



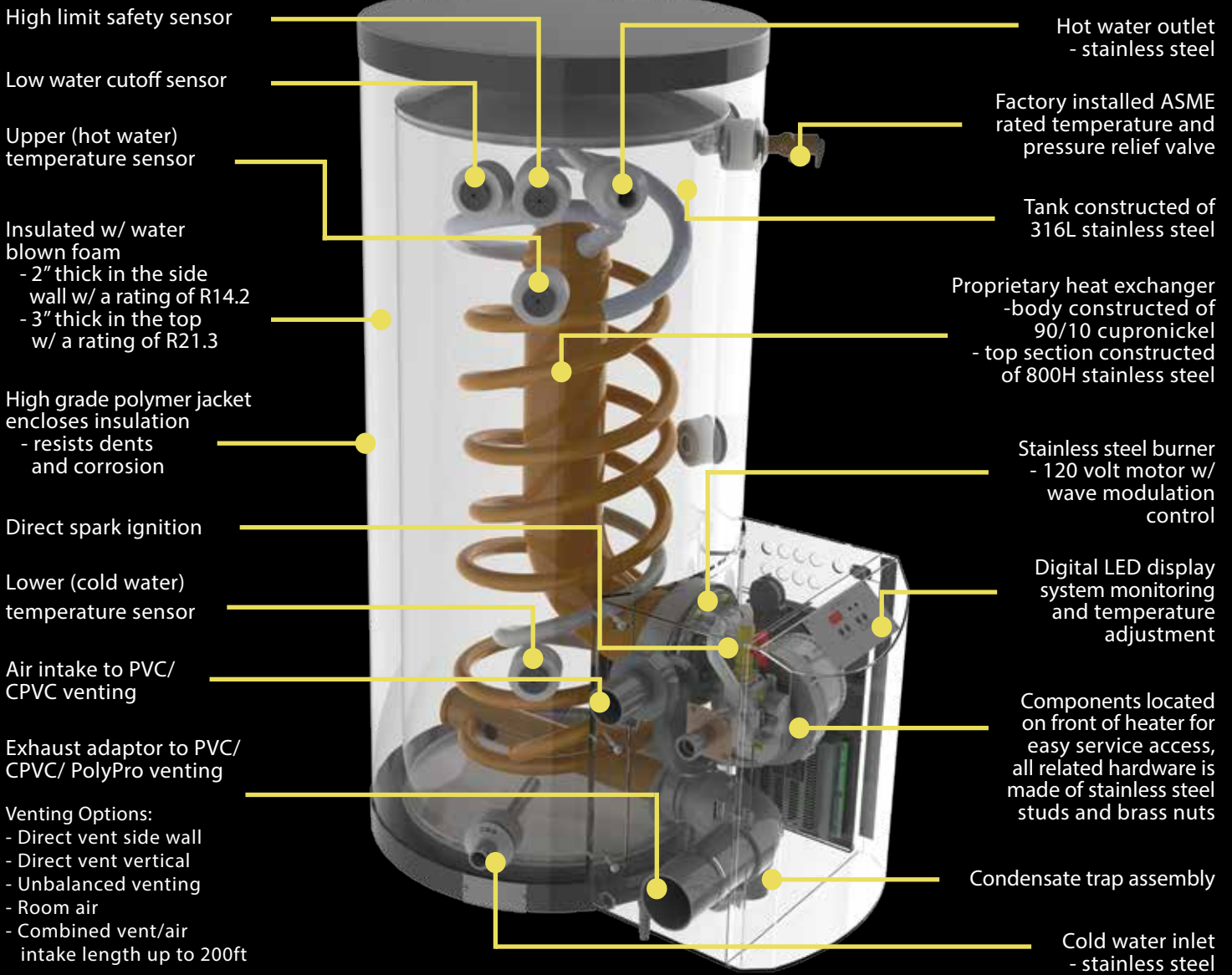
Advanced Heating  
& Hot Water Systems

# Commercial Phoenix



**up to 96% Efficient Commercial Water Heater**

# SPECIFICATION GUIDE



Find 3D Revit Drawings at [www.htproducts.com](http://www.htproducts.com)

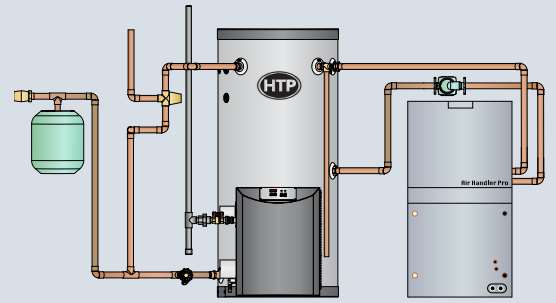
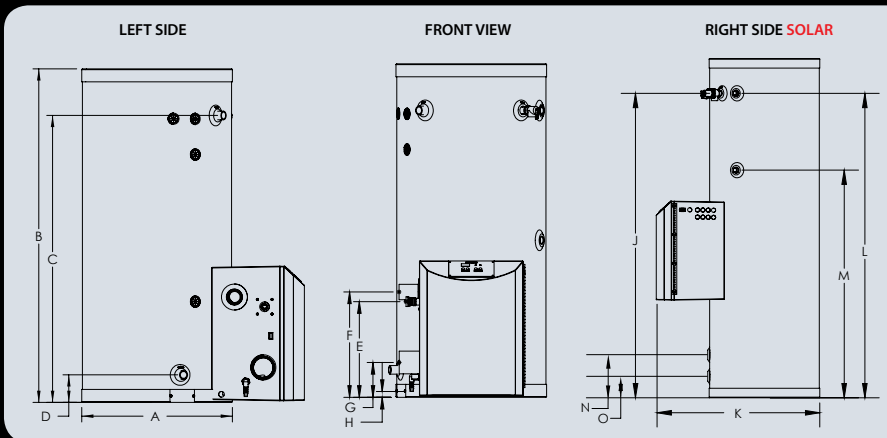
## All Phoenix Water Heaters shall be

- UL/ULC listed
- exceed ASHRAE 90.1b-1992 efficiency requirements
- ANSI Z 21.10.3 certified
- comply w/ NOx emissions set forth in SCAQMD Rule 1146.2-1998
- factory assembled, test-fired, and adjusted for proper combustion parameters
- operate at altitudes up to 4,500 feet above sea level without additional parts or adjustments

Note: Due to variations by state in CSD-1 requirements, please consult with the factory for all controls required in your jurisdiction.



# DIMENSIONS & SPECIFICATIONS



**Combining the Phoenix with an Air Handler**  
A Unique and Highly Efficient Way to Provide Heat and Hot Water

### PHOENIX 76K WATER HEATER DIMENSIONS

MODEL	GAL.	A	B	C	D	E	F
HS76-45	45	42-3/4"	36-1/4"	33-1/4"	7-1/4"	23"	32-1/4"
HS76-55	60	54-3/4"	36-1/4"	33-1/4"	7-1/4"	23"	32-1/4"
HS76-75	80	62-3/4"	36-1/4"	33-1/4"	7-1/4"	23"	32-1/4"

### PHOENIX WATER HEATER AND SANITIZER BOOSTER DIMENSIONS

MODEL	GAL.	A	B	C	D	E	F	G	H	J	K	L	M
PH100-55/ PH130-55 PH160-55/ PH199-55	55	23"	52"	45"	5"	14-3/4"	16-1/4"	5-1/4"	1"	45"	34-1/4"	45"	27-1/2"
PH100-80/ PH130-80 PH160-80/ PH199-80	80	23"	72"	64"	5"	17"	18-1/2"	7-3/4"	3-1/4"	64"	34-1/4"	64"	29-3/4"
PH100-119/ PH130-119 PH160-119/ PH199-119	119	27"	74"	66-1/4"	7-1/2"	18-3/4"	21-1/2"	10-1/2"	5"	66-1/2"	38-1/2"	66-1/2"	31"
PH130-55SA/ PH199-55SA	55	23"	52"	45"	5"	14-3/4"	16-1/4"	5-1/4"	1"	45"	34-1/4"	45"	27-1/2"

### PHOENIX SOLAR WATER HEATER DIMENSIONS

SRCC SYSTEM AVAILABLE	MODEL	GAL.	A	B	C	D	E	F	G	H	J	K	L	M	N	O
PH-80S	PH130-80S/ PH199-80S	80	23"	72"	65"	5-3/4"	36"	37-1/2"	27"	22-1/2"	64-3/4"	34"	64-3/4"	48-3/4"	9-3/4"	5-1/4"
PH-119S	PH130-119S/ PH199-119S	119	27"	74"	66"	7-1/4"	36-3/4"	38-1/4"	27-1/4"	23-1/4"	66-1/4"	38-1/4"	66-1/4"	49-1/4"	11-1/2"	7"

### PHOENIX WATER HEATER AND SANITIZER BOOSTER SPECIFICATIONS

MODEL	BTU's	AIR INTAKE/ EXHAUST VENT	INLET/ OUTLET	AUXILIARY CONN.	GAS LINE CONN.	SYSTEM RELIEF PIPE	SHIPPING WEIGHT	MAX. TEMP LIMIT
HS76-45	76,000	2"	3/4" NPT	3/4" FNPT	1/2"	3/4"	- LBS	160 F
HS76-55	76,000	2"	3/4" NPT	3/4" FNPT	1/2"	3/4"	- LBS	160 F
HS76-75	76,000	2"	3/4" NPT	3/4" FNPT	1/2"	3/4"	- LBS	160 F
PH100-55	100,000	2"	1" NPT	1" FNPT	3/4"	3/4"	175 LBS	160 F
PH130-55	130,000	2"	1" NPT	1" FNPT	3/4"	3/4"	175 LBS	160 F
PH160-55	160,000	3"	1" NPT	1" FNPT	3/4"	3/4"	175 LBS	160 F
PH199-55	199,000	3"	1" NPT	1" FNPT	3/4"	3/4"	175 LBS	160 F
PH100-80	100,000	2"	1-1/2" NPT	1" FNPT	3/4"	3/4"	235 LBS	160 F
PH130-80	130,000	2"	1-1/2" NPT	1" FNPT	3/4"	3/4"	235 LBS	160 F
PH160-80	160,000	3"	1-1/2" NPT	1" FNPT	3/4"	3/4"	235 LBS	160 F
PH199-80	199,000	3"	1-1/2" NPT	1" FNPT	3/4"	3/4"	235 LBS	160 F
PH100-119	100,000	2"	1-1/2" NPT	1" FNPT	3/4"	3/4"	405 LBS	160 F
PH130-119	130,000	2"	1-1/2" NPT	1" FNPT	3/4"	3/4"	405 LBS	160 F
PH160-119	160,000	3"	1-1/2" NPT	1" FNPT	3/4"	3/4"	405 LBS	160 F
PH199-119	199,000	3"	1-1/2" NPT	1" FNPT	3/4"	3/4"	405 LBS	160 F
PH130-55SA	130,000	2"	1" NPT	1" FNPT	3/4"	3/4"	175 LBS	184 F
PH199-55SA	199,000	3"	1" NPT	1" FNPT	3/4"	3/4"	175 LBS	184 F

### PHOENIX SOLAR WATER HEATER SPECIFICATIONS

SRCC SYSTEM AVAILABLE	MODEL	BTU's.	AIR INTAKE/ EXHAUST VENT	INLET/ OUTLET	AUXILIARY CONN.	GAS LINE CONN.	SYSTEM RELIEF PIPE	SHIPPING WEIGHT	MAX. TEMP LIMIT
PH-80S	PH130-80S PH130-119S	130,000	2"	1" NPT	1"	3/4"	3/4"	245 LBS	160 F
PH-119S	PH199-80S PH199-119S	199,000	3"	1" NPT	1"	3/4"	3/4"	415 LBS	160 F

Note: All units are compatible with natural gas or liquid propane, but must be specified upon placing an order.

#### STANDARD FEATURES

- Up to 96% Thermal Efficiency
- Modulating Burner
- 5:1 Turndown Ratio
- Vents in PVC, CPVC, Stainless Steel, ULC S636
- Limited Warranty
- 7 Year Residential
- 3 Year (5 Year Option Available) Commercial

#### WHAT'S IN THE BOX

- Intake PVC Tee w/ Screens
- Exhaust PVC Coupling w/ Screens
- Installation Manual
- Solar Addendum (Solar Models Only)
- LP Conversion Kit (Natural Gas Models Only)

#### OPTIONAL EQUIPMENT

- Outdoor Sensor
- 2", 3" PVC Concentric Vent Kit
- 3", 4" Stainless Steel Outside Termination Vent Kit
- Condensate Neutralizer
- PC Connection Cable w/ Software
- Sanitizer Booster Kit

**ULTRA**  
**Low NOx**  
**Emissions**

In accordance with our company policy of ongoing product improvement, HTP Inc. reserves the right to make changes without prior notice.



# SUPERIOR STAINLESS STEEL CONSTRUCTION

## Why Choose A Stainless Steel Tank?

HTP has produced more stainless steel tanks in North America since 1976, than any other company in the industry.



### Our Components are Made of Durable Materials:

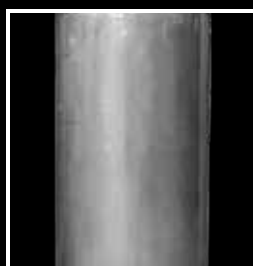
- Dip Tubes
- Port Outlets
- Heat Exchanger
- Tank Construction

Made with High Grade 316L and 800H Stainless Steel Materials.



### The Advantages

#### Stainless Steel vs. Glass-Lined



HTP's  
119 GAL. Tank  
405 LBS. (Ship. Weight)

Top Competitor's  
119 GAL. Tank  
555 LBS.

- Eliminates Scale Build-up on HX
- Prolongs Tank Life
- No Need for Anode Rods
- Light Weight Construction

### NO Anode Rods Needed!

All coated tanks require anodes to delay the inevitable corrosion and tank failure. The average commercial water heater lasts about 6 years. The Commercial Phoenix stainless steel tank will outlast any coated steel tank in the market.



SCALE BUILD-UP

...Because They Are Built To Last!

# HIGH EFFICIENCY & FULL MODULATION

The modulating design of the Phoenix water heater proves far superior in conserving energy compared to an on/off design used by most in the condensing water heater industry.

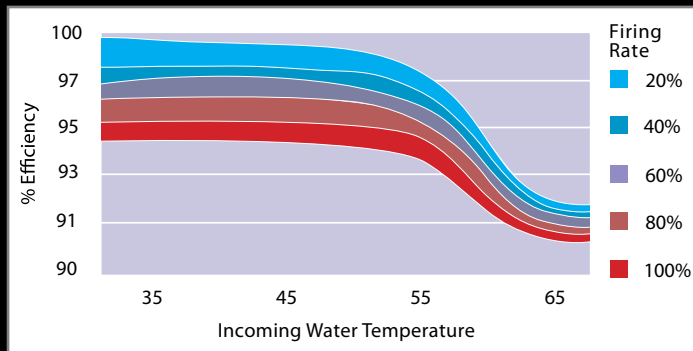
**-96% Thermal Efficiency**

**-94% Combustion Efficiency**

**-Drop in replacement for mid to high efficiency units**

**-5 to 1 Turndown Ratio**

The ability to modulate down to 20% of input capacity optimizes energy and reduces cycling, increasing efficiency.



## Phoenix® Efficiency

The Phoenix® electronic control adjusts the burner firing rate to match demand. The burner firing rate increases as the demand increases and decreases as the hot water demand approaches the required temperature set point. This load matching modulation dramatically reduces on/off cycling, resulting in longer component life, reliability and higher system efficiency.

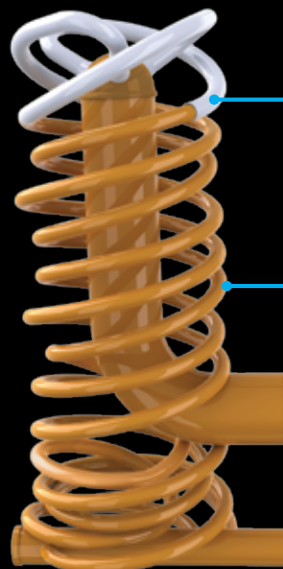
# HTP'S UNIQUE HEAT EXCHANGER

**-Durable Construction**

**-High Performance**

**-Excellent Heat Transfer Capabilities**

**-Self Cleaning**



Stainless Steel (1.65mm thick) welded to the top of the heat exchanger where flue gas is the hottest.

Transitions to 90/10 Cupronickel (1.1mm thick) spiral design that expands and contracts rapidly with the change in temperature eliminating scale build-up.

# THE PROOF IS IN THE REPORTS

## PG&E Test Report: Phoenix Water Heater is Top Performer

Performance Study Results



**Tested Recovery Efficiency**

**Tested Energy Factor**

**HTP's Phoenix is #1**

**The Runner Up**

<b>94.2%</b>	<b>83%</b>
<b>.833</b>	<b>.722</b>

"HTP's Phoenix modulating condensing water heater out performed all of the other units, achieving the greatest efficiency at most levels of use."

Specify the Best: brand name water heaters are an easy default selection. Break the habit with the higher value choice.

#1 in Durability: Stainless steel/cupronickel construction lasts far longer than coated steel construction which fails rapidly if acidic condensate is trapped. Load matching modulation leads to far less cycling and longer component life.

#1 in Reliability: Again, Phoenix load matching modulation rapidly reduces component wear associated with the cycling of standard on/off heaters. The Phoenix gas valve/blower/control module has been successfully used by millions of boilers world wide, and over 70,000 boilers and water heaters manufactured by HTP.

To view the full report, please visit <http://www.2hsc.com/pdfs/phoenix/PGEWaterHeaterReport.pdf>

## Phoenix Commercial, Solar & Sanitizer Ratings

MODEL	INPUT MODULATION	FIRST HR. RATING	100 DEG. F. RISE	THERMAL EFFICIENCY
PH100-55	35,000-100,000	169 GAL.	115	95%
PH130-55	35,000-130,000	205 GAL.	148	94%
PH160-55	40,000- 160,000	245 GAL.	184	95%
PH199-55	40,000-199,000	295 GAL.	229	95%
PH100-80	35,000-100,000	189 GAL.	116	96%
PH130-80	35,000-130,000	227 GAL.	150	95%
PH160-80	40,000-160,000	265 GAL.	184	96%
PH199-80	40,000-199,000	314 GAL.	229	95%
PH100-119	35,000-100,000	214 GAL.	117	96%
PH130-119	35,000-130,000	257 GAL.	152	96%
PH160-119	40,000-160,000	295 GAL.	184	96%
PH199-119	40,000-199,000	335 GAL.	230	96%

MODEL	INPUT MODULATION	FIRST HR. RATING	THERMAL EFFICIENCY
PH130-80S	35,000-130,000	227 GPH	N/A
PH199-80S	40,000-199,000	314 GPH	N/A
PH130-119S	35,000-130,000	257 GPH	N/A
PH199-119S	66,000-199,000	335 GPH	N/A
PH130-119SNHX	35,000-130,000	257 GPH	94%
PH199-119SNHX	66,000-199,000	335 GPH	95%
PH130-55SA	35,000- 130,000	205 GPH	94%
PH199-55SA	40,000- 199,000	295 GPH	95%



The various Phoenix models and sizes address over 80% of the commercial water heater market.