

# Kennedy Swing Check Valves

A.W.W.A. C508 was developed in 1976 to set a standard for the manufacture, testing and application of Iron Body Bronze Mounted (IBBM) Check Valves. The valves are designed with an iron body and include either metal-to-metal or composition-to-metal seating.

Kennedy Swing Check Valves are designed and manufactured in conformance with A.W.W.A. C508 and are for use on water, oil and gas lines. Under certain circumstances where it is desirable to have more positive control of the closing of the disc, the valves can be supplied with either lever-and-spring or lever-and-weight. For restricted spacing requirements Kennedy Valve manufactures a Wafer Check Valve that also helps to control water hammer.

## Features



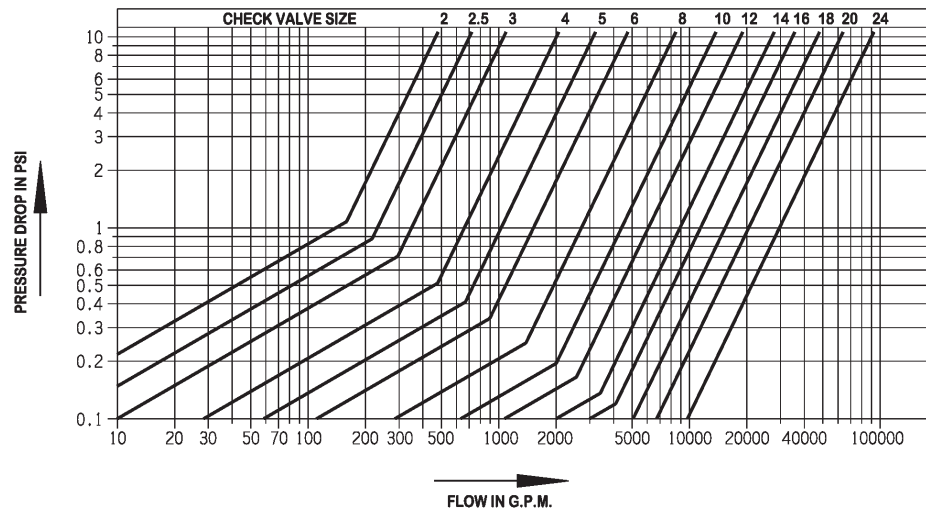
### Swing Check Valve-AWWA

- Stainless steel hinge pin.
- Working parts are removable through the top of the valve.
- Tapped bosses available.
- Available with lever-and-spring or lever-and-weight.
- Double bronze side plug construction.
- Bodies are made of high strength cast iron with reinforced flanges - ANSI B 16.1/125 # flanges.
- May be installed in a vertical line with the flow up.

- |                                  |                |
|----------------------------------|----------------|
| • Figure #1106 Series            | <u>2"-12"</u>  |
| Test Pressure - Seat and Shell   | 400 PSI        |
| Working Pressure - non-shock CWP | 200 PSI        |
| • Figure #106 Series             | <u>14"-24"</u> |
| Test Pressure - Seat and Shell   | 300 PSI        |
| Working Pressure - non-shock CWP | 150 PSI        |

### FLOW VERSUS PRESSURE DROP

Data Representative of Kennedy Figure 1106 and 1106A Swing Check Valves

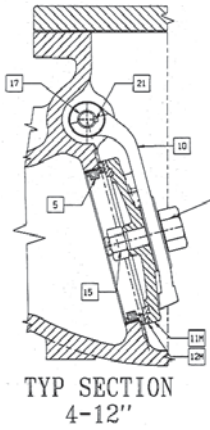




## KENNEDY CHECK VALVES

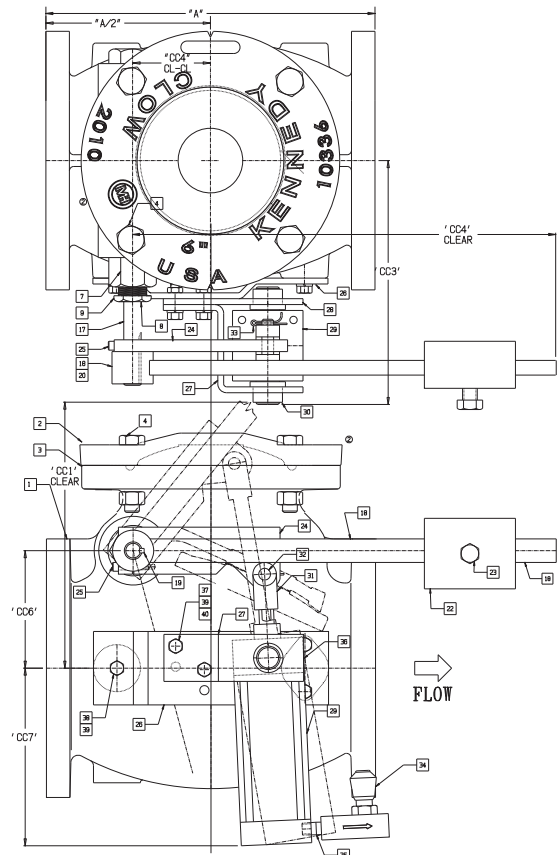
It is generally recommended, that when using Kennedy swing check valves, that you locate the valve at least 5 to 10 pipe diameters down stream from any flow disturbance or obstruction (valve, pump, elbow, reducer, etc.). Turbulence close to the check valve may result in valve "chatter" resulting in premature failure of the check valve.

*As stated in AWWA C508, "Conditions of water hammer, hydraulic pulsation, and excessive operating noise are results of system design rather than valve design and are beyond the scope of this standard and require special design and construction considerations."*



**NOTES:**

1. 6" VALVE SHOWN
2. VALVE SHOWN WITH CUSHION ARRANGEMENT ON RIGHT HAND SIDE (FACING INLET) LEFT HAND VERSION AVAILABLE
3. VALVE OPENING IS SUDDEN INSTALL GUARDS OR OTHERWISE ASSURE THAT PERSONS ARE WELL CLEAR
4. DIMENSIONS ARE APPROXIMATE and FOR LAYOUT PURPOSES ONLY
5. CONFIGURATION FOR VERTICAL INSTALLATION DIFFERENT THAN SHOWN—See Page 15-14



ITEM NO.	DESCRIPTION			
1	Body	Gray Iron	A126 B	Special Boss Drill & Tap
2	Cap	Gray Iron	A126 B	
3	Cap Gasket	Rubber Reinforced	by GARLOCK	
4	Cap Bolts & Nuts	Steel, Plated	A307	
5	Seat Ring	Bronze	CDA 844	
6				
7	Stuffing Box	Bronze	B16	
8	Packing (not shown)	Non-Asbestos	by GARLOCK	
9	Gland Follower	Bronze	B16	
10	Hinge (Keyed)	Ductile Iron		
11M	Disc – Metal	Iron		
11R	Disc Holder	Iron		
12M	Disc Facing Ring	Bronze	CDA 844	Integral with Disc
12R	Disc, Resilient	Rubber		
13R	Disc Plate	Bronze	CDA 844	
14	Disc Bolt	—		Sizes 2-8" Steel 10&12" Bronze
15	Nut, Disc Bolt	—		Sizes 2-8" Steel 10&12" Bronze
16	Disc Bolt Gasket	Fibre		10&12" Sizes Use O-Ring
17	Hinge Pin (Special)	Stainless	431	Heat Treated
18	Lever (Special)	Steel		
19	Key for Lever	Stainless		
20	Set Screw for Lever	Steel		
21	Key for Hinge	Stainless		
22	Weight	Gray Iron	A126 B	
23	Set Screw for Weight	Steel, Plated	A307	
24	Cylinder Arm	Steel		
25	Set Screw for Arm	Steel		
26	Body Bracket	Steel		
27	Outer Cylinder Bracket	Steel		
28	Inner Cylinder Bracket	Steel		4 & 6" Sizes
29	Cylinder	Per Catalogue		
30	Bushing(s)	Bronze		
31	Rod End	Steel		
32	Pin	Steel		
33	Cotter Pin	Stainless		
34	Control Valve	Per Catalogue		
35	Nipple	Brass		
36	Muffler	Per Catalogue		
37	Body Bracket Bolts	Steel, Plated	Grade 5	
38	Cylinder Bracket Bolts	Steel, Plated	Grade 5	
39	Lock Washer (HiCollar)	Steel, Plated		
40	Nuts (Jam)	Steel, Plated		

SIZE	A	D	E	CC1	CC2	CC3	CC4	CC5	CC6	CC7
4	11.50	8.31	9.00	13.77	12.00	9.56	2.44	—	3.75	8.89
6	14.00	10.06	11.00	19.28	18.00	10.38	3.31	—	5.00	7.52
8	19.50	12.38	13.50	22.24	18.00	11.75	4.88	—	6.25	6.40
10	24.50	13.93	16.75	23.62	18.00	13.68	6.19	—	7.12	11.46
12	27.50	16.18	19.00	24.57	18.00	14.94	8.38	—	8.19	10.40

Dimensions Approximate—For Checking Clearances Only  
Allow Clearance Two Sides to Remove Side Plug & Access Hinge Pin

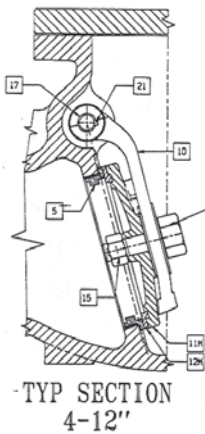
ASSEMBLY DRAWING CUSHION CHECK SIZES 4"-12"  
FLOW HORIZONTAL

	DRAWN BY L2C	DATE 9/15/96
	CHECKED	SCALE NONE
	APPROVED	
	DWG NO. 54106	REV.

# Cushion Check (Must specify vertical or horizontal installation when ordering)

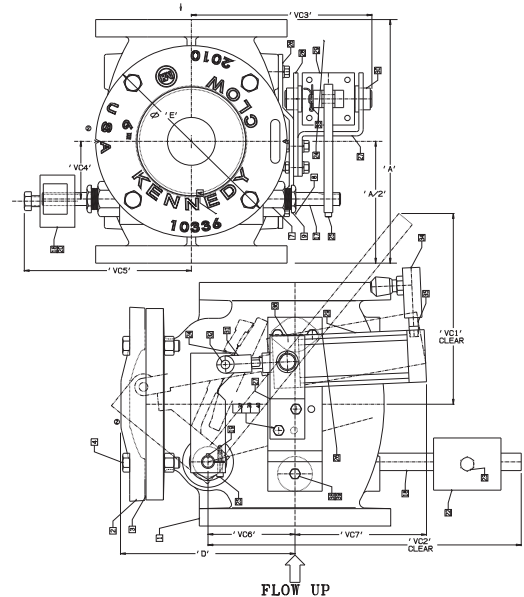
If possible, it is preferable to eliminate water hammer. The best way to eliminate water hammer is in the design of the piping system. For most cases where water hammer exists it is preferable to reduce its effects by causing the check valve to close so quickly that the flow is not able to reverse. Kennedy Valve makes a Figure 706 Wafer Check Valve that is intended as an anti-water hammer valve. Kennedy Valve also has available lever and weight and lever and spring arrangements on the Figure 1106 Check Valve.

In some cases the customer may want an arrangement that retards the closing of the check valve. The customer may want such an arrangement for those cases where the water column actually has an opportunity to reverse or even separate, such as might occur when the check valve is not at the lowest elevation in the system.



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8	19.50	12.38	13.50	12.00	18.00	11.75	4.88	11.69	6.25	6.40
10	24.50	13.93	16.75	NA	18.00	13.68	6.19	13.13	7.12	11.46
12	27.50	16.18	19.00	NC	18.00	14.94	8.38	15.25	8.19	10.40

Dimensions Approximate—For Checking Clearances Only  
Allow Clearance Two Sides to Remove Side Plug & Access Hinge Pin

ASSEMBLY DRAWING CUSHION CHECK SIZES 4"-12"  
FLOW UP

	DRAWN BY L2C	DATE 9/15/96
	CHECKED	SCALE NONE
	APPROVED	
	DWG NO. 54107V	REV.

For those customers, Kennedy Valve makes available the Figure 1206 Cushion Check Valve. The Figure 1206 Cushion Check Valve is a Figure 1106, AWWA valve with a lever and weight and a pneumatic cylinder arrangement. The pneumatic cylinder has a needle valve that allows the customer to adjust the time required for the valve to close.

The Figure 1206 Check Valve may be ordered from the factory either as flow horizontal or flow up. The cylinder arrangement is available mounted on either side unless specified the Figure 1206 valve will be supplied with the cylinder on the right side (when facing the inlet) and for horizontal flow.

The Figure 1206 has internal components identical to the Figure 1106 except that the hinge pin is made from heat treated, type 431 stainless steel and is unique to the Figure 1206.