

## PTCS® Air Source Heat Pump Form

All sections must be filled out, signed, and dated by a PTCS Certified Technician at the time of installation. A copy of the completed form must be promptly submitted to the utility and homeowner in accordance with utility policy. Please enter this form online at [ptcs.bpa.gov](http://ptcs.bpa.gov) or fax to 877-848-4074. Questions? Call 800-941-3867 or email [ResHVAC@bpa.gov](mailto:ResHVAC@bpa.gov).

### Site Information (Please print clearly)

PTCS Tech #	PTCS Tech Name	Install Date	Electric Utility
Customer Name		Installation Site Address*	
Site City*	Site State*	Site Zip*	Customer Phone # ( ) -
*Mailing address if different (#, City, St, Zip):			
Home Type: <input type="checkbox"/> Existing Site Built <input type="checkbox"/> New Construction Site Built <input type="checkbox"/> Manufactured: # of Sections <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3			
Heated Area: Sq Ft	Year Built:	Foundation Type (Site Built): <input type="checkbox"/> Crawlspace <input type="checkbox"/> Full Basement <input type="checkbox"/> Half Basement <input type="checkbox"/> Slab	
Existing Heating System Being Replaced (If new home, indicate heating system installed):			
<input type="checkbox"/> Electric Forced Air w/out AC <input type="checkbox"/> Electric Forced Air w/ AC <input type="checkbox"/> Electric Zonal <input type="checkbox"/> Air Source Heat Pump <input type="checkbox"/> Geothermal Heat Pump <input type="checkbox"/> Natural Gas Furnace (Gas Company: _____) <input type="checkbox"/> Other Non-Electric Space Heating: _____			
Back up Heat: <input type="checkbox"/> None <input type="checkbox"/> Elec. Forced Air <input type="checkbox"/> Elec. Zonal <input type="checkbox"/> Heat Pump <input type="checkbox"/> Natural Gas Furnace <input type="checkbox"/> Non-Electric Space Heating			

### New Heat Pump Equipment Data

**\*\*PTCS requires minimum 9.0 HSPF, 14 SEER. Commissioning, Controls & Sizing requires Federal minimum. Check with utility for requirements.**

AHRI #	SEER**	HSPF**	EER	Outdoor HP Capacity (tons)
Heat Pump Make	Outdoor HP Model #	<input type="checkbox"/> Non Variable Speed HP <input type="checkbox"/> Variable Speed HP		
	Indoor HP Model #	What is the Balance Point? _____ Provide BP calculation to utility.		

### External Static Pressure Test

**Check unit operating at full capacity unless conditions do not permit. Attach additional sheets as needed if test must be re-run.**

<ol style="list-style-type: none"> <li>1. Record expected CFM/ton based on fan wiring board settings</li> <li>2. Measure return static pressure</li> <li>3. Measure supply plenum static pressure</li> <li>4. Calculate external static pressure: add values in #2 and #3 values together, ignoring the minus sign</li> </ol>	<b>1a. Testing Mode Used:</b> <input type="checkbox"/> Heating <input type="checkbox"/> Cooling  <b>2. Return Static Pressure</b>  <b>3. Supply Static Pressure</b>	<b>1b. CFM/Ton Setting</b>  Units (check one): <input type="checkbox"/> Pa <input type="checkbox"/> Inches H <sub>2</sub> O  <b>4. External Static Pressure</b>	<b>Note:</b> Any External Static Pressure above 200 Pa or 0.8 Inches H <sub>2</sub> O will result in a rejection.
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### TrueFlow Test

**Use the Performance Checks in the Reference Materials at [www.bpa.gov/goto/reshvac](http://www.bpa.gov/goto/reshvac) to determine acceptable performance, unless using an alternative method.**

<ol style="list-style-type: none"> <li>1. Measure Normal System Operating Pressure (NSOP) [A]</li> <li>2. Check TrueFlow plate size and units</li> <li>3. Note TrueFlow plate location</li> <li>4. Measure Supply Pressure with TrueFlow plate in (TFSOP) [B]</li> <li>5. Calculate Correction Factor [C]</li> <li>6. Measure plate pressure</li> <li>7. Enter Raw Flow CFM from tables [D]</li> <li>8. Calculate Corrected Flow (CFM = [C] x [D])</li> <li>9. Calculate CFM/ton</li> </ol>	<b>1. NSOP [A]</b>	<b>2a. Plate Size:</b> <input type="checkbox"/> 14 <input type="checkbox"/> 20	<b>2b. Units (check one) Use same units ESP:</b> <input type="checkbox"/> Pa <input type="checkbox"/> Inches H <sub>2</sub> O
	<b>3. Filter Location:</b> <input type="checkbox"/> Air Handler <input type="checkbox"/> Return Grille <input type="checkbox"/> Other (specify): _____		
	<b>4. TFSOP [B]</b>	<b>5. Correction Factor [C] from table or calculate <math>\sqrt{[A]/[B]}</math></b>	
	<b>6. Plate Pressure</b>	<b>7. Raw Flow CFM from tables [D]</b>	
	<b>8. Corrected Flow CFM = [C] x [D]</b>	<b>9. CFM/ton</b>	Is flow at or above 325 CFM/ton? <input type="checkbox"/> Y <input type="checkbox"/> N Please submit proof of manufacturer target CFM/Ton if under 325.

## Refrigerant Charge Information

Outside Air Temp °F	Mode unit tested in: <input type="checkbox"/> Heating <input type="checkbox"/> Cooling <input type="checkbox"/> Alternative If > 65°F, test in cooling; if ≤ 65°F, test in heating.	Are the refrigeration piping/other penetrations sealed? <input type="checkbox"/> Yes <input type="checkbox"/> No
Stage/Capacity Tested <input type="checkbox"/> High <input type="checkbox"/> Low <input type="checkbox"/> Other (specify):	Total lineset length ft.	Refrigerant Adjustment: <input type="checkbox"/> Added _____ oz. <input type="checkbox"/> Removed _____ oz. <input type="checkbox"/> None

### Performance Check: Run unit for at least 15 minutes in compressor-only mode before taking readings.

Use the Performance Checks in the Heat Pumps section at [www.bpa.gov/goto/reshvac](http://www.bpa.gov/goto/reshvac) to determine acceptable performance, unless using alt. method.

Heating Mode (65°F or lower)	Cooling Mode (higher than 65°F)	Alternative Method
Supply Air (SA) Temp:	Discharge Pressure:	Specify method used:
Return Air (RA) Temp:	Discharge Temp [A]:	Target:
Temp Split (SA – RA):	Liquid Line Temp [B]:	Test result:
Expected Temp Split from table: Is it acceptable? <input type="checkbox"/> Y <input type="checkbox"/> N	Sub cooling [A] – [B]: Is it acceptable? <input type="checkbox"/> Y <input type="checkbox"/> N	Is it acceptable? <input type="checkbox"/> Y <input type="checkbox"/> N

### Controls

Compressor Low Ambient Lockout control (LAL) setting at 5° or less? <input type="checkbox"/> Yes <input type="checkbox"/> Not Installed/Disabled <input type="checkbox"/> Non-Electric Backup <input type="checkbox"/> No	Auxiliary (strip) heat lockout has been set to <input type="checkbox"/> 35°F <input type="checkbox"/> Below 35°F
Single Capacity Compressor Systems <input type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	Make <u>and</u> Model of Heat Pump Thermostat
Multiple Capacity Compressor systems ( <input type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable ) <input type="checkbox"/> If the discharge air sensor control is used to control auxiliary heat, confirm it is set no higher than 85°F or, <input type="checkbox"/> If staging thermostat is set warmer than 85°F, confirm resistance heat cannot operate at temperatures above 35°F	Confirm discharge air temperature sensor is either not installed or is disabled. <input type="checkbox"/> Confirmed

### Notes

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**Required Signatures:** This section shall be filled out by the electrical utility account holder. This form must be signed by the person whose name appears on the electric utility account. ENERGY INFORMATION RELEASE: The undersigned utility customer requests and authorizes the specified utility to release billing and usage information for the account listed below to the PTCS program. With this authorization, the PTCS program can request billing information for up to two years pre-installation and two years post-installation. The utility customer also hereby releases the utility company from any and all liability arising from or connected with providing this information.

Electric Utility	Account #
Account Holder Name	
Account Holder Signature	Date
By signing below, technician certifies that this form and any accompanying documentation are complete and accurate, and that all measures associated with this project were completed as of the signature date below.	
Technician Name	Installation Company
Technician Signature	Date Tech Phone # (      ) -

#### 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.