

## Rate of flow, 3-way metal pilot-valve

The 31-10F is a 3-way, diaphragm actuated, spring- loaded pilot-valve that is designed for control of flow-regulating hydraulic valves. The pilot valve operates as a selector between the common port and the two other ports. The pilot valve will vent, pressurize or lock the hydraulic valve's chamber as a factor of the relation between the pressure differential across a supplementary orifice plate and the adjusted set-value.

## Features

- A differential pressure regulating, 3-way pilot valve
- Fully vents the control chamber to open the main valve - thus minimizing pressure-losses, when the differential pressure of the orifice drops below the set-value.
- Easy to adjust
- Pressure-balanced - will not be affected, even by large, upstream pressure-variations.
- Superb sensitivity & repeatability

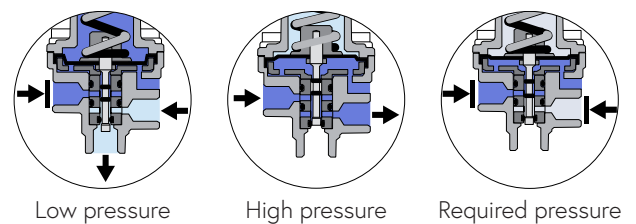


## Typical applications

- Flow rate control valves - FR
- Pressure differential reducing - PD

## Technical data

General		
Pressure rating	25 bar / 360 psi	
Pressure adjustment range	2 - 60 mt / 3 - 90 psi	
Fluid temperature	80°C max. / 175°F max.	
Weight	1.70 Kg / 3.7 lbs	
Materials	Standard	Optional*
Body and bonnet	Brass	SST
Elastomers	NBR	EPDM, Viton
Internal parts	SST	
Spring	SST	
Dimensions		
H (Height) max.	190 mm / 7.5"	
W (Width)	60 mm / 2.4"	
Port Connections		
1, 2, 3, 4	NPT 1/4"	
5	NPT 1/8"	



\* other materials available upon demand

## Installation

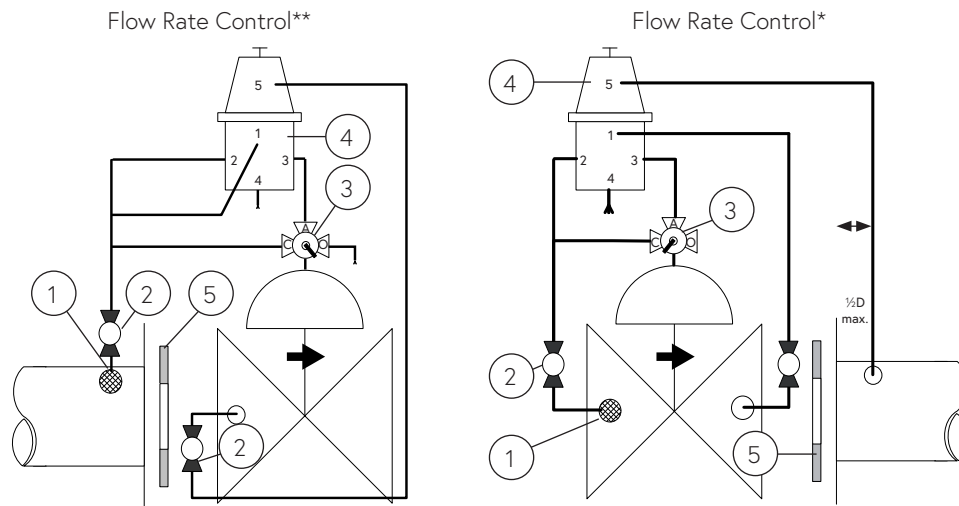
### Main components

#	Description
1	Self flushing filter
2	Isolation ball valve
3	3-way selector valve for manual override
4	31-10F Pilot valve
5	Orifice plate

### Connections

Port	Flow rate
1	Upstream orifice plate
2	Upstream orifice plate
3	Valve control chamber
4	Vent
5	Downstream orifice plate

\* Note: a downstream installation of the orifice plate is possible in globe type valves. Contact Dorot technical Support for further details.



\* Downstream orifice for models 300 and 500.

\*\* Upstream orifice for model 100.

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

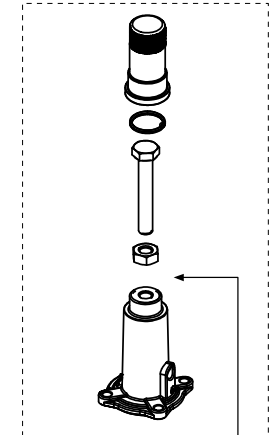
## Springs adjustment range

Spring number	Color	Meter	psi
78 (Std.)	Yellow	2 - 7	3 - 10
130	Green	5 - 60	7 - 90

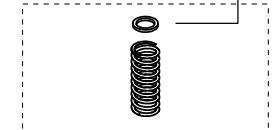
Adjustment: Turn the adjusting screw clockwise to increase the set point

## Spare parts

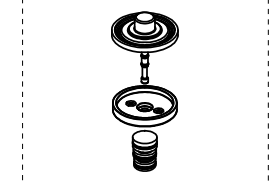
### Bonnet kit



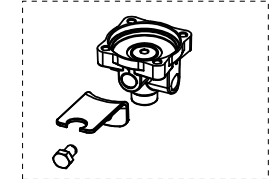
### Spring



### Internal parts kit



### Body assembly



## Catalogue numbers

Description	Catalogue number
Bonnet kit	661023110R00000
Spring 78 - Yellow	0022078000
Spring 130 - Green	0022013000
Internal parts kit	661203110F00000
Body kit	661013110R00000