



TITAN FLOW CONTROL, INC.

SILENT CHECK VALVE ♦ GLOBE TYPE ♦ CENTER GUIDED

ANSI CLASS 150 ♦ CARBON & STAINLESS STEEL ♦ FLANGED ENDS

MODELS: CV 51-CS
CV 51-SS

Body: Carbon & Stainless Steel
Trim: Stainless Steel



RAISED FACE FLANGED ENDS

FEATURES

SIZE RANGE: 2" ~ 24"
LARGER SIZES AVAILABLE

- ♦ **DESIGNED FOR LONG SERVICE LIFE**
CARBON STEEL BODIES PERFORM EXCEPTIONALLY WELL IN HIGH TEMPERATURE SERVICE AND PROVIDE EXCELLENT RESISTANCE TO SHOCK, VIBRATION, AND PIPING STRAINS. STAINLESS STEEL BODIES ARE HIGHLY CORROSION RESISTANT, EXTREMELY STRONG, AND ALSO PERFORM WELL IN HIGH TEMPERATURE SERVICE.
- ♦ **MINIMAL HEAD LOSS**
HEAD LOSS IS MINIMIZED BY PROVIDING A LARGE CROSS-SECTIONAL AREA WHICH EXCEEDS THAT OF THE ADJACENT PIPELINE. ADDITIONALLY, THE SPRING-LOADED, CENTER GUIDED 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**
SILENT SHUT-OFF IS ACHIEVED VIA THE FULLY AUTOMATIC, SPRING ASSISTED DISC THAT CLOSURES NEAR ZERO FLOW VELOCITY. THE LIGHTWEIGHT, CENTER GUIDED DISC DESIGN CREATES A POSITIVE SHUTOFF PRIOR TO FLOW REVERSAL AND HELPS TO KEEP SLAMMING AND SURGES TO A MINIMUM.
- ♦ **METAL-TO-METAL SEATS**
PRECISION MACHINED SEALING SURFACES ALLOW THE CV 51-CS/SS TO MAINTAIN A TIGHT SEAL THAT MEETS OR EXCEEDS API 598 LEAKAGE REQUIREMENTS. RESILIENT SEATS ARE ALSO AVAILABLE TO PROVIDE BUBBLE TIGHT SEALS.
- ♦ **VERSATILE DESIGN**
THIS VALVE CAN BE INSTALLED IN ANY POSITION (HORIZONTAL OR VERTICAL WITH UPWARD FLOW). PLEASE CONSULT FACTORY FOR VERTICAL INSTALLATIONS WITH DOWNWARD FLOW

TECHNICAL

PRESSURE/TEMPERATURE RATING ⁽¹⁾
CS - ASTM A216 Gr. WCB - CLASS 150

WOG: 285 PSI @ 100 °F

PRESSURE/TEMPERATURE RATING ⁽¹⁾
SS - ASTM A351 Gr. CF8M - CLASS 150

WOG: 275 PSI @ 100 °F

SEAT MATERIAL ⁽¹⁾
TEMPERATURE RANGE

STAINLESS STEEL: -325 ~ 1500 °F

SPRING MATERIAL ⁽¹⁾
MAXIMUM TEMPERATURE

STAINLESS STEEL: 450 °F

1. The above listed temperatures are theoretical and may vary during actual operating conditions.

APPLICATIONS

MARKETS: OIL AND GAS PRODUCTION, GENERAL INDUSTRY, CHEMICAL, PETROCHEMICAL, POWER, FOOD AND BEVERAGE

SERVICE: PUMP DISCHARGE SERVICE IN MUNICIPAL WATER, IRRIGATION, AND INDUSTRIAL CLASS HVAC SYSTEMS. IT IS RECOMMENDED THAT A TITAN FCI STRAINER BE INSTALLED AHEAD OF THE PUMP TO ENSURE PROTECTION OF THE CHECK VALVE AND THE PUMP.

PRECAUTIONS: THIS VALVE IS INTENDED FOR LIQUID SERVICE THAT DOES NOT EXCEED 10 FT/SEC. IT IS DESIGNED FOR STEADY FLOW CONDITIONS AND IS NOT RECOMMENDED FOR USE IN RECIPROCATING PUMP, COMPRESSOR OR OTHER TYPE OF PHYSICAL/THERMAL SHOCK-LOAD APPLICATIONS. THIS VALVE IS NOT RECOMMENDED FOR STEAM SERVICE OR FLOW MEDIA THAT CONTAINS SOLIDS. IT SHOULD BE INSTALLED AT LEAST FIVE PIPE DIAMETERS DOWNSTREAM FROM ANY TURBULENCE PRODUCING COMPONENTS. FLOW STRAIGHTENERS MAY BE REQUIRED IN CERTAIN APPLICATIONS.

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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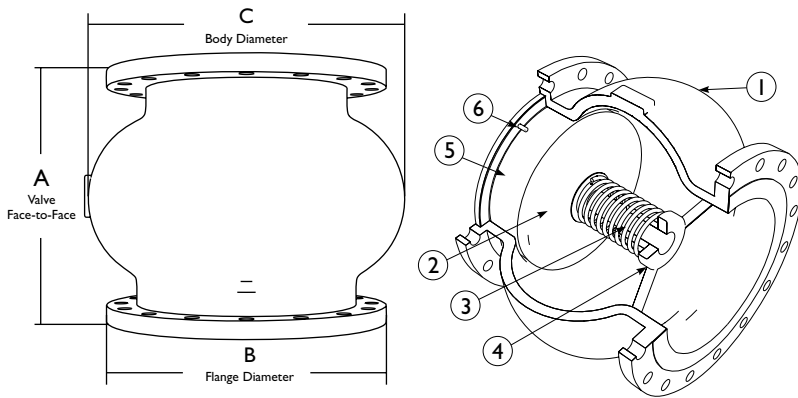

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SILENT CHECK VALVE • GLOBE TYPE
CV 51-CS (Carbon) CV 51-SS (Stainless Steel)

 ANSI Class
 150

Flanged Ends (RF) • Globe Style • Center Guided Disc

BILL OF MATERIALS ⁽¹⁾

No.	PART	CV 51-CS	CV 51-SS
1	Body	Carbon Steel A216 Gr.WCB	Stainless Steel A351 Gr. CF8M
2	Disc ⁽²⁾	Stainless Steel Gr. CF8M Type 316 SS	Stainless Steel Gr. CF8M Type 316 SS
3	Spring ⁽²⁾	Series 300 Stainless Steel	Series 300 Stainless Steel
4	Bushing ⁽²⁾	Stainless Steel	Stainless Steel
5	Seat ^{(2) (3)}	Stainless Steel Gr. CF8M Type 316 SS	Stainless Steel Gr. CF8M Type 316 SS
6	Cap Screw	Stainless Steel	Stainless Steel

1. Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion.
2. Denotes recommended spare parts.
3. Resilient Seats are available upon request. Please call for details.

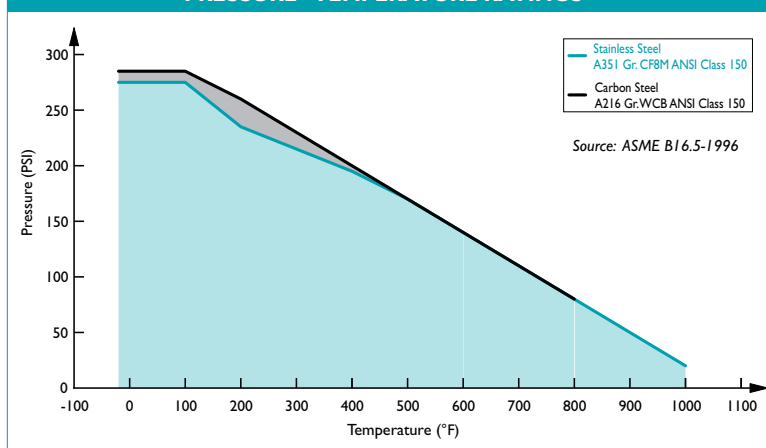
Additional Notes:

- Face-to-Face Dimension 'A' does not include raised face. Class 150 flanges are regularly furnished with 1/16 inch high raised face.
- Carbon Steel bodies are epoxy painted. Other coatings are available, please contact factory for details.

DIMENSIONS AND PERFORMANCE DATA ⁽¹⁾

SIZE	in	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A DIMENSION FACE TO FACE	in	5.25	5.50	6.0625	7.375	8.50	9.75	12.625	15.625	14.25	15.75	17.625	19.25	20.5	C/F
	mm	133	140	154	187	216	248	321	C/F	362	400	448	489	521	C/F
ØB DIMENSION FLANGE DIAMETER	in	6.00	7.00	7.50	9.00	10.00	11.00	13.50	16.00	19.00	21.00	23.50	25.00	27.50	32.00
	mm	152	178	191	229	254	279	343	406	483	533	597	635	699	813
ØC DIMENSION BODY DIAMETER	in	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F
	mm	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F
WEIGHT (APPROXIMATE)	lb	14.0	20.0	28.0	41.0	55.0	71.0	120.0	184.0	256.0	376.0	470.0	544.0	640	952
	kg	6.3	9.1	12.7	18.6	24.9	32.2	54.4	83.4	116.0	170.4	213.0	246.5	290.0	431.4
Flow Coefficient	C _v	65	105	150	265	410	600	1100	1800	2500	3100	4300	5000	6300	9800
Cracking Pressure ⁽²⁾	psi	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5	≤ .5

1. Dimensions, weights, and flow coefficients are provided for reference only. When required, always request certified drawings.
2. Cracking pressure is for horizontal installations only. For vertical installations, please consult factory.

PRESSURE - TEMPERATURE RATINGS ⁽¹⁾


1. This chart displays the pressure-temperature ratings for the valve's body. Max temperature limits have been added for seat and spring materials.

ORDERING CODE

Model Number	Description
CV51-CS	Carbon Steel Body, Stainless Steel Seat and Disc
CV51-SS	Stainless Steel Body, Stainless Steel Seat and Disc

REFERENCED STANDARDS & CODES

CODE	DESCRIPTION
ANSI B1.6.5	Pipe Flanges & Flanged Fittings
ANSI/API 594	Valve Design and Manufacture
API 598	Valve Inspection and Pressure Test
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

PRESSURE - TEMPERATURE RATING

ANSI CLASS 150	Carbon Steel	Stainless Steel
WOG (water, oil, gas)	285 PSI @ 100 °F	275 PSI @ 100 °F

TEMPERATURE RANGE SEAT

SEAT	Temperature
Stainless Steel	-325 ~ 1500 °F

MAX TEMPERATURE SPRING

SPRING	Max Temperature
Stainless Steel	450 °F

The listed pressure and temperature ratings for the valve's body, seat, and spring are theoretical and may vary during actual operating conditions.