

CDA ALTERNATE COOLING SOURCE DRYERS

For Compressed Air Systems

The ZEKs line of alternate cooling source dryers takes advantage of an available ammonia, chilled water, or glycol supply for drying compressed air. These units are manufactured without a dedicated refrigeration compressor or condenser, as the cooling source used in these dryers is provided and processed by the customer's central facility.

ZEKS offers two distinct designs for alternate cooling source chillers: Ammonia and Chilled Water. Ammonia Chiller Dryers (CDAN) use nominal 150 psig ammonia that is expanded through the dryer exchanger. Exchanger temperature and the subsequent compressed air pressure dew point are set by a back-pressure regulator (available as an option). Water Chiller Dryers (CDAW) use chilled water or glycol as supplied by the customer. These units yield a compressed air dew point that is approximately 5° - 7°F higher than the inlet water or glycol temperature. Water or glycol flow rates vary according to the heat transfer load imparted on the exchanger.



500CDAN00 and 4000CDAW00 Models Shown

The CFX® Advantage – Only From ZEKs

All CDA models incorporate our patented CFX® heat exchangers that combine a high heat transfer coefficient with an industry-leading low pressure drop. The stainless steel Corrugated, Folded eXchangers (CFX) have a flow area that is 3-5 times that of the equivalent copper tube exchanger and a self-cleaning action that contribute to low pressure drop with extremely low fouling potential. The all-welded stainless steel construction enables use in many applications where copper or other metals are not suitable.

With Stainless Steel



CDAN models include carbon steel components for the compressed air and ammonia circuits – no yellow metals are used. CDAW models feature copper water lines and headers and carbon steel air piping, headers, and condensate separator. All models include a pneumatically operated demand drain for reliable condensate discharge. All models also have a pre-cooler/reheater that conditions air optimally before it enters compressed air system piping. Gauges conveniently display compressed air pressure and temperature as well as the status of the alternate cooling source. Full cabinetry protects all internal dryer components and is powder coated to maintain the smooth machine finish. Options are available that enable ZEKs CDA Chiller Dryers to be optimized for all installations.

CDA models are available in 75 – 19,200 scfm compressed air flow capacities. 2000/2400 scfm modules are configured at the factory to make models 4,000 scfm and larger.

- **Protects Compressed Air Processes** – Removes Moisture, Aerosols, and Other Contaminants
- **Consumes No Additional Power** – Uses Available Cooling Source: Ammonia, Water, or Glycol
- **Very Low Pressure Drop** – Maintains Compressed Air System Efficiency
- **Stainless Steel CFX® Exchangers** – Durable and Corrosion Resistant In All Applications
- **Complete Condensate Removal** – Efficient Separation From Airstream and Discharge Through No Air Loss Drain
- **Uncomplicated Installation** – Requires Only Compressed Air And Cooling Source Connection
- **75 - 19,200 scfm Capacities** – Models For Compressed Air Systems Of Any Size

5 year
CFX® Exchanger
Warranty

See reverse side for standard features and options...

CDA

Alternate Cooling Source Dryers

CDAN 75-19,200 scfm Dryer for available ammonia refrigerant supply

CDAW 75-19,200 scfm Dryer for available chilled water or glycol supply

ZEKS CDA alternate cooling source dryers take advantage of a customer-supplied source of ammonia, or chilled water or glycol, as the energy source for drying compressed air. Supply must be sufficient to match the energy demand of the CDA model selected. CDAN models require a back-pressure regulator for the ammonia circuit that is available as an installed option from the factory. Flow control valves must be furnished by the customer for CDAW models as well as shut-off valves, if desired, for the alternate cooling source. No electrical connection is required as there is no dedicated refrigeration system, pump, valves, or electronic controls. All models come ready to install and operate.

Sizing Procedure: Alternate cooling source chiller dryers are sized based on the demands of the compressed air load. Although sizing closely follows that of refrigerated air dryers, ZEKs Application Engineering is available to assist selection of the appropriate chiller dryer model.

Standard Features

- Stainless steel CFX[®] exchangers – precooler/reheater and chiller
- No more than 3 psi pressure drop at full load ($\pm .5$ psi)
- Carbon steel air piping, headers, separator
- Carbon steel ammonia lines, headers, and thermostatic expansion valve(s) (CDAN models)
- 100% non-ferrous water circuit (CDAW models)
- Gauges: Compressed Air Inlet Pressure; Compressed Air Inlet Temperature; Exchanger Temperature; Ammonia Suction Pressure (CDAN models); Inlet Water Temperature (CDAW models)
- Pneumatically operated demand drain
- 300 psi maximum operating pressure

Available Options

- 100% stainless steel air circuit
- 100% stainless steel ammonia circuit (CDAN models)
- 100% stainless steel water circuit (CDAW models)
- Gauges: Compressed Air Outlet Pressure; Compressed Air Outlet Temperature; Ammonia Discharge Pressure; Outlet Water Temperature; Inlet Water Pressure; Outlet Water Pressure
- Alternate drain configurations
- Back-pressure regulator (CDAN models)



ZEKS CDA Dryers are made in U.S.A.

Compressed air dryers protected under U.S. Patent No. 6,186,223 and No. 6,244,333.

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