

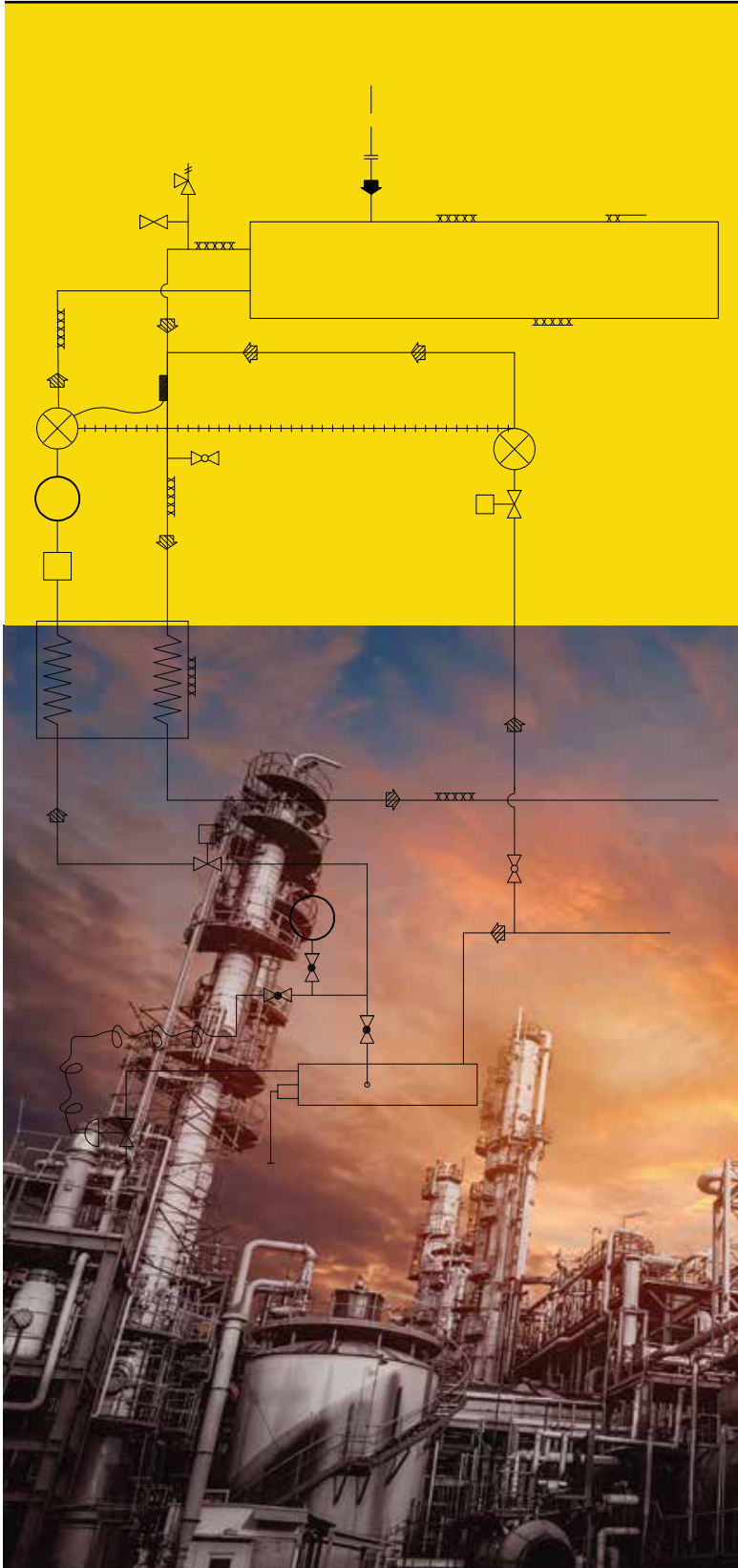
Engineered and manufactured gas and liquid process solutions

LECTRODRYER

adsorption technology experts since 1932

TYPE GAS CC INDUSTRIAL DRYERS

The Type Gas CC Lectrodryer is specially designed for drying atmospheric and cylinder gases. It eliminates the moisture from process gases such as hydrogen, nitrogen, helium, oxygen, Freon, and other precious gases. Its dual tower solid absorption, heat-reactivated design provides continuous drying of gas, and GAS-CC is manufactured with a closed-circuit system that utilizes a captive volume of the process gas during reactivation as there's no need for purging.



THE TYPE GAS – CC provides purging without loss

Here's how the GAS – CC works:

One column of the dual towers dries the gas as it passes through, then the drying process switches to the other column while the first column is reactivated.

Once the purging flow has been circulated, the closed system removes the condensable materials being driven off the desiccant. This is done by means of a motor-driven blower that circulates the captive volume of gas through an external heater or embedded electric reactivation heater (depending on unit size) that circulates the purging flow through an absorbent bed into a water-cooled inner cooler. (The main function of the inner cooler is to separate and trap condensates.) The closed-circuit system is kept at a slight positive pressure at all times, so atmospheric air cannot enter the system. This prevents the formation of explosive mixtures with combustible gases, or the contamination of the processes gases.

Drying is accomplished by specialized absorbents, such as activated alumina (depending on service requirements) or molecular sieve. By utilizing one of these, the GAS-CC can produce very low moisture contents in the range of -80 F or lower.

The Type GAS-CC Lectordryer is available in a full range of sizes and capacities to meet the individual drying needs of your particular operation.

Standard Type GAS-CC Features

- Closed-circuit system maintains positive pressure throughout drying
- Electric reactivation heaters are distributed throughout the desiccant bed*
- Embedded heater elements have extremely low-watt density for extended durability
- Relief valves protect low pressure design equipment
- Thermostats on all sizes except GAS-CC-12
- Lubricated 4-way plug valves; automatic units with air piston operator and solenoid controls
- Dial thermometer measures reactivation temperatures

Model	Length	Width	Height	Weight	Heater	Motor	Coolant	Connection
GAS-CC-12	40"	24"	30"	220 lbs.	0.5 KW	1/4 HP	11/2 GPM	13/8"
GAS-CC-27	48"	22"	57"	550 lbs.	1.0 KW	1/4 HP	1 GPM	3/4 or 1"
GAS-CC-40	52"	22"	57"	750 lbs.	1.4 KW	1/3 HP	1 GPM	1" or 1 1/2"
GAS-CC-75	52"	22"	77"	900 lbs.	2.3 KW	1/3 HP	1 GPM	1" or 1 1/2"
GAS-CC-100	52"	24"	62"	1000 lbs.	3.0 KW	1/3 HP	1 GPM	1 1/2" or 2"
GAS-CC-135	52"	24"	75"	1250 lbs.	4.9 KW	1/3 HP	1 GPM	1 1/2" or 2"
GAS-CC-165	54"	28"	70"	1500 lbs.	4.5 KW	1/2 HP	2 GPM	1 1/2" or 2"
GAS-CC-210	54"	28"	85"	1700 lbs.	5.0 KW	1/2 HP	2 GPM	1 1/2" or 2"
GAS-CC-350	76"	58"	65"	2200 lbs.	12.0 KW	2 HP	5 GPM	2" or 3"
GAS-CC-700	92"	85"	78"	4200 lbs.	22.0 KW	5 HP	8 GPM	3" or 4"
GAS-CC-1200	120"	94"	88"	7000 lbs.	36.0 KW	7 1/2 HP	14 GPM	5" or 6"
GAS-CC-2100	142"	97"	91"	10000 lbs.	60.0 KW	10 HP	25 GPM	6" or 8"
GAS-CC-3500	156"	102"	95"	17500 lbs.	100 KW	16 HP	42 GPM	8" or 10"



- Motor-driven circulating blower
- Water-cooled inner cooler
- Separator and condensate trap
- Each absorber has relief valves for added protection
- Automatic or semi-automatic operations available
- Carbon steel vessels on all models
- Pressure gages
- ASME Code where applicable

*Models GAS-CC-12 to GAS-CC.210

On units designed for elevated operating pressures, straightway valves are furnished to isolate low pressure reactivation system from high pressure operation. In these type units, the close-circuit system normally includes pressure build-up bleed down valves.

Units (size 12 through 40) are furnished with a 110-volt, 1 phase, 60 hertz power supply. Larger models have 440-volt, 3-phase, 60 hertz power supply with special power equipment is normally mounted in a single enclosure for easy accessibility, as are all mechanical items.

Optional Features

Fully automatic electrical enclosures.

NEMA 4, 12, and 7.

Non-lubricated valves for switching.

Switch failure, heater failure and over-temperature detection with alarm contacts.

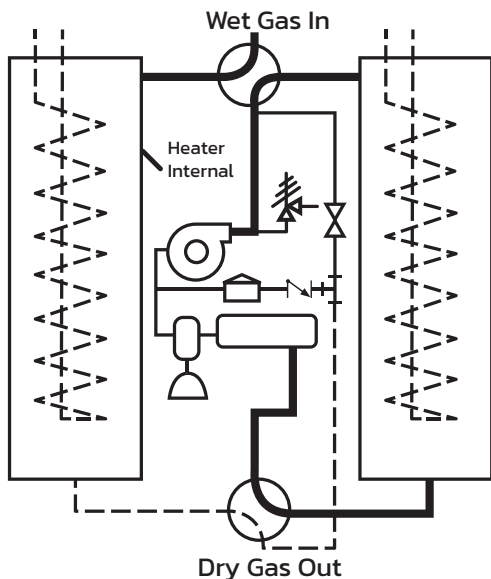
Drying Cycles

Wet gas enters the Type GAS-CC Lectrodryer at the top 4-way valve. It is then directed through the left tower and through the desiccant bed. The dry gas exits through the bottom 4-way valve. The gas in the closed circuit is heated and run through the right tower where it is directed through the cooler. A trap collects the condensable materials being driven off the desiccant.

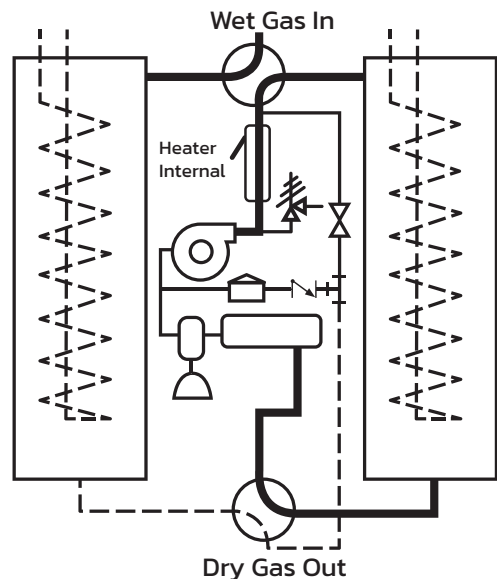
Sizing of Type GAS-CC Lectrodryers

The selection of a particular Type GAS-CC Lectrodryer for an application is somewhat more complex than the selection of a compressed air dryer. The various parameters that affect the sizing of the Type GAS-CC Lectrodryer are many. Because of the complex nature of the selection of this type Lectrodryer, each problem should be handled individually.

Typical flow diagram for models GAS-CC-12 though GAS-CC-210 with internal heater.



Typical flow diagram for models GAS-CC-350 though GAS-CC-3500 with external heater.



LECTRODRYER offers a complete range of drying and purification equipment:

- * For atmospheric or high pressure conditions
- * For very small or very large volumes
- * For air, gases, liquids and certain organic fluids
- * Completely packaged systems
- * Custom engineered and manufactured

Regenerative Adsorption Dryer

Typical applications:

Drying compressed air for instruments; purging of refrigeration coils, compressors, and systems; drying air for ozone generators; vacuum-breaking operations controlled atmosphere gas.

Features:

Carbon steel pressure vessels with ASME Code (where applicable) for up to 150 psig stainless steel perforated metal desiccant support and inlet flow diffuser, sheathed or non-sheathed heating element in which each adsorber vessel with thermostatic over temperature protection in the heater bundle, two 4-way lubricated plug valves with air piston operator and solenoid valve controls, thermal pressure relief valves, pressure gages, dial thermometer in the purge outlet, 110 volt controls and NEMA 1 electrical enclosures.

Optional Features:

Special controls and electrical enclosures.



Refrigeration-Type Industrial Gas Dryer

Typical Application:

Low pressure situations for controlling atmospheric gases.

Features:

Power-on light, high temperature warning light, on/off switch, refrigeration analyzer gage, gas-out gage, gas-in temperature gage, low suction pressure cut-out, high head pressure cut-out, hot gas bypass capacity control, start push button pump down shut off cycle, oil pressure control, and suction accumulator.

Optional Features:

Special control and electrical enclosures.



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.

Lube Oil / Air Tanks



Lectrobreather tank vent dryers prevent atmospheric moisture from entering storage during "breathing" due to ambient temperature changes and draining periods.

Information contained in this brochure is for reference only and needs to be confirmed by a Lectrodryer representative.



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