

Commissioning Checklist



Site Name _____ Serial # _____
Date _____
Site Tech _____

PRESSURE/VACUUM TEST AND WORKING FLUID TRANSFER

- ☐ Nitrogen Pressure test system to 7 bar (100 psi) verify after one hour pressure is above 6.75 bar (98 psi),
- ☐ Draw system into vacuum of 750 micron and run vacuum pump for 30 minutes to remove moisture from system
- ☐ Stop vacuum pump, isolate system from pump and verify vacuum holds for 30 minutes
- ☐ Record Initial Vacuum Gauge Reading: _____ and Final Reading: _____
- ☐ Transfer 400 lbs (180 kg) Honeywell Genetron R-245fa
- ☐ Install Filter-Dryer and purge connection hoses

ELECTRICAL CONNECTIONS AND POWER ON

- ☐ Verify 3-Phase + Ground are terminated to machine
- ☐ Visually inspect all electrical cabinet wiring and connections. Check that nothing is loose after shipping
- ☐ Check all field device cables and/or wiring connections
- ☐ Verify Customer Terminal Strip and Jumpers if not connected: External E-Stop, Customer GPR and Remote Stop
- ☐ Turn power onto the Power+ by turning the main disconnect from OFF to ON

HMI AND REMOTE SETUP

- ☐ Verify revision of PLC and HMI software, record revisions, versions available from the HMI screen:
- ☐ PLC: _____ HMI: _____
- ☐ Site Static IP address: _____ (note working internet connection required for warranty)
- ☐ Navigate to ALARMS screen and verify no phase or I/O alarms are active
- ☐ Record Phase-To-Phase Voltage and Frequency from the HMI "ELECTRICAL INFORMATION" screen
A-B: _____ B-C: _____ A-C: _____ Frequency: _____
- ☐ Confirm control voltage is 120VAC at the Control cabinet power switch
- ☐ Measure 24VDC power at the 24VDC power supply
- ☐ From "SETUP">"SITE OPTIONS", update "Power+Serial Number – Equipment Name" with **ET#### - Site Name**
- ☐ Navigate to SETUP: STARTUP PARAMETERS and configure settings per site requirements

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ROTATION TEST AND INITIAL STARTUP

Navigate to SETUP: TEST FUNCTIONS Screen to do the below testing.

- ☐ Bump Test generator to test rotation. Inlet pressure to expander will decrease, and outlet pressure from expander will increase with correct rotation. Correct phasing at generator junction box if wrong.
- ☐ Test all Water Relays and confirm any site controlled field devices
- ☐ Test all Lights and the Horn
- ☐ Toggle the WF Bypass valve and visually verify the automatic valve cycles
- ☐ Run the feed pump at 30hz for 20 minutes and take a fluid sample, verify a milky emulsion of WF and Mineral Oil
- ☐ Start the ORC and adjust balance of plant as necessary for proper operation.

DOCUMENTATION REVIEW WITH SITE OWNER

- ☐ Review operation of equipment, operator HMI screens with site owner/operator
- ☐ Review Maintenance Log sheets with owner/operator
- ☐ Review recommended spare parts list with owner/operator
- ☐ Review and provide ElectraTherm contact information with site owner/operator

Gather information from site owner as listed below

Date of Commissioning: _____

ElectraTherm ORC Serial number: _____ Site Name: _____

Site Address: _____

ORC Physical GPS coordinates: _____

Installing Tech Name: _____ Installing Tech Signature: _____

Installing Company: _____

Installing Company Phone: _____ Installing company email: _____

Owner Name: _____

Owner Address: _____

Owner Phone Number: _____ Owner email address: _____

IMPORTANT:

This form MUST BE COMPLETED, signed and submitted to ElectraTherm when completed.

Fill out or Scan and email form to service@electratherm.com with the verbiage "commissioning checklist" in the email subject line. You will then receive an electronic certificate of commissioning and warranty certificate from ElectraTherm for this machine that was installed.