

Safety Relief Valves

The safety relief valve is mounted directly to the boiler to prevent excess pressure buildup in the boiler. The capacity of the relief valve must be greater than the BTU input of the boiler.

Series LF174A / 174A / 374A / 740 ASME Water Pressure Relief Valves

Sizes: 3/4" – 2" (20 – 50mm)

Boiler safety relief valves for pressure protection only of all types of hot water heating boiler equipment. Female inlet and outlet connections. Meets Military spec. MIL-V-136-12D, Type III.

Features

- Seat located above drain; water can't be trapped and sediment can't foul seat
- Non-mechanical seat-to-disc alignment
- Water seal of high-temperature resisting material isolates spring working parts from water during relief

LEAD FREE Series LF174A features Lead Free* cast copper silicon alloy body construction and complies with Lead Free* installation requirements. Pressure range 60 to 150 psi (4-10 bar) with corresponding high ratings from 1,100,000 to 14,370,000 BTU/hr.

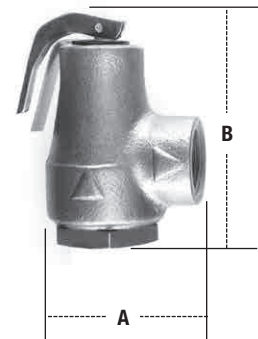
Series 174A features a bronze body for use in non-potable applications. Pressure range 30 to 150 psi (2-10 bar) with corresponding high ratings from 650,000 to 14,370,000 BTU/hr.

Series 374A features an iron body with forged bronze inlet for use in non-potable applications. Pressure range 30 to 150 psi (2-10 bar) with corresponding high ratings from 550,000 BTU/hr.

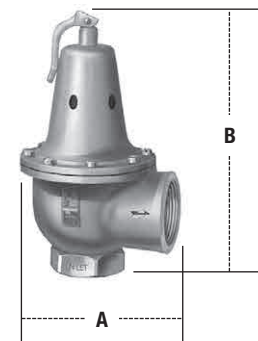
Series 740 safety relief valves with expanded outlets for hot water space heating boilers. Features iron body construction. Pressure range 30-75psi (207 – 517 kPa) with corresponding high ratings from 925,000 – 10,700,000 BTU/Hr., a wide range of relief capacities. Has a lower BUT per thousand cost because the Series 740 provides a high BTU rating, size-or-size than other valves on the market. Female inlet and outlet connections.



174A



374A



740

Dimensions – Weights

MODEL	SIZE (DN)		DIMENSIONS				WEIGHT	
	in.	mm	A		B		lbs.	kgs.
LF174A/174A	3/4 x 3/4	20 x 20	2 1/2	64	5 1/2	130	2	.9
LF174A/174A	1 x 1	25 x 25	3	76	5 3/4	146	3	1.4
LF174A/174A	1 1/4 x 1 1/4	32 x 32	4 3/4	121	8 3/8	213	6	2.7
LF174A/174A	1 1/2 x 1 1/2	40 x 40	4 7/8	124	9	229	7	3.2
LF174A/174A	2 x 2	50 x 50	6 1/4	159	11 1/2	295	14	6.4
374A	3/4 x 3/4	20 x 20	2 1/2	64	3 3/8	92	1	.5
740	3/4 x 1	20 x 25	3	76	5 1/2	143	2	.9
740	1 x 1 1/4	25 x 32	3 1/2	89	7 1/4	184	3	1.4
740	1 1/4 x 1 1/2	32 x 40	4 5/8	117	8 3/4	222	6	2.7
740	1 1/2 x 2	40 x 50	5 1/4	133	9 1/4	235	8	3.6
740	2 x 2 1/2	50 x 65	6 3/4	171	11 1/2	295	17	7.7

Settings and Relieving Capacities

BTU Steam Discharge Capacities

MODEL	SIZE (DN)		30PSI	100PSI	125PSI	150PSI
	in.	mm				
374A	3/4	20	550,000	–	–	–
LF174A / 174A	3/4	20	650,000	1,695,000	2,070,000	2,445,000
LF174A / 174A	1	25	1,005,000	2,635,000	3,215,000	3,795,000
LF174A / 174A	1 1/4	32	1,682,000	4,399,000	5,370,000	6,340,000
LF174A / 174A	1 1/2	40	2,020,000	5,290,000	6,460,000	7,630,000
LF174A / 174A	2	50	3,815,000	9,970,000	12,170,000	14,370,000

MODEL	SIZE (DN)		30PSI	45PSI	50PSI	75PSI
	in.	mm				
740	3/4 x 1	20 x 25	925,000	1,245,000	1,352,000	1,886,000
740	1 x 1 1/4	25 x 32	1,300,000	1,750,000	1,899,000	2,649,000
740	1 1/4 x 1 1/2	32 x 40	2,105,000	2,830,000	3,075,000	4,285,000
740	1 1/2 x 2	40 x 50	2,900,000	3,903,000	4,237,000	5,909,000
740	2 x 2 1/2	50 x 65	5,250,000	7,067,000	7,672,000	10,700,000

Note: Valve settings, other than shown above, are available in 5psi (34.5 kPa) increments within the pressure ranges shown.

Approvals



Rated in accordance with ASME Section IV and the requirements of the national board.

For additional information, reference literature ES-LF174A or ES-174A-740.

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Safety Relief Valves

Model LF3L / 3L / LF53L / 53L

Poppet Type Pressure Relief Valves for Protection Against Excessive Pressure

Sizes: 1/2", 3/4" (15, 20mm)

Series LF3L/3L are used for protection against excessive pressure on domestic storage tanks or tankless water heaters. Similar in construction to Watts Model 10L, the Models LF3L/3L has no temperature relieving element. Models LF3L/3L are ASME approved. These Pressure Relief Valves are popularly used in conjunction with the Models LF210/210 gas shut off valve on gas water heaters to shut off gas to heater if water heater temperature exceeds 210°F (99°C).

LEAD FREE Series LF3L 3/4" features Lead Free* cast copper silicon alloy construction and complies with Lead Free* installation requirements.

Series 3L 3/4" features bronze body construction and are for use in non-potable applications.

LEAD FREE Series LF53L 1/2" features Lead Free* cast copper silicon alloy construction and complies with Lead Free* installation requirements.

Series 53L 1/2" features bronze body construction and are for use in non-potable applications.

Pressure - Temperature

Pressure range: 75—150psi (5.2—10.3 bar)

Standard settings of 75psi, 100psi, 125psi, 150psi

NOTICE

On all the above pressure relief valves, pressure setting should be not less than 25-30 lbs. above the maximum service main pressure.



LF3L



LF53L

Models

Solar 3L Use in solar applications. Specify Z9 for stainless steel lever and pin or outside solar applications.

LF3L / 3L ASME construction/Tested, listed and certified by the National Board of Boiler and Pressure Vessel Inspectors

LF53L / 53L Does not comply with ASME requirements/Listed and certified by CSA

Dimensions — Weights

MODEL	SIZE		HEIGHT		WIDTH		WEIGHT		VERSION
	in	mm	in	mm	in	mm	lbs.	gms.	
LF3L/3L	3/4	20	3 1/2	89	1 3/4	44	5/8	284	M7
LF53L/53L	1/2	15	3 1/2	89	1 7/8	48	1/2	227	M7

Model LF3L / 3L CSA and ASME approved.

For additional information, reference literature ES-LF3L-53 or ES-3L-53L.

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Water Safety Relief Valves

Fig. 31 - ASME Section I

Provides over pressure protection of steam boilers operating up to 250psi (17.2 bar) and 406°F (208°C) saturated steam.

Fig. 41 - ASME Section VIII

For steam service on unfired pressure vessels and pressure reducing valve stations. Figure 41 is rated up to 250psi (17.2 bar) and 406°F (208°C) saturated steam

Fig. 41A - ASME Section VIII

For air, gas and vapors, used on compressors, receivers, burners and other piping systems. Figure 41A is rated up to 250psi (17.2 bar) and 406°F (208°C).



Fig. 31, 41, 41A
Bronze safety valves



Fig. 31, 41, 41A
Flanged cast iron safety valves

Standard Steam Capacities (lbs./hr. @ 90% rating and 33 1/3% Overpressure)

SET PRESSURE	VALVE SIZE INLET X OUTLET - INCHES							
	psi	3/4 x 1	1 x 1 1/4	1 1/4 x 1 1/2	1 1/2 x 2	2 x 2 1/2	2 1/2 x 2 1/2	3 x 3
*5	230	409	639	924	1637	2557	3698	
*10	318	565	882	1276	2260	3530	5106	
15	394	700	1093	1581	2801	4375	6328	

* Capacities for 5 and 10psi (.3 and .7 bar) are not certified by ASME/National Board.

For additional information, reference literature ES-FIG31, ES-FIG41 or ES-FIG41A.

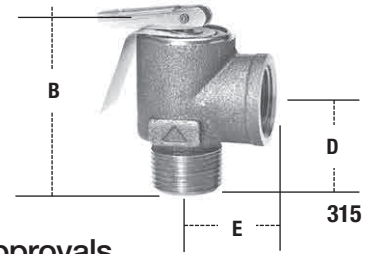
Safety Relief Valves

Series 315-M1, 415-M1 Steam Safety Valves

ASME rated steam safety relief valves up to 643 lbs./hr. (292 kg./hr). Also available with lower settings, such as 8 lbs. (3.6 kg.) for pressure cooker and steam cleaning requirements, which are not ASME rated. Consult factory for rating and quotation.

Dimensions — Weights

MODEL	SIZE (DN)		ASME STEAM DISCHARGE CAPACITY		DIMENSIONS						WEIGHT	
	in.	mm	lbs./hr. @ 15psi	kg./hr. @ 1 bar	B		D		E		lbs.	kgs.
315-M1	3/4 x 3/4	20 x 20	375	170	2 1/16	68	1 3/8	35	1 1/4	32	.55	.24
415-M1	3/4 x 3/4	20 x 20	450	204	2 9/16	71	1 5/16	33	1 1/4	32	.70	.31
415-M1	1 x 1	25 x 25	643	292	3 1/8	78	1 11/16	43	1 5/8	41	.91	.41
415	1 1/4 x 1 1/2	32 x 40	1230	574	4 3/4	121	2 3/8	60	2 1/8	54	2.00	.91
415	1 1/2 x 2	40 x 50	1860	844	5 7/16	138	2 5/8	67	2 3/16	59	3.00	1.36



Approvals



Rated in accordance with ASME Section IV and the requirements of the national board. ANSI Z21.22 "Relief Valves and Automatic Gas Shutoff Devices", CSA Listed. Meets Military Spec. MIL-V-136-12D, Type I.

For additional information, reference literature ES-315 and ES-415.

Automatic Air Vent Valves

Used on boiler piping to automatically and continuously vent air from the system water and prevent air collecting in system piping.

Series FV-4M1 Automatic Air Vent-Valve

Sizes: 1/8" - 1" (3 - 25mm) NPTF

Provides automatic air venting for hot or cold water distribution systems. Purges air that may be in the water system and utilizes a float to actuate the valve plug which is located at the top of the valve. Once the air is displaced and the system pressure is sustained, the valve plug seals and prevents any water from escaping the system.

The float vent also operates as an anti-vacuum device since it will permit air to enter the system when it must be drained.

Pressure – Temperature

Minimum Working Pressure: 1.45psi (10 kPa)
Maximum Working Pressure: 150psi (10.3 bar)
Maximum Working Temperature: 240°F (116°C)

For additional information, reference literature ES-FV4-M1.

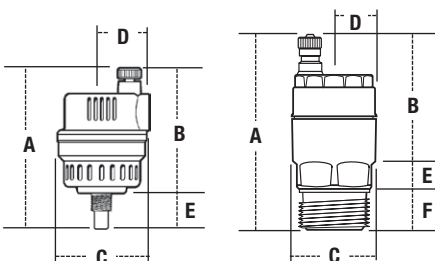


1/8" - 1/4"



1/2" - 1"

FV-4M1



Dimensions — Weights

SIZE (DN)		DIMENSIONS								WEIGHT					
in.	mm	A		B		C		D		E		F		lbs.	kgs.
1/8	3	2 15/16	75	2 5/8	67	1 5/8	41	1 3/16	21	5/16	7.9	5/16	7.9	.40	.18
1/4	8	3 1/8	79	2 5/8	67	1 5/8	41	1 3/16	21	1/8	3.1	1/2	12.7	.43	.20
1/2	15	3 5/16	85	2 11/16	69	1 1/4	32	1 1/16	18	5/8	16	—	—	.44	.20
3/4	20	3 3/8	85	2 11/16	69	1 1/4	32	1 1/16	18	5/8	16	—	—	.45	.20
1	25	3 1/2	89	2 11/16	69	1 3/8	35	1 1/16	18	13/16	20	—	—	.47	.21