

BY AMANDA MCKEW

EQUIPMENT STARTUP CHECKLIST

For Health Care Facilities

Equipment type: AHU
Equipment designation: SF-1, RAF-1
Barcode designation: 11111
Area served: Radiology wing
Equipment location: Mechanical wing

ELECTRICAL INSPECTION

[Y] [N]

- Electrical completed and disconnect install per code compliance.
- Starter and wire sizing per contract documents.
- Disconnect furnished and installed.
- Terminations and panel circuit labeled.
- Voltage and motor amps (per phase) documented.

EQUIPMENT INSTALLATION (PER CONTRACT DRAWINGS AND SPECIFICATION)

[Y] [N]

- Maintenance accessibility.
- Permanent labeling (or barcode) installed.
- Piping/refrigeration complete at unit.
- Vibration isolation complete.
- Seismic restraints complete.
- Manufacturer's O&M available.
- Manufacturer's startup sheets attached with this checklist.
- Warranty certificate available.

DISTRIBUTION (TO AND FROM EQUIPMENT)

[Y] [N]

- Piping pressure tested per contract documents.
- Ductwork pressure tested per contract documents.
- Insulation complete.
- Valves labeled and gauges installed.
- Installation per contract documents (specification and details).
- TAB report and field notes attached with this checklist.
- Identification per contract documents.

AUTOMATIC CONTROLS

[Y] [N]

- Temperature controls complete.
- Control points confirmed.
- Electrical system interlocks complete.
- Unit furnished controls interfaced with owner's BAS computer.

ENERGY EFFICIENCY AND OTHER ADVANTAGES

[Y] [N]

- Consider using VSDs on fans.

REFERENCE

- 2008 ASHRAE Handbook – Systems and Equipment, Chapter 1, "HVAC System Analysis and Selection," Chapter 4, "Air Handling and Distribution," and Chapter 21, "Humidifiers"
- 2007 ASHRAE Handbook – HVAC Applications, Chapter 7, "Health Care Facilities"

- 2005 ASHRAE Handbook – Fundamentals, Chapter 35, "Duct Design," and Chapter 36, "Pipe Sizing"
- Department of Public Health guidelines
- Guidelines for Design & Construction of Health Care Facilities by the Facilities Guidelines Institute, the AIA Academy of Architecture for Health, with assistance from the U.S. Department of Health and Human Services
- Guidelines for Construction and Equipment of Hospital & Medical Facilities, by American Institute of Architects



DESIGN REVIEW AND TRICKS OF THE TRADE

- Confirm safe access to the equipment.
- Confirm manufacturers' recommended clearance around equipment.
- Spot-check heating capacity by dividing square feet and cooling capacity and dividing square feet by tons cooling.
- 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 the April 2009 "HVACR Designer Tips" column for more information on the design review for health care facilities. **E5**

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



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