

LECTRODRYER

ADSORPTION TECHNOLOGY EXPERTS



BAC-50 Automatic Continuous Hydrogen Dryer



On-line or Off-line, Lectrodryer has a Hydrogen Dryer that does it all.

* Automatic Regeneration * Positive Protection * No Loss of Pressure * No CO2 Purging *

Improve Generator Protection

Prevent moisture causing damage to insulation and high strength steel components.

Continuous Automatic Operation

Reduces maintenance, minimizes operator involvement.

No Hydrogen Venting

Adsorption and reactivation are accomplished at generator gas pressure, there's no need to vent hydrogen for reactivation.

Easily Pays for Itself

Reduced windage losses, no operator regenerations and lower Hydrogen usage provide ongoing savings. From a risk management viewpoint the prevention of just one moisture caused outage will more than pay for the cost of the BAC-50.

State of the Art Technology

Lectrodryer dual tower hydrogen dryer utilizes the latest technology. Compared to old fashioned single tower dryers, BAC-50's advanced design offers greatly improved generator protection not only by drying the gas but also by continuously and automatically maintaining a low dewpoint.

INTRODUCTION

Lectrodryer has solved the problems associated with out-moded generator hydrogen dryers with the BAC-50 continuous operating automatic twin tower dryer.

Now, whether you're operating or offline, drying remains constant. Minor operating delays no longer affect the quality of the drying and the regeneration chore is eliminated.

The Lectrodryer BAC-50 does it all for you, automatically and without operator involvement. BAC-50 takes the risk out of moisture control and guards against damage causing moisture which can lead to costly repairs and down time.

DESCRIPTION

The type BAC-50 Lectrodryer is a dual adsorber unit for the continuous drying of hydrogen gas used in cooling turbine generators. The unit utilizes regenerative type desiccant and is fully automatic in operation. The unit is used worldwide and meets all known applicable specifications including ASME, PED, CE, CCC, ATEX, IECEx.

The BAC-50 is heat reactivated with embedded electric heaters operating from seven standard voltages, and NEMA 4 purged electrical enclosures to meet C11, Div 2, Gr B area.

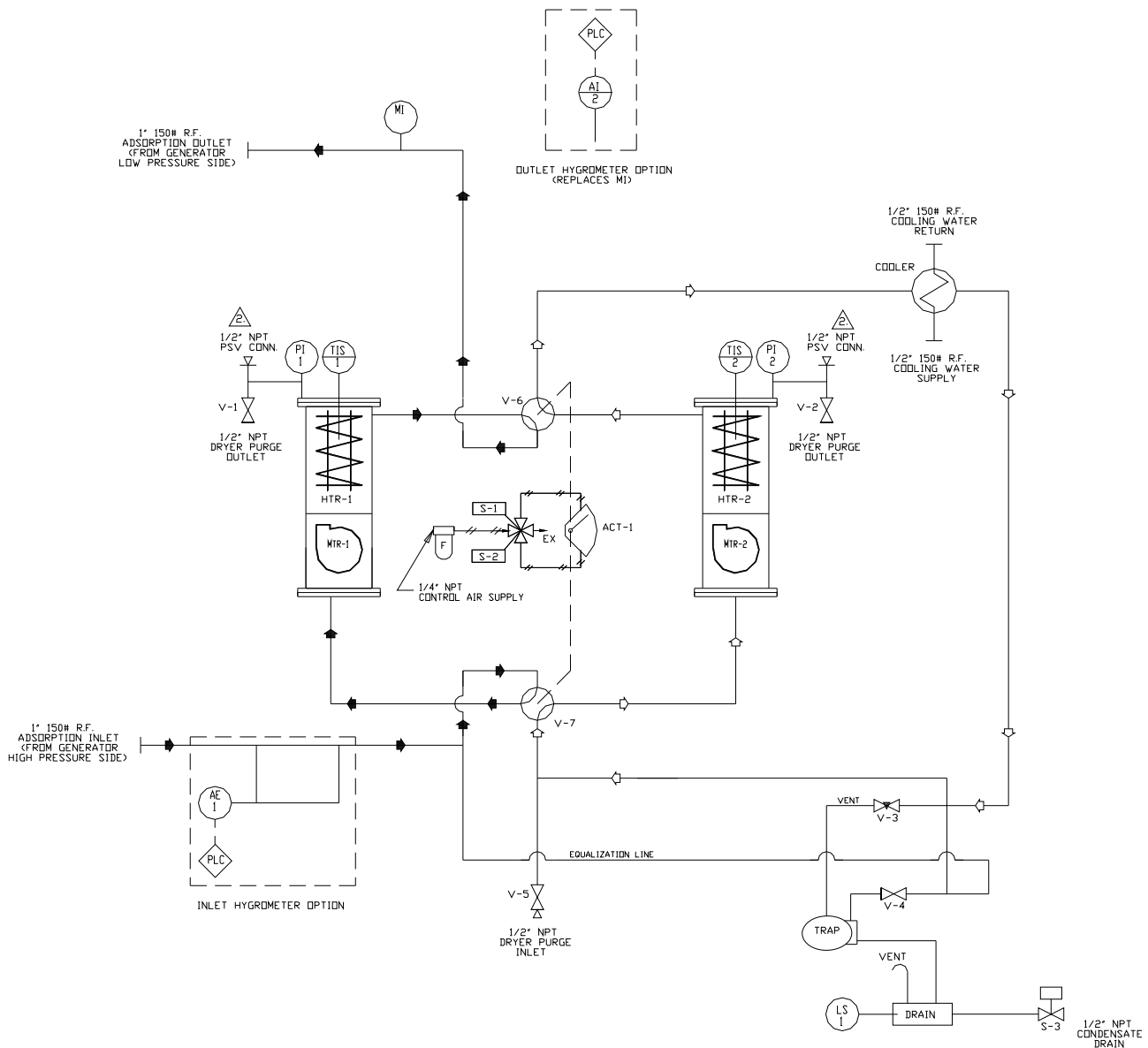


Interlocked non-lubricated 4-way valves provide trouble-free switching with a generously sized double acting actuator. Reactivation is accomplished at operating pressure with a closed circuit system with **no purge loss** or infiltration of atmosphere into the system. This system also allows the continuous monitoring of the volume of water removed from the generator. The BAC-50 Lectrodryer generates an adsorption flow and a reactivation flow simultaneously. Flow can be continued through the generator and dryer even though the turbine may be on turning gear.

The BAC-50 Lectrodryer features ASME or PED carbon steel pressure vessels with embedded electric heater in each adsorber vessel with over temperature protection, initial charge of desiccant, two 4-way non-lubricated plug valves with double acting actuator and solenoid valve controls, pressure gages, 110 volt controls with control transformer, PLC, heater contractors, on-off switch, and a HMI (Human Machine Interface) for information on dryer status, sequence activity and maintenance information.

Optional features include a diagnostics package with alarms, inlet and outlet dew point meters and an oil vapor prefilter. **New is an automatic water volume discharge monitor.**





FEATURES

- No Hydrogen purging
- Fully automatic- no manual regeneration
- Integral blowers- maintain positive flow
- Closed circuit reactivation with welded piping, no venting from valves or other Hydrogen losses
- Internal heaters- maintain even heat distribution
- Dual tower desiccant beds- minimizes operator involvement
- Non- lubricated valves- no maintenance
- Easy maintenance electrical enclosures that meet area requirements with a full PLC and operator interface

- Over-temperature protection-extends heater life
- Protective cage enclosure- prevents tampering, protects operating personnel
- Independent adsorption flow- maintains flow regardless of the generator status.
- Approximate weight: 1,800 pounds
- Dimensions (not crated): 54"W x 43"D x 82"H

OPTIONS

- Inlet and outlet dewpoint monitors with 4-20 ma outputs and dual alarms.
- Oil vapor pre filter- prevents contamination of desiccant bed



LECTRODRYER POWER SECTOR PRODUCTS

Generator Auxiliary Skids

Incorporates and unifies typical generator auxiliaries:

- Dryer
- Purity Equipment
- Gas Control Piping
- Dew point Instruments
- Continuous Generator Monitoring



The skid can be standard or custom designed

Fast Degas CO₂ Evaporator

- Ability to deliver 305 SCM_H (10,800 SCFM) of CO₂ to generator
- Helps reduce the time and cost involved during outages
- Safety benefit by rapidly blanketing the generator in emergency situations
- Available in ATEX version
- Can be purchased as a stand alone system, with a BAC-50 hydrogen dryer or as a part of the Gen Aux system.



Landfill Gas

The Lectrodryer Landfill Gas Compression System is designed to compress, clean, and deliver a volume of landfill gas at a specified pressure and quality. The LGCS strives for efficiency, one that minimizes initial cost and seeks to operate at the lower possible horsepower.



Lube Oil / Air Tanks

Lectrobreather tank vent dryers prevent atmospheric moisture from entering storage during "breathing" due to ambient temperature changes and draining periods. Valuable oils and chemical solutions remain free of water contamination.



Lectrodryer Filters

The Lectrodryer type SF and type F filters provide high efficiency filtration with ten sizes available in each type for flows to 8400 SCFM, larger sizes available on application. Both types have a high level filter efficiency of 99.985% retention (0.015 DOP penetration) for filtration to a 0.3 micron particle size and smaller.



CONTINUING THE TRADITION OF QUALITY AND SERVICE SINCE 1932

LECTRODRYER

P.O. Box 2500, Richmond, KY 40476-2602 U.S.A.

Phone: (859) 624-2091 Fax: (859) 623-2436

Website: www.lectrodryer.com E-mail: info@lectrodryer.com