

## Chilled Water Pump Construction Checklist

<b>Project:</b>	
<b>Date:</b>	
<b>Pump tag:</b>	
<b>Building:</b>	
<b>Location:</b>	

### Submittal / Approvals

**Submittal.** The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. \_\_\_ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup and initial checkout, preparatory to functional testing.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- If this form is not used for documenting, one of similar rigor shall be used.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

**Approvals.** This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

**DIVISION 1 – GENERAL REQUIREMENTS**  
**Section 01 91 00.13b – Chilled Water Pump Construction Checklist**

Pump 1 Information					
Make		Model Number			
Serial Number		GPM		Head	
Volts/Phase		Function		Service Area	
Motor Hp		Motor Eff		RPM	
<b>Comments:</b>					

Pump 2 Information					
Make		Model Number			
Serial Number		GPM		Head	
Volts/Phase		Function		Service Area	
Motor Hp		Motor Eff		RPM	
<b>Comments:</b>					

Associated Checklists					
Chilled Water Piping	<input type="checkbox"/>	DDC	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
<b>Comments:</b>					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Pump alignment report	<input type="checkbox"/>	
Vibration testing report	<input type="checkbox"/>	
<b>Comments:</b>		

**DIVISION 1 – GENERAL REQUIREMENTS**  
**Section 01 91 00.13b – Chilled Water Pump Construction Checklist**

<b>Installation Checks</b>			
<b>Check if Acceptable; Provide comment if unacceptable</b>	<b>NA</b>	<b>Comment</b>	
<b>General</b>			
Installation is per manufacturers instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Equipment label permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Pump lubricated	<input type="checkbox"/>	<input type="checkbox"/>	
Pump drive properly aligned	<input type="checkbox"/>	<input type="checkbox"/>	
Pump turns freely	<input type="checkbox"/>	<input type="checkbox"/>	
Drive guard or shield is properly installed	<input type="checkbox"/>	<input type="checkbox"/>	
Pump foundation is level within manufacturer's tolerances	<input type="checkbox"/>	<input type="checkbox"/>	
Pumps in place and properly anchored	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes are supported independently of the pump	<input type="checkbox"/>	<input type="checkbox"/>	
Vibration isolation devices installed and functional	<input type="checkbox"/>	<input type="checkbox"/>	
Seismic anchoring installed and functional where applicable	<input type="checkbox"/>	<input type="checkbox"/>	
Isolation valves and piping specialties installed	<input type="checkbox"/>	<input type="checkbox"/>	
Shaft seal is leak free	<input type="checkbox"/>	<input type="checkbox"/>	
Pump detail checked against the drawings and all devices gages and appurtenances are in place	<input type="checkbox"/>	<input type="checkbox"/>	
Insulation installed per requirements; pumps for cold water insulated to avoid condensation yet allow for service	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Electrical and Controls</b>			
Power disconnect is located within site of the unit it controls and labeled	<input type="checkbox"/>	<input type="checkbox"/>	
All electric connections tight	<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 and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>	
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>	
Operation of HOA switch checked in all positions	<input type="checkbox"/>	<input type="checkbox"/>	
Proper safeties in control when HOA switch in hand position	<input type="checkbox"/>	<input type="checkbox"/>	
Installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Rotates in the correct direction (for VFD, check Inverter and Bypass modes)	<input type="checkbox"/>	<input type="checkbox"/>	
<b>VFD</b>			
Installation per manufacturer's requirements and start up instructions completed	<input type="checkbox"/>	<input type="checkbox"/>	
Drive location not subject to excessive moisture or dirt	<input type="checkbox"/>	<input type="checkbox"/>	
Drive location not subject to excessive temperatures	<input type="checkbox"/>	<input type="checkbox"/>	
Drive size matches motor size	<input type="checkbox"/>	<input type="checkbox"/>	
Drive mounted on house keeping pad (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	
Cooling air flow path clean and unobstructed	<input type="checkbox"/>	<input type="checkbox"/>	
Permanent label affixed and UL stamp approved	<input type="checkbox"/>	<input type="checkbox"/>	

**DIVISION 1 – GENERAL REQUIREMENTS**  
**Section 01 91 00.13b – Chilled Water Pump Construction Checklist**

<b>Installation Checks</b>		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Unit is programmed	<input type="checkbox"/>	<input type="checkbox"/>
Minimum and maximum speed set	<input type="checkbox"/>	<input type="checkbox"/>
VFD powered (wired to controlled equipment)	<input type="checkbox"/>	<input type="checkbox"/>
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>
Drive min and max speed set to _____ Hz min and 60 Hz max	<input type="checkbox"/>	<input type="checkbox"/>
Input of motor FLA represents 100% to 105% of motor FLA rating	<input type="checkbox"/>	<input type="checkbox"/>
Upper frequency limit set at 100%, unless explained otherwise	<input type="checkbox"/>	<input type="checkbox"/>
<b>Sensors and Gages</b>		
Piping gages, DDC and associated panel temperature and pressure readouts match	<input type="checkbox"/>	<input type="checkbox"/>
Pressure and Temperature gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>

**Sensor and Actuator Calibration**

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N** \_\_\_\_\_. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 <sup>st</sup> Gage or DDC Value	Instrument Measured Value	Final Gage or DDC Value	Pass Y / N

**Comments:**