

FIELD START-UP TEST SHEET

230 W. BlueRidge Ave, Orange, CA 92865
(714) 921-6000 Fax: (714) 921-6010
www.dataaire.com



FLOOR MOUNTED DIRECT EXPANSION SYSTEMS & MINI, MINI-PLUS, LCS CEILING, (gPOD) SYSTEMS

Air Cooled, Water/Glycol Cooled and Chilled Water Units

Instructions: This field start-up test sheet must be completely filled out during start-up and returned to Data Aire, Inc. Failure to return the test sheet may void or limit warranty coverage. Some of the terms listed require specific information to be entered and others only need a check mark that verifies a test of inspection has been conducted. Items not applicable should be marked "N/A".

UNIT IDENTIFICATION:

Job Number: _____ Model Number: _____ Serial Number: _____

STARTUP VOLTAGE:

A - B _____ A - C _____ B - C _____

STARTUP CONDITIONS:

Supply Air Temperature (°F) _____ Condenser/Ambient Air Temp. (°F) _____

Return Air Temperature (°F) _____ Return Air Humidity (%) _____

FAN DATA (EVAPORATOR):

Plug Fan Wheel Movement Free and Clear of any Debris? Yes: No: CFM*: _____

Motor HP: _____ Motor KW: _____ Nameplate voltage: _____ Nameplate F.L.A.: _____

Motor, Drive and Pulleys Aligned? Yes: No: N/A: Drive and Pulley Set Screws Tight? Yes: No: N/A:

Blower Wheel Clean of Debris? Yes: No: N/A: Blower Pulley Size: _____ Belt Size: _____

Fan Motor Voltage:

Fan#1	L1-L2 _____ V	L1-L3 _____ V	L2-L3 _____ V
Fan#2	L1-L2 _____ V	L1-L3 _____ V	L2-L3 _____ V
Fan#3	L1-L2 _____ V	L1-L3 _____ V	L2-L3 _____ V
Fan#4	L1-L2 _____ V	L1-L3 _____ V	L2-L3 _____ V
Fan#5	L1-L2 _____ V	L1-L3 _____ V	L2-L3 _____ V
Fan#6	L1-L2 _____ V	L1-L3 _____ V	L2-L3 _____ V

Fan Motor Amp Draw:

L1 _____ A	L2 _____ A	L3 _____ A	_____ RPM
L1 _____ A	L2 _____ A	L3 _____ A	_____ RPM
L1 _____ A	L2 _____ A	L3 _____ A	_____ RPM
L1 _____ A	L2 _____ A	L3 _____ A	_____ RPM
L1 _____ A	L2 _____ A	L3 _____ A	_____ RPM
L1 _____ A	L2 _____ A	L3 _____ A	_____ RPM

Fan Speed:*

* If measurement device is available

INDOOR CONDENSER (BLOWER): N/A:

Wheel Movement Free and Clear of any Debris? Yes: No: CFM*: _____

Motor HP: _____ Motor KW: _____ Nameplate voltage: _____ Nameplate F.L.A.: _____

Motor, Drive and Pulleys Aligned? Yes: No: N/A: Drive and Pulley Set Screws Tight? Yes: No: N/A:

Blower Wheel Clean of Debris? Yes: No: N/A: Blower Pulley Size: _____ Belt Size: _____

Fan Motor Voltage: L1-L2 _____ V L1-L3 _____ V L2-L3 _____ V

Motor Amp Draw: L1 _____ A L2 _____ A L3 _____ A

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Water cooled Heat Exchanger (CIRCUIT # 1): N/A:

Supply Water Temper: _____°F Return Water Temper: _____°F Delta Temper: _____°F

Supply Water Pressure: _____PSIG Return Water Pressure: _____PSIG Pressure Drop: _____PSIG

Water Regulating Valve Spring Adjusted: Yes: No:

REGRIGERANT TYPE: R410A R407A Charge: _____ Lbs _____ Oz

COMPRESSOR 1: Variable Speed: Fixed Speed:

NOTE: Charge with compressor running at high speed only. When checking operating conditions allow the unit to run for 10 minutes before recording any readings. This will allow the refrigeration to stabilize, the coil to get wet, and the room conditions to stabilize).

Compressor oil sight-glass level before startup: _____ %

Crankcase heater temperature before start up: _____°F **Note:** Before starting a compressor, the crankcase heater should be energized for a minimum of 12 hours to reduce the possibility of liquid slugging on start-up.

Compressor oil condition during the first 10 minutes of start-up _____ Clear _____ Foam

Operating Amps: L1 _____ L2 _____ L3 _____

Hot Gas Discharge Parameters:

Discharge Line Temp: _____°F

Discharge Pressure: _____PSIG

Discharge Sat. Temp: _____°F

Discharge Superheat: _____°F

Recommended Discharge Superheat:
45 - 65°F

Liquid Line Parameters:

Liquid line Pressure: _____PSIG

Liquid line Sat. Temp: _____°F

Liquid line Temperature: _____°F

Subcooling: _____°F

Recommended Sat temp 92 - 125°F

Recommended Subcooling: 8 - 12°F

Suction Gas Parameters:

Suction Line Temp: _____°F

Suction Pressure: _____PSIG

Suction Sat. Temp: _____°F

Suction Superheat: _____°F

Recommended Sat temp 34°F - 40°F

Recommended Superheat: 12 - 18°F

EVD Percent Level: _____ % **Note:** When the system is properly charged the EEV valve should be between 55% and 68% with an indoor temperature of 70°F to 74°F

Liquid Solenoid Valve: Yes: No: Sight Glass Moisture Indicator Status: Green Yellow

Compressor Unloader: Yes or No Discharge Pressure (unloaded) _____PSIG

Suction Temperature (unloaded) _____°F Amps (unloaded) L1 ___ L2 ___ L3 ___

Entering Air Temperature: _____°F

Exiting Air Temperature: _____°F

Temp. Differential Evap. Coil – Delta T: _____°F

Water cooled Heat Exchanger (CIRCUIT # 2): N/A:

Supply Water Temper: _____°F Return Water Temper: _____°F Delta Temper: _____°F

Supply Water Pressure: _____PSIG Return Water Pressure: _____PSIG Pressure Drop: _____PSIG

Water Regulating Valve Spring Adjusted: Yes: No:

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Air Cooled, Water/Glycol Cooled and Chilled Water Units

REGRIGERANT TYPE: R410A R407A Charge: _____ Lbs _____ Oz

COMPRESSOR 2: Variable Speed: Fixed Speed:

NOTE: Charge with compressor running at high speed only. When checking operating conditions allow the unit to run for 10 minutes before recording any readings. This will allow the refrigeration to stabilize, the coil to get wet, and the room conditions to stabilize).

Compressor oil sight-glass level before startup: _____ %

Crankcase heater temperature before start up: _____ °F **Note:** Before starting a compressor, the crankcase heater should be energized for a minimum of 12 hours to reduce the possibility of liquid slugging on start-up.

Compressor oil condition during the first 10 minutes of start-up _____ Clear _____ Foam

Operating Amps: L1 _____ L2 _____ L3 _____

Hot Gas Discharge Parameters:

Discharge Line Temp: _____ °F

Discharge Pressure: _____ PSIG

Discharge Sat. Temp: _____ °F

Discharge Superheat: _____ °F

Recommended Discharge Superheat:
45 - 65°F

Liquid Line Parameters:

Liquid line Pressure: _____ PSIG

Liquid line Sat. Temp: _____ °F

Liquid line Temperature: _____ °F

Subcooling: _____ °F

Recommended Sat temp 92 - 125°F

Recommended Subcooling: 8 - 12°F

Suction Gas Parameters:

Suction Line Temp: _____ °F

Suction Pressure: _____ PSIG

Suction Sat. Temp: _____ °F

Suction Superheat: _____ °F

Recommended Sat temp 34°F - 40°F

Recommended Superheat: 12 - 18°F

EVD Percent Level: _____ % **Note:** When the system is properly charged the EEV valve should be between 55% and 68% with an indoor temperature of 70°F to 74°F

Liquid Solenoid Valve: Yes: No: Sight Glass Moisture Indicator Status: Green Yellow

Compressor Unloader: Yes or No _____ Discharge Pressure (unloaded) _____ PSIG

Suction Temperature (unloaded) _____ °F Amps (unloaded) L1 ___ L2 ___ L3 ___

Entering Air Temperature: _____ °F

Exiting Air Temperature: _____ °F Temp. Differential Evap. Coil – Delta T: _____ °F

REHEAT: N/A:

Type: Electric Hot Water Hot Gas Steam Other, Describe: _____

Operating Amps: L1 _____ L2 _____ L3 _____ High Temp Safety Operation: Yes: No:

Chilled Water/Energy Saver:

Energy Saver Cooling: Yes: No: Auxiliary Chilled Water Cooling: Yes: No:

DC Volt Setting: _____ Modulate Open: Yes: No: Modulate Close: Yes: No:

Actuator Model Number: _____ Valve Type: 2-Way _____ 3-Way _____ Valve Size: _____

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HUMIDIFIER: N/A:

Steam Generator: Yes: No: Operating Amps: L1 _____ L2 _____ L3 _____

Water Level: _____ % Capacity Setting: _____ % Water Pressure Switch: Yes: No:

The following items must be installed, checked, adjusted or verified, as required:

Remote Shutdown Jump:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Smoke Detector Magnet Test:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Filters Clean:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	System Leak Checked:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Unit in Standby Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Compressor VFD Fault Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Comp. # 1 High pressure Alm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Comp. # 2 High pressure Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Water Detection Probe Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Underfloor Water Detection Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
No Airflow Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Dirty Filter Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Manual Override Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	High Condensate Water Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Expansion Module:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Heat Exchanger Type:	Plate Fin: <input type="checkbox"/> Cox: <input type="checkbox"/>
Pump Down:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Phase Loss Relay:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
No Water Flow Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	AC Power Loss Cap:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Fan Motor Overload Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Fan Failure Alarm:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Liquid Line Solenoid Valve:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Power Meter:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Hot-Gas Bypass Valve:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Receiver:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Hot-Gas Bypass Solenoid Vlv:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Condenser Aux. Contact:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Humidistat & Temp sensor:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Discharge Air Sensor:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
HW Reheat Protection Sensor:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	CO2 Sensor Setting: _____	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Electrical Connections Tight	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Copper Conductors Used:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Disconnect Switch:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Dual Power ATS:	Yes: <input type="checkbox"/> No: <input type="checkbox"/>

INSTALLATION:

Unit Clearance: Front _____" Back _____" Right Side _____" Left Side _____"

Location of condenser: _____ Total Vertical Height: _____ Total Horizontal length: _____

Field Piping Size: Discharge Line: _____ "OD Liquid Line: _____ "OD Suction Line: _____ "OD

Total Field Piping Length: _____ Feet Total # of Elbows: _____ Total # of traps: _____

Discharge Check Valve Installed? Yes: No:

DATA ALARM PROCESSOR (dap4) STARTUP SHEET CHECKLIST COMPLETED & ATTACHED? Yes: No:

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Comments:

Customer Acceptance:

Company Name: _____

Company Representative: _____ Title: _____

Authorized Signature: _____ **Date:** _____

Start-Up Completed by:

Company Name: _____ Telephone: (____) _____

Address: _____

Startup Technician: _____ Date: _____

Email: _____