

Date:

Bid Date:

Project #:

Location:

Project Name:

Engineer:

Contractor:

Prepared By:

LAARS Combi-Heat®

Residential Energy Saver Gas Water Heater System

Model LCH-504T10FBN and
Model LCH-504T10FCX

Specification

Contractor shall supply and install Qty: _____ Laars Combi Heat Direct Fired Gas Water Heater.

The water heater shall be a Laars Combi Heat Residential Energy Saver Gas Water Heater System, model

LCH-504T10F(_____), and shall have a U.S. gallon capacity of _____ gallons (_____ liters), with an input of _____ BTU/hr (_____ kW).

Unit shall have a recovery of _____ U.S. gph (_____ Lph) with a 90°F (50°C) temperature rise, and shall have a C.E.C listed recovery efficiency of 80%.

Heater shall be design certified by CSA International (formerly AGA/CGA). Heater shall meet SCAQMD requirements (natural gas) and shall meet NAECA requirements.

The water heaters shall meet or exceed the insulating standards established under ASHRAE Standard 90.1b (current edition). 2 inches of non-CFC foam insulation shall cover the sides and top of the tank to save energy by retarding heat loss.

Tank shall be glass-lined steel. Tank shall be manufactured of heavy gauge steel that is automatically formed, rolled and welded to assure a continuous seam for lining. Glass lining shall be porcelain-like, high-silica, to provide a tough interior lining. Tank shall come with protective anode rod, to further protect against corrosion.

The unit shall be certified at 300 PSI (2068 kPa) test pressure and 150 PSI (1034 kPa) working pressure .

Water heater shall have a glass coated steel heat exchanger coil that can be used for other heating purposes. The heat exchanger shall be double wall 1½" O.D. glass coated steel, ensuring separation between the potable water and the heating fluid. The heat exchanger shall have less than 5 feet of head loss for up to 10 gpm flow.

Tank shall be built with a cold water inlet tube to help minimize sediment build up in the tank, and increase first hour delivery of hot water.

Potable water connections shall be factory installed ¾" NPT on 8" (203mm) centers, and shall be true dielectric fittings. Heat exchanger connections shall be ¾" NPT, and shall be located on the front of the unit.

Unit shall be built with flue baffle that is designed to maximize the amount of heat absorbed in the lower portion of the tank, and reduce air movement in the heater during standby periods to slow the heat loss up the flue.

The heater shall have a flame arrestor that is designed to prevent ignition of flammable vapor outside of the water heater. Unit shall have a resettable thermal switch to prevent burner and pilot operation in case of ongoing flammable vapor burn inside the combustion chamber, or in case of restricted air flow.

The unit's pilot shall be lit by way of a push button Piezo igniter. A sight window shall be installed on the water heater to allow a view into the combustion chamber, to observe the pilot and burner.

The shall have a durable pedestal base for easy transport and to provide corrosion resistant contact with the floor.

Unit shall be furnished with a brass drain valve and thermostatic mixing valve. Unit shall be furnished with built-in high water temperature cutoff switch, gas pressure regulation and temperature/pressure relief valve.

Replaceable parts shall carry a 6-year limited warranty. The tank and heat exchanger shall carry a 10-year limited warranty.

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Bid Date:

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Prepared By:

LAARS Combi-Heat®

Residential Energy Saver Gas Water Heater System

Model LCH-75T10BN and Model LCH-75T10CX
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Specification

Contractor shall supply and install Qty: _____ Laars Combi Heat Direct Fired Gas Water Heater.

The water heater shall be a Laars Combi Heat Residential Energy Saver Gas Water Heater System, model LCH-75T10(____), and shall have a U.S. gallon capacity of _____ gallons (_____ liters), with an input of _____ BTU/hr (_____ kW).

Unit shall have a recovery of _____ U.S. gph (_____ Lph) with a 90°F (50°C) temperature rise, and shall have a C.E.C listed recovery efficiency of 80%.

Heater shall be design certified by CSA International (formerly AGA/CGA). Heater shall meet SCAQMD requirements (natural gas) and shall meet NAECA requirements.

The water heaters shall meet or exceed the insulating standards established under ASHRAE Standard 90.1b (current edition). 2 inches of non-CFC foam insulation shall cover the sides and top of the tank to save energy by retarding heat loss.

Tank shall be glass-lined steel. Tank shall be manufactured of heavy gauge steel that is automatically formed, rolled and welded to assure a continuous seam for lining. Glass lining shall be porcelain-like, high-silica, to provide a tough interior lining. Tank shall come with protective anode rod, to further protect against corrosion.

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Tank shall be built with a cold water inlet tube to help minimize sediment build up in the tank, and increase first hour delivery of hot water.

Potable water connections shall be factory installed ¾" NPT on 8" (203mm) centers, and shall be true dielectric fittings. Heat exchanger connections shall be ¾" NPT, and shall be located on the front of the unit.

Unit shall be built with flue baffle that is designed to maximize the amount of heat absorbed in the lower portion of the tank, and reduce air movement in the heater during standby periods to slow the heat loss up the flue.

Unit shall be furnished with a brass drain valve and thermostatic mixing valve. Unit shall be furnished with built-in high water temperature cutoff switch, gas pressure regulation and temperature/pressure relief valve.

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LAARS Combi-Heat®

Residential Energy Saver Gas Water Heater System

Model LCH-TW50T10FBN and
Model LCH-TW50T10FCX

Specification

Contractor shall supply and install Qty: _____ Laars Combi Heat Direct Fired Gas Water Heater.

The water heater shall be a Laars Combi Heat Residential Energy Saver Gas Water Heater System, model LCH-TW50T10F(____), and shall have a U.S. gallon capacity of _____ gallons (_____ liters), with an input of _____ BTU/hr (_____ kW).

Unit shall have a recovery of _____ U.S. gph (_____ Lph) with a 90°F (50°C) temperature rise, and shall have a C.E.C listed recovery efficiency of 80%.

Heater shall be design certified by CSA International (formerly AGA/CGA). Heater shall meet SCAQMD requirements (natural gas) and shall meet NAECA requirements.

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The unit shall be certified at 300 PSI (2068 kPa) test pressure and 150 PSI (1034 kPa) working pressure .

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Tank shall be built with a cold water inlet tube to help minimize sediment build up in the tank, and increase first hour delivery of hot water.

Potable water connections shall be factory installed ¾" NPT on 8" (203mm) centers, and shall be true dielectric fittings. Heat exchanger connections shall be ¾" NPT, and shall be located on the front of the unit.

A quiet, but powerful blower motor shall be built into the heater, to eliminate problems with difficult venting situations, including influence of wind.

Unit shall be built with a stainless steel flue baffle that is designed to maximize the amount of heat absorbed in the lower portion of the tank, and reduce air movement in the heater during standby periods to slow the heat loss up the flue.

The unit shall be able to be vented vertically or horizontally up to 60 equivalent feet with 3" pipe, and up to 180 equivalent feet with 4" pipe. Pipe material may be PVC or CPVC.

The heater shall have a flame arrestor that is designed to prevent ignition of flammable vapor outside of the water heater. Unit shall have an electronic flammable vapor sensor to prevent burner operation if flammable vapors are detected, and to prevent operation if there is ongoing flammable vapor burn inside the combustion chamber.

The unit shall have a spark-to-pilot ignition system that only lights the pilot when there is a call for heat. A sight window shall be installed on the water heater to allow a view into the combustion chamber, to observe the pilot and burner.

Unit shall have an electronic gas control valve that is equipped with an LED display (for startup and diagnostics) and allows water temperature adjustment without removing the cover.

The shall have a durable pedestal base for easy transport and to provide corrosion resistant contact with the floor.

Unit shall be furnished with a brass drain valve and thermostatic mixing valve. Unit shall be furnished with built-in high water temperature cutoff switch, gas pressure regulation and temperature/pressure relief valve.

Replaceable parts shall carry a 6-year limited warranty. The tank and heat exchanger shall carry a 10-year limited warranty

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Residential Energy Saver Gas Water Heater System

Model LCH-TW75T10BN and
Model LCH-TW75T10CX

Specification

Contractor shall supply and install Qty: _____ Laars Combi Heat Direct Fired Gas Water Heater.

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