

# CHECK VALVES



## Double Door Check Valves:

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**Sure Flow Equipment Inc.**, for many years, has provided industry with CUSTOM ENGINEERED FABRICATED STRAINERS to many design codes. All products are designed and manufactured to **ASME SECTION VIII, DIV 1, CURRENT EDITION. U and UM CODE STAMP** available on certain products as specified in this brochure.

Sure Flow's initial focus was to supply the marketplace with an extensive line of Y-Type Strainers, Simplex Strainers, Duplex and Fabricated Strainers. The product line provides a solution to every filtration problem in every industry and if we haven't already solved your problem, our Engineers will develop the best answer.

In addition to Pipeline Strainers, Sure Flow offers Wafer Double Door Check Valves, Silent Check Valves, Butterfly Valves 2" to 48", Knife Gate Valves and Expansion Joints and Automatic Strainers.

Sure Flow products are available in Cast Iron, Steel, Stainless, Bronze, and any exotic Alloy, in sizes from 1/4" to 60", 125 lb. to 2500 lb. Class, in NPT, Flanged, Butt Weld and Socket Weld.

Many design codes are available.

## The Universe of Industrial Valves





# Check Valves

The wafer check valve is a precision engineered, fully developed product at the forefront of pipe system technology. can be installed with confidence into offshore or onshore pipeline systems on product or service lines, wherever non-return protection is required.

Manufactured to meet API specifications, meets all the key criteria and in the vitally important area of comparative weights is actually lighter than other wafer check valves.

offers other operational benefits. **It is light, tight, strong, compact and cost effective.**

is a precision engineered dual plate wafer check valve. It has been designed specifically for its environment and its duty. Every component has been carefully chosen only after matching its performance requirements with value analysis criteria.

The Valve meets API 594 wafer check valve standard (except face to face dimensions of ANSI 125 cast iron valves from 2-1/2" to 12" in which case they meet the Industry Standard).

- ANSI B16.5 flange dimension
- ANSI B16.47 above 24", flange dimension
- API 594 – materials, design & face to face
- API 605 (B16.47), flange dimension
- API 6A – flange dimension & face to face
- API 6D – materials
- API 598 – testing
- ANSI B16.34 – materials, wall thickness

## Double Door or Dual Disc Available Wafer • Flanged • Hub • Lug



## Range of Valves

**Sizes:** • 2" to 72"

**Pressures:** • ANSI Class 125 & 250  
• ANSI Class 150 to 2,500  
• API 2,000# to 10,000#

**Temperatures:** • Minus 400°F. to 1,200°F.

**Seating:** • Resilient or Metal to Metal

**Materials:** • Cast or Forged  
• Cast Iron, Cast Steel  
• Stainless Steel & Bronze

**Types:** • Flanged  
• Flangeless (Wafer Style)  
• Lug (Drilled or Threaded)  
• Butt Weld  
• Hub End (for Clamp Joints)

# Check Valves

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## Lighter

Wafer check valves are recognized as being substantially lighter in weight than conventional swing check valves of the same size and pressure class.

*For example:*

6 "class 150 swing check weighs 175 lbs.

6 "150 weighs only 30 lbs.

This weight advantage means that the whole pipework system is lighter, consequently the pipework support structure can also be lighter and installation costs reduced.



## Stronger

Lighter weight does not mean, however, that strength has been sacrificed. In fact it is actually stronger than the equivalent length of pipe. Ribs around the side wall support the flange faces.

The Valve provides the following important features:

- ◆ Twin plate, flat seat design for efficient sealing.
- ◆ Long leg spring(s) allows the plates to open and close without seat scrubbing.
- ◆ Valves 14 "and larger are fitted with patented independent spring(s) as a standard feature.
- ◆ Lower head loss than swing checks above 6 "
- ◆ Valves with soft seats have bubble tight closure to API 6D.
- ◆ Valves with metal/hardfaced seats have low leakage in accordance with API 598.
- ◆ Simplicity of installation is a key feature.
- ◆ A wide range of seat options is available.

The strong central rib gives rigidity to the body, protects the mechanism from damage by foreign objects in the flow and also provides a broad seating area for the plate heels.

The pins which support the plates and anchor the spring are substantial in order to withstand the pressures imposed on them by the flow.







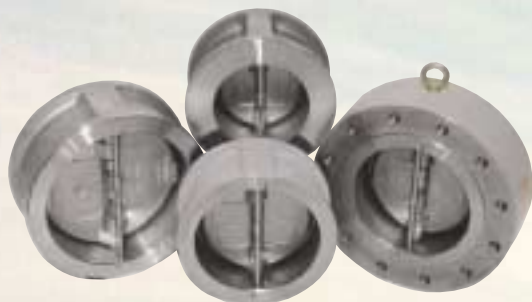
If the rib profile and size are reduced or the pins are slimmed down, the valve might not provide the safety margin in operation which is one of the main reasons for having a wafer check valve in the first place.

## Compact

meets the internationally accepted API 594 standard for steel valves. A 6" class 150 valve has a face to face measurement of just 3" compared with a swing check valve's 14" face to face dimension. A fits completely inside the flange bolt PCD and therefore external installation is straightforward.

## Non-Slam

is a non-slam check valve because it operates on flow cessation, not flow reversal. The normal position of the plates is closed, held against the seat by the unique spring design. As flow begins, the heels of the two plates are lifted off the seat face on the central rib.



This cracking pressure is less than 2 psi across most of the range. As flow increases, the plates then pivot against the spring pressure. Since the heels have already lifted off the rib seat there is no scrub or wear, either on the rib, body or plate seating surfaces. A pressure of only 4 psi is required to keep the plates fully open.

When flow stops and that pressure is removed the spring closes the plates. Flow reversal is then stopped by the closed valve and in fact any back pressure only serves to make the valve seal more tightly.

## Tight

The long leg spring design - with a single anchor point - is a unique feature of the design. Coupled with floating plates for minimum seat wear and the right choice of seat to suit the service requirements, this gives the best combination to meet API 598 requirements.



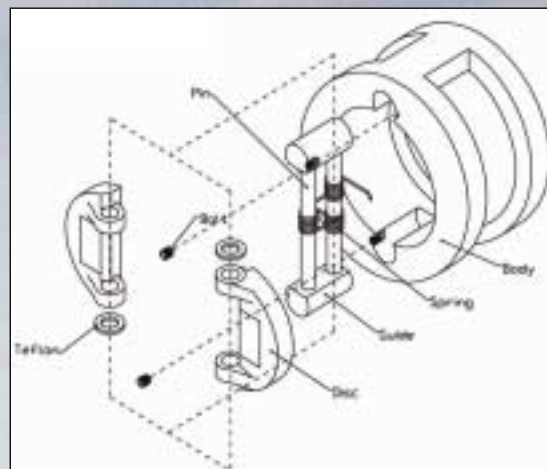
The long spring leg ensures closing tension is applied to the right part of the plate whilst allowing the plate heels to float on opening. For valves 14" and larger, the spring is anchored to the stop pin to ensure that both plates open and close independently. If the spring is not anchored, then the opening of one plate transfers pressure through the spring to make it more difficult for the other plate to open.

# Check Valves

## Sure Flow Retainerless body design

In standard or competitive designs, some manufacturers drill four holes through the body of the check valve to facilitate the installation of a hinge pin and stop pin. The valves are then sealed by four pipe plugs. These holes are potential leak paths from the body of the valve.

Sure Flow Equipment Inc. utilizes an internal stop pin and hinge pin which are machined into the cavity of the body wall. This design eliminates a potential shell or body leak path.



## Lapped body / disc seal

All valves meet or exceed API 598. When it comes to the Sure Flow metal to metal valve, an additional special machining cure is performed to provide a maximum flatness and a fine, lapped finish. The Sure Flow disc provides an almost zero leakage on metal seated valves with no additional cost.



## Shock bumpers

Sure Flow Equipment Inc. has cast "Shock Bumpers" into the reverse side of each of the discs (flappers). Both sides of the disc meet or touch in the fully open position, thus preventing them from contact with the internal pins. This reduces the force on the hinges to a minimum.

In some competitive designs the disc (flapper) strikes the stop pin in the fully open position, creating a lever force which could cause the hinge pin to break. The Shock Bumpers eliminate this potential problem.



## Seat life

Increased seat life is obtained by eliminating the problem of dragging on the seat when opening. The soft seated valve has a seat molded to the body by use of a heating temperature suitable to the materials.

## Standard Materials of Construction

ANSI 150 through 2500  
Series Body &  
Plate Castings

ASTM A216 Grade WCB  
Carbon Steel (0.22% Carbon Max.)

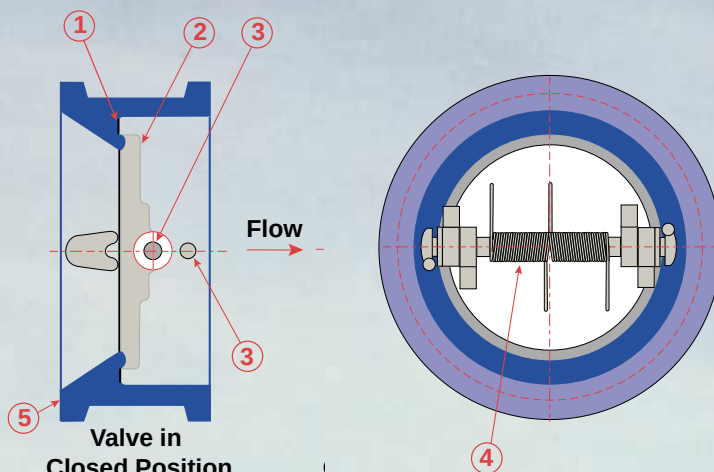
ASTM A217 Grade CA15  
Stainless Steel (410)

ASTM A351 Grade CF8M  
Stainless Steel (316)

BS 1400 Grade AB2 Aluminum Bronze  
(ANSI 150 & 300 Series)

*Other materials available on request.*

## Valve Parts Explosion



| No | Description    |
|----|----------------|
| 1  | Seat/Seal      |
| 2  | Disc           |
| 3  | Shaft          |
| 4  | Torsion Spring |
| 5  | Cast Body      |

### Springs

316 SS  
Inconel 600  
Inconel X 750

### Max. Operating Temperature

120°C (248°F)  
315°C (600°F)  
537°C (1000°F)

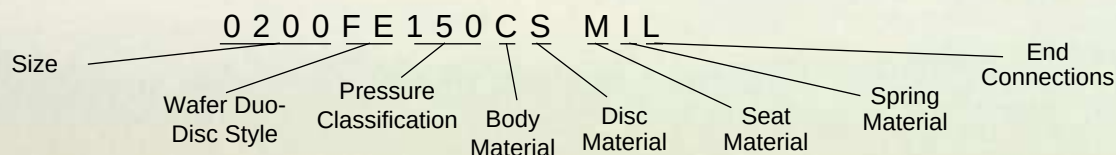
### Spring Selection

For temperatures up to 315°C (600°F), Inconel springs will be furnished as standard on all valves that are ordered with metal and Viton seats. For service conditions above 315°C (600°F), Inconel X springs should be specified.

**For Seal Selection Refer to Ordering Information**

## Identification Code/Figure Number

EXAMPLE



| Pressure Classification |     |     |     |     |      |      |
|-------------------------|-----|-----|-----|-----|------|------|
| Code                    | 150 | 300 | 600 | 900 | 1500 | 2500 |
| ANSI                    | 150 | 300 | 600 | 900 | 1500 | 2500 |

| Body and Flapper Materials |                 |                      |
|----------------------------|-----------------|----------------------|
| Code                       | Material        | Specification        |
| C                          | Carbon Steel    | ASTM A216 Grade WCB  |
| S                          | Stainless Steel | ASTM A351 Grade CF8M |

| Seat Material |          |
|---------------|----------|
| Code          | Material |
| M             | Metal    |
| V             | Viton    |

| Spring Material |          |               |
|-----------------|----------|---------------|
| Code            | Material | Max. Temp. F. |
| I               | Inconel  | 600°F         |

| End Connectors |                        |
|----------------|------------------------|
| Code           | Connection             |
| R              | Serrated Gasket Finish |
| L              | Lug 2" - 10"           |
| F              | Flanged 12" - 24"      |



# Check Valves

## Installation Dimensions for Wafer Body ANSI Check Valves

### **Class 150** **Model FE 150 Wafer**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/8        | 4 1/8        | 2 3/8            | 6                     |
| 2 1/2       | 2 3/8        | 4 7/8        | 2 5/16           | 8                     |
| 3           | 2 7/8        | 5 3/8        | 3 3/4            | 10                    |
| 4           | 2 7/8        | 6 7/8        | 4 1/2            | 17                    |
| 5           | 3 1/4        | 7 11/16      | 5 11/16          | 23                    |
| 6           | 3 7/8        | 8 3/4        | 6 5/8            | 33                    |
| 8           | 5            | 11 11/16     | 8 5/8            | 58                    |
| 10          | 5 3/4        | 13 3/8       | 10 3/4           | 109                   |
| 12          | 7 1/8        | 16 1/8       | 12 5/8           | 180                   |
| 14          | 7 1/4        | 17 3/4       | 13 11/16         | 206                   |
| 16          | 7 1/2        | 20 1/4       | 16 11/16         | 263                   |
| 18          | 8            | 21 5/8       | 18               | 334                   |
| 20          | 8 5/8        | 23 7/8       | 20 1/4           | 430                   |
| 24          | 8 3/4        | 28 1/4       | 23 3/4           | 582                   |
| 26          | 11 1/4       | 30 1/2       | 24 3/4           | 1,151                 |
| 28          | 12 5/8       | 32 3/4       | 27 5/8           | 1,293                 |
| 30          | 12           | 34 13/16     | 30 1/8           | 1,356                 |
| 32          | 14           | 37           | 30 11/16         | 1,746                 |
| 36          | 14 1/2       | 41 1/4       | 34               | 2,125                 |
| 40          | 17           | 45 3/4       | 38 13/16         | 3,011                 |
| 42          | 17           | 48           | 41 13/16         | 3,795                 |
| 48          | 20 5/8       | 54 1/2       | 47               | 5,566                 |
| 54          | 21 1/4       | 60 7/8       | 50 1/2           | 6,831                 |

### **Class 300** **Model FE 300 Wafer**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/8        | 4 3/8        | 2 3/8            | 6                     |
| 2 1/2       | 2 3/8        | 5 1/8        | 2 5/16           | 8                     |
| 3           | 2 7/8        | 5 7/8        | 3 3/4            | 13                    |
| 4           | 2 7/8        | 7 1/8        | 4 1/2            | 20                    |
| 5           | 3 1/4        | 8 1/2        | 5 3/4            | 23                    |
| 6           | 3 7/8        | 9 7/8        | 6 5/8            | 38                    |
| 8           | 5            | 12 1/8       | 8 5/8            | 71                    |
| 10          | 5 3/4        | 14 1/4       | 10 3/4           | 124                   |
| 12          | 7 1/8        | 16 5/8       | 12 5/8           | 195                   |
| 14          | 8 3/4        | 19 1/8       | 13 3/4           | 339                   |
| 16          | 9 1/8        | 21 1/4       | 16 11/16         | 428                   |
| 18          | 10 3/8       | 23 1/2       | 18               | 595                   |
| 20          | 11 1/2       | 25 1/2       | 20 1/4           | 774                   |
| 24          | 12 1/2       | 30 1/2       | 23 3/4           | 1,207                 |
| 26          | 14           | 32 7/8       | 24 3/4           | 1,569                 |
| 28          | 15           | 35 3/8       | 27 5/8           | 1,946                 |
| 30          | 14 1/2       | 37 1/2       | 30 1/8           | 2,113                 |
| 32          | 16           | 39 5/8       | 30 13/16         | 2,598                 |

### **Class 600** **Model FE 600 Wafer**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/8        | 4 3/8        | 2 3/8            | 6                     |
| 3           | 2 7/8        | 5 7/8        | 3 3/4            | 13                    |
| 4           | 3 1/8        | 7 5/8        | 4 1/2            | 25                    |
| 6           | 5 3/8        | 10 1/2       | 6 5/8            | 68                    |
| 8           | 6 1/2        | 12 5/8       | 8 5/8            | 127                   |
| 10          | 8 3/8        | 15 3/4       | 10 3/4           | 261                   |
| 12          | 9            | 18           | 12 5/8           | 324                   |
| 14          | 10 3/4       | 19 3/8       | 13 3/4           | 359                   |
| 16          | 12           | 22 1/4       | 16 11/16         | 683                   |
| 18          | 14 1/4       | 24 1/8       | 18               | 794                   |
| 20          | 14 1/2       | 26 7/8       | 20 1/4           | 1,159                 |
| 24          | 17 1/4       | 31 1/8       | 23 3/4           | 1,842                 |
| 26          | 18           | 34 1/8       | 24 3/4           | 2,474                 |
| 28          | 19           | 36           | 27 5/8           | 2,715                 |
| 30          | 19 7/8       | 38 1/4       | 30 1/8           | 3,211                 |
| 32          | 21           | 40 1/4       | 30 13/16         | 3,747                 |

### **Class 900** **Model FE 900 Wafer**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/4        | 5 5/8        | 2 3/8            | 16                    |
| 3           | 3 1/4        | 6 5/8        | 3 3/4            | 19                    |
| 4           | 4            | 8 1/8        | 4 1/2            | 38                    |
| 6           | 6 1/4        | 11 3/8       | 6 5/8            | 101                   |
| 8           | 8 1/8        | 14 1/8       | 8 5/8            | 213                   |
| 10          | 9 1/2        | 17 1/8       | 10 3/4           | 433                   |
| 12          | 11 1/2       | 19 5/8       | 12 5/8           | 640                   |
| 14          | 14           | 20 1/2       | 13 3/4           | 855                   |
| 16          | 15 1/8       | 22 5/8       | 16 11/16         | 1,123                 |
| 18          | 17 3/4       | 25 1/8       | 18               | 1,624                 |
| 20          | 17 3/4       | 27 1/2       | 20 1/4           | 1,951                 |
| 24          | 19 1/2       | 33           | 23 3/4           | 3,079                 |

### **Class 1500** **Model FE 1500 Wafer**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/4        | 5 5/8        | 2 3/8            | 16                    |
| 3           | 3 1/4        | 6 7/8        | 3 3/4            | 21                    |
| 4           | 4            | 8 1/4        | 4 1/2            | 40                    |
| 6           | 6 1/4        | 11 1/8       | 6 5/8            | 101                   |
| 8           | 8 1/8        | 13 7/8       | 8 5/8            | 213                   |
| 10          | 9 3/4        | 17 1/8       | 10 3/4           | 463                   |
| 12          | 12           | 20 1/2       | 12 5/8           | 678                   |
| 14          | 14           | 22 3/4       | 13 3/4           | 1,045                 |
| 16          | 15 1/8       | 25 1/4       | 16 11/16         | 1,240                 |
| 18          | 18 7/16      | 27 3/4       | 18               | 2,102                 |
| 20          | 21           | 29 3/4       | 20 1/4           | 4,643                 |

### **Class 2500** **Model FE 2500 Wafer**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/4        | 5 3/4        | 2 3/8            | 30                    |
| 3           | 3 3/8        | 7 3/4        | 3 3/4            | 46                    |
| 4           | 4 1/8        | 9 1/4        | 4 1/2            | 92                    |
| 6           | 6 1/4        | 12 1/2       | 6 5/8            | 190                   |
| 8           | 8 1/8        | 15 1/4       | 8 5/8            | 285                   |
| 10          | 10           | 18 3/4       | 10 3/4           | 555                   |
| 12          | 12           | 21 5/8       | 12 5/8           | 814                   |
| 14          | 14           | 22 3/4       | 13 3/4           | 1,254                 |
| 16          | 15 1/8       | 25 1/4       | 16 11/16         | 1,488                 |
| 18          | 18 7/16      | 27 3/4       | 18               | 2,522                 |
| 20          | 21           | 29 3/4       | 20 1/4           | 5,571                 |

**NOTE:** Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.



## Installation Dimensions for Lug Body ANSI Check Valves

### **Class 150** **Model FE 150 Lug**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/8        | 6            | 2 3/8            | 18                    |
| 3           | 2 7/8        | 7 1/2        | 3 3/4            | 30                    |
| 4           | 2 7/8        | 9            | 4 1/2            | 48                    |
| 6           | 3 7/8        | 11           | 6 5/8            | 81                    |
| 8           | 5            | 13 1/2       | 8 5/8            | 159                   |
| 10          | 5 3/4        | 16           | 10 3/4           | 235                   |

### **Class 300** **Model FE 300 Lug**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 2           | 2 3/8        | 6 1/2        | 2 3/8            | 20                    |
| 3           | 2 7/8        | 8 1/4        | 3 3/4            | 35                    |
| 4           | 2 7/8        | 10           | 4 1/2            | 58                    |
| 6           | 3 7/8        | 12 1/2       | 6 5/8            | 114                   |
| 8           | 5            | 15           | 8 5/8            | 197                   |
| 10          | 5 3/4        | 17 1/2       | 10 3/4           | 291                   |

## Installation Dimensions for Flanged Body ANSI Check Valves

### **Class 150** **Model FE 150 Flanged**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 12          | 7 1/8        | 19           | 12 5/8           | 230                   |
| 14          | 7 1/4        | 21           | 13 11/16         | 283                   |
| 16          | 7 1/2        | 23 1/2       | 16 11/16         | 364                   |
| 18          | 8            | 25           | 18               | 438                   |
| 20          | 8 5/8        | 27 1/2       | 20 1/4           | 569                   |
| 24          | 8 3/4        | 32           | 23 3/4           | 784                   |
| 26          | 11 1/4       | 34 1/4       | 24 3/4           | 1,316                 |
| 28          | 12 5/8       | 36 1/2       | 27 5/8           | 1,472                 |
| 30          | 12           | 38 3/4       | 30 1/8           | 1,576                 |
| 32          | 14           | 41 3/4       | 30 11/16         | 2,135                 |
| 36          | 14 1/2       | 46           | 34               | 2,682                 |
| 40          | 17           | 50 3/4       | 38 13/16         | 3,600                 |
| 42          | 17           | 53           | 41 13/16         | 4,177                 |
| 48          | 20 5/8       | 59 1/2       | 47               | 6,386                 |
| 54          | 21 1/4       | 66 5/8       | 50 1/2           | 8,164                 |

### **Class 300** **Model FE 300 Flanged**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 12          | 7 1/8        | 20 1/2       | 12 5/8           | 261                   |
| 14          | 8 3/4        | 23           | 13 3/4           | 405                   |
| 16          | 9 1/8        | 25 1/2       | 16 11/16         | 519                   |
| 18          | 10 3/8       | 28           | 18               | 711                   |
| 20          | 11 1/2       | 30 1/2       | 20 1/4           | 936                   |
| 24          | 12 1/2       | 36           | 23 3/4           | 1,417                 |
| 26          | 14           | 38 1/4       | 24 3/4           | 1,796                 |
| 28          | 15           | 40 3/4       | 27 5/8           | 2,181                 |
| 30          | 14 1/2       | 43           | 30 1/8           | 2,343                 |
| 32          | 16           | 45 1/4       | 30 13/16         | 2,861                 |

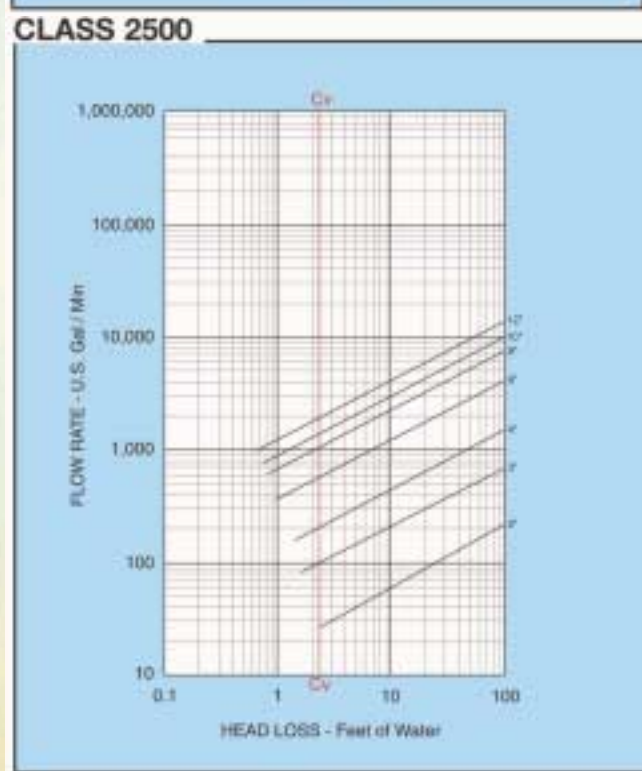
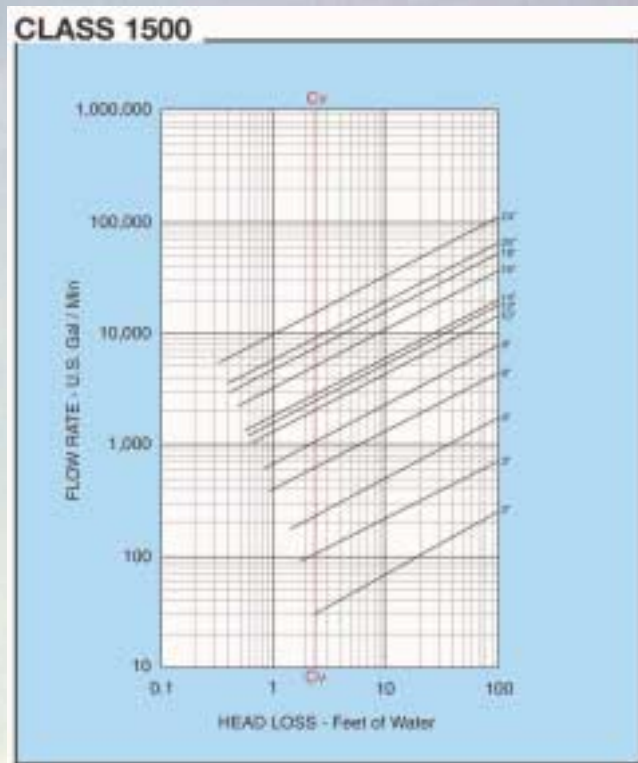
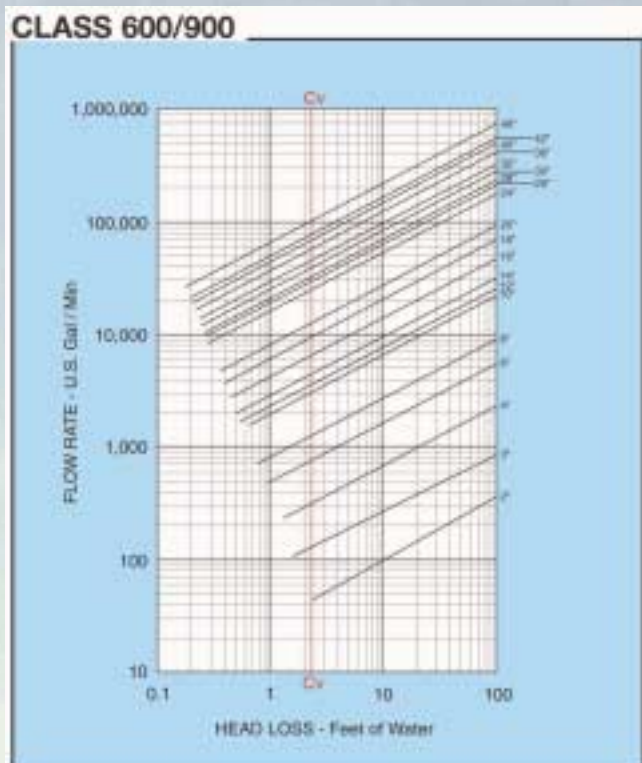
### **Class 600** **Model FE 600 Flanged**

| Size Inches | Face to Face | Outside Dia. | Min. Flange Bore | Shipping Weight (lbs) |
|-------------|--------------|--------------|------------------|-----------------------|
| 12          | 9            | 22           | 12 5/8           | 415                   |
| 14          | 10 3/4       | 23 3/4       | 13 3/4           | 577                   |
| 16          | 12           | 27           | 16 11/16         | 835                   |
| 18          | 14 1/4       | 29 1/4       | 18               | 1,164                 |
| 20          | 14 1/2       | 32           | 20 1/4           | 1,417                 |
| 24          | 17 1/4       | 37           | 23 3/4           | 2,249                 |
| 26          | 18           | 40           | 24 3/4           | 2,745                 |
| 28          | 19           | 42 1/4       | 27 5/8           | 3,236                 |
| 30          | 19 7/8       | 44 1/2       | 30 1/8           | 3,752                 |
| 32          | 21           | 47           | 30 13/16         | 4,420                 |

NOTE: Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

# Check Valves

## Head Loss - For Water at 60°F



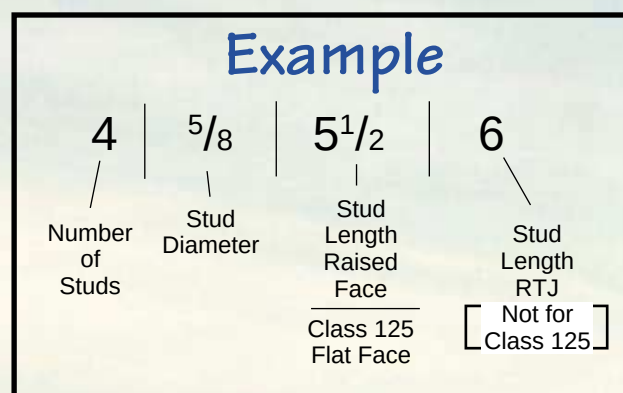
\*Valves fitted to larger bore pipes will have lower pressure drops

\*\*Note: For Class 150 refer to page 10

**NOTE: Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.**

## ANSI Stud Bolting

| Valve Size | Class 125 |       |        |  | Class 150 |       |        |        | Class 300 |       |        |        | Class 600 |       |        |        | Class 900 |       |        |        | Class 1500 |       |        |        | Class 2500 |       |        |        |   |
|------------|-----------|-------|--------|--|-----------|-------|--------|--------|-----------|-------|--------|--------|-----------|-------|--------|--------|-----------|-------|--------|--------|------------|-------|--------|--------|------------|-------|--------|--------|---|
| 2          | 4         | 5/8   | 5 1/4  |  | 4         | 5/8   | 5 1/2  | 6      | 8         | 5/8   | 5 3/4  | 6 3/4  | 8         | 5/8   | 6 1/2  | 7      | 8         | 7/8   | 8 1/2  | 8 3/4  | 8          | 7/8   | 8 1/2  | 8 3/4  | 8          | 1     | 9 3/4  | 10     |   |
| 3          | 4         | 5/8   | 5 3/4  |  | 4         | 5/8   | 6 1/2  | 7      | 8         | 3/4   | 7      | 8      | 8         | 3/4   | 7 3/4  | 8 1/4  | 8         | 7/8   | 9      | 9 1/4  | 8          | 1 1/8 | 10 1/4 | 10 1/2 | 8          | 1 1/4 | 12     | 12 1/4 |   |
| 4          | 8         | 5/8   | 6 1/4  |  | 8         | 5/8   | 6 1/2  | 7      | 8         | 3/4   | 7 1/4  | 8 1/4  | 8         | 7/8   | 9 1/4  | 9 1/2  | 8         | 1 1/8 | 10 3/4 | 11     | 8          | 1 1/4 | 11 3/4 | 12     | 8          | 1 1/2 | 14     | 14 1/2 |   |
| 6          | 8         | 3/4   | 7      |  | 8         | 3/4   | 7 3/4  | 8 1/4  | 12        | 3/4   | 8 3/4  | 9 3/4  | 12        | 1     | 12     | 12 1/2 | 12        | 1 1/8 | 14     | 14     | 12         | 1 3/8 | 16 1/2 | 16 3/4 | 8          | 2     | 20     | 20 1/2 |   |
| 8          | 8         | 3/4   | 8      |  | 8         | 3/4   | 9 1/4  | 9 3/4  | 12        | 7/8   | 10 1/2 | 11 1/4 | 12        | 1 1/8 | 14 1/4 | 14 1/2 | 12        | 1 3/8 | 16 3/4 | 17 1/4 | 12         | 1 5/8 | 19 1/2 | 20     | 12         | 2     | 23 1/4 | 24     |   |
| 10         | 12        | 7/8   | 9      |  | 12        | 7/8   | 10 1/2 | 11     | 16        | 1     | 12     | 12 3/4 | 16        | 1 1/4 | 16 3/4 | 17 1/4 | 16        | 1 3/8 | 18 3/4 | 19     | 12         | 1 7/8 | 23 1/4 | 23 1/2 | 12         | 2 1/2 | 29 1/2 | 30 1/4 |   |
| 12         | 12        | 7/8   | 10 1/2 |  | 12        | 7/8   | 11 3/4 | 12 1/4 | 16        | 1 1/8 | 13 3/4 | 14 3/4 | 20        | 1 1/4 | 17 3/4 | 18     | 20        | 1 3/8 | 21 1/2 | 21 3/4 | 16         | 2     | 27     | 27 1/2 | 12         | 2 3/4 | 33 1/2 | 34 1/2 |   |
| 14         | 12        | 1     | 12     |  | 12        | 1     | 12 1/4 | 13 1/4 | 20        | 1 1/8 | 16 1/4 | 16 1/4 | 20        | 1 3/8 | 20     | 20     | -         | -     | -      | -      | -          | -     | -      | -      | -          | -     | -      | -      | - |
| 16         | 16        | 1     | 13 1/4 |  | 16        | 1     | 13 1/4 | 14 1/2 | 20        | 1 1/4 | 16 3/4 | 16 3/4 | 20        | 1 1/2 | 22 1/2 | 22 1/2 | -         | -     | -      | -      | -          | -     | -      | -      | -          | -     | -      | -      | - |
| 18         | 16        | 1 1/8 | 14     |  | 16        | 1 1/8 | 14     | 15 1/4 | 24        | 1 1/4 | 19     | 19     | 20        | 1 5/8 | 24 1/2 | 24 1/2 | -         | -     | -      | -      | -          | -     | -      | -      | -          | -     | -      | -      | - |
| 20         | 20        | 1 1/8 | 14 1/4 |  | 20        | 1 1/8 | 14 1/2 | 15 1/2 | 24        | 1 1/4 | 20 1/4 | 21 1/4 | 24        | 1 5/8 | 26     | 27     | -         | -     | -      | -      | -          | -     | -      | -      | -          | -     | -      | -      | - |
| 24         | 20        | 1 1/4 | 16 1/2 |  | 20        | 1 1/4 | 16 3/4 | 16 3/4 | 24        | 1 1/2 | 22 1/2 | 22 1/2 | 24        | 1 7/8 | 30 1/2 | 30 1/2 | -         | -     | -      | -      | -          | -     | -      | -      | -          | -     | -      | -      | - |



## Installation Data

The valve is designed so that it is centralized between the flanges when the stud bolts are in position. The outside diameter of the body is equal to the bolt circle PCD minus the diameter of one bolt.

It is suitable for use in a variety of orientations. In horizontal lines the valve is installed with the pins vertical (i.e. with the pin retainers at the top). For sizes 6" and upwards the valve is tapped to take an eyebolt for lifting.

Arrows cast into the body indicate the normal direction of flow.

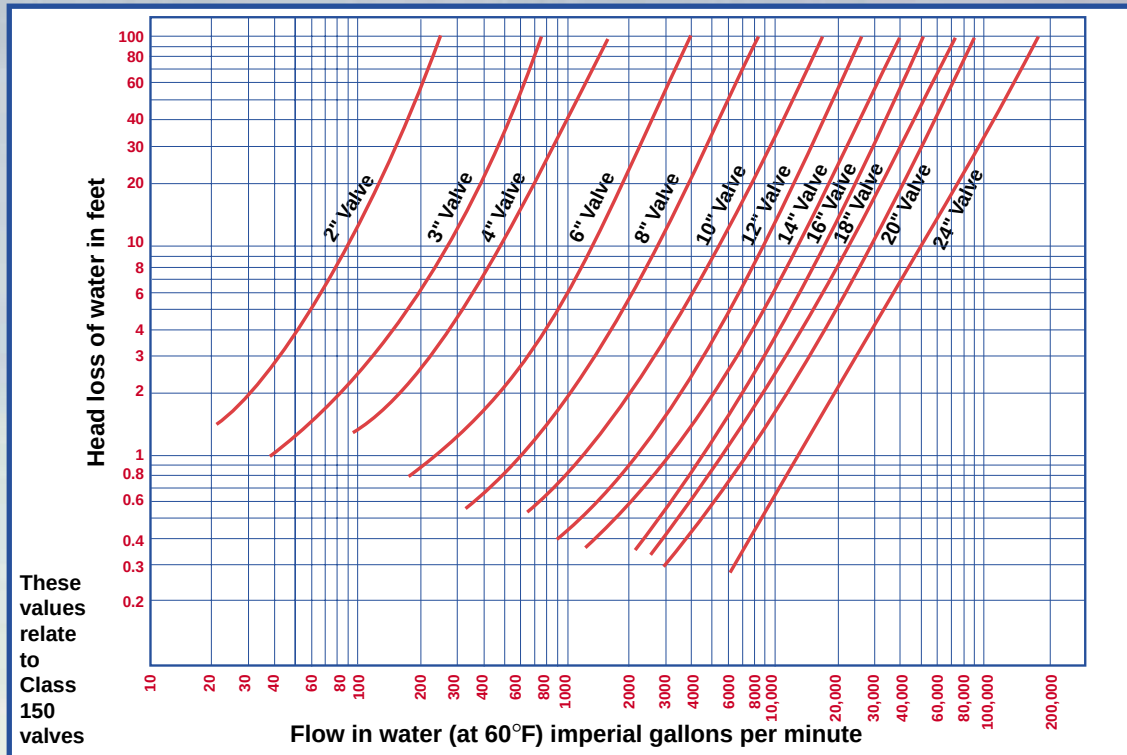
Before initial installation it is advisable to open the plates by hand since, if the valve is held in store for a period of time, the corrosion inhibitor may have caused the plates to stick to the body and line pressure may not be sufficient to break this seal.

If the bottom half of the studs are installed first they will serve as a platform to support the valve whilst the gaskets and other studs are put in. Similarly, if the valve is to be removed from the line, the top half of the studs should be removed and the bottom half slackened.



# Check Valves

## Pressure Loss Through Valves



- ◆ We will provide valves to match your performance requirements
- ◆ The curves shown above relate to valves provided with standard rated springs
- ◆ Higher value springs may be required to ensure faster reaction if very large changes in velocity occur
- ◆ It should be borne in mind that a media (liquid) velocity in the pipeline of 10 ft per second is considered to be desirable for normal applications

**Percent of Flow Area  
Sure Flow Check vs Standard Steel Pipe**

| Size | Pressure Class |      |      |      |      |      |
|------|----------------|------|------|------|------|------|
|      | 150            | 300  | 600  | 900  | 1500 | 2500 |
| 2"   | 36.7           | 36.7 | 44.0 | 54.4 | 54.4 | 36.1 |
| 3"   | 39.1           | 39.1 | 43.8 | 46.6 | 46.6 | 32.8 |
| 4"   | 41.4           | 41.4 | 45.8 | 47.7 | 47.7 | 29.5 |
| 6"   | 54.0           | 54.0 | 58.5 | 52.9 | 52.9 | 33.4 |
| 8"   | 56.7           | 56.7 | 57.8 | 58.6 | 58.6 | 32.7 |
| 10"  | 56.0           | 56.0 | 67.9 | 70.5 | 52.6 | 30.9 |
| 12"  | 61.8           | 61.8 | 63.0 | 71.8 | 62.0 | 31.2 |
| 14"  | 66.7           | 72.5 | 62.9 | 75.4 | 75.4 | —    |
| 16"  | 64.3           | 55.2 | 67.9 | 71.8 | 71.8 | —    |
| 18"  | 74.5           | 69.9 | 64.8 | 76.4 | 74.0 | —    |
| 20"  | 70.8           | 65.1 | 67.4 | 84.0 | 81.0 | —    |
| 24"  | 66.0           | 63.4 | 68.3 | 71.4 | 71.0 | —    |

**Approximate performance data for Sure Flow Check valves when used with water at 60° F with a nominal 10 ft/sec velocity**

| Valve Size | Flow (imperial gals/min) | Pressure drop psi | Head loss in feet | Approx. equiv. length of pipe in feet |
|------------|--------------------------|-------------------|-------------------|---------------------------------------|
| 2"         | 86                       | 4.49              | 10.32             | 30                                    |
| 3"         | 192                      | 2.97              | 6.83              | 34                                    |
| 4"         | 368                      | 2.30              | 5.29              | 35                                    |
| 6"         | 750                      | 1.47              | 3.38              | 37                                    |
| 8"         | 1292                     | 1.20              | 2.76              | 40                                    |
| 10"        | 2116                     | 0.93              | 2.14              | 41                                    |
| 12"        | 2920                     | 0.81              | 1.87              | 44                                    |
| 14"        | 3570                     | 0.74              | 1.70              | 45                                    |
| 16"        | 4750                     | 0.60              | 1.38              | 47                                    |
| 18"        | 6600                     | 0.55              | 1.27              | 47                                    |
| 20"        | 7500                     | 0.51              | 1.18              | 50                                    |
| 24"        | 12500                    | 0.42              | 0.97              | 52                                    |

## Seat Options

The right seat is critical for the correct functioning of the valve in its designated service. offers a wide range of seat options.

Metal to metal seats can be either the body/plate parent material or a hardfacing of other material, overlaid by deposition.

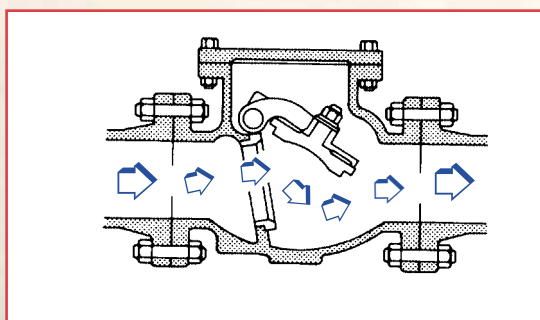
For soft seated valves standard elastomers are vulcanized for maximum security.

On high pressure class valves it is set into a groove for further safety.

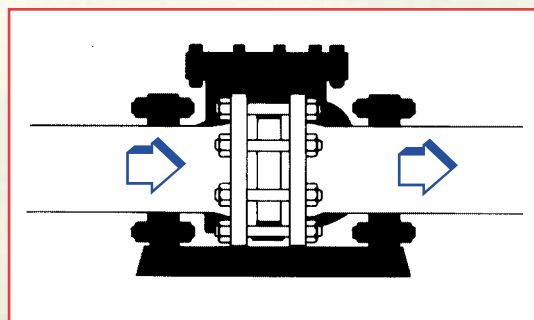


## Simple Installation

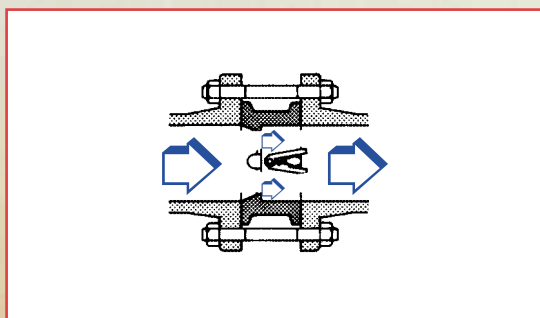
Simplicity and speed of installation are of paramount importance for the process or pipeline engineer. is simply installed between the flanges. A raised face (serrated or smooth finish), a RTJ, profile hub and butt weld ends can be provided. Only one set of studs is required as fits inside the bolt circle PCD. If the valve needs to be taken out of the line, only half the bolts need to be removed, reducing the amount of work to be done and providing a retained link for the two pipe flanges.



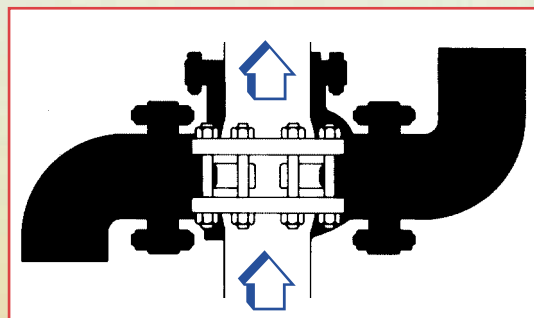
*Conventional swing check valve*



*Horizontal Flow - rib vertical*



*Sure Flow Check dual plate wafer check valve*



*Vertical Flow*

# Check Valves

## Quality From Start To Finish

### Quality Counts

Our quality starts with design and engineering, continues through development and testing, to manufacture and certification. Our technical and sales support services are vital ingredients in maintaining the overall quality of our products. The stringent quality control, inspection and testing procedures we apply are contained within the Documented Quality System.

*Manufactured to API 594  
and tested to API 598*

### Quality is manufactured not inspected

Our operatives are responsible for the quality and accuracy of their work and for ensuring that it is in accordance with the appropriate working drawings and specifications. Our Q.A. Department checks initial compliance throughout all aspects of manufacture from the receipt of materials to the end of the machining process.

Our Quality Assurance Department remains the ultimate authority in guaranteeing that materials, engineering and methods are in full accordance with agreed specifications and established procedures. Through a combination of these procedures we can confidently fulfil all requirements for material conformity and traceability and for full certification.

When you specify valves, you can be confident that not only are you making an investment in quality and reliability, but equally important, you know the service starts with the sale.

*All requirements for  
material conformity,  
traceability and certification  
met in full*





### Type CD125IS Wafer - Double Door - Dual Disc- Check Valve

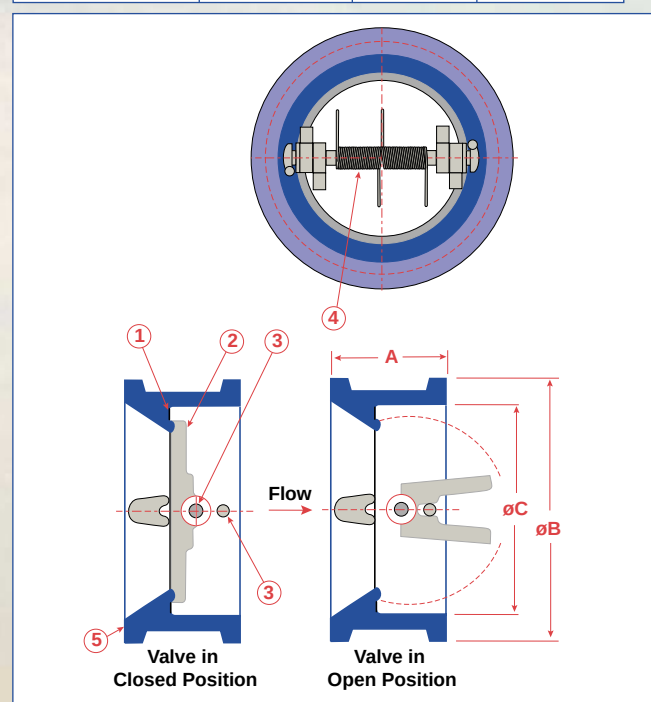


The **Eco (Economical) Dual Plate Check Valve** features ease of maintenance and exceptional flow characteristics.

- Body gives compact, one-piece wafer design
- Dual plate valves give maximum strength with minimum opening time
- Full contact seats maintain positive shut-off at minimum working pressure
- Torsion springs assist valve closure, preventing flow reversal
- Shaft is of extra heavy duty, corrosion resistant construction
- Shaft supports with large bearings act as stops to prevent over travel of plates
- Thrust washers reduce friction and wear of valve plate hinges.
- Model CD125IS with 316SS Discs

#### Operating Pressures and Temperatures

| Service | Size      | psi | Temp  |
|---------|-----------|-----|-------|
| WOG     | 2" - 12"  | 200 | 200°F |
| WOG     | 14" - 54" | 150 | 200°F |



#### Ordering Information

Example: Include full description

Size (Prefix)      Model #

**0400 - CD125IS**

4", Cast Iron Wafer Check Valve,  
BUNA-N Seat, 316SS Discs.

#### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification. Valves are designed to operate on vertical and horizontal flow, see note 1.

##### NOTE 1

**Horizontal Flow:** Valve must be installed with disc hinge pin in the vertical position, to insure proper operation.

#### Construction

| No | Name           | Material                      |
|----|----------------|-------------------------------|
| 1  | Seat/Seal      | Buna-N                        |
| 2  | Discs          | A351 Gr. CF8M Stainless Steel |
| 3  | Shaft          | A351 Gr. CF8M Stainless Steel |
| 4  | Torsion Spring | A351 Gr. CF8M Stainless Steel |
| 5  | Cast Body      | A126 Class B Cast Iron        |

#### Dimensional Data

| Size Inches | Model | A      | B        | C        | Shipping Weight (lbs) |
|-------------|-------|--------|----------|----------|-----------------------|
| 2           | 0200  | 2 1/8  | 4 1/8    | 2 3/8    | 6                     |
| 2 1/2       | 0250  | 2 1/8  | 4 7/8    | 2 5/16   | 7                     |
| 3           | 0300  | 2 1/4  | 5 3/8    | 3 3/4    | 10                    |
| 4           | 0400  | 2 1/2  | 6 3/8    | 4 1/2    | 14                    |
| 5           | 0500  | 2 3/4  | 7 11/16  | 5 11/16  | 19                    |
| 6           | 0600  | 3      | 8 3/4    | 6 5/8    | 25                    |
| 8           | 0800  | 3 3/4  | 11       | 8 5/8    | 42                    |
| 10          | 1000  | 4 1/4  | 13 3/8   | 10 3/4   | 72                    |
| 12          | 1200  | 5 5/8  | 16       | 12 5/8   | 116                   |
| 14          | 1400  | 7 1/4  | 16 5/8   | 13 11/16 | 182                   |
| 16          | 1600  | 7 1/2  | 20 1/2   | 16 11/16 | 243                   |
| 18          | 1800  | 8      | 21 5/8   | 18       | 334                   |
| 20          | 2000  | 8 3/8  | 23 7/8   | 20 1/4   | 430                   |
| 24          | 2400  | 8 3/4  | 28 1/4   | 23 3/4   | 582                   |
| 26          | 2600  | 11 1/4 | 30 1/2   | 24 3/4   | 1,128                 |
| 28          | 2800  | 12 5/8 | 32 3/4   | 27 5/8   | 1,293                 |
| 30          | 3000  | 12     | 34 13/16 | 30 1/8   | 1,356                 |
| 32          | 3200  | 14 1/2 | 37       | 30 11/16 | 1,746                 |
| 36          | 3600  | 14 1/2 | 41 1/4   | 34       | 2,125                 |
| 40          | 4000  | 16     | 45 3/4   | 38 13/16 | 3,011                 |
| 42          | 4200  | 17     | 48       | 41 13/16 | 3,795                 |
| 48          | 4800  | 20 5/8 | 54 1/2   | 47       | 5,566                 |
| 54          | 5400  | 21 1/4 | 60 7/8   | 50 1/2   | 6,831                 |

# Elastic Swing Check Valves

Ductile Iron - Flanged

## Type CXF125IV Flanged Elastic Swing Check Valve



The **Elastic Swing Check Valve** is suitable for municipal and industrial applications.

It is standard with a ductile iron body with flanges which comply with ANSI B16.1; Class 125. The internal body is epoxy coated. Special coatings are available upon request. The one-piece molded disc has a steel reinforced insert to insure closure. Plus, while in the open position, it will allow 100% uninterrupted flow. The one-piece disc hinge and disc can be repaired without removal of the valve from the line.

The elastic check can be installed in a vertical or horizontal pipeline.

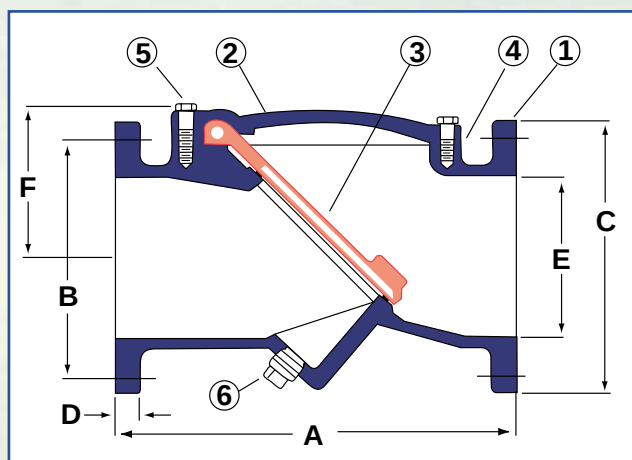
### Construction

| No | Name        | Material                            |
|----|-------------|-------------------------------------|
| 1  | Cast Body   | A536 60-45-12                       |
| 2  | Cover       | A536 60-45-12                       |
| 3  | Disc        | BUNA w/steel & fabric reinforcement |
| 4  | Gasket      | Lexide NK-511 (non asbestos)        |
| 5  | Cover Bolts | Alloy steel SAE Grade S             |
| 6  | Drain       | A536 60-45-12                       |

\*Face to face: ANSI B16.10 Class 125

### Operating Pressures and Temperatures

| Service | Size      | psi | Temp  |
|---------|-----------|-----|-------|
| WOG     | 2" - 12"  | 285 | 150°F |
| WOG     | 14" - 24" | 150 | 150°F |



### Dimensional Data

| Size Inches | Model        | A        | B      | C      | D       | E     | F      | Drain Size | Shipping Weight (lbs) |
|-------------|--------------|----------|--------|--------|---------|-------|--------|------------|-----------------------|
| 2           | 0200CXF125IV | 8        | 4 3/4  | 6      | 5/8     | 2     | 3 3/8  | 3/4        | 30                    |
| 2 1/2       | 0250CXF125IV | 8 1/2    | 5 1/2  | 7      | 11/16   | 2 1/2 | 3 3/8  | 3/4        | 38                    |
| 3           | 0300CXF125IV | 9 1/2    | 6      | 7 1/2  | 3/4     | 3     | 3 7/8  | 3/4        | 46                    |
| 4           | 0400CXF125IV | 11 1/2   | 7 1/2  | 9      | 15/16   | 4     | 4 5/8  | 1          | 70                    |
| 5           | 0500CXF125IV | 13 3/4   | 8 1/2  | 10     | 15/16   | 5     | 5 1/8  | 1          | 100                   |
| 6           | 0600CXF125IV | 15       | 9 1/2  | 11     | 1       | 6     | 5 7/8  | 1 1/4      | 115                   |
| 8           | 0800CXF125IV | 19 1/2   | 11 3/4 | 13 1/2 | 1 1/8   | 8     | 7 5/8  | 1 1/2      | 250                   |
| 10          | 1000CXF125IV | 24 1/2   | 14 1/4 | 16     | 1 3/16  | 10    | 9 7/8  | 2 1/2      | 525                   |
| 12          | 1200CXF125IV | 27 1/2   | 17     | 19     | 1 1/4   | 12    | 11 1/2 | 2 1/2      | 710                   |
| 14          | 1400CXF125IV | 31       | 18 3/4 | 21     | 1 3/8   | 14    | 13 1/2 | 2 1/2      | 860                   |
| 16          | 1600CXF125IV | 31 15/16 | 21 1/4 | 23 1/2 | 1 7/16  | 16    | 15 1/4 | 2 1/2      | 1090                  |
| 18          | 1800CXF125IV | 35 15/16 | 22 3/4 | 25     | 1 9/16  | 18    | 17 1/4 | 3          | 1450                  |
| 20          | 2000CXF125IV | 39 15/16 | 25     | 27 1/2 | 1 11/16 | 20    | 19 1/4 | 3          | 1575                  |
| 24          | 2400CXF125IV | 47 15/16 | 29 1/2 | 32     | 1 7/8   | 24    | 22 3/4 | 3          | 2600                  |

### Ordering Information

Example: Include full description

Size (Prefix)      Model #

**0400 - CXF125IV**

4", Ductile Iron Flanged Check Valve,  
BUNA-N w/steel & fabric reinforcement



### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

### Type CSF125IB Flanged Horizontal Swing Check Valve



The **Sure Flow Horizontal Swing Check Valve** has a cast iron body, cover and disc. The valve is provided with a bronze seat ring and bronze disc ring.

Bronze being softer than a cast iron facing, it offers a more positive sealing effect than competitors' standard iron facing. At the same time, a bronze seat ring and disc ring is very versatile in its stability to temperature and various commonly handled materials.

Conforming to MSS SP-71

End Flange Dimensions: ANSI B16.1

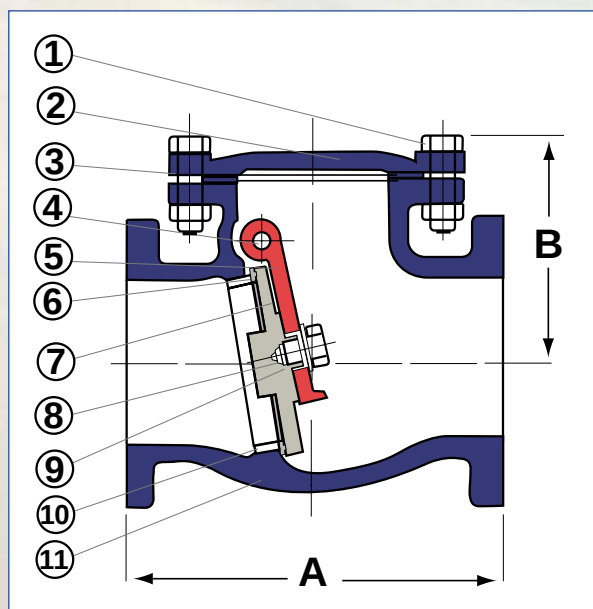
Face to Face Dimensions: ANSI B16.10.

#### Construction

| No | Name             | Material        |
|----|------------------|-----------------|
| 1  | Cover Bolt & Nut | Steel           |
| 2  | Cover            | A126 Class B    |
| 3  | Gasket           | Graphite        |
| 4  | Hanger Pin       | Stainless Steel |
| 5  | Hanger           | A126 Class B    |
| 6  | Disc Ring        | B62             |
| 7  | Disc             | A126 Class B    |
| 8  | Disc Washer      | Steel           |
| 9  | Disc Bolt        | Steel           |
| 10 | Seat Ring        | B62             |
| 11 | Cast Body        | A126 Class B    |

#### Operating Pressures and Temperatures

| Service | Size      | psi | Temp  |
|---------|-----------|-----|-------|
| WOG     | 2" - 12"  | 200 | 200°F |
| WOG     | 14" - 20" | 150 | 200°F |



#### Dimensional Data

| Size Inches | Model        | A      | B      | Shipping Weight (lbs) |
|-------------|--------------|--------|--------|-----------------------|
| 2           | 0200CSF125IB | 8      | 5 1/8  | 20                    |
| 2 1/2       | 0250CSF125IB | 8 1/2  | 5 5/8  | 25                    |
| 3           | 0300CSF125IB | 9 1/2  | 6 1/8  | 30                    |
| 4           | 0400CSF125IB | 11 1/2 | 7 1/8  | 70                    |
| 5           | 0500CSF125IB | 13     | 9      | 88                    |
| 6           | 0600CSF125IB | 14     | 9 1/4  | 98                    |
| 8           | 0800CSF125IB | 19 1/2 | 10 7/8 | 130                   |
| 10          | 1000CSF125IB | 24 1/2 | 12 1/4 | 300                   |
| 12          | 1200CSF125IB | 27 1/2 | 13 3/4 | 410                   |
| 14          | 1400CSF125IB | 31     | 18 1/4 | 496                   |
| 16          | 1600CSF125IB | 30 1/4 | 19 1/2 | 660                   |
| 18          | 1800CSF125IB | 33     | 21     | 825                   |
| 20          | 2000CSF125IB | 36     | 23 1/2 | 981                   |

#### Ordering Information

Example: Include full description

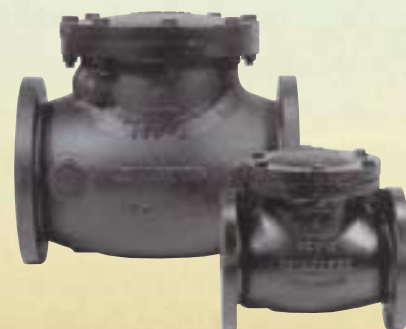
Size (Prefix)      Model #

**0400 - CSF125IB**

4", Cast Iron Flanged Horizontal Swing Check Valve, Bronze Seat Ring

#### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.





# Check Valves

## Cast Iron - Swing Disc

### Type CSW125IS Wafer Swing Check Valve ANSI 125/150 Class



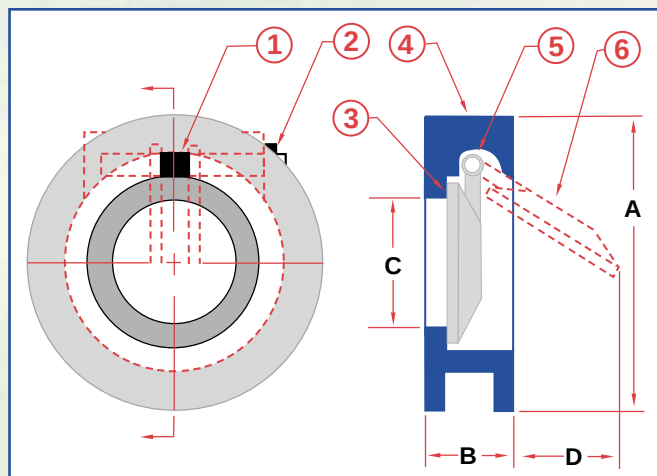
The **Wafer Swing Check Valve** incorporates several features distinguishing it from conventional check valves for silent, fast, non slam operation. The most prominent of these is the accurately machined disc and its special quick closing action. Spring loading of the 316SS disc assures instantaneous closure to reversing flow, preventing build-up of momentum, the cause of damaging water hammer. The hinge pin design assures free movement of the disc and eliminates seizure under extreme conditions. Soft seat inserts are standard for positive sealing of hard-to-hold solvents and fluids. Lifting eye hook on 8" to 12" valves.

#### Construction

| No | Name           | Material            |
|----|----------------|---------------------|
| 1  | Torsion Spring | 316 Stainless Steel |
| 2  | Plug           | ASTM A126 Class B   |
| 3  | O-Ring Seal    | BUNA-N              |
| 4  | Cast Body      | ASTM A126 Class B   |
| 5  | Shaft          | 316 Stainless Steel |
| 6  | Disc           | 316 Stainless Steel |

#### Operating Pressures and Temperatures

| Service | Size     | psi | Temp  |
|---------|----------|-----|-------|
| WOG     | 2" - 12" | 200 | 100°F |



#### Dimensional Data

| Size Inches | Model        | A      | B     | C     | D      | Shipping Weight (lbs) |
|-------------|--------------|--------|-------|-------|--------|-----------------------|
| 2           | 0200CSW125IS | 4 1/8  | 2 1/4 | 1 1/2 | 7/8    | 10                    |
| 2 1/2       | 0250CSW125IS | 4 7/8  | 2 3/8 | 1 3/4 | 1      | 12                    |
| 3           | 0300CSW125IS | 5 3/8  | 2 5/8 | 2 1/8 | 1 1/2  | 17                    |
| 4           | 0400CSW125IS | 6 7/8  | 2 1/4 | 3 1/8 | 2 1/4  | 26                    |
| 5           | 0500CSW125IS | 7 3/4  | 2 1/2 | 3 7/8 | 2 1/2  | 36                    |
| 6           | 0600CSW125IS | 8 3/4  | 2 3/4 | 4 3/4 | 2 3/4  | 53                    |
| 8           | 0800CSW125IS | 11     | 2 7/8 | 6 1/2 | 4      | 72                    |
| 10          | 1000CSW125IS | 13 3/8 | 3 1/8 | 7 3/4 | 7 3/16 | 115                   |
| 12          | 1200CSW125IS | 16 1/8 | 3 3/8 | 9 1/2 | 9      | 168                   |

#### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

Valves are designed to operate on vertical and horizontal flow, see note 1.

#### NOTE 1

The wafer check valve is designed for installation between two pipe flanges in horizontal or vertical pipelines (in the latter case upward flow is preferred).



#### Ordering Information

Example: Include full description

Size (Prefix) Model #

**0400 - CSW125IS**

4", Cast Iron Wafer Swing Check Valve,  
BUNA-N Seat, 316SS Disc

### Type CSW150SSMIR Wafer Swing Check Valve ANSI 150 Class



The **Wafer Swing Check Valve** incorporates several features distinguishing it from conventional check valves for silent, fast, non slam operation. The most prominent of these is the accurately machined disc and its special quick closing action. Spring loading of the 316SS disc assures instantaneous closure to reversing flow, preventing build-up of momentum, the cause of damaging water hammer. The hinge pin design assures free movement of the disc and eliminates seizure under extreme conditions. Metal seat is standard for sealing. Lifting eye hook on 8" to 12" valves.

#### Construction

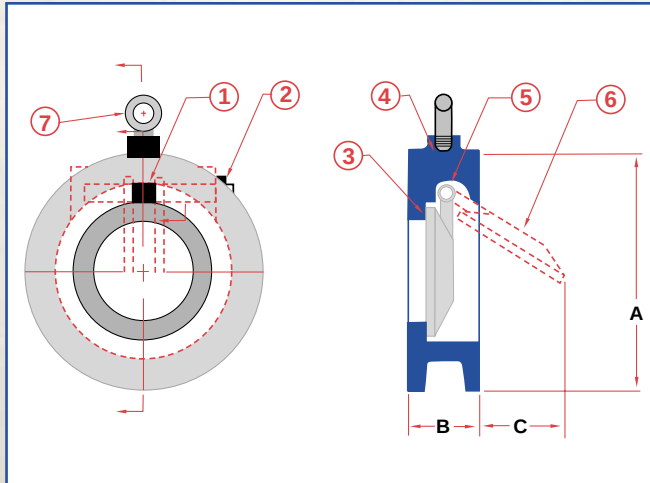
| No | Name           | Material                 |
|----|----------------|--------------------------|
| 1  | Torsion Spring | Inconel X 316 SS         |
| 2  | Bolt           | 316 SS                   |
| 3  | Seat           | CF8M                     |
| 4  | Cast Body      | CF8M                     |
| 5  | Shaft          | 316 SS                   |
| 6  | Disc           | CF8M                     |
| 7  | Eye Bolt       | Carbon Steel Zinc Plated |

#### Operating Pressures and Temperatures

| Service | Size     | psi | Temp  |
|---------|----------|-----|-------|
| WOG     | 2" - 12" | 275 | 100°F |

#### Dimensional Data

| Size Inches | Model        | A      | B     | C      | Shipping Weight (lbs) |
|-------------|--------------|--------|-------|--------|-----------------------|
| 2           | 0200CSW150SS | 4 1/8  | 2 3/8 | 1 1/8  | 8                     |
| 3           | 0300CSW150SS | 5 3/8  | 2 7/8 | 1 1/2  | 16                    |
| 4           | 0400CSW150SS | 6 7/8  | 2 7/8 | 2 3/8  | 26                    |
| 6           | 0600CSW150SS | 8 3/4  | 3 7/8 | 3 3/4  | 55                    |
| 8           | 0800CSW150SS | 11     | 5     | 4      | 103                   |
| 10          | 1000CSW150SS | 13 3/8 | 5 3/4 | 5 7/16 | 143                   |
| 12          | 1200CSW150SS | 16 1/8 | 7 1/8 | 5 7/8  | 252                   |



#### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

Valves are designed to operate on vertical and horizontal flow, see note 1.

#### NOTE 1

The wafer check valve is designed for installation between two pipe flanges in horizontal or vertical pipelines (in the latter case upward flow is preferred).

\*Please specify metal or viton seal.



#### Ordering Information

Example: Include full description

Size (Prefix) Model #

**0400 - CSW150SSMIR**

4", 316SS Wafer Swing Check Valve,  
Metal Seat, 316SS Disc

# Silent Check Valves

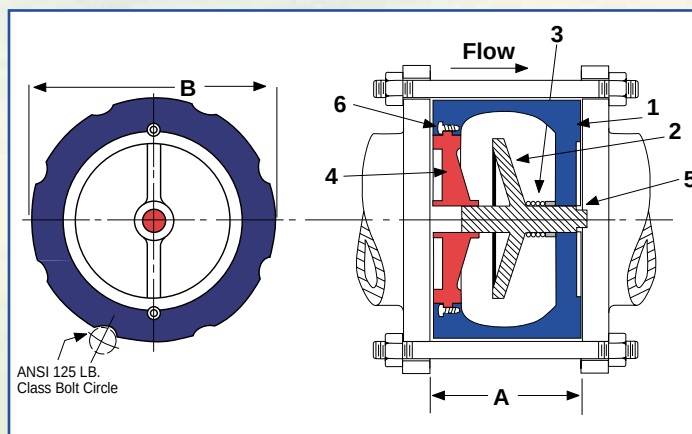
## Cast Iron - Wafer

### Type CW125ISC - Cast Iron Flat Face



#### Operating Pressures and Temperatures

| Service | Size     | psi | Temp. |
|---------|----------|-----|-------|
| Liquid  | 2" - 12" | 200 | 180°F |



#### Ordering Information

Example: Include full description

Model #      Type & Material

**0400 - CW125ISC**

4", Flat Face Wafer Check Valve Silent, Stainless Steel Plug  
Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" size and larger.

**Sure Flow Wafer Check Valves** are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 12"

#### Service Applications

- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

#### Construction

| No | Name      | Material        |
|----|-----------|-----------------|
| 1  | Cast Body | A126 Class B    |
| 2  | Plug      | A351 Gr. CF8M   |
| 3  | Spring    | Stainless Steel |
| 4  | Seat      | A351 Gr. CF8M   |
| 5  | Bushing   | Stainless Steel |
| 6  | Screw     | Stainless Steel |

#### Dimensional Data

| Size  | Model         | A      | B      | CV   | Shipping Weight (lbs) |
|-------|---------------|--------|--------|------|-----------------------|
| 2     | 0200CW125ISC  | 2 5/8  | 4      | 40   | 7                     |
| 2 1/2 | 0250CW125ISC  | 2 7/8  | 4 3/4  | 60   | 9                     |
| 3     | 0300CW125ISC  | 3 1/8  | 5 1/4  | 85   | 15                    |
| 4     | 0400CW125ISC  | 4      | 6 3/4  | 150  | 25                    |
| 5     | 0500CW125ISC  | 4 5/8  | 7 5/8  | 230  | 32                    |
| 6     | 0600CW125ISC  | 5 1/2  | 8 5/8  | 340  | 56                    |
| 8     | 0800CW125ISC  | 6 1/2  | 10 3/4 | 600  | 100                   |
| 10    | 1000CW125ISC  | 8 1/4  | 13 1/8 | 900  | 140                   |
| 12    | 1200CW125ISC* | 11 1/4 | 19     | 1850 | 370*                  |

\*Special full lug pattern

#### Notes

**Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.**

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.



# Silent Check Valves

## Cast Steel & Cast Stainless Steel Wafer

### Type CW150C - Cast Steel & CW150SS Cast Stainless Steel



**Sure Flow Wafer Check Valves** are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 24"

### Service Applications

- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

### Operating Pressures and Temperatures

| Material        | Service | Size     | psi | Temp. |
|-----------------|---------|----------|-----|-------|
| Cast Steel      | Liquid  | 2" - 10" | 285 | 100°F |
| Stainless Steel | Liquid  | 2" - 10" | 275 | 100°F |

### Construction - Cast Steel

| No | Name      | Material        |
|----|-----------|-----------------|
| 1  | Cast Body | A216 Gr. WCB    |
| 2  | Plug      | A351 Gr. CF8M   |
| 3  | Spring    | Stainless Steel |
| 4  | Seat      | A351 Gr. CF8M   |
| 5  | Bushing   | Stainless Steel |
| 6  | Screw     | Stainless Steel |

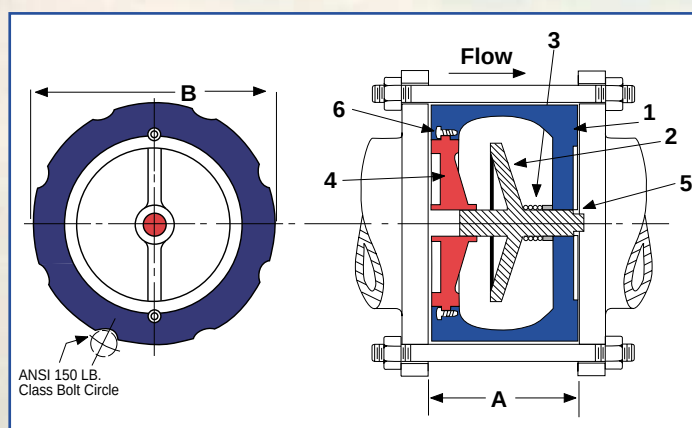
### Construction - Cast Stainless Steel

All ASTM Spec A351 Grade CF8M Stainless Steel.

### Dimensional Data

| Size  | Model     | A     | B      | CV   | Shipping Weight (lbs) |
|-------|-----------|-------|--------|------|-----------------------|
| 2     | 0200CW150 | 2 5/8 | 4 1/4  | 50   | 7                     |
| 2 1/2 | 0250CW150 | 2 7/8 | 5      | 72   | 9                     |
| 3     | 0300CW150 | 3 1/8 | 5 3/4  | 92   | 15                    |
| 4     | 0400CW150 | 4     | 7      | 180  | 25                    |
| 5     | 0500CW150 | 4 5/8 | 8 3/8  | 276  | 32                    |
| 6     | 0600CW150 | 5 1/2 | 9 3/4  | 408  | 56                    |
| 8     | 0800CW150 | 6 1/2 | 13 1/2 | 720  | 100                   |
| 10    | 1000CW150 | 8 1/4 | 16     | 1000 | 140                   |

\* Also Available in size 12", 14", 16", 18", 20" and 24".



### Ordering Information

Example: Include full description

**Model #      Type & Material**

**0400 - CW150SS150**

4", Raised Face Wafer Silent Check Valve,  
All 316SS Construction

Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" size and larger.

We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.

### Notes

**Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.**

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



# Globe or Silent Check Valves

Cast Iron - Flanged

## Type CF125ISC Cast Iron



### Operating Pressures and Temperatures

| Service | Size      | psi | Temp. |
|---------|-----------|-----|-------|
| Liquid  | 2" - 16"  | 200 | 150°F |
| Liquid  | 14" - 24" | 150 | 150°F |

**Sure Flow Globe Style Check Valves** are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 24"

### Service Applications

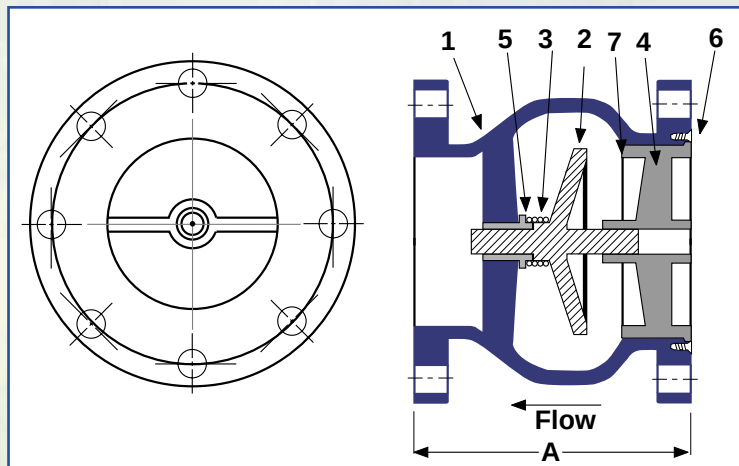
- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

### Construction

| No | Name      | Material          |
|----|-----------|-------------------|
| 1  | Body      | A126 Class B      |
| 2  | Plug      | Stainless Steel   |
| 3  | Spring    | Stainless Steel   |
| 4  | Seat      | Stainless Steel   |
| 5  | Bushing   | Stainless Steel   |
| 6  | Screw     | Stainless Steel   |
| 7  | Quad Ring | BUNA-N (Optional) |

### Dimensional Data

| Size  | Model        | A<br>316SS Plug<br>CF125ISC | CV   | Shipping<br>Weight<br>(lbs) |
|-------|--------------|-----------------------------|------|-----------------------------|
| 2     | 0200CF125ISC | 6 1/4                       | 40   | 30                          |
| 2 1/2 | 0250CF125ISC | 7                           | 100  | 34                          |
| 3     | 0300CF125ISC | 7 1/2                       | 130  | 50                          |
| 4     | 0400CF125ISC | 8 1/2                       | 225  | 75                          |
| 5     | 0500CF125ISC | 9 1/2                       | 340  | 100                         |
| 6     | 0600CF125ISC | 10 1/2                      | 540  | 130                         |
| 8     | 0800CF125ISC | 13 1/2                      | 830  | 240                         |
| 10    | 1000CF125ISC | 16 1/4                      | 1370 | 360                         |
| 12    | 1200CF125ISC | 20 1/4                      | 1980 | 600                         |
| 14    | 1400CF125ISC | 22 3/4                      | 2300 | 710                         |
| 16    | 1600CF125ISC | 24 3/4                      | 3200 | 810                         |
| 18    | 1800CF125ISC | 22 1/2                      | 6200 | 910                         |
| 20    | 2000CF125ISC | 24                          | 6800 | 1140                        |
| 24    | 2400CF125ISC | 24                          | 9800 | 2600                        |



### Ordering Information

Example: Include full description

Size      Model  
(Prefix)      #

**0400 - CF125ISC**

4", Flat Face Flanged Cast Iron Silent  
Check Valve with 316SS Disc

Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" sizes and larger.

We recommend that the valves be installed  
7 to 10 pipe lengths away from the turbulence.

### Notes

**Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.**

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



# Silent Check Valves

Cast Steel, Cast Stainless Steel - Flanged

## Type CF150C Cast Steel, Type CF150SSC Stainless Steel



**Sure Flow Globe Style Check Valves** are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 12"

### Service Applications

- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

### Construction - Cast Steel

| No | Name    | Material        |
|----|---------|-----------------|
| 1  | Body    | SA216 Gr. WCB   |
| 2  | Plug    | Stainless Steel |
| 3  | Spring  | Stainless Steel |
| 4  | Seat    | Stainless Steel |
| 5  | Bushing | Stainless Steel |
| 6  | Screw   | Stainless Steel |

### Operating Pressures and Temperatures

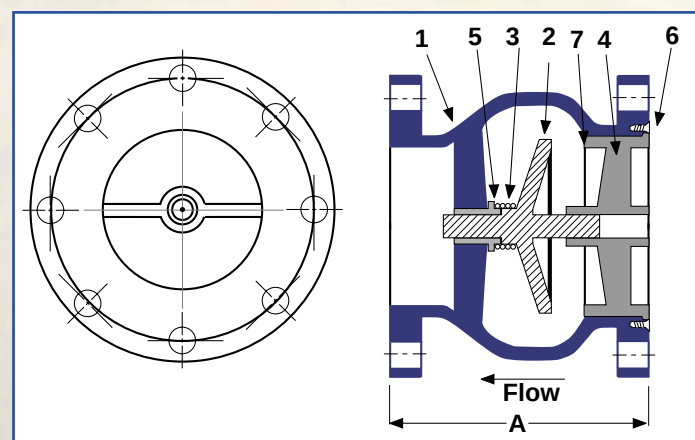
| Material        | Service | Size     | psi | Temp. |
|-----------------|---------|----------|-----|-------|
| Cast Steel      | Liquid  | 2" - 12" | 285 | 100°F |
| Stainless Steel | Liquid  | 2" - 12" | 275 | 100°F |

### Construction - Cast Stainless Steel

All ASTM Spec A351 Grade CF8M Stainless Steel.

### Dimensional Data

| Size  | Model     | A      | CV   | Shipping Weight (lbs) |
|-------|-----------|--------|------|-----------------------|
| 2     | 0200CF150 | 6 1/4  | 55   | 30                    |
| 2 1/2 | 0250CF150 | 7      | 90   | 41                    |
| 3     | 0300CF150 | 7 5/8  | 140  | 56                    |
| 4     | 0400CF150 | 8 1/2  | 265  | 90                    |
| 6     | 0600CF150 | 10 1/2 | 610  | 150                   |
| 8     | 0800CF150 | 12     | 1000 | 260                   |
| 10    | 1000CF150 | 14     | 1700 | 410                   |
| 12    | 1200CF150 | 18     | 2400 | 720                   |



### Ordering Information

Example: Include full description

Size      Model  
(Prefix)    #  
**0400 - CF150C**

4", 150# Raised Face Cast Steel - Silent Check Valve

Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" size and larger.

*We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.*

### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



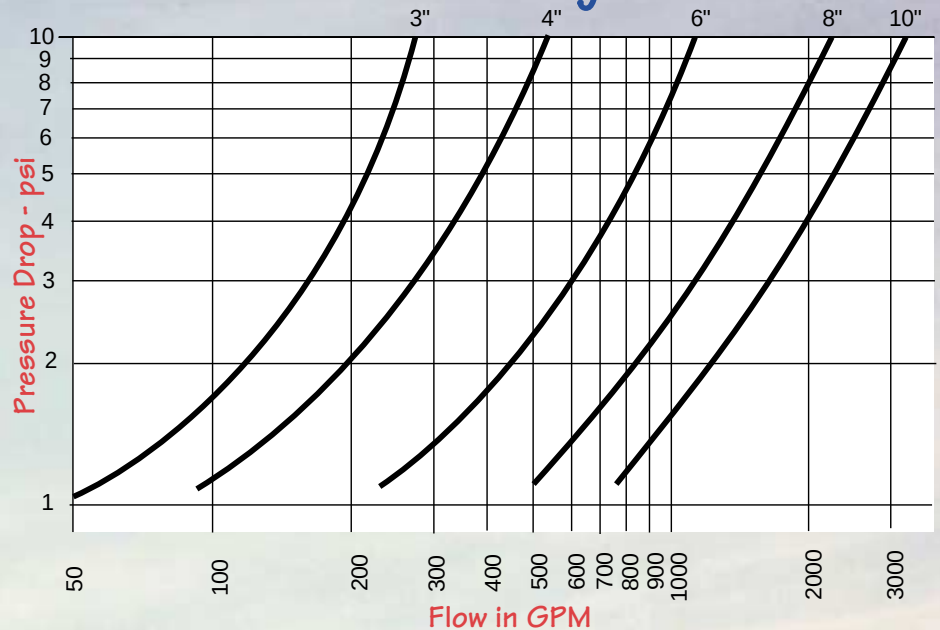


# Silent Check Valves

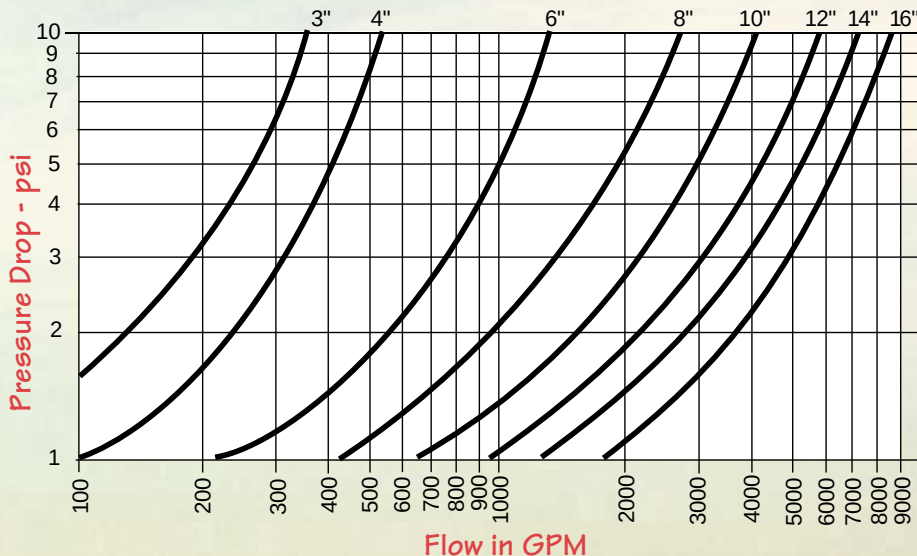
Pressure Drop in Water

## Silent Check Valves

### Wafer Style



### Globe Style



- The above curves are based on the flow of clean water at ambient temperature.
- Preferred piping standards recommend placing check valves 5 to 10 pipe diameters from any turbulence producing device, i.e. pumps, elbows, etc.
- Maximum recommended flow velocity of 10 ft./sec.

*We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.*

# Elastic Swing Foot Valves

Ductile Iron - Flanged

## Type FVCEXF-125 Flanged Elastic Swing Foot Valve



The Elastic Swing Foot Valve is suitable for municipal and industrial applications.

It is standard with a ductile iron body with flanges which comply with ANSI B16.1; Class 125 or 250. The internal body is epoxy coated. Special coatings are available upon request. The one-piece molded disc has a steel reinforced insert to insure closure. Plus, while in the open position, it will allow 100% uninterrupted flow. The one-piece disc hinge and flapper can be repaired without removal of the valve from the line. The Elastic Swing Foot Valve is designed for continuous flow applications and is not recommended for reciprocating pumps.

The elastic swing foot valve can be installed in a vertical or horizontal pipeline.

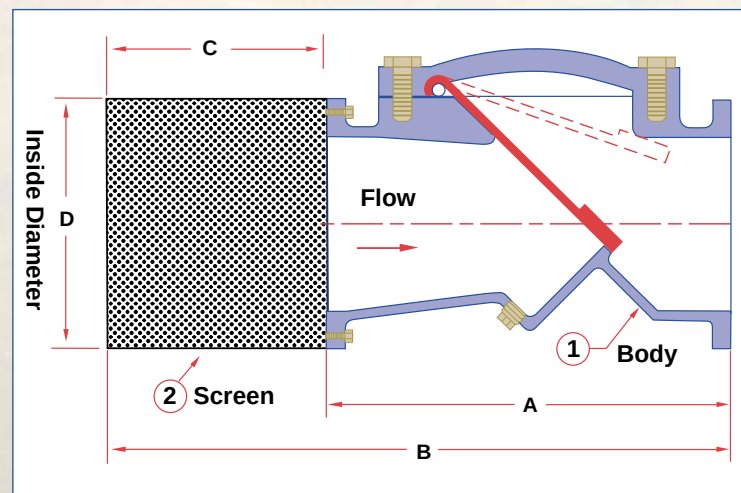
The Elastic Swing Foot Valve body material is Ductile Iron ASTM SA536 60-45-12 with a screen of 1/8" perforated Stainless Steel.

### Operating Pressures and Temperatures

| Service | Size      | psi | Temp  |
|---------|-----------|-----|-------|
| WOG     | 2" - 12"  | 200 | 150°F |
| WOG     | 14" - 24" | 150 | 150°F |

### Dimensional Data

| Size   |        | A        | B       | C  | D      | CV     | Shipping Weight lbs |
|--------|--------|----------|---------|----|--------|--------|---------------------|
| Inches | Prefix |          |         |    |        |        |                     |
| 2      | 0200   | 8        | 10 1/2  | 3  | 6 1/8  | 150    | 36                  |
| 2 1/2  | 0250   | 8 1/2    | 11      | 3  | 7 1/8  | 305    | 46                  |
| 3      | 0300   | 9 1/2    | 12      | 3  | 7 5/8  | 600    | 55                  |
| 4      | 0400   | 11 1/2   | 14      | 3  | 9 1/8  | 955    | 84                  |
| 5      | 0500   | 13 3/4   | 16 3/4  | 4  | 10 1/8 | 1400   | 120                 |
| 6      | 0600   | 15       | 19 1/2  | 5  | 11 1/8 | 2800   | 138                 |
| 8      | 0800   | 19 1/2   | 25      | 6  | 13 5/8 | 5000   | 300                 |
| 10     | 1000   | 24 1/2   | 31      | 7  | 16 1/8 | 8000   | 630                 |
| 12     | 1200   | 27 1/2   | 35      | 8  | 19 1/8 | 9000   | 852                 |
| 14     | 1400   | 31       | 39 1/2  | 9  | 21 1/8 | 10,000 | 1,032               |
| 16     | 1600   | 31 15/16 | 41 7/16 | 10 | 23 5/8 | 15,000 | 1,308               |
| 18     | 1800   | 35 15/16 | 47 7/16 | 12 | 25 1/8 | 18,000 | 1,740               |
| 20     | 2000   | 39 15/16 | 55 7/16 | 16 | 27 5/8 | 28,000 | 1,890               |
| 24     | 2400   | 47 15/16 | 65 7/16 | 18 | 32 1/8 | 40,000 | 3,120               |



### Ordering Information

Example: Include full description

Size (Prefix) Model #

**0400 - FVCEXF-125**

4" Ductile Iron Flanged Elastic Swing Foot Valve, Buna-N w/Steel Disc

### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi.

#### NOTE 1

**Horizontal Flow:** Valve must be installed with cover on top, to insure proper operation.



# Elastic Hinge Foot Valves

Cast Steel, Cast Stainless Steel - Flanged

Type FVRF-150CC Carbon Steel Foot Valves and

Type FVRF-150SS Stainless Steel Flanged Foot Valves



The Elastic Hinge Foot Valve is suitable for municipal and industrial applications.

It is available in Threaded style in sizes from one inch to four inches and in Flanged style in sizes from one inch to twelve inches. Units are supplied standard with Buna seals and 316SS flappers.

The elastic hinge design provides the highest flow factor "Cv" of all the foot valves available from Sure Flow. The Elastic Hinge Foot Valve is seatless, full port, and features a double disc check valve - the next generation of continuous flow internal design that offers high pressure rating and improved flow characteristics.

Standard screen is 0.125" perf. (40% open) with a 6:1 open area ratio. The screen material is 316SS. Other screen openings are available upon request.

**NOTE:** Foot Valve will operate in either the horizontal or vertical position.

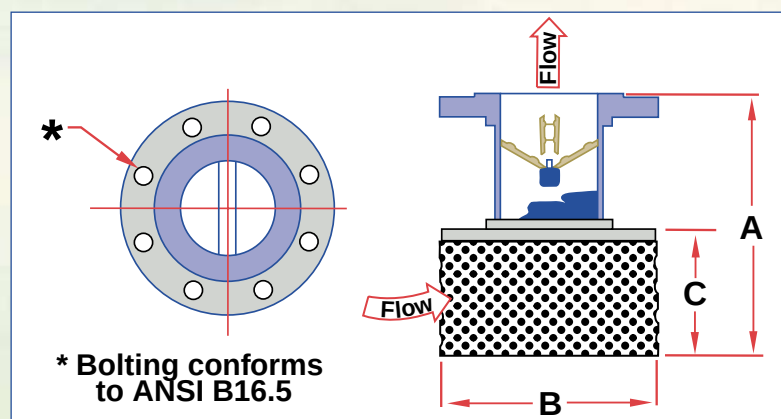
## Construction

| Model      | Body / Internals Materials |
|------------|----------------------------|
| FVRF-150CC | Carbon Steel/316SS         |
| FVRF-150SS | 316SS                      |

Standard hardware is 316 SS  
Standard seal material is Buna-N

## Operating Pressures and Temperatures

| Type | Size     | psi | Temp  |
|------|----------|-----|-------|
| WOG  | 1" - 12" | 200 | 150°F |



## Dimensional Data

| Size   |        | A      | B      | C  | Shipping Weight lbs | CV   |
|--------|--------|--------|--------|----|---------------------|------|
| Inches | Prefix |        |        |    |                     |      |
| 1      | 0100   | 8 1/4  | 1 3/4  | 5  | 4                   | 37   |
| 1 1/4  | 0125   | 8 1/4  | 2      | 5  | 5                   | 65   |
| 1 1/2  | 0150   | 9 3/4  | 2 3/8  | 6  | 7                   | 91   |
| 2      | 0200   | 10 3/4 | 2 7/8  | 7  | 10                  | 160  |
| 2 1/2  | 0250   | 13 1/8 | 3 3/8  | 8  | 11                  | 410  |
| 3      | 0300   | 15 1/2 | 4 1/8  | 10 | 15                  | 620  |
| 4      | 0400   | 13     | 9      | 8  | 42                  | 965  |
| 5      | 0500   | 15 1/2 | 10     | 10 | 49                  | 1510 |
| 6      | 0600   | 17 1/2 | 12 1/2 | 11 | 72                  | 3025 |
| 8      | 0800   | 24 1/2 | 15     | 16 | 115                 | 5195 |
| 10     | 1000   | 31 1/2 | 17 1/2 | 21 | 168                 | 7345 |
| 12     | 1200   | 38 1/2 | 20 1/2 | 26 | 276                 | 9450 |

## Ordering Information

Example: Include full description

Size (Prefix)      Model #

0400 - FVRF-150CC

4" Carbon Steel Flanged Foot Valve, Buna-N Seal w/Stainless Steel Disc. Consult factory for optional construction materials. Resilient seating of EPDM, and Teflon.

## Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi.





# Elastic Hinge Foot Valves

Cast Steel, Cast Stainless Steel - Threaded



## Type FVRM-150CC Carbon Steel and FVRM-150SS Stainless Steel Male Threaded Foot Valves

The Elastic Hinge Foot Valve is suitable for municipal and industrial applications.

It is available in Threaded style in sizes from one inch to four inches and in Flanged style in sizes from one inch to twelve inches. Units are supplied standard with Buna seals and 316SS flappers.

The elastic hinge design provides the highest flow factor "cv" of all the foot valves available from Sure Flow. The Elastic Hinge Foot Valve is seatless, full port, and features a double disc check valve - the next generation of continuous flow internal design that offers high pressure rating and improved flow characteristics.

Standard screen is 0.125" perf. (40% open) with a 6:1 open area ratio. The screen material is 316SS. Other screen openings are available upon request.

NOTE: Foot Valve will operate in either the horizontal or vertical position.

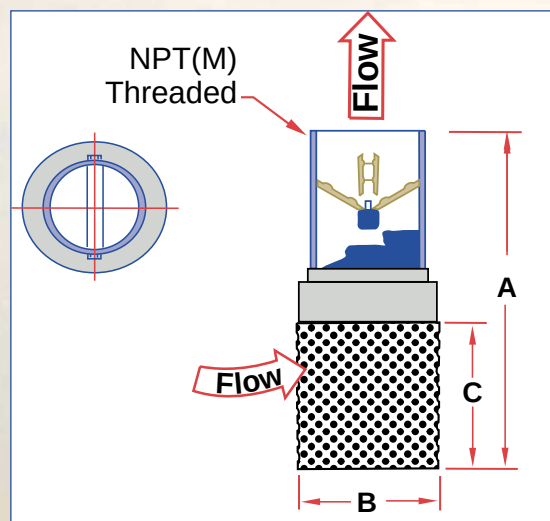
### Construction

| Model      | Body / Internals Materials |
|------------|----------------------------|
| FVRM-150CC | Carbon Steel/316SS         |
| FVRM-150SS | 316SS                      |

**Standard hardware is 316 SS**  
**Standard seal material is Buna-N**

### Operating Pressures and Temperatures

| Type | Size    | psi | Temp  |
|------|---------|-----|-------|
| WOG  | 1" - 4" | 200 | 150°F |



### Dimensional Data

| Size   |        | A      | B     | C  | Shipping Weight lbs | CV  |
|--------|--------|--------|-------|----|---------------------|-----|
| Inches | Prefix |        |       |    |                     |     |
| 1      | 0100   | 8 1/4  | 1 3/4 | 5  | 2                   | 37  |
| 1 1/4  | 0125   | 8 1/4  | 2     | 5  | 2                   | 65  |
| 1 1/2  | 0150   | 9 3/4  | 2 3/8 | 6  | 2                   | 91  |
| 2      | 0200   | 10 3/4 | 2 7/8 | 7  | 3                   | 160 |
| 2 1/2  | 0250   | 13 1/8 | 3 3/8 | 8  | 5                   | 410 |
| 3      | 0300   | 15 1/2 | 4 1/8 | 10 | 8                   | 620 |
| 4      | 0400   | 19 1/4 | 5 1/8 | 13 | 12                  | 965 |

### Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi.

### Ordering Information

Example: Include full description

Size (Prefix) Model #

**0400 - FVRM-150CC**

4" Carbon Steel Male Threaded Foot Valve, Buna-N Seal w/Stainless Steel Disc. Consult factory for optional construction materials. Resilient seating of EPDM and Viton.



# Silent Seat Foot Valves

Cast Iron - Cast Steel - Stainless Steel - Flanged

Type FV 125 Cast Iron, Type FV150 Cast Steel,  
Type FV150SS Stainless Steel Foot Valves



## Construction

Design of the available in sizes 2 inches to 30 inches, evolved through a need for a valve that could provide positive sealing actions at various pressure ranges without seat damages, along with silent operation.

The , satisfies these requirements plus low head loss through its full ported area and heavy duty stainless steel basket screening.

The Buna-N O-ring, provides a drop-tight seal. As the pressure increases, the Buna-N O-ring is compressed slightly and the disc makes contact with the metal portion of the valve seat, preventing any further compression of the Buna-N O-ring. The Buna-N O-ring will continue to provide the "drop-tight seating" during the higher pressure ranges without damage from the increased pressure loading.

## Standard Features:

- The seating design provides positive shut-off at all pressure ranges without additional loading on the seal.
- Heavy duty stainless steel screening, with flow area 3 to 4 times that of pipe area.
- Silent operation, by design of disc, stroke and linear closing characteristics.
- Cast iron, 125 lb ANSI Standard.

## Optional Features:

- Available in carbon steel & stainless steel

## Ordering Information

Example: Include full description

| Size<br>(Prefix) | Model<br># |
|------------------|------------|
| 1200 -           | FV150      |

12" Carbon Steel Silent Seat Flanged  
Foot Valve, Buna-N Seat

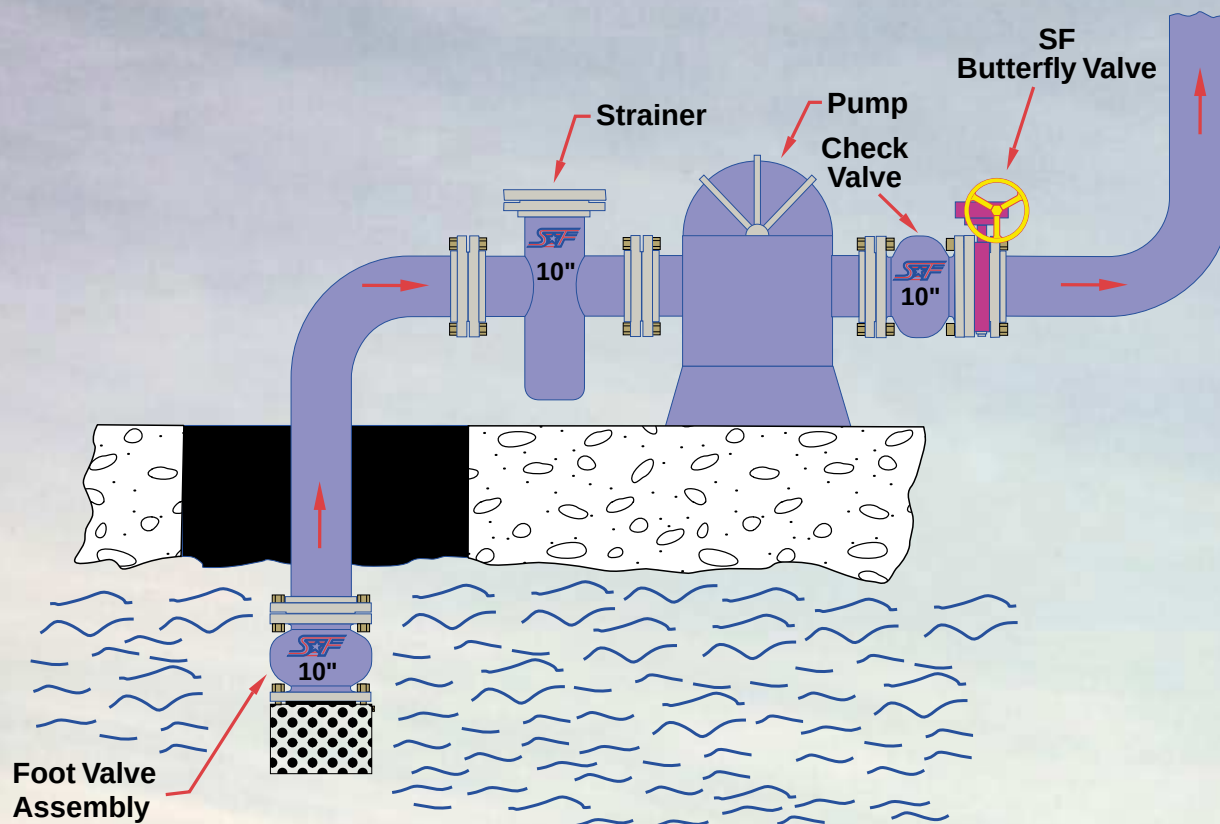


**A foot valve should be used with  
basket strainers and check valves.**

## Notes

Manufacturer reserves the right to modify dimensions, materials, or design.  
Contact factory for certification.

# Foot Valve Assembly

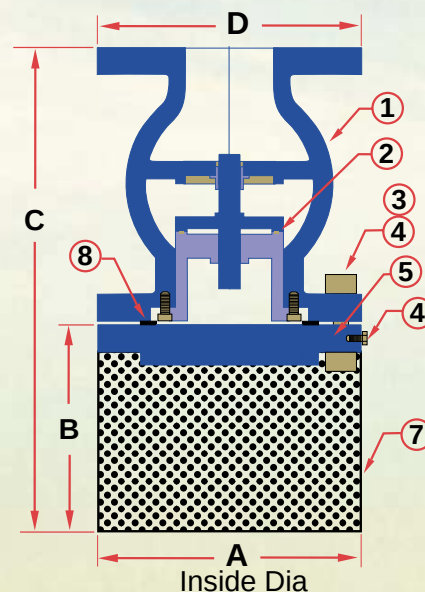


## Construction - Cast Steel

| No | Name         | Material            |
|----|--------------|---------------------|
| 1  | Body Ass'y   | A126 Class B        |
| 2  | Quad Ring    | Buna-N o-ring       |
| 3  | Studs        | SA 194 B7 Steel     |
| 4  | Hex Nuts     | SA 194 Steel        |
| 5  | Slip-on Flng | Flat Face ASTM A105 |
| 6  | Cap Screw    | Stainless Steel     |
| 7  | Screen       | Stainless Steel     |
| 8  | Gasket Ring  | Red Rubber          |

## Dimensional Data

| Size   |        | A      | B | C        | D      | Shipping Wgt (lbs.) |
|--------|--------|--------|---|----------|--------|---------------------|
| Inches | Prefix |        |   |          |        |                     |
| 2      | 0200   | 6      | 3 | 9 7/16   | 6      | 25                  |
| 2 1/2  | 0250   | 7      | 3 | 10 3/16  | 7      | 35                  |
| 3      | 0300   | 7 1/2  | 3 | 10 11/16 | 7 1/2  | 45                  |
| 4      | 0400   | 9      | 3 | 11 11/16 | 9      | 70                  |
| 5      | 0500   | 10     | 4 | 13 11/16 | 10     | 90                  |
| 6      | 0600   | 11     | 5 | 15 11/16 | 11     | 110                 |
| 8      | 0800   | 13 1/2 | 6 | 19 11/16 | 13 1/2 | 180                 |
| 10     | 1000   | 16     | 7 | 23 7/16  | 16     | 250                 |
| 12     | 1200   | 19     | 8 | 28 7/16  | 19     | 400                 |



## Notes:

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The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi.