



Oil-Free Air Cooled Chillers

XNC500/XNC600

500 to 600 Tons
(1.8 MW to 2.1 MW)

XNChiller Air-Cooled Chillers: A Solution for Data Center Efficiency

The rise in demand for digital services drives the rapid growth of data centers. However, climate change, decarbonization efforts, and increasingly powerful computers present new challenges, requiring more efficient cooling solutions. Productivity and profitability hinge on effective server cooling, with any downtime potentially causing significant financial losses. Reliable cooling is crucial, making **XNChiller's** air-cooled chillers a preferred choice due to their exceptional performance, reliability, low maintenance, and high energy efficiency, ensuring optimal conditions and minimizing downtime.

Top Reasons our Air-Cooled Chillers Excel



Significant energy savings and **improved PUE** for data centers.



Reduced maintenance costs through simplified design.



Built with highest standard of **quality**.



750,000 s.f. of modern manufacturing space.



Free cooling delivers performance down to **0.025 kW/Ton**.



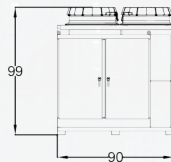
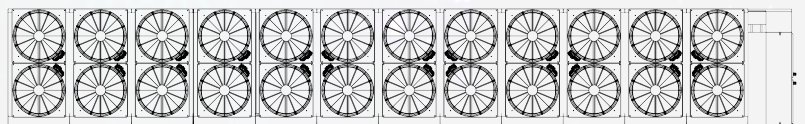
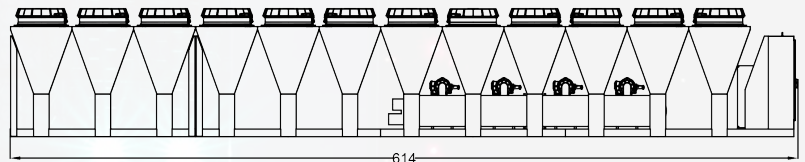
Reliable cooling across a wide ambient temperature range, from **+135°F** down to **-22°F**.





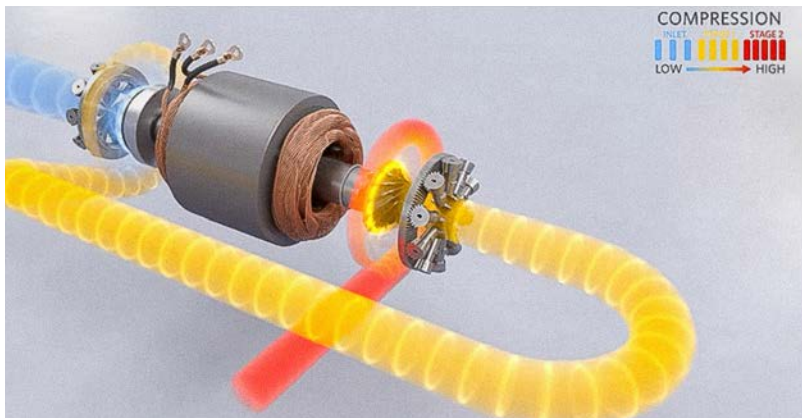
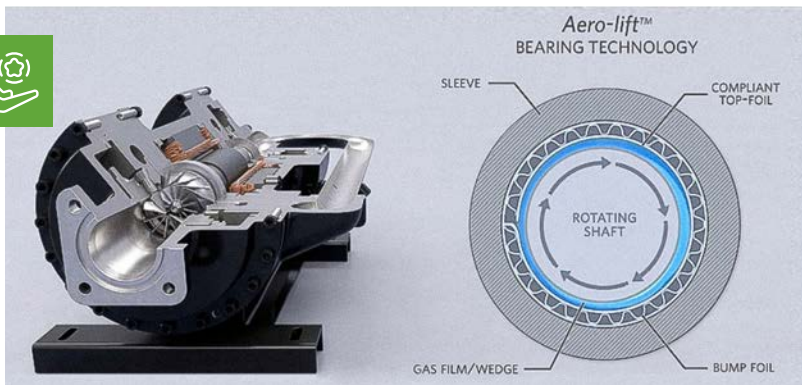
About XNChiller

XNChillers stand out in their class, offering oil-free Aero-lift™ technology that reduces operating costs and minimizes component count, leading to simplified maintenance. Their rapid startup capability ensures swift and power-efficient cooling of large spaces, even in hot climates, making them an exceptional choice for modern data centers.



Heart of Our Chillers

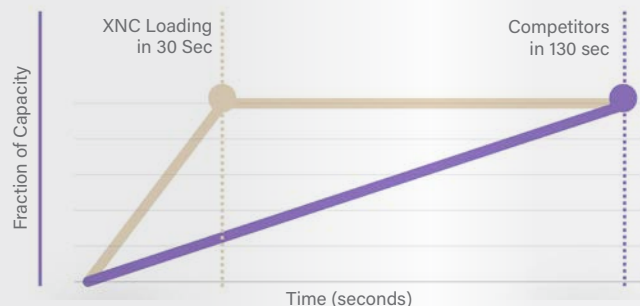
XNChillers utilize oil-free frictionless compressors with the revolutionary Aero-Lift™ bearing technology, offering an efficient, robust and reliable alternative to magnetic levitation. This design allows the compressor shaft to lift without external power, complex controls, or proximity sensors. It decouples the compressor from the VFDs for a wider operating temperature range and greater flexibility and scalability.



- Optimized for low power consumption, improving overall energy efficiency.
- High uptime and robust performance to ensure continuous cooling without interruptions.
- Highly engineered design reduces components and increases reliability.
- Simplified maintenance procedures and minimal downtime for servicing.
- No need for water, improving WUE.
- Integration with advanced control systems for optimized performance and energy savings.
- Rapid restart as shown on graph below

ADVANTAGES of Aero-lift™ Technology

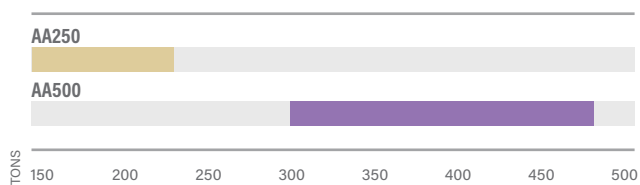
Aero-lift™ technology features a variable-speed frictionless rotor with two stages of compression, each with independent inlet guide vanes, for precise cooling load modulation in all conditions. The high-speed brushless permanent motor ensures superior efficiency and reliability across a wide range of conditions. Advanced control algorithms further boost efficiency, protect against surges, and allow real-time monitoring, making Aero-lift™ bearings durable and efficient for modern chillers.



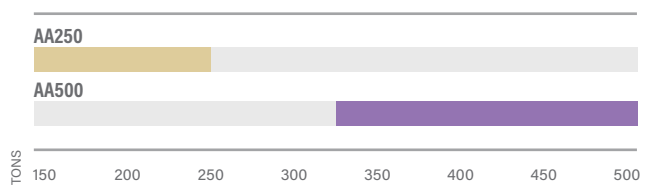
XNC500/XNC600 Specifications

MODEL	18 FAN	24 FAN
NOMINAL COOLING CAPACITY	500 Ton	600 Ton
POWER SUPPLY	400-480/3/60 V/Ph/Hz	400-480/3/60 V/Ph/Hz
DIMENSIONS (L X W X H, IN)	331 x 92 x 99	655 x 92 x 99

Standard Data Center Condition, 80-60° F water temp



Extended Data Center Condition, 100-80° F water temp



FEATURE	AERO-LIFT COMPRESSORS	OIL SCREW COMPRESSORS	OIL-FREE COMPRESSORS (MAGNETIC LEVITATION)
ENERGY EFFICIENCY	Top efficiency (+10% more in full load).	Decline over time.	High efficiency.
MAINTENANCE	No oil = less maintenance. Reduced parts = less failure.	Higher maintenance and upkeep costs due to oil management.	No oil = less maintenance. Capacitor replacement required.
RELIABILITY	Highly reliability at high-ambient and high humidity.	Reliable.	Reliability issues at high-ambient.
COST	Lower lifecycle cost.	Lower initial cost, but higher lifecycle cost.	High initial and comparatively higher maintenance costs.
REFRIGERANT-SIDE FREE COOLING	Up to 120°F chilled water inlet temperature without suction pressure regulation.	Requires modulating valve for suction pressure regulation, limiting lift and pressure ratio, while introducing additional point of failure.	

