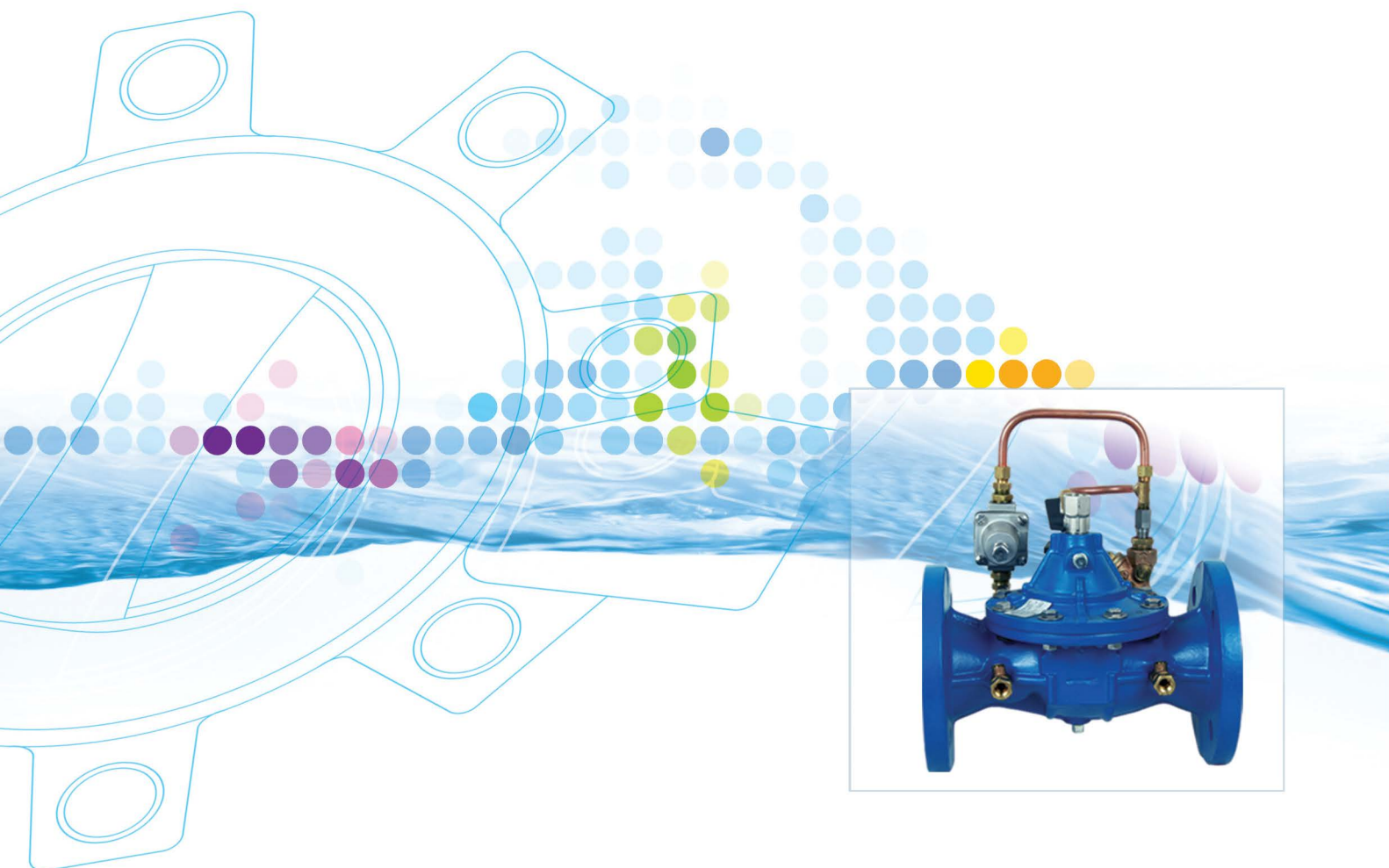
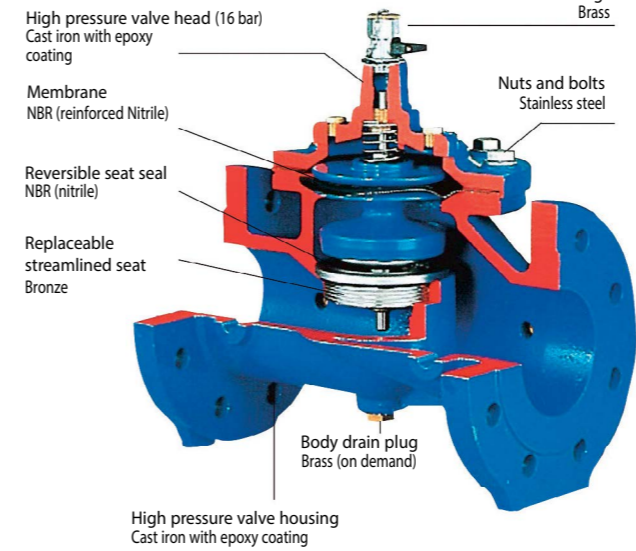


# SOCCLA

## CONTROL VALVE



For all control valves  
PN 16  
DN 40 to 300 mm



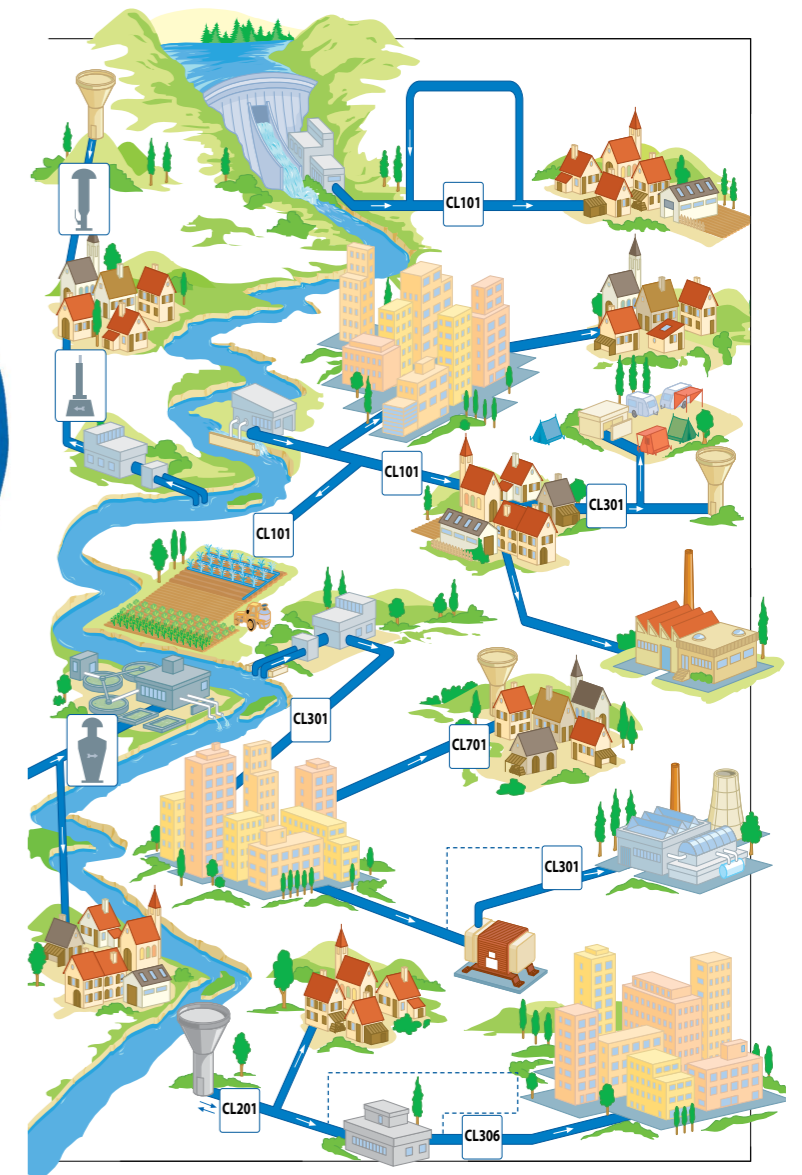
### REGULATION MAINTENANCE

We recommend a maintenance control each 6 or 12 months according to the quality of the water.

- a. Checking and cleaning filters of the pilot circuit and main piping system.
- b. Purging the upper chamber by means of the visual position indicator.
- c. Flushing the valves not frequently used.

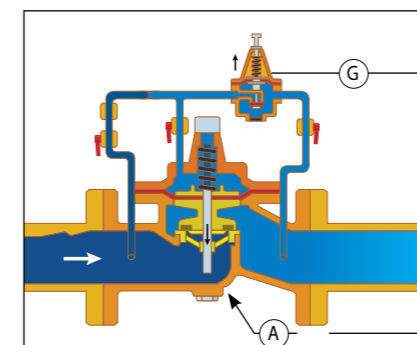
Every 5 years, general maintenance is advisable :

- dismantling
- cleaning of main valve and pilot valve
- preventive removing of the seals (set available - please consult us)
- reassembling and tests.



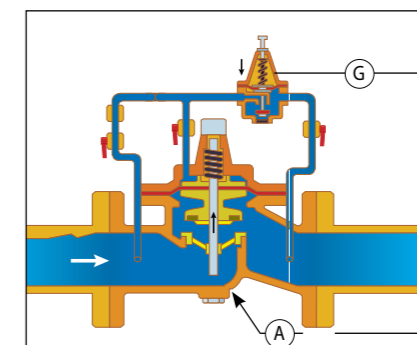
### Working principle (Pressure reducing valve type CL101)

CLOSING



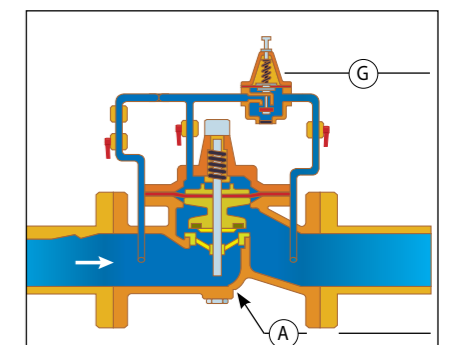
When the downstream pressure rises, the pilot valve G closes. Pressure in the upper chamber rises also and forces the membrane to close the main valve A which reproduces the movement of the pilot.

OPENING



When the downstream pressure is too low, no pressure is acting on the membrane and the pilot G opens. Pressure in the upper chamber is released and the valve A opens reproducing the movement of the pilot.

CONTROLLING



When the pilot G opens or closes, pressure in the upper chamber forces more or less on the membrane to open or close the main valve.

# TECHNICAL INFORMATION

TEMPERATUR MAX : 90°C  
 VERSION WITH FLANGES : PFA 16 IF NOT INDICATED PRESSURE  
 VERTICAL INSTALLATION : CONTACT US  
 IT IS ADVISABLE TO USE A STRAINER UPSTREAM AND AN AIR RELIEF VALVE DOWNSTREAM

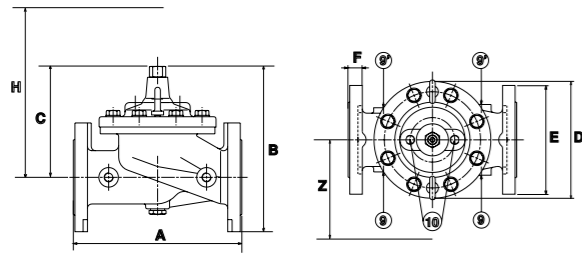
## DIMENSIONS

DN	A mm	B mm	C mm	D mm	E mm	F mm	H mm	Z mm	Kg	9	9'	10
40	237	240	160	170	167	16	520	335	13	1/4	1/4	1/4
50	237	240	160	170	167	16	520	335	13	1/4	1/4	1/4
65	276	255	160	170	192	18	550	335	15	1/4	1/4	1/4
80	276	255	160	170	192	18	550	335	15	1/4	1/4	1/4
100	306	315	205	205	233	24	665	352,5	29	1/4	1/4	1/4
125	416	370	240	270	250	25	750	385	46	1/4	1/4	3/8
150	416	380	240	270	283	26	760	385	50	1/4	1/4	3/8
200	520	490	330	363	345	28	940	431,5	95	1/4	1/4	3/8
250	755	690	490	575	410	33	1180	537,5	360	3/8	1/4	3/4
300	764	720	490	575	480	34	1180	537,5	330	3/4	3/4	3/4

Connection : PN 10 - PN 16 - PN 25 : flange drilling to be indicated when ordering.  
 Threaded connection and ANSI-ASI drilling : on request

### IMPORTANT

- Pilot circuit always mounted on the right hand side of valve, looking downstream direction of valve (for other execution, consult us).
- Control valve installed according to your parameters.
- These parameters are always required with the order : this is necessary to guarantee a correct functioning of your installation.



(Z) (H) MAX. OVERALL DIMENSION including the pilot circuit  
 (9) (10) BORES FOR PRESSURE GAUGES

- **DN 40 to 300 mm** : flange connection
- **Cast iron/ductile iron epoxy coated I/E** : 150µ +/-50µ
- **Flange version** : PN 16 & 25 according to EN 1092-2
- **Minimum upstream pressure** : 1 bar
- **Maxi. upstream pressure** : according to PN
- **Temperatur maxi** : 90°C
- **Temperature minimum** : -1°C
- **Vertical mounting** : Please consult us

## HOW TO SELECT THE RIGHT SIZE

To size this valve correctly and avoid undesirable operating characteristics (noise, excessive wear, poor regulation) which result from oversizing (or undersizing), use the sizing guide and choose the smallest valve size compatible with the indicated flow rates.

NOTA :

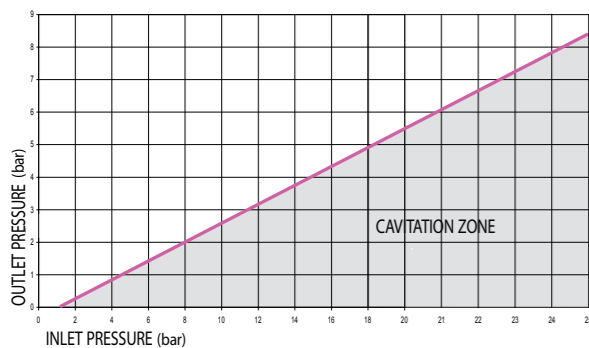
- For a throttling valve application requiring a wide range of flows a dual valve installation should be used.
- The maximum flow rates listed above were calculated by using a velocity of 4,5 m/second. The throttling valve is capable of handling larger flows for short periods of time ; however, the increase in maximum flow should be limited to 25% of the above values.

SIZING THE CONTROL VALVE		
DN	Mini m³/h	Maxi m³/h
40	0,4	20
50	0,5	32
65	0,8	40
80	1,15	50
100	1,5	80
125	3	100
150	4,5	150
200	10	300
250	15	550
300	25	850

## KV FACTOR

KV FACTOR		
DN	m³/h	l/s
40	42,5	11,81
50	42,5	11,81
65	42,5	11,81
80	42,5	11,81
100	94,5	26,25
125	170,5	47,36
150	170,5	47,36
200	373,5	103,75
250	740	205,56
300	740	205,56

## CAVITATION

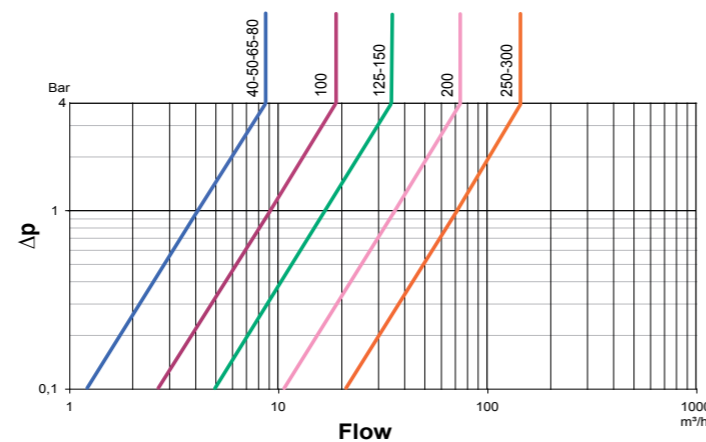


A too large differential pressure and a low downstream pressure may result in damage to the valve by cavitation. To avoid it, refer to the cavitation curve.

To avoid cavitation please refer to above diagram and if needed reduce the differential pressure by installing and connecting two or more control valves in same line (consult us). Stainless steel seat and counter seat are standard

## HEADLOSS CHART

VALVE FULLY OPENED



# Type CL101

## Control valve

### Pressure reducing valve

### Applications and general characteristics

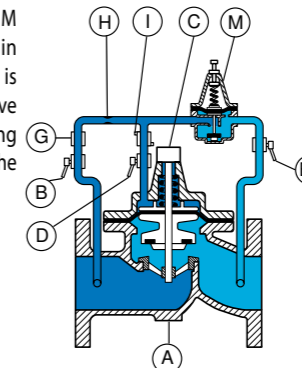


NB : Additional information is available on the data sheet listed as «Main valve».

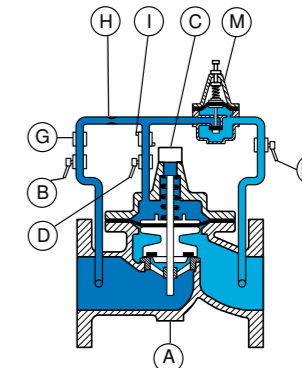
- This valve controls and maintains a preset reduced downstream pressure regardless of variations in demand and upstream pressure (the setting of downstream pressure is always below the upstream pressure).
- This valve reduces the pressure in networks of water distribution, irrigation or pump outlet.

### Working principal

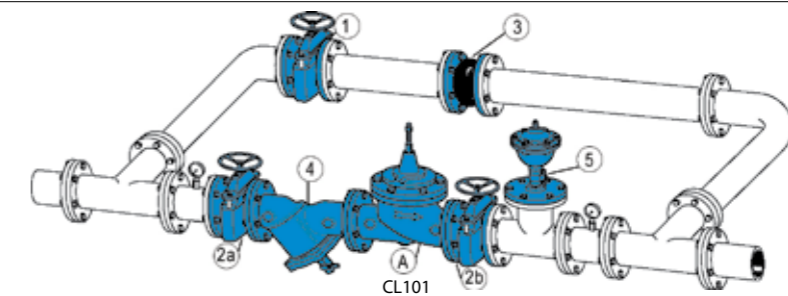
When the pilot M opens, pressure in the upper chamber is released and the valve A opens, reproducing the movement of the pilot.



When the pilot M closes, pressure in the upper chamber rises also and forces the membrane to close the main valve A which reproduces the movement of the pilot.



### Installation example and spare parts list



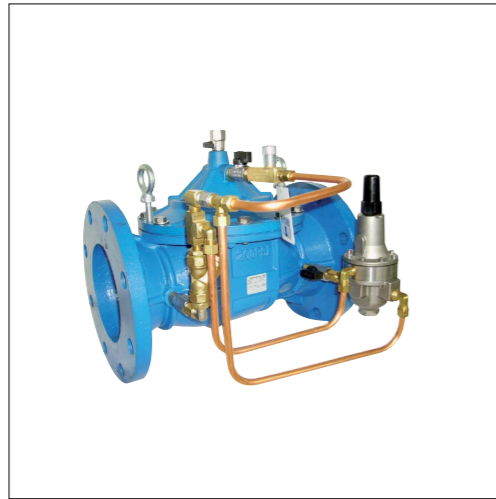
N°	Description	Material
A	Main valve	Cast iron
B	Upstream isolation valve	Nickel plated brass
B1	Downstream isolation valve	Nickel plated brass
C	Drain cock	Brass
D	Isolation valve	Nickel plated brass
G	Strainer	Brass
H	Orifice	Stainless steel
I	Flow control	Brass
J	Check valve (type CL101c)	Brass
M	Pilote valve	Stainless steel

N°	Description
1	Isolation valve of the by-pass
2a - 2b	Isolation valves of the main water pipe
3	Rubber expansion joints
4	Filter
5	Air vent

## Type CL301

Control valve  
Pressure Relief Valve

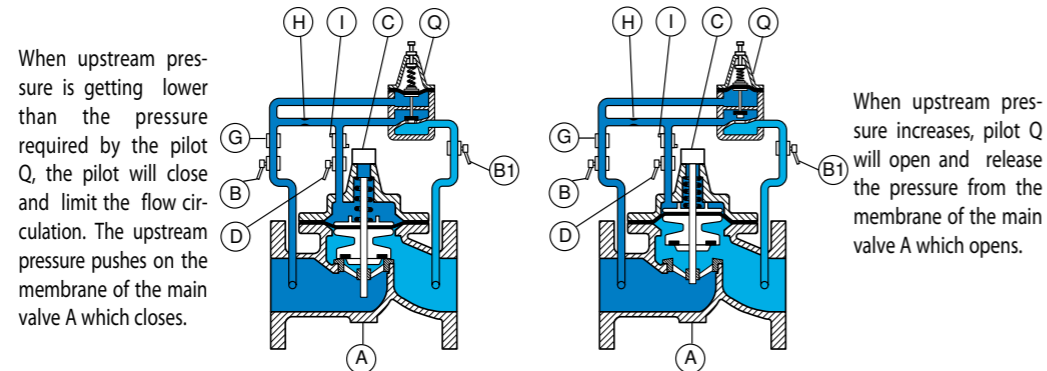
**Applications and general characteristics**



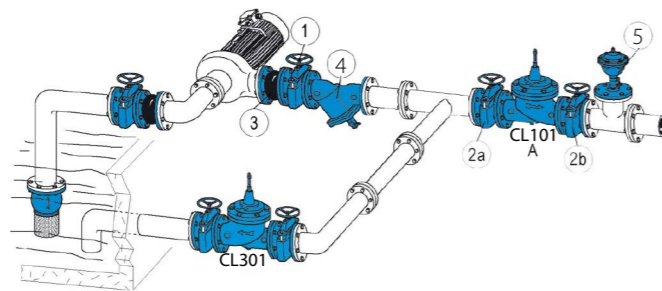
NB : Additional information is available on the data sheet listed as «Main valve».

- It controls and maintains a preset upstream pressure regardless of variations in flow rate.
- Always mounted in line, it prevents the pump from reducing its suction pressure below the security point. It prevents also from exceeding the pumping capacity when the demand is higher.

**Working principal**



**Installation example and spare parts list**



N°	Description	Material
A	Main valve	Cast iron
B	Upstream isolation valve	Nickel plated brass
B1	Downstream isolation valve	Nickel plated brass
C	Drain cock	Brass
D	Chamber isolation valve	Nickel plated brass
G	Strainer	Brass
H	Orifice	Stainless steel
Q	Pilote valve CL301	Inox

N°	Description
1	Isolation valve of the by-pass
2a - 2b	Isolation valves of the main water pipe
3	Rubber expansion joints
4	Filter
5	Air vent

## Type CL701

Control valve  
Altitude valve float operated

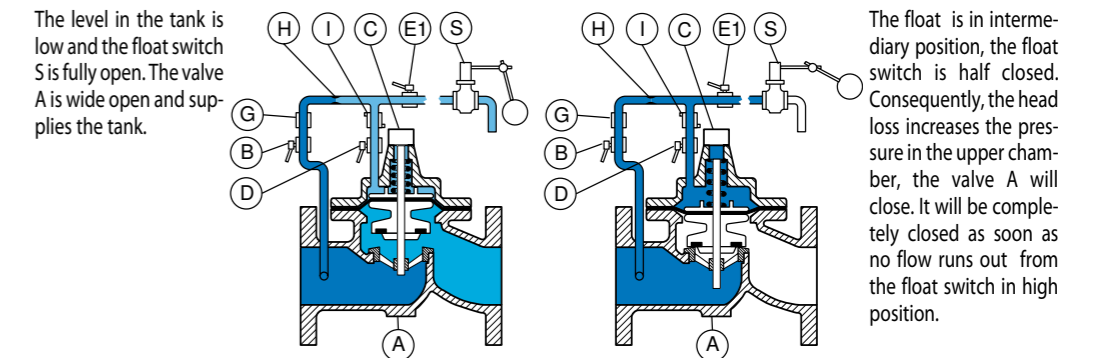
**Applications and general characteristics**



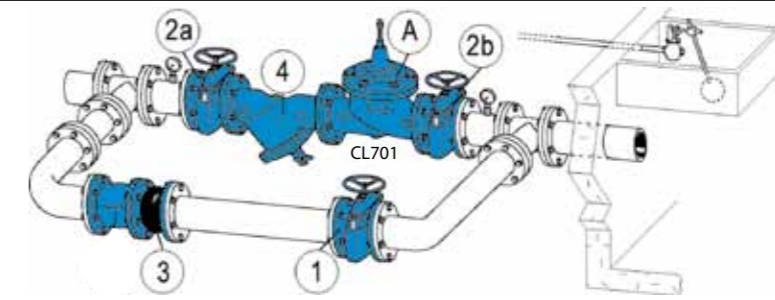
NB : Additional information is available on the data sheet listed as «Main valve».

- It prevents from overflowing and maintains a constant level in the tank thanks to a float.
- Openings and closings are very progressive, (a few centimeters from the required level).
- Prefer the installation at the bottom of the tank or close to it.

**Working principle**



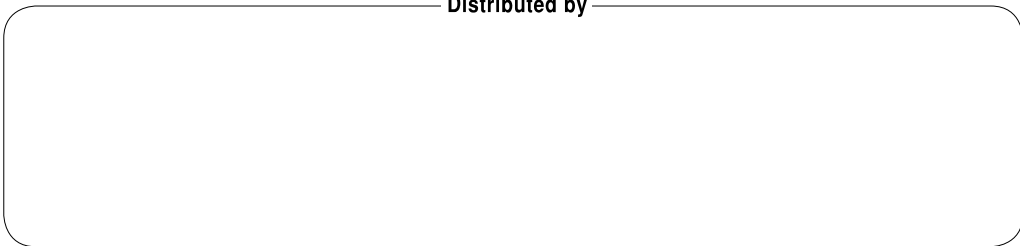
**Installation example and spare parts list**



N°	Description	Material
A	Main valve	Cast iron
B	Upstream isolation valve	Nickel plated brass
C	Drain cock	Brass
D	Chamber isolation valve	Nickel plated brass
E1	Downstream isolation valve	Nickel plated brass
G	Strainer	Brass
H	Orifice	Stainless steel
S	Pilote	Bronze-Stainless steel-copper float

N°	Description
1	Isolation valve of the by-pass
2a - 2b	Isolation valves of the main water pipe
3	Rubber expansion joints
4	Non-return valve

Distributed by



**SMA SOCLA-CTRL 01/15**