

# Installation, Operation and Maintenance Manual

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## Lync Storage Tank



### Disclaimer

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### Engineered Solutions

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## 1. SAFETY CONSIDERATIONS

### ⚠ WARNING!

It takes only 5 seconds of skin contact with 140°F water to cause a second-degree burn. You must protect against high water temperatures in all lavatories, tubs, showers, and other points of hot water contact. Potable hot water should be tempered to no more than 110°F when used for bathing or other personal use. Thermostatically controlled mixing valves must be set at 120°F or less to keep the delivered water temperature below scalding temperatures.

The Lync Storage Tank contains water stored under pressure. Fluids under pressure may cause significant person injury or damage to equipment when released. Be sure to shut off all incoming and outgoing water shutoff valves and carefully decrease all trapped pressures to zero **before** performing maintenance.

Installation and service must be performed by a qualified installer, or service agency who must read and follow the supplied instructions before installing, servicing, or removing the unit.

Accidental scalding from hot water is a greater risk in any installation where the response to contact with hot water may be slower or where the danger of hot water contact is greater.

Some examples are:

- Hospitals
- Homes For Those With Disabilities
- Elder Care and Child Care Facilities

### ⚠ WARNING!

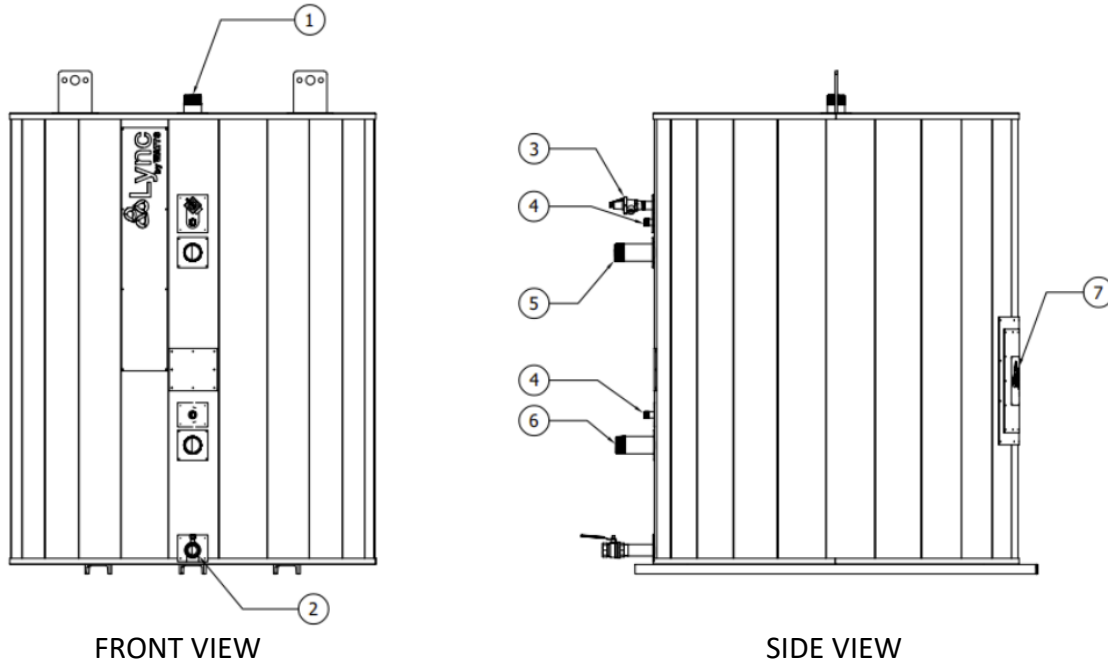
You are required to consult the local building and plumbing codes prior to installation. If the information in this manual is not consistent with local building or plumbing codes, the local codes should be followed. Inquire with governing authorities for additional local requirements.

Thermostatically controlled mixing valves must be used in the design of the potable hot water system to keep delivered water below scalding temperatures.

### IMPORTANT

Read this Manual **before** using this equipment. Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment. Keep this Manual for future reference.

## 2. PRODUCT DESCRIPTION



Lync Storage Tank

1. 2-1/2" NPT Hot Water Outlet
2. Drain Valve (250gal = 1" NPT; 500-1000gal = 1-1/2" NPT)
3. 1" NPT T&P Valve
4. 3/4" Thermowell (allows for a 1/4" probe and two 4mm probes)
5. Optional Service Connection (cap for standard configurations)
6. 2-1/2" NPT Cold Water Inlet
7. Manway Access

Lync Storage Tanks are ASME certified pressure vessels designed for domestic hot water use with heat pump water heaters. The Lync Storage Tank is made of duplex stainless-steel alloy combined with a highly specialized and proprietary manufacturing process to deliver long-lasting, reliable storage with superior corrosion-resistance. It offers the following features:

- Lifting lugs for tank placement
- Steel skidded base for securing it to the ground
- R-22 fiberglass insulation for improved energy and acoustic efficiency, minimal standby losses, and high resistance to fire and mildew
- Bottom drain valve for easy tank flushing and cleaning
- No anode – no associated failure and no added maintenance
- Inlet diffuser to encourage stratification and reduce heater cycling
- Optional durable Rhino Linings® outer coating to withstand harsh outdoor conditions

**NOTE:** These units accept 4mm probes, connection 1/2" NPT. **Installation of provided temperature sensors, or other sensors meeting requirements of the user hot water system, must be done by the installer prior to operation.** Sensor installation locations may vary, depending on the number of storage tanks, as well as the tank configuration for the system. Refer to the Lync Aegis Installation, Operation, and Maintenance Manual for probe installation locations, temperature setpoints, and operations in a heat pump hot water system.

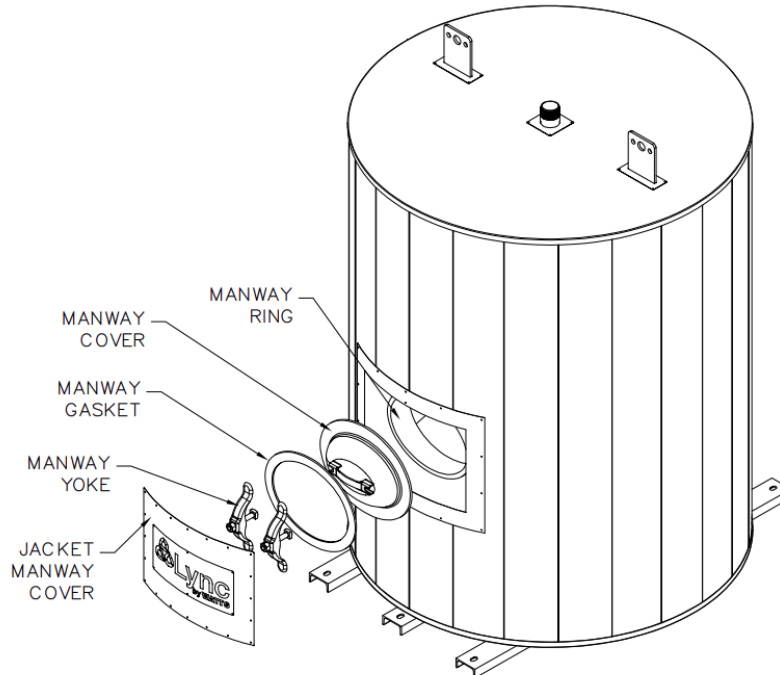
**NOTE:** Other tank sizes are available upon request. See the **Appendices A and B** for more information.

### 3. INLET DIFFUSER

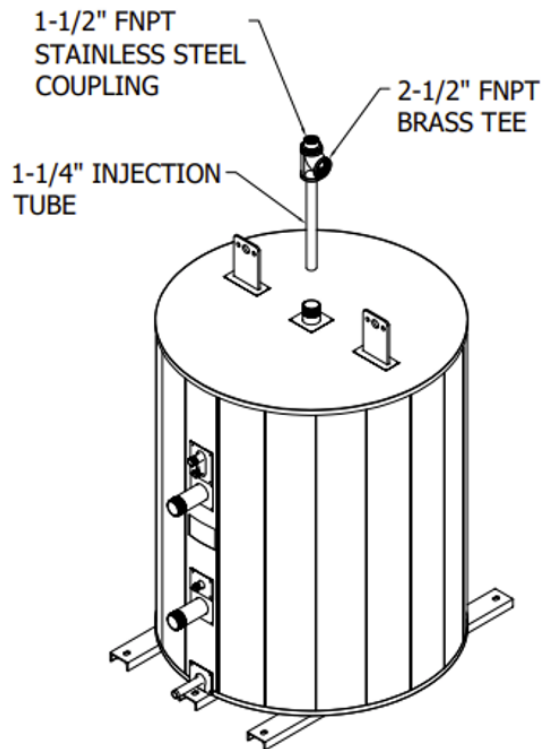
The Lync Storage Tank includes an integral inlet diffuser connected from the interior to the inlet connection to encourage proper stratification of hot water. This component is critical for heat pump water heater systems, for which stratified storage reduces heater cycling and improves performance.

### 4. MANWAY ACCESS PANEL

Lync Storage Tanks require fastener removal around the perimeter of the manway panel cover to access the tank. Lync storage tanks **MAY** have one or more removable heads used to access the tank. Do not remove the manway jacket ring for manway access.



## 5. INJECTION TEE (AEGIS ACCESSORY ONLY)



The injection tee separates the flow coming from the hot water source into the tank, such that the hot water can flow both into the tank and out to the system from the top of the tank, ensuring a constant water temperature for the output, independent of hot-water source operation. Flow from the hot water source is injected below the top of the tank where the hot water is drawn from the tank. The injection tee or an equivalent configuration is required for all Aegis installations.

**NOTE:** The injection tee should only be installed on the last storage tank relative to the cold-water inlet of the tanks (this is the first tank filled with hot water in a series of tanks).

## 6. MAINTENANCE

1. A preventative maintenance program must be established to assure long, and trouble-free use of the water heater.
2. A scale of limestone will normally form and accumulate in the storage tank during operation. The limescale is formed from the natural chemicals in the water that precipitate out during the heating cycles. Some water supplies contain more of these chemicals than others, and the scale buildup will occur more rapidly. Other factors affecting the scale buildup are the amount of hot water used and the temperature of the water. As more hot water is used, more fresh water containing the scale-forming chemicals is brought into the tank. As the temperature of the water increases, the rate of scale deposited will be increased.
3. To control sediment and scale buildup in the water heater, the tank should be flushed at three-month intervals; increase frequency if the water conditions in your location cause high scale buildup. To flush the tank, open the drain valve and allow water to flow through the tank until it runs clear. Close the drain valve afterwards.
4. If the tank has a manway access for inspection and cleaning use, the tank should be inspected for scale buildup through this opening. If scale is present, it can be loosened with a high-pressure stream of water. The smaller pieces can be flushed through the drain and the larger pieces removed by hand. The frequency of inspections will be determined by the rate of scale buildup. Lync recommends 30–60-day intervals for inspection.
5. The temperature and pressure relief valve should be checked at regular intervals to maintain safe operation, per the specific instructions on the tag attached to the valve. The openings inside the valve may become inoperative or the valve may become unable to open or close due to being stuck. If the valve does not open and close properly when tested, it must be replaced.

### IMPORTANT

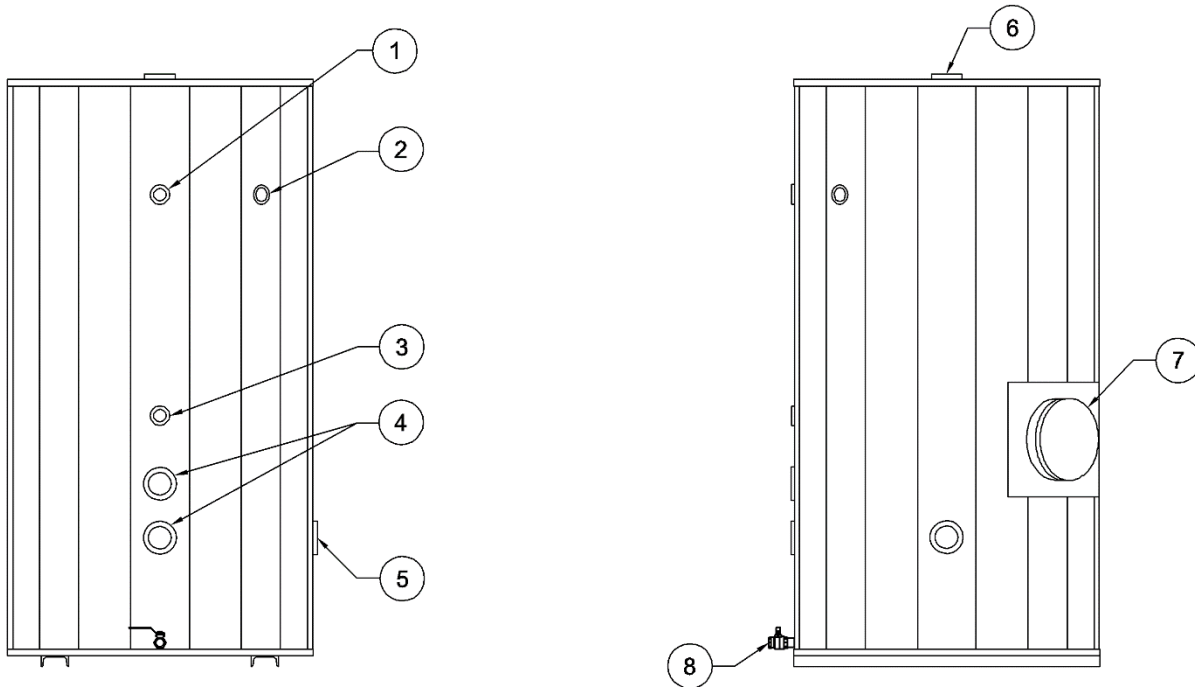
The relief valve is a primary safety device. A relief valve functions in an emergency by discharging water. Therefore, it is essential that a discharge line be piped from the valve in order to carry the overflow to a safe place of disposal. The discharge line must be the same size as the valve outlet and must pitch downward from the valve and terminate at least 6" (152mm), but no more than 18" (457mm), above the floor drain where any discharge will be clearly visible.

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**Storage Tank Warranty Forms Ship Separately with Each Product and Can Also be Found online at [lyncbywatts.com](http://lyncbywatts.com)**



**APPENDIX A. PRODUCT DESCRIPTION (ALTERNATE TANK SIZES)**



**Storage Tank**

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|---|---|
| <ul style="list-style-type: none"> <li>1. Temperature gauge fitting</li> <li>2. T&amp;P valve fitting</li> <li>3. Thermostat fitting</li> <li>4. Circulating connections</li> </ul> | <ul style="list-style-type: none"> <li>5. Cold water inlet and Building return connection</li> <li>6. Hot water outlet</li> <li>7. Manway access (250 gallon and larger)</li> <li>8. Drain valve</li> </ul> |
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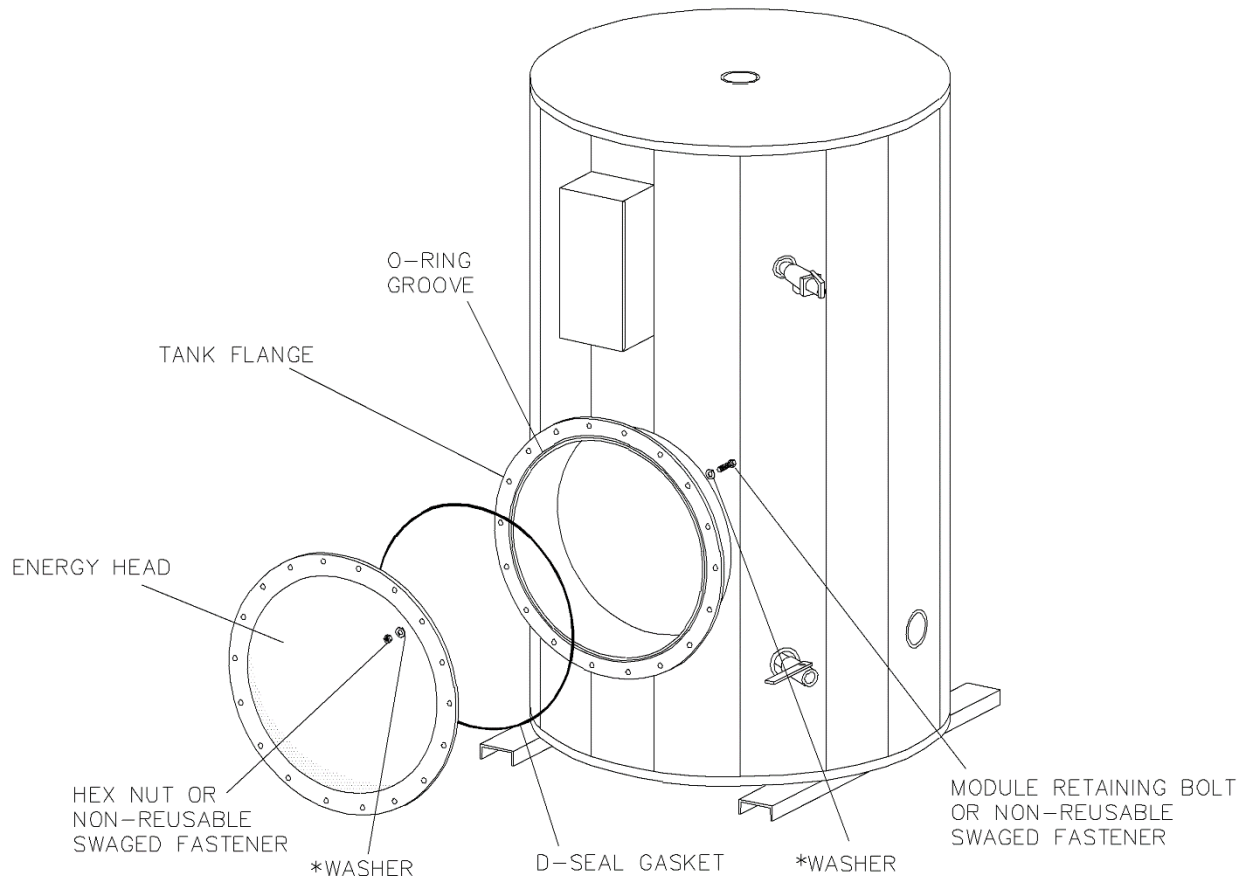
Horizontal shipping skids for 1000, 1500 – 3000 gallon tanks (not shown)

**APPENDIX B. BOLTED HEAD REMOVAL (ALTERNATE TANK SIZES)**

Lync Storage Tanks MAY have one or more removable heads used to access the tank. If it is necessary to remove a head, the existing bolts and nuts should be replaced. Contact your Lync Representative or the factory at 1-800-433-5654 to order a D-Seal replacement kit:

**Part Number 116816 Kit, Fastener Flange 18 Holes w/Instruction Sheet Gr 8**

**Part Number 116817 Kit, Fastener Flange 40 Holes w/Instruction Sheet Gr 8**



\*NOT USED WITH SWAGED FASTENERS