



TITAN FLOW CONTROL, INC.

SILENT CHECK VALVE ♦ WAFER TYPE ♦ CENTER GUIDED

ANSI CLASS 150/300 ♦ DUCTILE IRON BODY

MODELS: CV 90-DB
CV 90-DS

2" TROUGH 12"

DUAL PRESSURE SERVICE (150/300): 2" ~ 6" ONLY



FEATURES

- ♦ SILENT SHUT-OFF IS ACHIEVED VIA THE FULLY AUTOMATIC, SPRING-ASSISTED, DOUBLE-GUIDED DISC THAT CLOSURES AT ZERO FLOW VELOCITY
- ♦ SHORT TRAVEL DISTANCE AND QUICK CLOSURE OF THE DISC ELIMINATES WATER HAMMER BY CREATING A POSITIVE SHUTOFF PRIOR TO FLOW REVERSAL
- ♦ HEAD LOSS IS MINIMIZED BY PROVIDING A LARGE CROSS-SECTIONAL AREA WHICH EXCEEDS THAT OF THE ADJACENT PIPELINE
- ♦ DUCTILE IRON BODY MAINTAINS THE ANTI-CORROSIVE PROPERTIES OF CAST IRON WHILE ACHIEVING A YIELD STRENGTH COMPARABLE TO CARBON STEEL
- ♦ CAN BE INSTALLED IN ANY POSITION (HORIZONTAL OR VERTICAL WITH UPWARD FLOW) - CONSULT FACTORY FOR VERTICAL INSTALLATION WITH DOWNWARD FLOW
- ♦ AVAILABLE WITH ALUMINUM BRONZE OR STAINLESS STEEL TRIM
OPTIONAL RESILIENT SOFT SEATS ARE ALSO AVAILABLE

TECHNICAL

PRESSURE/TEMPERATURE RATING DUCTILE IRON CLASS 150

WOG: 250 PSI @ 100 °F

DUCTILE IRON CLASS 300

WOG: 640 PSI @ 100 °F ⁽¹⁾

1. Ductile Iron Check Valves offer higher pressure ratings than Cast Iron Check Valves. For example, ANSI Class 300 Ductile Iron Check Valves (Sizes 2" ~ 24") are rated at 640 PSI WOG. By comparison, Cast Iron Check Valves (Sizes 2" ~ 12") are rated at 500 PSI WOG and (14" ~ 24") are only rated at 300 PSI WOG.

MARKETS: OIL & GAS PRODUCTION, GENERAL INDUSTRY, CHEMICAL, PETROCHEMICAL, POWER GENERATION, PULP & PAPER, AND FOOD & BEVERAGE

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

PRECAUTIONS: CHECK VALVE IS INTENDED FOR LIQUID SERVICE THAT DOES NOT EXCEED 10 FT/SEC. NOT RECOMMENDED FOR STEAM SERVICE. 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.

SERVICE ♦ QUALITY ♦ COMMITMENT

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APPLICATIONS



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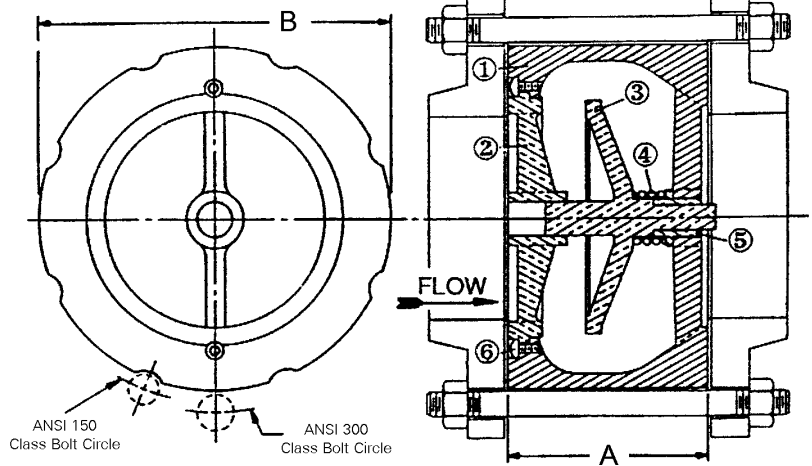
E-mail: titan@titanfci.com
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SILENT CHECK VALVE • WAFER TYPE
CENTER GUIDED DESIGN • DUCTILE IRON
MODELS: CV 90-DB (Aluminum Bronze Trim)
CV 90-DS (Stainless Steel Trim)

ANSI Class
150/300 lb

BILL OF MATERIALS (1)

No.	PART	CV 90-DB
1	Body (2)	ASTM 536 Ductile Iron
2	Seat (3)	ASTM B148 Aluminum Bronze
3	Disc	ASTM B148 Aluminum Bronze
4	Spring (4)	ASTM A313 Type 304 Stainless Steel
5	Bushing (4)	Bronze ASTM B584 Copper Alloy 836
6	Screws (4)	ASTM A276 Type 304 Stainless Steel
No.	PART	CV 90-DS
1	Body (2)	ASTM 536 Ductile Iron
2	Seat (3)	ASTM A351 Gr. CF8M Type 316
3	Disc	ASTM A351 Gr. CF8M Type 316
4	Spring (4)	ASTM A313 Type 304 Stainless Steel
5	Bushing (4)	ASTM A351 Gr. CF8M Type 316
6	Screws (4)	ASTM A276 Type 304 Stainless Steel



1. Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion.
2. Bodies are epoxy painted.
3. Resilient, soft seats also available.
4. Denotes recommended spare parts.

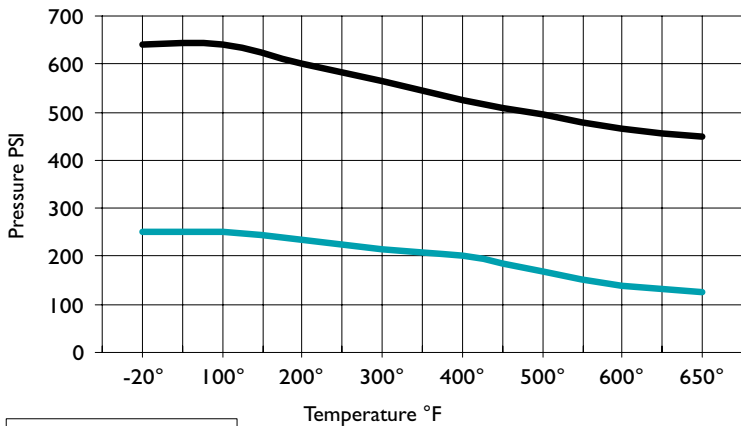
Design Note:

Sizes 2" through 6" utilize a unique scallop design that permits dual pressure service (150/300 lb). These sizes fit properly between any ANSI Class 125/250 or 150/300 Class flanges. Sizes 8" through 12" are only rated for ANSI 150 lb service. Actual design of Check Valve is ANSI Class 150/300.

		DIMENSIONS AND PERFORMANCE DATA									
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	in	2.625	2.875	3.125	4.0	4.625	5.625	6.50	8.25	11.375	
	mm	67	73	79	102	117	143	165	210	289	
ØB DIMENSION OUTSIDE DIAMETER	in	4.25	5.0	5.75	7.0	8.375	9.75	13.50	16.0	19.25	
	mm	108	127	146	178	213	248	343	406	489	
ASSEMBLED WEIGHT	lb	5.0	6.5	10.0	19.0	26.5	38.5	85	163	332	
	kg	2.3	2.9	4.5	8.6	12.0	17.4	38.5	73.9	150.4	
Flow Coefficient	C _v	60	98	150	230	410	600	1200	1800	2600	
Cracking Pressure	psi	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	C/F	

Dimensions and weights are for reference only. When required, request certified drawings.

PRESSURE-TEMPERATURE RATINGS: ASTM A536 CLASS 150 & 300



Source: ASME B16.42-1998

REFERENCED STANDARDS & CODES

CODE	DESCRIPTION
ANSI B16.42	Ductile Iron Pipe Flanges and Flanged Fittings
ANSI B16.5	Pipe Flanges and Flanged Fittings
MSS SP-6	Standards Finishes for Connecting-end Flanges
MSS SP-25	Standard Marking System for Valves
MSS SP-125	D.I., In-Line, Spring Loaded, Center-Guided Valves

PRESSURE/TEMPERATURE RATING:

ANSI Class	150 lb Service 2" ~ 12"	300 lb Service 2" ~ 6" only
WOG (water, oil, gas)	250 PSI @ 100 °F (1)	640 PSI @ 100 °F (1)

1. Ductile Iron Check Valves offer higher pressure ratings than Cast Iron Check Valves. For example, ANSI Class 300 Ductile Iron Check Valves (Sizes 2" ~ 24") are rated at 640 PSI WOG. By comparison, Cast Iron Check Valves (Sizes 2" ~ 12") are rated at 500 PSI WOG and (14" ~ 24") are only rated at 300 PSI WOG.

TESTING:

Check Valves are individually, hydrostatically tested at 1.5 x WOG in accordance with ANSI and API test specifications.

Ordering Code: _____ Size: _____

Customer/Project: _____

Inq./P.O. No.: _____

Titan Order No.: _____

Certified By: _____ Date: _____



TITAN FLOW CONTROL, INC.
Engineering Specification Submittal

Wafer Type Silent Check Valve - Center Guided • Models: CV 90-DB/DS

Size	Model Number	Description	Drawing Number