

## In Touch



# Grasso 10 Series

### Reciprocating compressors for industrial refrigeration

The Grasso 10 series. A range of outstandingly reliable, open type, reciprocating refrigeration compressors. Central to their design is absolute reliability under the most demanding circumstances and with an alert eye to economics. Grasso has paid particular attention to such aspects as price, maintenance costs and power consumption. Grasso has achieved this by incorporating innovations like composite material valves and lightweight

pistons with low-wear piston rings into a design that has already proven itself in actual practice. Combined with our unique welded steel compressor concept, these innovative features enable us to offer you total reliability and maximum efficiency. The Grasso 10 series is designed to work efficiently in almost any type of industrial refrigeration installation for cooling either freezing application.

### Features of Grasso 10 series

- ° Steel welded compressor housing
- ° No water cooling required
- Extensive range of single & two stage models
- ° Capacity control steps per cylinder
- ° Suitable for speed control (600 1500 min.-1)
- ° Composite valve material for high efficiency and long valve life time

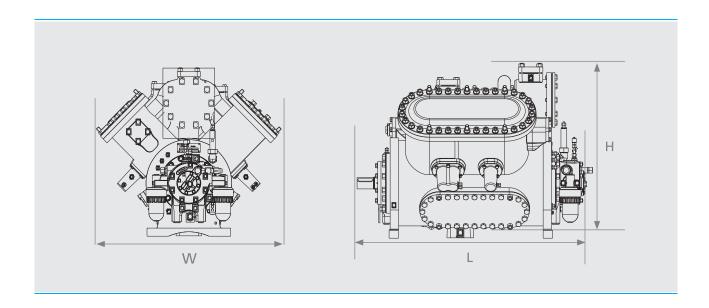
## ° In touch with our products

## Technical data and features

Models	Swept Volume* (m³/h)	Cooling cap. (kW)**				Dimensions (mm)			Weight (kg)
		$NH_3$	R22	R134a	R404A***	L	W	Н	
Single-stage			0/40 °C		-15/+40 °C				
Grasso 210	145	119	111	61	49	925	536	765	420
Grasso 310	217	178	167	92	73	1105	536	765	545
Grasso 410	290	238	223	124	99	925	888	815	550
Grasso 610	435	357	334	185	147	1105	888	815	730
Grasso 810	580	476	446	247	198	1455	888	815	915

Models	Swept Volume* (m³/h)	Cooling cap. (kW)**				Dimensions (mm)			Weight (kg)
		$NH_3$	R22	R134a	R404A***	L	W	Н	
Two stage***		-35/+35°C	-40/35 °C	n.a.	-40/+35 °C				
Grasso 2110	145	32	29	-	30	1105	536	765	585
Grasso 3110	217	43	39	-	40	925	888	815	560
Grasso 4210	290	64	58	-	60	1105	888	815	725
Grasso 6210	435	86	79	-	80	1455	888	815	910

- Theoretical swept volume based on max. speed of N =1500 min.-1
- Based on: 5K subcooling, 5K superheat (R404a: 15 K superheat), max. speed for synth. Refrigerants < 1200 min.-1
- NH₃ 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** 

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