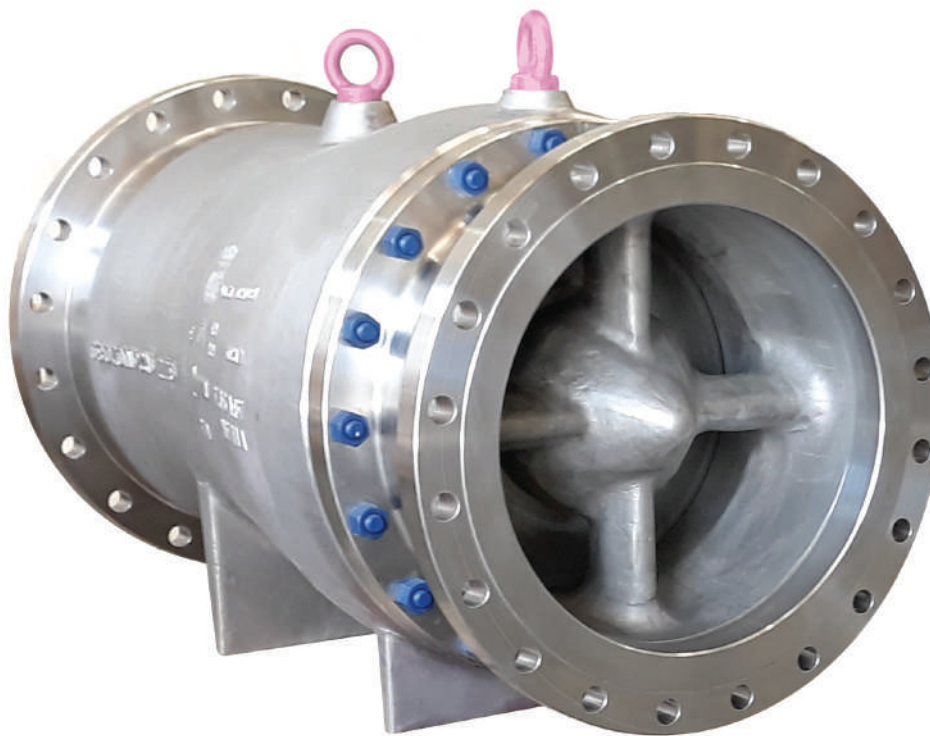


Velan ABV's API 6D Axial No-slam check valves are silent in-line and specifically designed to automatically protect critical components from reverse flow as well as pressure transients. Fast and prompt closing is assured due to the powerful spring and short valve stroke. As forward velocity begins to slow, the spring assist starts to close the disc. By the time it reaches zero, the valve disc is closed against the seat before reverse flow can occur, preventing a peak of pressure in the line and water hammer phenomena.

In addition, Velan ABV offers a compact version of No-slam check valves, providing the same reliability and quality of the traditional Axial No-slam valves, but with significant space and weight savings.



Features

- Compact face-to-face option for weight and space savings
- Spring assisted and short stroke solution to handle dynamic response and zero reverse flow
- Internal Venturi pattern design to maximize the spring effect and minimize hydraulic losses
- Minor friction between moving parts to eliminate any chance of jamming.
- Materials selection is fully customizable
- Metal-to-metal contact between seat and plug for tight shut-off performance and a long service life
- Low emissions rate in accordance API 6D
- Fire safe design and fire tested as per API 6FA/607
- Negligible pressure drop under normal conditions, less than 0.05 bar
- Low cracking pressure for high performance even at compressor start-up
- No chattering effect to minimize pressure fluctuation during normal conditions

Applications

- Water hammer mitigation
- Pressure transients damage prevention in pumps
- Centrifugal and reciprocating compressor protection
- Reverse flow prevention in critical systems
- Fluid contamination prevention in complex networks

Specifications

Sizes	NPS 2 to 56 (DN 50 to 1400)
Pressure rating	ASME Classes 150 to 2500
Temperature range	-150 to 662°F (-101 to 350°C)
Face-to-face	As per API 6D standard Short pattern design as per Velan standard
End connections	RF ⁽¹⁾ , RTJ ⁽¹⁾ , BW ⁽²⁾ , Hub, Compact flanges

(1) As per B16.5 & B16.47 (2) As per B16.25 (3) As per B16.11

Design features

Axial No-slam check axial valve up to NPS 20 (DN 500)

① Body design

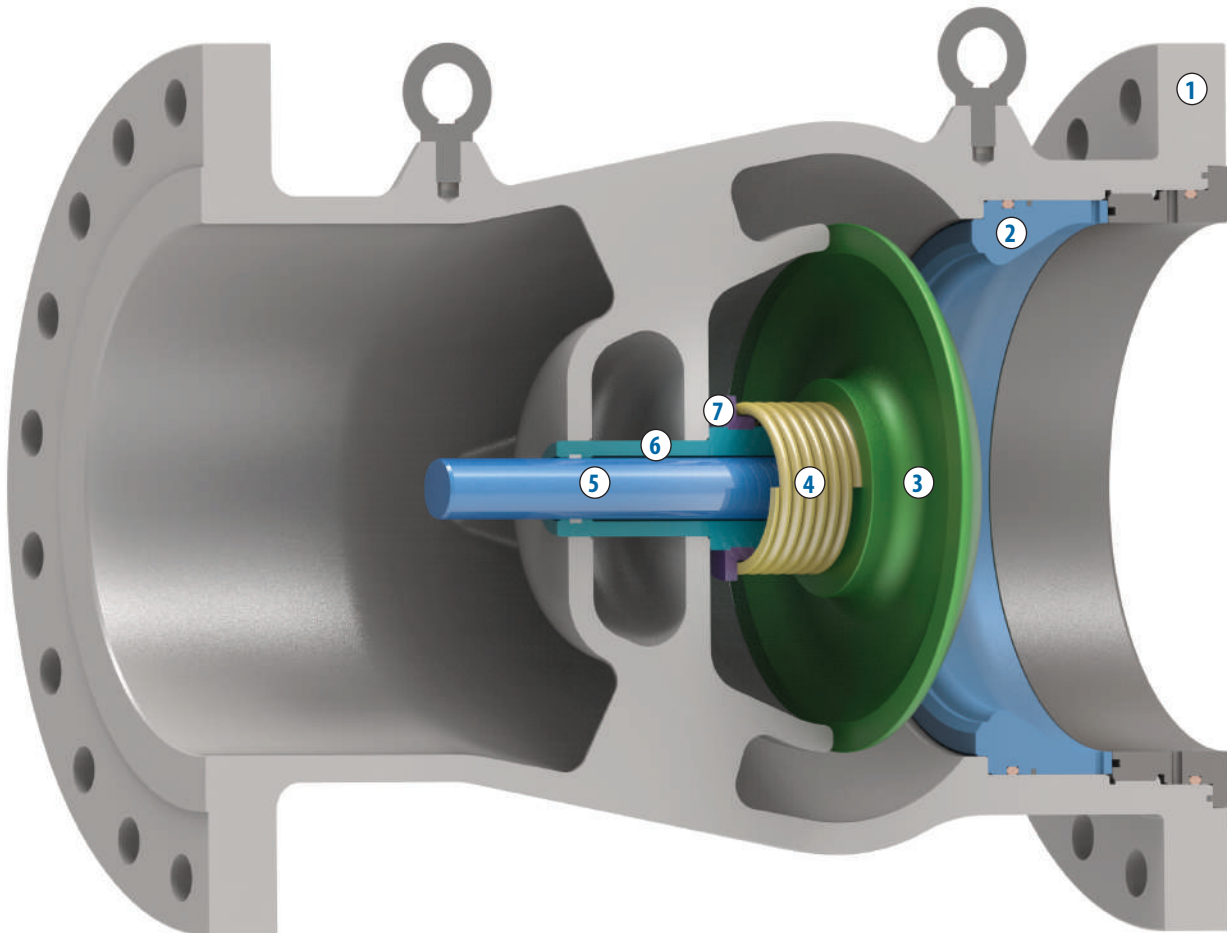
The one-piece body casting is designed with an internal Venturi pattern for quickest transient response.

② Seat sealing

The seat offers metal-to-metal contact with standard 150 microns of CoCr alloy hardfacing, to prevent potential erosive effects caused by aggressive flows. Leakage rate complies with API 6D.

③ Light-weight disc

The disc design is optimized to minimize inertia which improves the dynamic response of the valve. Available in a variety of trim materials to handle various types of corrosive and erosive fluids.



④ Spring

The spring is designed for ultra-fast closing without backflow and pressure surges in critical applications such as multi-pump systems. Customized springs are provided as a standard to perform under the most critical conditions.

⑤ Stem

A spherical connection between the stem and the disc ensures a perfect contact match with the seat.

⑥ Stem sleeve

The sleeve is provided to support the stem and limit friction

⑦ Spring threaded ring push

The ring allows the spring preload to adjust for an optimal combination between flow conditions and sealing performance.

Venturi pattern design

This valve is the most reliable choice for back flow mitigation which enhances safety in processes. This efficient solution is achieved with an internal Venturi pattern design that ensures stable valve opening as well as a fast closing response.

When the valve is in closed position, the disc is held against the seat by the spring and back pressure. The disc lifts off the seat when the static pressure exceeds the force of the pre-loaded spring. As the flow rate increases, the disc moves toward the open position.

Once the valve is 85% open, the Venturi effect contributes to its total opening creating a low-pressure field behind the disc, adding a large hydrostatic

component to the opening force. When the valve is fully open, the disc remains stable, even while the velocity increases, resulting in the elimination of valve chatter.

If the flow accidentally decelerates, the spring promptly reacts by providing a powerful closing force. The closing disc has a much shorter distance to travel, compared to a traditional check valve, and the valve is in closed position before the fluid has the chance to reverse and cause any issues.

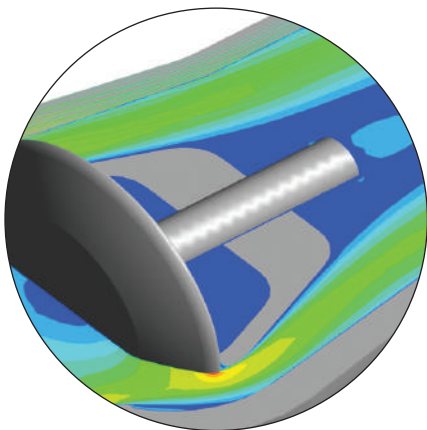
Reliable performance forecast

Dynamic behavior and pressure drops can be accurately foreseen using critical flow tests and a mathematical model developed in cooperation with a recognized fluid hydraulics laboratory.

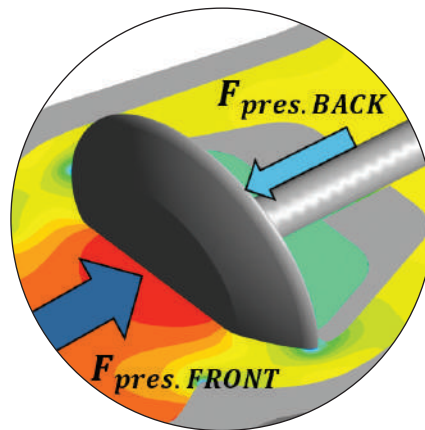
Design optimization

The No-slam axial check valve design has been optimized by using advanced computational fluid dynamics(CFD) simulation technologies. This technology is used to simulate the fluid/gas flow through the valve to maximize the

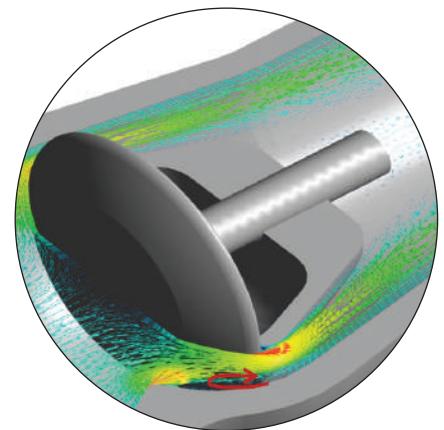
internal flow contour Venturi effect and to minimize recirculation zones. The reduction of the head loss across the valve has a beneficial impact on the efficiency of the whole transmission system.



Maximize the internal flow contour Venturi effect



Maximize the resulting pressure force on disk



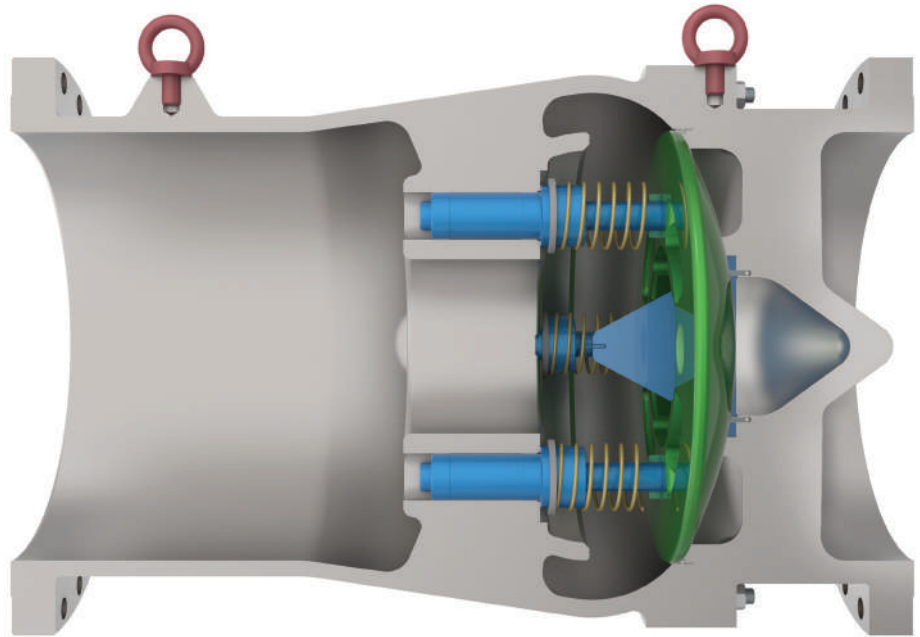
Minimize recirculation zones

No-slam nozzle check valve over NPS 20 (DN 500)

To avoid disc overload for valves larger than NPS 20 (DN 500), Velan ABV has adopted a nozzle design which ensures the same level of safety and reliability as the Axial No-slam axial check valve. The unique shape of the nozzle design ensures better flow regulation and stability of the whole system.

Flow, in the desired direction, lifts the disc off the seat with any slowing or cessation of forward motion allowing the spring to close the disc, preventing reverse flow. Velan ABV's unique design ensures fast closing before reverse flow occurs, minimizing the disc from slamming, preventing water hammer and avoiding pressure transients through the piping system.

Compared with other types of check valves, Velan ABV's No-slam nozzle check offers the fastest dynamic performance and lowest pressure loss.

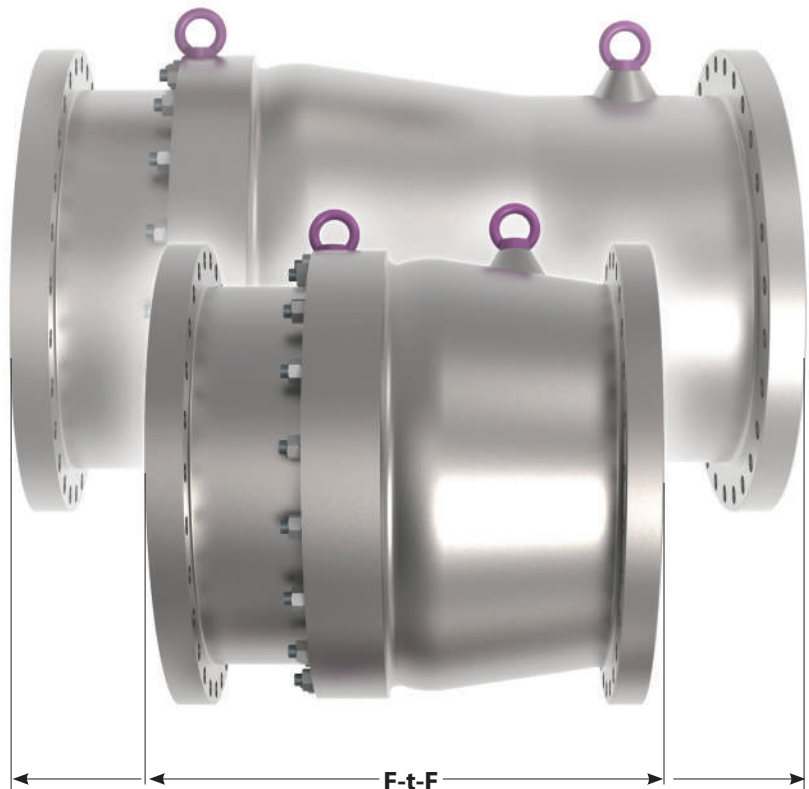


Velan ABV's compact No-slam check valve

Velan ABV's Engineering team is aware of the importance of saving space and reducing weight in offshore platforms and FPSO (floating production storage and offloading). For this reason, Velan ABV's compact No-slam check valve has been designed to satisfy all offshore market requirements. This compact solution includes the same internal components as the standard Axial No-slam check valve, but with a significant reduction of the face-to-face dimension leading to a total of 50% in weight savings.

Additionally, Velan ABV's compact No-slam check valve sets itself apart because of its easy installation and that no special support is required. It is lightweight compared to the traditional Axial No-slam check which reduces the cost of installation for the customer.

Velan also offers compact version both for Axial and No-Slam nozzle check valves.



Valve design configuration

Summary of available features

Features	Design
API 6D monogram	On request
Fire safe design as per API 6FA - API 607 - BS 6755 part 2	Included
Face-to-face as per ASME B16.10 or Velan standard	Included
Flange dimensions as per ASME B16.5 & B16.47	Included
Butt weld ends as per ASME B16.25	Included
Hub connections	On request
Single piece casted body design up to NPS 20	Included
Two-piece casted body design (nozzle type) over NPS 20	As required
Light-weight disc design	Included
Metal-to-metal seat sealing with 150 micron of CoCr alloy Gr.6	Included
Double body seals (one o-ring and one graphite gasket)	Included
Lip seal configuration	On request
Full graphite configuration for high temperature	On request
Overlay on all dynamic sealing areas	On request
FBE (fusion bounded epoxy) internal coating for corrosive services	On request
Drain plug	Included
Supporting feet (on NPS 6 and larger)	On request
Locking device	On Request
Bare stem	On Request

Inspection and testing

100% of Velan valves are inspected and tested before shipment.

NDT certified personnel

Internal personnel, qualified as per ASNT SNT-TC-1A or ISO 9712, perform nondestructive testing (NDT) on valve components in compliance with all the major international standards.

- Visual and dimensional inspections
- Positive material identification
- Penetrant testing
- Magnetic particle testing
- Ultrasonic testing

Optional qualification tests

- Low temperature tests as per BS6364
- Fire tests
- Endurance tests

Tested as per API 6D

Prior to shipment, all manufactured valves are tested following all the mandatory requirements as per API 6D.

- Hydrostatic shell test
- Hydrostatic seat test

Supplementary tests as per API 6D

- High-pressure nitrogen gas tests
- Antistatic test
- Low-pressure pneumatic seat testing

Technical specifications

Applicable international standards

API 6D / ISO 5208 / API 598

ASME B16.10

ASME VIII Div. I & II

API 6FA / 607 / ISO 10497

NACE MR0 175

EN 10204

ATEX DIR 2014-34-EU

PED DIR 2014-68-EU

Best installation practices

The No-slam valve must be installed in the proper orientation to fully benefit from all its design features. Regardless of the design, all Velan ABV check valves can be installed both in horizontal and vertical positions.

To ensure a good flow pattern at the entry, and to minimize head loss, Velan ABV suggests installing the valve at a minimum of 5 pipe diameters downstream of any piping component (pump, compressor, elbow, tee, valve etc.) to allow the flow to stabilize.

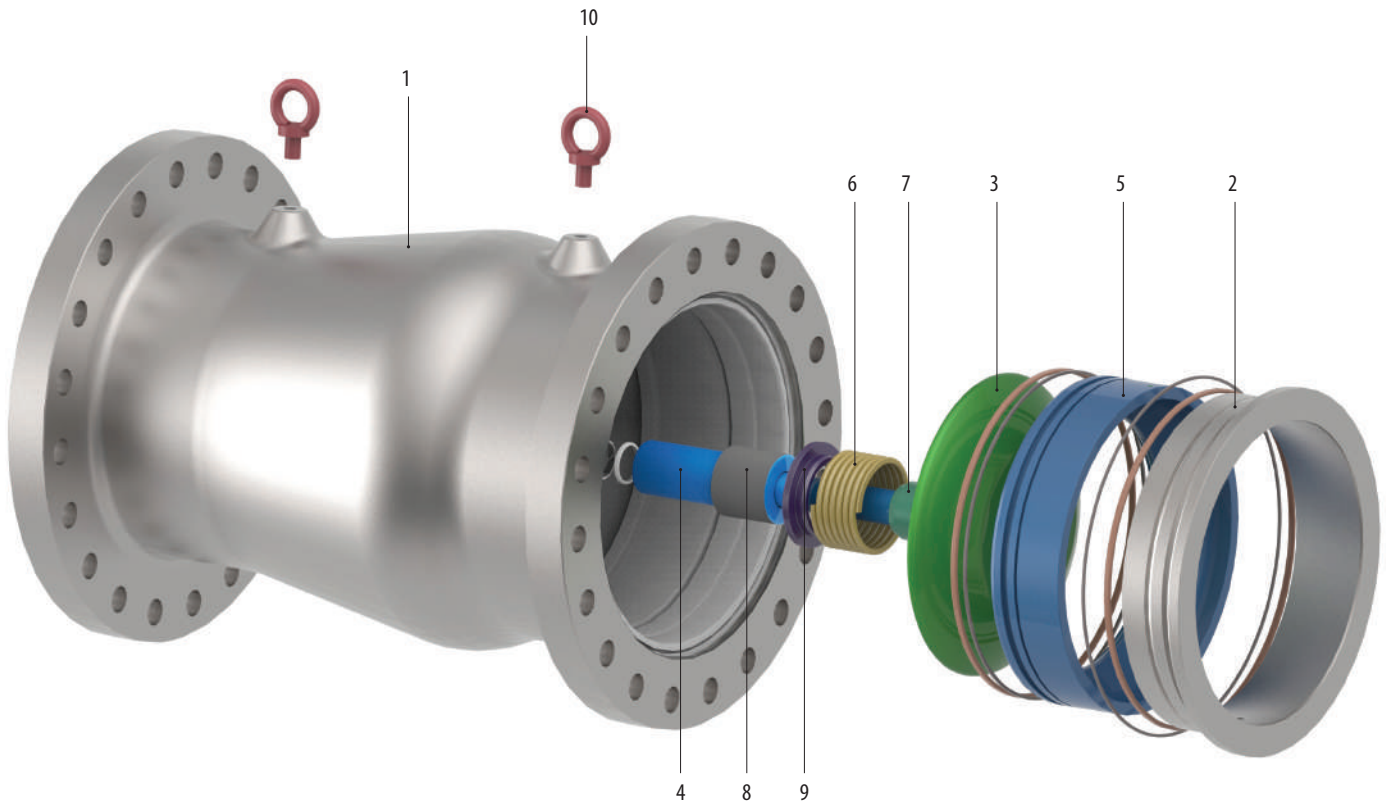
There should also be a minimum of 2 diameters of straight pipe downstream of the valve before the next fitting to allow for pressure recovery.

The distance of 5 pipe diameters downstream is applicable to both vertical and horizontal pipe runs.

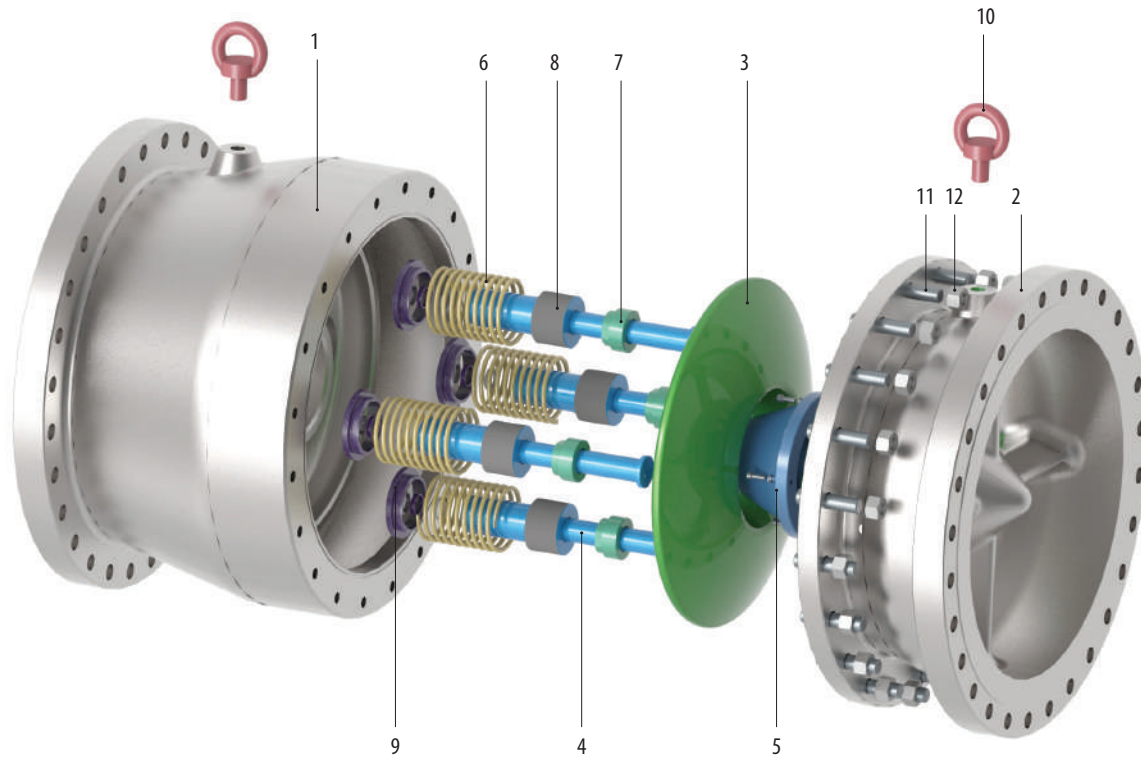
In vertical flow down applications, slamming problems can be amplified due to the valve disc being positioned in the vertical plane which will cause no gravity assistance in closing.

Generally, flow down installation is not recommended. Velan ABV suggests consulting our Engineering department and providing specific sizes and rating as well as the application the valve will be installed in.

Exploded view: Axial No-slam axial check valve up to NPS 20 (DN 500)



Exploded view: No-slam nozzle check valve over NPS 20 (DN 500)



Standard materials

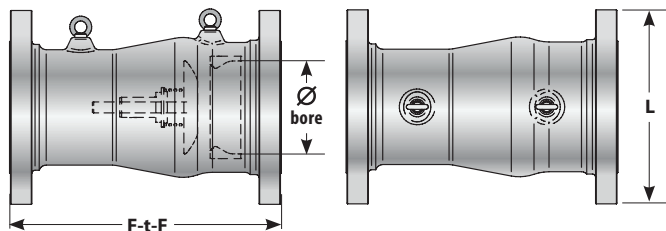
Axial No-slam axial check valve up to NPS 20 (DN 500)

PART		Standard service	Offshore service	Low temperature service	Sour service
1	Body	ASTM A352 LCB	ASTM A995 4A	ASTM A351 CF8M	ASTM A494 CW6MC
2	Seat closure	ASTM A350 LF2 CL.1	ASTM A182 F51	ASTM A182 F316/F316L	ASTM B564 N06625
3	Disk	ASTM A182 F316/F316L	ASTM A182 F51	ASTM A182 F316/F316L	ASTM B564 N06625
4	Stem	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
5	Seat ring	ASTM A182 F316/F316L	ASTM A182 F51	ASTM A182 F316/F316L	ASTM B564 N06625
6	Coil spring	Inconel X750	Inconel X750	Inconel X750	Inconel 718
7	Threaded ring	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
8	Stem sleeve	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
9	Spring threaded ring push	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
10	Eyebolt	AISI 1012	AISI 1012+ ENP	AISI 1012+ ENP	AISI 1012+ ENP
	Seals	O-ring-Viton B	O-ring-Viton B	Lip seals: PTFE + Elgiloy	Lip seals: PTFE + Elgiloy
	Gasket	Graphite	Graphite	Graphite	Graphite
	Sliding ring	Turcite	Turcite	Turcite	Turcite

No-slam nozzle check valve over NPS 20 (DN 500)

PART		Standard service	Offshore service	Low temperature service	Sour service
1	Body	ASTM A352 LCB	ASTM A995 4A	ASTM A351 CF8M	ASTM A494 CW6MC
2	Nozzle closure	ASTM A352 LCB	ASTM A995 4A	ASTM A351 CF8M	ASTM A494 CW6MC
3	Disk	ASTM A351 CF8M	ASTM A995 4A	ASTM A351 CF8M	ASTM A494 CW6MC
4	Stem	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
5	Nozzle switch	ASTM A182 F316/F316L	ASTM A182 F51	ASTM A182 F316/F316L	ASTM B446 N06625
6	Coil spring	Inconel X750	Inconel X750	Inconel X750	Inconel 718
7	Threaded ring	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
8	Stem sleeve	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
9	Spring threaded ring push	ASTM A479 S31600/S31603	ASTM A479 S31803	ASTM A479 S31600/S31603	ASTM B446 N06625
10	Eyebolt	AISI 1012	AISI 1012+ ENP	AISI 1012+ ENP	AISI 1012+ ENP
11	Body stud	ASTM A320 L7M	ASTM A320 L7M (Xylan 1070)	ASTM A320 B8M	ASTM A320 L7M (Xylan 1070)
12	Body nuts	ASTM A194 Gr.7M	ASTM A194 Gr.7M (Xylan 1070)	ASTM A194 Gr.8M	ASTM A194 Gr.7M (Xylan 1070)
	Seals	O-ring-Viton B	O-ring-Viton B	Lip seals: PTFE + Elgiloy	Lip seals: PTFE + Elgiloy
	Gasket	Graphite	Graphite	Graphite	Graphite
	Sliding ring	Turcite	Turcite	Turcite	Turcite

Dimensions and weights: Axial No-slam axial check valve

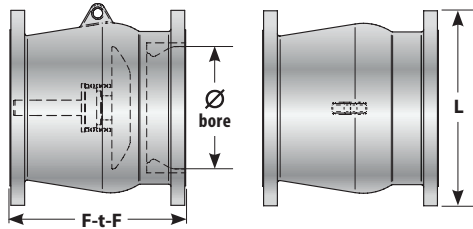


Size full bore NPS DN	ASME 150				ASME 300				ASME 600			
	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg
4	4.02	11.5	9.02	64	4.02	14.02	10	82	4.02	17.01	10.75	104
100	102	292	229	29	102	356	254	37	102	432	273	47
6	5.98	14.37	11.02	126	5.98	17.52	12.52	176	5.98	22.01	14.02	282
150	152	365	280	57	152	445	318	80	152	559	356	128
8	7.99	19.49	13.58	243	7.99	20.98	15	276	7.99	25.98	16.5	441
200	203	495	345	110	203	533	381	125	203	660	419	200
10	10	24.49	15.94	430	10	24.49	17.52	459	10	30.98	20	728
250	254	622	405	195	254	622	445	208	254	787	508	330
12	12.01	27.52	19.09	545	12.01	27.99	20.51	688	12.01	32.99	22.01	1003
300	305	699	485	247	305	711	521	312	305	838	559	455
14	13.23	30.98	21.06	816	13.23	32.99	22.99	926	13.23	35	23.74	1257
350	336	787	535	370	336	838	584	420	336	889	603	570
16	15.24	30	23.5	948	15.24	33.19	25.51	1127	15.24	39.02	27.01	1673
400	387	762	597	430	387	843	648	511	387	991	686	759
18	17.24	38.5	25	1433	17.24	38.5	27.99	1653	17.24	42.99	29.25	2183
450	438	978	635	650	438	978	711	750	438	1092	743	990
20	19.25	38.5	27.52	1587	19.25	40	30.51	2000	19.25	47.01	32.01	3051
500	489	978	699	720	489	1016	775	907	489	1194	813	1384

Size full bore NPS DN	ASME 900				ASME 1500				ASME 2500			
	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg
4	4.02	17.99	11.5	130	4.02	21.5	12.24	214	3.5	26.5	14.02	432
100	102	457	292	59	102	546	311	97	89	673	356	196
6	5.98	24.02	15	397	5.75	27.99	15.43	529	5.24	35.98	19.02	1314
150	152	610	381	180	146	711	392	240	133	914	483	596
8	7.99	29.02	18.5	619	7.6	33.11	19.02	926	7.13	40.87	21.73	1825
200	203	737	470	281	193	841	483	420	181	1038	552	828
10	10	32.99	21.5	981	9.49	39.02	22.99	1702	8.9	50.87	26.5	3389
250	254	838	546	445	241	991	584	772	226	1292	673	1537
12	12.01	37.99	24.02	1378	11.38	45.12	26.5	2778	10.51	56.89	30	4339
300	305	965	610	625	289	1146	673	1260	267	1445	762	1968
14	12.76	40.51	25.24	1852	12.52	49.49	29.49	3638				
350	324	1029	641	840	318	1257	749	1650				
16	14.76	44.49	27.76	2282	14.25	54.49	32.52	4597				
400	375	1130	705	1035	362	1384	826	2085				
18	16.73	47.99	30.98	3131	16.02	60.51	35.98	6063				
450	425	1219	787	1420	407	1537	914	2750				
20	18.62	52.01	33.74	4167	16.54	65.51	38.74	7674				
500	473	1321	857	1890	420	1664	984	3481				

Note: Dimensions shown in inches/mm.

Dimensions and weights: Compact No-slam axial check valve

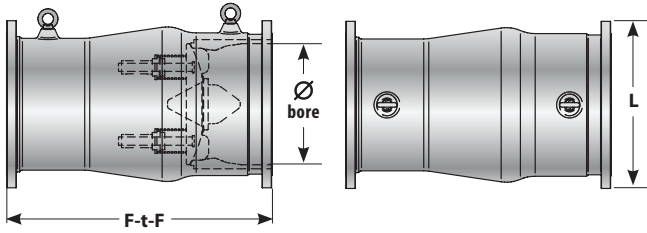


Size full bore NPS DN	ASME 150				ASME 300				ASME 600			
	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg
4	4.02	7.05	9.02	46	4.02	7.05	10	64	4.02	7.05	10.75	84
100	102	179	229	21	102	179	254	29	102	179	273	38
6	5.98	9.96	11.02	95	5.98	9.96	12.52	130	5.98	9.96	14.02	187
150	152	253	280	43	152	253	318	59	152	253	356	85
8	7.99	11.61	13.58	198	7.99	11.61	15	231	7.99	11.61	16.5	342
200	203	295	345	90	203	295	381	105	203	295	419	155
10	10	14.37	15.94	260	10	14.37	17.52	346	10	14.37	20	522
250	254	365	405	118	254	365	445	157	254	365	508	237
12	12.01	17.13	19.09	417	12.01	17.13	20.51	547	12.01	17.13	22.01	745
300	305	435	485	189	305	435	521	248	305	435	559	338
14	13.23	18.7	21.06	573	13.23	18.7	22.99	838	13.23	18.7	23.74	970
350	336	475	535	260	336	475	584	380	336	475	603	440
16	15.24	21.46	23.5	694	15.24	21.46	25.51	966	15.24	21.46	27.01	1296
400	387	545	597	315	387	545	648	438	387	545	686	588
18	17.24	24.02	25	999	17.24	24.02	27.99	1323	17.24	24.02	29.25	1764
450	438	610	635	453	438	610	711	600	438	610	743	800
20	19.25	26.57	27.52	1272	19.25	26.57	30.51	1742	19.25	26.57	32.01	2335
500	489	675	699	577	489	675	775	790	489	675	813	1059

Size full bore NPS DN	ASME 900				ASME 1500				ASME 2500			
	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg	Ø BORE	F-t-F RF	L	Weight lb/kg
4	4.02	7.05	11.5	101	4.02	7.05	12.24	143	3.5	11.61	14.02	351
100	102	179	292	46	102	179	311	65	89	295	356	159
6	5.98	9.96	15	240	5.75	11.02	15.43	368	5.24	15.35	19.02	849
150	152	253	381	109	146	280	392	167	133	390	483	385
8	7.99	13.39	18.5	551	7.6	13.19	19.02	739	7.13	15.24	21.73	1133
200	203	340	470	250	193	335	483	335	181	387	552	514
10	10	14.37	21.5	666	9.49	14.96	22.99	1089	8.9	18.66	26.5	2105
250	254	365	546	302	241	380	584	494	226	474	673	955
12	12.01	16.93	24.02	959	11.38	17.13	26.5	1682	10.51	20.47	30	2959
300	305	430	610	435	289	435	673	763	267	520	762	1342
14	12.76	18.9	25.24	1455	12.52	18.7	29.49	2575				
350	324	480	641	660	318	475	749	1168				
16	14.76	21.06	27.76	1583	14.25	21.46	32.52	3049				
400	375	535	705	718	362	545	826	1383				
18	16.73	24.37	30.98	2491	16.02	24.02	35.98	4321				
450	425	619	787	1130	407	610	914	1960				
20	18.62	25.98	33.74	2866	16.54	25.59	38.74	5236				
500	473	660	857	1300	420	650	984	2375				

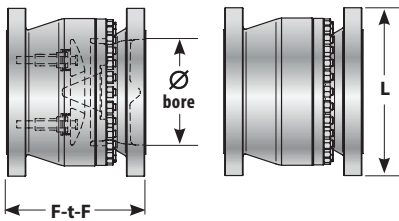
Note: Dimensions shown in inches/mm.

Dimensions and weights: No-slam nozzle check valve over NPS 20 (DN 500)



Size full bore NPS DN	ASME 150				ASME 300				ASME 600				ASME 900			
	Ø BORE	F-t-F RF	L	Weight lb / kg	Ø BORE	F-t-F RF	L	Weight lb / kg	Ø BORE	F-t-F RF	L	Weight lb / kg	Ø BORE	F-t-F RF	L	Weight lb / kg
24	23.27	50.98	32.01	2844	23.27	52.99	35.98	4630	23.27	55	37.01	5236	23.27	60.98	40.98	8466
600	591	1295	813	1290	591	1346	914	2100	591	1397	940	2375	591	1549	1041	3840
28	27.01	57.01	36.5	4321	—	—	—	—	—	—	—	—	29.02	68.43	48.5	13713
700	686	1448	927	1960	—	—	—	—	—	—	—	—	737	1738	1232	6220
30	—	—	—	—	29.02	62.76	42.99	6437	—	—	—	—	—	—	—	—
750	—	—	—	—	737	1594	1092	2920	—	—	—	—	—	—	—	—
36	—	—	—	—	34.49	82.01	58.66	10913	34.49	82.01	51.77	14661	—	—	—	—
900	—	—	—	—	876	2083	1490	4950	876	2083	1315	6650	—	—	—	—
40	—	—	—	—	38.43	0	65.35	0	—	—	—	—	—	—	—	—
1000	—	—	—	—	976	0	1660	0	—	—	—	—	—	—	—	—
42	40.16	66.93	52.99	11938	40.16	0	66.93	0	—	—	—	—	—	—	—	—
1050	1020	1700	1346	5415	1020	0	1700	0	—	—	—	—	—	—	—	—
48	45.91	0	59.45	0	—	—	—	—	45.91	78.74	72.83	28307	—	—	—	—
1200	1166	0	1510	0	—	—	—	—	1166	2000	1850	12840	—	—	—	—
56	53.54	0	68.7	0	—	—	—	—	—	—	—	—	—	—	—	—
1400	1360	0	1745	0	—	—	—	—	—	—	—	—	—	—	—	—

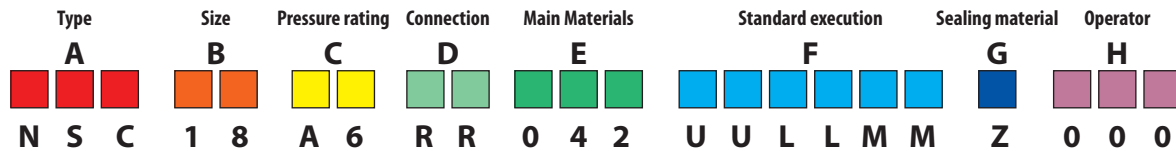
Dimensions and weights: Compact No-slam nozzle check valve over NPS 20 (DN 500)



Size full bore NPS DN	ASME 150				ASME 300				ASME 600				ASME 900			
	Ø BORE	F-t-F RF	L	Weight lb / kg	Ø BORE	F-t-F RF	L	Weight lb / kg	Ø BORE	F-t-F RF	L	Weight lb / kg	Ø BORE	F-t-F RF	L	Weight lb / kg
24	23.27	30.71	32.01	2028	23.27	28.54	35.98	3131	23.27	30.71	37.01	3660	23.27	36.81	40.98	6393
600	591	780	813	920	591	725	914	1420	591	780	940	1660	591	935	1041	2900
28	27.01	37.2	36.5	3814	—	—	—	—	—	—	—	—	—	—	—	—
700	686	945	927	1730	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	29.02	38.39	42.99	4519	—	—	—	—	29.02	0	48.5	0
750	—	—	—	—	737	975	1092	2050	—	—	—	—	737	0	1232	0
36	—	—	—	—	34.49	45.67	58.66	7496	34.49	45.67	51.77	10119	—	—	—	—
900	—	—	—	—	876	1160	1490	3400	876	1160	1315	4590	—	—	—	—
40	—	—	—	—	38.43	48.43	65.35	9149	—	—	—	—	—	—	—	—
1000	—	—	—	—	976	1230	1660	4150	—	—	—	—	—	—	—	—
42	40.16	50.59	52.99	8322	40.16	50.59	66.93	10781	—	—	—	—	—	—	—	—
1050	1020	1285	1346	3775	1020	1285	1700	4890	—	—	—	—	—	—	—	—
48	45.91	57.87	59.45	12258	—	—	—	—	45.91	63.58	72.83	18673	—	—	—	—
1200	1166	1470	1510	5560	—	—	—	—	1166	1615	1850	8470	—	—	—	—
56	53.54	67.52	68.7	19687	—	—	—	—	—	—	—	—	—	—	—	—
1400	1360	1715	1745	8930	—	—	—	—	—	—	—	—	—	—	—	—

Note: Dimensions shown in inches/mm.

How to order API 6D Axial No-slam check valves



Example:

- A** Axial No-slam check valve
- B** NPS 18 (DN 450)
- C** ASME Class 900
- D** Raised face flanged
- E** Body & closure: ASTM A995 Gr.6A, Disc: ASTM A182 F55+CoCr alloy, Stem: A479 UNS S32760
- F** O-ring seals, metal self-relieving seats without emergency sealant injections on seats and stem
- G** Viton B, Seat inserts: metal
- H** Automatic operation

A TYPE

- NSC** Axial No-slam check valve up to NPS 20
- NSZ** No-slam nozzle check valve over NPS 20

B SIZE shown in NPS/inch (DN/mm)

02 2 (50)	10 10 (250)	20 20 (500)	32 32 (800)	48 48 (1200)
03 3 (80)	12 12 (300)	24 24 (600)	34 34 (850)	ZX 52 (1300)
04 4 (100)	14 14 (350)	26 26 (650)	36 36 (900)	54 54 (1350)
06 6 (150)	16 16 (400)	28 28 (700)	40 40 (1000)	56 56 (1400)
08 8 (200)	18 18 (450)	30 30 (750)	42 42 (1050)	

C PRESSURE RATING (ASME)

A1 150	A2 300	A4 600	A6 900	A7 1500	A8 2500
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D END CONNECTION

- HH** Hub (HUB)
- JJ** Ring-type joint flanged (RTJ)
- RR** Raised face flanged (RF)
- BB** Butt weld (BW)
- 8A** Compact flange (CJ)

E MAIN MATERIALS

CODE	BODY & CLOSURES	DISC	STEM	BOLTINGS
042	ASTM A995 Gr. 6A	ASTM A182 F55+ CoCr alloy	A479 UNS S32760	None
032	ASTM A890 Gr. 4	ASTM A182 F51+ CoCr alloy	ASTM A479 S31803	None
906	ASTM A352 LCB	ASTM A182 F316/F316L CL.2+CoCr alloy	ASTM A479 S31600/S31603	None
908	ASTM A351 CF8M	ASTM A182 F316/F316L+CoCr alloy	ASTM A479 S31600/S31603	None
X24	ASTM A494 CW6MC	ASTM B564 N06625	ASTM B564 N06625	None
B42	ASTM A995 Gr. 6A	ASTM A182 F55+ CoCr alloy	A479 UNS S32760	ASTM A320 L7M ASTM 194 Gr. 7M (Xylan coated 1070)
B32	ASTM A890 Gr. 4	ASTM A182 F51+ CoCr alloy	ASTM A479 S31803	ASTM A320 L7M ASTM 194 Gr. 7M (Xylan coated 1070)
B06	ASTM A352 LCB	ASTM A182 F316/F316L CL. 2+CoCr alloy	ASTM A479 S31600/S31603	ASTM A320 L7M ASTM 194 Gr. 7M (Xylan coated 1070)
B08	ASTM A351 CF8M	ASTM A182 F316/F316L+CoCr alloy	ASTM A479 S31600/S31603	ASTM 193 B8M – ASTM194 Gr. 8M
X25	ASTM A494 CW6MC	ASTM B564 N06625	ASTM B564 N06625	ASTM A320 L7M ASTM 194 Gr. 7M (Xylan coated 1070)

F STANDARD EXECUTION

Code	Primary seals	Emergency sealant injection-seats	Emergency sealant injection-stem	Seat contact type	Seat design
UULLMM	O-ring	No	No	Metal seat	Self-relieving
KKLLMM	Lip-seal	No	No	Metal seat	Self-relieving

G SEALING MATERIALS

CODE	Seals	Seat inserts
Z	Viton B	Metal
X	Viton GLT	Metal
Y	HNBR	Metal
W	Lip seal	Metal

H OPERATOR

CODE	DESCRIPTION
000	Automatic

Note: For additional features or different materials combination please contact our Sales Department

For more specific product information contact our sales department:

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