GEA RedAstrum

A new series of highly efficient and space-saving ammonia heat pumps

engineering for a better world

gea.com

New: Top performance, minimum footprint

GEA RedAstrum is a new series of standard ammonia heat pumps developed for an increasing demand of efficient heating solutions. This new generation consists of four heat pump models based on the GEA Grasso M screw compressors newly developed for 52-bar applications.

With GEA RedAstrum heating water can be generated at temperature levels between 55 and 80 °C and used for any industrial processes or fed into a district heating network.

Thanks to its innovative and compact design, GEA RedAstrum is also perfectly suited for replacing conventional heating systems in your machine room.

Adapted from the highly successful GEA BluAstrum chillers series, the GEA RedAstrum range provides identical advantages: industry-leading efficiency and heat exchanger approach temperatures, low oil and ammonia charges, high reliability and an exceptionally small footprint.

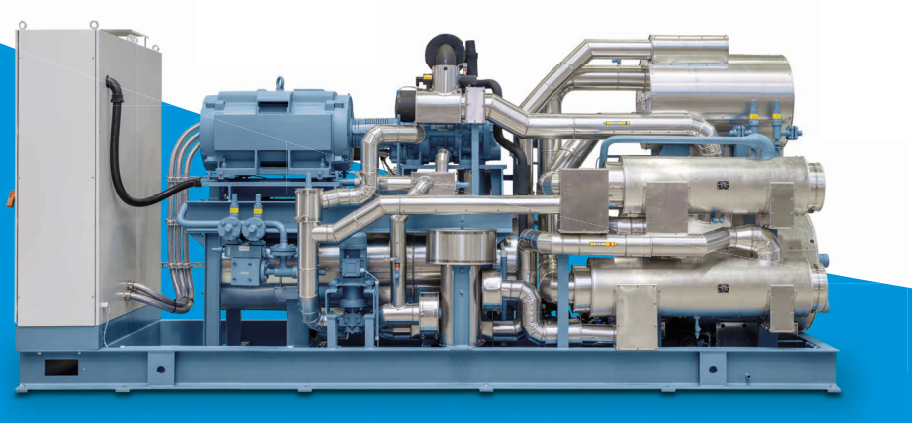
GEA REDASTRUM TECHNICAL DATA [1]

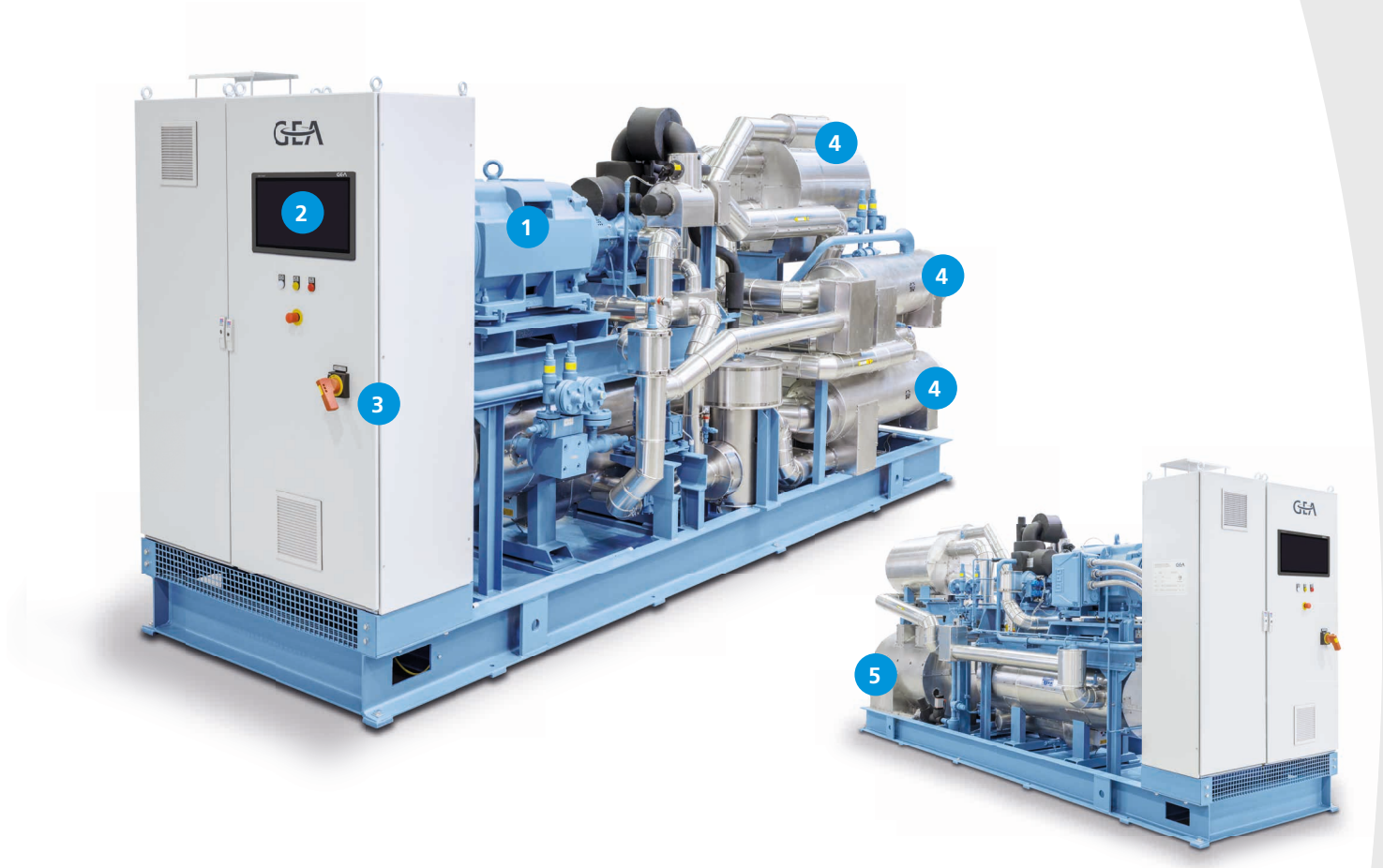
Model		Heating medium (°C)	Secondary refrigerant inlet/outlet +40/+35°C			Secondary refrigerant inlet/outlet +10/+5°C			Dimensions (mm)		
			Heating capacity (kW)	Cooling capacity (kW)	COP [2] heating	Heating capacity (kW)	Cooling capacity (kW)	COP [2] heating + cooling			
		inlet/outlet	at 4,500 rpm		line	at 4,500 rpm		line	L	W	H
GEA RedAstrum	1200	+40 / +70 +70 / +80	1,385 1,230	1,160 930	5.6 3.8	640 615	420 325	4.4 3.0	5,800	1,400	2,250
	1500	+40 / +70 +70 / +80	1,635 1,460	1,380 1,115	5.9 3.9	740 695	495 380	4.6 3.1	5,800	1,400	2,250
	1900	+40 / +70 +70 / +80	2,150 1,905	1,805 1,460	5.7 3.9	985 805	650 490	4.5 2.7	6,300	1,600	2,350
	2200	+40 / +70 +70 / +80	2,460 2,190	2,085 1,690	6.1 4.0	1,115 1,050	750 570	4.6 3.1	6,300	1,600	2,350

[1] *Showcase applications for single-stage screw compression; deviations possible acc. to individual configuration*
[2] *COP heating = heating capacity / electrical consumption at net; COP heating + cooling = combined heating and cooling capacity electrical consumption at net*

OPTIMUM PERFORMANCE

- Heating capacity between 1 and 2 MW
- Hot water temperature up to +80 °C
- Heat source between +10 and +40 °C
- Compact footprint, comes in one piece, installation indoors





1 High-efficiency screw compressor

- High pressure version – 52 bar
- Proprietary 5/6 rotor profile – industry leading COP
- Reduced complexity, no oil pump required
- Pressure activated suction check valve for smooth operation

2 Sophisticated GEA Omni™ control

- User-friendly industrial PC
- 15.6” high-definition touch screen
- All common communication protocols
- Remote access via web browser
- Maintenance logs and full data history

3 Stepless capacity control

- Capacity control via frequency converter and capacity slide for infinitely variable capacity
- Sequence control for several units

4 Optimized hot water cycle

- Optimized temperature approach and lowest system pressure loss
- Individual and optimal set-up of condenser, oil cooler and optional sub-cooler
- Completely pre-piped, only one inlet/one outlet connection required
- All common fluids supported

5 Combined evaporator/liquid separator

- Fully welded vessel suitable for all common fluids
- Minimized ammonia charge
- Secondary refrigerant inlet up to +40 °C
- Electronic Condenser Drain (ECD) system for optimized capacity adjustment

Enhanced plant safety

- Multi-stage safety chain for over-pressure protection
- Double safety valve, PED approved
- Reduced welding seams and leakage risks
- Insulated hot and optionally cold side, touch protection and minimized heat losses

Minimized service and maintenance

- Continuous vibration surveillance of the bearings
- Easy access to wear parts when service is indicated

engineering for
a better world

We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

GEA Germany
GEA Refrigeration Germany GmbH
Holzhauser Straße 165
13509 Berlin, Germany
Tel +49 (0)30 435 92 600
Fax +49 (0)30 435 92 777
info@gea.com
gea.com