



## START-UP SHEET Chiller

Job Name \_\_\_\_\_ Job Number \_\_\_\_\_

Job Address \_\_\_\_\_

### Section 5: Equipment Description

Spec. #:	Submittal #:	P&ID / Dwg #:
Area Served:		

Chiller Type: Reciprocating ☐ Rotary Screw ☐ Centrifugal ☐ Other: \_\_\_\_\_

Data	Design	Actual On Site
Unit Tag #		
Manufacturer		
Model #		
Serial #		

### Section 6: Equipment Pre-Installation Inspection

Step	Inspection Description	Yes	No	N/A	Performed By (Initials & Date)
6.2	Nameplate data matches vendor specifications.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.3	All parts are received.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.4	No visible signs of damage, leak, or defective parts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.5	Verify electrical service for correct voltage, current and thermal overload protection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.6	Operational and Maintenance (O&M) manual is available in the field.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.7	Start-up technicians reviewed factory start-up procedures in the O&M manual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments/  
Observations \_\_\_\_\_

Performed By  
(Therma)

Reviewed By  
(Owner/Representatives)

Print Name	Signature	Date



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Step	Inspection Description	Yes	No	N/A	Performed By (Initials & Date)
6.8	If Therma provided Variable Frequency Drives (VFDs) that are controlling the fans, complete FN 8.029.1 VFD start-up form.				

### Section 7: Installation Inspection

Step	Inspection Description	Yes	No	N/A	Performed By (Initials & Date)
7.2	Unit is installed on flat foundation and level.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.3	Tag # is attached to the unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.4	Service clearance is adequate for maintenance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.5	Controls are installed and tested.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.6	Valves are installed at inlet and outlet of evaporator and condenser water piping.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.7	Flow switches are installed in the chilled water and condenser water piping.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.8	Flow switches are set for minimum flow plus 10%.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.9	Pressure and temperature test ports are installed at inlet and outlet of the evaporator and condenser.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.10	Drain valves are installed to the evaporator and condenser.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.11	Vent valves are installed on the top of the evaporator and condenser.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.12	Water regulating valve is installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.13	Water treatment is provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments/  
Observations

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### Chiller

Step	Inspection Description	Yes	No	N/A	Performed By (Initials & Date)
7.14	Water pressure relief valves are installed in the evaporator and condenser water piping.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.15	All condenser fan setscrews are tight.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.16	Electrical connections are secure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.17	All access panels and covers are in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.18	Vibration isolators are installed and adjusted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.19	All compressor shipping braces and compressor rail isolator sleeves are removed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.20	Coils are clean and fins are straight.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.21	Crankcase heaters are installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.22	Compressor oil level is within manufacturer's specification.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.23	Low ambient control is installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.24	Relief valve type, setting, and capacity are correct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.25	Chilled & condenser water supply outlet is proper size.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.26	Chilled & condenser water return inlet is proper size.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.27	Make-up water supply has proper shut-off and back flow device.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.28	Temperature and pressure gauges are installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.29	Make-up water pressure regulator is installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.30	Expansion tank is installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.31	Pressure & temperature test ports are provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments/  
Observations

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Step	Inspection Description	Yes	No	N/A	Performed By (Initials & Date)
7.32	Air separation device is properly installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.33	Pump(s) are installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.34	Pot feeder is installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.35	System has been cleaned and treated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.36	Isolation valves are installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.37	Water treatment is installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### Section 8: Operational Inspection

Step	Inspection Description	Yes	No	N/A	Performed By (Initials & Date)
8.2	Unit vibration is acceptable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.3	Each fan rotation is correct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.4	Cooling components perform per manufacturer's specifications.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.5	Crankcase heaters are functional.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.6	Make sure thermostat is set.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8.7	Record start up operating parameters below then use Supplementary Forms (FN8.028.2 or FN8.028.3) for additional data.				

Comments/  
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### Record Start Up Operating Parameters

Data	Design	Actual On Site
Evaporator Pressure Drop		
Evaporate Flow (GPM)		
Data	Design	Actual On Site
Condenser Pressure Drop		
Condenser Flow (GPM)		
Chilled Water $\Delta T$		

END OF SECTION

Comments/  
Observations

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(Therma)

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(Owner/Representatives)

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