

## GEA Grasso Ammonia Dryer

A sensible supplement to your ammonia refrigeration system



The GEA Grasso Ammonia Dryer is a perfect supplement to your ammonia refrigeration system to ensure longer operational life as well as lower operating and maintenance costs. The ammonia

dryer removes water from the refrigerant cycles without having the machines shut down. It keeps the refrigerant circuit dry and clean and your refrigeration system running efficiently.

## Technical data & product features

### Advantages

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

### Options

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

### Technical data

- Max. design pressure: 23 bar
- Evaporating temp. of the cooling system: -43 °C to 5 °C
- Refrigerant charge: 110 kg

#### GEA Grasso Ammonia Dryer

Type	Input power (kW)	Dimensions (mm)			Weight (kg)
		L	W	H	
150 H <sup>1)</sup>	0.2	2200	750	1000	500
150 E <sup>2)</sup>	1.8	2200	750	1000	500

1) hot gas heating, 2) electric heating

### Functionality of the GEA Grasso Ammonia Dryer

The GEA Grasso Ammonia Dryer heats the aqueous ammonia, boiling the ammonia out of the water. It can be done either with an electric or hot gas heater. The 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. Only after the water concentration in the container sump reaches the defined value, will the cycle end and the manual drain valve open. The remains which may contain sludge in addition to aqueous ammonia are directed to the prepared canister and then disposed of. Signal lights on the operator panel provide information about the relevant operating status of the dryer.

The GEA Grasso Ammonia Dryer thus removes the water from the refrigerant cycle and makes the perfect addition to your ammonia refrigeration system along with filters and purgers.

### Impact of water in the refrigerant circuit

A refrigeration plant can have water levels of approximately 2% to 5% within a few years despite regular care. Due to the very different evaporating temperatures of water and ammonia, even very slight increases in water concentrations may increase the evaporating temperature of the ammonia water mixture. If the suction pressure alters the evaporating temperature of the aqueous ammonia, i.e. the intended temperature in the cooling chambers can no longer be achieved. This effect is compensated through lowering the suction pressure which in turn compromises the capacity of the compressor. To guarantee the specified cooling capacity, the operating hours of the compressor need to be increased, raising the operating costs for the refrigeration system. In addition, the water in the ammonia circuit causes corrosion as well as the oil to age faster and accelerates sludge formation in the refrigeration system. To prevent overmoisturizing over your refrigeration system we thus recommend using the GEA Grasso Ammonia Dryers.

## GEA Refrigeration Technologies

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