

PRE START UP CHECKLIST



INSTRUCTIONS:

Before a system is started up, this PRE-START UP CHECKLIST must be completely filled out for each unit by the installing contractor and returned to the startup company and Data Aire, Inc. The Startup date will be scheduled after the startup company has reviewed and approved this PRE-START UP CHECKLIST.

Failure to return this sheet may result in **delay of startup and additional charges.**

Please contact your startup company or Data Aire Technical Support if any assistance is needed in filling out this checklist.

During the Start-up, the startup company will visually inspect the installation, start-up the Data Air equipment, verify component operation, verify charge on equipment and fill out start-up reports for each unit, with the assistance of a local refrigeration technician.

Start Up Exclusions and Terms:

Exclusions:

- Equipment or component installation.
- Removable, relocation, disposal or cost of any scrap metal such as compressors, coils, fan motors, blower assemblies and sheet metal, etc.
- Removable, disposal or cost of any refrigerant, oil, gases or hazardous material.
- Commissioning/Balancing.
- Draining of the chill water coil.
- Preparation of unit containment.
- Rewiring of incoming voltage, wiring of BMS, Fire alarm (EPO), Zonemaster, smoke detector and remote devices.
- Leak Test and Evacuation.
- Leak repair to any existing piping or water valves
- Refrigerant, unless otherwise specified in the startup contract.
- Labor/service warranty, unless otherwise specified in the startup contract.

Terms:

- Scheduling will be coordinated after receipt of Purchase order.
- To confirm scheduling, complete and return Pre-Start-Up Check List to the startup Company at least two weeks in advance of the requested service date.
- All major and refrigeration tools should be provided by end user or mechanical contractor, unless otherwise specified in the startup contract.
- Customer will provide all materials that are not included in the contractual scope of work, including refrigerant.
- Units must be vacuumed down to 500 microns and pre-charged with 80% of its total refrigerant charge or approximately 3 pounds of R410A or R407C per nominal ton of capacity.
- Air cooled systems with receiver (Flooded System) should have the vacuum broken with approximately 4 pounds of R410A/R407C per nominal ton of capacity.
- If the job is extended due to the customer lack of readiness, customer will incur additional charges.

Terms, Continued:

- Customer agrees to promptly notify the Startup Company of any coordination items, such as schedule changes or other trades, that may impact work to be performed by Startup Company. A \$200.00 rescheduling or cancellation fee shall be assessed, in addition to any directly associated cost incurred by Startup Company because of the change, for any changes made after the service date is confirmed by the Startup Company. Buyer agrees to accept and pay such cancellation charges.
 - Work is to be performed between 7:00 AM and 4:00 PM local time, Monday through Friday. Should weekend, holiday, nightly or overtime scheduling be needed please inform Data Aire Factory Service Team for scheduling and rate information.
 - Startup Company will start up one to two units per day.
 - Please contact the Startup Company for a revised quotation if accelerated startup will require additional personnel; or if conditions dictate that startup will require additional trips to the site.
 - The Startup Company will work in a way to keep all their employees and other trades safe.
 - The Startup Company payment terms are NET 30 days from invoice date, for customers with established credit with Data Aire. (If credit cannot be established, then Startup Company will require payment in advance).
 - All work will be completed in a workman like manner, according to standard practices.
 - Equipment needs to be installed according to manufacturer's guidelines. The Startup Company or Data Aire, Inc. will not be responsible for damages or repairs caused by improper design or installation.
 - It is the responsibility of the installing contractor to leak check the entire system, both refrigeration and water. This includes checking refrigeration tubing, compressor roto-lock valves, all flare fittings, pressure controls, all condenser and fluid cooler fittings, head pressure control valves, water lines, pumps, humidifier make-up water, condensate lines and chilled water lines.
 - The Customer must make the job site and equipment available during start-up date. Customer agrees to provide unobstructed access to the equipment for start-up. Data Aire, Inc. personnel will be allowed to start and stop equipment as necessary to perform start-up and be permitted use of existing facilities and building services.
 - The Customer is responsible for providing load banks.
 - The Customer is responsible to coordinate all trades associated with the equipment installation to be present and available during start-up.
 - The Mechanical Contractor needs to provide a refrigeration technician with charging and recovering equipment to add or remove refrigerant and to facilitate the start-up while Data Aire is onsite.
 - The Customer is responsible to remove or protect any personal property such as elevators, tiles, walls, roof, furniture, etc....
 - All labor performed by Data Aire, Inc. is 100% guarantee and warranted for 90 days. Labor Warranty begins on the date of start-up completion and will end 90 days after.
 - Data Aire, Inc may terminate the warranty immediately upon nonpayment. We will not be held responsible for any indirect or consequential damage of a commercial nature such as, loss of revenue or loss of use of any equipment as a result of suspension of labor/service due to non-payment.
 - Please note that periodic maintenance is required as recommended in the owner's manual to ensure proper performance of the equipment. Repairs that are required due to lack of periodic maintenance are not covered by warranty agreement. You are required to provide proof of yearly maintenance service by a qualified service technician to keep your warranty valid
-

A MINIMUM OF TWO WEEKS NOTIFICATION IS REQUIRED TO SCHEDULE PERSONNEL.

TODAY'S DATE: _____ REQUESTOR NAME: _____

REQUESTOR PHONE: _____ REQUESTOR EMAIL: _____

PROJECT NAME: _____

ADDRESS: _____

INSTALLING CONTRACTOR: _____

ONSITE POC: _____ SITE POC PHONE: _____

DATA AIRE JOB# : _____

- | | | | |
|--------------|-------|-----------|-------|
| 1. MODEL #: | _____ | SERIAL #: | _____ |
| 2. MODEL #: | _____ | SERIAL #: | _____ |
| 3. MODEL #: | _____ | SERIAL #: | _____ |
| 4. MODEL #: | _____ | SERIAL #: | _____ |
| 5. MODEL #: | _____ | SERIAL #: | _____ |
| 6. MODEL #: | _____ | SERIAL #: | _____ |
| 7. MODEL #: | _____ | SERIAL #: | _____ |
| 8. MODEL #: | _____ | SERIAL #: | _____ |
| 9. MODEL #: | _____ | SERIAL #: | _____ |
| 10. MODEL #: | _____ | SERIAL #: | _____ |

CONFIRM THE FOLLOWING HAS BEEN COMPLETED PRIOR TO SCHEDULING.

MECHANICAL:

- | | |
|--|---|
| 1. Indoor unit installed according to plans, applicable code regulations, Data Aire installation guidelines and is ready for start up? | Initial
Yes [<input type="checkbox"/>] |
| 2. Physical damage is apparent on equipment?
Yes [<input type="checkbox"/>] Description of damage: _____ | No [<input type="checkbox"/>] |
| 3. Service access doors on unit are accessible and capable of opening fully? | Yes [<input type="checkbox"/>] |
| 4. Ductwork is properly installed, sealed to prevent air loss and free of debris to allow proper airflow? | Yes [<input type="checkbox"/>] N/A [<input type="checkbox"/>] |
| 5. Volume control or fire damper(s) are operable and in the open position? | Yes [<input type="checkbox"/>] N/A [<input type="checkbox"/>] |
| 6. Are filter(s) able to be removed from unit? | Yes [<input type="checkbox"/>] |
| 7. Are filter(s) in place and clean? | Yes [<input type="checkbox"/>] |
| 8. All raised floor tiles are set in place and discharge grills (perforated panels) are located for optimum air movement? | Yes [<input type="checkbox"/>] N/A [<input type="checkbox"/>] |
| 9. Height of raised floor is at least 12" or higher? | Yes [<input type="checkbox"/>] N/A [<input type="checkbox"/>] |
| 10. Are tuning vanes or air scoop installed in floor stand? | Yes [<input type="checkbox"/>] N/A [<input type="checkbox"/>] |

11. Area under raised floor is clear of debris? Yes [] N/A []
12. Remote condenser/fluid cooler set in place according to plans, applicable code, Data Aire installation guidelines and are ready for startup? Yes []
13. Circulating pump(s) for fluid cooler(s) are set in place according to plans, applicable code, Data Aire installation guidelines and are ready for startup? Yes [] N/A []
14. Under-floor water detection probe(s) are mounted per Data Aire installation guidelines? Yes [] N/A []
15. High Water Condensate Pan sensors are mounted per Data Aire installation guidelines? Yes [] N/A []
16. Discharge air sensors are mounted per Data Aire installation guidelines? Yes [] N/A []
17. Hot Water Reheat Protection sensors are mounted per Data Aire installation guidelines? Yes [] N/A []
18. Humidistat & Temperature sensors are mounted per Data Aire installation Guidelines and is sensing room temperature? Yes []
19. Day and night sensors are mounted per Data Aire installation guidelines? Yes [] N/A []
20. Remote Thermostat bulb sensors are mounted on Fluid Cooler per Data Aire installation guidelines? Yes [] N/A []
21. Are "Field Installed" components installed? (i.e. Sensors, Leak Detection, water reg valves, etc.) Yes [] N/A []

PIPING INSTALLATION (General):

1. Condensate drain line(s) are installed according to plans, applicable code, Data Aire installation guidelines and are ready for startup?? Yes []
2. Humidifier make-up water line is installed? Yes [] N/A []
3. Is all the piping pertaining to this unit secure per local codes? Yes []

PIPING INSTALLATION (Water Cooled /Chilled Water):

1. Water/glycol piping to remote fluid cooler or tower is installed per plans using standard piping practices, Data Aire guidelines and properly secured/supported? Yes [] N/A []
2. Chilled water supply is available to unit? Yes [] N/A []
3. Strainer installed in water/glycol lines? Yes [] N/A []
4. Air vents installed in water/glycol lines at highest point in system? Yes [] N/A []

5. Are water shut off valves installed before the unit? Yes [] N/A []
6. Water/glycol lines are free of debris? Yes [] N/A []
7. Was glycol added to 10-15 PSI standing pressure and pumps run to remove air from the system? Yes [] N/A []
8. Water/glycol lines are purged of air? Yes [] N/A []
9. System has a _____% concentration of glycol solution? Yes [] N/A []
10. Are the chilled water circuits properly designed with balancing devices, so it does not exceed operating pressure of system specifications? Yes [] N/A []
11. Is the system fully balanced and tested prior to Start up? Yes [] N/A []
12. Is the expansion tank installed above fluid cooler? Yes [] N/A []
13. Are the water and glycol pipes insulated inside the unit? Yes [] N/A []

PIPING INSTALLATION (Air Cooled):

1. Refrigeration piping to remote air-cooled condenser installed per plans using standard piping practices, Data Aire piping guidelines and properly secured/supported? Yes [] N/A []
2. Liquid line lift is no more than 15 feet high? Yes [] N/A []
3. Discharge check valve(s) installed in the refrigeration piping? Yes [] N/A []
4. Are traps installed on the discharge or suction lines at the bottom of every vertical run and at every 15-20 feet in height? Yes [] N/A []
5. Are inverted traps installed at the top of every riser and above the condenser coil? Yes [] N/A []
6. Are horizontal gas lines sloped downward in the direction of the refrigerant flow? The recommended slope is 1/2" (12 mm) for every ten (10) feet (3 m) of line length. Yes [] N/A []
7. What type of brazing material and percent of silver were used on copper-to-copper fitting? _____, _____%
8. What type of brazing material and percent of silver were used on dissimilar metals? _____, _____%
9. Was dry nitrogen used during the brazing? Yes []
10. Has the entire system been leak tested with no more than 150 PSI of dry nitrogen? Yes []
11. Refrigeration system has been evacuated to below 500 microns and the vacuum broken with the appropriate refrigerant charge as specified in the terms and conditions? Yes [] N/A []
 - a. Holding charge volume? _____ lbs _____ oz
Note: Installing contractor must furnish refrigerant to complete charging (Start up tech does not provide)
12. Are refrigerant lines insulated? Yes [] No []

13. Refrigeration pipe distance between indoor and outdoor unit? _____ feet, _____ inches
 Vertical pipe Height? _____ feet, _____ inches
 # of traps per line? _____
 # of elbows per line? _____
 # of 45° fittings per line? _____

ELECTRICAL:

1. Field supplied voltage, hertz and phase corresponds with rating on nameplate of equipment? Yes []
2. Were copper conductors used? Yes []
3. Is the voltage coming into the unit the same as the unit's name plate? Yes []
4. Utility service is sufficient to handle the load imposed by the Data Aire equipment? Yes []
5. Data Aire equipment is properly grounded per applicable code regulations and guidelines? Yes []
6. Permanent power is available and can be energized on? (Startup cannot be performed with temp power)
 - A. Indoor Unit Yes []
 - B. Remote Condenser/Fluid Cooler Yes []
 - C. Circulating Pumps Yes [] N/A []
7. Required interconnecting control wiring is installed and connected per plans and Data Aire installation guidelines? Yes []
8. Auxiliary contact wiring between indoor unit and remote condenser/fluid cooler is installed? Yes [] N/A []
9. Remote shutdown contacts or switch is wired to unit? Yes [] N/A []
10. Remote alarm contact is wired to unit? Yes [] N/A []
11. Three phase equipment has been checked for proper rotation? Yes [] N/A []

GENERAL:

1. Is the owners' packet onsite (i.e. IO&M, wiring diagrams, startup paperwork)?
2. Space is adequately sealed to maintain a temperature of 65°F? Yes []
3. Is the space loaded with heat? Yes []
4. Does the space have a vapor barrier in the walls, ceiling and floor? Yes []
5. What type of vapor barrier is used:

Walls? _____

Ceiling? _____

Floor? _____

6. Facility: Computer Room []
 Grow Room []
 Telecom Site []
 MRI Facility []
 Other []

GENERAL:

7. Is security check-in required? Yes [] No []
8. Does Data Aire have Clearance to the site? Yes []

COMMENTS: _____

CONFIRM THAT YOU HAVE INSTALLED THE EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND THAT YOU HAVE READ, UNDERSTAND AND AGREE TO ALL TERMS AND EXCLUSIONS LISTED ABOVE AND THAT THE PRECEEDING IS ALL ACCURATE INFORMATION:

_____ _____ _____
Agent/Person Requesting Start-up Title Company Name of Agent

Authorized Signature: _____ **Date:** _____

Data Aire, Inc.
230 W. Blueridge Avenue, Orange CA 92865-4255
(714) 921-6000 / (800) 347-2473 / Fax (714) 921-6010
service@dataaire.com