SAPAG
VALVES

CLASAR®

The High Dynamic Response Check Valve

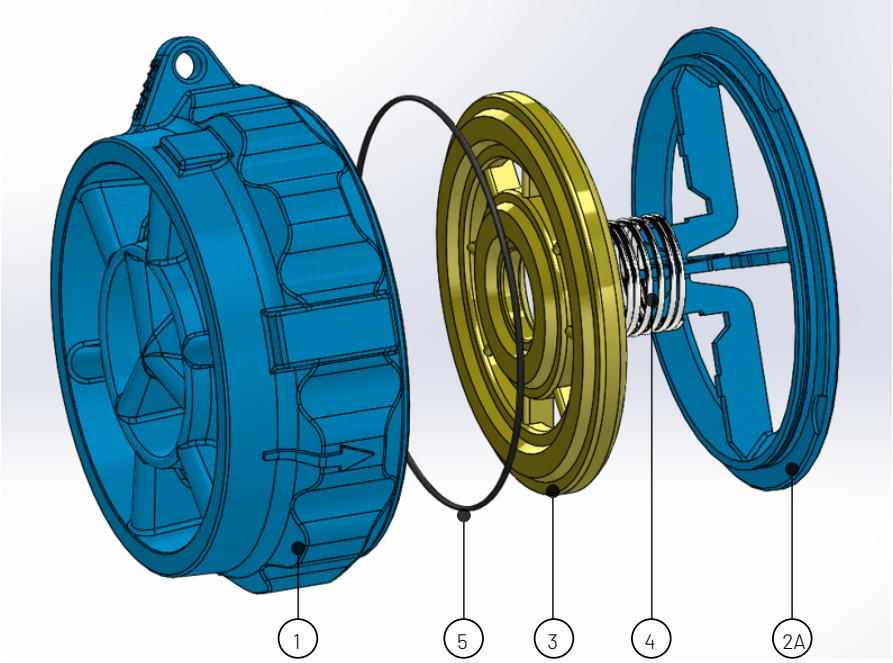
SAPAG

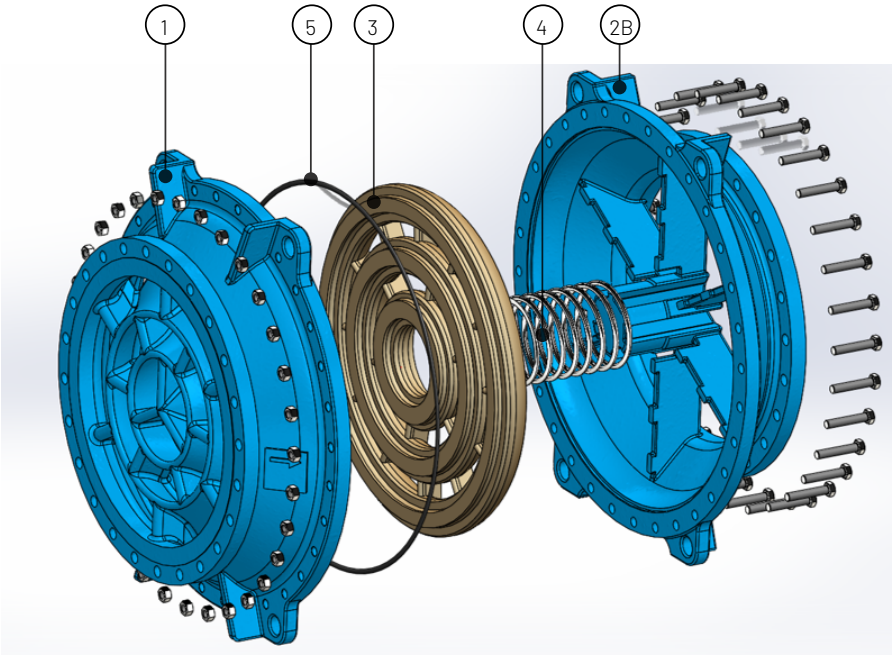
CONTENTS

CLASAR® CHECK VALVE

CLASAR® check valve obturator move axially and valves can operate in position with horizontal or upward flows.

There are 2 main versions:
- Wafer version from DN80 to DN500 (NPS3 - NPS20")
- Flange version from DN600 to 1800 (NPS24 - NPS72")

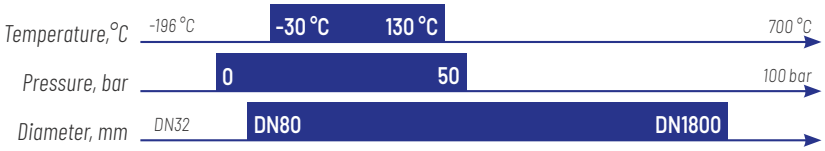
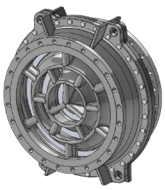




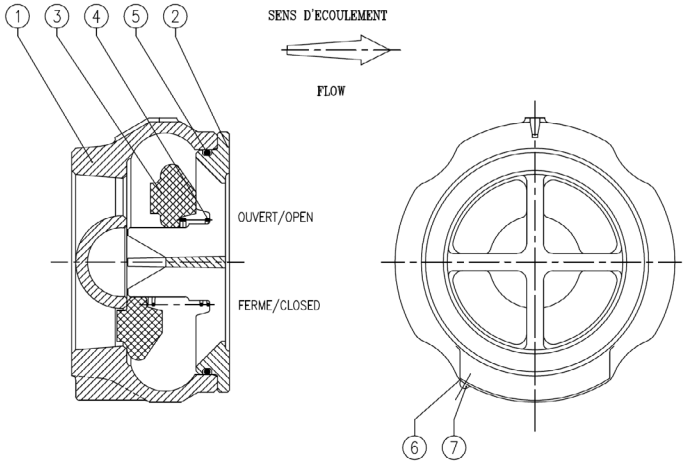
	Designation	
1	**Body**	One piece precision casting. Lifting lug: for easy valve installation handling. Arrows: these visible marks are cast directly on the body. They warranty correct installation.
2A	**Backing plate**	One piece precision casting. The body profile is thoroughly developed and hydraulically tested in flow control laboratories. It allows quick recovery of the flow.
2B	**Downstream body**	
3	**Axial disc**	Available in different types of corrosion free materials.
4	**Spring**	Corrosion free materials.
5	**O-ring**	Ensures perfect sealing.

(*) Others on request.

CLASAR® CHECK VALVE: CHARACTERISTICS

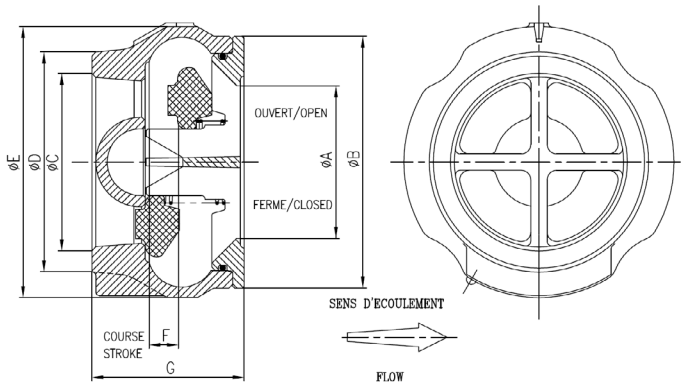
Performances	The maximum pressures and temperatures depend on the pressure/temperature ratio, materials, size (DN) and nature of the fluid. 
Technology	Non-return valve with very high dynamic response to avoid the water hammer: • Partial opening, • Silent running, • Compact design, • Virtually no wear and tear on the obturator • Fast closing due to short obturator motion (effective protection of the valve against pressure peaks and of the pumps against flow reversal).
Body type	 Wafer (DN80-500)  Double flange (DN600 – 1800)
Design Standard	EN16767 (out of face to face)
Face to Face	Manufacturer Standard
Body	The design of the diffuser is the direct result of hydraulic studies and tests, carried out in renowned laboratories. It provides effective guidance for the fluid with the same flow velocity in all valve sections. A complex part requiring a high level of quality, SAPAG VALVES has entrusted the production of the raw part to partners recognized for their high technicality. The sealing area is faultless, i.e. no repairs are permitted, which guarantees a homogeneous maintenance of the metallurgical properties.
Counter flange (Wafer) **or Real shell** (Double Flange Version)	SAPAG VALVES applies the same quality requirements as for the body. It ensures precise guidance of the return spring. Its careful machining guarantees the external sealing of the valve.
Obturator	Instantaneous dynamic response thanks to its density close to the fluid and its very short run. The hardness of the obturator takes into account the design of the sealing surfaces and conditions of use. It guarantees the maintenance of the properties of the valve's tightness over time. Static seals and absence of rubbing thanks to the floating design of the obturator limit or eliminate the need for periodic maintenance.
Spring	The features are calculated to guarantee optimal performance of the valve. Its main function is to hold the valve on the sealing surfaces at zero differential pressure. It therefore avoids mixing upstream and downstream fluids. The material used is adapted and selected according to the fluid flowing through the valve. The spring in the standard version allows operation in systems with low line speeds, but also in systems with high deceleration (smooth operation).

CLASAR® TYPE I (DN80 – DN150): PARTS LIST AND DIMENSIONS



Ref	Designation	Material [3] Type	EN standard		ASTM standard	
1	Body	Ductile iron	EN1563	JS1030		
		Carbon steel	EN10213	1.0619	A216	WCB
		Stainless steel	EN10213	1.4408	A351	1.4408
2	Backing Plate	Duplex[2] Steel	EN10213	1.4470	A995	4A
			EN10213	1.4469	A995	5A
		Ductile Ni-Resist[2] alloy	EN13835	JS3011	A439	D-2B
3	Axial Disc	Polyurethane PTFE				
4	Spring	Stainless steel Inconel® [2]				
5	O-ring	Nitrile EPDM				
6	Manufacturing Plate	Stainless steel				
7	Rivet	Stainless steel				

[1] Spare parts
[2] For sea water application
[3] Others materials on request

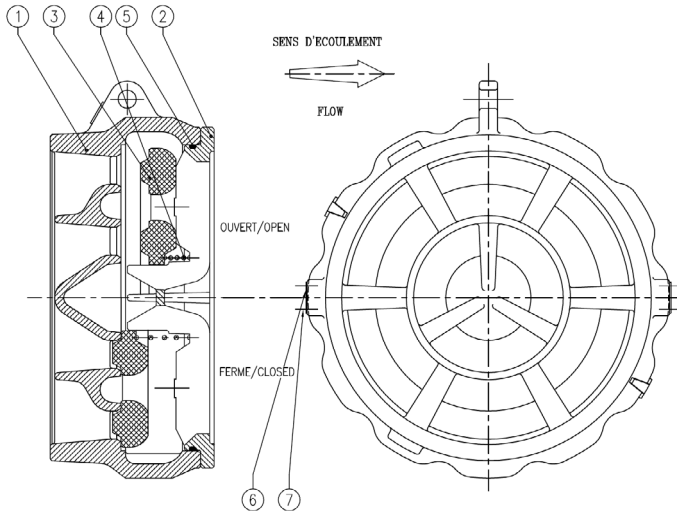


	ØA	ØB	ØC	ØD	ØE	F	G	Weight*
DN80	90	132	90	115	142	17	80	2
DN100	100	162	113	140	174	24	100	5.5
DN125	125	192	138	170	210	29	125	11
DN150	150	216	163	195	246	33	150	17

* Part 1, 2 in Ductile iron, Part 3 inpolyurethane

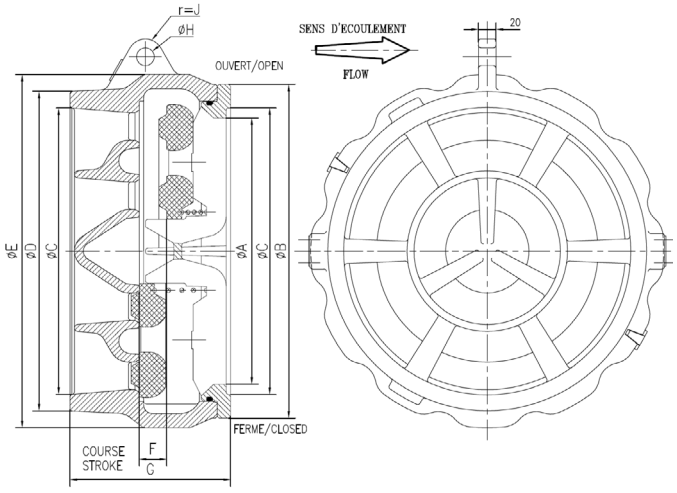
NOTA : Dimensions in mm, weights in kg are given as guide

CLASAR® TYPE II (DN200 - DN500): PARTS LIST AND DIMENSIONS



Ref	Designation	Material [3]				
		Type	EN standard		ASTM standard	
1	Body	Ductile iron	EN1563	JS1030		
		Carbon steel	EN10213	1.0619	A216	WCB
		Stainless steel	EN10213	1.4408	A351	1.4408
2	Backing Plate	Duplex[2] Steel	EN10213	1.4470	A995	4A
			EN10213	1.4469	A995	5A
		Ductile Ni-Resist[2] alloy	EN13835	JS3011	A439	D-2B
3	Axial Disc	Polyurethane PTFE				
4	Spring	Stainless steel Inconel® [2]				
5	O-ring	Nitrile EPDM				
6	Manufacturing plate	Stainless steel				
7	Rivet	Stainless steel				

[1] Spare parts
[2] For sea water application
[3] Others materials on request

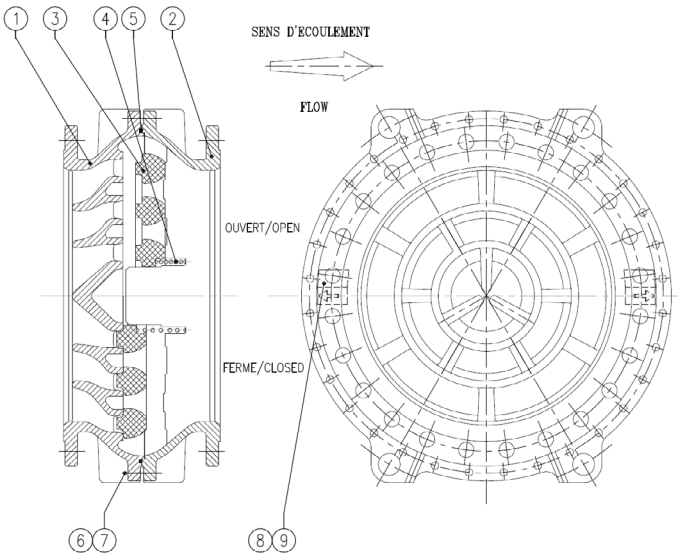


	ØA	ØB	ØC	ØD	ØE	F	G	ØH	J	Weight*
DN200	200	271	224	256	290	22	127	20	20	22
DN250	250	326	275	310	352	25	146	20	20	36
DN300	300	376	323	360	398	31	181	20	20	53
DN350	330	435	373	413	460	36	222	20	20	80
DN400	380	485	418	460	520	41	232	20	20	100
DN450	430	536	469	507	544	48	260	20	20	150
DN500	470	590	518	565	626	48	292	35	20	180

* Part 1, 2 in Ductile iron, Part 3 inpolyurethane

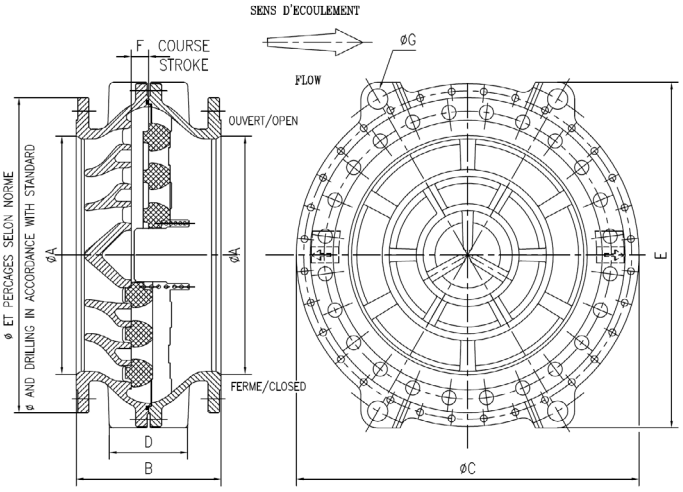
NOTA : Dimensions in mm, weights in kg are given as guide

CLASAR® TYPE III (DN600 – DN1000): PARTS LIST AND DIMENSIONS



Ref	Designation	Material [3]		
		Type	Norme EN	Norme ASTM
1	Body	Ductile iron	EN1563 JS1030 EN13835 JS3011	A536 Gr.60.40.18 A439 D2-B
2	Rear shell	Ductile Ni-Resist[2] alloy		
3[1]	Obturator	Polyurethane		
4[1]	Spring	Stainless steel Inconel® [2]		
5[1]	O-ring	Nitrile EPDM		
6	Screw	Carbon steel		
7	Nut	Carbon steel		
8	Manufacturing plate	Stainless steel		
9	Rivet	Stainless steel		

[1] Spare parts
[2] For sea water application
[3] Others materials on request

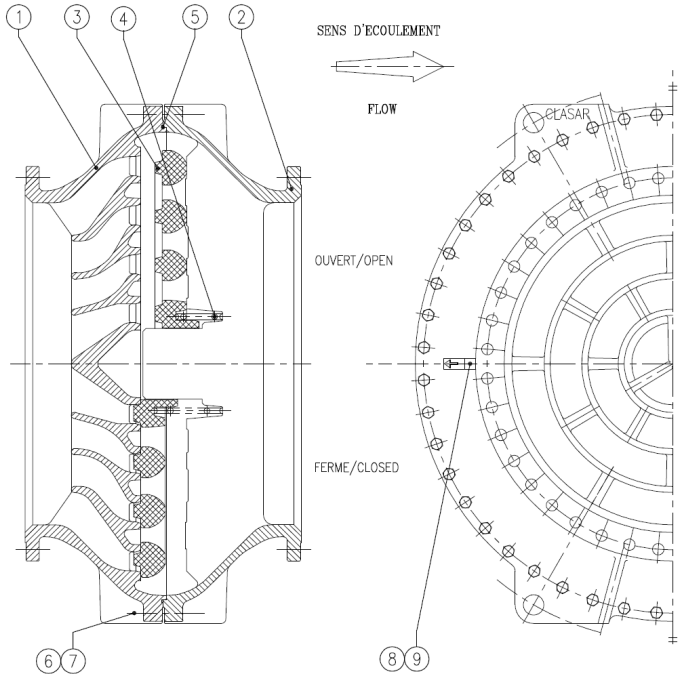


	ØA	B	ØC	D	E	F	ØG	Weight*
DN600	615	435	920	220	930	50	60	550
DN700	715	500	1120	270	1130	60	60	875
DN800	820	515	1180	290	1190	60	70	1100
DN900	930	710	1480	380	1490	80	80	1600
DN900 Cl150	906	710	1480	380	1490	80	80	1600
DN1000	1030	730	1500	420	1510	80	80	2050

* Part 1, 2 in Ductile iron, Part 3 inpolyurethane

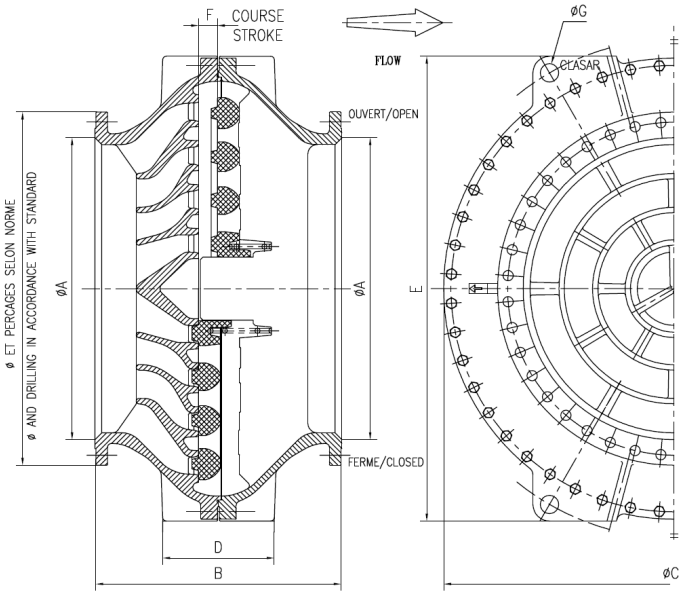
NOTA : Dimensions in mm, weights in kg are given as guide

CLASAR® TYPE III (DN1200 – DN1800): PARTS LIST AND DIMENSIONS



Ref	Designation	Material [3]			
		Type	Norme EN		Norme ASTM
1	Body	Ductile iron Ductile Ni-Resist[2] alloy	EN1563 EN13835	JS1030 JS3011	A536 Gr.60.40.18 A439 D2-B
2	Rear shell				
3[1]	Obturator	Polyurethane			
4[1]	Spring	Stainless steel Inconel® [2]			
5[1]	O-ring	Nitrile EPDM			
6	Screw	Carbon steel			
7	Nut	Carbon steel			
8	Manufacturing plate	Stainless steel			
9	Rivet	Stainless steel			

[1] Spare parts
[2] For sea water application
[3] Others materials on request



	ØA	B	ØC	D	E	F	ØG	Weight*
DN1200	1230	900	1890	500	1900	80	80	3400
DN1400	1430	1120	2265	520	2275	90	100	5400
DN1600	1660	1352	2520	610	2540	105	100	8100
DN1800	1860	14440	2850	750	2890	115	100	11850

* Part 1, 2 in Ductile iron, Part 3 inpolyurethane

NOTA : Dimensions in mm, weights in kg are given as guide

OPERATING PRINCIPLES

Check valve operating principles

Check valves mounted on large supply networks and in pumping station delivery lines are required to operate frequently.

Statistics show that when serious pressure surge occurs, this is often due to the fact that an incorrect type of valve has been installed. For example, when a pump is switched off in a pumping station, the flow reduces the speed, stops and is subsequently reversed (Figure 4 and 5). The valve then closes under the effect of the disc's weight or a return spring, or by the reversal of the flow.

Experience and calculations show that this reversal can occur within an extremely short time (from 1/100 to 1/10 of a second). If the valve does not respond quickly, closure will occur sharply during reversed flow conditions, with the result that:

- the disc is slammed against the seating with a creation of a loud shock wave
- water hammer is created causing pressure surge

Shock waves and pressure surge stress installation which may result in mechanical failure of the valve components and pipeline.

These problems are even more emphasized if an air pressurized, water tank is inserted in the system (Figure 6). In this case, flow reversal in this short pipe between the tank and the pump occurs very rapidly. The valve must therefore operate even quicker in order to avoid serious damages.

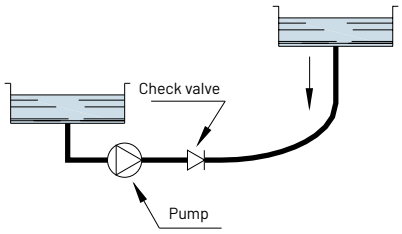


Figure 1

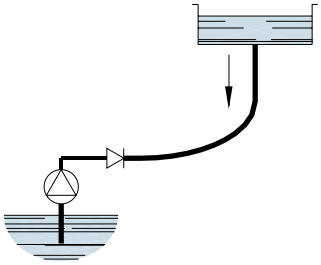


Figure 2

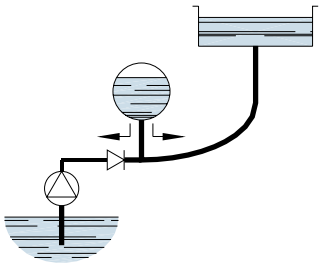


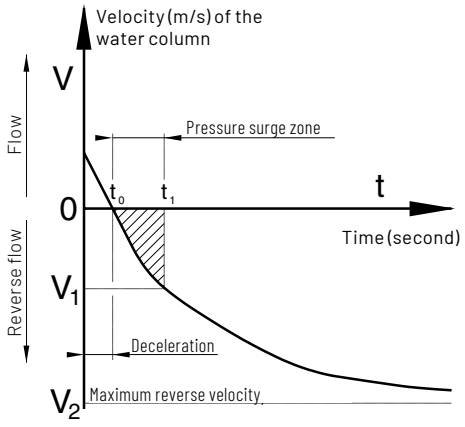
Figure 3

Description of high dynamic response check valve

The features of ideal check valve can be summarized in the graph.

t = 0	The pump stops
$t = t_0$	The velocity of the water is V = 0. It is the beginning of the reverse flow. Usual values: 1/100 s < t_0 < 1/10 s
$T = t_1$	The obturator of the check valve is positioned on the seat • The reverse velocity of the water is V_1 • The reverse flow is stopped immediately • The overpressure is proportional to the reverse velocity (V_1).

The ideal check valve should close at $t = t_0$



CLASAR® FULFILS THIS REQUIREMENT AS THIS CHECK VALVE HAS:

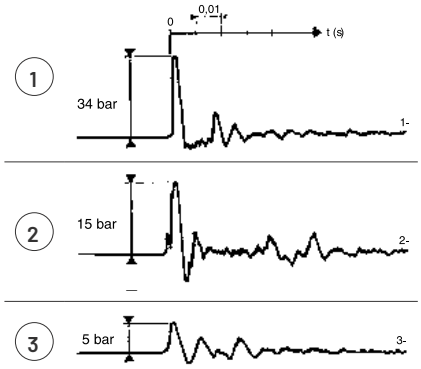
- Short face to face, thus reducing the stroke of the axial disc
- No axial shaft that may increase the closing time (risk of jamming)
- Density of the axial disc material = 1 (no inertia of the axial disc in water, low weight of the axial disc)
- Spring enhancing the closing time
- No creation of shock at closing time due to metal/plastic contact.

OPERATING PRINCIPLES

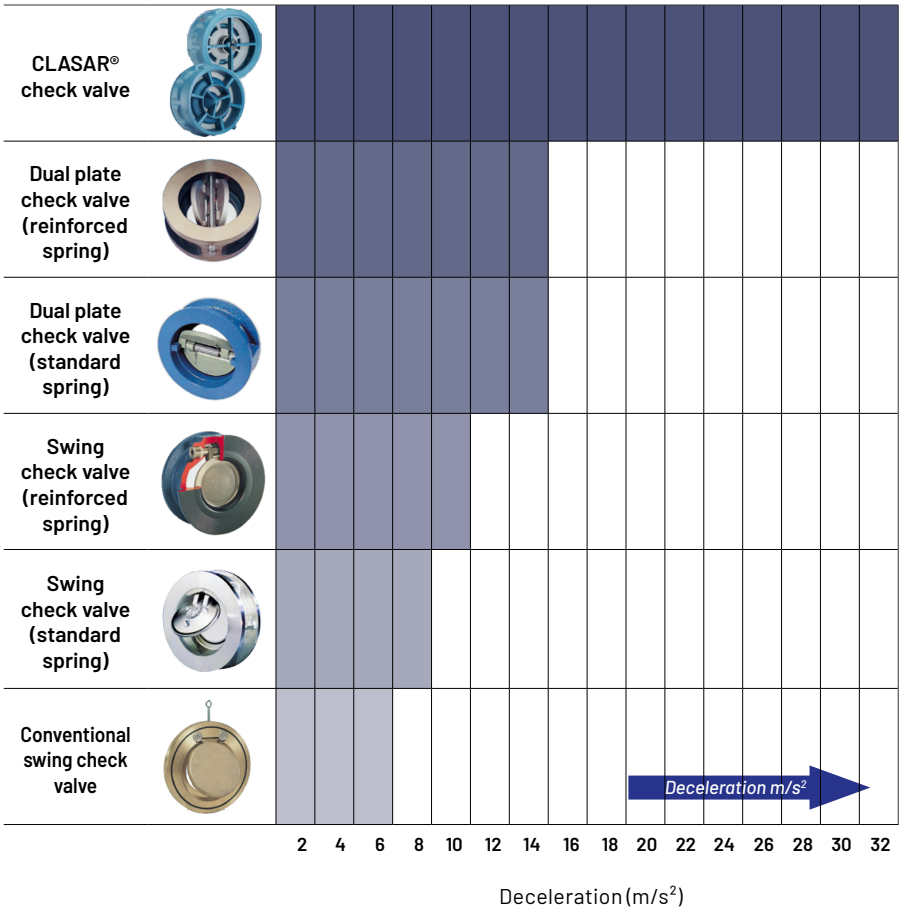
Pressure surge according to check valves technologies type

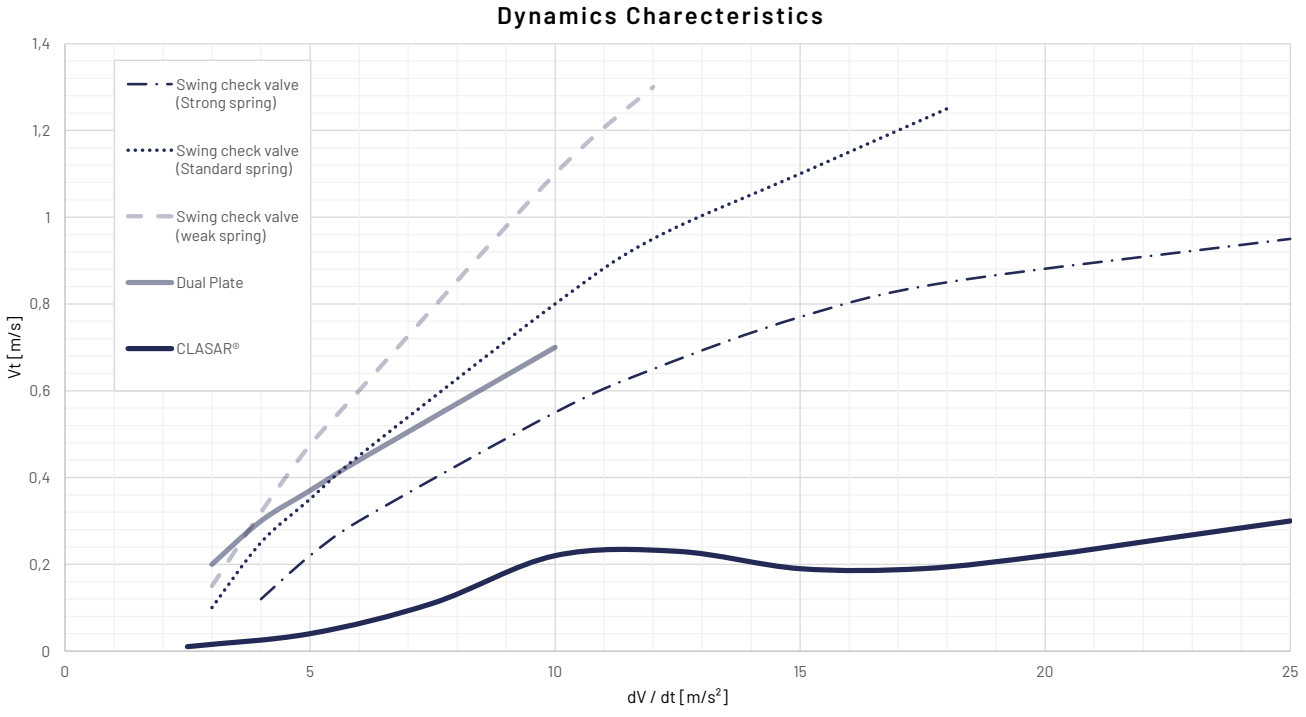
Figure shows the water hammer resulting from closure of various type of valves under identical operating conditions:

1. Single flap valve
2. Dual plate check valve
3. CLASAR®



Pressure surge comparison





FLOW COEFFICIENTS (Kv, Cv)

Flow coefficients (K_v et C_v)

Headloss (Δp)

K_v is the flow in m³/h of water, at an average temperature of 20 °C, crossing the valve creating a headloss of 1 bar.

$$Cv = 1{,}16 \times Q \times \sqrt{\frac{d}{\Delta P}}$$

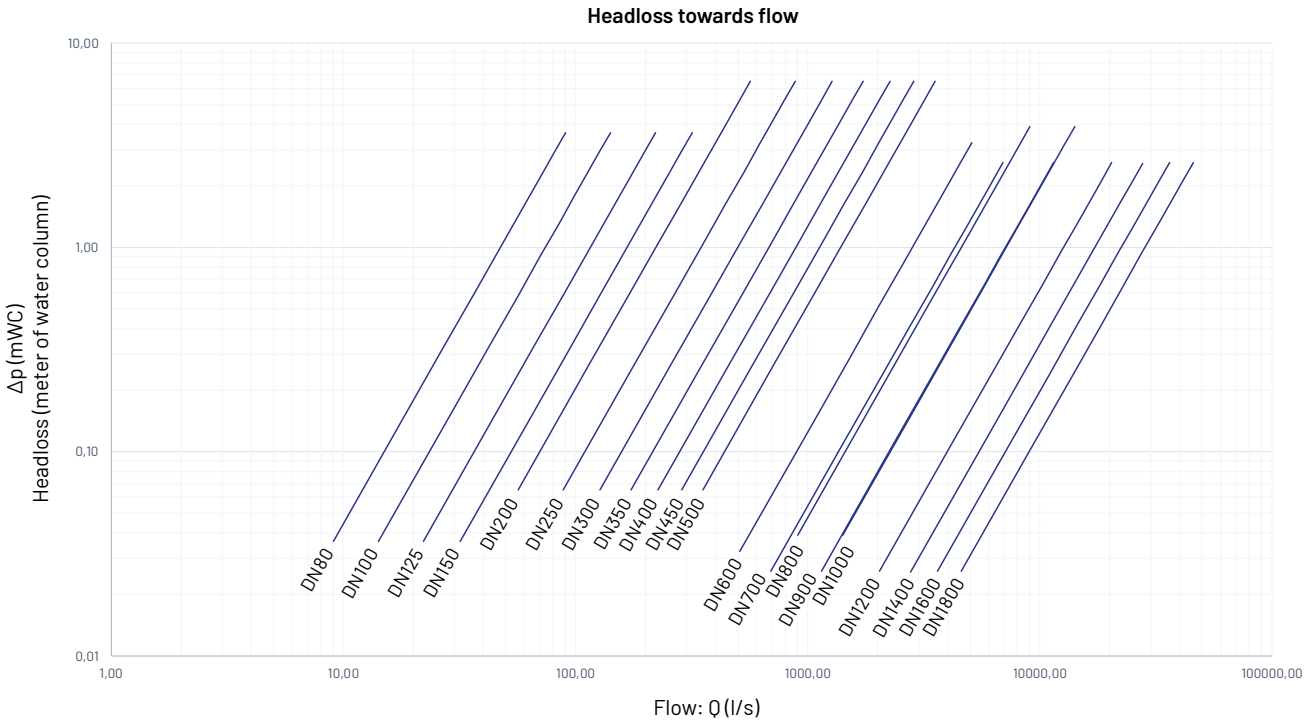
$$Cv = 1{,}16 \times Kv$$

$$\Delta P = d \times \left(\frac{Q}{Kv}\right)^2$$

K_v	flow coefficient (m³/h)
Q	flow (m³/h)
Δp	headloss (bar)
d	density (d = 1 for water)

10 mWC = 1 bar = 100 kPa = 14,5 psi

DN	80	100	125	150	200	250	300	350	400	450	500	600	700	750	800	900	1000	1200	1400	1600	1800
K_v	151	237	370	532	708	1106	1593	2169	2832	3585	4426	9013	137715	14082	14627	226772	22854	40306	55140	71655	90688
C_v	176	274	429	617	821	1283	1848	2516	3286	4158	5134	10455	15910	16335	16967	26300	26511	46755	63962	83120	105199



OBTURATOR OPENING PRESSURES

DN	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
P1 mCE	0,39	0,44	0,47	0,52	0,25	0,27	0,35	0,37	0,55	0,53	0,35	0,39	0,24	0,39	0,21	0,35	0,55	0,11
P2 mCE	0,60	0,70	0,83	0,95	0,46	0,50	0,56	0,54	1,03	0,86	0,60	0,56	0,35	0,56	0,30	0,52	0,81	0,17

P1 : Sarting opening pressure
P2 : Full opening pressure

CLOSING TIME

DN	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
Closing time in second	0,020	0,020	0,024	0,025	0,027	0,029	0,017	0,039	0,037	0,056	0,044	0,070	0,090	0,090	0,117	0,117	0,118	0,118

SELECTION TABLE FOR MATERIALS

Fluids	**Bodies**				**Axial disc**		**Spring**	
	Ductile iron + Epoxy	Stainless steel	Ductile NiResist alloy	Duplex	Polyure-thane	PTFE	Stainless steel	Inconel
Hot water	•				•		•	
Hot water	•				•		•	
Demineralized water		•			•		•	
Sea water			•	•	•			•
Drinking water	•	•			•		•	
Heating - HVAC	•				•		•	
Acids (low concentration)		•		•		•	•	
Alcohol		•				•	•	
Oils	•					•	•	
Hydrocarbons	•	•				•	•	

MOUNTING

Maximum working pressure

DN	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600	1800
Size	3″	4″	5″	6″	8″	10″	12″	14″	16″	18″	20″	24″	28″	32″	36″	40″	48″	56″	64″	72″
MWP (bar)*	50	50	50	50	50	50	50	50	50	50	50	25	25	25	20	20	16	16	16	16
MWP (psi)*	725	725	725	725	725	725	725	725	725	725	725	362	362	362	290	290	240	240	240	240

* at room temperature

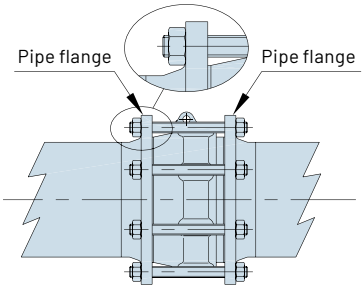
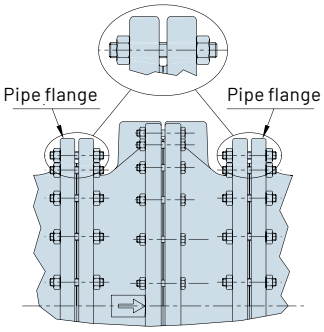
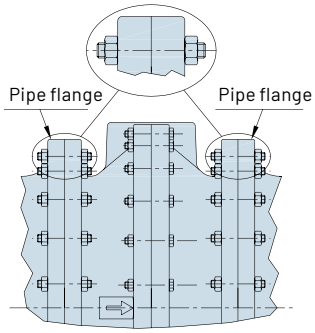
Mounting between flanges

	DN	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600	1800
	Size	3″	4″	5″	6″	8″	10″	12″	14″	16″	18″	20″	24″	28″	32″	36″	40″	48″	56″	64″	72″
EN 1092-1, DIN 2501, BS 4504, ISO 2084, ISO 7005	PN 6	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠
	PN 10	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	PN 16	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	PN 25	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
	PN 40	■	■	■	■	■	■	■	■	■	■	■									
EN 1759	Class 150	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	Class 300	■	■	■	■	■	■	■	■	■	■	■	⊠								
ANSI B 16.5	Class 150	■	■	■	■	■	■	■	■	■	■	■	■	*See ANSI B16.47 A*							
	Class 300	■	■	■	■	■	■	■	■	■	■	■	⊠								
ANSI B16.47 A	Class 150	*See ANSI B 16.5*												■	■	■	■				
MSS SP 44	Class 150							■	■	■	■	■	■	■	■	■	■				
AWWA C207	Tables 2-3-4-5		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
AS 2129	Table D	⊠	*	■	*	■	⊠	■	■	⊠	■	⊠	*On request only*								
	Table E	⊠	*	■	⊠	*	■	■	■	⊠	■	⊠									
	Table F-H	■	■	■	⊠	■	■	■	■	■	■	■									
AS 4087	PN 16	⊠	*	■	*	*	⊠	■	■	⊠	■	⊠									
	PN 35	■	■	■	⊠	■	■	■	■	■	■	⊠									

■ POSSIBLE for all version
* With remachining

⊠ IMPOSSIBLE
■ Not defined by standard

Pipe mounting

Wafer mounting DN 80 - 500 (3″ - 20″)	**Flanged mounting** DN 600 - 1800 (24″ - 72″)	**On resquest: FLAT FACE assembling** DN 600 - 1800
		

MOUNTING INSTRUCTIONS

1 INSPECTION

CLASAR ® will be unpacked carefully without shock or fall.

Visual inspection of the valve before installation is imperative to verify the absence of foreign material (packaging...) in CLASAR ® and piping. Clean with water or compressed air if necessary.

Inspect the surface of the flange of CLASAR ®.

Confirm that the materials shown on the plate meet your requests and working conditions.

Maximum torque value for thru-bolt mounting mentioned on p.16 must be respected.

2 POINTS THAT NEED TO BE CHECKED BEFORE THE FIRST USE

- ATTENTION TO DROP OF WELDING AND METAL SHAVINGS THAT CAN DAMAGE SEAL AND SEAL.
- NEVER WELD FLANGES TO THE PIPE WHEN THE CLASAR® IS IN POSITION BECAUSE THIS MIGHT DAMAGE THE OBTURATOR.
- PROVIDE A TRASHRACK OR OTHER SOLIDS REMOVAL SERVICE DEVICE IF SOLIDS ARE LIABLE TO BE BORNE ALONG BY THE FLOW AND FOUL THE OBTURATOR REGION AND PREVETN CLOSURE.
- CHECK THAT THE FLOW TAKES PLACE IN THE DIRECTION SHOWN BY THE ARROW ON THE VALVE
- CLASAR® FOR WAFER-MOUNTING MUST BE PERFECTLY ALIGNED WITH THE PIPE CENTRE-LINE. USE SPACER TUBES MOUNTED ON TIE-RODS IF NECESSARY.

3 TIGHTNESS RATE

The tightness class of CLASAR check-valves depends on the material and hardness of the material used for the obturator.

4 INFORMATIONS

The use of a sleeve removal is recommended, both to ensure the clearances needed to insert and remove CLASAR®, and to prevent unacceptable stressing due to possible misalignment.

At least one of the pipes connected to the valve must be firmly anchored to contain the withstand the thrust occurring on valve closure.

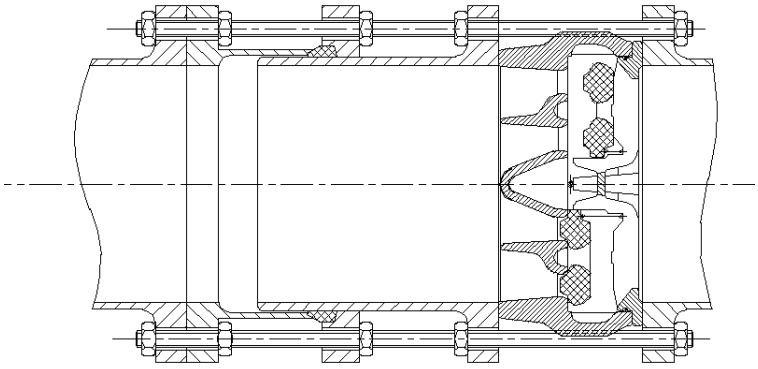
Nota : CLASAR® are delivered without flange or support seals or tie-rods or bolt to secure valves to pipework.

5 INSTALLATION IN ATEX ENVIRONMENT

The CLASAR® must be grounded.

The CLASAR® do not generate any temperature elevation. The installer must take into account an increase of temperature due to fluid temperature. and take safeguards necessary to prevent the presence of hot surfaces.

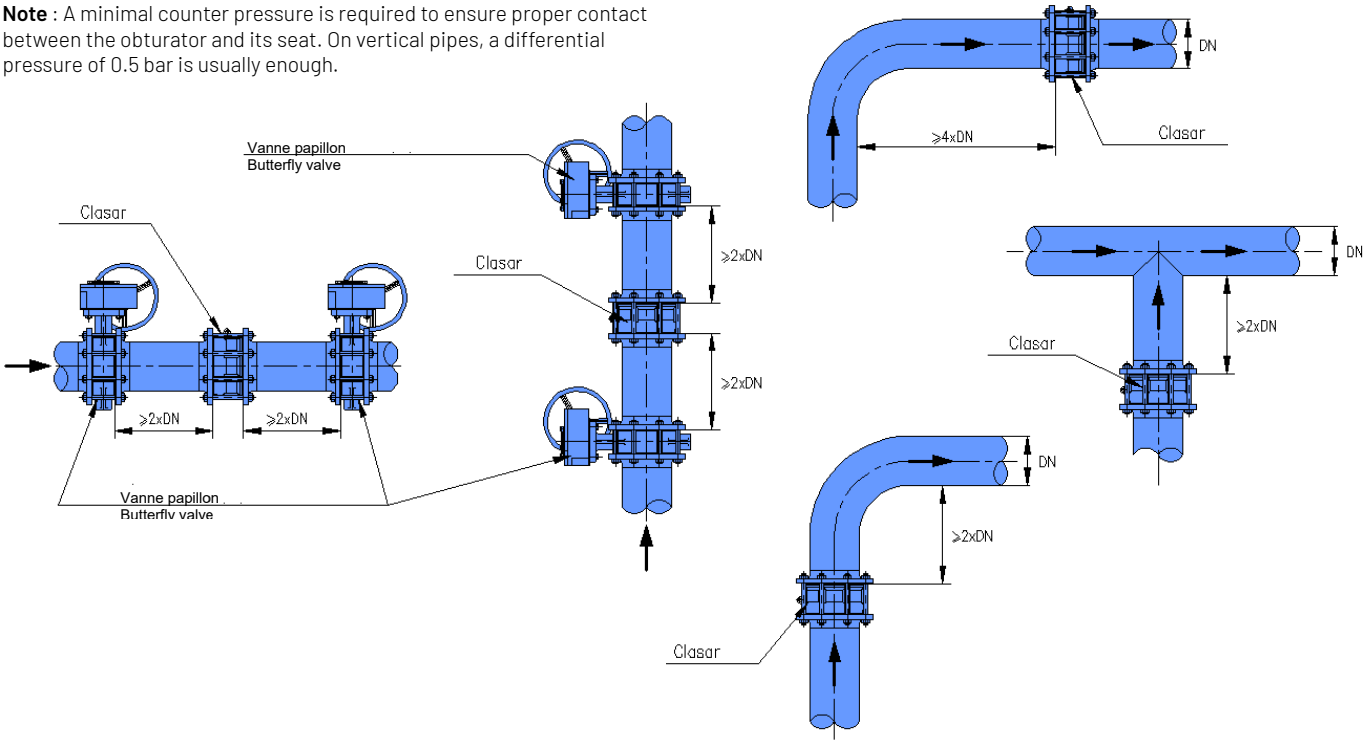
The user should take all necessary measures to potential leakage of flammable fluid or likely to provoke a reaction if the fluid coming into contact with a potentially explosive atmosphere.



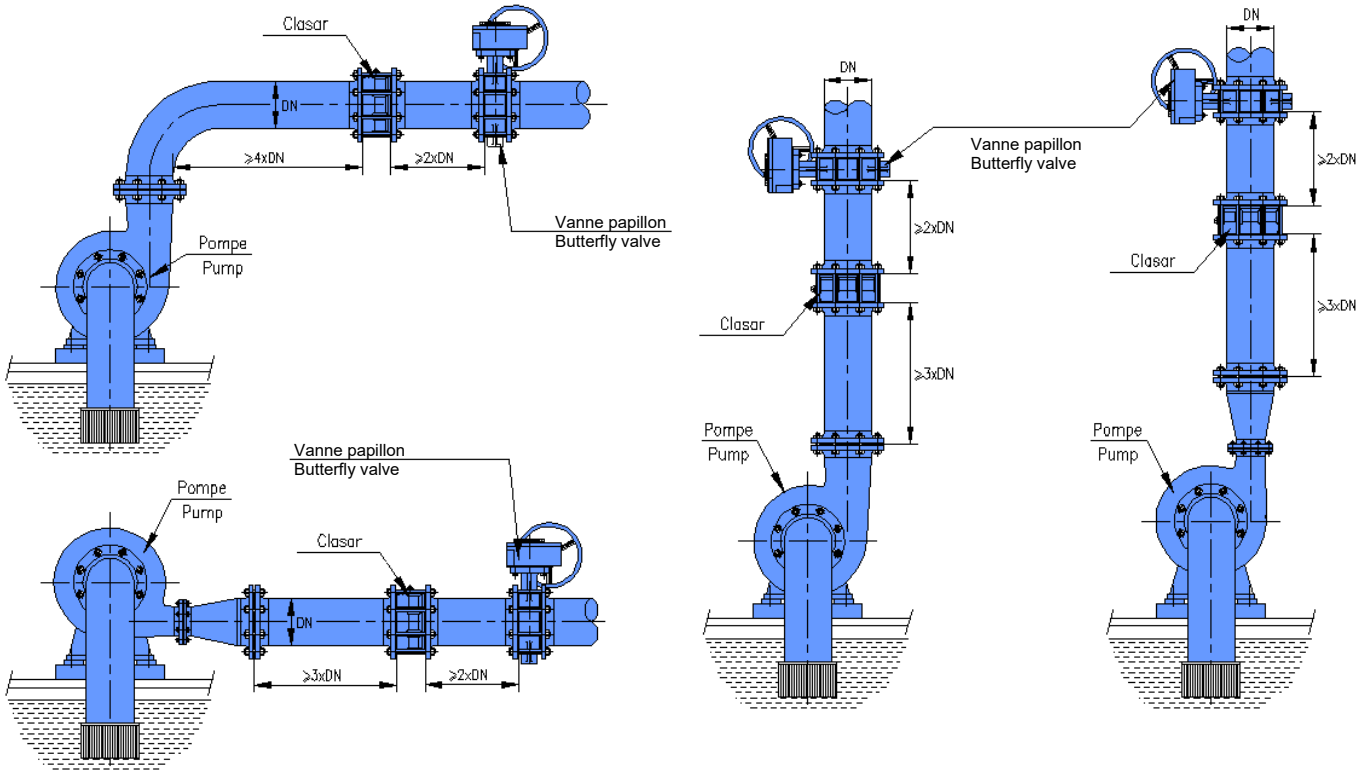
CLASAR PIPE MOUNTING

IN LINE MOUNTING

Note : A minimal counter pressure is required to ensure proper contact between the obturator and its seat. On vertical pipes, a differential pressure of 0.5 bar is usually enough.



MOUNTING WITH PUMP UPSTREAM



BOLTING

Dimensions

		Flange type	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700	DN 800	DN 900	DN 1000	DN 1200	DN 1400	DN 1600	DN 1800
PN10 ISO7005 / EN1092	N		8	8	8	8	8	12	12	16	16	20	20	20	24	24	28	28	32	36	40	44
	ØM		M16	M16	M16	M20	M20	M20	M20	M20	M24	M24	M24	M27	M27	M30	M30	M33	M36	M39	M45	M45
	L	1	160	180	210	240	220	240	280	320	340	320	400	130	130	140	150	150	170	190	230	230
		11	160	180	210	240	220	240	280	320	350	340	420	140	150	160	170	190	190	200	240	240
PN16 ISO7005 / EN1092	N		8	8	8	8	12	12	12	16	16	20	20	20	24	24	28	28	32	36	40	44
	ØM		M16	M16	M16	M20	M20	M24	M24	M24	M27	M27	M30	M33	M33	M36	M36	M39	M45	M45	M52	M52
	L	1	160	180	210	240	220	260	290	330	350	340	430	150	150	170	160	170	190	220	260	260
		11	160	180	210	240	220	260	300	350	360	360	440	160	150	170	180	190	220	230	270	270
PN20 ISO7005 / EN1092	N		4	8	8	8	8	12	12	12	16	16	16	20			32	36				
	ØM		M16	M16	M20	M20	M20	M24	M24	M27	M27	M30	M30	M33			M38	M39				
	L	1	170	190	230	260	240	260	300	350	360	360	440	170			210	220				
		11	170	190	230	260	240	270	320	370	390	380	470	170			180	190				
PN25 ISO7005 / EN1092	N		8	8	8	8	12	12	16	16	16	20	20	20	24	24						
	ØM		M16	M20	M24	M24	M24	M27	M27	M30	M33	M33	M33	M36	M39	M45						
	L	1	170	200	230	260	240	270	310	360	380	370	450	160	170	180						
		11	170	200	230	260	240	270	310	360	380	370	450	170	170	180						
PN40 ISO7005 / EN1092	N		8	8	8	8	12	12	16	16	16	20	20	20								
	ØM		M16	M20	M24	M24	M27	M30	M30	M33	M36	M36	M39	M45								
	L	1	170	200	230	260	250	280	330	380	400	390	470	200								
		11	170	200	230	260	260	280	330	380	400	390	490	210								
PN50 ISO7005 / EN1092	N		8	8	8	12	12	16	16	20	20	24	24									
	ØM		M20	M20	M20	M20	M24	M27	M30	M30	M33	M33	M33									
	L		180	210	240	270	260	300	340	390	410	400	490									

Maximum torque for thru bolt bolting (N.m)(1) between (1) Body and (2) Real Shell

	M16	M20	M22	M24	M27	M30	M33	M36	M39	M42	M45
Max. torque	146	290	380	490	720	900	1320	1710	2200	3080	3410
Quality class	6/8	6/8	6/8	6/8	6/8	6/8	6/8	6/8	6/8	8/8	6/8

(1) : New bolting non oxidized.

IDENTIFICATION PLATE

Exemple of the identification plate for the product.

STORAGE

1 PACKAGING

All valves are packaged properly to protect the obturator during transport and storage on site.

- Protection of the sealing surfaces of flanges.
- Protection of light and weather.

Special conditions of transport and storage should be specified when ordering.

2 HANDLING

Cases and pallets containing products should be handled by suitable lifting equipment, observing safety rules (limitations on use of lifting equipment, safety measures the company / site, etc. ...).
Check valves must be handled by straps hung in lifting holes.

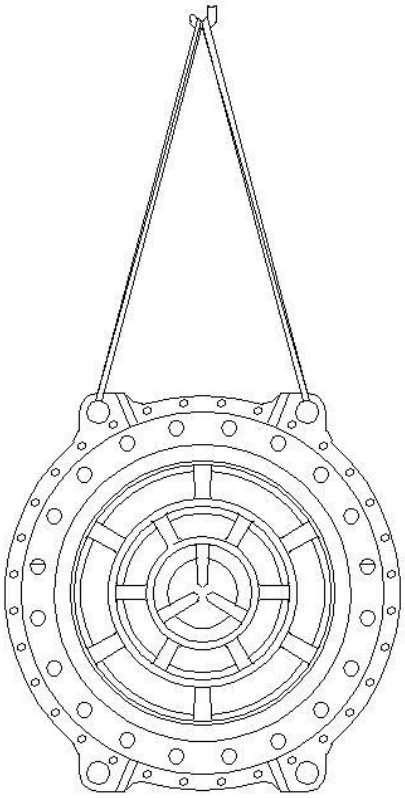
3 GENERAL STORAGE CONDITIONS

The equipment in storage will be adequately made safe from weather, saline atmospheres, dust and moisture.

The room temperature shall be not below 10 °C.

No special care will be provided if the storage does not exceed six months. Otherwise a repackaging is required.

Nota : It is advisable to remove the package at the last moment.



CLASAR®
DN600- DN1800
Lifting holes

ORDERING CODE

A code with the following basic information is marked on the tagplate:
- 5 characters defining type and materials.

For the order, completing the below data with the following information:
- the nominal diameter (DN),
- the flange connection,
- and, if applicable, the valve options.

Body and backing plate
- **201** Ductile iron
- **202** Ductile NiResist alloy
- **203** Stainless steel
- **205** Duplex Steel
- **206** Carbon Steel

Axial disc (1)
- **1** Polyurethane (-10 / +60°C)
- **3** PTFE (-30 / +130°C)

Spring (1)
- **1** Stainless steel
- **3** Inconel©

DN (mm)

DN 80 - 1800 (3" - 72")

Flanges: Type

For class flanges, precise the standard

PS

Working pressure

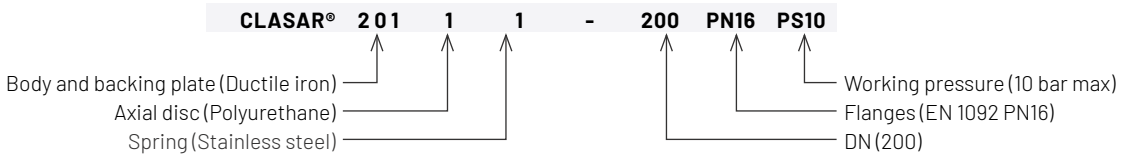
Valve options
- **FF** Flat face

Approvals and certificates
- **A2** ATEX approved

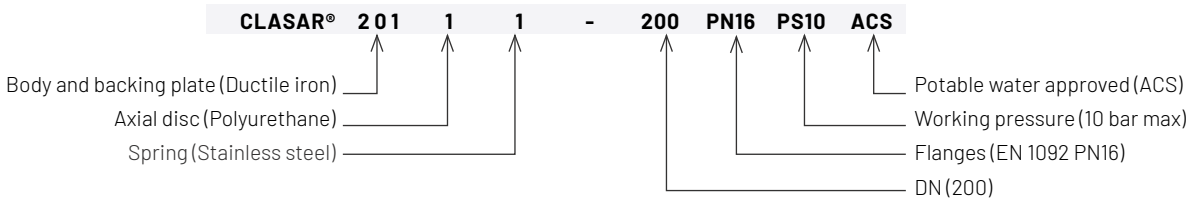
NOTES
(1) The choice of the material depends on the application parameters, please contact factory.

EXAMPLES

1. CLASAR® with body and counter flange in ductile iron, axial disc in polyurethane, spring in stainless steel, DN200 for mounting between flanges defined by EN1092 in PN16, with a working pressure of 10 bar:



2. Same check valve but potable water approved (ACS) with a working pressure of 10 bar:



NOTES

SAPAG has been designing and manufacturing a wide range of high-quality and highperformance industrial valves for more than 90 years. These include butterfly valves (elastomer, PTFE or metal seats), ball valves (carbon steel, stainless steel, or others on request), MONOVAR® control valves, the ultimate CLASAR® check valve, as well as gate and needle valves.

Our products are used in water, gas and other fluid transport networks in fields as diverse as petrochemicals, shipbuilding and process industries in general.

Today the company has more than 100 employees. In addition to the machining, assembly and testing unit for industrial valves, the site includes all the administrative, technical and commercial departments. This proximity enables SAPAG VALVES to ensure responsiveness, follow-up and compliance with our clients' requirements.

Our products are present in more than 70 countries around the world and our production is regularly exported to all 6 continents.

Our Quality, Safety and Environmental Management System is certified by the following :

ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

SAPAG VALVES

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