PTCS
Performance Tested Comfort Systems

PTCS® Ground/Water Source Heat Pump Form

All sections must be filled out at the time of installation. Only installations by a single technician who is both IGSHPA and PTCS Certified are eligible. A copy of the completed form must be promptly submitted to the utility and homeowner in accordance with utility policy. Please enter online at www.ptcsnw.com or fax to 877-848-4074. Questions? Call 800-941-3867 or email reshvac@bpa.gov. *Last updated: 12 June 2013*

Site Information *(Please print clearly)*

PTCS Tech#	IGSHPA#	PTCS Tech Name	Install Date

Customer Name	Customer Phone	Customer Utility

Installation Site Address*	Site City *	Site State	Site Zip Code*

Site Built Home: ☐ Existing ☐ New	**Foundation:** ☐ Crawl ☐ Full Basement ☐ Half Basement ☐ Slab
Year Built: _____ **Energy Star?** ☐Y ☐N **Super Good Cents?** ☐Y ☐N	**Heating System:** ☐ Electric Furnace ☐Heat Pump ☐Gas Furnace backup

Heated Area (sq ft)

If mailing address is different, record here (#, City, St, Zip): _____

New Heat Pump Equipment Data

AHRI #	COP	System Type: ☐ Closed Loop ☐ Open Loop ☐ Pond	☐Vertical Loop ☐Horizontal Loop	☐Forced Air Furn. ☐Hydronic

For Closed Loop Systems:	**For Horizontal ground loop:**
Total external loop length: _____ ft.	Average in-ground loop depth: _____ ft.

For Open loop systems:
Supply side depth (elevation difference between water source and heat pump): _____ft.
Return water: ☐ Re-injected into ground (Depth in Feet: ____), or ☐ Discharged onto the surface. (specify: _____)

Unit Make	**Unit Mod. #**	_____ # Compressor stages or ☐ Inverter driven

True Flow Test (not necessary for water to water systems. Use correction factor from table orv(NSOP/TFSOP))

Unit Tested in ☐ Heating ☐ Cooling	Filter Size(s)	Tons	Filter Location: ☐Air Handler ☐Return Grille ☐ Other:	Units ☐Pa ☐H_2O

Plate Size	Plate 1 ☐14 ☐ 20	Plate 2 ☐14 ☐ 20	Plate 3 ☐14 ☐ 20	True Flow Test Notes
NSOP				
TFSOP				
Plate Pressure				
Correction Factor [CF]				
Raw Flow CFM from tables [A]				
Corrected Flow CFM = [CF] x [A]				
Final CFM/ton (sum plates 1-3/tons)				

Auxiliary Heating System. (for GPM flow rate use manufactures startup instructions or numbers in PTCS specs or measure directly)

Auxiliary (strip) heat is locked out at temperatures above: ☐35°F ☐40°F ☐Other (specify):

Flow Rate in GPM

Loop in Pressure (a)	Loop Out Pressure (b)	Pressure Drop (a – b)
GPM flow rate from table*	Calculate GPM/ton	GPM/ton Requirement Met ☐Y ☐N

Notes

PTCS® Commissioned Ground Source Installation Checklist

Temperature Rise/Drop across Ground Loop (Tests to be performed w/o desuperheater after 15 min continuous operation).					
Existing Condition	As Found in Cooling	As Found in Heating	Adjusted Cond. (If necessary)	As Found in Cooling	As Found in Heating
Loop in Temp.	^{o}F	^{o}F	Loop in Temp.	^{o}F	^{o}F
Loop out Temp.	^{o}F	^{o}F	Loop out Temp.	^{o}F	^{o}F
Temp. Diff.	^{o}F	^{o}F	Temp. Diff.	^{o}F	^{o}F
Target Diff.**	^{o}F	^{o}F	Target Diff.**	^{o}F	^{o}F

Temperature Rise/Drop across Air Coil Check after 15 minutes of continuous operation.					
Existing Condition	As Found in Cooling	As Found in Heating	Adjusted Cond. (If necessary)	As Found in Cooling	As Found in Heating
Supply Air Temp.	^{o}F	^{o}F	Supply Air Temp.	^{o}F	^{o}F
Return Air Temp.	^{o}F	^{o}F	Return Air Temp.	^{o}F	^{o}F
Temp. Diff.	^{o}F	^{o}F	Temp. Diff.	^{o}F	^{o}F
Target Diff.**	^{o}F	^{o}F	Target Diff.**	^{o}F	^{o}F

** *Refer to manufacturer's installation guide for target loop and air-side temp. splits. If measured splits do not meet the manufacturer's specifications, repair and re-test until specs are met.*

Operating Amps/Volts Check after 15 minutes of continuous operation.					
Existing Condition	As Found in Cooling	As Found in Heating	Adjusted Cond. (If necessary)	As Found in Cooling	As Found in Heating
Voltage			Voltage		
Compressor Amps			Compressor Amps		
Air Handler Amps			Air Handler Amps		
Circulating Pump(s) Amps			Circulating Pump(s) Amps		

Required Customer and Technician Signatures

To 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:	
Technician signature:	Date:

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.