## Series

## High Efficiency Oil-Fired Steel Boiler



- Up to 86.7% AFUE
- 1.0 to 1.9 GPH in five sizes
- Chimney vented
- Integrated boiler control
  - User-friendly
  - Combination high limit circulator relay
  - Extensively tested & proven
- Horizontal firetube heat exchanger, 1/4" and 5/16" boiler-plate steel
  - Meets the ASME Boiler and Pressure Vessel Code
- Domestic hot water coil optional
  - Extended flange on FR-173E, FR-122E
- Wet leg design
  - Provides more heat transfer surface for increased heating efficiency
- Lifetime limited warranty





## **FR** Technical Information







| Model    | Burner<br>Capacity<br>(GPH) | DOE<br>Heating<br>Capacity<br>(MBH) | AHRI<br>Net<br>Ratings<br>(MBH) | AFUE % | Water<br>Capacity<br>(Gal.) | Approx.<br>Shipping<br>Weight<br>(lbs.) |  |
|----------|-----------------------------|-------------------------------------|---------------------------------|--------|-----------------------------|---|--|
| FR-122-E | 1.00                        | 121                                 | 105                             | 86.0   | 20                          | 450                                     |  |
| FR-147   | 1.25                        | 154                                 | 134                             | 86.7   | 40                          | 720                                     |  |
| FR-173-E | 1.50                        | 182                                 | 158                             | 86.0   | 40                          | 720                                     |  |
| FR-205   | 1.75                        | 215                                 | 187                             | 86.0   | 46                          | 780                                     |  |
| FR-232-E | 1.90                        | 231                                 | 201                             | 86.0   | 46                          | 780                                     |  |

NOTE: Add "T" to end of model number for tankless heater coil

Net AHRI Water Ratings shown based on a piping and pickup allowance of 1.15.

Consult manufacturer before selecting boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.

## **Standard Features**

- Horizontal firetube boiler
- Integrated boiler control system
- 3450 RPM flame retention Beckett® oil burner
- Beckett GeniSYS® primary control
- Electronic ignitor 14KV
- Taco® 007e circulator
- Clean cut fuel pump
- Tridicator
- National board registration
- Swing away burner
- HydroStat®
- Cast iron observation door
- 1-stage fuel pump
- Hinged flue door

|          | Dimensions (inches) |        |         |        |        |       |       |                 |                         |       |                         | Minimum                 |                                  |
|----------|---------------------|--------|---------|--------|--------|-------|-------|-----------------|-------------------------|-------|-------------------------|-------------------------|----------------------------------|
| Model    | A                   | В      | C       | D      | E      | F     | G     | Nozzle<br>Specs | Stack<br>Diam.<br>(in.) | Tubes | Supply<br>Size<br>(in.) | Return<br>Size<br>(in.) | Chimney<br>Size<br>(in./in./ft.) |
| FR-122-E | 37-7/8              | 19-7/8 | 18-5/16 | 25-1/4 | 28-1/2 | 3-7/8 | 5-7/8 | .90 60°B        | 6                       | 12    | 1-1/4                   | 1-1/4                   | 8 x 8 x 15                       |
| FR-147   | 46-5/8              | 21-7/8 | 21-5/8  | 30-1/4 | 33-3/4 | 5-3/8 | 6-7/8 | 1.00 60°B       | 7                       | 18    | 2                       | 2                       | 8 x 8 x 15                       |
| FR-173-E | 46-5/8              | 21-7/8 | 21-5/8  | 30-1/4 | 33-3/4 | 5-3/8 | 6-7/8 | 1.25 60°B       | 7                       | 18    | 2                       | 2                       | 8 x 8 x 15                       |
| FR-205   | 46-17/32            | 21-3/4 | 25-7/8  | 29-3/4 | 38-3/4 | 6-1/8 | 7-7/8 | 1.50 60°B       | 8                       | 18    | 3                       | 2                       | 8 x 8 x 15                       |
| FR-232-E | 46-17/32            | 21-3/4 | 25-7/8  | 29-3/4 | 38-3/4 | 6-1/8 | 7-7/8 | 1.65 60°B       | 8                       | 18    | 3                       | 2                       | 8 x 8 x 15                       |







