



APCO CONVERTIBLE SWING CHECK VALVES



APCO Convertible Swing Check Valves

Engineer: APCO is a unique check valve manufacturer. We are unique because we manufacture seven different type check valves in twenty different styles! With this variety, APCO is the industry leader in fitting individual customer needs because no single check valve is all serving

What Is Slamming?

Each type of check valve has inherent advantages and disadvantages and APCO is not reluctant to reveal either side. For example, beware of the term non-slamming. Non-slamming cannot be precisely defined or rated and what may be considered a slam to one individual may not be to another. Generally, as you would suspect, the user claims slam and the manufacturer claims no slam. Now it's a question of degree, opinion and argumentation between the parties.

We sincerely believe we have a logical solution to this problem: the convertible Swing Check Valve. This check valve has a high strength stainless steel shaft which permits retrofitting in the field and has several features to positively remedy the slam.

For years engineers and municipalities have commonly specified and used conventional or so called "non-slam type check valves", only to find themselves backed into a corner when the check valve turns out to be a real slammer after installation.

Don't let this happen to you. Specify Convertible Swing Check Valves.

Consider the tremendous importance of a check valve in your pumping system. A check valve allows flow or stops flow repeatedly twenty-four hours a day, three hundred sixty-five days a year. It also operates continuously, so it must certainly be reliable.

If a Swing Check Valve will satisfy your application, by all means specify it! But, be certain it is in fact reliable, designed to operate twenty-four hours a day, three hundred sixty-five days a year.

Do yourself and your client a favor. Specify APCO Convertible Swing Check Valves, with all the advanced engineered features included.

Be Certain:

(See drawings on page 4 for reference)

- It's built with a fully extended hi-strength stainless steel shaft
- The disc arm is ductile iron for high strength
- The disc arm is double connected to the disc for stability
- The body seat is long wearing centrifugally cast aluminum bronze
- The disc seat is resilient Buna-N for drip tight shut-off
- You can switch the counterweight or spring to either side of the valve in the field (sizes 10" & larger)
- Internals are replaceable without removing main valve from line

Finally, should hydraulic conditions exceed those anticipated and slamming occurs, be certain it can be upgraded in the field with an anti-slam:

Air Cushion Cylinder

(For Moderate Slam)

Oil Controlled Cylinder

(For Severe Slam)

- Side Mounted - Sizes up to 20" (500mm)
- Bottom Mounted - Sizes 8"-66" (200-1700mm)

Series 6000CP Convertible Swing Check Valve

The Convertible Swing Check Valve shall be constructed of heavy cast iron body with a bronze seat ring. The seat ring shall be locked in place with stainless steel lock screws and be field replaceable without the use of special tools. The shaft shall be one piece stainless steel 17-4PH conforming to the following table and be fully extended from the body to allow future retrofitting with external closing devices.

Valve Size	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	54"	60"	66"	
Shaft Dia.	1" 25	1" 25	1" 25	1.125" 29	1.375" 35	1.75" 44	2.125" 54	2.5" 64	3" 76	3.5" 89	3.75" 95	4" 102	3" 76	3.75" 95	4" 102	5" 127	5.5" 140	5.5" 140	6" 152	6" 152	
Model Number	6000CP	Stainless Steel 17-4PH																			
	6000CLS	Stainless Steel 17-4PH																			
	6000CLW	Stainless Steel 17-4PH																			
	6000C	Stainless Steel 17-4PH																			
	6000B	Not Available					Stainless Steel T303														
	6100	Stainless Steel 17-4PH										For Full ANSI Rating Use Series 6000B									
Yield strength: Stainless Steel 17-4PH = 165,000 psi; Stainless Steel T303 = 40,000 psi																					

Inch
Millimeter

Note: Above shaft diameters are designed for maximum torque when used with 6100 Series "side mounted" oil control check valves. These same shafts are also used on 6000 Series Air Cushion Check Valves which develops the least torque. Superior grade 17-4PH stainless steel shaft material is used. This material is four times stronger than T303, T304 or T316 stainless steel.

Valve shall be capable of being converted to any of the following variations after installation:

- 6000CLW Swing Check Valve — Lever & Weight (all sizes)
 - 6000CLS Swing Check Valve — Lever & Spring (all sizes)
 - 6000C Cushioned Swing Check Valve — Air Cushion (all sizes)
 - 6000B Cushioned Swing Check Valve — Oil Controlled Bottom Buffer (sizes 8" to 66") (200-1700mm)
 - 6100 Cushioned Swing Check Valve — Oil Controlled Side Mounted (sizes 2" to 20") (50-500mm)
- } For larger sizes contact factory**

The shaft shall have an O-ring seal at each end, and be externally replaceable. The valve disc shall be ductile iron suspended from the shaft by means of a double clevice for minimal tilt when open.

The Convertible Swing Check Valve shall prevent the backflow of the media on pump shut-off or power failure and be tight seating.

The disc seat shall be resilient Buna-N material for drip tight shut-off and shall be easily replaced in the field.

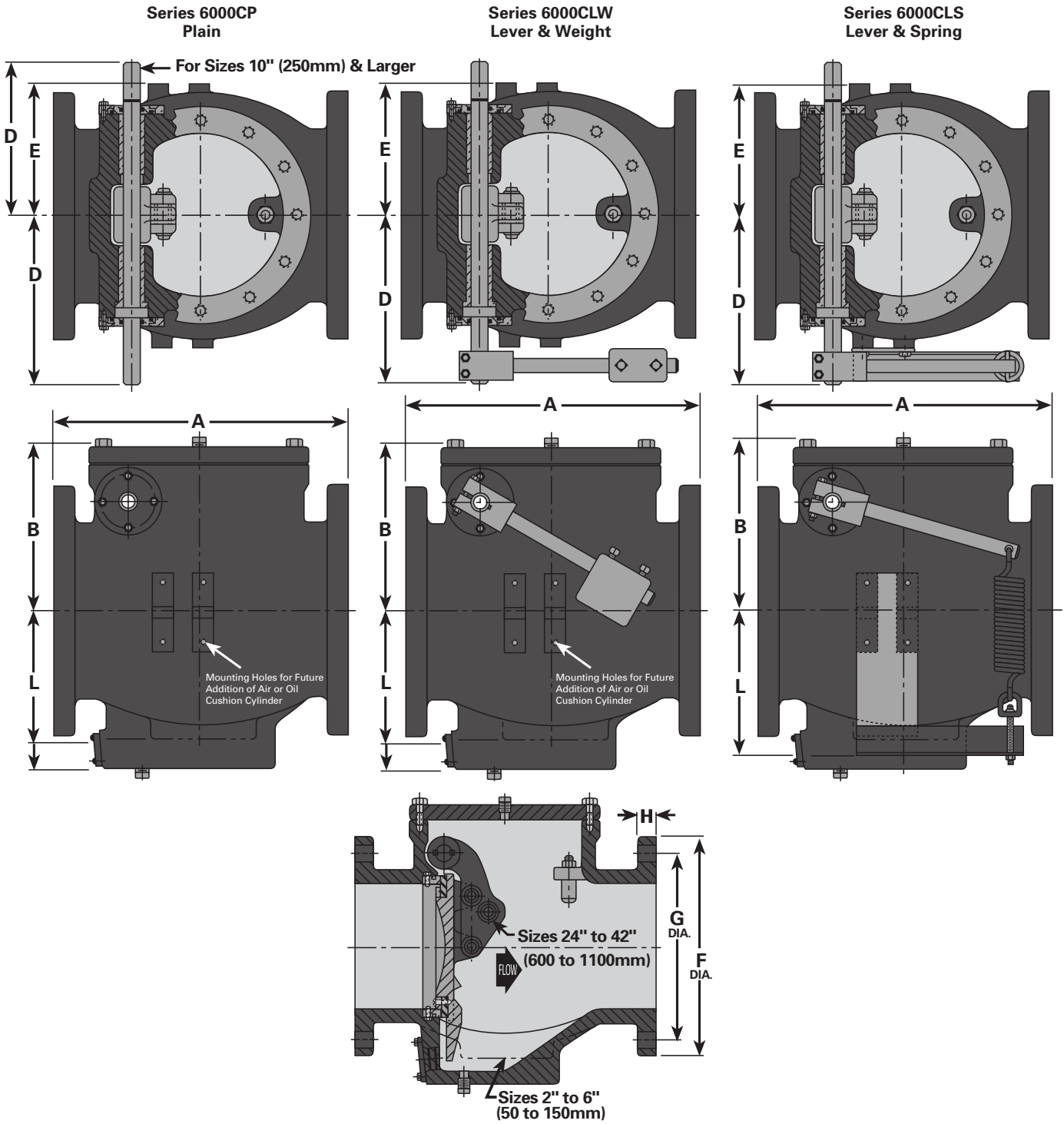
All internals shall be replaceable in the field without removing the main valve from the pipeline.

Valve exterior to be painted with universal metal primer as accepted by the FDA for use on contact with potable water.

All materials of construction shall be certified in writing to conform to A.S.T.M. specifications as follows:

Body, cover	Cast Iron	ASTM A126, GR.B
Disc, Disc arm	Ductile Iron	ASTM A536
Seat	Aluminum Bronze or Stainless Steel	ASTM B148
Disc seat	Buna-N or Metal	To suit
Pivot shaft	Stainless Steel	Type 17-4PH

APCO Series 6000 - Dimensions



Note:
All internals remain the same for conversions.

For future conversion to any particular model and lever arm dimensions see Bulletin 6000.

See previous page for shaft sizes and specifications.

APCO Series 6000 - Dimensions

Dimensions for 125#/250# Class Valves								Dimensions 125# Class Valves					Dimensions 250# Class Valves				
Model	Size	A	B	C	D	E	L	F	G	H	Dia. of Holes	No. of Holes	F	G	H	Dia. of Holes	No. of Holes
6002CP 6002CLS 6002CLW	2" 50	9" 229	5.75" 146	3.5" 89	11.875" 302	5" 127	5" 127	6" 152	4.75" 121	.625" 16	.75" 19	4	6.5" 165	5" 127	.875" 22	.75" 19	8
6002.5CP 6002.5CLS 6002.5CLW	2.5" 65	12" 305	6.875" 175	4" 102	12.25" 311	5.25" 133	5.5" 140	7" 178	5.5" 140	.688" 17	.75" 19	4	7.5" 191	5.875" 149	1" 25	.875" 22	8
6003CP 6003CLS 6003CLW	3" 80	12" 305	7" 178	4.125" 105	12.75" 324	5.5" 140	5.625" 143	7.5" 191	6" 152	.75" 19	.75" 19	4	8.25" 210	6.625" 168	1.125" 29	.875" 22	8
6004CP 6004CLS 6004CLW	4" 100	13" 330	7.5" 191	5" 127	13" 330	6" 152	6.5" 165	9" 229	7.5" 191	.938" 24	.75" 19	8	10" 254	7.875" 200	1.25" 32	.875" 22	8
6006CP 6006CLS 6006CLW	6" 150	17.5" 445	10" 254	6.5" 165	16.875" 429	8.375" 213	8" 203	11" 279	9.5" 241	1" 25	.875" 22	8	12.5" 318	10.625" 270	1.438" 37	.875" 22	12
6008CP 6008CLS 6008CLW	8" 200	18" 457	12" 305	7.5" 191	16.75" 425	8.5" 216	9" 229	13.5" 343	11.75" 298	1.125" 29	.875" 22	8	15" 381	13" 330	1.625" 41	1" 25	12
6010CP 6010CLS 6010CLW	10" 250	23" 584	14.375" 365	13" 330	20" 508	20" 508	13" 330	16" 406	14.25" 362	1.188" 30	1" 25	12	17.5" 445	15.25" 387	1.875" 48	1.125" 29	16
6012CP 6012CLS 6012CLW	12" 300	28" 711	16.125" 410	15" 381	21" 533	21" 533	15" 381	19" 483	17" 432	1.25" 32	1" 25	12	20.5" 521	17.75" 451	2" 51	1.25" 32	16
6014CP 6014CLS 6014CLW	14" 350	33" 838	20.375" 518	16.75" 425	25" 635	25" 635	16.75" 425	21" 533	18.75" 476	1.375" 35	1.125" 29	12	23" 584	20.25" 514	2.125" 54	1.25" 32	20
6016CP 6016CLS 6016CLW	16" 400	36" 914	22.625" 575	20" 508	27" 686	27" 686	20" 508	23.5" 597	21.25" 540	1.438" 37	1.125" 29	16	25.5" 648	22.5" 572	2.25" 57	1.375" 35	20
6018CP 6018CLS 6018CLW	18" 450	40" 1016	24" 610	21" 533	28.5" 724	28.5" 724	21" 533	25" 635	22.75" 578	1.563" 40	1.25" 32	16	28" 711	24.75" 629	2.375" 60	1.375" 35	24
6020CP 6020CLS 6020CLW	20" 500	40" 1016	25.25" 641	22.375" 568	31.5" 800	31.5" 800	22.375" 568	27.5" 699	25" 635	1.688" 43	1.25" 32	20	30.5" 775	27" 686	2.5" 64	1.375" 35	24
6024CP 6024CLS 6024CLW	24" 600	48" 1219	28" 711	25.375" 645	33" 838	33" 838	25.375" 645	32" 813	29.5" 749	1.875" 48	1.375" 35	20	36" 914	32" 813	2.75" 70	1.625" 41	24
6030CP 6030CLS 6030CLW	30" 750	56" 1422	37.875" 962	29.75" 756	37.5" 953	37.5" 953	29.75" 756	38.75" 984	36" 914	2.125" 54	1.375" 35	28	43" 1092	39.25" 997	3" 76	2" 51	28
6036CP 6036CLS 6036CLW	36" 900	63" 1600	44.125" 1121	33.5" 851	41" 1041	41" 1041	33.5" 851	46" 1168	42.75" 1086	2.375" 60	1.625" 41	32	50" 1270	46" 1168	3.375" 86	2.25" 57	32
6042CP 6042CLS 6042CLW	42" 1100	70" 1778	55.75" 1416	37.625" 956	48.5" 1232	48.5" 1232	37.625" 956	53" 1346	49.5" 1257	2.625" 67	1.625" 41	36	57" 1448	52.75" 1340	3.688" 94	2.25" 57	36
6048CP 6048CLS 6048CLW	48" 1200	78" 1981	50" 1270	41" 1041	60" 1524	60" 1524	41" 1041	59.5" 1511	56" 1422	2.75" 70	1.625" 41	44	65" 1651	60.75" 1543	4" 102	2.25" 57	40
6054CP 6054CLS 6054CLW	54" 1400	87" 2210	63" 1600	52" 1321	65" 1651	65" 1651	52" 1321	66.25" 1683	62.75" 1594	3" 76	2" 51	44	To be supplied by customer				
6060CP 6060CLS 6060CLW	60" 1500	97" 2464	66" 1676	58" 1473	70" 1778	70" 1778	58" 1473	73" 1854	69.5" 1765	3.125" 79	2" 51	52					
6066CP 6066CLS 6066CLW	66" 1700	108" 2743	68" 1727	64" 1626	76" 1930	76" 1930	64" 1626	80" 2032	76" 1930	3.438" 87	2" 51	52					

Inch
Millimeter

Sales and Service

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