

SABROE PAC chillers

Packaged ammonia chillers based on screw compressors, with a 100–6200 kW capacity range

PAC ammonia-based chillers are fully integrated packaged units, designed to take full advantage of the many different models of ultra-reliable SABROE screw compressors. They are popular because there is such a wide range of different standard sizes, and they are also particularly easy to customise to meet specific requirements.

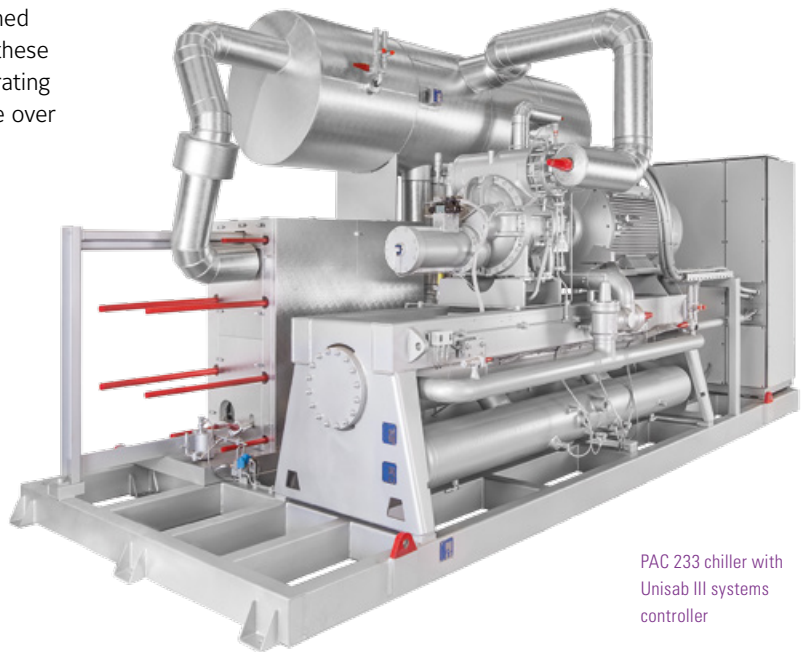
The integrated design, with the plate evaporator/condenser, oil separator and control system all built in, means PAC units provide exceptional refrigeration capacity while only taking up a minimum of space. They are ideal for use in indirect cooling set-ups, and in installations where it is important to use future-compatible natural refrigerants, such as ammonia.

The advanced technology and the well-matched integration of the component systems make these chillers so energy efficient that their low operating costs make them the most economical choice over the lifetime of a refrigeration plant.

Range

There are 19 different standard models in this range of packaged chillers, with capacities ranging from approx. 109 kW to 6180 kW.

Customised configurations are also available for use with remote air-cooled or evaporative condensers, and for twin or multi-packages, designed to provide particularly large cooling capacities.



PAC 233 chiller with Unisab III systems controller

Advantages	Benefits
Factory-assembled, pre-tested packaged units	Easy pre-commissioning makes installation and running-in both faster and cheaper. Factory acceptance test (FAT) available as an option
Comprehensive selection of compressor capacities, making it easier to match particular requirements	Avoid paying for greater capacity than needed
Very easy access for service	Improves safety, ensures maximum reliability and global sourcing of parts
Indirect cooling and uncomplicated flooded evaporating system, using natural ammonia (R717) only	Greater safety and outstanding reliability
Plate evaporator/condenser are easy to open and service	Routine checks/service can be carried out by operator's own staff

Options

- Variable-speed drive (VSD)
- Soft-starter or Y/D starter
- Desuperheater
- Subcooler
- External condenser
- Control panel mounted separately
- 3600 rpm at 60 Hz or VSD
- 4200 rpm at 70 Hz or VSD (PAC 193, 233, 283, 355)
- Available with high-pressure compressors as HeatPAC
- Factory acceptance test (FAT), customer-witnessed.



Water: inlet 12°C, outlet 7°C

Type	Capacity kW	E-motor kW	R717 charge kg	Operational weight kg	Unit dimensions in mm			Sound level dB(A)	SEPR
					L	W	H		
PAC 120 S-A	195	55	38	4000	4310	1870	2260	82	6.79
PAC 120 M-A	253	75	40	4150	4310	1870	2260	83	7.15
PAC 120 L-A	324	75	50	4550	4310	1870	2260	84	7.37
PAC 120 E-A	439	110	54	4800	4560	1870	2360	86	7.57
PAC 151 S-A	509	132	55	5600	3800	2070	2360	88	8.22
PAC 151 M-A	594	160	59	5700	5700	2070	2360	89	8.09
PAC 151 L-A	755	200	75	6200	3940	2090	2450	89	8.29
PAC 193 S-A	865	200	81	6400	4600	2350	2450	82	8.54
PAC 151 E-A	914	200	80	6350	4600	2090	2450	90	8.34
PAC 193 L-A	1156	315	91	7000	5300	2350	2450	82	8.62
PAC 233 S-A	1571	355	167	11500	5500	2900	3200	83	9.38
PAC 233 L-A	2002	450	183	12500	6700	3000	3200	83	9.94
PAC 233 E-A	2479	560	211	15200	6700	3050	3400	84	10.51
PAC 283 S-A	2875	630	229	17000	7500	3400	3400	85	10.16
NSPAC 283 L-A	3596	800	350	20500	7300	3700	4500	83	
NSPAC 283 E-A	4367	900	391	25500	8500	3700	4700	83	
NSPAC 355 S-A	4516	1000	410	28000	8500	4000	4700	83	
NSPAC 283 X-A	4939	1000	450	30000	9100	4000	4700	83	
NSPAC 355 L-A	6180	1250	700	40000	10000	4000	6000	83	

Ethylene glycol 30%: inlet -2°C, outlet -8°C

Type	Capacity kW	E-motor kW	R717 charge kg	Operational weight kg	Unit dimensions in mm			Sound level dB(A)	SEPR
					L	W	H		
PAC 120 S-C	108	55	37	4000	4310	1870	2260	82	3.76
PAC 120 M-C	140	75	39	4150	4310	1870	2260	83	3.97
PAC 120 L-C	179	75	48	4500	4310	1870	2360	84	4.09
PAC 120 E-C	242	110	52	4700	4310	1870	2360	86	4.20
PAC 151 S-C	281	110	53	5550	3940	2070	2360	88	4.33
PAC 151 M-C	331	132	56	5600	3940	2070	2360	89	4.31
PAC 151 L-C	420	160	71	6100	3940	2090	2450	89	4.41
PAC 193 S-C	484	200	77	6250	4600	2350	2450	82	4.57
PAC 151 E-C	508	200	76	6200	4290	2090	2450	90	4.43
PAC 193 L-C	646	250	85	6750	5000	2350	2450	82	4.57
PAC 233 S-C	875	315	158	11250	5200	2750	3200	84	4.86
PAC 233 L-C	1102	400	170	12100	5800	2750	3200	84	4.87
PAC 233 E-C	1364	500	193	14700	6500	2800	3400	84	4.88
PAC 283 S-C	1587	560	206	16350	6700	3150	3400	86	4.89
PAC 283 L-C	1996	710	230	19000	7100	3700	3400	88	4.88
NSPAC 283 E-C	2412	900	374	24500	7300	3700	4500	84	
NSPAC 355 S-C	2525	900	380	26000	8000	4000	4700	84	
NSPAC 283 X-C	2752	1000	400	28000	8500	4000	4700	84	
NSPAC 355 L-C	3418	1200	600	38000	9500	4000	6000	84	

Condenser: water inlet 30°C, outlet 35°C.

The above data are only valid for the stated temperatures and operating conditions.

SEPR = Seasonal Energy Performance Ratio.

All data and nominal capacities kW at 3000 rpm.

60 Hz or VSD operation possible.

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

Compliance

All SABROE chiller units are fully compliant with appropriate major international design codes and the specifications laid down by the most common classification societies.

Approval in accordance with other technical requirements, specific national legislation or other classification societies' requirements is available on request.

All information is subject to change without notice.

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