

SABCube variable-speed screw compressors

Hear less, see less, experience more ...

The SABCube compressor is a quiet, compact and efficient solution that completely revolutionises the market for small screw compressors.

The SABCube compressor package reduces energy costs by as much as 30%. It is specially designed to automatically operate at the maximum efficiency available for any required output.



SABCube 159

Proven reliability and the unique service concept, with a clear focus on load-based maintenance, result in service cost reductions of as much as 25%.

The SABCube is also extremely compact and quiet compared with conventional fixed-speed compressors.

Revolutionary technology

The SABCube is based on a unique compressor concept, with well-proven technology applied in a highly innovative way to achieve exceptional operating efficiency.

Variable-speed drive technology has been optimised and combined with both a hybrid permanent magnet motor and a screw compressor with fewer moving parts and greater efficiency. The SABCube also features an innovative oil management system.

These technologies are all fully integrated into one compact integrated unit that is managed by a Unisab III control system.

Significant advantages

The advantages of the Sabroe SABCube design include

Hear less ...

- Sound level lower than 80dB (A).

See less ...

- Very small footprint, which saves space.

Experience more ...

- The multiple advantages of variable-speed drive (VSD) – such as high efficiency, accurate control, economiser COP increase – result in benefits in all part-load situations.
- The compressor package components – motor, VSD, filters, oil cooler, valves, etc. – are 100% integrated.
- No motor bearings, coupling, oil pump or slide valve – resulting in fewer wearing parts.
- Worldwide product support 24 hours a day, 7 days a week.
- Attractive service concept based on preventive maintenance that reflects the actual load profile.

Customer benefits

For the customer, the benefits of the Sabroe SABCube design include

- ▶ Better working environment.
- ▶ Better use of space, making it easy to upgrade from existing equipment.
- ▶ Remarkable efficiency at part load – up to 30% energy savings compared with conventional compressors.
- ▶ Maximum reliability, because both structural resonance and leaks are avoided.
- ▶ Less service work needed – up to 25% savings on total service costs.
- ▶ Maximum operating uptime.
- ▶ Maintenance downtime is easy to plan, with savings on service costs.

Sabroe product description

SABCube standard equipment

Sabroe SABCube compressor packages are supplied with the following equipment as standard

- sound enclosure
- integrated high-performance compressor and permanent magnet drive motor
- start-up torque limitation system
- complete, fully wired inverter panel including RFI filter – ready to operate
- very compact oil separator with integrated oil cooler and oil filter including standstill heating and oil level sight glasses
- suction and discharge side stop valves and necessary service valves

- Unisab III control unit, pre-programmed and wired to sensors and transmitters for compressor protection and monitoring
- PED (Pressure Equipment Directive) approval
- vibration dampers
- commissioning set of spares.

Optional equipment

A wide range of optional equipment is available, including

- economiser system
- certificates and test report
- choice of integrated oil coolers along with approvals other than PED.

Technical data

Model	Swept volume m ³ /hour at max. speed	Rotor		Operating conditions with R717			Dimensions L x W x H [m]	Weight [kg]	Sound pressure dB(A)
		Dia. [mm]	L/D ratio	-10/35°C Q [kW]	-40/35°C ¹⁾ Q [kW]	0/35°C Q [kW]			
SAB 109 M	289	109	1.4	182	53	272	2.0 x 1.15 x 1.6	1650	73
SAB 109 L	361	109	1.4	228	66	340	2.0 x 1.15 x 1.6	1650	75
SAB 133 T	525	133	1.4	331	96	494	2.0 x 1.15 x 1.6	1850	75
SAB 133 M	543	133	1.4	343	100	512	2.0 x 1.15 x 1.6	1850	75
SAB 133 N	633	133	1.4	400	116	597	2.0 x 1.15 x 1.6	1850	76
SAB 133 L	679	133	1.4	N/A	125 ²⁾	N/A	2.0 x 1.15 x 1.6	1850	77
SAB 159 M	947	159	1.4	599	174	893	2.0 x 1.15 x 1.6	1970	77
SAB 159 L	1184	159	1.4	N/A	225 ²⁾	N/A	2.0 x 1.15 x 1.6	1970	79

5 K suction gas superheat
5 K liquid subcooling

1) Open flash economiser system
2) On request
N/A Not applicable

All information is subject to change without previous notice.