



AXIAL FLOW NOZZLE CHECK VALVES MODEL NZ & NZS

QUALITY PRODUCTS, SERVICE & RELIABILITY



CHAMPION CHECK VALVES • SIZE RANGE 1/2" - 54" • ASME CLASS 150 - 2500



MATERIALS: CARBON STEEL • STAINLESS STEEL • DUPLEX STAINLESS STEEL • METAL ALLOYS



SAI GLOBAL
ISO 9001
Quality

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INTRODUCTION

Champion Valves, Inc. (CVI) Models NZ and NZS axial flow nozzle check valves are engineered to provide the longest and most reliable protection of gas and liquid piping systems. CVI's axial flow non-slam design minimizes water hammer and associated pressure transients. Our design is energy efficient, has an extremely long service life and requires minimal maintenance costs over the life of the valve.

Models NZ and NZS axial flow nozzle check valves are designed with a spring-loaded, center-guided, profiled disc that is guided through bearings in the valve body guide. The valve body is a streamlined axial design with a central diffuser that reduces pressure loss through the valve. Using the latest simulation software and applying years of application experience, Models NZ and NZS have one of the most efficient pressure drop designs available today.

Our commitment to continuous design improvements has led to many unique features, including a hexagonal shaft design that ensures smooth travel of the disc.

GENERAL APPLICATIONS

Gas and Crude Oil Transmission

- Compressor, pump suction and discharge
- Main Pipeline
- Bypass Lines
- Metering Stations

Hydrocarbon Processing

- Crude Offloading
- Pump or compressor suction and discharge of clean liquid and gas media

Petrochemical / Chemical Processing

- Ethylene and Polypropylene Compressors
- Low and high steam pressure for cooling water

Power Generation

- Feedwater
- Cooling Water
- Blowdown
- High Pressure Water Circulation
- High & Low Steam Pressure

Water Transmission

- Pipeline
- Pump Protection
- Manifold



FEATURES & BENEFITS

FEATURES	BENEFITS
<p>Axial Flow Path/Venturi Effect</p> <ul style="list-style-type: none"> • The geometry of the valve's body and disc are designed using Computational Fluid Dynamics to streamline the flow path • Internal diffusers hold the guide to the body • Spring is engineered based on specific operating conditions 	<ul style="list-style-type: none"> • Reduces operating cost with minimal pressure drop • Reduces cavitation • Reduces risk of damage to piping
<p>Non-Slam Design</p> <ul style="list-style-type: none"> • Lightweight, singular compression spring-loaded disc • The disc travels only a short distance from the open to closed position 	<ul style="list-style-type: none"> • Provides fast dynamic response • Ensures consistent non-slam operation • Provides optimal surge protection for centrifugal compressors
<p>Reliable Operations</p> <ul style="list-style-type: none"> • Conical disc is self-aligning • Disc is the only moving part • Large valves feature front and rear bearing supports • Unique hexagonal shaft provides a passageway for suspended particulate to flow through shaft/bearing area, while simultaneously reducing drag • Multiple material and trim options available 	<ul style="list-style-type: none"> • Designed for gas and liquid media • Provides consistent smooth travel of shaft through guide bearings • Ensures low seat leakage rate over a long period of time with aligned disc/shaft • Ensures low maintenance costs • Optimizes installation - can be mounted in any piping orientation (Contact factory for vertical down flow installation).

Size Range	1/2" - 54"
Design Specifications	ASME, BS, DIN, API 6D
ASME Classes	150-2500
Flange Type & Size	ASME B16.5, B16.47, DIN
End Connections	Raised Face / RTJ / Weld-End / Socket Weld
Inspection & Testing	API 6D, API 6FA, API 598
Painting	ISO8501-1, ISO12944

DESIGN FEATURES

Single Body Structure - No External Leakage

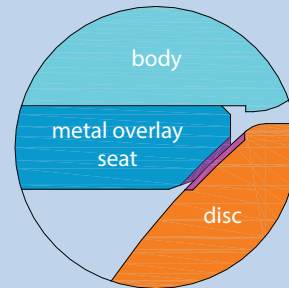
CVI Models NZ and NZS utilize a patented independent front-loading sealing ring technology. The seat is located on the sealing ring that is secured internally in the one-piece body. The flange face is not interrupted. This results in zero leakage outside of the valve body and allows for precise machining of the sealing face for a consistently low seat leakage rate.



Seat Design

CVI Models NZ and NZS axial flow check valves are available with a metal to metal or soft seat. Metal seats have dissimilar metals for protection against galling. The soft seat design has zero seat leakage down to 5 psig backpressure. Models NZ and NZS have a fire-safe tested seat design. A wide variety of seat material combinations are available for different media and temperatures from - 450 °F to 1000 °F.

Metal Seat Detail



Unique Shaft Design

Small clearance and tolerances between the shaft and bearings ensure smooth operation of the disc during opening and closing of the valve. Our unique hexagonal shaft provides a passage way for entrained particles in the media to flow through the shaft/bearing area for consistent alignment of the disc to the body seat. This prevents potential wear in the guide bearing area and prevents increased drag forces.

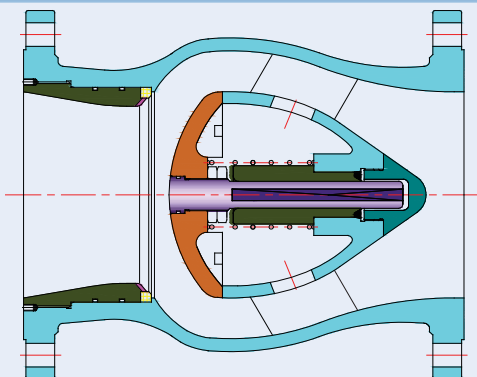
Hexagonal Shaft Detail



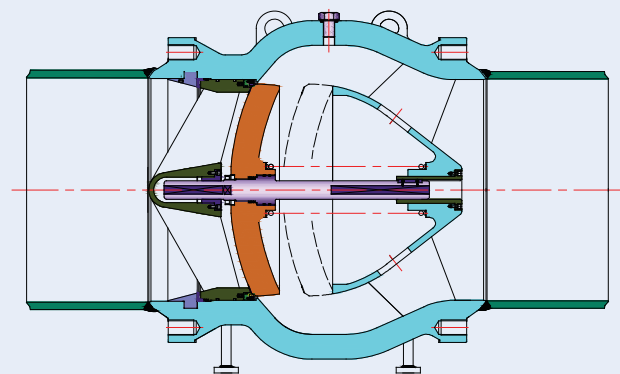
Shaft Support

Support of the shaft is required to ensure consistent alignment of the conical disc. This results in a consistently low seat leakage rate and eliminates axial deflection of the shaft due to the weight of the disc. A dual bearing support system is used based on specific disc/shaft weight and is standard for 12" and larger.

Single Support Structure



Dual Support Structure



DESIGN FEATURES

Dual Support Structure

Front bearing shaft support for consistent disc alignment and low seat leakage rate.

Bubble tight shutoff (elastomer seat) at low line pressure.

Single Support Structure

Short travel distance to seat ensures minimal water hammer.

Unique hexagonal shaft minimizes possibility of trapped particles.

Compression spring for exceptional response to changes in flow and long spring life.

Venturi flow pattern and diffuser minimizes pressure drop across the valve.

Axial flow design creates streamlined flow path through body, reduces turbulence and prevents erosion and vibration.

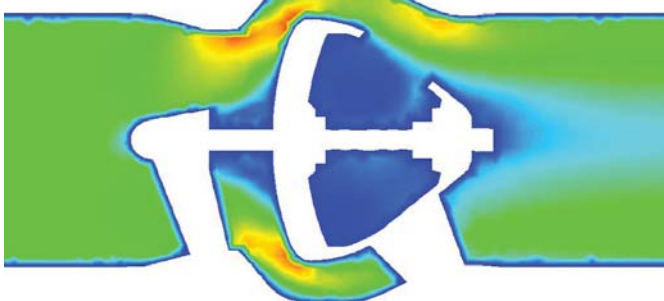
WORKING PRINCIPLES & CHARACTERISTICS

Streamlined Flow Passage Design - Low Pressure Loss

Models NZ and NZS axial flow check valve's low, energy saving pressure drop through the valve is designed using Computational Fluid Dynamic software to ensure an efficient and streamlined flow passage and to minimize fluid turbulence. Diffusers in the valve body contribute to a streamlined flow with minimal cavitation and minimal noise.

Using Bernoulli's principle, the high flow rate in the seat area creates a low pressure zone behind the disc which compensates for the engineered spring. The spring is designed based on actual flow conditions to allow the valve to be fully open at low flows. A high rate of pressure recovery results in a fast response to dynamic changes in the media flow. This allows the valve to open at a low cracking pressure and reach full open at reduced flow rates. Flow coefficients have been verified by independent laboratory flow tests.

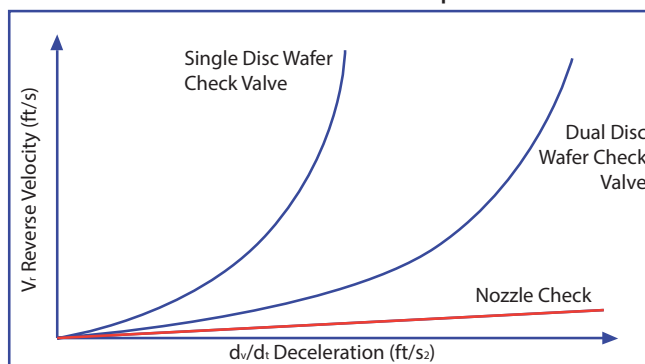
40" Class 900



Non-Slam Performance

The rate of fluid deceleration when a pump is turned off can exceed the percentage of disc closure, resulting in reverse flow. Sudden closure of a check valve with a reverse flow causes water hammer. CVI's axial flow check valve's single compression spring-loaded disc reacts quickly to fluid deceleration. The disc's short travel distance from full open to close, before reverse flow begins, ensures non-slam performance. Design of the spring torque is fundamentally important for reducing potential water hammer. CVI designs the spring for each specific application using the latest simulation software and years of application experience.

Slam Performance Comparison



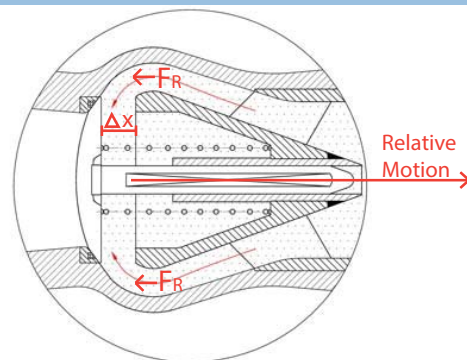
Opening Surge Protection

CVI's axial flow check valve's integrity is not affected by fast opening forces that can occur with centrifugal compressor surge or fast start-up pumps. The amount of force that can be generated by the disc to the valve's internal guide is shown in the formula below. Derived from Newton's Second Law, as the distance the disc travels from the open to closed position increases so does the force of impact. The short stroke length reduces the distance necessary for acceleration, reducing the impact force and protecting all of the valve's internal components from the initial opening surge.

$$F_R = \frac{m}{\Delta t} \left(\frac{\Delta x}{\Delta t} \right)$$

F_R = Reaction Force Δx = Travel Distance

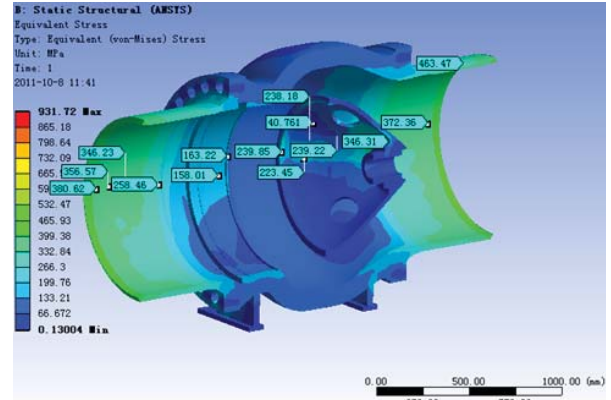
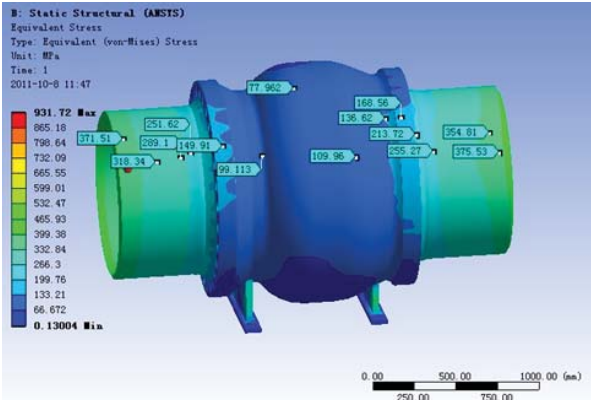
m = Mass of Disc/Shaft Δt = Change in Time



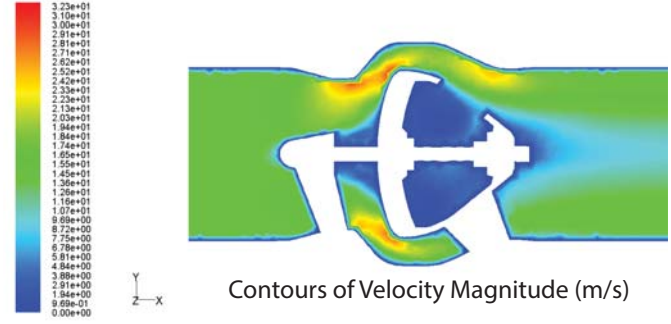
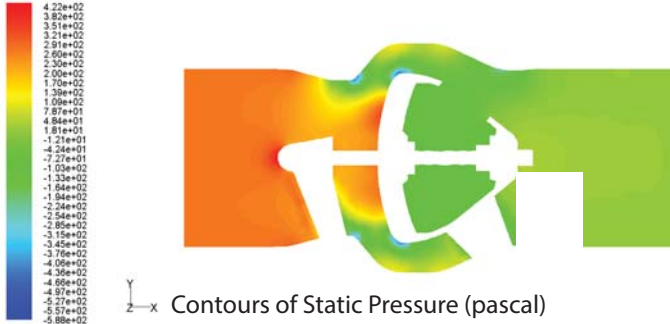
ENGINEERING CAPABILITIES

CVI's axial flow check valve's design and application are based on sound engineering. Finite Element Analysis and Computational Fluid Dynamic programs are used for the basic valve design and sizing of the valve.

Structural Integrity



Low Pressure Drop



Application Engineering

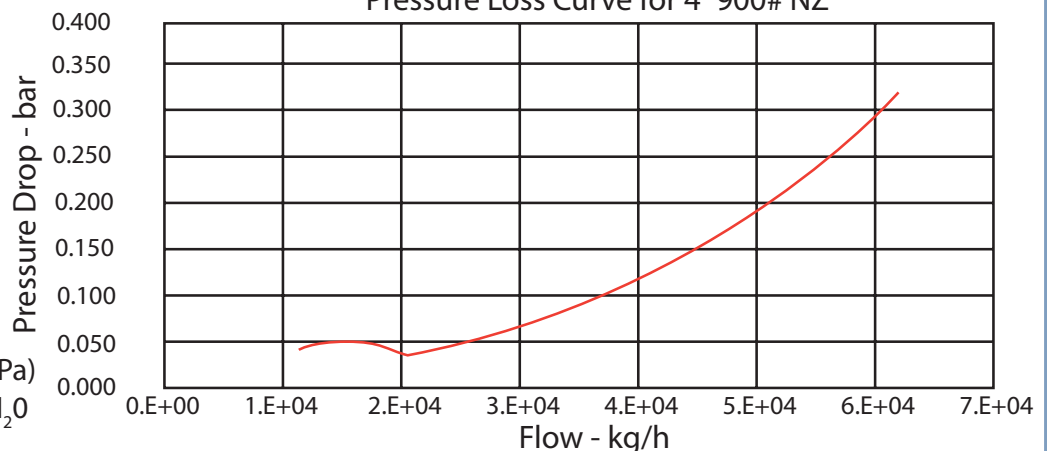
Each axial flow check valve is sized based on the specific application for maximum performance.

Valve Details

Valve Size..... 4"
 Pressure Class..... 900
 Valve Type..... Model NZ
 Valve Cv 527 gpm
 Valve Position..... Horizontal

Pressure Loss . .0.50 psi (0.035 Pa)
 14" (358 mm) H₂O

Pressure Loss Curve for 4" 900# NZ



Fluid Details

Fluid..... Process Non-Corrosive Gas
 Operating Pressure..... 1199.8 psig [82.74 barg]
 Operating Temperature..... 115° F [46.1° C]
 Operating Density..... 3.925 lbf/ft³ [62.88 kg/m³]

Fluid Velocity..... 55 ft/sec [14 m/s]
 Flow Rate 835,138 SCFH (21,007 kg/h)
 Est. % Open = 100%

MANUFACTURING

Exceptional performance and reliability begins with accurate and consistent machining of valve parts. CVI's axial flow check valve's parts are machined using the latest CNC machining centers.



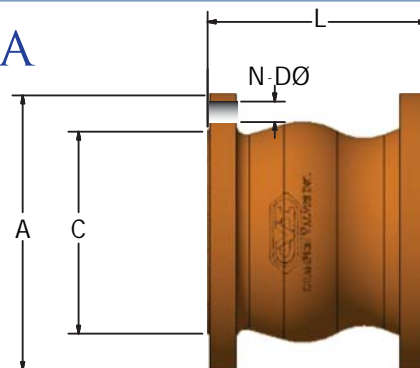
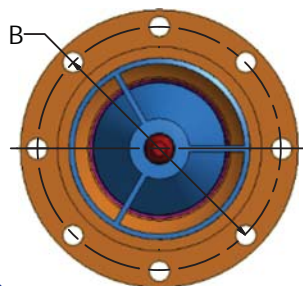
INSPECTION

Each valve must pass CVI's standard high quality inspection and testing procedures, and any additional customer requirements. All castings are subjected to tensile, impact testing and mass spectrometer analysis. The test samples and associated foundry and in-house material test reports are fully traceable. Inspection hold points are established during the manufacturing process to ensure your valves are delivered on time. All valves are hydrostatically tested in accordance with established industry standards and as specified in the customer's purchase order.

Inspection & Testing	Standard	Optional
Casting		
Tensile	★	
Impact	★	
Spectrometer	★	
Manufacturing		
Radiographic Testing		★
Ultrasonic Testing		★
Magnetic Particle Testing		★
Liquid Penetrant Testing		★
Sealing Face Hardness	★	
Dimension Inspection	★	
Operational Test	★	
Hydrostatic Test (API 598)	★	
High Pressure Gas Seat Test	★	
Low Pressure Gas Seat Test	★	
Coating Adhesion Test	★	
Spark Test		★



INSTALLATION DIMENSIONAL DATA



CLASS 150

SIZE		L (FACE TO FACE)				A		B		C		N-DØ	
in	mm	API 6D		STANDARD		in	mm	in	mm	in	mm	in	mm
		in	mm	in	mm								
3/4	20			3.15	80	3.88	100	2.75	69.9	1.69	42.9	4 / .63	4-16
1	25			3.46	88	4.25	110	3.12	79.4	2.00	50.8	4 / .63	4-16
1 1/2	40			4.72	120	5.00	125	3.88	98.4	2.88	73	4 / .63	4-16
2	50	8	203	5.12	130	6.00	150	4.75	120.7	3.62	92.1	4 / .75	4-19
2 1/2	65	8.5	216	6.30	160	7.00	180	5.50	139.7	4.12	104.8	4 / .75	4-19
3	80	9.5	241	7.09	180	7.50	190	6.00	152.4	5.00	127	4 / .75	4-19
4	100	11.5	292	7.87	200	9.00	230	7.50	190.5	6.19	157.2	8 / .75	8-19
5	125			9.06	230	10.00	255	8.50	215.9	7.31	185.7	8 / .88	8-22
6	150	14	356	10.63	270	11.00	280	9.50	241.3	8.50	215.9	8 / .88	8-22
8	200	19.5	495	12.99	330	13.50	345	11.75	298.5	10.62	269.9	8 / .88	8-22
10	250	24.5	622	14.57	370	16.00	405	14.25	362	12.75	323.8	12 / 1	12-26
12	300	27.5	699	17.72	450	19.00	485	17.00	431.8	15.00	381	12 / 1	12-26
14	350	31	787	20.47	520	21.00	535	18.75	476.3	16.25	412.8	12 / 1.125	12-30
16	400	34	864	22.83	580	23.50	595	21.25	539.8	18.50	469.9	16 / 1.125	16-30
20	500	38.5	978	26.57	675	27.50	700	25.00	635	23.00	584.2	20 / 1.25	20-33
24	600	51	1295	31.89	810	32.00	815	29.50	749.3	27.25	692.2	20 / 1.375	20-36
28	700	57	1448	37.20	945	36.50	835	34.00	795.3	31.50	762	28 / 1.375	40-22
32	800			43.90	1115	41.75	940	38.50	900.1	36.00	864	28 / 1.625	48-22
36	900	77	1956	49.21	1250	46.00	1055	42.75	1009.6	40.25	972	32 / 1.625	44-26
40	1000			54.72	1390	50.75	1175	47.25	1120.8	44.25	1080	36 / 1.625	44-30
44	1100			61.42	1560	55.25	1275	51.75	1222.4	49.00	1181	40 / 1.625	52-30
48	1200			63.58	1615	59.50	1390	56.00	1335.1	53.50	1289	44 / 1.625	44-33
56				67.91	1725	68.75	1600	65.00	1543	62.00	1492	48 / 1.875	60-33

CLASS 300

SIZE		L (FACE TO FACE)				A		B		C		N-DØ	
in	mm	API 6D		STANDARD		in	mm	in	mm	in	mm	in	mm
		in	mm	in	mm								
3/4	20			3.15	80	4.62	115	3.25	82.6	1.69	42.9	4 / .75	4-18
1	25			3.46	88	4.88	125	3.50	89.9	2.00	50.8	4 / .75	4-18
1-1/2	40	10.51	267			6.12	155	4.50	114.3	2.88	73.0	4 / .875	4-22
2	50	11.50	292	5.12	130	6.50	165	5.00	127.0	3.62	92.1	8 / .75	8-18
2-1/2	65	12.52	318	6.30	160	7.50	190	5.88	149.2	4.12	104.8	8 / .875	8-22
3	80	14.02	356	7.09	180	8.25	210	6.62	168.3	5.00	127.0	8 / .875	8-22
4	100	17.52	445	9.06	230	10.00	255	7.88	200.0	6.19	157.2	8 / .875	8-22
5	125	20.98	533	9.06	230	11.00	280	9.25	235.0	7.31	185.7	8 / .875	8-22
6	150	24.49	622	10.63	270	12.50	320	10.62	269.9	8.50	215.9	8 / .875	12-22
8	200	27.99	711	12.99	330	15.00	380	13.00	330.3	10.62	269.9	12 / 1	12-26
10	250	32.99	838	14.57	370	17.50	445	15.25	387.4	12.75	323.8	16 / 1.125	16-30
12	300	34.02	864	17.72	450	20.50	520	17.75	450.8	15.00	381.0	16 / 1.25	16-33
14	350	38.50	978	20.47	520	23.00	585	20.25	514.5	16.25	412.8	20 / 1.25	20-33
16	400	40.00	1016	22.83	580	25.50	650	22.50	571.5	18.50	469.9	20 / 1.375	20-36
20	500	52.99	1346	26.57	675	30.50	775	27.00	685.8	23.00	584.2	24 / 1.375	24-36
24	600	59.02	1499	31.89	810	36.00	915	32.00	812.8	27.25	692.2	24 / 1.625	24-43
28	700			37.20	945	40.75	920	37.00	857.2	31.50	787.0	28 / 1.75	36-36
32	800	82.01	2083	43.90	1115	45.25	1055	41.50	977.9	36.00	902.0	28 / 2	32-42
36	900			49.21	1250	50.00	1170	46.00	1089.0	40.25	1010.0	32 / 2.125	32-45
40	1000			53.50	1359	48.75	1275	45.50	1190.6	42.75	1114.0	32 / 1.75	40-45
44	1050			61.42	1560	53.25	1385	49.75	1295.0	47.00	1219.0	32 / 1.875	40-48
48	1200			64.96	1650	57.75	1510	54.00	1416.0	51.25	1327.0	32 / 2	40-51

Approximate weights and dimensions - Apply for certified drawings. Dimensions available with DIN, JIS, AS and ISO. Sizes above 24" per ASME B16.47 Series A. Series B available if required.

INSTALLATION DIMENSIONAL DATA

CLASS 600

SIZE		L (FACE TO FACE)				A		B		C		N-DØ	
in	mm	API 6D		STANDARD		in	mm	in	mm	in	mm	in	mm
		in	mm	in	mm								
2	50	11.50	292	6.69	170	6.50	165	5.00	127.0	3.62	92.1	8 / .75	8-19
2 1/2	65	13.00	330	7.87	200	7.50	190	5.88	148.2	4.12	104.8	8 / .875	8-22
3	80	14.00	356	8.66	220	8.25	210	6.62	168.3	5.00	127.0	8 / .875	8-22
4	100	17.00	432	11.81	300	10.75	275	8.50	215.9	6.19	157.2	8 / 1	8-26
6	150	22.00	559	13.39	340	14.00	355	11.50	292.1	8.50	215.9	12 / 1.125	12-30
8	200	26.00	660	16.54	420	16.50	420	13.75	349.2	10.62	269.9	12 / 1.25	12-33
10	250	31.00	787	17.13	435	20.00	510	17.00	431.8	12.75	323.8	16 / 1.375	16-36
12	300	33.00	838	19.41	493	22.00	560	19.25	489.0	15.00	381.0	20 / 1.375	20-36
14	350	35.00	889	21.77	553	23.75	605	20.75	527.0	16.25	412.8	20 / 1.5	20-39
16	400	39.00	991	25.59	650	27.00	685	23.75	603.2	18.50	469.9	20 / 1.625	20-42
20	500	47.00	1194	26.57	675	32.00	815	28.50	723.9	23.00	584.2	24 / 1.75	24-45
24	600	55.00	1397	31.89	810	37.00	940	33.00	838.2	27.25	692.2	24 / 2	24-51
26	650	57.00	1448	34.65	880	40.00	890	36.00	806.4	29.50	727.1	28 / 2	28-45
28	700	63.00	1600	37.20	945	42.25	955	38.00	863.6	31.50	784.2	28 / 2.125	28-48
30	750	65.00	1651	41.14	1045	44.50	1025	40.25	927.1	33.75	841.2	28 / 2.125	28-51
32	800			43.90	1115	47.00	1085	42.50	984.5	36.00	895.4	28 / 2.375	28-55
36	900	82.00	2083	49.21	1250	51.75	1215	47.00	1105.0	40.25	1009.7	28 / 2.625	28-60
40	1000			54.72	1390	52.00	1320	47.75	1213.0	43.75	1111.2	32 / 2.375	32-60
48	1200			64.96	1650	62.75	1595	57.50	1460.0	52.50	1333.5	32 / 2.875	32-74

CLASS 900

SIZE		L (FACE TO FACE)				A		B		C		N-DØ	
in	mm	API 6D		STANDARD		in	mm	in	mm	in	mm	in	mm
		in	mm	in	mm								
2	50	14.50	371	7.09	180	8.50	215	6.50	165.0	3.62	124	8 / 1	8-26
2-1/2	65	16.61	422	7.87	200	9.62	245	7.50	190.5	4.12	137	8 / 1.125	8-30
3	80	15.00	384	8.66	220	9.50	240	7.50	190.5	5.00	156	8 / 1	8-33
4	100	18.00	460	11.81	300	11.50	290	9.25	235.0	6.19	181	8 / 1.25	8-33
6	150	24.00	613	15.35	390	15.00	380	12.50	318.0	8.50	241	12 / 1.25	12-33
8	200	29.00	740	16.54	420	18.50	470	15.50	319.5	10.62	308	12 / 1.5	12-39
10	250	33.00	841	17.13	435	21.50	545	18.50	470.0	12.75	362	16 / 1.5	16-39
12	300	38.00	968	19.41	493	24.00	610	21.00	533.5	15.00	419	20 / 1.5	20-39
14	350	40.50	1308	21.77	553	25.25	640	22.00	559.0	16.25	467	20 / 1.625	20-42
16	400	44.50	1140	25.59	650	27.75	705	24.25	616.0	18.50	524	20 / 1.75	20-45
20	500	52.00	1334	29.92	760	33.75	855	29.50	749.3	23.00	648	20 / 2.125	20-55
24	600	61.00	1568	32.24	819	41.00	1040	35.50	901.7	27.25	772	20 / 2.625	20-68
28	700			37.20	945	46.00	1105	40.25	971.5	31.50	889	20 / 3.125	20-74
32	800			43.90	1115	51.75	1240	45.50	1092.0	36.00	1003	20 / 3.375	20-80
36	900			49.21	1250	57.50	1345	50.75	1200.0	40.25	1124	20 / 3.625	20-80
40	1000			54.72	1390	59.50	1510	52.75	1340.0	45.75	1162	24 / 3.625	24-92
48	1200			68.90	1750	70.25		62.50		54.50		24 / 4.125	

CLASS 1500

SIZE		L (FACE TO FACE)				A		B		C		N-DØ	
in	mm	API 6D		STANDARD		in	mm	in	mm	in	mm	in	mm
		in	mm	in	mm								
2	50	14.50	371	7.02	180	8.50	215	6.50	165.1	3.62	124	8 / 1	8-26
2-1/2	65	16.61	422	7.80	200	9.62	245	7.50	190.5	4.12	137	8 / 1.125	8-30
3	80	18.50	473	8.58	220	10.50	265	8.00	203.2	5.00	168	8 / 1.25	8-33
4	100	21.50	549	11.70	300	12.25	310	9.50	241.3	6.19	194	8 / 1.375	8-36
6	150	27.75	711	15.21	390	15.50	395	12.50	317.5	8.5	248	12 / 1.5	12-39
8	200	32.75	841	16.38	420	19.00	485	15.50	393.7	10.62	318	12 / 1.75	12-45
10	250	39.00	1000	16.97	435	23.00	585	19.00	482.6	12.75	371	12 / 2.0	12-51
12	300	44.50	1146	19.50	500	26.50	675	22.50	571.5	15.00	438	16 / 2.125	16-55
14	350	49.50	1276	21.57	553	29.50	750	25.00	635.0	16.25	489	16 / 2.375	16-60
16	400	54.50	1407	25.35	650	32.50	825	27.75	704.8	18.50	546	16 / 2.625	16-68
18	450	60.50	1559	25.35	650	36.00	915	30.50	774.7	21.00	613	16 / 2.875	16-74
20	500	65.50	1686	29.64	760	38.75		32.75	831.8	23.00	673	16 / 3.125	16-80
24	600	76.50	1972	31.94	819	46.00	1170	39.00	990.6	27.25	794	16 / 3.625	16-94

Approximate weights and dimensions - Apply for certified drawings. Dimensions available with DIN, JIS, AS and ISO.
 Sizes above 24" per ASME B16.47 Series A. Series B available if required.

ORDERING INFORMATION

FIGURE NUMBER INFORMATION

Models NZ and NZS Axial Flow Nozzle Check Valves

STYLE		BODY & DISC*		
NZ - API 6D		ORDER LETTER	MATERIAL	SPECIFICATION
NZS - Standard		C	Carbon Steel	ASTM A216, Gr. WCB; ASTM A105
ASME/API SERIES		D	Duplex	ASTM A995/A995M, Gr. CD4MCuN
15 = 150 Class		F	Alloy 20 [®]	ASTM A351, Gr. CN7M
30 = 300 Class		H	Hastelloy C276 [®]	ASTM A494, Gr. CW12MW
60 = 600 Class		J	410 Stainless Steel	ASTM A217, Gr. CA15 (12% Cr)
90 = 900 Class		K	317 Stainless Steel	ASTM A351, Gr. CG8M
150 = 1500 Class		M	Monel [®]	ASTM A494, Gr. M35-1
250 = 2500 Class		N	Nickel	ASTM A494, Gr. CZ100
		S	316 Stainless Steel	ASTM A351, Gr. CF8M; ASTM 182 F316
		T	304 Stainless Steel	ASTM A351, Gr. CF8; ASTM 182 F304
		V	Low Temp Carbon Steel	ASTM A352, Gr. LCC
		Y	Low Temp Carbon Steel	ASTM A352, Gr. LCB

SEAT*			
ORDER LETTER	MATERIAL	OPERATING TEMPERATURE	
		°C	°F
B	Buna-N [®]	-57 to 120	-70 to 250
D	Devlon	-50 to 176	-58 to 350
E	EPDM	-18 to 135	0 to 300
H	Silicone	-18 to 260	0 to 500
J	410 SS	-267 to 537	-450 to 1000+
K	Nylon	-60 to 140	-76 to 284
L	Stellite [®]	-267 to 537	-450 to 1000+
N	Neoprene [®]	-40 to 120	-40 to 250
P	Integral Metal	-267 to 537	-450 to 1000+
R	RPTFE	-45 to 232	-50 to 450
S	316 SS	-267 to 537	-450 to 1000+
T	Teflon [®]	-40 to 149	-40 to 300
V	Viton [®]	-40 to 204	-40 to 400
X	PEEK	-56 to 315	-70 to 600

SPRING*				END CONNECTION	
ORDER LETTER	MATERIAL	OPERATING TEMPERATURE		ORDER LETTER	CONNECTIONS
		°C	°F		
S	316 SS	260	500	R	Serrated Raised Face
M	Monel [®]	232	450	RJ	Ring Joint
W	Inconel [®]	371	700	FM	Male & Female Flanged Face
X	Inconel [®] X-750	593	1100	BW	Butt Weld
				SW	Socket Weld

*Other Materials available upon request.

EXAMPLE: Specifications Call for 6"(150mm), Standard Axial Flow Nozzle Check Style;ASME 300; 316 Stainless Steel Body; 316 SS Disc; Integral Metal Seat; & Inconel X-750 Spring; Raised Face End Connection.

6NZS30-SSPX-R								
SIZE	STYLE	PRESSURE CLASS	BODY	DISC	SEAT	SPRING	END CONNECTION	MODIFICATION NUMBER
6"	NZS	30	S	S	P	X	R	Assigned by Factory

EXCEPTIONAL QUALITY, SERVICE, & RELIABILITY



CHAMPION VALVES INC

DUAL DISC • SINGLE DISC WAFER • NOZZLE CHECK • NOZZLE CHECK WAFER
SILENT CHECK • IN-LINE CHECK • ACCESSORIES: EXTERNAL WEIGHT & LEVER • FOOT VALVE

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