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

|  |  |
| --- | --- |
| PC: | **23 90 00** |
| **ITEM:** | **Merchandiser, Upright, Grab-n-go – Medium Temperature Case**  |
| **ID:** |  |
| **AREA SERVED:** |  |

Form Filled Out By:

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

GC = General Contractor; FS = Food Contractor; EC = Electrical Contractor; BC = Balancing Contractor; OR = Owner Representative; A/E = Architect/Engineer; CA = Commissioning Agent; MC = Mechanical Contractor

XX = No Initials Required

# DOCUMENTATION VERIFICATION

Check if OK. Enter note number if deficient.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **GC** | **FS** | **EC** | **MC** | **CC** | **OR** | **A/E** | **CA** |
| Product information submitted |  |  |  |  |  |  |  |  |
| Shop drawings submitted |  |  |  |  |  |  |  |  |
| Manufacturer’s installation instructions submitted |  |  |  |  |  |  |  |  |
| Manufacturer’s startup instructions submitted |  |  |  |  |  |  |  |  |
| O & M Manuals submitted |  |  |  |  |  |  |  |  |
| Factory test report submitted if applicable |  |  |  |  |  |  |  |  |
| Manufacturer’s representative start-up and check out complete and report submitted. |  |  |  |  |  |  |  |  |

# MODEL VERIFICATION

Fill in requested information.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Installed  | **Submitted**  | **Specified**  |
| Manufacturer |  |  |  |
| Model |  |  |  |
| Refrigerant type |  |  |  |

# 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** | **Item** | **GC** | **FS** | **EC** | **MC** | **CC** | **OR** | **A/E** | **CA** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Unit in good condition with no damage present |  |  |  |  |  |  |  |  |
| 2 | Unit is level (side to side and front to back) |  |  |  |  |  |  |  |  |
| 3 | Unit interior/exterior cleaned |  |  |  |  |  |  |  |  |
| 4 | Glass to glass gaps are properly adjusted |  |  |  |  |  |  |  |  |
| 5 | Gasket and seals are in good condition |  |  |  |  |  |  |  |  |
| 6 | Confirm a minimum of 3” of space is present between the rear of the case and wall for proper air circulation |  |  |  |  |  |  |  |  |
| 7 | Confirm rear raceway can be removed for access to digital T-stat and electrical components |  |  |  |  |  |  |  |  |
| 8 | Access panels are clearly labeled and can be removed |  |  |  |  |  |  |  |  |
| 9 | Before refrigeration connection - Depress the universal line valve to ensure that coils have maintained factory pressurization |  |  |  |  |  |  |  |  |
| 10 | Confirm protective shroud is in place at merchandiser refrigeration connection  |  |  |  |  |  |  |  |  |
| 11 | Refrigerant Suction Line – Confirm line is pitched in the direction of flow |  |  |  |  |  |  |  |  |
| 12 | Refrigerant Suction Line – Confirm merchandiser suction lines enter at the top of the branch line |  |  |  |  |  |  |  |  |
| 13 | Refrigerant liquid line – Confirm take-offs to merchandiser liquid lines exit the bottom of the branch liquid line |  |  |  |  |  |  |  |  |
| 14 | Refrigerant liquid line – Confirm an expansion loop for each evaporator take-off is present. Minimum 3in loop |  |  |  |  |  |  |  |  |
| 15 | Confirm refrigerant suction lines are insulated to prevent condensation drippage |  |  |  |  |  |  |  |  |
| 16 | Verify temperature control is by means of a T-STAT and Suction Stop Solenoid. Confirm EPR Valves, Liquid Line Solenoids or electronic control devices of any kind are not used. These allow temperature swings that cause dehydration and excessive energy consumption  |  |  |  |  |  |  |  |  |
| 17 | Confirm defrost is time terminated. Defrost times should be as follows: OFF CYCLE- six times daily for 25 minutes. |  |  |  |  |  |  |  |  |
| 18 | Confirm waste outlet that is located in the center, 8” from the front of the case is not obstructed. |  |  |  |  |  |  |  |  |
| 19 | Confirm P-Trap is installed to prevent air leakage and insect entrance into the fixture |  |  |  |  |  |  |  |  |
| 20 | Condensate piping is pitched in the direction of flow. (Minimum pitch of 1/8 in per foot) |  |  |  |  |  |  |  |  |
| 21 | Ensure condensate drain is supported to relieve any stress on pipe connectors and drain hub. |  |  |  |  |  |  |  |  |
| 22 | Confirm condensate drain support is within 24” from drain hub tee. |  |  |  |  |  |  |  |  |
| 23 | Confirm condensate drain is protected against freezing |  |  |  |  |  |  |  |  |
| 24 | Confirm condensate pump can be accessed through the front of the close off panel |  |  |  |  |  |  |  |  |
| 25 | Confirm air discharge and return opening are free of obstructions to provide proper refrigeration and air curtain performance |  |  |  |  |  |  |  |  |
| 26 | Confirm the Danfoss AKC-210-CC Controller’s set point is set to 24 degrees. |  |  |  |  |  |  |  |  |

# 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 has 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