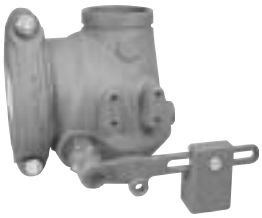
Series 317 Check Valves

PRODUCT DESCRIPTION

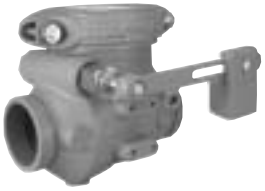
Series 317 Lever with Adjustable Spring and Air Cushion

Series 317 Bare



Series 317 Lever with Weight (Vertical Installations)

Series 317 Lever with Adjustable Spring



Series 317 Lever with Weight (Horizontal Installations)

The Series 317 is a grooved end AWWA check valve conforming to AWWA C-508 requirements for water and wastewater treatment services. Series 317 is available in 3 - 12" (80 - 300 mm) sizes.

The body conforms to AWWA C-508 standard end-to-end dimensions. Grooved ends conform to ANSI/ AWWA C-606 rigid groove specifications to allow easy installation with Victaulic® Style 31 couplings, Style 307 Transition couplings (3 - 12"/80 - 300 mm) or in combination with Style 341 Vic-Flange® adapters (3 - 12"/ 80 - 300 mm).

The valve is constructed with metallic seats. Elastomeric seats are offered as an option. Various types of accessories are available including lever and counterweight, lever and spring, and adjustable air cushions. Options are normally mounted on right side of valve. Left side mounting is available. The standard outside coating is an alkyd phenolic primer unless otherwise specified. Designed for working pressures up to 175 psi (1200 kPa) the Series 317 allows easy access for maintenance through the closure coupling and cap.

CHARACTERISTICS

1 Shaft – Stainless steel shaft prevents corrosion and seizing.

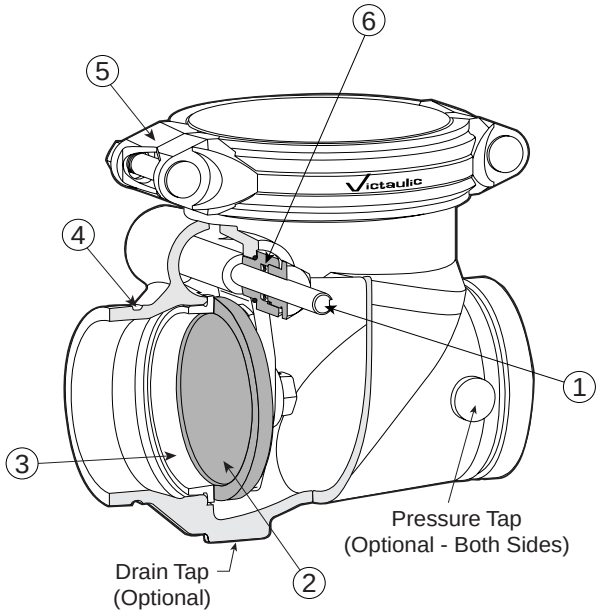
2 Disc – Provides positive sealing up to 175 psi (1200 kPa). The 3 and 4" sizes are bronze, while the 6 through 12" sizes consist of ductile iron with nickel welded seat.

3 Body Seat – Removable bronze seat eases repair and reduces downtime. Rubber lined seat is available upon request.

4 Groove – Provided with rigid grooves conforming to AWWA C-606 standards.

5 Coupling/Cap Assembly – Provides access to internal components by simply removing two bolts and nuts. Greatly reduces downtime during maintenance operations.

6 Adjustable Packing – Provides a reliable, durable shaft seal.



Exaggerated for Clarity

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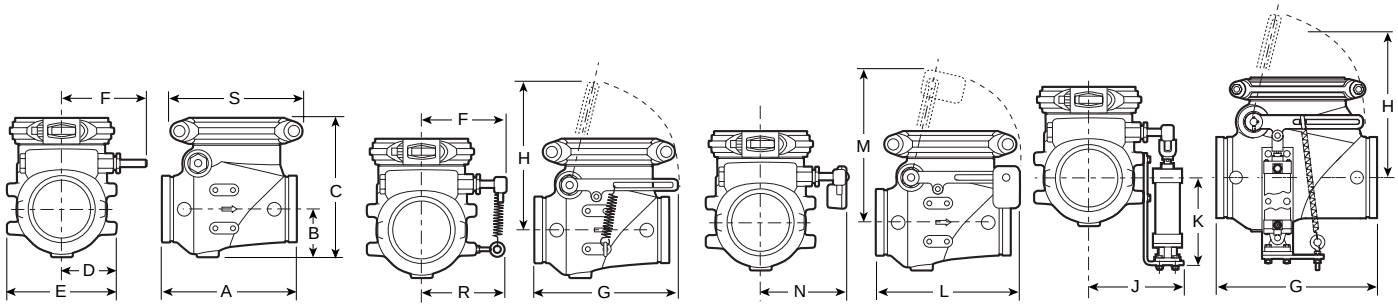
DIMENSIONS



Series 317 Bare | **Series 317 Spring and Lever** | **Series 317 Weight and Lever** | **Series 317 Air Cushion**

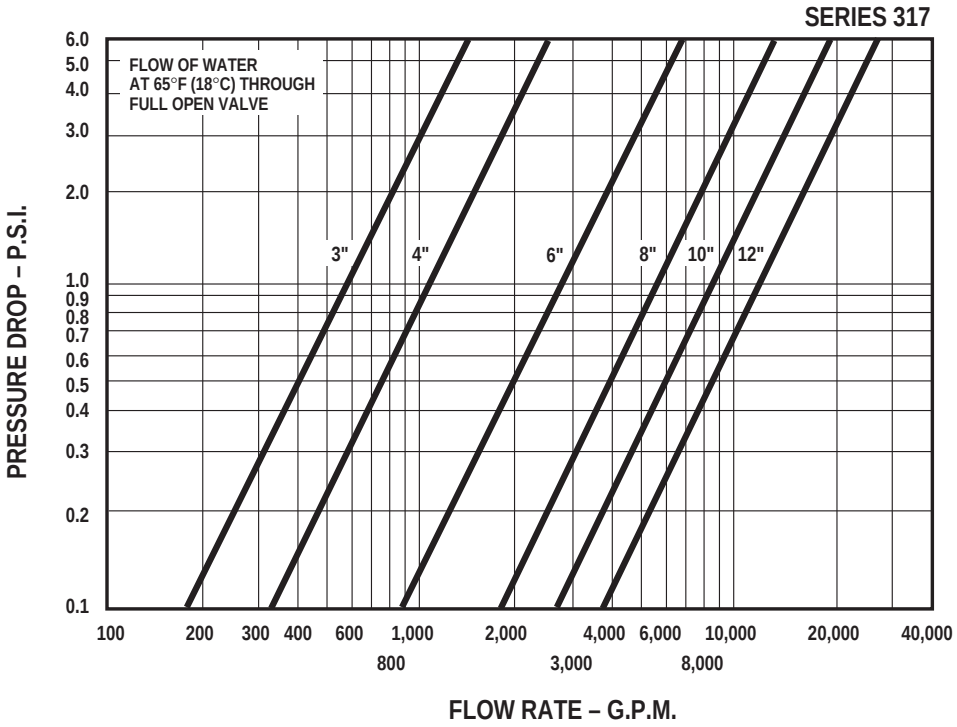
Valve Size		Dimensions – Inches/millimeters															Aprx.* Wgt. Ea. Lbs. kg	Accessory Kits Aprx. Wgt. - Lbs./kg		
Nom. Dia. In./mm	Actual Out. Dia. In./mm	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S		Spring & Lever	Weight & Lever	Air Cushion
3 80	3.960 100,6	9.50 241	3.28 83	10.13 257	3.87 98	7.74 197	7.05 179	13.56 344	13.22 336	8.00 203	11.28 287	14.65 372	14.07 357	7.30 185	6.82 173	9.50 241	50.0 22.7	4.0 1,8	7.0 3,2	15.0 6,8
4 100	4.800 121,9	11.50 292	4.05 103	11.38 289	4.62 117	9.24 235	7.80 198	13.93 354	13.91 353	8.75 222	10.74 273	15.03 382	14.74 374	8.05 204	7.54 192	11.74 298	70.0 31.8	4.0 1,8	7.0 3,2	15.0 6,8
6 150	6.900 175,3	14.00 356	4.98 126	14.43 367	5.68 144	11.36 289	8.86 225	14.50 368	15.26 388	9.81 249	9.47 241	15.59 396	16.07 408	9.11 231	8.60 218	14.57 370	120.0 54.4	4.0 1,8	7.0 3,2	15.0 6,8
8 200	9.050 229,9	19.50 495	6.12 155	18.14 461	7.15 182	14.30 363	11.34 288	20.25 514	21.37 543	12.65 321	12.74 324	21.52 547	22.21 564	11.64 296	10.37 263	17.94 456	225.0 102.1	8.0 3,6	17.0 7,7	34.0 15,4
10 250	11.100 281,9	22.00 559	7.38 187	20.90 531	8.28 210	16.56 421	12.48 317	20.39 518	22.61 574	13.78 350	11.51 292	21.65 550	23.45 596	12.77 324	11.50 292	20.42 519	350.0 158.8	8.0 3,6	17.0 7,7	34.0 15,4
12 300	13.200 335,3	26.00 660	8.60 218	27.04 687	9.62 244	19.24 489	13.81 351	21.00 533	24.00 610	15.12 384	10.13 257	22.27 566	24.83 631	14.11 358	12.84 326	23.05 585	460.0 217.7	8.0 3,6	17.0 7,7	34.0 15,4

* Weights listed above are for the bare valve. Accessory kit weights are listed separately in right hand columns.

Note: Refer to the “Important Installation Considerations” table on page 3 for proper installation orientations.

FLOW DATA

Pressure losses for flow of water at 65°F (18°C) with a fully open valve are shown in the graph below.



IMPORTANT INSTALLATION CONSIDERATIONS

The following is a listing of proper installation orientations for the Series 317 Check Valve.

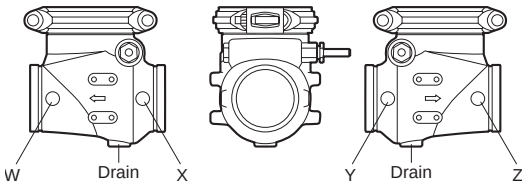
Option[1]	Horizontal Orientation	Vertical Orientation
Bare	Yes	Yes
Lever with Weight	Yes	Yes[2]
Lever with Spring	Yes	Yes
Lever with Adjustable Spring[3] and Air Cushion	Yes	Yes

NOTES:

1. Valves installed without air cushions are subject to slamming.
2. For proper operation in vertical orientations, the lever must be rotated 90° (refer to instructions supplied with the valve).
3. All valves installed with an air cushion must also contain an adjustable spring. **NOTE:** This is not the same spring that is provided with non-air cushion options.

- Field retrofit kits are available.
- Excessive tightening of the packing nut may impede the rate of clapper closure.
- Valves are supplied without pressure taps and drains. Specify at the time of order if taps or drains are required. Refer to the table below for available tap and drain locations and sizes.

TAP LOCATIONS



Valve Size		Tap Sizes NPT (max.) Inches/mm	Drain Tap NPT Location W, X, Y, Z Inches/mm
Nominal Diameter Inches/mm	Actual Outside Diameter Inches/mm		
3 80	3.960 100,6	1/4 6,4	3/4 19,1
4 100	4.800 121,9	1/2 12,7	3/4 19,1
6 150	6.900 175,3	1/2 12,7	1 25,4
8 200	9.050 229,9	3/4 19,1	1 25,4
10 250	11.100 281,9	3/4 19,1	1 1/4 31,8
12 300	13.200 335,3	1 25,4	1 1/4 31,8

VALVE NUMBERING

Series 317 Check Valve Numbering System

C - 040 - 1 1 1 1 10

Type	Size Act. In.	Size Fig. No.	Pressure Rating	Body Material	Closure Coupling Gasket Grade	Seat	Accessories*
C	3"	030	1 - 175 psi	1 - Iron	1 - (S) Nitrile	1 - Bronze	10 - Bare shaft on right side of valve
	4"	040		3 - Coated iron**	2 - (M) Halogenated Butyl	2 - (T) Nitrile	11 - Lever with Adjustable Spring mounted on right side of valve
	6"	060	9 - Special*	7 - Glass lined	3 - (V) Neoprene	3 - (E) EPDM	12 - Lever with Weight mounted on right side of valve
	8"	080			4 - (V) Neoprene	4 - (V) Neoprene	13 - Air Cushion with Adjustable Spring mounted on right side of valve
	10"	100		9 - Special*	5 - (O) Fluoroelastomer	5 - (O) Fluoroelastomer	20 - Bare shaft on left side of valve
	12"	120			9 - Special*	9 - Special*	21 - Lever with Adjustable Spring mounted on left side of valve
							22 - Lever with Weight mounted on left side of valve
							23 - Air Cushion with Adjustable Spring mounted on left side of valve
							09 -Special*

*Details must be supplied with order.
**Details of coating must be supplied with order.

MATERIAL SPECIFICATIONS

Body: Cast Iron conforming to ASTM A-126 Class B.

Body Coating: Alkyd phenolic primer

- **Optional:** Other coatings (internal and/or external) available. Coating specification must be supplied with order.

Disc:

3 - 4": Bronze conforming to ASTM B-584

6 - 12": Ductile iron conforming to ASTM A-536, grade 65-45-12 with welded nickel seat.

Hinge: Ductile iron conforming to ASTM A-536, grade 65-45-12.

Seat: Bronze conforming to ASTM B-584

- **Optional:** Elastomeric coatings (Specify choice on order)
- **Grade "E" EPDM**
  EPDM (Green color code). Temperature range –34°C to +110°C (–30°F to +230°F). Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL classified in accordance with ANSI/NSF 61 for cold (30°C) and hot (82°C) potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.
- **Grade "T" nitrile**
  Nitrile (Orange color code). Temperature range –29°C to +82°C (–20°F to +180°F). Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range; except hot, dry air over +60°C (+140°F) and water over +66°C (+150°F). NOT RECOMMENDED FOR HOT WATER SERVICES.

Shaft: 17-4PH stainless steel conforming to ASTM A-564.

Bearings and Packing Nut: Bronze conforming to ASTM B-140.

Cap: Ductile iron conforming ASTM A-536, grade 65-45-12.

Closure Coupling : Ductile iron conforming to ASTM A-536, grade 65-45-12.

Coupling Gasket: (Specify choice on order*)

- **Grade "M" halogenated butyl**
  Halogenated butyl (Brown color code). Temperature range –20°F to +200°F (–29°C to +93°C). Recommended for water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. Readily conforms to ductile pipe surfaces. UL classified in accordance with ANSI/NSF 61 for cold +86°F (+30°C) potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.
- **Grade "S" nitrile**
  Nitrile (Red color code). Temperature range –20°F to +180°F (–29°C to +82°C). Specially compounded to conform to ductile pipe surfaces. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F (+66°C) or for hot dry air over +140°F (+60°C).

*Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

Bolts/Nuts: Heat treated carbon steel, zinc plated to ASTM B-633, track-head conforming to physical properties of ASTM A-183 minimum tensile 110,000 psi (758340 kPa).

Accessories: (specify choice on order)

- Lever with Weight
- Lever with Adjustable Spring
- Lever with Adjustable Spring and Air Cushion