



### PTCS Ground Source Heat Pump Quality Assurance Inspection Form

All fields are required, except notes and fields marked not required (NR). Inspectors should have a copy of the submitted installation data available to them. Last updated: April 2022

Inspector Name		Outdoor Temp °F	Insp. Date	Insp. Time	
Utility Name		Measure ID		Re-inspection? <input type="checkbox"/> Y <input type="checkbox"/> N	
Site Address		Site City	Site State	Site Zip	
<input type="checkbox"/> Utility staff present. Name:		<input type="checkbox"/> Install tech present. Name:		Heated Area (NR): Sq Ft	
<input type="checkbox"/> Closed Loop		<input type="checkbox"/> Open Loop		<input type="checkbox"/> Water-To-Air System	
				<input type="checkbox"/> Water-To-Water System	

The graded items below will *not* be weighted upon entry into the registry. Inspector manually assigns an overall grade.

**\*\*Overall fail:** These noted 'F' grades are considered major failures.

#### Heat Pump Equipment Data

All Equipment Data matches technician's form. If not, record below.

AHRI number	Outdoor Unit Make	Indoor Heat Pump Model #	With Desuperheater? Yes <input type="checkbox"/> No <input type="checkbox"/>
Is Energy Star Grade (Check one)	<input type="checkbox"/> <b>A (Above Spec)</b> Is Energy Star and exceeds minimum	<input type="checkbox"/> <b>B (Meets Spec)</b> Is Energy Star	<input type="checkbox"/> <b>**F (Fails)</b> Is not Energy Star
Notes			

#### Air Flow QA

Testing Method Used by Tech:		Units tested in <input type="checkbox"/> Pa <input type="checkbox"/> H <sub>2</sub> O	NSOP	Plate Size <input type="checkbox"/> 14 <input type="checkbox"/> 20	TFSOP	
<input type="checkbox"/> QA observed ESP-CFM (complete CFM/Ton) <input type="checkbox"/> Digital/Bluetooth True Flow			NSOP	Plate Size <input type="checkbox"/> 14 <input type="checkbox"/> 20	TFSOP	
<input type="checkbox"/> QA unobserved ESP-CFM (complete True Flow Test) <input type="checkbox"/> Original True Flow						
Plate Pressure	Capacity (tons)	Correction Factor	Raw Flow	*Corrected /Total Flow	CFM/Ton - Tech	*CFM/Ton - QA
Plate Pressure	Capacity (tons)	Correction Factor	Raw Flow	*Corrected /Total Flow	CFM/Ton - Tech	*CFM/Ton - QA
Air Flow (CFM) Grade (Check one)	<input type="checkbox"/> <b>A (Pass)</b> 325 to 500 CFM/Ton <input type="checkbox"/> <b>A (Pass)</b> Tech value submitted by technician for ESP-CFM methodology meets program requirements. <input type="checkbox"/> <b>A (Pass)</b> Exception granted for airflow below 325 CFM/Ton or over 500 CFM/Ton if it meets manufacturer specifications.				<input type="checkbox"/> <b>F (Fails)</b> Less than 325 or greater than 500 CFM/Ton and does not meet manufacturer specifications.	
*If using Digital/Bluetooth True Flow, only fill out these cells. If plate is located at filter grille or on an air handler with no plenum, add 4% to corrected flow.						
Notes						

#### Refrigerant Charge For W-A Units Only

<input type="checkbox"/> Heating	Supply Air Temp. _____ °F	Return Air Temp. _____ °F	Temp. Split _____ °F	Notes
<input type="checkbox"/> Cooling				
Temperature Split Grade (Check one)	<input type="checkbox"/> <b>B (Meets Spec)</b> Everything passes unless air temp split is less than 10F		<input type="checkbox"/> <b>F (Fails)</b> Less than 10F (air temperature - before and after the coil)	Notes



Digital/Bluetooth TrueFlow Test	1. Capacity	2. **Corrected/Total Airflow	3. **CFM/ton
---------------------------------	-------------	------------------------------	--------------

**Controls**

Strip Heat Lockout Set To _____	Notes		
<b>Strip Heat Lock Out Grade</b> (Check one)	<input type="checkbox"/> <b>A (Above Spec)</b> Set to less than 30F and actually does inhibit the strip heat from coming on	<input type="checkbox"/> <b>B (Meets Spec)</b> Set to 30F and actually does inhibit the strip heat from coming on	<input type="checkbox"/> <b>**F (Fails)</b> Set to incorrect number

**Sizing**

Method used by installer: <input type="checkbox"/> Heat Pump Sizing Calculator <input type="checkbox"/> ACCA Manual J <input type="checkbox"/> SpecPro <input type="checkbox"/> Other	Balance Point	Contractor inputs reflect the actual situation? <input type="checkbox"/> Y <input type="checkbox"/> N
<b>*Balance Point Grade</b> (Check one)	<input type="checkbox"/> <b>A (Above Spec)</b> Balance point below 25F with entering water temp no less than 30F	<input type="checkbox"/> <b>B (Meets Spec)</b> Meets 25F balance point with entering water temp no less than 30F
		<input type="checkbox"/> <b>**F (Fails)</b> Does not meet program specs
Notes		

**\*Open Loop Specific Criteria**

	A (Above spec)	B (Meets spec)	C (Passable)	F (Fails)	Grade 'F' is Automatic Fail
<b>Balance Point Grade</b>	Balance Point below 25F	Meets 25F balance point		Greater than 25F or not provided	

**Additional notes**

<p><b>Overall Heat Pump Inspection Results</b></p> <p>Inspector to determine overall letter grade.</p> <p><b>Letter Grade:</b> _____ <b>Pass/Fail:</b> _____</p>
--

After completing this inspection, it is my recommendation that this technician be placed on a Corrective Action Plan and receives additional guidance. Checking this box upon entering this inspection into the registry will serve to notify BPA of my recommendation. The customer's utility will be notified and will act according to their process.

<b>Inspector Signature:</b> _____	<b>Date:</b> _____
-----------------------------------	--------------------

**PRIVACY ACT STATEMENT**

Basic authority for collecting this information is authorized by 16 U.S.C. §§ 832 et. seq., and 838 et. seq., pursuant to Bonneville Power Administration's Conservation Program system of records established in 46 FR 31700.

This information is primarily intended to further, but is incidental to the performance of, BPA's overall Energy Efficiency Program, the objective of which is to acquire energy resources through energy efficiency, to determine what cost-effective conservation and direct application renewable resources measures should be installed or adopted under different circumstances, and to provide incentives for the installation of such measures.

Other routine issues of this information include: aggregation into a public database on energy efficiency; furnished to authorized personnel for installation/repair of equipment; aggregated into a database for program publicity; and in some instances information regarding buildings will be made available to subsequent purchasers of the buildings. Your disclosure of the requested information is voluntary, however failure to provide requested information means that it will not be possible for you to participate in this BPA Energy Efficiency program

