hidra conta

VALVES

eopard

LEOPARD VALVE







Multifunctionality

HIDROVALVE valves are essential elements in any hydraulic installation due to its multifunctionality. Reduced pressure, limiter, relief, and multifunctional regulations are some of the possibilities of this valve.

Easy Maintenance

A simple assembly including few moving parts allows on-site maintenance without dismantling the installation, besides guaranteeing a long useful life.

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LEOPARD VALVE











The Hidroconta HIDROVALVE valve is developed to eliminate water hammer by its slow opening and closing. In addition, its hydrodynamic design reduces possible internal turbulence and its body generates low losses of load. Water Engineering

It uses the energy of the circulating fluid itself, with a single activation chamber and where the closure is produced by the diaphragm itself.

The assembly of all its components constitutes a conduit through which the water will pass, which we will strangle as we are interested through the position of the diaphragm.



COUNTS

6

Exploded view

N.°	NAME	MATERIAL
1	Body	Ductil Iron
2	Lid	Ductil Iron
3	Membrane	Natural ruber
4	Screw	Zinc plated steel
5	Washer	Zinc plated steel

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WHEN WATER

LEOPARD VALVE



Dimensions

Diameter		L	D	Н	Weight	Connections
mm	Inch		mm		Kg	
20	3/4"	184	32	94	3,0	FILETAGE BSP
25	1″	184	32	94	2,7	
32	1-1/4″	180	31	94	3,1	
40	1-1/2"	180	31	94	2,8	
50	2"	186	38	100	3,2	
65	2-1/2"	186	46	117	3,8	
80	3"	235	55	113	5,4	
50	2"	189	82	166	6,6	
65	2-1/2"	202	93	186	9,98	BRIDEL FINIO
80	3"	250	100	201	10,8	
100	4"	311	110	222	16,2	
125	5″	335	125	250	25,4	
150	6″	410	145	290	51,0	H O DDD O
200	8″	465	170	340	57,0	
250	10″	650	230	460	125,0	
300	12"	650	230	460	137,0	



Technical specifications

Diameter		Connections	Minimum opening pressure	Maximum pressure	κv	cv
mm	Inch		bar	bar	m³/h	US glm / psi
20	3/4"	Filetage	0,75	16	28,1	32,6
25	1″	Filetage	0,75	16	28,1	32,6
32	1-1/2"	Filetage	0,80	16	65,0	75,4
40	1-1/4"	Filetage	1,10	16	77,0	89,3
50	2"	Filetage	1,20	16	77,0	89,3
65	2-1/2"	Filetage	1,50	16	77,0	89,3
80	3"	Filetage	0,3	16	150	174,0
50	2"	Brideé	1,20	16	90,0	104,4
65	2-1/2"	Brideé	0,3	16	101,0	117,15
80	3"	Brideé	0,3	16	233,0	270,28
100	4"	Brideé	0,3	16	328,0	380,48
125	5″	Brideé	2,30	16	220,0	255,2
150	6"	Brideé	1,60	16	360,0	417,6
200	8″	Brideé	2,10	16	360,0	417,6
250	10″	Brideé	0,50	16	1.150,0	1.334,0
300	12″	Brideé	0,80	16	1.150,0	1.334,0

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WHEN WATER COUNTS



Calculation of coefficient Kv

- qv is the flow rate in m³ / h
- ρ is the density of water in kg / m³
- ρ_0 is the density of water at 15 °C in kg / m³
- Δpv is the loss pressure of the valve in bar





Pressure loss curve



Flanged valves

pin bar 10°-12° 10°

WHEN WATER COUNTS

PRESSURE REDUCING VALVE



Used in places where pressure is needed for:



- Protect instalations.



- Break the static pressure.

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.



Maximum reduction ratio: inlet pressure x 1/3 Precision Ratio: preset pressure ± 0.5 bar



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



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LEOPARD VALVE



Funtional drawing



5.- Filter.

2 WAYS REDUCING PRESSURE VALVE WITH SOLENOIDE



- 1.- Leopard valve.
- 2.- 3 valve.
- 3.- 2-Way Reducer Pilot.
- 4.- Inlet Pressure manometer..
- 5.- Outlet Pressure manometer.
- 6.- Needle spiral.
- 7.- Filter.
- 8.- Solenoid.

REDUCING PRESSURE VALVE WITH SOLENOIDE



6.- Solenoid NA/Lacth.

3 WAYS REDUCING PRESSURE VALVE WITH SOLENOIDE



WHEN WATER COUNTS

SUSTAINING VALVE



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



- 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.



Standard working rate: from 1 bar to 6.5 bar **Precision Ratio:** preset pressure ± 0.3 bar



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.



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Funtional drawing



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LEOPARD VALVE

REDUCING AND SUSTAINING VALVE



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.



Maximum reduction ratio: inlet pressure x 1/3 Precision Ratio: preset pressure ± 0.3 bar Standard operating ratio: 1 bar to 6.5 b



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WHEN WATER COUNTS

LEOPARD VALVE





REDUCING AND SUSTAINING VALVE (with accelerator pilot)



WHEN WATER COUNTS

- 1.- Valve Leopard. (DN150-DN300).
- 2.- Sustenance pilot.
- 3.- Inlet pressure manometer.
- 4.- Outlet pressure manometer.
- 5.- Reducer pilot.
- 6.- Accelerator pilot.
- 7.- 3 ways valve.
- 8.- Cut-off hidraulic valve.
- 9.- Filter.

FLOW CONTROL VALVE



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.



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



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.



LEOPARD VALVE



Funtional drawing

FLOW RATE VALVE



- 2.- 3 ways valve.
- 3.- Inlet pressure manometer.
- 4.- Limiter pilot.
- 5.- Hole disc.
- 6.- Filter.



FLOW RATE VALVE WITH SOLENOIDE

1 -	Valve		nard
1.7	vaive	Leo	paru

- 2.- 3 ways valve.
- 3.- Solenoid.
- 4.- Inlet pressure manometer.
- 5.- Limieter pilot.
- 6.- Hole disc.
- 7.- Filter.

rev: 2

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WHEN WATER COUNTS

FLOW LIMITER AND PRESSURE REDUCER



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.



Maximum reduction ratio: inlet pressure x 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 ± 15%..



The limiting and reducing valve performs its function with the aid of a tared 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.

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LEOPARD VALVE



Funtional drawing

FLOW LIMITER AND PRESSURE REDUCER VALVE



FLOW LIMITER AND PRESSURE REDUCER VALVE WITH SOLENOID



- 1.- Valve Leopard.
- 2.- 3 ways valve.
- 3.- Solenoid.
- 4.- Reducer pilot.
- 5.- Inlet pressure manometer.
- 6.- Outlet pressure manometer.
- 7.- Limiter pilot.
- 8.- Hole disc. 9.- Filter.
- .

rev: 2

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WHEN WATER COUNTS

ELECTROVALVE



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



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.

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FLOAT VALVE



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.





Funtional drawing

1 LEVEL FLOAT VALVE



2 LEVELS FLOAT VALVE



PRESSURE RELIEF VALVE



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.



Working pressures: From 2-16 bar Precision Ratio: ± 0.5 bar

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LEOPARD VALVE



General cha	racteristics	
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	
Estado de la válvula en reposo	abierta/ cerrada	

Re	ducer valve characteristics
Output pressure	bar / MPa
Maximum flow	m³ / h
Minimum flow	m ³ / h

Su	staining valve characteristics
Pressure to hold	bar / MPa
Maximum flow	m ³ / h
Minimum flow	m ³ / h
Working flow	m³ / h
	Electrovalve characteristics
Solenoid voltage	V
N ^⁰ of wires	2/3

Use of the valve			
	Float cha	racteristics	
Filling point			
		ohovo otovistico	

	Pressure relief chara	acteristics
Pressure relief		bar / MPa

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open / close

1/2



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.

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.

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LEOPARD VALVE

WHEN WATER COUNTS CUANDO EL AGUA ES LO QUE CUENTA

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