



# P10KW / P15KW Air Dryer Installation Guide

This guide covers basic air dryer installation and setup only. Once installation is complete, please refer to the P10KW / P15KW User's Guide for more advanced setup and configuration options.

## 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 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 as outlined in this Installation Guide is extremely important to ensure the reliability and longevity of the equipment as well as prevent damage or personal injury.



### CAUTION!

Incoming power to dryer must be:  
30 amp service recommended  
20 amp slow blow fuse  
208 - 230 VAC  
1 Phase for P10KW  
3 Phase for P15KW  
If hard-wiring directly, minimum of 12 AWG wire must be used.



### 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!

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



### IMPORTANT!

If installing more than one dryer in the same location, use individual water drain tubing. If plumbed together, damage to the Air Dryers may occur.



### 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.

## Before You Begin

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.
2. Read the entire Installation Guide to familiarize yourself with the components and procedures before performing the air dryer installation.
3. Verify the installation location of the air dryer:
  - Well ventilated and free from abrasive dust or chemicals.
  - Unobstructed drain or bucket for water dump
  - Ambient temperature is between 40° F and 85° F (optimum).  
**NOTE:** Higher temperatures will decrease component lifespan.
  - Meets the following power requirements:
    - 208 - 230 VAC
      - 1 Phase for P10KW
      - 3 Phase for P15KW
    - Minimum 30 amp service with a 20 amp slow blow fuse.
    - If hard-wiring directly, minimum of 12 AWG wire must be used.
4. Notify the alarm center of the installation and potential for alarms during the process (as necessary).

## Included Contents

- (1) P10KW / P15KW Air Dryer
  - (1) Installation Guide (not shown)
- Package located inside the dryer:
- (1) User's Guide (not shown)
  - (10') 3/8" Tubing
  - (1) Purge Muffler
  - (1) Water Sensor
  - (1) Compressor Connector Tool



## Required Tools and Materials

- Large and Medium adjustable wrench
- 7/16" wrench
- Band cutters or snips
- 1+ gallon of clean tap water  
**(DO NOT USE DISTILLED WATER)**
- Small funnel
- 20 amp 250 VAC plug (recommended)
- Pipe dope or pipe thread tape
- Cup of soapy water
- 1-inch paint brush (recommended)

## Installation Steps

**1**

- Remove all shipping materials.
- Place the dryer at the operating location.

**2**

- Remove the front panel.

**3**

- Check for loose parts, hoses, or wiring.

**4**

- Using a 7/16" wrench, remove the shipping block from under the compressor plate.
- Discard block and bolt.

**5**

- Remove the ship-loose contents package.

**6**

- Verify that the black orifice plug is still installed where shown.
- Install the purge muffler (optional).

**7**

- Install 3/8" drain tubing and route to an unobstructed drain or bucket.

**8**

- Verify that the dryer is powered **OFF**.

## Installation Steps cont.

**9**

- Wire directly to or plug the power cord into a power outlet:  
208 - 230, 1 Phase for **P10KW**  
208 - 230, 3 Phase for **P15KW**

**10**

Prime the Compressor:

**⚠ CAUTION: The following steps must be performed to avoid damage to the compressor.**

- Using a medium adjustable wrench, disconnect tube from the water filter.
- Using a funnel (not provided), slowly pour water into the tube.
- Continue adding water until tube is full.
- Reinstall the tubing to the water filter.

**11**

- Press down on the quick disconnect fitting collar to remove the inlet manifold assembly.
- Set the inlet manifold assembly to the side.

**12**

- Power the dryer **ON**.

**13**

**NOTE:**

If water **IS** being drawn into the compressor,  
**Skip to Step #15**

If water **IS NOT** being drawn into the compressor,  
**Continue to the Next Step #14**

- Slowly add approximately half a gallon of water.

**14**

Interchange the Compressor Red & Black Wire Leads:

**NOTE: Skip these steps if water IS being drawn into the compressor correctly.**

- Power the dryer **OFF**.

- Use the Compressor Connector Tool to remove the Red & Black wires from the DRYER SIDE connector.
- Switch the Red & Black wires and re-insert.

- Power the dryer **ON**.

**15**

- Continue adding water until the water level stabilizes below the Middle Water Sensor.

**16**

- Reinstall the inlet manifold assembly by pressing down on the quick disconnect fitting collar and inserting male coupling fitting.

**17**

- Let the dryer run until the Humidity drops under 2%. (May take up to 15 minutes.)
- NOTE: Press RESET if the dryer goes into SHUTDOWN condition.**

**18**

- Power the dryer **OFF**.

**19**

- Connect the air supply line(s) to the dryer Outlet and/or Static Pressure port(s).
- ⚠ CAUTION: Be careful when removing plug(s). System may be pressurized.**

**20**

- Power the dryer **ON**.

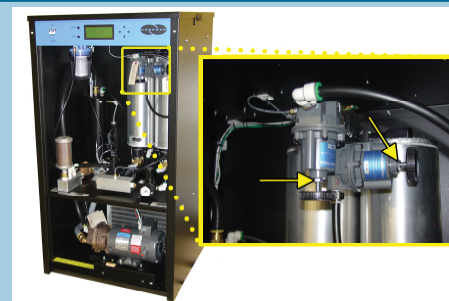
# Installation Steps cont.

**21**

Set the System Pressures:

- Use this chart to determine the correct Back Pressure and Bypass settings for your local elevation.

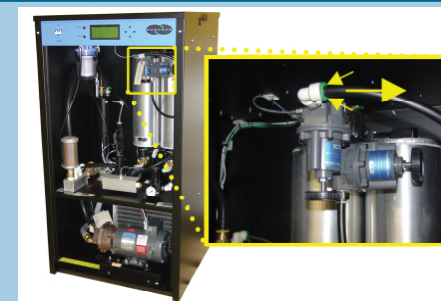
Elevation (Feet)	0	2000	4000	6000	8000	10000	12000
Back Pressure (PSI)	25	24	23	22	21	20	19
Bypass (PSI)	26	25	24	23	22	21	20



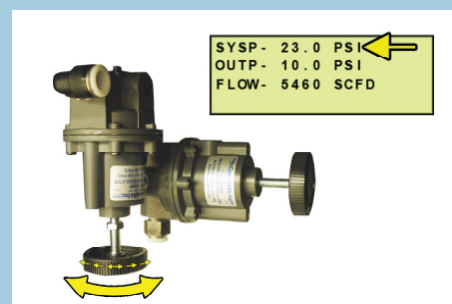
- Unlock the Bypass and Back Pressure Valve knobs by loosening the retaining nuts.



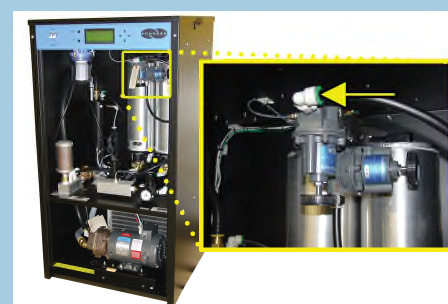
- Turn the Bypass Valve (in back) clockwise until it is completely closed.



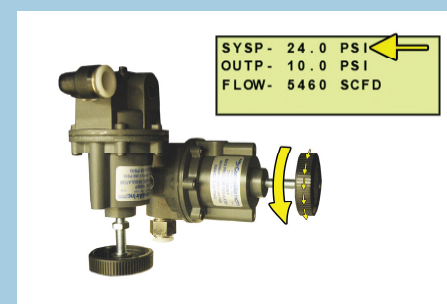
- Push the Back Pressure Tube **IN** towards the fitting.
- Press and hold the green ferrule **IN**.
- Pull Back Pressure Tube out of the fitting.



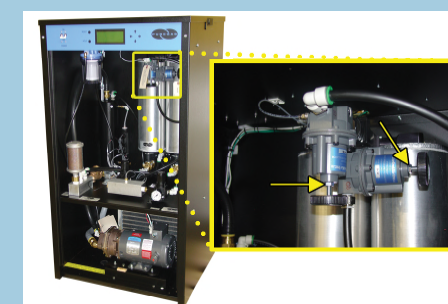
- Adjust the Back Pressure Valve (in front) until the **SYSP** reading on the Front Panel Display equals the Back Pressure value determined earlier in this Step.



- Re-connect the Back Pressure Tube by pressing it firmly into the green ferrule.

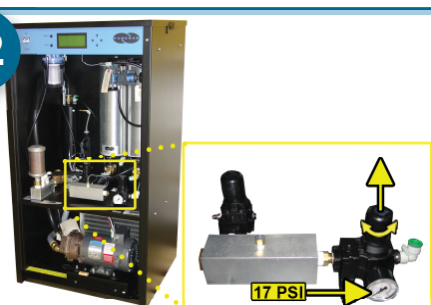


- Adjust the Bypass Valve (in back) until the **SYSP** reading on the Front Panel Display equals the Bypass Pressure value determined earlier in this Step.



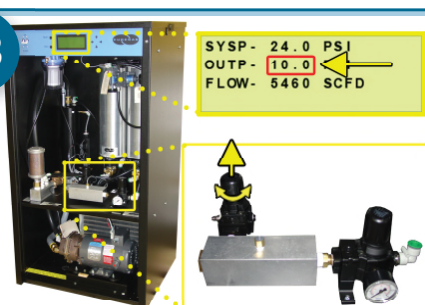
- Lock the Bypass and Back Pressure Valve knobs by re-tightening the retaining nuts.

**22**



- Pull Static Pressure Regulator knob **OUT**.
- Adjust knob until the reading on the Pressure Gauge is **17 PSI**.
- Push knob **IN** to lock.

**23**



- Pull Outlet Pressure Regulator knob **OUT**.
- Adjust knob until Outlet Pressure (**OUTP**) reading is at the desired setting.
- Push knob **IN** to lock.

**24**

- Visually inspect for water leaks.
- Check for air leaks.

**CAUTION: DO NOT SOAP TEST THE HUMIDITY SENSOR FITTING. DAMAGE TO THE SENSOR MAY OCCUR.**

**With Compressor NOT RUNNING:** Listen for 'hissing' sounds which may indicate a fitting or hose air leak.

**With Compressor RUNNING:** Use a 1-inch brush to dab soapy water on all air fittings and hose connections.

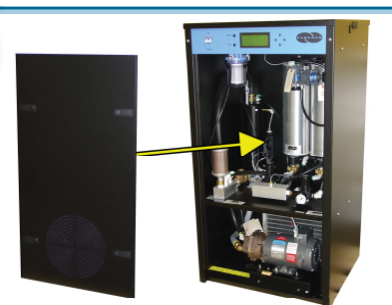


If air bubbles appear, this is an indication that air is leaking.

**EXAMPLE** Take steps to seal the leak:

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

**25**



- Re-install the Front Panel.

**26**

- Connect alarm hookups (if applicable).

Please refer to the **P10KW / P15KW User's Guide** section on **Operating Your Dryer**.

Specifically, sub-sections:

**Connecting to Common Alarm Terminals**  
**Rewiring the Common Alarm Terminals**

**27**

- REGISTER YOUR DRYER.**



## Installation Checklist

- No shipping damage was detected.
- Dryer location meets the following requirements:
  - o Well ventilated
  - o Free from abrasive dust or chemicals
  - o Unobstructed drain for water dump (Multiple dryers NOT plumbed together)
  - o Ambient temperature is between 40° and 85° F (optimal)
- Shipping block removed from compressor tray.
- System Pressures are set according to you local elevation.
- Static Pressure is set to 17 PSI.
- No air / water leaks are present in the system.
- No alarms are present on the Display Panel.

## Registering Your Dryer

Please take a moment to register your PUREGAS P10KW / P15KW 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](http://www.puregas.com/registration)

Or by Phone:

1-800-521-5351 **(option 2)**

Have the following information available:

Model #: <b>P10KW / P15KW</b>
Serial #: _____

Company Name: \_\_\_\_\_

Location Name: \_\_\_\_\_

Shipping Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone #: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ ext. \_\_\_\_\_

Email: \_\_\_\_\_