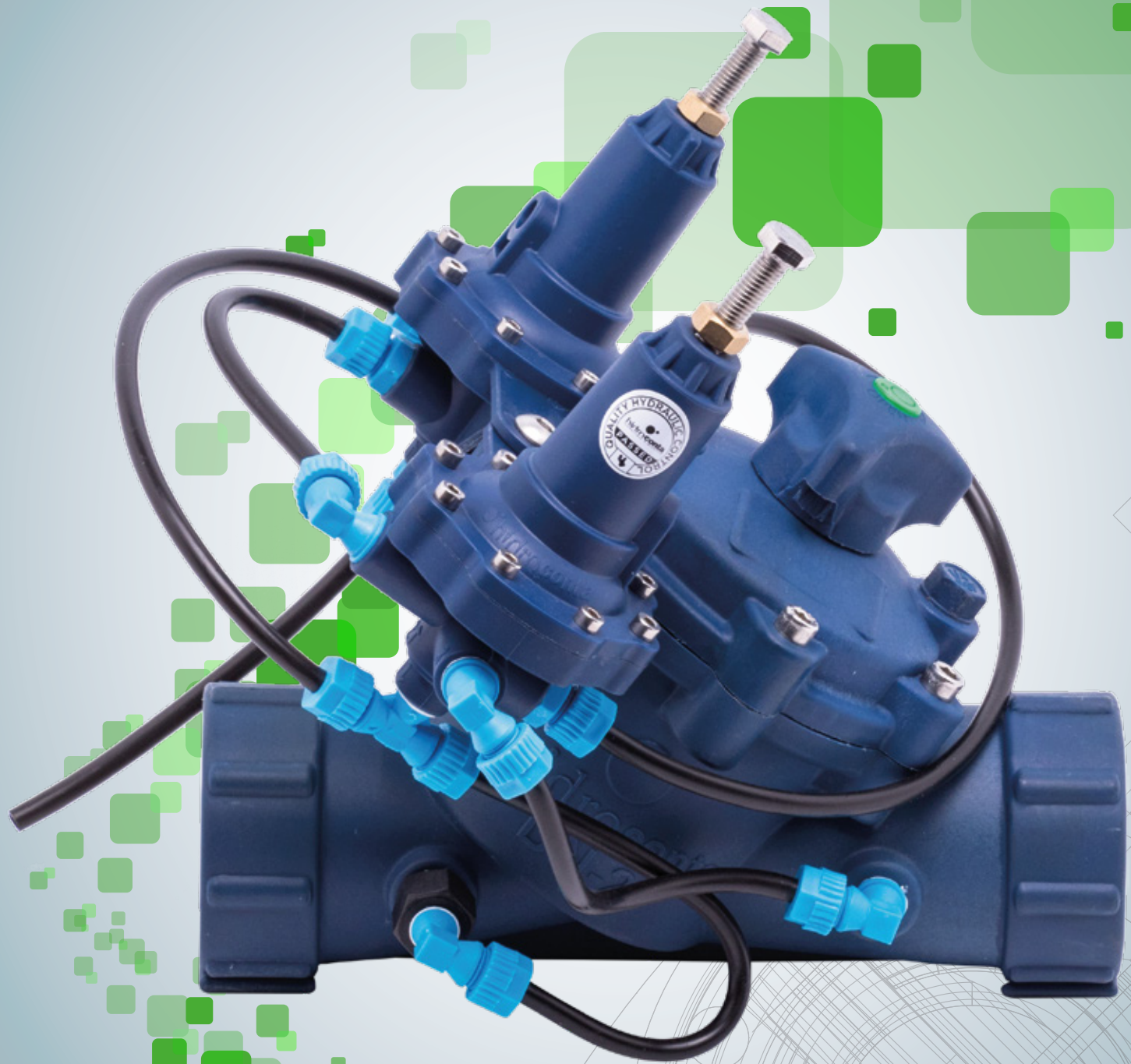


VALVES



taurus

h y d r a u l i c t e c h n o l o g y



Look through valve

Pressure

16 bar

Opening at very low pressure



Connections

Threaded or flanged

Integrated

shut - off valve

Low pressure loss

and **high KV**



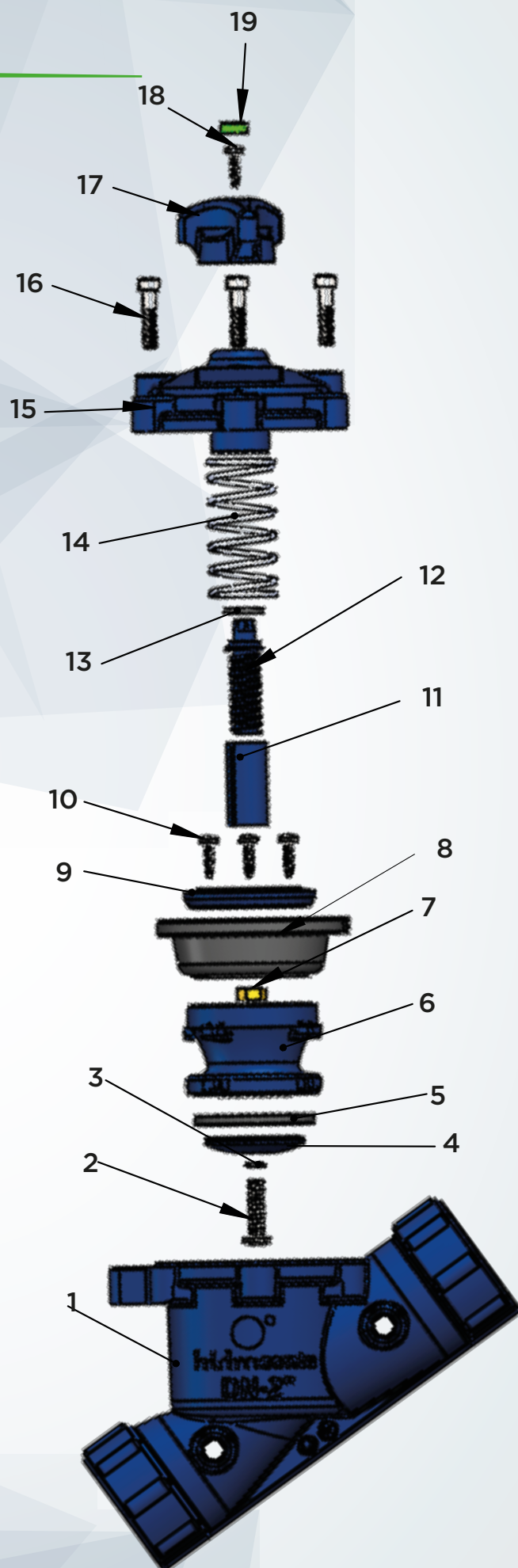
Hydrodynamic
design

The Hidroconta's Taurus valve is designed in "Y" shape, it allows a great flow capacity maintaining a very low pressure loss.



Assembly

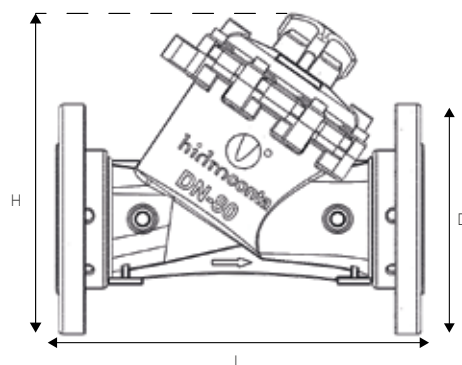
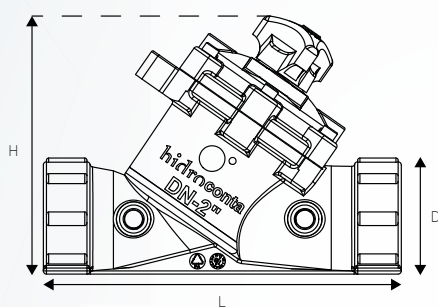
Nº	Description	Material
1	Body	Polyamide reinforced with fiberglass
2	Screw M8x30	Stainless steel
3	O-ring 8x2	NBR
4	Inferior seal washer	Polyamide reinforced with fiberglass
5	Closing gasket	NBR
6	Internal body	Polyamide reinforced with fiberglass
7	Screw M8	Brass
8	Diaphragm	NR
9	Superior seal washer	Polyamide reinforced with fiberglass
10	Screw 4,8x19	Stainless steel
11	Shutter nut	Polyamide reinforced with fiberglass
12	Screw nut	Polyamide reinforced with fiberglass
13	O-ring 16x2,5	NBR
14	Spring	Stainless steel
15	Lid	Polyamide reinforced with fiberglass
16	Allen Screw M6x30	Stainless steel
17	Valve wheel	Polyamide reinforced with fiberglass
18	Screw 3,9x32	Stainless steel
19	Lid screw	Polyamide reinforced with fiberglass





Dimensions

Calibre		L	H	D	Weight	Connection	Adaptor for PVC pipe (L1)
mm	inch	mm			Kg		mm
50	2"	230	162	74	1,1	Threaded	330,40
80	3"	310	236	108	2,7	Threaded	436,00
80	3"	320	278	200	3,8	Flanged	
100	4"	335	291	225	4,22	Flanged	



Technical specifications

Calibre	Minimum opening pressure	Maximum pressure	KV	CV
	bar	bar	m ³ /h	US glm and psi
50	0,3	PN16	98,9	114,3
80	0,15	PN16	203,3	235,0
100	0,15	PN16	203,3	235,0



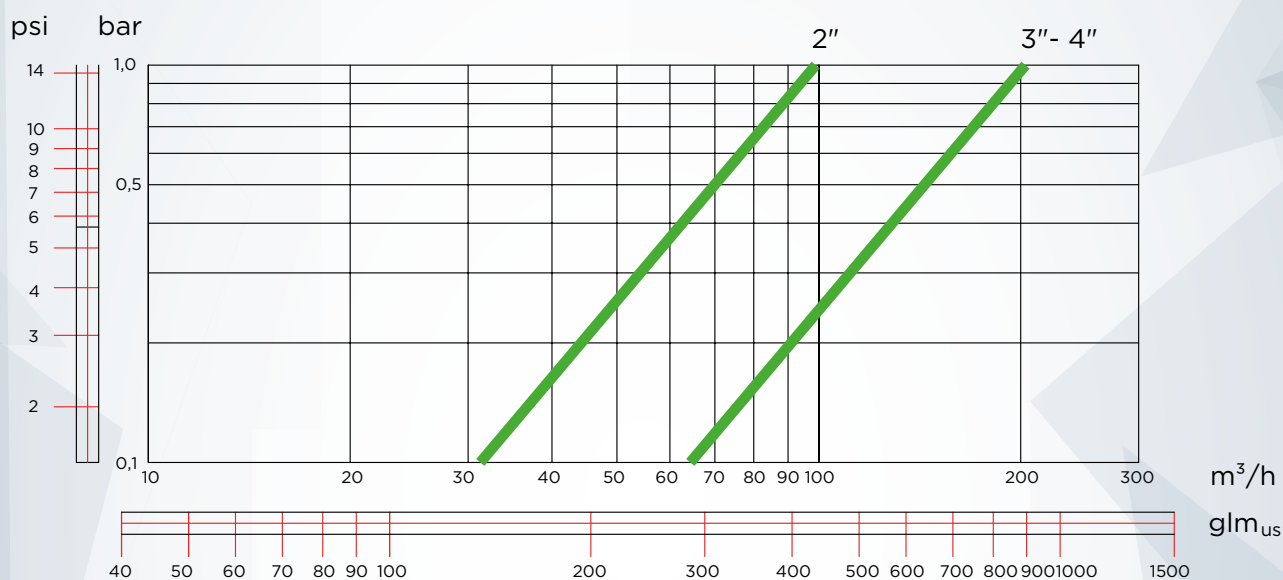
Calculation of coefficient Kv

q_v is the flow rate in m^3 / h
 ρ is the density of water in kg / m^3
 ρ_0 is the density of water at 15 °C in kg / m^3
 Δp_v is the loss pressure of the valve in bar

$$K_v = q_v \sqrt{\frac{\rho}{\Delta p_v \rho_0}}$$

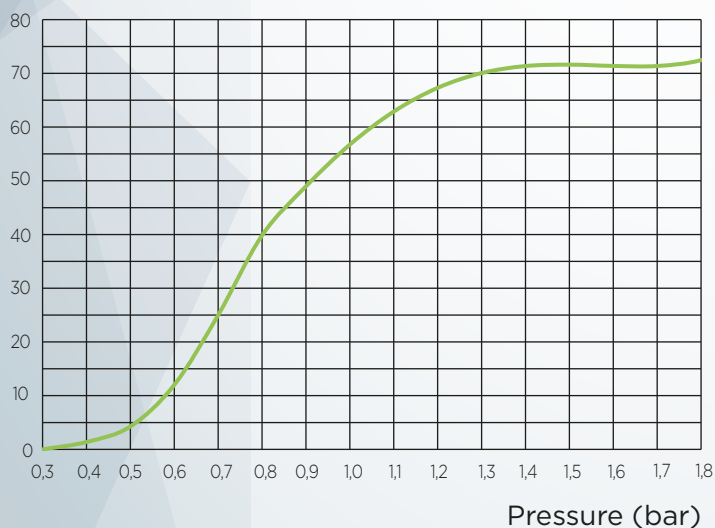


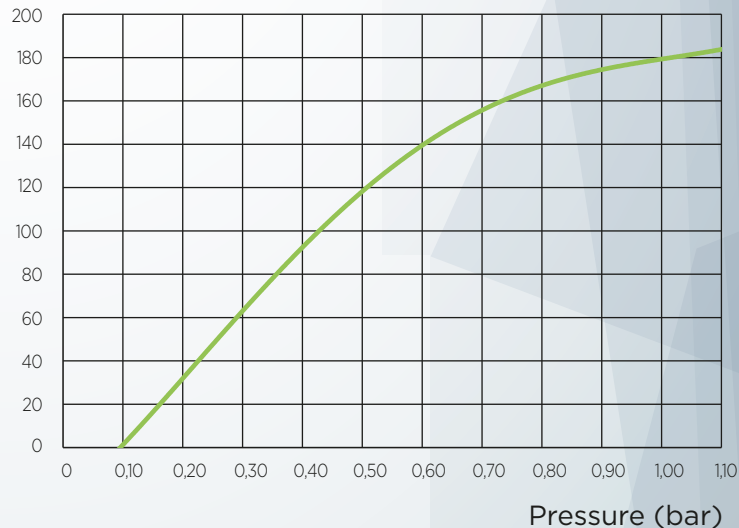
Pressure loss curve



Operating curves

DN 50

 Flow m^3 / h

DN 80 - 100

 Flow m^3 / h


PRESSURE REDUCING VALVE



Applications

Used in places where pressure is needed for:

- ✓ - Adjust the pressure to consumption.
- ✓ - Protect instalations.

The pilot acts on the valve so that it has a modulating function, in order to keep the downstream pressure constant for the setting value.



Functioning

The pilot sets the downstream pressure regardless the inlet pressure. If the outlet pressure is less than the preset pressure, the valve is completely open. If the upstream pressure is less than the calibrated, the pilot will open the valve, it will act just when the pressure exceeds the set pressure

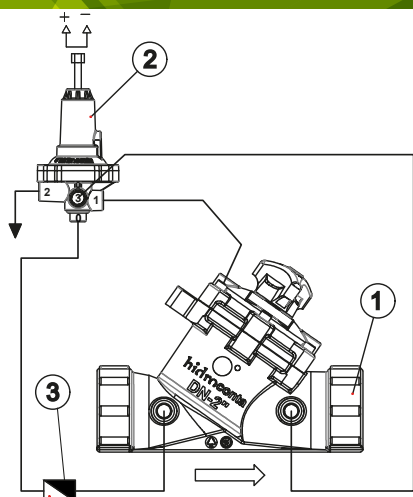


Ratios

Maximum reduction ratio: inlet pressure x 1/3

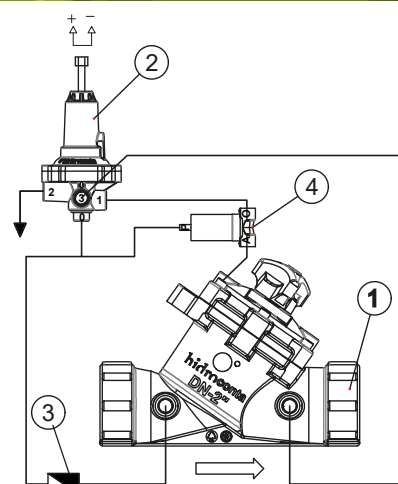
Precision Ratio: preset pressure \pm 0,3 bar

REDUCING PRESSURE VALVE



- 1.- Taurus valve.
- 2.- Reducer pilot.
- 3.- Filter.

REDUCING PRESSURE 3 WAYS VALVE WITH SOLENOIDE



- 1.- Taurus valve.
- 2.- Reducer pilot.
- 3.- Filter.
- 4.- Solenoid.

SUSTAINING VALVE



Applications

It is used in installations where it is desired to maintain a minimum hydraulic pressure, such as:

- ✓ - Pumping groups.
- ✓ - Pipe lines with different consumption.
- ✓ - Filtering equipment.

The installation of this type of valves allows to maintain a minimum pressure upstream set by the user.



Functioning

The pressure holding valve is designed to maintain a minimum upstream pressure if the pressure is higher than the set value. Otherwise the valve will close until the upstream pressure is equal to or greater than the tare.

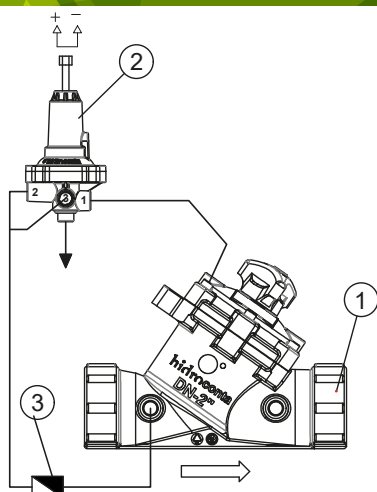


Ratios

Standard working rate: from 1 bar to 6.5 bar

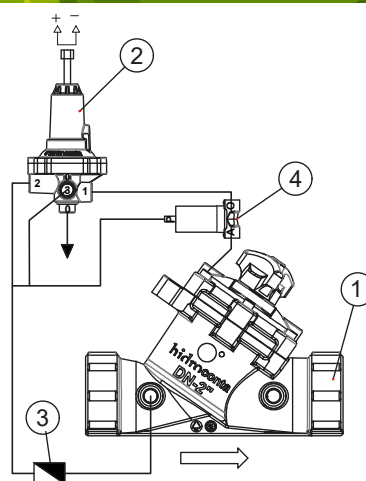
Precision Ratio: preset pressure \pm 0.3 bar

PRESSURE SUSTAINING 3 WAYS VALVE



- 1.- Taurus valve.
- 2.- Sustenance pilot.
- 3.- Filter.

PRESSURE SUSTAINING 3 WAYS VALVE WITH SOLENOID



- 1.- Taurus valve.
- 2.- Sustenance pilot.
- 3.- Filter.
- 4.- Solenoid.

REDUCING AND SUSTAINING VALVE



Applications

The combined reducing and sustaining valve performs both functions independently. Prevents on-site generation:

- ✓ - Pressure drops.
- ✓ - Overpressures.

It is mainly used to automatically reduce downstream pressure in the distribution network and hold a minimum of pressure in the main high pressure line regardless of the demand for distribution.



Functioning

The reducing pilot acts on the valve so that it has a modulating function, in order to keep the downstream pressure constant for the set control value, the holding pilot acts on the valve so that it has a modulating function, in order to maintain the upstream pressure above the minimum control value.



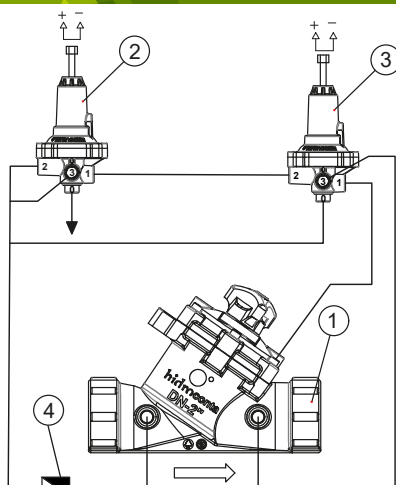
Ratios

Maximum reduction ratio: inlet pressure x 1/3

Precision Ratio: preset pressure \pm 0.3 bar

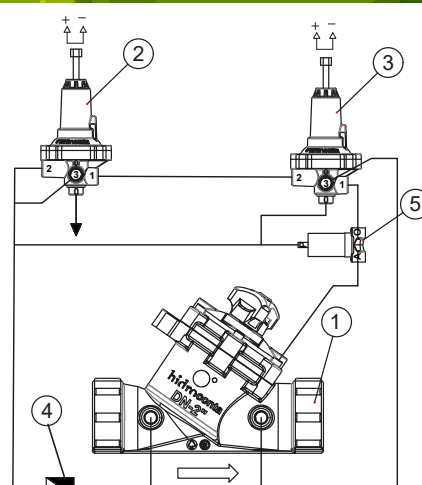
Standard operating ratio: 1 bar to 6.5 bar

REDUCING AND SUSTAINING 3 WAYS VALVE



- 1.- Taurus valve.
- 2.- Reducer pilot.
- 3.- Sustenance pilot.
- 4.- Filter.

REDUCING AND SUSTAINING 3 WAYS VALVE WITH SOLENOID



- 1.- Taurus valve.
- 2.- Reducer pilot.
- 3.- Sustenance pilot.
- 4.- Filter.
- 5.- Solenoid.

FLOW CONTROL VALVE



Applications

The installation of limiter flow control valves allows to:

- ✓ - Avoid excessive consumption.
- ✓ - Avoid pressure drops and therefore supply deficiencies at points away from the grid.

The flow limiting valves allow to limit the flow of circulating water, ensuring that it is equal to or less than adjusted.



Functioning

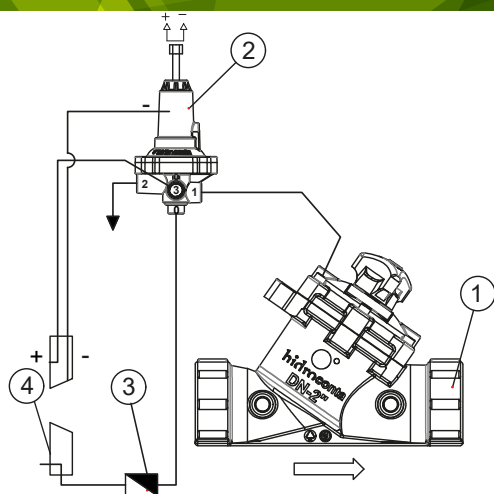
The pilot regulates the opening of the valve according to the differential pressure, providing the pre-set flow rate and keeping the flow constant. By actuating the screw of the pilot's tare it is possible to vary the flow rate. By means of two sensors, installed on both sides of an orifice plate that produces a certain pressure drop, the circulating flow is obtained, closing the hydraulic valve partially until only allowing the determined flow if this flow is to be exceeded.



Ratios

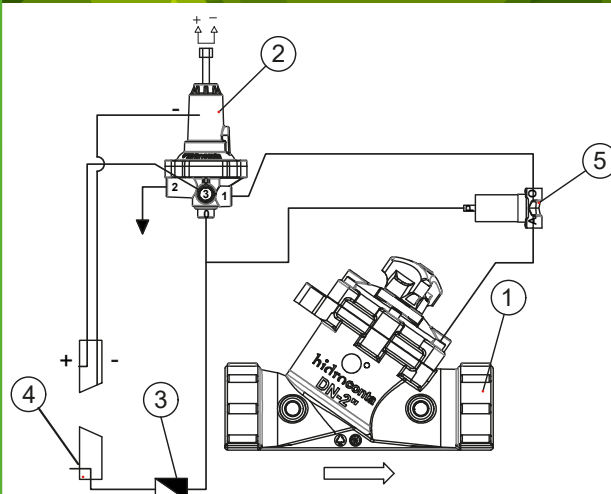
After preselecting the flow to be limited, the pilot is able to modify the flow rate set at $\pm 15\%$.

FLOW RATE 3 WAYS VALVE



- 1.- Taurus Valve.
- 2.- Limiter pilot.
- 3.- Filter.
- 4.- Hole disc.

FLOW RATE 3 WAYS VALVE WITH SOLENOID



- 1.- Taurus Valve.
- 2.- Limiter pilot.
- 3.- Filter.
- 4.- Hole disc.
- 5.- Solenoid.

FLOW LIMITER AND PRESSURE REDUCER



Applications

The combined reducing and limiting valve performs both functions independently.
Prevents on-site generation:

- ✓ - Excessive consumption
- ✓ - Pressure drops and therefore supply deficiencies at points away from the grid.
- ✓ - Adjust the pressure to the consumption.
- ✓ - Protect facilities.



Functioning

The limiting and reducing valve performs its function with the aid of a tapered orifice plate installed upstream. It includes a differential pilot that regulates the opening of the valve in function of the differential pressure, proportional to the flow, maintaining the constant flow. The reducing pilot acts on the valve so that it has a modulating function in order to keep the downstream pressure constant for the set control value.



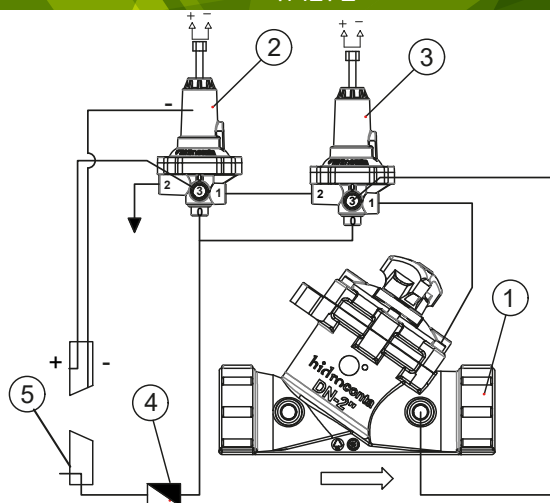
Ratios

Maximum reduction ratio: inlet pressure $\times 1/3$

Precision Ratio: preset pressure ± 0.3 bar

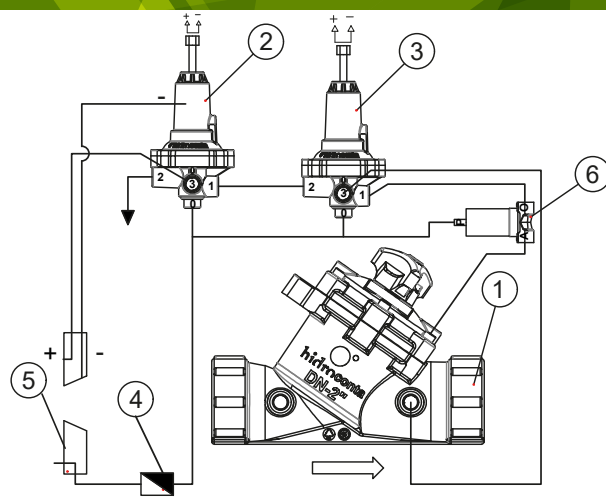
After preselecting the flow to be limited, the pilot is able to modify the flow rate set at $\pm 15\%$.

FLOW LIMITER AND PRESSURE REDUCER 3 WAYS VALVE



- 1.- Taurus valve.
- 2.- Limiter pilot.
- 3.- Reducer pilot.
- 4.- Filter.
- 5.- Hole disc.

FLOW LIMITER AND PRESSURE REDUCER 3 WAYS VALVE WITH SOLENOID



- 1.- Taurus valve.
- 2.- Limiter pilot.
- 3.- Reducer pilot.
- 4.- Filter.
- 5.- Hole disc.
- 6.- Solenoid.

ELECTROVALVE



Applications

The installation of solenoid valves allows us to act remotely, we can control the opening and closing of the valve automatically.



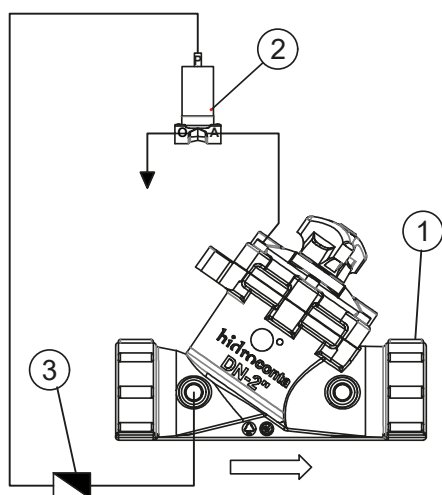
Functioning

The VHM valve with solenoid or electrovalve is an on / off valve. The valve will operate fully open or fully closed when the solenoid is energized.

The valve uses the own pressure of the network for its operation.

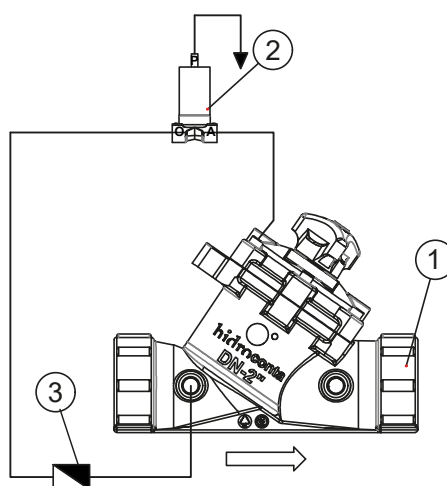
In case of low pressure in the network any external source of pressure can be used.

ELECTROVALVE NA



- 1.- Taurus valve.
- 2.- Solenoid.
- 3.- Filter.

ELECTROVALVE NC O LACHT



- 1.- Taurus valve.
- 2.- Solenoid.
- 3.- Filter.

FLOAT VALVE



Aplicaciones

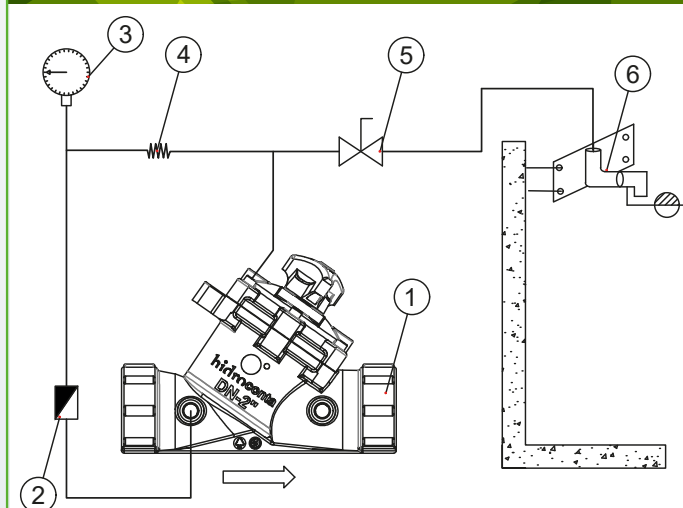
Float valves are used in water tanks or regulation tanks. It is designed to fully open when the water level reaches a preselected low and closes tightly when it reaches the selected high level.



Functioning

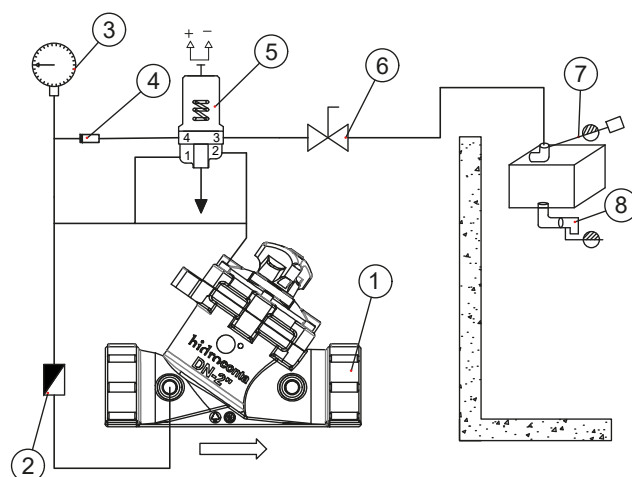
When the water level in the tank reaches its maximum point, the buoy pilot closes the water passage, accumulating the water pressure in the valve chamber and closing it. When the water level in the tank drops due to consumption, the buoy pilot also descends, opening the water passage and draining the chamber, which opens the hydraulic valve.

1 LEVEL FLOAT VALVE



- 1.- Taurus valve.
- 2.- Filter.
- 3.- Inlet pressure manometer.
- 4.- Spiral 4 mm.
- 5.- Cut-off hydraulic valve.
- 6.- 1 level float.

2 LEVELS FLOAT VALVE



- 1.- Taurus valve.
- 2.- Filter.
- 3.- Inlet pressure manometer.
- 4.- Needle valve pilot.
- 5.- Float pilot.
- 6.- Cut-off hydraulic valve.
- 7.- Maximum level float.
- 8.- Float hydraulic switch.

PRESSURE RELIEF VALVE



Applications

The relief valve is designed to open in case of exceeding a preset maximum pressure. This valve is installed with outlet to the atmosphere, relieving by opening the overpressure in the pipe.

- ✓ - Protection of hydraulic installations.



Functioning

The pressure relief pilot sets the maximum tare pressure limit through a set screw.

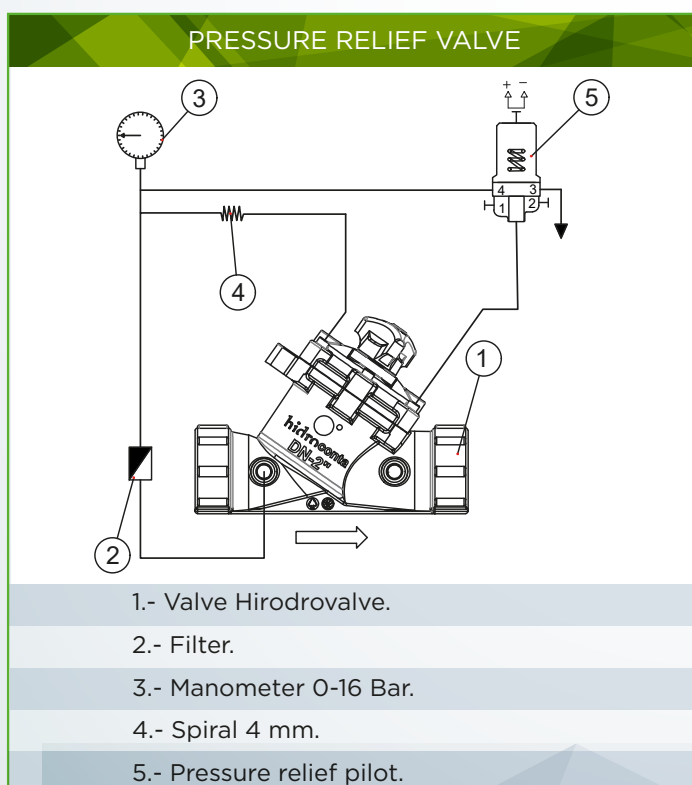
If the upstream pressure exceeds the setting pressure, the piston is moved upwards by communicating the valve chamber and the atmospheric pressure. In this way the valve opens to reduce excess pressure.



Ratios

Working pressures: From 2-16 bar

Precision Ratio: ± 0.5 bar





Order information

General characteristics	
Valve diameter	DN / mm / inches
Valve type	membrane / piston
Maximum input pressure	bar / MPa
Fittings	plastic / metalic
Accesories	plastic / metalic
Pilots	plastic / metalic
Solenoid (Yes/Not)	latch/24VDC/24VAC/220VAC
State of the valve at rest	open / close

Reducer valve characteristics	
Output pressure	bar / MPa
Maximum flow	m ³ / h
Minimum flow	m ³ / h

Sustaining valve characteristics	
Pressure to hold	bar / MPa
Maximum flow	m ³ / h
Minimum flow	m ³ / h
Working flow	m ³ / h

Electrovalve characteristics	
Solenoid voltage	V
Nº of wires	2 / 3
Use of the valve	open / close

Float characteristics	
Filling point	1 / 2

Pressure relief characteristics	
Pressure relief	bar / MPa



FAQ

1- Why does not the valve open?

There may be insufficient pressure at the inlet pressure valve, you should examine the insulation valves of the system upstream and downstream, if they are closed open to allow the passage of water and generate pressure.

Another reason may be that the solenoid is calcified, clean it and replace parts as necessary.

2- Why does not the valve regulate at the desired control point?

It may be caused by the pilot because it is not adjusted properly, check it by tightening and loosening the screwdriver to see if there is a pilot reaction, so you can adjust the pilot to the desired opening and closing speed.

Check if the upstream filter is clogged and causes insufficient pressure to reach the pilot to activate the valve at the desired control point.

3- Why does not the valve close?

It may be that the filter is clogged, to check it, disconnect the copper line from the lid to see if there is water flow in the inlet. In this case clean the filter mesh.

If the main valve membrane fails, it can also give this result, replace the membrane for repair.

Another reason may be that the solenoid is calcified, clean it and replace parts as necessary.

4- Why does the membrane leak water?

It is usually produced by the accumulation of dirt between the membrane and its closing support, closing the valve manually, if the problem persists open the valve to clean the area.



TAURUS VALVE

WHEN WATER COUNTS

CUANDO EL AGUA ES LO QUE CUENTA

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