The PL Series
Pressure Air Release Valves

Sizes 1” thru 6” Available • Compound Lever System
Adjustable Buna-N Rubber Plunger

Crispin
Since 1905

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PL SERIES

Pressure Air Release Valves

Valve Function

- Allows air and/or gas to be released from a pressurized liquid system

Features

- Meeets AWWA C-512
- Compound lever system
- Adjustable Buna-N rubber plunger
- Available in sizes 1" thru 4"

*All Crispin Valves are hydrostatically tested to 150% of their maximum working pressure.

*For ease of maintenance, some of the parts are provided as kits or assemblies.

With Stainless Steel Trim and Float or Bronze Trim and Stainless Steel Float

Systems under pressure can be vented of accumulating air with the use of Pressure Air Release Valves. These should be mounted on the system at all high points, and downstream from these points where the velocity of the liquid carries the air or gas slightly beyond the crest. On lines with little gradient, valves should be placed every half mile or so, at the discretion of the engineer. Crispin Type "N" is for normal use in water below 150° F, and features a PVC seat. Crispin Type "P" is for use with all types of fluid, and is supplied with a steel seat. Both are supplied with a Buna-N rubber plunger. For special applications, an optional stainless steel seat with a Buna-N plunger is available.

When a valve is used in a system where a vacuum is desired, such as in a pump prime, an optional vacuum check unit is offered that will prevent air from re-entering the system.

Orifice Size for Various Pressure Ranges

Valve Size	MAX. OPERATING PRESSURE IN PSI (standard 150 PSI)					
	Max. 50	Max. 100	Max. 150	Max. 200	Max. 250	Max. 300
1"	5/16"	5/16"	1/4"	3/16"	5/32"	1/8"
2"	3/8"	3/8"	5/16"	1/4"	3/16"	5/32"
2 1/2"	5/8"	1/2"	7/16"	3/8"	9/32"	1/4"
3"	3/4"	5/8"	1/2"	7/16"	5/16"	9/32"
4"	1"	3/4"	5/8"	1/2"	7/16"	3/8"

** For additional sizes, please consult factory.*

Model Information

Size of Valve	1"	2"	2 1/2"	3"	4"
Model No. Screwed Inlet	PL10	PL20	P250	P30	P40
		PL10A		PL20A	
125# Flanged Inlet		PL21	P251	P31	P41
250# Flanged Inlet		PL22	P252	P32	P42
Trim	S/S	S/S	IBBT	IBBT	IBBT

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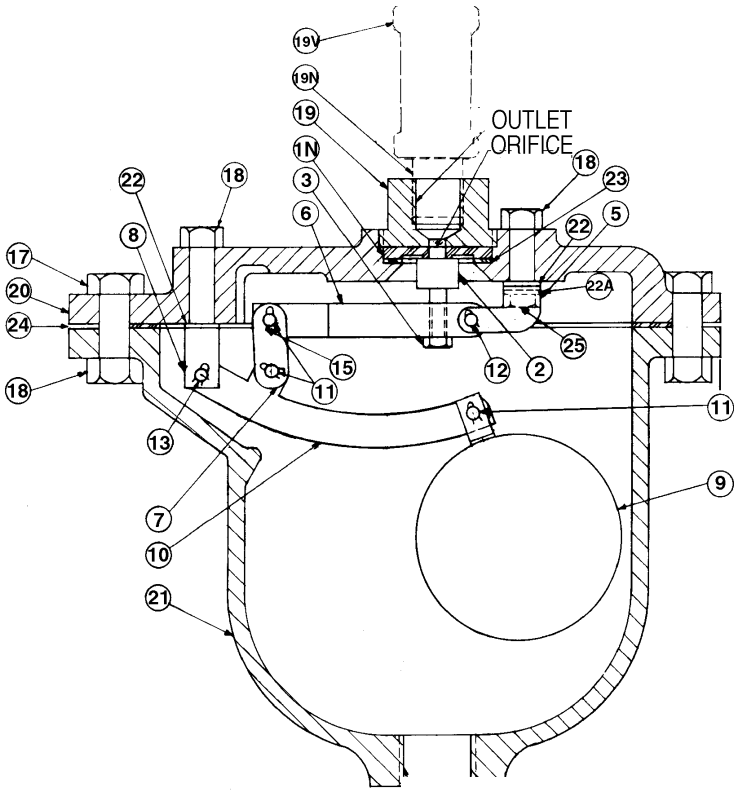
PL SERIES

Dimensions and Weights

MODEL	INLET NPT	TRIM	HEIGHT	WIDTH	WEIGHT (lbs)
PL10	1" NPT	S/S	9 1/8"	9 3/4"	22
PL10A	2" NPT	S/S	9 1/8"	9 3/4"	22
PL20	2" NPT	S/S	10 1/2"	10 1/8"	45
PL20A	3" NPT	S/S	12 1/4"	10 1/8"	54
PL21	2" 125# Flg.	S/S	14"	10 1/8"	51
PL22	2" 250# Flg.	S/S	14 1/4"	10 1/8"	56
P250	2 1/2" NPT	IBBT	11 1/8"	11 1/2"	58
P251	2 1/2" 125# Flg.	IBBT	14 1/8"	11 1/2"	68
P252	2 1/2" 250# Flg.	IBBT	14 5/16"	11 1/2"	70
P30	3" NPT	IBBT	13 1/2"	12 1/2"	87
P31	3" 125# Flg.	IBBT	16 3/16"	12 1/2"	100
P32	3" 250# Flg.	IBBT	16 9/16"	12 1/2"	103
P40	4" NPT	IBBT	16 5/8"	4 1/4"	132
P41	4" 125# Flg.	IBBT	18 7/8"	14 1/4"	145
P42	4" 250# Flg.	IBBT	19 3/16"	14 1/4"	158



CRISPIN Pressure Air Release Valves operate by means of a compound lever system. This lever system multiplies the weight of the float so that the force pulling the rubber valve away from the orifice is greater than the force or system pressure holding it closed. The pressure at which it will operate is determined by the orifice size. The orifice size will vary inversely to the pressure, that is, as the operating pressure increases the orifice must be smaller, as the operating pressure decreases the orifice can be larger. A valve with an orifice size small enough to permit operation at 300 psig will still function at pressures less than 300 PSIG.

Where pressure air release valves are used on systems other than water, the specific gravity of the liquid must be considered (re. catalog sheet: "Air Release Valves For Liquids Other Than Water"). The specific gravity affects the float buoyancy and, subsequently, valve performance. For example, a valve applied on a petroleum application would require a float of lighter weight in order to provide a buoyancy equivalent to that of the float in water.

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