PRE-START-UP CHECKLIST FOR AEGIS HEAT PUMP WATER HEATERS

A Pre-Start-Up Checklist must be completed for each unit installed on site. All completed Pre-Start-Up Checklists must be sent to startup@lyncbywatts.com **5 business days prior to scheduled Start-Up date.**

LYNC CUSTOMER CARE DEPARTMENT

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Web: www.lyncbywatts.com

This Pre-Start-Up Checklist Form can also be completed and submitted electronically via the Lync Rep Portal. You will find it located in the Forms and Policies tab.

Date:			
Model Number:		**Serial Number:**	
Installation Job Name:			
Installation Address:			
Installation Type:			

PRE-START-UP CHECKLIST

Lync by Watts recommends keeping the heat pump off (the disconnect off and the 3-way switch on the heat pump to be in the "Off" position) while performing this Pre-Start-Up. The factory-trained technician will carry out the actual equipment start-up. Inspect the unit for the following points as applicable and refer to the product Installation & Maintenance Manual L-OMM-012 prior to Start-Up. Note any deficiencies in the space provided at the end of the report. **After going through this checklist, ensure that the disconnect is on to the heat pump and that the 3-way switch on the heat pump is in the "off" position at least 24 hours prior to the start-up.**

GENERAL	**(Y / N / NA)**
Is the unit damaged or are there any missing parts?	
Is the unit mounted on the included anti-vibration mounts as illustrated in the manual, and mounted in a location with proper support? (Reference Section 3.2 of the manual and the drawings for anti-vibration mounting locations)	
Is the condensate drain plumbed to a suitable floor drain?	
If the unit is in a location where freezing is possible, is the condensate drain plumbing insulated and heat traced?	
Is there adequate clearance for proper operation and maintenance as per the dimensional drawings?	
Are there shut-off valves installed on the inlet and outlet water piping for servicing?	
Is all piping complete, connections tight, leak free and damage free?	

ELECTRICAL & CONTROL REQUIREMENTS							**(Y / N / NA)**
Does the voltage at the disconnect correspond to the voltage requirements listed on the heat pump's nameplate?							
Does the disconnect/breaker size and wire size correspond to the MOP and MCA on the heat pump's nameplate?							
Are all main power terminals for field connection and other factory terminals tight? DO NOT PULL TEST, tighten all screw terminals with the appropriate screw driver/Allen wrench.							
Is the low voltage wiring for the control valves and pumps between the heat pump and the heat exchanger module run and terminated?							
Is 120V supplied to the heat exchanger module?							
Measure the voltage at the disconnect supply and record values in the table below.							
Measure Voltages Between:	L1 – L2 (V):		L2 – L3 (V):		L1 – L3 (V):		
Are all external sensors connected as per the control diagram? Specifically BT3 and BT1 if no sequencer is used. For sequencers the following sensors must be connected: BT1, BT2, and one staging probe for each additional heat pump over 1 (BT4, BT5, etc.).							

Does the control wiring between the heat pump and heat exchanger module match the piping (i.e., if there are two Aegis units, does unit #1 pipe to heat exchanger module #1 and is it electrically wired to heat exchanger module #1 as well)?	
Are all field wired connections run in conduit and have a liquid tight connection to the heat pump (high voltage and low voltage)?	
Does the sequencer (if more than one heat pump is installed) have its own 120V power supply?	
Does the sequencer have an Ethernet "home run" for each heat pump to the Ethernet switch inside the Sequencer?	
Is any additional wiring on the project's electrical drawings run to the sequencer such as BAS integration?	

BUILDING MANAGEMENT/AUTOMATION	**(Y / N / NA)**
BMS Communication Interface (Modbus, BACnet, etc.)?	
BMS connected to which field access terminals:	
Do all wire runs for communication follow recommendations for limits? (18 AWG Twisted Shield Wire: 150' max; 16 AWG: 150'-270'; 15 AWG: 270'-360')	
BMS Brand (JCI, Siemens, etc.):	

PLUMBING – PRIMARY LOOP PIPING	**(Y / N / NA)**
Is an air eliminator installed in the highest part of the piping?	
Has the primary loop been filled with water or glycol/water mix, and has all air been purged from this loop?	
If glycol is used, has the glycol pH been checked as per the glycol manufacturer's recommended procedures, and has the freeze point been verified with a refractometer as being within specification?	
If glycol is used, has it been ensured that there is no connection with an automatic refill system?	
Hot Water Delivery Temperature to Heat Exchanger Module (°F):	

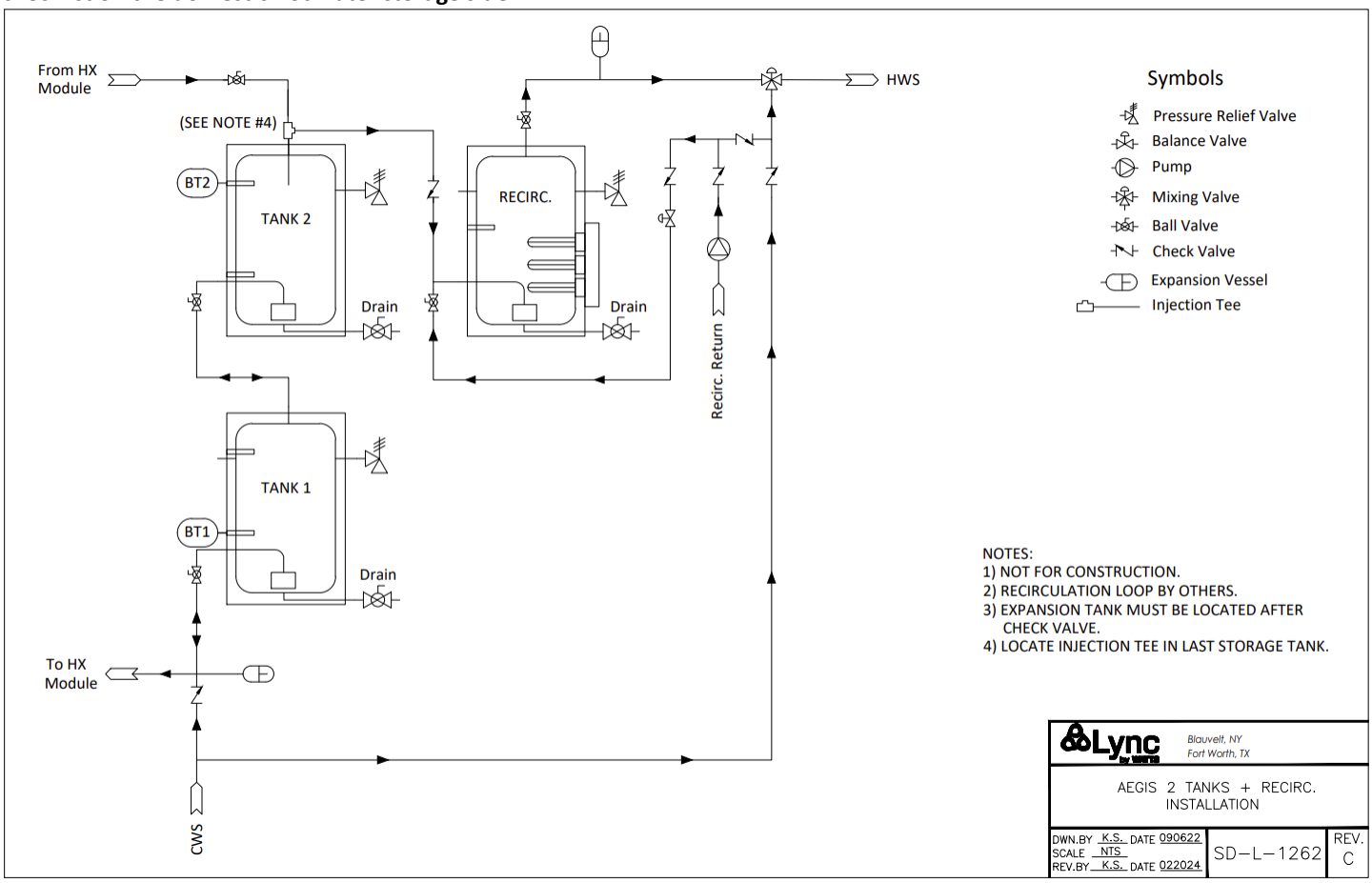
PLUMBING – DOMESTIC WATER SYSTEM	**(Y / N / NA)**
Is there a T&P relief valve(s) for each storage tank piped to a suitable floor drain?	
Is the tank drain plumbed to a suitable floor drain?	
Is there an expansion tank in the cold water supply?	
Is there a mixing valve on the hot water supply?	
Is the piping correct as per the project drawings?	
Have the tanks and piping been filled with potable water?	
Is there a recirculation heater piped to the building recirculation loop?	
Is a strainer installed on the hot water inlet to the heat pump?	
Hot Water Storage Design Temperature (°F):	

MECHANICAL/PLUMBING – AEGIS W AND AEGIS A WITH COOL RECOVERY ONLY	**(Y / N / NA)**
Is the source water loop filled with water and is all air purged from the loop?	
Is there sufficient flow on the source water loop to close the internal flow switch?	
If using the Aegis contact to enable/disable the source pump, is the wiring correct on the user connection terminal block X2 terminals 107 & 108?	
Is the piping correct as per the project drawings?	
Is a strainer installed on the source water inlet to the heat pump?	

PLUMBING – STORAGE TANKS*	(Y / N / NA)
Are the tanks properly mounted and their weight supported?	
Is the provided outlet “injection tee” assembly installed in the furthest (“hot”) storage tank (not in the building recirculation tank)?	
Has it been verified that any seismic restraints are as per the engineer’s plans?	
Are the storage tanks plumbed in series with one another and not parallel?	
Does the DHW (“secondary”) pump on the heat exchanger module draw from the bottom of the tank with the cold-water connection?	
Is the outlet flow from the module to the top of the tank furthest away from the heat pump as per the drawings?	
Are there no check valves installed between the heat exchanger module DHW inlet and the tanks (the Aegis requires bi-directional flow in this pipe)?	

<u>*NOTE:</u> Lync strongly encourages the use of Lync Storage Tanks, as these have been designed to maximize the performance of Aegis heat pump water heaters. If Lync storage tanks are not used, these tanks must have required features, including an inlet diffuser, upper and lower thermowells, and an outlet injection tee on the furthest (“hot”) tank.

Use the image below of a typical Aegis storage tank piping diagram (tank quantity may differ) as a reference for this pre-start-up checklist on the domestic hot water storage side.



PRE-START-UP CHECKLIST FOR AEGIS HEAT PUMP WATER HEATERS (cont.)

NOTE: The information on this form verifies the operation of the Lync product only. This does not imply other system components or overall system operation is certified. The designated commissioning agent or installing contractor should perform ancillary equipment component and system verification.

COMMENTS

Pre-Start-Up Performed By					
Company:					
Address:					
City:		State:		Zip:	
Email:		Phone:			
Name:					