

Azanechiller 2.0

The natural chiller choice

Cooling capacities from 40 TR to 340 TR
and fluid temperatures from 14°F to 50°F



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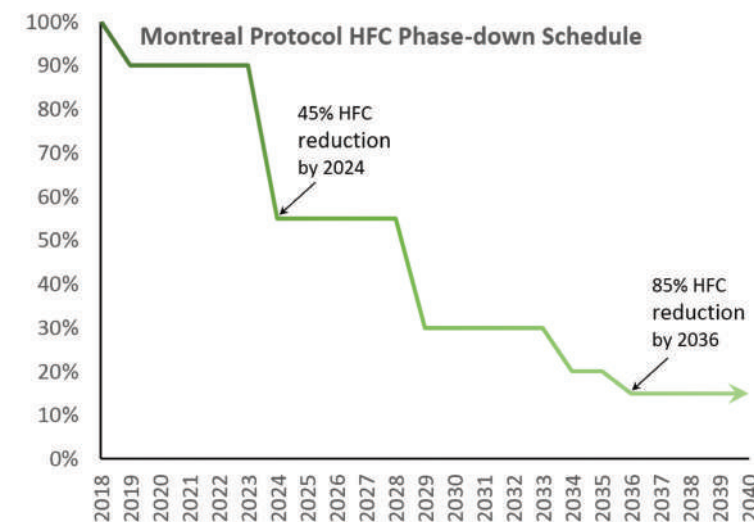
The state of the art Azanechiller 2.0 is the latest iteration of the Azanechiller and combines exceptional efficiency, quality components, and performance monitoring to ensure the lowest total cost of ownership. The Azanechiller 2.0 delivers the benefits of industrial-quality ammonia refrigeration in a convenient and factory-built package so that the uncertainty of synthetic HFC refrigerants can be easily avoided with a future-proof solution.

The Azanechiller 2.0 is an excellent solution and the natural choice for temperature controlled storage, food production, process cooling, HVAC, and more. Because it uses a very low charge of ammonia in an outdoor package, it offers an extremely safe option that is easy to install and does not require a machinery room.



The Need for Evolution

The Azanechiller 2.0 has been developed specifically as a result of stringent new legislation to minimize the environmental impact of chiller operation while also improving plant efficiency.



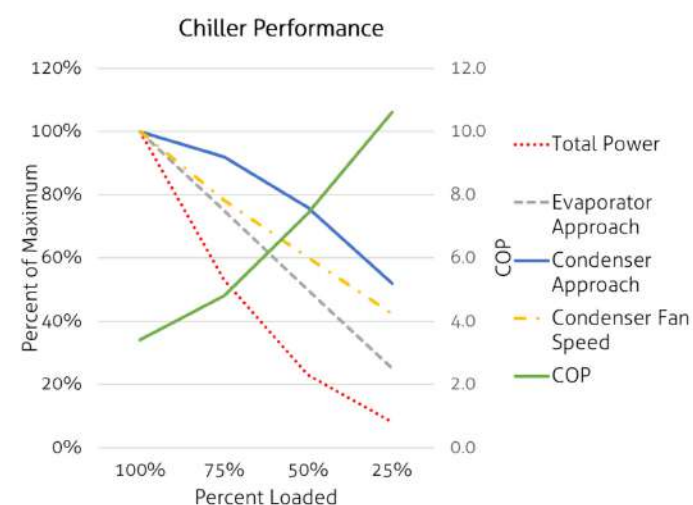
HFC Phase-down & Low Charge Ammonia

The Montreal Protocol phasing out R-22 incorporated HFCs as controlled substances under the Kigali amendment in 2016. This sets the direction toward HFC phase-down on a global scale.

Since the Azanechiller uses ammonia, (R717) which has no Ozone Depleting or Global Warming characteristics, it represents a future proof solution immune to the uncertainty of future HFC gas costs and availability.

Improved Performance

The Azanechiller 2.0 has also been designed to assure that it remains ahead of the curve of ever-increasing efficiency standards. Per AHRI 550/590 parameters, integrated part load values in the range of 23 MBH/kW are achievable when ammonia is paired with the efficient design and operation of the Azanechiller.



Core benefits

Exceptional Efficiency

The Azanechiller 2.0 range has set a new benchmark in chiller efficiency by integrating variable speed reciprocating compressor technology with EC fans, close evaporator approach design and advanced controls. Azanechiller 2.0 delivers efficiency that is at least 20% higher than competing HFC chiller technology.

This allows the units to deliver immediate reductions in energy costs for end users after installation.

Low Refrigerant Charge

The use of high side control and low refrigerant charge evaporator technology ensures optimum efficiency and eliminates the need for a separate suction vessel. This results in refrigerant charges as little as 1.4 lb/TR.

20+ Year Operation

The combination of using quality equipment with robust industrial construction means a 20+ year chiller life expectancy.

Key Features Include:

- The use of ammonia as a refrigerant - most efficient, and it's future proof!
- No machinery room required
- Flooded PSHE evaporator with negligible superheat
- Close-coupled evaporator with very little suction losses
- IPLVs in the 23 MBH/kW range with part load COPs as high as 11.8
- EC variable speed condenser fan motors
- Stainless tube and epoxy coated fin condensers
- Floating suction pressure as load allows
- Floating head pressure to 50°F or lower as ambient allows
- Remote monitoring capability for efficiency sustainability
- PLC control for fully unattended operation
- Stainless steel UL electrical control panel with Allen Bradley PLC
- Fully automatic oil recovery
- 360 degrees of convenient maintenance access
- Option for free heating from auxiliary ammonia condenser
- Option for on-board process pumps to save total project costs

Manufactured in the US

Azanechiller 2.0 is manufactured in the US by Azane Inc., the US's leading low charge ammonia solutions provider.

Market Flexibility

The family of pre-engineered chillers is suitable for a wide variety of end user markets, including temperature controlled storage, food processing, beverage production, process cooling, HVAC, data centers, ice rinks, pharmaceutical and more.



"When we set out to develop the next generation of Azanechiller, we knew we needed to provide an unprecedented level of efficiency without sacrificing the quality and long-term reliability that our customers have come to expect.

The Azanechiller 2.0 technology represents a new era for packaged ammonia systems in the industry."

Caleb Nelson, VP - Business Development



Features & Components

Azanechiller 2.0 is a complete refrigeration package integrating high quality, industrial components with our customized control package on an Allen Bradley PLC to offer unrivalled efficiency, performance, reliability, and quality.

The packaged system makes installation simple and also allows for systems to be easily relocated on-site, to a different facility, or even re-sold.



Stainless Steel Control Panel
For extended life in outdoor operation.

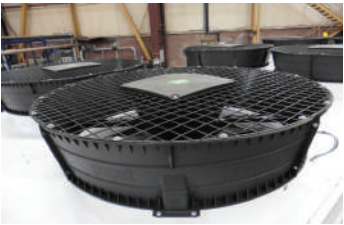
Efficient Allen Bradley PLC Control
PLC control provides optimised performance, based on ambient temperature and cooling load.
Touchscreen HMI. Remote access and condition based monitoring are available through broadband.



Compressor
Variable speed, reciprocating compressor with lowest power consumption providing linear capacity from 100% to 13% (depending on model).
Single or twin compressor options available.
Enhanced compressor technology delivers 25% longer service intervals. Intelligent overhaul scheduling via PLC reduces maintenance costs for part load operation.

Flatbed Condenser
Stainless steel tube condenser for long life. Full perimeter maintenance access.

Steel Pipework
Fully welded steel piping for long life and leak tight operation.



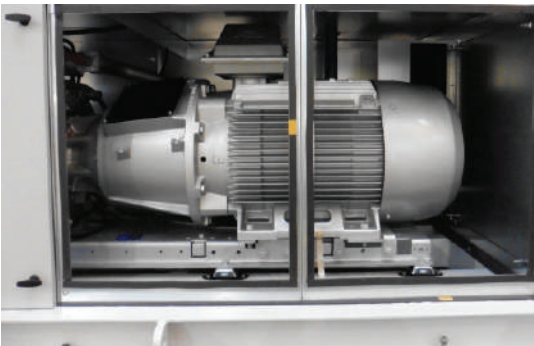
Variable Speed fans
EC variable speed fans with optional Axitop diffusers for low fan power and improved air flow.



Heat Exchanger
Fully welded plate and shell heat exchanger utilized as combined evaporator and suction separator. High integrity design, giving low refrigerant charge and minimizes risk of leakage.

Chiller Pumps
Optional on-skid pumpset.

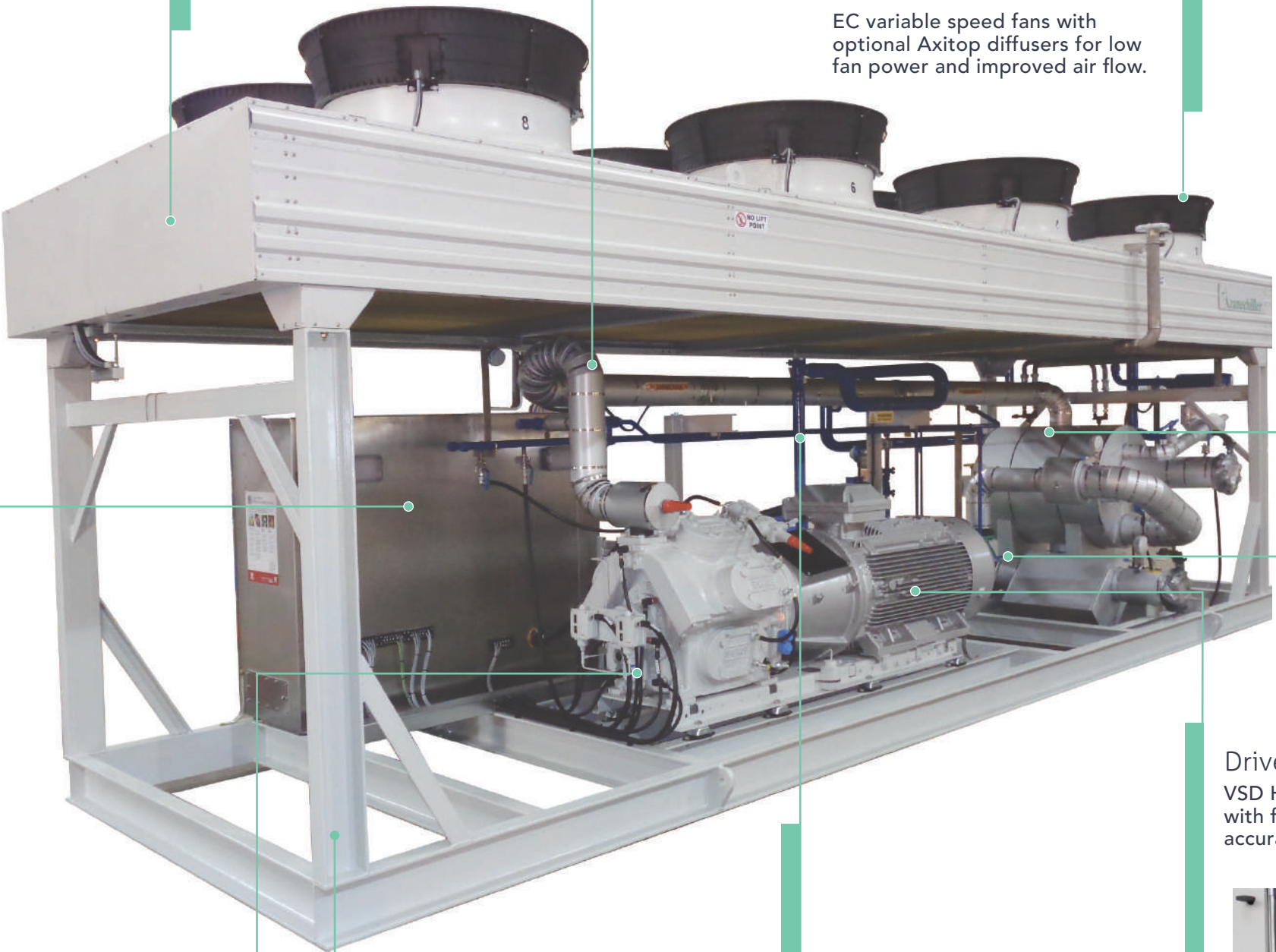
Drive Motor
VSD High efficiency IE3 drive motor with flange mounting to ensure accurate alignment.



Heat Recovery
Optional heat recovery from ammonia hot gas system.



Steel Baseframe
Channel section steel frame gives rigid construction and long life.



LOW CHARGE AMMONIA



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