

Please fill out either form:

FORM 1:

**Packaged Water-To-Air and
Water-To-Water Units**

FORM 2:

Water-To-Air Split Units



Geothermal Heat Pump Start-Up Certification Form

Installer Name _____ Company Name _____

Company Address _____ City _____ State _____ Zip/Postal Code _____

Phone _____ Installer E-Mail _____

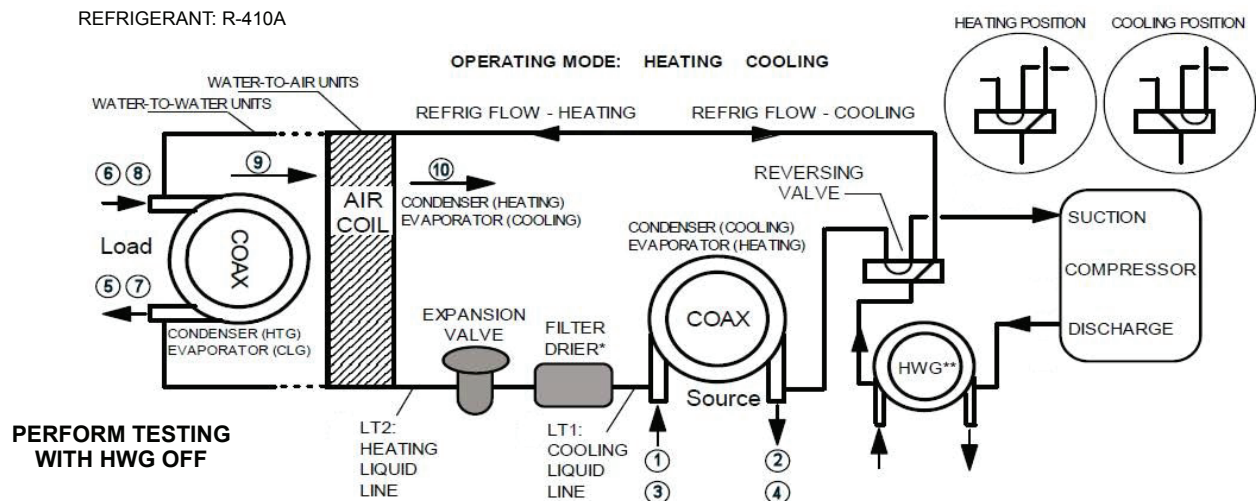
Customer Name _____ Customer E-Mail _____

Customer Address _____ City _____ State _____ Zip/Postal Code _____

Phone _____ Start-Up Date _____

Loop Type: ___ Open ___ Closed Pressurized ___ Closed Non-Pressurized Antifreeze Type and % _____

Model No. _____ Serial No. _____



Complete the following information for any type of unit			
Description	Heating	Cooling	Notes
1			
2			
			1 minus (-) 2
3			
4			
			3 minus (-) 4
9			
10			
			9 minus (-) 10

Additional Information required for Water-to-Water Unit only			
Description	Heating	Cooling	Notes
5			
6			
			5 minus (-) 6
7			
8			
			7 minus (-) 8

- NOTES:
1. "Temp" always refers to temperature
 2. Enter temperature in degrees Fahrenheit (°F)
 3. Enter pressure in pounds (lbs)

Calculate Heat of Extraction (Absorption) or Heat of Rejection:	Fluid Factor: Use 500 for water, 485 for antifreeze
_____ Flow Rate (GPM) X _____ Water Temp Difference (°F) X _____ Fluid Factor = _____ BTUH (HE or HR)	

Installing Contractor: Must submit this completed form.
Fax 517-787-9341, -OR- email to: bmiles@marsdelivers.com.
IMPORTANT: Include customer e-mail so warranty certificate can be sent.

Geothermal Heat Pump Start-Up Certification Form

Installer Name _____ Company Name _____

Company Address _____ City _____ State _____ Zip/Postal Code _____

Phone _____ Installer E-Mail _____

Customer Name _____ Customer E-Mail _____

Customer Address _____ City _____ State _____ Zip/Postal Code _____

Phone _____ Start-Up Date _____

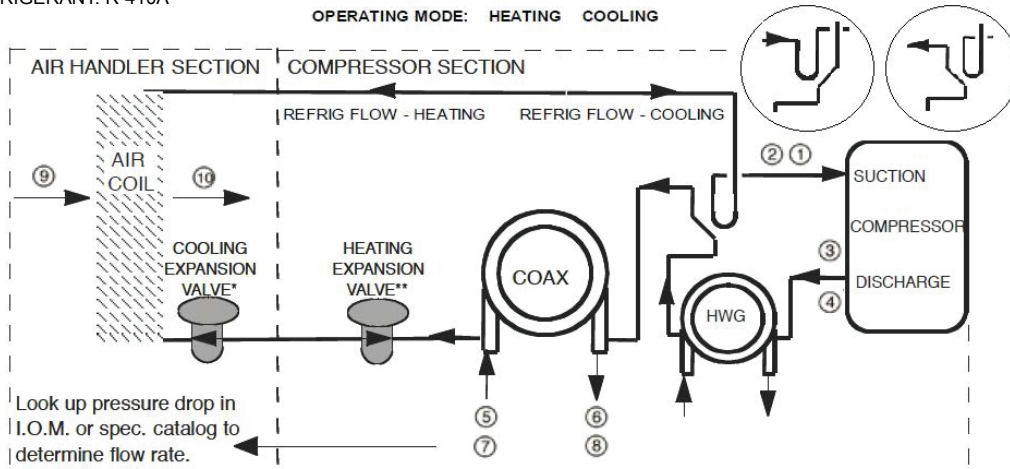
Loop Type: ___ Open ___ Closed Pressurized ___ Closed Non-Pressurized Antifreeze Type and % _____

Model No. _____ Serial No. _____

REFRIGERANT: R-410A

OPERATING MODE: HEATING COOLING

HEATING POSITION COOLING POSITION



PERFORM TESTING WITH HWG OFF

Look up pressure drop in I.O.M. or spec. catalog to determine flow rate.

*Cooling expansion valve meters in the cooling mode, and bypasses in the heating mode.
 **Heating expansion valve meters in the heating mode, and bypasses in the cooling mode.

Description	Heating	Cooling	Notes	Description	Heating	Cooling	Notes
Voltage				1 Suction Line Temp			
5 Water In Temp				2 Suction Line Pressure			
6 Water Out Temp				Saturation Temp			
Temp Change			5 minus (-) 6	Superheat			Sat. Temp - Line Temp
7 Pressure In (lbs)				3 Discharge Line Temp			
8 Pressure Out (lbs)				4 Discharge Line Pressure			
Pressure Drop			7 minus (-) 8	Saturation Temp			
9 Return Air Temp				Subcooling			Sat. Temp - Line Temp
10 Supply Air Temp							
Temp Change			9 minus (-) 10				

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3. Enter pressure in pounds (lbs)

Calculate Heat of Extraction (Absorption) or Heat of Rejection: _____ Fluid Factor: Use 500 for water, 485 for antifreeze

_____ Flow Rate (GPM) X _____ Water Temp Difference (°F) X _____ Fluid Factor = _____ BTUH (HE or HR)

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