



SWING CHECK VALVE ♦ WAFER TYPE ♦ SHORT PATTERN

ANSI CLASS 150 ♦ CARBON STEEL & STAINLESS STEEL

MODELS: CV 12-CS

Body: Carbon Steel

Seat/Seal: Buna-N

CV 12-SS

Body: Stainless Steel

Seat/Seal: PTFE

SIZES: 2" ~ 24"



FEATURES

♦ ROBUST DESIGN

THIS IS A SELF-ACTING, NON-RETURN, SINGLE PLATE, WAFER TYPE SWING CHECK VALVE WHICH PROVIDES HIGH QUALITY AND RELIABILITY WITHIN A SIMPLIFIED CONSTRUCTION. AVAILABLE IN BOTH CARBON STEEL AND STAINLESS STEEL.

♦ MINIMAL HEAD LOSS

THE LOW INERTIA DISC IS DESIGNED TO OPEN AND CLOSE UNDER LOW DIFFERENTIAL PRESSURE CONDITIONS. ALSO, THE SHORT PATTERN DESIGN AND STRAIGHT FLOW PATH MINIMIZE PRESSURE DROP ACROSS THE VALVE.

♦ ECONOMICAL DESIGN

THE LOW WEIGHT AND SHORT FACE-TO-FACE DIMENSIONS PROVIDE AN ECONOMICAL, SPACE-SAVING SOLUTION. ADDITIONALLY, FLANGE GASKETS ARE TYPICALLY NOT REQUIRED DUE TO THE BUILT-IN, BODY SEAL O-RINGS.

♦ RESILIENT SOFT SEATS

SOFT SEATS (PTFE OR BUNA) COMBINED WITH A GRAVITY ASSISTED DISC HELP TO ENSURE A POSITIVE SHUTOFF WHICH CREATES A BUBBLE TIGHT SEAL THAT MEETS OR EXCEEDS API 598 LEAKAGE REQUIREMENTS.

♦ VERSATILE DESIGN

THIS VALVE CAN BE INSTALLED BETWEEN WELD NECK OR SLIP-ON TYPE COMPANION FLANGES OF DIFFERENT STANDARDS. THIS VALVE CAN NOT BE INSTALLED IN A VERTICAL PIPELINE WITH DOWNWARD FLOW.

♦ FUGITIVE EMISSION DESIGN

THE ONE-PIECE BODY DESIGN ELIMINATES POTENTIAL LEAK PATHS TO THE ENVIRONMENT SO THERE ARE NO BODY EMISSIONS.

TECHNICAL

PRESSURE/TEMPERATURE RATING ⁽¹⁾
SS - ASTM A240 GR. 316 - CLASS 150

WOG (Non-shock): 275 PSI @ 100 °F

PRESSURE/TEMPERATURE RATING ⁽¹⁾
CS - ASTM A515 GR. 70 - CLASS 150

WOG (Non-shock): 285 PSI @ 100 °F

SEAT AND BODY SEAL (O-RING) ⁽¹⁾
TEMPERATURE RANGE

PTFE: 14 ~ 320 °F
BUNA-N: -20 ~ 250 °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

SERVICE: THIS VALVE IS INTENDED FOR LOW FLOW SERVICE THAT IS STEADY, CLEAN (NO ABRASIVES OR SOLIDS), AND NON-PULSATING. FLOW RATE MUST NOT EXCEED FOR LIQUIDS: 15 FT/SEC

PTFE PROPERTIES: GOOD FOR MOST CHEMICAL ENVIRONMENTS. OFFERS EXCELLENT TEAR, ABRASIVE, CHEMICAL, ACID, AND ALKALI RESISTANCE. NOT RECOMMENDED FOR HIGH PRESSURE STEAM OR LARGE TEMPERATURE VARIATIONS.

BUNA-N PROPERTIES: MOST WIDELY USED ELASTOMER. GOOD FOR MOST PETROLEUM OILS AND FLUIDS, SILICONE GREASES AND OILS, AND COLD WATER. EXCELLENT COMPRESSION SET, TEAR, AND ABRASION RESISTANCE. POOR WEATHER RESISTANCE AND MODERATE HEAT RESISTANCE. NOT RECOMMENDED FOR SEVERE OZONE-RESISTANT 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!

Tel: 910-735-0000 ♦ Fax: 910-738-3848 ♦ titan@titanfci.com ♦ www.titanfci.com
290 Corporate Drive ♦ PO Box 7408 ♦ Lumberton, NC 28358


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Web: www.titanfci.com
Fax: 910.738.3848

SWING CHECK VALVE • WAFER TYPE
SINGLE DISC • SHORT PATTERN DESIGN

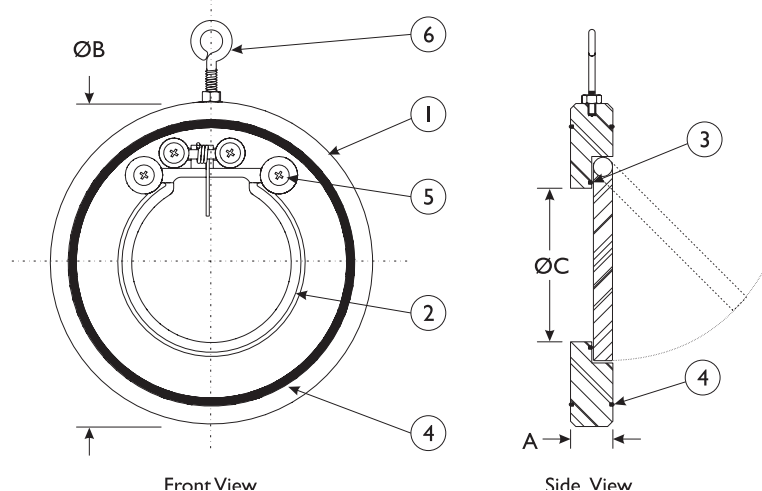
MODELS: CV 12-CS (Carbon Steel)
CV 12-SS (Stainless Steel)

ANSI
Class 150

BILL OF MATERIALS ⁽¹⁾

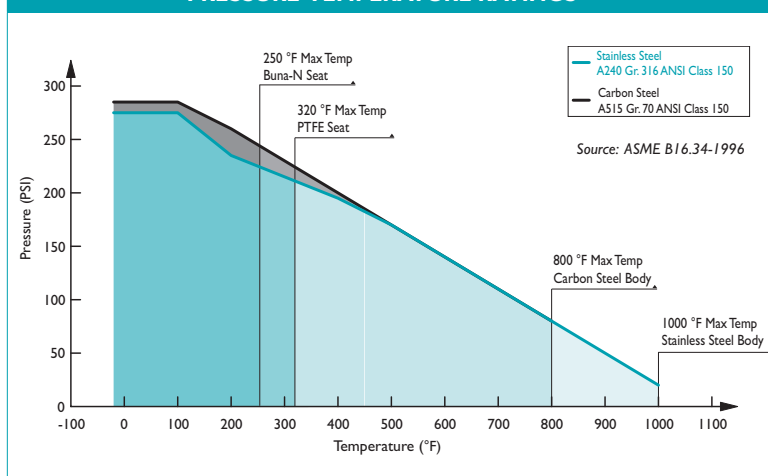
| No. | PART | CV 12-CS | CV 12-SS |
|-----|--------------------------|--------------------------------|----------------------------------|
| 1 | Body | Carbon Steel A515 Gr. 70 | Stainless Steel A240 Gr. 316 |
| 2 | Disc | Carbon Zinc Plated | Stainless Steel A351 Gr. CF8M |
| 3 | Seat ⁽²⁾ | Buna-N | PTFE |
| 4 | Body Seal ⁽²⁾ | Buna-N | PTFE |
| 5 | Bolt | Stainless Steel Type 304-SS | Stainless Steel Type 304-SS |
| 6 | Eye Bolt | Chrome Plated | Chrome Plated |

1. Bill of Materials represents standard materials. Equivalent or better materials may be substituted at the manufacturer's discretion.
2. Denotes recommended spare parts.


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 ⁽²⁾ | in | 0.55 | 0.55 | 0.55 | 0.71 | 0.71 | 0.79 | 0.87 | 1.02 | 1.26 | 1.50 | 1.73 | 1.97 | 2.21 | 2.44 |
| | mm | 14 | 14 | 14 | 18 | 18 | 20 | 22 | 26 | 32 | 38 | 44 | 50 | 56 | 62 |
| ØB DIMENSION OVERALL DIAMETER | in | 4.13 | 4.90 | 5.40 | 6.90 | 7.76 | 8.74 | 11.00 | 13.39 | 16.14 | 17.76 | 20.28 | 21.70 | 23.90 | 28.25 |
| | mm | 105 | 124 | 137 | 175 | 197 | 222 | 280 | 340 | 410 | 451 | 515 | 550 | 606 | 718 |
| ØC DIMENSION INLET DIAMETER | in | 1.26 | 1.58 | 2.13 | 2.76 | 3.62 | 4.41 | 6.06 | 7.87 | 9.45 | 10.60 | 12.13 | 14.17 | 15.95 | 19.14 |
| | mm | 32 | 40 | 54 | 70 | 92 | 112 | 154 | 200 | 240 | 269 | 308 | 360 | 405 | 486 |
| ASSEMBLED WEIGHT | lb | 2.5 | 3.5 | 6.0 | 7.0 | 8.5 | 10.0 | 22.0 | 33.5 | 58.0 | 93.5 | 146.5 | 195.0 | 232.0 | 352.0 |
| | kg | 1.1 | 1.6 | 2.7 | 3.2 | 3.9 | 4.5 | 10.0 | 15.2 | 26.3 | 42.4 | 66.5 | 88.5 | 105.1 | 159.5 |
| Flow Coefficient | C _v | 62 | 100 | 166 | 318 | 470 | 610 | 1250 | 2300 | 4150 | 4980 | 8225 | 11906 | 20000 | 27700 |
| Cracking Pressure ⁽³⁾ | psi | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 | ≤ .25 |

1. Dimensions, weights, and flow coefficients are provided for reference only. When required, always request certified drawings.
2. Face to face values have a tolerance of ± 0.06 in (± 2.0 mm) for sizes 10" and smaller 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. Valve can not be installed in the vertical position with downward flow.

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, body seal, and spring materials.

REFERENCED STANDARDS & CODES

| CODE | DESCRIPTION |
|----------------------|---|
| API 598 / ANSI B16.5 | Valve Testing |
| ASME/ANSI B16.34 | Valves - Flanged, Threaded, & Welding End |
| ANSI 150 | Flange Standard Conformity |

PRESSURE/TEMPERATURE RATING

| ANSI CLASS 150 | A240 Gr. 316 | A515 Gr. 70 |
|-----------------|------------------|------------------|
| WOG (Non-shock) | 275 PSI @ 100 °F | 285 PSI @ 100 °F |

SEAT/BODY SEAL TEMPERATURE RANGE ⁽¹⁾

| SEAT | Temperature |
|--------|--------------|
| PTFE | 14 ~ 320 °F |
| Buna-N | -20 ~ 250 °F |

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

ORDERING CODE

| Model Number | Description |
|--------------|---------------------------------|
| CV 12-CS | Carbon Steel Body, Buna-N Seat |
| CV 12-SS | Stainless Steel Body, PTFE Seat |

Additional Design & Technical Notes:

Short pattern check valves feature a reduced port and eccentric opening which allow the disc to open into the connecting pipe. However, given the short face-to-face, the disc will not fully open due to interference with the connecting pipe. Although this conforms to API specifications, this may be unsuitable for certain types applications. Consult factory for more specific application information.