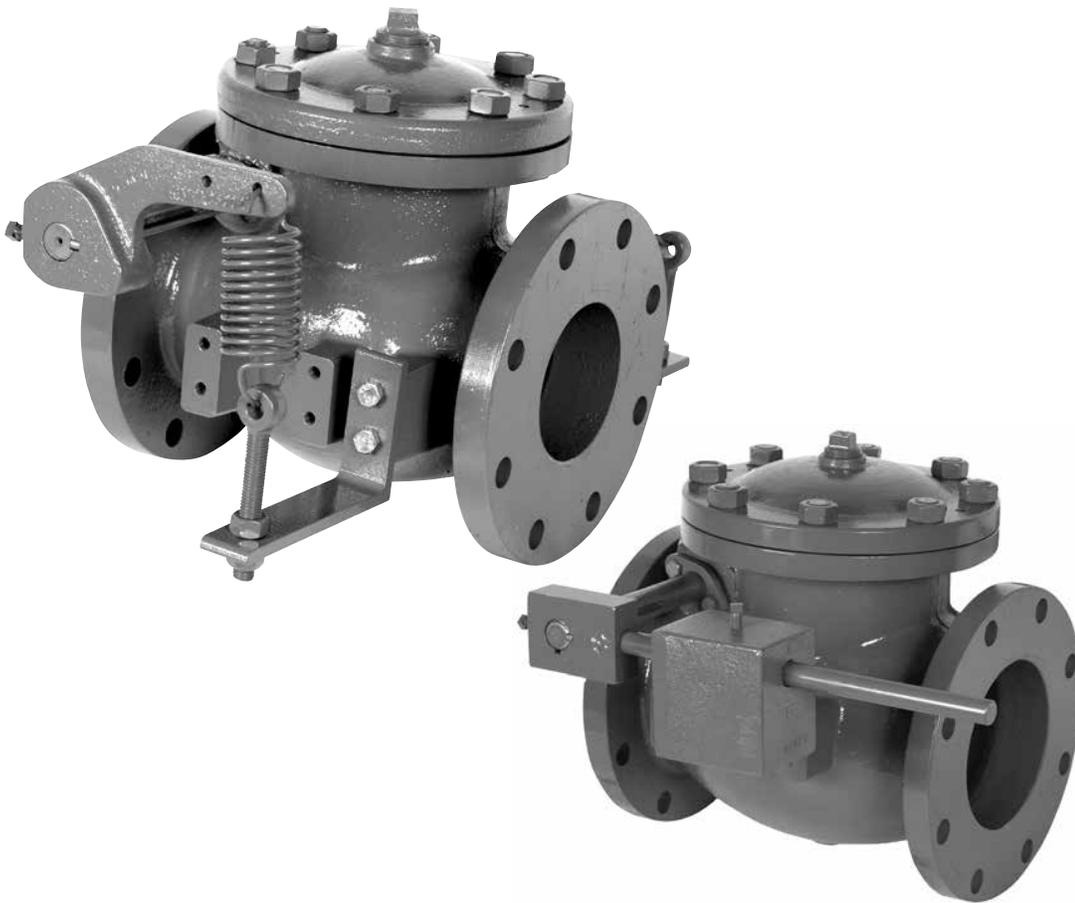




LUDLOW Series AWWA C508 Swing Check Valves

Lever and Weight • Lever and Spring

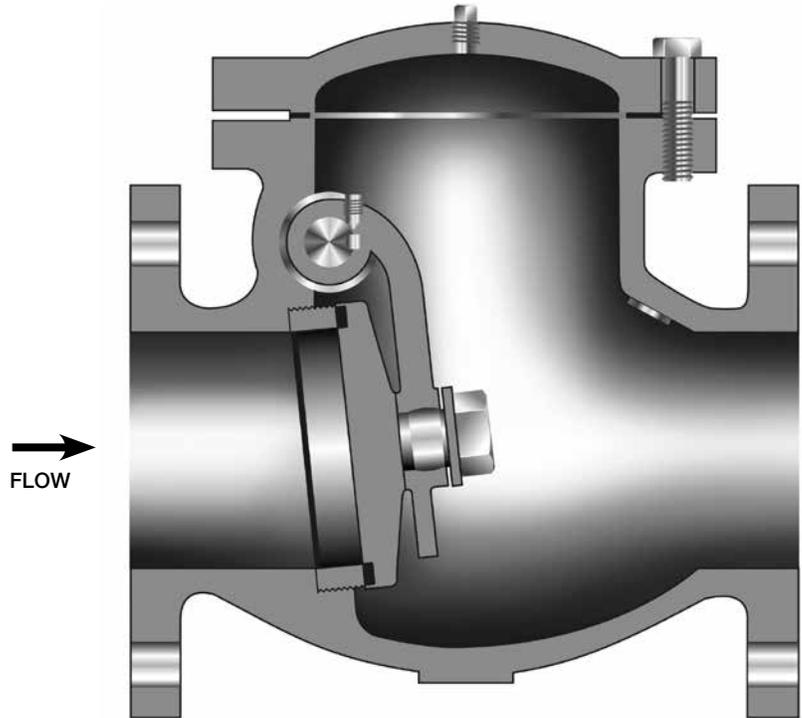


3" to 30" for Water, Wastewater and Sewage

LUDLOW SERIES AWWA C508 SWING CHECK VALVE FEATURES

STANDARD FEATURES

- Quick-closing, slam resistant operation, ideal for pump station applications
- Meets design, materials of construction and testing requirements of AWWA C508 (latest revision)
- Heavy-duty 250 PSI rated high strength ductile iron body and cover
- Full waterway design for low headloss
- Corrosion and wear resistant stainless steel body seat
- Rubber-faced disc for durable, drop tight seating
- Oversized stainless steel shaft and bronze shaft bearings designed for high cycle operation
- Lined and coated with NSF-61 certified epoxy for long term corrosion resistance
- Stainless steel cover bolts
- Valve is totally serviceable through top flange



OPTIONAL FEATURES

- Limit switch to indicate valve position. Available in NEMA 4, 4X, 6, 6P or 7 rating

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CHECK VALVES DESCRIPTION, OPERATION AND HEADLOSS

Description

LUDLOW Series Swing Check Valves provide long-term, dependable service in water, wastewater and raw sewage applications. LUDLOW Series Swing Check Valves are ruggedly designed to withstand the rigors and frequent operation of pump station use, opening freely when the pump starts and closing quickly and quietly upon pump shutdown to prevent reverse flow. The LUDLOW Series check valves meet or exceed the requirements of AWWA C508, are rubber-seated for zero leakage and are available with either outside lever and weight or lever and spring for installation in horizontal or vertical pipes.

Valve Size	GA		STANDARD SWING CHECK	
	Diameter	Area	Diameter	Area
3	3/4"	.44 sq.in.	5/8"	.31 sq.in.
4	7/8"	.60 sq.in.	3/4"	.44 sq.in.
6	1"	.79 sq.in.	7/8"	.60 sq.in.
8	1-1/4"	1.2 sq.in.	1"	.79 sq.in.
10	1-1/4"	1.2 sq.in.	1-1/8"	1.0 sq.in.
12	1-1/2"	1.8 sq.in.	1-1/8"	1.0 sq.in.
14	2"	3.1 sq.in.	1-1/8"	1.0 sq.in.
16	2"	3.1 sq.in.	1-1/4"	1.2 sq.in.
18	2"	3.1 sq.in.	1-1/2"	1.8 sq.in.
20	2"	3.1 sq.in.	1-1/2"	1.8 sq.in.
24	2-3/4"	5.9 sq.in.	2"	3.1 sq.in.
30	2-1/2"	5.9 sq.in.	2-1/2"	4.9 sq.in.

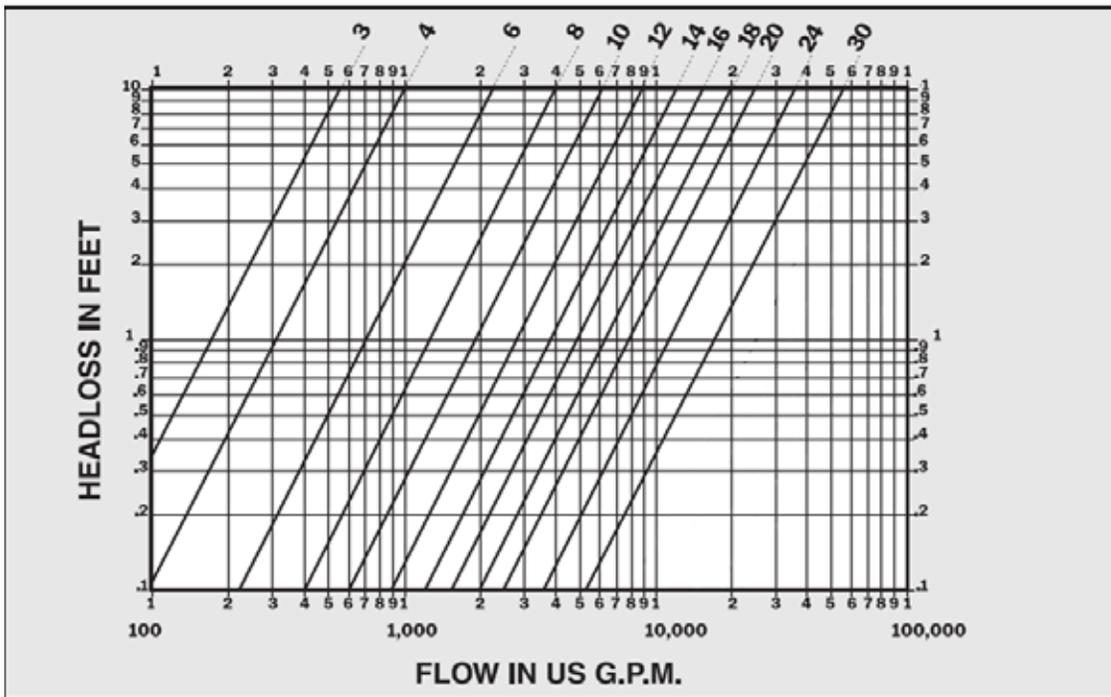
Pump Check Operation

At pump start, the valve disc swings away from the seat in proportion to the fluid's forward flow velocity, lifting the counterweight or extending the external spring as it does. The design of the LUDLOW Series valve provides a full flow area when the disc has swung away from the seat by as little as 22.5 degrees but can open as much as 60 degrees if the fluid velocity is sufficient.

At pump shutdown, the force of the heavy counterweight or extended spring "pulls" the valve closed through the decreasing forward fluid velocity during pump coastdown so the valve is fully seated before fluid reversal occurs, precluding slam and bang.

The heavy closure devices needed to ensure quiet closure require over-sized hinge shaft and bearings to withstand the forces produced by rapid closure. Figure 1 compares the significantly larger diameter shaft of the LUDLOW Series Swing Check Valve to that of a "standard" swing check. These small shaft diameters could not accommodate the heavy closure devices needed for quiet operation thus increasing the likelihood of slam and bang.

Figure 1
Typical Swing Check Valve Shaft Diameter Comparison



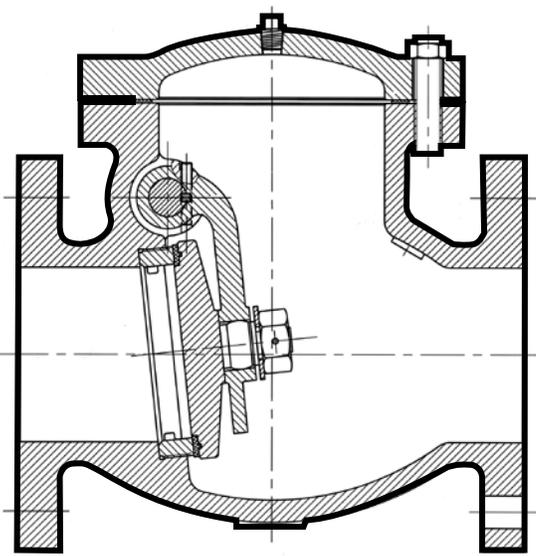
Headloss

LUDLOW Series
Swing Check Valves
Full Open Headloss

LUDLOW Series Figure 340-W

LEVER AND WEIGHT SWING CHECK VALVES

COMBATS SLAM		FEATURES
	<p>More than a century of valve design and manufacturing.</p> <p>Consult factory for availability of options.</p>	<ol style="list-style-type: none"> 1. Meets design, materials of construction and testing requirements of AWWA C508 (latest revision) 2. ANSI Class 125 flanged, 250 PSI rated ductile iron construction 3. NSF-61 certified epoxy lined and coated 4. Stainless steel body seat 5. Rubber faced ductile iron disc for zero seat leakage 6. Adjustable Teflon shaft packing for low friction operation 7. Stainless steel hinge shaft supported at both ends in lead free bronze bearings 8. Powerful closure devices for non-slam operation
	<p>Working Pressure</p> <p>3" through 30" 250 psi</p>	
	<p>Hydrostatic Test Pressure</p> <p>3" through 30" 400 psi</p>	
<p>FIG. NO. 340-W (Single Lever and Weight)</p>		

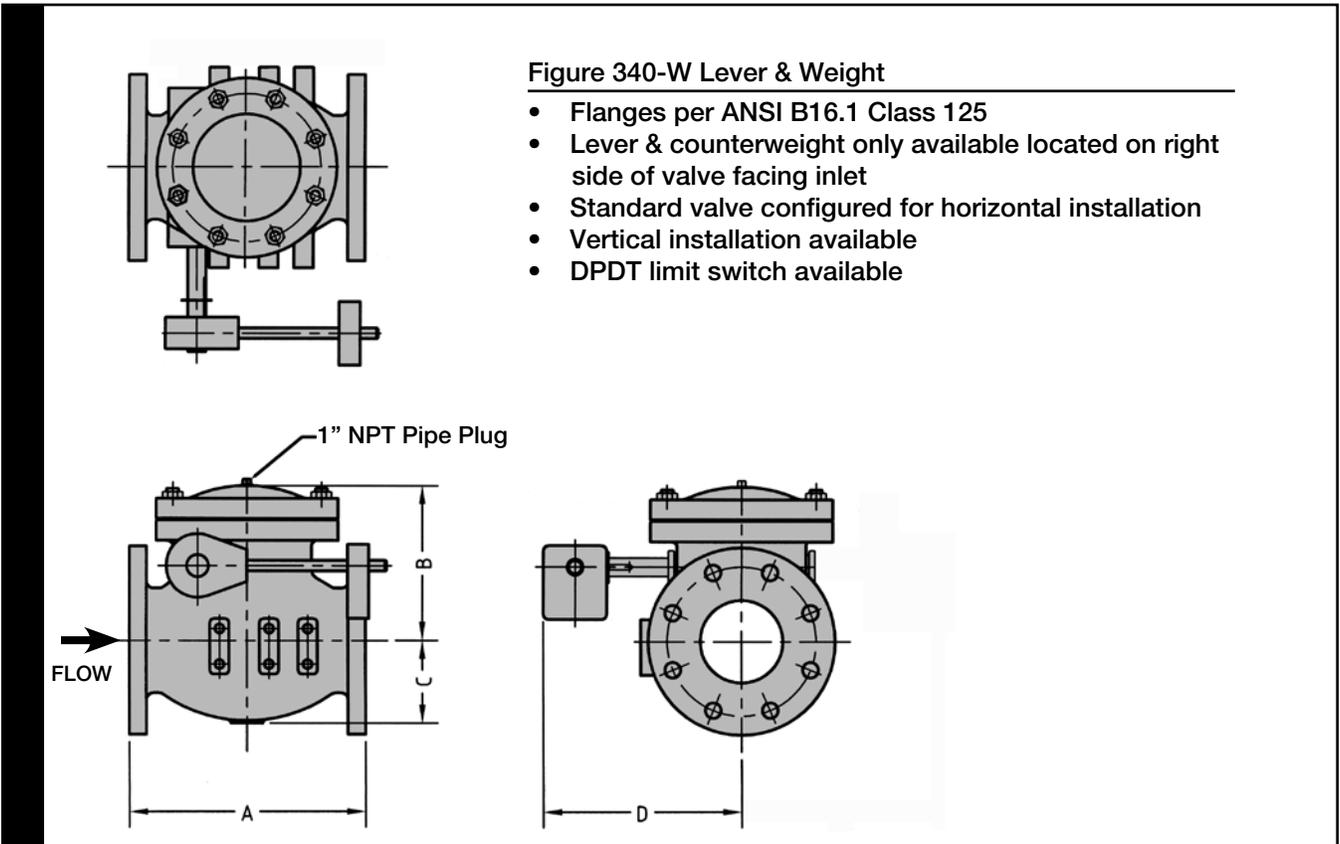
MATERIALS OF CONSTRUCTION		CROSS SECTION													
<table border="1"> <thead> <tr> <th>Part Name</th> <th>Standard Material</th> </tr> </thead> <tbody> <tr> <td>Body, Cover Disc and Disc Arm</td> <td>Ductile Iron ASTM A536 Grade 65-45-12</td> </tr> <tr> <td>Body Seat</td> <td>316 Stainless Steel</td> </tr> <tr> <td>Resilient Seat</td> <td>Nitrile (Buna-N)</td> </tr> <tr> <td>Shaft, Key</td> <td>304 Stainless Steel</td> </tr> <tr> <td>Cover Gasket</td> <td>Graphite</td> </tr> <tr> <td>Exterior Studs Bolts and Nuts</td> <td>304 Stainless Steel</td> </tr> </tbody> </table>	Part Name	Standard Material	Body, Cover Disc and Disc Arm	Ductile Iron ASTM A536 Grade 65-45-12	Body Seat	316 Stainless Steel	Resilient Seat	Nitrile (Buna-N)	Shaft, Key	304 Stainless Steel	Cover Gasket	Graphite	Exterior Studs Bolts and Nuts	304 Stainless Steel	
Part Name	Standard Material														
Body, Cover Disc and Disc Arm	Ductile Iron ASTM A536 Grade 65-45-12														
Body Seat	316 Stainless Steel														
Resilient Seat	Nitrile (Buna-N)														
Shaft, Key	304 Stainless Steel														
Cover Gasket	Graphite														
Exterior Studs Bolts and Nuts	304 Stainless Steel														
<p>NOTE: Also available with Lever & Spring or Cushioned Lever & Weight.</p>															

LUDLOW Series Figure 340-W

LEVER AND WEIGHT SWING CHECK VALVES

GENERAL DIMENSIONS											
SIZE		A		B		C		D		WEIGHT	
Inches	MM	Inches	MM	Inches	MM	Inches	MM	Inches	MM	lbs	kg
3"	80	9-1/2	241	6-1/4	157	3	75.8	9-1/4	247	70	32
4"	100	11-1/2	292	7-1/2	186	3-3/4	93.9	10-1/4	259	100	45
6"	150	14	356	9-1/2	237	14	125	11-7/8	301	170	77
8"	200	19-1/2	495	11-1/4	282	5	163	14	358	300	136
10"	250	24-1/2	622	14-1/4	357	7-1/2	188	15-1/4	387	450	204
12"	300	27-1/2	698	16-1/2	417	8-7/8	224	16-3/8	416	650	295
14"	350	31	787	17-3/4	447	10-1/2	265	17-1/4	439	950	430
16"	400	36	914	19-1/2	495	11-5/8	296	22	557	1200	545
18"	450	40	1016	21-1/8	536	12-5/8	320	23-1/4	590	1500	680
20"	500	40	1016	23-1/4	586	14	357	24-1/2	621	2000	907
24"	600	48	1210	28-1/2	720	17-1/8	435	27	686	3000	1360
30"	750	60	1524	33	838	26	660	41	1041	6000	2727

Dimensions are approximate. Request certified drawings if clearances are critical.



LUDLOW Series Figure 340-S

LEVER AND SPRING SWING CHECK VALVES

COMBATS SLAM

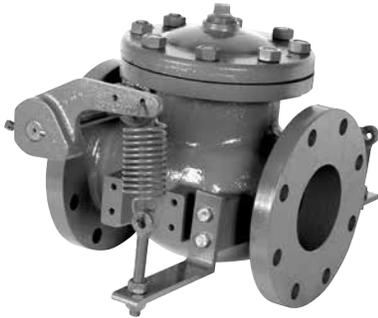


FIG. NO. 340-S (Single Lever and Spring)

More than a century of valve design and manufacturing.

Consult factory for availability of options.

Working Pressure
3" through 30" 250 psi

Hydrostatic Test Pressure
3" through 30" 400 psi

FEATURES

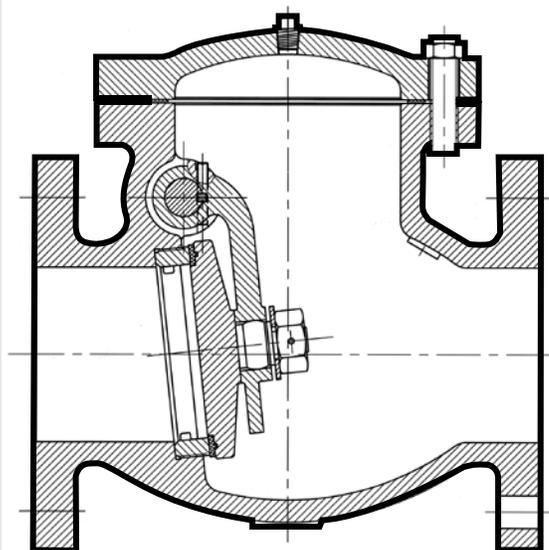
1. Meets design, materials of construction and testing requirements of AWWA C508 (latest revision)
2. ANSI Class 125 flanged, 250 PSI rated ductile iron construction
3. NSF-61 certified epoxy lined and coated
4. Stainless steel body seat
5. Rubber faced ductile iron disc for zero seat leakage
6. Adjustable Teflon shaft packing for low friction operation
7. Stainless steel hinge shaft supported at both ends in lead free bronze bearings
8. Powerful closure devices for non-slam operation

MATERIALS OF CONSTRUCTION

Part Name	Standard Material
Body, Cover Disc and Disc Arm	Ductile Iron ASTM A536 Grade 65-45-12
Body Seat	316 Stainless Steel
Resilient Seat	Nitrile (Buna-N)
Shaft, Key	304 Stainless Steel
Cover Gasket	Graphite
Exterior Studs Bolts and Nuts	304 Stainless Steel

NOTE: Also available with Lever & Weight or Cushioned Lever & Weight.

CROSS SECTION

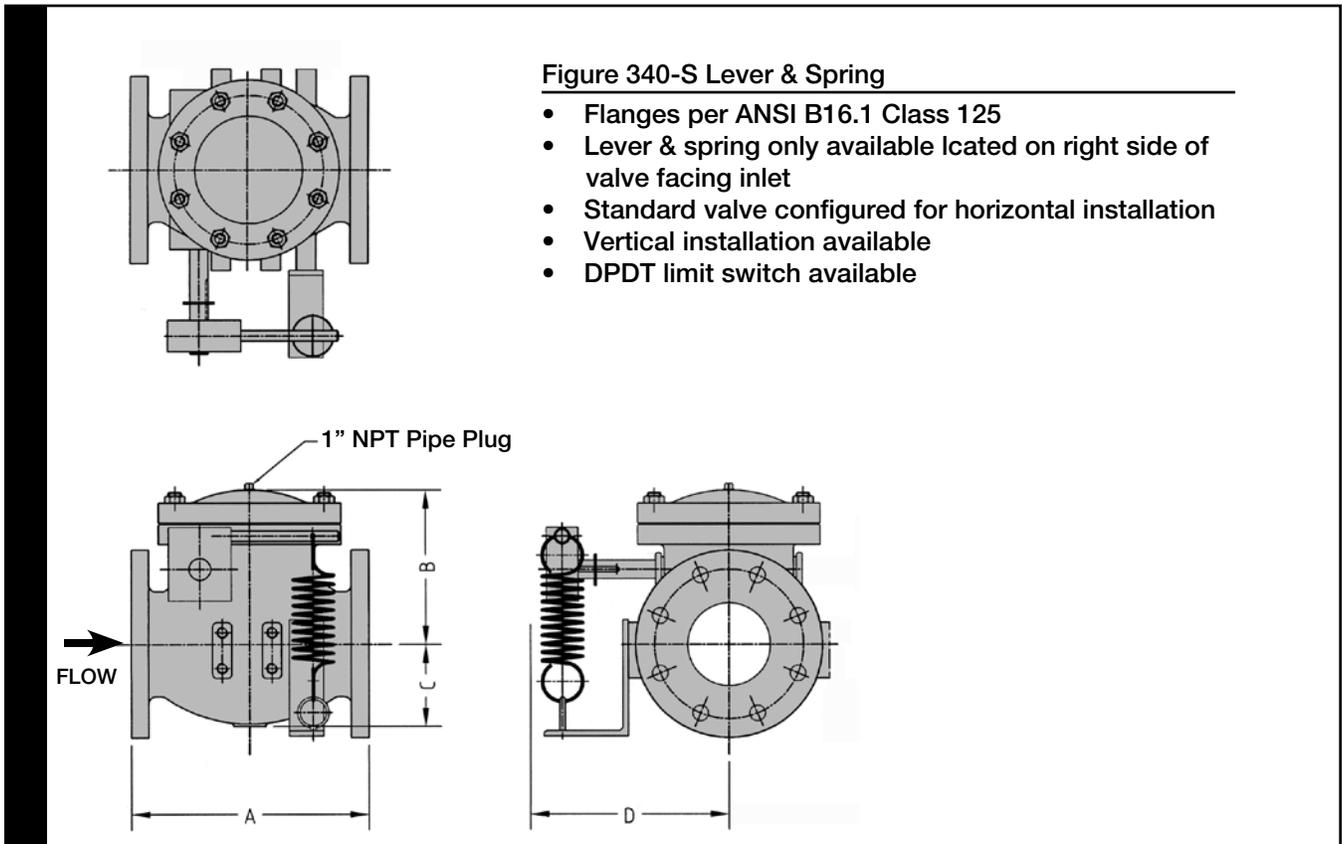


LUDLOW Series Figure 340-S

LEVER AND SPRING SWING CHECK VALVES

GENERAL DIMENSIONS											
SIZE		A		B		C		D		WEIGHT	
Inches	MM	Inches	MM	Inches	MM	Inches	MM	Inches	MM	lbs	kg
3"	80	9-1/2	241	6-1/4	157	3	75.8	9-1/4	247	70	32
4"	100	11-1/2	292	7-1/2	186	3-3/4	93.9	10-1/4	259	100	45
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30"	750	60	1524	33	838	26	660	41	1041	6000	2727

Dimensions are approximate. Request certified drawings if clearances are critical.



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- Flanged and Mechanical Joint Ends
- Manual and Automatic Actuation

AWWA C507

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- Resilient Seated
- Hydraulic, Pneumatic, or Electric Motor Actuation

AWWA C508

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- Rubber Flapper Check
- Globe and Wafer Silent Check
- Ball Check
- Foot Valves

AWWA C512

Air Valves for Water and Sewage

- Air Release
- Air and Vacuum
- Combination
- Vacuum Breaking

AWWA C517

Eccentric Plug Valves

- Flanged, Threaded, and Mechanical Joint Ends
- Manual and Automatic Actuation

AWWA C530

Control Valves

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- Pressure Regulating
- Solenoid Operated
- Anti-Cavitation

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