

Pressure Relief Valve

Fig. A500

Feature

Pressure Relief/Pressure Holding Valve is a hydraulically operated, pilot-controlled regulating valve designed to maintain upstream pressure within a narrow specified range.

This valve can be used for pressure relief, pressure holding, backpressure regulation, or safety relief/load dumping in bypass systems.

During operation, the valve is actuated by line pressure through a pilot control system. It rapidly opens to stabilize line pressure and gradually closes to prevent surge, ensuring smooth system performance.

Adjustment Range

0.0 ~ 2.8 Bar

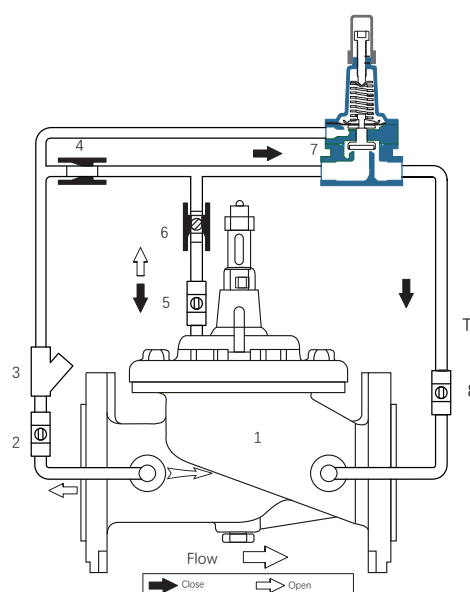
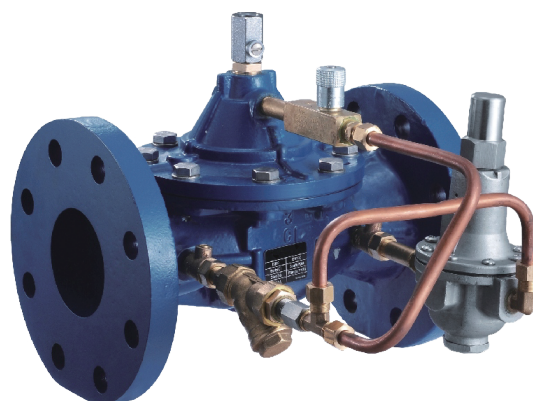
1.7 ~ 8.6 Bar (Default)

6.9 ~ 17.2 Bar

Material

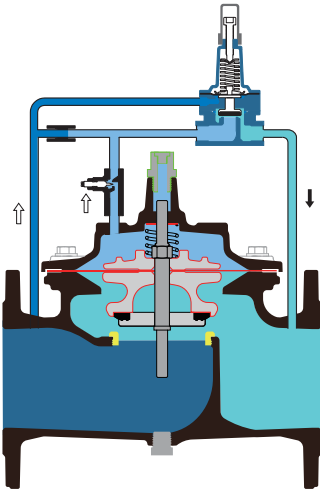
No.	Part	Material	Standard
1	Main valve	Cast Iron Ductile Iron	EN-GJL-200 EN-JS 1050
2	Ball valve	Brass	EN 12165 W603N
3	Strainer	Brass	EN 12165 W603N
4	Orifice	Brass	EN 12165 W603N
5	Ball valve	Brass	EN 12165 W603N
6	Throttle valve	Brass	EN 12165 W603N
7	Pilot valve	SS	BS970 304 S15
8	Ball valve	Brass	EN 12165 W603N
Verticle installation optional	Spring	SS	BS970 304 S15

Schema



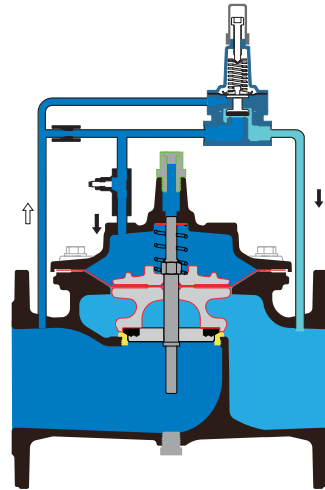
Working Principle

Main valve open



When the upstream pressure drops below the pilot valve's set pressure, the pilot valve closes, allowing water to enter the upper bonnet chamber of the main valve and forcing the main valve to shut.

Main valve close

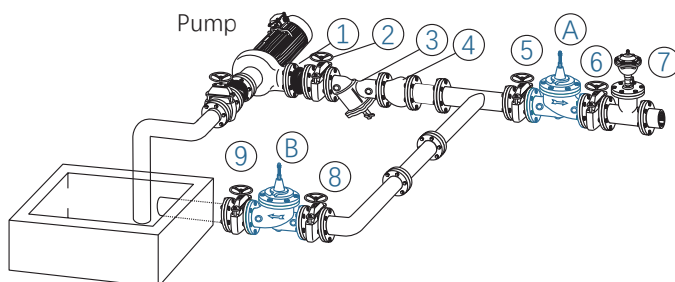


When the upstream pressure exceeds the pilot valve's set pressure, the pilot valve opens, allowing the upper bonnet chamber of the main valve to drain and enabling the main valve to open.

Installation Key Points:

1. Install a strainer upstream of the valve to effectively protect the main valve.
2. A front shut-off valve facilitates maintenance.
3. When the control valve is installed horizontally, the maximum allowable tilt angle must not exceed 45°.
4. For vertical installation, corresponding spring accessories (optional components) must be procured

Typical Application



1. Regulate and maintain the preset upstream pressure of the control valve.
2. Prevent pump overloading when system water demand exceeds pump capacity.

1: Connector 2, 5, 6, 8, 9: Cut-off Valve 3: Strainer
7: Air Vent A: Control valve B: Pressure Relief Valve

Hydraulic Control Valve-Main Valve

Fig. A000

Specification

Face to face: BS EN558-1
 Flange: EN1092-2 PN1
 ISO 7005 / ANSI B16.5
 GB/T 9119
 Testing Standard: EN12266-1 / DIN3230
 Design Standard: BS EN 1074-5

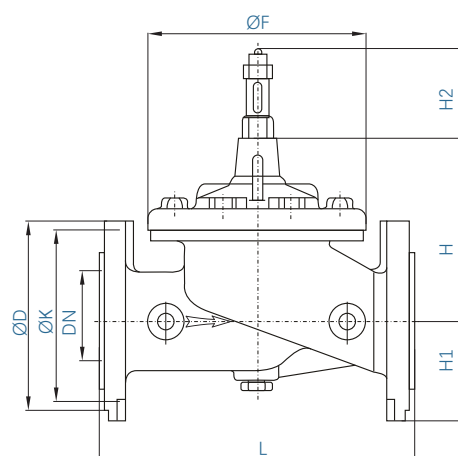
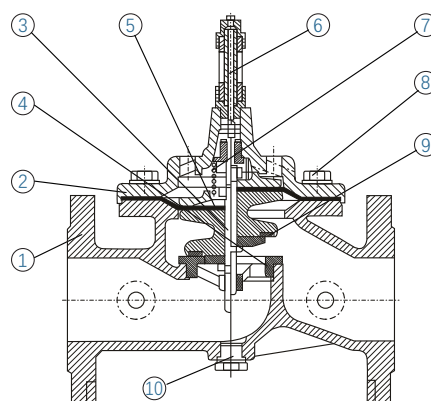
Technical data

Working pressure: 16bar
 Dimensions: DN40~DN600
 Testing pressure: Shell: 24 +1 bar
 Seal: Low: 0.5 bar
 High: 17.6+1 Bar
 Temperature: 0°C ~ 70°C

Material

Part	Material	Standard
Body	Cast Iron Ductile Iron	EN-GJL-200 EN-JS 1050
Bonnet	Same to body	Same to body
Stem	Stainless Steel Stainless Steel	BS970 304 S15 BS970 316 S16
Seat	Stainless Steel	BS970 304 S15
Diaphragm	Reinforced NBR	
Air vent	Brass	EN 12165 W603N
Spring	Stainless Steel	BS970 304 S15
Bolt	Stainless Steel	BS970 304 S15
Seal	NBR	
Plug	Stainless Steel	BS970 304 S15

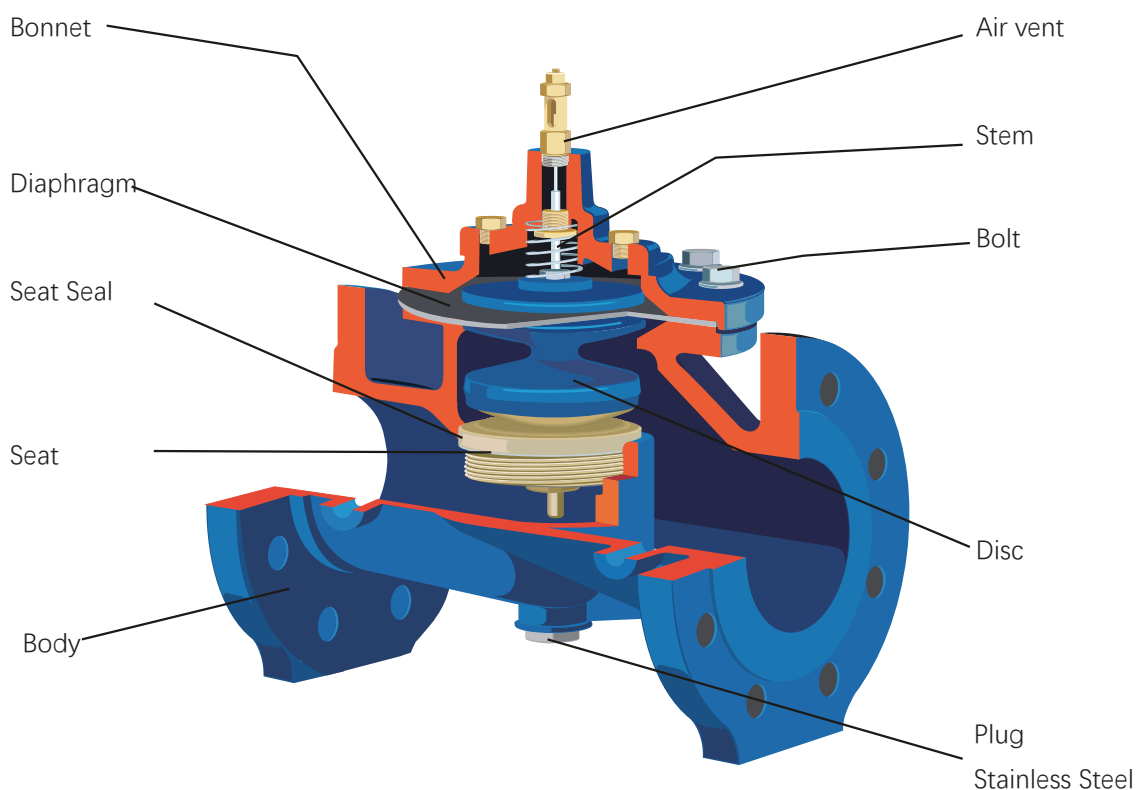
Schema



Hydraulic Control Valve-Main Valve

Fig. A000

Structure



Dimensions

DN	mm	40	50	65	80	100	125	150	200	250	300
	inch	1- 1/2	2	2-1/2	3	4	5	6	8	10	12
L		237	243	276	276	306	416	416	520	755	764
H		160	160	160	160	205	240	240	330	490	490
H1		80	80	95	95	110	130	140	160	200	230
ØF		170	170	170	170	205	280	280	363	479	693
H2		42	42	42	42	42	42	42	42	42	42
ØK		110	125	145	160	180	210	240	295	355	410
ØD		150	165	185	200	220	250	285	340	395	445
Weight(Kg)		13	14	19	20	30	52	68	198	245	303