

**CRANE**

FLUID SYSTEMS

# PRESSURE REDUCING VALVE (PRV)

## D1625 & D1625L DIRECT ACTING – PISTON STYLE

- The Pressure Reducing Valve reduces and stabilises the fluid pressure on a water distribution system, according to a preset value.
- Setting is by means of an integral adjustable mechanism.
- ¼" threaded tapping point included for optional fitting of a pressure gauge, for direct reading of outlet pressure.
- ½" to 1" sizes are Kitemarked to BS EN 1567.
- Adheres to requirements for use on potable water systems and is approved by ACS (Attestation De Conformité Sanitaire, France).

**D1625**

### TECHNICAL SPECIFICATION

<b>Maximum allowable working pressure (PN):</b>	25 bar
<b>Outlet Pressure Setting:</b>	From 1 to 5.5 bar
<b>Factory Set Outlet Pressure:</b>	3 bar
<b>Maximum Temperature Limit:</b>	0 to 130°C
<b>Compatible fluids:</b>	Water Glycolate solutions max glycol 50%
<b>Pipe connection threads:</b>	Female Threaded to ISO 228/1
<b>Gauge connection:</b>	Rp1/4" according to EN 10226-1
<b>Approval:</b>	Kitemark (1/2" to 1") ACS Approved

## PRODUCT LIFE CYCLE

The life of the valve is dependent on its application, frequency of use and freedom from misuse. Compatibility with the system, into which it is installed, must be considered.

The properties of the fluid being transported such as pressure, temperature and the nature of the fluid must be taken into account to minimise or avoid premature failure or non-operability.

A well-designed system will take into consideration all the factors considered in the valve design, but additionally electrolytic interaction between dissimilar metals in the valve and the system must be examined.

Before commissioning a system, it should be flushed to eliminate debris and chemically cleaned, as appropriate, to eliminate contamination, all of which will prolong the life of the valve.

## LIMITS OF USE

These valves have been categorised in accordance with the Pressure Equipment Directive 2014/68/EU.

**The fluid to be transported is limited to group 2 liquids only. On no account must these valves be used on any Group 1 liquids, group 1 gases, group 2 gases, or unstable fluids.**

**Note:** Valves that are classified as SEP (Sound Engineering Practice) are not CE marked and therefore do not require a declaration of conformity.

Valves must be installed into a well-designed system and it is recommended that the system be inspected in accordance with the appropriate national and regional legislation.

Valves must be installed by trained personnel only.

Service temperature and pressure as indicated on product documentation should not be exceeded.

The installation should be designed to provide adequate means of draining and venting to avoid harmful effects such as water hammer, vacuum collapse, corrosion and uncontrolled chemical reactions and to permit cleaning, inspection and maintenance in the correct manner.

Valves are not designed to operate under high shock loadings. Where pressure increases occur due to shock loading (water hammer), they should be added to the working pressure to obtain the total pressure acting on the valve. The total must not exceed the pressure rating of the valve. A pressure surge, or shock, is usually caused by the rapid closure of a check valve or quarter turn valve resulting in a sudden reduction in flow rate.

It is the responsibility of the installer to ensure that the valves do not exceed the allowable limits of pressure.

Not suitable for fatigue loading, creep conditions, fire testing, fire hazard environment, corrosive or erosive service, transporting fluids with abrasive solids, high velocity gases that can cause shock waves.

The valves have been designed for loadings, appropriate to its intended use and other reasonably foreseeable operating conditions. Loadings caused by traffic, wind and earthquake have not been taken into account.

Any queries regarding service applications should be addressed to the Crane Fluid Systems - Technical Sales Department.

**LIMITS OF USE (CONTINUED)**

Fig. No.	PED Category by Valve Size (DN)				Product Application			
	SEP	CAT 1	CAT 2	CAT 3	Group 1 Gas	Group 2 Gas	Group 1 Liquid	Group 2 Liquid
D1625 & D1625L	15 - 100	-	-	-	-	-	-	✓

**SAFETY REQUIREMENTS**

The pressure reducing valve conditions must never exceed the permitted maximum working pressure, maximum setting pressure and temperature.

Only use the pressure reducing valve with compatible fluids.

In case of installation at boilers entrance, water heaters or hot water storage tanks, it is fundamental to use, after the pressure reducing valve, an expansion vessel for sanitary use even if a check valve has already been installed.

The pressure reducing valve must be installed by qualified personnel.

Do not perform any investigation or maintenance procedures on the valve without having completely discharged the pressure of the system.

If water temperature exceeds 50°C, take the necessary actions to avoid serious burns and hazards to people. The operator should use suitable hand protection at high temperature conditions.

Maintenance Engineers & Operators are reminded to use correct fitting tools and equipment.

A full risk assessment and methodology statement must be compiled prior to any maintenance.

The risk assessment must take into account the possibility of the limits of use being exceeded whereby a potential hazard could result.

Failure to comply with these instructions may lead to an incorrect installation, operation or maintenance, which may cause the device malfunctioning and may result in damage or injury.

For more information on the product, please contact your Crane representative.

## INSTALLATION

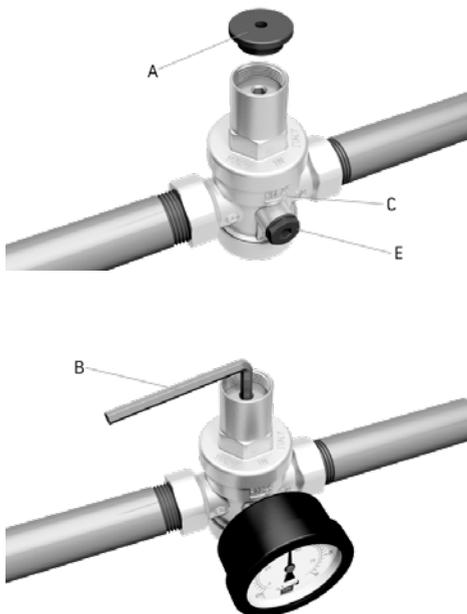
Valves must be provided with adequate support. Adjoining pipework must be supported to avoid the imposition of pipeline strains on the valve body.

It is recommended to install a strainer before the pressure reducing valve, in order to eliminate any impurities in the water which could compromise the functioning.

Proceed as follows:

1. Flush the system to prevent the impurities from damaging the device.
2. Check that the operating pressures and temperatures are within the permitted range.
3. The housing of the device must ensure sufficient space for adjustments and maintenance.
4. Install isolation valves upstream and downstream the pressure reducing valve.
5. Assemble the optional pressure gauge (article supplied separately) in the place provided "E".
6. Make sure that the water flow follows the direction of the arrow "C".

**CAUTION!** Before commissioning the PRV, ensure that pressure gauge connections on the valve body are sealed, with either pressure gauges or sealing plugs.



We advise to interrupt the installation of the device if these instructions have not been completely read and understood or if there are aspects of the installation or the system which do not meet the stated requirements.

## ADJUSTMENT

The pressure reducing valve is pre-set at a 3 bar outlet pressure.

The pressure gauge (optional) shows the value of the already reduced pressure (Ps) of the outlet fluid. The outlet pressure should always be set with the downstream isolated. A small drop in outlet pressure can be expected when the system downstream isolation valve is opened and the system returns to flow conditions.

To change the outlet pressure, proceed as follows:

1. Close the shut-off valve placed downstream the pressure reducing valve.
2. Remove the cover "A" and use the regulator "B" to set the pressure: rotating **CLOCKWISE** the pressure value will increase, while rotating **COUNTERCLOCKWISE** it will decrease. After each action on the regulator "B" discharge the outlet pressure by opening the shut-off valve and closing it again after a few seconds; check if the outlet pressure from the pressure reducing valve is the one desired.
3. Once the required pressure has been reached, re-fit the plastic plug "A".
4. Take note of the value of the set pressure for future maintenance operations.

## MAINTENANCE

Periodically check that the outlet pressure value from the pressure reducing valve is the one set during installation.

In order to check correctly, the shut-off valve placed downstream of the pressure reducing valve has to be closed.

- If the outlet pressure is **LOWER** than the value set during installation, ensure that the downstream isolation valve is fully closed - Any leak would cause an incorrect reading of the outlet pressure. If the shut-off valve is sealed tight, set the pressure reducing valve again and re-check.
- If the outlet pressure is **HIGHER** than the value set during installation, ensure that the downstream isolation valve is fully closed - If the pressure remains **CONSTANT**, re-set the pressure reducing valve again; if the pressure **INCREASES** gradually above the set value, extra maintenance of the pressure reducing valve is required.



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