

EVDOS S.A

EVDOS MECHANICAL CONSTRUCTIONS S.A



HYDRAULIC CONTROL VALVE DOUBLE CHAMBER TYPE Y

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Hydraulic Control Valves are automatic control valves which are designed to provide the control of pressure, flow and water level in the water supply system. They are designed as "Y shaped body" model type in order to perform with maximum performance, resistance to cavitation and minimum pressure loss in high flow rates.

They are operated with diaphragm actuator . They are double-chamber diaphragm actuated and disc closed types. The Valve has a standard double control chamber.

These line pressure operating valves are used in various water control applications of water supply, firefighting, industrial systems and agricultural irrigation.

WORKING PRINCIPLE

Three-way selector valve connected to main valve:

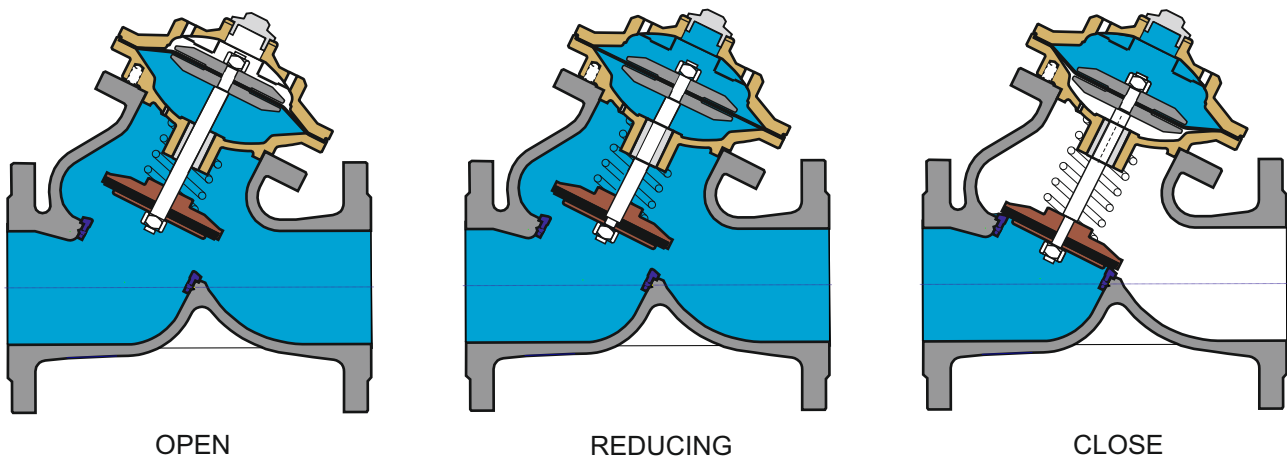
Closed position: Valve is closed by applying pressure on the diaphragm and flow is provided from the inlet of valve or by supplying an external pressure to actuator.

Open position: When the trapped pressure in the valve actuator starts to be released, the internal pressure is pushing by moving the diaphragm upward and the valve is opened and flow is provided without obstruction.

Controlling with a pilot valve on a valve:

Modulation Position: The actuator balances the upstream pressure, downstream pressure and flow it ensure that the diaphragm remains in a stable position.

Open position: When the pilot valve is fully opened, the pressure trapped inside the actuator lifts the pressure on the diaphragm and valve is opened.

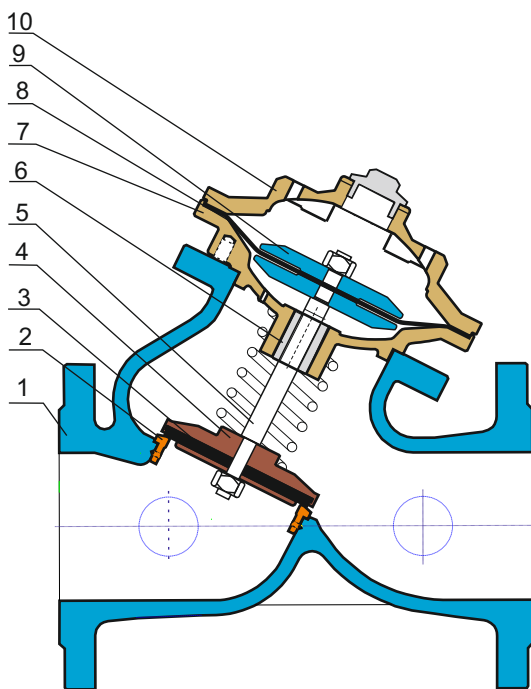


GENERAL SPECIFICATIONS

- I I. The sealed valve provides a full sealing thanks to the rubber diaphragm.
- II II. Open valve provides minimal pressure drop and unobstructed flow at the desired opening.
- III III. Valve opening, closing and modulation position is provided by diaphragm, spring, shaft and disc
- IV IV. The valve can be controlled with a line pressure or with another pressure source.
- V V. There are no rusting or damaging shafts, bearings and gaskets in the valve.

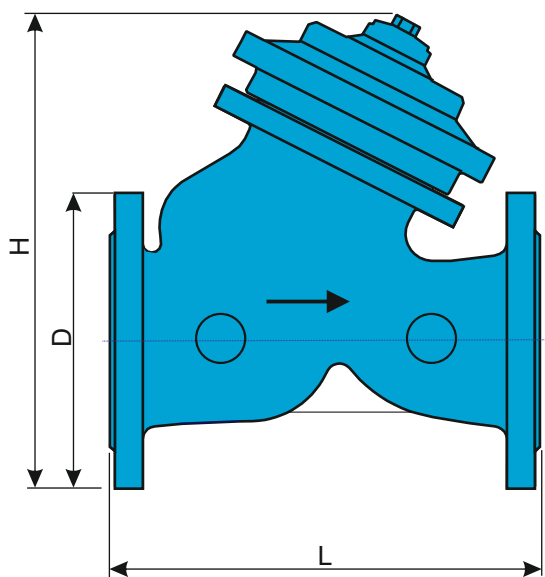
ADVANTAGES & BENEFITS

- I I. The "Y shaped Body" Valves are designed to have more flow rates compared to standard globe types.
- II II. They have lower pressure loss than standard globe types.
- III III. There is less cavitation damage, smooth control and easy usage and maintenance due to its body design.
- IV IV. They do not cause damage during turning on and off. They have less maintenance cost advantages.
- V V. They operate with line pressure without needing extra energy.
- VI VI. They have a wide range of applications by using of various pilot valves.



MATERIAL

1	Body	Ductile iron GGG 40
2	Seal Ring	Brass / Bronze
3	Rubber seal	NBR
4	Disc	Ductile iron GGG 40
5	Stem	Stainless steel AISI 420
6	Bearing	Brass / Bronze
7	Separation partition	Ductile iron GGG 40
8	Diaphragm	Neoprene
9	Diaphragm washer	Steel
10	Cover	Ductile iron GGG 40



DN	L	D	H	WEIGHT
40	220	150	265	13
50	220	165	268	13
65	220	185	285	14
80	275	200	340	26
100	335	235	390	38
125	410	270	420	39
150	430	300	520	80
200	540	360	668	142
250	620	425	775	230
300	700	485	850	370
350	868	555	1060	650
400	868	620	1085	673
450	1116	670	1350	1282
500	1116	730	1390	1322
600	1450	845	1560	1810
700	1650	960	1700	2200
800	1855	1085	1743	3200

DESCRIPTION

NORMS

Body - Flange	EN 1563 / EN 1092-2
Dimensions	DN 50 - 800
Temperature	70°C
Pressure	PN 10/16/25
Coating	Electrostatic epoxy 250 microns DIN 30677
Standard	EN 1074-5
Test	EN 12266-1

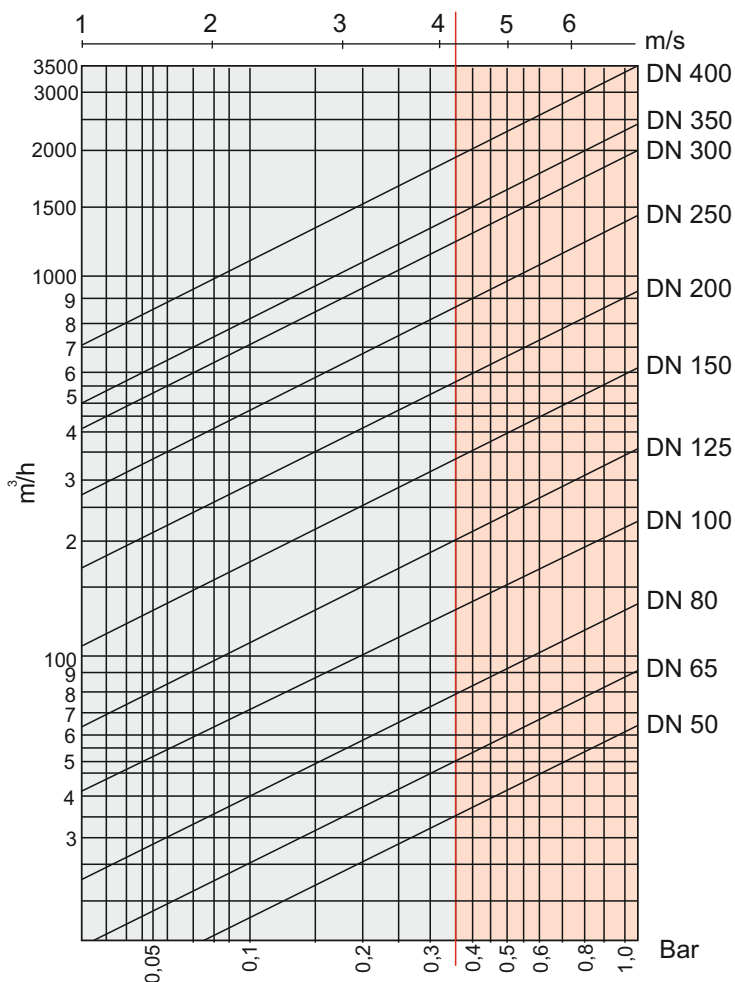
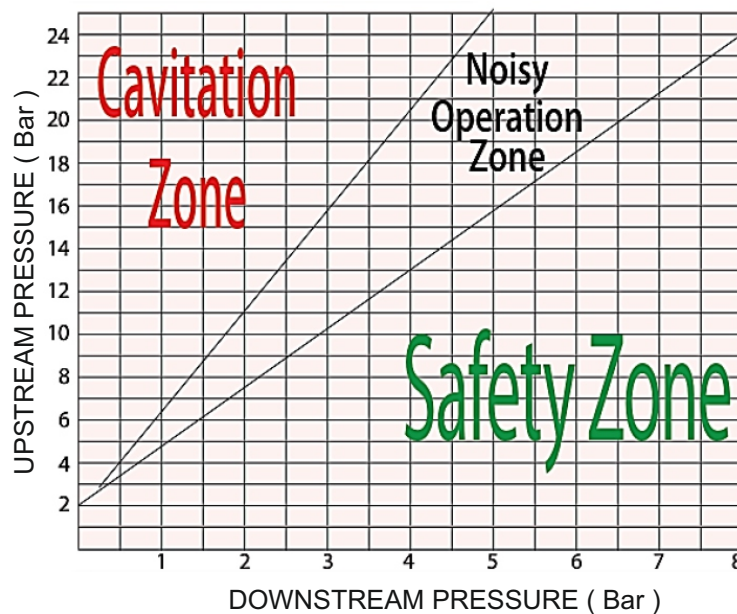
VALVE SIZING

D = Diameter of pressure quick relief valve in mm

Q = Flow rate (m³/h)

P = Operating pressure

$$D = \sqrt{\frac{250 \times Q}{P}}$$

PRESSURE LOSS

CAVITATION DIAGRAM




Quick Relief Valves are hydraulically operated safety control valves, designed to protect water network systems by releasing higher upstream pressure surges to atmosphere that causes from sudden changes in water speed because pumps put into/out of service frequently in water network elevation lines or for any reasons. When line pressure goes beyond preset point, the valve opens by itself quickly and protects system by releasing over pressure and maintains it constant, regardless of fluctuating demand or varying upstream pressure. When there is no flow in the system, it closes by itself automatically. When line pressure decreases to normal level, it closes slowly and automatically as fully sealed without causing surge.

