P4200W2 Series Air Dryer



User's Guide

Models covered:

P4200W2 P4200W2LP P4202W2 P4202W2LP P4202W2H



1. Welcome & Congratulations

Congratulations on your purchase of a new PUREGAS P4200W2 Series Air Dryer! We here at PUREGAS are very proud of our products and we are committed to providing you with the best value and service possible.

We are sure that you will be satisfied with your new air dryer and would like to thank you for choosing PUREGAS for your air dryer requirements. We also hope that you will continue to choose us for your future air pressure and related product purchases.

For information about this and other PUREGAS products, please visit us on the web at:

www.puregas.com

2. Introduction

PLEASE READ THIS USER'S GUIDE THOROUGHLY AND SAVE FOR FUTURE REFERENCE.

This User's Guide is provided for the benefit of our customers and contains information and direction specific to the PUREGAS P4200W2 Series Air Dryer. Models covered include P4200W2, P4200W2LP, P4202W2, P4202W2H and P4202W2LP. It will cover topics including: safety, specifications, installation, registration, operation, testing, maintenance, replacement parts, service, and troubleshooting issues. Observation and compliance with this User's Guide will ensure the maximum life and efficiency of your air dryer.

This User's Guide should be read thoroughly prior to installing, operating, or servicing the air dryer in order to become familiar with the recommended procedures. This will minimize the possibility of personal injury or damage to the unit due to improper operation or handling.

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4. Safety & Warning Information

This section contains general information about safety and warning points to consider and adhere to during installation, operation, and maintenance of your air dryer. PLEASE READ THIS SECTION BEFORE PERFORMING ANY OPERATION OR PROCEDURE ON YOUR AIR DRYER.

Additional warnings specific to an operation or procedure will also be presented throughout the following sections. These will include the symbol as well as a label of "WARNING!", "CAUTION!", or "IMPORTANT!". Please be sure to pay close attention for these warnings and read them as you encounter them.



WARNING!

For your safety, all the information in this User's Guide must be followed to minimize the risk of electrical shock, and prevent property damage or personal injury.



WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. Many procedures performed during installation, operation, testing, and maintenance of this air dryer require the equipment to be running, creating a situation for potential electrical shock. It is highly recommended that you remove all jewelry before performing any procedures.



WARNING!

Internal surfaces may be hot. Use care when coming into contact with internal components as there is a potential for some of these components to become hot when in operation or standby.



WARNING!

High Noise. PUREGAS air dryers are meant to be installed in an unattended area.



CAUTION!

Proper Installation & Maintenance as outlined in this User's Guide is extremely important to ensure the reliability and longevity of the equipment as well as prevent damage or personal injury.



CAUTION!

Depressurizing the air dryer may be necessary before performing certain procedures. **NEVER** remove pressure sensing tubes from the Control Board without depressurizing the air dryer first, or **damage to the Control Board will occur.**



CAUTION!

Incoming power to dryer must be:

- 15 amp service recommended
- 10 amp slow blow fuse
- 110 125 VAC, 50/60 Hz for P4200W2 & P4200W2LP models
- 220 230 VAC, 50/60 Hz, 1 Phase for P4202W2,
 P4202W2LP & P4202W2H models



IMPORTANT!

Performing routine maintenance as outlined in the *Maintaining Your Dryer* section will ensure optimal performance over the lifecycle of your air dryer.



IMPORTANT!

Performing procedures not described in this User's Guide or installing components not supplied by PUREGAS is NOT RECOMMENDED AND MAY VOID THE WARRANTY.



CAUTION!

This Air Dryer does not contain an internal Surge Protection Device (SPD). If an SPD is required it must be supplied by the user.



CAUTION!

Observe precautions for handling Electrostatic Sensitive Devices.



IMPORTANT!

Installation of PUREGAS air dryers are intended for network telecommunication facilities (non-customer premises) only.

5. Overview & Specifications

5.1 Product Description

The P4200W2 Series Air Dryer from PUREGAS is designed to intake wet ambient air and remove the moisture for delivery to applications requiring a constant, ondemand source of dry, pressurized air. This process is fully automatic and will remain consistent with minimal required periodic maintenance. This dryer is designed specifically for indoor use.

The P4200W2 Series Air Dryer employs a fully digital operating platform offering the most accurate readings of dryer variables, removable access panels allowing easier access for adjustment and maintenance, and ultra quiet compressors with an industry leading maintenance interval of 8,000 hours.

5.2 Key Features

- LCD display of all operating parameters
- Solid state microprocessor-based circuitry eliminates costly maintenance
- Accurate humidity sensing within $\pm 0.1\%$ RH
- Quietest dryer on the market
- Pressure Ranges from 35 138 KPa or 2 69 KPa (LP Models)
- Remote alarm reset capabilities
- SNMP communication compatible
- Remote access through HTML interface
- Oil-less compressor with 8,000 hour maintenance interval

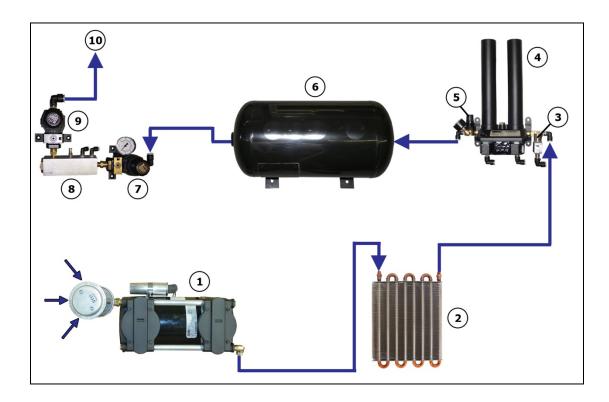
5.3 P4200W2 Series Air Dryer Models

Model	Description
P4200W2	110 - 125 VAC, Standard Pressure 35 – 138 KPa
P4200W2LP	110 - 125 VAC , Low Pressure 2 – 69 KPa
P4202W2	220 - 230 VAC , Standard Pressure 35 – 138 KPa
P4202W2LP	220 - 230 VAC , Low Pressure 2 – 69 KPa
P4202W2H	220 - 230 VAC , Standard Pressure 35 – 138 KPa

5.4 Technical Specifications

	P4200W2	P4200W2LP	P4202W2	P4202W2 LP	P4202W2H
Output Capacity	Normal: 74 SCMD Maximum: 119 SCMD			Normal: 90 SCMD Max: 119 SCMD	
Power Requirements	110 - 125 VAC, 1 Phase, 50 / 60 Hz		220 - 230 VAC, 1 Phase, 50 / 60 Hz		220-230 VAC, 1 Phase, 50Hz
Running Amps	8.6 Amps (15 Amp service recommended)		3.9 Amps (15 Amp service recommended)		4.2 Amps (15 Amp service recommended)
Outlet Pressure Range	35 - 138 KPa	2 – 69 KPa	35 - 138 KPa	2 – 69 KPa	35 – 138 KPa
Outlet Air Humidity	Less than 2% RH				
Compressor	2-cylinder, 3/4 HP, oil-less type compressor				
Drying Method	Heatless Desiccant				
Operating Temperature Range	5° to 30° C (optimal)				
Noise Level:	63 dBA @ 1m				
Heat Dissipation	3,521 BTU / hr 2,924 BTU / hr			TU / hr	
Alarms	Standard alarms – complete readings of all critical measurement points, individual alarm indication display				
Monitoring	Web Browser and SNMP compatible communications via Network IP				
Outlet Connections	1/2" NPT Female				
Dimensions	53cm D x 64cm W x 124cm H				
Net / Shipping Weight	100 kgs / 126 kgs				

5.5 Dryer Function Overview



#	Component	Description
1	Compressor	Compresses drawn in ambient air.
2	Precooler	Cools compressed air prior to drying function.
3	Unloader Valve	Relieves excess Compressor head pressure.
4	Heatless Dryer	Removes moisture from compressed air.
5	Capacity Control Valve	Regulates System Pressure at 345 KPa (50 PSI)
		and prevents air from bleeding back through the
		Heatless Dryer.
6	Air Tank	Stores dry compressed air.
7	Static Pressure Regulator	Regulates the Static Pressure at 138 KPa (20 PSI)
		and maintains constant pressure on the Combo
		Block for accurate Flow measuring.
8	Combo Block	Measures the Flow of compressed air and houses
		the Humitter.
9	Outlet Pressure Regulator	Regulates the Outlet Pressure.
10	Pressure Outlet	Outputs the pressure set by the Outlet Pressure
		Regulator.

6. Installing Your Dryer

6.1 Safety & Warning Information



WARNING!

Internal surfaces may be hot. Use care when coming into contact with internal components as there is a potential for some of these components to become hot when in operation or standby.



WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. Many procedures performed during installation, operation, testing, and maintenance of this air dryer require the equipment to be running, creating a situation for potential electrical shock. It is highly recommended that you remove all jewelry before performing any procedures.



WARNING!

High Noise. Puregas air dryers are meant to be installed in an unattended area.



CAUTION!

Proper Installation & Maintenance as outlined in this User's Guide is extremely important to ensure the reliability and longevity of the equipment as well as prevent damage or personal injury.



CAUTION!

This Air Dryer does not contain an internal Surge Protection Device (SPD). If an SPD is required it must be supplied by the user.



IMPORTANT!

Performing procedures not described in this User's Guide or installing components not supplied by PUREGAS is NOT RECOMMENDED AND MAY VOID THE WARRANTY.



IMPORTANT!

Installation of PUREGAS air dryers are intended for network telecommunication facilities (non-customer premises) only.

6.2 Before You Begin

- 6.2.1 Carefully inspect the unit, including the shipping box as well as the air dryer, for ANY DAMAGE CAUSED BY SHIPPING. If any shipping damage is detected, it is important to file a claim with the shipping company prior to continuing the installation procedures.
- **6.2.2** Read the entire *Installing Your Dryer* section to familiarize yourself with the components and procedures before performing the air dryer installation.
- **6.2.3** Verify the installation location of the air dryer:
 - **6.2.3.1** Well ventilated and free from abrasive dust or chemicals.
 - **6.2.3.2** Ambient temperature is between 5° and 30° C (optimal). **NOTE:** Higher temperatures will decrease component lifespan.
 - **6.2.3.3** Meets the following power requirements:
 - 110 125 VAC for P4200W2 and P4200W2LP models
 - 220 230 VAC, 1 Phase for P4202W2, P4202W2LP & P4202W2H models
 - All models require 50/60 Hz and minimum 15 amp service with a 10 amp slow blow fuse
- **6.2.4** Notify the alarm center of the installation and potential for alarms during the process (as necessary).

6.3 Included Contents

(1) P4200W2 Series Air Dryer

Package located inside the dryer:

- (2) Alarm Connector
- (1) User's Guide (not shown)
- POWER CORD

 ALLEN
 WRENCH
 CONNECTOR (2)

 COMPRESSOR
 PURGE
 MUFFLER

 CONNECTOR
 TOOL
- (1) Allen Wrench

- (1) Purge Muffler
- (1) Compressor Connector Tool
- (1) Power Cord

6.4 Required Tools and Materials

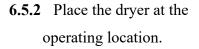
- Large adjustable wrench
- Medium adjustable wrench
- 7/16" wrench
- Band cutters or snips

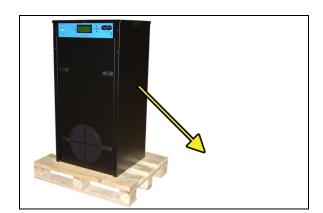
- Pipe dope or pipe thread tape
- Cup of soapy water
- 1-inch paint brush (recommended)

6.5 Installation Steps

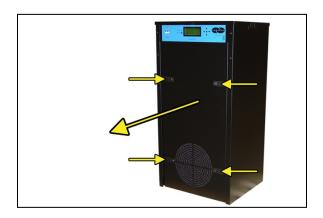
6.5.1 Remove all shipping materials.

NOTE: If ANY SHIPPING DAMAGE is detected, file a claim with the shipping company prior to continuing the installation procedures.



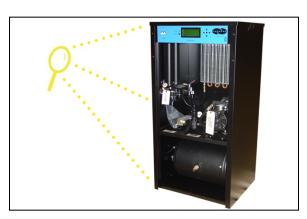


6.5.3 Remove the Front Panel.



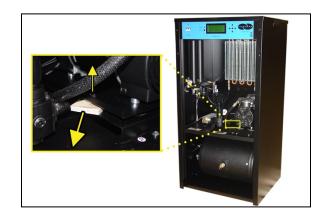
6.5.4 Check for loose parts, hoses, or wiring.

NOTE: If ANY SHIPPING DAMAGE is detected, file a claim with the shipping company prior to continuing the installation procedures.

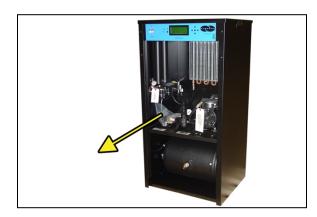


6.5.5 Using a 7/16" wrench, remove the shipping block from under the Compressor Plate.

Discard block and bolt.

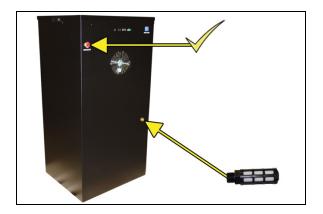


6.5.6 Remove the ship-loose contents package.



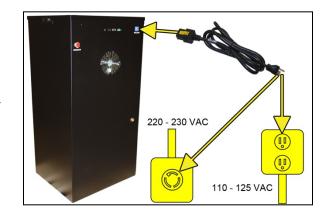
On BACK of dryer:

- **6.5.7** Verify that the Red Orifice Plug is still installed where shown.
- **6.5.8** Install the Purge Muffler (optional).
- **6.5.9** Verify that the dryer is powered **OFF**.





- **6.5.10** Plug the AC Power Cord into the dryer.
- **6.5.11** Plug in or wire the Power Cord to an outlet:
 - 110 125 VAC power outlet for P4200W2 and P4200W2LP model



- 220 230 VAC, 1 phase, power outlet for P4202W2, P4202W2LP, and P4202W2H models.
- **6.5.12** Power the dryer **ON**.

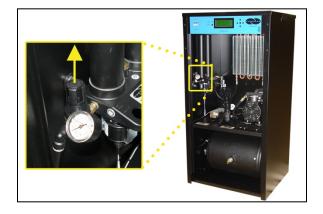
NOTE: The Compressor and Heatless Dryer will start, creating air flow through the Red Orifice Plug.



6.5.13 Set the System Pressure:

With Compressor running:

6.5.13.1 Pull the Capacity Control Valve knob out.



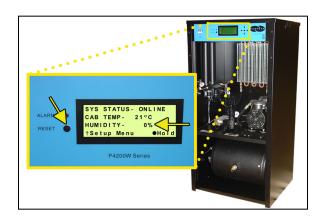
6.5.13.2 Turn the knob until the reading on the Pressure Gauge is 345 KPa (50 PSI).

6.5.13.3 Push the knob in to lock.



6.5.14 Let the dryer run until the Humidity drops below 2% (may take up to 15 minutes).

NOTE: Press **RESET** if the dryer goes into **SHUTDOWN**.



6.5.15 Power the dryer **OFF**.



6.5.16 Remove the Red Orifice

Plug from the Outlet Pressure

Port.

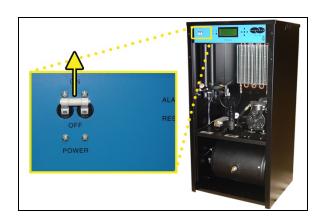
CAUTION: Be careful when removing plug. System may be pressurized.



6.5.17 Connect the air supply line to the Outlet Pressure Port.

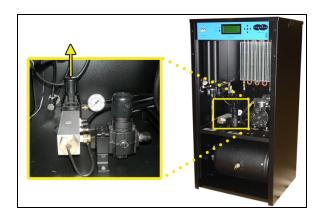
PUREGAS recommends using Installation Kit **P011752** to connect your air dryer to the air supply line (See section 11.6 for detail).

6.5.18 Power the dryer **ON**.



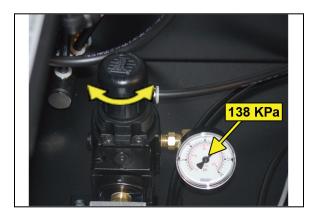
6.5.19 Set the Static Pressure:

6.5.19.1 Pull Static Pressure Regulator knob out.



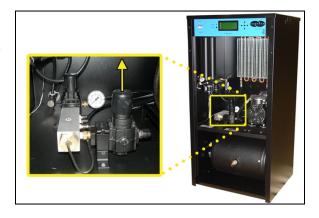
6.5.19.2 Turn knob until the reading on the Pressure Gauge is 138 KPa (20 PSI).

6.5.19.3 Push knob in to lock.

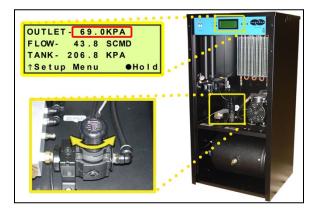


6.5.20 Set the Outlet Pressure:

Pressure Regulator knob out or loosen the retaining nut (LP models).



- 6.5.20.2 Turn knob untilOutlet Pressure(OUTLET) reading is at the desired setting.
- **6.5.20.3** Push knob in to lock or tighten retaining nut (LP models).



6.5.21 Check for air leaks:

NOTE: This is a general procedure that can be applied to any fitting or hose that has air pressure in it. **DO NOT SOAP TEST THE HUMIDITY SENSOR FITTING. DAMAGE TO THE SENSOR MAY OCCUR.**

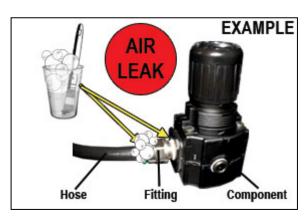
With Compressor NOT running:

6.5.21.1 Listen for any 'hissing' sounds which may indicate a fitting or hose air leak.

With Compressor running:

brush to dab soapy water on the air fitting or hose connection to be tested.

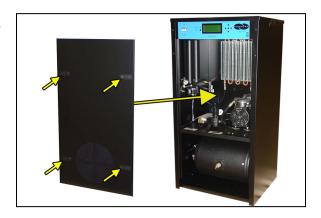
If air bubbles appear at the connection, this indicates that air is leaking from the connection.



If any leaks are detected, take steps to seal them off (as necessary):

- *Tighten the fitting*
- Re-connect the hose end
- *Replace the fitting / hose / component*

6.5.22 Re-install the Front Panel.



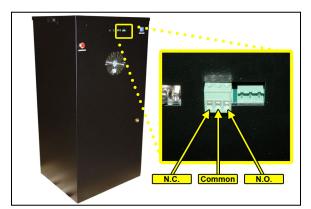
6.5.23 Connect a Common Alarm (as required):

Alarm Connector into either of the two (2)

Alarm Ports.



- 6.5.23.2 Wire an external alarm wire pair to the Alarm Connector as required:
 - Common and N.C. for OPEN ON ALARM operation.



• **Common** and **N.O.** for CLOSE ON ALARM operation.

6.5.24 REGISTER YOUR DRYER. See section 7 for details.

6.6 Installation Checklist

- ☐ No shipping damage was detected.
- ☐ Dryer location meets the following requirements:
 - o Well ventilated
 - o Free from abrasive dust or chemicals
 - o Ambient temperature is between 5° and 30° C (optimal)
- ☐ Shipping block removed from Compressor Tray.
- ☐ System Pressure is set to 345 KPa (50 PSI).
- ☐ Static Pressure is set to 138 KPa (20 PSI).
- ☐ No air leaks are present in the system.
- ☐ No alarms are present on the Display Panel.

7. Registering Your Dryer

Please take a moment to register your PUREGAS P4200W2 Series Air Dryer.

Registering is necessary to activate the Limited Warranty on your product. Once you register, you are eligible to receive free technical support, as well as updates concerning your PUREGAS products.

Register Online at	www.puregas.com/registration
Or by Phone	1-800-521-5351 (option 2)
Have the following inform	mation available:
Model #:	Serial #:
Company Name:	Location Name:
Shipping Address:	
City:	State: Zip Code:
Contact Name:	Phone #: () - ext.
Email:	

8. Operating Your Dryer

8.1 Safety & Warning Information



WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. Many procedures performed during installation, operation, testing, and maintenance of this air dryer require the equipment to be running, creating a situation for potential electrical shock. It is highly recommended that you remove all jewelry before performing any procedures.



WARNING!

Internal surfaces may be hot. Use care when coming into contact with internal components as there is a potential for some of these components to become hot when in operation or standby.



WARNING!

High Noise. Puregas air dryers are meant to be installed in an unattended area.



CAUTION!

Observe precautions for handling Electrostatic Sensitive Devices.



IMPORTANT!

Performing procedures not described in this User's Guide or installing components not supplied by PUREGAS is NOT RECOMMENDED AND MAY VOID THE WARRANTY.

8.2 Connecting an Air Line to the Dryer

8.2.1 Remove the Red Orifice
Plug from the Outlet Pressure
Port.

CAUTION: Be careful when removing plug. System may be pressurized.



8.2.2 Connect the air supply line to the Outlet Pressure Port.

PUREGAS recommends using Installation Kit **P011752** to connect your air dryer to the air supply line (See section 11.6 for detail).

8.3 Powering the Dryer ON & OFF



CAUTION!

Incoming power to dryer must be:

- 15 amp service recommended
- 10 amp slow blow fuse
- 110 125 VAC, 50/60 Hz for P4200W2 & P4200W2LP models
- 220 230 VAC, 50/60 Hz, 1 Phase for P4202W2, P4202W2LP & P4202W2H models
- **8.3.1** Power Circuit Breaker Controls the main power to the dryer.



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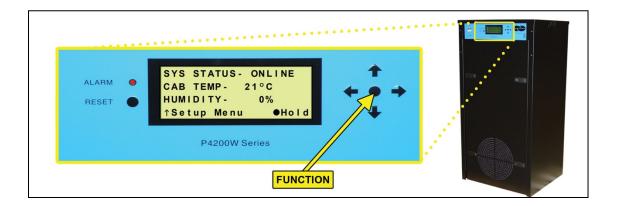
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8.4 Using the Front Panel Display



CAUTION!

The Display Screen is covered by a clear protective layer that guards against Electrostatic Discharge (ESD). DO NOT REMOVE THIS LAYER.



- **8.4.1** ALARM LED Indicates an alarm is present.
- **8.4.2 RESET Button** Clears an alarm and allows the system to continue operating.

8.4.3 FUNCTION Button -

- Acts as a **HOLD** button to freeze the current information screen on the display. When pressed again, it will allow the information screens to begin cycling again.
- Acts as an **ENTER** button in the Setup Menu screens.
- **8.4.4** Arrow Buttons Used to access, navigate, and change values in the Setup Menu screens.

8.4.5 Display Screen - Shows the current dryer readings. Will cycle between the following three (3) information screens (unless the **HOLD** button has been pressed):

8.4.5.1 Sys Status Screen

```
SYS STATUS - ONLINE
CAB TEMP - 21°C
HUMIDITY - 0%

↑Setup Menu • Hold
```

SYS STATUS - Running Status of the system:

- **ONLINE** System is Online.
- SHUTDOWN System has been shutdown as a result of either a High Humidity or High Cabinet Temperature alarm.

CAB TEMP – Temperature of the dryer cabinet compartment.

HUMIDITY – Humidity level of the system.

8.4.5.2 Outlet Screen

```
OUTLET - 69.0KPA
FLOW- 43.8 SCMD
TANK- 206.8 KPA

↑Setup Menu •Hold
```

OUTLET – Outlet Pressure regulated by the Outlet Pressure Regulator.

FLOW – Air Flow Rate.

TANK – Air Tank Pressure - fluctuates between 172 – 345 KPa.

8.4.5.3 Compressor Run Time Screen

COMPRESSOR RUN TIME:
DUTY CYCLE - 15%
TOTAL - 38 HRS

↑Setup Menu •Hold

DUTY CYCLE – The percentage of time the Compressor is ON versus time it is OFF during the last Air Tank pressurization cycle.

TOTAL – How many hours the Compressor has run since the last Compressor Total Time Reset.

8.4.5.4 Unit in Standby Screen

UNIT IN STANDBY

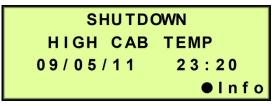
Occurs when the dryer is connected to a Cycle Kit and has been switched to Standby Mode.

8.5 Identifying Dryer Alarms

8.5.1 High Cabinet Temperature Alarm -

Occurs when the temperature in the dryer cabinet (**CAB TEMP**) rises above 46°C for more than one (1) minute. If the temperature rises above 50°C for more than one (1) minute, the air dryer will go into **SHUTDOWN** mode to protect against damage due to overheating.

This screen will be displayed, showing the Date and Time that the alarm occurred.



8.5.1.1 Press the Info (●) Button to see the detail of the alarm.

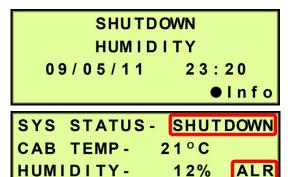


See section 13.12 for troubleshooting information.

8.5.2 High Humidity Alarm -

Occurs when the Humidity level (**HUMIDITY**) rises above the alarm threshold for more than one (1) minute. The air dryer will go into **SHUTDOWN** mode to prevent saturated air from being delivered to the supply line. (Default setting is 10%)

This screen will be displayed, showing the Date and Time that the alarm occurred.



8.5.2.1 Press the Info (●) Button to see the detail of the alarm.

See section 13.10 for troubleshooting information.

↑Setup Menu

●Hold

8.5.3 Low Outlet Pressure Alarm –

Occurs when the Outlet Pressure (**OUTLET**) drops below the alarm threshold for more than one (1) minute. (Default setting is 2.0 KPa)

This screen will be displayed, showing the Date and Time that the alarm occurred.



8.5.3.1 Press the Info (●) Button to see the detail of the alarm.

```
OUTLET - 19.3KPA LALR
FLOW - 43.8 SCMD
TANK - 206.8 KPA
↑Setup Menu • Hold
```

See section 13.7 for troubleshooting information.

8.5.4 High Outlet Pressure Alarm -

Occurs when the Outlet Pressure (**OUTLET**) rises above the alarm threshold for more than one (1) minute. (Default setting is 138.0 KPa)

This screen will be displayed, showing the Date and Time that the alarm occurred.



8.5.4.1 Press the Info (●) Button to see the detail of the alarm.

```
OUTLET-106.9KPA HALR FLOW- 43.8 SCMD TANK- 206.8 KPA ↑Setup Menu • Hold
```

See section 13.5 for troubleshooting information.

8.5.5 High Flow Rate Alarm –

Occurs when the Flow Rate (**FLOW**) rises above the alarm threshold for more than one (1) minute. (Default setting is 74.0 SCMD)

This screen will be displayed, showing the Date and Time that the alarm occurred.



8.5.5.1 Press the Info (●) Button to see the detail of the alarm.

```
OUTLET - 69.0KPA
FLOW- 76.5 SCMD ALR
TANK - 206.8 KPA

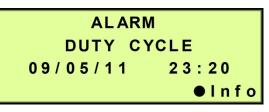
↑Setup Menu •Hold
```

See section 13.9 for troubleshooting information.

8.5.6 High Duty Cycle Alarm –

Occurs when the Duty Cycle (**DUTY CYCLE**) exceeds the alarm threshold during the Air Tank pressurization cycle. (Default setting is 70%)

This screen will be displayed, showing the Date and Time that the alarm occurred.



8.5.6.1 Press the Info (●) Button to see the detail of the alarm.



See section 13.17 for troubleshooting information.

8.5.7 Compressor Total Run Time Alarm –

Occurs when the Compressor has reached an 8,000 Hour maintenance interval. Perform the required maintenance.

This screen will be displayed, showing the Date and Time that the alarm occurred.



8.5.7.1 Press the Info (●) Button to see the detail of the alarm.



See section 10.3 for maintenance information.

8.6 Accessing the Setup Menu

The P4200W has three (3) Setup sections:

- System Setup Used to set specific values for the system.
- Alarm Setup— Used to set the alarm thresholds for specific readings.

 Once the threshold is reached (or exceeded) this results in an alarm. Each of these thresholds is factory programmed with a default value. Many of can be modified to levels based upon your specific application.
- Network Setup Used to configure network settings including the IP
 Address, Subnet Mask, Gateway Address, and Keyword.

NOTE: Reference Appendix Section 14.2 for Limits, Defaults, and Formats.

8.6.1 Press the Up (↑) Arrow Button to access the Setup Menu.

```
SYS STATUS - ONLINE
CAB TEMP - 21°C
HUMIDITY - 0%

↑Setup Menu •Hold
```

8.6.2 Press the Up (↑) & Down (↓)Arrow Buttons to Select the required menu option.

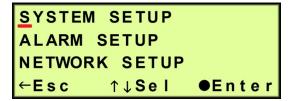
```
SYSTEM SETUP
ALARM SETUP
NETWORK SETUP
←Esc ↑↓Sel ●Enter
```

8.6.3 Press the Enter (●) Button to access the menu selected or press the Left(←) Arrow Button to Escape to the information screens.

8.7 Using the System Setup Menu

In the Setup Menu:

8.7.1 Press the Up (↑) & Down (↓)Arrow Buttons to Select the "<u>S</u>" in System Setup.



- **8.7.2** Press the Enter (●) Button to access System Setup.
- **8.7.3** Set Alarm Delay (default setting is ON)
 - 8.7.3.1 Press the Enter (●)Button to access the edit screen.



8.7.3.2 Press the Left (←) &
Right (→) Arrow Buttons
to Select the correct choice
(On or Off).



- **8.7.3.3** Press the Enter (●) Button to submit the selection.
- 8.7.3.4 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).



- **8.7.3.5** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.7.4** Press the Up (\uparrow) Arrow Button to access the next screen.

- **8.7.5** Set Start Up Delay (default setting is 0 seconds)
 - 8.7.5.1 Press the Enter (●)Button to access the edit screen.



8.7.5.2 Press the Left (←) & Right (→) Arrow Buttons to Select the digit to change.

```
SET START UP DELAY

02 SECONDS

(RANGE= 0-10)

←→Sel ↑↓Chg ●Enter
```

- **8.7.5.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.7.5.4** Press the Enter (●) Button to submit the new setting.
- 8.7.5.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).



- **8.7.5.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.7.6** Press the Up (1) Arrow Button to access the next screen.

8.7.7 Reset Compressor Total Time –

- 8.7.7.1 Press the Enter (●)

 Button to access the reset screen.
- 8.7.7.2 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).



RESET COMPRESSOR

TOTAL TIME TO 0 HRS

ARE YOU SURE Y N

←→Sel ●Enter

- **8.7.7.3** Press the Enter (●) Button to confirm the selected choice. This will reset the Total Time to zero (0).
- **8.7.8** Press the Up (↑) Arrow Button to access the next screen.

8.7.9 Reset To Factory Default Values –

8.7.9.1 Press the Enter (●)

Button to access the reset screen.



←→Se I

RESET TO FACTORY

DEFAULT VALUES

8.7.9.2 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

8.7.9.3 Press the Enter (●) Button to confirm the selected choice. This will reset all settings to Factory Default Values (section 14.2).

8.7.10 Press the Up (1) Arrow Button to access the next screen.

●Enter

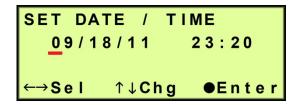
8.7.11 Set Date / Time –

8.7.11.1 Press the Enter (●)

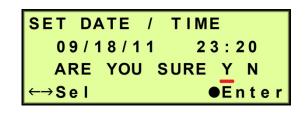
Button to access the edit screen.



8.7.11.2 Press the Left (←) & Right (→) Arrow Buttons to Select the digit to change.



- **8.7.11.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.7.11.4** Press the Enter (●) Button to submit the new setting.
- 8.7.11.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).



- **8.7.11.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.7.12** Press the Up (↑) Arrow Button to access the next screen.

8.8 Using the Alarm Setup Menu

In the Setup Menu:

8.8.1 Press the Up (↑) & Down (↓)Arrow Buttons to Select the "A"in Alarm Setup.



- **8.8.2** Press the Enter () Button to access Alarm Setup.
- **8.8.3** Set High Humidity Threshold (default setting is 10%)
 - 8.8.3.1 Press the Enter (●)

 Button to access the edit screen.

```
SET HIGH HUMIDITY
THRESHOLD - 10%
(DEFAULT = 10%)
←Esc ↑↓Scroll ●Enter
```

8.8.3.2 Press the Left (←) &Right (→) Arrow Buttonsto select the digit to change.

```
SET HIGH HUMIDITY
THRESHOLD - 10%
(RANGE = 3-15)

←→Sel ↑↓Chg ●Enter
```

- **8.8.3.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.8.3.4** Press the Enter (●) Button when to submit the new setting.
- 8.8.3.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

```
SET HIGH HUMIDITY

THRESHOLD - 10%

ARE YOU SURE Y N

←→Sel ●Enter
```

- **8.8.3.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.8.4** Press the Up (1) Arrow Button to access the next screen.

- **8.8.5** Set High Outlet Threshold (default setting is 138.0 KPa)
 - 8.8.5.1 Press the Enter (●)Button to access the edit screen.

SET HIGH OUTLET
THRESHOLD - 138.0 KPA
(DEFAULT= 138.0 KPA)
←Esc ↑↓Scroll ●Enter

8.8.5.2 Press the Left (←) &
Right (→) Arrow Buttons
to Select the digit to
change.

SET HIGH OUTLET
THRESHOLD - 138.0 KPA
(RANGE= 2.8-138.0)

←→Sel ↑↓Chg •Enter

- **8.8.5.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.8.5.4** Press the Enter (●) Button when to submit the new setting.
- 8.8.5.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

SET HIGH OUTLET
THRESHOLD - 138.0 KPA
ARE YOU SURE Y N

←→Sel ●Enter

- **8.8.5.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.8.6** Press the Up (\uparrow) Arrow Button to access the next screen.

- **8.8.7 Set Low Pressure Threshold** (default setting is 2.0 KPa)
 - 8.8.7.1 Press the Enter (●)Button to access the edit screen.

```
SET LOW OUTLET
THRESHOLD - 2.0 KPA
(DEFAULT = 2.0 KPA)
←Esc ↑↓Scroll ●Enter
```

8.8.7.2 Press the Left (←) &Right (→) Arrow Buttons to Select the digit to change.

```
SET LOW OUTLET
THRESHOLD - 002.0 KPA
(RANGE= 2.0-137.0)

←→Sel ↑↓Chg ●Enter
```

- **8.8.7.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.8.7.4** Press the Enter (●) Button when to submit the new setting.
- 8.8.7.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

```
SET LOW OUTLET
THRESHOLD - 2.0 KPA
ARE YOU SURE Y N
←→Sel ●Enter
```

- **8.8.7.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.8.8** Press the Up (\uparrow) Arrow Button to access the next screen.

- **8.8.9 Set High Flow Threshold** (default setting is 74.0 SCMD)
 - 8.8.9.1 Press the Enter (●)Button to access the edit screen.

```
SET HIGH FLOW

THRESHOLD - 74.0 SCMD

(DEFAULT = 74.0 SCMD)

←Esc ↑↓Scroll ●Enter
```

8.8.9.2 Press the Left (←) &Right (→) Arrow Buttons to Select the digit to change.

```
SET HIGH FLOW

THRESHOLD - 074.0 SCMD

(RANGE = 0.0-119.0)

←→Sel ↑↓Chg ●Enter
```

- **8.8.9.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.8.9.4** Press the Enter (●) Button when to submit the new setting.
- 8.8.9.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

```
SET HIGH FLOW

THRESHOLD - 74.0 SCMD

ARE YOU SURE Y N

←→Sel ●Enter
```

- **8.8.9.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.8.10** Press the Up (\uparrow) Arrow Button to access the next screen.

8.8.11 Set High Duty Cycle Threshold (default setting is 70%)

8.8.11.1 Press the Enter (●)Button to access the edit screen.

SET HIGH DUTY CYCLE
THRESHOLD - 70%

(DEFAULT = 70%)

←Esc ↑↓Scroll ●Enter

8.8.11.2 Press the Left (←) & Right (→) Arrow Buttons to Select the digit to change.

```
SET HIGH DUTY CYCLE
THRESHOLD - 70%
(RANGE = 0-99)

←→Sel ↑↓Chg •Enter
```

- **8.8.11.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.8.11.4** Press the Enter (●) Button when to submit the new setting.
- 8.8.11.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

```
SET HIGH DUTY CYCLE
THRESHOLD - 70%
ARE YOU SURE Y N
←→Sel ●Enter
```

- **8.8.11.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.8.12** Press the Up (1) Arrow Button to access the next screen.

8.9 Using the Network Setup Menu

In the Setup Menu:

8.9.1 Press the Up (↑) & Down (↓)

Arrow Buttons to Select the "<u>N</u>"

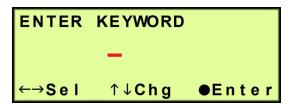
in Network Setup.



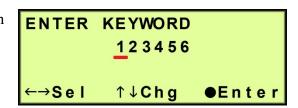
8.9.1.1 Press the Enter (●) Button to access Network Setup.

8.9.2 Enter Keyword (default Keyword is 123456) –

8.9.2.1 Press the Left (←) & Right (→) Arrow Buttons to Select the digit to change.



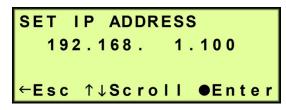
8.9.2.2 Press the Up (↑) & Down(↓) Arrow Buttons toChange the value of the selected digit.



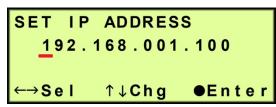
8.9.2.3 Press the Enter (●) Button to submit the Keyword.

- **8.9.3 Set IP Address** (default is 192.168.1.100)
 - 8.9.3.1 Press the Enter (●)

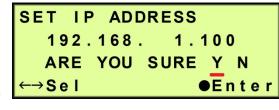
 Button to access the edit screen.



8.9.3.2 Press the Left (←) &Right (→) Arrow Buttons to Select the digit to change.



- **8.9.3.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.9.3.4** Press the Enter (●) Button when to submit the new setting.
- 8.9.3.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).



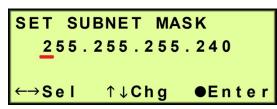
- **8.9.3.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.9.4** Press the Up (↑) Arrow Button to access the next screen.

- **8.9.5** Set Subnet Mask (default is 255.255.255.000)
 - 8.9.5.1 Press the Enter (●)

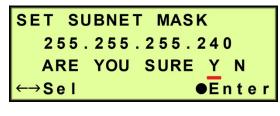
 Button to access the edit screen.



8.9.5.2 Press the Left (←) &Right (→) Arrow Buttons to Select the digit to change.

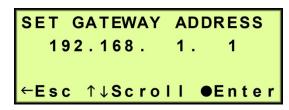


- **8.9.5.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.9.5.4** Press the Enter (●) Button when to submit the new setting.
- 8.9.5.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

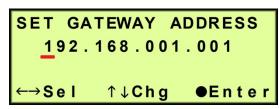


- **8.9.5.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.9.6** Press the Up (↑) Arrow Button to access the next screen.

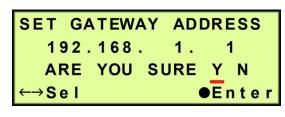
- **8.9.7** Set Gateway Address (default is 000.000.000.000)
 - 8.9.7.1 Press the Enter (●)Button to access the edit screen.



8.9.7.2 Press the Left (←) &Right (→) Arrow Buttons to Select the digit to change.



- **8.9.7.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.9.7.4** Press the Enter (●) Button when to submit the new setting.
- 8.9.7.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).

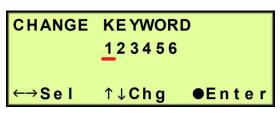


- **8.9.7.6** Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.
- **8.9.8** Press the Up (↑) Arrow Button to access the next screen.

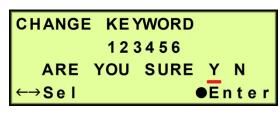
8.9.9 Change Keyword (default is 123456) –

- **8.9.9.1** Press the Enter (●)

 Button to access the edit screen.
- CHANGE KEYWORD 123456 ←Esc ↑↓Scroll ●Enter
- 8.9.9.2 Press the Left (←) &Right (→) Arrow Buttons to Select the digit to change.



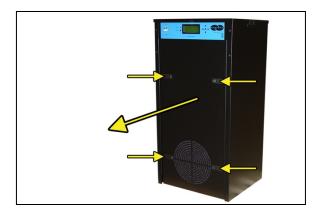
- **8.9.9.3** Press the Up (↑) & Down (↓) Arrow Buttons to Change the value of the selected digit.
- **8.9.9.4** Press the Enter (●) Button when to submit the new setting.
- 8.9.9.5 Press the Left (←) & Right (→) Arrow Buttons to Select the correct confirmation choice (Yes or No).



8.9.9.6 Press the Enter (●) Button to confirm the selected choice. This will lock in the new setting.

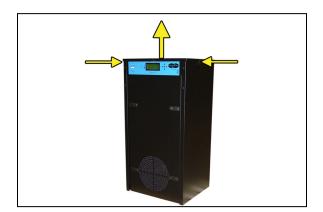
8.10 Removing the Front Panel

- **8.10.1** Depress the four (4) Trigger Latches.
- **8.10.2** Pull the Front Panel away from the dryer.



8.11 Removing the Top Cover

- **8.11.1** Use he included Allen Wrench to unlock the two (2) Trigger Latches.
- **8.11.2** Depress the two (2) Trigger Latches.



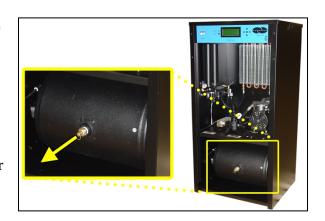
8.11.3 Lift the Top Cover off of the dryer.

NOTE: There is a wire connected between the Top Cover and the dryer's main frame. This is used for grounding purposes.

8.12 Depressurizing the Dryer

- **8.12.1** Remove the Front Panel (section 8.10).
- **8.12.2** Pull the ring handle on the Safety Relief Valve until all air pressure is released.

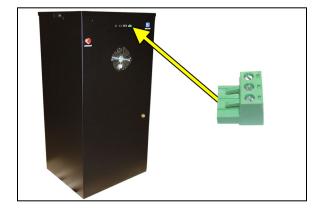
NOTE: To prevent pressure from building back up, power the dryer **OFF** (section 8.3).



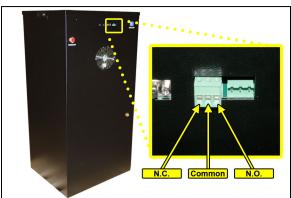
8.12.3 Reinstall the Front Panel (section 8.10).

8.13 Connecting to Common Alarm Socket

8.13.1 Insert the included Alarm Connector into either of the two (2) Alarm Ports.



- **8.13.2** Wire an external alarm wire pair to the Alarm Connector as required:
 - Common and N.C. for OPEN ON ALARM operation.
 - Common and N.O. for CLOSE ON ALARM operation.

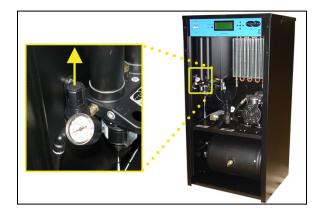


8.14 Setting the System Pressure

8.14.1 Remove the Front Panel (section 8.10).

With Compressor running:

8.14.2 Pull the Capacity Control Valve knob out.



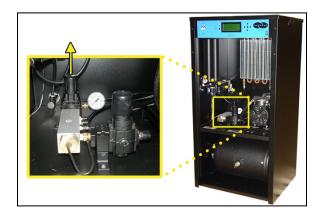
- **8.14.3** Turn the knob until the reading on the Pressure Gauge is **345 KPa** (50 PSI).
- **8.14.4** Push the knob in to lock.



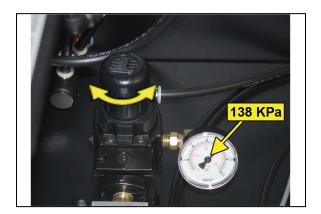
8.14.5 Reinstall the Front Panel (section 8.10).

8.15 Setting the Static Pressure

- **8.15.1** Remove the Front Panel (section 8.10).
- **8.15.2** Pull the Static Pressure Regulator knob out.



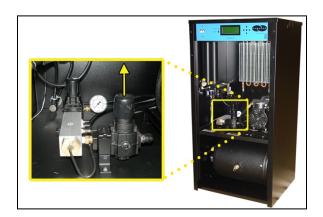
- **8.15.3** Turn knob until the reading on the Pressure Gauge is **138 KPa** (20 PSI).
- **8.15.4** Push knob in to lock.



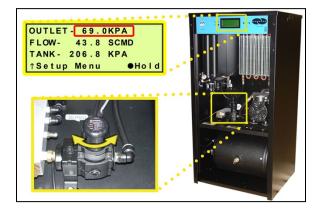
8.15.5 Reinstall the Front Panel (section 8.10).

8.16 Setting the Outlet Pressure

- **8.16.1** Remove the Front Panel (section 8.10).
- **8.16.2** Pull the Outlet Pressure Regulator knob out.



- **8.16.3** Turn knob until Outlet Pressure (**OUTLET**) reading is at the desired setting.
- **8.16.4** Push knob in to lock.



8.16.5 Reinstall the Front Panel (section 8.10).

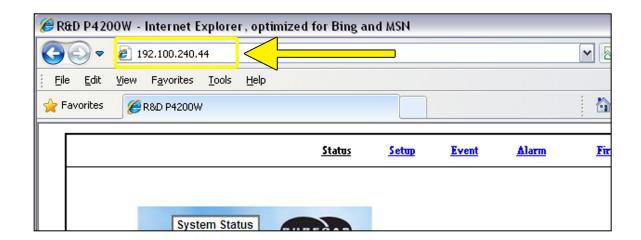
8.17 Connecting via Web Browser

If the Air Dryer IS connected to an IP network:

- The Air Dryer must be configured with a valid IP Address, Subnet Mask, and Gateway Address for the network.
- An IP cable must be connecting the air dryer to the network.
- Use a computer that is on the same network as the air dryer.
- Use Internet Explorer (6.0 or newer) or Mozilla Firefox Web Browser.

If the Air Dryer IS NOT connected to an IP network and has not been configured with IP information:

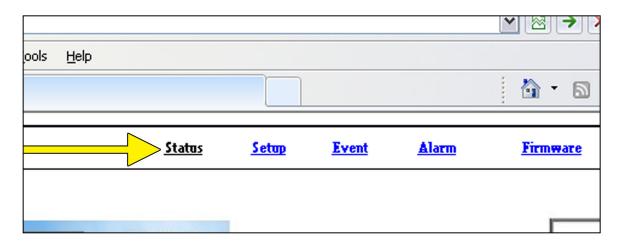
- Use the default IP Address (192.168.1.100) of the air dryer to connect.
- Use an IP Cable (may require Cross-over cable) plugged directly into a Laptop/PC and the other end plugged into the Network Port of the air dryer.
- Configure the network card on the Laptop/PC to use the IP Address 192.168.1.101. This will make the Laptop/PC compatible with the air dryer.
- Use Internet Explorer (6.0 or newer) or Mozilla Firefox Web Browser.
- **8.17.1** Type the IP Address of the P4200W2 Series Air Dryer in the Address text box of the Web Browser.



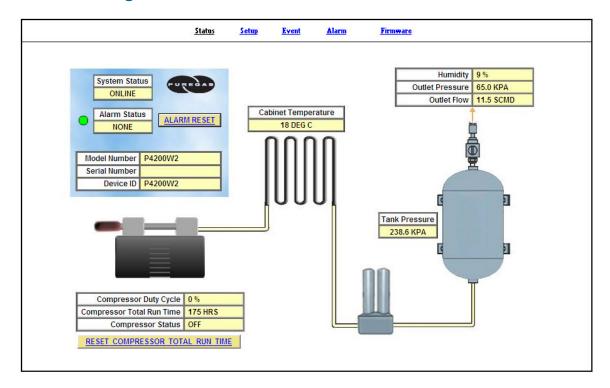
The Web Browser connection offers five (5) screens to the user:

- **Status Screen** Displays the readings and alarms monitored in the P4200W2 Series Air Dryer. Provides remote ALARM RESET.
- **Setup Screen** All configurations for System, Alarms, Network, and Keyword can be made in this screen.
- Event Screen Displays all events such as alarms, changes made, and alarm resets registered by the P4200W2 Series Air Dryer. This screen is informational only.
- Alarm Screen Displays all the Alarms registered by the P4200W2
 Series Air Dryer. This screen is informational only.
- **Firmware Screen** Allows the user to upload any software updates or upgrades to the Air Dryer.



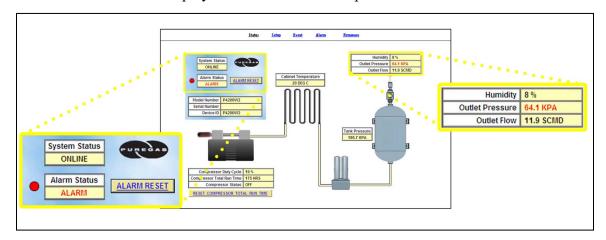


8.18 Using the Status Screen



Displays the readings and alarms monitored in the P4200W2 Series Air Dryer. Provides remote ALARM RESET.

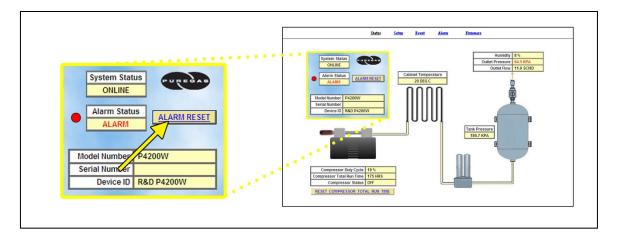
- Readings are displayed in **BLACK** unless an alarm is present.
- Alarms are displayed in **RED** next to the parameter in alarm.



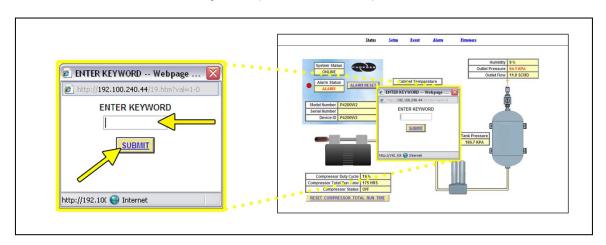
- Alarm Status will display **ALARM** if any alarms are present.
- Keyword validation is required for ALARM RESET and RESET COMPRESSOR TOTAL RUN TIME.

8.18.1 Resetting an Alarm

8.18.1.1 Click on the **ALARM RESET** Button to remotely reset Air Dryer alarms displayed on Status Screen.



8.18.1.2 Enter Keyword (default is 123456)

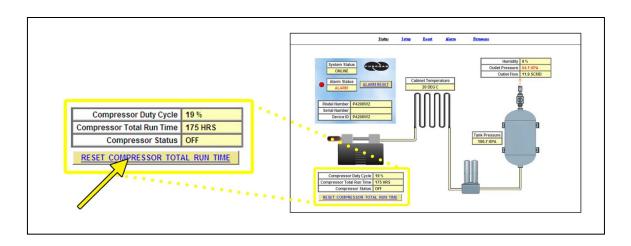


8.18.1.3 Click on **SUBMIT** Button when done.

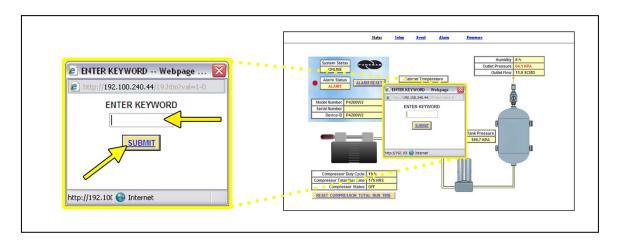
8.18.2 Resetting a Compressor Total Run Time

8.18.2.1 Click on the RESET COMPRESSOR TOTAL RUN TIME

Button to remotely reset Compressor Total Run Time displayed on Status Screen.



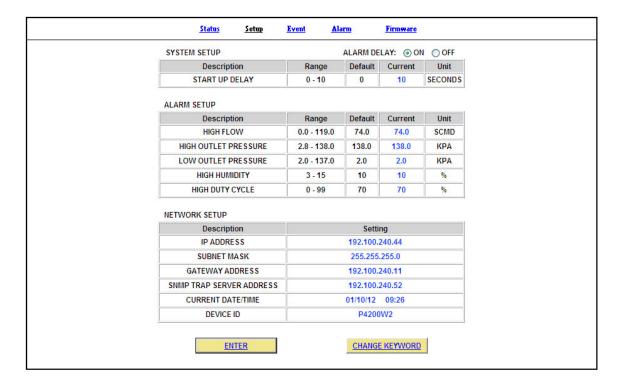
8.18.2.2 Enter Keyword (default is 123456)



8.18.2.3 Click on **SUBMIT** Button when done.

8.19 Using the Setup Screen

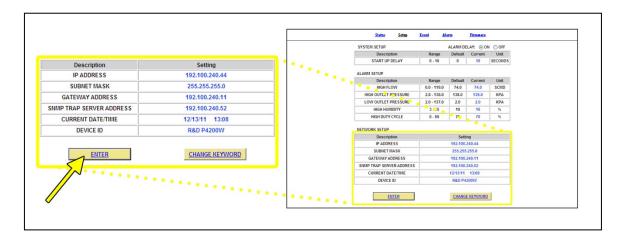
All configurations for the System, Alarms, Network, and Keyword can be made in this screen.



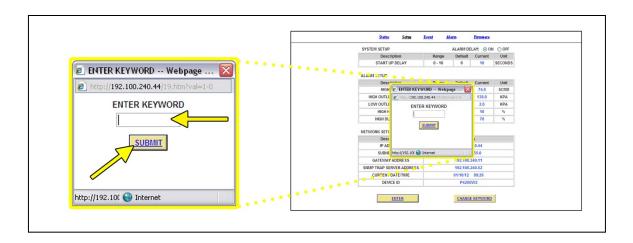
- Values in **BLUE** represent the current setting.
- The **ENTER** Button is used to change values.
- The **CHANGE KEYWORD** Button allows you to configure a new Keyword.
- Keyword validation is required for the following:
 - Changing a Threshold value
 - Changing the Keyword

8.19.1 Changing a Threshold or Setup value:

- **8.19.1.1** Click on the value to change.
- **8.19.1.2** Type in the new value.



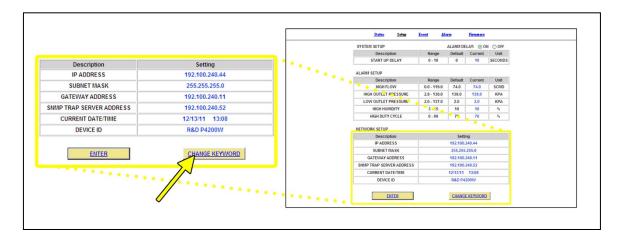
- **8.19.1.3** Click the **ENTER** Button when done.
- **8.19.1.4** Enter Keyword (default is 123456)



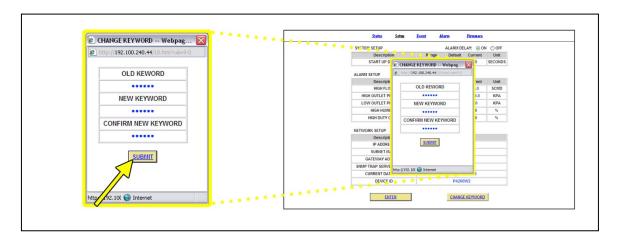
8.19.1.5 Click on **SUBMIT** Button when done. This will lock in the new setting value.

8.19.2 Changing the Keyword

8.19.2.1 Click on **CHANGE KEYWORD** Button to change the keyword.



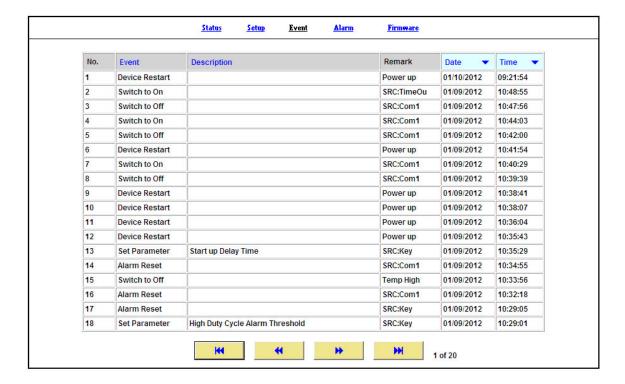
- **8.19.2.2** Type the Old Keyword.
- **8.19.2.3** Type the New Keyword.
- **8.19.2.4** Type the Confirm New Keyword.



8.19.2.5 Click on **SUBMIT** Button to confirm. This will lock in the new setting value.

8.20 Using the Event Screen

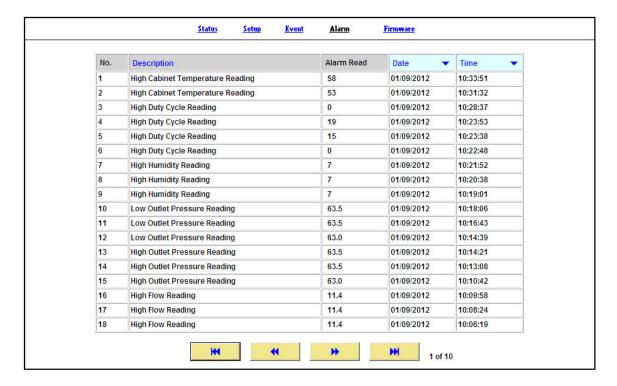
Displays all events such as alarms, changes made, and alarm resets registered by the P4200W2 Series Air Dryer. This screen is informational only.



- Click on the column headings to sort data according to that column.
- Click the Arrow Buttons to navigate through all the event log pages.

8.21 Using the Alarm Screen

Displays all the Alarms registered by the P4200W2 Series Air Dryer. This screen is informational only.



- Click on the column headings to sort data according to that column.
- Click the Arrow Buttons to navigate through all the event log pages.

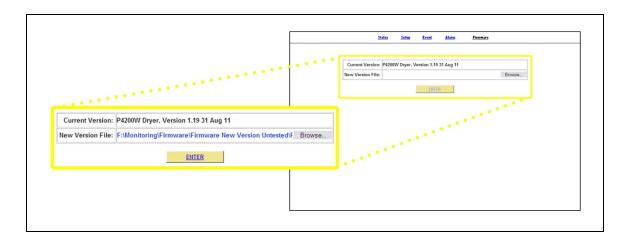
8.22 Using the Firmware Screen

Displays the current firmware version and date of the P4200W2 Series Air Dryer.

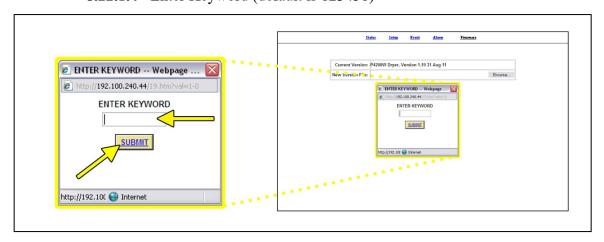


- **Current Version:** Displays the current firmware version of the P4200W2 Series Air Dryer.
- **New Version File:** Displays the new location and new firmware version chosen.
- The **BROWSE** Button allows you to locate the new firmware file.
- The **ACCEPT** Button is used to change values.
- Keyword validation is required to update firmware.

8.22.1 Updating the Firmware:



- **8.22.1.1** Click on **BROWSE** Button to locate the firmware file.
- **8.22.1.2** Navigate and select the correct .bin file. Press the **OK** Button.
- **8.22.1.3** Click the **ENTER** Button.
- **8.22.1.4** Enter Keyword (default is 123456)



8.22.1.5 Click on **SUBMIT** Button when done. This will lock in the new firmware version.

8.23 Connecting via SNMP

Using SNMP to connect and communicate with the P4200W Series Air Dryer is dependent upon the specific SNMP Management software used on your network. This software requires a SNMP Definition & Configuration File (MIB file) in order to properly communicate with the Air Dryer.

The files for the P4200W2 Series Air Dryers can be downloaded from our website (Puregas.com) under the Product Support section SNMP Files link. It is necessary to import this file into your SNMP operating software.

NOTE: Reference Appendix section 14.3 for a list of SNMP Parameters.

9. Testing Your Dryer

9.1 Safety & Warning Information



WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. Many procedures performed during installation, operation, testing, and maintenance of this air dryer require the equipment to be running, creating a situation for potential electrical shock. It is highly recommended that you remove all jewelry before performing any procedures.



WARNING!

Internal surfaces may be hot. Use care when coming into contact with internal components as there is a potential for some of these components to become hot when in operation or standby.



WARNING!

High Noise. Puregas air dryers are meant to be installed in an unattended area.



CAUTION!

Observe precautions for handling Electrostatic Sensitive Devices.



CAUTION!

Depressurizing the air dryer may be necessary before performing certain procedures. **NEVER** remove pressure sensing tubes from the control board without depressurizing the air dryer first, or **damage to the control board will occur.**

9.2 Measuring Compressor Amp Draw



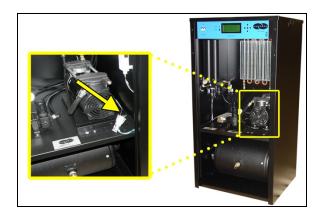
WARNING!

Internal surfaces may be hot. Use care when coming into contact with internal components as there is a potential for some these components to become hot when in operation or standby.

9.2.1 Remove the Front Panel (section 8.10).

With the Compressor running:

9.2.2 Locate the BLACK wire coming directly from the Compressor.



9.2.3 Use an Amp Meter to measure the Amps of the BLACK wire.

With the Compressor running, the running amps should measure:



- **8.6 amps or below** for the P4200W2 & P4200W2LP models.
- **3.9 or below** for the P4202W2 & P4202W2LP models.
- **4.2 or below** for the P4202W2H model.

If the Compressor measures over the recommended running amps, see section 13.16 for troubleshooting information.

9.2.4 Reinstall the Front Panel (section 8.10).

9.3 Measuring Voltage to Compressor



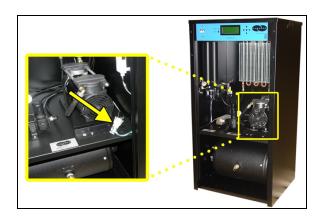
WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. It is highly recommended that you remove all jewelry before performing any procedures.

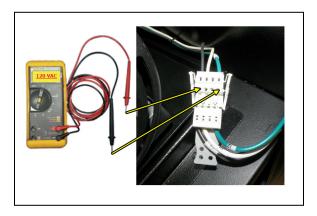
9.3.1 Remove the Front Panel (section 8.10).

With the Compressor running:

9.3.2 Locate the Compressor power connector.



- **9.3.3** Use a Voltmeter to measure the voltage between the BLACK and WHITE wires:
 - **9.3.3.1** Place the Voltmeter probes in the openings in the power connector.



The voltage should measure:

- 110 125 VAC for the P4200W2 & P4200W2LP models.
- **220 230 VAC** for the P4202W2, P4202W2LP & P4202W2H models.
- **9.3.4** Reinstall the Front Panel (section 8.10).

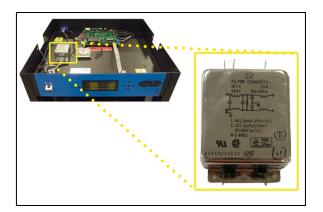
9.4 Measuring Voltage at the Power Line Filter



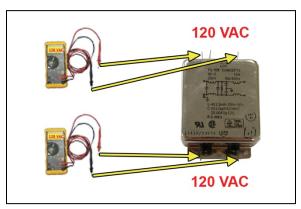
WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. It is highly recommended that you remove all jewelry before performing any procedures.

- **9.4.1** Remove the Top Cover (section 8.11).
- 9.4.2 Locate the Power LineFilter inside the Top Sectionof the air dryer.



- **9.4.3** Use a Voltmeter to measure the voltage:
 - 9.4.3.1 Place the probesbetween the Power LineFilter and terminalinsulation so that theytouch the metal contacts.



The voltage should measure:

- 110 125 VAC for the P4200W2 & P4200W2LP models.
- **220 230 VAC** for the P4202W2, P4202W2LP & P4202W2H models.

If any of the voltage measurements are different than indicated above, the Power Line Filter is defective and should be replaced. See sections 11.1 for part detail and 11.7 for ordering information.

9.4.4 Reinstall the Top Cover (section 8.11).

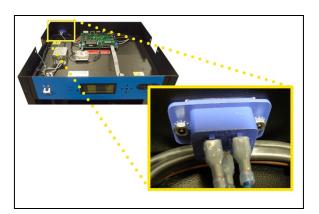
9.5 Measuring Incoming Voltage



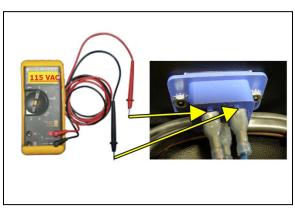
WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. It is highly recommended that you remove all jewelry before performing any procedures.

- **9.5.1** Remove the Top Cover (section 8.11).
- 9.5.2 Locate the Power IECConnector inside the TopSection of the air dryer.



- **9.5.3** Use a Voltmeter to measure the voltage:
 - 9.5.3.1 Place the probesbetween the IECConnector and terminal insulation so that they touch the metal contacts.



The voltage should measure:

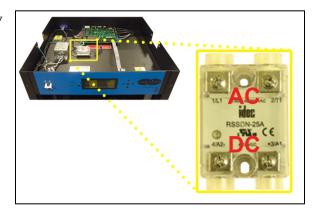
- 110 125 VAC for the P4200W2 & P4200W2LP models.
- **220 230 VAC** for the P4202W2, P4202W2LP & P4202W2H models.

If the incoming voltage measures less than indicated above, it is recommended that steps be taken at your facility to increase the incoming power to the recommended levels.

9.5.4 Reinstall the Top Cover (section 8.11).

9.6 Measuring Voltages at Solid State Relay

- **9.6.1** Remove the Top Cover (section 8.11).
- **9.6.2** Locate the Solid State Relay inside the Top Section of the air dryer.

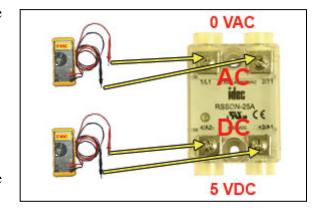


With the Compressor running:

9.6.3 Use a Voltmeter to measure across the AC terminals.

The voltage should measure **0 VAC**.

9.6.4 Use a Voltmeter to measure across the DC terminals.



The voltage should measure:

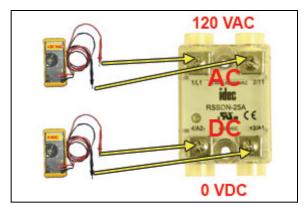
- **5 VDC** for the P4200W2 & P4200W2LP models.
- 12 VDC for the P4202W2, P4202W2LP & P4202W2H models.

With the Compressor NOT running:

9.6.5 Use a Voltmeter to measure across the AC terminals.

The voltage should measure:

 110 - 125 VAC for the P4200W2 & P4200W2LP models.



- **220 230 VAC** for the P4202W2, P4202W2LP & P4202W2H models.
- **9.6.6** Use a Voltmeter to measure across the DC terminals. The voltage should measure **0 VDC**.
- **9.6.7** Reinstall the Top Cover (section 8.11).

If any of the voltage measurements are different than indicated above, the Solid State Relay is defective and should be replaced. See sections 11.1 for part detail and 11.7 for ordering information.

9.7 Testing Consistent Heatless Dryer Cycling

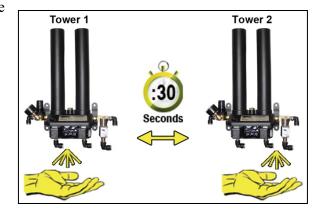
9.7.1 Remove the Front Panel (section 8.10).

With the Compressor running:

9.7.2 Disconnect the purge tubes from the Heatless Dryer.



- 9.7.3 Place your hand beneath the purge fittings to feel for purging air. Air should:
 - Purge from Tower 1 side
 - Purge from Tower 2 side30 Seconds later
 - Purge from Tower 1 side30 Seconds later
 - ...and so on.



- **9.7.4** Re-connect the purge tubes to the Heatless Dryer.
- 9.7.5 Reinstall the Front Panel (section 8.10).



If the Heatless Dryer is not cycling consistently as described, see section 13.13 for troubleshooting information.

9.8 Testing Unloader Valve

9.8.1 Remove the Front Panel (section 8.10).

With the Compressor running:

9.8.2 Disconnect the Unloader tube from the Unloader Valve.

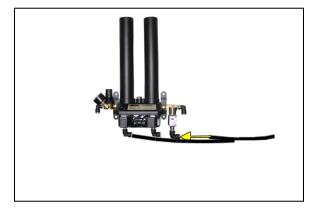


9.8.3 Place your hand beneath the Unloader Valve fitting to feel for air flow.

Air should **NOT** flow from this fitting continuously. Air should only be released in a short burst when the Compressor shuts off.



- **9.8.4** Re-connect the Unloader tube to the Unloader Valve.
- **9.8.5** Reinstall the Front Panel (section 8.10).



If air flows from this valve continuously the Unloader Valve is defective and should be replaced. See sections 11.4 for part detail and 11.7 for ordering information.

9.9 Measuring Heatless Dryer Solenoid Voltage

9.9.1 Remove the Front Panel (section 8.10).

With the Compressor running:

9.9.2 Locate the Heatless Dryer Cycle Timer.

The timer has three (3) sets of terminals (from left-to-right):

"VALVE" – Left solenoid

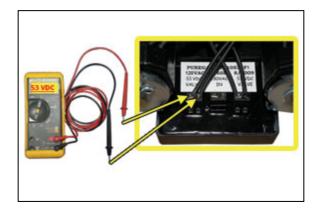
"IN" – Incoming power

"VALVE" - Right solenoid



9.9.3 Use a Voltmeter to measure the DC voltage across each set of "VALVE" terminals.

Continue to measure for up to 45 seconds if no voltage is initially measured.



The voltage should measure:

- **53 VDC** for the P4200W2 & P4200W2LP models.
- **106 VDC** for the P4202W2, P4202W2LP & P4202W2H models.
- **9.9.4** Reinstall the Front Panel (section 8.10).

If the voltage does not measure as indicated above, this is an indication that the Cycle Timer is defective and should be replaced. See sections 11.4 for part detail and 11.7 for ordering information

9.10 Testing Precooler Fan

9.10.1 Place your hand in front of the Precooler Fan to feel for air being blown outward.

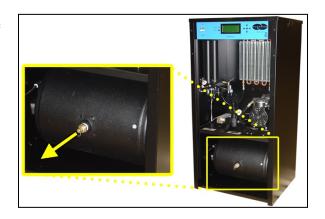


If the fan is not blowing air outward as described:

- Check for loose wiring. Refer to the Wiring Diagram (section 14.1)
- Replace defective fan (see sections 11.3 for part detail and 11.7 for ordering information).

9.11 Testing Safety Relief Valve

- **9.11.1** Remove the Front Panel (section 8.10).
- **9.11.2** Pull the ring handle on the Safety Relief Valve to verify air pressure is released.
- **9.11.3** Release ring handle and verify that no air is leaking from the valve.

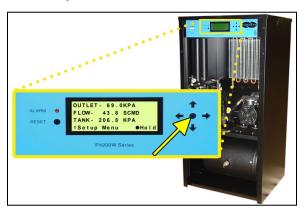


9.11.4 Reinstall the Front Panel (section 8.10).

If the Safety Relief Valve fails either test described, it must be replaced. See sections 11.3 for part detail and 11.7 for ordering information.

9.12 Testing Compressor ON/OFF Cycling

- **9.12.1** Remove the Front Panel (section 8.10).
- 9.12.2 When the Outlet Screen (section 8.4.5.2) appears on the display, press the HOLD Button on the Front Panel to freeze that screen.



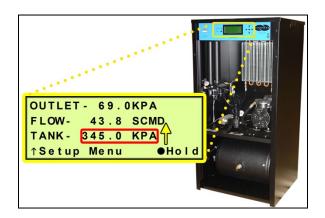
With Compressor running:

9.12.3 Verify the Compressor shuts down when the Tank Pressure (TANK) reaches345 KPa.

If the Tank Pressure (**TANK**) fails to reach 345 KPa, see section 13.15 for troubleshooting information.

With Compressor NOT running:

- 9.12.4 Pull the ring handle on the Safety Relief Valve to release air pressure from the Air Tank.
- 9.12.5 Verify the Compressor turns on when the TankPressure (TANK) falls to 172KPa.





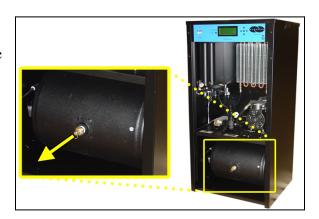
9.12.6 Reinstall the Front Panel (section 8.10).

If the Compressor Cycling fails either test described, it indicates a problem with the Control Board which may need to be replaced. See sections 11.1 for part detail and 11.7 for ordering information.

9.13 Testing High Duty Cycle Alarm

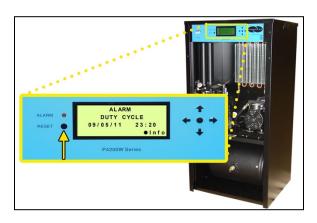
NOTE: For this test, allow the Display Screen to cycle through the information screens.

- **9.13.1** Remove the Front Panel (section 8.10).
- **9.13.2** Allow the Compressor run and then turn off.
- 9.13.3 Immediately after theCompressor turns off, pull thering handle on the SafetyRelief Valve until theCompressor turns on again.



A High Duty Cycle Alarm should appear on the Display Screen.

9.13.4 Allow the Compressor to turn off.

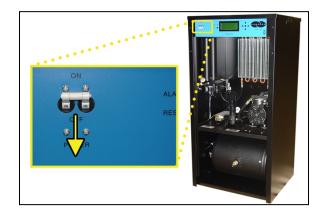


- **9.13.5** Press the **RESET Button** to clear the alarm.
- **9.13.6** Reinstall the Front Panel (section 8.10).

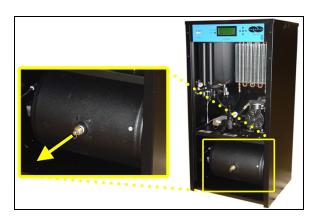
If you are unable to create a High Duty Cycle Alarm as described, see section 13.18 for troubleshooting information.

9.14 Testing Humidity Alarm and System Shutdown

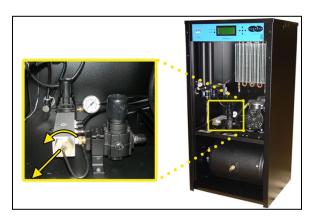
- **9.14.1** Power the air dryer **OFF**.
- **9.14.2** Remove the Front Panel (section 8.10).



9.14.3 Depressurize the air dryer.



9.14.4 Unscrew and remove the Humitter from the Combo Block.



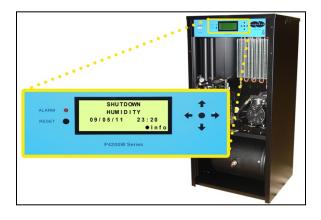
9.14.5 Power the air dryer **ON**.



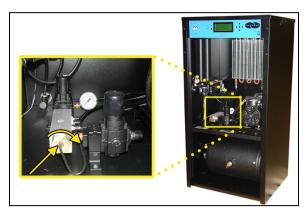
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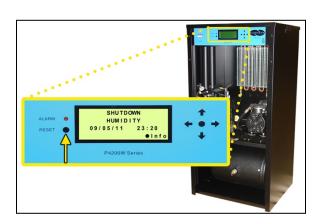
- **9.14.6** Allow the Humidity reading to rise over 10.0%.
- **9.14.7** After three (3) minutes, verify that a Humidity Alarm appears and the dryer goes into **SHUTDOWN** mode.



9.14.8 Replace the Humitter into the Combo Block.



- **9.14.9** Press the **RESET Button** to clear the alarm.
- **9.14.10** Reinstall the Front Panel (section 8.10).

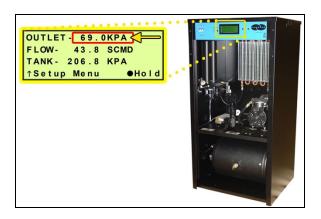


NOTE: If the Humitter is disconnected from the Control Board, **% will appear on the Humidity reading and after 5 minutes the unit will Shutdown. This is to allow for troubleshooting.

If you are unable to create a Humidity / Shutdown alarm as described, see section 13.11 for troubleshooting information.

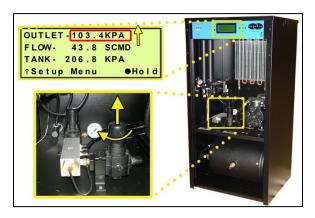
9.15 Testing High Outlet Pressure Alarm

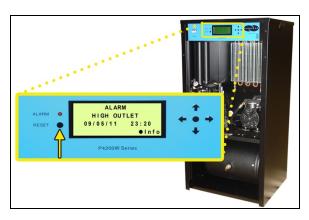
- **9.15.1** Make a note of the current Outlet Pressure (**OUTLET**) reading.
- **9.15.2** Remove the Front Panel (section 8.10).



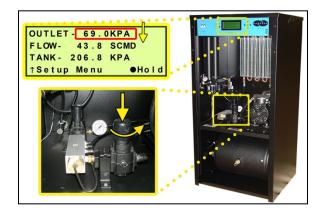
With Compressor running:

- **9.15.3** Pull the Outlet Pressure Regulator knob out.
- 9.15.4 Turn knob clockwise until
 Outlet Pressure (OUTLET)
 reading climbs over the alarm
 threshold. (section 8.8.5)
- 9.15.5 After one (1) minute,verify that a High OutletPressure Alarm appears on the display.
- **9.15.6** Press the **RESET Button** to clear the alarm.





9.15.7 Turn Outlet Pressure
Regulator knob counterclockwise until Outlet
Pressure (OUTLET) reading
lowers to the reading
recorded in step 9.15.1

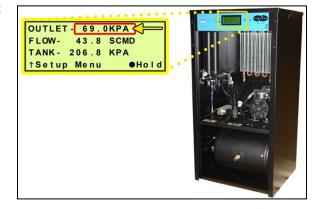


- **9.15.8** Push knob in to lock.
- **9.15.9** Reinstall the Front Panel (section 8.10).

If you are unable to create a High Outlet Pressure Alarm as described, see section 13.6 for troubleshooting information.

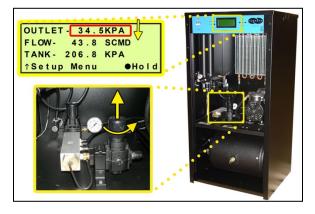
9.16 Testing Low Outlet Pressure Alarm

- **9.16.1** Make a note of the current Outlet Pressure (**OUTLET**) reading.
- **9.16.2** Remove the Front Panel (section 8.10).

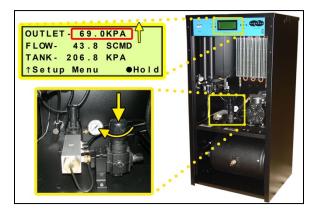


With Compressor running:

- **9.16.3** Pull the Outlet Pressure Regulator knob out.
- 9.16.4 Turn knob counterclockwise until OutletPressure (OUTLET) reading drops below the alarm threshold. (section 8.8.7)



- 9.16.5 After one (1) minute,verify that a Low OutletPressure Alarm appears on the display.
- **9.16.6** Press the **RESET Button** to clear the alarm.
- 9.16.7 Turn Outlet PressureRegulator knob clockwiseuntil Outlet Pressure(OUTLET) reading raises tothe reading recorded in step9.16.1
- ALARM LOW OUTLET
 09/05/11 23:20
 01/10
 P4200W Series



- **9.16.8** Push knob in to lock.
- **9.16.9** Reinstall the Front Panel (section 8.10).

If you are unable to create a Low Outlet Pressure Alarm as described, see section 13.8 for troubleshooting information.

9.17 Testing Air Fittings & Hoses for Leaks

NOTE: This is a general procedure that can be applied to any fitting or hose that has air pressure in it. DO NOT SOAP TEST THE HUMIDITY SENSOR FITTING. DAMAGE TO THE SENSOR MAY OCCUR.

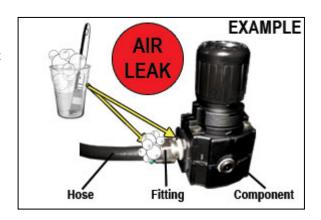
With Compressor NOT running:

9.17.1 Listen for any 'hissing' sounds which may indicate a fitting or hose air leak.

With Compressor running:

9.17.2 Use a 1-inch paint brush to dab soapy water on the air fitting or hose connection to be tested.

If air bubbles appear at the connection, this indicates that air is leaking from the connection.



If any leaks are detected, take steps to seal them off (as necessary):

- Tighten the fitting
- Re-connect the hose end
- Replace the fitting / hose / component

10. Maintaining Your Dryer

In order to ensure that your P4200W2 Series Air Dryer continues to operate efficiently and reliably, PUREGAS recommends performing the following maintenance procedures at the specified Six Month and 8,000 Hour intervals.

It is also recommended that you print out the included *Six Month Maintenance (section 10.2)* and *8,000 Hour Maintenance (section 10.3)* log sheets and record all completed maintenance for historical tracking and reference purposes.

The log sheets include a Section reference column which indicates the User's Guide section containing the information about the specific procedure. Please refer to these sections for detailed procedural information.

NOTE: When operating at higher ambient temperatures, it is recommended that maintenance be performed more frequently.

NOTE: After 16,000 hours of run time, PUREGAS recommends sending in your Compressor and Heatless Dryer for a complete and comprehensive rebuild by our Service Department technicians. *See sections 12.1 and 12.2 for information on services and contacting PUREGAS.*

10.1 Safety & Warning Information



WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. Many procedures performed during installation, operation, testing, and maintenance of this air dryer require the equipment to be running, creating a situation for potential electrical shock. It is highly recommended that you remove all jewelry before performing any procedures.



WARNING!

Internal surfaces may be hot. Use care when coming into contact with internal components as there is a potential for some of these components to become hot when in operation or standby.



CAUTION!

SHUT DOWN IMMEDIATELY FOR REPAIRS if the air compressor shows any evidence of overheating or presents excessive noise.



CAUTION!

Depressurizing the air dryer may be necessary before performing certain procedures. **NEVER** remove pressure sensing tubes from the Control Board without depressurizing the air dryer first, or **damage to the Control Board will occur.**



WARNING!

High Noise. Puregas air dryers are meant to be installed in an unattended area.



CAUTION!

Observe precautions for handling Electrostatic Sensitive Devices.



IMPORTANT!

After performing any maintenance, always soap test pressure fittings to check for air leaks. Also, check for any loose or disconnected wiring.

10.2 Six Month Maintenance

MODEL:	LOCATION NAME:					
SERIAL NUMBER:	ADDRESS:					
DATE INSTALLED:						
			Maintenai	ice Interva	l (Months)	
Procedure	Section	6	12	18	24	30
Install Six Month Maintenance Kit P012314	11.6					
Install P012514 for P4202W2H ONLY	11.0	_		_		
Read & Record Flow Rate (FLOW)	8.4.5.2					
Measure & Record Compressor Amp Draw	9.2					
Measure & Record Incoming Voltage	9.5					
Test High & Low Outlet Pressure Alarms	9.15 &					
	9.16	Ц				
Set System Pressure (345 KPa / 50 PSI)	8.14					
Set Static Pressure (138 KPa / 20 PSI)	8.15					
Set Outlet Pressure	8.16					
Test Consistent Heatless Dryer Cycling	9.7					
Test Precooler Fan	9.10					
Test Safety Relief Valve	9.11					
Test Compressor ON/OFF Cycling	9.12					
Test Duty Cycle Alarm	9.13					
Test Humidity Alarm & System Shutdown	9.14					
Test Air Fittings and Hoses for Leaks	9.17					
Clean Precooler Coils						
Visually Inspect Inside & Outside of Unit for Loose						
Wiring or Hardware		_				
Maintenance Perf	formed by:					
Date of Maintenance:						

NOTE: COPY OR PRINT THIS PAGE AND KEEP IT WITH THE AIR DRYER

10.3 8,000 Hour Maintenance

Under typical operating conditions:

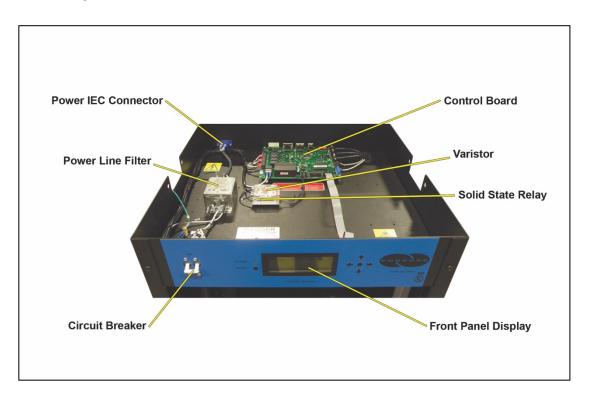
8,000 hours of run time will occur between one (1) and two (2) years of use. This will be identified by a **COMPERSSOR RUN TIME: TOTAL** Alarm on the display.

MODEL:	LOCATION NAME:					
SERIAL NUMBER:	ADDRESS:					
DATE INSTALLED:						
			Maintena	nce Interv	al (Hours)	
Procedure	Section	8,000	16,000	24,000	32,000	40,000
Install 8,000 Hour Maintenance Kit P011471 Install P012519 for P4202W2H ONLY	11.6					
Read & Record Flow Rate (FLOW)	8.4.5.2					
Measure & Record Compressor Amp Draw	9.2					
Set System Pressure (345 KPa / 50 PSI)	8.14					
Set Static Pressure (138 KPa / 20 PSI)	8.15					
Set Outlet Pressure	8.16					
Test Consistent Heatless Dryer Cycling	9.7					
Test Compressor ON/OFF Cycling	9.12					
Test Air Fittings and Hoses for Leaks	9.17					
Reset COMPRESOR TOTAL RUN TIME Reading to Zero	8.7.7					
Visually Inspect Inside & Outside of Unit for Loose Wiring or Hardware						
Maintenance Peri	formed by:					
Date of Ma	intenance:					

NOTE: COPY OR PRINT THIS PAGE AND KEEP IT WITH THE AIR DRYER

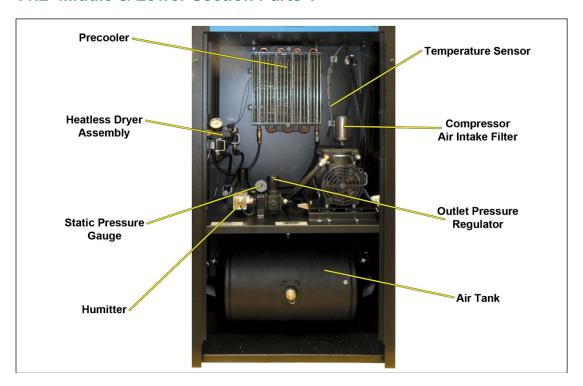
11. Replacement Parts & Accessories

11.1 Top Section Parts



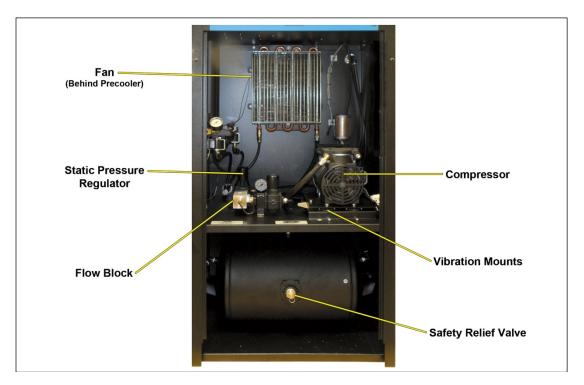
Description	Part Number		Quantity	Recommend Spare
	P4200W2 P4200W2LP (120 VAC)	P4202W2 P4202W2LP P4202W2H (220 VAC)		
Power IEC Connector	P012279		1	
Power Line Filter	P011628		1	
Circuit Breaker	P06136		1	√ (1)
Control Board	P012304		1	√(1)
Varistor	P012033 P012034		1	√ (1)
Solid State Relay	P05992		1	√ (1)
Front Panel Display	P01	2276	1	

11.2 Middle & Lower Section Parts 1



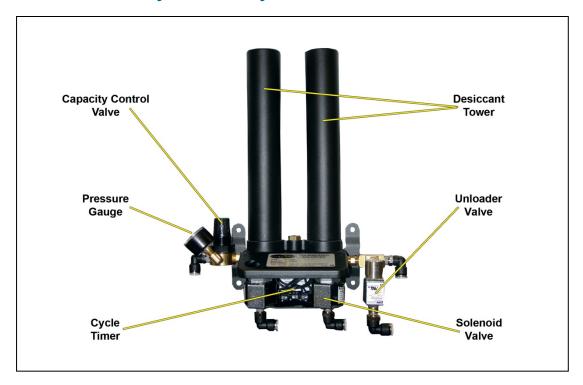
Description	Part Number		Quantity	Recommend Spare
	P4200W2 P4200W2LP (120 VAC)	P4202W2 P4202W2LP P4202W2H (220 VAC)		Spare .
Precooler	P4642		1	
Heatless Dryer Assembly		See section 1	1.4 for detail	
Static Pressure Gauge (0-30 PSI)	P013339		1	
Humitter	P011380		1	
Temperature Sensor	P011823		1	
Compressor Air Intake Filter		P012314. See s it P012514 for	v	
Outlet Pressure Regulator (Low Pressure)	P013 (P01	3203 2316)	1 (1)	√(1)

11.3 Middle & Lower Section Parts 2



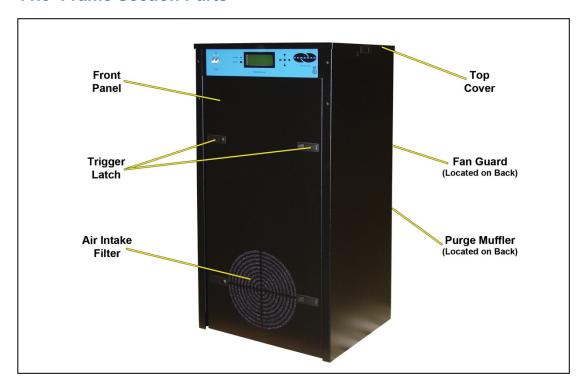
Description	Part Number			Quantity	Recommend
•					Spare
	P4200W2 &	P4202W2 &	P4202W2H		
	P4200W2LP	P4202W2LP	(220VAC)		
	(120 VAC)	(220 VAC)			
Fan	P012366 P012368		1		
Static Pressure	P013203			1	√ (1)
Regulator		F013203			(1)
Flow Block				1	
Compressor	P013261	P013262	P012518		✓ (1)
Vibration Mounts	P4582S		4		
Safety Relief Valve		P03646		1	

11.4 Heatless Dryer Assembly Parts



Description	Part Number			Quantity	Recommend Spare
	P4200W2 & P4200W2LP (120 VAC)	P4202W2 & P4202W2LP (220 VAC)	P4202W2H (220 VAC)		
Heatless Dryer Assembly	PHF2C112041	PHF2C212041	PHF2C212045	1	
Capacity Control Valve	P4634			1	✓ (1)
Pressure Gauge (0–100 PSI)	P010695			1	
Cycle Timer	P010530F1	PO	010530F2	1	
Desiccant Chamber	P20040312			2	
Unloader Valve	P011022 P010453		1	✓ (1)	
Solenoid Valve		In Kit P01147	71. See section 11.	6 for detail.	1

11.5 Frame Section Parts



Description	Part Number	Quantity	Recommend Spare	
Front Panel		1		
Trigger Latch		6		
Air Intake Filter	In Kit P012314. See section 11.6 for detail. In Kit P012514 for P4202W2H ONLY			
Top Cover		1		
Fan Guard	P03703	1		
Purge Muffler	In Kit P012314. See section 11.6 for detail In Kit P012514 for P4202W2H ONLY			

11.6 Accessories for Your Dryer

	Description	Part Number	Recomme nd Spare
	Installation Kit Includes fittings required to connect to 3/4" flexible hose or 1/2" tubing.	P011752	
	Six Month Maintenance Kit Includes air intake filter, compressor air intake filter, and purge muffler.	P012314 $P4202W2H = P012514$	✓ (2)
1 00	8,000 Hour Maintenance Kit Includes heatless dryer maintenance kit and compressor maintenance kit.	P011471 P4202W2H = P012519	✓ (1)
COLANI O	Cycle Kit Allows multiple dryers to be cycled.	P08033W	
0	Cycle Kit Interface Kit	P012341	
	1/2" Bleed Orifice Kit Allows the Compressor and Heatless Dryer to cycle in low flow applications.	P013292	

11.7 Ordering Parts from PUREGAS



IMPORTANT!

Instruction for the replacement of individual listed components goes beyond the scope of this User's Guide and will not be covered. Please refer to the information included with the specific replacement part for this instruction.

Once you have identified your required parts and accessories, contact the PUREGAS Inside Sales / Service department to order:

(800) 521-5351 **(option 2)**

Fax - (303) 657-2205

sales@puregas.com

parts@puregas.com

12. Service & Repair

Only PUREGAS can offer factory direct rebuilds backed by a 6 month factory warranty.

- 2 week turnaround time
- Estimates available upon request
- Minimum service charge fee applies

12.1 Services Offered

• Compressor Rebuild

- Replace motor bearings, piston rod assemblies, and install a complete compressor maintenance kit.
- o Test air flow, air pressure, and electrical performance

• Heatless Dryer Rebuild

- Replace desiccant, o-rings, check valves, springs, and complete solenoid assembly
- Test proper component operation

Desiccant Tower Repack

- o Clean out tower and replace desiccant, filter, and o-ring
- Circuit Board Repair (Limited to current model boards only)
- Complete Dryer Repair

12.2 Initiating a Service Transaction

- Contact our Parts & Service Department at **1-800-521-5351 (option 3)** to obtain a Return Authorization (RA) number.
- Carefully package the item(s) to be returned.
- Mark the Return Authorization (RA) number on the outside of the shipping container.
- Include the main address and phone number of the individual to contact for related inquiry and follow-up information.
- Include the purchase order number.

13. Troubleshooting Your Dryer

13.1 Before You Call PUREGAS

PLEASE READ THIS SECTION FIRST. It is important that you use the following sections in order to diagnose and attempt to fix the problem with your air dryer before placing a call to PUREGAS Technical Support.

This troubleshooting guide is intended to simplify the isolation of problems, present possible causes, provide test procedures for verification, and suggest corrective actions to restore the air dryer back to normal operation. Each section begins with the most likely cause(s) of the issue. Otherwise, they start from the simplest possibilities and progress to more complicated ones.

This troubleshooting guide is designed to be easy to follow and very effective when used properly. It is suggested to always start at the beginning of the specific problem section and continue in sequence, following the procedures indicated.

13.2 Safety & Warning Information



WARNING!

For your safety, all the information in this User's Guide must be followed to minimize the risk of electrical shock, and prevent property damage or personal injury.



WARNING!

Internal surfaces may be hot. Use care when coming into contact with internal components as there is a potential for some of these components to become hot when in operation or standby.



WARNING!

Extreme care should be exercised to avoid contact with live electrical circuits. Many procedures performed during installation, operation, testing, and maintenance of this air dryer require the equipment to be running, creating a situation for potential electrical shock. It is highly recommended that you remove all jewelry before performing any procedures.



CAUTION!

Depressurizing the air dryer may be necessary before performing certain procedures. **NEVER** remove pressure sensing tubes from the Control Board without depressurizing the air dryer first, or **damage to the Control Board will occur.**



CAUTION!

Do not test the Humidity Sensor with an ohm meter or apply any DC voltage. This will render the Humidity Sensor defective.



WARNING!

High Noise. Puregas air dryers are meant to be installed in an unattended area.



CAUTION!

Observe precautions for handling Electrostatic Sensitive Devices.

13.3 Air Dryer Won't Power ON

Possible Cause	Check	Corrective Action
Power Circuit Breaker	Verify Power Circuit	Move Power Circuit
in OFF position	Breaker is in ON	Breaker to ON position
	position	(section 8.3)
	(section 8.3)	
No voltage to the Circuit	Measure voltage to the	If voltage is correct
Breaker	Power Line Filter	replace Circuit Breaker
	(section 9.4)	(section 11.1). If
		voltage is not correct go
		to next possible cause
No incoming voltage to	Measure incoming	Troubleshoot facility
air dryer	voltage (section 9.5)	power supply to air
		dryer

13.4 Display Screen Not Functioning

Possible Cause	Check	Corrective Action
Dryer experienced a		Power the air dryer OFF
power spike		for 15+ seconds.
		Power the air dryer ON .

13.5 High Outlet Pressure Alarm

Possible Cause	Check	Corrective Action
Outlet Pressure set too	Verify Outlet Pressure	Adjust Outlet Pressure
high	(OUTLET) reading	Regulator (section 8.16)
	(section 8.4.5.2)	
High Outlet Pressure	Verify High Outlet	Raise High Outlet
Alarm threshold too low	Pressure threshold	Pressure threshold
	(section 8.8.5)	(section 8.8.5)

13.6 Can't Create a High Pressure Alarm

Possible Cause	Check	Corrective Action
Defective Outlet	Verify that the Outlet	Replace Outlet Pressure
Pressure Regulator	Pressure Regulator can	Regulator if unable to
	be adjusted	adjust pressure
	(section 8.16)	(section 11.2)
High Outlet Pressure	Verify High Outlet	Adjust Outlet Pressure
Alarm threshold higher	Pressure threshold	Regulator so that Outlet
than default	(section 8.8.5)	Pressure (OUTLET)
		reading climbs over
		verified threshold
		(section 8.16)
Defective Control Board	Verify that the Outlet	Replace Control Board
	Pressure (OUTLET)	(section 11.1) if Outlet
	reading is higher than	Pressure (OUTLET)
	the High Outlet Pressure	reading is over verified
	threshold (above)	High Outlet Pressure
		threshold for more than
		1 minute and fails to
		create an alarm.

13.7 Low Outlet Pressure Alarm

Possible Cause	Check	Corrective Action
Outlet Pressure set too	Verify Outlet Pressure	Adjust Outlet Pressure
low	(OUTLET) reading	Regulator (section 8.16)
	(section 8.4.5.1)	
High Flow condition	Verify Flow Rate	Troubleshoot High Flow
	(FLOW) reading is not	condition
	higher than expected	(section 13.9)
	(section 8.4.5.2)	
Compressor will not	Verify System Pressure	Troubleshoot Compressor
build up pressure	(section 8.14)	Won't Build Pressure
		(section 13.15)
Low Outlet Pressure	Verify Low Outlet	Lower the Low Outlet
Alarm threshold too	Pressure threshold	Pressure threshold (section
high	(section 8.8.7)	8.8.7)

13.8 Can't Create a Low Pressure Alarm

Possible Cause	Check	Corrective Action
Defective Outlet	Verify that the Outlet	Replace Outlet Pressure
Pressure Regulator	Pressure Regulator can	Regulator if unable to
	be adjusted	adjust pressure
	(section 8.16)	(section 11.2)
Low Outlet Pressure	Verify Low Outlet	Adjust Outlet Pressure
Alarm threshold lower	Pressure threshold	Regulator so that Outlet
than default setting	(section 8.8.7)	Pressure (OUTLET)
		reading drops below
		verified threshold
		(section 8.16)
Defective Control Board	Verify that the Outlet	Replace Control Board
	Pressure (OUTLET)	(section 11.1) if Outlet
	reading is lower than the	Pressure (OUTLET)
	Low Outlet Pressure	reading is under verified
	threshold (above)	Low Outlet Pressure
		threshold for more than
		1 minute and fails to
		create an alarm.

13.9 High Flow Rate Alarm

Possible Cause	Check	Corrective Action
Air leak in downstream	Verify Flow Rate	Fix downstream
cable outside of dryer	(FLOW) reading is not	problem
	higher than expected	
	(section 8.4.5.2)	
Air leak inside of dryer	Test fittings and hoses	Reconnect or replace
	for leaks (section 9.17)	bad fitting / hose
High Flow Alarm	Verify High Flow	Raise High Flow
threshold too low	threshold	threshold
	(section 8.8.9)	(section 8.8.9)

13.10 High Humidity



CAUTION!

Do not test the Humidity Sensor with an ohm meter or apply any DC voltage. This will render the Humidity Sensor defective.

Possible Cause	Check	Corrective Action
Low System Pressure	Verify System Pressure	Adjust System Pressure
	(section 8.14)	(section 8.14)
Low Flow Rate	Verify Flow Rate	Increase flow by
	(FLOW) reading is low	creating an artificial leak
	(section 8.4.5.2)	outside of the air dryer
High Humidity Alarm	Verify High Humidity	Raise High Humidity
threshold too low	threshold	threshold
	(section 8.8.3)	(section 8.8.3)
	If Flow Rate is low,	Over 10% not
	allowing a higher	recommended
	Humidity alarm	
	threshold (up to 10%)	
	will allow dryer to run	
	within acceptable levels.	
Heatless Dryer not	Verify consistent	Troubleshoot
cycling between towers	Heatless Dryer cycling	Inconsistent Heatless
	(section 9.7)	Dryer Cycling condition
		(section 13.13)
Plugged or obstructed	Test fittings and hoses to	Remove obstruction
Outlet Purge	Outlet Purge	
Defective Humitter	Perform the Testing	Troubleshoot Can't
	Humidity Alarm and	Create a High Humidity
	System Shutdown test	Alarm / Shutdown
	(section 9.14)	condition
		(section 13.11)
Defective Control Board	Unplug Humitter from	If Humidity reading
	Control Board (see	does not display **%,
	section 11.1 for Control	replace Control Board
	Board location)	(section 11.1)
	Humidity reading should	
	display **%	

13.11 Can't Create a High Humidity Alarm / Shutdown

These troubleshooting steps assume that the Humitter is removed from the Humidity Block during the *Testing Humidity Alarm and System Shutdown* (section 9.14) procedures.

Possible Cause	Check	Corrective Action
Humitter Cable	Verify that Humitter	Connect Humitter cable
disconnected	cable is connected to the	
	Control Board	
Defective Humitter	Verify that Humidity	Replace Humitter
	reading fails to climb	(section 11.2)
	higher than 15% or	
	creates sporadic	
	readings	
Defective Control Board	Verify that Humidity	Replace Control Board
	reading is over 15% for	if no alarm is created
	more than 1 minute	and system does not shut
		down (section 11.1)

13.12 High Cabinet Temperature Alarm

Possible Cause	Check	Corrective Action
Fan Failure	Verify fan is running	Check for loose fan
	(section 9.10)	wiring (section 14.1)
		Replace defective fan
		(section 11.3)
Defective Control Board	Unplug Temperature	If Cabinet Temperature
	Probe from Control	did not drop to 0°C,
	Board (see section 11.1	replace Control Board
	for Control Board	(section 11.1)
	location)	
	Cabinet Temperature	
	reading should drop to	
	0°C.	
High Ambient	Verify temperature of	Lower ambient
Temperature	dryer operating location.	temperature of dryer
	Recommended ambient	operating location
	temperature is 5°-30°C.	

13.13 Inconsistent Heatless Dryer Cycling

Possible Cause	Check	Corrective Action
Defective Solenoid	Measure voltage going	If correct VDC IS
Valve	to the Heatless Dryer	present, replace
	Solenoid Valves	Solenoid Valves
	(section 9.9)	included in the 8,000
		Hour Maintenance Kit
		(section 11.6)
Defective Cycle Timer	Measure voltage going	If correct VDC IS NOT
	to the Heatless Dryer	present, replace the
	Solenoid Valves	Cycle Timer
	(section 9.9)	(section 11.4)

13.14 Compressor Doesn't Operate

Possible Cause	Check	Corrective Action
Defective Compressor	Measure voltage to	If voltage is good,
	Compressor	replace Compressor
	(section 9.3)	(section 11.5)
		or send it in for repair
		(section 12.)
No power to	Measure voltage to	If voltage is not present
Compressor	Compressor	or fluctuates, continue to
	(section 9.3)	next Possible Cause
Defective Solid State	Measure voltages at	If measurements are
Relay	Solid State Relay	bad, replace Solid State
	(section 9.6)	Relay (section 11.1)
System is in	On the Display Panel,	Press the RESET
SHUTDOWN state	verify that the system is	Button
	in SHUTDOWN state	

13.15 Compressor Won't Build Pressure

Possible Cause	Check	Corrective Action
Low System Pressure	Verify System Pressure	Adjust System Pressure
	(section 8.14)	(section 8.14)
Defective Unloader	Test Unloader Valve	Replace Unloader Valve
Valve	operation (section 9.8)	(section 11.4)
Leak in air system	Check all hoses and	Connect, tighten, or
	fittings between	replace leaking
	Compressor and Air	component
	Tank for air leaks	
	(section 9.17)	

13.16 Compressor Excessive AMP Draw

Possible Cause	Check	Corrective Action
Restriction in air line	Remove Discharge Hose	If measurement is below
	from Compressor (see	the recommended
	section 11.3 for location	running amps, trace
	of hose)	hoses from Compressor
		to Unloader Valve
	Re-measure Compressor	looking for restrictions
	AMP Draw	or kinks
	(section 9.2)	
Compressor failing	Remove Discharge Hose	If measurement is still
	from Compressor (see	above recommended
	section 11.5 for location	amps, replace
	of hose)	Compressor
		(section 11.3)
	Re-measure Compressor	or send it in for repair
	AMP Draw	(section 12.)
	(section 9.2)	

13.17 High Duty Cycle Alarm

Possible Cause	Check	Corrective Action
Low System Pressure	Verify System Pressure	Adjust System Pressure
	(section 8.14)	(section 8.14)
High Flow condition	Verify Flow Rate	Troubleshoot High Flow
	(FLOW) reading is not	Alarm condition
	higher than expected	(section 13.9)
	(section 8.4.5.2)	
Defective Unloader	Test Unloader Valve	Replace Unloader Valve
Valve	operation (section 9.8)	(section 11.4)
	If this is continuously	
	flowing high amounts of	
	air, the Unloader Valve	
	is defective.	
Defective Heatless	Verify consistent	Replace Solenoid
Dryer Solenoid Valve	Heatless Dryer cycling	Valves included in the
	(section 9.7)	8,000 Hour Maintenance
	If either side is	Kit (section 11.6)
	continuously flowing	
	high amounts of air, the	
	Solenoid Valve is	
	defective.	
Defective Solid State	Measure voltages at	If measurements are
Relay	Solid State Relay	bad, replace Solid State
	(section 9.6)	Relay (section 11.1)

13.18 Can't Create a High Duty Cycle Alarm

Possible Cause	Check	Corrective Action
High Duty Cycle Alarm	Verify High Duty Cycle	Allow the Compressor
threshold too high	threshold	to run longer than the
	(section 8.8.11)	verified threshold
		(section 9.13)
Defective Control Board	Verify that the	Replace Control Board
	Compressor has run	(section 11.1) if the
	longer than the verified	Compressor runs longer
	High Duty Cycle	than the verified High
	threshold (above)	Duty Cycle Alarm
		threshold and fails to
		create an alarm.

13.19 Compressor Rapid ON/OFF Cycling

Possible Cause	Check	Corrective Action
Defective Solid State	Measure voltages at	If measurements are
Relay	Solid State Relay	bad, replace Solid State
	(section 9.6)	Relay (section 11.1)
Defective Control Board	Measure voltages at	If measurements are
	Solid State Relay	good, replace Control
	(section 9.6)	Board (section 11.1)

13.20 Contacting PUREGAS Technical Support

Please read the Before You Call PUREGAS section 13.1

Once you have exhausted all of the potential problems and solutions covered in the *Troubleshooting Your Dryer* section, and you still require further assistance to correct a problem, contact PUREGAS Technical Support:

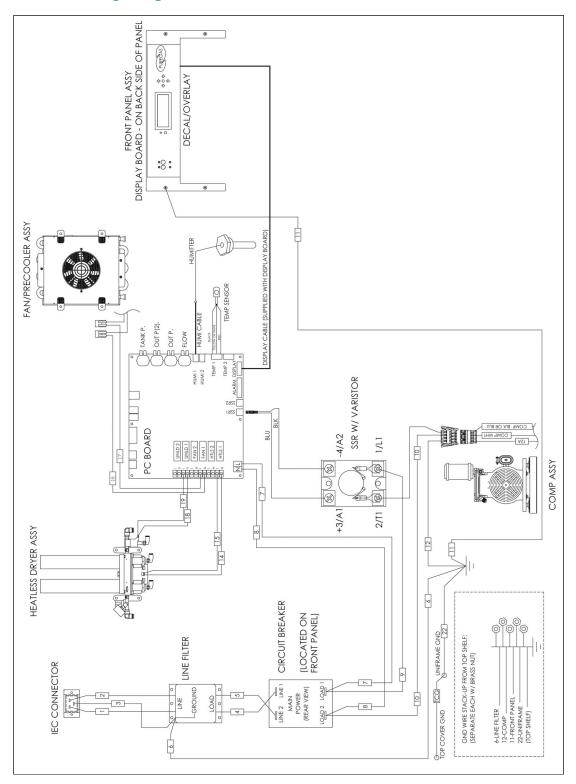
(800) 521-5351 (option 1)

Have the following information available:

Trouble Ticket # (if follow	wing-up on a pre	vious call):	
Technician Name:		Phone #:	
Model #:		Serial #:	
Company Name:		Location Name:	
City:	State:		

14. Appendix

14.1 Wiring Diagram



14.2 Operational Limits and Defaults

14.2.1 System Adjustments

Description	Minimum Value	Maximum Value	Default Value	Unit of Measurement
System Pressure			345 (50)	KPa (PSI)
Static Pressure			138 (20)	KPa (PSI)
Outlet Pressure (LP UNITS)	35.0 (2.0)	138.0 (69.0)		KPa
Alarm Delay	OFF	ON	ON	
Start Up Delay	0	10	0	Seconds

14.2.2 Alarm Thresholds

Description	Minimum Value	Maximum Value	Default Value	Unit of Measurement	Shutdown
High Humidity Alarm	3	15	10	%	YES
High Outlet Pressure Alarm	2.8	138.0	138.0	KPa	
Low Outlet Pressure Alarm	2.0	137.0	2.0	KPa	
High Flow Rate Alarm	0	119	74	SCMD	
High Duty Cycle Alarm	0	99	70	%	
Compressor Total Run Time Alarm			8000	Hours	
High Cabinet Temperature Alarm			46	Deg C	Shutdown at 50°C

14.2.3 System Operations

Description	ON Value	OFF Value	Default Value	Unit of Measurement
Compressor	172	345		KPa
Fan			ON	

14.3 SNMP Parameters

Device Configuration Information	
Device ID	Alphanumeric (Defined by Customer)
Device Model	Alphanumeric (Factory Preset)
Device Firmware Version	Numeric (Factory Preset)
Current Date/Time	Numeric (mm/dd/yy hh:mm)
IP Address	Numeric (xxx.xxx.xxx)
Subnet Mask	Numeric (xxx.xxx.xxx)
Gateway Address	Numeric (xxx.xxx.xxx)
SNMP Trap Server Address	Numeric (xxx.xxx.xxx)
SNMP Read Community String	Alphanumeric (6-14 digits, Default =
(also sets SNMP Trap Community String)	"public")
SNMP Write Community	Alphanumeric (6-14 digits, Default = "123456")
tatus Readings (Read-Only)	
Outlet Pressure Reading	Numeric (KPa)
Tank Pressure Reading	Numeric (KPa)
Humidity Reading	Numeric (%)
Flow Reading	Numeric (SCMD)
Cabinet Temperature Reading	Numeric (DEG C)
Compressor Total Run Time Reading	Numeric (Hours)
Duty Cycle Reading	Numeric (%)
System Status	ON / SHUTDOWN / STANDBY
Compressor Status	ON / OFF
Alarm Readings (Read-Only)	0117 011
High Flow Alarm	OK / Alarm
High Outlet Pressure Alarm	OK / Alarm
Low Outlet Pressure Alarm	OK / Alarm
High Humidity Alarm	OK / Alarm
High Cabinet Temperature Alarm	OK / Alarm
High Duty Cycle Alarm	OK / Alarm
	OK / Alarm
Maintenance Required Alarm	
Total Alarm	OK / Alarm
Configuration Settings (Read-Write)	N. (GCMD)
High Flow Alarm Threshold	Numeric (SCMD)
High Outlet Pressure Alarm Threshold	Numeric (KPa)
Low Outlet Pressure Alarm Threshold	Numeric (KPa)
High Humidity Alarm Threshold	Numeric (%)
High Duty Cycle Alarm Threshold	Numeric (%)
Reset Compressor Total Run Time Reading	Numeric (Hours)
Start Up Delay Time	Numeric (Seconds)
Alarm Delay (1 Minute)	ON / OFF
Alarm Traps Sent to SNMP Server	
High Flow	
High Outlet Pressure	
Low Outlet Pressure	
High Humidity	
High Cabinet Temperature	
High Duty Cycle	
Maintenance Required	

15. Limited Warranty Agreement

PUREGAS products carry a one (1) year warranty against defective workmanship and material. This period starts at date of shipment. Not included are the components subject to normal replacement during a year's operating time.

No claims for labor in replacing defective parts or for consequential damages will be allowed. Replacement parts will be invoiced in the regular way, with invoices subject to adjustment after the parts claimed defective are examined at our factory. In addition, no material or parts will be accepted at our factory for in-warranty repairs or credit without previous authorization from PUREGAS.

Responsibility for damages incurred in transit will be borne by the user and the user in turn should file any damage claim against the carrier. All warranty items are F.O.B. Broomfield, Colorado. Freight charges are the responsibility of the user.

This warranty shall not apply to any PUREGAS product which shall have been repaired or altered in any way by anyone other than PUREGAS or authorized personnel so as to affect, in our judgment, its proper functioning or reliability, neither will it apply to any product which has been subject to misuse, negligence, or accident. The installation of unauthorized non PUREGAS parts will void the warranty on those PUREGAS products.

Registration Reminder

If you haven't already done so, please take a moment to register your PUREGAS P4200W2 Series Air Dryer. **Registering is necessary to activate this Limited**Warranty on your product. Once you register, you are eligible to receive free technical support, as well as updates concerning your PUREGAS products.

See Section 7 for details on Registering Your Dryer.

16. Contacting PUREGAS

16.1 General

PUREGAS, LLC

226A Commerce Street

Broomfield, Colorado 80020

(800) 521-5351

(303) 427-3700

Fax - (303) 657-2233

info@puregas.com

www.puregas.com

16.2 Sales

(800) 521-5351 (option 2)

Fax - (303) 657-2205

sales@puregas.com

parts@puregas.com

16.3 Service

(800) 521-5351 (option 3)

Fax - (303) 657-2205

16.4 Technical Support

(800) 521-5351 (option 1)

DON'T FORGET TO REGISTER YOUR DRYER!

See Section 7 for details on Registering Your Dryer.

17. Notes	