



Gas Heat Pump and AHU Commissioning Checklist

These guidelines are provided to ensure the successful commissioning of the Anesi gas absorption heat pump (GAHP) with the Anesi air handler unit (AHU) and the optional indirect storage tank (IST). They assume that the installation contractor or professional has read and understood the installation and operation manuals, including all minimum and maximum guidelines for all Anesi products.

System Details				Date:
Location Address				
GAHP Model		GAHP S/N		IMEI:
AHU Model		AHU S/N		
IST Model		IST S/N		
Contractor Company				
Contractor Name				Mobile #

GAHP			
Placement and Installation		Condensate Disposal	
<input type="checkbox"/>	Installation on a flat and level (within 2°) surface	<input type="checkbox"/>	Condensate management is functional
<input type="checkbox"/>	Clearance requirements are met for unit and flue pipe	<input type="checkbox"/>	Self-regulating heat trace installed and functioning
<input type="checkbox"/>	Visual confirmation of clean installation: nothing disconnected or damaged	<input type="checkbox"/>	Photo collected for commissioning team
<input type="checkbox"/>	Proper installation of flue pipe and external antenna		
<input type="checkbox"/>	Photo collected for commissioning team		
Hydronic Lines		Electric Service	
<input type="checkbox"/>	All hydronic line isolation valves are open	<input type="checkbox"/>	120VAC circuit is hot
<input type="checkbox"/>	All outdoor hydronic lines are insulated with minimum R-8 insulation	<input type="checkbox"/>	120VAC polarity is correct
<input type="checkbox"/>	Photo collected for commissioning team	<input type="checkbox"/>	Low voltage wires are routed separately from line voltage wires
		<input type="checkbox"/>	Control wiring is correctly installed in the control box*
		<input type="checkbox"/>	Photos collected for commissioning team: internal unit and external connections

* Refer to Appendix A within the installation and operation manual

Fuel Service	
<input type="checkbox"/>	Manual shut-off valve installed upstream of required drip tee
<input type="checkbox"/>	Line purged of air
<input type="checkbox"/>	Photo collected for commissioning team

AHU			
Placement and Installation		Hydronic Lines	
<input type="checkbox"/>	Access clearance requirements are met	<input type="checkbox"/>	All hydronic lines connected and without leaks
<input type="checkbox"/>	Visual confirmation of clean installation: nothing damaged	<input type="checkbox"/>	All indoor hydronic lines are insulated with minimum R-4 insulation
<input type="checkbox"/>	Duct work is sealed and without leaks	<input type="checkbox"/>	Glycol level in plastic feeder tank AND expansion tank are FULL
<input type="checkbox"/>	Filter is installed	<input type="checkbox"/>	Check valve between plastic feeder tank and expansion tank installed and in correct orientation
<input type="checkbox"/>	Photo collected for commissioning team	<input type="checkbox"/>	Photo collected for commissioning team
		<input type="checkbox"/>	All hydronic lines filled and purged, including lines to and from the IST when applicable
		<input type="checkbox"/>	Inhibited Propylene Glycol Brand
		<input type="checkbox"/>	Inhibited Propylene Glycol % Measured

Electric Service			
<input type="checkbox"/>	120VAC installed with correct polarity	<input type="checkbox"/>	Photos collected for commissioning team
<input type="checkbox"/>	Control wiring is correctly installed in the control box^		
<input type="checkbox"/>	Thermostat Signals (R, C, W1, W2, G, Y1, Y2)	<input type="checkbox"/>	Aquastat Signal
<input type="checkbox"/>		<input type="checkbox"/>	Modbus (3-wire, CAT5 cable)
<input type="checkbox"/>		<input type="checkbox"/>	(Low) Tank Temperature

^ If applicable

Running the System		IST (if applicable)	
<input type="checkbox"/>	Connect and confirm remote access software functionality	<input type="checkbox"/>	Confirm water fill level
		<input type="checkbox"/>	Valves: hot water is closed AND cold-water inlet valve is open
		<input type="checkbox"/>	Expansion tank connected
		<input type="checkbox"/>	Disconnect control wire from IST water heater Aquastat
Entire system			
<input type="checkbox"/>	Set space-heating thermostat to initiate a space-heating call (Stage 1)	<input type="checkbox"/>	Confirm blower initiation in AHU at hydronic supply temperature of 90°F (32.2 °C)
<input type="checkbox"/>	Confirm burner lights in GAHP	<input type="checkbox"/>	Confirm no leaks within the flue transition of the GAHP while unit is in operation

System Readings				
Using an industry-standard combustion analyzer, measure combustion emissions at the flue gas vent based on full/min fire rates (refer to Section 2.10 for firing rate values) ^{^ ^} :				
		Full Fire		Min Fire
<input type="checkbox"/>	Oxygen (%)			
<input type="checkbox"/>	Carbon Dioxide (%)			
<input type="checkbox"/>	Excess Air (%)			
<input type="checkbox"/>	Carbon Monoxide (ppm)			
<input type="checkbox"/>	Calculate firing rate based on local barometric pressure and an HHV(____):			
System Readings using ANESI App				
Collect the following data points after adjusting the firing rates with the ANESI App				
	Full Fire (Btu/hr)		Min Fire (Btu/hr)	
<input type="checkbox"/>	Final firing rate measured		<input type="checkbox"/>	Final firing rate measured
<input type="checkbox"/>	Percentage to achieve		<input type="checkbox"/>	Percentage to achieve
Entire System				
<input type="checkbox"/>	Reconnect control wire from the IST water heater Aquastat and a tank call will be initiated IF the space heating call from the thermostat is not stage 2 (W2)			
<input type="checkbox"/>	Verify the hydronic 3-way valve in the AHU is open and flow is active through the indirect coil, i.e., supply line feeding tank is warm			
<input type="checkbox"/>	Verify the AHU switches back to space heating (if a call is still present) after the IST Aquastat is satisfied			
<input type="checkbox"/>	Open the domestic hot water valve once the IST is fully heated			

^{^ ^}Altitude and propane fuel scenarios require alternate acceptable reference ranges. Refer to Section 2.10 of the manual.