

SWC Series Swing Check Valves, Sizes 3"-36", AWWA C508

SWC-OC Series w/Lever & Weight, Side Oil Cushion, Sizes 3"-20"

The operating principle of this mechanism is essentially the same as a SWC-BD Swing Check Valve with a Bottom Mounted Oil Control (Dashpot). However, the hydraulic cylinder is connected directly to the pivot shaft via a clevis, link and rod eye. This is done so that both the opening and closing of the valve may be controlled. When the valve opens, oil is displaced into the pressurized accumulator and can be adjusted as above. This controls the full stroke of opening.

During closure, however, the design of the two chamber cylinder allows closing to be broken into two stages. The first stage of the closing stroke is able to be much quicker due to the pressurized air cushion in the accumulator. This air expands and forces the oil back into the chamber faster, creating pressure against the piston and closing the valve quicker. The actual closure rate of this first stage is achieved by the use of a needle valve.

The second, final stage of closure is controlled by a small internal valve and an oil flow channel that controls the last portion of the oil flow into the accumulator. Adjustment of this valve gives the disc a final "cushion" at the end of the closing stroke.

This option is also available with the addition of a Timing Valve. The optional timing valve allows the valve to close to an adjustable degree rapidly on pump shut off. The option provides a means of reducing the closing time, which is key to containing column reversal. This is accomplished without the "slamming" associated with non-cushioned valves.

Available Sizes	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"
# of Levers & Weights	1	1	1	1	2	2	2	2	2	2
# of Cylinders	1	1	1	1	2	2	2	2	2	2

SWC-LWOC SERIES PARTS LIST

ITEM	DESCRIPTION	MATERIAL
1	BODY	A536 Gr. 65-45-12 Ductile Iron (DI)
2	COVER	A536 Gr. 65-45-12 DI
3	DISC ARM	A536 Gr. 65-45-12 DI
4	BODY SEAT	B148 UNS C95400 Al-Bronze (Al-Br)
5	DISC	DI (A536 Gr. 65-45-12)
6	DISC SEAT	Buna-N (ASTM D2000)
7	SEAT RETAINER	A240 Type 316 Stainless Steel (SS)
8	SEAT RETAINING BOLT	A193 Type 316 SS
9	SEAT RTR SET SCREW	A193 Type 316 SS
10	SEAT O-RING	Buna-N (ASTM D2000)
11	DISC PIN	A276 Type 316 SS
12	DISC ARM SLEEVE	A276 Type 316 SS
13	DISC PIN RET RING	PH 15-7 MO SS
14	DISC SLEEVE	A276 Type 316 SS
15	PIVOT SHAFT	A582 Type 303 SS
***15B	PIVOT SHAFT RING	A582 Type 303 SS
***15C	SET SCREW	A193 Type 316 SS
16	R.H. END CAP BSHG	B505 UNS C95400 Al-Br
17	L.H. END CAP BSHG	B505 UNS C95400 Al-Br
**18	END CAP FLANGE	A536 Gr. 65-45-12 DI
19	PIVOT BUSHING	B505 UNS C95400 Al-Br
*20	DISC STOP	A276 Type 316 SS
*21	DISC STOP NUT	A194 Type 316 SS
22	INT. O-RING	Buna-N (ASTM D2000)
23	EXT. O-RING	Buna-N (ASTM D2000)
24	DISC SET SCREW	A193 Type 316 SS
25	PIVOT KEY	A276 Type 316 SS
26	COVER GASKET	Klinger-SIL C4401
27	COVER BOLT	A307 GR. B Steel
28	END CAP BOLT	A307 GR. B Steel
29	PLUG	A536 Gr. 65-45-12 DI
32	LEVER ASSEMBLY	Steel
35	OIL CUSHION	Steel



PRODUCT LINE

SWC Series Swing Check Valves, Sizes 3"-36"

SHEET

SWC-LW-AC Series Materials List

DATE

3/18/2025

REVISION

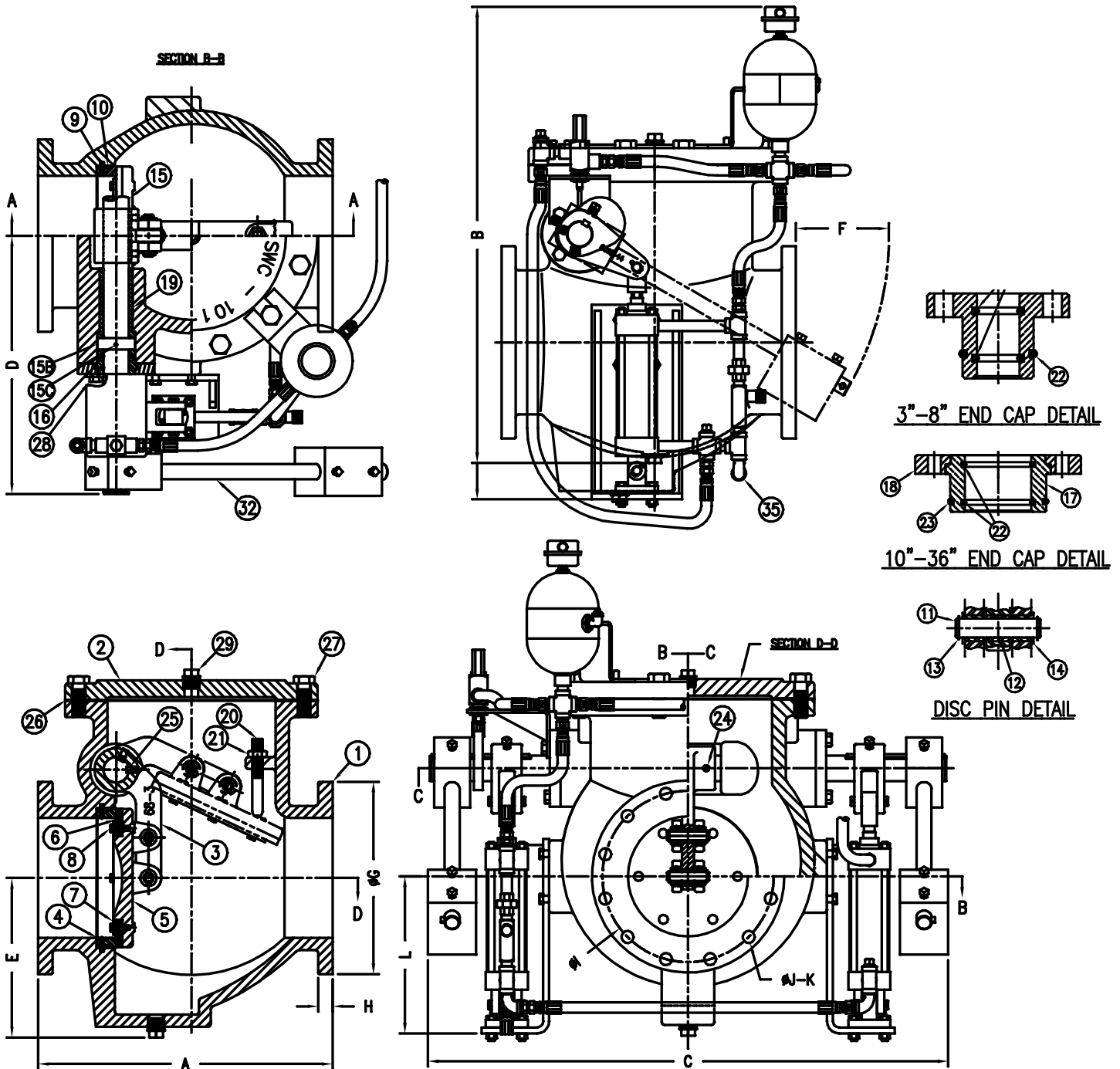
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NOTES ON PARTS LIST:

1. *: Used on 6" & larger valves.
2. **: Used on 10" & larger valves.

3. ***: Used on 14" & larger valves.
4. 36" valves have dual cushion and lever assemblies.



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