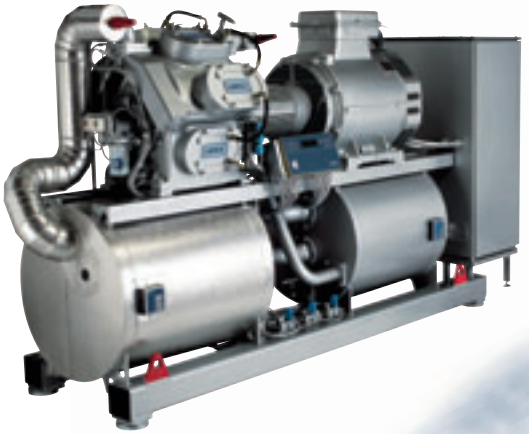
ChillPAC packaged ammonia chillers



Sabroe ChillPAC packaged ammonia chillers based on reciprocating compressors feature a completely new design. This new range of ChillPAC provides a number of outstanding advantages and benefits in cases where indirect cooling, future-compatible natural refrigerants and life cycle cost are important issues.
The ChillPAC design includes fully welded plate heat exchangers as well as pre-formed pipes. This minimises any risk of leaks and provides a much greater degree of safety and reliability.

The plate heat exchangers and other integrated components mean that only a minimum of space is required for a complete Sabroe ChillPAC unit. This is largely because of the shell-and-plate evaporator design with built-in liquid separator and the shell-and-plate condenser design with built-in oil separator and high-pressure float expansion valve system.

Comprehensive series of chillers

The standard Sabroe range of ChillPAC ammonia chillers comprises 15 models that have been optimised to meet the requirements experienced in the great majority of situations. Solutions customised to meet individual needs are also available.
All chillers are supplied with Y/D starters or with variable-speed drive as a standard feature of a modern chiller.
All chillers are supplied with PED approval (European Pressure Equipment Directive). Other approvals are available on request.

Significant advantages

Customer benefits

- The standard ChillPAC range is factory-assembled and based on world-renowned reciprocating compressor products developed and optimised by Sabroe.

→ • Full advantage of well-tested Sabroe standard solutions that feature top-quality industrial components. This improves safety, ensures maximum reliability and low operating costs, and provides easy access to service and parts worldwide.

- The Sabroe ChillPAC design is based on the flooded evaporating system, using ammonia only. This provides very high COP, outstanding part-load performance and no limitations on the condenser pressure because the condensing temperatures make full use of the ambient temperature differences.

→ • Ammonia is the most environmentally acceptable and future-compatible refrigerant currently available. Exceptional reliability and very low energy consumption also result in the lowest possible life cycle costs.

- The completely new ChillPAC compact design is unique compared with conventional chiller designs. The ChillPAC has lower weight, uses less than half the amount of refrigerant and less than half the footprint. In terms of size, it is equal to or smaller than HFC/HCFC chillers.

→ • Significantly reduced installation costs due to smaller size, and additional energy savings achieved from the low differential pressure on the secondary side. Provides you with an easy, safe and cost-effective upgrade path for when you are ready to replace your existing HCFC chillers.

- All Sabroe ChillPAC units are operationally tested with refrigerant at the specialist End of Line (EOL) Test Centre before dispatch. A capacity test is also available as an option.

→ • Factory testing confirms specified performance and ensures trouble-free on-site start-up and operation as soon as the refrigerant charge has been added and utility connections made. Shorter, safer start-up and commissioning periods reduce overall costs significantly.

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Selection guide – packaged ammonia chillers

Water chillers (Water: inlet 12°C, outlet 7°C)

Type	Cooling capacity	E-motor	R717 charge	Dry weight	Dimensions			Sound level *)
					L	W	H	
	kW	kW	kg	kg	mm	mm	mm	dB(A)
CPAC 104S-A	233	45	14	2301	2900	1000	2000	78
CPAC 104L-A	294	55	15	2410	2900	1000	2000	79
CPAC 106S-A	346	75	17	2727	2900	1000	2000	79
CPAC 104E-A	357	75	17	2652	2900	1000	2000	79
CPAC 106L-A	440	90	21	2950	2900	1000	2000	80
CPAC 108S-A	464	90	22	3060	2900	1000	2000	80
CPAC 106E-A	536	110	24	3225	3100	1000	2000	81
CPAC 108L-A	588	110	26	3526	3100	1000	2000	82
CPAC 112S-A	690	132	29	4315	4000	1000	2200	82
CPAC 108E-A	715	132	30	3880	3300	1000	2000	82
CPAC 112L-A	878	160	36	4738	4500	1000	2200	83
CPAC 116S-A	921	200	37	5044	4500	1000	2200	83
CPAC 112E-A	1066	200	41	5196	4600	1000	2200	83
CPAC 116L-A	1167	250	45	5556	4700	1000	2200	83
CPAC 116E-A	1398	315	49	5878	5000	1000	2200	84

Brine chillers (Ethylene glycol 30%: inlet -4°C, outlet -8°C)

Type	Cooling capacity	E-motor	R717 charge	Dry weight	Dimensions			Sound level *)
					L	W	H	
	kW	kW	kg	kg	mm	mm	mm	dB(A)
CPAC 104S-C	116	37	13	2253	2700	1000	2000	78
CPAC 104L-C	150	55	15	2378	2900	1000	2000	79
CPAC 106S-C	172	55	15	2505	2900	1000	2000	79
CPAC 104E-C	185	75	17	2586	2900	1000	2000	79
CPAC 106L-C	222	75	18	2701	2900	1000	2000	80
CPAC 108S-C	227	75	18	2766	2900	1000	2000	80
CPAC 106E-C	272	90	20	2866	2900	1000	2000	80
CPAC 108L-C	295	110	22	3091	3100	1000	2000	82
CPAC 112S-C	339	110	24	3696	3800	1000	2200	82
CPAC 108E-C	363	132	25	3523	3300	1000	2000	82
CPAC 112L-C	440	160	29	4290	4200	1000	2200	83
CPAC 116S-C	450	160	29	4390	4200	1000	2200	83
CPAC 112E-C	544	200	35	4733	4300	1000	2200	83
CPAC 116L-C	586	200	37	4898	4300	1000	2200	83
CPAC 116E-C	718	250	43	5322	4300	1000	2200	83

Condenser: water inlet 30°C, outlet 35°C
Motor: 3 x 400V, 50 Hz, 1460 rpm
The above data are only valid for the stated temperatures and operating conditions.

Capacities are nominal.
A = The A after the type designation stands for air conditioning application (Temperature above 0°C)
C = The C after the type designation stands for brine chiller application (Temperature below 0°C)

*) Mean sound pressure levels in free field over reflecting plane, distance at 1 m. All data are based on sound power measurements made according to ISO 9614-2

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