

F-Series Plus Super High Efficiency Gas Water Heater offers maximum efficiency & continuous flow

EFFICIENCY

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

PERFORMANCE

- Up to 95G first hour rating depending on model
- Recovery: Up to 64 GPH at a 90° F rise, depending on model

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

- Easy to use LCD display with integrated diagnostics

HIGH ALTITUDE COMPLIANT

- Certified to 10,100 ft. above sea level
– **High altitude dongle installation required for over 2000 feet**

PLUS...

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

WARRANTY

- 8-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.



**F-Series Plus
Super High Efficiency**
40 and 50-Gallon Capacities
50,000 BTU/h
Natural and LP Gas
Ultra Low NOx



LEED Points = 2



Low Lead
Compliant

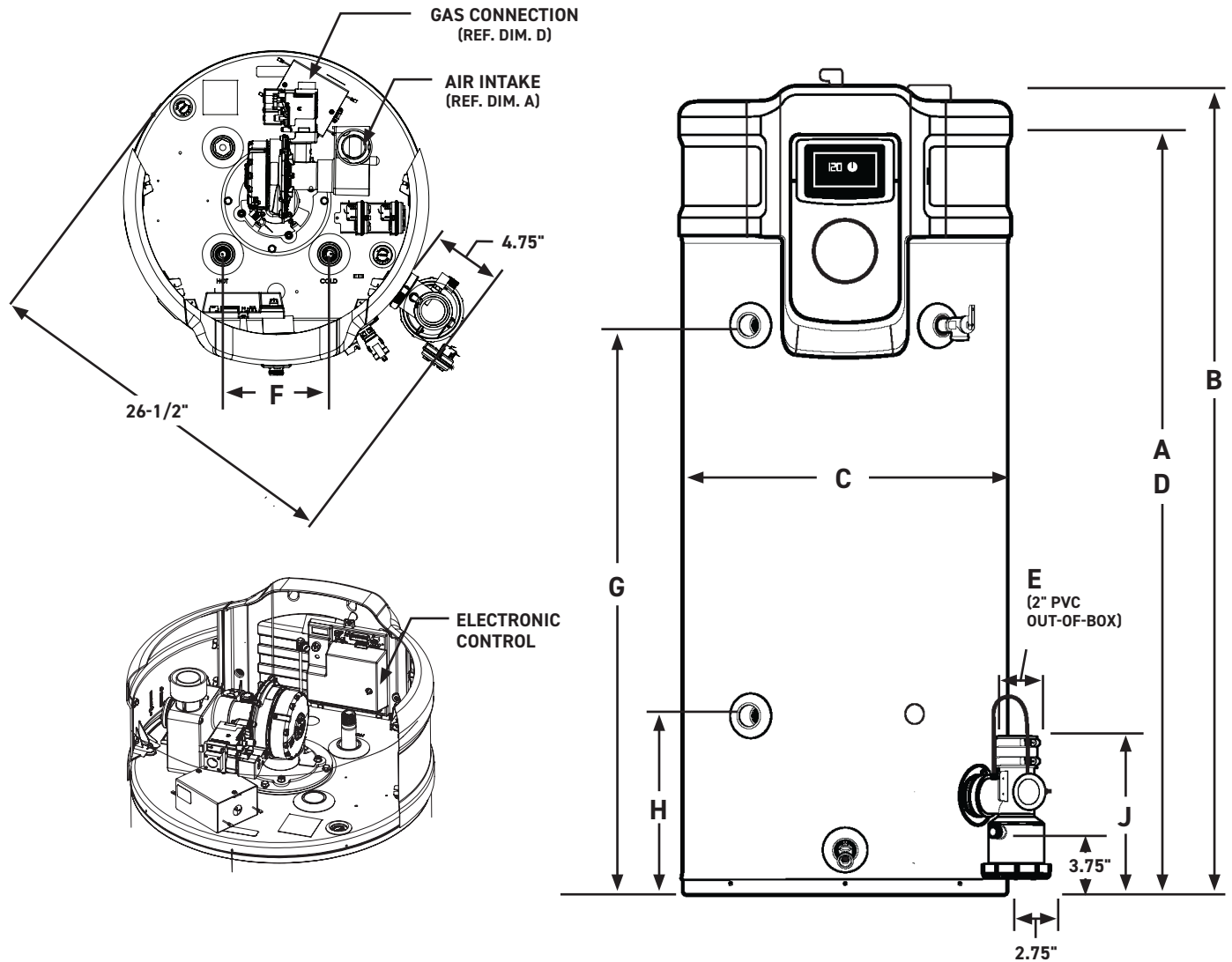
See specifications chart on next page.

F-Series Plus 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) | | 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 | | | | | | | | | | | | |
| Short | 40 | 40 | 8PROG 40-50U FD HE EC1 | 50 | - | 64 | - | 88 | - | 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 |
| Short | 40 | 40 | 8PROG 40-50P FD HE EC1 | - | 50 | - | 64 | - | 88 | 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 | 8PROG 50-50U FD HE EC1 | 50 | - | 64 | - | 95 | - | 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 | 8PROG 50-50P FD HE EC1 | - | 50 | - | 64 | - | 95 | 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 |

Uniform Energy Factor and rated gallon capacity based on Department of Energy (DOE) requirements.

(H) denotes model is available in high-altitude version. High-altitude versions are required for LP installations at 2000-7800 ft. To order a high-altitude model, add H and the end of the base model number.



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 INSTALLATION OF HIGH ALTITUDE DONGLE AS SHOWN IN HIGH ALTITUDE SECTION OF MANUAL. | | | | | | | | |
| **LP GAS MODELS HAVE UNIQUE HIGH ALTITUDE MODEL NUMBERS. THEY ARE FACTORY SET FOR HIGH ALTITUDE OPERATION. HIGH ALTITUDE MODELS HAVE A 'H' DESIGNATION AT THE END OF THE MODEL NUMBER. | | | | | | | | |

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

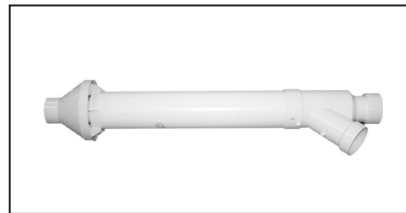
| MODEL | 0-2000 FEET | 2000-5400 FEET | 5400-7800 FEET | 7800-10,100 FEET |
|------------------|--------------------------------------|---|----------------|------------------|
| 40G / 50K BTU NG | No Changes Needed – Good Out The Box | Installation of High Altitude Dongle Required | | |
| 40G / 50K BTU LP | No Changes Needed – Good Out The Box | Factory Order Model with “-H” Designation – Installation of High Altitude Dongle Required | | N/A |
| 50G / 50K BTU NG | No Changes Needed – Good Out The Box | Installation of High Altitude Dongle Required | | |
| 50G / 50K BTU LP | No Changes Needed – Good Out The Box | Factory Order Model with “-H” Designation – Installation of High Altitude Dongle Required | | N/A |

Super High Efficiency Accessories

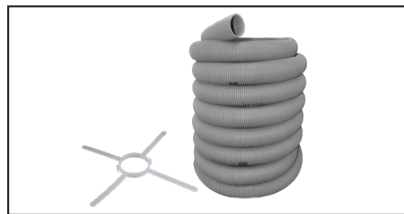
| PART NO. | DESCRIPTION |
|----------|--------------------------------------|
| SP20897 | 2" CONCENTRIC TERMINATION |
| SP20245 | 3" CONCENTRIC TERMINATION |
| SP20796 | 4" CONCENTRIC TERMINATION |
| SP20285 | 2" FLAT TERMINATION |
| SP20286 | 3" FLAT TERMINATION |
| SP21091 | 2" POLYPROPYLENE FLEX 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)

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

Friedrich Water Heating · 1115 Northmeadow Parkway, Suite 100
Roswell, Georgia 30076 · www.friedrich.com