

# Sales and Installer Training

- ◆ Each session is PowerPoint driven with handout
- ◆ Select and prioritize your needs

## \_\_\_\_\_ *Energy Comparisons – 20 Minutes*

- Various fuels and electric rates
- Annual cost program
- Dual Fuel vs. Dual Heat, which utility wins

## \_\_\_\_\_ *Airflow Concepts and Principles – 15 Minutes*

- Not duct design or sheet metal design
- Relates to furnace conversions
- “How it works” within residential forced air system, from return register through heat register
- Deflector design and why airflow will not make a 90° turn
- Theory relating to FPM, CFM, resistance/static pressure, ideal velocity, CFM formula, etc.

## \_\_\_\_\_ *Plenum Heater Mechanical – 30 Minutes*

- Choosing correct model number
- Furnace inspection/evaluation and sizing
- Installation steps
- Baffling requirements, including 15” model
- Accessories or options

## \_\_\_\_\_ *Plenum Heater Electrical – 30 Minutes*

- Review three product series
- Wiring/hookup for each
- Wiring associated with newer multi-speed or variable speed furnaces
- Heat anticipator function and setting
- Checkout and operation

## \_\_\_\_\_ *Heat Pump Control Wiring and Thermostat Theory – 45 Minutes*

- Description and detailed review of all 24-volt wiring points related to heat pump and various room thermostats
- Auxiliary heat, why and how it ties in
- Comparison of heat pump stat and basic heat/cool stat, review of various thermostat types
- Other related components such as fan center, fossil fuel kit, oil burner control, stack control

## \_\_\_\_\_ *Heat Pump Controller Concepts – 15 Minutes*

- Dual Fuel vs. Dual Heat
- Various blending or modulating controllers, in the industry
- ODT considerations

## \_\_\_\_\_ *WarmFlo™ Controller, 101 – 45 Minutes*

- Outdoor and indoor sensors, temperature modulation theory and concept
- Where does WarmFlo™ apply?
- Block diagram
- WarmFlo™ application flowchart
- Selecting the required hardware (Electro and Brand X) from flowchart
- Accessories or options
- Electrical wiring/hookup

## \_\_\_\_\_ *WarmFlo™ Controller, Details – 60 Minutes*

- Sequence of events
- Various setup settings and selections
- Monitor lights
- Various troubleshooting points
- Triac or electronic switch troubleshooting

\_\_\_\_\_ ***Air Make-Up Heaters – 15 Minutes***

- Brief product/model review
- WarmFlo™ duct sensor concept
- CFM chart relating to temperature rise and various models
- How to select temperature range code chips and temperature set point

\_\_\_\_\_ ***Electric Boilers, Hardware and Basic Installation – 60 Minutes***

- Electric boiler basic components and features
- Various types – Mini-Boiler, radiant floor, dual heat, WarmFlo™
- Electronic aquastat boilers
- Installation, mechanical
- Installation, electrical wiring
- Operations and troubleshooting, compared to Electro-Mate

\_\_\_\_\_ ***Electric Boiler, Zoning Concerns – 40 Minutes***

- Energy in vs. energy out
- Loops vs. zones
- How zone valves work and various types
- Zones, why they present challenges
- Zone controllers – application, selection, wiring
- Multi-pumps – application and wiring

\_\_\_\_\_ ***Radiant Heat Concepts – 20 Minutes***

- Comparing three common heat systems – forced air, baseboard, floor radiant
- Comfort features with each type
- Radiant heat methods list
- Comparing electric cable and hydronics tube under floor
- Why electric boiler?
- Radiant application – primary or secondary/warm floor
- Heating goals and sizing related to the various application types

\_\_\_\_\_ ***Radiant, Electric Boiler Design Tips – 60 Minutes***

- Comparing gas and boiler concepts, relating to the installation and control accessories
- Low temperature boiler
- Slab stat and flow regulate temperature
- Insulation techniques
- Placement of tubing, sizing, tube size, etc.
- Interrupt time or storage, relating to tube placement within sand/concrete
- Radiant floor surface temperature at appropriate heat loss
- Radiant floor maximum design conditions
- Floor covering evaluation and chart
- Loop or piping system resistance calculation
- Determining pump size

\_\_\_\_\_ ***Standby GenSet Transfer Switch – 30 Minutes***

- Meter adapter
- Meter enclosure
- Automatic
- 400-amp service

\_\_\_\_\_ ***Peak Interrupt and CT Metering – 40 Minutes***

- Main lug disconnects
- Multi-pole disconnects
- CT phasing
- Meter socket enclosures



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