



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

## INTRODUCTION

The test procedure guideline has been prepared to explain the minimum standard for testing packaged air conditioning units.

### 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 packaged units 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 nameplate information and compare against approved specification
6. Confirm all transit bolts, wedges, motor packing and vibration packing and the like are removed
7. Check that condenser water is available at each unit and is ready for use, has been pressured tested and water balanced and have adequate measuring facilities for flow, pressure and temperature
8. Check all upstream and downstream duct work systems are complete and free of dust or hazards
9. Confirm air balance both upstream and downstream of the unit has been completed
10. Confirm no damage to the electric components
11. Confirm all electrical terminals are correctly tightened
12. Check power supply is isolated, has the correct power source, voltage circuit breaker sizing
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 heat exchanger and refrigerant coils are not damaged
17. Check fans are free to rotate
18. Bump spin fans to confirm rotation and operation

### Procedure recommended for testing operation

1. Confirm condenser water solenoid valves are working correctly by adjusting the set point and observe valve operating, disconnect power and verify that valve can be manually overridden
2. With the condenser water passing through the unit record the condenser water flow rate, differential pressure across the unit, entering water and leaving water temperature, air entering and leaving temperature from the unit
3. With the unit operating at full capacity record the amps of the unit
4. Operational test in AUTO mode to verify that the unit operates without alarms present
5. Operational test in AUTO mode to verify that unit can satisfy temperature set points
6. Operational test to verify that the alarms operate for high temperature, blocked filter, unit fault as applicable

## REFERENCE STANDARDS

CIBSE Commissioning Code W – Water Distribution Systems

NEBB Procedural Standards for Testing Adjusting and Balancing of Environmental Systems



**CHECKLIST**

PAC Unit Reference					
Drawing Number					
	ITEM	VERIFICATION METHOD	RESULT	RESULT	RESULT
1	Check installation against approved shop drawings	Site Inspection			
2	Check installation and finish is acceptable with coils undamaged	Site Inspection			
3	Check unit 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 condenser water flows are available	Site Inspection			
8	Check all duct work connected to units is complete and filters are fitted	Site Inspection			
9	Check all electrical connections and confirm acceptance	Site Inspection			
10	Bump spin fan and check correct rotation and VSD operation (as applicable)	Site Inspection			
11	Check all control devices are fitted and are air tight	Site Inspection			
12	Check condensate trays are fully drained and that trap is sized to suit operating pressure of the fan with dirty filters	Site Inspection			
13	Verify fan and motor speeds and unit amps at full design loading	Site Inspection			
14	Check operation of pressure switches, temperature sensors for accuracy, solenoid valves for operation, fan/unit fault/trips, dirty filter alarm	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			
17	Verify unit achieves room set point temperature	Site measurement			
18	Check fire trip operation	Site Inspection			



<p>Certified By Sub Contractor (initial): Date:</p>	
<p>Confirmed By (Head Contractor / Client) (initial): Date:</p>	