ACV - SURGE ANTICIPATION VALVE - N550

Specifications

DN mm	DN 40 - DN1600
DN inch	1"½ - 64"
Temperature	Water : 0°C - 70°C Fuel : -40°C - 70°C
Type of connection	Threaded and flange
Application	Pressure, Flow, Level control, Smart control in municipality. Water, pumping station, building, fire protection, irrigation, water treatment. Fuel, Sea water, Clear water
Pressure range	ISO PN10/ PN16/PN25 ANSI Class 125/150/300 JIS 10K/16K KS Table D/E, KS4087 PN16
Flange standard	EN 1092-2 ISO 7005-2 ANSI or JIS KS2129 or KS4087
Design standard	EN 1074-5
Test standard	ISO 5208 and EN12266-1* (* Resistance and tightness of the body (1.5 x allowable operating pressure), Tightness of the seat, (1.1 x allowable operating pressure)

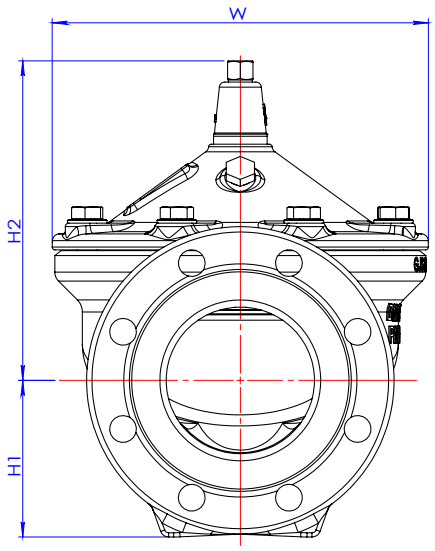
Description

Surge Anticipation Valve is indispensable for protecting pumps, pumping equipment and all applicable pipelines from dangerous pressure surges caused by rapid changes of flow velocity within a pipeline. When pumping systems are started and stopped gradually, harmful surges do not occur. However, should a power failure take place, the abrupt stopping of the pump can cause dangerous surges in the system which could result in severe equipment damage. Power failure to a pump will usually result in a down surge in pressure, followed by an up surge in pressure. The surge control valve opens on the initial low pressure wave, diverting the returning high pressure wave from the system. In effect, the valve has anticipated the returning high pressure wave and is open to dissipate the damage causing surge. The valve will then close slowly without generating any further pressure surges.

Advantages

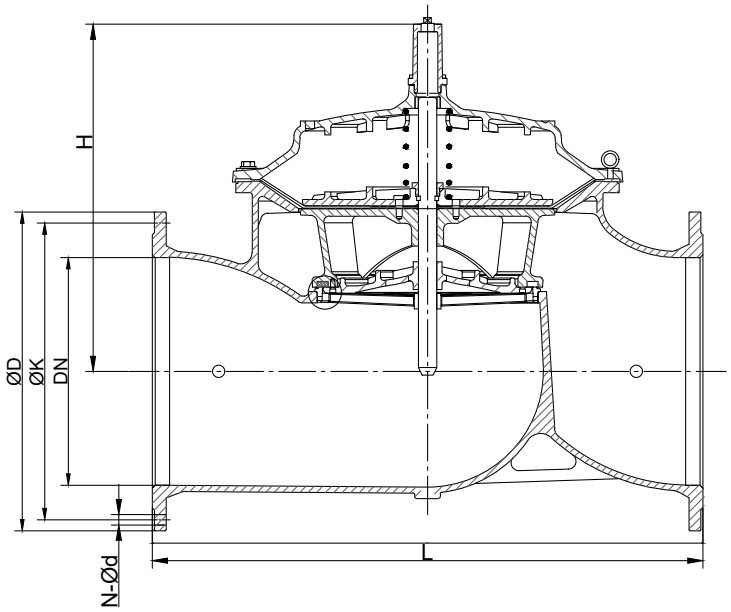
- 1. Two designs of body
- - Full bore (FB)
    - Large flow capacity
    - Low head loss
    - Seal at Zero flow rate
- - Reduced bore (RB)
    - Lower flow capacity, suitable for building services and pressure reduction
    - Cavitation resistance
    - Seal at Zero flow rate
- 2. Large choices of valve body material: SS304, SS316, SS316L, Duplex, Carbon steel, Bronze, Aluminium
- 3. Large choices of pilot material: SS304, SS316, SS316L, Brass, Bronze
- 4. Stainless steel 304 or 316 pilot circuit and valves.
- 5. Robust design: seat in stainless steel.
- 6. High flow capacity thanks to larger diameter of seat.
- 7. Stable working even if the flow is close to Zero.
- 8. High performance and strength Nylon enforced diaphragm.
- 9. Personalized product: functions, color…
- 10. Easy operation and maintenance: without disassembly from the pipeline

Dimensions



Main valve - Full Bore (BH) and Reduce Bore (RB)

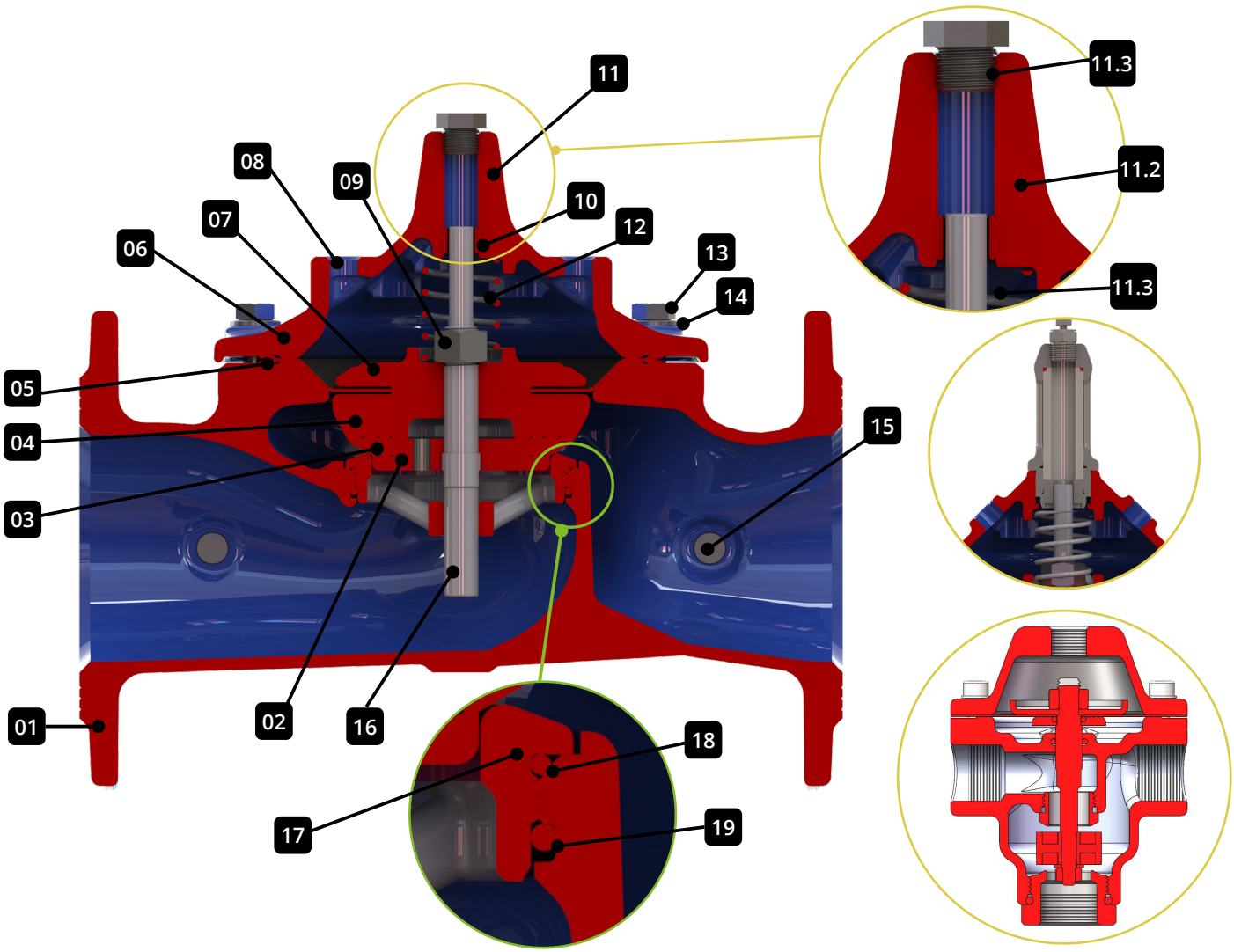
DN	L Mm	Ø D Mm	H1 Mm	H2 Mm		W Mm	
				BH	RB	BH	RB
40	200	165	85	150	-	155	-
50	230	165	85	170	150	165	155
65	290	185	95	185	170	205	165
80	310	200	102	220	185	230	205
100	350	220	112	230	220	270	230
125	400	250	127	-	(230)	-	(270)
150	480	285	145	300	230	355	270
200	600	340	172	405	300	455	355
250	730	405	205	530	405	530	455
300	850	460	232	510	460	620	530



Main valve - Full Bore (BH) - Reduce Bore (RB)

DN	H		Seat/DN		L	ØD			ØK			N-Ød		
	FB	RB	FB	RB		PN10	PN16	PN25	PN10	PN16	PN25	PN10	PN16	PN25
400	670	580	400	300	1100	580	580	620	515	525	550	16-Ø28	16-Ø31	16-Ø37
450	-	670	-	400	1200	640	640	670	565	585	600	20-Ø28	20-Ø31	20-Ø37
500	790	670	500	400	1250	715	715	730	620	650	660	20-Ø28	20-Ø34	20-Ø37
600	930	790	600	500	1450	780	840	845	725	770	770	20-Ø31	20-Ø37	20-Ø40
700	1000	930	700	600	1650	910	910	-	840	840	-	24-Ø31	24-Ø37	-
800	1170	930	800	600	1850	1025	1025	-	950	950	-	24-Ø34	24-Ø41	-
900	-	1170	-	800	1850	1115	1125	-	1050	1050	-	28-Ø34	28-Ø41	-
1000	1460	-	1000	-	2250	1230	1255	-	1160	1170	-	28-Ø37	28-Ø44	-
1200	1750	1460	1200	1000	2450	1455	1485	-	1380	1390	-	32-Ø40	32-Ø49	-
1400	-	1750	-	1200	2650	1685	1685	-	1590	1590	-	36-Ø43	36-Ø49	-
1600	-	1750	-	1200	2850	1930	1930	-	1820	1820	-	40-Ø49	32-Ø56	-

Nomenclature



Item	Part name	Materials		Norme
01	Body	Stainless steel 316/1.4401	Option*	NF EN 1563
02	Seal guide	EPDM		NF EN 10088
03	Seal	Stainless steel 316 DN50-150 DN 200-DN1600: DI+ epoxy coating		
04	Seal retainer	EPDM		
05	Diaphram	Ductile iron GLS-500-7		
06	Valve bonnet	Stainless steel 316 DN50-150 DN200-DN1600: DI+ epoxy coating	Option*	NF EN 1563
07	Diaphram plate	Stainless steel/1.4310		
08	Plug	Stainless steel/1.4310		NF EN 10088
09	Stem nut	EPDM		NF EN 10088
10	Oring	Composite		
11	Cap	Bronze CuSn5Zn5Pb5-C		
11.1	Guide brushing	Stainless steel/CF8		EN 1503-4
11.2	Cap	Stainless steel 316/1.4401		EN 10213-4
11.3	ARV	Stainless steel 316/1.4401	Option**	NF EN 10088
12	Spring	Stainless steel 316/1.4401	Option**	NF EN 10088
13	Bolt	Stainless steel 316/1.4401	Option**	NF EN 10088
14	Washer	Stainless steel 316/1.4401	Option**	NF EN 10088
15	Plug	Stainless steel 420	Option**	NF EN 10088
16	Stem	Stainless steel/CF8		
17	Seat	EPDM		EN 10213-4
18	Oring NBR	EPDM		
19	Oring NBR	NBR		

*** Option Body and bonnet :**
- Stainless steel 304
- Stainless steel 316
- Stainless steel 316L
- Duplex
- Carbon Steel: DN40 - DN400
- Bronze: DN40 - DN400
- Aluminium (AL): DN40 - DN200

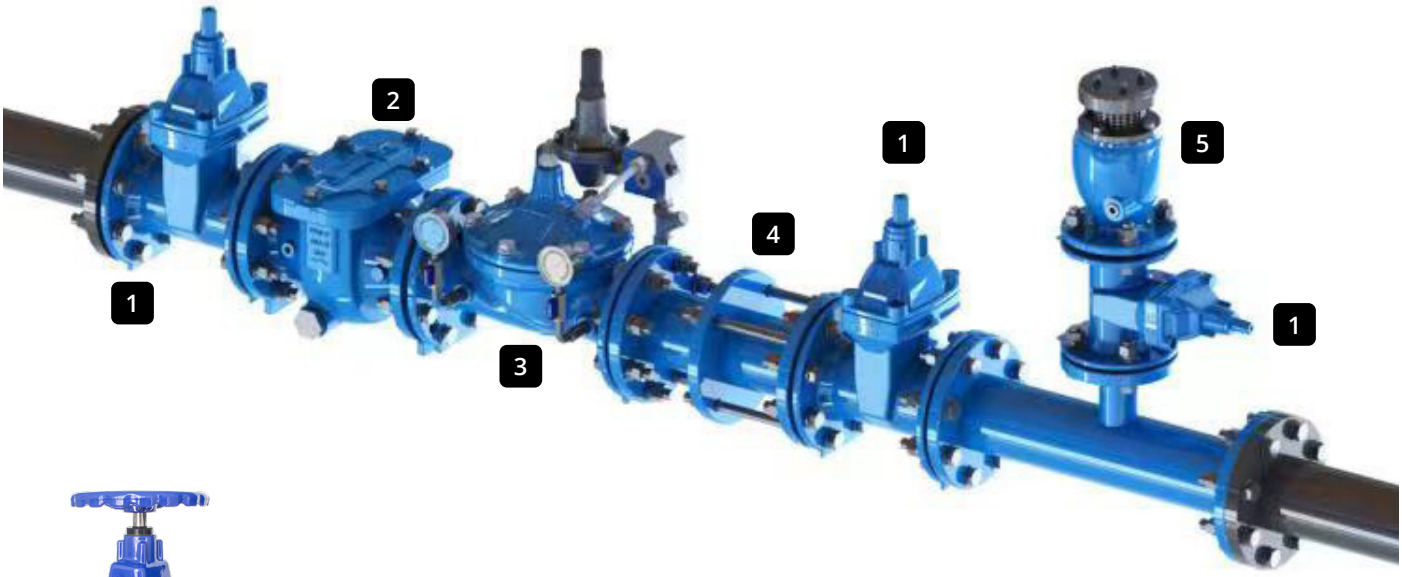
**** Option internal mobile parts :**
- Stainless steel 304
- Stainless steel 316
- DUPLEX

Installation

• The recommended equipment is vital for safety during filing and maintenance, as well as for the satisfactory opera of the valve.
• For the purposes of illustration, we will look at the case of a Neptune pressure reducing valve. In the case, the air valve is fitted downstream if the pipe runs downwards to the stabiliser or upstream if the pipe runs upwards to the stabiliser.

2 | Mud boxes - basket strainers

3 | Control valves



1 | Gate valves

5 | Air valve

4 | Dismantling joints