

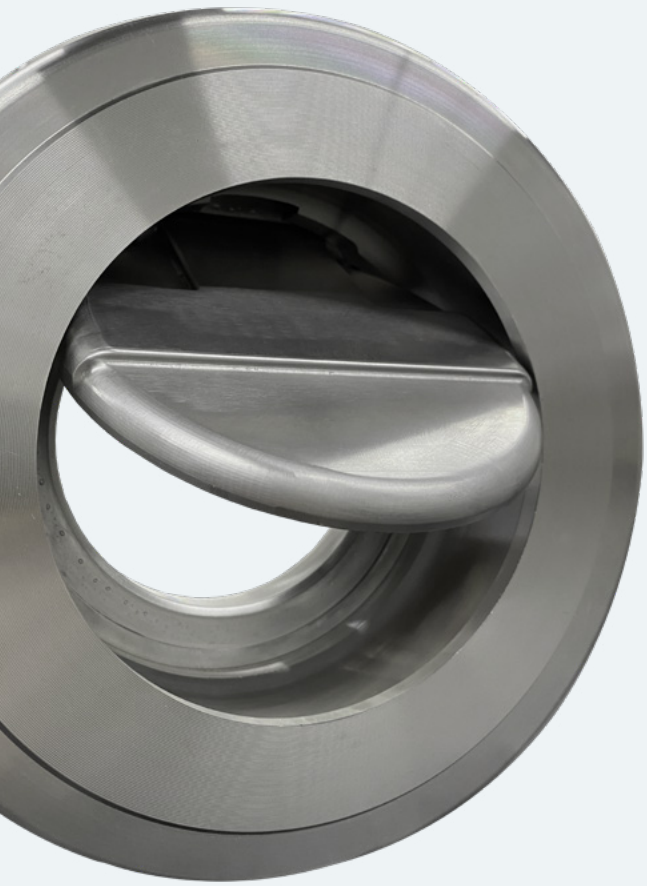


Severe Service Check Valves



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Introducing DSS Severe Service Check Valves

Too long have Check Valves been an afterthought for industrial processes. The time has come to improve this portion of the industry.

We put our severe service design and manufacturing experience to the test to tackle this problem. We also hired experts who have spent entire careers studying Check Valves. The result? The world's finest Severe Service Check Valve (SSCKV) on the market today.

Why a Severe Service Check Valve?

There are many severe service applications where conventional Check Valves are unacceptable. The risk they impose on the piping system is too great.

Our SSCKV provides repeatable non-return function and cannot release fugitive emissions to atmosphere. The design also handles:



**Extreme
Temperatures**



**High
Pressures**



**Corrosive &
Toxic Media**

Engineered SSCKVs

Design teams often overlook Check Valves during the creation of piping systems. Implementing failure-prone conventional designs result in unreliable non-return function.

The poor reputation of Check Valves leads end-users to put little thought into their selection. Unfortunately, this lack of foresight can end up causing pump damage, process inefficiencies, and even catastrophic failure.

DSS understands Check Valve failure modes, and has designed an advanced product to succeed where typical valves fail.



Designed for Severe Service™

DSS Valves is comprised of industry veterans who have spent decades learning and perfecting Severe Service Valves.

Our company has built a reputation for starting with the building blocks of a Severe Service Valve, and then improving it to the next generation. This is the same approach we have taken with our SSCKV design.

Made in the USA

DSS is dedicated to creating North American Made Severe Service Valves. When it comes to our Severe Service Check Valves, 100% of the components are sourced from US-based vendors, with the final assembly taking place in Niles, MI.

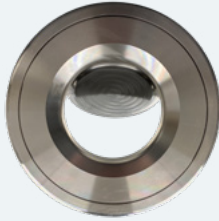
We are fully compliant with American Iron and Steel (AIS) provisions, and are proud to also be compliant with the Buy American Act (BAA).

Problems We Solve



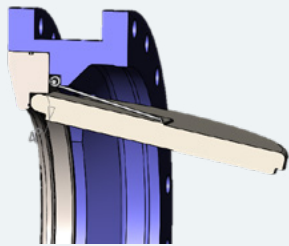
PROBLEM: Fugitive Emissions

SOLUTION: • Retainerless body • Engineered interference fit between body and seat insert
Eliminating fugitive emissions is a major focus of the industry and our retainerless body removes potential leakage paths that exists in other Check Valves. Previous generations of Severe Service Check Valves had inherent design flaws and were never truly *engineered*.



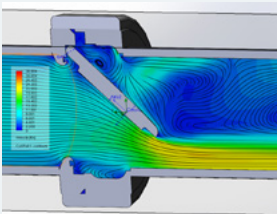
PROBLEM: Pressure Drop

SOLUTION: • Minimally obstructed bore • Engineered flow path
Our disc swings mostly out of the flow path producing a large bore with minimal obstructions; this results in very low pressure drop. Additionally, we have engineered the geometry of the bore using CFD software to improve flow characteristics over previous generation Severe Service Check Valves.



PROBLEM: Disc/Obturator Breakage

SOLUTION: • Single piece disc/shaft/hinge
Conventional Check Valves use discs that are comprised of as many as seven different components, and they're usually built to sloppy tolerances. It is common to find Check Valve disc components that have traveled downstream causing damage to pumps and other equipment. DSS replaces all of these components with one integral piece that cannot come loose and travel downstream. We have also engineered this component based on experience and with the aid of FEA tools to make improvements to critical locations to provide the longest service life.



PROBLEM: Failures Due to Slamming

SOLUTION: • Proper Check Valve sizing
The leading cause of Check Valve failures is due to oversized bores which leads to slamming. We have optimized the size of our disc and the geometry of our inlet to overcome many of these slamming concerns. Additionally, we have the capability to run sizing calculations using CFD software to create custom sized bores while maintaining external dimensions to remove the need for piping modifications.



PROBLEM: Lead Time

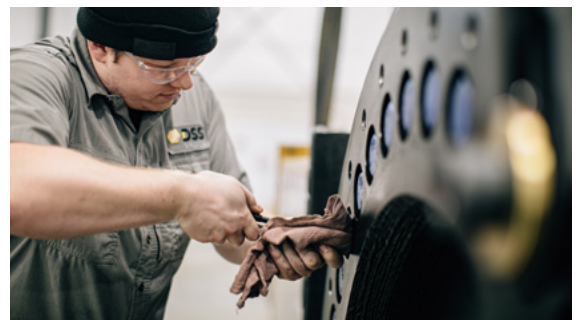
SOLUTION: • Integrated supply chain • Investment in inventory
Previous generation Severe Service Check Valves typically come with very long lead times. Utilizing our nimble supply chain and multiple manufacturing partners within driving distance of our factory, we can provide large bore valves, high alloys, and high-pressure class valves in a fraction of the time it takes our competitors.



About DSS Valves

Based in Niles, Michigan, DSS Valves is a team of engineering and manufacturing professionals with decades of experience in creating premier Severe Service Knife Gate Valves and Severe Service Check Valves for Oil & Gas, Mining, Steel, Pulp & Paper, and Water/Wastewater industries.

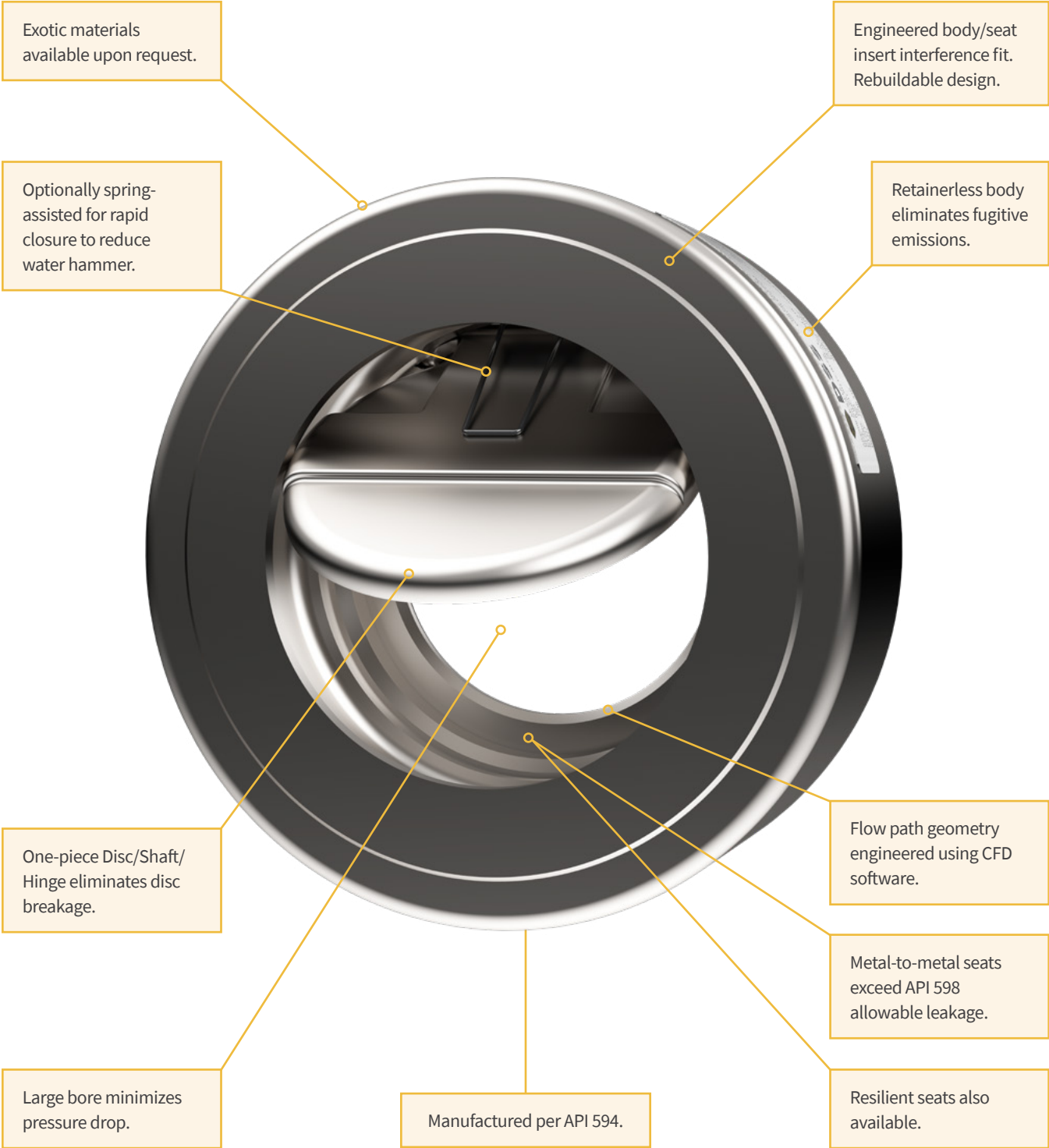
We specialize in creating valves that thrive in the harshest environments and our products are known for handling high differential pressure scenarios, corrosive materials, and extreme temperatures.



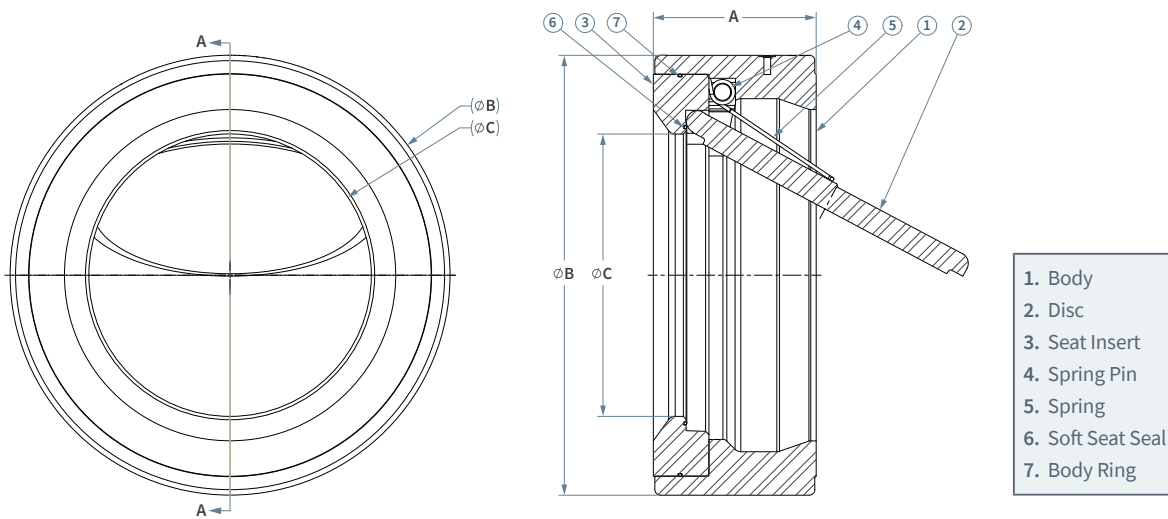


Severe Service Check Valve

Features and Benefits



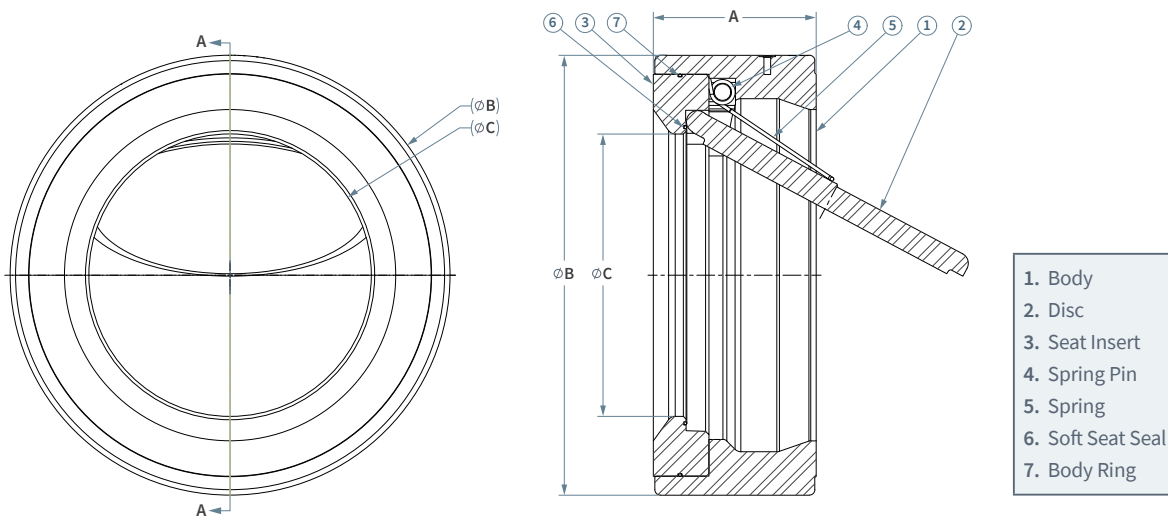
Swing Check Valve — Wafer



- 1. Body
- 2. Disc
- 3. Seat Insert
- 4. Spring Pin
- 5. Spring
- 6. Soft Seat Seal
- 7. Body Ring

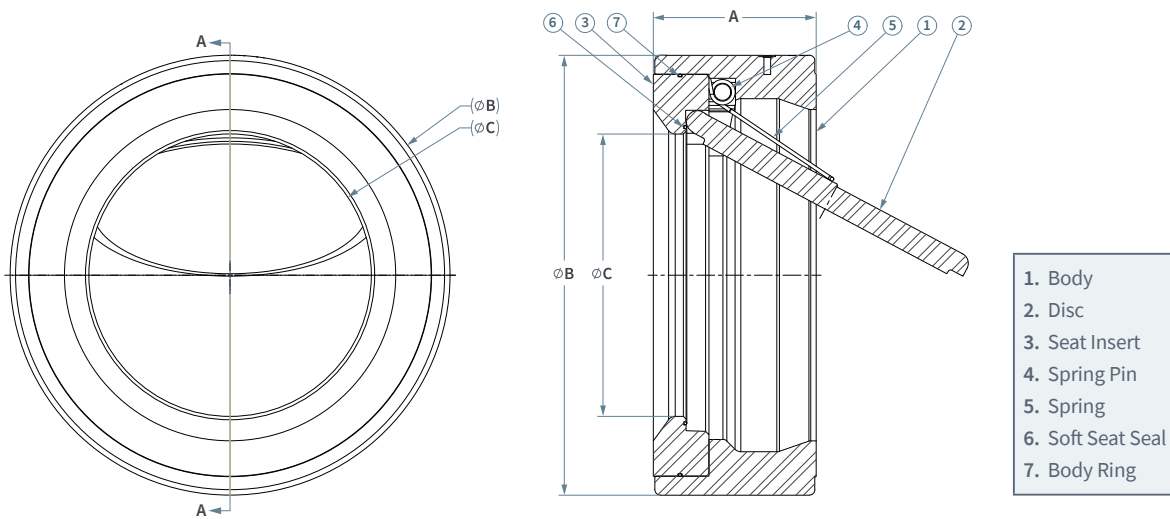
Class	NPS	A — Face To Face	B — Wafer OD	C — Bore ID	Flange Facing
150	1	1.88	2.63	0.88	RF/FF
300	1	1.88	2.88	0.88	RF/FF
600	1	1.88	2.88	0.88	RF/FF
900	1	1.88	3.13	0.88	RF/R16
1500	1	1.88	3.13	0.88	RF/R16
2500	1	2.13	3.38	0.88	RF/R18
150	1 1/2	2.38	3.38	1.31	RF/FF
300	1 1/2	2.38	3.75	1.31	RF/FF
600	1 1/2	2.38	3.75	1.31	RF/FF
900	1 1/2	2.38	3.88	1.31	RF/R20
1500	1 1/2	2.38	3.88	1.31	RF/R20
2500	1 1/2	2.75	4.63	1.31	RF/R23
150	2	2.38	4.13	1.75	RF/FF
300	2	2.38	4.38	1.75	RF/FF
600	2	2.38	4.38	1.75	RF/FF
900	2	2.75	5.63	1.75	RF/R24
1500	2	2.75	5.63	1.75	RF/R24
2500	2	2.75	5.75	1.75	RF/R26
150	3	2.88	5.38	2.75	RF/FF
300	3	2.88	5.88	2.75	RF/FF
600	3	2.88	5.88	2.56	RF/R31
900	3	3.25	6.50	2.56	RF/R31
1500	3	3.25	6.88	2.56	RF/R35
2500	3	3.38	7.75	2.56	RF/R32

Swing Check Valve — Wafer



Class	NPS	A — Face To Face	B — Wafer OD	C — Bore ID	Flange Facing
150	4	2.88	6.88	3.38	RF/FF
300	4	2.88	7.13	3.38	RF/FF
600	4	3.13	7.63	3.38	RF/R37
900	4	4.00	8.13	3.38	RF/R37
1500	4	4.00	8.25	3.38	RF/R39
2500	4	4.12	9.25	3.38	RF/R38
150	6	3.88	8.75	4.75	RF/FF
300	6	3.88	9.88	4.75	RF/FF
600	6	5.38	10.50	4.75	RF/R45
900	6	6.25	11.38	4.75	RF/R45
1500	6	6.25	11.13	4.75	RF/R46
2500	6	6.25	12.50	4.75	RF/R47
150	8	5.00	11.00	6.75	RF/FF
300	8	5.00	12.13	6.75	RF/FF
600	8	6.50	12.63	6.75	RF/R49
900	8	8.12	14.13	6.75	RF/R49
1500	8	8.12	13.88	6.75	RF/R50
2500	8	8.12	15.25	6.75	RF/R51
150	10	5.75	13.38	8.00	RF/FF
300	10	5.75	14.25	8.00	RF/FF
600	10	8.38	15.75	8.00	RF/R53
900	10	9.50	17.13	8.00	RF/R53
1500	10	9.75	17.13	7.75	RF/R54
2500	10	10.00	18.75	7.75	RF/R55

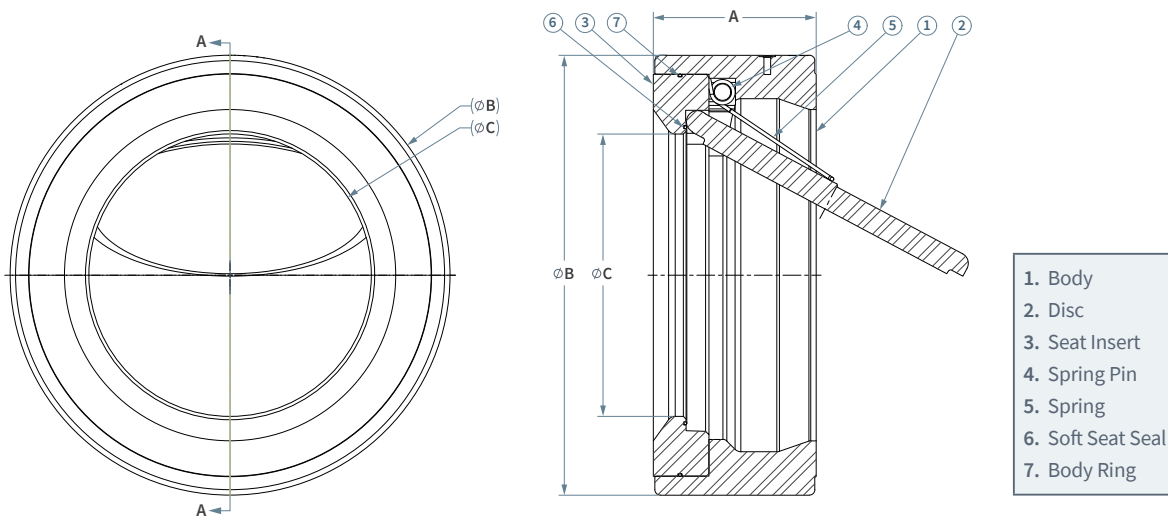
Swing Check Valve — Wafer



- 1. Body
- 2. Disc
- 3. Seat Insert
- 4. Spring Pin
- 5. Spring
- 6. Soft Seat Seal
- 7. Body Ring

Class	NPS	A — Face To Face	B — Wafer OD	C — Bore ID	Flange Facing
150	12	7.13	16.13	9.88	RF/FF
300	12	7.13	16.63	9.88	RF/FF
600	12	9.00	18.00	9.88	RF/R57
900	12	11.50	19.63	9.88	RF/R57
1500	12	12.00	20.50	9.50	RF/R58
2500	12	12.00	21.63	9.50	RF/R60
150	14	7.25	17.75	11.50	RF/FF
300	14	8.75	19.13	11.50	RF/FF
600	14	10.75	19.38	11.50	RF/R61
900	14	14.00	20.50	11.50	RF/R62
1500	14	14.00	22.75	11.00	RF/R63
150	16	7.50	20.25	13.00	RF/FF
300	16	9.13	21.25	13.00	RF/FF
600	16	12.00	22.25	13.00	RF/R65
900	16	15.12	22.63	13.00	RF/R66
1500	16	15.12	25.25	12.50	RF/R67
150	18	8.00	21.63	14.50	RF/FF
300	18	10.38	23.50	14.50	RF/FF
600	18	14.25	24.13	14.50	RF/R69
900	18	17.75	25.13	14.50	RF/R70
1500	18	18.44	25.00	13.50	RF/R71
150	20	8.63	23.88	15.75	RF/FF
300	20	11.50	25.75	15.75	RF/FF
600	20	14.50	26.88	15.75	RF/R73
900	20	17.75	27.50	15.75	RF/R74
1500	20	21.00	29.75	15.25	RF/R75

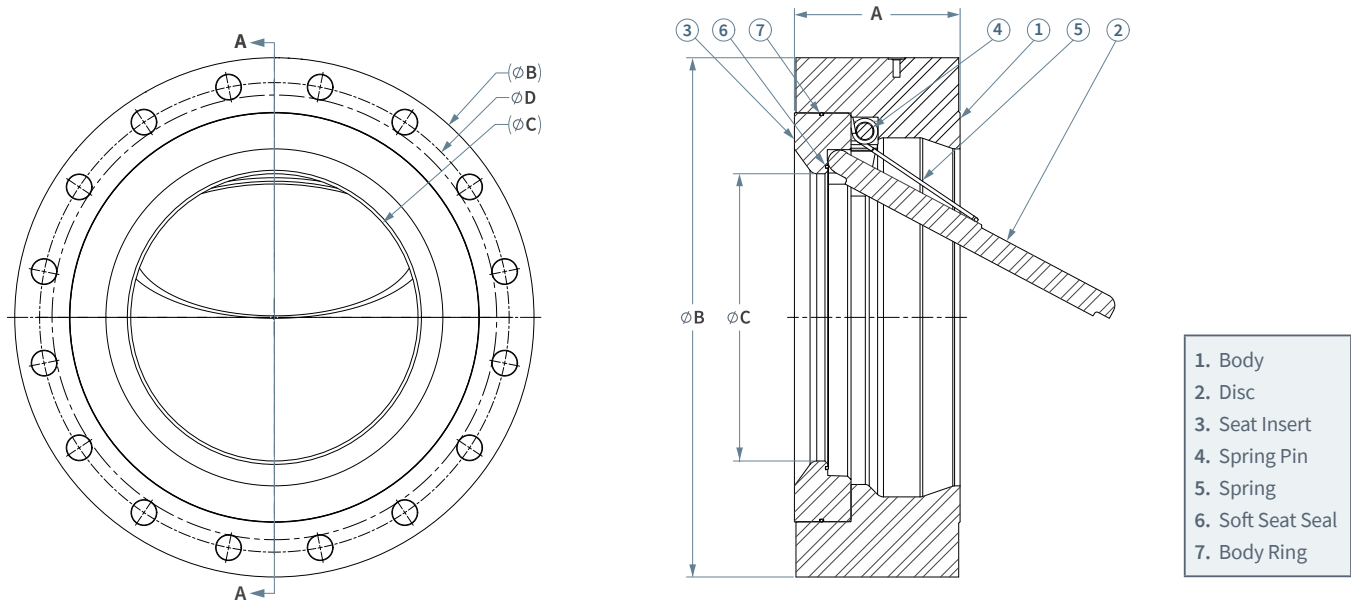
Swing Check Valve — Wafer



- 1. Body
- 2. Disc
- 3. Seat Insert
- 4. Spring Pin
- 5. Spring
- 6. Soft Seat Seal
- 7. Body Ring

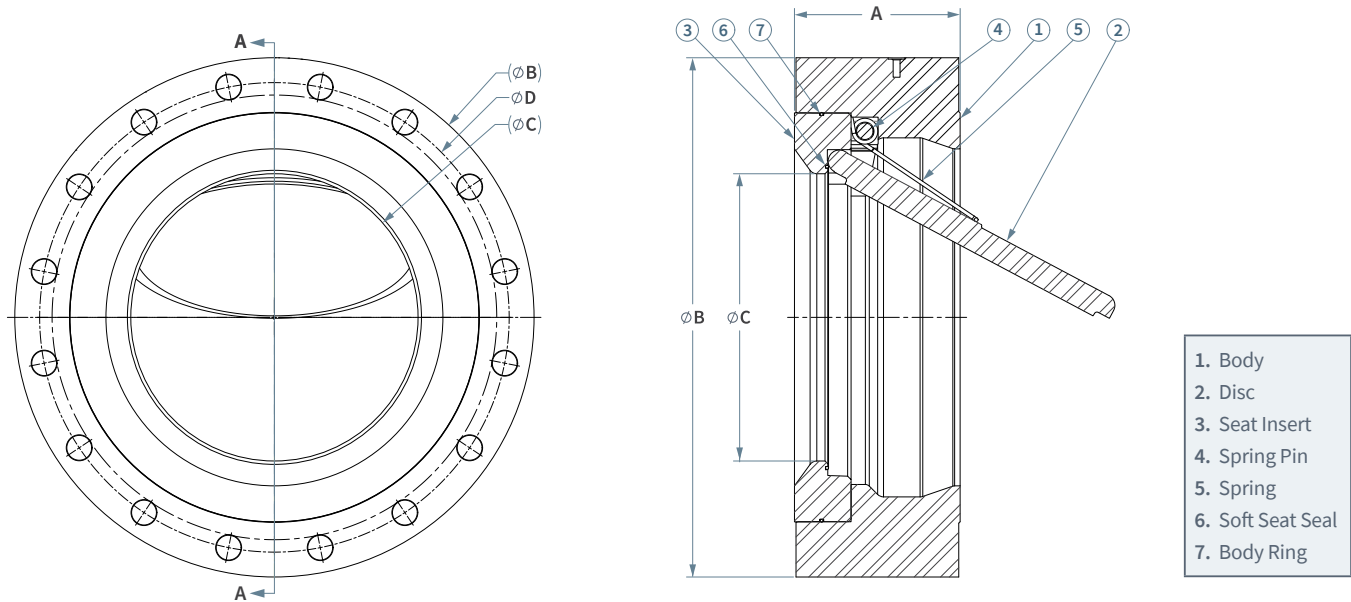
Class	NPS	A — Face To Face	B — Wafer OD	C — Bore ID	Flange Facing
150	22	8.75	26.00	17.50	RF/FF
300	22	12.00	27.75	17.50	RF/FF
600	22	15.88	27.75	17.50	RF/R81
150	24	8.75	28.25	19.50	RF/FF
300	24	12.50	30.50	19.50	RF/FF
600	24	17.25	31.13	19.50	RF/R77
900	24	19.50	33.00	19.50	RF/R78
1500	24	22.00	35.50	18.25	RF/R79
150	26	8.75	30.50	20.50	RF/FF
300	26	12.50	32.88	20.50	RF/FF
150	28	12.00	32.75	21.50	RF/FF
300	28	14.50	35.38	21.50	RF/FF
150	30	12.00	34.75	22.00	RF/FF
300	30	14.50	37.50	22.00	RF/FF
600	30	19.88	38.25	22.00	RF/R95
150	32	14.00	37.00	24.00	RF/FF
300	32	14.50	39.63	24.00	RF/FF
150	36	14.50	41.25	26.50	RF/FF
300	36	19.00	44.00	26.50	RF/FF
600	36	25.00	44.50	26.50	RF/R98
150	38	15.75	43.75	28.50	RF/FF
150	40	17.00	45.75	30.00	RF/FF
150	42	17.00	48.00	31.50	RF/FF
300	42	22.38	45.88	31.50	RF/FF
600	42	27.62	48.00	31.50	RF
150	48	20.62	54.50	36.00	RF/FF
300	48	24.75	52.13	35.00	RF/FF

Swing Check Valve — Lug Wafer



Class	NPS	A — Face To Face [inch]	B — Flange OD [inch]	C — Bore ID [inch]	Flange Facing	Drilling				
						D — Diam. of Bolt Circle [inch]	No. of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt [inch]	Thread
150	1	1.88	4.25	0.88	RF/FF	3.12	4	5/8	1/2	1/2-13
300	1	1.88	4.88	0.88	RF/FF	3.50	4	3/4	5/8	5/8-11
600	1	1.88	4.88	0.88	RF/FF	3.50	4	3/4	5/8	5/8-11
900	1	1.88	5.88	0.88	RF/R16	4.00	4	1	7/8	7/8-9
1500	1	1.88	5.88	0.88	RF/R16	4.00	4	1	7/8	7/8-9
2500	1	2.13	6.25	0.88	RF/R18	4.25	4	1	7/8	7/8-9
150	1 1/2	2.38	5.00	1.31	RF/FF	3.88	4	5/8	1/2	1/2-13
300	1 1/2	2.38	6.12	1.31	RF/FF	4.50	4	7/8	3/4	3/4-10
600	1 1/2	2.38	6.12	1.31	RF/FF	4.50	4	7/8	3/4	3/4-10
900	1 1/2	2.38	7.00	1.31	RF/R20	4.88	4	1 1/8	1	1-8
1500	1 1/2	2.38	7.00	1.31	RF/R20	4.88	4	1 1/8	1	1-8
2500	1 1/2	2.75	8.00	1.31	RF/R23	5.75	4	1 1/4	1 1/8	1 1/8-8
150	2	2.38	6.00	1.75	RF/FF	4.75	4	3/4	5/8	5/8-11
300	2	2.38	6.50	1.75	RF/FF	5.00	8	3/4	5/8	5/8-11
600	2	2.38	6.50	1.75	RF/FF	5.00	8	3/4	7/8	7/8-9
900	2	2.75	8.50	1.75	RF/R24	6.50	8	1	7/8	7/8-9
1500	2	2.75	8.50	1.75	RF/R24	6.50	8	1	7/8	7/8-9
2500	2	2.75	9.25	1.75	RF/R26	6.75	8	1 1/8	1	1-8
150	2 1/2	2.62	7.00	1.88	RF/FF	5.50	4	3/4	5/8	5/8-11
300	2 1/2	2.62	7.50	1.88	RF/FF	5.88	8	7/8	3/4	3/4-10
600	2 1/2	2.62	7.50	1.88	RF/FF	5.88	8	7/8	3/4	3/4-10
900	2 1/2	3.25	9.62	1.88	RF/R27	7.50	8	1 1/8	1	1-8
1500	2 1/2	3.25	9.62	1.75	RF/R27	7.50	8	1 1/8	1	1-8
2500	2 1/2	3.25	10.50	1.75	RF/R28	7.75	8	1 1/4	1 1/8	1 1/8-8

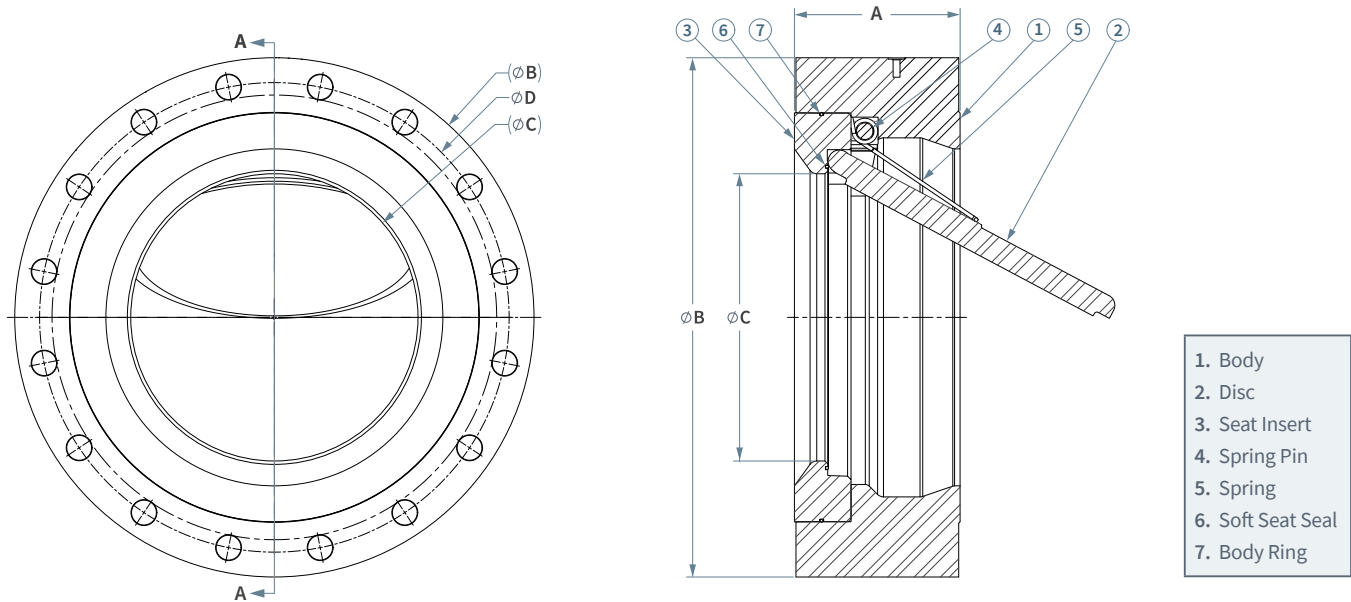
Swing Check Valve — Lug Wafer



- 1. Body
- 2. Disc
- 3. Seat Insert
- 4. Spring Pin
- 5. Spring
- 6. Soft Seat Seal
- 7. Body Ring

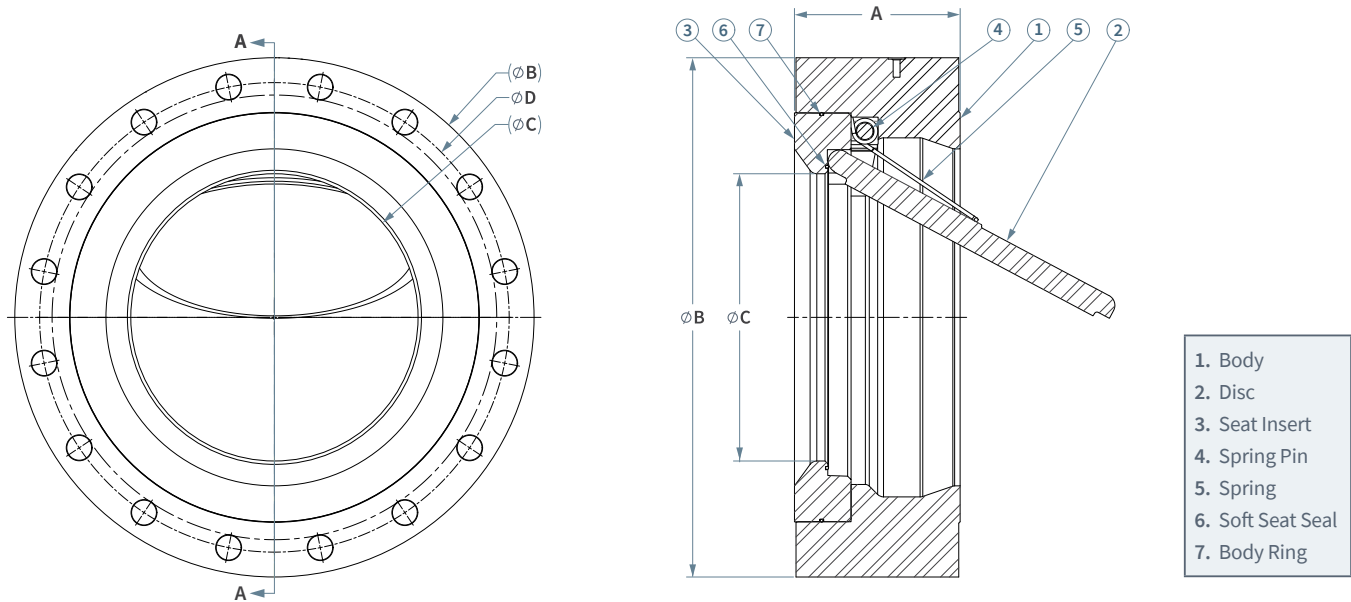
Class	NPS	A — Face To Face [inch]	B — Flange OD [inch]	C — Bore ID [inch]	Flange Facing	Drilling				
						D — Diam. of Bolt Circle [inch]	No. of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt [inch]	Thread
150	3	2.88	7.50	2.75	RF/FF	6.00	4	3/4	5/8	5/8-11
300	3	2.88	8.25	2.75	RF/FF	6.62	8	7/8	3/4	3/4-10
600	3	2.88	8.25	2.56	RF/R31	6.62	8	7/8	3/4	3/4-10
900	3	3.25	9.50	2.56	RF/R31	7.50	8	7/8	3/4	3/4-10
1500	3	3.25	10.50	2.56	RF/R35	8.00	8	1 1/4	1 1/8	1 1/8-8
2500	3	3.38	12.00	2.56	RF/R32	9.00	8	1 3/8	1 1/4	1 1/4-8
150	4	2.88	9.00	3.38	RF/FF	7.50	8	3/4	5/8	5/8-11
300	4	2.88	10.00	3.38	RF/FF	7.88	8	7/8	3/4	3/4-10
600	4	3.13	10.75	3.38	RF/R37	8.50	8	1	7/8	7/8-9
900	4	4.00	11.50	3.38	RF/R37	9.25	8	1 1/4	1 1/8	1 1/8-8
1500	4	4.00	12.25	3.38	RF/R39	9.50	8	1 3/8	1 1/4	1 1/4-8
2500	4	4.12	14.00	3.38	RF/R38	10.75	8	1 5/8	1 1/2	1 1/2-8
150	6	3.88	11.00	4.75	RF/FF	9.50	8	7/8	3/4	3/4-10
300	6	3.88	12.50	4.75	RF/FF	10.62	12	7/8	3/4	3/4-10
600	6	5.38	14.00	4.75	RF/R45	11.50	12	1 1/8	1	1-8
900	6	6.25	15.00	4.75	RF/R45	12.50	12	1 1/4	1 1/8	1 1/8-8
1500	6	6.25	15.50	4.75	RF/R46	12.50	12	1 1/2	1 3/8	1 3/8-8
2500	6	6.25	19.00	4.75	RF/R47	14.50	8	2 1/8	2	2-8
150	8	5.00	13.50	6.75	RF/FF	11.75	8	7/8	3/4	3/4-10
300	8	5.00	15.00	6.75	RF/FF	13.00	12	1	7/8	7/8-9
600	8	6.50	16.50	6.75	RF/R49	13.75	12	1 1/4	1 1/8	1 1/8-8
900	8	8.12	18.50	6.75	RF/R49	15.50	12	1 1/2	1 3/8	1 3/8-8
1500	8	8.12	19.00	6.75	RF/R50	15.50	12	1 3/4	1 5/8	1 5/8-8
2500	8	8.12	21.75	6.75	RF/R51	17.25	12	2 1/8	2	2-8

Swing Check Valve — Lug Wafer



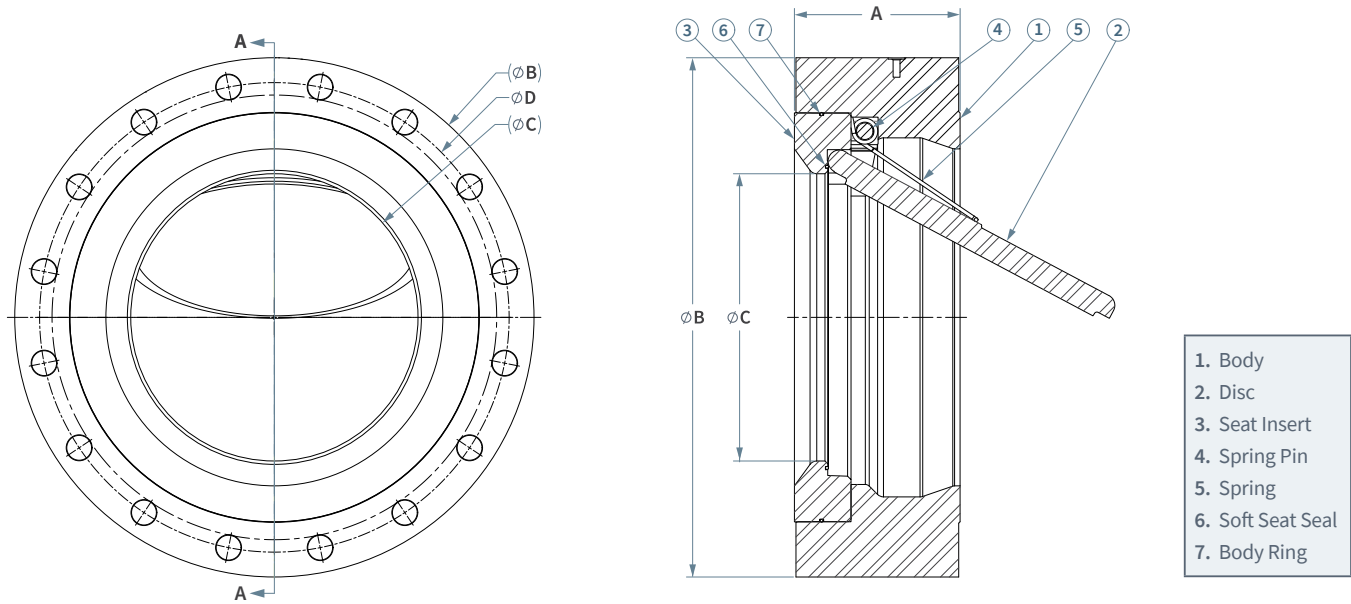
Class	NPS	A — Face To Face [inch]	B — Flange OD [inch]	C — Bore ID [inch]	Flange Facing	Drilling				
						D — Diam. of Bolt Circle [inch]	No. of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt [inch]	Thread
150	10	5.75	16.00	8.00	RF/FF	14.25	12	1	7/8	7/8-9
300	10	5.75	17.50	8.00	RF/FF	15.25	16	1 1/8	1	1-8
600	10	8.38	20.00	8.00	RF/R53	17.00	16	1 3/8	1 1/4	1 1/4-8
900	10	9.50	21.50	8.00	RF/R53	18.50	16	1 1/2	1 3/8	1 3/8-8
1500	10	9.75	23.00	7.75	RF/R54	19.00	12	2	1 7/8	1 7/8-8
2500	10	10.00	26.50	7.75	RF/R55	21.25	12	2 5/8	2 1/2	2 1/2-8
150	12	7.13	19.00	9.88	RF/FF	17.00	12	1	7/8	7/8-9
300	12	7.13	20.50	9.88	RF/FF	17.75	16	1 1/4	1 1/8	1 1/8-8
600	12	9.00	22.00	9.88	RF/R57	19.25	20	1 3/8	1 1/4	1 1/4-8
900	12	11.50	24.00	9.88	RF/R57	21.00	20	1 1/2	1 3/8	1 3/8-8
1500	12	12.00	26.50	9.50	RF/R58	22.50	16	2 1/8		FALSE
2500	12	12.00	30.00	9.50	RF/R60	24.38	12	2 7/8	2 3/4	2 3/4-8
150	14	7.25	21.00	11.50	RF/FF	18.75	12	1 1/8	1	1-8
300	14	8.75	23.00	11.50	RF/FF	20.25	20	1 1/4	1 1/8	1 1/8-8
600	14	10.75	23.75	11.50	RF/R61	20.75	20	1 1/2	1 3/8	1 3/8-8
900	14	14.00	25.25	11.50	RF/R62	22.00	20	1 5/8	1 1/2	1 1/2-8
1500	14	14.00	29.50	11.00	RF/R63	25.00	16	2 3/8	2 1/4	2 1/4-8
150	16	7.50	23.50	13.00	RF/FF	21.25	16	1 1/8	1	1-8
300	16	9.13	25.50	13.00	RF/FF	22.50	20	1 3/8	1 1/4	1 1/4-8
600	16	12.00	27.00	13.00	RF/R65	23.75	20	1 5/8	1 1/2	1 1/2-8
900	16	15.12	27.75	13.00	RF/R66	24.25	20	1 3/4	1 5/8	1 5/8-8
1500	16	15.12	32.50	12.50	RF/R67	27.75	16	2 5/8	2 1/2	2 1/2-8

Swing Check Valve — Lug Wafer



Class	NPS	A — Face To Face [inch]	B — Flange OD [inch]	C — Bore ID [inch]	Flange Facing	Drilling				
						D — Diam. of Bolt Circle [inch]	No. of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt [inch]	Thread
150	18	8.00	25.00	14.50	RF/FF	22.75	16	1 1/4	1 1/8	1 1/8-8
300	18	10.38	28.00	14.50	RF/FF	24.75	24	1 3/8	1 1/4	1 1/4-8
600	18	14.25	29.25	14.50	RF/R69	25.75	20	1 3/4	1 5/8	1 5/8-8
900	18	17.75	31.00	14.50	RF/R70	27.00	20	2	1 7/8	1 7/8-8
1500	18	18.44	36.00	13.50	RF/R71	30.50	16	2 7/8	2 3/4	2 3/4-8
150	20	8.63	27.50	15.75	RF/FF	25.00	20	1 1/4	1 1/8	1 1/8-8
300	20	11.50	30.50	15.75	RF/FF	27.00	24	1 3/8	1 1/4	1 1/4-8
600	20	14.50	32.00	15.75	RF/R73	28.50	24	1 3/4	1 5/8	1 5/8-8
900	20	17.75	33.75	15.75	RF/R74	29.50	20	2 1/8	2	2-8
1500	20	21.00	38.75	15.25	RF/R75	32.75	16	3 1/8	3	3-8
150	22	8.75	29.50	17.50	RF/FF	27.25	20	1 3/8	1 1/4	1 1/4-8
300	22	12.00	33.00	17.50	RF/FF	29.25	24	1 5/8	1 1/2	1 1/2-8
600	22	15.88	34.25	17.50	RF/R81	30.62	24	1 7/8	1 3/4	1 3/4-8
150	24	8.75	32.00	19.50	RF/FF	29.50	20	1 3/8	1 1/4	1 1/4-8
300	24	12.50	36.00	19.50	RF/FF	32.00	24	1 5/8	1 1/2	1 1/2-8
600	24	17.25	37.00	19.50	RF/R77	33.00	24	2	1 7/8	1 7/8-8
900	24	19.50	41.00	19.50	RF/R78	35.50	20	2 5/8	2 1/2	2 1/2-8
1500	24	22.00	46.00	18.25	RF/R79	39.00	16	3 5/8	3 1/2	3 1/2-8
150	26	8.75	34.25	20.50	RF/FF	31.75	24	1 3/8	1 1/4	1 1/4-8
300	26	12.50	38.25	20.50	RF/FF	34.50	28	1 3/4	1 5/8	1 5/8-8
150	28	12.00	36.50	21.50	RF/FF	34.00	28	1 3/8	1 1/4	1 1/4-8
300	28	14.50	40.75	21.50	RF/FF	37.00	28	1 3/4	1 5/8	1 5/8-8

Swing Check Valve — Lug Wafer



Class	NPS	A — Face To Face [inch]	B — Flange OD [inch]	C — Bore ID [inch]	Flange Facing	Drilling				
						D — Diam. of Bolt Circle [inch]	No. of Bolt Holes	Diam. of Bolt Holes	Diam. of Bolt [inch]	Thread
150	30	12.00	38.75	22.00	RF/FF	36.00	28	1 3/8	1 1/4	1 1/4-8
300	30	14.50	43.00	22.00	RF/FF	39.25	28	1 7/8	1 3/4	1 3/4-8
600	30	19.88	44.50	22.00	RF/R95	40.25	28	2 1/8	2	2-8
150	32	14.00	41.75	24.00	RF/FF	38.50	28	1 5/8	1 1/2	1 1/2-8
300	32	14.50	45.25	24.00	RF/FF	41.50	28	2	1 7/8	1 7/8-8
150	36	14.50	46.00	26.50	RF/FF	42.75	32	1 5/8	1 1/2	1 1/2-8
300	36	19.00	50.00	26.50	RF/FF	46.00	32	2 1/8	2	2-8
600	36	25.00	51.75	26.50	RF/R98	47.00	28	2 5/8	2 1/2	2 1/2-8
150	38	15.75	48.75	28.50	RF/FF	45.25	32	1 5/8	1 1/2	1 1/2-8
150	40	17.00	50.75	30.00	RF/FF	47.25	36	1 5/8	1 1/2	1 1/2-8
150	42	17.00	53.00	31.50	RF/FF	49.50	36	1 5/8	1 1/2	1 1/2-8
300	42	22.38	50.75	31.50	RF/FF	47.50	32	1 3/4	1 5/8	1 5/8-8
600	42	27.62	55.25	31.50	RF	50.50	28	2 5/8	2 1/2	2 1/2-8
150	48	20.62	59.50	36.00	RF/FF	56.00	44	1 5/8	1 1/2	1 1/2-8
300	48	24.75	57.75	35.00	RF/FF	54.00	32	2	1 7/8	1 7/8-8



Additional Check Valve models are available.
 For our full offering, download our **Check Valve Appendix**:

dssvalves.com/resources

Lug | Lug Wafer | Double Flange | Multibody Flanged | Multibody Butt weld

Ordering Information

VENDOR MODEL No.	SERIES	CLASS	BODY	SIZE	–	BODY	–	SEAT INSERT
	A	03	A	06		SS		SS

SERIES	P/N
Swing Check, Single Disc	A
Double Disc	B

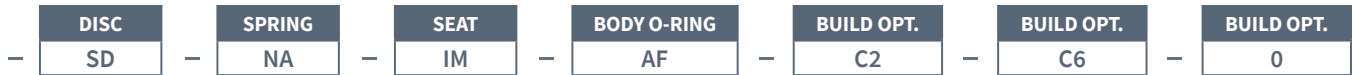
CLASS	P/N
ASME Class 150	01
ASME Class 300	03
ASME Class 600	06
ASME Class 900	09
ASME Class 1500	15
ASME Class 2500	25
ASME Class 4500	45
API 6A Class 3000	3K
API 6A Class 5000	5K
API 6A Class 10000	0X
API 6A Class 15000	XV

CLASS	P/N
PN6	PA
PN10	PB
PN16	PC
PN25	PD
PN40	PE
PN63	PF
PN100	PG
PN160	PH
PN250	PJ
PN320	PK
PN400	PL

BODY	P/N
Wafer, Raised Face	A
Wafer, Flat Face	B
Wafer, Ring Joint	C
Lug, Raised Face, Through Bolt Flange	D
Lug, Raised Face, Tapped Flange	E
Lug, Flat Face, Through Bolt Flange	F
Lug, Flat Face, Tapped Flange	G
Lug, Ring Joint, Through Bolt Flange	H
Lug, Ring Joint, Tapped Flange	J
Double Flange, Raised Face, Through Bolt Flange	K
Double Flange, Raised Face, Tapped Flange	L
Double Flange, Flat Face, Through Bolt Flange	M
Double Flange, Flat Face, Tapped Flange	N
Double Flange, Ring Joint, Through Bolt Flange	P
Double Flange, Ring Joint, Tapped Flange	Q
Double Flange, B16.10 F-T-F, Multi Body, Raised Face, Through Bolt Flange	R
Double Flange, B16.10 F-T-F, Multi Body, Flat Face, Through Bolt Flange	S
Double Flange, B16.10 F-T-F, Multi Body, Ring Joint, Through Bolt Flange	T
Hub, Multi Body	U
Buttweld, Multi Body	V
Uni-Body for B16.10 F-T-F, Swing Check Only, Raised Face, Through Bolt Flange	W
Uni-Body for B16.10 F-T-F, Swing Check Only, Flat Face, Through Bolt Flange	X
Uni-Body for B16.10 F-T-F, Swing Check Only, Ring Joint, Through Bolt Flange	Y

SIZE	P/N
1 Inch	01
1.5 Inch	1H
2 Inch	02
2.5 Inch	2H
3 Inch	03
4 Inch	04
5 Inch	05
6 Inch	06
8 Inch	08
10 Inch	10
12 Inch	12
14 Inch	14
16 Inch	16
18 Inch	18
20 Inch	20
22 Inch	22
24 Inch	24
26 Inch	26
28 Inch	28
30 Inch	30
32 Inch	32
36 Inch	36
40 Inch	40
42 Inch	42
48 Inch	48
Other (specify)	XX

BODY, SEAT INSERT, AND DISC MATERIALS	P/N
17.4 PH	17
304 SS	4S
316 SS	SS
317 SS	37
347H Stainless Steel	34
410 SS	41
6Mo (Type 254 SMO)	6M
AL6XN	6X
Alloy 20	A2
AISI 4130	30
Bronze (Navy)	92
Nickel Aluminum Bronze	95
Carbon Steel	CS
Low Temp Carbon Steel (-50F)	LT
Duplex 2205	DS
Super Duplex 2507	SD
F5 Chrome-Moly	F5
F9 Chrome-Moly	F9
F11 Chrome-Moly	11
F22 Chrome-Moly	22
F91 Chrome-Moly	91
Hastelloy C-276	HC
Incoloy Alloy 825	I8
Inconel Alloy 625	I2
Monel Alloy 400	M4
Nickel 200	N2
Titanium Grade 2	T2
Titanium Grade 5	T5
Titanium Grade 12	TT
Zirconium	ZI
Other (Specify)	XX



SPRING MATERIALS	P/N
Inconel Alloy X750	IX
Inconel Alloy 600	I6
Hastelloy Alloy C276	HC
Monel Alloy K500	MK
Elgiloy	EL
316 Stainless Steel	SS
Titanium Grade 5	T5
No Spring	NA

SEAT MATERIALS	P/N
Aflas [25 to 450°F]	AF
NBR (Buna N) [-30 to 250°F]	BN
HNBR [-30 to 325°F]	HN
FFKM (Chemraz, Kalrez, Markez) [-20 to 610°F]	CH
FKM (Viton) [-15 to 437°F]	VI
FKM RGD Resistant (Viton)	VR
FKM White (Viton) [-15 to 437°F]	VW
GFLT Viton [-29 to 437°F]	GF
EPDM [-65 to 265°F]	EP
EPDM White [-65 to 265]	EW
Neoprene [-40 to 250°F]	NE
Polyurethane [-30 to 180°F]	PL
Teflon [-328 to 500°F] (White in color)	TF
Integral Metal to Metal	IM
Stellite Overlay-Disc Seat	SD
Stellite Overlay-Body Seat	SB
Stellite Overlay-Both Seats	SS
Special (Specify)	XX

BODY O-RING MATERIALS	P/N
Aflas [25 to 450°F]	AF
NBR (Buna N) [-30 to 250°F]	BN
HNBR [-30 to 325°F]	HN
FFKM (Chemraz, Kalrez, Markez) [-20 to 610°F]	CH
FKM (Viton) [-15 to 437°F]	VI
FKM RGD Resistant (Viton)	VR
FKM White (Viton) [-15 to 437°F]	VW
GFLT Viton [-29 to 437°F]	GF
EPDM [-65 to 265°F]	EP
EPDM White [-65 to 265]	EW
Neoprene [-40 to 250°F]	NE
Polyurethane [-30 to 180°F]	PL
Teflon [-328 to 500°F] (White in color)	TF
Special (Specify)	XX

BUILD OPTIONS	P/N
None	0
Tilt Seat	C1
Disc Modification for Extreme Duty	C2
NACE MR0175 Materials	C3
NACE MR0103 Materials	C4
CE Marked for PED Compliance	C5
1/4" NPT Drain Hole with Plug (Bottom Side)	C6
1/2" NPT Drain Hole with Plug (Bottom Side)	C7
3/4" NPT Drain Hole with Plug (Bottom Side)	C8
1/4" NPT Gauge Port with Plug (Top Side)	C9
1/2" NPT Gauge Port with Plug (Top Side)	C10
3/4" NPT Gauge Port with Plug (Top Side)	C11
Chlorine Cleaned and Packaged	C12
Oxygen Cleaned and Packaged	C13
Hard-faced Bore	C14
Reduced Spring Tension	C15
Increased Spring Tension	C16
Extra Light Disc	C17
Reduced Bore (xx=bore NPS)	RYYZ*
Non-Standard Face-to-Face (yyz=FTF [inches])	XYYZ**
Other (Specify)	C99

yy__2-digit whole number

zz__incremental fractional number

z=A=.125
z=B=.250
z=C=.375
z=D=.500
z=E=.625
z=F=.750
z=G=.875

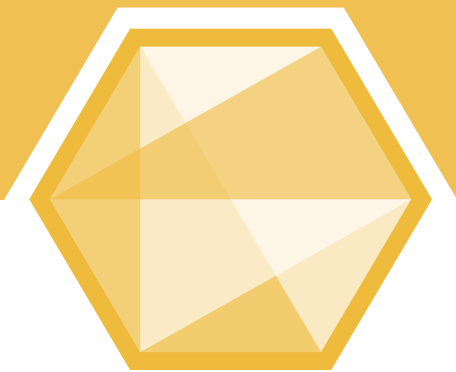
*Ex: R15B_Reduced to 15.250 inches

**Ex: X01F=Valve with face-to-face length of 1.750 inches

MATERIAL LIST

MATERIAL	MODEL No. CODE	FORGED	CAST
17.4 PH	17	ASTM A705 (Type 630)	ASTM A747 (CB7Cu-1)
304 SS	4S	ASTM A182 (F304)	ASTM A351 (CF8)
316 SS	SS	ASTM A182 (F316)	ASTM A351 (CF8M)
317 SS	37	ASTM A182 (F317)	ASTM A351 (CF8A)
347H SS	34	ASTM A182 (F347)	-
410 SS	41	ASTM A182 (F6a)	ASTM A217 (CA15)
6Mo (TYPE 254 SMO)	6M	ASTM A182 (F44)	ASTM A351 (CK3MCuN)
AISI 4130	30	ASTM A29 (4130)	-
AL6XN	6X	ASTM B462 (N08367)	ASTM A351 (CN3MN)
ALLOY 20	A2	ASTM B462 (N08020)	-
ALLOY 20 (CAST)	A2	-	ASTM A351 (CN7M)
BRONZE (NAVY)	92	-	ASTM B271 (C92200) (Centrifugal) / ASTM B505 (C92200) (Continuous) / ASTM B584 (C92200) (Investment)
BRONZE, NICKEL ALUMINUM	95	-	ASTM B271 (C95800) (Centrifugal) / ASTM B505 (C95800) (Continuous) / ASTM B148 (Investment)
CARBON STEEL	CS	A105	ASTM A216 (WCB)
CARBON STEEL, LOW TEMP (-50F)	LT	ASTM A350 (LF2)	-
DUPLEX SS	DS	ASTM A182 (F51)	ASTM A351 (CD3MN)
DUPLEX SS, SUPER	SD	ASTM A182 (F55)	-
DUPLEX SS, SUPER (CAST)	SD	-	ASTM A995 (CD3MWCuN(6A))
F11 CHROME-MOLY	11	ASTM A182 (F11 CL.2)	-
F22 CHROME-MOLY	22	ASTM A182 (F22 CL.3)	ASTM A217 (WC9)
F5 CHROME-MOLY	F5	ASTM A182 (F5)	-
F9 CHROME-MOLY	F9	ASTM A182 (F9)	ASTM A217 (C12)
F91 CHROME-MOLY	91	ASTM A182 (F91)	ASTM A217 (C12A)
HASTELLOY	HC	ASTM B462 (N10276) / B564 (N10276)	-
HASTELLOY (CAST)	HC	-	ASTM A494 (CW-12MW)
INCOLOY ALLOY 825	I8	ASTM B564 (N08825)	-
INCONEL ALLOY 625	I2	ASTM B564 (N06625)	-
MONEL ALLOY 400	M4	ASTM B564 (N04400)	ASTM A494 (M-35-1)
NICKEL 200	N2	ASTM B564 (N02200)	-
TITANIUM GR.12	TT	ASTM B381 (F12)	ASTM B367 (C-12)
TITANIUM GR.2	T2	ASTM B381 (F2)	ASTM B367 (C-2)
TITANIUM GR.5	T5	ASTM B381 (F5)	ASTM B367 (C-5)
ZIRCONIUM	ZI	ASTM B493 (R60702)	-

PLATE	BAR	TUBULAR	ASME B16.34 GROUP NO.
ASTM A693 (Type 630)	ASTM A564 (Type 630)	-	-
ASTM A240 (304)	ASTM A182 (F304)	ASTM A312 (TP304)	2.1
ASTM A240 (316)	ASTM A182 (F316) / A479 (316)	ASTM A312 (TP316)	2.2
ASTM A240 (317)	-	ASTM A312 (TP317)	2.2
ASTM A240 (347)	ASTM 182 (F347) / A479 (347)	ASTM A312 (TP347) / A358 (TP347) /	2.5
ASTM A240 (410)	ASTM A182 (F6a)	-	-
ASTM A240 (S31254)	ASTM A182 (F44) / A479 (S31254)	-	2.8
-	ASTM A29 (4130)	-	-
ASTM B688 (N08367)	ASTM B462 (N08367)	-	3.12
ASTM B463 (N08020)	ASTM B462 (N08020)	-	3.1
			3.17
-	-	-	-
-	ASTM B150 (C63200)	-	-
ASTM A516 (70)	A105	ASTM A106 C	1.1
ASTM A516 (70)	ASTM A350 (LF2)	ASTM A672 (C70)	1.1
ASTM A240 (S31803)	ASTM A182 (F51) / A479 (S31803)	ASTM A789 (S31803)	2.8
ASTM A240 (S32760)	A479 (S32760)	ASTM A790 (S32760)	2.8
-	-	-	2.8
ASTM A387 (11 CL.2)	ASTM A182 (F11 CL.2)	-	1.9
ASTM A387 (22 CL.3)	ASTM A182 (F22 CL.3)	-	1.10
-	ASTM A182 (F5)	-	1.17
-	ASTM A182 (F9)	-	1.14
ASTM A387 (91 CL.2)	ASTM A182 (F91)	ASTM A335 (P91)	1.15
ASTM B575 (N10276)	ASTM B462 (N10276) / B574 (N10276)	ASTM B622 (N10276)	3.8
-	-	-	3.15
ASTM B424 (N08825)	ASTM B425 (N08825)	ASTM B423 (N08825)	3.8
ASTM B443 (N06625)	ASTM B446 (N06625)	-	3.8
ASTM B127 (N04400)	ASTM B164 (N04400)	ASTM B165 (N04400) / B163 (N04400)	3.4
ASTM B162 (N02200)	ASTM B160 (N02200)	ASTM B161 (N02200) / B163 (N02200)	3.2
ASTM B265 (GR.12)	ASTM B348 (GR.12)		
ASTM B265 (GR.2)	ASTM B348 (GR.2)	-	-
ASTM B265 (GR.5)	ASTM B348 (GR.5)		
ASTM AB551 (R60702)	ASTM B550 (R90702)	-	-



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