

EQUIPMENT STARTUP CHECKLIST

For Condo / Apartment HVAC Units

Area served: Condo / apartment
Equipment type: Residential packaged HVAC unit
Equipment Designation: AHU-1
Barcode designation: 111111
Equipment location: In occupied space

ELECTRICAL INSPECTION

- | | [Y] | [N] |
|--|-----------------------|-----------------------|
| • Check electrical connections are completed | <input type="radio"/> | <input type="radio"/> |
| • Disconnect installed per code compliance | <input type="radio"/> | <input type="radio"/> |
| • Starter and wire sizing per contract documents | <input type="radio"/> | <input type="radio"/> |
| • Motor "bumped" to verify rotation | <input type="radio"/> | <input type="radio"/> |
| • Terminations and panel circuit labeled | <input type="radio"/> | <input type="radio"/> |
| • Voltage and motor amps (per phase) documented | <input type="radio"/> | <input type="radio"/> |
| • Electric reheat connected (if applicable) | <input type="radio"/> | <input type="radio"/> |
| • Electric humidifier connected (if applicable) | <input type="radio"/> | <input type="radio"/> |

EQUIPMENT INSTALLATION (PER CONTRACT DRAWINGS AND SPECIFICATION)

- | | [Y] | [N] |
|--|-----------------------|-----------------------|
| • Piping installation complete at unit (CHW, CW, or Dx) | <input type="radio"/> | <input type="radio"/> |
| • Vibration isolation complete (if applicable) | <input type="radio"/> | <input type="radio"/> |
| • Seismic restraints complete (if applicable) | <input type="radio"/> | <input type="radio"/> |
| • Interior of unit is clean of any debris | <input type="radio"/> | <input type="radio"/> |
| • Filters are clean and no restricted airflow | <input type="radio"/> | <input type="radio"/> |
| • Manufacturer's O&M available | <input type="radio"/> | <input type="radio"/> |
| • Manufacturer's startup sheets attached with this checklist | <input type="radio"/> | <input type="radio"/> |
| • Warranty certificate available | <input type="radio"/> | <input type="radio"/> |

DISTRIBUTION (TO AND FROM EQUIPMENT)

- | | [Y] | [N] |
|---|-----------------------|-----------------------|
| • Piping pressure tested per contract documents (no leaks) | <input type="radio"/> | <input type="radio"/> |
| • Humidification installation complete (if applicable) | <input type="radio"/> | <input type="radio"/> |
| • Insulation completed | <input type="radio"/> | <input type="radio"/> |
| • Non-toxic glycol solution at correct percentage (if applicable) | <input type="radio"/> | <input type="radio"/> |
| • Installation per contract documents (specification and details) | <input type="radio"/> | <input type="radio"/> |
| • TAB report and field notes attached with this checklist | <input type="radio"/> | <input type="radio"/> |
| • Identification per contract documents | <input type="radio"/> | <input type="radio"/> |

AUTOMATIC CONTROLS

- | | [Y] | [N] |
|--|-----------------------|-----------------------|
| • Temperature controls complete | <input type="radio"/> | <input type="radio"/> |
| • Control points confirmed | <input type="radio"/> | <input type="radio"/> |
| • Alarm types determined and enabled | <input type="radio"/> | <input type="radio"/> |
| • Alarm limits programmed | <input type="radio"/> | <input type="radio"/> |
| • Electrical system interlocks complete | <input type="radio"/> | <input type="radio"/> |
| • Unit-furnished controls interfaced with owner's BAS computer | <input type="radio"/> | <input type="radio"/> |

REFERENCE

- 2004 ASHRAE Handbook – Systems & Equipment, Chapter 1, "Residential," and Chapter 5, "Decentralized Cooling and Heating"

DESIGN REVIEW AND TRICKS OF THE TRADE

- Create an airflow diagram indicating cfm, air changes, and space pressure.
- Confirm there is safe access to the equipment.
- Confirm there is the manufacturer's recommended clearance around equipment.
- Consider if routine maintenance can be achieved without shutting unit down.
- Attach equipment schedule and design criteria to checklist.
- Attach sequence of operation to checklist.
- Attach associated contract detail drawing to checklist.

NOTE

- Refer to equipment manufacturers' literature for additional data and requirements
- Refer to building owner standards and guidelines for additional criteria

If you have any comments, suggestions, or questions regarding this designer checklist, contact Amanda McKew at amckew@rdkengineers.com.

This column is meant to provide some basic guidelines for good design. Always consult all necessary codes and resources relevant to each particular project.

