



## GEA Ammonia Dryer

A sensible supplement to your ammonia refrigeration system

The GEA Ammonia Dryer is a practical supplement for your chiller. It not only ensures a longer life cycle, it also lowers operating and maintenance costs. The ammonia dryer removes water from refrigerant cycles without having to shut down the machinery. Water in the ammonia reduces chiller efficiency and increases operating costs. It also causes corrosion in the refrigerant cycle and accelerates the aging process of oil. Increased wear and more frequent oil changes reduce system availability and lead to higher service costs. The GEA Ammonia Dryer is the perfect solution for your chiller: it keeps the refrigerant circuit clean and dry and makes your system run efficiently.

### Advantages

- Portable device
- Ready for connection
- Easy to transport
- Compact design

### Why you need the GEA Ammonia Dryer – impact of water in the refrigerant circuit

A chiller can reach water levels of 2% to 5% within a few years – despite regular maintenance. Water and ammonia evaporate at very different temperatures. Even a very slight increase in water concentration can increase the evaporating temperature of the ammonia/water mixture. If suction pressure changes the evaporating temperature of the aqueous ammonia, the intended temperature in the cooling chambers can no longer be achieved. This effect is compensated by lowering the suction pressure which in turn compromises the capacity of the compressor. Guaranteeing the specified cooling capacity requires more compressor operating hours, which increases chiller operating costs. Water in the ammonia circuit causes corrosion, makes the oil age faster, and accelerates sludge formation in the chiller. The GEA Ammonia Dryer effectively prevents over-moisturizing in your ammonia chiller.

### GEA Ammonia Dryer functionality

The ammonia dryer heats aqueous ammonia and boils the ammonia out of the water. This can be done either with an electric or hot gas heater. Distilled ammonia flows out of the dryer and is fed back into the separator. At the end of the cycle, the controls start the next filling and distillation process. After the water concentration in the container sump reaches a predefined value, the cycle ends and the drain valve opens. Any remaining sludge or aqueous ammonia are directed to the prepared canister for disposal. Indicator lights on the operating panel provide information about the status of the dryer. The GEA Ammonia Dryer efficiently removes water from the refrigerant cycle. Combined with optional filters and purgers, it is a sensible supplement for your chiller system.

## TECHNICAL DATA

Model	Input power (kW)	Dimensions (mm)			Max. design pressure (bar)	Refrigerant charge (kg)	Evaporating temperature of cooling system	Weight <sup>3)</sup> (kg)
		L	W	H				
150 H <sup>1)</sup>	0.2	2,200	750	1,000	23	110	-43 to +5 °C	500
150 E <sup>2)</sup>	1.8	2,200	750	1,000	23	110	-43 to +5 °C	500

1) Hot gas heating, 2) electric heating, 3) without refrigerant

### Optional features

- Flexible tubes
- Adaptors
- Flanges
- Stench trap
- Sample bottles
- Conversion kit for hot gas heating

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