

## Pressure-Sustaining/Relief, 2-way pilot-valve

The 68-510 is a 2-way, diaphragm actuated, spring-loaded pressure-sustaining pilot-valve, designed for control of hydraulic valves. The pilot valve modulates to keep a steady, pre-set pressure upstream the valve's location. As the upstream pressure rises above the adjusted value, the pilot-valve opens the water passage between its "COM" and "OUT" port thus allowing the water in the main valve's chamber to vent to the downstream, causing the main valve to open. As the upstream pressure falls below the set point, the pilot valve throttles the internal passage, restricting the flow out of the main valve control chamber, enabling the valve to keep its position or to close (if necessary).

## Features

- A pressure sustaining/relief 2-way pilot valve
- Normally-close, will open when the upstream pressure exceed the adjustable spring setting
- Wide regulation range
- Easy to adjust
- Minimal internal sealing and maximal dependability
- SST needle valve – integral in the valve's design
- Optional separated sensing chamber (model 68-51A)



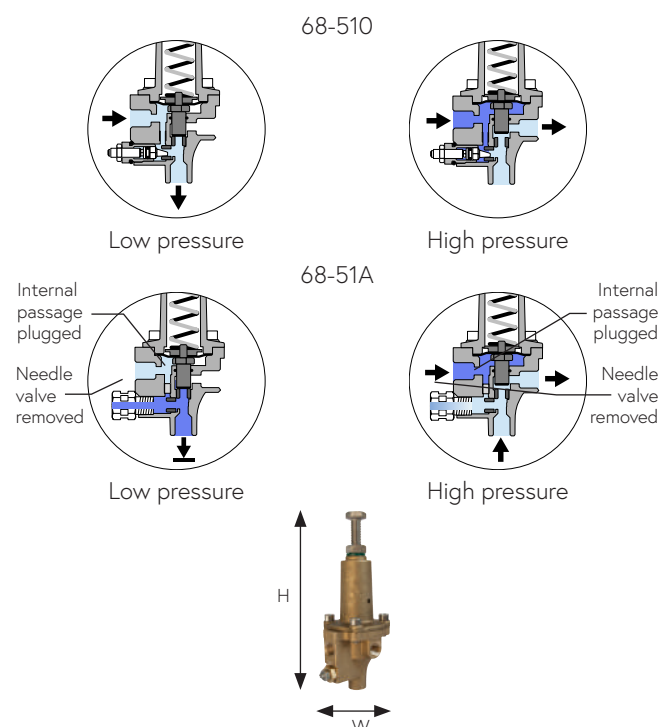
## Typical applications

- Pressure sustaining valves - PS
- Pressure relief valves - PS[R]
- Quick-acting pressure-relief - QR

## Technical data

General		
Pressure rating	40 bar / 580 psi	
Pressure adjustment range	0.4 - 40 bar / 6 - 580 psi	
Fluid temperature	80°C max. / 176°F max.	
Weight	850 g. / 1.9 lbs.	
Materials	Standard	Optional*
Body and bonnet	Brass	SST
Elastomers	NBR	EPDM, Viton
Internal parts	SST	
Spring	SST	
Dimensions		
H (Height) max.	180 mm / 7"	
W (Width)	72 mm / 3"	
Port Connections		
I, O, C	NPT 1/4"	

\* other materials available upon demand



## Installation

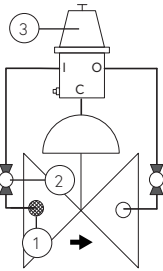
### Main components

#	Description
1	Self flushing filter
2	Isolation ball valve
3	68-510 Pilot valve
4	Orifice / Needle Valve
5	28-200 Relay valve
6	2" Relay valve
7	3/2 solenoid-valve

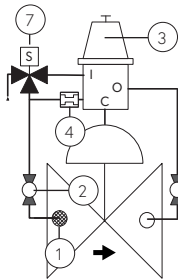
### Connections

Port	Pressure Sustaining / Relief
I	Upstream
C	Valve / Relay control chamber
O	Downstream

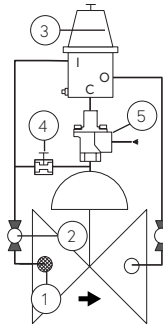
PS & PS[R] (68-510)  
& QR up to 2½"



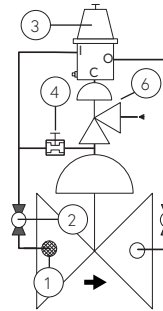
PS/EL (6851A)



QR 3" to 6"

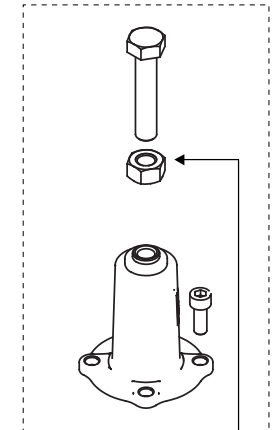


QR 8" or larger

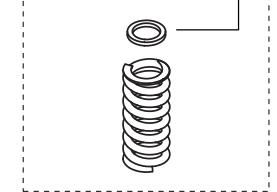


### Spare parts

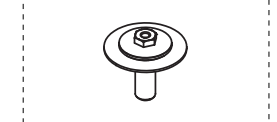
#### Bonnet kit



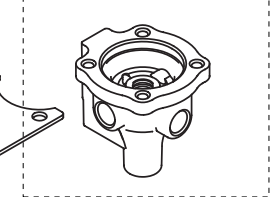
#### Spring



#### Internal parts kit



#### Body kit



Sample drawing. Consult Dorot for the assembly design to fit your needs.

### Springs adjustment range

Spring number	Color	bar	psi
67 (Std.)	Red	2 - 40	30 - 580
66	Green	0.8 - 13	10 - 190
78	Yellow	0.4 - 3.5	6 - 50

Adjustment: Turn the adjusting screw clockwise to increase the set point

### Catalogue numbers

Description	Catalogue number
Bonnet kit	661026851000000
Spring 67 - Red	0022067000
Spring 66 - Green	0022066000
Spring 78 - Yellow	0022078000
Internal parts kit	661206851000000
Body kit	661016851000000

Hex bolt for conversion to 510-68A version