

## Variable Air Volume with Hot Water Reheat Construction Checklist

<b>Project:</b>	
<b>Date:</b>	
<b>VAV tag:</b>	
<b>Building:</b>	
<b>Location:</b>	

### 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
		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.
- 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.

Project Engineer	Date	Owner’s Representative	Date

**DIVISION 1 – GENERAL REQUIREMENTS**

**Section 01 91 00.13s – Variable Air Volume with Hot Water Reheat Construction Checklist**

VAV Information				
<b>Make</b>		<b>Model Number</b>		
<b>Serial Number</b>		<b>Function</b>	<b>Service Area</b>	
<b>GPM</b>		<b>MBH</b>		
<b>Comments:</b>				

Associated Checklists					
<b>Ductwork</b>	<input type="checkbox"/>	<b>Heating Hot Water Piping</b>	<input type="checkbox"/>	<b>DDC</b>	<input type="checkbox"/>
<b>Other</b>	<input type="checkbox"/>	<b>Other</b>	<input type="checkbox"/>	<b>Other</b>	<input type="checkbox"/>
<b>Comments:</b>					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (airflows, 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"/>	
<b>Comments:</b>		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
<b>General</b>			
General appearance good, no apparent damage	<input type="checkbox"/>	<input type="checkbox"/>	
Installation is per manufacturers instructions	<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"/>	
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>	
Access doors close tightly - no leaks	<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"/>	

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<b>Installation Checks</b>			
<b>Check if Acceptable; Provide comment if unacceptable</b>	<input type="checkbox"/>	<b>NA</b>	<b>Comment</b>
Maintenance access acceptable for unit and components	<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"/>	
Verify that inlet conditions are OK: Smooth, round, straight duct for at least 3 duct diameters when possible and 2 diameters minimum for velocity pressure sensor and 3 to 5 diameters for single point electronic sensors, else airflow straighteners	<input type="checkbox"/>	<input type="checkbox"/>	
Verify that outlet conditions are OK, per manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Valves, Piping and Coils</b>			
Pipe fittings complete and pipes properly supported	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes properly labeled	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes properly insulated	<input type="checkbox"/>	<input type="checkbox"/>	
Strainers in place and clean; blowdown installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping system properly flushed	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent around fittings	<input type="checkbox"/>	<input type="checkbox"/>	
All coils are clean and fins are in good condition	<input type="checkbox"/>	<input type="checkbox"/>	
All condensate drain pans clean and slope to drain, per spec	<input type="checkbox"/>	<input type="checkbox"/>	
Valves properly labeled	<input type="checkbox"/>	<input type="checkbox"/>	
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>	
OSAT, MAT, SAT, RAT, chilled water supply sensors properly located and secure (related OSAT sensor shielded)	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors calibrated	<input type="checkbox"/>	<input type="checkbox"/>	
P/T plugs and isolation valves installed per drawings	<input type="checkbox"/>	<input type="checkbox"/>	
No Air Leaks that can be felt or heard			
<b>Dampers</b>			
Smoke and fire dampers installed properly per contract docs (proper location, access doors, appropriate ratings verified)	<input type="checkbox"/>	<input type="checkbox"/>	
All dampers open fully	<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"/>	
No Air Leaks that can be felt or heard	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Ducts</b>			
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"/>	
Branch duct control dampers operable	<input type="checkbox"/>	<input type="checkbox"/>	
Ducts cleaned as per specifications	<input type="checkbox"/>	<input type="checkbox"/>	

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<b>Installation Checks</b>			
<b>Check if Acceptable; Provide comment if unacceptable</b>	<input type="checkbox"/>	<b>NA</b>	<b>Comment</b>
Balancing dampers installed as per drawings and TAB's site visit	<input type="checkbox"/>	<input type="checkbox"/>	
No Air Leaks that can be felt or heard	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Electrical and Controls</b>			
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>	
Proper grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>	
Safeties in place and operable	<input type="checkbox"/>	<input type="checkbox"/>	
Control system interlocks hooked up and functional	<input type="checkbox"/>	<input type="checkbox"/>	
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Sensors and Gages</b>			
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"/>	
<b>TAB</b>			
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"/>	

**Sensor and Actuator Calibration**

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. 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.

<b>Sensor or Actuator Tag &amp; Location</b>	<b>Location OK</b>	<b>1<sup>st</sup> Gage or BAS Value</b>	<b>Instrument Measured Value</b>	<b>Final Gage or BAS Value</b>	<b>Pass Y / N</b>

**Comments:**