



Double Regulating valve (DRV), DZR brass body. Xpress union x Xpress end for copper, carbon/ stainless steel.

GENERAL INFORMATION

Size	Pattern No.	Pack 1 Qty	Code	Barcode
15mm	PSU1200	1	126240	5022050252791
18mm	PSU1200	1	126241	5022050252852
22mm	PSU1200	1	126242	5022050253088
28mm	PSU1200	1	126243	5022050253200
35mm	PSU1200	1	126244	5022050253262
42mm	PSU1200	1	126245	5022050253323
54mm	PSU1200	1	126246	5022050253392

APPROVALS



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[WRAS Press Fit Connectors](#)



[WRc-NSF Press Fit](#)

PEGLER

Installation, Operating and Maintenance Instructions – 1200 DRV and 1260 FODRV Double Regulating and Commissioning valves



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 as 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 Categorized 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. Provided 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 1200 DRV and 1260 FODRV are suitable for:
Gas

Steam	Water	Oil	Air	Inert	Combustible	Corrosive	Oxygen
X	✓	X	X	X	X	X	X

Operational Limits

Pressure and temperature limitations for PN rated valves

PN	Connection	Non-shock pressure at temperature range	Non-shock pressure at Max temperature
16	Compression	16bar, 2°C - 30°C	5bar at 120°C
16	XPress Press-fit	16bar, -10°C - 110°C	5bar at 120°C
20	Female thread	20bar, -10°C - 100°C	17.2bar at 120°C

Pegler 1200 DRV and 1260 FODRV PED categorisation

1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
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 and PN20 must be installed in a piping system whose normal pressure and temperature do not exceed the indicated 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 pressure 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 straining on the valve seat, pipe work and valves must be adequately supported.

These valves are not suitable for end of line service.

Installation

Unpack the valve and check that the flow paths and valve threads are clean and free from debris.

Check the body markings and nameplate, where fitted, 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.

The valve is marked with a directional flow arrow on the body. The valve will function correctly providing it is fitted so that the fluid transported follows the indicated flow direction.

Pegler 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 or the stem).
- Dirt and debris entering the valve through the end ports.
- Excessive force during assembly and hand wheel operation.

Use suitable hangers close to both ends of the valve in order to remove stresses transmitted by the pipe.

Confirm that the pipe threading length is correct to avoid excessive penetration of the pipe into the valve that would otherwise cause damage.

Thread depths for 1200DRV and 1260F0DRV Double regulating and Commissioning valves

1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
DN15	DN20	DN25	DN32	DN40	DN50
16.5mm	17.6mm	20.0mm	21.5mm	21.3mm	26.1mm

Care should be taken to apply jointing compound to the pipe only and not in the valve threads. Surplus compound will then be forced outwards and will not enter the valve. Overuse of compound can lead to valve failure on the body ends.

Threads should be engaged correctly when tightening the valve onto the pipe. The wrench should always be fitted on the body end adjacent to the joint being made. Severe damage can occur to stems, valves and seats by the use of hand wheels or levers larger than those originally supplied by the manufacturer, and by wheel keys.

Valve options include pre-assembled with adaptors for Compression, Press fitting and Push fittings.

Compression joints should be made with Kuterlite joints that are suitable for Copper, stainless steel tube and carbon steel tube (15mm to 28mm). Joints should be made to hand tight and then further tightened as follows:

360° turn for 6mm - 12mm and 270° turn for 15mm - 54mm. A few drops of light oil on the threads will assist, on sizes 35mm and above.

All tightening should be carried out using a close fitting spanner. The larger size fittings may require a drop of light oil to aid joint tightening.

Press fit valves include the Xpress connectors and these are bronze and are suitable for copper tube, stainless steel and carbon steel tube. The Joints are of the leak before press type and utilise the M press profile.

Push fit valves utilise the Tectite connectors that also incorporate a special grab ring to allow connection to copper, carbon steel and stainless steel tube.

The Pegler 1200 DRV can be used with a 1250 metering station but the design does not allow for close coupling. It is important that when they are used in conjunction the metering station test points are positioned to allow for the easy use of manometer probes.

When commissioning an upstream straight length of tube should be a minimum of 5 pipe diameters to allow for lamina flow and more accurate measurement of the valve signal.

Straight pipe lengths are not necessary downstream of the 1200DRV.

Installation of the 1260 FODRV Commissioning valve should take account of the position of the test points to allow for easy connection of the Manometer probes.

When fitting a Pegler 1260 FODRV commissioning valve an upstream straight length of tube should be a minimum of 5 pipe diameters to allow for lamina flow and more accurate measurement of the valve signal.

Adequate space should be allowed for easy adjustment of the valve control handle, giving easy operability, regulation and position setting for the double regulating mechanism.

Operation – 1200DRV and 1260FODRV Valve operation by hand wheel

Regulation – 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.

When using the Pegler 1200 or 1260 in water distribution balancing mode the valve should always be in a fully open position prior to system flushing or commissioning.

The Pegler 1200 and 1260 valves have a visible position indicator set into the valve hand wheel. This allows for double regulation at positions from 00 to 79, with a securing mechanism in the handle that locks the set position. When the valve is closed in its isolating position the valve can be reopened to the previous set point to avoid further costly commissioning.

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: Suitable hand protection should be worn when operating valves used in extreme temperature applications.

Maintenance

Under normal working conditions Pegler 1200 and 1260 valves do not normally require any maintenance; however, in the event of maintenance being necessary, the following procedure should be followed:

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.

The valve should be at zero pressure and ambient temperature before any valve maintenance is carried out.

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

Separate means of draining the pipe work must be provided when carrying out any maintenance to the valves.

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

Before starting work, de-pressurise the system, turn off any circulating pumps.

Prior to any inspection all valves should be at zero pressure and at ambient temperature.

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 they would help extend the valve life.

Stress corrosion cracking (SCC) is a phenomenon that occurs occasionally with brass compression fittings. It is almost always introduced during installation, either from over-tightening of fittings

or contamination from a corrosive substance. The usual corrosive substance involved in SCC is ammonia or ammoniacal compounds, which can be found in

cleaning fluids, refrigeration gases, sewage waste products, building materials, insulating materials (especially foams) and flame and smoke retarding treatments. An essential ingredient in the SCC process is moisture. Moisture on the fitting or pipework allows the corrosive substance to collect and become more concentrated. This is a particular problem in chilled water installations, where insulating materials allow the condensed moisture to be retained and kept in close contact with the fitting surface.

Pegler Yorkshire does not recommend the use of brass components in chilled water applications. Instead, we recommend fittings made from SCC resistant or immune materials, such as copper or gunmetal. Fittings from our XPress, Tectite, Yorkshire or Endex ranges are the preferred products for chilled water applications. If compression fittings are used then they should be assembled exactly in accordance with our published instructions and securely bound by a moisture barrier such as Densotape® to prevent moisture build up on the fitting. The following installation practices should be adhered to when installing compression fittings in order to avoid SCC:

1. Do not overtighten brass components.
2. Use correctly fitting spanners.
3. Use a drop or two of light oil on the threads of fittings of sizes 35mm and above.
4. Avoid contaminating the threads or nuts with jointing compounds.
5. Use parallel threaded adaptors to avoid stressing the female threaded ends.

Minimise the risk of contamination from a potential corrosive substance. Wrapping susceptible fittings in a vapour barrier or applying impermeable paints can be helpful in preventing contact with a corrosive substance.

Reference Material: Pegler Commercial Valves Package Brochure, Pegler Yorkshire Group Limited 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).



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Press-fit Solutions

For joints 15 to 108mm

Always cut the tube square, using a rotary tube cutter whenever possible.

When using plastic coated carbon steel tube remove the coating using the S115 stripping tool.

Deburr the tube end, both internally and externally.

Check the tube ends are free from damage and clean, wiping away any swarf to avoid damaging the 'O' ring on tube insertion. Tube end must also be free from stickers, tape and adhesive residues.

Mark the socket depth with a marker.

Fitting socket depths		
Size	Copper/Gas	Stainless/Carbon/ Stainless Gas
15mm	20mm	20mm
18mm	-	20mm
22mm	21mm	21mm
28mm	23mm	23mm
35mm	26mm	26mm
42mm	30mm	30mm
54mm	35mm	35mm
67mm	50mm	50mm
76mm	50mm	55mm
89mm	-	64mm
108mm	64mm	78mm

Select the correct type and size of fitting. *Legislation dictates that you must not convert water fittings into gas fittings by substituting the 'O' ring – the fitting must be marked by the manufacturer as suitable for gas.*

The fitting should be kept in its bag until point of use to protect the 'O' ring.

Check the fitting is free from damage and the 'O' ring is seated correctly. Due to the Leak Before Press feature, a slight triangulation of the fitting socket is intentional, and should not be mistaken for damage.

The LBP feature on XPress carbon and stainless is provided by the use of a special 'O' ring that has nodules to form a leak path prior to pressing the fitting.

The 'O' ring integrity is critical, as it is this that forms the seal. This is why tube preparation is vital to ensure the 'O' ring is not compromised on insertion of the tube. Use S130 silicon lubricant sparingly to aid insertion into the bead of the fitting – over lubrication can cause the joint to fail.

Insert the tube into the fitting until it meets the tube stop and corresponds to the depth mark made earlier.

Make the tool safe by isolating it from the power supply.

Select the correct jaws for the joint being made, checking that they are free from damage. Attach the jaws, following the instructions for your particular press-tool, and reconnect the power supply when ready.

Place the jaws over the bead at the mouth of the fitting, maintaining a 90° angle to ensure the integrity of the joint, and to protect you from 'kickback', where there is a risk of the machine moving sideways.

With the tool fully supported and not hanging from the pipe work, and with your hands safely away from the jaws start the pressing cycle.

Release the jaws from the fitting and inspect the joint, ensuring the fitting is fully closed around the pipe, there are no distortions, and the mouth of the fitting still corresponds to the depth mark.

If all is in order mark the joint as complete.

For joints 42 to 108mm

Tube preparation and joint assembly for 42 to 108mm fittings is the same as for the smaller sizes.

It is essential to use sling jaws, as these provide a more equally distributed force than two piece jaws, ensuring reliability.

Select the correct sling jaw for the joint to be made checking they are free from damage and suitable for the material you are using, as jaws for copper and steel differ at 108mm.

It is essential to lubricate the sling by applying S135 lubricant to the pressing profile groove between the main sling arms and the moving segments and along the pivot pins. Lubrication intervals: after every 50 joints for 42mm to 76mm sizes and every 5 joints for 108mm.

Mount the sling with the groove in the sling sitting over the bead at the mouth of the fitting, taking care not to trap your fingers in the sling.

Make the tool safe by isolating it from the power supply.

Select the correct adaptor and attach it to the press-tool, following the instructions for the press-tool, and then reconnect the power supply when complete.

Attach the adaptor to the sling jaw maintaining a 90° angle to protect you from kickback, and to ensure the integrity of the joint. With the tool fully supported and not hanging from the pipe work and your hands safely away from the jaws start the pressing cycle.

For 108mm fittings the sling jaw is left in place and a second pressing operation is required. Swap the adapter on the press-tool for the second press adaptor and repeat the pressing operation.

Disconnect the adaptor and remove the sling jaw from the fitting.

Inspect the joint ensuring the fitting is fully closed around the pipe, there are no distortions and the mouth of the fitting still corresponds to the depth mark made earlier.

If all is in order mark the joint as complete.

Notes:

When using power tools, great care must be taken at all times. Always refer to the manufacturers' instructions for all machines and tools you use. Please refer to www.pegleyorkshire.co.uk/SHE for further COSHH information.

The advantages of the XPress System

- A totally heat-free jointing solution
 - Reduced installation times provides major installed cost savings
 - No need for hot works permits or additional costly insurance
 - Sizes from 15mm up to 108mm
 - Systems have an exceptionally clean boar with no flux residues
 - Cover a wide variety of applications in modern building services
 - System guarantees of 30 Year for XPress Copper/Stainless and 10 Years for XPress Carbon
 - Excellent system performance from -24 to 110°C at a maximum working pressure of 16 bar
 - and -20 to 70°C at 5 bar (1 bar within buildings) for Gas fittings
 - Designed for hydraulic system testing at up to 1.5 times working pressure, to a maximum of 16 bar*
- *For testing at higher pressures and compressed air pipeline systems advice should be sought from Pegler Yorkshire

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