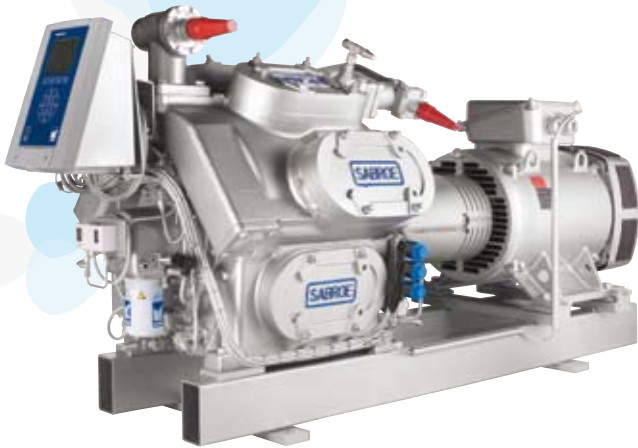


SMC 100 single-stage reciprocating compressors

Sabroe SMC 100 reciprocating compressors are ideal for use in medium-size industrial and marine refrigeration installations. They are the most robust, reliable and economical option for a wide range of heavy-duty applications of this particular size. The well-proven Sabroe SMC 100 range consists of



SMC 108 reciprocating compressor unit with Unisab III compressor control

fifteen different models covering capacities of between 226 and 1357 m³/h swept volume at 1500 rpm maximum speed. They can be used with almost all refrigerants, and in high-stage or booster operation.

Significant advantages

The advantages of the Sabroe SMC 100 compressor design include

- High coefficient of performance (COP), with excellent part-load characteristics.
- Excellent accessibility and few requirements for spare parts.
- Any necessary repairs can normally be undertaken without having to remove the compressor.
- Chromium piston rings, gas-dampened discharge valves and hardened cylinder liner surfaces.
- Spring-loaded safety heads, balanced refrigerant-tight shaft seal, asbestos-free gaskets and an internal bypass valve to prevent excessive pressure.

All SMC 100 compressors can be fitted with variable-speed drive (Rotatune) for stepless capacity control and improved coefficient of performance at part load. More details about this are provided in the special Sabroe product description for Rotatune compressors.

Compatible and upgradable

Sabroe SMC 100 compressor units are designed to be future-compatible. Ongoing changes and improvements are configured to make sure they can also be implemented on earlier SMC 100 models. This makes it easy to upgrade and retrofit older compressors to the latest standard.

Standard equipment

Sabroe SMC 100 compressors are supplied with the following equipment as standard

- compressor block with oil pump and oil filter
- solenoid valves for capacity control
- suction and discharge stop valves
- safety valve
- oil-charging valve
- suction filter
- oil-level sight glass
- electric immersion heater in crankcase
- evacuation valve
- pre-lubrication valve.

Customer benefits

For the customer, the benefits of the Sabroe SMC 100 compressor design include

- ▶ Lower power consumption, especially when operating at part load. This greatly reduces operating costs.
- ▶ Easy maintenance, resulting in low service costs and minimal downtime.
- ▶ All repairs can be carried out on site at the customer's own premises, reducing both repair costs and downtime.
- ▶ Extended service life for all moving parts.
- ▶ The special design ensures low noise and low vibration levels, with safe, environmentally friendly operation.

Sabroe product description

Optional equipment

A wide range of optional equipment is also available on Sabroe SMC 100 compressors. This includes

- gauges, thermometers and temperature/pressure control switches
- Sabroe Unisab III microprocessor control with temperature/pressure sensors
- extended single-cylinder capacity control or standard capacity control with full unloading
- oil level regulator for parallel systems
- explosion-proof equipment
- base frame with coupling and guard for direct-drive unit
- base frame with pulleys, belts and guard for V-belt drive unit
- motors (standard or variable-speed)
- oil separators with solenoid valve and TLT valve for oil return
- oil charging pump
- vibration dampers and foundation bolts
- tool sets
- sets of genuine Sabroe spare parts.

Compressor and oil cooling

Depending on specific refrigerant and operating conditions, it can be necessary to supplement basic air convection cooling to make sure the compressor and the lubricating oil are cooled efficiently.

This can be done with one of the following options

- water-cooled head covers
- water-cooled side covers for oil cooling
- refrigerant-based oil cooling
- thermo-pump system (for use with R717 only).



SMC 108 with gauges

Model	Number of cylinders	Bore x stroke mm	Max. rpm *	Swept volume at max. rpm m ³ /h	Normal capacities kW					Dimensions Direct coupled unit mm			Weight excl. motor kg	Sound pressure level dB(A)
					R717		Booster	R404A		L	W	H		
					Single/high stage			Single/high stage						
					-10/+35°C	0/+35°C	-40/-10°C	0/+35°C	-10/+35°C					
SMC 104 S	4	100 x 80	1500	226	129	209	35	205	132	1800-2350	995	1095	830	80
SMC 104 L	4	100 x 100	1500	283	167	266	46	208	235	1800-2350	995	1095	830	81
SMC 104 E	4	100 x 120	1500	339	206	324	57	N/A	N/A	1800-2350	995	1095	830	81
SMC 106 S	6	100 x 80	1500	339	194	313	52	308	197	1850-2500	1005	1130	925	81
SMC 106 L	6	100 x 100	1500	424	251	398	70	312	202	1850-2500	1005	1130	925	82
SMC 106 E	6	100 x 120	1500	509	309	486	86	N/A	N/A	1850-2500	1005	1130	925	82
SMC 108 S	8	100 x 80	1500	452	259	417	70	410	263	1900-2550	1005	1125	990	82
SMC 108 L	8	100 x 100	1500	565	335	531	93	416	270	1900-2550	1005	1125	990	83
SMC 108 E	8	100 x 120	1500	679	412	648	115	N/A	N/A	1900-2550	1005	1125	990	83
SMC 112 S	12	100 x 80	1500	679	388	626	106	616	395	2425-3000	1095	1335	1660	83
SMC 112 L	12	100 x 100	1500	848	502	796	140	624	405	2425-3000	1095	1335	1660	83
SMC 112 E	12	100 x 120	1500	1018	618	972	172	N/A	N/A	2425-3000	1095	1335	1660	83
SMC 116 S	16	100 x 80	1500	905	517	834	141	821	526	2475-3200	1135	1335	1760	84
SMC 116 L	16	100 x 100	1500	1131	669	1062	187	831	539	2475-3200	1135	1335	1760	84
SMC 116 E	16	100 x 120	1500	1357	824	1297	230	N/A	N/A	2475-3200	1135	1335	1760	84

Nominal capacities are based on 5°C subcooling and max. rpm

*) SMC 100 S: max. rpm 1500 for R404A

SMC 100 L: max. rpm 1200 for R404A

All information is subject to change without previous notice

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