Technical data sheet

Type C501

Control valve

Anti-water hammer protection

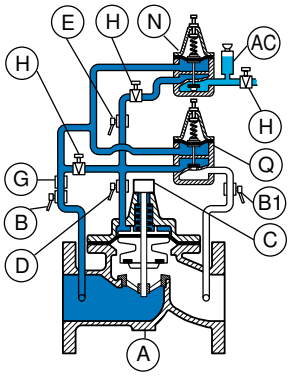
NB : Additional information is available on the data sheet listed as «Main valve».

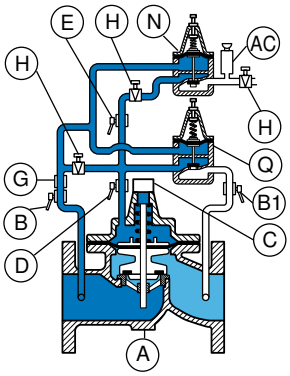
Applications and general characteristics

- Eliminates all pressure fluctuations which occur when pump starts, during electric power failure or pump failure.
- Always installed on a by-pass, its drains a certain quantity of water to the sewage pipe or at the pump suction into a tank : at first anticipation of the water-hammer in using the pressure drop preceding, and secondly reaction at real time against a possible overpressure, (in so far as the first operation is not sufficient).
- Approvals : ACS

Working principal

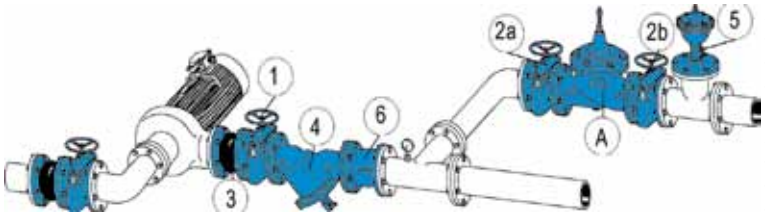
A pressure drop precedes the water-hammer, pilot N opens, water flows from the upper chamber of valve A to the accumulator AC. The valve A opens and water flows out.





Water flows quickly from the accumulator AC into the upper chamber, the valve A and the pilot valve N close. If the quantity of water drained is not sufficient to avoid water-hammer, the valve will discharge thanks to pilot valve Q, just like the valve C401.

Installation example and spare parts list



N°	Description	Materials
A	Main valve	Cast iron
AC	Accumulator	Steel Rubber
B	Upstream isolation valve	nickel-plated brass
B1	Downstream isolation valve	nickel-plated brass
C	Position indicator with drain	Stainless steel - brass
D	Chamber isolation valve	nickel-plated brass
E	Isolation valve of pilot C108	Brass bronze
G	Filter	Brass
H	Orifice-needle valve	Stainless steel or brass
I	Flow control	Brass
N	Pilot C108	Brass-Stainless steel-bronze
Q	Pilot C301	Brass-Stainless steel-bronze
1	Isolation valve	
3	Rubber expansion joint	
2a	Upstream isolation valve of the by-pass.	
2b	Downstream isolation valve of the by-pass.	
4	Filter	
5	Single function air valve	
6	Check valve of the pump	

Setting range of upstream pilote :
- 1 to 2,41 bar
- 1,72 to 8,6 bar (standard)
- 6,89 to 17,24 bar
- 13,78 to 25 bar

Setting range of pilote fully open:
- 1 to 2,41 bar (standard)
- 1,72 to 8,6 bar
- 6,89 to 17,24 bar
- 13,78 to 25 bar

Installation :
- install a strainer upstream
- install an air relief valve downstream or at the high point near the control valve.
- horizontal setting up : the cap of the valve should be oriented to the top and inclined at 45° maximum.
- vertical setting up : change the spring of the main valve (option 7)

Other types :
- C502, C503
- FKM seals in the main valve and in the pilot