

# Elite Fire Tube ULTRA

Highly Efficient  
Condensing Boiler & Combi Units



## Features

### DURABLE HEATING - BOILER & COMBI UNITS

Boiler Firing Rates: 85,000, 110,000, 150,000, 199,000 Btuh

Combi Firing Rates: 110,000, 150,000, 199,000 Btuh

Vertical down fired Stainless Steel Heat Exchanger for exceptional efficiency, low pressure drop, and durable performance

### ABSOLUTE EFFICIENCY

Up to 96% AFUE while using an outdoor sensor (included)

10:1 turndown ratio limits short cycling and provides more efficient energy consumption

Built-in automatic bypass eliminates expensive primary / secondary piping

Equipped with a built-in highly efficient ECM Pump

### WHISPER QUIET OPERATION

Thanks to a pump and combustion fan with insulating panels

### EASY TO USE INTERFACE

LCD display with digits, symbols, and an intuitive menu to easily set the desired temperature, activate functions, and manage different heating zones

### COMBI BOILER: FULL COMFORT SETTING

Domestic hot water preheat function for instant hot water

### SMART CONNECTIVITY WITH HTP LINK

The Elite Ultra boiler is always at your fingertips with a WiFi gateway on board, allowing the boiler and its many system parameters to be monitored remotely

Set up real-time service notifications and maintenance alerts to ensure that the unit is regularly monitored, overdue for maintenance, or if professional assistance is recommended

### EASY TO SERVICE WITH QUICK SNAP COMPONENT AND SENSOR CONNECTIONS

### ASSE 1017 & 1070 CERTIFIED THERMOSTATIC MIXING VALVE INCLUDED WITH COMBI UNITS

### FIFTEEN (15) YEAR LIMITED WARRANTY

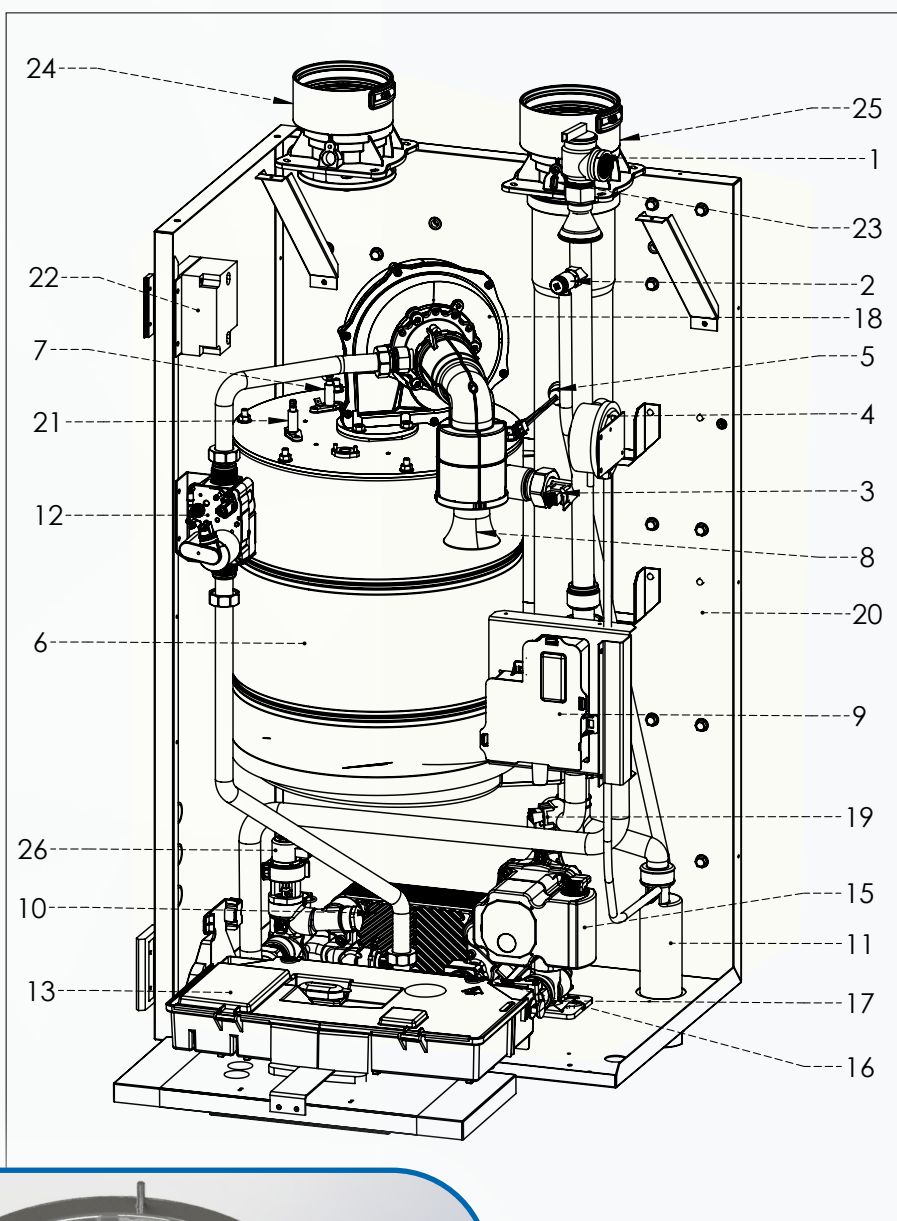


SUSTAINABLE COMFORT FOR EVERYONE



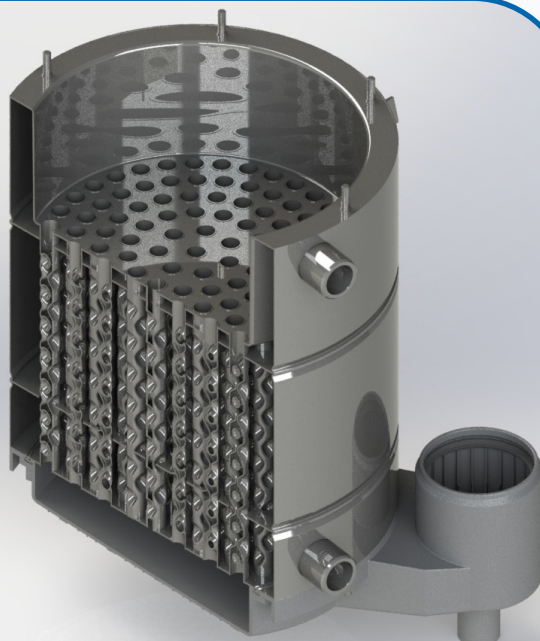
# A Look Inside the EFTU-85 - 199K BTU Combi/Boiler

1. Pressure relief valve
2. Air purge valve
3. Boiler outlet temperature sensor
4. Air pressure switch
5. Flue gas temperature sensor
6. Main heat exchanger
7. Flame detection electrode
8. Silencer
9. Junction box
10. DHW Heat Exchanger (Combi Models Only)
11. Condensate trap
12. Gas valve
13. Control panel
15. Circulation Pump
16. DHW Flow Sensor (Combi Models Only)
17. Water pressure switch
18. Modulating Fan
19. Boiler inlet temperature sensor
20. Frame
21. Ignition electrode
22. Spark generator
23. Combustion Analysis Test Point
24. Air intake connection
25. Exhaust vent connection
26. Diverter valve



## Vertical Fire Tube Heat Exchanger

- Features robust SA-240 S43932 Chromium stainless steel
- Down-Fired design resists combustion chamber fouling better than other heat exchanger types
- Resists scale build-up and magnetite formation, increasing heat exchanger life and reducing maintenance
- Innovative dimpled tubes extract more heat while remaining compact, without the need for inserts that degrade over time



## ELITE FIRE TUBE ULTRA



Low Pressure Drop



High Efficiency



Advanced Design

# Water Circuit Diagram

## Combi Models

## Boiler Models

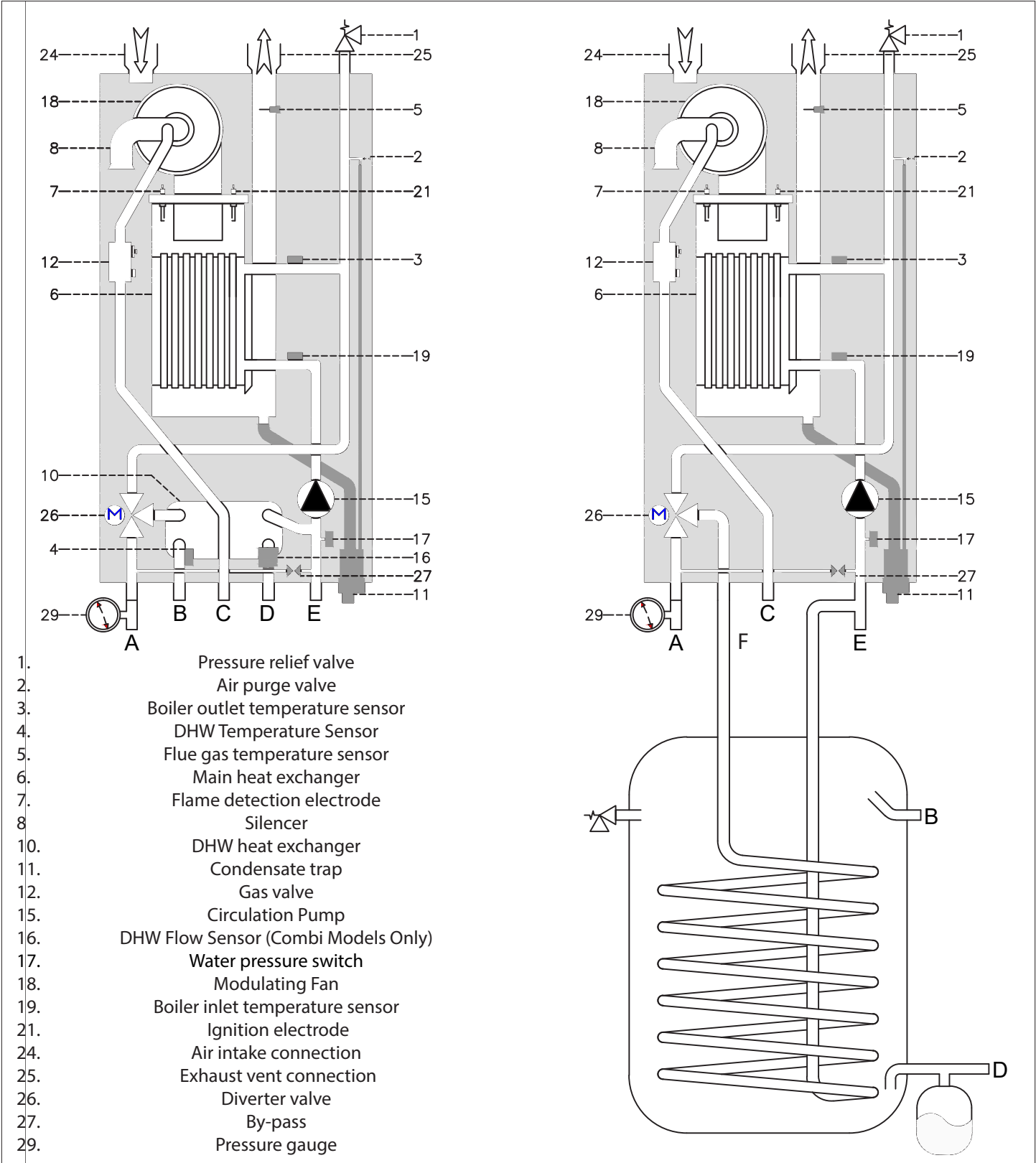


Figure 1 - Water Circuit Diagrams

# Specifications

| Model  |                       | EFTU-85WBN   | EFTU-110WBN      | EFTU-150WBN      | EFTU-199WBN       | EFTU-110WCN                          | EFTU-150WCN      | EFTU-199WCN       |
|--|-----------------------|--|------------------|------------------|-------------------|--------------------------------------|------------------|-------------------|
| Type   |                       | Boiler   | Boiler           | Boiler           | Boiler            | Combi                                | Combi            | Combi             |
| Installation                                       |                       | Indoor, Wall Hung, Fully Condensing  |                  |                  |                   |                                      |                  |                   |
| Minimum / Maximum Input (Btu/Hr) <sup>1</sup>      |                       | 8,500 / 85,000   | 11,000 / 110,000 | 15,000 / 150,000 | 19,900 / 199,000  | 11,000 / 110,000                     | 15,000 / 150,000 | 19,900 / 199,000  |
| DOE AFUE <sup>2</sup> (%)                          |                       | 96   | 95               | 95               | 95                | 95                                   | 95               | 95                |
| Heating Capacity <sup>1, 2</sup> (MBH)             |                       | 79   | 101              | 138              | 184               | 101                                  | 138              | 184               |
| Net AHRI Rating, Water (MBH) <sup>2</sup>          |                       | 69   | 88               | 120              | 160               | 88                                   | 120              | 160               |
| Hot Water Capacity                                 | 35°F Rise             | N/A  | N/A              | N/A              | N/A               | 5.8                                  | 7.9              | 10.5              |
|  | 45°F Rise             |  |                  |                  |                   | 4.5                                  | 6.1              | 8.2               |
|  | 77°F Rise             |  |                  |                  |                   | 2.6                                  | 3.6              | 4.8               |
| Flue System  |                       | Category IV, Sealed Combustion Direct Vent, Power Vent   |                  |                  |                   |                                      |                  |                   |
| Minimum - Maximum Exhaust Vent Run <sup>3</sup>    |                       | 2" (6 - 100 feet), 3" (6 - 150 feet)   |                  |                  | 3" (6 - 150 feet) | 2" (6 - 100 feet), 3" (6 - 150 feet) |                  | 3" (6 - 150 feet) |
| Minimum - Maximum Intake Air Pipe Run <sup>3</sup> |                       | 2" (0 - 100 feet), 3" (0 - 150 feet)   |                  |                  | 3" (0 - 150 feet) | 2" (0 - 100 feet), 3" (0 - 150 feet) |                  | 3" (0 - 150 feet) |
| Approved Exhaust Vent Materials <sup>3</sup>       |                       | PVC, CPVC, PP, Stainless Steel   |                  |                  |                   |                                      |                  |                   |
| Shipping Weight (lbs)                              |                       | 110  | 110              | 120              | 131               | 110                                  | 121              | 132               |
| Gas Supply Pressure                                | NG                    | 3.5" to 10.5" WC   |                  |                  |                   |                                      |                  |                   |
|  | LP                    | 8" to 13" WC   |                  |                  |                   |                                      |                  |                   |
| Power Supply                                       |                       | 120V, 60 Hz, less than 12A   |                  |                  |                   |                                      |                  |                   |
| General Operating Conditions                       |                       | Ambient Temperature Range: 33 – 104°F (0.6 – 40°C)<br>Product Approvals and Requirements: ANSI Z21.13 / CSA 4.9  |                  |                  |                   |                                      |                  |                   |
| Ignition System                                    |                       | Direct Electronic Spark Ignition / Flame Rectification   |                  |                  |                   |                                      |                  |                   |
| Burner System                                      |                       | Premixed Fuel Modulation / Stainless Steel Burner  |                  |                  |                   |                                      |                  |                   |
| Gas Valve System                                   |                       | Air Ratio Valve  |                  |                  |                   |                                      |                  |                   |
| Dimensions (in Inches)                             | W                     | 19.75  |                  |                  |                   |                                      |                  |                   |
|  | H                     | 38.25  |                  |                  |                   |                                      |                  |                   |
|  | D                     | 17   |                  | 18.5             |                   | 17                                   | 18.5             |                   |
| Approx. Full Boiler Weight (lbs)                   |                       | 107  | 107              | 122              | 139.5             | 107                                  | 128.5            | 140.5             |
| Boiler Water Content (Gallons)                     |                       | 1.4  | 1.4              | 2.0              | 2.8               | 1.5                                  | 2.1              | 2.8               |
| Boiler Setpoint Temperature Range                  |                       | 68 – 122°F Low Temperature / 86 - 179°F High Temperature   |                  |                  |                   |                                      |                  |                   |
| DHW Indirect Setpoint Temperature Range            |                       | 104 – 149°F  |                  |                  |                   |                                      |                  |                   |
| DHW Setpoint Range (Combi Models)                  |                       | 97 – 149°F   |                  |                  |                   |                                      |                  |                   |
| Water Pressure (PSI)                               | Heat Exchanger MAWP   | 50   |                  |                  |                   |                                      |                  |                   |
|  | Pressure Relief Valve | 30   |                  |                  |                   |                                      |                  |                   |
|  | DHW Max Pressure      | N/A  | N/A              | N/A              | N/A               | 150                                  | 150              | 150               |
| Control Panel / Main Controller                    |                       | AristonThermo LCD Display / AristonThermo GALEVO2 Control  |                  |                  |                   |                                      |                  |                   |
| Connection Sizes                                   | CH Supply / Return    | 1 1/4" Male NPT  |                  |                  |                   |                                      |                  |                   |
|  | DHW Inlet / Outlet    | 3/4" Male NPT  |                  |                  |                   |                                      |                  |                   |
|  | Gas Inlet             | 3/4" Male NPT  |                  |                  |                   |                                      |                  |                   |
| Materials  | Cabinet               | Painted Steel  |                  |                  |                   |                                      |                  |                   |
|  | Heat Exchanger        | SA-240-S43932 Stainless Steel Water Tube   |                  |                  |                   |                                      |                  |                   |
| Safety Devices                                     |                       | Flame Rectifier Probe, Temperature Limit Control (190°F), Water Pressure Switch (Min. 8 PSI), Freeze Protection, Blocked Condensate Pressure Switch, Condensate Trap, Flue Temperature High Limit Sensor (210°F), Blocked Vent Pressure Switch |                  |                  |                   |                                      |                  |                   |

**Table 1 - Technical Specifications**

**NOTES:**

<sup>1</sup> Listed Input and Output Ratings are at minimum vent lengths at an altitude of 0 - 2000 ft. Numbers will be lower with longer venting and/or altitudes greater than 2000 ft.

<sup>2</sup> Ratings based on standard test procedures prescribed by the US Department of Energy.

<sup>3</sup> The EFTU requires a special venting system. Use only the vent materials and methods detailed in these installation instructions.



**15 Year Limited Warranty**

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