

Pegler

Installation, Operating and Maintenance Instructions V912 Cast Iron Y Strainer



V912

THE PRESSURE EQUIPMENT DIRECTIVE 97/23/EC and CEMARKING

This has been implemented in United Kingdom law by the Pressure Equipment Regulations 1999 (SI 1999/2001).

The regulations apply to all valves with a maximum allowable pressure greater than 0.5 bar. 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") are designated SEP regardless of the fluid group).

Section 1-Technical Details

1.1 The valves shall be drawn from the Pegler Commercial Cast Iron V912 series (available from Pegler) are intended for the collecting of system debris in sections of pipe work and equipment in HVAC applications.

1.2 Tube compatibility

Valve Type	Flange Connection Specification
V912 PN16	Flanges to EN1092-2 PN16

1.3 Pressure and Temperature ratings

Valves must be installed in a piping system whose normal pressure and temperature does not exceed the stated rating of the valve. The maximum allowable pressure in valves as specified in the standard is for non shock conditions. Water hammer and impact should also be avoided.

If system testing will subject the valve to pressures in excess of the working pressure, this should be within the "shell test pressure for the body" to a maximum of 1.5 times the PN rating of the valve and conducted with the valve fully opened.

It may be hazardous to use these valves outside of their specified pressure and temperature limitations and also when not used for the correct application.

Pegler

Technical Performance Specification

V912 (Flanged ends) all sizes rated at PN16
Self acting
Size range DN65-DN300
Raised Flanges in accordance with BS EN1092-2:1997 PN16

Section 2-Installation

2.1 Electrical continuity

All metallic pipework should comply with the equipotential bonding requirements of the current edition of the IEE wiring regulations (BS7671:2001). After all plumbing work has been completed continuity checks are to be conducted by a qualified electrician in accordance with the regulations.

2.2 Heat free

The Pegler V912 Series offers Heat free jointing across its whole range of flanged valves. These valve connections must not be brazed.

2.3 Insulation

For all Pegler V912 Series valves, it is recommended that you adhere to the insulation requirements as specified by the Water Supply (Water Fittings Regulations 1999, ensuring at all times that access for valve operation is taken into consideration.

2.4 Valve selection

Valves must be properly selected for their intended services conditions. Provided it is installed correctly and receives adequate preventative maintenance it should give years of trouble free service.

They must be compatible with the system design, pressure and temperature requirements and must be suitable for the fluids that they are intended to carry. Interactions between metals in the pipe system must be considered as part of the valve selection.

V912 Strainers valves perform best when they are installed in a horizontal position with the strainer sited beneath the pipeline but may be installed in a vertical pipeline as long as the flow direction is respected with the body arrow pointing in an upward direction.

2.5 Location/end of line service

Valves must be provided with adequate support. Adjoining pipe work must be supported to avoid the imposition of pipeline strains on the valve body, which would impair its performance,

Heavy valves may need independent support or anchorage.

To ensure ease of operation, adjustment, maintenance and repair, valve siting should be decided during the system design phase.

These strainers must not be used in an end of line application without a blanking flange being fitted on the downstream end of the valve..

2.6 Pre Installation- Health and Safety

Before starting work on any installation a risk assessment must be made to consider the possibility of operational limits being exceeded and reduction or elimination of any potential hazards.

1. Protective clothing and safety equipment must be utilized as appropriate to the hazard presented by the nature of the process to which the valve is being installed or maintained.

Pegler

2. Before installing or removing a valve the pipeline circulating pumps (when fitted) must be turned off. The pipeline must be depressurised, drained and vented. Valves must be fully opened to ensure release of any pipeline or valve pressure.
3. Fitters must be trained in manual and mechanical handling to enable them to safely lift and install Pegler valves.
4. The valve selected must be suitable for the required service conditions. The pressure and temperature limitations are indicated on the valve nameplates, body or data plate. They must not be exceeded.
5. The V912 is designed to protect other valves and equipment from system debris.
6. Any flushing fluid used to clean the pipeline must not cause any damage to the valve and its components.
7. Pegler valves must not be misused by lifting them by their hand wheels, levers or valve stems.
8. Pegler valves are not suitable for fatigue loading, creep conditions, fire testing, fire hazard environment, corrosive or erosive service, or for carrying fluids containing abrasive solids. There is no allowance for corrosion in the design of these valves. Design for this valve do not allow for decomposition of unstable fluids and must not be used where this could occur.
9. Pegler valves are not designed to withstand the effects of fire, wind, earthquakes and traffic.
10. All Health and Safety Rules must be followed when installing and maintaining valves.

Installation – Flanged Y pattern strainers

Prior to installation a check of the nameplate and body markings 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, lack of cleaning of both valve and system before operation and excessive force during assembly.

Unpack the valve and check the bores are clean and free from foreign material. Valves must be provided with adequate support. Adjoining pipe work must be supported to avoid the imposition of pipeline strains on the valve body, which would impair its performance. Allow space for the removal of the strainer basket in the event that cleaning is required.

Valves should not be lifted without taking into consideration the weight for health and safety reasons.

Strainers must be assembled with the correct gaskets and mating flanges that are compatible with the V912 strainer. Prior to assembly the gasket and mating flange must be inspected to ensure that they are clean and free from damage.

Installing damage or unclean gaskets and mating flanges could lead to valve failure.

When assembled with the gasket and mating flanges correct size bolts must be used and tightened in sequence to ensure that the gasket is compressed equally across its surface to give the correct seal. All bolt holes should be utilized.

In systems where corrosion could be a potential hazard, wall thickness checks on the body and bonnet should be made. This requires either the removal of the valve from the pipeline or the removal of the bonnet with system at zero pressure. If the wall thickness of the valve has reduced by 25% then the valve should be replaced.

Pegler

Section 3 Testing

3.1 TESTING

DN65 to DN300 - each products shall be pneumatically tested at 6 bar (90psig) for 5 sec. There shall be no signs of visible leakage from the Body / Bonnet joint, surfaces or seals.

After testing the valves shall be left fully 'Open'.

Type Testing-These tests shall be carried out at Pegler on a sample basis in accordance with BS6001.

	<u>DN65 to DN300</u>
-	
a) Hydrostatic body test	24bar
b) Hydraulic seat test	17.6bar
c) Pneumatic body test	6 bar
d) Pneumatic seat test	6 bar

PN rated valves

PN	Non-shock pressure at temperature range	Non-shock pressure at Maximum temperature
16	16bar -10°C up to 120°C	13bar at 220°C
	Suitable for use with Group 2 Liquids only	

Not suitable for use with Group 1 Liquids, Group 1 or Group 2 Gases

Certification

Not applicable

Operation/ Commissioning

The valve is self acting but the strainer may require cleaning after commissioning and then at regular intervals during its lifecycle.

MAINTENANCE

The valve should be at zero pressure and ambient temperature prior to any maintenance. Maintenance Engineers and Operators are reminded to use the 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 program should therefore include checks on the development of unforeseen conditions, which could lead to failure. In systems where corrosion could be a potential hazard, wall thickness checks on the body and bonnet should be made. This requires either the removal of the valve from the pipeline or the removal of the bonnet with system at zero pressure. If the wall thickness of the valve has reduced by 25% then the valve should be replaced.

Servicing of the Strainer basket

V912 Y pattern strainers have mesh baskets that are held in position by a bolted cover and sealing gasket.

To carry out cleaning of the mesh basket the strainer must be isolated on both inlet and outlets. The bolted cover has a draining plug that can be removed to release any fluid retained between the

Pegler

isolating points. Care must be taken to ensure that the fluid drawn off is at a safe ambient temperature and at zero pressure.

The bolted cover can then be removed taking care not to damage the gasket. The bolts should be removed by slackening each bolt, taking up the weight of the cover without causing stress to the flange and bolts during the removal process. The mesh basket can then be removed and cleaned and then replaced.

The cover can then be re-attached, ensuring that the flange surfaces are clean and un-damaged; if necessary a new cover gasket may be fitted. Secure the cover with the bolts being tightened in sequence making sure that the gasket compression is applied equally.

Refit the drain plug prior to system filling.

In systems where corrosion could be a potential hazard, wall thickness checks on the body and bonnet should be made. This requires either the removal of the valve from the pipeline or the removal of the bonnet with system at zero pressure. If the wall thickness of the valve has reduced by 25% then the valve should be replaced.

3.2 Additives

For information on additives compatible with Xpress systems visit www.pegler.co.uk/en/brochures/bulletins. It is strongly recommended to consult a commissioning engineer in conjunction with the manufacturer prior to their use.

3.3 Warranty

Products are subject to a 5 year guarantee that is between Pegler and the final purchaser of the product.

The guarantee is subject to proof of purchase being supplied.

This guarantee does not affect any statutory rights the consumer may have in law.

The guarantee covers manufacturing or material defects and does not cover parts subject to normal wear and tear.

This product range has been designed for the use of homeowners, domestic and commercial applications and therefore the guarantee is subject to the product being properly selected for their intended service conditions.

The guarantee is not applicable where the product is fitted contrary to the conditions in the fitting instructions.

This is reinforced where valves are covered by the European Pressure Equipment Directive (PED97/23/EC) where Installation, Operating and Maintenance Instructions are supplied with each product and/or carton.

Provided it is installed correctly and receives adequate preventative maintenance it should give years of trouble –free service.

Abusive behaviour and accidental damage to the product are not covered by this guarantee.

The extent of this liability is limited to the cost of the replacement of the defective item and not to fitting or consequential damages.

Section 4-Storage

Valves should be stored off the ground in a clean, dry, indoor area. Where desiccant bags are included these should be changed after a period of six months.

Pegler valves are supplied in appropriate packaging to give adequate protection from damage. Cast iron and steel valves may also have end protection caps.

When Pegler valves are fitted to pressure equipment or assemblies, suitable protective devices may be required.

Pegler

Section5 -Contact details

For further details please contact our technical department: **0800 156 0050**

Aalberts Integrated Piping Systems Ltd

St. Catherine's Avenue,
Doncaster,
South Yorkshire,
DN4 8DF

technical@aalberts-ips.com
www.pegler.co.uk