



Centrifugal Water Chiller (Water Cooled) Pre-Functional Checklist

Equipment ID	8CH3
Building	Chiller Plant
Location	New Mechanical Room

Statement of Readiness

The above equipment and/or systems integral to them are complete and ready for functional testing, except as noted. None of the outstanding items preclude safe and reliable functional tests being performed. This checklist does not take the place of the manufacturer's recommended checkout and startup procedures or report.

Responsible Contractor Sign Here

CONTRACTOR	PRINTED NAME	SIGNATURE	DATE
General Contractor (GC)			
Mechanical Contractor (MC)			
Electrical Contractor (EC)			
TAB Contractor (TAB)			
Controls Contractor (CC)			

This statement of readiness has been received by the Commissioning Agent on _____ and will be incorporated as part of the final commissioning report.

Equipment Information

Make		Model Number	
Serial Number		Capacity BTUH	GPM Condenser ; Evaporator;
Volts/Phase		Function	Service Area
Notes:			



System Readiness Checklist

Yes = Checked and Completed, N/A = Not Applicable

General Installation					
Description	Yes	N/A	Initials	Date	Comments
General appearance good, no apparent damage	<input type="checkbox"/>	<input type="checkbox"/>			
Proper vibration isolators installed and adjusted	<input type="checkbox"/>	<input type="checkbox"/>			
Seismic restraints in place	<input type="checkbox"/>	<input type="checkbox"/>			
Pipe fittings and accessories complete	<input type="checkbox"/>	<input type="checkbox"/>			
Isolation valves and balancing valves installed	<input type="checkbox"/>	<input type="checkbox"/>			
Pipes not supported on chiller	<input type="checkbox"/>	<input type="checkbox"/>			
Hydronic system flushing complete and strainers cleaned	<input type="checkbox"/>	<input type="checkbox"/>			
Cooling tower or condenser system checked out	<input type="checkbox"/>	<input type="checkbox"/>			
Evaporator air vent provided	<input type="checkbox"/>	<input type="checkbox"/>			
Water cooled condenser air vent provided	<input type="checkbox"/>	<input type="checkbox"/>			
Refrigerant relief pipe extended to outside	<input type="checkbox"/>	<input type="checkbox"/>			
Sequencer controls installed (If specified)	<input type="checkbox"/>	<input type="checkbox"/>			
Pressure gages installed	<input type="checkbox"/>	<input type="checkbox"/>			
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>			
Flow switch installed as required	<input type="checkbox"/>	<input type="checkbox"/>			
Flow meters installed	<input type="checkbox"/>	<input type="checkbox"/>			
Proper refrigerant level	<input type="checkbox"/>	<input type="checkbox"/>			
No refrigerant leaking	<input type="checkbox"/>	<input type="checkbox"/>			
Proper oil level	<input type="checkbox"/>	<input type="checkbox"/>			
Refrigerant monitor installed	<input type="checkbox"/>	<input type="checkbox"/>			
Purge unit installed, if specified	<input type="checkbox"/>	<input type="checkbox"/>			
Equipment labels affixed	<input type="checkbox"/>	<input type="checkbox"/>			
Oil heater installed properly	<input type="checkbox"/>	<input type="checkbox"/>			
Over current motor heater installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>			
Oil filter clean	<input type="checkbox"/>	<input type="checkbox"/>			
No fluid leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>			
Notes:					



Electrical and Controls					
Description	Yes	N/A	Initials	Date	Comments
Power disconnect is located within site of the unit it controls and labeled	<input type="checkbox"/>	<input type="checkbox"/>			
All electric connections tight and installed properly	<input type="checkbox"/>	<input type="checkbox"/>			
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>			
Safeties installed and operational	<input type="checkbox"/>	<input type="checkbox"/>			
Starter overload breakers installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>			
All control devices, pneumatic tubing and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>			
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>			
Emergency power off (EPO) switch installed as specified	<input type="checkbox"/>	<input type="checkbox"/>			
Operation of EPO switch checked in all positions	<input type="checkbox"/>	<input type="checkbox"/>			
Proper safeties in control when EPO switch is active	<input type="checkbox"/>	<input type="checkbox"/>			
Sensors calibrated (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>			
Refrigerant monitor and purge checked	<input type="checkbox"/>	<input type="checkbox"/>			
Notes:					

Piping					
Description	Yes	N/A	Initials	Date	Comments
Piping installation checked against the drawings and all devices gages and appurtenances are in place	<input type="checkbox"/>	<input type="checkbox"/>			
Piping supported independently of the chiller	<input type="checkbox"/>	<input type="checkbox"/>			
Piping type and flow direction labeled on piping	<input type="checkbox"/>	<input type="checkbox"/>			
Isolation valves, balancing valves and piping specialties installed	<input type="checkbox"/>	<input type="checkbox"/>			
System flushing complete and strainers cleaned	<input type="checkbox"/>	<input type="checkbox"/>			
Hydronic system flushing complete and strainers cleaned	<input type="checkbox"/>	<input type="checkbox"/>			
Notes:					

TAB					
Description	Yes	N/A	Initials	Date	Comments
Installation of system and balancing devices is completed following NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>			
Notes:					



Operational Checks					
Description	Yes	N/A	Initials	Date	Comments
Measure line to line voltage phase imbalance for compressor: ($\% \text{Imbalance} = 100 \times (\text{avg.} - \text{lowest}) / \text{avg.}$) Record imbalance of compressor. Imbalance less than 2%?	<input type="checkbox"/>	<input type="checkbox"/>			
Record full load running amps for compressor. _____ rated FL amps x _____ svc factor = _____ (Max amps). Running less than max?	<input type="checkbox"/>	<input type="checkbox"/>			
No unusual noise and vibration when running	<input type="checkbox"/>	<input type="checkbox"/>			
Compressor interlocking with oil pressure	<input type="checkbox"/>	<input type="checkbox"/>			
Adequate oil pressure when compressor shaft is turning	<input type="checkbox"/>	<input type="checkbox"/>			
Pre-rotation vane closed before compressor reaches full speed (centrifuge-modify as required)	<input type="checkbox"/>	<input type="checkbox"/>			
Pre-rotation vane steady when load changes	<input type="checkbox"/>	<input type="checkbox"/>			
Specified sequences of operation and operating schedules have been implemented with all variations documented	<input type="checkbox"/>	<input type="checkbox"/>			
Specified point-to-point checks have been completed and documentation record submitted for this system	<input type="checkbox"/>	<input type="checkbox"/>			
Startup report completed with this checklist attached. (Includes full listing of all internal settings with notes as to which settings are BAS controlled or monitored and which are integral	<input type="checkbox"/>	<input type="checkbox"/>			
Startup report includes written certification from chiller manufacturer that all specified features, controls and safeties have been installed and are functioning properly and that the installation and application comply with the manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>			
Piping gages, BAS and chiller panel temperature and pressure readouts match (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>			
Notes:					

Additional Comments:

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