

# GEA Bock HG44e/HG56e

Assembly instructions

96426-06.2017-Gb

Translation of the original instructions

|  |                |               |                 |
|--|----------------|---------------|-----------------|
|  |                | HGX44e/475-4  | HGX44e/475-4 S  |
|  |                | HGX44e/565-4  | HGX44e/565-4 S  |
|  | HG44e/665-4 S  | HGX44e/665-4  | HGX44e/665-4 S  |
|  | HG44e/770-4 S  | HGX44e/770-4  | HGX44e/770-4 S  |
|  |                |               |                 |
|  | HG56e/850-4 S  | HGX56e/850-4  | HGX56e/850-4 S  |
|  | HG56e/995-4 S  | HGX56e/995-4  | HGX56e/995-4 S  |
|  | HG56e/1155-4 S | HGX56e/1155-4 | HGX56e/1155-4 S |

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# About these instructions

Read these instructions before assembly and before using the compressor. **This will avoid misunderstandings and prevent damage. Improper assembly and use of the compressor can result in serious or fatal injury.**

Observe the safety instructions contained in these instructions.

These instructions must be passed onto the end customer along with the unit in which the compressor is installed.

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# 1| Safety

## 1.1 Identification of safety instructions:



**DANGER** Indicates a dangerous situation which, if not avoided, will cause immediate fatal or serious injury.



**WARNING** Indicates a dangerous situation which, if not avoided, may cause fatal or serious injury.



**CAUTION** Indicates a dangerous situation which, if not avoided, may cause fairly severe or minor injury.



**ATTENTION** Indicates a situation which, if not avoided, may cause property damage.



**INFO** Important information or tips on simplifying work.

## 1.2 Qualifications required of personnel



**WARNING** Inadequately qualified personnel poses the risk of accidents, the consequence being serious or fatal injury. Work on compressors is therefore reserved for personnel which is qualified to work on pressurized refrigerant systems:

- For example, a refrigeration technician, refrigeration mechatronic engineer. As well as professions with comparable training, which enables personnel to assemble, install, maintain and repair refrigeration and air-conditioning systems. Personnel must be capable of assessing the work to be carried out and recognising any potential dangers.

# 1| Safety

## 1.3 General safety instructions



### WARNING

**Risk of accidents.**

Refrigerating compressors are pressurised machines and as such call for heightened caution and care in handling.

The maximum permissible overpressure must not be exceeded, even for testing purposes.

**Risk of burns!**

- Depending on the operating conditions, surface temperatures of over 60°C on the discharge side or below 0°C on the suction side can be reached.

- Avoid contact with refrigerant necessarily.

Contact with refrigerant can cause severe burns and skin damage.

## 1.4 Intended use



### WARNING

**The compressor may not be used in potentially explosive environments!**

These assembly instructions describe the standard version of the compressor named in the title manufactured by GEA. GEA refrigerating compressors are intended for installation in a machine (within the EU according to the EU Directives 2006/42/EC Machinery Directive, 2014/68/EU Pressure Equipment Directive).

Commissioning is permissible only if the compressor has been installed in accordance with these assembly instructions and the entire system into which it is integrated has been inspected and approved in accordance with legal regulations.

The compressors are intended for use in refrigeration systems in compliance with the limits of application.

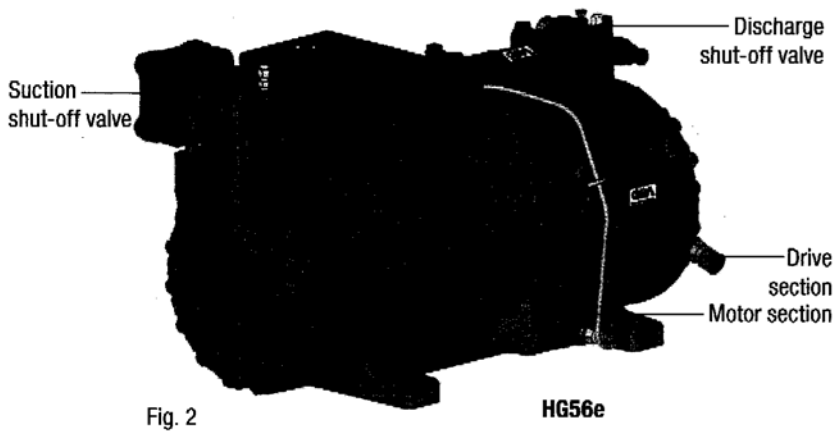
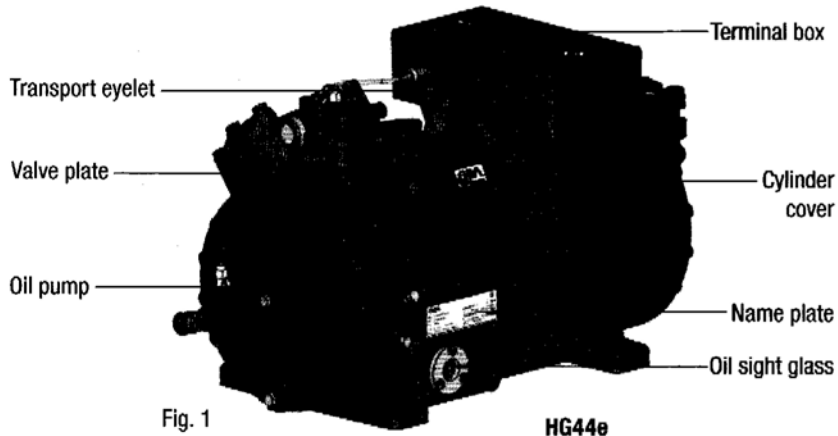
Only the refrigerant specified in these instructions may be used.

**Any other use of the compressor is prohibited!**

## 2 | Product description

### 2.1 Short description

- **HG44e:** Semi-hermetic four-cylinder reciprocating compressor with suction-gas cooled drive motor.
- **HG56e:** Semi-hermetic six-cylinder reciprocating compressor with suction-gas cooled drive motor.
- Preferred application range: normal refrigerating and air-conditioning.



Dimension and connection values can be found in Chapter 10

## 2 | Product description

### 2.2 Name plate (example)

|            |  |                            |   |
|------------|--|----------------------------|---|
| <b>GEA</b> |  | <b>CE</b>                  |   |
| 1          | Typ : HGX44e/770-4 S                         | 380-420 V Y/YY             | -3- 50HZ                                  |
| 2          | Nr. : AV12345A001                            | n : 1450 min <sup>-1</sup> | V <sub>th.</sub> : 67,0 m <sup>3</sup> /h |
| 3          | I <sub>max</sub> : 35,0 A                    | 440-480 V Y/YY             | -3- 60HZ                                  |
| 4          | I <sub>block</sub> : Y: 113 A YY: 179 A      | n : 1740 min <sup>-1</sup> | V <sub>th.</sub> : 80,4 m <sup>3</sup> /h |
| 5          | P <sub>max</sub> : ND(LP) / HD(HP)=19/28 bar | IP66                       | Oil: SE 55                                |

Fig. 3

|   |  |    |                                |
|---|--|----|--------------------------------|
| 1 | Type designation   | 6  | Voltage, circuit, frequency    |
| 2 | Machine number   | 7  | Nominal rotation speed         |
| 3 | maximum operating current  | 8  | Displacement                   |
| 4 | Starting current (rotor blocked)                                   | 9  | Voltage, circuit, frequency    |
|   | Y: Part winding 1  | 10 | Nominal rotation speed         |
|   | YY: Part windings 1 and 2  | 11 | Displacement                   |
| 5 | ND (LP): max. admissible operating pressure (g) Low pressure side  | 12 | Oil type filled at the factory |
|   | HD (HP): max. admissible operating pressure (g) High pressure side | 13 | Terminal box protection type   |

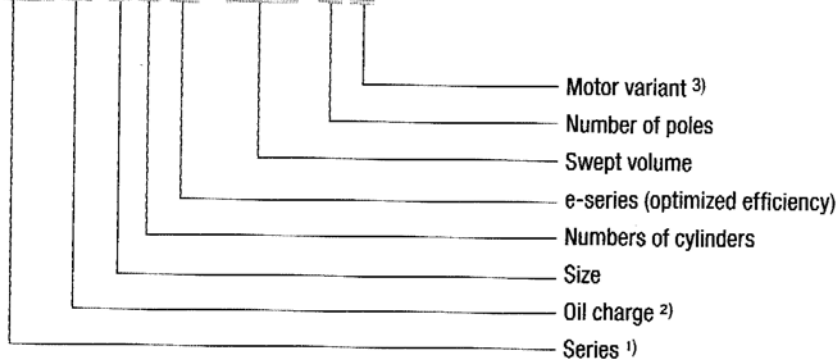
} 50 Hz  
} 60 Hz

**i** Electrical accessories can change the IP protection class!

**i** Observe the limits of application diagrams!

### 2.3 Type key (example)

**HG X 44 e / 770-4 S**



- 1) HG - Hermetic Gas-Cooled (suction gas-cooled)
- 2) X - Ester oil charge (HFC refrigerant, e.g. R134a, R404A/R507, R407C, R407F)
- 3) S - More powerful motor, e.g. for air-conditioning applications