C 101

Control valves

Downstream stabilisers

Technical Data Sheet



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Description

The control valves C 101 controls and maintains a constant preset reduced downstream pressure regardless of variations in downstream demand or upstream pressure (the setting of downstream pressure is always below the upstream pressure).



C 101

Control valves - Downstream stabilisers

DN	PN	PFA in bar	PS				Cat	Ref.	Weight* Kg
mm			L1	L2	G1	G2			
40	10/16/25	25	25	25	x	x	4.3	**149B001158**	12
50	10/16/25	25	25	25	x	x	4.3	**149B001175**	13
65	10/16/25	25	25	25	x	x	4.3	**149B10106N**	21
80	10/16/25	25	20	25	x	x	4.3	**149B10108N**	26
100	10/16	16	16	16	x	x	4.3	**149B10110N**	39
125	10/16	16	16	16	x	x	4.3	**149B10111N**	59
150	10/16	16	16	16	x	x	4.3	**149B10112N**	73
200	10	10	10	10	x	x	4.3	**149B10114N**	122
250	10	10	10	10	x	x	I	**149B10115N**	208
300	10	10	10	10	x	x	I	**149B10116N**	328
200	16	16	10	16	x	x	4.3	**149B001342**	122
250	16	16	10	16	x	x	I	**149B001352**	208
300	16	16	10	16	x	x	I	**149B001361**	328
100	25	25	20	25	x	x	4.3	**149B001285**	39
125	25	25	16	25	x	x	4.3	**149B001301**	59
150	25	25	13	25	x	x	4.3	**149B001329**	73
200	25	25	10	25	x	x	4.3	**149B001345**	122
250	25	25	10	25	x	x	I	**149B001354**	208
300	25	25	10	25	x	x	I	**149B001362**	328

* Weight of valve alone

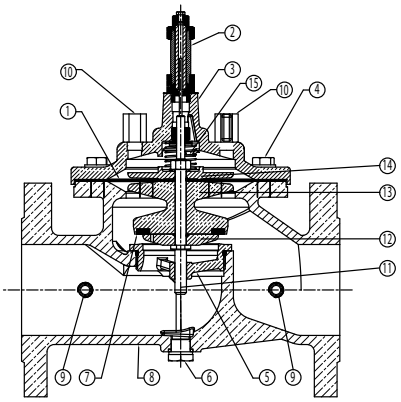
Important notice :

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 to 80°C, for temperatures over 80°C consult us
Upstream pressure	Mini. : 1 bar / Maxi. : 25 bar according to PN (see table above)
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
1	Membrane	EPDM / Polyamide
2	Position indicator with purge	Brass and stainless steel
3	Valve head high pressure	Ductile iron / Epoxy Int/Ext
4	Nuts and bolts	Stainless steel
5	Removable streamlined	Stainless steel
6	Body drain plug	Brass
7	Reversible seal	EPDM
8	Body high pressure	Ductile iron / Epoxy Int/Ext 150µ ± 50µ
9-10	Valve	Chromed brass
11	Stem	Stainless steel
12	Flange	Stainless steel
13	Seal carrier	Bronze (DN40-50) Cast iron / Epoxy
14	Plate	Bronze (DN40-50) Cast iron / Epoxy
15	Spring	Stainless steel



standard flow valve

Approvals

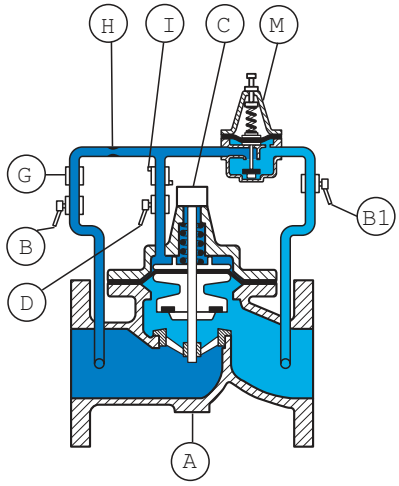
ACS SCP CE PED 2014/68/UE

International construction Standards :
Directive 2014/68/UE
Connection with flange PN according to EN 1092-2

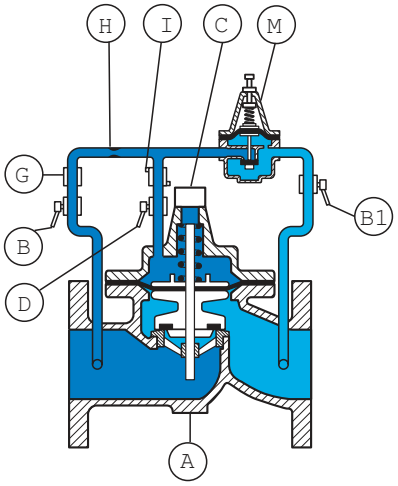
Application

The control valves C101 reduces pressure in a distribution, irrigation or pump outlet system.

Operation



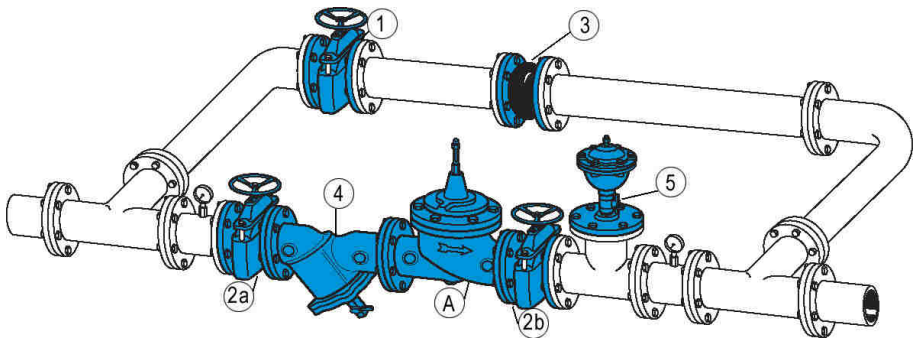
When the pilot Ⓜ opens, pressure in the upper chamber is released and the valve Ⓐ opens, reproducing the movement of the pilot.



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

Installation

C 101 - Control valves installation diagram



N°	Description
A	Main valve
B	Upstream isolation valve
B1	Downstream isolation valve
C	Position indicator with drain
D	Chamber isolation valve
G	Filter
H	Orifice-needle valve
I	Flow control
M	Pilot C101
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
5	Single function air valve

Setting range :

- 0,4 to 5,51 bar
- 1,72 to 8,5 bar (standard)
- 2,06 to 24,5 bar

Installation :

- Install a strainer upstream
- Install an air relief valve down-stream 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 :

- C101C, C101DS, C101M, C101S
- FKM seals in the main valve and in the pilot
- 316TI stainless steel fittings

Maintenance

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

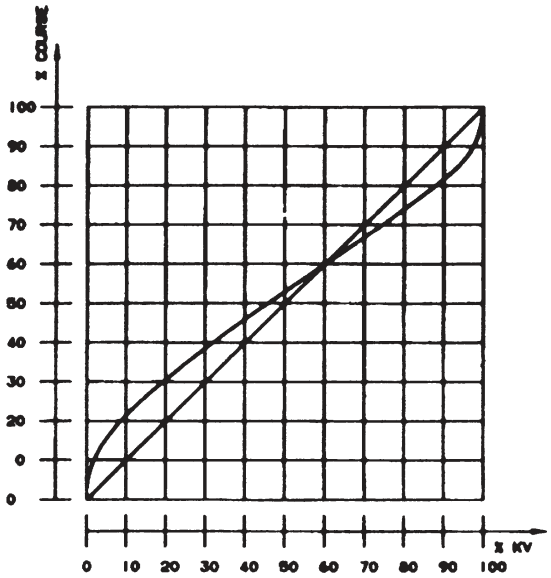
- Purging the upper chamber
- Flushing the valves not frequently used
- Checking and cleaning filters of the pilot circuit and main piping system.
- Checking the working (pressures)

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

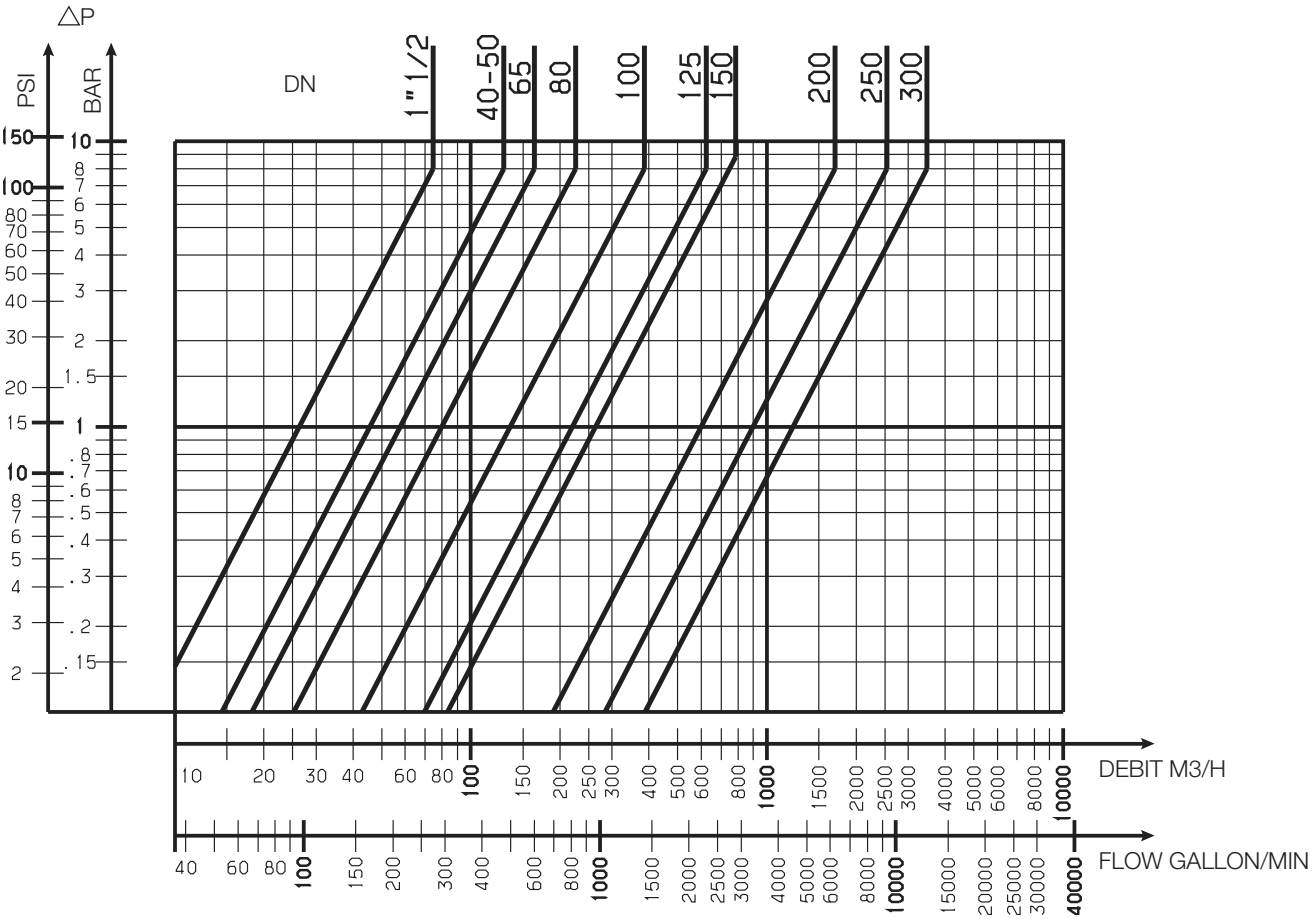
Choice of base valve



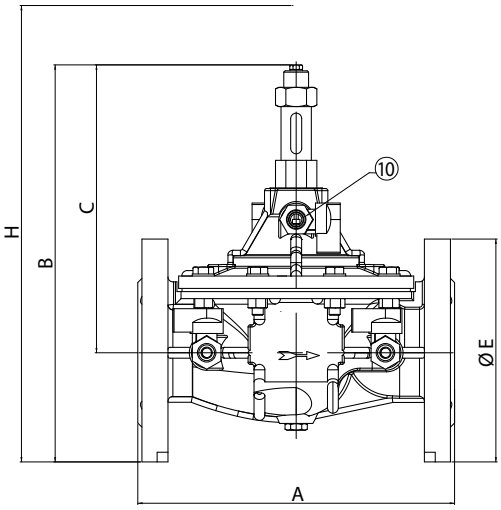
DN	Mini	Maxi	KV		ζ
mm	m³/h	m³/h	m³/h	L/s	
40	0,675	32,00	45,66	12,68	1,93
50	0,675	32,00	45,66	12,68	4,70
65	0,855	54,00	57,75	16,08	8,39
80	1,600	82,00	80,00	22,22	10,00
100	2,720	127,00	136,00	37,78	8,47
125	4,400	199,00	220,00	61,11	7,90
150	5,280	286,00	264,00	73,33	11,38
200	13,500	509,00	600,00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

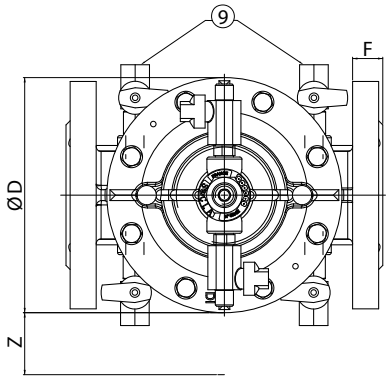
Headloss chart

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	mm	”	”
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

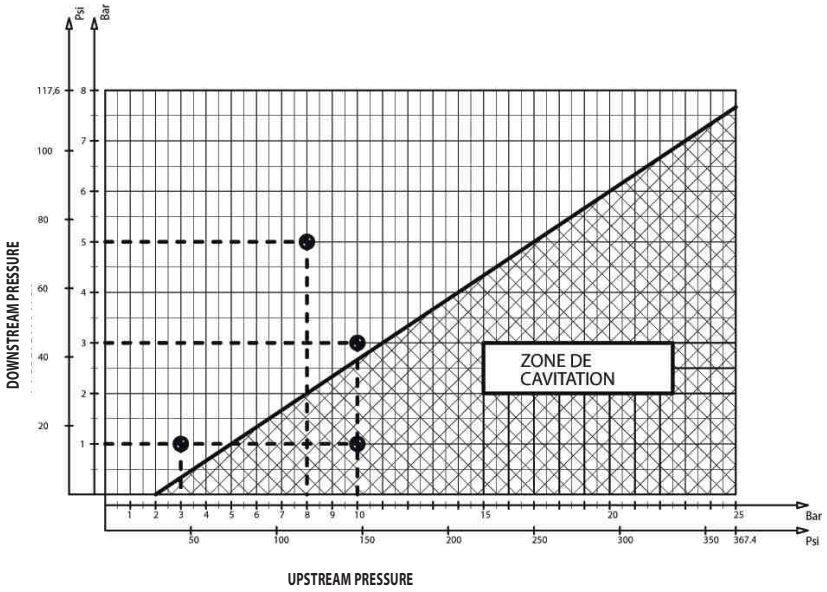
Other operating characteristics

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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