



Aquachill

PRODUCT RANGE

NH₃

LOW CHARGE

SINGLE SCREW

EC FAN

HEAT RECLAIM





AN INTRODUCTION TO...

Aquachill packaged air cooled chillers

Aquachill is a standard chiller range which offers superior efficiency with high COPs under extreme operating conditions.

Reliability, quality and performance are key to Aquachill's success, ensuring it meets the most stringent requirements for use with cold stores, ice-rinks and process cooling.

The chillers boast HallScrew open drive single screw compressors with integral oil separator for outstanding reliability. Operating with NH₃, the range is designed to minimise energy costs whilst maximising cooling capacities.

Aquachill is available in three different efficiency levels, each with low or ultra-low noise levels and with additional energy saving options including heat reclaim from the oil and refrigerant discharge.

- ▶ **Duties from 219kW to 1,035kW**
- ▶ **Proven NH₃ technology**
- ▶ **Low refrigerant charge**
- ▶ **Outstanding reliability**
- ▶ **Superior efficiency**
- ▶ **Design flexibility**
- ▶ **Engineered for quiet operation**



The Environment

Aquachill meets today's demand for products that have limited impact on the environment. The chiller range uses only NH₃ as a refrigerant which is a natural gas with Zero GWP.

The HallScrew compressor, together with a direct expansion evaporator, enables the refrigerant charge to be as low as 0.1 kg/kW compared to around 0.3 kg/kW for flooded systems used by other manufacturers.

As the complete refrigerant circuit is manufactured under strict control within our factory any possibility of leakage in operation is minimised. Low noise levels are achieved by the use of low noise EC fans and acoustically treated compressor housing*.

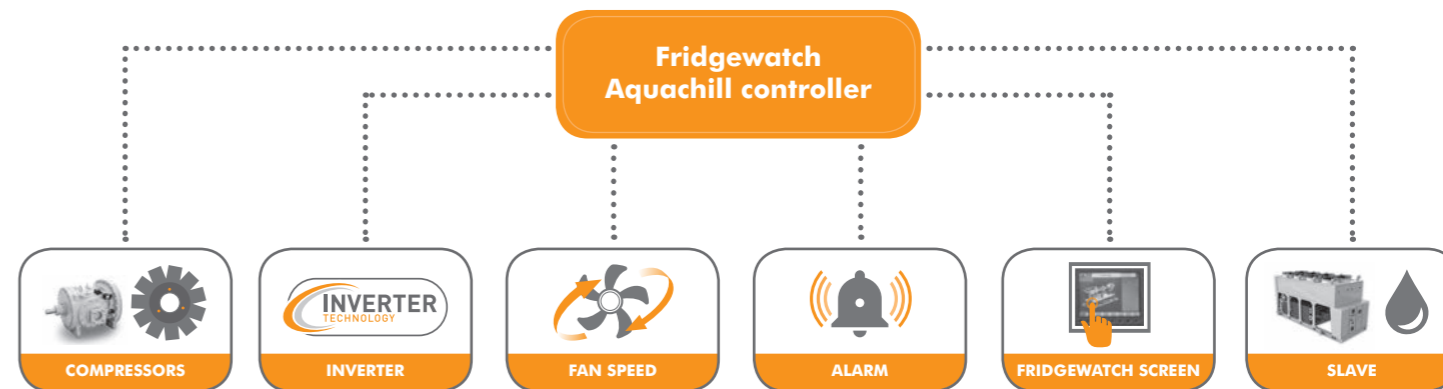
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Highly Reliable

J & E Hall has manufactured bespoke chillers for over 30 years operating on NH₃, Propane, CO₂ and many other refrigerants. Our experience in chiller technology gives design inherent reliability.

At the heart of Aquachill is the single rotor HallScrew compressor which is renowned for its reliability, minimal moving parts and a design life of 100,000 hours which equates to 25 years in a typical application.

FRIDGEWATCH AQUACHILL



Energy Efficiency

All compressor motors are inverter driven which minimises usage at part load through accurate load matching to the system.

Varying condensing temperature takes advantage of changes in ambient temperature and ensures that optimum compressor and motor power is obtained.

Each refrigerant circuit is complete with economiser to ensure that optimum efficiency is maintained and high efficiency EC fans are also fitted to the condenser.



Controllability

Aquachill is designed to match the system load accurately and efficiently through the use of the latest control technology.

The control and management of the HallScrew compressors and inverter motor drives through a PLC based system ensures optimum system balancing and operation. A touch screen display and integration into the plant's BMS system gives maximum control and monitoring together with slave unit operation and full alarm facility.



Application Range

Application range	-30°C to +10°C	
Low temperature	(fluid -15°C to +20°C)	219kW to 382kW
Medium temperature	(fluid -5°C to -10°C)	417kW to 600kW
High temperature	(fluid +12°C to +7°C)	567kW to 1,035kW
Three efficiency levels per application	Standard Medium High	
Two acoustic levels (unit dependant)	73 – 75 dB(A) 62 – 66 dB(A)	
Partial and full heat recovery options available		

Performance Tested

Aquachill has been tried and tested on applications from aircraft carrier to petrochemical process cooling where reliability and quality are paramount. Aquachill's reliability and performance has been proven time and time again.

Total Support

J & E Hall offer an onsite facility to start up and fine tune our chillers. Experienced engineers are readily available to check and balance installed refrigerating plants and systems. We also offer a complete range of spare parts directly from our comprehensive stock holding.

Proven Capability

Food distribution centre, UK

- ▶ R22 plant upgrade
- ▶ Two Aquachill units
- ▶ 1,338 kW cooling capacity
- ▶ Temperature range between -3°C and -7°C

Meat processing plant, Poland

- ▶ New build
- ▶ One Aquachill unit
- ▶ 424 kW cooling capacity
- ▶ Temperature range between -3°C and -6°C



Hansard Gate, West Meadows, Derby, DE21 6JN

T: 01332 253400

E: marketing@jehall.co.uk

🐦 @jehfridge

www.jehall.co.uk



Certificate no 07147 EMS 53005

