**This Prefunctional Checklist should be completed as part of startup and initial checkout of the equipment in preparation for Functional Performance testing.**

|  |  |
| --- | --- |
| PC: | **23 64 00** |
| **ITEM:** | **Packaged Water Chiller** |
| **ID:** |  |
| **AREA SERVED:** |  |

Form Filled Out By:

|  |  |  |
| --- | --- | --- |
|  | Name & Company | Date |
| GC |  |  |
| MC |  |  |
| EC |  |  |
| BC |  |  |
| CC |  |  |
| OR |  |  |
| A/E |  |  |
| CA |  |  |

GC = General Contractor; MC = Mechanical Contractor; EC = Electrical Contractor; RMCS = Refrigerant Management Control System Contractor, OR = Owner Representative; A/E = Architect/Engineer; CA = Commissioning Agent

XX = No Initials Required

# DOCUMENTATION VERIFICATION

 Check if OK. Enter note number if deficient.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **GC** | **MC** | **EC** | **RMCS** | **OR** | **A/E** | **CA** |
| Product information submitted |  |  |  |  |  |  |  |
| Shop drawings submitted |  |  |  |  |  |  |  |
| Manufacturer’s installation instructions submitted |  |  |  |  |  |  |  |

# MODEL VERIFICATION

Fill in requested information.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Specified | **Submitted**  | **Installed** |
| Manufacturer |  |  |  |
| Model Number |  |  |  |
| Mark No |  |  |  |
| Evaporator Flow (GPM) |  |  |  |
| Condenser Flow (GPM) |  |  |  |
| Compressor RLA |  |  |  |
| Capacity (Tons) |  |  |  |
| Refrigerant Type |  |  |  |
| Volts/Phase |  |  |  |
| MCA |  |  |  |
| MOP |  |  |  |

# INSTALLATION VERIFICATION

This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report**.**

Check if OK. Enter Outstanding Item Note number if deficient.

| **No** | **Checks** | **GC** | **MC** | **EC** | **RMCS** | **OR** | **A/E** | **CA** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | New concrete pad extension matches thickness of existing pad. |  |  |  |  |  |  |  |
| 2 | Chiller casing is in good condition with no dents or damage. |  |  |  |  |  |  |  |
| 3 | Chiller is secured to concrete pad per construction documents and manufacturer's requirements. |  |  |  |  |  |  |  |
| 4 | Vibration isolators are installed and equally deflected per manufacturer's requirements. |  |  |  |  |  |  |  |
| 5 | Chiller is level (within 0.25" end-to-end). |  |  |  |  |  |  |  |
| 6 | Maintenance access is verified to meet manufacturer's requirements. |  |  |  |  |  |  |  |
| 7 | Chiller area is clean. |  |  |  |  |  |  |  |
| 8 | Control panel is free of moisture and foreign material (wires, metal chips, tools, documents, etc.) |  |  |  |  |  |  |  |
| 9 | Flow switches and differential pressure sensors furnished by chiller manufacturer are located and installed per manufacturer's requirements. |  |  |  |  |  |  |  |
| 10 | Pipe fittings, unions, and chiller connections are tight with no leaks. |  |  |  |  |  |  |  |
| 11 | Piping is properly supported independent of the chiller. |  |  |  |  |  |  |  |
| 12 | Piping type and flow direction are labeled on piping. |  |  |  |  |  |  |  |
| 13 | All valves are operational and accessible. |  |  |  |  |  |  |  |
| 14 | All valves are properly tagged or labeled. |  |  |  |  |  |  |  |
| 15 | Control valves are installed in the correct direction. |  |  |  |  |  |  |  |
| 16 | Electrical power has been supplied to the chiller and has been verified to be correct for the installed chiller. |  |  |  |  |  |  |  |
| 17 | Chiller is properly grounded. |  |  |  |  |  |  |  |
| 18 | Overload protection is the correct size and type for the equipment. |  |  |  |  |  |  |  |
| 19 | All electrical connections and terminations are secure |  |  |  |  |  |  |  |
| 20 | Power disconnect is located within site of the chiller and labeled. |  |  |  |  |  |  |  |
| 21 | Cooling tower, condenser water system, and pump checks complete. |  |  |  |  |  |  |  |
| 22 | Verify rotation is correct for chilled water and condenser water pumps. |  |  |  |  |  |  |  |
| 23 | Verify proper oil level. |  |  |  |  |  |  |  |
| 24 | Measure compressor operational line voltage: L1\_\_\_\_\_\_, L2\_\_\_\_\_\_, L3\_\_\_\_\_\_ (%Imbalance = 100 x (avg. - lowest)/avg.) Compressor voltage imbalance is less than 2%. |  |  |  |  |  |  |  |
| 25 | Measure compressor full load running amps. Rated FL amps x \_\_\_\_service factor = Max amps. Compressor is running at less than calculated max amps. |  |  |  |  |  |  |  |

# OUTSTANDING ITEMS

Note outstanding items in table below. Use numbers referenced above.

|  |  |  |
| --- | --- | --- |
| Resolved(Initial / Date) | **Note** | Description |
|  | **1.** |  |
|  | **2.** |  |
|  | **3.** |  |
|  | **4.** |  |
|  | **5.** |  |
|  | **6.** |  |
|  | **7.** |  |
|  | **8.** |  |
|  | **9.** |  |
|  | **10.** |  |

# FIELD NOTES

Fill in as appropriate.

|  |
| --- |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

# SIGN OFF

System / Equipment have been installed in accordance with the Contract Documents and is ready for Functional Testing.

|  |  |  |
| --- | --- | --- |
|  | **Signature** | **Date** |
| **Contractor’s Representative** |  |  |
| **A /E Representative** |  |  |
| **Commissioning Agent** |  |  |
| **Owner’s Representative** |  |  |

##### END OF CHECKLIST