

C 701

Control valves

Altitude valve float operated

Technical Data Sheet



Description

The control valves C 701 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.



C 701

Control valves - Altitude valve float operated

DN "	mm	PN	PFA in bar	PS				Cat	Ref.	Weight* Kg
				L1	L2	G1	G2			
1 1/2		10	10	10	10	x	x	4.3	149B010456	8
	40	10	10	10	10	x	x	4.3	149B010458	12
	50	10	10	10	10	x	x	4.3	149B010463	13
	65	10	10	10	10	x	x	4.3	149B70106N	21
	80	10	10	10	10	x	x	4.3	149B70108N	26
	100	10	10	10	10	x	x	4.3	149B70110N	39
	125	10	10	10	10	x	x	4.3	149B70111N	59
	150	10	10	10	10	x	x	4.3	149B70112N	73
	200	10	10	10	10	x	x	4.3	149B70114N	122
	250	10	10	10	10	x	x	I	149B70115N	208
	300	10	10	10	10	x	x	I	149B70116N	328

* Weight of valve alone

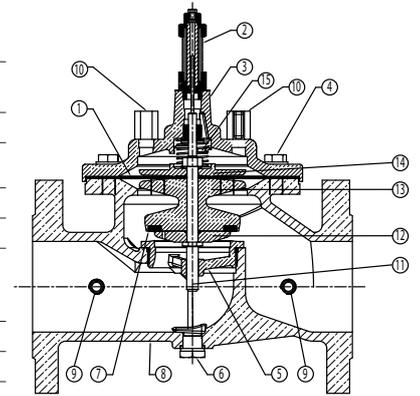
Important notice :

The indicated pressure for the different categories of fluids (L1/L2/G1/G2) is under no condition a guarantee of use. Therefore, it is essential to validate the use of products under given operating conditions.

Technical features	
Operating temperature	-10 °C to 90 °C
Upstream pressure	Mini. : 1 bar / Maxi. : 10 bar
Connection	DN 40 to 300 mm : with flange PN (see table above) DN 1"1/2 : threaded F/F
Mediums	Clear water 2 mm
Vertical mounting	In optional

Nomenclature and materials

N°	Description	Materials	EURO	ANSI
1	Membrane	EPDM / Polyamide		
2	Position indicator with purge	Brass and stainless steel	EN 12164-CuZn39Pb3-R360min EN 10088-3-X5CrNi18-10 EPDM Cu	ASTM B36 / ASTM B121 AISI 304 / ASTM A240
3	Valve head high pressure	Ductile iron / Epoxy Int/Ext	EN 1563 EN-GJS-400-15 except DN 125 : EN 1561-EN-GJL-300	ASTM A536 60-40-18 ASTM A48 class 45B
4	Nuts and bolts	Stainless steel	EN 10088-3-X5CrNi18-10	AISI 304 / ASTM A240
5	Removable streamlined	Stainless steel	EN 10213-GX5CrNi19-10+AT	AISI 304 / ASTM A240
6	Body drain plug	Brass	EN 12164-CuZn39Pb3-R360min	ASTM B36 / ASTM B121
7	Reversible seal	EPDM		
8	Body high pressure	Ductile iron / Epoxy Int/Ext 150µ ± 50µ	EN 1563 EN-GJS-400-15 except DN 125 : EN 1561-EN-GJL-300	ASTM A536 60-40-18 ASTM A48 class 45B
9-10	Valve	Chromed brass		
11	Stem	Stainless steel	EN10213-GX5CrNi19-10-AT	AISI 304 / ASTM A240
12	Flange	Stainless steel	EN10088-3X5CrNi18-10	AISI 304 / ASTM A240
13	Seal carrier	Bronze (DN40-50) Cast iron / Epoxy	EN1982 CuSn5Zn5Pb2-C GS EN1561-EN-GJL-250	ASTM A 48 35 B
14	Plate	Bronze (DN40-50) Cast iron / Epoxy	EN1982 CuSn5Zn5Pb2-C GS EN1561-EN-GJL-250	ASTM A 48 35 B
15	Spring	Stainless steel	EN10270-3 X10CrNi18-8	AISI 302



standard flow valve

Approvals

ACS  PED 2014/68/UE **WRAS**

International construction Standards :

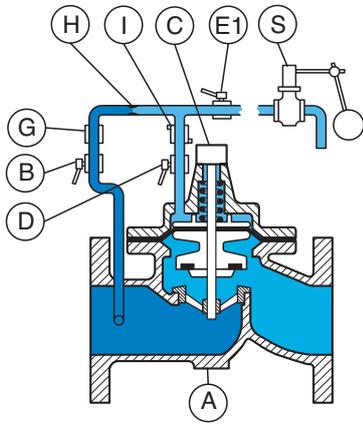
Directive 2014/68/UE

Connection with flange PN according to EN 1092-2

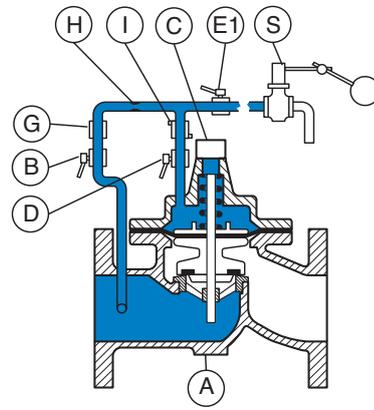
Application

The control valves C 701 preferably installed at the bottom of the tank or close to it.

Operation

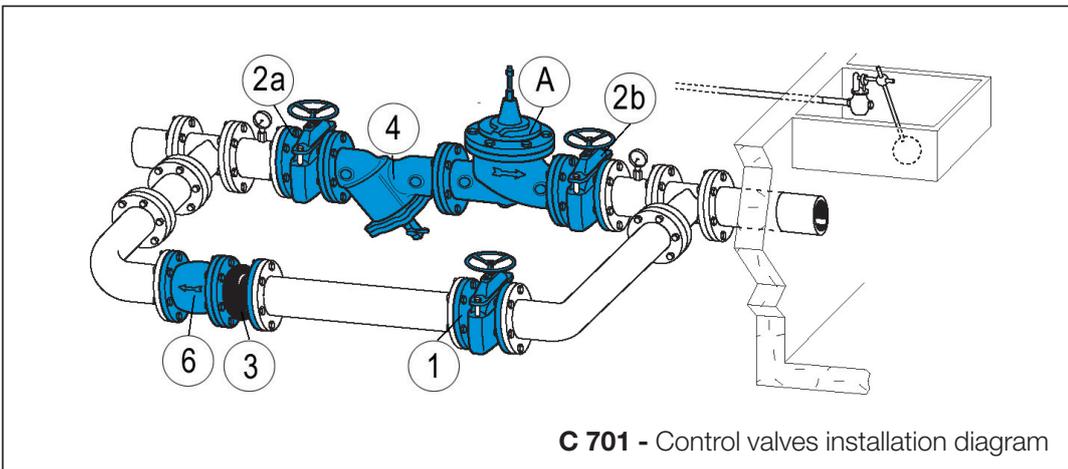


The level in the tank is low and the float switch (S) is fully open. The valve (A) is wide open and supplies the tank.



The float is in intermediary position, the float (S) switch is half closed. Consequently, the head loss increases the pressure in the upper chamber, the valve (A) will close. It will be completely closed as soon as no flow runs out from the float (S) switch in high position.

Installation



N°	Description
A	Main valve
B	Upstream isolation valve
C	Position indicator with drain
D	Chamber isolation valve
E1	Isolation valve of pilot C701
G	Filter
H	Orifice-needle valve
I	Flow control
S	Float switch pilot C701
1	Isolation valve of the by-pass
2a	Upstream isolation valve of the main water pipe
2b	Downstream isolation valve of the main water pipe
3	Rubber expansion joint
4	Filter
6	Check valve of the by-pass

Pilot setting ranges :

- Regulation on the first centimeters.
- Working travel : 15 cm

Installation :

- Install a strainer upstream
- Install an air relief valve down-stream or at the high point near the control valve
- Vertical setting up : change the spring of the main valve (option 7)

Other types :

- C702

NB : Connecting pipe 10/12mm from the pressure tap to the valve not included.

Maintenance

We recommend a maintenance programme of between 6 to 12 months according to the quality of the water and to the pressure :

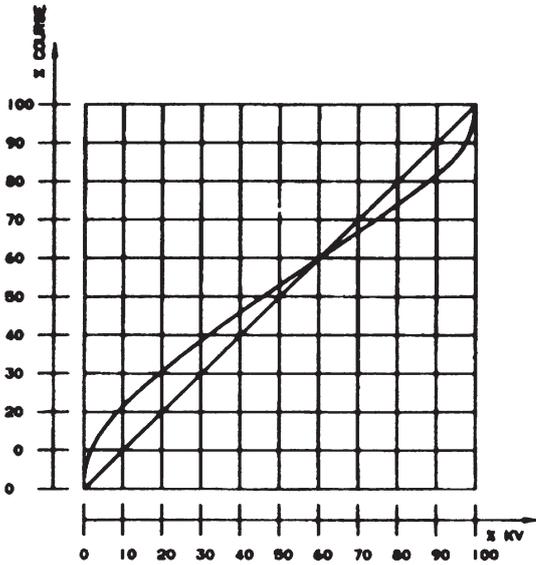
- Purging the upper chamber
- Flushing the valves not frequently used
- Checking and cleaning filters of the pilot circuit and main piping system.
- Checking the working (pressures)

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.

Operating characteristics

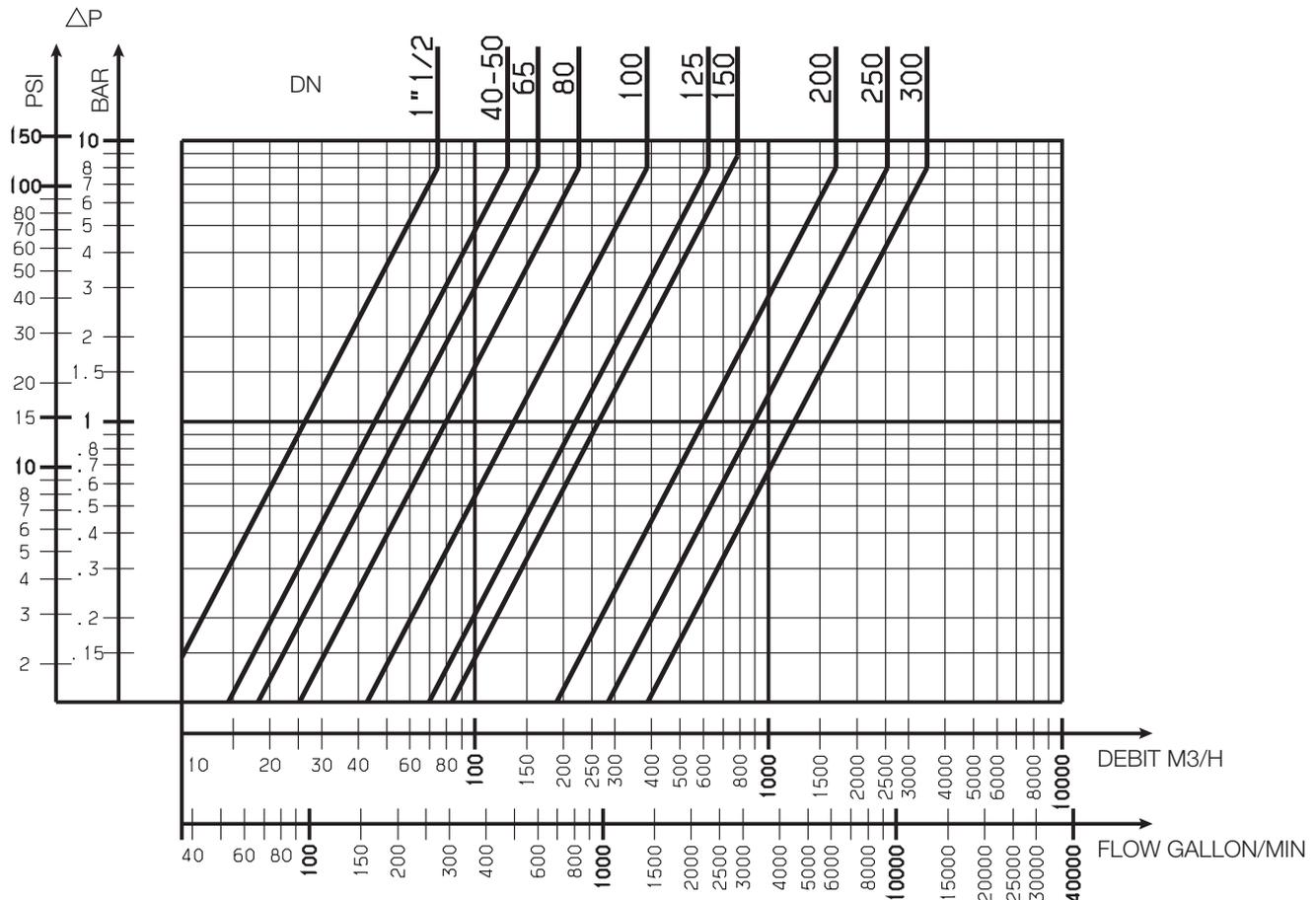
Choice of base valve



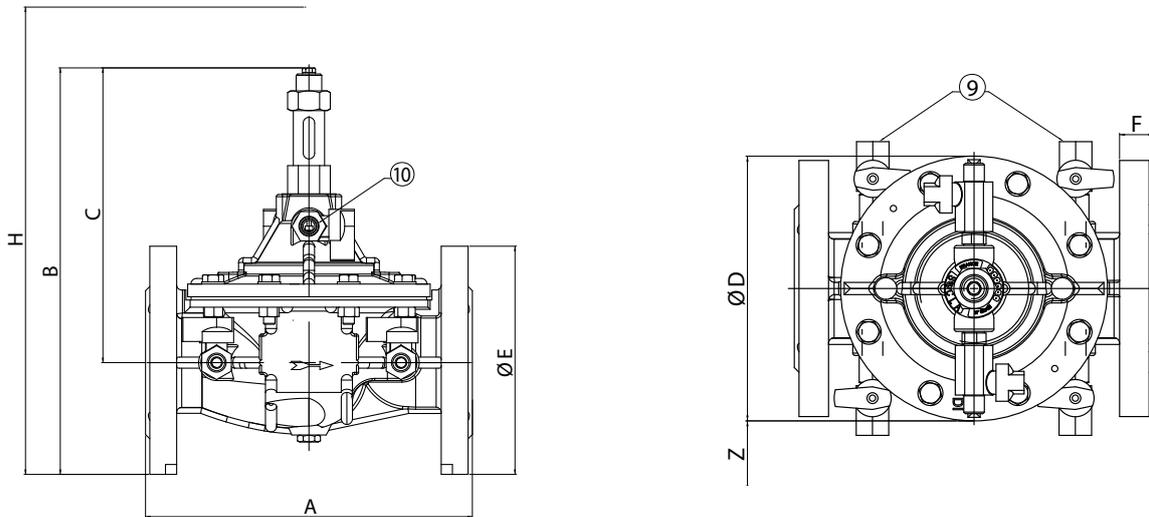
DN mm	Mini m³/h	Maxi m³/h	KV		ζ	PN bar	PFA bar	PN bar	PFA bar	PN bar	PFA bar
			m³/h	L/s							
1" 1/2	0,520	20,34	26,35	7,32	5,78	10/16	16	25	25	-	-
40	0,675	32,00	45,66	12,68	1,93	10/16	16	25	25	-	-
50	0,675	32,00	45,66	12,68	4,70	10/16	16	25	25	-	-
65	0,855	54,00	57,75	16,08	8,39	10/16	16	25	25	-	-
80	1,600	82,00	80,00	22,22	10,00	10/16	16	25	25	-	-
100	2,720	127,00	136,00	37,78	8,47	10/16	16	25	25	16	16
125	4,400	199,00	220,00	61,11	7,90	10/16	16	25	25	-	-
150	5,280	286,00	264,00	73,33	11,38	10/16	16	25	25	-	-
200	13,500	509,00	600,00	66,67	6,96	10	10	25	25	16	16
250	25,000	795,00	900,00	50,00	7,56	10	10	25	25	16	16
300	40,900	1145,00	1224,00	40,00	8,47	10	10	25	25	16	16

Headloss chart

Solid line : Base valve completely open



Sizing



standard flow valve

DN	A	B	C	Ø D	Ø E	F	H	Z	9	10
”	mm	mm	mm	mm	mm	mm	mm	mm	”	”
1 1/2(F/F)	230	267	210	170	6 pans ⁽¹⁾	-	400	254	1/4	3/8
40	230	285	210	170	152	23	400	254	1/4	3/8
50	230	285	210	170	161	23	400	254	1/4	3/8
65	290	352	257	200	185	24	470	254	3/8	1/4
80	310	372	272	217	200	26	500	254	3/8	3/8
100	350	423	302	241	235	28	510	254	3/8	3/8
125	400	506	371	296	270	30	570	254	3/8	3/8
150	480	551	401	363	300	20	650	254	3/8	3/8
200	600	709	529	467	360	22	750	254	3/8	3/8
250	730	844	631	587	425	24	900	254	1/2	1/2
300	850	975	730	680	486	27	1100	254	1/2	1/2

(1) 78/plats

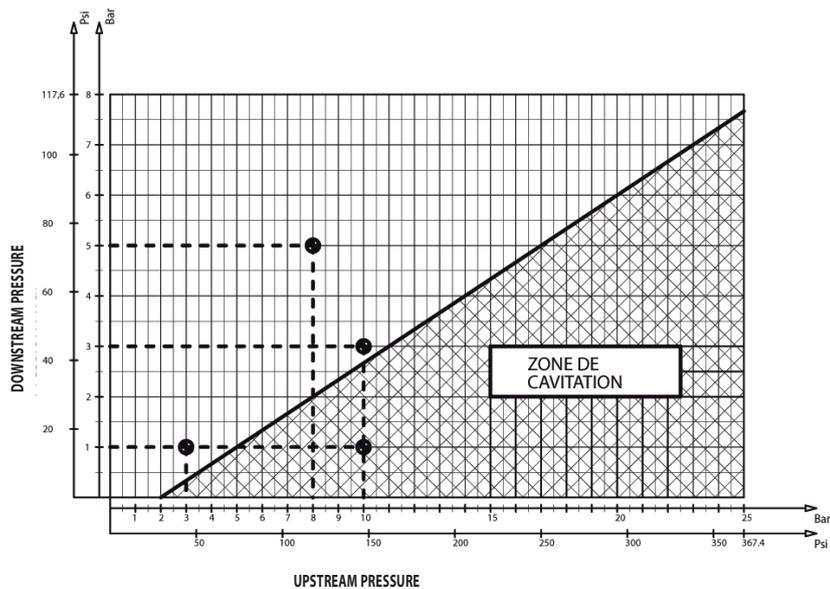
Other operating characteristics

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 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.



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