



**Quick-Start Operating Guide**

Document No. 1800-48

**Dryex Gas Dryer**

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Your Comprehensive  
 Equipment Source





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### Safety Notice

A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death.



CAUTION

Cautions are used when failure to observe instructions could result in significant damage to equipment.

The following symbols are intended to call your attention to two levels of hazard involved in operation:



WARNING

Warnings are used when failure to observe instructions or precautions could result in injury or death.

The information presented here is subject to change without notice.

## 1.0 Introduction

This manual provides information on installing and operating your Terra Dryex Gas Dryer.

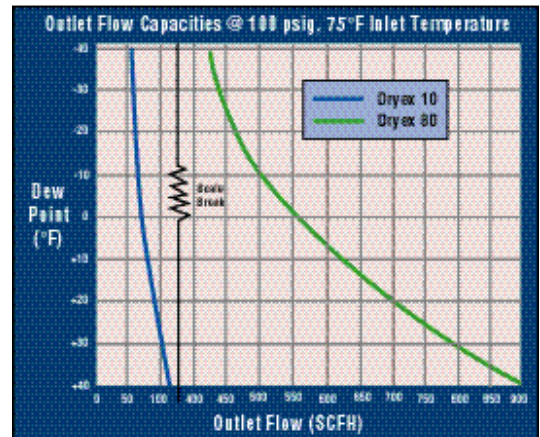
By studying this document carefully, you can be assured of a long, efficient service life from your system.

## 2.0 Description

Terra Universal's Dryex Gas Dryer is designed to provide reliable gas drying without the expense and inconvenience associated with desiccant drying systems. It uses efficient membrane separation technology to remove moisture and particulates from a stream of compressed air. By regulating the flow of air from the Dryex, you can determine the humidity of the air output (see the performance graph for typical system performance)



Dryer 80  
Outlet Flow: 54-105 SCFH



The system contains a gas pressure regulator and indicating gauge, a flowmeter, a 1-micron air line prefilter, a coalescing filter, and the moisture membrane module. The prefilter removes all solids 1 micron and larger, along with water droplets and most oil aerosols. The coalescing filter removes all solids 0.025 microns and larger and 99.999+% of oil aerosols, thereby protecting the membrane module from oil and other impurities in the incoming air line and ensuring a long service life. Oil and moisture condensation from the prefilter and coalescing filter is fed to a single bulkhead fitting, which can be connected to an in-house drain.



## 3.0 Installation

Before operation, carefully unpack and inspect the Dryex Gas Dryer. Any damage should be reported immediately to the shipping company.

### To connect and operate the system,

1. With the pressure regulator and flowmeter completely closed, connect the Dryex to an incoming compressed air line by means of the 3/8" inlet Swagelok compression fitting on the rear panel. The compressed air fed into the Dryex should be regulated externally at between 120 and 140 psi.
2. Connect the air outlet by means of the other 3/8" Swagelok compression fitting on the rear panel.
3. Pressure and flow settings depend on application requirements. Typically, the pressure regulator should be set at about 100 psi, and the flowmeter, which determines outlet flow, at about 500 SCFH (for Dryex 80) or 60 SCFH (for Dryex 10). Increasing the outlet flow will increase the humidity level of the air flow, so the flow level should be set lower if a very low dew point is required. Refer to the performance graph for typical flow/dew point correlations, and then conduct tests to determine the settings that meet your specifications.
4. Oil and water condensation drains out of a 3/8" Swagelok compression fitting at the bottom of the rear panel. If necessary, this fitting can be connected to an in-house drain line.



**Dryer 80**  
**Outlet Flow: 420-900 SCFH**

## 4.0 Maintenance

The moisture membrane module inside the Dryex is designed to operate maintenance-free as long as the prefilter and coalescing filter effectively remove impurities (particularly oil vapor) from the feed air.

Differential pressure alarms on these filters indicate both audibly with a whistle, and/or visually, with a red pop-up indicator, when the set differential pressure has been reached. This gives an instant indication that the filter needs to be replaced.

### To replace either filter,

1. Remove the front housing panel of the Dryex by removing the four screws on the control panel and the three screws on each side. The housing panel slides forward, allowing access to the internal modules.
2. Loosen the 3/8" NPTF inlet and outlet fittings to remove each filter.
3. Reconnect the new filter and reattach the front housing panel.



## 5.0 Specifications

Overall Dimensions:	<b>Dryex 80</b>	<b>Dryex 10</b>
	15"W x 13"D x 42"H	16"W x 7.25"D x 6.5"H
Weight:	55 lbs.	11 lbs.
Feed Air Pressure:	60 - 200 PSIG	60 - 200 PSIG
Outlet Flow @ 100 PSIG:	420-900 SCFH	54-105 SCFH
Feed Air Temperature:	40°F to 150°F (70°F recommended).	
Prefilter:	One-micron absolute filtration. Dual glass micro-fiber filter beds coalesce and remove 100% of water droplets, 70% of oil aerosols. Includes internal drain and differential pressure alarm.	
Coalescing Filter:	99.999+% oil removal efficiency, Absolute filtration of 0.025µm particles; nominal filtration of 0.010µm particles Includes internal drain and differential pressure alarm.	
Membrane Module:	Semipermeable hollow fiber bundles.	

### Replacement Filters

	Cat. #
1-micron Prefilter	9082-03
0.025-micron Coalescing Filter	9082-02



## 6.0 Warranty

**Products Manufactured by Terra:** Terra Universal, Inc., warrants products that it manufactures to be free from defects for a period of 12 months for parts and 90 days for labor, commencing from the date of shipment. Terra's sole responsibility is to repair or replace, at its option, any part of the product that proves defective or malfunctioning during this time limit. In some cases, components incorporated in Terra Universal products are covered by additional warranties from component manufacturers; obtain specific information from Terra sales representatives. This warranty is void if the equipment is abused or modified by the customer, is operated outside Terra's operating instructions or specifications, or is used in any application other than that for which it is specified. This warranty does not include routine maintenance or service procedures, breakage of quartz baths after 60 days, shipping damage, nor damage from misuse, intentional or unintentional abuse, neglect, natural disasters, or acts of God.

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Generally, customers can improve the chance of collecting on a freight claim by following these procedures: 1) formally requesting that the carrier inspect the shipment immediately upon suspecting damage or shortage to verify condition; 2) notifying the carrier upon discovery of concealed damage and requesting an inspection within 15 days of receipt, both in person or phone and following up via mail; 3) keeping the shipment as intact as possible, including retaining original packaging materials and keeping the product as close to the original receiving location as possible; 4) holding salvage for disposition by the carrier.

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