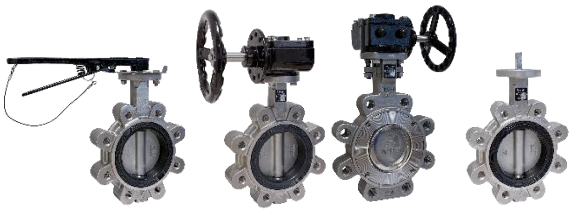
Installation, Operating and Maintenance Instructions.

PEGLER Butterfly Valves Stainless Steel series

SV905, SV905G, SV905HP, SV905BX



PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU

In the context of the **Pressure Equipment Directive**, when used with **Water** (a Group 2 Fluid) and rated at **16bar:**

- Valves up to and including DN300 are designed and manufactured according to Sound Engineering Practice (SEP). Instructions of their use can be found below.
- Valves larger than DN300 are defined as Pressure Accessories. These items carry a CE mark, and a Declaration of Conformity for them can be found on the Aalberts IPS website Home - Aalberts IPS UK

When rated at 25 bar (and 40 bar)

- Valves up to and including DN200 are designed and manufactured according to Sound Engineering Practice (SEP). Instructions of their use can be found below
- Valves larger than DN200 are defined as Pressure Accessories. These items carry a CE mark, and a Declaration of Conformity for them can be found Aalberts IPS website Home - Aalberts IPS UK

Section 1 - Technical Details

1.1 Butterly valve

Pegler Stainless Steel butterfly valves (available from Aalberts integrated piping systems) are intended for the isolation of sections of pipe work and equipment in HVAC, Industrial applications and general commercial applications. The valves are quarter turn operation by geared wheel handles.

Tube compatibility

Valve Type	*Flange Connection Specification*
SV905 series	Fully lugged, to BS EN593 face to face dimensions to BS EN558

1.2 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 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, 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 when not used for the correct application.

Technical Performance Specification

- Fully lugged to BS EN593
- Face to face dimensions to BS EN558
- Size range DN50 to DN600
- Temperature range -10°C to +120°C
- Maximum working pressure 16bar/25bar, depending on type rating
- End of line rated
- ISO5211 mounting plate
- Gearbox: IP68 rated

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 SV905 Series offers Heat free jointing across its complete range with flanged connection technology. These valve connections must not be brazed.

2.3 Insulation

For all Pegler SV905 series stainless steel butterfly valves, it is recommended that you adhere to the insulation requirements as specified by the Water Supply (Water Fittings Regulations 1999), always ensuring that access for valve operation is taken into consideration.

2.4 Valve selection

Valves must be 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

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that they are intended to carry. Interactions between metals in the pipe system must be considered as part of the valve selection.

Butterfly valves perform best when they are installed in an upright position. The direction of flow is not important. They are fitted when the valve is in the open position.

Butterfly valves are designed for isolation and should either be fully opened or fully closed and should not be used for regulation or throttling of flow.

2.5 Location/end of line service

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

Pegler SV905 series stainless steel butterfly valves are suitable for end-of-line service.

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.
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 enabling 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. Valve seats, seals and internal components can be damaged by system debris. Protective devices may need to be fitted, and system flushing may be required.
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 with–stand the effects of fire, wind, earthquakes and traffic.
10. All Health and Safety Rules must be followed when installing and maintaining valves.

2.7 Installation – Flanged valves

- Unpack the valve.
- Check that the valve is correct for its intended use.
- Ensure that any flange protectors, where fitted, are removed.
- Check that the flow paths are clear, clean and free from debris.
- Ensure that the valve is fully open during installation.
- Flange components have their own design limitations and correct selection and compatibility is vital.
- Pressure and temperature must not exceed its rating.
- All bolts must be compatible with the mating flange being used. Refer to technical manual for torque of bolting.
- Pipe and its mating flange should be cleaned and made ready for assembly.
- Piping should be properly supported with the use of correctly sized hanging or securing brackets.
- All pipes need to be aligned correctly to ensure that the valve integrity is maintained, avoiding twisting and distortion of the valves structure and valve damage.
- As the valve is assembled in the pipeline ensure that the bolts are placed and secured with nuts at hand tightness employing the crossover method of tightening to secure a sound and leak tight joint.
- Butterfly valves provide positive shut off in both directions. The disc profile is designed to give sealing properties at minimum torque. Raised seat profile provides a positive flange seal.
- Use suitable hangers close to both ends of the valve to remove stresses transmitted by the pipe.

Section 3 - Operation

3.1 Testing

Each product is tested in accordance with the table below to criteria in EN 12266, acceptance requires no detectable leakage.

Norm / Tests	PN16	PN25
Hydrostatic body	24 bar	37.5 bar
Hydraulic seat	17.6 bar	27.5 bar

3.2 Certification

Not applicable

3.3 Caution:

Service applications with extremes of pressure may cause the disc 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.

3.4 Operation / Commissioning

The valve should normally be used in the fully open or fully closed position. The lever can be set into several set positions for degrees of opening/closing.

SV905G valves incorporate a gearbox mechanism which allows the quarter turn operation of the stem and disc to be conducted more easily. Rotation of the hand wheel in a clockwise direction will move the disc to closure. An in-built stop will prevent further movement once the fully closed position is reached. Rotation of the hand wheel in an anticlockwise direction will move the disc to

an open position. An in-built stop will prevent further movement once the fully opened position is reached.

If valves are used for regulating flow, then a position indicator is fitted on both lever and gear operated valves.

3.5 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 conducted. 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.

We do not recommend any servicing, or maintenance is conducted on these valves.

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 conducted.

The correct fitting tools and equipment should be used for valve replacement work.

Separate means of draining the pipe work must be provided when conducting any replacement of SV905 series stainless steel Butterfly valves.

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

3.6 Product Life Span

When a valve is 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.

3.7 Additives

It is strongly recommended to consult a commissioning engineer in conjunction with the manufacturer prior to their use.

3.8 Warranty

Products are subject to a 2-year guarantee that is between Aalberts integrated piping systems 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 in commercial applications and therefore the guarantee is subject to the product being 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 (2014/68/EU(PED)) 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. Stainless Steel 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.

Section 5 – Additional information

Additional information can be found on our website, in the download-tab

Section 6 - Contact details

For further details please contact our technical department: **+44 (0)1302 560 560**

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