

## PTCS<sup>®</sup> 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 [www.ptcsnw.com](http://www.ptcsnw.com) 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	Customer's Electric Utility
Customer Name		Installation Site Address*	
Site City*	Site State*	Site Zip Code*	Customer Phone # (     ) -     -
<b>Home Type</b> (provide information for just one type, either a Site Built or Manufactured Home):			
<b>Site Built Home:</b> <input type="checkbox"/> Existing <input type="checkbox"/> New Construction <b>Site Built Home Foundation Type:</b> <input type="checkbox"/> Crawl Space <input type="checkbox"/> Full Basement <input type="checkbox"/> Half Basement <input type="checkbox"/> Slab		<b>Manufactured Home:</b> <input type="checkbox"/> Y <input type="checkbox"/> N <b># of Sections for a Manufactured Home:</b> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <b>Super Good Cents?</b> <input type="checkbox"/> Y <input type="checkbox"/> N	
Year Built:	<b>Heating System Being Replaced:</b>	<b>Duct Sealing:</b> if not required, indicate why	
Heated area (sq.ft):	<input type="checkbox"/> Elec. Furnace <input type="checkbox"/> Heat Pump <input type="checkbox"/> Gas Furnace	<input type="checkbox"/> ≥50% inside conditioned space	
Energy Star? <input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Other (specify): _____	<input type="checkbox"/> ducts were previously PTCS certified	
	Gas Company (if applicable): _____	<input type="checkbox"/> pretest leakage <BPA requirements	

\*If mailing address is different, record here (#, City, St, Zip): \_\_\_\_\_

### New Heat Pump Equipment Data Definitions: (OD) = Outdoor (ID) = Indoor

AHRI #	SEER**	HSPF**	EER
OD and ID Unit Make:	OD Unit Model #	OD Unit Capacity (tons)	
	ID Unit Model #	_____ Number of compressor stages or <input type="checkbox"/> Inverter driven heat pump	

**\*\*Bonneville Power Administration standards are 9.0 HSPF, 14 SEER. Check with utility regarding equipment eligibility if below these standards.**

### 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.**

1. Record expected CFM/ton based on fan wiring board settings 2. Measure return static pressure 3. Measure supply plenum static pressure 4. Calculate external static pressure: add values in #2 and #3 together, ignoring the minus sign and providing absolute value.	<b>1a. Testing Mode Used:</b> <input type="checkbox"/> Heating <input type="checkbox"/> Cooling	<b>1b. CFM/Ton Setting:</b>  Units (check one) <input type="checkbox"/> Pa <input type="checkbox"/> Inches H <sub>2</sub> O <i>Use same units for all tests</i>	<b>Note:</b> An External Static Pressure of 200 Pa (0.8 Inches H <sub>2</sub> O) or more in Step 4 can result in extreme fan energy use and early fan failure.
	<b>2. Return Static Pressure</b>	<b>4. External Static Pressure</b>	
	<b>3. Supply Static Pressure</b>		

### TrueFlow Test

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

1. Measure Normal System Operating Pressure (NSOP) [A] 2. Check TrueFlow plate size and units 3. Note TrueFlow plate location 4. Measure Supply Pressure with TrueFlow plate in (TFSOP) [B] 5. Calculate Correction Factor [C]	<b>1. NSOP [A]</b>	<b>2. Plate Size</b> <input type="checkbox"/> 14 <input type="checkbox"/> 20	Units (check one) Use same units for all tests <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 calculatev ([A]/[B])</b>	
	<b>6. Plate Pressure</b>	<b>7. Raw Flow CFM from tables [D]</b>	

**TrueFlow test continues on other side**

<b>6. Measure plate pressure</b> <b>7. Enter Raw Flow CFM from tables [D]</b> <b>8. Calculate Corrected Flow (CFM = CF x [D])</b> <b>9. Calculate CFM/ton</b>	<b>8. Corrected Flow</b> <b>CFM = [C] x [D]</b>	<b>9. CFM/ton</b>	Is flow at or above 350 CFM/ton? <input type="checkbox"/> Y <input type="checkbox"/> N If not, specify manufacturer CFM/ton requirement:
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### Refrigerant Charge Information/Testing

Does indoor unit have an ECM blower? <input type="checkbox"/> Y <input type="checkbox"/> N	OD air temp <i>Required</i> °F	Mode unit tested in: <input type="checkbox"/> Heating <input type="checkbox"/> Cooling <input type="checkbox"/> Alternative <i>If &gt; 65°F, test in cooling; if ≤ 65°F, test in heating.</i>
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 Reference Materials section at [bpa.gov/reshvac/](http://bpa.gov/reshvac/) to determine acceptable performance, unless using alternative 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

<b>Compressor Low Ambient Lockout control (LAL) setting:</b> (For ALL systems, single and multi-stage compressors) <input type="checkbox"/> 0°F <input type="checkbox"/> _____ °F or <input type="checkbox"/> LAL not installed	Auxiliary (strip) heat lockout: <input type="checkbox"/> ≥ 35°F <input type="checkbox"/> ≥ 40°F <input type="checkbox"/> Other: _____ Make and Model of Indoor Thermostat:
<b>Single Capacity Compressor Systems:</b> <input type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	Confirm discharge air temp. sensor is either not installed or is disabled <input type="checkbox"/> Confirmed
<b>Multiple Capacity Compressor systems:</b> ( <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	

### Installation/Technician Notes:

**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.

<b>Electric Utility:</b>	<b>Account #:</b>
<b>Account holder name:</b> (Please print clearly)	
<b>Account holder signature:</b>	<b>Date:</b>
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.	
<b>Technician name:</b> (Please print clearly)	<b>Installation Company:</b>
<b>Technician signature:</b>	<b>Date:</b>
<b>Tech Phone #:</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.