

## H-Series Super High Efficiency with LeakSense™ Gas Water Heater offers maximum efficiency & continuous flow

### EFFICIENCY

- Up to .90 UEF reduces operating cost
- ENERGY STAR® rated

### PERFORMANCE

- Up to 3.8 GPM continuous flow of hot water at setpoint temperature
- Highest Delivery of 198 gallons in MaxMode™

### EASY INSTALLATION

- Built-in Condensate Neutralizer
- Certified for multiple termination configurations
- Easy front access to connections and components
- Zero clearance on sides and back
- Longest vent runs, installs as PV or PDV with same unit
- 8" Centers on top water connections for easy replacement of standard gas water heaters
- 1/2" NPT gas connection
- 3/4" NPT water inlet and outlet; 3/4" condensate drain connections
- Side water connections for space heating applications
- Temperature and pressure relief valve installed

### INTEGRATION

- LCD Display with built-in water leak sensor and system health alert with audible alarm

- Built-in Wi-Fi powered by EcoNet® technology<sup>1</sup> and EcoNet app gives users control over water systems, allowing for customizable temperature, vacation/away settings, energy scheduling and energy consumption tracking from your smartphone.
- LeakSense™ Built-in Leak Detection System detects any leak large or small, internal or external<sup>2</sup>
- Optional auto water shut-off valve accessory limits leaks to no more than 20 ounces of water<sup>3</sup>

### OPERATION MODES

- MaxMode™ for up to 15% more hot water on demand
- Vacation/Away mode for energy savings during non-use time

### HIGH ALTITUDE COMPLIANT

- Certified to 10,100 ft. above sea level

### PLUS...

- Dual anode rods extend tank life
- Enhanced flow brass drain valve for faster draining
- Advanced Controls and Start-up Verification for better diagnostics, faster installation and easier servicing

### WARRANTY

- 12-Year limited tank and parts warranty  
See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of NAECA, ASHRAE standard 90, ICC Code and all state energy efficiency performance criteria.



40 & 50-Gallon Model

75-Gallon Model

**H-Series**  
**Super High Efficiency**  
40, 50 and 75-Gallon Capacities  
Up to 100,000 BTU/h  
Natural and LP Gas  
Ultra Low NOx



These products meet a stringent set of our internally defined sustainability standards.



LEED Points = 2



Low Lead Compliant

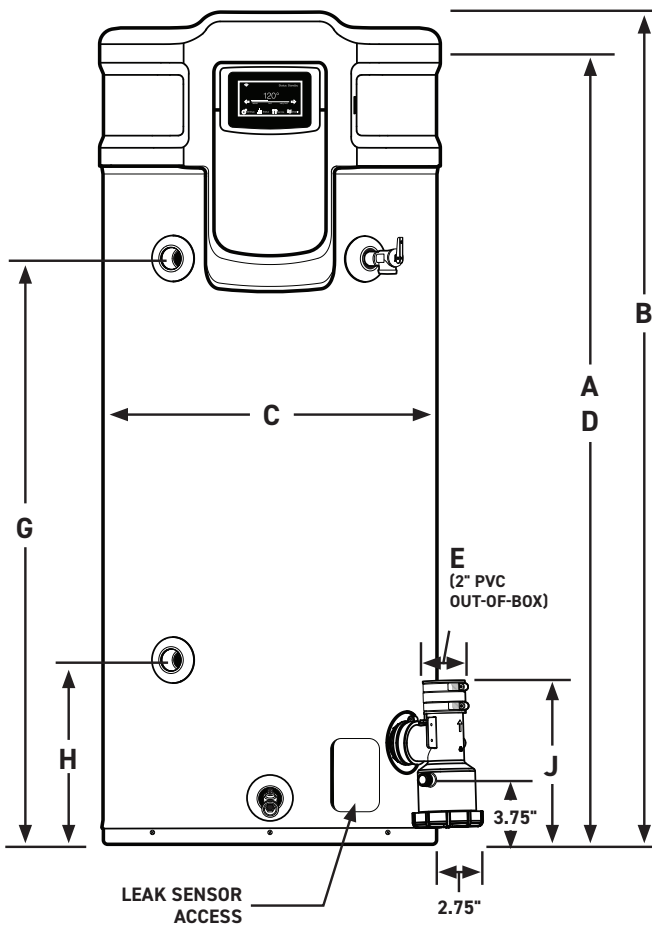
<sup>1</sup>Wi-Fi broadband internet connection required. <sup>2</sup>Water leaks from the heater only, as tested across scenarios including a minimum of 5.5mL/hr volume leak rate, using most common installation scenarios. <sup>3</sup>Source: Leak-Sensing Data; testing under a vacuum lock using 50-gallon tank, no expansion tank, average tank pressure of 40 psi, assuming no additional faucets are opened. Accessory sold separately. Contact your contractor or distributor for more details.

See specifications chart on next page.

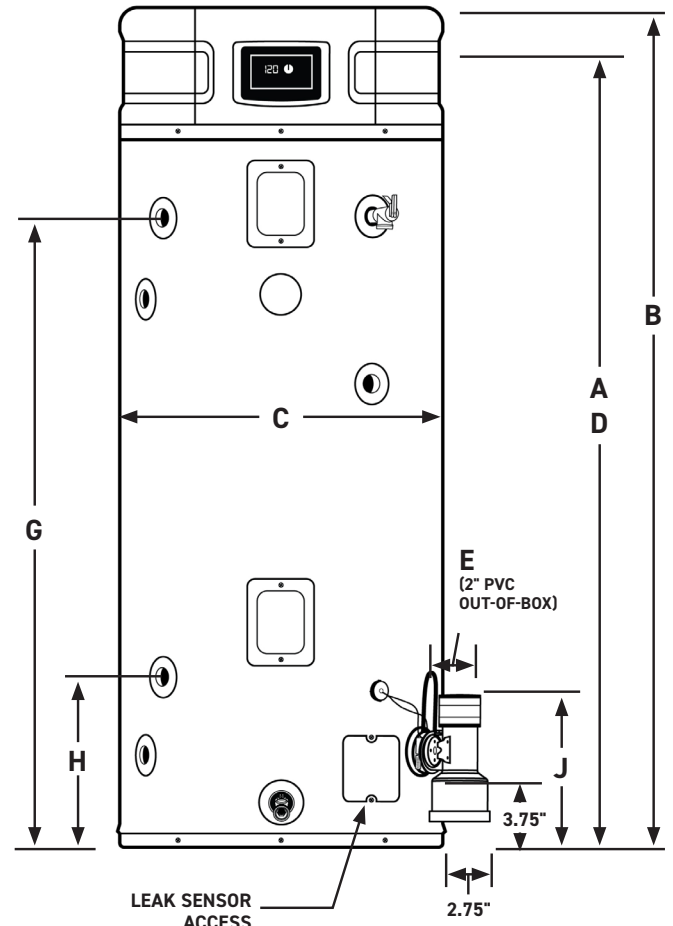
## H-Series Super High Efficiency Specifications

DESCRIPTION				FEATURES								ROUGHING IN DIMENSIONS (SHOWN IN INCHES)											ENERGY INFO.
TYPE	NOMINAL GALLON CAP.	RATED GALLON CAP.	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H		RECOVERY IN G.P.H. 90° F RISE		FIRST HR. RATING (GALLONS)		MAXMODE™ DELIVERY (GALLONS)		HEIGHT TO INTAKE A	OVERALL UNIT HEIGHT B	DIAM. C	HT. TO GAS CONN. D	VENT SIZE E	WATER CONN. CENTER F	HT. TO SIDE TAP HOT G	HT. TO SIDE TAP COLD H	HT. TO EXHAUST J	WATER CONN. SIZE	SHIP WT. (LBS)	UNIFORM ENERGY FACTOR (UEF)
				NAT.	LP	NAT.	LP	NAT.	LP	NAT.	LP												
Tall	40	40	12PROG 40-50U FD HE EC3	50	-	64	-	88	-	101	-	54-1/4	54-1/2	21-3/4	50-1/4	2", 3", 4", 2" or 3" Flex	8	38	12	10	3/4	221	0.90
Tall	40	40	12PROG 40-50P FD HE EC3	-	50	-	64	-	88	-	101	54-1/4	54-1/2	21-3/4	50-1/4	2", 3", 4", 2" or 3" Flex	8	38	12	10	3/4	221	0.90
Tall	50	50	12PROG 50-50U FD HE EC3	50	-	64	-	95	-	109	-	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	247	0.88
Tall	50	50	12PROG 50-50P FD HE EC3	-	50	-	64	-	95	-	109	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	247	0.88
Tall	50	50	12PROG 50-76U FD HE EC3	76	-	97	-	136	-	156	-	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	50	50	12PROG 50-76P FD HE EC3	-	76	-	97	-	136	-	156	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	50	50	12PROG 50-100U FD HE EC3	100	-	128	-	167	-	192	-	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	50	50	12PROG 50-100P FD HE EC3	-	100	-	128	-	167	-	192	64-1/4	65-1/2	21-3/4	61	2", 3", 4", 2" or 3" Flex	8	48	12	10	3/4	256	0.89
Tall	75	75	12PROG 75-100U FD HE EC3	100	-	129	-	167	-	198	-	62-5/8	64-1/2	26-1/4	60-1/8	2", 3", 4", 2" or 3" Flex	12	47	12	9	3/4	332	0.88
Tall	75	75	12PROG 75-100P FD HE EC3	-	100	-	129	-	167	-	198	62-5/8	64-1/2	26-1/4	60-1/8	2", 3", 4", 2" or 3" Flex	12	47	12	9	3/4	332	0.88

Uniform Energy Factor and rated gallon capacity based on Department of Energy (DOE) requirements. All units have integrated Wi-Fi control board.



40 & 50-GALLON MODELS



75-GALLON MODELS

## RESIDENTIAL EQUIVALENT VENT LENGTHS

40G-50K AND 50G-50K; POWER VENT CONFIGURATION; (RIGID PIPE)				40G-50K AND 50G-50K; POWER DIRECT VENT CONFIGURATION; (RIGID PIPE)				TERMINATIONS
ELEVATION (FEET)	VENT SIZE (INCHES)	NAT MAX EQ. LENGTH (FEET)	LP MAX EQ. LENGTH (FEET)**	NAT MAX EQ. LENGTH (FEET)		LP MAX EQ. LENGTH (FEET)**		
				INTAKE	EXHAUST	INTAKE	EXHAUST	
0-2000	2"	50'	50'	50'	50'	50'	50'	2" AND 3" 90° ELBOWS, 2", 3" AND 4" CONCENTRIC AND 2"AND 3" PANCAKE
	3"	140'	140'	140'	140'	140'	140'	
	4"	140'	140'	140'	140'	140'	140'	
2000-5400	2"	50'	40' <small>(High Altitude Model Required)</small>	50'	50'	40'	40'	
	3"	140'	100' <small>(High Altitude Model Required)</small>	140'	140'	100'	100'	
	4"	140'	100' <small>(High Altitude Model Required)</small>	140'	140'	100'	100'	
5400-7800	2"	50'	20' <small>(High Altitude Model Required)</small>	50'	50'	10'	20'	
	3"	140'	100' <small>(High Altitude Model Required)</small>	140'	140'	100'	100'	
	4"	140'	100' <small>(High Altitude Model Required)</small>	140'	140'	100'	100'	
7800-10,100	2"	50'	Not Applicable	50'	50'	Not Applicable	Not Applicable	
	3"	140'	Not Applicable	140'	140'	Not Applicable	Not Applicable	
	4"	140'	Not Applicable	140'	140'	Not Applicable	Not Applicable	
MINIMUM INTAKE AIR AND EXHAUST VENT: 10' EQUIVALENT LENGTH								
NATURAL GAS MODELS CAN BE INSTALLED IN HIGH ALTITUDE LOCATIONS WITH DISPLAY CONTROL SETTING CHANGES AS SHOWN IN HIGH ALTITUDE SECTION OF MANUAL.								

50G-76K, 50G-100K, 75G-100K; POWER VENT CONFIGURATION; (RIGID PIPE)				50G-76K, 50G-100K, 75G-100K; POWER DIRECT VENT CONFIGURATION; (RIGID PIPE)				TERMINATIONS
ELEVATION (FEET)	VENT SIZE (INCHES)	NAT MAX EQ. LENGTH (FEET)	LP MAX EQ. LENGTH (FEET)	NAT MAX EQ. LENGTH (FEET)		LP MAX EQ. LENGTH (FEET)		
				INTAKE	EXHAUST	INTAKE	EXHAUST	
0-10,100	2"	40'	40'	40'	40'	40'	40'	2" AND 3" 90° ELBOWS, 2", 3" AND 4" CONCENTRIC AND 2"AND 3" PANCAKE
	3"	140'	140'	140'	140'	140'	140'	
	4"	140'	140'	140'	140'	140'	140'	
MINIMUM INTAKE AIR AND EXHAUST VENT: 10' EQUIVALENT LENGTH								

**Note:** Vent pipe size should not be mixed for venting these water heater. Use same diameter pipe for all venting of the unit.

All power direct models can use 2" concentric venting only as listed in the above chart.

2" Concentric vent can only be used with 2" rigid piping.

**DO NOT** mismatch concentric vent terminations with different rigid piping as it may cause the heater to malfunction or cause a lock-out condition unless specifically mentioned.

3" Concentric vent may be used with 3" and 4" venting.

FLEXIBLE POLYPROPYLENE PIPE (FT)				
PIPE SIZE (IN.)	2"		3"	
	INTAKE	EXHAUST	INTAKE	EXHAUST
MAX PV	0	30'	0	30'

VENTING - ELBOW EQUIVALENT VENT LENGTH					
90°			45°		
SHORT SWEEP	STANDARD	LONG SWEEP	SHORT SWEEP	STANDARD	LONG SWEEP
DO NOT USE	7'	5'	DO NOT USE	4.5'	2.5'

• Each 45 degree elbow reduced the equivalent length by 2-1/2 ft.

## Altitude Guide by Model

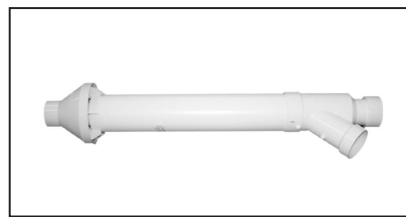
MODEL	0-2000 FEET	2000-5400 FEET	5400-7800 FEET	7800-10,100 FEET
40G / 50K BTU NG	No Changes Needed – Good Out The Box	Change to High Altitude Mode in User Interface		
40G / 50K BTU LP	No Changes Needed – Good Out The Box	Factory Order Model with “-H” Designation – Change to High Altitude Mode in User Interface	N/A	
50G / 50K BTU NG	No Changes Needed – Good Out The Box	Change to High Altitude Mode in User Interface		
50G / 50K BTU LP	No Changes Needed – Good Out The Box	Factory Order Model with “-H” Designation – Change to High Altitude Mode in User Interface	N/A	
50G / 76K BTU NG	No Changes Needed – Good Out The Box			
50G / 76K BTU LP				
50G / 100K BTU NG	No Changes Needed – Good Out The Box			
50G / 100K BTU LP				
75G / 100K BTU NG	No Changes Needed – Good Out The Box			
75G / 100K BTU LP				

## Super High Efficiency Accessories

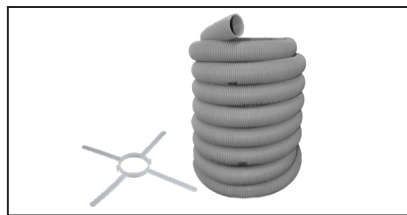
PART NO.	DESCRIPTION
SP20897	2" CONCENTRIC TERMINATION
SP20245	3" CONCENTRIC TERMINATION
SP20796	4" CONCENTRIC TERMINATION
SP20285	2" FLAT TERMINATION
SP20286	3" FLAT TERMINATION
SP21091	2" POLYPROPYLENE FLEX PIPE – 30 FEET
AP19356	3" POLYPROPYLENE FLEX PIPE – 30 FEET
SP21172	AUTO SHUTOFF VALVE KIT



Flat Vent Termination (SP20285, SP20286)



Concentric Vent Termination (SP20897, SP20245, SP20796)



Flex Venting Kit (SP21091, AP19356)



Shutoff Valve (SP21172)

*In keeping with its policy of continuous progress and product improvement, Friedrich reserves the right to make changes without notice.*

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