

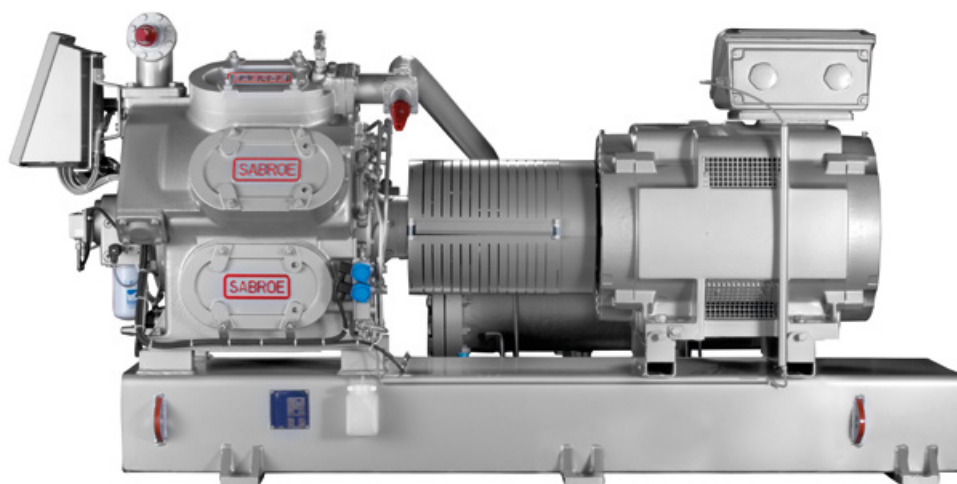
SABROE HPO/HPC/HPX high-pressure reciprocating compressor units

High-pressure hybrids of CMO and SMC reciprocating compressors, with swept volumes of 100–800 m³/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 90°C, and makes HPX and HPO/HPC compressors 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 CO₂ as refrigerant.

SABROE high-pressure compressors 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.



HPC 108 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 90°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

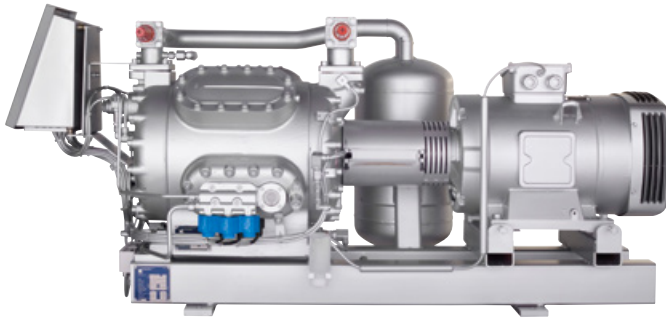
Lower repair and maintenance costs, and less downtime

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

Range

Nine different models are available to provide swept volumes of between 97 and 814 m³/h.





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 ³ /h	Swept volume at 1800 rpm m ³ /h	Nominal capacities in kW at 1800 rpm						Unit dimensions in mm			Weight excluding motor kg	Sound pressure level at 1800 rpm dB(A)
				Heating		Cooling		Defrosting		L	W	H		
				R717		R717	R744	R744						
				+35/+74°C	+35/+90°C	0/+55°C	-50/-10°C	-15/+8°C	-40/+10°C					
HPO 24	4	97	116	332	N/A	83	116	441	N/A	1580-1930	835	985	510	77
HPO 26	6	146	175	497	N/A	125	174	661	N/A	1600-1950	940	985	550	78
HPO 28	8	194	233	663	N/A	167	232	881	N/A	1620-1970	940	985	580	80
HPC 104 S	4	226	271	781	N/A	198	226*	N/A	N/A	2261-2865	1305	1214	1340	83
HPC 106 S	6	339	407	1171	N/A	297	338*	N/A	N/A	2286-2890	1345	1260	1580	84
HPC 108 S	8	452	543	1560	N/A	396	451*	N/A	N/A	2311-2915	1486	1247	1660	85
HPC 112 S	12	679	814	N/A	N/A	594	677*	N/A	N/A	3279-3687	1525	1448	2520	86
HPX 704	4	111	133	380	356	95	133	N/A	232	2261-2865	1213	1214	1220	82
HPX 706	6	166	200	570	535	143	200	N/A	347	2286-2890	1267	1260	1440	84
HPX 708	8	222	266	760	713	190	266	N/A	463	2311-2915	1278	1260	1510	85
HPX 712	12	333	399	1140	1069	286	400	N/A	695	3279-3687	1345	1448	2430	86
HPX 716	16	443	532	1520	1426	381	533	N/A	926	3329-3737	1356	1445	2600	87

* at 1500 rpm

For HPO

Design pressure, HP side: 50 bar
Design pressure, LP side: 26 bar
Differential pressure: 25 bar.

For HPC

Design pressure, HP side: 50 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:
1500 rpm at 50 Hz.
1800 rpm at 60 Hz or VSD.

For R744

2 K liquid subcooling and 10 K usable suction superheat for R744.

For R717

2 K liquid subcooling and 0.5 K non-usable suction superheat.

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

Min./max. speed	R717	R744
HPO 20	700-1800 rpm	700-1800 rpm
HPC 100	500-1800 rpm	500-1500 rpm
HPX 700	500-1800 rpm	500-1800 rpm

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All information is subject to change without notice.

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