

HIGH EFFICIENCY COMMERCIAL WATER HEATERS

# POWER-fin®

  
**CONXUS®**

REMOTE CONNECT NOW AVAILABLE

  
**SMART TOUCH™**

TOUCHSCREEN LCD DISPLAY NOW AVAILABLE

**7 MODELS: 500,000 TO 2.0 MILLION BTU/HR**

5:1 TURNDOWN RATIO

OUTDOOR INSTALLATION APPROVED

CASCADING SEQUENCER WITH  
CASCADE REDUNDANCY



**85%**  
**THERMAL EFFICIENCY**

 **Lochinvar®**  
HIGH EFFICIENCY BOILERS & WATER HEATERS

DESIGNED ★ ENGINEERED ★ ASSEMBLED  
**USA**  
[Lochinvar.com](http://Lochinvar.com)

# POWER-fin®

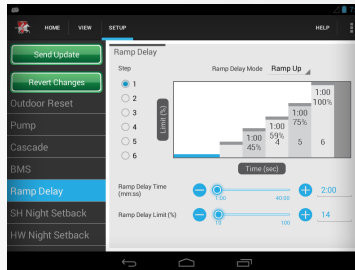
## A SYMBOL OF LOCHINVAR'S COMMITMENT TO EXCELLENCE!

Since its introduction in 1986, the Power-Fin® water heater has carried on the Lochinvar tradition of always giving more to our customers. The latest generation of Power-Fin continues to evolve, with new “Built-in Advantages” from Lochinvar. These include expanded burner modulation and the advanced Smart Touch™ operating control, including a built-in cascading sequencer for up to eight water heaters.

Power-Fin water heaters can be installed with Lochinvar's advanced Lock-Temp® storage tanks, in a wide variety of combinations to meet system sizing requirements. “Factory Packaged” water heater/storage tank systems can be built to your specifications, with all piping installed, and shipped on I-beam skids.

### ENHANCED OPERATING CONTROL

The Power-Fin now offers the industry-best Smart Touch™ 8” LCD full color touchscreen with easy-to-understand infographics. It is equipped with CON-X-US® connectivity that lets you remotely monitor and optimize the performance of the entire water heating system.



Starting with the introduction of Power-Fin product line in 1986, we were able to provide something that other companies weren't focused on, efficiency and footprint. Now, 30 years later, we are proud to continue that tradition and provide some of the most efficient products on the market.

### BURNER MODULATION BOOSTS EFFICIENCY AND LOWERS COSTS

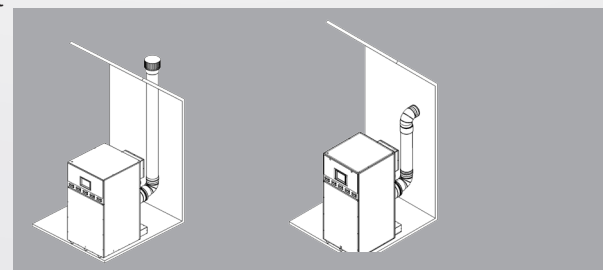
With thermal efficiency of 85%, Power-Fin water heaters feature a 5:1 turndown ratio that will precisely match the firing rate to heat demand requirements—at any point from 20% to full firing rate. This results in less equipment cycling for greater efficiency and cost savings.

### READY FOR OUTDOOR INSTALLATION

In warm-weather sites where the mechanical room is overcrowded, the Power-Fin can be easily installed either outdoors or on a rooftop. Its optional hood and screen protector make outdoor installation fast and trouble free.

### VENTING SOLUTIONS

The Power-Fin offers seven venting options for ease of installation and venting flexibility to meet the most challenging installation requirements. The Power-Fin permits air intake and exhaust terminations to be horizontal through a sidewall or vertical through a roof. Consult the installation and operation manual for detailed venting guidelines.



ROOM AIR VERTICAL

ROOM AIR SIDEWALL





## CONTROL FEATURES

BUILT IN WIFI CAPABILITY TO REMOTELY MONITOR AND CONTROL WATER HEATERS

CASCADE UP TO EIGHT WATER HEATERS FOR PRECISE MULTI-UNIT CONTROL AND ULTIMATE SYSTEM REDUNDANCY

WATER HEATER PUMP CONTROL:

- > PUMP DELAY W/FREEZE PROTECTION
- > PUMP EXERCISE

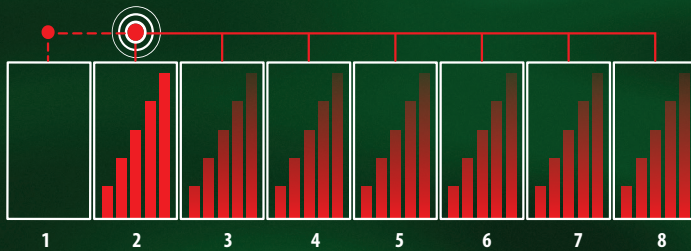
0-10 VDC BMS INPUT FOR EASY INTEGRATION INTO BUILDING MANAGEMENT SYSTEMS

RED LOCKOUT SCREEN DISPLAYING THE FAULT CODE IN PLAIN ENGLISH

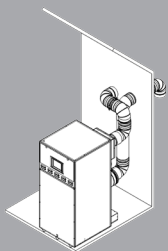
## PEACE OF MIND, WHEN IT MATTERS MOST

Cascade Redundancy provides peace of mind because it helps ensure that a Power-Fin water heater will always deliver reliable performance with no downtime. If the lead water heater is turned off for maintenance, Cascade Redundancy automatically shifts the lead role to the second sequenced water heater. Up to eight Power-Fin water heaters can be sequenced using a 2-wire daisy-chain connection. Cascade sequencing can be programmed for Lead-Lag or Efficiency Optimized operation.

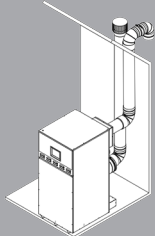
With Lead-Lag operation, one lead water heater modulates to capacity on demand. As load increases, the system then cascades to additional lag water heater in sequence. The first-on role shifts daily, distributing equal runtimes to each unit.



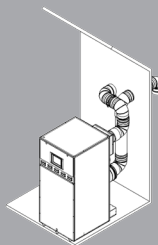
In an Efficiency Optimized system (see illustration left), all water heater fire and modulate simultaneously at the same Btu/hr input rates.



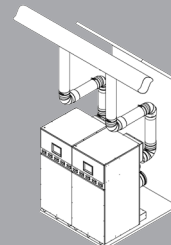
DIRECT VENT SIDEWALL



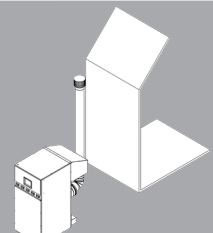
DIRECT VENT VERTICAL



VERTICAL SIDEWALL AIR

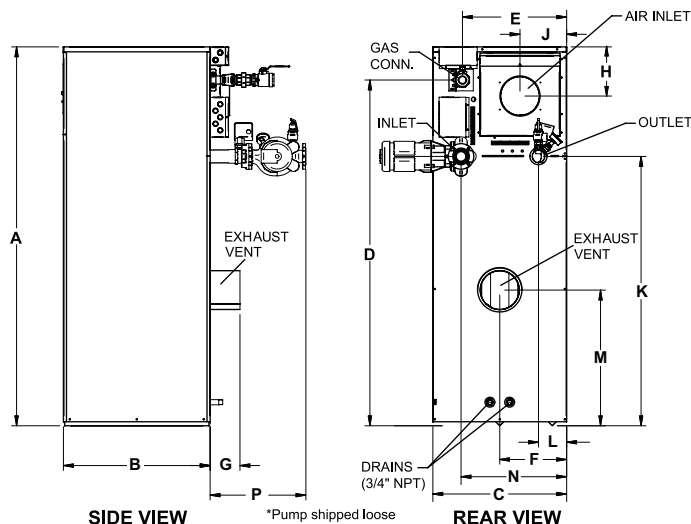


COMMON VENTING



OUTDOOR

# POWER-FIN® WATER HEATER DIMENSIONS AND SPECIFICATIONS



## Model Number Guide

| PF    | N           | 1501         | PM           | M9              |
|-------|-------------|--------------|--------------|-----------------|
| Model | Natural Gas | Btu/hr Input | Pump Mounted | Firing Controls |

Power-Fin Water Heater,  
Natural Gas,  
1,500,000 Btu/hr input,  
Pump Mounted, M9 firing controls

| POWER-FIN WATER HEATER |              |                        |         |         |         |         |         | DIMENSIONS AND SPECIFICATIONS |         |    |     |        |
|------------------------|--------------|------------------------|---------|---------|---------|---------|---------|-------------------------------|---------|----|-----|--------|
| Model Number           | Btu/Hr Input | GPH @ 100°F Rise (M/F) | A       | B       | C       | D       | (F)     | E (M)                         | E F     | G  | H   | J      |
| PFN0502PM              | 500,001      | 515                    | 44-1/2" | 28-1/2" | 23-1/4" | 34"     | 18-3/4" | 18-1/2"                       | 6-1/2"  | 6" | 8"  | 7-3/4" |
| PFN0752PM              | 750,000      | 773                    | 52"     | 28-1/2" | 23-1/4" | 41-3/4" | 19"     | 18-3/4"                       | 6-3/4"  | 6" | 8"  | 7-3/4" |
| PFN1002PM              | 999,999      | 1,030                  | 59-1/4" | 28-1/2" | 23-1/4" | 48-3/4" | 17"     | 18-3/4"                       | 7-1/4"  | 6" | 8"  | 7-3/4" |
| PFN1302PM              | 1,300,000    | 1,339                  | 67-3/4" | 28-1/2" | 23-1/4" | 57-1/4" | 17"     | 18-3/4"                       | 8-1/4"  | 6" | 8"  | 7-3/4" |
| PFN1501PM              | 1,500,000    | 1,545                  | 65-1/2" | 29-3/4" | 27-1/4" | 59"     | 21"     | 20-3/4"                       | 13-1/2" | 8" | 10" | 9-1/2" |
| PFN1701PM              | 1,700,000    | 1,752                  | 70"     | 29-3/4" | 27-1/4" | 63-1/2" | 21"     | 20-3/4"                       | 13-1/2" | 8" | 10" | 9-1/2" |
| PFN2001PM              | 2,000,000    | 2,061                  | 76-3/4" | 29-3/4" | 27-1/4" | 70"     | 21"     | 20-3/4"                       | 13-1/2" | 8" | 10" | 9-1/2" |

| Model Number | K       | L       | M       | N       | P (F)   | P (M)   | Gas Conn. | Air Inlet | Cat I (F) | Vent Sizes Cat II (M) | Cat IV (M) | Wt. (lbs) |
|--------------|---------|---------|---------|---------|---------|---------|-----------|-----------|-----------|-----------------------|------------|-----------|
| PFN0502PM    | 23"     | 11-1/2" | 11-1/4" | 17-1/2" | 15-1/4" | 15-1/4" | 1"        | 5"        | 7"        | 7"                    | 4"         | 535       |
| PFN0752PM    | 30-1/2" | 11-1/2" | 11-1/4" | 17-1/2" | 15-1/4" | 15-1/4" | 1-1/4"    | 5"        | 9"        | 9"                    | 5"         | 584       |
| PFN1002PM    | 37-3/4" | 11-1/2" | 11-1/4" | 17-1/2" | 15-1/4" | 15-1/4" | 1-1/4"    | 6"        | 10"       | 10"                   | 6"         | 663       |
| PFN1302PM    | 46-1/4" | 11-1/2" | 19-1/2" | 17-1/2" | 15-1/4" | 15-1/4" | 1-1/4"    | 6"        | 12"       | 12"                   | 8"         | 682       |
| PFN1501PM    | 43-1/2" | 5-3/4"  | 22-1/4" | 21-1/2" | 24-1/2" | 19-1/2" | 1-1/2"    | 6"        | 12"       | 8"                    | 6"         | 1,131     |
| PFN1701PM    | 48"     | 5-3/4"  | 25"     | 21-1/2" | 24-1/2" | 19-1/2" | 1-1/2"    | 7"        | 14"       | 9"                    | 7"         | 1,166     |
| PFN2001PM    | 54-3/4" | 5-3/4"  | 27-1/2" | 21-1/2" | 24-1/2" | 19-1/2" | 1-1/2"    | 8"        | 14"       | 10"                   | 8"         | 1,193     |

Notes: Change 'N' to 'L' for LP Gas Model No deration on LP models Temperature rise calculations based on firing rate of 100% All water connections are 2-1/2"

## STANDARD FEATURES

- > 85% Thermal Efficiency
- > Outdoor Ready
- > Modulating Burner with 5:1 Turndown
  - Hot Surface Ignition
  - Low NOx Operation
  - Sealed Combustion
  - Low Gas Pressure Operation
- > Vertical & Horizontal Venting
  - Category I or Category IV Venting
  - Cat IV converts to Cat II w/optional vent kit
  - CAT IV Venting up to 50 Feet
- > ASME Copper-Finned Tube Heat Exchanger
  - ASME Certified, "HLW" Stamped
  - Gasketless design
  - 160 psi working pressure
- > On/Off Switch
- > Adjustable High Limit w/ Manual Reset
- > Flow Switch
- > Low Air Pressure Switch
- > Downstream Test Cocks
- > 150 psi Temperature & Pressure Relief Valve
- > Combustion Air Filtration
- > All Bronze Pump
- > Zero Clearances to Combustible Material
- > 1 Year Warranty on Parts
- > 5 Year Limited Warranty

(See Warranties for Details)

## SMART TOUCH™ FEATURES

- > SMART TOUCH Operating Control
  - Full-Color 8" Touchscreen LCD Display
  - CON-X-US Remote Connect
  - Building Management System Integration with 0-10 VDC Input
  - Dual Level Password Security
  - Inlet & Outlet Temperature Readout
  - Freeze Protection
  - Service Reminder
  - Time Clock
- > Built-in Cascading Sequencer for up to 8 Water Heaters
  - Built-in Redundancy
  - Cascade Multiple Sized Water Heaters
  - Lead/Lag Cascade
  - Efficiency Optimized Cascade
- > Low Water Flow Safety Control & Indication
- > Data Logging
  - Hours Running, Modulation Rate
  - Ignition Attempts
  - Last 10 Lockouts
- > Programmable System Efficiency Optimizers
  - Night Setback
- > High-Voltage Terminal Strip
  - 120V/60 Hertz/1 Phase Power Supply

## Low-Voltage Terminal Strip

- 24 VAC Auxiliary Device Relay
- Auxiliary Proving Switch Contacts
- Alarm on Any Failure Contacts
- Runtime Contacts
- Thermostat Contacts
- Unit Enable Contacts
- Louver Proving Contacts
- Tank Sensor Contacts
- Cascade Contacts
- 0-10 VDC BMS External Control Contact

## FIRING CODES

- M Indicates 5:1 Turndown, Category IV
- F Indicates 100% On/Off Fire, Category I

- M9 Standard
- F9 Special Order Factory Trimmed

## OPTIONAL EQUIPMENT

- Cupro-Nickel Heat Exchanger
- High and Low Gas Pressure Switches w/Manual Reset
- Outdoor Kit
- Low Water Cutoff w/ Manual Reset & Test(required for California Code)
- Alarm Bell
- Modbus Communications
- BACnet MSTP Communications
- BMS Gateway to LON or BacNet IP
- > Vent Kits
  - Horizontal Exhaust Cap
  - Horizontal Air Intake Cap
  - Horizontal Direct Vent Cap
  - Category IV to Category II Conversion Kit



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