

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Series LF40, LF140, LFN240, LF340 Automatic Reseating T&P Relief Valves

⚠ WARNING

FOLLOWING INSTALLATION, THE VALVE LEVER MUST BE OPERATED AT LEAST ONCE A YEAR BY THE WATER HEATER OWNER TO ENSURE THAT THE WATERWAYS ARE CLEAR. Certain naturally occurring mineral deposits may adhere to the valve, blocking waterways, rendering it inoperative. When the lever is operated, hot water discharges if the waterways are clear. 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 WATER HEATER AND CALL A PLUMBER IMMEDIATELY.

This device is designed for emergency safety relief and shall not be used as an operating control.

⚠ WARNING

TEMPERATURE AND PRESSURE RELIEF VALVES SHOULD BE INSPECTED AT LEAST ONCE EVERY 2 TO 4 YEARS, and replaced, if necessary, by a licensed plumbing contractor or qualified service technician, to ensure that the product has not been affected by corrosive water conditions and that the valve and discharge line have not been altered or tampered with illegally. Certain naturally occurring conditions may corrode the valve or its components over time, rendering the valve inoperative. Such conditions can only be detected if the valve and its components are physically removed and inspected. Do not attempt to conduct an inspection on your own. Contact your plumbing contractor for a reinspection to assure continuing safety. FAILURE TO REINSPECT THIS VALVE AS DIRECTED COULD RESULT IN UNSAFE TEMPERATURE OR PRESSURE BUILD-UP WHICH CAN RESULT IN SERIOUS INJURY OR DEATH AND/OR SEVERE PROPERTY DAMAGE.

The combined 2-in-1 Temperature and Pressure Relief Valves provide a means for protection against both excessive temperature and pressure emergency conditions. The valves are fully automatic and reseat independently after relieving. Constructed with Lead Free* materials to comply with Lead Free* installation requirements.

Inlet connections are male or female NPTF depending on the model.

Thermostat tubes come in multiple lengths to allow required water contact and have thermo-bonded coating or stainless steel construction, depending on the valves BTU/hr ratings.

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

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



Features

- Lead Free cast body
- Nonmechanical seat-to-disc alignment
- Tamper-resistant bonnet screws
- Higher relieving capacity for larger residential and commercial applications
- Available in diameters from 3/4" to 2"
- Optional SentryPlus Alert® discharge line flood sensor which pairs with a connection kit (sold separately) to detect excessive water discharges from the relief valve (Refer to ES-FS-ReliefValve.)

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.

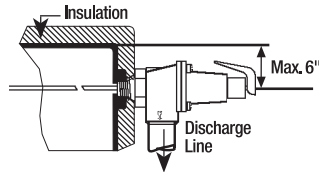
Specification

Each hot water storage heater shall be equipped with an automatic temperature and pressure relief valve to protect the heater from excessive pressure and excessive temperature. The device shall be certified as meeting the requirements of ASME low pressure heating boiler code and ANSI Z21.22. The BTU discharge capacity of the device shall be in excess of the BTU input rating of the heater. The device shall be constructed using Lead Free* materials. Lead Free* automatic reseating T&P relief valves shall comply with state codes and standards, where applicable, requiring reduced lead content. The T&P valve shall be a Watts Series LF40, LF140, LFN240, or LF340 and shall include a sensor for flood detection. (Sensor activated by add-on connection kit, sold separately.)

Direct Side Tapping

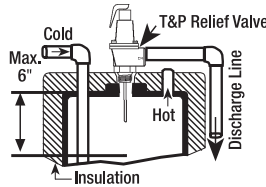
For External Flue Heaters

Use an extra length extension thermostat to extend into water storage tank.



For Internal Flue Heaters

Use a short or standard length thermostat. The vertical discharge line must be installed with its direction downward.



For Heaters with Direct Top Tapping

Use a standard or an extra length extension thermostat.

Certifications and Listings



Certified to NSF/ANSI/CAN 372

CSA certified and listed to ANSI Z21.22/CSA 4.4

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

NSF certified to NSF/ANSI/CAN 372

Pressure – Temperature

Temperature relief: 210°F (99°C)

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

Standard setting: 75, 100, 125, and 150 psi (5.2, 6.9, 8.6, and 10.3 bar)

General Recommendations

For gas, electric, or oil-fired storage water heaters between 180,000 and 205,000 BTU/hr rating: USE ¾" SERIES LF40, LF140 TESTED UNDER ANSI Z21.22 WITH RATINGS AS CERTIFIED AND LISTED BY CSA.

For gas or oil-fired storage water heaters between 205,000 and 730,000 BTU/hr rating and for compliance with applicable water heater labeling requirements: USE 1" LF40, LF140, LFN240 SERIES TESTED UNDER ANSI Z21.22 WITH RATINGS AS CERTIFIED AND LISTED BY CSA.

For installations of gas or oil-fired hot water supply boilers over 730,000 BTU/hr output heating domestic water and for steam coil storage water heaters: USE SERIES LF340, LF342 TESTED UNDER ANSI Z21.22 WITH RATING AS CERTIFIED AND LISTED BY CSA.

MODEL	THERMOSTAT LENGTH (BELOW INLET X OUTLET)	DIMENSIONS HEIGHT (LESS THERMOSTAT)	WIDTH	WEIGHT	CSA TEMP. STEAM					
					ASME PRESSURE STEAM RATING BTU/HR*	ASME PRESSURE STEAM RATING BTU/HR*	ASME PRESSURE STEAM RATING BTU/HR*	ASME PRESSURE STEAM RATING BTU/HR*	ASME PRESSURE STEAM RATING BTU/HR*	
LF40L-3	¾ M x ¾ F	3	5½	2½	1¾	180,000	778,000	998,000	1,218,000	1,438,000
LF40XL-5	¾ M x ¾ F	5	5½	2½	1¾	205,000	778,000	998,000	1,218,000	1,438,000
LF40XL-8	¾ M x ¾ F	8	5½	2½	1¾	205,000	778,000	998,000	1,218,000	1,438,000
LF140S-3	¾ F x ¾ F	3	5½	2½	1¾	180,000	778,000	998,000	1,218,000	1,438,000
LF140X-5	¾ F x ¾ F	5	5½	2½	1¾	205,000	778,000	998,000	1,218,000	1,438,000
LF140X-8	¾ F x ¾ F	8	5½	2½	1¾	205,000	778,000	998,000	1,218,000	1,438,000
LF40L-2	1M x 1F	2	6¼	2¾	2¼	450,000	1,155,000	1,481,000	1,808,000	2,135,000
LF40XL-4	1M x 1F	4	6¼	2¾	2¼	500,000	1,155,000	1,481,000	1,808,000	2,135,000
LF40XL-7	1M x 1F	7	6¼	2¾	2¼	500,000	1,155,000	1,481,000	1,808,000	2,135,000
LF140S-3**	1F x 1F	3	5¾	3	2¼	570,000	1,670,000	2,140,000	2,610,000	3,085,000
LF140X-6**	1F x 1F	6	5¾	3	2¼	670,000	1,670,000	2,140,000	2,610,000	3,085,000
LF140X-9**	1F x 1F	9	5¾	3	2¼	670,000	1,670,000	2,140,000	2,610,000	3,085,000
LFN240X-6**	1F x 1F	6	6¼	3¼	2¾	730,000	2,195,000	2,817,000	3,438,000	4,059,000
LFN240X-9**	1F x 1F	9	6¼	3¼	2¾	730,000	2,195,000	2,817,000	3,438,000	4,059,000
LFN241X-5**	1¼ M x 1F	5	7¾	3¼	2¾	730,000	2,195,000	2,817,000	3,438,000	4,059,000
LFN241X-8**	1¼ M x 1F	8	7¾	3¼	2¾	730,000	2,195,000	2,817,000	3,438,000	4,059,000
LF340-3**	1½ F x 1½ F	3	9¾	4½	7	1,150,000	3,450,000	4,426,000	5,403,000	6,379,000
LF340X-8**	1½ F x 1½ F	8	9¾	4½	8	1,150,000	3,450,000	4,426,000	5,403,000	6,379,000
LF342-3**	2 M x 1½ F	3	9¾	4½	7	1,150,000	3,450,000	4,426,000	5,403,000	6,379,000
LF342X-8**	2 M x 1½ F	8	9¾	4½	8	1,150,000	3,450,000	4,426,000	5,403,000	6,379,000

*ASME capacities are steam pressure ratings and do not reflect the CSA temperature relieving capacity of the valves for selection purposes.

**Stainless steel thermostat tube.

M=Male; F=Female.

LFL40XL and LFL40XL valves with extended inlet shanks should be used for water heaters that have extra thick insulation. For more information, download for ES-LFL/LLL-40XL.



USA: T: (978) 689-6066 • Watts.com

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