# **D115S**

# Pressure Reducing Valves

#### **APPLICATION**

According EN 806-2 pressure reducing valves of this type protect household water installations against excessive pressure from the supply. They can also be used for industrial or commercial applications within the range of their specification. By installing a pressure reducing valve, pressurization damage is avoided, and water consumption is reduced. The set pressure is also maintained constant, even when there is wide inlet pressure fluctuation. Reduction of the operating pressure and maintaining it at a constant level minimizes flow noise in the installation



#### **FEATURES AND BENEFITS**

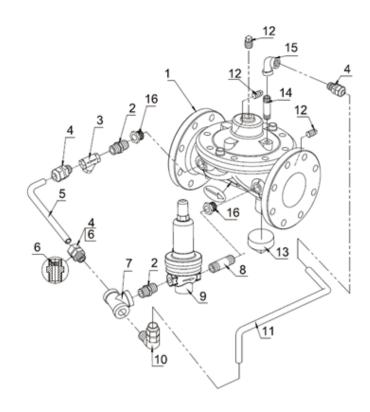
- Pilot operated main valve not subject to pressure fall off
- Outlet pressure is adjustable with single screw
- Can be maintained without removal from the pipeline
- Adjustable operating/ response speed

- Stabilized regulation at near-zero flow
- Flanged and drilling complies with EN1092-2 PN10/16; ANSI B16.1 Class 125
- Grooved end complies with AWWA C606 Standard.
- Corrosion Protection -Fusion Bonded Coating Interior and Exterior meet or exceed all applicable AWA C550 Standards in terms of corrosion Protection

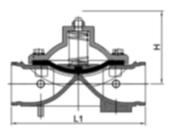
## **MATERIAL SPECIFICATIONS**

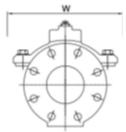
PART	MATERIAL	ASTM SPECIFICATION	
Body	Ductile Iron	A536 Grade 65-45-12	
Bonnet	Ductile Iron	A536 Grade 65-45-12	
Diaphragm	Nylon Reinforced Natural Rubber/EPDM/NBR		
Spring Retainer	Ductile Iron	A536 Grade 65-45-12	
Spring	Stainless Steel	A276 Type 304	
Galvanized Bolt	Carbon Steel	A307 Grade B	
Galvanized Washer	Carbon Steel	A307 Grade B	

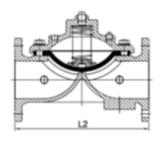
NO.	COMPONENTS	MATERIAL
1	Main Valve	
2	Pipe Joint	SS 304
3	Y-Strainer	SS 304
4	Cutting Sleeve	SS 304
5	Pipe	SS 304
6	Throttling Element	SS 304
7	Tee-Junction	SS 304
8	Screwed Pipe	SS 304
9	Pressure Reducing Pilot	Bronze
10	Elbow	SS 304
11	Pipe	SS 304
12	Plug	SS 304
13	Plug	Carbon Steel
14	Screwed Pipe	SS 304
15	Elbow	SS 304
16	Reducer Union	SS 304



# **DIMENSIONS**







SIZE	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
L1	260	310	310	356	370	436	530	636	835
L2	233	290	310	356	370	436	530	636	835
W	450	485	500	520	550	590	640	700	950
Н	210	220	259	270	280	290	360	380	430

# **TECHNICAL DATA**

MEDIA					
Medium	Raw water, clean water				
CONNECTIONS/SIZES					
Connect Sizes	2", 21/2", 3", 4", 5", 6", 8", 10", 12"				
Nominal Sizes	DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN250, DN300				
PRESSURE VALUES	PRESSURE VALUES				
Max Inlet Pressure	20 Bar				
Outlet Pressure	1 Bar – 4 Bar (15-60 PSI), 2.4 Bar – 6 Bar (35-85 PSI), 4.5 Bar – 11.4 Bar (65-165 PSI)				
Nominal Pressure	PN16/PN20				
Min. Pressure Drop	1 Bar				
Pressure Test port	Reserved pressure test port (product will be without pressure gauge by default)				
OPERATING TEMPERATURES					
Operating temperature range of the medium	0-82°C				

### **METHOD OF OPERATION**

The D115S Pressure Reducing Valve is designed to perform the following function: Reducing a higher upstream pressure into a lower, constant downstream pressure. The D115S consists of the following components (as arranged on the principle schematic shown above):

#### **BASIC CONTROL VALVE**

A hydraulically operated, diaphragm-actuated globe valve which closes with an elastomer-on-metal seal.

#### MODEL PRP PRESSURE-REDUCING PILOT

A two-way, normally open pilot valve which senses downstream pressure under its diaphragm and balances it against an adjustable spring load. An increase in downstream pressure tends to make the pilot close.

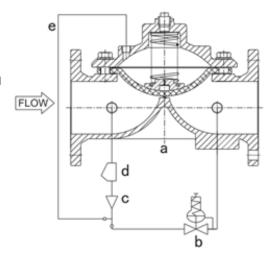
#### **RESTRICTION**

A simple ferrule fitting connection with a fixed orifice in its upstream port.

#### **Y-STRAINER**

The Strainer protects the pilot system from solid contaminants in the line fluid

MARKING NO	COMPONENTS	MATERIAL	
а	Main Valve		
b	Pressure Reducing Pilot	Bronze	
С	Restriction Orifice	SS 304	
d	Y-Strainer	SS 304	
е	Pipeline	SS 304	



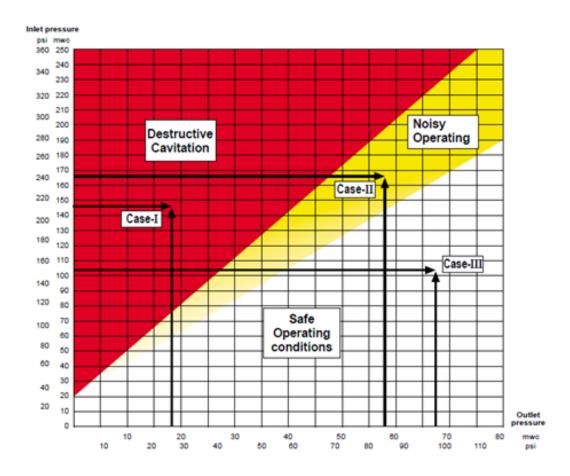
As downstream pressure tends to increase above the set point of the pressure-reducing pilot, the pilot moves further closed. This results in an increase in pressure in the diaphragm chamber of the basic control valve. The basic control valve then closes slightly to restore the downstream pressure to the set point. Conversely, as downstream pressure tends to decrease below the set point, the pilot moves further open. This results in a decrease in pressure in the diaphragm chamber of the basic control valve. The basic control valve then opens wider to bring the downstream pressure back up to the set point. The net result of all this is a constant modulating action by the pilot and the basic control valve and a downstream pressure which remains constant despite fluctuations in demand or inlet pressure.

## **INSTALLATION GUIDELINES**

The D115S is fully factory-assembled and ready for installation at the appropriate point in the system. In order to ensure safe, accurate and efficient operation of the D115S, these guidelines should be followed:

- Make sure you have a properly sized valve.
- Make a careful inspection of the valve to ensure that there has been no damage to the external piping, fittings and controls. Check that all fittings are tight.
- It is recommended that either gate or block valves be installed on the inlet and discharge sides of the valve for preventive or corrective maintenance.
- · Prior to mounting the valve, all interconnecting piping should be thoroughly flushed of chips, scale, and foreign matter.
- Install the valve in the line according to the flow arrow on the valve body. The arrow should point downstream.
- Allow sufficient room around the valve for ease of adjustment and maintenance service.
- Install downstream of the filter or strainer, this position ensures optimum protection for the pressure reducing valve against dirt
- Provide a straight section of pipework of at least five times the nominal valve size after the pressure reducing valve (in accordance with EN 806-2)
- Requires regular maintenance (in accordance with EN 806-5)

#### **CAVITATION CHART**



# PRESSURE ADJUSTMENT PROCEDURE:

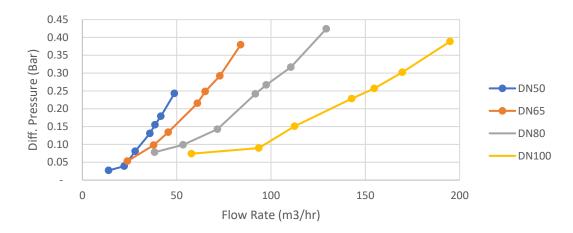
The following procedures should be followed in the order presented in order to effect an initial startup of the D115S:

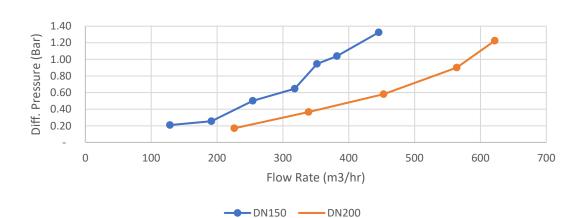
- Install a pressure gauge of the proper range upstream and downstream of the D115S. The unused side ports on the basic control valve body may be used for this purpose if there is no convenient location in the piping.
- Remove the plastic cap from the pressure-reducing pilot and loosen the adjusting screw jam nut.
  Turn the adjusting screw counterclockwise until it is loose enough to be turned by hand.
- Start the pump, or otherwise start the system flowing. The basic control valve will at this time be either fully closed or open only a very small amount.
- Carefully loosen the pipe plug in the basic control valve bonnet until fluid appears around the threads. When only clear fluid (no air) is discharging, re-tighten the plug.
- Check downstream pressure. It should be lower than desired at this point. If it is already too high, there is too much restriction downstream. Open further valves or otherwise increase demand until the pressure falls below the desired set point.
- Slowly turn the adjusting screw of the pressure reducing pilot clockwise until downstream pressure rises to the desired set point. Tighten the adjusting screw jam nut, and replace the plastic cap.
- Slowly close downstream valves to reduce flow to zero, while observing the pressure gauge. The pressure will rise above the set point a few psi. This is normal. However, the magnitude of this pressure rise should not exceed 14.5 psig.
- If pressure readjustment should ever be required, the pressure-reducing pilot is adjusted clockwise to increase pressure; counterclockwise to decrease pressure.

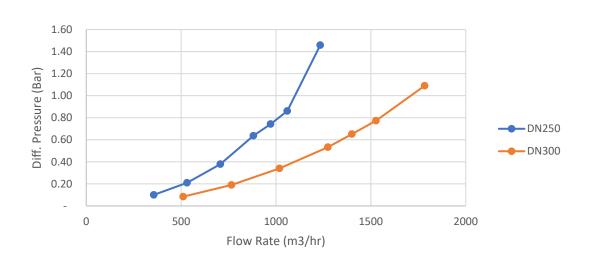
# **TECHNICAL CHARACTERISTICS**

#### **KV Values**

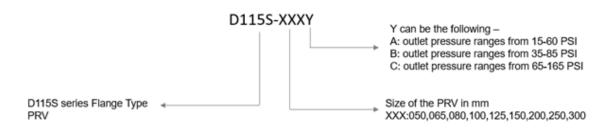
#### **Pressure drop characteristics**







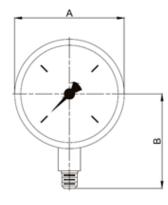
## **ORDERING INFORMATION**

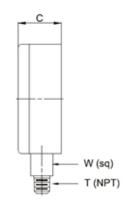


# **ACCESSORIES**

#### **Pressure Gauge**







#### **Dimensions (mm/inch)**

SIZE	A	В	C	T	W
4	100/4.0	71/2.79	30/1.18	1/4"	14/0.55

#### For more information,

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