AMMONIA AIR COOLED CHILLER

AIR COOLED LIQUID CHILLER USING HALLSCREW AMMONIA SEMI-HERMETIC COMPRESSOR TECHNOLOGY

J&E Hall International

AMMONIA AIR COOLED CHILLER

AMMONIA
LOW CHARGE

Air-Cooled liquid chiller using HallScrew semi-hermetic ammonia single-screw compressor technology

Designed for reliability, quality and performance, minimising energy consumption and offering a wide range of cooling capacities.

Cooling capacity for SINGLE compressor units:	Cooling capacity for DUAL compressor units:
350 to 480 kW in high temperature	700 to 960 kW in high temperature
195 to 275 kW in medium temperature	390 to 550 kW in medium temperature
100 to 130 kW in low temperature	200 to 260 kW in low temperature

Applications

- For cold store cooling between -18°C and +15°C

- For process cooling between -25°C and +7°C

- Comfort cooling

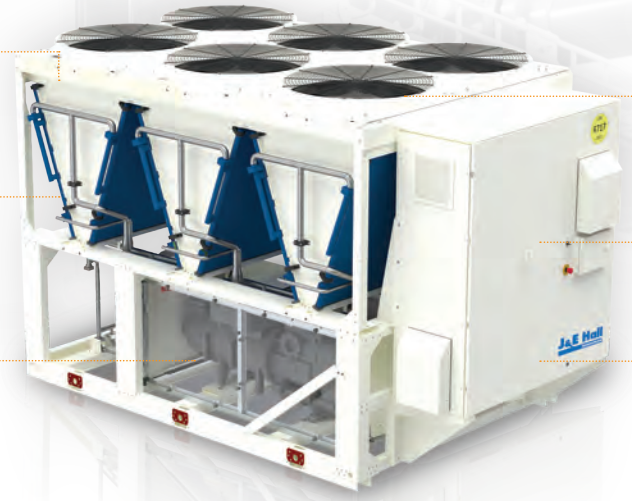
Features

INVERTER TECHNOLOGY

ACOUSTIC HOUSING
- Optional
- Helps reducing noise levels
- Protects from low temperature winter conditions

STAINLESS STEEL PIPEWORK
- Robust
- Lightweight
- Highly resistant to external corrosion agents
- Highly reliable for ammonia containment

HALLSCREW SEMI-HERMETIC AMMONIA COMPRESSOR
- Single screw compressor technology



CONDENSER WITH VARIABLE SPEED-CONTROLLED LOW NOISE FANS
- Helps to optimise the chiller power consumption and operating conditions

AMMONIA LEAK DETECTION SYSTEM FOR ACOUSTIC HOUSING AND CONTROL PANEL

MOUNTED WITHIN THE CONTROL PANEL
- Refrigerant cooled variable speed drive
- Compact micro-controller
- Cloud based monitoring
- Touch screen interface

Benefits

HallScrew semi-hermetic ammonia compressor
- Design eliminates the weakest leakage point – shaft seal
- Does not require motor-compressor shaft alignment or transition piece
- A single screw with single star compressor has minimum moving parts
- Easy to refurbish

Reliability
- Designed to minimise potential leak points
- Simple mechanical design with reduced pipework and valves
- Micro-controller designed to withstand mechanical vibration and ambient conditions

Proven technology
- Screw compressors have been widely used with ammonia on medium to large size distribution centres, food & beverage process facilities, pharmaceutical and petrochemical projects
- Micro-channel condensers with variable speed-controlled fans are widely used on outdoor chillers to save space, improve performance and reduce ammonia charge
- Shell and tube heat exchangers to chill the water are also widely used in the chiller industry, either for process cooling or comfort cooling
- Electronic expansion valves have made it possible to adequately feed liquid ammonia for compressor cooling and the main cooler. Now these are widely used in ammonia systems

Low noise
- The condenser fan profile limits the noise level when operating at high speed

Protection
- Leak detection system protects the equipment from operating if there is an ammonia leak. An alarm alerts the end user or maintenance engineer there is a leak

Available optional maintenance and monitoring packages

Environmental
- Ammonia is environmentally conscious with no ozone depleting and global warming potential

Technical Specifications

Model	No. Fans	Size	Length x Width (m)	Weight (kg)
ACCN31 Mono-compressor	6	S	3.8 x 2.3	3870
	6	L	3.8 x 2.3	3870
	8	L	4.9 x 2.3	4500
ACCN31 Dual-compressor	12	S	7.1 x 2.3	7740
	12	L	7.1 x 2.3	7740
	16	L	9.2 x 2.3	9000

Performance Data

Model	HIGH* Water +12°C to +7°C Ambient Air +35°C		MEDIUM EG 35% -2°C to -8°C Ambient Air +35°C		LOW EG 51% -19°C to -25°C Ambient Air +35°C	
	Cooling Capacity (kW)	Power Input (kW)	Cooling Capacity (kW)	Power Input (kW)	Cooling Capacity (kW)	Power Input (kW)
ACCN31 Mono-compressor	350	130	195	115	100	100
	-	-	275	155	130	120
	480	180	-	-	-	-
ACCN31 Dual-compressor	700	260	390	230	200	190
	-	-	550	310	260	240
	960	360	-	-	-	-

* No Economiser

DX U-BUNDLE SHELL & TUBE EVAPORATORS CONDENSER: MODULAR V / MICRO-CHANNEL COIL / BRUSHLESS FAN EG CONCENTRATIONS ARE BY WEIGHT

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