SMARDT

INNOVATION ENGINEERED,
ENERGY OPTIMISED

AE Series
Air-Cooled Chiller



Cooling Capacity
40 - 500 TR
(140 kW - 1786 kW)

Available Refrigerants
R134a, R513A,
R1234ze, R515B



About Smardt

Global innovation in oil-free technology, products built for high-performance environments.



Smardt is a global leader in oil-free centrifugal chillers, delivering energy-efficient solutions with ultra-low lifecycle costs. With over 12,000 units installed worldwide, we support some of the most demanding environments from hospitals and commercial buildings to manufacturing and mission-critical facilities.

Our chillers are powered by magnetic bearing technology and a Global Controls Platform, offering reliability, low maintenance, and future-ready performance.

As buildings evolve, we continue to reduce energy usage, support global compliance requirements, and help customers move towards more sustainable operations.

AE Series

Air-Cooled Chiller

Smardt brings its extensive expertise in oil-free chiller development, sales, and service into the Smardt AE Series; a range of air-cooled chillers designed to deliver maximum reliability, outstanding efficiency, and the lowest total cost of ownership. With simplified installation, easy operation, and reduced lifetime costs, the AE Series is a smart choice for owners and operators seeking high performance with minimal complexity

Engineered for Peak Performance



READY TO SHIP.
READY TO PERFORM.

Oil-Free Operation - The Heart of AE Performance

Smardt's oil-free centrifugal technology, powered by advanced magnetic bearings and variable-speed drives, delivers industry-leading IPLV efficiencies far beyond traditional oil-lubricated chillers.

The proprietary magnetic bearing technology eliminates friction losses, mechanical wear, and the need for high-maintenance oil management systems.

The Turbocor compressor technology ensures the highest part-load efficiencies, with the rotor shaft and impellers levitated by a digitally controlled magnetic bearing system. Real-time feedback ensures precise, centered rotation, resulting in significant energy savings and extended service life without the efficiency degradation seen in oil-based systems.

Core Highlights

1. Efficiency & High-Lift Performance

- Industry-leading part-load efficiencies across the entire capacity range
- Optimized for high-lift applications and ambient temperatures up to 52°C (126°F)
- Optimized for High-LCHWT up to 30°C (For Data Center application)
- Stable and efficient operation under extreme climatic conditions

2. Durability & Reliability

- Advanced corrosion protection for coils, base frames, and critical components
- Multi-compressor redundancy ensures continuous operation and high up time

3. Quiet Operation

- Oil-free compressors operate up to 8 dBA quieter than screw chillers
- Low-noise ECM fans on all units for noise-sensitive installations

4. Ease of Use & Smart Operation

- Streamlined installation and intuitive operation
- Field-serviceable compressors simplify maintenance and reduce downtime
- Smardt Restart enables rapid system recovery—up to 20 seconds after power loss—eliminating the need for thermal storage (Optional)



Compressors & Refrigerants

The Smardt AE Series offers flexibility to meet diverse project requirements, utilizing standard Turbocor or high-lift oil-free compressors. Both compressors are compatible with R134a or low-GWP R513A, R515B and R1234ze** refrigerants, with built-in variable frequency drives (VFDs) for enhanced efficiency at part-load.

- **TTS & TGS:** Optimized for standard applications
- **TTH & TGH** High-lift performance for hot, dry climates

***R1234ze refrigerant is not available for the North American market*



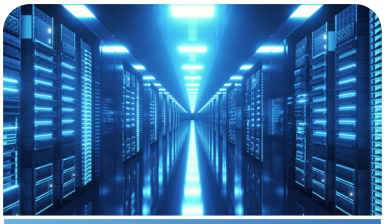


Applications

Engineered for critical and continuous-load environments, the AE Series is ideal for diverse industry segments including:



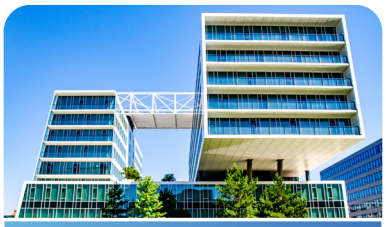
Commercial Buildings



Data Centers



Pharmaceuticals



Hospitals



Higher Education



District Cooling



Hotels & Retail



Airport & Transportation

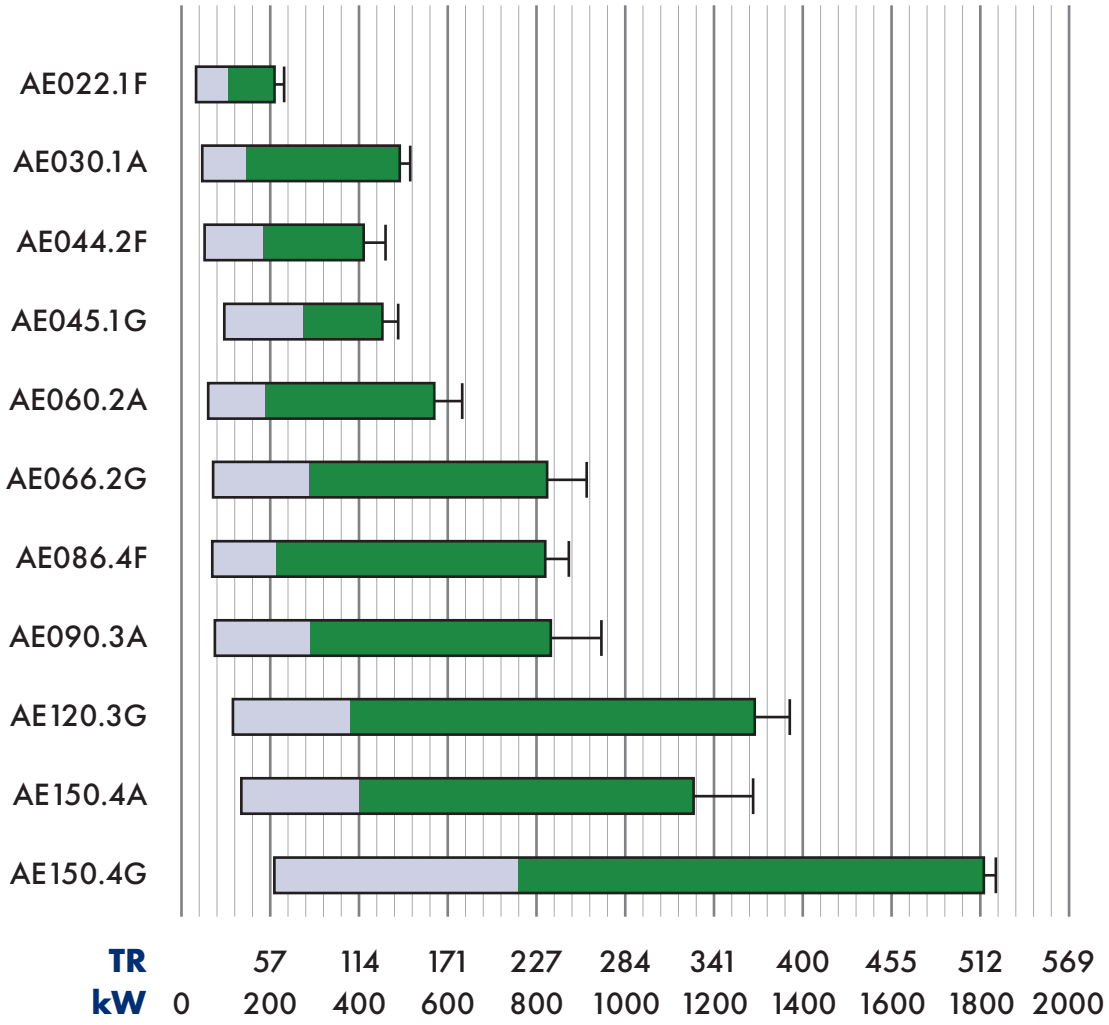


Manufacturing

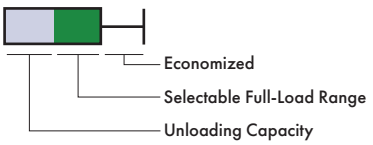
Delivering high efficiency, reliability, and long-term value, the Smardt AE Series supports the needs of energy-conscious plant owners and operators across diverse industries.

Representative Models

Smardt can customize your AE Design Series chiller to meet your project's needs and specifications. The models included in this capacity chart are considered representative of the AE Design Series, but selection is not limited to these specific models or refrigerants. Your Smardt representative can provide capacity data for your project.

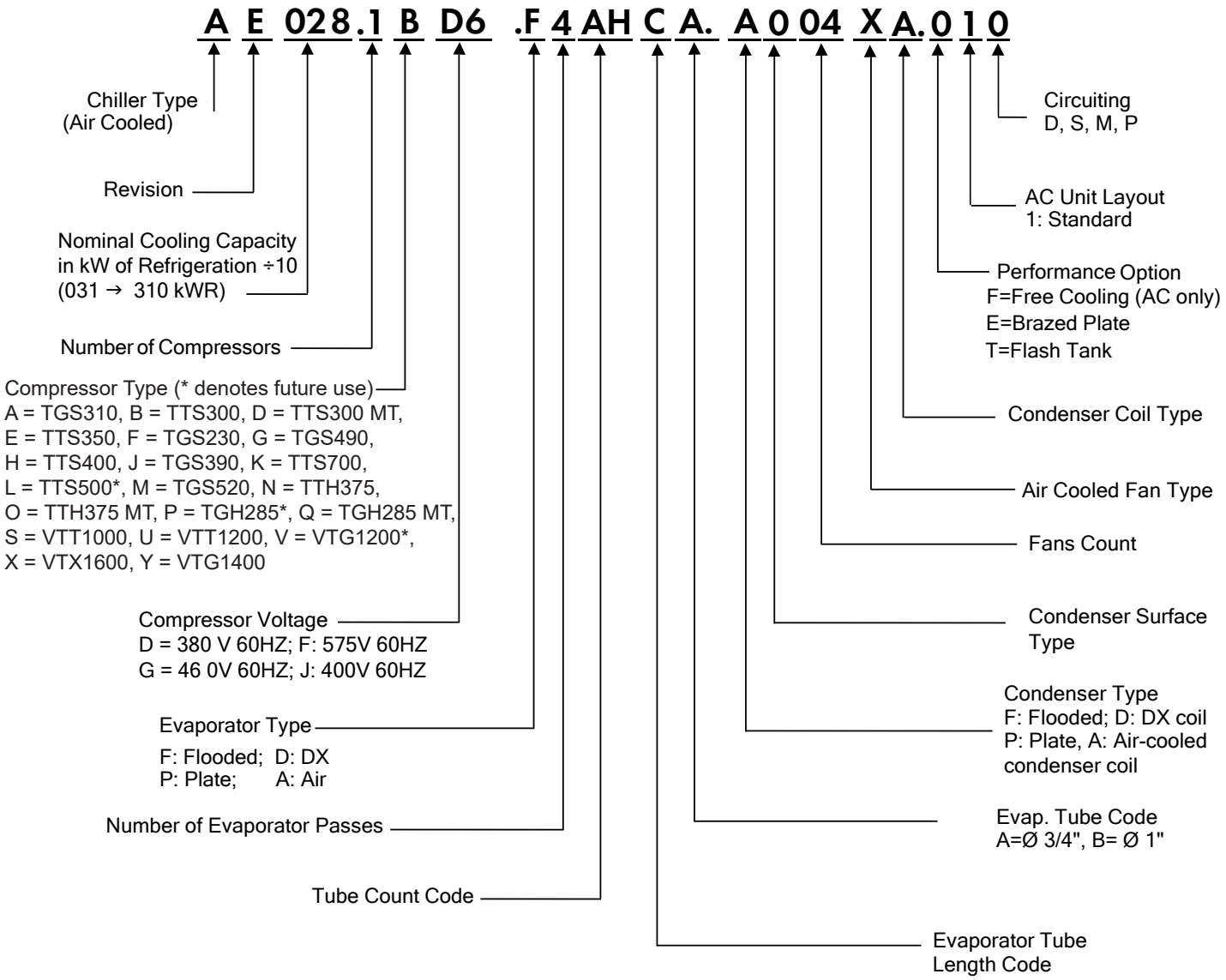


Cooling Capacity TR (kW)



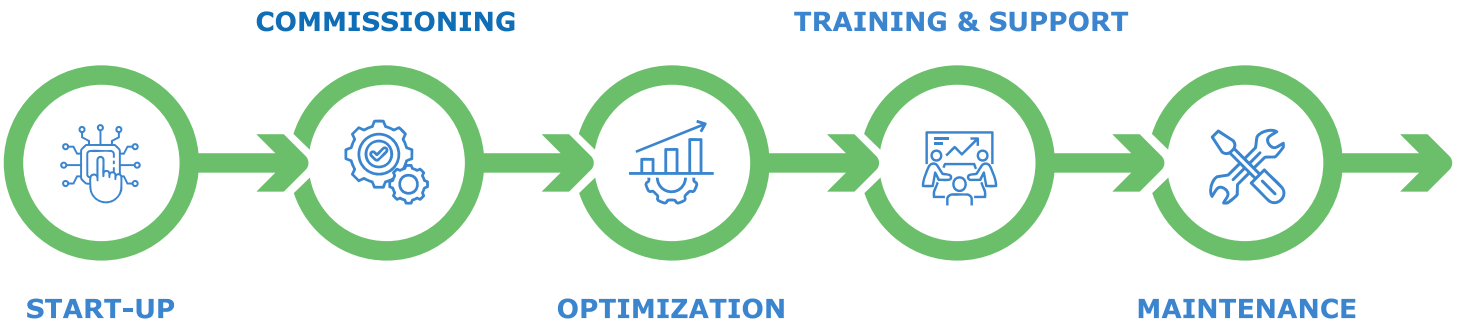
Note: Available cooling capacity will vary with operating conditions and chiller configuration. Capacities shown are based on standard AHRI conditions.

Model Nomenclature



Driving lifecycle performance

Smardt delivers a comprehensive suite of services designed to maximize the performance, reliability, and longevity of your HVAC systems. With global experience across more than 12,000 chiller installations, we support customers throughout the entire equipment lifecycle from start-up to optimization and beyond.





Core Benefits

- Improved system reliability
- Reduced operational risks & costs
- Regulatory & sustainability compliance
- Enhanced energy efficiency

Process-driven optimization

We help you get the most from your central plant systems with a data-driven approach that cuts energy use, lowers costs, and boosts performance.

It starts with an energy audit to pinpoint inefficiencies, followed by tailored solutions built around your plant's needs. Often this includes our **Central Plant Energy Conservation System** (CPECS) a smart platform that dynamically manages equipment for maximum efficiency.

From assessment to full integration, we deliver seamless projects backed by proven results in commercial, institutional, and mission-critical facilities. The outcome: measurable savings, stronger reliability, and greater visibility supporting your efficiency and sustainability goals.



System Capabilities

- Optimized energy performance
- Enhanced system control & transparency
- Lower operating costs
- Improved reliability with seamless execution