TITAN FLOW CONTROL, INC.

SWING CHECK VALVE ❖ WAFER TYPE ❖ SINGLE DISC
ASME CLASS 300 ❖ CARBON AND STAINLESS STEEL

MODELS: CV 34-CS
(Carbon - Viton)

CV 34-SS
(Stainless - PTFE)

SIZES: 2" ~ 12"
(14" ~ 24" Available)

FEATURES

◇ **ECONOMICAL DESIGN**

LOW WEIGHT AND SHORT LAYING LENGTH PRODUCE SAVINGS IN INITIAL COST, SPACE REQUIREMENTS, AND INSTALLATION WHEN COMPARED TO FULL-BODY, SWING-TYPE CHECK VALVES.

◇ **MINIMAL HEAD LOSS**

HEAD LOSS IS MINIMIZED BY PROVIDING A SHORT, STRAIGHT AND VIRTUALLY UNOBSTRUCTED FLOW PATH. ADDITIONALLY, THE SPRING-LOADED DISC IS DESIGNED WITH VERY LOW CRACKING PRESSURE WHICH REDUCES THE AMOUNT OF ENERGY REQUIRED TO OPEN THE VALVE.

◇ **QUICK CLOSURE TO REDUCE WATER HAMMER**

SHUT-OFF IS ACHIEVED VIA THE FULLY AUTOMATIC, SPRING-ASSISTED DISC THAT CLOSES NEAR ZERO FLOW VELOCITY. THE LIGHTWEIGHT, SINGLE DISC DESIGN CREATES A POSITIVE SHUTOFF PRIOR TO FLOW REVERSAL WHICH HELPS TO KEEP SURGES TO A MINIMUM.

◇ **DURABLE, HIGH QUALITY DESIGN**

THE CV34 CHECK VALVE IS AVAILABLE IN EITHER CARBON STEEL OR STAINLESS STEEL BODY CONFIGURATIONS, WHICH ALLOW IT TO PERFORM WELL IN HIGHER TEMPERATURE APPLICATIONS. THE CARBON STEEL UNITS ARE EPOXY PAINTED. ADDITIONALLY, BOTH MODELS FEATURE ANTI-CORROSIVE, STAINLESS STEEL TRIM (DISC, SPRING, SHAFT) AS STANDARD.

◇ **RESILIENT SOFT SEATS**

RESILIENT SOFT SEATS (VITON AND PTFE O-RING) COUPLED WITH PRECISION MACHINED SEALING SURFACES HELP TO ENSURE A BUBBLE TIGHT SEAL THAT MEETS OR EXCEEDS API 598 TEST REQUIREMENTS.

TECHNICAL

PRESSURE/ TEMPERATURE RATING CS - ASTM A216 GR.WCB - CLASS 300
WOG (Non-shock): 740 PSI @ 100 °F
PRESSURE/ TEMPERATURE RATING SS - ASTM A351 GR. CF8M - CLASS 300
WOG (Non-shock): 720 PSI @ 100 °F
SEAT MATERIAL (O-RING) TEMPERATURE RANGE
VITON: -40 ~ 400 °F PTFE: -100 ~ 400 °F
SPRING MATERIAL MAXIMUM TEMPERATURE
Stainless Steel Type 304: 450 °F

1. *The above listed temperatures are theoretical and may vary during actual operating conditions.*
2. *Max and min temperatures are for reference only. Prolonged use at these temperatures is not recommended for optimal service life.*

APPLICATIONS

MARKETS: GENERAL INDUSTRY, CHEMICAL, PETROCHEMICAL, POWER, AND FOOD & BEVERAGE

SERVICE: INTENDED FOR LIQUID SERVICE THAT IS STEADY, CLEAN (NO ABRASIVES OR SOLIDS) AND NON-PULSATING. FLOW RATE SHOULD NOT EXCEED 15 FT/SEC. NOT RECOMMENDED FOR STEAM OR RECIPROCATING COMPRESSOR SERVICE.

PTFE PROPERTIES: RECOMMENDED FOR MOST CHEMICAL ENVIRONMENTS INCLUDING ACIDS, BASES, AND OILS. OFFERS EXCELLENT TEAR, ABRASIVE, CHEMICAL, ACID, AND ALKALI RESISTANCE. NOT RECOMMENDED FOR HIGH PRESSURE STEAM OR LARGE TEMPERATURE VARIATION APPLICATIONS.

VITON PROPERTIES: OFFERS A BROAD RANGE OF CHEMICAL RESISTANCE AND EXCELLENT HEAT RESISTANCE. GOOD MECHANICAL PROPERTIES AND COMPRESSION SET RESISTANCE. OFTEN USED IN APPLICATIONS WHERE NOTHING ELSE WILL WORK. FAIR LOW TEMPERATURE RESISTANCE AND LIMITED HOT-WATER RESISTANCE AND SHRINKAGE.

The above data represents common market and service applications. No representation or guarantee, expressed or implied, is given due to the numerous variations of concentrations, temperatures and flow conditions that may occur during actual service.

TITAN® FLOW CONTROL, INC.

YOUR PIPELINE TO THE FUTURE!

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CV34-0321

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SWING CHECK VALVE • WAFER TYPE SINGLE DISC

MODELS: CV 34-CS (Carbon - Viton Seat)
CV 34-SS (Stainless - PTFE Seat)

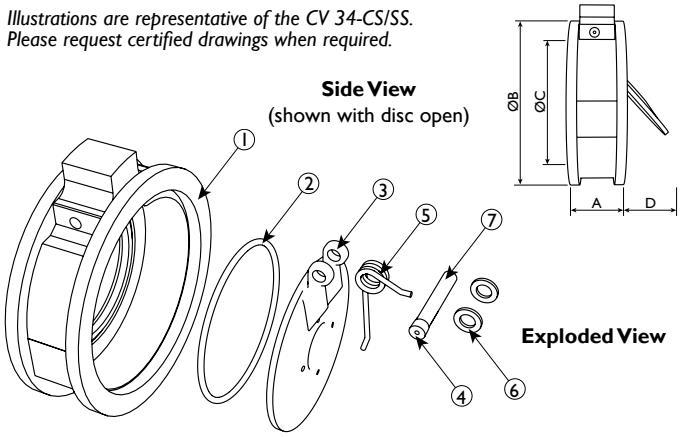
ASME Class 300

BILL OF MATERIALS (1)

No.	PART	CV 34-CS	CV 34-SS
1	Body(4)	Carbon Steel A216 Gr. WCB	Stainless Steel A351 Gr. CF8M
2	Seat (2)	Viton O-Ring	PTFE Commercial O-Ring
3	Disc (2)(3)	Stainless Steel Type 316	Stainless Steel Type 316
4	Plug	Carbon Steel ASTM A307B	Stainless Steel Type 316
5	Spring	Inconel X-750	Inconel X-750
6	Spacer	Stainless Steel Type 316	Stainless Steel Type 316
7	Shaft	Stainless Steel Type 316	Stainless Steel Type 316

1. Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion. All materials conform to ASTM specifications.
2. Denotes recommended spare parts.
3. Metal Seats, Buna and other elastomer seats available. Consult factory.
4. LCB, LCC, Duplex SS, and other materials available. Consult factory.

Illustrations are representative of the CV 34-CS/SS. Please request certified drawings when required.

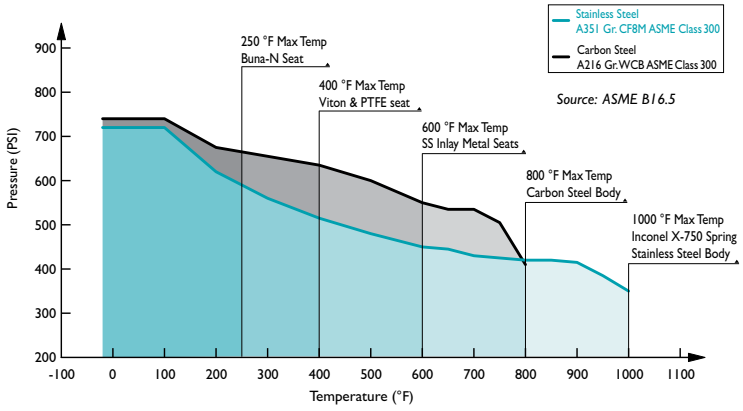


DIMENSIONS AND PERFORMANCE DATA (1)

SIZE		in	2	2 1/2	3	4	5	6	8	10	12
		mm	50	65	80	100	125	150	200	250	300
A DIMENSION FACE TO FACE (2)		in	2.38	2.62	2.88	2.88	3.38	3.88	5.00	5.75	7.12
		mm	60	67	73	73	86	98	127	146	181
ØB DIMENSION OVERALL DIAMETER		in	4.33	5.04	5.78	7.05	8.43	9.81	12.00	14.13	16.56
		mm	110	128	147	179	214	249	305	359	420
ØC DIMENSION INLET DIAMETER		in	1.50	1.77	2.20	3.00	3.75	4.75	6.50	7.68	9.50
		mm	38	45	56	76	96	120	165	195	241
D DIMENSION DISC MAX TRAVEL		in	0.79	1.10	1.38	2.17	2.87	3.54	4.13	4.80	5.12
		mm	20	28	35	55	73	90	105	122	130
ASSEMBLED WEIGHT		lb	5.5	8.8	11.0	15.5	25	36	70	109	178
		kg	2.5	4.0	5.0	7.0	11.2	16.5	31.5	49.5	81.0
Flow Coefficient		C_V	62	109	166	318	471	720	1384	2298	4153
Cracking Pressure (3)		psi	≤ .25	≤ .25	≤ .25	≤ .25	≤ .25	≤ .25	≤ .25	≤ .25	≤ .25

1. Dimensions, weights, and flow coefficients are for reference only. When required, request certified drawings.
2. Face to face values have a tolerance of ±0.06 in (±2.0 mm) for sizes 10" and lower and a tolerance of ±0.12 in (±3.0 mm) for sizes 12" and larger.
3. Cracking pressure is for horizontal installations only. For vertical installations, please consult factory.

PRESSURE-TEMPERATURE RATINGS (1)



1. The above chart displays the pressure-temperature ratings for the valve's body material per ASME B16.5. Max temperature limits have been added for seat and spring materials.

PRESSURE/TEMPERATURE RATING (1)

Class 300	Carbon Steel A216 Gr. WCB	Stainless Steel A351 Gr. CF8M
WOG (Non-shock)	740 PSI @ 100 °F	720 PSI @ 100 °F

REFERENCED STANDARDS & CODES

CODE	DESCRIPTION
ASME B16.34	Steel Valves - Flanged, Threaded, & Welding Ends
API 594	Face-to-Face & End-to-End Dimensions of Valves
ASME B16.5	Pipe Flanges & Flanged Fittings
API 598	Valve Inspection and Testing
MSS SP-6	Standard Finishes for Connecting-end Flanges
MSS SP-25	Standard Marking System for Valves
MSS SP-55	Quality Standard for Valve Castings

SEAT AND SPRING TEMPERATURE RATINGS (1)

SEAT (O-Ring)	Temperature Range
Viton	-40 ~ 400 °F
PTFE	-100 ~ 400 °F
SPRING (2)	**Maximum Temperature**
Stainless Steel Type 304	450 °F
INCONEL X-750	1000 °F

1. The listed pressure and temperature ratings for the valve's body, seat, and spring are theoretical and may vary during actual operating conditions.
2. As the temperature increases, the load capacity of the spring diminishes significantly. At higher temperatures, a different material spring may be required. Please consult for specific application assistance.
3. Max and min temperatures are for reference only. Prolonged use at these temperatures is not recommended for optimal service life.