

Sabroe SMC reciprocating compressor units

Large single-stage compressors with swept volumes of 250–1350 m³/h

SMC compressor units are ideal for use in medium-sized refrigeration installations where reliable service is a major priority. They are particularly effective under part-load conditions.

Sabroe SMC compressors are world-renowned for their exceptional reliability, making them an economical, low-maintenance solution for heavy-duty refrigeration, using all common refrigerants.

Range

Fifteen different models are available to provide swept volumes of between 250 and 1357 m³/h at 1800 rpm.



SMC 108 single-stage reciprocating compressor unit with Unisab III systems controller

Advantages

High coefficient of performance (COP), with excellent performance under part-load conditions

Variable-speed drive (optional) provides stepless capacity control over the entire operating range

Repairs can be undertaken *in situ*, without removing the compressor

Easy to access for service, with limited spare parts requirements

Special oil separator design based on coalescer technology

Benefits

Low power consumption, which greatly reduces operating costs

Power consumption and operating costs kept to a minimum

Lower repair costs and less downtime

Easy, inexpensive maintenance, which helps limit downtime and reduce operating costs

Low oil carry-over, which cuts back on oil costs



Optional equipment

- Unisab III systems controller
- Variable-speed drive line
- Gauges, thermometers and temperature/pressure control switches
- Extended cylinder capacity control
- Oil level regulator (for use in parallel systems)
- ATEX-compliant configuration
- Special vibration dampening



SMC 108 single-stage reciprocating compressor block with gauges

| Model | Number of cylinders | Bore x stroke mm | Swept volume at 1800 rpm m ³ /h | Nominal capacities kW | | | | | Dimensions in mm Direct coupled unit | | | Weight excluding motor kg | Sound pressure level dB(A) |
|------------------|---------------------|---------------------|---|--------------------------------|------------|----------------------|------------------------------|------------|---|-------------|-------------|------------------------------|-------------------------------|
| | | | | R717 | | Booster -40/-10°C | R404A | | L | W | H | | |
| | | | | Single/high stage -10/+35°C | 0/+35°C | | Single/high stage 0/+35°C | -10/+35°C | | | | | |
| SMC 104 S | 4 | 100 x 80 | 271 | 129 | 209 | 35 | 205 | 132 | 2400-2800 | 1228 | 1103 | 830 | 80 |
| SMC 104 L | 4 | 100 x 100 | 339 | 167 | 266 | 46 | 208 | 235 | 2400-2800 | 1228 | 1103 | 830 | 81 |
| SMC 104 E | 4 | 100 x 120 | 339 | 206 | 324 | 57 | N/A | N/A | 2400-2800 | 1228 | 1103 | 830 | 81 |
| SMC 106 S | 6 | 100 x 80 | 407 | 194 | 313 | 52 | 308 | 197 | 2400-2800 | 1190 | 1108 | 925 | 81 |
| SMC 106 L | 6 | 100 x 100 | 509 | 251 | 398 | 70 | 312 | 202 | 2400-2800 | 1190 | 1108 | 925 | 82 |
| SMC 106 E | 6 | 100 x 120 | 509 | 309 | 486 | 86 | N/A | N/A | 2400-2800 | 1190 | 1108 | 925 | 82 |
| SMC 108 S | 8 | 100 x 80 | 543 | 259 | 417 | 70 | 410 | 263 | 2400-2800 | 1201 | 1103 | 990 | 82 |
| SMC 108 L | 8 | 100 x 100 | 679 | 335 | 531 | 93 | 416 | 270 | 2400-2800 | 1201 | 1103 | 990 | 83 |
| SMC 108 E | 8 | 100 x 120 | 679 | 412 | 648 | 115 | N/A | N/A | 2400-2800 | 1201 | 1103 | 990 | 83 |
| SMC 112 S | 12 | 100 x 80 | 814 | 388 | 626 | 106 | 616 | 395 | 2425-3000 | 1290 | 1314 | 1660 | 83 |
| SMC 112 L | 12 | 100 x 100 | 1018 | 502 | 796 | 140 | 624 | 405 | 2425-3000 | 1290 | 1314 | 1660 | 83 |
| SMC 112 E | 12 | 100 x 120 | 1018 | 618 | 972 | 172 | N/A | N/A | 2425-3000 | 1290 | 1314 | 1660 | 83 |
| SMC 116 S | 16 | 100 x 80 | 1086 | 517 | 834 | 141 | 821 | 526 | 2475-3200 | 1301 | 1314 | 1760 | 84 |
| SMC 116 L | 16 | 100 x 100 | 1357 | 669 | 1062 | 187 | 831 | 539 | 2475-3200 | 1301 | 1314 | 1760 | 84 |
| SMC 116 E | 16 | 100 x 120 | 1357 | 824 | 1297 | 230 | N/A | N/A | 2475-3200 | 1301 | 1314 | 1760 | 84 |

Nominal capacities are based on 5°C subcooling and 1500 rpm.

SMC-E series: max. rpm 1500 for R717

SMC-S series: max. rpm 1500 for R404A

SMC-L series: max. rpm 1200 for R404A

Sound pressure levels in free field, over reflecting plane and one metre distance from the unit.

All information is subject to change without notice.

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