



PROJECT:

PHONE (573) 882-1133
FAX (573) 882-1175
Date:

Exhaust Fan Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date	Sheet Metal Contractor	Date
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- If this form is not used for documenting, one of similar rigor shall be used.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.



Construction Management

University of Missouri-Columbia

Planning, Design & Construction

Campus Facilities

117 General Services Building
Columbia, MO 65211-3200

PROJECT:

PHONE (573) 882-1133

FAX (573) 882-1175

Date:

Commissioning Authority	Date	Owner's Representative	Date

Exhaust Fan Information					
Make			Model Number		
Serial Number			Capacity CFM min	CFM max	
Total Air PD (In WC)			Sound Power Level @ 63, 250, & 1KHz		
Volts/Phase		Function		Service Area	
Comments:					

Associated Checklists					
AHU	<input type="checkbox"/>	Ductwork	<input type="checkbox"/>	BAS	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		



PROJECT:

PHONE (573) 882-1133

FAX (573) 882-1175

Date:

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
General		
Cabinet and general installation	<input type="checkbox"/>	<input type="checkbox"/>
Permanent labels affixed	<input type="checkbox"/>	<input type="checkbox"/>
Casing condition good: no dents, leaks, door gaskets installed	<input type="checkbox"/>	<input type="checkbox"/>
Access doors close tightly – no leaks	<input type="checkbox"/>	<input type="checkbox"/>
Mountings checked and shipping bolts removed	<input type="checkbox"/>	<input type="checkbox"/>
Connection between duct and unit tight and in good condition	<input type="checkbox"/>	<input type="checkbox"/>
Vibration isolation equipment installed & released from shipping locks	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance access acceptable	<input type="checkbox"/>	<input type="checkbox"/>
Sound attenuation installed	<input type="checkbox"/>	<input type="checkbox"/>
Thermal insulation properly installed and according to specification	<input type="checkbox"/>	<input type="checkbox"/>
Instrumentation installed according to specification (thermometers, pressure gages, flow meters, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Clean up of equipment completed per contract documents	<input type="checkbox"/>	<input type="checkbox"/>
Filters installed and replacement type and efficiency permanently affixed to housing--construction filters removed	<input type="checkbox"/>	<input type="checkbox"/>
Fans and Dampers		
Exhaust fan and motor aligned	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan belt tension & condition good	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan protective shrouds for belts in place and secure	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan area clean	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan and motor lube lines installed and lubed	<input type="checkbox"/>	<input type="checkbox"/>
Filters clean and tight fitting	<input type="checkbox"/>	<input type="checkbox"/>
Filter pressure differential measuring device installed and functional (magnahelic, inclined manometer, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Smoke and fire dampers installed properly per contract docs (proper location, access doors, appropriate ratings verified)	<input type="checkbox"/>	<input type="checkbox"/>
All dampers close tightly	<input type="checkbox"/>	<input type="checkbox"/>
All damper actuators installed	<input type="checkbox"/>	<input type="checkbox"/>
Ducts		
Sound attenuators installed	<input type="checkbox"/>	<input type="checkbox"/>
Duct joint sealant properly installed	<input type="checkbox"/>	<input type="checkbox"/>
No apparent severe duct restrictions	<input type="checkbox"/>	<input type="checkbox"/>
Turning vanes in square elbows as per drawings	<input type="checkbox"/>	<input type="checkbox"/>
Pressure leakage tests completed	<input type="checkbox"/>	<input type="checkbox"/>



Construction Management

University of Missouri-Columbia

Planning, Design & Construction

Campus Facilities

117 General Services Building
Columbia, MO 65211-3200

PROJECT:

PHONE (573) 882-1133

FAX (573) 882-1175

Date:

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
Branch duct control dampers operable	<input type="checkbox"/>	<input type="checkbox"/>
Ducts cleaned as per specifications	<input type="checkbox"/>	<input type="checkbox"/>
Balancing dampers installed as per drawings and TAB's site visit	<input type="checkbox"/>	<input type="checkbox"/>
Electrical and Controls		
Power disconnects located within site of the unit it controls and labeled	<input type="checkbox"/>	<input type="checkbox"/>
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>
Safeties installed and operational	<input type="checkbox"/>	<input type="checkbox"/>
Starter overload breakers installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>
Smoke detectors in place	<input type="checkbox"/>	<input type="checkbox"/>
VFD		
Installation per manufacturer's requirements and start up instructions completed	<input type="checkbox"/>	<input type="checkbox"/>
Drive location not subject to excessive moisture or dirt	<input type="checkbox"/>	<input type="checkbox"/>
Drive location not subject to excessive temperatures	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate Volts vs. Hz curve is being used	<input type="checkbox"/>	<input type="checkbox"/>
Drive size matches motor size	<input type="checkbox"/>	<input type="checkbox"/>
Drive mounted on house keeping pad (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>
Cooling air flow path clean and unobstructed	<input type="checkbox"/>	<input type="checkbox"/>
Permanent label affixed and UL stamp approved	<input type="checkbox"/>	<input type="checkbox"/>
VFD interlocked to control system	<input type="checkbox"/>	<input type="checkbox"/>
Unit is programmed with full written programming record on site	<input type="checkbox"/>	<input type="checkbox"/>
Accel time set to _____ and Decel time set to _____	<input type="checkbox"/>	<input type="checkbox"/>
Operation checked in HAND, OFF, and AUTO. As applicable operation also checked in BYPASS	<input type="checkbox"/>	<input type="checkbox"/>
Where applicable, ensure safeties are active in all modes	<input type="checkbox"/>	<input type="checkbox"/>
Coordinated with BAS for all interface ranges and signal isolation	<input type="checkbox"/>	<input type="checkbox"/>
Restart on Power Failure parameter set to auto	<input type="checkbox"/>	<input type="checkbox"/>
VFD powered (wired to controlled equipment)	<input type="checkbox"/>	<input type="checkbox"/>
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>
Drive min and max speed set to _____ Hz min and 60 Hz max	<input type="checkbox"/>	<input type="checkbox"/>
Security settings set per Owner direction and Password documented for Owner	<input type="checkbox"/>	<input type="checkbox"/>



PROJECT:

PHONE (573) 882-1133

FAX (573) 882-1175

Date:

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
Drive response to loss of signal set to _____	<input type="checkbox"/>	<input type="checkbox"/>
Output pulse resolution set to _____ MHz. (This is coordinated with the application to minimize audible noise and coordinated with driven bearing allowances.)	<input type="checkbox"/>	<input type="checkbox"/>
Checked the input voltage with drive disconnected	<input type="checkbox"/>	<input type="checkbox"/>
Input of motor FLA represents 100% to 105% of motor FLA rating	<input type="checkbox"/>	<input type="checkbox"/>
Upper frequency limit set at 100%, unless explained otherwise	<input type="checkbox"/>	<input type="checkbox"/>
Sensors and Gages		
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>
Piping gages, BAS and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>
TAB		
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>

Operational Checks		
Check if acceptable, provide comment if unacceptable	NA	Comments
Fan rotation correct (If VFD, check rotation in bypass and VFD Inverter mode)	<input type="checkbox"/>	<input type="checkbox"/>
Fan has no unusual noise or vibration	<input type="checkbox"/>	<input type="checkbox"/>
All dampers (OSA, RA, EA, etc.) stroke fully without binding and spans calibrated and BAS reading site verified	<input type="checkbox"/>	<input type="checkbox"/>
Specified point-to-point checks have been completed and documentation record submitted for this system	<input type="checkbox"/>	<input type="checkbox"/>

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated in accordance with Specification Section 01810. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N



Construction Management

University of Missouri-Columbia

Planning, Design & Construction

Campus Facilities

117 General Services Building
Columbia, MO 65211-3200

PROJECT:

PHONE (573) 882-1133

FAX (573) 882-1175

Date:

Sensor or Actuator Tag & Location	Location OK	1 st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

***Fill out all form fields before signing!**

Name	Organization	Title	Signature

University of Missouri Commissioning Authority



(Place Digital Locking Stamp Here)