

Instruction Manual

Dri-Tech

Desiccant Chamber



Read instructions carefully before operating this device.

- ❶ *This device is not to be used for Human Life Support applications.*
- ❷ *To avoid possible electrical shock, do not operate this device if it is wet or has had liquids spilled onto it.*
- ❸ *Service or calibration procedures should only be performed by qualified personnel familiar with the electrical hazards of line-powered devices.*



Ardmore PA 19003 U.S.A.
(610)642-7719
info@cwe-inc.com

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www.cwe-inc.com

STATEMENT OF WARRANTY

IF THIS INSTRUMENT FAILS WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF DELIVERY OR INSTALLATION, CWE, INC. WILL, AT ITS OPTION, REPAIR OR REPLACE IT FREE OF CHARGE. THIS WARRANTY EXCLUDES DAMAGE INCURRED THROUGH MISUSE OR ACCIDENT. CWE, INC. DOES NOT ASSUME ANY LIABILITY FOR ANY CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS INSTRUMENT.

DEFECTIVE UNITS SHOULD BE RETURNED TO THE FACTORY ALONG WITH A NOTE DESCRIBING THE NATURE OF THE FAULT. THIS WARRANTY IS APPLICABLE TO THE ORIGINAL PURCHASER OF THE INSTRUMENT ONLY, AND IS NOT TRANSFERABLE.

FACTORY SERVICE

Out of warranty or damaged instruments may be returned to the factory freight prepaid for service at prevailing rates. Upon request, a written or verbal quotation for such service will be issued after examination of the unit but prior to commencing repairs or service. Address requests for service or technical information to:

CWE, Incorporated
Technical Support
Ardmore, PA 19003 U.S.A.
(610)642-7719
info@cwe-inc.com

LIFE SUPPORT POLICY

Instruments manufactured by CWE, Incorporated are not authorized for use as critical components in human life support devices or systems. "Life support devices or systems", as used herein, are devices or systems whose failure to perform, whether through misuse, failure, or proper operation, can reasonably be expected to result in significant injury to the operator or subject persons.

This manual last updated on 2/14/23.

1.0 INTRODUCTION

The Dri-Tech Desiccant Chamber system is used to dry gas samples being measured with gas analyzers. It works by passing the gas sample through a Nafion™ membrane tubing contained in a sealed chamber filled with desiccant medium. The Nafion membrane works by selectively passing water molecules across a humidity gradient. The air in the chamber is extremely dry because of the desiccant, so water vapor is removed from the gas through a process of equilibration.



*Dri-Tech Desiccant Chamber before loading with Drierite™.
Note the tethered Luer plugs used to seal the inlet and outlet when not in use.*

2.0 PREPARATION AND USE

The Dri-Tech chamber comes pre-assembled, and it is only necessary to fill with a charge of desiccant medium. Granular Drierite™ is convenient because it has a built-in moisture-content indicator (blue to pink when saturated), but other media can be used (e.g. molecular sieve).

To fill, unlatch the lid and pour in sufficient desiccant medium to completely cover the Nafion tubing. This typically requires about ½ pound (455g) of medium. Be careful to remove any granules that may be on the rubber seal around the lid that might otherwise prevent the airtight seal.

When not in use, insert the tethered Luer plugs into the chamber connectors to prevent humid air from entering the tubing.

3.0 MAINTENANCE

The only required maintenance is periodically replacing the desiccant medium after it has become saturated with water. Drierite™ and some other common desiccant media can be reconstituted by controlled heating (see below).

Reconstituting Drierite:

When saturated with water, Drierite™ will turn pink. To regenerate Drierite™, the granules may be spread in layers one granule deep and heated for 1 hour at 210°C or 425°F. The regenerated material should be placed in the original glass or metal container and sealed while hot. The color of the Drierite™ may become less distinct on successive regenerations due to the migration of the indicator into the interior of the granule and sublimation of the indicator, but it will still retain its water-absorbing properties.



10.0 ORDERING INFORMATION

Part No.	Description
11-20222	Dri-Tech Desiccant Chamber, includes 1lb bottle of Drierite™ desiccant
11-01103	Replacement 24" Nafion™ tubing
11-20211	Replacement 1 lb bottle Drierite
11-20212	Replacement 5 lb bottle Drierite