



**FORM WCCL-PC6
WCCL TEST STAND APPROVAL PROCEDURE AND CHECKLIST
OF THE THIRD-PARTY LABORATORY**

**AHRI CERTIFICATION PROGRAM FOR WATER-COOLED WATER
CHILLING AND HEAT PUMP WATER-HEATING (WCCL) PACKAGES**

WCCL Third Party Laboratory: _____
Date of Test: _____
Test Stand Inspection Report Number: _____
Test Results: _____

Instructions: The following Third Party Test Stand Approval Procedure and Checklist is to be used by AHRI or a representative contracted by AHRI (Representative) to conduct test stand inspections for the Water-Cooled Water Chilling and Heat Pump Water-Heating (WCCL) Packages Certification Program at a Laboratory test stand (Test Stand). This Test Stand Approval Procedure and Checklist is to be used in conjunction with the AHRI General Operations Manual (OM) for AHRI Certification Programs, the WCCL OM and the latest edition of AHRI Standard 550/590 (I-P) or AHRI Standard 551/591 (SI) (Standard). Where the AHRI General OM, the WCCL OM and this Test Procedure and Checklist differ, the other documents shall prevail. The completed checklist shall be maintained by AHRI upon the completion of the review.

If the Test Stand fails to comply with the conditions listed below:

- Notify AHRI
- Notify Third-Party Laboratory

REVIEW OF CHANGES IN OPERATION

- [] This is a first-time test stand approval
- [] No changes made which would impact results of previous inspection
- [] Changes made in operations that affect results of previous inspection
 - [] Changes have occurred in test facilities
 - [] Changes have occurred in test equipment
 - [] Changes have occurred in laboratory personnel
 - [] Changes have occurred in supervisory/management staff
 - [] Changes have occurred in testing capability
 - [] Other: _____

Pre-Visit//Preliminary Approval

Verify the following Testing Documents as submitted by the Third-Party Laboratory:

- | | | |
|-------|-------|--|
| _____ | _____ | 1. WCCL-FA1: Application for Witness Testing a. Verify form is completed in its entirety |
| _____ | _____ | 2. WCCL-FA2: Personnel Experience Questionnaire a. Verify form is completed in its entirety |
| _____ | _____ | 3. WCCL-FA3: Test Stand and Equipment Questionnaire a. Verify form is completed in its entirety b. Verify water flow capability match minimum and maximum cooling capacity of the Test Stand c. Verify maximum airflow meets or exceeds the largest capacity chiller d. Verify Power Supply is suitable for the equipment being tested |
| _____ | _____ | 4. WCCL-FA4: Calibration Summary a. Verify form is completed in its entirety b. Verify that calibration has been properly conducted c. Verify that all Systems meet the required accuracy per Table C1 of the Standard over the intended range of use for the System |
| _____ | _____ | 5. Schematic drawing of the area of the Test Stand in which AHRI certification testing will be conducted a. Verify that the information is reasonable |
| _____ | _____ | 6. Photographs of the Test Stand in which AHRI certification testing will be conducted, which shall include sufficient views to show the location and connection of each instrument as well as the location and connect of the ports to be used by the Laboratory during testing a. Verify that photographic views show all instruments b. Verify that the test elements (instruments, equipment, power wires, etc.) seem reasonable |

Determine whether the Test Stand should be granted preliminary approval

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| _____ | _____ | <p>If NO:</p> <ul style="list-style-type: none"> • Inform AHRI • Inform the Laboratory of additional information and/or changes that are required. • Upon receipt of additional information and/or confirmation of changes, make a determination whether to grant preliminary approval of the Test Stand or not |
| _____ | _____ | <p>If YES:</p> <ul style="list-style-type: none"> • Inform AHRI • Make arrangements for Test Stand inspection |

Pre-Visit//Preliminary Approval (contin.)

Prior to the Test Stand Inspection, confirm the following with the Laboratory

A chiller must be *operated* at 100% and 25% load points for the inspection

The capacity of the chiller used for the inspection must be at least 85% of the maximum capacity of the Test Stand being inspected

Day of Inspection at Third-Party Laboratory's Test Stand

- | | | |
|-------|-------|--|
| _____ | _____ | <p>Upon arrival, request a brief meeting of the involved parties to review the following information:</p> <ol style="list-style-type: none"> 1. Safety rules at the site 2. Completed forms WCCL-FA1-4 3. Schedule of testing/inspection |
| _____ | _____ | <p>Verify that capacity of the chiller being used for inspection is at least 85% of the maximum stated capacity of the Test Stand (as stated in WCCL-FA3)</p> <p>If the Test Stand Inspection is not conducted in conjunction with an AHRI Certification Test, then the chiller must be run at 100% and 25% (or lowest available capacity step) test points and data must be collected to verify test stand capabilities</p> |
| _____ | _____ | Verify instrument application (in accordance with the procedures defined in the Standard) |
| _____ | _____ | Verify instrumentation requirements as per WCCL OM, Table 1 |
| _____ | _____ | Verify calibrations |

OPERATION OF CHILLER: TEST STAND CONTROL AND DATA ACQUISITION

- | | | |
|-------|-------|--|
| _____ | _____ | <ol style="list-style-type: none"> 1. Start chiller and achieve stable 100% load conditions |
| _____ | _____ | <ul style="list-style-type: none"> • Observe Test Stand operation and record any unusual circumstances <hr/> <hr/> <hr/> |
| _____ | _____ | <ul style="list-style-type: none"> • Note the time it takes to get to start up to stable 100% conditions |
| _____ | _____ | <ul style="list-style-type: none"> • Have the Third-Party Laboratory run a test (collecting all data) according to the Standard |
| _____ | _____ | <ul style="list-style-type: none"> • Verify Third-Party Laboratory's data is recorded as per Sections C3.1.2, C5.1 and C5.2 as per the Standard |
| _____ | _____ | <ul style="list-style-type: none"> • Did you observe any limitations of the Test Stand? |
| _____ | _____ | <ol style="list-style-type: none"> 2. Achieve stable 25% load conditions or the minimum unloaded capacity of the chiller |
| _____ | _____ | <ul style="list-style-type: none"> • Observe Test Stand operation and record any unusual circumstances <hr/> <hr/> <hr/> |

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|----------------------------|-------------------------------|
| REPRESENTATIVE INITIALS | DATA POINT (IF APPLICABLE) |
|----------------------------|-------------------------------|

Day of Inspection at Third-Party Laboratory's Test Stand (contin.)

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| _____ | _____ | <ul style="list-style-type: none"> • Note the time it takes to change from 100% down to stable part-load conditions |
| _____ | _____ | <ul style="list-style-type: none"> • Have the Third-Party Laboratory run a test (collecting all data) according to the Standard |
| _____ | _____ | <ul style="list-style-type: none"> • Verify Third-Party Laboratory's data is recorded as per Sections C3.1.2, C5.1 and C5.2 as per the Standard |
| _____ | _____ | <ul style="list-style-type: none"> • Did you observe any limitations of the Test Stand? |

Determine whether the Test Stand should be granted preliminary approval:

- | | | |
|-------|-------|---|
| _____ | _____ | <p>If NO:</p> <ul style="list-style-type: none"> • Identify specifically what additional information and/or changes are required • Determine whether the additional information and/or changes can be completed during this inspection visit or if another test stand inspection must be scheduled for a later date |
| _____ | _____ | <p>If YES:</p> <ul style="list-style-type: none"> • AHRI will issue Test Stand Approval Certificate |

This checklist & all supporting documents have been reviewed & approved

PRINTED NAME OF REPRESENTATIVE

SIGNATURE OF REPRESENTATIVE

DATE