

# Pegler

## **Installation, Operating and Maintenance Instructions**

<b>PRODUCT DATA SHEET</b>	<b>PRODUCT TYPE</b>
PEGLER VALVES PACKAGE	PEGLER V850PN16 DI GATE VALVES

<b>DATE:</b>	<b>PAGES</b>	<b>LEAFLET CODE</b>
22 <sup>nd</sup> September 2015	1 OF: 3.	<b>V850IOM220915</b>

### **THE PRESSURE EQUIPMENT DIRECTIVE 97/23/EC and CE MARKING**

The Pressure Equipment Regulations 1999 (SI 1999/2001) have now been introduced into United Kingdom law.

Valves with a maximum allowable pressure greater than 0.5 bar are covered by these new Regulations. Valves are categorised according to their maximum working pressure, size and rising level of hazard. The level of hazard varies according to the fluid being carried. Fluids are classified as Group 1, dangerous fluids or Group 2, all other fluids including steam. The Categories designated are SEP (sound engineering practice). Valves up to and including 25mm (1") are designated SEP regardless of the fluid group. Those identified as having increased hazard are Categorised as, 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 carries the CE mark and require a Declaration of Conformity. Valves classified from the piping chart would not be included in Category IV.

### **VALVE SELECTION**

It is important that the valve selected is suitable for the required service conditions. Providing it is installed correctly and receives adequate preventative maintenance it should give years of trouble-free service.

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. Designs for this valve do not allow for decomposition of unstable fluids and must not be used where this could occur.

Pegler valves are not designed to withstand the effects of fire, wind, earthquakes and traffic.

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

Pegler V850 are suitable for:

Steam	Water	Oil	Air	Gas	Gas	Gas	Gas
				Inert	Combustible	Corrosive	Oxygen
NO	YES*	NO	NO	NO	NO	NO	NO

\*Group 2 liquids only- defined for potable/drinking water.

### **OPERATIONAL LIMITS**

#### **Pressure and temperature limitations for PN rated valves**

PN	Non-shock pressure at temperature range	Non-shock pressure at Maximum temperature
PN16	16bar-10°C to 80°C	16bar at 80°C

Pegler V850 Categorisation:

DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
S.E.P	S.E.P	S.E.P	S.E.P	S.E.P	S.E.P	S.E.P	S.E.P	S.E.P

CE marking is not required.

### **PRESSURE/TEMPERATURE RATING**

Valves rated at PN16 must be installed in a piping system whose normal pressure and temperature do not exceed these ratings. The maximum allowable pressure in valves as specified in the standards 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 rating, this should be within the "shell test pressure for the body" to a maximum of 1.5 times the PN rating 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.

### **VALVE LOCATION and END-OF-LINE SERVICE**

To ensure ease of operation, adjustment, maintenance and repair, valve siting should be decided during the system design phase. To prevent imposing strain on the valve flanges, pipe work and valves must be adequately supported. These valves are not suitable for end of line service and it is strongly recommend that a blanking plate is fitted to the downstream end of the valve.

### **INSTALLATION**

Unpack the valve and check that the flow paths and valve are clean and free from debris. Check the body and handle markings to ensure that the correct valve has been selected for installation. Before valve installation the pipe work to which the valve is to be connected should be inspected for cleanliness and freedom from debris.

**Gate valves may be fixed in horizontal with stem vertical or vertical pipe lines with stem horizontal, always leaving enough space for the operation of the hand wheel. Fixing a valve in the horizontal plane with the stem horizontal could lead to premature valve failure because of the potential for accumulation of system debris collecting in the valve mechanism.**

Consideration should be given to large sized valves and their weight from a handling, securing and fixing viewpoint.

Pegler gate valves are manufactured to exacting standards and, therefore, should not be subjected to misuse. The following should be avoided:

- Careless handling of the valve- (Valves should not be lifted using the hand wheel).
- Dirt and debris entering the valve through the end ports.
- Excessive force during assembly and handle operation.

Use suitable hangers close to both ends of the valve in order to remove stresses transmitted by the pipe. V850 are DI flanged gate valves-these valves are joined with mating flanges using the threaded bolt holes to secure the assembly.

Bolt tightening should proceed from the bottom flange hole and then use the cross over method with the appropriate torque, taking care to ensure that the correct specification and size of bolt is utilized for the application.

### **OPERATION**

#### **V850 PN16**

To open - an anti-clockwise rotation of the hand wheel will open the valve. When it will go no further return the hand wheel clockwise 1/2 turn.

To close the valve – a clockwise rotation of the hand wheel will close the valve. Closure will be confirmed when the handle can be turned no further.

**Caution:** Service applications with extremes of temperature may cause the wedge to become tight in the valve. The valve may be become stiff to operate in these circumstances.  
Suitable hand protection should be worn when operating valves used in extreme temperature applications.  
The valve should only be used in the fully open or fully closed position.  
Gate valves are not suitable for regulating and throttling service.

### **MAINTENANCE**

A regular maintenance program is the most efficient method of ensuring longer term operational efficiency of the selected valve. Such a program would need to include a risk assessment and a planned procedure of how the maintenance will be carried out. The possibility of operational limits being exceeded and the potential hazards ensuing must be considered as part of this assessment.

This should be implemented to include visual checks on the valve's condition and any development of unforeseen conditions, which could lead to failure.

Should a valve need replacing then the following should be taken into consideration.

The valve should be at zero pressure and ambient temperature before any valve replacement is carried out. The correct fitting tools and equipment should be used for valve replacement work.

Separate means of draining the pipe work must be provided when carrying out any replacement of V850 DI gate valves.

Where there may be any system debris this should be collected and /or filtered by installation of the appropriate protective device.

### **PRODUCT LIFE SPAN**

When a valve is properly selected for its service conditions it should give years of trouble-free service provided it is installed correctly and receives adequate preventative maintenance. By not considering the compatibility of the system design and the pressure and temperature requirements the life expectancy of the valves can be adversely affected and valve failure may occur. The nature of the fluid being carried through the valve could also affect the valve performance as this could lead to premature valve failure. There may also be interactions between metals in the pipe system and the valve which need to be considered. Appropriate flushing and cleaning of the pipe work installation should take place when commissioning the system as this would help extend the valve life.

#### **Reference Material:**

Pegler Commercial Valves Brochure, Pegler website

A Technical File is held at Doncaster as part of the requirements for compliance to the European Pressure Equipment Directive (PED 97/23 EC).

---

MAINTAINING A POLICY OF CONTINUAL PRODUCT DEVELOPMENT PEGLER RESERVE THE RIGHT TO CHANGE SPECIFICATION, DESIGN AND MATERIALS OF PRODUCTS LISTED IN THIS LEAFLET WITHOUT PRIOR NOTICE.