PTCS® Air Source Heat Pump Optional Data Collection Tool

1) **Enter all data into the registry on a mobile device or computer** at ptcs.bpa.gov using the certified technician's account. This optional form can be filled out for later entry online. Issues entering data? Submit this form for entry:

   - Customers of Bonneville Power Administration (BPA) utilities: email ResHVAC@bpa.gov, fax to 1.877.848.4074, or call 1.800.941.3867
   - Customers of PGE or Pacific Power: email Residentialforms@energytrust.org or call 1.866.365.3526

2) **Submit the Registry Installation Report** (found online) **and additional required documents to the customer utility.** Unless requested by the utility, submission of this form is not required.

Site Information

PTCS Tech #	PTCS Tech Name		Install Date		Electric Utility		
Installation Site Address			Site City		Site State		Site Zip

Home Type: ☐ Existing Site Built ☐ New Construction Site Built ☐ Manufactured: **# of Sections** ☐ 1 ☐ 2 ☐ 3

Heated Area: _____ Sq Ft | **Foundation Type (Site Built):** ☐ Crawlspace ☐ Full Basement ☐ Half Basement ☐ Slab

Existing Heating System Being Replaced *(If new home, indicate heating system installed)*:

☐ Electric Forced Air w/out AC ☐ Electric Forced Air w/ AC ☐ Electric Zonal ☐ Air Source Heat Pump ☐ Ground Source Heat Pump

☐ Natural Gas Furnace (Gas Company: _____) ☐ Other Non-Electric Space Heating: _____

Back up Heat: ☐ None ☐ Electric Forced Air ☐ Electric Zonal ☐ Natural Gas Furnace ☐ Non-Electric Space Heating

New Heat Pump Equipment Data

***If less than 9.0 HSPF or 14 SEER, check with utility for requirements.*

AHRI #		SEER*	HSPF*	Outdoor HP Capacity (tons)
Heat Pump Make	Outdoor HP Model #			☐ Non Variable Speed HP Compressor ☐ Variable Speed HP Compressor
	Indoor HP Model #			Balance Point? _____ Provide BP documentation to utility.

Did you perform all of your tests in Test Only/Check Charge mode? ☐ Yes ☐ No ☐ N/A

External Static Pressure Test

Check unit operating at full capacity unless conditions do not permit.

	1. Return Static Pressure	**2.** Supply Static Pressure	**3.** External Static Pressure
1. Measure return static pressure **2.** Measure supply plenum static pressure **3.** Calculate external static pressure (ESP): add values in **#1** and **#2** values; ignore the minus sign	☐ Variable speed system's ESP meets manufacturer's specifications	Maximum ESP allowed by manufacturer	*Units: Use same units for TrueFlow* ☐ Pa ☐ Inches H2O

TrueFlow Test

Not required for variable speed systems or if you complete External Static Pressure - CFM Manufacturer Lookup Table below.

Original True Flow Test	**1.** NSOP **[A]**	**2a.** Plate Size: ☐ 14 ☐ 20	**2b.** Plate location: ☐ Air Handler ☐ Return Grille
1. Measure NSOP (Normal System Operating Pressure) **[A]**			
2. Check True Flow plate size and location	**3.** TFSOP **[B]**	**4.** Correction Factor **[C]** from table or calculate $\sqrt{([A]/[B])}$	
3. Measure TFSOP (Supply Pressure with True Flow Plate) **[B]**			
4. Calculate Correction Factor **[C]**	**5.** Plate Pressure	**6.** Raw Flow CFM from tables **[D]**	
5. Measure plate pressure			
6. Enter Raw Flow CFM from tables **[D]**	**7.** Corrected Flow **CFM** = **[C] x [D]**		**8.** CFM/ton
7. Calculate Corrected Flow **8.** Calculate CFM/ton			

Digital/Bluetooth True Flow Test	**1.** Plate Location ☐ Air Handler ☐ Return Grille	**2.** Total Airflow	**3.** CFM/ton

External Static Pressure - CFM Manufacturer Lookup Table   *Not required for variable speed systems or if you completed TrueFlow Test table above*

1. Use manufacturer lookup table to determine total airflow. **2.** Calculate **CFM/ton**	**1.** Total Airflow	**2.** CFM/ton

Variable speed system's airflow meets manufacturer's specifications? ☐ Yes ☐ No ☐ N/A

Refrigerant Charge Check   *Run unit for at least 15 minutes in compressor-only mode before taking readings. Not required for variable speed systems.*

Outside Air Temp	°F	**Mode unit tested in:** ☐ Heating (if ≤ 65°F) ☐ Cooling (if > 65°F)	☐ Variable speed system's refrigerant charge meets manufacturer's specifications.

Heating Mode (65°F or lower)	**Cooling Mode** (higher than 65°F)	**Alternative Test Method**
Supply Air **(SA)** Temp	Liquid Line Pressure	Specify method used
Return Air **(RA)** Temp	Liquid Saturation Temp **[A]**	Target
Temp Split **(SA – RA)**	Liquid Line Temp **[B]**	Test result
Expected Temp Split from table:	Sub cooling **[A] – [B]**	Meets specification? ☐ Y ☐ N

Controls

Auxiliary (strip) heat locked out to not engage at outdoor temperatures above 35°F:		Auxiliary (strip) heat not installed:
HP Thermostat Make	**HP Thermostat** Model	

Notes