



Single / Double Check Valves

Fig.150W | 150CW
Single Check Valves

Fig.250W | 250CW
Double Check Valves

PN10



CE Marking and the Pressure Equipment Directive 2014/68/EU

The regulations apply to all valves with a maximum allowable pressure greater than 0.5 bar. Valves with a maximum allowable pressure not exceeding 0.5 bar are outside the scope of the Directive. Valves are categorised in accordance with the maximum working pressure, size and ascending level of hazard, which is dependent on the fluid being transported. Fluids are classified as Group 1, dangerous fluids or Group 2, all other fluids including steam. Categories are SEP (sound engineering practice) and for ascending levels of hazard, I, II, III or IV. All valves designated as SEP do not bear the CE mark nor require a Declaration of Conformity. Categories I, II, III or IV carry the CE mark and require a Declaration of Conformity (Note- all valves up to and including 25mm (1") having a maximum allowable pressure greater than 0.5 bar are designated SEP regardless of fluid group.)

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, the 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.

Fig. No	Description	Size Range
150W	PN10 Single Check Valve Compression	1/2" to 2"
150CW	PN10 Single Check Valve Compression	15mm, 22mm and 28mm
250W	PN10 Double Check Valve Threaded	1/2" to 2"
250CW	PN10 Double Check Valve Compression	15mm, 22mm and 28mm

Limits of Use

The valves to which these installation, operation and maintenance instructions apply have been categorised in accordance with the Pressure Equipment Directive 2014/68/EU.

The fluid to be transported is limited to Group 2 liquids i.e. non-hazardous and on no account must these valves be used on any Group 2 gases, Group 1 liquids or Group 1 Gases, or unstable fluids.

These valves are classified as SEP (Sound Engineering Practice), and therefore are not CE marked and do not require a declaration of conformity.

Operating Pressures and Temperatures

Valve	Shell Pressure	Max Inlet/Working Pressure	Temperature
150W	16 bar	10 bar	-10°C to 85°C
150CW	16 bar	10 bar	-10°C to 85°C
250W	16 bar	10 bar	-10°C to 85°C
250CW	16 bar	10 bar	-10°C to 85°C

All check valves are WRAS Approved with a restricted maximum temperature of 60°C for continuous and intermittent service conditions.

Not suitable for fatigue loading, creep conditions, fire testing, fire hazard environment, corrosive or erosive service, transporting fluids with abrasive solids.

Pressure / Temperature Rating

These valves must be installed in a piping system where the normal pressure and temperature do not exceed the above ratings.

If system testing will subject the valve to pressures in excess of the working pressure rating, please check with Hattersley.

The maximum allowable pressure in valves as specified in the standards is for non-shock conditions. Water hammer and impact, for example, should be avoided.

If the limits of use specified in these instructions are exceeded or if the valve is used on applications for which it was not designed, a potential hazard could result.

Layout and Siting

These valves may be installed in horizontal and vertical pipework. If in vertical pipework the flow must be in upwards direction only.

Check valves having 6 diameters of straight lengths of pipe upstream and 3 diameters downstream are suitable for velocities up to 3 metres/second. If the valve is situated such that turbulence occurs, or is situated close to reciprocating pumps, then the velocity should not exceed 2 metres/second.

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

Installation

Unpack the valve and check the bores are clean and free from foreign material.

These valves must be installed with the direction arrow on the body coincident with the direction of flow in the pipeline.

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed.

Valves are precision manufactured items and as such, should not be subjected to misuse such as careless handling, allowing dirt to enter the valve through the end ports and lack of cleaning both valve and system before operation.

All special packaging material must be removed.

Immediately prior to valve installation, the pipework to which the valve is to be fitted should be checked for cleanliness and freedom from debris.

150CW and 250CW - Compression

These valves are fitted with compression ends to BS EN-12542-2, which are suitable for installation into copper pipework to BS EN 1057: R250 half hard and are provided with olives and compression nuts.

Compression nuts must be tightened hand tight and then further tightened by one complete turn.

150W and 250W - Threaded

The valves are supplied with taper threads and, with the use of a thread sealant will give a pressure tight seal.

To avoid distortion of the valve, when fitting and tightening the pipe, the valve must be gripped using the flats provided at the same end as the pipe is being fitted.

Care should be taken to avoid 'pipe ending'. This is a condition that occurs when the pipe is screwed in too far resulting in distortion of the valve seat.

The male thread on the pipe must have fully formed, undamaged threads.

Maintenance

The Fig. 150W, 150CW, 250W and 250CW check valves are maintenance free.

The valve should be at zero pressure and ambient temperature prior to any inspection.

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.

A maintenance programme should, therefore, include checks on the development of unforeseen conditions, which could lead to failure.



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