

# Airtek Smart Cycle Plus

**Models SCP1200 to SCP3000**

User Guide - PUB042209 REV. B

aerospace  
climate control  
electromechanical  
**filtration**  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding

## Contents

1	Getting Started	3
1.1	Environmental & Location Considerations	3
2.	Dryer Installation	4
2.1	Plumbing the Air Lines	4
2.2	Electrical Connections	5
2.3	Electrical Hook-up	6
3.	Controls	7
3.1	DP5550 Displays	9
4.	Start-Up Procedure	13
4.1	Smart Cycle Plus 1200 – 3000	13
4.2	When Operating Dryer	14
5.	Routine Maintenance	15
6.	Diagnostic Codes & Troubleshooting	16
7.	Optional Control Center	18
8.	Maintenance Charts	40
8.1	Maintenance Procedures	40
8.2	Routine Maintenance	41
10.	Spare Parts List	79
11.	Warranty and Product Registration	80

## 1 Getting Started

Before unpacking/uncrating your new dryer, inspect the carton/crate for damage. Note any damage on the freight bill. File notice of concealed damage if:

- (a) there are any dents in the cabinets
- (b) there is any sign of oil on the skid or floor
- (c) the refrigerant gauge shows NO pressure  
(Upper right side – look for hole in packing)

File these claims with the carrier immediately!

Otherwise, proceed with unpacking/uncrating the unit.

### 1.1 Environmental & Location Considerations

Following these guidelines will help insure that your new dryer will provide safe and reliable service.

- Unless supplied for special conditions, all SCP dryers must be located indoors in an area with an ambient temperature between 41 - 100°F (5-37.7°C) and free from explosive and corrosive fumes. Three (3) feet (92cm) of space must be allowed between all open grills, walls, or other objects.

If the dryer is installed in a confined area, an exhaust system must be provided to eliminate re-circulation of hot atmospheric air.

- High ambient temperatures affect the outlet dew point of the dryer. For every 10° of ambient temperature over 100°F (37.7°C) a decrease of 10% of dryer performance is encountered with air cooled dryers. The unit must not operate in an ambient of over 115°F (46°C). If ambient temperature conditions are over 100°F (37.7°), water cooled dryers are recommended.
- Unit must be installed indoors.

## 2. Dryer Installation

- NEVER work on unit under pressure
- NEVER work on unit when power is connected

CAUTION



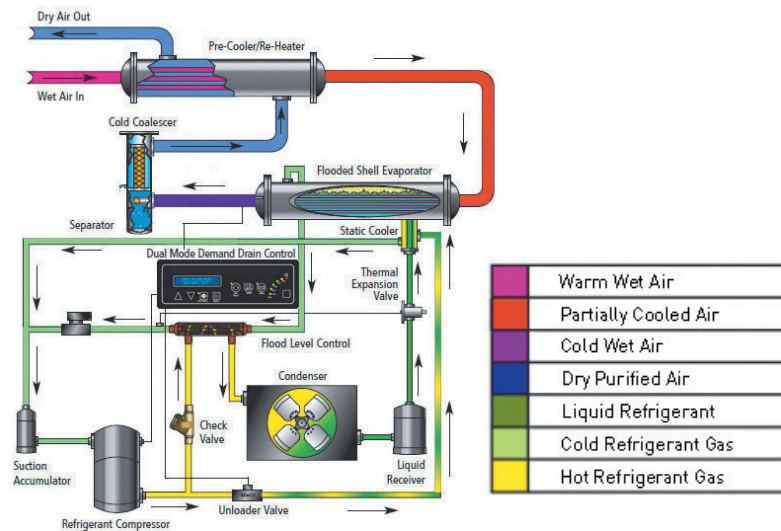
### IMPORTANT

- DO NOT over pressurize unit.
- DO NOT pass air through the unit until it has been stabilized (operating about 15-20 minutes)

### 2.1 Plumbing the Air Lines

The dryers are shipped ready to run. All connections are made to the outside of the cabinet

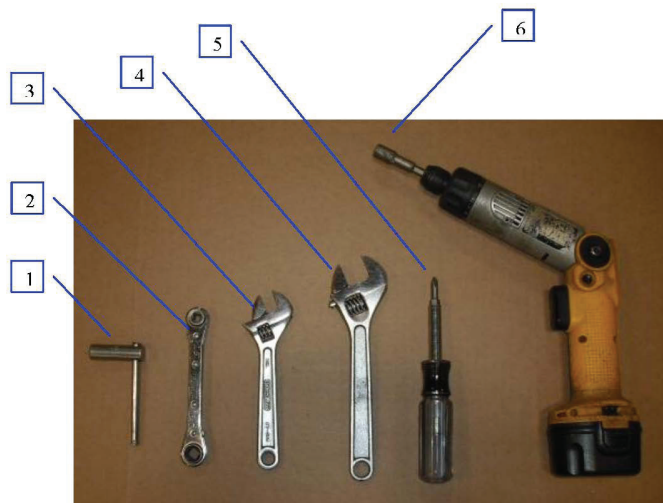
- Air piping must be supported independently of the dryer.
- Direction of the air flow must be observed for proper installation.



- Use unions or flange joints on inlet and outlet pipe connections.
- If vibration is present, flexible metal hoses must be installed to prevent the vibration from being transmitted to the dryer.
- Install a bypass line and gate valves to permit isolation of the dryer from the air system. This is done to provide easy service and/or removal of the dryer without interruption of air to the system.

USE TWO (2) WRENCEHS WHEN CONNECTING DRYER TO PIPING. THIS WILL PREVENT DAMAGE TO INTERNAL AIR LINES.





Recommended tools for Start-up

1. Roto-lock packing wrench (special)
2. Refridge service wrench
3. Small adjustable wrench
4. 6" adjustable wrench
5. Philips screw driver
6. Nut driver for panel removal

## 2.2 Electrical Connections



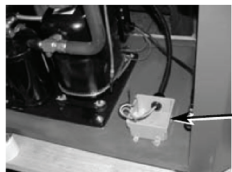
To be performed by a qualified person only. Risk of serious injury or death. Before connecting electrical power to the dryer check for correct voltage and phase at the connection box. All units must be externally grounded to protect against severe electrical shock.

### Service Switch (On Models SMART CYCLE PLUS 1200 to 3000)



Toggle Switch shown in the "OFF" position as shipped. Switch must remain in the "OFF" position until ALL electrical wiring has been completed.

## 2.3 Electrical Hook-up



Voltage	Phase	Wire Colors
115V	Single	Black, White, Green
230V	Single	Black, Red, Green
230V	3 Phase	3 Black, 1 Green
460V	3 Phase	3 Black, 1 Green
575V	3 Phase	3 Black, 1 Green

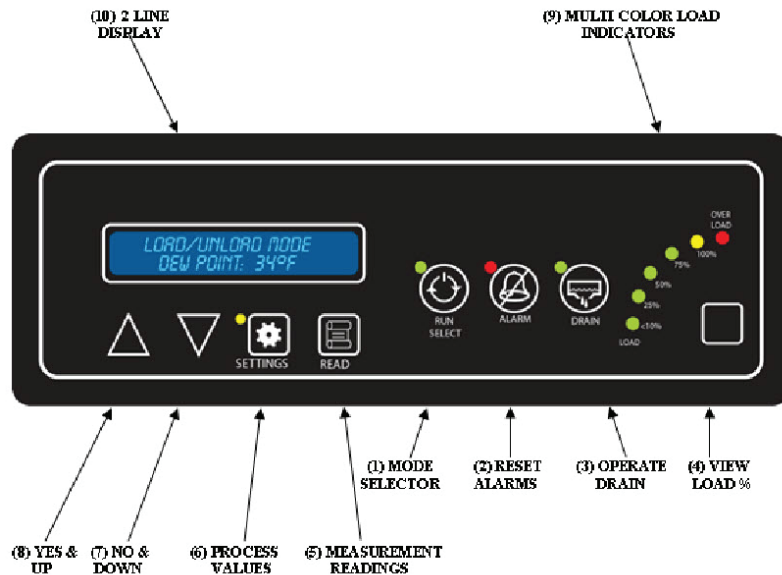
1. Remove side cover and locate electrical box.
2. Remove electric box cover from inside unit.
3. Locate the wires.
4. Locate hole on side of box, place and tighten connector, run wires through connector.
5. Using wire connectors, connect Black to Hot wire, White to Neutral and Green to Ground wire. Refer to table above for voltage and wire colors.
6. Make sure no bare wire is exposed; replace box cover and screw closed.
7. Turn Service Switch "ON".
8. Replace side covers.

Wire the dryer separately from the air compressor. The dryer must not cycle with the air compressor.

Phase rotation is important if the dryer has a 3 phase condenser (SCP3000). Fans must pull air through condenser coil.

Crankcase heaters are pre-wired from the factory to the line side of the compressor contactor. When power is applied to the dryer, the heater will energize. Heater must be energized for 12 hours prior to start-up and after prolonged shut down. The power must be left on at all times except when servicing.

### 3. Controls



#### (1) – RUN SELECT KEY: (MODE SELECTOR)

Push Key to toggle through the four modes of operation ('AUTO' Run Mode, 'LOAD/UNLOAD' Mode, 'CYCLING' Mode, and 'OFF'). The Display 'main screen' will indicate all modes of operation along with the current Dew Point measurement.

#### (2) – ALARM KEY: (RESET ALARMS)

When the ALARM Key red 'LED' is flashing, the system has experienced an alarm event. The Display will indicate all alarms when they occur. Pushing the ALARM Key will attempt to clear the fault. Note with some alarms, the system will need to be restarted.

#### (3) – DRAIN KEY: (OPERATE DRAIN)

When the 'DRAIN' Key is pressed, the drain solenoids will operate for the programmed time duration. (see Settings, Drains). The green LED will illuminate indicating the drains are open.

#### (4) – LOAD KEY: (VIEW LOAD %)

Pushing the 'LOAD' Key will toggle the Display between indicating 'Mode & Dewpoint' (standard), and, 'Percent of Load' (optionally) that the dryer is experiencing. The green LED will illuminate indicating the display option is active.

#### (5) – READ KEY: (MEASUREMENT READINGS)

The 'READ' Key will scroll through each system measurement.

#### (6) – SETTINGS KEY: (PROCESS VALUES)

The 'SETTINGS' Key will scroll through each user setting (process value). The amber LED will illuminate indicating the display is active.

(7) – YES / UP KEY: (YES & UP)

When the 'YES / UP' Key is pressed, the controller will either increment up or toggle depending on which user setting is selected in the 'SETTINGS' menu. Note the SETTINGS Key amber LED will now flash. To save the 'new' process value setting, press the SETTINGS Key again – a message 'ARE YOU SURE?' will display (answer either YES or NO, the LED will stop flashing).

(8) – NO / DOWN KEY: (NO & DOWN)

When the 'NO / DOWN' Key is pressed, the controller will either decrement up or toggle depending on which user setting is selected in the 'SETTINGS' menu. Note the SETTINGS Key amber LED will now flash. To save the 'new' process value setting, press the SETTINGS Key again – a message 'ARE YOU SURE?' will display (answer either YES or NO, the LED will stop flashing).

(9) – MULTI COLORS INDICATOR:

These LED's will illuminate in RED, AMBER and GREEN. They represent a 'visual' indication as to dryer loading. If all the LED's are RED, this is the worst possible state (a combination of very bad dew point and or overloaded). The other side of the spectrum would be only one GREEN LED illuminated; indicating less then (<10%) ten percent capacity is being utilized and all is OK.

(10) – MAINTENANCE MONITOR:

The controller will remind the user to perform maintenance on the dryer every six month. The Display will indicate (and the ALARM LED will flash), the statement "CHANGE FILTER." IMPORTANT – The user should change the coalescing filter on a regular basis. Also do all other recommended maintenance (see maintenance section of the Operating Manual) at this time.

To reset the 'Maintenance Monitor' at the completion of the maintenance procedures, push the ALARM Key and when the "HAS FILTER BEEN CHANGED? (YES / NO)" message is in the Display, press the 'YES' Key. Pressing the YES Key will reset the Change Filter timing for six months. Selecting the 'NO' key will exit the menu and the message will repair again in 8 hours.

OTHER FEATURES:

On 'power-up' the Display will indicate the system configuration (System Operating Code #, CFM Range and Firmware Revision) for three seconds.



Dual Pressure Gauge



11

(11) Air Inlet & Outlet PSI Gauges. Indicates that unit is pressurized. Unit MUST be depressurized and bypassed before any service work is done on air system. Excessive pressure drop (more than 5 PSIG) across dryer indicates water may be freezing in the evaporator.

### 3.1 DP5550 Displays

Power On Screen – Displayed for 3 seconds after power-on or reset

[4] 1500-3000 CFM

1.0.4.9x/Dec 1 2009

Model and Size  
Firmware Rev/Date

Main Display - System OFF

SYSTEM OFF

Press Run Select

Main Display - System Running, No Alarms

Press the RUN SELECT key to cycle thru the operating modes

AUTO MODE (L)

DEW POINT: 36°F

Operating Mode  
Operating Dew Point

Operating Modes

“SYSTEM OFF”

“AUTO MODE (L)” (L) = load/Unload Mode,  
(C) = Cycling Mode

“LOAD/UNLOAD MODE”

“CYCLING MODE”

Main Display - System Running, with Warning Alarms

HIGH INLET TEMP

DEW POINT: 36°F

Alarm Description(s)  
Operating Dew Point

Warning Alarms

“HIGH DEW POINT”

“DRAIN FAULT”

“HIGH CONDENSER TEMP.”

“HIGH INLET TEMP”

“HIGH DIFF PRESSURE”

“BAD SENSOR WARNING”

“CHANGE FILTER”

Note: if more than one alarm condition exists, then the top line of the display will automatically cycle thru all active alarms.

Main Display - System Shutdown Due To Critical Alarm

HIGH DISCHARGE PRES.	Alarm Description
Alarm Shutdown	Shutdown status

Critical Alarms

- “DRYER OVERLOAD”
- “BAD SENSOR SHUTDOWN”
- “LOW SUCTION PRESSURE”
- “HIGH DISCHARGE PRES.”
- “HIGH SUPERHEAT”
- “EVAPORATOR FROZEN”
- “EMERGENCY STOP”
- “BAD PUMPDOWN”
- “SYSTEM FAULT”

Press the ALARM key to reset all alarms

AUTO MODE (L)
Alarm Shutdown

Press the RUN SELECT key to restart the dryer after an alarm

Note: if more than one alarm condition exists, then the top line of the display will automatically cycle thru all active alarms.

Read System Parameters

Press the READ key to cycle thru the system parameter values

Dew point	Parameter Description
36°F	Parameter Value
Dew Point Temp.	0 thru 200°F
Superheat Temp.	0 thru 100°F
Suction Temperature	0 thru 200°F
Suction Pressure	0 thru 600 psi
Discharge Pressure	0 thru 600 psi

Inlet Temperature            0 thru 200°F  
Condenser Temperature    0 thru 200°F

Note: The parameter value will display “FAULT!” if the sensor input is invalid

Settings Menu - User Settings  
Press the SETTINGS key to cycle thru the user settings

TARGET DEW POINT?

36 °F

Setting Description

User Settings

	Default	Settings
TARGET DEW POINT?	38 oF	36 thru 50 °F
DRAIN DURATION?	2 secs	1 thru 30 seconds
DRAIN CYCLE?	60 mins	0 thru 60 minutes
MAX CONDENSER TEMP?	100°F	0 thru 125°F
MAX INLET TEMP?	101°F	0 thru 125°F
TEMPERATURE UNITS?	°F	°F, °C
PRESSURE UNITS?	psi	psi, kPa, bars
NETWORK ADDRESS?	1	1 thru 247

Changing the User Settings

TARGET DEW POINT?

36 °F

Setting Description

Use the UP and DOWN keys to change the setting  
Press the SETTINGS key when finished

TARGET DEW POINT?

ARE YOU SURE?

Select YES or NO to confirm

New Setting Saved

YES selected, store setting

Setting NOT Saved!

NO selected, restore previous setting

### Load Display

Press the LOAD key to display the dryer load percentage

Dryer Load
67%

### Clearing the Maintenance Timer

Press the ALARM RESET key to reset the maintenance timer and alarm

HAS FILTER BEEN
REPLACED? (YES/NO)

Press YES to reset the timer to 6 months (after maintenance has been performed)

Press NO to reset the timer to 8 hours (until maintenance has been performed)



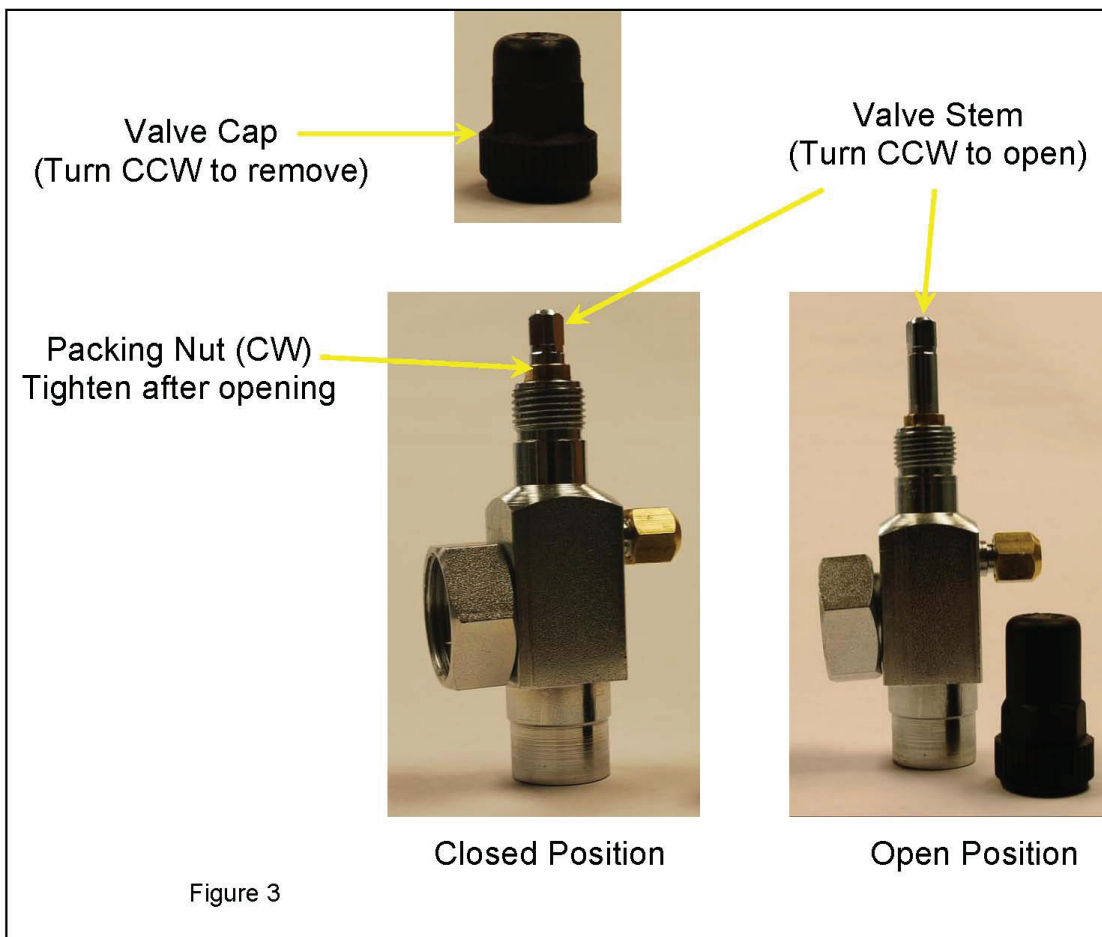
## 4. Start-Up Procedure



There should be NO air flow through the dryer before or during start-up. It is recommended that the dryer be installed with bypass piping to better service the unit.

## 4.1 Smart Cycle Plus 1200 – 3000

1. After electrical connection (Refer to Section 3), apply power.
2. After power has been applied the control panel should say “OFF” and the crankcase heater will now start heating. **THE CRANKCASE HEATER MUST BE SWITCHED ON 12 HOURS BEFORE STARTING THE DRYER.** Failure to comply with this rule may cause serious damage to the compressor.
3. Remove side panel from unit.
4. Some units are shipped with the refrigeration service valve tagged. These tagged service valves must not be opened until the dryer is ready to be started and the main power is permanently applied. Only tagged service valves must be opened.
5. Locate tagged service valves and remove end cap from valve stem.  
(Fig. 3 below)



6. Using a refrigeration service or small crescent wrench, turn the valve stem counterclockwise until it stops. Occasionally, it may be necessary to re-tighten the packing nut (turn clockwise) if a leak is noticed. The valve will now be fully opened. (Fig. 3)
7. Replace cap.
8. Once the crankcase heater has been pre-heated, pressure the RUN SELECT button on the control panel to start the dryer.
9. If the storage conditions were adverse (for example very cooled) the refrigeration compressor may make a loud metallic hammering noise. If this happens, turn the dryer off at the panel and wait 60 seconds. Then turn the dryer back on. Repeat this procedure until the refrigeration compressor runs smoothly. The dewpoint should start to drop towards the set point.

**IMPORTANT**

Do not pass air through the dryer until it is stabilized.  
(Unit cycles 2 – 3 times)

10. With the dryer turned on from the control panel, and is stabilized, you can now introduce compressed air to the dryer.
11. Check the automatic drain for proper operation. Drain should open at regular intervals based on the drain control settings.

**IMPORTANT**

Clean Y-Strainer on drains after the first 4 hours of operation. (See Section 5.0, Fig. 4)

12. Restart dryer using this procedure after maintenance, power outage or prolonged periods of shutdown.

**ATTENTION**

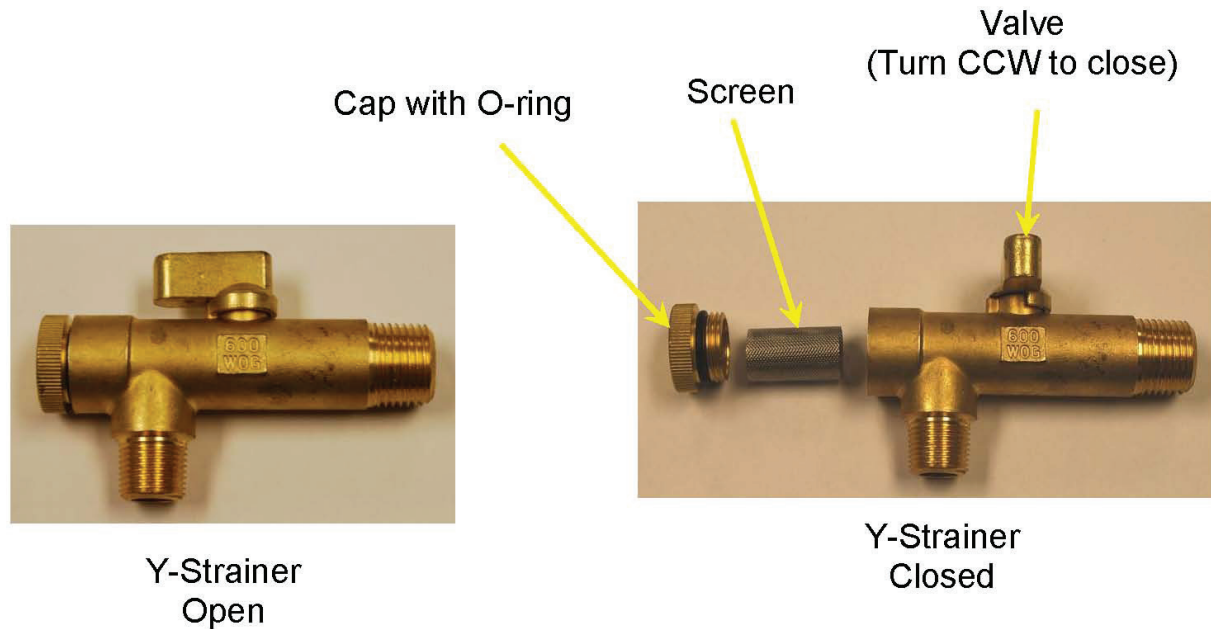
## 4.2 When Operating Dryer

1. Turn dryer On and Off at control panel only.
2. Keep power to unit at all times except when servicing.
3. Start dryer prior to allowing air flow through unit.
4. Clean condenser when necessary.
5. Maintain ambient temperature between 41-100°F (5-37.7°C)
6. Keep inlet temperature under 101°F (38°C)
7. Check and clean Y-strainer regularly.
8. NEVER allow dryer to cycle ON/OFF with air compressor.

## 5. Routine Maintenance

The air cooled condenser must be kept clean. Inspect on a regular basis for dirt or debris that might accumulate. Remove any debris immediately.

It is recommended that the drain and solenoid be checked weekly for proper functioning. The Y-strainer should be checked and screen cleaned monthly. (Fig. 4)



### ATTENTION



It is not advisable to tamper with the other adjustments unless you are familiar with refrigeration. The controls interact with each other and, although the effect of an adjustment may not be immediately obvious, it will affect the dryer's performance.

**CHARGE LIQUID REFRIGERANT ONLY, DO NOT CHARGE WITH VAPOR!**

### CAUTION



- See tag for correct refrigerant charge.
- Unit needs to be pulled into vacuum 500 micron (minimum)
- The full charge might not be accepted. If this occurs, the unit can be started and then the remainder of the charge should be slowly metered into the suction side (Suction side is always the inlet to compressor side).

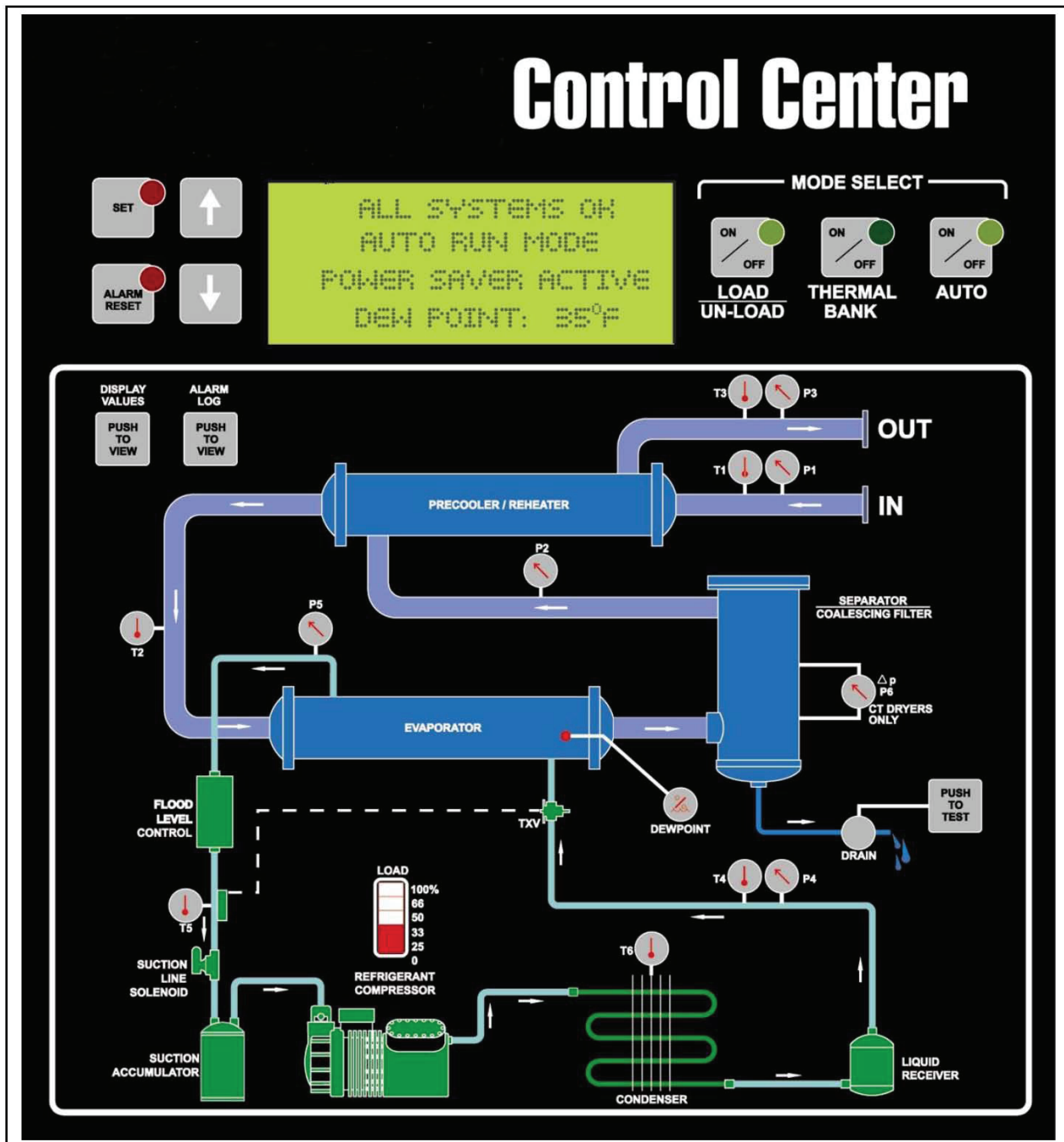
## 6. Diagnostic Codes &amp; Troubleshooting

ALARM	CODE	CONDITION	TIMEOUT	SHUT-DOWN	RESET
HIGH DEW POINT	11	Actual dew-point is 15°F above the target setting	2 seconds	No	Auto
DRYER OVERLOAD	12	Dew Point > Set Point +40°F	10 minutes	YES	MANUAL
BAD SENSOR SHUT-DOWN	13	Dew Point, Suction Temp, Suction Pressure, or Discharge Pressure is reading out of range	2 seconds	YES	MANUAL
LOW PRESSURE	14	Suction PSI < Set point during compressor on	5 seconds	YES	MANUAL
HIGH PRESSURE	15	Discharge Pressure > High Setting, or Switch is open while compressor is on	1 Seconds	YES	MANUAL
HIGH SUPERHEAT! (Semi-Hermetic)	16	Compressor is running. Superheat Calculation is >40°F and Suction temperature >75°F	40 minutes	no	Auto
HIGH SUPERHEAT! (Hermetic)	16	Compressor is running. Superheat Calculation is >40°F and Suction temperature >75°F	40 minutes	YES	MANUAL
DRAIN FAULT	17	Drain switch is closed for too long	See Note 1	No	Auto
FROZEN EVAP!	18	Dew-Point ≤ 20°F	10 minutes	YES	MANUAL
HIGH CONDENSER TEMP	21	Ambient/Water temperature is higher than setting	60 seconds	No	Auto
HIGH INLET TEMP	22	Inlet temperature is higher than setting	60 seconds	No	Auto
HIGH DIFFERENTIAL PRESSURE SWITCH	23	Input from PSID switch is closed	2 seconds	No	Auto
EMERGENCY STOP	24	E-Stop switch is opened or internal fuse is blown	2 seconds	YES	MANUAL
BAD PUMP DOWN	25	Pressure switch remains open for 1 minute after shutdown, or cycles more than 8 times per hour	1 hour (see description)	YES	MANUAL
BAD SENSOR WARNING	26	Inlet, or Condenser temperature is reading out of range	2 seconds	No	Auto
NON-RECOVERABLE SYSTEM FAULT	27	Dryer is not configured or configuration has been corrupted	1 Seconds	YES	MANUAL
CHANGE FILTER	28	Timer has timed out	6 months or 8 hours	No	MANUAL

Note 1 - Timeout is Drain Duration setting +10 seconds

ALARM	FAULT-CODE	CAUSE	REMEDY
HIGH DEW POINT	11	1) Thermal load is too high. 2) Condenser is dirty.	1) Reduce compressed air quantity and/or inlet temperature. 2) Clean condenser.
DRYER OVERLOAD	12	1) Thermal load is too high. 2) Unloader valve not closing. (Temperature on the copper lines of each side of the valve will be equal) 3) Compressor will not start, no hum. 4) Compressor will not start, hums but trips overload.	1) Reduce compressed air quantity and/or inlet temperature. 2) Replace valve internals (Repair Kit). 3) Check for: Service switch in OFF position, loose or improper wiring, overload tripped, bad starter. 4) Check for: Loose or improper wiring or voltage, overload tripped, bad starter or compressor failure.
BAD SENSOR SHUTDOWN (Dewpoint, Suction Temp, Discharge psi or Suction psi)	13	1) Sensor connection is loose or disconnected. 2) Sensor is defective.	1) Identify which sensor (scroll thru control panel readings to find faulty sensor) & tighten connections. 2) Identify which sensor (scroll thru control panel readings to find faulty sensor) & replace.
LOW PRESSURE	14	1) Refrigerant leak. 2) Low pressure switch defective. 3) Suction line solenoid not opening. 4) Liquid line solenoid not opening.	1) Locate leak. Repair and recharge. 2) Replace. 3) Replace valve internals (Repair Kit) or coil. 4) Replace valve internals (Repair Kit) or coil.
HIGH PRESSURE	15	1) Condenser dirty / blocked. 2) Fan pressure switch defective. 3) Fan motor defective. 4) Ambient temperature too high. 5) High pressure switch defective. 6) Low water flow. 7) Water valve defective. 8) Liquid line valve or coil defective.	1) Clean condenser. 2) Replace. 3) Replace motor. 4) Improve room ventilation. 5) Replace. 6) Fix water supply. 7) Replace. 8) Replace valve internals (Repair Kit) or coil.
HIGH SUPERHEAT	16	1) Refrigerant leak. 2) Defective superheat probe. 3) Poor contact of superheat probe. 4) Faulty expansion valve.	1) Locate leak. Repair and recharge. 2) Replace. 3) Tighten probe to refrigerant line. 4) Replace.
DRAIN FAULT	17	1) Valve strainer clogged. 2) Drain valve clogged. 3) Solenoid defective. 4) Level sensor defective.	1) Clean. 2) Dis-assemble and clean. 3) Replace. 4) Replace.
FROZEN EVAP!	18	1) Unloader valve not opening. Defective valve or coil.	1) Replace valve internals (Repair Kit) or coil.
HIGH CONDENSER TEMP	21	1) Ambient too high.	1) Improve room ventilation.
HIGH INLET TEMP	22	1) Inlet air temperature too high.	1) Clean air compressor aftercooler and or improve room ventilation.
HIGH DIFFERENTIAL PSI	23	1) Coalescing filter is dirty. 2) Excessive compressed air flow.	1) Change filter (see serial sticker for part #). 2) Reduce flow.
EMERGENCY STOP	24	1) E-stop switch is opened. 2) Internal fuse blown. 3) E-stop jumper is disconnected.	1) Close switch. 2) Replace. 3) Replace.
BAD PUMP DOWN	25	1) Suction valve not fully closing. 2) Unloader valve stuck open. 3) Compressor is defective.	1) Replace valve internals (Repair Kit). 2) Replace valve internals (Repair Kit). 3) Replace.
BAD SENSOR WARNING	26	1) Sensor connection is loose or disconnected. 2) A sensor is defective.	1) Check/tighten connections. 2) Identify which sensor & replace.
NON-RECOVERABLE SYSTEM FAULT	27	1) Not programmed properly.	1) Consult factory for settings and programming instructions.
CHANGE FILTER	28	1) Filter is dirty.	1) Check and replace if necessary (see serial sticker for filter part #).

## 7. Optional Control Center



## PREFACE:

This document is intended to make familiar, the Control Center functionality. The “manual”, can serve as a handy guide to quickly move through the operations of the dryer it is controlling. It is not intended to replace the more comprehensive, specific “dryer manual” that will show all other aspects of operation and safety. It is IMPORTANT that both manuals be referenced for complete dryer understanding.

MENU TREE

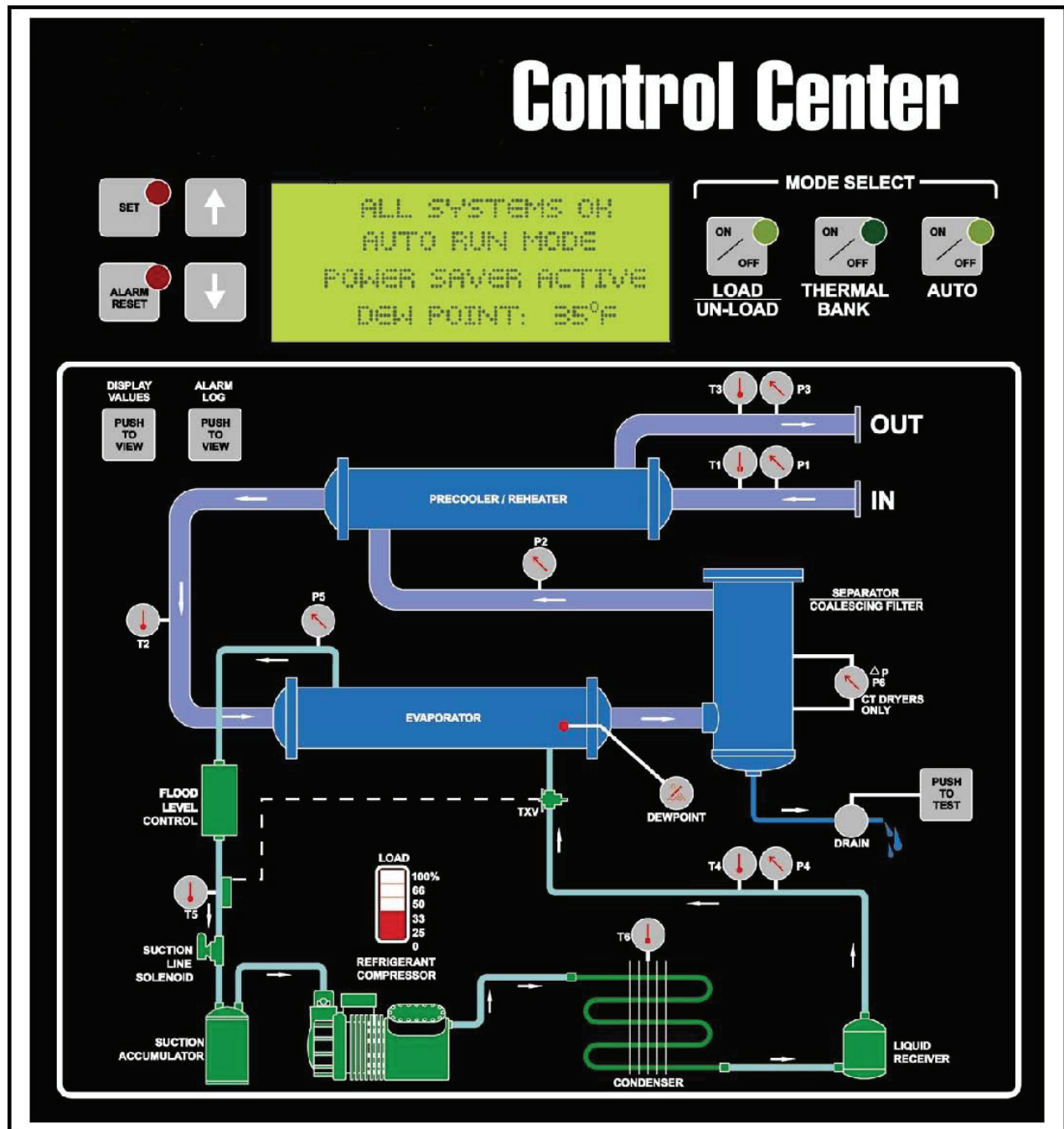
- a. STARTUP NULL SCREEN-----[ 4 ]
  - PRE-SETUP
  - STARTUP
  - CHANGE MODES
- b. MAIN SCREEN-----[ 5 ]
  - DISPLAY ORIENTATION
  - TYPICAL SCREEN DISPLAYS
- c. EVENTS-----[ 6 ]
  - EMERGENCY STOP
  - STANDBY
  - DEWPOINT OPTION (not installed)
  - ACTIVE ALARMS
  - DEWPOINT ALARMS
  - NO FLOW
- d. REVIEW ALARM LOG (“J” Series Menus)-----[ 6 ]
- e. DISPLAY SENSOR VALUES (“K” Series Menus)-----[ 8 ]
  - FLOW METER (4-20Ma/1 to 5 volt INPUT)

MAIN MENU

- 1 DEWPOINT SETTINGS (“D” Series Menus)-----[ 9 ]
  - DEWPOINT SETPOINT
- 2. SETUP MENU (“E” Series Menus)-----[ 10 ]
  - COMPANY INFORMATION-----[ 10 ]
    - PHONE & www MESSAGE
  - PRODUCT INFORMATION-----[ 10 ]
    - TYPE OF DRYER & SN#
    - FACTORY DEFAULTS
    - GO TO “NULL” STATE
    - CALIBRATION MENU (“H” Series Menus)
      - INLET PRSSURES
      - REHEATER PRESSURE
      - OUTLET PRESSURE
      - DISCHARGE PRESSURE
      - SUCTION PRESSURE
      - ELEMENT DP SETTINGS
      - FLOW RANGE SETTINGS
  - DRAINS SETUP MENU (“I” Series Menus)-----[ 12 ]
    - #1 DEMAND or TIMED OPERATIONS

- #1 INTERVAL (Timed)
  - #1 DURATION
  - #1 AUTOTEST
  - #2 DEMAND or TIMED OPERATIONS
- #2 INTERVAL (Timed)
  - #2 DURATION
  - #2 AUTOTEST
- COMMUNICATON MENU (“F” & “G” Series Menus)-----[ 12 ]
  - ADJUST CLOCK
  - STAR WATCH – Host to Control: YES
  - MODEM SETUP
    - MODEM ENABLE
    - MODEM TEST
    - MODEM RESET (Reprogram)
    - VIEW MODEM SETTINGS
- 3. SENSOR SETTINGS (“C” Series Menus)-----[ 14 ]
  - P1: LOW INLET PRESSURE
  - P1: HIGH INLET PRESSURE
  - P2: REHEATER PRESSURE
  - P3: OUTLET PRESSURE
  - P4: DISCHARGE PRESSURE
  - P5: SUCTION PRESSURE
  - P6: SEPARATOR DP
  - FLOW
- 4. TEMPERATURE SETTINGS (“B” Series Menus)-----[ 15 ]
  - T1: DRYER INLET SETPOINT
  - T2: PRECOOLER SEPOINT
  - T3: DRYER OUTLET SETPOINT
  - T4: REFRIGERANT SETPOINT
  - T5: SUCTION SETPOINT
  - T6: AMBIENT/H2O SETPOINT
- 5. VIEW ALARMS (“A” Series Menus)-----[ 15 ]
  - HIGH DEWPOINT
  - LOW FLOW
  - (E1/E2) DEWPOINT PROBE FAULT (OPEN OR SHORT)
  - MOTOR OVERLOAD
  - (E3) SUPERHEAT OUT OF RANGE
  - (E4) LOW DEWPOINT
  - (E5) DRYER OVERLOAD
  - (E6) LOW FREON OR OIL PRESSURE
  - (E7) HIGH FREON PRESSURE
  - (W1) LOW AIR-IN PSI
  - (W2) HIGH AIR-IN PSI
  - (W4) HIGH INLET AIR TEMP
  - (W5) HIGH AMBIENT/H2O TEMP
  - (W6) DRAIN FAULT
  - MODEM FAULT

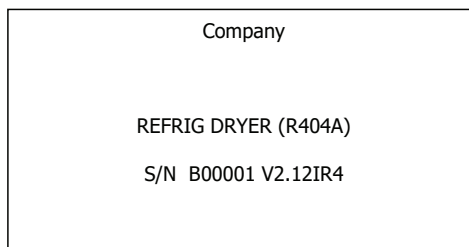




- |                      |   |
|----------------------|---|
| 1. Up Arrow          | Scroll Menu Up or Increment Value                                   |
| 2. Down Arrow        | Scroll Menu Down or Decrement Value                                 |
| 3. Set               | Enter Menu Selection, Enter Program Mode or Save to Memory          |
| 4. Reset Alarm       | Back-up Menu Level or Clear 'Resetable' Alarm                       |
| 5. Load/Un-Load      | Load/Un-Load Mode Selector  |
| 6. Thermal Bank      | Thermal Bank Mode Selector  |
| 7. Auto Run          | Auto Mode Selector – Automatically Sequences to Demand (#5 or #6)   |
| 8. Drain Test        | Operates Both Drain System for Programmed Duration                  |
| 9. Display Values    | Enters Sensor Menus – Indicates Current Values (Series 'K' Screens) |
| 10. Review Alarm Log | Enters Historical Log of Alarm Event (Series 'J' Screens)           |

a. STARTUP NULL SCREEN-----

Upon initialization, the display shows the “type” of dryer the Control Center is configured to control. An example:



This is a fixed configuration. Once assigned to a dryer: the Control Center will never be changed to any of the other configurations. Note that the Control Center Serial Number, Refrigerant Type and Firmware Version are also displayed on the null, initialization screen.

PRE-SETUP

Prior to starting up the dryer, the DISPLAY VALUES button may be selected to view groupings of sensors (use the up/down arrows to scroll through the list) Depress the Display Values button a second time, or the Alarm RESET button to return to the Main Screen. Also, all of the other screens and menus can be viewed by using the up/down arrows. Simply position any particular menu choice into view and advance a menu level by depressing the SET button. Returning to the Main Screen can be achieved at any time by depressing the Alarm RESET button. These screens may be viewed at any time, and at any state of operation.

The Main Screen of the Fan Inactive System prior to start-up (run mode) is the NULL Screen above, when returning to the Main Screen from viewing any of the above Pre-Startup procedures.

STARTUP

TO START the dryer, select any of three main operating modes by depressing their button.

- AUTO Mode (normal operations) dryer will automatically sequence between the Load/Un-Load and Thermal Bank modes as required by demand.
- LOAD/UN-LOAD Mode (cycling operation), or
- THERMAL BANK Mode (cycling operation including compressor including OFF).

CHANGING MODES

The dryer can change modes of operation by simply depressing the any desired mode button. To return the dryer to an INACTIVE (SYSTEM OFF-STANDBY) state, depress, the “current mode” button as is indicated by the Mode Pilot indicator (LED).

b. MAIN SCREEN-----

## DISPLAY ORIENTATION

There are several informational indications displayed on the Main Screen. They are displayed on the four lines of the LCD.

1. The first line is the “message” line. If all is normal, this line will indicate ALL SYSTEMS OK, or else it will indicate an alarm; for example, HIGH DEWPOINT. If more than one alarm is active, this message line will “scroll” between any and all messages.
2. The second line is the “mode” line. This line will indicate the dryers operations:
  - SYSTEM INACTIVE (NULL),
  - EMERGENCY STOP,
  - AUTO RUN MODE
  - LOAD/UN-LOAD MODE,
  - THERMAL BANK MODE,
  - SYSTEM OFF, and
  - ALARM SHUT DOWN
3. The third line is the “process” line. INITIALIZING, POWERSAVE ACTIVE or may be blank for all other normal operations.
4. The forth line is dedicated to the current DEWPOINT value.

## TYPICAL SCREEN DISPLAYS-----

Below is a sampling of typical display screens; showing some of the possible system operations.

ALL SYSTEMS OK  
AUTO RUN MODE  
POWERSAVE ACTIVE  
DEWPOINT 34°F (1°C)

MOTOR OVERLOAD ALARM SHUTDOWN  
DEWPOINT 39°F (4°C)

ALL SYSTEMS OK SYSTEMS OFF  
DEWPOINT 65°F (18°C)

COMPRESSOR WILL CONTINUE TO RUN  
UNTIL RUMPDOWN IS COMPLETE

STARWATCH ACTIVE AUTO RUN MODE  
DEWPOINT 33°F (0°C)

c. EVENT-----  
EMERGENCY STOP At any time the dryer's E-STOP pushbutton is depressed, the dryer will immediately "stop" operations (all output will be de-energized except for COMMON ALARM dry output relay and MODEN relay). To restart the dryer, the flashing mode (AUTO RUN, LOAD/UNLOAD or THERMAL BANK) selector must be re-selected. Note – the E-STOP pushbutton must be rotated and pulled "out" to its normal position before the re-start can be invoked.

ACTIVE ALARMS EMERGENCY STOP!  
DEWPOINT 35°F (2°C)

ALARM SHUT DOWN When a "shut-down" alarm occurs, the dryer will "stop" operating and will require a Manual Reset (see VIEW ALARMS section). Once the alarm has been reset and if the alarm condition has been cleared, the system may be re-started. The current mode LED will be flashing. When the mode selector button is depressed, the system will restart and LED will stop flashing and remain illuminated.

LOW FREON/OIL PSI  
ALARM SHUT DOWN  
DEWPOINT 35°F (2°C)

---

#### IMPORTANT

All screens from section (d.) forward to the end of this manual are indicated with an alphanumeric indication in the upper left corner of the display as a screen ID. The CONTR

d. REVIEW ALARM LOG ("J" Series Menus)-----

When the Review Alarm Log pushbutton is depressed, the "J" series screens will be displayed. Each "J" screen shows the status of a possible alarm. The UP/DOWN arrow will allow scrolling through 16 different alarm conditions. The number appearing next the "DAYS SINCE LAST", indicated the last time that the alarms condition has occurred. A zero (0) indicates the current date. For example, 365 would indicate exactly one year since the occurrence of any particular alarm. If "---" is indicated, that means the selected alarm has never happened.

All screens from section (d.) forward to the end of this manual are indicated with an alphanumeric indication in the upper left corner of the display as a screen ID. The CONTROL CENTER will display these ID's as any given screen is selected within the menu tree. Please make note of any particular screen ID when communicating with a support representatives, which may be in question.

When an alarm is tripped, the "COMMON ALARM RELAY" (K16) will energize if the "ALARM OUT" is ENABLED.

There is a form "C" dry contact available for the user on K16 (see schematic). To "DISABLE" the ALARM OUT from energizing the Common Alarm relay, use the SET and UP/DOWN arrow buttons to disable any given alarm. All alarms are factory default to "ENABLED". The user can program anyone, any combination, or all alarms to activate the Common Alarm relay.

LOW REFRIGERANT/OIL PRESSURE  
NOTE IF MULTIPLE COMPRESSORS – SEE ACTIVE  
ALARMS

HIGH REFRIGERANT PRESSURE

J1 ALARM LOG  
HIGH DEWPOINT  
DAYS SINCE LAST: 1  
ALARM OUT: YES

J2 ALARM LOG  
LOW FLOW  
DAYS SINCE LAST: 25  
ALARM OUT: YES

J3 ALARM LOG  
DP PROBE DEFAULT  
DAYS SINCE LAST: 365  
ALARM OUT: YES

J4 ALARM LOG  
MOTOR OVERLOAD  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J5 ALARM LOG  
E3: HI SUPERHEAT  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J6 ALARM LOG  
E4: DRYER OVERLOAD  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J7 ALARM LOG  
E5: LOW PRESSURE  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J8 ALARM LOG  
E6: LOW PRESSURE  
DAYS SINCE LAST: 0  
ALARM OUT: YES

J9 ALARM LOG  
E7: HIGH PRESSURE  
DAYS SINCE LAST: ---  
ALARM OUT: YES

COALESCER ELEMENT DIFFERENTIAL PRESSURE

J11 ALARM LOG  
W2: HIGH AIR-IN PSI  
DAYS SINCE LAST: ---  
ALARM OUT: ENABLED

J12 ALARM LOG  
W3: CHANGE FILTER  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J13 ALARM LOG  
W4: HIGH AIR-IN °F  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J14 ALARM LOG  
W5: HIGH AMBIENT/H2O  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J15 ALARM LOG  
E9: DRAIN FAULT  
DAYS SINCE LAST: ---  
ALARM OUT: YES

J16 ALARM LOG  
MODEM FAULT  
DAYS SINCE LAST: 1  
ALARM OUT: YES

## E. DISPLAY SENSOR VALUES ("K" Series Meus)-----

The DISPLAY VALUE pushbutton is a quick way to view groupings of sensor values. The UP/DOWN arrows will scroll through the 7 possible groups of the "K" series screen.

K1	Superheat	12°F
T4:	Refrig	130°F
P4:	Discharge	100 psi
P5:	Suction	96 psi

R TYPE: R404A		
K2	Superheat	12°F
T5:	Suction	100°F
P5:	Suction	100 psi

K3	Dewpoint	33°F
	T1: Inlet	100°F
	P1: Inlet	100 psi
	T6: Ambient/H2O of	54°F

NOTE IF NOT “OK” = CHANGE FILTER WILL BE INDICATED

K4	P1: Inlet	100 psi
	P1: Outlet	98 psi
	P6: Filter Element	OK

K5	T1: Inlet	100°F
	T3: Outlet	90°F

K6	T6: Ambient/H2O of	67°F
	P4: Discharge	250 psi
	-Flow	10000 scfm

K7	T1: Inlet	100°F
	T3: Outlet	90°F
	PI: Inlet	100 psi
	P3: Outlet	98 psi

K8	Auxiliary #1	DISABLED
	Auxiliary #2	75
	Flow	DISABLED

## CUSTOM ENGINEERED UNITS

**NOTE** Auto-Sequence “Time” can be selected between 1 & 72 hours. (See Compressor Menu’s R1 – R5 to ENABLE or DISABLE by pressing the SET.

K9	Power:	10.4 Kw
	Current:	12.4 A
	Speed:	13000 RPM
	Frequency:	45 Hz

K10	COMPRESSORS	
	Timer:	23:59 h:m
	C1: STNDBY	C2: ONLINE
	C3: ONLINE	C4: DISABL

## FLOW METER:

All Control Center’s come standard with flow sensor input capabilities. Simply “hook-up” a 4-20mA loop, or a 1 to 5 volt signal to the appropriate flow input (see schematic/wiring diagram) and activate the FLOW ENABLE in the SETUP screens. The loop may be powered by the Control Center or powered externally. The FLOW measurement is displayed in the “K6” screen only if enabled. Refer to schematic for configuring panel to “current/voltage” only if enabled. Call support for details or questions.

## 1. DEW POINT MENU-----

DEWPOINT MENU  Press SET to Select
---

**DEWPOINT** – The dryer will attempt to deliver a dew point relative to the DEWPOINT SET POINT value. The range for this setting can be selected between 34°F (1°C) to 50°F (10°C). When the dew point indicated is at the set point value or less, the panel LCD display will give a message: POWERSAVE ACTIVE

D1	DEWPOINT
Value:	36°F
Set Point:	34°F

## 2. SETUP MENU-----

Screen series: “E”, “F”, “G”, “R” and “I” are within the set-up selections.

SETUP MENU  Press SET to Select
--

E2	PRODUCT INFORMATION
Press SET to select	

E2	CT (404A) REFRIG AIR DRYER Serial # B00000 Firmware Rev. 2.38
----	--

E3	COMMUNICATIONS MENU
Press SET to Select	

E4	DRAIN SETUP MENU
Press SET to select	



E5

CALIBRATION  
MENU

## E6 ALARM REPORTING MENU

M1	ALARM #1		
	HIGH DEWPOINT		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M4	ALARM #2		
	FLOW/AUX		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M7	ALARM #3		
	DP PROBE FAULT		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M10	ALARM #4		
	MOTOR FAULT		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M13	ALARM #1		
	E3: HI SUPERHEAT		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M16	ALARM #6		
	E4: LOW DP/PUMPDOWN		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M19	ALARM #7		
	E5: DRYER OVERLOAD		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M22	ALARM #8		
	E6: LOW PRESSURE		
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M25	ALARM #9		
E7: HIGH(REFRIG)PRESSURE			
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M28	ALARM #10		
W1 : LOW AIR-IN PSI			
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M31	ALARM #11		
W2: HIGH AIR-IN PSI			
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M34	ALARM #12		
W3: CHANGE FILTER			
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M37	ALARM #13		
W4: HIGH AIR-IN °F			

M40	ALARM #14		
W5: HIGH AMBIENT/H2O			
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M43	ALARM #15		
E9: DRAIN FAULT			
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

M46	ALARM #16		
MODEM FAULT			
RELAY	PAGER	REMOTE	
Yes	N/A	N/A	

**CALIBRATION MENU.** Each of the transducers in the system has their ranges set in the “H” series screens. It is important that the value indicated in the screens match the maximum range of the transducer span. If while servicing the dryer, and a different ranged transducer is replacing a factory installed transducer, make certain a corrected value for maximum range is entered in the appropriate screen.

H1	ENGLISH / METRIC		
SELECT UNITS: (ENGLISH)			

H2	METRIC PRESSURES: BAR OR KP
----	--------------------------------

H3	INLET PRESSURE
ACTUAL:	93 PSI
OFFSET	[ 0 psi ]
FULLSCALE	200 PSI

H4	INLET PRESSURE
ACTUAL:	93 PSI
OFFSET	[ 0 psi ]
FULLSCALE	200 PSI

H5	Outlet Pressure
Actual:	0 psi
Offset:	[ 0 psi ]
Fullscale	200 psi

H6	Outlet Pressure
Actual:	0 psi
Offset:	0 psi
Fullscale	[ 200 psi ]

H7	Discharge Pressure
Actual:	3 psi
Offset:	0 psi
Fullscale	[ 600 psi ]

H8	Discharge Pressure
Actual:	0 psi
Offset:	0 psi
Fullscale	[ 600 psi ]

H9	Suction Pressure
Actual:	0 psi
Offset:	[ 0 psi ]
Fullscale	600 psi

H10	Suction Pressure
Actual:	0 psi
Offset:	0 psi
Fullscale	[ 600 psi ]

H11 Flow	
Actual:	OPEN
Offset:	[ 0 scfm ]
Fullscale:	100 scfm

H12 Flow	
Actual:	OPEN
Offset:	0 scfm
Fullscale:	[100 scfm]

H13 AUX #1	
Actual:	OPEN
Offset:	[ 0 ]
Fullscale:	100

H14 AUX #1	
Actual:	OPEN
Offset:	0
Fullscale:	[ 100 ]

H15 AUX #2	
Actual:	OPEN
Offset:	[ 0 ]
Fullscale:	100

H16 AUX #2	
Actual:	OPEN
Offset:	0
Fullscale:	[ 100 ]

System Drains- (E & I Series Menus) - Each of the two (2) drain controls can be programmed to be either a 'TIMED' or 'DEMAND' drains.

- If Timed is selected, the drain will activate to the "Interval" time setting for the period of time indicated in the 'Duration' time setting.
- If DEMAND is selected, the drain will operate for the period of time indicated in the 'Duration' time setting, when a drain input signal is sensed from the demand drain float. A DRAIN FAULT Alarm can occur if float doesnot respond as expected. When a fault is detected, the drain solenoid will be 'pulsed' for ten minutes in attempt to clear the faulted drain.
- The 'Auto Test' feature will operate the drain for the period of time indicated in the Duration setting at the specifiedInterval. This feature is intended to prevent sediment buildup by activating the drain periodically and 'blowing out' any possible debris.

E4	DRAIN SETUP MENU
Press SET to Select	

I 1 Drain #1	
Type	[ DEMAND ]
Interval (m:s):	10 :00
Duration:	2 Sec

I 2 Drain #1	
Type	DEMAND
Interval (m:s):	[10]:00
Duration:	2 Sec

I 3 Drain #1	
Type	DEMAND
Interval (m:s):	10:[00]
Duration:	2 Sec

I 4 Drain #1	
Type	DEMAND
Interval (m:s):	10:00
Duration:	[2] Sec

I 5 Drain #1	
On Delay (m:s)	[0:05]
Auto Test (h:m)	12:00

I 6 Drain #1	
On Delay (m:s)	0:05
Auto Test (h:m)	[12]:00

I 7 Drain #1	
On Delay (m:s)	0:05
Auto Test (h:m)	12:[00]

I 8 Drain #2	
Type:	TIMED
Interval (m:s):	10:00
Duration:	2 sec

I 9 Drain #2	
Type:	TIMED
Interval (m:s):	[ 10 ]: 00
Duration:	2 sec

I 10 Drain #2	
Type:	TIMED
Interval (m:s):	10:[ 00 ]
Duration:	2 sec

I 11 Drain #2	
Type:	TIMED
Interval (m:s):	10:00
Duration:	[ 2 ] sec

I 12 Drain #2	
On Delay (m:s)	[ 0: 05 ]
Auto Test (h:m)	12:00

I 13 Drain #1	
On Delay (m:s)	[ 0: 05 ]
Auto Test (h:m)	12:00

I 14 Drain #2	
On Delay (m:s)	[ 0: 05 ]
Auto Test (h:m)	12:00

### 3. SENSOR SETTINGS-----

SENSOR SETTINGS
--------------------

Press SET to select
---------------------

C1	P1 LOW INLET
Value:	100 psi
Alarm Set:	50 psi

C2	P1 HIGH INLET
Value:	100 psi
Alarm Set:	101 psi

C3	P4 DISCHARGE
Value:	240 psi
Alarm Set:	350 psi

FLOW INPUT ENABLE (If Value indicates Fault  
= No sensor)

FLOW ALARM SET POINT

**C4 P5 SUCTION**

Value: 100 psi  
Alarm Set: 30 psi

**C5 FLOW SENSOR**

Enabled : [ NO ]  
VALUE: OPEN  
Alarm Set: 0 scfm

**C6 FLOW SENSOR**

Enabled : NO  
VALUE: FAULT  
Alarm Set: [ 0scfm ]

**C7 AUX #1 SENSOR**

Enabled : [ NO ]  
VALUE: OPEN

**C8 AUX #1 ALARM**

Low Alarm : [ 0 ]  
High Alarm: 100  
Delay (m:s): 00.05

**C9 AUX #1 ALARM**

Low Alarm : 0  
High Alarm: [ 100 ]  
Delay (m:s): 00.05

**C10 AUX #1 ALARM**

Low Alarm : 0  
High Alarm: 100  
Delay (m:s): [ 00.05 ]

**C11 AUX #2 SENSOR**

Enabled : [NO]

Value:

**C12 AUX #2 ALARM**

Low Alarm : [ 0 ]  
High Alarm: 100  
Delay (m:s): 00.05

C13 AUX #2 ALARM	
Low Alarm :	0
High Alarm:	[ 100 ]
Delay (m:s):	00.05

C14 AUX #2 ALARM	
Low Alarm :	0
High Alarm:	100
Delay (m:s):	[ 00.05 ]

#### 4. TEMPERATURE SETTINGS-----

TEMPERATURE SETTINGS
-------------------------

Press SET to select
---------------------

B1 T1: DRYER INLET
--------------------

Value:	72°F
Alarm Set:	120°F

B2 T3: DRYER OUTLET
---------------------

Value:	86°F
Alarm Set:	120°F

B3 T4: REFRIG.
----------------

Value:	87°F
Alarm Set	130°F

B3 T4: REFRIG.
----------------

Value:	87°F
Alarm Set	130°F

#### 5. VIEW ALARMS-----

VIEW ACTIVE ALARMS
-----------------------

Press SET to select
---------------------



ACTIVE ALARMS  
Press UP/DOWN to  
View active alarms  
Press RESET to

A3a SYSTEM SHUTDOWN – Requires a manual reset.

A1 ACTIVE ALARMS  
HIGH DEWPOINT  
(Self-Resetting)  
Press RESET to EXIT

A2 ACTIVE ALARMS  
LOW FLOW  
(Self-Resetting)  
Press RESET to EXIT

A3b SYSTEM SHUTDOWN – Requires a manual reset.

A3 ACTIVE ALARMS  
E1: DP PROBE OPEN  
  
Press RESET to Clear

A3 ACTIVE ALARMS  
E2: DP PROBE SHORT  
  
Press RESET to Clear

A4 SYSTEM SHUTDOWN – Requires a manual reset.

A4 ACTIVE ALARMS  
MOTOR OVERLOAD  
  
Press RESET to Clear

A5a SYSTEM SHUTDOWN – Requires a manual reset.

A5 ACTIVE ALARMS  
E3: SUPERHEAT HIGH  
  
Press RESET to Clear

A5b SYSTEM SHUTDOWN – Requires a manual reset.

A5 ACTIVE ALARMS  
E3: SUPERHEAT LOW  
  
Press RESET to Clear

A6 SYSTEM SHUTDOWN – Requires a manual reset.

A6 ACTIVE ALARMS  
E4: LOW DEWPOINT  
  
Press RESET to Clear

A7 SYSTEM SHUTDOWN  
Requires a manual reset.

A7 ACTIVE ALARMS  
ES: DRYER OVERLOAD  
  
Press RESET to Clear

A8 SYSTEM SHUTDOWN  
Requires a manual reset.

A8 ACTIVE ALARMS  
E6: LOW REFRIG/ OIL PSI  
  
Press RESET to Clear

A9 SYSTEM SHUTDOWN  
Requires a manual reset.

A9 ACTIVE ALARMS  
E7: HIGH REFRIG PSI  
  
Press RESET to Clear

A10 ACTIVE ALARMS  
W1: LOW AIR-IN PSI  
(Self Resetting)  
Press RESET to Exit

A11 ACTIVE ALARMS  
W2: HIGH AIR-IN PSI  
(Self Resetting)  
Press RESET to Exit

A12 ACTIVE ALARMS  
W3: COALESCER PSID  
  
Press RESET to Clear

A13 ACTIVE ALARMS  
W4: HIGH AIR-IN °F  
(Self Resetting)  
Press RESET to Exit

A14 ACTIVE ALARMS  
W5: HIGH AMBIENT/H2O  
(Self Resetting)  
Press RESET to Exit

A15a Drain #1 FAILURE

A15 ACTIVE ALARMS  
DRAIN FAULT-1  
(Self Resetting)  
Press RESET to Exit

A15b Drain #2 FAILURE

A15 ACTIVE ALARMS  
DRAIN FAULT-2  
(Self Resetting)  
Press RESET to Exit

A16 Drain Requires a manual reset.

A16 ACTIVE ALARMS  
MODEM FAILURE  
  
Press RESET to Clear

ACTIVE ALARMS  
  
No Active Alarms  
Press RESET to EXIT

COMPRESSOR  
MENU  
  
Press SET to Select

Auto-Sequence "Time" can be selected between 1 & 72 hours. NOTE: When set to "TEST", units will sequence STANDBY COMPRESSOR every 3 minutes (also see the K10 Menu in DISPLAY VALUES).

R1 COMPR #1 [ ENABLED ]  
COMPR #2 ENABLED  
COMPR #3 ENABLED  
COMPR #4 DISABLED

R2 COMPR #1 ENABLED  
COMPR #2 [ ENABLED ]  
COMPR #3 ENABLED  
COMPR #4 DISABLED

SELECT "ENABLE or DISABLE"




























R3 COMPR #1 ENABLED  
COMPR #2 ENABLED  
COMPR #3 [ ENABLED ]  
COMPR #4 DISABLED

R4 COMPR #1 ENABLED  
COMPR #2 ENABLED  
COMPR #3 ENABLED  
COMPR #4 [ DISABLED ]

R5  
  
AUTO-SWITCH TIME:  
24 Hrs

## 8. Maintenance Charts

The maintenance chart below indicates the components that should be checked while performing routine maintenance on the dryer. The chart also indicates how often a specific check should be done.

Description of Service Required		Service recommended every:			
Component	Operation	Week	Month	6 Months	Year
Filtration	Coalescing Filter Element				
Dryer	Condensing Coil (AC units)				
Dryer	Condenser (WC units)*				
Dryer	Drain Line Y-Strainer				
Dryer	High Pressure Switch				
Dryer	Low Pressure Switch*				
Dryer	Fan Control Switches (AC units)				
Dryer	Compressor Oil Level				
Filtration	Drain Solenoid				



\* The condenser should be cleaned only if the unit is running abnormally high discharge pressure. Contact the factory for verification prior to proceeding with this maintenance item.

### 8.1 Maintenance Procedures

Before performing any maintenance on the machine ensure that air pressure is vented from the system. Also make sure that personnel performing the maintenance have read the maintenance section of the manual.

Some of the maintenance tasks will require the refrigeration system to run, but when not required, turn the unit off before proceeding.

Upon completion of the maintenance tasks be sure that the machine has been properly reassembled prior to restarting and reintroducing air.

## 8.2 Routine Maintenance

This section covers the various components that require periodic maintenance and/or replacement.

### Coalescing Filter Element

The coalescing filter element should be checked Bi-Annually. On units with the standard control panel, check the pressure drop across the unit by using air pressure gauges upstream and downstream of the dryer using the closest possible gauges to the dryer. If it is determined that there is a high pressure drop across the machine, remove the filter element from the machine and inspect it. If the filter is dirty, replace it. Ensure that air pressure is removed from the machine prior to removing the filter element. On units that have the Control Center option installed the filter differential can be checked on the control board.

The coalescing element should be changed annually. To change the filter element:

- De-pressurize the dryer.
- Remove the bolts that secure the filter housing cover.
- Remove the wing nut that secures the filter cap to the element.
- Remove the filter cap.
- Remove the existing element from the housing.
- Install the replacement element.
- Reinstall the filter cap and wing nut
- Reinstall the filter cover.

### Condensing Coil (Air Cooled Units)

The condensing coil should be cleaned weekly. Ensure that air pressure is removed from the system prior to cleaning the condenser. The condenser can be cleaned by using a vacuum or compressed air. If the condenser is not clean after it is blown out with compressed air or vacuumed, contact the factory for assistance.

### Condenser (Water Cooled Units)

The water cooled condenser should be checked and cleaned annually if necessary. To check the condenser, water flow to the condenser should be shut off, air flow to the machine should be shut off, and the unit should be taken out of a run mode. The end bonnets then need to be removed exposing the tube side of the condenser. The tube side should be inspected for any debris and cleaned. If soft deposits are found they can be cleaned using a pneumatic tube cleaning gun which forces plugs down the tubes. Some have a brush between two rubber plugs and others are specially designed plugs which scrape the tube walls as they travel down the tube. If scale is found special equipment is required to clean the tubes. These cleaning systems utilize a flexible shaft which rotates a brush as it is fed

down the tube, they can also simultaneously flush out the tubes with water. There is a wide variety of brushes and tools available that attach to the shaft to clean both soft and hard deposits.

#### Drain Line Y-Strainer (See Section 5.0, Fig. 4)

The drain line y-strainer should be cleaned weekly. Air flow and air pressure should be removed from system before proceeding. To clean the y-strainer:

- Turn the ball valve on the strainer assembly to the closed position
- Remove threaded cap at the end of the ball valve assembly.
- Clean the screen inside of the cap by rinsing it under water.
- Reinstall the screen and cap
- Return the ball valve to the open position

#### High Pressure, Low Pressure, & Fan Control (AC units only)

The refrigeration pressure switches should be checked monthly to ensure that they are adjusted to the proper settings. Please refer to the applicable electrical drawings for your unit.

#### Compressor Oil Level

The oil level in the compressor should be checked daily. The refrigeration system should never need oil unless the system is leaking or has been recently repaired. If it is determined that the system needs oil, do the following:

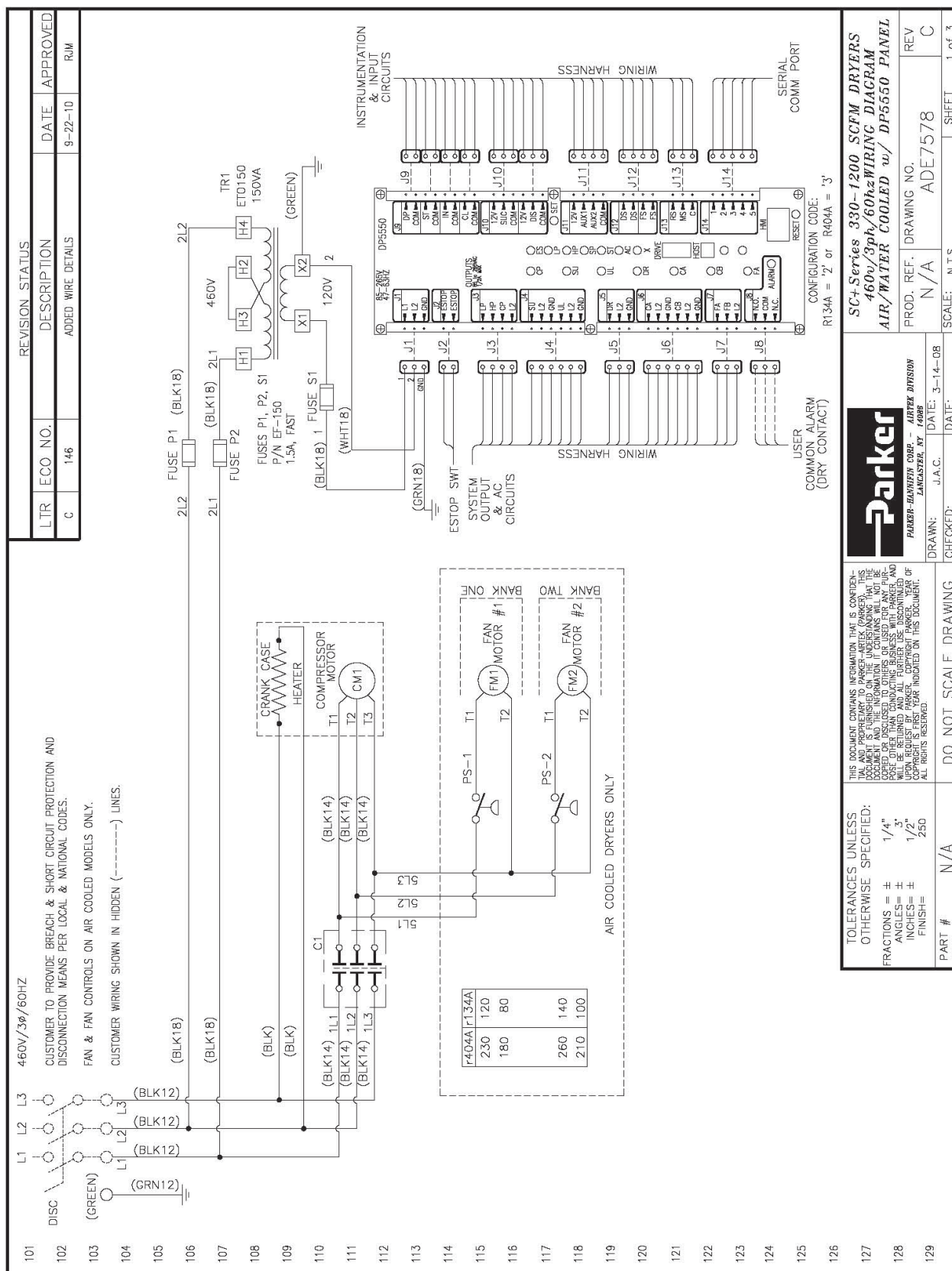
- Run the dryer for a minimum of 2 minutes, if there is not a visible level of oil in the sight glass, proceed to the next step, if there is an oil level, DO NOT add oil to the system.
- Using the appropriate oil pump add the proper oil (POE for R134 and R404 refrigerant) using the Schrader valve on the suction side of the compressor.
- Add oil until there is a visible level in the sight glass with the compressor running.

[illegible]





## 9. Associated Drawings



201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

REVISION STATUS			
LTR	ECO NO.	DESCRIPTION	DATE
C	146	ADDED WIRE DETAILS	9-22-10
			RJM

SERVICE SWITCH (RED)

(YEL) (ORC18) HIGH PRESSURE r134A r404A

(BLK) (21) HIGH PRESSURE

(BLU) (11) LOW PRESSURE

(V018) SUPPRESSOR P/N EW9501

COMPRESSOR CONTROL

C1 (WHT11B) 109

JUMPER (TIE WRAP TO WIRING HARNESS)

(BLK18) 104

(V018) 106

(ORA18) 107

(BLK18) 108

(WHT18) 109

(BLK) 110

(WHT) 111

(GRN) 112

(BLK) 113

(WHT) 114

(GRN) 115

LIQUID LINE SOL.

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

(BLK) 116

(WHT) 117

(GRN) 118

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRAINS.

NOT USED THIS MODEL

NOT USED THIS MODEL

OUTPUTS 85 to 265VAC 1/2A MAX

E-STOP SWITCH OUT

E-STOP SWITCH IN

LOW PRESSURE IN

HIGH PRESSURE IN

COMPRESSOR RUN

NEUTRAL

SUCTION SOL

NEUTRAL

GND

UNLOADER SOL

NEUTRAL

GND

DRAIN(S) SOL

NEUTRAL

GND

CYLINDER HEAD A

NEUTRAL

GND

CYLINDER HEAD B

NEUTRAL

GND

FAN CONTROL A

FAN CONTROL B

NEUTRAL

FROM CONTACTOR C1 11 12 13

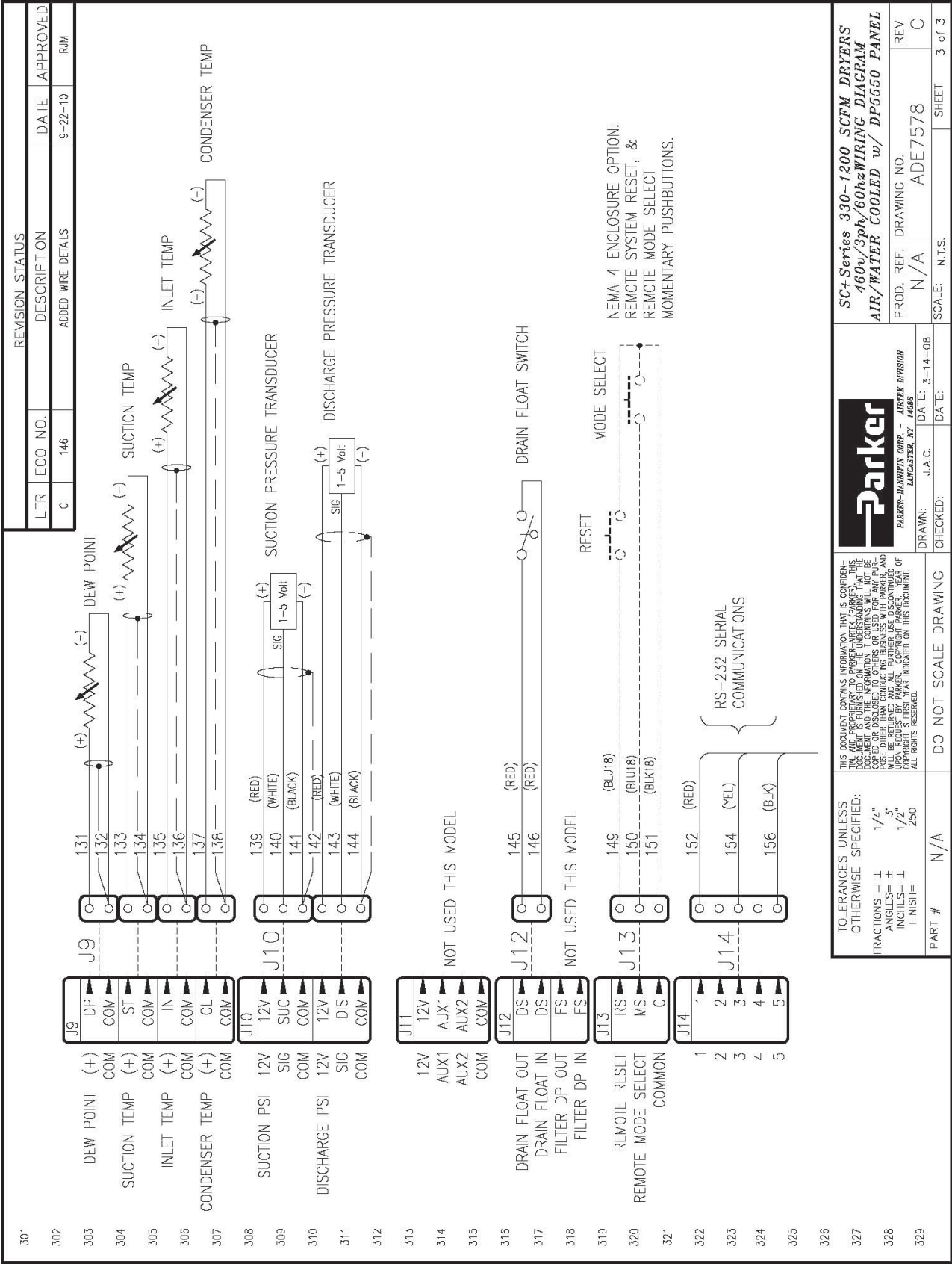
INTERNAL MOTOR PROTECTION

SCHEMATIC DIAGRAM OF WIRING FOR PARKER AIR/WATER COOLED W/ DP5550 PANEL

COMPRESSOR CONTROL

UNDLADER SOL.

DRAIN SOL. #2 IS WIRED PARALLEL TO DRAIN #1 ON UNITS WITH TWO DRA



460V/3ø/60HZ

CUSTOMER TO PROVIDE BREACH & SHORT CIRCUIT PROTECTION AND DISCONNECTION MEANS PER LOCAL & NATIONAL CODES.

FAN & FAN CONTROLS ON AIR COOLED MODELS ONLY.

CUSTOMER WIRING SHOWN IN HIDDEN (-----) LINES.

**FLOOR DOCUMENT**

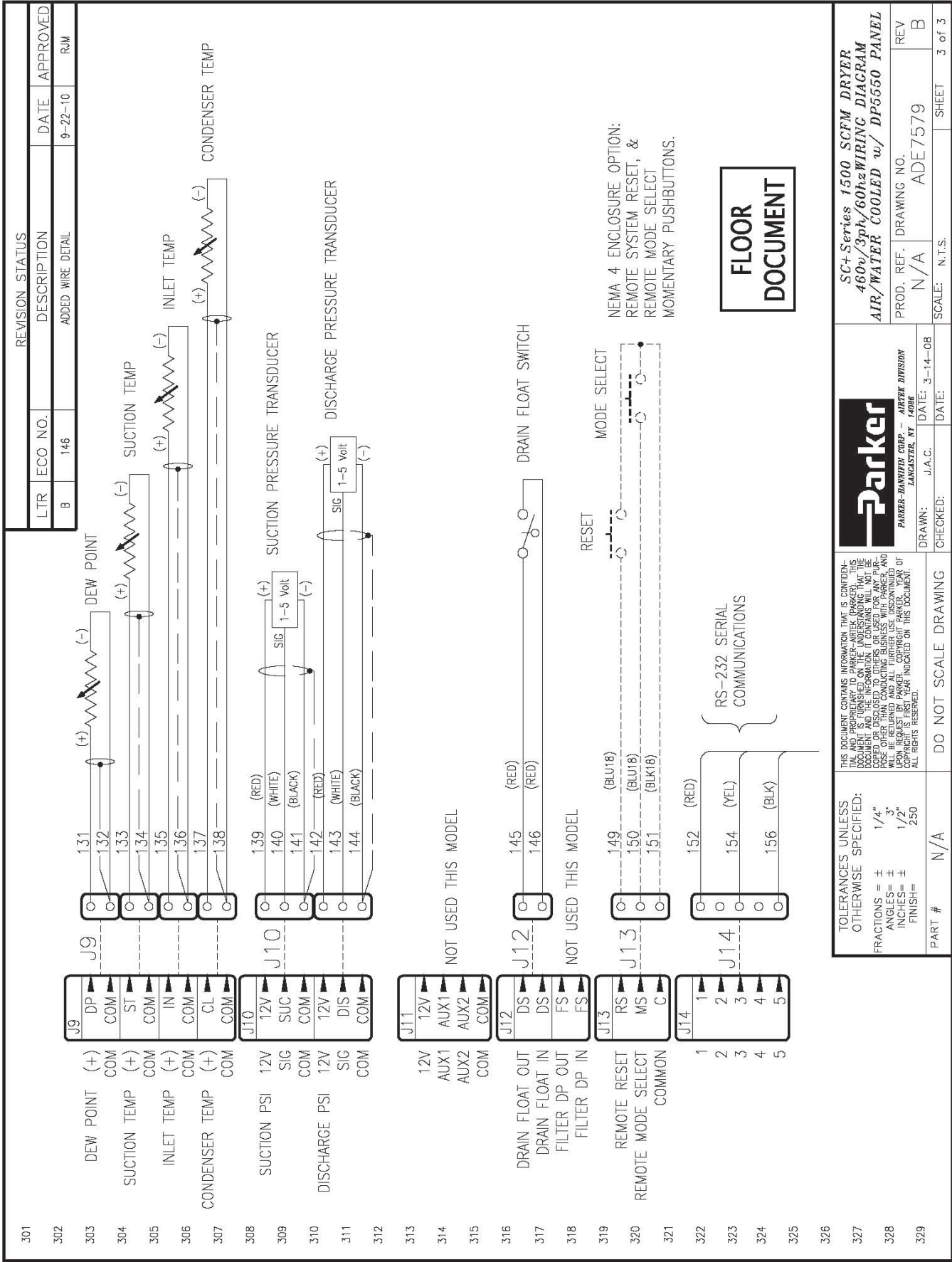
REVISION STATUS			
LTR	ECO NO.	DESCRIPTION	DATE
B	146	ADDED WIRE DETAIL	9-22-10
		APPROVED	RJM

PROD. REF.	DRAWING NO.	SCALE:	N.T.S.	SHEET	1 of 3
N/A	ADE7579				

SC+Series 1500 SCFM DRYER  
460v/3ø/60hz WIRING DIAGRAM  
AIR/WATER COOLED w/ DP5550 PANEL



[illegible]



**REVISION STATUS**

LTR	ECO NO.	DESCRIPTION	DATE	APPROVED
G	563	CORRECTED FANS TO BE 3 PHASE FANS	5-13-11	A.S.

**460V/3 $\phi$ /60HZ**

CUSTOMER TO PROVIDE BREACH & SHORT CIRCUIT PROTECTION AND DISCONNECTION MEANS PER LOCAL & NATIONAL CODES.

FAN & FAN CONTROLS ON AIR COOLED MODELS ONLY.

CUSTOMER WIRING SHOWN IN HIDDEN (-----) LINES.

**FUSES P1, P2, P/N EF0100 1.0A, FAST**

**FUSE P1**

**FUSE P2**

**FUSES S1 P/N EF0150 1.5A, FAST**

**CRANK CASE HEATER**

**COMPRESSOR MOTOR CM1**

**BANK ONE**

**BANK TWO**

**AIR COOLED DRYERS ONLY**

**FILTER DRAIN ASSEMBLY**

**DP5550**

**WIRING HARNESS**

**INSTRUMENTATION & INPUT CIRCUITS**

**SERIAL COMM. PORT**

**CONFIGURATION CODE: R404A = 'A'**

**USER COMMON ALARM (DRY CONTACT)**

**DO NOT SCALE DRAWING**

**TOLERANCES UNLESS OTHERWISE SPECIFIED:**

FRACTIONS =  $\pm$  1/4"

ANGLES =  $\pm$  3°

INCHES =  $\pm$  1/2"

FINISH = 250

**PART # N/A**

**DO NOT SCALE DRAWING**

**DATE: 3-14-08**

**CHECKED: J.A.C.**

**DRAWN: LANCASTER, NY 14096**

**SCALE: N.T.S.**

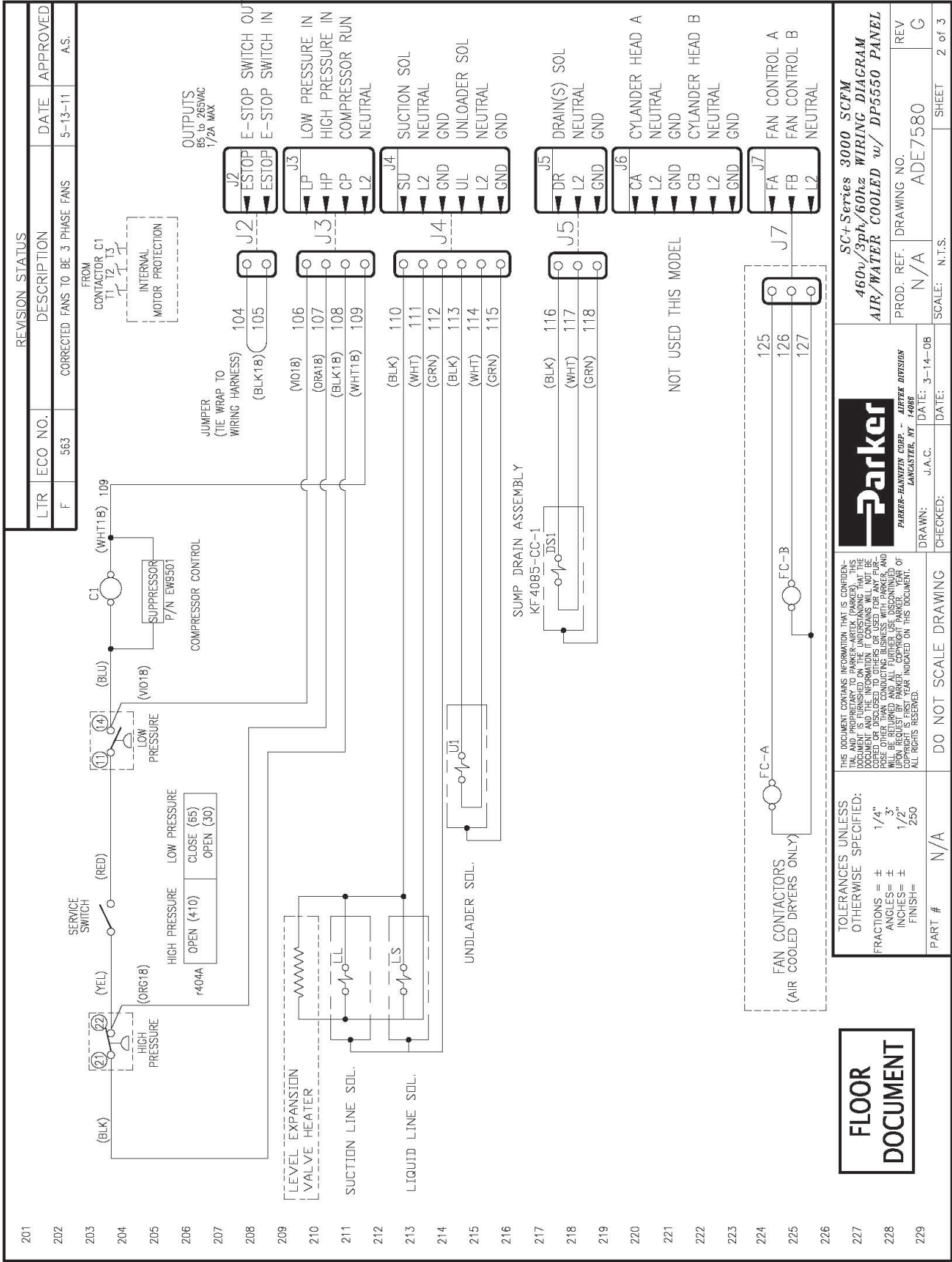
**SHEET 1 of 3**

**REV G**

**DRAWING NO. ADE7580**

**PROD. REF. N/A**

**SC+ Series 3000 SCFM 460V/3ph/60Hz AIR/WATER COOLED w/ DP5550 PANEL**

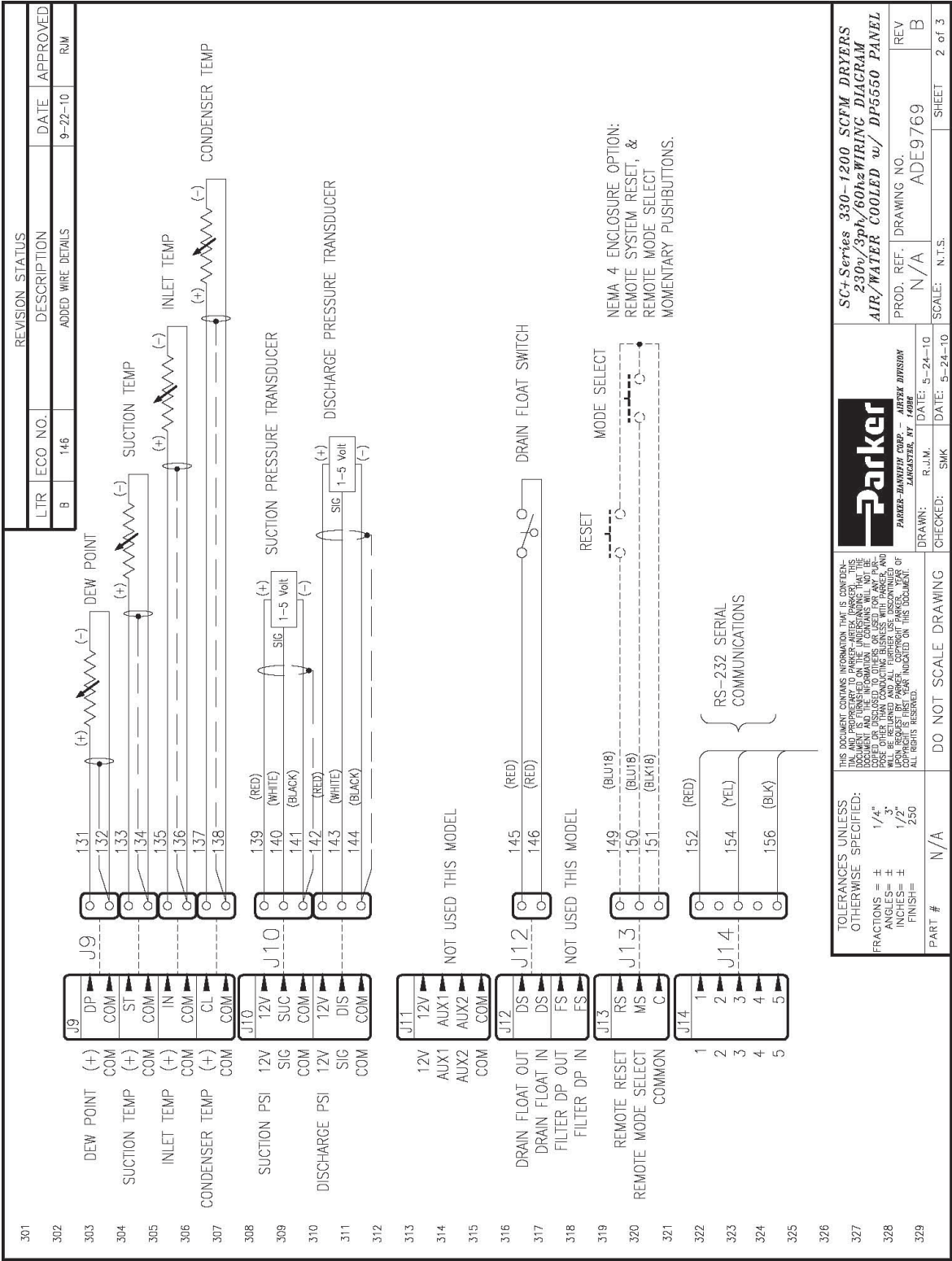




[illegible]

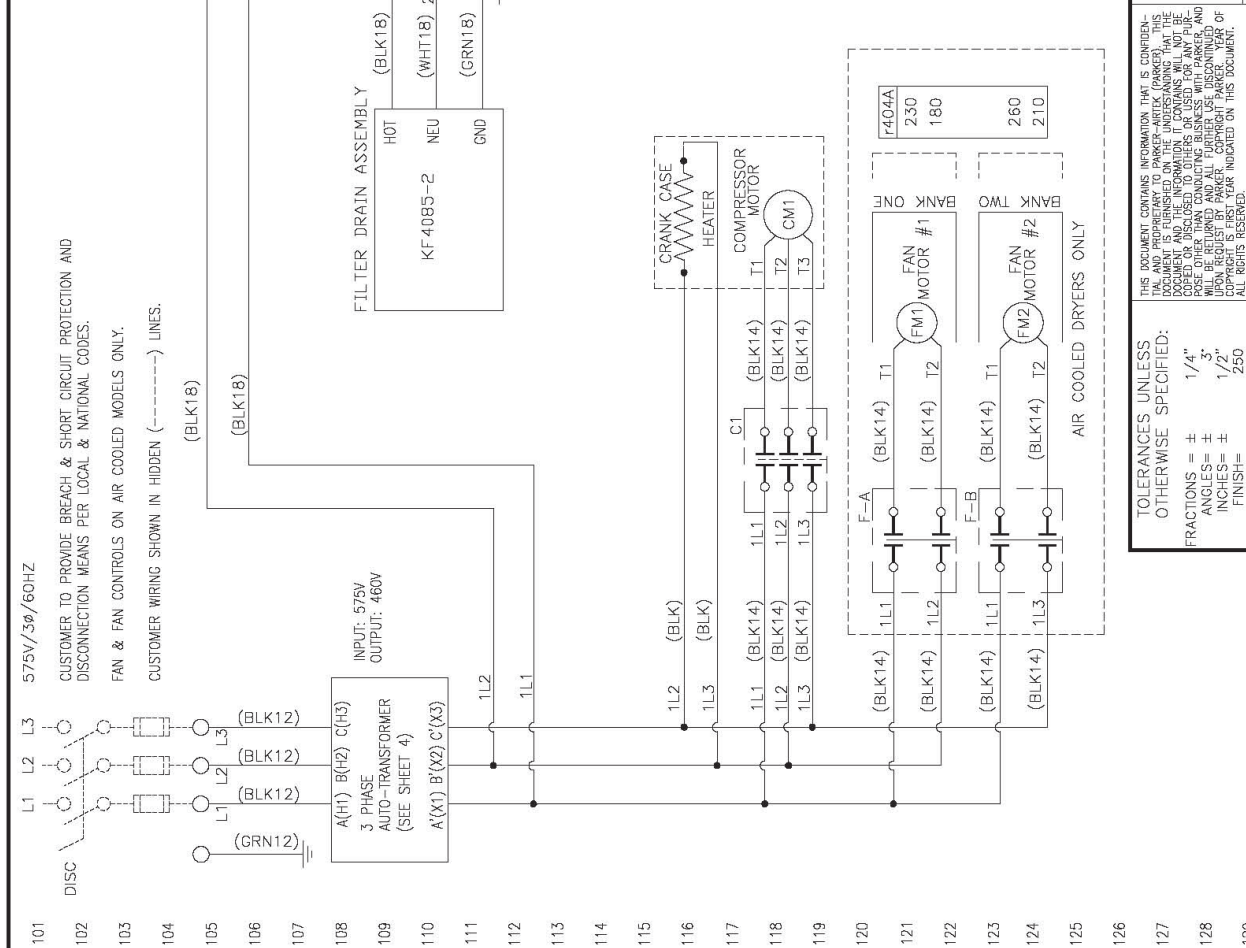
[illegible]


**Parker**



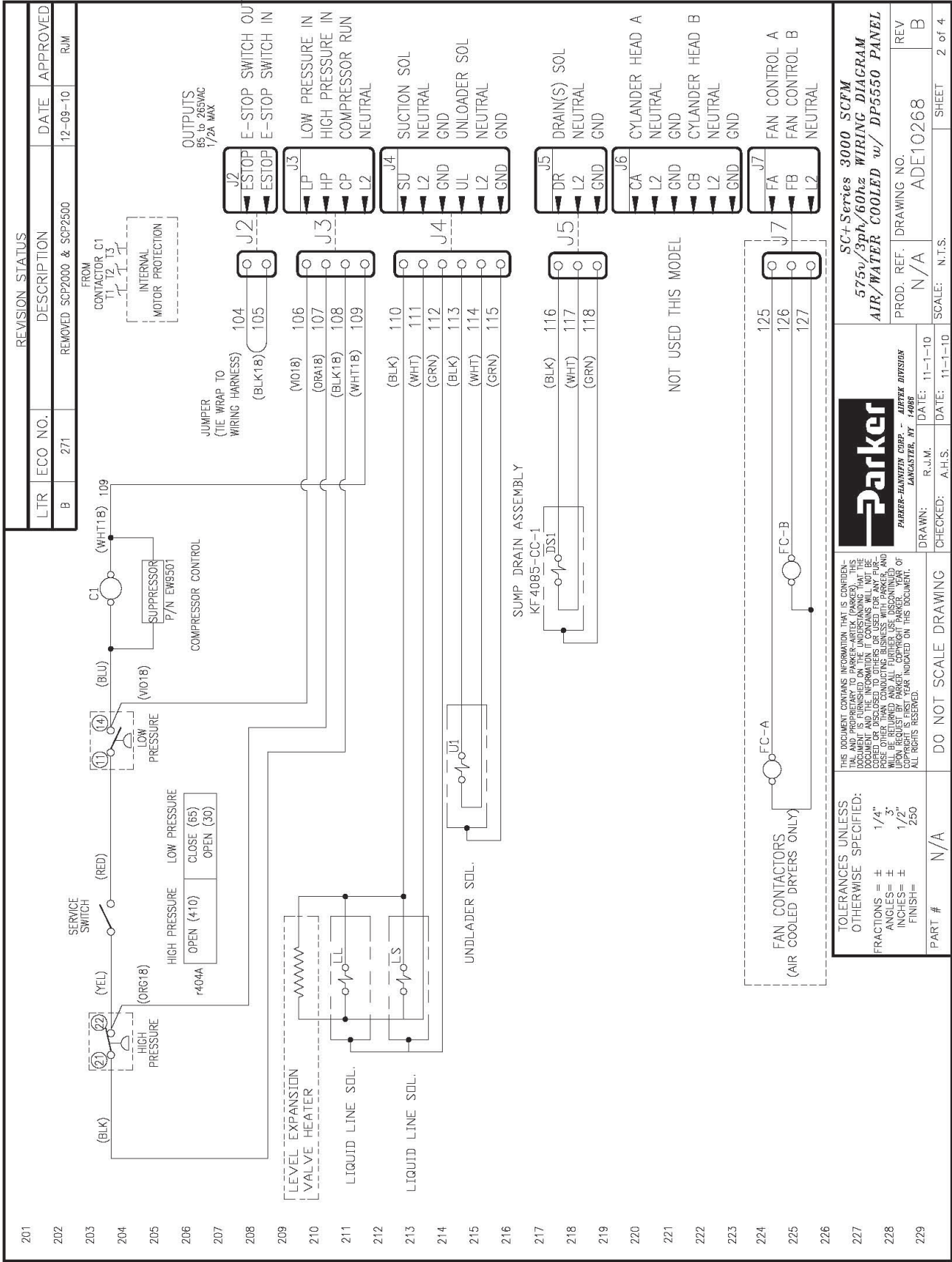


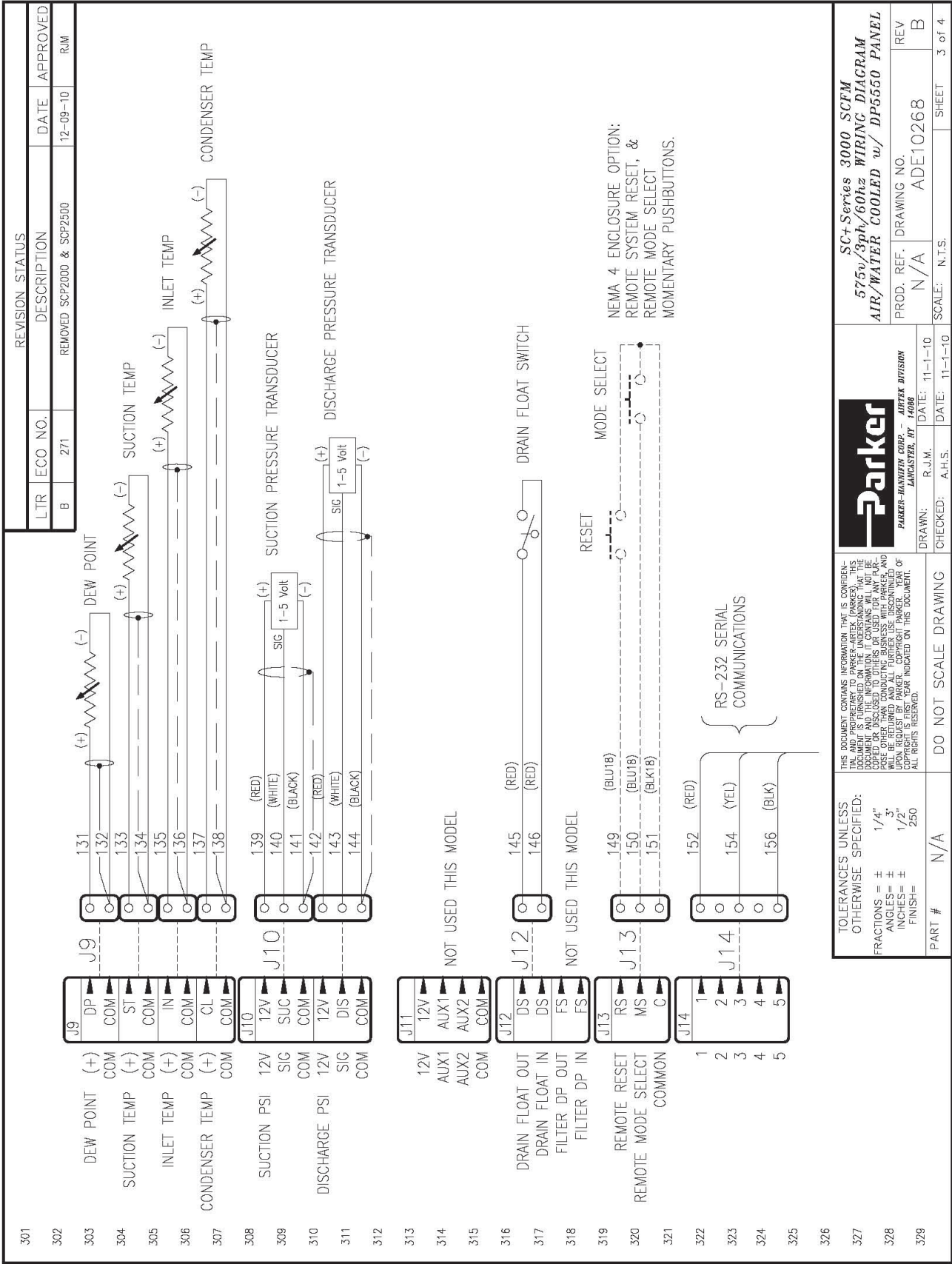
REVISION STATUS			
LTR	ECO NO.	DESCRIPTION	DATE
B	271	REMOVED SCP2000 & SCP2500	12-09-10
			APPROVED
			RJM



	<b>PARKER-HANNIFIN CORP. - AIRPORT DIVISION</b> 10000 W. LAMAR BLVD. DALLAS, TEXAS 75243		<b>SC+ Series 3000 SCFM</b> <b>575v/3ph/60hz WIRING DIAGRAM</b> <b>AIR/WATER COOLED w/ DP5550 PANEL</b>	
	DRAWN:	R.A.M.	PROD. REF.	DRAWING NO.
	CHECKED:	A.H.S.	N/A	ADE10268
	DATE:	DATE:	SCALE:	N.T.S.
11-1-10	11-1-10	1 of 4		

<p><b>TOLERANCES UNLESS OTHERWISE SPECIFIED:</b></p> <p>FRACTIONS = ± 1/4"</p> <p>ANGLES = ± 3°</p> <p>INCHES = ± 1/2"</p> <p>FINISH = 250</p>	<p>THIS DOCUMENT CONTAINS INFORMATION THAT IS CONFIDENTIAL AND THE INFORMATION CONTAINED HEREIN IS NOT TO BE DISCLOSED TO THE PUBLIC OR TO ANY OTHER PERSON OR ORGANIZATION WITHOUT THE WRITTEN AUTHORIZATION OF THE U.S. GOVERNMENT. IT IS THE POLICY OF THE U.S. GOVERNMENT TO PROTECT THE CONFIDENTIALITY OF INFORMATION CONTAINED HEREIN AND TO PREVENT THE UNLAWFUL DISCLOSURE OF SUCH INFORMATION. IT IS THE POLICY OF THE U.S. GOVERNMENT TO MAKE AVAILABLE TO THE PUBLIC INFORMATION THAT IS NOT CONFIDENTIAL. IT IS THE POLICY OF THE U.S. GOVERNMENT TO PROTECT THE CONFIDENTIALITY OF INFORMATION CONTAINED HEREIN AND TO PREVENT THE UNLAWFUL DISCLOSURE OF SUCH INFORMATION. IT IS THE POLICY OF THE U.S. GOVERNMENT TO MAKE AVAILABLE TO THE PUBLIC INFORMATION THAT IS NOT CONFIDENTIAL.</p>
<p>PART # N/A</p>	<p>DO NOT SCALE DRAWING</p>





[illegible]



575V/3ø/60HZ

CUSTOMER TO PROVIDE BREACH & SHORT CIRCUIT PROTECTION AND DISCONNECTION MEANS PER LOCAL & NATIONAL CODES.

FAN & FAN CONTROLS ON AIR COOLED MODELS ONLY.

CUSTOMER WIRING SHOWN IN HIDDEN (-----) LINES.

INPUT: 575V  
OUTPUT: 460V

A(H1) B(H2) C(H3)  
3 PHASE  
AUTO-TRANSFORMER  
(SEE SHEET 4)  
A(X1) B(X2) C(X3)

FUSE P1 (BLK18) 2L2  
FUSE P2 (BLK18) 2L1  
FUSES P1, P2, S1  
P/N EF-150  
1.5A, FAST  
120V  
(WHT18)  
(GRN18)

TR1  
EOT150  
150VA

ESTOP SWT  
SYSTEM  
OUTPUT  
& AC  
CIRCUITS

INSTRUMENTATION  
& INPUT  
CIRCUITS

WIRING HARNESS

COMMON ALARM  
(DRY CONTACT)

USER

CONFIGURATION CODE:  
RT34A = '2' or R404A = '3'

SERIAL  
COMM. PORT

Model	230	120	80	260	140	100
r404A	230	120	80	260	140	100
r134A	230	120	80	260	140	100

AIR COOLED DRYERS ONLY

BANK ONE  
FAN MOTOR #1  
FM1  
T1 T2

BANK TWO  
FAN MOTOR #2  
FM2  
T1 T2

PS-1  
PS-2

GRANK CASE  
HEATER

COMPRESSOR  
MOTOR  
CM1  
T1 T2 T3

DO NOT SCALE DRAWING

TOLERANCES UNLESS OTHERWISE SPECIFIED:  
FRACTIONS = ± 1/4"  
DIMENSIONS = ± 3"  
ANGLES = ± 1/2°  
FINISH = 250

PART # N/A

DO NOT SCALE DRAWING

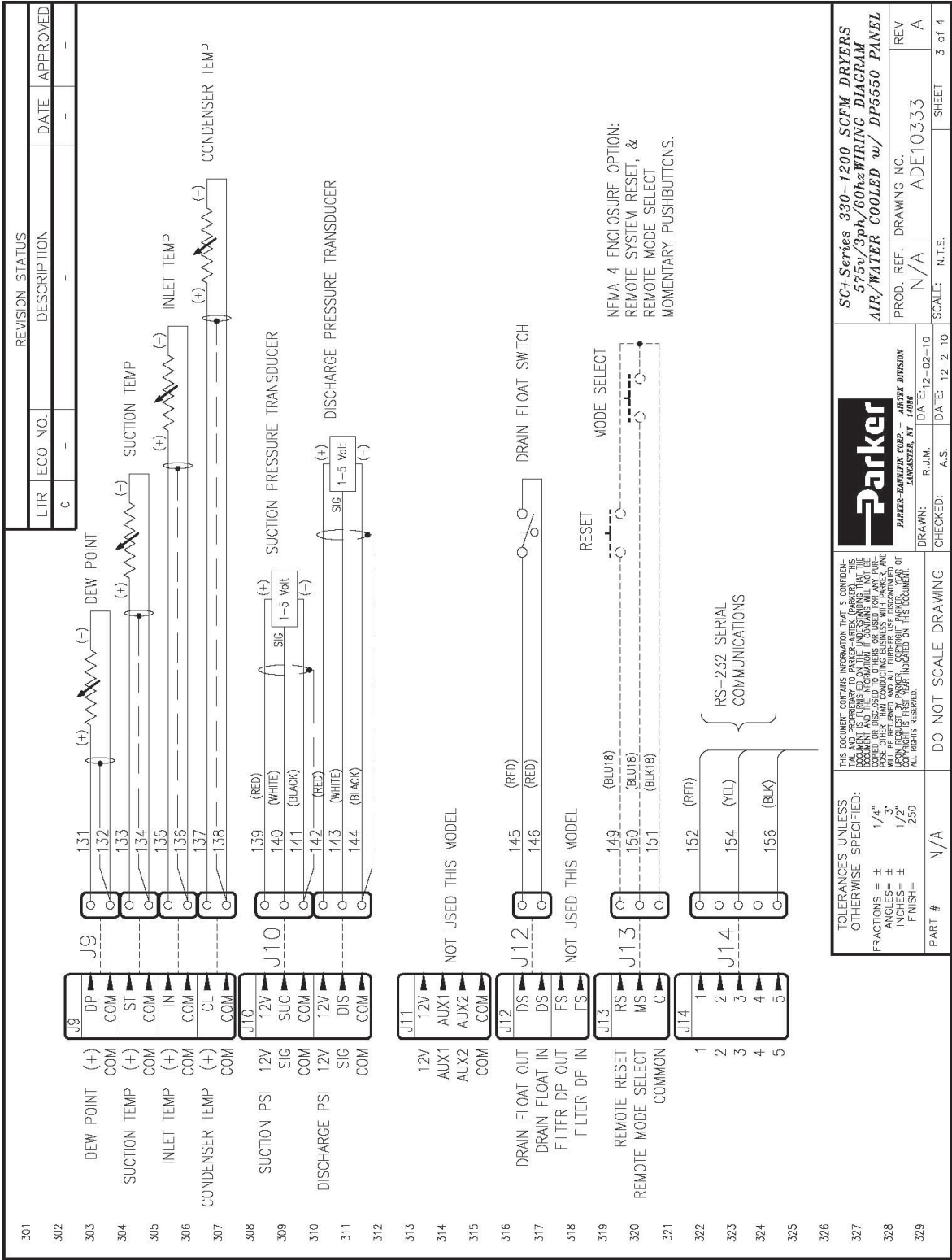
THIS DOCUMENT CONTAINS INFORMATION THAT IS CONFIDENTIAL TO PARKER. IT IS TO BE KEPT SECRET AND NOT DISCLOSED TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF PARKER. ANY UNAUTHORIZED DISCLOSURE OR USE OF THIS INFORMATION IS PROHIBITED. PARKER REQUESTS THAT YOU REQUEST BY PARKER. COPYRIGHT PARKER. ALL RIGHTS RESERVED.

CHECKED: R.J.M. DATE: 12-02-10  
DRAWN: J.A. DATE: 12-02-10  
SCALE: N/A  
SHEET: 1 of 4

PROD. REF. DRAWING NO. ADE10333  
N/A  
REV A

SCF Series 330-1200 SCFM DRYERS  
575v/3ø/60hz WIRING DIAGRAM  
AIR/WATER COOLED w/ DP5550 PANEL





INPUT: 600V(575V) 3 $\phi$  60Hz 3WIRE

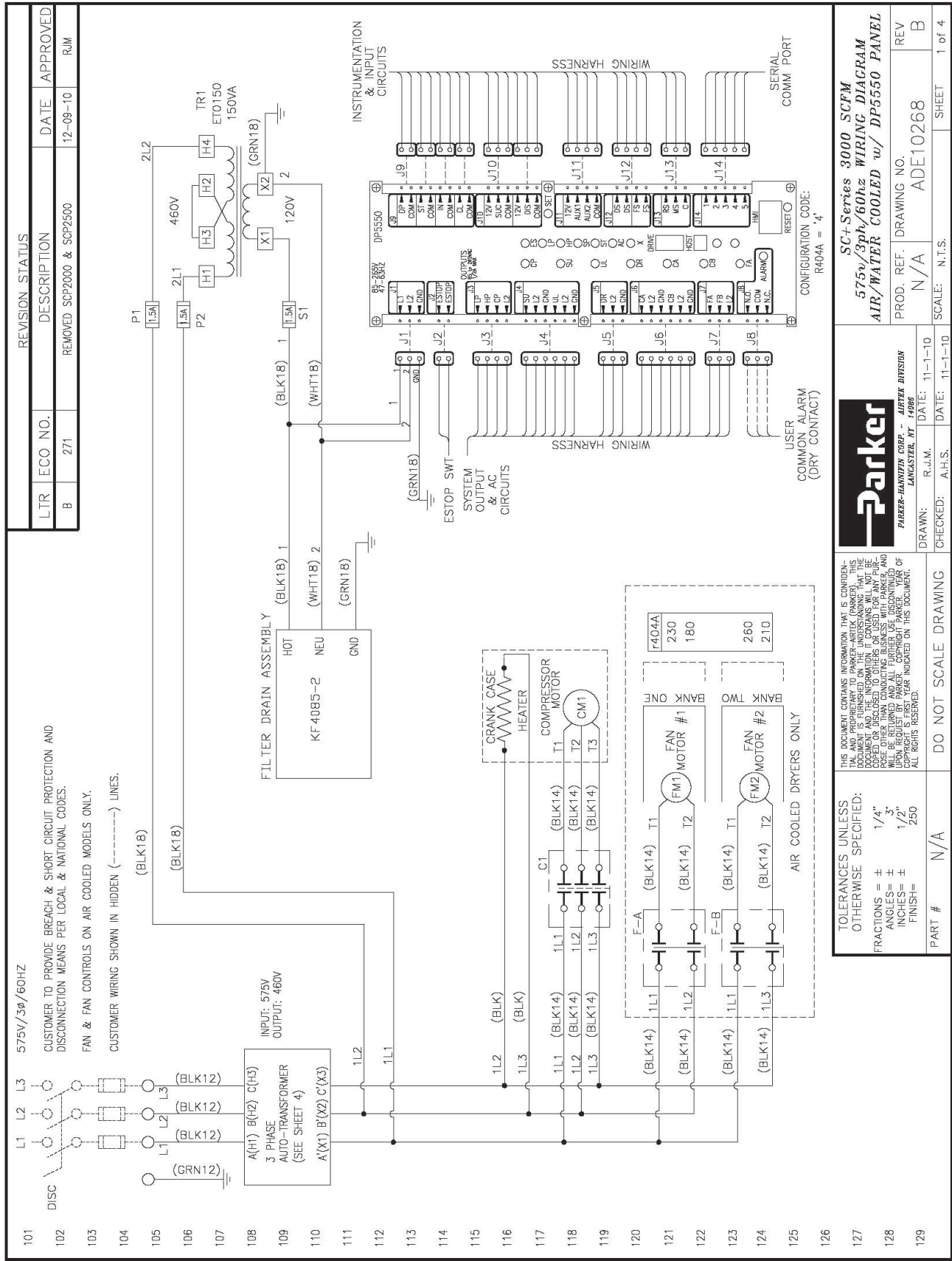
OUTPUT: 480V(460V) 3 $\phi$  60Hz 3WIRE

REVISION STATUS			
LTR	ECO NO.	DESCRIPTION	DATE
C	-	-	-

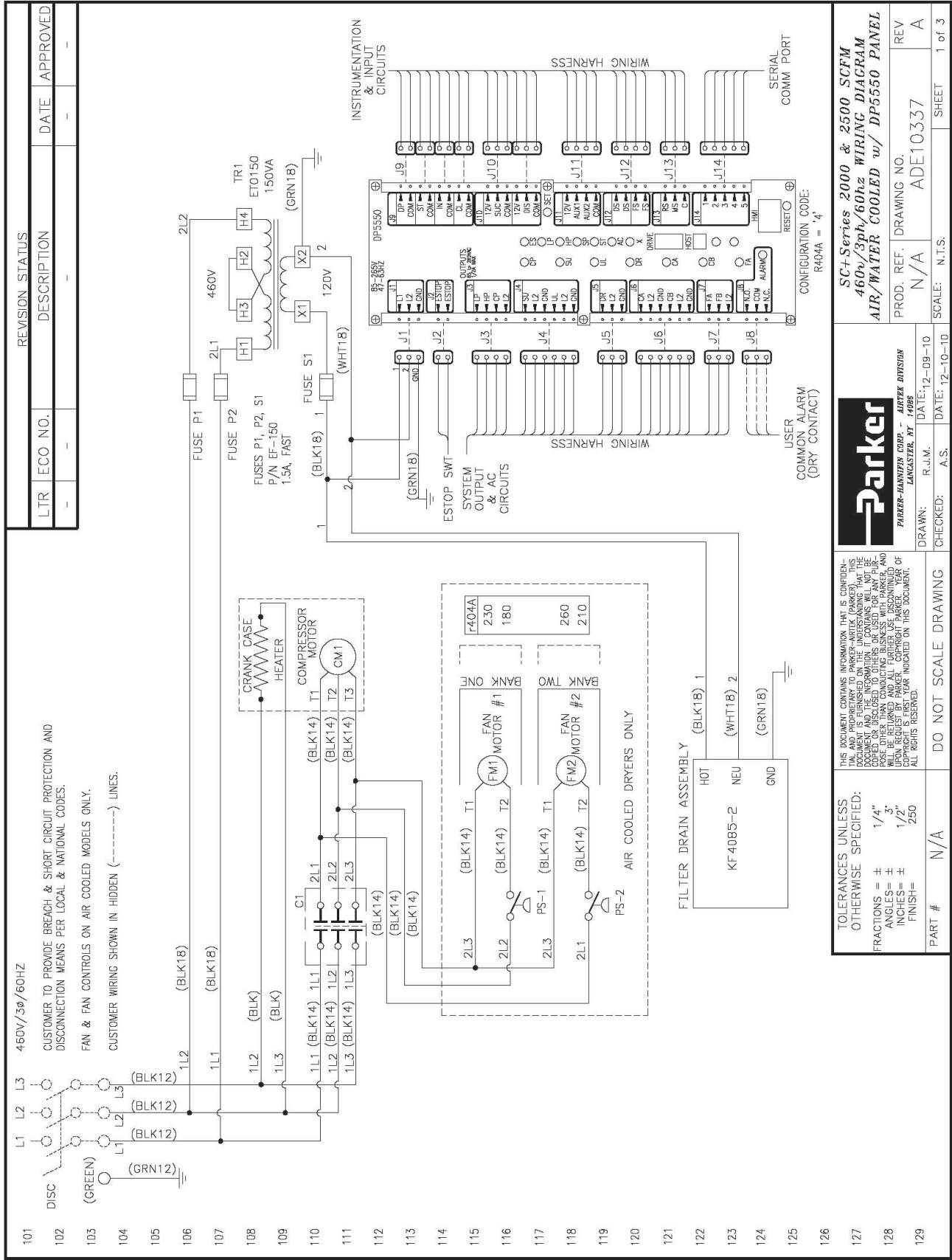
TOLERANCES UNLESS OTHERWISE SPECIFIED:		PART #	
FRACTIONS = $\pm$	1/4"	N/A	
ANGLES = $\pm$	3"		
INCHES = $\pm$	1/2"		
FINISH =	250		

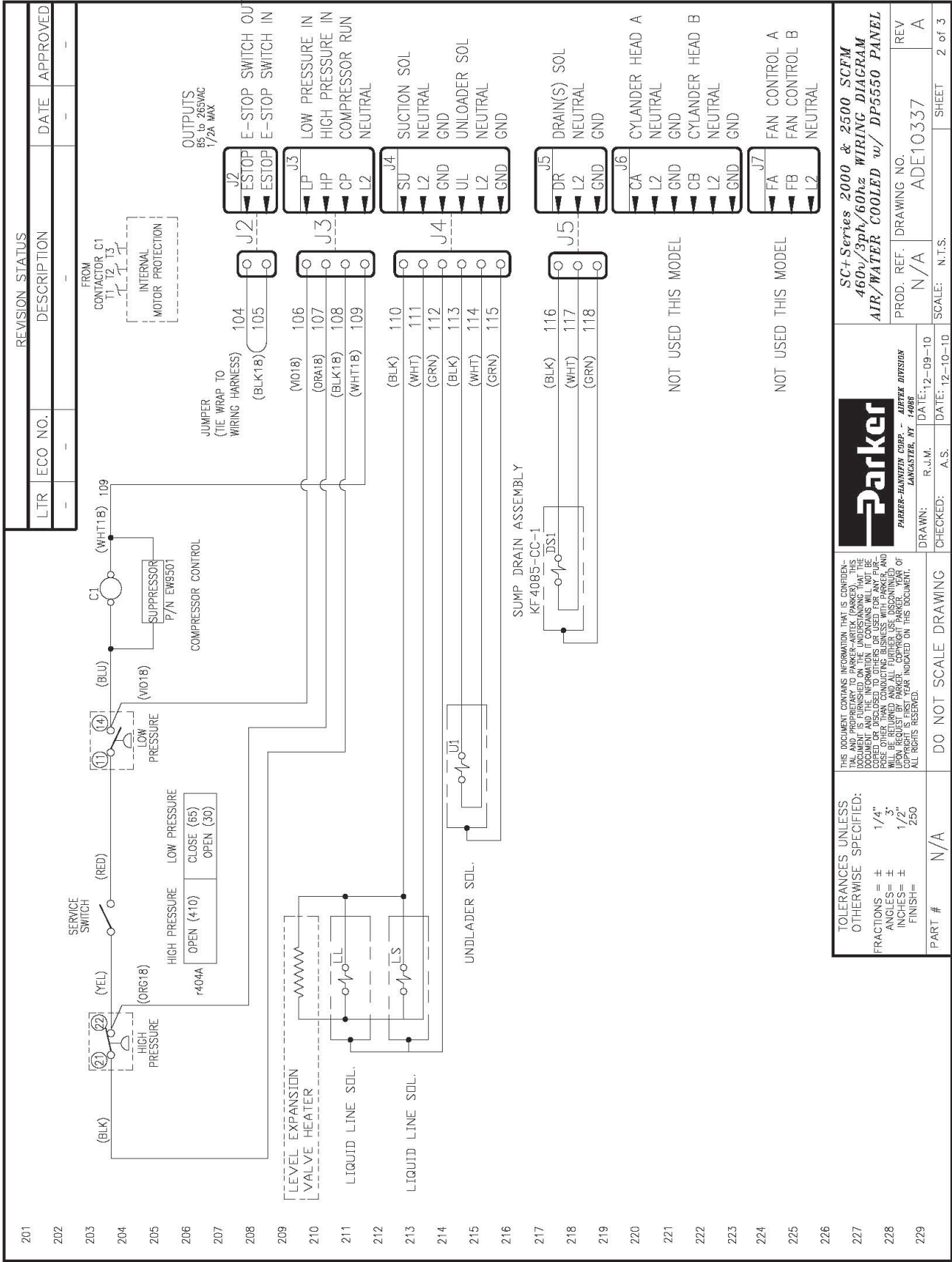
DO NOT SCALE DRAWING		THIS IS AN AUTO-TRANSFORMER CONNECTION	
CHECKED:	R.J.M.	DATE:	12-02-10
DRAWN:	A.S.	DATE:	12-02-10

Parker		Parker-Hannifin Corp. - AIRTEK Division	
Parker-Hannifin Corp. - AIRTEK Division		Parker-Hannifin Corp. - AIRTEK Division	
LANSING, MI 48106		LANSING, MI 48106	
PROD. REF. N/A		DRAWING NO. ADE10333	
REV. A		REV. A	









TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS = ± 1/4" ANGLES = ± 3° INCHES = ± 1/2" FINISH = 250	Parker PARKER-HANFEN CORP. - ARTK DIVISION LANCASTER, NY 14086		SC+ Series 2000 & 2500 SCFM 460w/3ph/60hz WIRING DIAGRAM AIR/WATER COOLED w/ DP5550 PANEL	
	DRAWN: R.J.M.	DATE: 12-09-10	PROD. REF. N/A	DRAWING NO. ADE10337
PART # N/A	DO NOT SCALE	DRAWING	CHECKED: A.S.	SCALE: 12-10-10
			SHEET 2 of 3	REV A

REVISION STATUS	
LTR	ECO NO.
DESCRIPTION	DATE

**WIRING DIAGRAM**

**SC+ Series 2000 & 2500 SCFM  
460v/3ph/60hz WIRING DIAGRAM  
AIR/WATER COOLED w/ DP5550 PANEL**

PROD. REF.	DRAWING NO.	REV
N/A	ADE10337	A

SCALE: N.T.S. SHEET 3 of 3

**NOT USED THIS MODEL**

**NOT USED THIS MODEL**

**MODE SELECT**

RESET

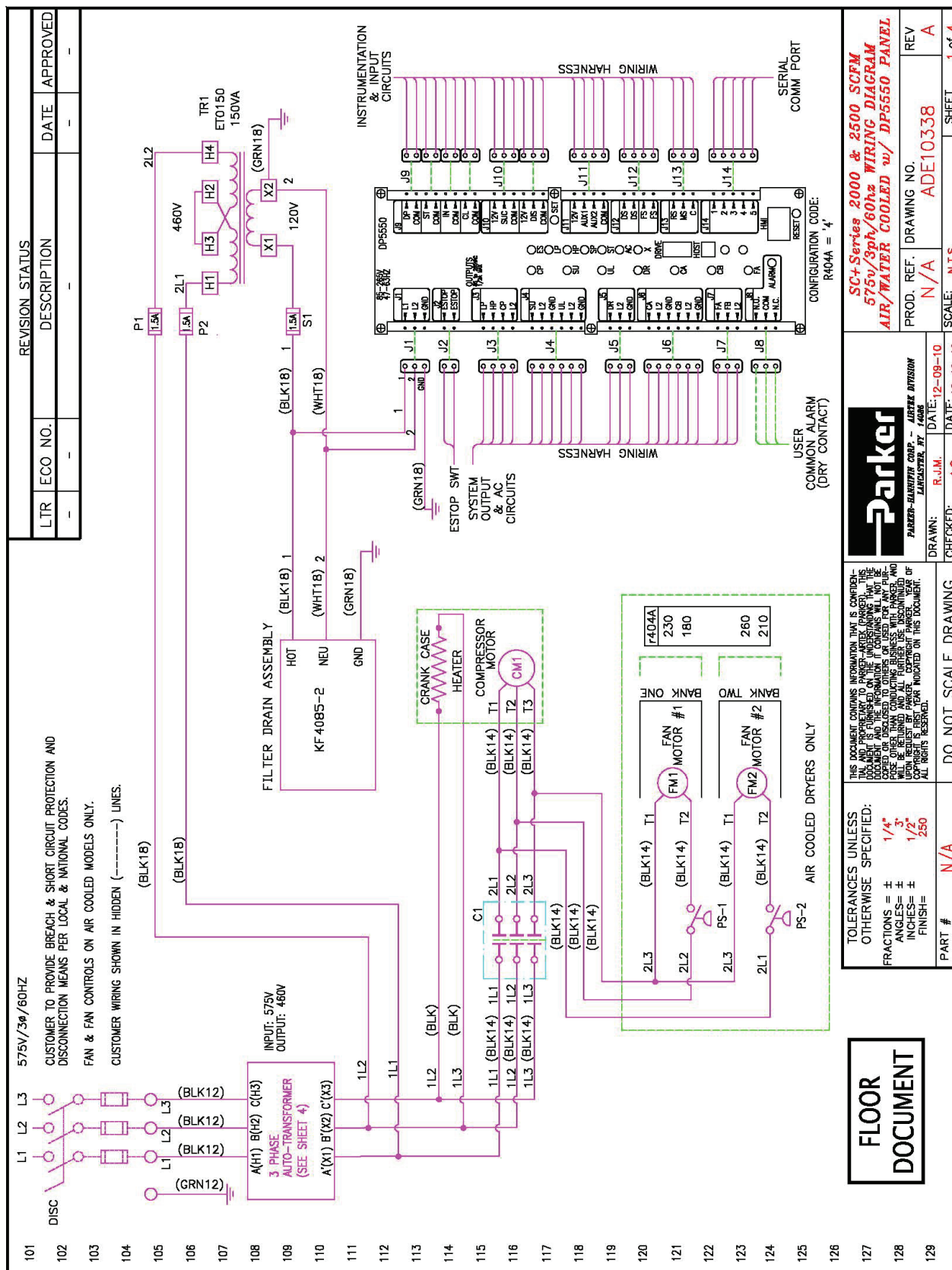
DRAIN FLOAT SWITCH

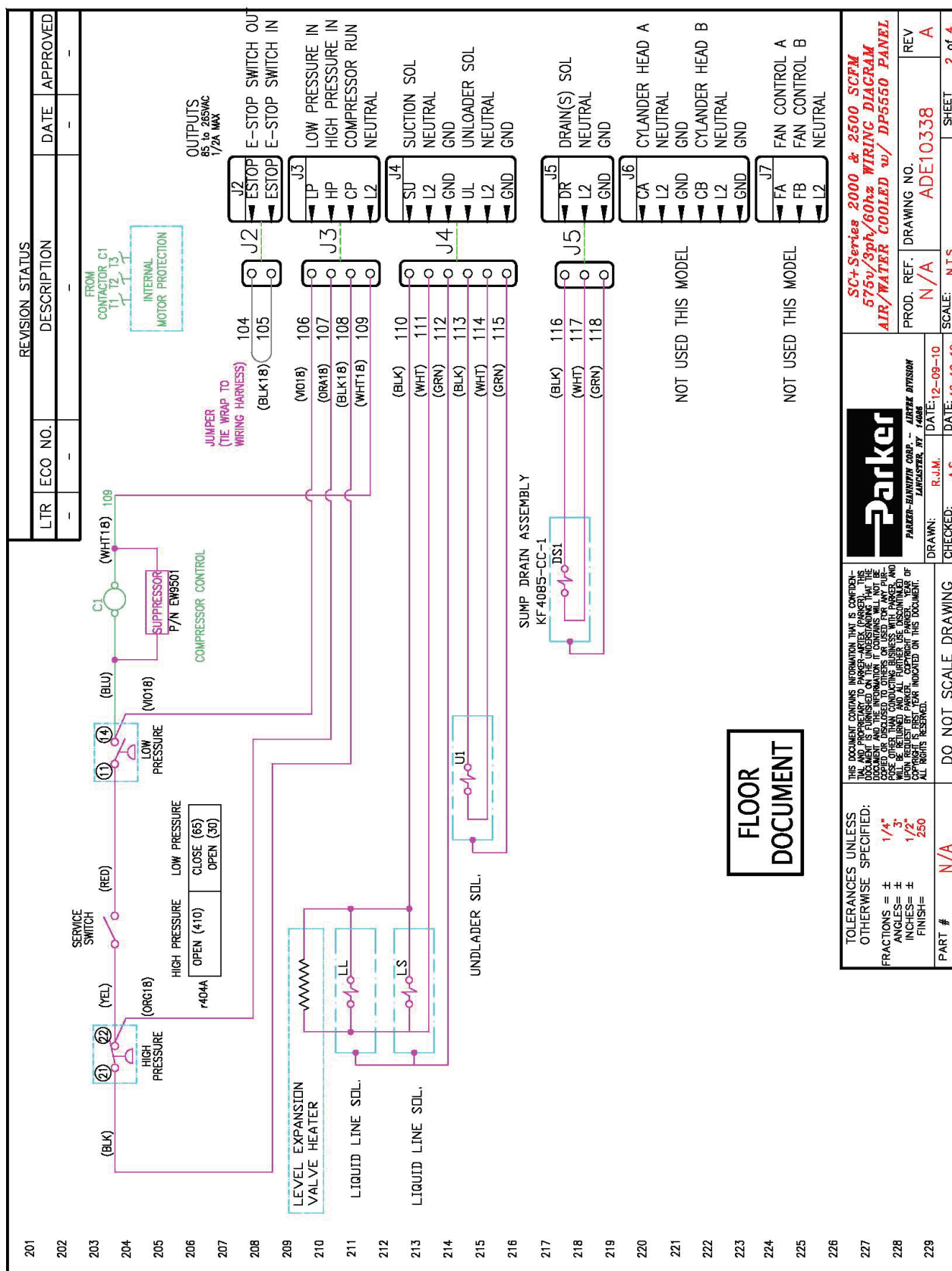
RS-232 SERIAL COMMUNICATIONS

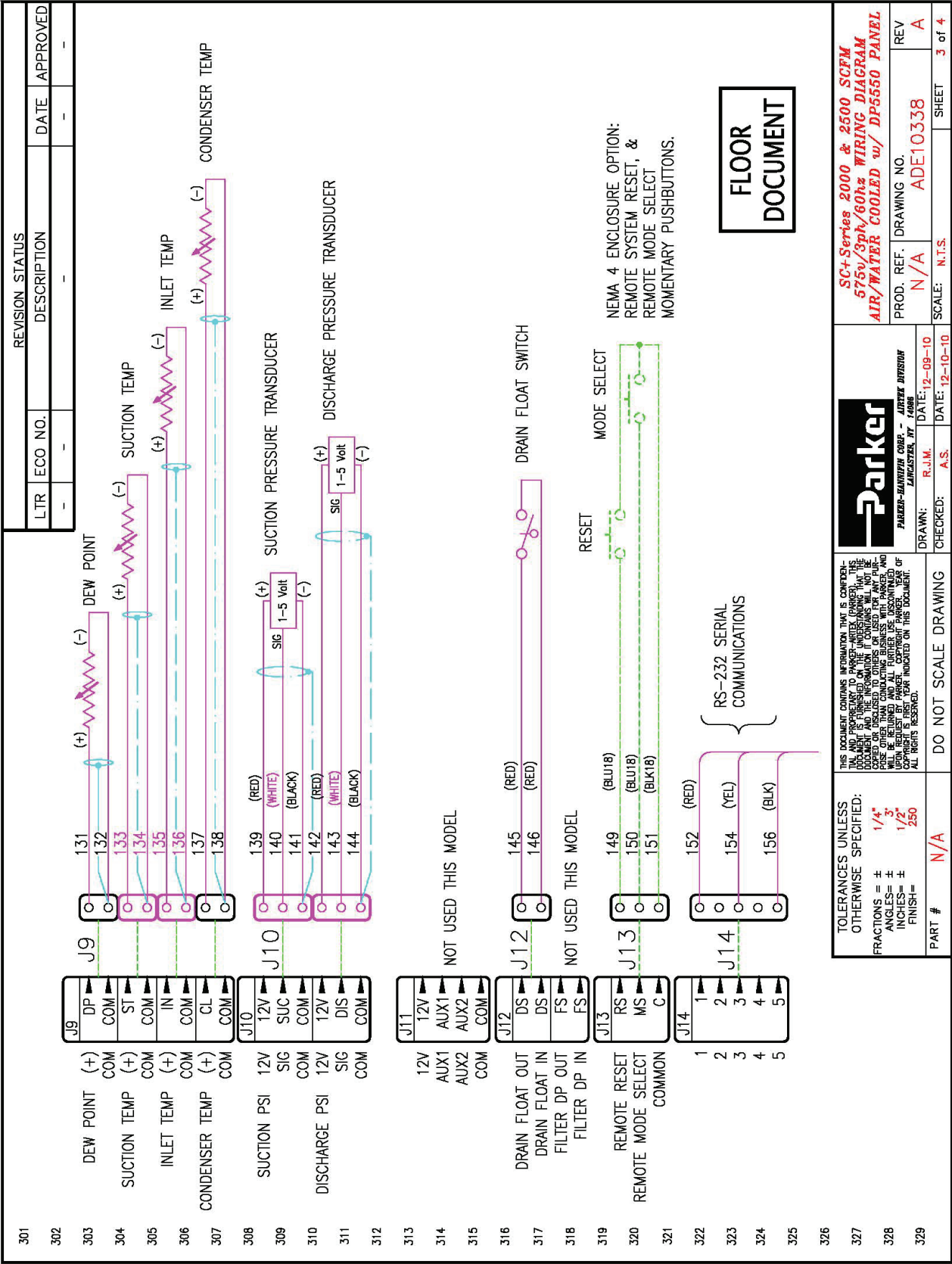
**REVISION STATUS**

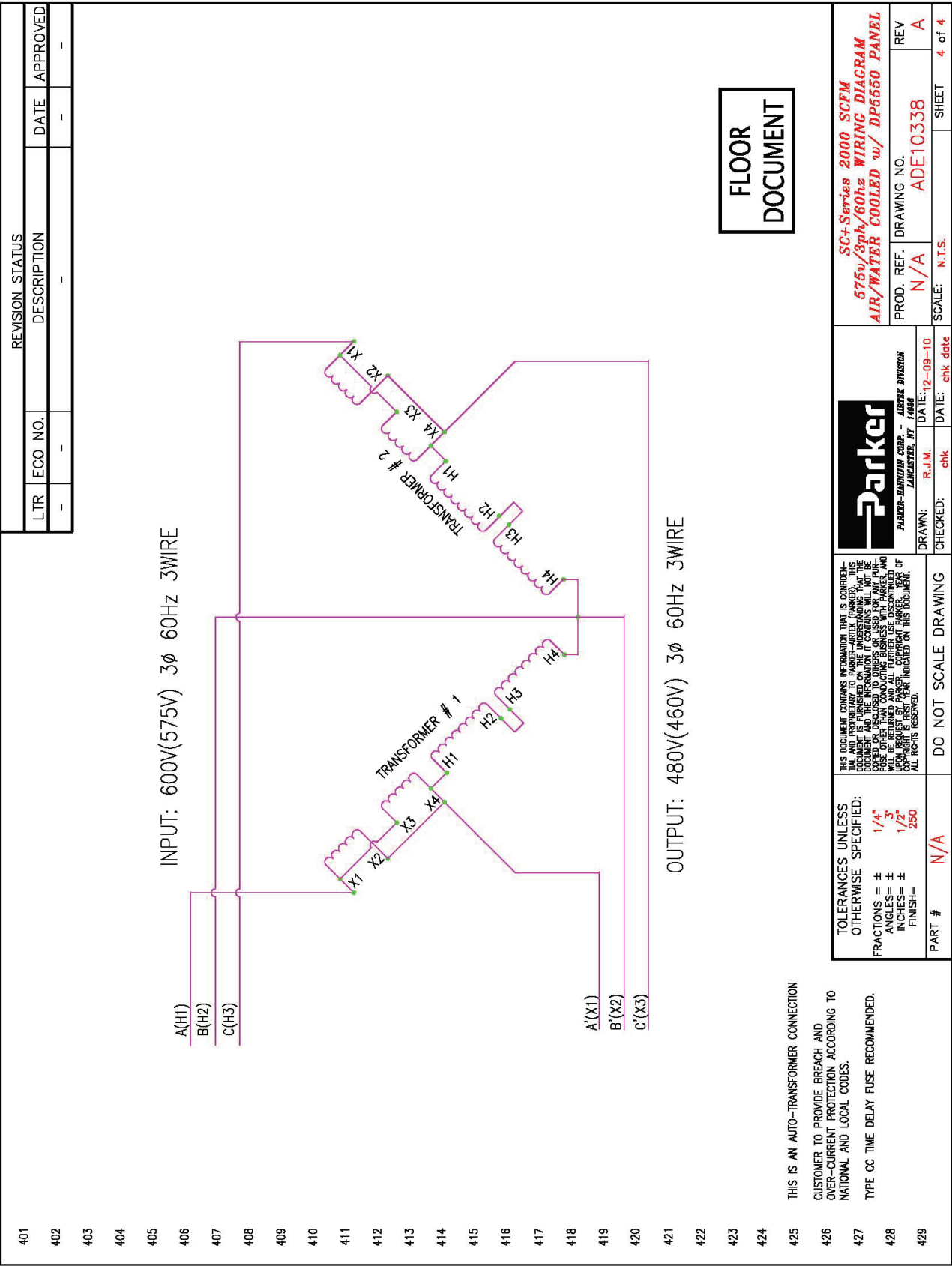
LTR	ECO NO.	DESCRIPTION	DATE	APPROVED









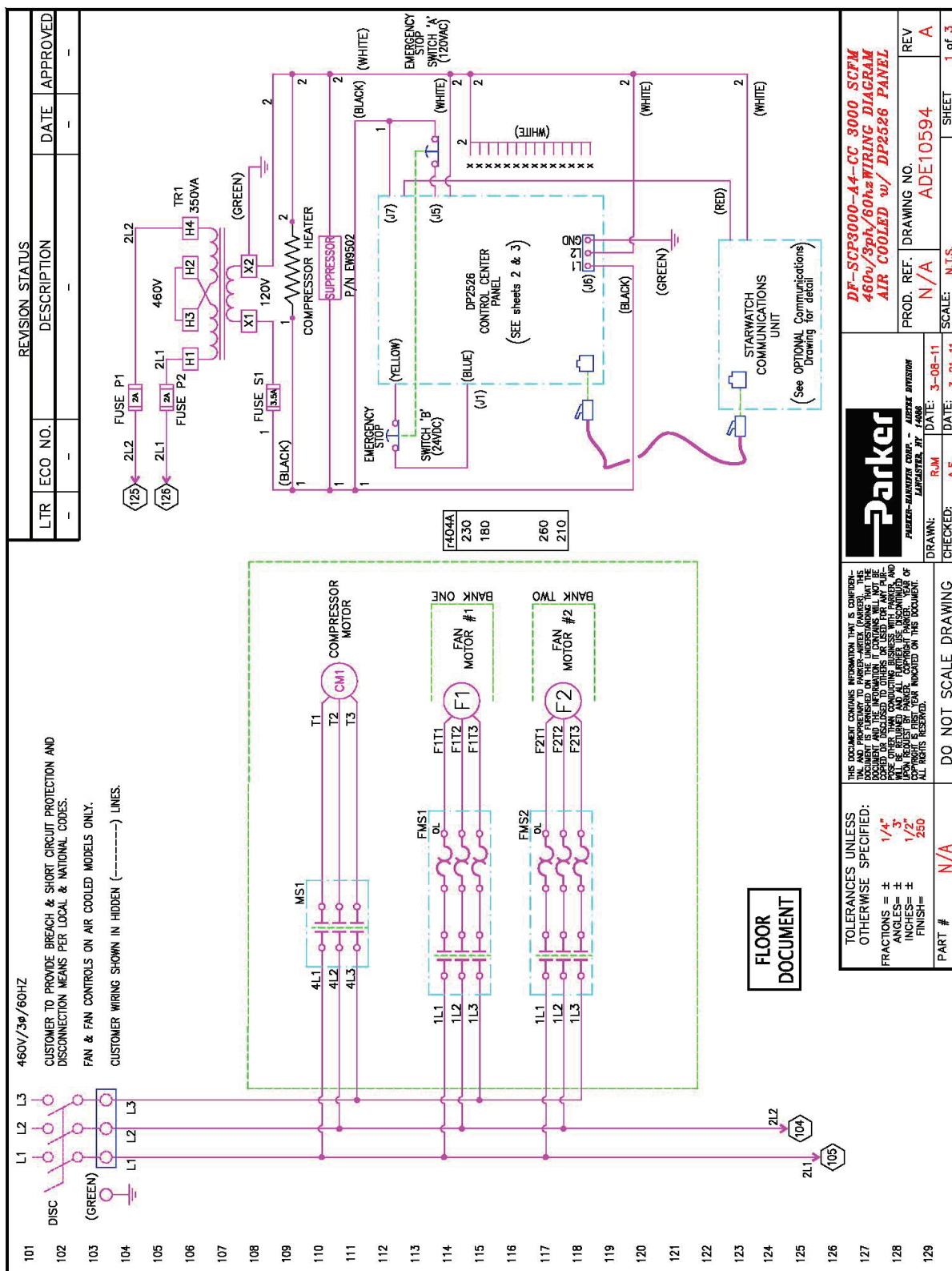




[illegible]

[illegible]

[illegible]





REVISION STATUS		
LTR	ECO NO.	DESCRIPTION
-	-	-
-	-	DATE
-	-	APPROVED

**LEGEND:**

- 1 UNIT #1 LOW PRESSURE
- 2 HIGH REFRIGERANT PRESSURE
- 3 (NOT USED)
- 4 (NOT USED)

**COMPONENTS:**

- SERVICE SWITCH (RED) 23
- HIGH PRESSURE (YELLOW)
- LOW PRESSURE (BLUE) 27
- COMPRESSOR CONTROL (WHITE) 109
- SUPPRESSOR P/N EW502
- MODERN POWER (120VAC LINE) (RED)
- MODERN POWER (120VAC RECEPTICAL) (WHITE)
- COMMON ALARM (USER - DRY CONTACT) (BLACK)
- LINE (L1) (WHITE)
- NEUTRAL (L2) (BLACK)
- EARTH GROUND (GREEN)
- LIQUID LINE (WHITE)
- LEVEL EXPANSION VALVE HEATER (15 WATT, 120 VAC)

**TERMINAL BLOCKS:**

- P13: 1 UNIT #1 LOW PRESSURE, 2 HIGH REFRIGERANT PRESSURE, 3 (NOT USED), 4 (NOT USED)
- P14: 16 HOT (RED), 15 NEUTRAL (WHITE), 14 K14 (DR2) DRAIN VALVE SOL. #2 (RED), 13 K13 (DR1) DRAIN VALVE SOL. #1 (RED), 12 K12 (FC2) FAN BANK #2 (RED), 11 K11 (FC1) FAN BANK #1 (RED), 10 K10 (NOT USED), 9 K9 (NOT USED), 8 K8 (NOT USED), 7 K7 (NOT USED), 6 K6 (NOT USED), 5 K5 (NOT USED), 4 K4 (NOT USED), 3 K3 (U1) UNLOADER #1 (WHITE), 2 K2 (KS1) SUCTION VALVE (WHITE), 1 K1 (C1) COMPRESSOR #1 (WHITE)
- P5: 3 LINE (L1) (WHITE), 2 NEUTRAL (L2) (BLACK), 1 EARTH GROUND (GREEN)
- P6: 3 LINE (L1) (WHITE), 2 NEUTRAL (L2) (BLACK), 1 EARTH GROUND (GREEN)
- P7: 6 NC, 5 K15 CDM, 4 K14 CDM, 3 NC, 2 K16 CDM, 1 ND

**NOTES:**

- Twisted pair cable 'SHIELD' IS 10 AWG GROUNDING AT CONTROL PANEL ONLY
- 10 AWG (GREEN)
- 10 AWG (GREEN)

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

FROM CONTACTOR C1  
T1 T2 T3

INTERNAL MOTOR PROTECTION

COMPRESSOR CONTROL

MODERN POWER (120VAC LINE) (RED)

MODERN POWER (120VAC RECEPTICAL) (WHITE)

COMMON ALARM (USER - DRY CONTACT) (BLACK)

LINE (L1) (WHITE)

NEUTRAL (L2) (BLACK)

EARTH GROUND (GREEN)

LIQUID LINE (WHITE)

LEVEL EXPANSION VALVE HEATER (15 WATT, 120 VAC)

10 AWG (GREEN)

10 AWG (GREEN)

Twisted pair cable 'SHIELD' IS 10 AWG GROUNDING AT CONTROL PANEL ONLY

FLOOR DOCUMENT

TOLERANCES UNLESS OTHERWISE SPECIFIED:

FRACTIONS =  $\pm \frac{1}{16}$ "

ANGLES =  $\pm 3^\circ$

DIMENSIONS =  $\pm \frac{1}{32}$ "

FINISH = 250

PART # N/A

DO NOT SCALE DRAWING

DATE: 3-08-11

CHECKED: R.M.

DRAWN: PARKER-MANUFACTURING CORP. - JEROME DIVISION  
LANCASTER, MT 44008

PROD. REF. N/A

DRAWING NO. ADE10594

SCALE: N.T.S.

SHEET 2 of 3

DP-SCP3000-A4-CC 3000 SCFM

460v/3ph/60hz WIRING DIAGRAM

AIR COOLED w/ DP2556 PANEL

REV A

**REVISION STATUS**

LTR	ECO NO.	DESCRIPTION	DATE	APPROVED
-	-	-	-	-

**4-20mA LOOPS ARE NOT POWERED. USE ISO (+) DCV SUPPLY (PIN #9) & ISO GND (PIN #10) OF P1 LOOP IF POWER IS REQUIRED.**

**PANEL DP2586**  
THERMISTERS  
RED WIRE = (+) PIN  
BLACK WIRE &  
SHIELD WIRE = (-) PIN

**DO NOT SCALE DRAWING**

**FLOOR DOCUMENT**

**TOLERANCES UNLESS OTHERWISE SPECIFIED:**

FRACTIONS =  $\pm \frac{1}{4}$ "

ANGLES =  $\pm 3^\circ$

INCHES =  $\pm \frac{1}{2}$ "

FINISH = 250

**DO NOT SCALE DRAWING**

**DO NOT SCALE DRAWING**

**THE DOCUMENT CONTAINS INFORMATION THAT IS CONFIDENTIAL TO THE COMPANY. IT IS TO BE KEPT IN THE COMPANY'S POSSESSION AND CONTROL AT ALL TIMES. IT IS TO BE RETURNED TO THE COMPANY UPON REQUEST BY PARKER. COMPANY PROPERTY. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT THE WRITTEN PERMISSION OF PARKER. ALL RIGHTS RESERVED.**

**DF-SCP3000-A4-CC 3000 SCPM**  
**460v/3ph/60hz WIRING DIAGRAM**  
**AIR COOLED w/ DP2586 PANEL**

**PROD. REF. DRAWING NO.**

**N/A ADE10594**

**REV**

**3 of 3**

## 10. Spare Parts List

Replacement parts	STD. MODEL (scfm)				
	1200	1500	2000	2500	3000
Compressor					
460V/3PH/60Hz	*DP16255 (AC) DP16240-4-1 (WC)	DP16260-4	DP16280-4	DP16292-404	
Fan motor					
460V/1PH/60Hz (460V Dryers)	*DP18184	DP18192			DP205-16-M
Fan motor starter contactor	N/A				ES5003-5
Starter overload relay	N/A				ES5001-2.4
Fan blade	*DP18158-B	DP18185-B			DP205-16-B
Fan guard	*DP18158-G	DP18184-G			DP205-16-G
Condenser coil (Air-Cooled)	*DP14407-C	DP14422-1-C			DP205-16
Water regulating valve (watercooled only)	DP38110	DP38115		DP38120	
Suction line solenoid valve	N/A	DP32121	DP32126-H		
Suction line solenoid coil	N/A	DP32084-C	DP32301		
Unloader solenoid valve	DP32100-H	DP32110-H	DP32115-H		
Liquid line solenoid valve	DP32086-1	DP32100-H	DP32110-H		
Unloader/liquid line solenoid coil	DP32301	DP32301			
Expansion valve	DP34185-404	DP34201-4	DP33011-4	DP33012-4	
Refrigerant suction filter	DP28305	DP28315-B (replaceable core)			
Refrigerant liquid line drier	DP28135	DP28135	DP28315-C (replaceable core)		
Fan #1 pressure switch	DP40080				
Fan #2 pressure switch	DP40081				
High refrigerant pressure switch	DP40051 (AC) / DP401030 (WC)				
Low refrigerant pressure switch	DP40026 (AC) / DP401030 (WC)				
Dual air pressure gauge	DP42100-P	DP42100-P			
Electronic controller	DP5550	DP5550			
Dew point temperature probe	DP5060-P12	DP5060-P15-1	DP5060-P18	DP5060-P18	DP5060-P18
Superheat probe	DP5060-S	DP5060-S			
Air inlet temperature probe	DP5060-T15	DP5060-P15			
Ambient or Water temperature probe	DP5060-T15	DP5060-P15			
Refrigerant pressure transducer	TP2455	TP2455			
Demand drain level sensor	DP6060-S	DP6060-S			
Replacement filter element	JE1600-C10	JE1600-C10	(3) JE1000-C10		JE3000-C10
Upper Drain solenoid valve #1	TP8002	TP8002	TP8005-1		
Lower Drain solenoid valve #2	TP8002-1	TP8003	TP8005-1	TP8101-1P	
Actuated drain ball valve	N/A			TP6605-5	
Valve strainer screen	KP5025-S		N/A		
Compressor contactor	ES5035	ES5035		ES5050	
Transformer (Control)	ET0150				

\* Starting with serial # 120602860 and higher.



## WARRANTY REGISTRATION

**IMPORTANT! Mail or Fax (716-685-1010) Today!**

Fold and Send and your Service Warranty will be registered immediately.

We are here to help. For more information on service or installation call the Service Department at 1-855-387-4123.

Email to: [efwarranty@parker.com](mailto:efwarranty@parker.com)

Model # _____	Serial # _____
Company _____	
Address _____	
City _____	State/Province _____ Zip _____
Telephone _____	Contact _____
Title _____	Department _____
Date Purchased _____	Date installed _____
Functional From _____	

### COMMENTS

Please indicate a response on a scale of  
(1) being the lowest to (5) being the highest

Condition of Arrival \_\_\_\_\_

Ease of Installation \_\_\_\_\_

Ease of Start-Up \_\_\_\_\_

Product Quality \_\_\_\_\_

Technical Assistance \_\_\_\_\_

Clarity of Instruction/Warranty Manual \_\_\_\_\_

### FINAL OPERATION CHECK LIST

Inlet air temperature is \_\_\_\_\_

Inlet PSIG is \_\_\_\_\_

The dew point temperature controller reads between \_\_\_\_\_ and \_\_\_\_\_

Air compressor HP \_\_\_\_\_ or Max SCFM is \_\_\_\_\_

Is the dryer a minimum of 3' from any structure on all sides?

Yes                      No

The Y strainer for slimes has been cleaned after first 8 hours of operation                      Yes                      No

**What are your thoughts on the operation of the dryer?**

---



---

**Why did you choose this manufacturer?**

---



---

**What could we do better?**

---



---

# Worldwide Filtration Manufacturing Locations

## North America

**Compressed Air Treatment**  
Filtration & Separation/Balston  
Haverhill, MA  
978 858 0505  
[www.parker.com/balston](http://www.parker.com/balston)

Finite Airtek Filtration  
Airtek/domnick hunter/Zander  
Lancaster, NY  
716 686 6400  
[www.parker.com/faf](http://www.parker.com/faf)

Finite Airtek Filtration/Finite  
Oxford, MI  
248 628 6400  
[www.parker.com/finitefilter](http://www.parker.com/finitefilter)

## Engine Filtration & Water Purification

Racor  
Modesto, CA  
209 521 7860  
[www.parker.com/racor](http://www.parker.com/racor)

Holly Springs, MS  
662 252 2656  
[www.parker.com/racor](http://www.parker.com/racor)

Beaufort, SC  
843 846 3200  
[www.parker.com/racor](http://www.parker.com/racor)

Racor – Village Marine Tec.  
Gardena, CA  
310 516 9911  
[desalination.parker.com](http://desalination.parker.com)

Parker Sea Recovery  
Carson, CA  
310 637 3400  
[www.searecovery.com](http://www.searecovery.com)

## Hydraulic Filtration

Hydraulic Filter  
Metamora, OH  
419 644 4311  
[www.parker.com/hydraulicfilter](http://www.parker.com/hydraulicfilter)

Laval, QC Canada  
450 629 9594  
[www.parkerfarr.com](http://www.parkerfarr.com)

## Process Filtration

domnick hunter Process Filtration  
Oxnard, CA  
805 604 3400  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

Madison, WI  
608 824 0500  
[www.scilog.com](http://www.scilog.com)

Phoenixville, PA  
610 933 1600  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

## Aerospace Filtration

Velcon Filtration  
Colorado Springs, CO  
719 531 5855  
[www.velcon.com](http://www.velcon.com)

## Europe

**Compressed Air Treatment**  
domnick hunter Filtration & Separation  
Gateshead, England  
+44 (0) 191 402 9000  
[www.parker.com/dhfn](http://www.parker.com/dhfn)

Parker Gas Separations  
Etten-Leur, Netherlands  
+31 76 508 5300  
[www.parker.com/dhfn](http://www.parker.com/dhfn)

Hiross Zander  
Padova Business Unit  
Padova, Italy  
+39 049 9712 111  
[www.parker.com/hzd](http://www.parker.com/hzd)

Hiross Zander  
Essen Business Unit  
Essen, Germany  
+49 2054 9340  
[www.parker.com/hzd](http://www.parker.com/hzd)

## Engine Filtration & Water Purification

Racor  
Dewsbury, England  
+44 (0) 1924 487 000  
[www.parker.com/rfde](http://www.parker.com/rfde)

Racor Research & Development  
Stuttgart, Germany  
+49 (0)711 7071 290-10  
[www.parker.com/rfde](http://www.parker.com/rfde)

## Hydraulic Filtration

Hydraulic Filter  
Arnhem, Holland  
+31 26 3760376  
[www.parker.com/hfde](http://www.parker.com/hfde)

Urjala Operation  
Urjala, Finland  
+358 20 753 2500  
[www.parker.com/hfde](http://www.parker.com/hfde)

Condition Monitoring Centre  
Norfolk, England  
+44 (0) 1842 763 299  
[www.parker.com/hfde](http://www.parker.com/hfde)

Parker Kittiwake  
West Sussex, England  
+44 (0) 1903 731 470  
[www.kittiwake.com](http://www.kittiwake.com)

Parker Procal  
Peterborough, England  
+44 (0) 1733 232 495  
[www.kittiwake.com](http://www.kittiwake.com)

## Process Filtration

domnick hunter Process Filtration  
Birtley, England  
+44 (0) 191 410 5121  
[www.parker.com/processfiltration](http://www.parker.com/processfiltration)

Parker Twin Filter BV  
Zaandam, Netherlands  
+31(0)75 655 50 00  
[www.twinfiler.com](http://www.twinfiler.com)

## Asia Pacific

Australia  
Castle Hill, Australia  
+61 2 9634 7777  
[www.parker.com/australia](http://www.parker.com/australia)

China  
Shanghai, China  
+86 21 5031 2525  
[www.parker.com/china](http://www.parker.com/china)

India  
Navi Mumbai, India  
+91 22 651 370 8185  
[www.parker.com/india](http://www.parker.com/india)

Parker Fowler  
Bangalore, India  
+91 80 2783 6794  
[www.johnfowlerindia.com](http://www.johnfowlerindia.com)

Japan  
Tokyo, Japan  
+81 45 870 1522  
[www.parker.com/japan](http://www.parker.com/japan)

Parker Techno  
Osaka, Japan  
+81 66 340 1600  
[www.techno.taiyo-ltd.co.jp](http://www.techno.taiyo-ltd.co.jp)

Korea  
Hwaseon-City  
+82 31 359 0852  
[www.parker.com/korea](http://www.parker.com/korea)

Singapore  
Jurong Town, Singapore  
+65 6887 6300  
[www.parker.com/singapore](http://www.parker.com/singapore)

Thailand  
Bangkok, Thailand  
+66 2186 7000  
[www.parker.com/thailand](http://www.parker.com/thailand)

## Latin America

Parker Comercio Ltda.  
Filtration Division  
Sao Paulo, Brazil  
+55 12 4009 3500  
[www.parker.com/br](http://www.parker.com/br)

Pan American Division  
Miami, FL  
305 470 8800  
[www.parker.com/panam](http://www.parker.com/panam)

## Africa

Aeroport Kempton Park, South Africa  
+27 11 9610700  
[www.parker.com/africa](http://www.parker.com/africa)

