

Dynamic Lifter® Sewage Pressure Relief Valve



- BOOSTED OPENING MINIMIZES SURGE PRESSURE
- PREMIUM MATERIALS FOR LOW MAINTENANCE
- 'NO TOOLS' FIELD CYCLE & OPERATION TEST
- CLOSING SPEED ADJUSTMENT
- 1-1/2" SENSING CONNECTION
- LARGE SOLIDS HANDLING
- ALL MAINTENANCE POSSIBLE IN-LINE
- AVAILABLE IN TWO VERSIONS: SPRING & OIL OPERATED (Model 106-DL) OR AIR OPERATED (Model 106-DL-A)

When Ordering Please Specify

1. Catalog Model #
2. End Connections
3. Valve Size
4. Inlet/Outlet Pressure Range

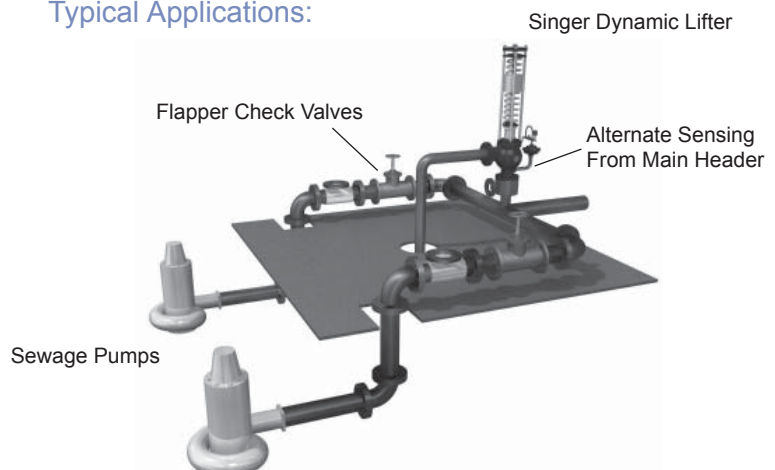
- Direct acting, fast open, adjustable slow close to prevent closing surges.
 - Booster piston opens valve wider, the extra discharge reduces system over-pressure.
 - Handles large solids -minimum 2" (50mm) opening and up to 3" (75mm) on larger sized valves.
 - Sensing separation chamber permits clean uncontaminated mineral oil to transmit system pressure to the opening piston.
- By closing the sensing ball valve and applying pressure to the test connection, the valve may be cycled open during maintenance checks, ensuring that it will operate freely when needed. No tools or disassembly is required.
- The opening test cycling process may be used to flush the seat area quickly and easily, should the valve fail to close drip tight.
 - Premium materials, 316 stainless steel, heat fusion coating, ductile iron body, long re-greasable guide bushing, stainless fasteners. These all contribute to long life and operators preference.
 - Available in two versions: Spring and Oil operated (Model A106-DL) or Air operated (Model A106-DL-A) The air actuated design is used for higher relief pressures or where pressurized air\ actuation would be preferred. (Consult Factory for details on A106-DL-A.)

The Singer model DL sewage pressure relief valve is a direct acting spring loaded relief valve (Air actuated design also available -used for higher relief pressures or where pressurized air actuation would be preferred). The valve is adjusted to open when the pressure exceeds the set point (approximately 10% above the normal operating pressure). The valve closes drip tight when pressure falls below the set point.

The Dynamic Lifter is connected on a tee off the main line and usually discharges relief flow back to the main sump to reduce the surge over-pressure. A speed control permits adjustment of the closing speed.

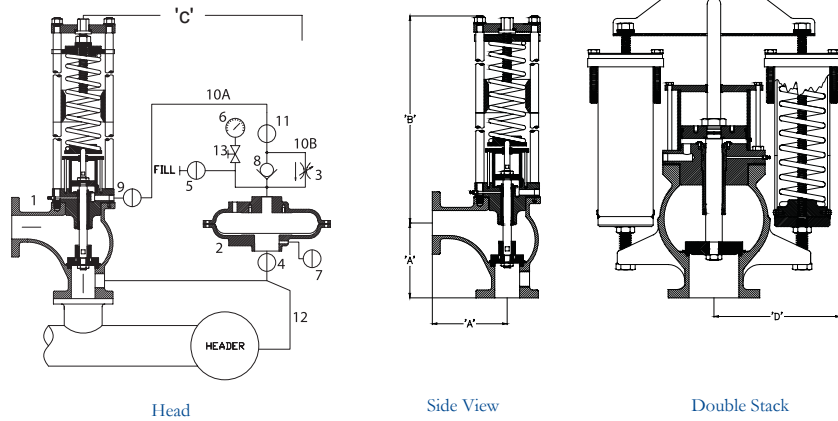
The opening force is boosted by the line pressure operating (via separation chamber) on the piston. By applying external pressure (eg. hand pump) to the test connection, the valve may be cycled open for routine maintenance.

Typical Applications:



Dynamic Lifter Sewage Relief Valve:

1. Model 106-DL - Dynamic Lifter
2. Diaphragm Isolator
3. Closing speed control needle valve
4. Isolating valve
5. Isolating valve
6. Pressure gauge
7. Isolating valve
8. Teflon seated swing check valve
9. Isolating valve
- 10A. Field connection by others
- 10B. 3/8 NPT flexible hose
11. Isolating valve
12. (Optional) Field connection by others
13. Model 852B gauge cock



Selection Summary:

A106-DL ANSI DATA (US UNITS)		SINGLE STACK				DOUBLE STACK						
Size	3"	4"	6"	8"	6"	8"						
Relief Settings (psi)												
SPRING SPECIFIC RANGES	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
	15	120	15	80	10	35	5	15	50	120	30	70
	30	200	25	150	15	75	10	35	-	-	-	-
	100	250	30	180	50	80	15	40	-	-	-	-
	150	250	-	-	-	-	-	-	-	-	-	-
Lift / Opening	2"		2"		2-1/2"		3"		2-1/2"		3"	
Dimensions												
Dimension A	9"		10"		11.5"		14"		11.5"		14"	
Dimension B	38.5"		39.5"		43.75"		45.75"		25.25"		26.75"	
Dimension C	30.5"		30.5"		32"		32"		32"		32"	
Dimension D	4.75"		4.75"		7.5"		10"		15.25"		18.25"	
A106-DL ANSI DATA (METRIC UNITS)												
Size	80 mm	100 mm	150 mm	200 mm	150 mm	200 mm						
Relief Settings (bar)												
SPRING SPECIFIC RANGES	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
	1.03	8.27	1.03	5.52	0.69	2.41	0.34	1.03	3.45	8.27	2.07	4.83
	2.07	13.79	1.72	10.34	1.03	5.17	0.69	2.41	-	-	-	-
	6.89	17.24	2.07	12.41	3.45	5.52	1.03	2.76	-	-	-	-
	10.34	17.24	-	-	-	-	-	-	-	-	-	-
Lift / Opening	50mm		50 mm		64 mm		76 mm		64 mm		76 mm	
Dimensions												
Dimension A	229 mm		254 mm		292 mm		356 mm		292 mm		356 mm	
Dimension B	978 mm		1004 mm		1112 mm		1162 mm		641 mm		680 mm	
Dimension C	775 mm		775 mm		813 mm		813 mm		813 mm		813 mm	
Dimension D	121 mm		121 mm		191 mm		254 mm		387 mm		464 mm	

NOTE: Please verify / consult factory for all dimensions. For higher pressures or applications where pressurized air actuation would be preferred - please consult factory.

Specifications:

The valve shall be a SINGER VALVE model A106 DL Sewage Pressure Relief Valve, size “_____” flanges ANSI Class 150 pressure rating, smooth radius angle style with spring ranges (see table above) factory set at _____”.

- Construction shall be of ductile iron with 12 mils of heat fused epoxy. The 316 Stainless Steel Stem shall be applied with Oxy-Nitride to reduce solids adhesion. The replaceable seat ring shall be of 316 Stainless Steel to reduce corrosion.
- The opening force on the inner valve from system pressure shall be supplemented by a booster piston using a clean actuating fluid which provide extra opening force at full system pressure throughout the stroke.
- A flexible diaphragm in a separation chamber shall continuously transfer the system pressure to the actuating fluid without contamination.
- Using a test connection and without tools it shall be possible to apply external pressure at the separation chamber and cycle the inner valve assembly open to ensure that it is always operational when required.
- Closing speed shall be adjustable using a flow control in the clean liquid to prevent valve closing surges.
- Prior to shipping the standard factory tests shall include cycling full stroke at the relief setting, drip tight leakage test, in addition to the normal over pressure shell test.

Consult Factory for specifications for Air Actuated Dynamic Lifter (Model 106-DL-A). See Catalog Technical & Sizing Section for sizing graph