



LAARS[®] **U.H.E.[™]**

Ultra-High Efficiency
Commercial Water Heaters

Up To
99.1%
Efficient!



LAARS[®] 
Heating Systems Company
A subsidiary of **BRADFORD WHITE[®]** Corporation

Ultra-High Efficiency Water Heaters

from Laars® Heating Systems Company

Laars® U.H.E.™ is one of the most exceptional additions to the Laars Heating Systems commercial lineup. Utilizing exclusive designs and technologies, the new Laars® U.H.E.™ outperforms the competition when it comes to installation flexibility, quiet operation and, most importantly, efficiency.

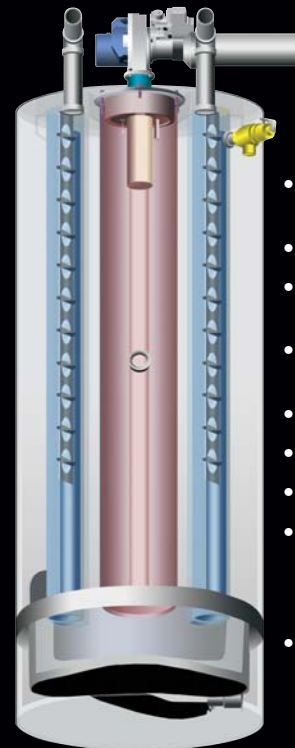
First and foremost, Laars® U.H.E.™ has a remarkable thermal efficiency rating as high as 99.1% – an unprecedented statistic that makes this line of commercial water heaters the most efficient in its class. In addition to this remarkable performance, Laars® U.H.E.™ is second-to-none in installation flexibility. All models can vent vertically, horizontally and are also approved for unbalanced, direct-vent closed combustion applications. The unbalanced aspect means the air intake pipe doesn't have to be vented the same distance as the exhaust – a feature not available on competitors' models (net vent lengths up to 120 equivalent feet using 3" ABS, PVC or CPVC piping or 170 equivalent feet using 4" ABS, PVC or CPVC piping).

Laars® U.H.E.™ is also noticeably more quiet than any other water heater in its class, and building owners, managers and occupants will appreciate the difference.

Last but not least, Laars® U.H.E.™ line comes with Laars Heating Systems patented stainless steel Sediment Reduction System, a continuous self-cleaning system that is proven to extend the life of the water heater.

With its superb efficiency, unprecedented installation flexibility and quiet operation, Laars® U.H.E.™ gives building owners, engineers and plumbing and heating professionals a commercial water heater that meets the demands for large amounts of hot water, saves energy and is installable in some of the most difficult locations.

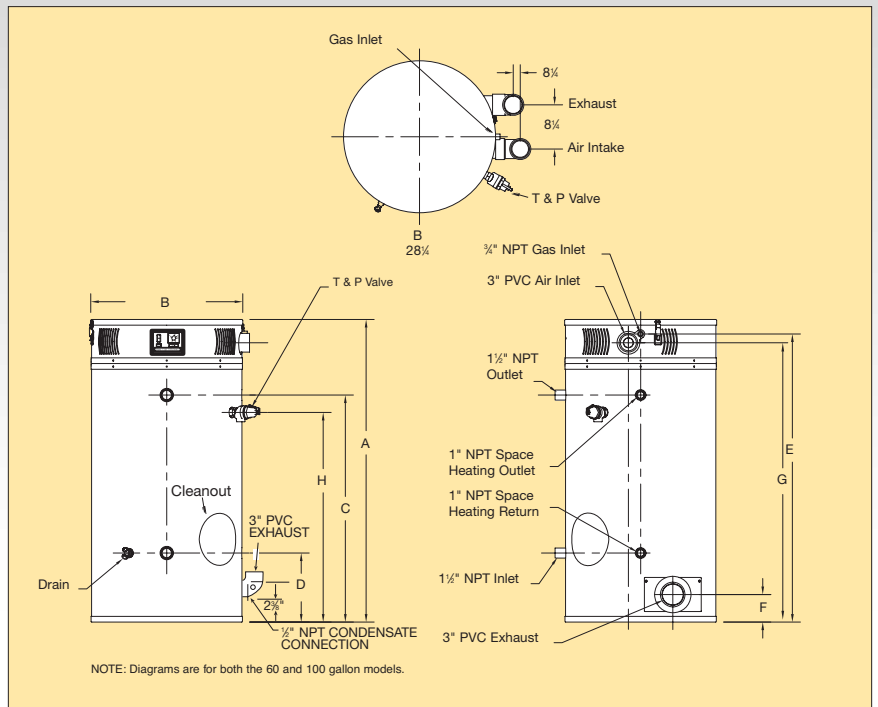
There's no doubt that Laars® U.H.E.™ is the best line of high-efficiency commercial gas water heaters available in the industry.



- Self Compensating Combustion System
- Quiet Operation
- Glass Lined Flue Tubes
- Low NOx Emissions Compliance
- Rugged Construction
- Durable Igniter
- Stainless Steel Baffles
- Venting: up to 120 Equivalent Feet with 3" PVC, CPVC or ABS Vent Pipe
- Maximum Heat Transfer



LAARS® U.H.E.™ 100 GALLON WATER HEATER



NOTE: Diagrams are for both the 60 and 100 gallon models.

Laars® U.H.E.™ Commercial Ultra High Efficiency Water Heater

NATURAL GAS AND LIQUID PROPANE GAS

Meet or exceed ASHRAE 90.1b (current standard) C.E.C. Listed
Includes Installed T&P Valve and Electronic Ignition

Model Number	Input	1 ST Hour Delivery at 100°F Rise	Recovery GPH at Degree Rise			Storage Capacity	Thermal Efficiency	Approx. Shipping Weight lbs.
	BTU		Gal.	40°F	100°F			
V ● ★ UHE-100T-150E-3N(A)	150,000	250	450	180	129	100	99.1	900
V ● ★ UHE-100T-199E-3N(A)	199,999	309	597	239	171	100	98.5	900
V ● ★ UHE-100T-250E-3N(A)	250,000	364	735	294	210	100	97.0	900
V ● ★ UHE-100T-300E-3N(A)	300,000	405	836	335	239	100	92.0	900
V ● ★ UHE-100T-399E-3N(A)	399,999	521	1127	451	322	100	93.0	950

Model Number	A	B	C	D	E	F	G	H	Water Conn. Dia.	Gas Conn. Dia.	Relief Valve Open
	Floor to Top of Heater	Jacket Dia.	HW Out	Cold In	Floor to Gas Conn.	Floor to Vent Outlet	Floor to Air Intake	Floor to T&P Conn.			
	in. cm.	in. cm.	in. cm.	in. cm.	in. cm.	in. cm.	in. cm.	in. cm.	in. cm.	in. cm.	in. cm.
V ● ★ UHE-100T-150E-3N(A)	77 ⁵ / ₈ 197	28 ¹ / ₄ 72	63 160	13 33	74 ³ / ₄ 190	5 13	73 ¹ / ₈ 186	60 153	1 ¹ / ₂ 4	3/4 2	3/4 2
V ● ★ UHE-100T-199E-3N(A)	77 ⁵ / ₈ 197	28 ¹ / ₄ 72	63 160	13 33	74 ³ / ₄ 190	5 13	73 ¹ / ₈ 186	60 153	1 ¹ / ₂ 4	3/4 2	3/4 2
V ● ★ UHE-100T-250E-3N(A)	77 ⁵ / ₈ 197	28 ¹ / ₄ 72	63 160	13 33	74 ³ / ₄ 190	5 13	73 ¹ / ₈ 186	60 153	1 ¹ / ₂ 4	3/4 2	1 3
V ● ★ UHE-100T-300E-3N(A)	77 ⁵ / ₈ 197	28 ¹ / ₄ 72	63 160	13 33	74 ³ / ₄ 190	5 13	73 ¹ / ₈ 186	60 153	1 ¹ / ₂ 4	3/4 2	1 3
V ● ★ UHE-100T-399E-3N(A)	77 ⁵ / ₈ 197	28 ¹ / ₄ 72	63 160	13 33	73 ¹ / ₄ 186	5 13	73 ¹ / ₈ 186	60 153	1 ¹ / ₂ 4	1 3	1 3

For propane gas models change suffix "N" to "X" and remove "E" from the model number. Example: UHE-100T-150-3X

V - 115V A.C. Required

• - Electronic Ignition

H - Listed with California Energy Commission

(A) ASME - All models are available with ASME construction.

To order ASME construction add the (A) to the end of the model number.

Example: UHE-100T-150E-3NA

Note: The weight is the same for both ASME and Non-ASME models.

NSF Construction Available with optional kit

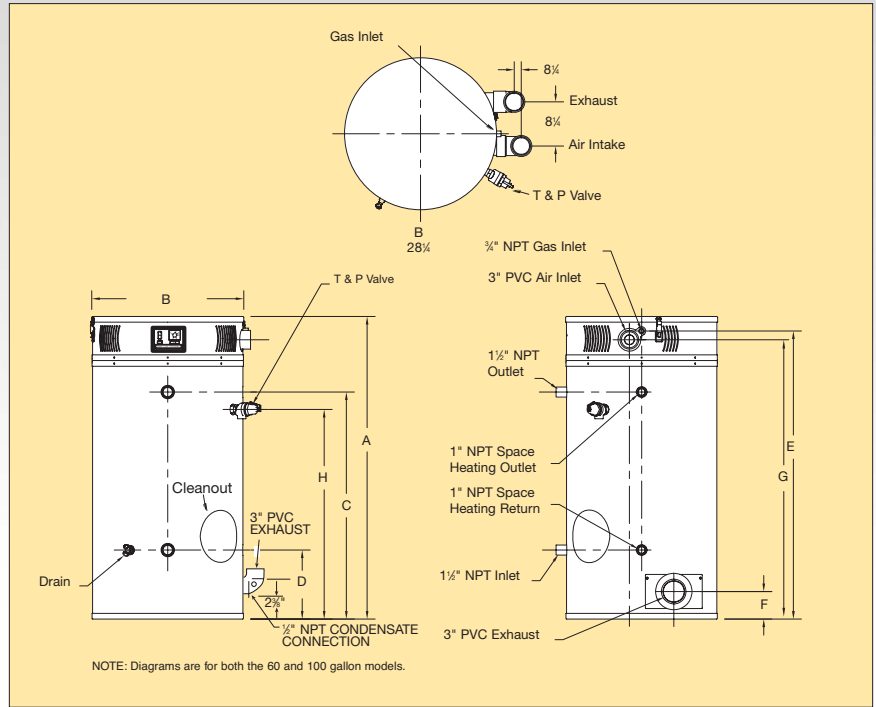
Complies with SCAQMD low NO_x requirements — 10.39 ng/joule

Design certified by CSA International (formerly AGA/CGA)

Amp Draw range = 1.0 to 1.8 amps and 7.0 amps for UHE-100T-399

150 PSI Working Pressure (1034 kPa), 300 PSI Test Pressure (2068 kPa)

LAARS® U.H.E.™ 60 GALLON WATER HEATER



Laars® U.H.E.™ Commercial Ultra High Efficiency Water Heater

NATURAL GAS AND LIQUID PROPANE GAS

Meet or exceed ASHRAE 90.1b (current standard) C.E.C. Listed
Includes Installed T&P Valve and Electronic Ignition

Model Number	Input	1 ST Hour Delivery at 100°F Rise	Recovery GPH at Degree Rise			Storage Capacity	Thermal Efficiency	Approx. Shipping Weight lbs.
	BTU	Gal.	40°F	100°F	140°F	U.S. Gal.	%	
V ● ★ UHE-60T-125E-3N(A)	125,000	187	364	145	104	60	96.0	570
V ● ★ UHE-60T-150E-3N(A)	150,000	211	423	169	121	60	93.0	570
V ● ★ UHE-60T-199E-3N(A)	199,999	265	558	223	159	60	92.0	570

Model Number	A		B		C		D		E		F		G		H	
	Floor to Top of Heater		Jacket Dia.		HW Out		Cold In		Floor to Gas Conn.		Floor to Vent Outlet		Floor to Air Intake		Floor to T&P Conn.	
	in.	cm.	in.	cm.	in.	cm.	in.	cm.	in.	cm.	in.	cm.	in.	cm.	in.	cm.
V ● ★ UHE-60T-125E-3N(A)	57	145	28 1/4	72	42	107	13	33	53 1/2	136	5	13	52 1/2	132	40	99
V ● ★ UHE-60T-150E-3N(A)	57	145	28 1/4	72	42	107	13	33	53 1/2	136	5	13	52 1/2	132	40	99
V ● ★ UHE-60T-199E-3N(A)	57	145	28 1/4	72	42	107	13	33	53 1/2	136	5	13	52 1/2	132	40	99

For propane gas models change suffix "N" to "X" and remove "E" from the model number. Example: UHE-60T-150-3X

V - 115V A.C. Required

● - Electronic Ignition

H - Listed with California Energy Commission

(A) ASME - All models are available with ASME construction.

To order ASME construction add the (A) to the end of the model number.

Example: UHE-60T-125E-3NA

Note: The weight is the same for both ASME and Non-ASME models.

NSF Construction Available with optional kit

Complies with SCAQMD low NO_x requirements — 10.39 ng/joule

Design certified by CSA International (formerly AGA/CGA)

Amp Draw range = 1.0 to 1.8 amps and 7.0 amps for UHE-100T-399

150 PSI Working Pressure (1034 kPa), 300 PSI Test Pressure (2068 kPa)

LAARS® U.H.E.™ ULTRA-HIGH EFFICIENCY WATER HEATERS

Laars® U.H.E.™ Standard Equipment Features:

- **Thermal Efficiency up to 99.1%**—Fully condensing design.
- **Three Pass Flue System**—The three pass flue system keeps the hot combustion gases moving at a high velocity. The combination of high turbulence and velocity causes an enormous rate of heat transfer into the water.
- **Factory Installed Sediment Reduction System**—Cold inlet sediment reduction device made of stainless steel for increased durability. Helps prevent sediment build-up in tank.
- **Glass-Lined Tank**—Laars® Heating Systems water heater tanks are protected from the corrosive effects of hot water by an exclusive ceramic porcelain-like coating. Our high silica lining provides a tough interior surface.
- **Protective Magnesium Anode Rods**—Employed to provide an extra measure of corrosion protection for longer life. Each Laars® U.H.E.™ heater has 4 anodes, except the UHE-100T-399 which has 2 powered anode rods and one non-powered anode rod.
- **Low NOx Premix Power Burner**—Developed for the Laars® U.H.E.™, a turbulent flame shoots down the submerged combustion chamber. This turbulence causes a thorough mixing of the gas and air for optimum combustion and high heat transfer efficiencies. — Far exceeds California emission requirements.
- **Submerged Combustion Chamber**—Submerging the combustion chamber in the center of the water storage tank minimizes radiant heat loss and improves efficiency.
- **Electronic Controls**—Adjustable electronic thermostat for control between 80°F and 180°F. The recycling Energy Cut Off (ECO) shuts off all gas flow in an event of an overheat condition.
- **Zero Inch Clearance**—The Laars® U.H.E.™ jacket is cool to the touch and is approved for zero inch clearance to combustibles for unsurpassed installation flexibility.

- **Factory Installed Dielectric Fittings**—All heaters equipped with special water heater nipples for longer heater life. No special dielectric fittings to buy.
- **Non-CFC Foam Insulation**—Surrounds the tank surface, saving energy by retarding loss of heat.
- **Flexible Venting**—The Laars® U.H.E.™ can vent vertically or horizontally with either 3" or 4" PVC, CPVC or ABS vent pipe, and is approved for direct vent closed combustion applications, or those applications that require inside air for combustion. Foam core pipe is permitted on the entire venting system. The Laars® U.H.E.™ is also approved for unbalanced venting, which means the air intake pipe doesn't have to be vented the same distance as the exhaust.

NOTE: Air intake cannot exceed exhaust by more than 30 feet.

Determining required vent length

1. Determine the total length of straight vent pipe (in feet) required for both the intake and the exhaust.
2. Add 5 feet of venting for every 90° elbow.
3. Add 2½ feet of venting for every 45° elbow.
4. Total vent length cannot exceed "Max Length" in the above venting table.
5. Air intake cannot exceed exhaust by more than 30 feet in any venting situation.

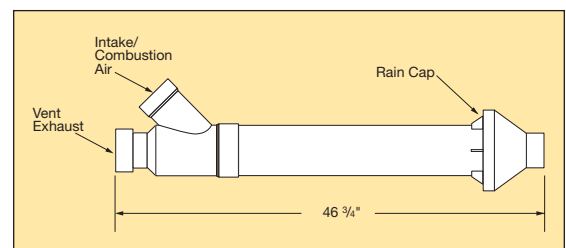
Model Number	Max. 3" PVC, ABS & CPVC	Max. 4" PVC, ABS & CPVC
UHE-60T-125	120 ft.	170 ft.
UHE-60T-150	100 ft.	150 ft.
UHE-60T-199	80 ft.	130 ft.
UHE-100T-150	120 ft.	170 ft.
UHE-100T-199	100 ft.	150 ft.
UHE-100T-250	80 ft.	130 ft.
UHE-100T-300	60 ft.	110 ft.
UHE-100T-399	50 ft.	100 ft.

NOTICE: Do not include the 3" exhaust elbow or vent terminals in determining maximum vent length.

- **Three Year Limited Warranty on Steel Tank**—Heavy gauge steel automatically formed, rolled and welded to assure a continuous seam for glass lining.
- **One Year Limited Warranty on Parts**

Laars® U.H.E.™ Optional Equipment Features:

- **Maxitrol Gas Pressure Regulating valve**—Ensures proper supply pressure to UHE unit of 7" to 11" W.C. (provided incoming pressure is between 1/2 and 2 psi). This can be ordered as a separate part, or as part of the heater. The separate part is not available for use with the UHE-100T-399.
- **Concentric Vent Terminal Kit**—3" termination fitting provides for only one exit opening through wall or roof.
- **NSF Compliance Kit**





View our entire product line at www.Laars.com

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