



EQUIPMENT STARTUP CHECKLIST-AHU-1

Laboratory and Office Space Served By A Dual Fan, Double-Duct System — Hot Fan Unit

Equipment type: Dual fan, double-duct AHU
Equipment designation: AHU-1/SAFH-1
Bar code designation: 111111

ELECTRICAL INSPECTION

	YES	NO
• Electrical completed and disconnect installed per code compliance.	<input type="checkbox"/>	<input type="checkbox"/>
• Starter and wire sized per contract documents.	<input type="checkbox"/>	<input type="checkbox"/>
• Motor "bumped" to verify rotation.	<input type="checkbox"/>	<input type="checkbox"/>
• Terminations and panel circuit labeled.	<input type="checkbox"/>	<input type="checkbox"/>
• Voltage and motor amps (per phase) documented.	<input type="checkbox"/>	<input type="checkbox"/>

ELECTRICAL INSTALLATION (PER CONTRACT DRAWINGS AND SPECIFICATION)

	YES	NO
• Ductwork complete.	<input type="checkbox"/>	<input type="checkbox"/>
• Piping complete at unit.	<input type="checkbox"/>	<input type="checkbox"/>
• Vibration isolation complete.	<input type="checkbox"/>	<input type="checkbox"/>
• Seismic restraints complete.	<input type="checkbox"/>	<input type="checkbox"/>
• Manufacturers' O&M available.	<input type="checkbox"/>	<input type="checkbox"/>
• Manufacturers' startup sheets attached with this checklist.	<input type="checkbox"/>	<input type="checkbox"/>
• Warranty certificate available.	<input type="checkbox"/>	<input type="checkbox"/>

DISTRIBUTION (TO AND FROM EQUIPMENT)

	YES	NO
• Ductwork pressure tested per contract documents.	<input type="checkbox"/>	<input type="checkbox"/>
• Hot duct distribution insulated per contract documents.	<input type="checkbox"/>	<input type="checkbox"/>
• Piping pressure tested per contract documents.	<input type="checkbox"/>	<input type="checkbox"/>
• TAB report (and field notes) attached with this checklist.	<input type="checkbox"/>	<input type="checkbox"/>
• Identification per contract documents.	<input type="checkbox"/>	<input type="checkbox"/>

AUTOMATIC CONTROLS

	YES	NO
• Temperature controls complete.	<input type="checkbox"/>	<input type="checkbox"/>
• Control "points" confirmed.	<input type="checkbox"/>	<input type="checkbox"/>
• Electrical system interlocks complete.	<input type="checkbox"/>	<input type="checkbox"/>
• Unit-furnished controls interfaced with owner's BAS computer.	<input type="checkbox"/>	<input type="checkbox"/>

TRENDING

	YES	NO
• Trend outdoor air with return air and hot air supply temperature.	<input type="checkbox"/>	<input type="checkbox"/>
• Trend outdoor air and hot supply air temperature for reset control performance.	<input type="checkbox"/>	<input type="checkbox"/>
• Trend cold air supply and hot air supply static pressure control setpoints.	<input type="checkbox"/>	<input type="checkbox"/>

REFERENCE

- *ASHRAE Handbook – 2004 Systems & Equipment*, Chapter 1, "HVAC System Analysis & Selection."
- *ASHRAE Handbook – 2004 Systems & Equipment*, Chapter 2, "Building Air Distribution."

- Refer to equipment manufacturers' literature for additional data and requirements.

DESIGN REVIEW / TRICKS OF THE TRADE

- Consider hot supply air reset air temperature in the range of 110°F to 120° for those periods of peak heat for minimum durations in the heating season. Refer to this month's "Back to Basics" for further design and construction phase tips.
- Confirm there is safe access to the equipment.
- Confirm exhaust air will not short-circuit into air intakes and/or other building openings.
- Confirm the manufacturers' recommended clearance around equipment.
- Consider routine maintenance that can be achieved without shutting down the AHU-1.
- For some applications, the hot fan system can be shut off when outdoor air temperature is above 60°.
- Attach equipment schedule and design criteria to checklist.
- Attach sequence of operation to checklist.
- Attach associated contract drawing detail drawing to checklist. **ES**



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.

