

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Series LF174A ASME Water Pressure Relief Valves

⚠ WARNING

The discharge line must be the same size as the valve outlet, and must pitch downward from the valve to a safe place for disposal.

The valve lever must be tripped at least once a year to ensure that waterways are clear. This device is designed for emergency safety relief and shall not be used as an operating control.

⚠ WARNING

FOLLOWING INSTALLATION, THE VALVE LEVER MUST BE OPERATED AT LEAST ONCE A YEAR BY THE BOILER OWNER TO ENSURE THAT THE WATERWAYS ARE CLEAR. Certain naturally occurring deposits may adhere to the valve, blocking waterways, rendering it inoperative. When manually operating the lever, water will discharge and precautions must be taken to avoid contact with hot water and to avoid water damage. BEFORE OPERATING THE LEVER, check to see that a discharge line is connected to this valve directing the flow of hot water from the valve to a proper place of disposal; otherwise, personal injury or property damage may result. If no water flows, the valve is inoperative. TURN OFF THE BOILER AND CALL A PLUMBER IMMEDIATELY.

Series LF174A is a Lead Free* cast copper silicon alloy body safety relief valve for pressure protection of all types of hot water heating boiler equipment. Female NPTF inlet and outlet connections. The series features Lead Free* construction to comply with Lead Free* installation requirements.

Features

- Seat located above drain; water cannot be trapped and sediment cannot foul seat
- Nonmechanical seat-to-disc alignment will not stick or freeze
- Water seal of high temperature resisting material isolates spring working parts from water during relief
- Nonmetallic disc-to-metal seating
- Available in diameters from 3/4" to 2"
- Optional SentryPlus Alert® discharge line flood sensor which when paired with a connection kit (sold separately) can detect excessive water discharges from the relief valve (Refer to ES-FS-ReliefValve.)

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



LF174A

Operation

As thermal expansion conditions develop, pressure builds up to the setting of the relief valve. This causes small quantities of water to discharge.

Should operating controls fail, permitting runaway firing, the boiler water may reach steam temperatures. If this occurs, the valve then opens to discharge steam at the rate or faster than the boiler can generate it, thus restoring system pressure to a safer level.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Inquire with governing authorities for local installation requirements.

Specification

An ASME Section XIII certified pressure relief valve shall be installed on each boiler as noted. The valve shall have a BTU rating in excess of the BTU rating of the boiler's heating output. Each hot water space heating boiler shall be equipped with a pressure relief valve set to relieve below the maximum boiler working pressure. The valve shall feature a raised seat and non-mechanical disc alignment. Working parts and spring shall be isolated from any discharge by a high temperature resistant material. The valve shall be constructed using Lead Free* cast copper silicon alloy material. The Lead Free* boiler relief valve shall comply with state codes and standards where applicable, requiring reduced lead content. The valve shall be a Watts Series LF174A and shall include a sensor for flood detection. (Sensor activated by add-on connection kit, sold separately.)

Materials

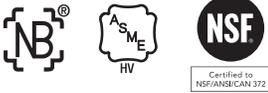
Lead Free* cast copper silicon alloy

Pressure – Temperature

Pressure range: 50 – 150 psi (3 – 10 bar) with corresponding high BTU/hr ratings from 950,000 to 14,370,000 BTU/hr

Maximum Temperature: 250°F (121°C)

Standards



NBBI certified to ASME BPVC Section XIII as an HV designated valve

NSF certified to NSF/ANSI/CAN 372

Dimensions – Weights

MODEL	SIZE	MODEL	HEIGHT		LENGTH		WEIGHT	
			in.	mm	in.	mm	lb	kg
LF174A	¾ x ¾	M3	4½	116	2¾	67	1.2	0.5
LF174A	1 x 1	M1	5¾	144	3	76	1.9	0.9
LF174A	1¼ x 1¼	M1	8½	213	4¼	109	4.6	2.1
LF174A	1½ x 1½	M	9¼	232	4¾	122	6.9	3.1
LF174A	2 x 2	M	11½	290	6½	162	14.4	6.6

Capacity

Steam pressure discharge capacity (BTU/hr) as tested and rated by the National Board of Boiler and Pressure Vessel Inspectors.

BTU/HR STEAM PRESSURE DISCHARGE CAPACITY						
Set Pressure	¾" x ¾"	1" x 1"	1¼" x 1¼"	1½" x 1½"	2" x 2"	
psi	bar	Model M3	Model M1	Model M1	Model M	Model M
50	3.45	950,000	1,470,000	2,459,000	2,950,000	5,575,000
55	3.79	1,025,000	1,590,000	2,653,000	3,190,000	6,010,000
60	4.13	1,100,000	1,702,000	2,847,000	3,425,000	6,450,000
65	4.58	1,170,000	1,820,000	3,041,000	3,660,000	6,890,000
70	4.82	1,245,000	1,935,000	3,325,000	3,890,000	7,330,000
75	5.17	1,320,000	2,055,000	3,429,000	4,125,000	7,770,000
80	5.51	1,400,000	2,166,000	3,605,000	4,360,000	8,215,000
85	5.86	1,470,000	2,285,000	3,817,000	4,590,000	8,650,000
90	6.60	1,545,000	2,400,000	4,011,000	4,825,000	9,090,000
95	6.55	1,620,000	2,520,000	4,205,000	5,060,000	9,530,000
100	6.89	1,695,000	2,635,000	4,399,000	5,290,000	9,970,000
105	7.23	1,770,000	2,750,000	4,593,000	5,525,000	10,410,000
110	7.58	1,845,000	2,865,000	4,787,000	5,760,000	10,850,000
115	7.92	1,920,000	2,980,000	4,981,000	5,990,000	11,290,000
120	8.27	1,995,000	3,100,000	5,175,000	6,225,000	11,730,000
125	8.61	2,070,000	3,215,000	5,370,000	6,460,000	12,170,000
130	8.96	2,145,000	3,330,000	5,564,000	6,690,000	12,610,000
135	9.30	2,220,000	3,445,000	5,758,000	6,925,000	13,050,000
140	9.65	2,295,000	3,565,000	5,952,000	7,160,000	13,490,000
145	9.99	2,370,000	3,680,000	6,146,000	7,390,000	13,930,000
150	10.34	2,445,000	3,795,000	6,340,000	7,630,000	14,370,000

