

## Engineering Specification

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# LEAD FREE\*

## Series LF1L, LF1XL, LF10L and LF100XL Temperature and Pressure Relief Valves

ASME Rated\*\*, CSA Listed. Self-closing T&P Relief Valves for Water Heaters up to 105,000 BTU/Hr.

The combined 2 in 1 T&P relief valve provides the least expensive and proven means for protection against both excessive temperature and pressure emergency conditions.

Provides fully automatic temperature and pressure relief protection for hot water storage tanks and heaters up to 105,000 BTU/HR. Series LF10L furnished with test lever and short thermostat for installation directly in tank tapping. Series LF100XL furnished with test lever and extension thermostat for installation in the hot water outlet line or directly in the tank tapping. Temperature sensing element must be immersed in the water within the top 6" (152mm) of the tank. Male inlet and female outlet. Temperature relief 210°F (99°C). Standard settings 75, 100, 125, 150psi (5.3, 7.0, 8.8, 10.3 bar). The LF1L, LF1XL, LF10L, and LF100XL feature Lead Free\* construction to comply with Lead Free\* installation requirements.

### Features

- Series LF1L, LF1XL Size 1/2" LF10L, LF100XL Size 3/4"
- A.S.M.E. Rated\*\*, CSA Listed
- Features a unique thermostat with special thermo-bonded coating
- LF1L and LF1XL Lead Free\* copper silicon alloy body
- LF10L and LF100XL Lead Free\* copper alloy body
- Stainless steel spring
- Thermostat is accurate and proven. Exclusively designed and manufactured by Watts

### Options

- For tanks and heaters with extra thick insulation, send for literature ES-LFSL100XL/LFL100XL/LFLL100XL/LFLLL100XL
- Series 100XL-8 with 8" (200mm) extension thermostat
- Series LF1L, LF1XL Size 1/2": For both temperature and pressure relief protection. Series LF1L has short thermostat and test lever. Series LF1XL has extension thermostat with thermo-bonded coating. Also available with 8" (200mm) extension thermostat
- SOLAR - Model Z11 for stainless steel lever & 180°F (82°C) thermostat

### 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.



LF10L



LF100XL

### Specification

#### T&P valves

Each water heater and hot water storage tank shall be equipped with a CSA and A.S.M.E. Rated\*\* automatic temperature and pressure relief valve to protect the heater from excessive pressure and temperature. Lead Free\* Temperature and Pressure Relief Valves (valve type, reduced pressure zone, etc.) shall be constructed using Lead Free\* materials. Lead Free valves shall comply with state codes and standards, where applicable, requiring reduced lead content. The device shall be ANSI Z21.22 certified. The BTU discharge capacity of the device shall be in excess of the BTU input rating of the heater. Watts Series No. LF1L, LF1XL, LF10L or LF100XL.

### ⚠ WARNING

**Following installation, the valve lever MUST be operated AT LEAST ONCE A YEAR to ensure that the water-ways are clear.** Certain naturally occurring mineral deposits may adhere to the valve, 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 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 may result. If no water flows, valve is inoperative. **TURN OFF THE WATER HEATER AND CALL A PLUMBER IMMEDIATELY.**

### NOTICE

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

### NOTICE

Inquire with governing authorities for local installation requirements

Maximum system operating pressure must not exceed 75% of valve set pressure.

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

\*\*Series LF1L and LF1XL Valves are not A.S.M.E. Listed or Rated.

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.

# Series LF1L, LF1XL, LF10L and LF100XL

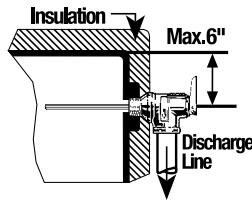
## Direct Side Tapping

### For External Flue Heaters

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

### For Internal Flue Heaters

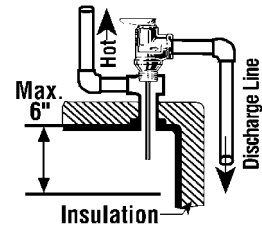
Use short or standard length thermostat. Vertical discharge line must be installed with its direction downward.



## Alternate

Only when the tappings are not provided

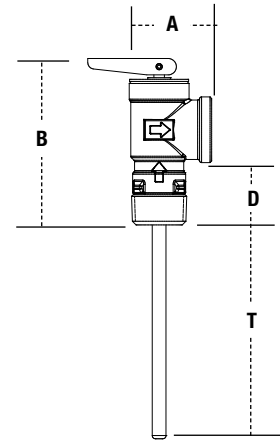
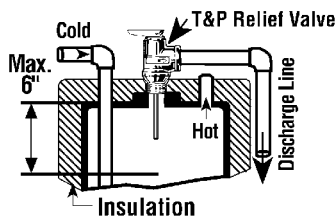
Use standard or extra length extension thermostat.



## Direct Top Tapping

### For Heaters

Use standard or extra length extension thermostat.



## Dimensions – Weights

MODEL	SIZE		DIMENSIONS								Weight		CSA
	in.	mm	A	B	D	in.	mm	in.	mm	oz.	gm	Temp. Steam Rating BTU/hr.	
LF1L2 M7	1/2	13/4	43	3 1/2	89	7/8	22	2	50	10	284	15,000	
LF1XL-4 M7	1/2	1 3/4	43	3 1/2	89	7/8	22	4	100	12	340	15,000	
LF1XL-8 M7	1/2	1 3/4	43	3 1/2	89	7/8	22	8	203	16	454	15,000	
LF10L-2 M7	3/4	1 5/32	40	3 11/64	81	1 3/16	30	2	50	8	227	80,000	
LF100XL-4 M7	3/4	1 5/32	40	3 11/64	81	1 3/16	30	4	100	8	227	105,000	
LF100XL-8 M7	3/4	1 5/32	40	3 11/64	81	1 3/16	30	8	203	8	227	105,000	

A = overall width of the valve. B = overall height of the valve, with lever closed, not including thermostat element length. D = length of shank, from shoulder under outlet orifice overhang to inlet orifice edge.

T = length of thermostat element, measured from inlet orifice edge to end of thermostat.\* 150psi set pressure

## ⚠ WARNING

**REINSPECTION OF T&P RELIEF VALVE: Temperature and Pressure Relief Valves should be reinspected AT LEAST ONCE EVERY TWO TO FOUR YEARS** by a licensed plumbing contractor or authorized inspection agency, to insure that the product has not been affected by corrosive water conditions and to insure 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 are not detectable unless the valve and its components are physically removed and inspected. Do not attempt to conduct this 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.**

## NOTICE

A relief valve functions in an emergency by discharging water. Therefore, it is essential that a discharge line be piped from the valve in order to carry the overflow to a safe place of disposal. The discharge line must be the same size as the valve outlet and must pitch downward from the valve and terminate at least 6"(152mm) above the floor drain where any discharge will be clearly visible. For 100DT discharge line consult your Watts agent.



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