

# In Touch



## Grasso 12E Series

Reciprocating compressors for industrial refrigeration

The Grasso 12E series. A range of outstandingly reliable, open type, reciprocating refrigeration compressors. All designed to work efficiently in almost any type of industrial refrigeration installation for cooling or freezing applications. The Grasso 12E provides low(er) investment and maintenance costs per kilowatt cooling capacity. The improved price/performance ratio is achieved by using new innovative technologies within the

compressor design. Composite material valves, light weight pistons with low wear piston rings make running speeds up to 1500 rpm possible for this size of compressor. Combined with our unique welded steel compressor concept, these innovative features enable us to offer you total reliability and maximum efficiency.

### Features of Grasso 12E series

- Steel welded compressor housing
- No water cooling required
- Capacity control steps per cylinder
- Largest swept volume range on the market
- Suitable for speed control (500 - 1500 min.<sup>-1</sup>)
- Composite valve material for high efficiency and long valve life time
- Low initial investment per kilowatt cooling capacity

° In touch with our products

## Technical data and features

Models	Swept Volume* (m <sup>3</sup> /h)	Cooling cap. (kW)**				Dimensions (mm)			Weight (kg)
		NH <sub>3</sub>	R22	R134a	R404a	L	W	H	
<b>Single stage</b>			0/+40 °C		-15/+40 °C				
Grasso 412E	796	691	470	288	229	1307	1077	884	810
Grasso 612E	1194	1036	705	432	343	1377	1171	931	1050
Grasso 912E	1792	1555	1058	648	515	1792	1171	931	1390
Grasso 1212E	2389	2073	1411	864	687	2182	1171	931	1630

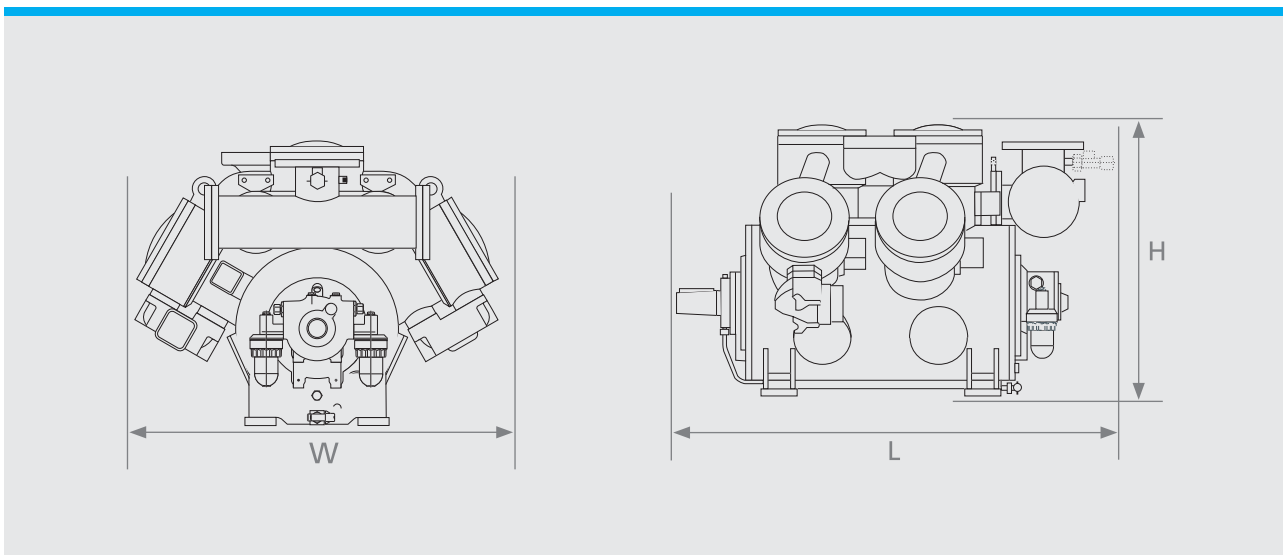
Models	Swept Volume* (m <sup>3</sup> /h)	NH <sub>3</sub>	Cooling cap. (kW)**			Dimensions (mm)			Weight (kg)
			R22	R134a	R404a	L	W	H	
<b>Two stage***</b>			-35/+35 °C	-40/35 °C	n.a.	-40/+35 °C			
Grasso 3112E	597	129	85	-	1317	1317	1077	876	885
Grasso 4212E	796	188	124	127	1377	1377	1171	931	1100
Grasso 5112E	995	187	121	-	1377	1377	1171	931	1100
Grasso 6312E	1194	282	188	192	1792	1792	1171	931	1440
Grasso 7212E	1393	291	188	-	1792	1792	1171	931	1440
Grasso 8412E	1592	376	249	254	2182	2182	1171	931	1700
Grasso 9312E	1792	389	253	-	2182	2182	1171	931	1700
Grasso10212E	1991	374	242	-	2182	2182	1171	931	1700

\* Theoretical swept volume based on max. speed of N = 1500 min.<sup>-1</sup>

\*\* Based on: 5K subcooling, 5K superheat (R404a: 15 K superheat), max. speed for synth. Refrigerants <1200min.<sup>-1</sup>

\*\*\* NH<sub>3</sub> refr.: data based on openflash gas cooling and liquid expansion (Grasso system 'C')

Synt. refr.: data based on gas cooling and liquid subcooling in heat exchanger (Grasso system 'B')



GEA Refrigeration Technologies

**GEA Refrigeration Netherlands N.V.**

P.O. Box 343 • 5201 AH 's-Hertogenbosch • The Netherlands • Phone +31 (0)73 6203 911 • info@grasso.nl • www.grasso.nl