

# Supplied Parts

## Freewatt Hydronic System

### 1. PRE-INSTALLATION INSPECTION

It is recommended that the dealer perform a pre-inspection of the installation site to properly plan for the installation. This pre-inspection can be performed at the time of initial quote or can be performed before the equipment arrives at the site.

The following items should be inspected:

1. Natural Gas
2. Utility Room
  - Level, Concrete Floor
  - Footprint Available for System
3. Air Intake and Exhaust Piping Locations
  - Boiler – Direct Vent Guidelines
  - MCHP – Non-Direct Guidelines
  - Concrete coring required?
4. Electrical Panel
  - Dedicated Breaker for 120 VAC Furnace Power
  - Dedicated Breaker 240 VAC line to MCHP
  - Outside Disconnect Switch required?
5. Condensate Removal for Boiler & MCHP
6. Communicating Thermostat Location
  - Largest and/or most used zone preferred Internet Connection
  - First floor preferred for 10-conductor wire installation
7. Internet Connection
  - What type of High Speed?
  - Issues?
8. Orphaned Hot Water Heater Requiring Chimney Liner

### 2. SUPPLIED PARTS

The freewatt System is delivered with the following items:

1. High Efficiency, Condensing, Gas-Fired freewatt Boiler (FW95M-200)
2. freewatt Hybrid Integration Module
3. freewatt Control Panel
4. Honda MCHP 1.2 Z, Standard Model
5. Installation Kit, including
  - A. Communicating HAI thermostat
  - B. ARGO Controls
    - ARM-6P Switching Relay (6 Zones w/priority)
    - AR822-II Switching Relay
  - C. 2 Outdoor Temperature Sensor (1 for boiler & 1 for MCHP)
  - D. MCHP
    - MCHP Communication Cable
    - MCHP Base w/ mounting hardware and anchors
    - MCHP Flexible Adapter Piece w/ Clamps
    - MCHP Coolant (2 gallons)
    - Coolant Tubing (12 ft. of Onix Tubing, 2 Brass Elbows, 2 Brass Barb Fittings, 2 Quick Disconnects, 8 Onix SelfTite Clamps, 1 Seatech-Barb Fitting)
  - E. (1) ½” Flexible Gas Connector (½” dia.; Length: 24”) with ½” NPT adapters (i.e. Brasscraft or Dormont) rated for use with a heating appliance
  - F. Pressure Switch System (w/ factory-installed cable), Exhaust Coupler
  - G. Exhaust Gas Sensor System
  - H. Miscellaneous (Strain Relief Loop Strap (MCHP Comm. Cable), condensate drain Y & T, rubber grommet for MCHP)

### 3. CONTRACTOR-SUPPLIED EQUIPMENT AND PARTS

The freewatt System installation team will need standard HVAC tools required to install a high-efficiency direct-vented furnace as well as the following equipment to properly install the system:

- Hammer Drill
- 3/8" Concrete Drill Bit
- Digital Manometer
- Laptop Computer
- Combustion Analyzer

The team will also need the following parts to install the system:

1. Circulators & flange sets
2. Miscellaneous System Components:
  - A. Pipe and Fittings (Hydronic, Gas, Air Intake/Vents)
    - Supply Manifold
    - Return Manifold
  - B. Hydronic Components
    - Expansion Tank
    - Air Separator & Air Vent
    - Make-Up Water Components (if necessary)
    - Ball Valves
    - Check Valves
    - Etc.
  - C. Gas Piping & Fittings
    - Boiler piping and gas stop valve
    - MCHP piping and gas stop valve
  - D. Air Intake/Exhaust Vent
    - Boiler – 3" PVC Sch 40 piping & supports
    - MCHP – 2" PVC Sch 40 vent piping & supports
    - Solvent Cement

E. Line Voltage:

- I. 240VAC, 60 Hz, Single Phase
  - Dedicated 15 Amp Circuit
  - Junction Box
  - 2-Pole Switch, Appliance Service Switch
  - 14-3 MC (w/ ground) Flexible Metal Conduit
  - (1) ½" 90 El BX Connector (MCHP)
  - Outdoor Disconnect Switch (if required by utility)

II. 120VAC, 60 Hz, Single Phase

- Dedicated 15 Amp Circuit
  - (1) ½" 90 El BX Connector (HI Module)
- F. Low Voltage:
- Thermostat Cable (10-conductor; Genesis - 22/10 STR CM/CL2 5C BX GRY)
  - Outdoor Temperature Cable (2-conductor: Std. Thermostat Wire)
  - (2) ½" 90 El BX Connectors (HI Module & MCHP)

G. Condensate Pump & Tubing

H. Internet Connection

- Cable & Terminations

I. Natural Gas:

- Required Black Iron Pipe or equivalent for gas piping
- Pipe Dope and Tape for Black Iron Pipe

J. Coolant Tubing:

- Pipe Dope and Tape for Coolant Loop
- Tools to install Onix Tubing and SelfTite clamps

3. Optional Equipment: High Efficiency Indirect Hot Water Tank (50, 80 or 120 Gallon) with tempering valve