

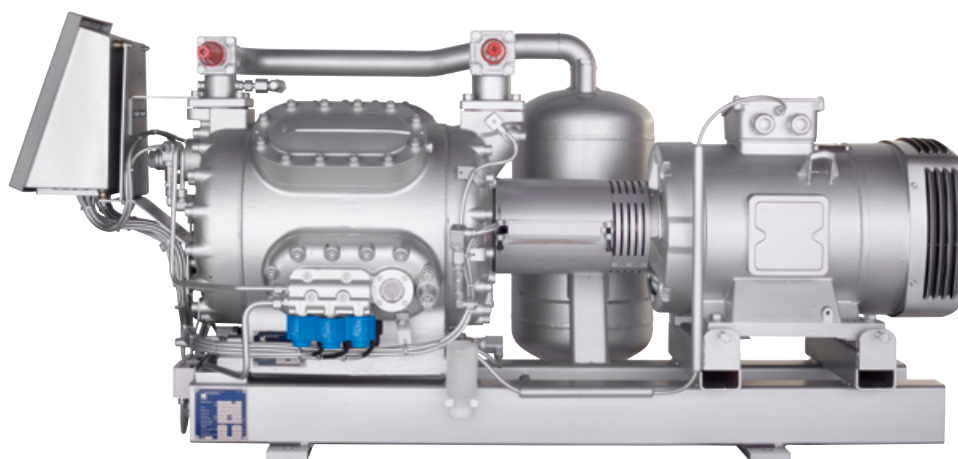
# SABROE HPO™/HPC™/HPX™ high-pressure reciprocating compressor units

High-pressure hybrids of CMO and SMC reciprocating compressors, with swept volumes of 100–450 m<sup>3</sup>/h

The blocks of the compressor units in the HPO/HPC/HPX range are cast in high-strength ductile iron, making them particularly strong and capable of operating under exceptionally high pressures.

This results in condensing temperatures of up to 70°C, and makes HPO/HPC and HPX compressors (condensing temperatures up to 90°C) ideal for use in conjunction with heat pumps and hot water applications, and as an extra “supercharge” stage in traditional ammonia plants. The renowned SABROE high-pressure compressors are ideal for use with either ammonia or CO<sub>2</sub> as refrigerant.

Sabroe high-pressure compressors provide reliability and cost savings provide exceptional reliability and big savings on operating costs, because they are based on the high-volume CMO and SMC compressors, and they share the majority of castings and parts.



HPO 24 single-stage reciprocating compressor unit (50 bar) 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

Provides exceptionally high condensing temperatures – up to 70°C

Designed for easy service access, and repairs can be undertaken *in situ*, without removing the compressor

Special oil separator design based on coalescer technology

## Benefits

Low power consumption, especially under part-load conditions. This greatly reduces operating costs

Power consumption and operating costs kept to a minimum

Matches radiator temperature in most domestic/commercial heating systems, making HPO/HPC/HPX units ideal in district heating, etc

Lower repair and maintenance costs, and less downtime

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

## Range

Nine different models are available to provide swept volumes of between 97 and 452 m<sup>3</sup>/h.



HPC 108 single-stage reciprocating compressor block (40 bar) with Unisab III systems controller

## Options

- Variable-speed drive line
- Gauges, thermometers and temperature/pressure control switches
- Extended cylinder capacity control
- ATEX-compliant configuration
- Special vibration dampening.

Model	Number of cylinders	Swept volume at 1500 rpm m <sup>3</sup> /h	Swept volume at 1800 rpm m <sup>3</sup> /h	Nominal capacities in kW at 1500 rpm (HPC) and 1800 rpm (HPO/HPX)					Dimensions in mm			Weight excluding motor kg	Sound pressure level at 1500 rpm dB(A)
				Heating	Cooling	Cooling	Cooling	Cooling	L	W	H		
				R717 +35/+72°C	R717 0/+55°C	R410A 0/+35°C	R744 -50/-10°C	R744 -40/-5°C					
HPO 24	4	97	116	267	71	117	92	138	1580-1930	835	985	510	74
HPO 26	6	146	175	397	106	176	138	207	1600-1950	940	985	550	76
HPO 28	8	194	233	529	141	235	184	276	1620-1970	940	985	580	77
HPC 104 S	4	226	N/A	629	168	284	228	338	2400-2800	1228	1103	850	81
HPC 106 S	6	339	N/A	942	252	426	343	507	2400-2800	1190	1108	1025	82
HPC 108 S	8	452	N/A	1256	335	568	457	676	2400-2800	1201	1103	1100	83
HPX 704	4	111	133	295*	92	N/A	124	185	2400-2800	1250	1100	850	84**
HPX 706	6	166	200	443*	138	N/A	185	275	2400-2800	1250	1100	1025	85**
HPX 708	8	222	266	590*	183	N/A	248	369	2400-2800	1250	1100	1100	86**

\* HPX +35/+88°C

\*\* Sound pressure level at HPX 1800rpm

For HPO

Design pressure, HP side: 50 bar

Design pressure, LP side: 26 bar

Differential pressure: 25 bar

For HPC

Design pressure, HP side: 40 bar

Design pressure, LP side: 26 bar

Differential pressure: 25 bar

For HPX

Design pressure, HP side: 60 bar

Design pressure, LP side: 26 bar

Differential pressure: 40 bar

Nominal capacities are based on max. 1500 rpm for HPC and 1800 rpm for HPO/HPX.

Nominal capacities for R744 are based on 0K subcooling in cascade cooler, 10K useful suction superheat.

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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