



Client:	Project Name:	Project No:	
Area:	Drawing No's:	Date:	Sheet: 1 of 2
Check Conducted By:	Signature:	Check Approved By:	Signature:

## INTRODUCTION

The test procedure guideline has been prepared to explain the minimum standard for testing AHU and FCUs.

### Procedure recommended general checks

1. Visibly check installation against approved shop drawings
2. Check that general construction and standard of finish is acceptable
3. Check levelling and alignment of AHUs and FCUs on anti-vibration mounts is acceptable
4. Check that adequate access for maintenance is provided both at ceiling level and at each unit
5. Record name plate information and compare against the approved specification
6. Confirm all transit bolts, wedges, motor packing and vibration packing and the like are removed
7. Check that adequate CHW and HHW is available at each coil and is ready for use, has been pressure tested and water balanced and have adequate measuring facilities for flow, pressure and temperature
8. Confirm no damage to the electric components
9. Confirm all electrical terminations are correctly tightened
10. Check power supply is isolated, has the correct power source, voltage, circuit breaker sizing
11. Check air filters are fitted
12. Check adequate outside air is provided at the AHU/FCU
13. Check all control items have been fitted to each unit and that they are sealed to avoid air leakage
14. Check condensate drain pans can fully drain
15. Confirm condensate drain trap is adequate for fan suction with fan operating with dirty filters
16. Check all upstream and downstream duct work systems are complete and free from dust or hazards
17. Check coils are not damaged
18. Check AHUs or FCUs fans are free to rotate
19. Bump spin fans to confirm correct rotation and operation of the VSD

### Procedure recommended for testing operation

1. Confirm CHW and HHW control valves are working correctly
2. Verify operation of the AHU or FCU CHW at full air flow, pressure differential across coils, CHW EWT and LWT as well as HHW EWT and LWT temperatures, AHU air EAT and LAT
3. Verify operation of filter dirty pressure switch, air flow failure, fire shut down, control valve positions, VSD operation
4. Measure fan motor amps
5. Operational test in AUTO mode to verify that units operate with no alarms present
6. Operational test in AUTO mode to verify that units can satisfy set points
7. Operational test to verify that the alarms operate for high temperature, blocked filter, motor trip or VSD fault as applicable

## REFERENCE STANDARDS

CIBSE Commissioning Code W – Water Distribution Systems

CIBSE Commissioning Code A – Air Distribution Systems



**CHECKLIST**

AHU/FCU Reference					
Drawing Number					
	<b>ITEM</b>	<b>VERIFICATION METHOD</b>	<b>RESULT</b>	<b>RESULT</b>	<b>RESULT</b>
1	Check installation against approved shop drawings	Site Inspection			
2	Check installation and finish is acceptable	Site Inspection			
3	Check units level and alignment on vibration isolation is acceptable	Site Inspection			
4	Check access for maintenance is acceptable	Site Inspection			
5	Confirm all transit bolts, wedges etc have been removed	Site Inspection			
6	Check fans are free to rotate	Site Inspection			
7	Check all pipe work connections CHW/HHW pipe work complete	Site Inspection			
8	Check all duct work connected to the units is complete and filters are fitted	Site Inspection			
9	Check all electrical connections and confirm acceptable	Site Inspection			
9	Bump spin fan and check correct rotation and VSD operation	Site Inspection			
10	Check all control devices are fitted and are air tight	Site Inspection			
11	Check condensate trays are fully drained and that trap is sized to suit operating pressure of the fan with dirty filters	Site Inspection			
12	Verify fan and motor speeds and amps at full design flow	Site Inspection			
13	Confirm CHW/HHW valves are working correctly	Site Inspection			
14	Check operation of pressure switches, temperature sensors, control valves for accuracy, fan fault/trips, dirty filter alarms, fire trip, control valve operation, VSD	Site Inspection			
15	Operational test in AUTO mode to verify units run without alarms	Site Inspection			
16	Run system in AUTO mode and verify EWT, LWT, EAT (°CDB and °CWB), LAT (°CDB, °CWB)	Site Measurement			
16	Verify units achieve room set points	Site Measurement			



17	Check fire trip operation	Site Inspection			
Certified By Sub Contractor (initial): Date:					
Confirmed By (Head Contractor / Client) (initial): Date:					