

## Multi-purpose Metal Pilot and Relay-Valve (66-31D Differential-pressure sensing)

The 66-310 is a diaphragm actuated, spring- loaded pilot-valve that is designed for control of hydraulic-valves. The pilot valve operates either as a 2-way pilot valve or as an adjustable relay valve that is used as a selector between the common port and the two other ports. The pilot valve will vent, or pressurize or lock the hydraulic valve's chamber as a factor of the relation between the regulated pressure and the adjusted set-value. The 66-310 pilot-valve can be used for implementing a wide range of hydraulic control-functions.

### Features

- Same pilot can be used for various control functions by simply changing the way it is connected to the valve!
- Differential pressure sensing - 66-31D (optional)
- Wide regulation range
- Easy to adjust
- Simple design and maximal dependability
- Can be used with any hydraulic control valve of any size
- Can be activated by hydraulic or pneumatic pressure

### Typical applications

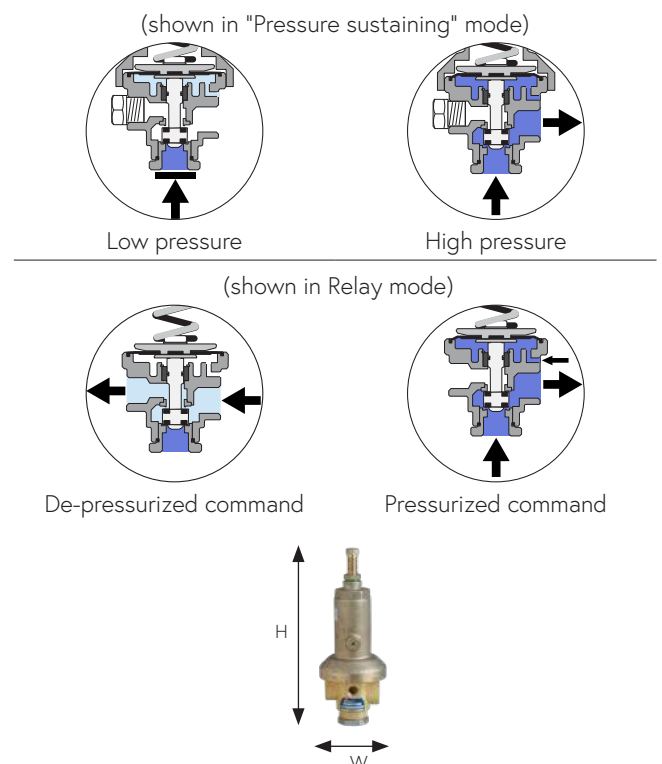
- Pressure sustaining valves - PS
- Quick pressure relief valves - QR
- Surge anticipating - RE
- Accelerator relay-valve (used for opening and closing valves quicker)
- Remote hydraulic-control with adjustable-pressure
- Pneumatically and hydraulically actuated deluge/pre-action valves - DE



### Technical data

General		
Pressure rating	25 bar / 360 psi	
Pressure adjustment range	0.4 - 13 bar / 6 - 190 psi	
Fluid temperature	80°C max. / 176°F max.	
Weight	1.9 kg / 4.2 lbs	
Materials	Standard	Optional*
Body and bonnet	Brass	SST
Elastomers	NBR	EPDM
Internal parts	SST+Brass	
Spring	SST	
Dimensions		
H (Height) max.	230 mm / 9"	
W (Width)	84 mm / 3.3"	
Port Connections		
1	NPT ¼"	
2, 3, 4	NPT ½"	
5	NPT ⅛"	

\* other materials available upon demand



## Installation

### Main components

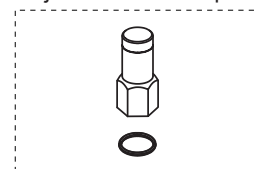
#	Description
1	Self flushing filter
2	Isolation ball valve
3	Needle valve
4	66-310 Pilot valve
5	Plug
6	2" Relay valve

### Connections

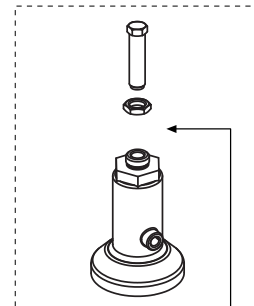
Port	P. Sustaining / Quick relief	Quick relief (6" or bigger)	Relay N.O.	Relay N.C.
1	Upstream	Upstream	P. command	P. command
2	Plug	Plug	Upstream	Vent
3	Downstream / vent	Relay cntrl. chamber	Control chamber	Control chamber
4	Control chamber	Vent	Vent	Upstream

### Spare parts

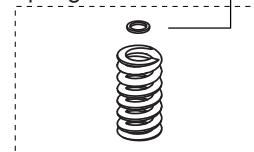
Adjustment bolt cap \*



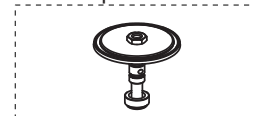
Bonnet kit



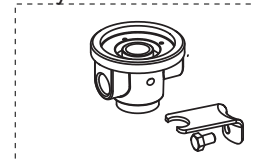
Spring



Internal parts kit

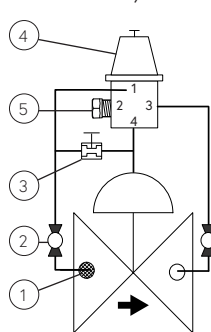


Body kit

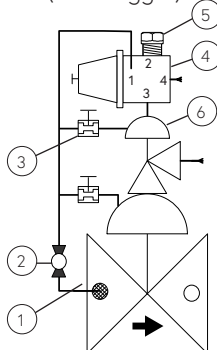


\* Used in 31-66D version only

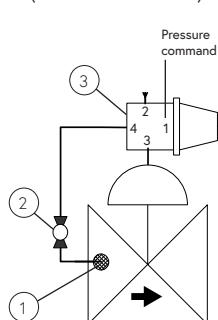
PS, PS[R] and QR (up to 4")



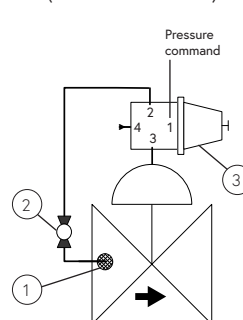
QR (6" or bigger)



Relay N.C. (Main valve N.O.)



Relay N.O. (Main valve N.C.)



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

### Springs adjustment range

Spring number	Color	bar	psi
42 (Std.)	Yellow	0.4 - 5.5	6 - 80
47	Green	0.6 - 9	9 - 130
50	Red	0.7 - 17	10 - 245

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

### Catalogue numbers

Description	Catalogue number
Bonnet kit	661026631000000
Spring 70	
Spring 42 - Yellow	0022042000
Spring 47 - Green	0022047000
Spring 50 - Red	0022050000
Internal parts kit	661206631000000
Body kit	661016631000000