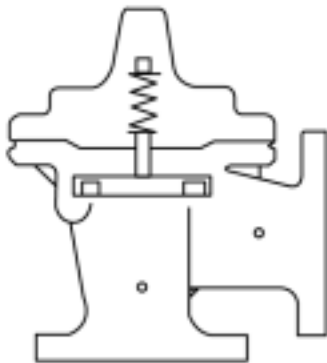
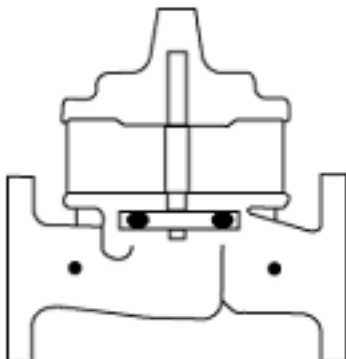


## ***INSTALLATION***



## ***OPERATION***



## ***MAINTENANCE***



# Series 581

## Silent Globe Check Valve



### SPECIFICATIONS

The silent globe check valve shall consist of a heavy cast iron body, bronze seat, bronze disc, and stainless steel spring. The valve disc shall be center guided at both ends with an integral shaft and shall be spring loaded for silent operation. The spring shall be helical or conical and stone tumbled to achieve a micro-finish to resist mineral deposits. For ease of maintenance, the seat and disc shall be replaceable in the field.

Check valve shall be capable of silent operation when installed in vertical or horizontal positions with either flow up or flow down. The flow area through the body shall be equal to or greater than the cross-section area of the equivalent pipe size. Sizes 3" to 10" shall allow bolting a wafer style butterfly valve directly to the outlet flange without a spool piece. The valve shall be a Cla-Val Series 581 Silent Globe Check Valve.

All materials of construction shall conform to ASTM specifications as follows:

- Valve Body:** Cast Iron ASTM A126 Class B
- Disc & Seat:** Bronze ASTM B584
- Spring:** Stainless Steel ASTM A313.5  
Stone Tumbled

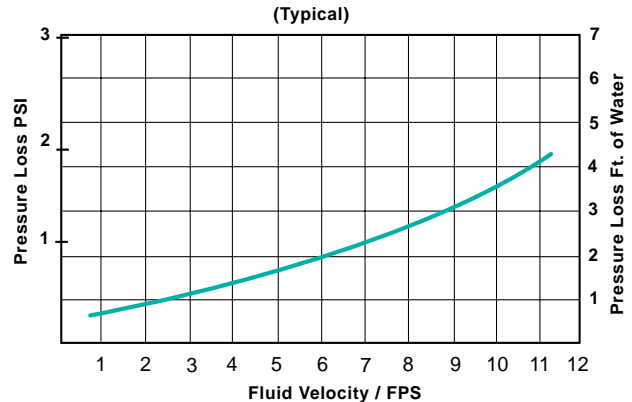
**Sizes:** 2 1/2" to 42"

- Operates Horizontally or Vertically
- Watertight Seating
- Field Replaceable Parts
- Factory Mutual Approved – Various Sizes
- Optional Resilient Seat

The Cla-Val Series 581 Silent Globe Check Valve has a spring-loaded poppet that allows the valve to close before flow reversal occurs, resulting in a silent, non-slam closure. It is a truly silent check valve. For ease of installation, the valve can be installed in vertical or horizontal positions with flow up or flow down. Silent Globe Check Valves are available in 2 1/2" to 42" sizes, with either a 125 lb. or 250 lb. pressure class rating. Silent Globe Check Valves in 3" to 10" sizes have enough outlet clearance to allow them to be bolted directly to wafer style butterfly valves.

Constructed of a cast iron body with bronze trim, the Cla-Val Silent Globe Check Valve offers watertight shutoff with metal-to-metal seating. For special applications, stainless steel trim and Buna-N® resilient seats are available as options. All materials conform to ASTM specifications, ensuring long lasting reliable performance. As a confirmation of Cla-Val's commitment to quality, 2 1/2" to 12" 125 lb. class Series 581 valves are Factory Mutual approved.

Series 581 Pressure Loss Curve



PRESSURE / TEMPERATURE RATINGS  
WAFER AND GLOBE STYLE SILENT CHECK VALVES

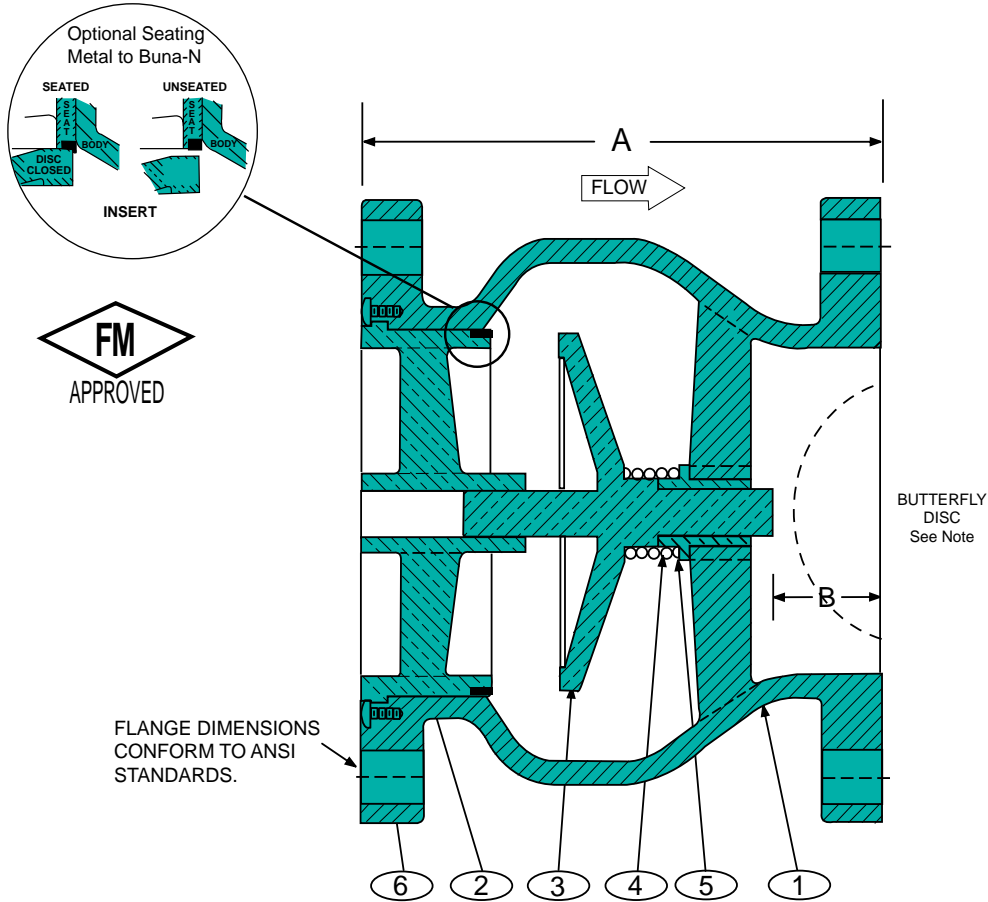
TEMP DEG F.	MAXIMUM NON-SHOCK WATER SERVICE PRESSURE							
	GRAY IRON 125 LB. CLASS		DUCTILE IRON 150 LB. CLASS		GRAY IRON 250 LB. CLASS		DUCTILE IRON 300 LB. CLASS	
	2" - 12"	14" - 42"	2" - 12"	14" - 42"	2" - 12"	14" - 42"	2" - 12"	14" - 42"
0 -150°	200	150	300	250	400	300	500	400
200°	190	135	280	230	370	280	460	370
250°	*	*	270	220	*	*	440	355
TEST PRES.	300	230	450	375	600	450	750	600

\* Ductile Iron Recommended For Hot Water Service Above 200° F.



# Silent Globe Check Valve

## SERIES 581



### Dimensions (In Inches)

ANSI CLASS 125 AND 250					
Model	Size	Weight Lbs.		A	B
		125	250		
581	2 1/2	24	30	5-1/2	1
581	3 *	29	36	6	1-3/8
581	4 *	42	59	7- 1/4	1-3/4
581	5 *	52	78	8-1/2	2
581	6 *	73	103	9-3/4	2-1/2
581	8 *	126	179	12-1/2	3-1/4
581	10 *	205	253	15-1/2	4-1/4
581	12	306	401	14-1/4	Spool Piece is Needed
581	14	380	511	15-3/4	
581	16	501	697	17-5/8	
581	18	724	959	18-3/4	
581	20	890	1180	20-5/8	
581	24	1220	1680	24	
581	30	2000	2375	29-1/4	
581	36	4421	5511	45	
581	42	7203	8663	50	

\* FM Approved

Detail No.	Name	Material Description
1	Body	Cast Iron ASTM A126, Class B
2	Seat	Bronze ASTM B584**
3	Plug	Bronze ASTM B584
4	Spring	Stainless Steel T302 ASTM A313.5
5	Bushing	Bronze ASTM B584
6	Screw	Stainless Steel T304 ASTM A276

\*\*Optional Resilient Seat

Temp. Rating	MAXIMUM SERVICE PRESSURE			
	ANSI B16.1 FLG. RATINGS			
	125 LB. CLASS		250 LB. CLASS	
	2" - 12"	14" - 42"	2" - 12"	14" - 42"
0-150° F	200	150	400	300
200° F	190	135	370	280
Test Pressure	300	230	600	450

**NOTE:** Sizes 3" to 10" designed to allow bolting a wafer style butterfly valve directly to the outlet flange without a spool piece.



— SERIES — **580 & 581**

# SILENT CHECK VALVES

**OPERATION:**

Cla-Val Silent Check Valves operate automatically, to open... when pump flow starts and close silently ...when pump flow stops.

**INSTALLATION:**

Silent Check Valves, Wafer and Globe style must be installed between flat faced iron or steel flanges per ANSI B16.5 or Awwa 207, utilizing a full faced gasket to bridge the joint between the seat O.D. (2) and the body (1) flange face. In this manner a pressure seal at this joint is made (see **Note 1**). Install the valve so that the nameplate data is plainly read and the flow arrow points in the flow direction.

**MAINTENANCE:**

Cla-Val Silent Check Valves are ruggedly designed for years of trouble-free service. Therefore, regular maintenance is not required. However, during initial start-up period the following problems may surface (due to mis-application) that can be easily resolved:

**A. No Flow thru Valve:**

1. Observe that the flow arrow name plate, on the valve body, is pointing in the direction of flow.
2. Check that the down stream shut-off valve is full open.

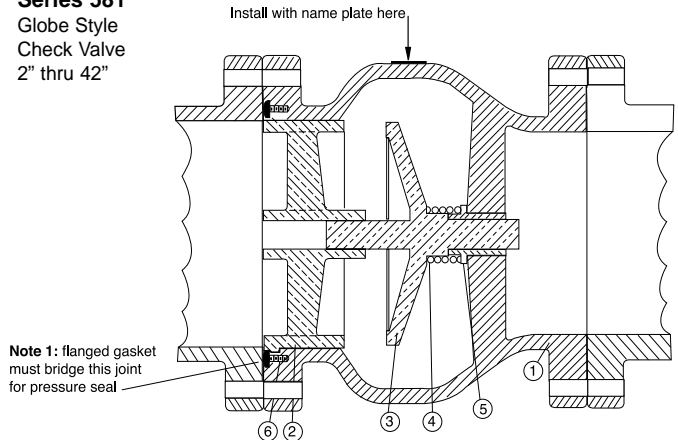
**B. Valve Chatters:**

1. Confirm that the flow velocity is a minimum 3'/Sec.
2. Check that there is a minimum of 3 diameters of straight pipe installed up stream of the silent check valve.

**C. Valve Leakage:**

1. Confirm a full face gasket is installed per Note 1.

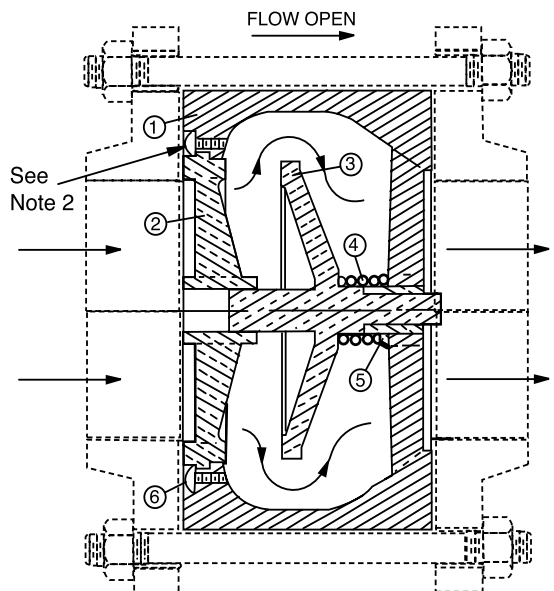
**Series 581**  
Globe Style  
Check Valve  
2" thru 42"



Detail	Description	Material
1	Body	Cast Iron
2	Seat*	Bronze or SS
3	Disc*	Bronze or SS (Optional Buna-N®)
4	Spring*	Stainless Steel
5	Bushing*	Bronze
6	Screw*	Stainless Steel (3" & larger valves)

**Note 2:** All size 2" and 2 1/2" valves have threaded seats in lieu of screws

\* Recommended Spare Part Kit



**SERIES 580**  
WAFER STYLE CHECK VALVE  
2" THRU 10"

**TO REMOVE VALVE FROM PIPELINE FOR INSPECTION:**

1. Shut off pump and pressure upstream and shut off isolation valve downstream to completely isolate check valve. A skilled pipe fitter should be used for this work.
2. Lay valve to rest on its downstream side and remove cap screws as shown in Fig. 3. **Note** that 2" and 2-1/2" valves threaded seats in lieu of cap screws.
3. Grip seat spokes by hand to pull out seats or push down the disc and release quickly to allow force of the spring to pop out the seat.
4. With seat removed, check that all internal parts are freely removable from valve body.
5. Examine all parts for wear/damage and order replacement PARTS KITS as shown below.

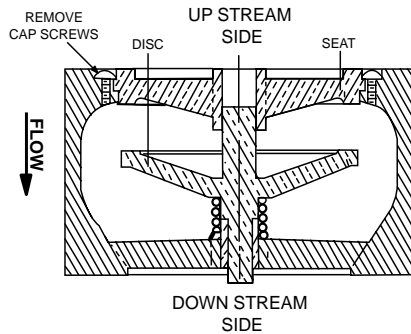
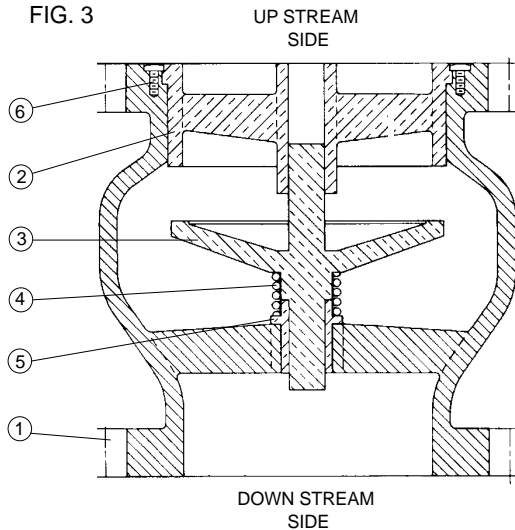


FIG. 3



Detail	Description	Material
1	Body	Cast Iron
2	Seat*	Bronze or SS
3	Disc*	Bronze or SS (Optional Buna-N®)
4	Spring*	Stainless Steel
5	Bushing*	Bronze
6	Screw*	Stainless Steel (3" & larger valves)

**Note 2:** All size 2" and 2 1/2" valves have threaded seats in lieu of screws

\* Recommended Spare Part Kit

**Silent Check Valve Spare Part Kits**

Series 580 Wafer Style		
Model	Size	Kits
580	2"	A B C D
580	2 1/2"	A B C D
580	3"	A B C D
580	4"	A B C D
580	5"	A B C D
580	6"	A B C D
580	8"	A B C D
580	10"	A B C D

Series 581 Globe Style		
Model	Size	Kits
581	2"	A B C D
581	2 1/2"	A B C D
581	3"	A B C D
581	4"	A B C D
581	5"	A B C D
581	6"	A B C D
581	8"	A B C D
581	10"	A B C D
581	12"	A B C D
581	14"	A B C D

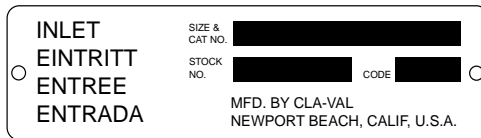
A-Kit Includes Detail 2 Bronze Seat & Detail 3 Disc  
 B-Kit Includes Detail 2 Stainless Steel Seat & Detail 3 Disc  
 C-Kit Includes Detail 2 Stainless Steel Seat, Detail 3 Disc, Detail 4 Spring, & Detail 5 Bronze Bushing  
 D-Kit Includes Detail 2 Stainless Steel Seat, Detail 3 Disc, Detail 4 Spring, & Detail 5 Stainless Steel Bushing

### Proper Identification

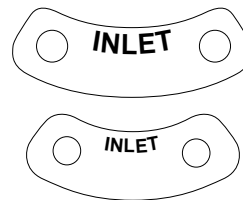
For ordering repair kits, replacement parts, or for inquiries concerning valve operation it is important to properly identify Cla-Val products already in service. Include all nameplate data with your inquiry. Pertinent product data includes valve function, size, material, pressure rating, end details, type of pilot controls used and control adjustment ranges.

### Identification Plates

For product identification, cast in body markings are supplemented by identification plates as illustrated on this page. The plates, depending on type and size of product, are mounted in the most practical position. **It is extremely important that these identification plates are not painted over, removed, or in any other way rendered illegible.**



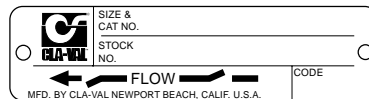
This brass plate appears on valves sized 2 1/2" and larger and is located on the top of the inlet flange.



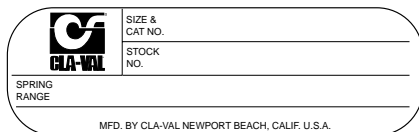
These two brass plates appear on 3/8", 1/2", and 3/4" size valves and are located on the valve cover.



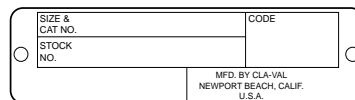
This brass plate appears on altitude valves only and is found on top of the outlet flange.



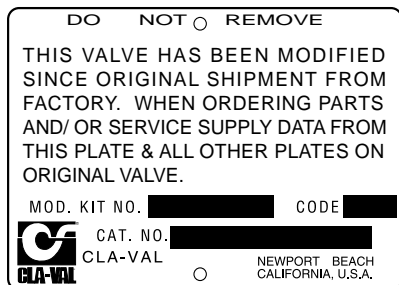
These two brass plates appear on 1" through 3" size screwed valves or 1" through 2" flanged valves. It is located on only one side of the valve body.



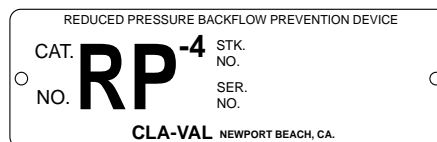
This tag is affixed to the cover of the pilot control valve. The adjustment range appears in the spring range section.



This brass plate is used to identify pilot control valves. The adjustment range is stamped into the plate.



This aluminum plate is included in pilot system modification kits and is to be wired to the new pilot control system after installation.



This brass plate is on our backflow prevention assemblies. It is located on the side of the number two check (2" through 10"). The serial number of the assembly is also stamped on the top of the inlet flange of the number one check.

## HOW TO ORDER

There are many valves and controls manufactured by Cla-Val that are not listed due to the sheer volume. For information not listed, please contact your local Cla-Val office or our factory office located at:

P. O. Box 1325  
Newport Beach, California 92659-0325  
(949) 722-4800  
FAX (949) 548-5441

## SPECIFY WHEN ORDERING

- Model Number
- Globe or Angle Pattern
- Adjustment Range (As Applicable)
- Valve Size
- Screwed or Flanged
- Body and Trim Materials
- Optional Features
- Pressure Class

## UNLESS OTHERWISE SPECIFIED

- Globe or angle pattern are the same price
- Ductile iron body and bronze trim are standard
- X46 Flow Clean Strainer or X43 "Y" Strainer are included
- CK2 Isolation Valves are included in price on 4" and larger valve sizes (6" and larger on 600 Series)

## LIMITED WARRANTY

Automatic valves and controls as manufactured by Cla-Val are warranted for three years from date of shipment against manufacturing defects in material and workmanship which develop in the service for which they are designed, provided the products are installed and used in accordance with all applicable instructions and limitations issued by Cla-Val.

We will repair or replace defective material, free of charge, which is returned to our factory, transportation charges prepaid, provided that, after inspection, the material is found to have been defective at time of shipment. This warranty is expressly conditioned on the purchaser's giving Cla-Val immediate written notice upon discovery of the defect.

Components used by Cla-Val but manufactured by others, are warranted only to the extent of that manufacturer's guarantee.

This warranty shall not apply if the product has been altered or repaired by others, and Cla-Val shall make no allowance or credit for such repairs or alterations unless authorized in writing by Cla-Val.

## DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY

The foregoing warranty is exclusive and in lieu of all other warranties and representations, whether expressed, implied, oral or written, including but not limited to any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

Cla-Val shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product. Cla-Val shall not be liable for any damages or charges for labor or expense in making repairs or adjustments to the product. Cla-Val shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data and services. No representative of Cla-Val may change any of the foregoing or assume any additional liability or responsibility in connection with the product. The liability of Cla-Val is limited to material replacements F.O.B. Newport Beach, California.

## TERMS OF SALE

### ACCEPTANCE OF ORDERS

All orders are subject to acceptance by our main office at Newport Beach, California.

### CREDIT TERMS

Credit terms are net thirty (30) days from date of invoice.

### PURCHASE ORDER FORMS

Orders submitted on customer's own purchase order forms will be accepted only with the express understanding that no statements, clauses, or conditions contained in said order form will be binding on the Seller if they in any way modify the Seller's own terms and conditions of sales.

### PRODUCT CHANGES

The right is reserved to make changes in pattern, design or materials when deemed necessary, without prior notice.

### PRICES

All prices are F.O.B. Newport Beach, California unless expressly stated otherwise on our acknowledgement of the order. Prices are subject to change without notice. The prices at which any order is accepted are subject to adjustment to the Seller's price in effect at the time of shipment. Prices do not include sales, excise, municipal, state or any other Government taxes. Minimum order charge \$75.00.

### RESPONSIBILITY

We will not be responsible for delays resulting from strikes, accidents, negligence of carriers, or other causes beyond our control. Also, we will not be liable for any unauthorized product alterations or charges accruing there from.

### RISK

All goods are shipped at the risk of the purchaser after they have been delivered by us to the carrier. Claims for error, shortages, etc., must be made upon receipt of goods.

### EXPORT SHIPMENTS

Export shipments are subject to an additional charge for export packing.

### RETURNED GOODS

1. Customers must obtain written approval from Cla-Val prior to returning any material.
2. Cla-Val reserves the right to refuse the return of any products.
3. Products more than six (6) months old cannot be returned for credit.
4. Specially produced, non-standard models cannot be returned for credit.
5. Rubber goods such as diaphragms, discs, o-rings, etc., cannot be returned for credit, unless as part of an unopened vacuum sealed repair kit which is less than six months old.
6. Goods authorized for return are subject to a 35% (\$75 minimum) restocking charge and a service charge for inspection, reconditioning, replacement of rubber parts, retesting, repainting and repackaging as required.
7. Authorized returned goods must be packaged and shipped prepaid to Cla-Val, 1701 Placentia Avenue, Costa Mesa, California 92627.



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