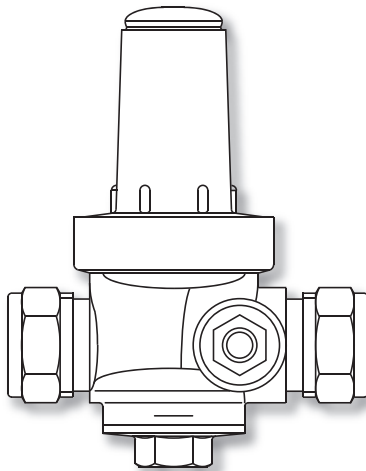


Pressure Reducing Valve with Gauge

PRVG15 & PRVG22

Installation and Maintenance Instructions



Intatec Ltd

Airfield Industrial Estate
Hixon
Staffordshire
ST18 0PF

In this procedure document we have endeavoured to make the information as accurate as possible.

We cannot accept any responsibility should it be found that in any respect the information is inaccurate or incomplete or becomes so as a result of further developments or otherwise.

Tel: **01889 272 180**

Fax: **01889 272 181**

email: **sales@intatec.co.uk**

web: **www.intatec.co.uk**

Introduction

Pressure reducing valves are installed in water systems to stabilise and reduce inlet pressures from mains water supplies or boosted water systems.

Trade-Tec pressure reducing valves are factory set to maintain a 3 bar downstream pressure.

The pressure can be adjusted using a flat head screw driver whilst reading the downstream pressure on the pressure gauge.

Products

15mm Pressure Reducing Valve with Pressure Gauge and 15mm Reducer for 15mm pipe	PRVG15
22mm Pressure Reducing Valve with Pressure Gauge	PRVG22

Technical Specification

Maximum inlet pressure:	16 bar
Adjustment range:	1 to 6 bar
Maximum inlet temperature:	80°C
Factory pre-setting:	3 bar
Pipe connections - compression:	BS EN 1254-2
Pipe connection - sizes:	15mm/22mm

Installation

The water supply to which the Tradetec valves are to be installed must be thoroughly flushed and cleaned to remove any debris which may have accumulated during installation.

Failure to remove any debris may affect the performance and the manufacturer's warranty of the product.

Independent in-line filters must be fitted upstream of the valve to protect the mechanical components in the PRV, these should be installed as close as practically possible to the inlets of the valve.

It is recommended, especially in hard water areas, that a water softener such as the ActivFlo or ActivFlo lite be fitted to reduce the risk of calcium deposits forming.

Ensure that the pressure reducing valve (PRV) is suitable for the intended application and suits condition on site.

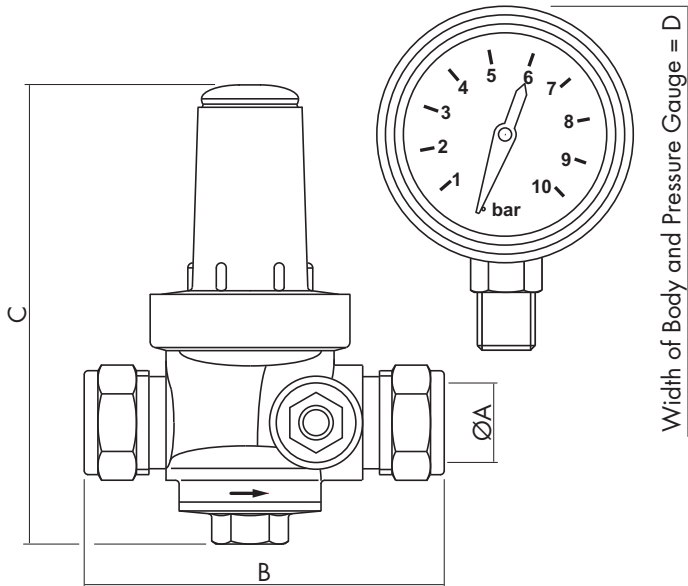
Remove the blanking plug from the gauge port in the valve body and fit the pressure gauge (supplied) using a suitable sealing method.

Ensure that the direction arrow on the valve body is pointing in the same direction as the water flow.

Install the valve into copper pipework and tighten the two compression nuts, using a suitably sized spanner (22mm only) tighten to 45 Nm to make water tight joints and check connections for any possible leaks.

It is also recommended that an isolation valve is fitted upstream of the PRV and the in-line strainer to allow servicing or possible replacement in the future.

Dimensions



Code	A	B	C	D
PRVG15	15	98	104.5	117
PRVG22	22	98	104.5	117

* All dimensions are in mm

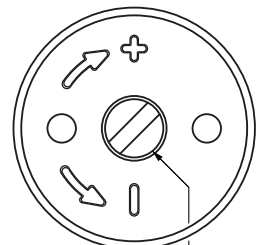
Setting the Outlet Pressure (Static)

Ensure all outlet fittings (taps and showers) installed downstream of the PRV are closed.

The adjusting screw is flush with the top of the spring housing.

Using a suitably sized screw driver turn the adjusting screw, visible at the top of the spring housing, anti-clockwise to reduce the pressure and clockwise to increase it.

Use the pressure gauge to help set the valve to the specified outlet pressure.

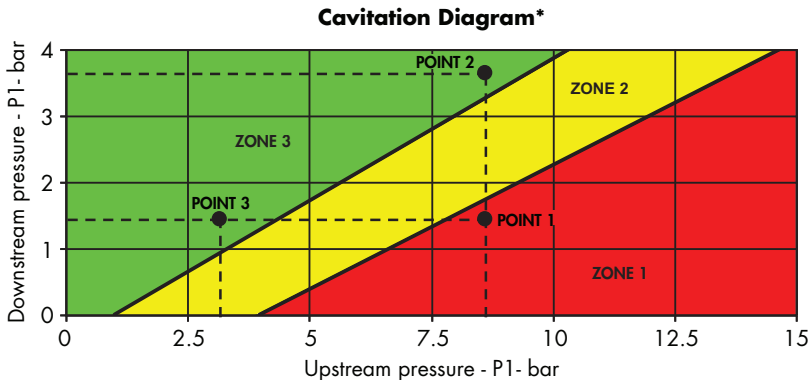


Adjuster with screw driver slot

Cavitation Diagram

In order to prevent cavitation, which can cause excessive noise, vibration and damage to the valve and downstream pipe, in certain pressure situations with high inlet pressures and low outlet pressures (high pressure loss) then a number of pressure reducing valves may be required.

The cavitation diagram shows three areas of operation depending upon the upstream and downstream (outlet) pressures.



- **ZONE 1: Damage and Noise** - The characteristics of cavitation are clearly audible and visible inside the pressure reducing valve and pipework. The valve should not be used under these conditions.
- **ZONE 2: Critical Zone** - Highlights the possibility of cavitation of occurring inside the pressure reducing valve or pipework. Using the valve under these conditions should be avoided and is not recommended.
- **ZONE 3: Operating Zone** - The pressure reducing valve works under its optimum conditions. The valve can safely be used under these conditions.

In order to avoid cavitation occurring the ratio between the maximum upstream pressure and the outlet pressure should not exceed a value of 2.5.

- * **NOTE:** The cavitation diagram has the sole purpose of supplying the technician with a quick reference for the system conditions to determine if cavitation will be present and the likely level.

Example

If the pressure reducing valve is used under the following conditions;

- Upstream pressure: $P_m = 8.5$ bar
- Outlet pressure: $P_v = 1.5$ bar

On the Cavitation Diagram these pressures correspond to POINT 1 in ZONE 1.

Ratio $P_m/P_v = 8.5/1.5 = 5.67$.

Solution

Use 2 pressure reducing valves in series.

First valve using the following conditions;

- Upstream pressure: $P_m = 8.5$ bar
- Outlet pressure: $P_v = 3.5$ bar

Pressure ration $8.5/3.5 = 2.42 < 2.5$

On the Cavitation Diagram these pressures correspond to POINT 2 in ZONE 3.

Second valve using the following conditions;

- Upstream pressure: $P_m = 3.5$ bar
- Outlet pressure: $P_v = 1.5$ bar

Pressure ration $3.5/1.5 = 2.33 < 2.5$

On the Cavitation Diagram these pressures correspond to POINT 3 in ZONE 3.

NOTE: The outlet pressure of the pressure reducing valve **MUST NEVER** be higher than the maximum pressure of components and outlets (tap and showers) downstream of the valve.

Hard Water Areas

In hard water areas it is recommended that a water softener such as the ActivFlo or ActivFlo lite be fitted to reduce the risk of calcium deposits forming.

Notes:

Notes:

Please leave this Manual for the User

To activate your product warranty please visit

www.intatec.co.uk

and click on Product Registration

Intatec Ltd

Airfield Industrial Estate
Hixon
Staffordshire
ST18 0PF

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web: **www.intatec.co.uk**