

PRODUCT OVERVIEW



TW-CLASS WATER-COOLED CHILLERS *WE design series*



SMARTD
GLOBAL #1 IN OIL-FREE CHILLERS

T^W-Class Water-Cooled Chillers

The T^W-Class of chillers is Smardt's water-cooled chiller that utilize Smardt's oil-free magnetic bearing technology with Turbocor's TT/TTS series compressors. The T^W-Class WE series of chillers are available from 85-1600 TR and can be supplied in multiple configurations, which Smardt can customize per the requirements of your application.



A Smardt T^W-Class WE series chiller equipped with two compressors.

T^W-Class WE Series

Smardt has brought its extensive experience in oil-free chiller development, sales and service into designing the T^W-Class — a range of water-cooled chillers that deliver the highest level of reliability, outstanding efficiency and the lowest total cost of ownership.

T^W-Class chillers offer valuable benefits to owners and operators, such as ease of installation, simple streamlined operation and maintenance, and lower lifetime operating and maintenance costs. These advantages are the hallmark of Smardt chillers.

The WE series is our latest version of the T^W-Class water-cooled chiller.

Global Number One

Smardt is the industry leader in oil-free centrifugal chillers. Smardt pioneered oil-free centrifugal compressor technology to provide plant owners and operators a line of chillers that surpassed industry norms of lifetime performance, energy conservation (reducing operating expenses), streamlined maintenance, and ease of operation.

The largest oil-free chiller in the world is a Smardt chiller, and our oil-free chillers are installed in countries across the globe. This is why we are "the global number one" in oil-free chillers.

Oil-Free Operation

Smardt oil-free centrifugal compressors use magnetic bearings and a variable-speed drive to deliver IPLV efficiencies that far surpass those of conventional oil-lubricated centrifugal, reciprocating, scroll and screw compressors.

Smardt utilizes totally oil-free Turbocor technology, achieving the highest part-load efficiencies for our chillers and chilled water systems (including water-, air- and evaporatively-cooled applications).

Proprietary magnetic bearings replace conventional oil-lubricated bearings. This eliminates the high friction losses, mechanical wear, and the higher-maintenance oil management systems that are inherent with conventional compressor designs.

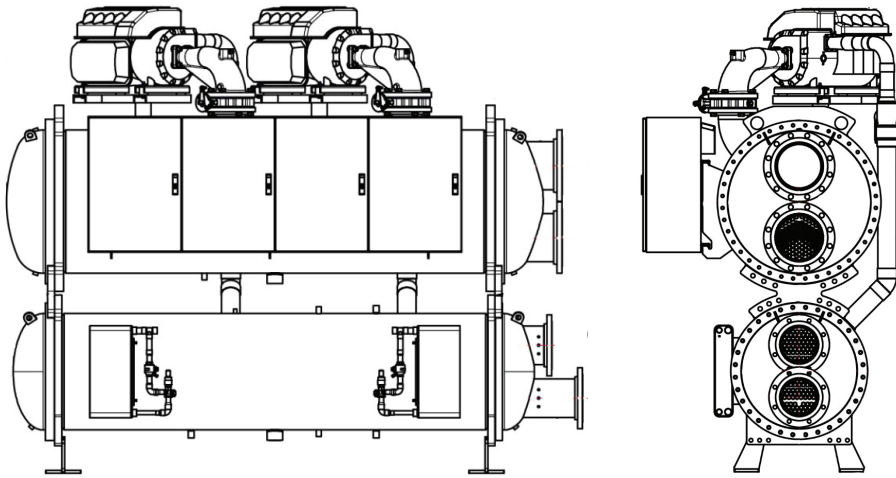
Turbocor's primary moving part (the rotor shaft and impellers) is levitated during rotation by a digitally controlled magnetic bearing system. Position sensors at each magnetic bearing provide real-time feedback to the bearing control system, 120 times each revolution, ensuring constantly centered rotation.

Smardt's oil-free operation yields chiller energy savings of 35 percent and more compared to standard chillers, while ensuring long-lifecycle reliability.

T^W-Class WE Series Chillers



T^W-Class WE Series Chillers



Side and front views of a Smardt T^W-Class WE series chiller customized in a stacked configuration to fit a smaller footprint within a plant room.

Turbocor TT Compressor

T^W-Class WE series chillers can be equipped with up to eight oil-free compressors. VFDs are built-in, and drives are internal to the machine. These oil-free compressors have low-sound output and use environmentally friendly R134a or R-513A refrigerants.

Configurations

Smardt can configure your T^W-Class WE series chiller to fit any footprint, with multiple barrel configurations available.

Applications

Energy conscious plant owners and operators want optimized performance with savings over the life of the chiller. Smardt's T^W-Class WE series chillers support critical-load applications in a variety of markets, including commercial, data center, pharmaceutical, hospital, higher education, district cooling, hotels, malls, and manufacturing.

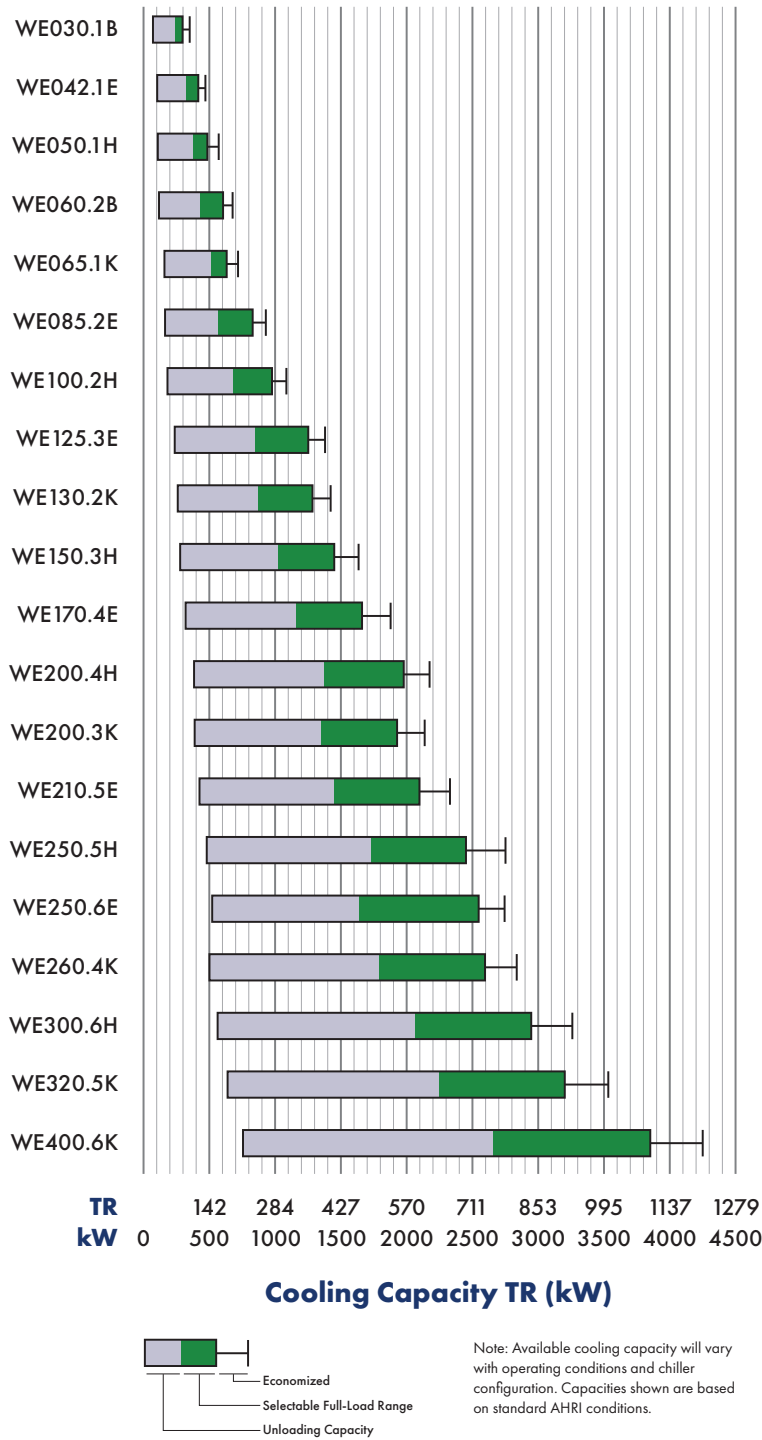
Highlights

- Largest capacity range in oil-free water-cooled chillers.
- Typically smaller footprint than chillers of comparable capacity.
- Responsive chilled water control under all conditions.
- Inbuilt redundancy with multiple compressors.
- Class leading part-load efficiencies, achieving optimum IPLV in total capacity range.
- Designed for ease of maintenance and serviceability, featuring field-serviceable compressors.
- Smardt quality, acceptance tested and pre-commissioned prior to delivery ensuring trouble-free commissioning and start-up on every project.

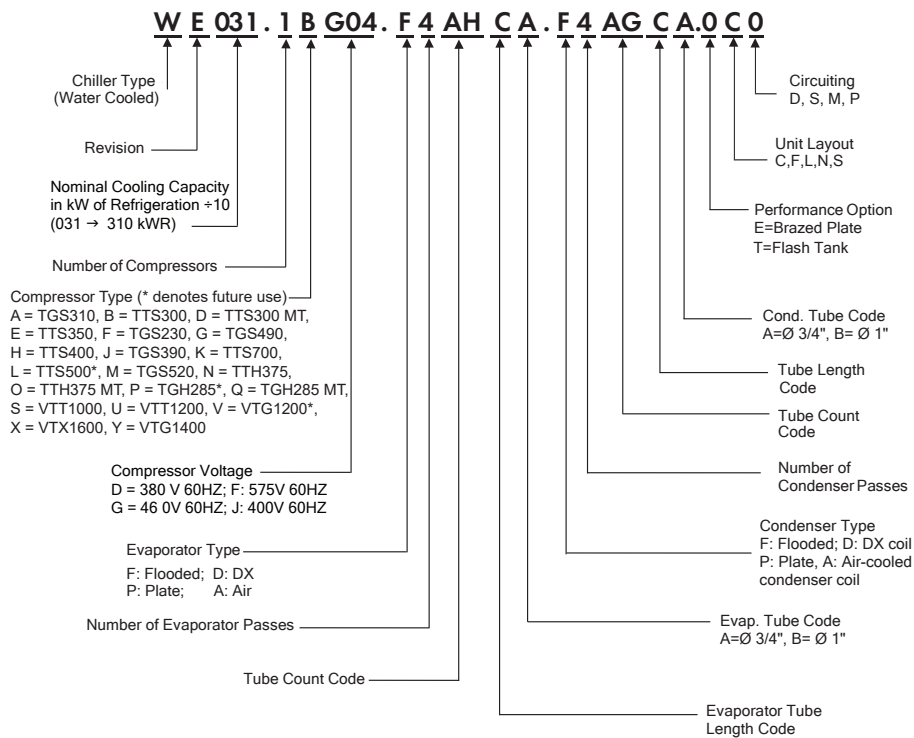
TW-Class WE Series Chillers

Smardt's TW-Class WE series of chillers with full-load capacities of units with R134a refrigerant, range from 85 TR up to 1140 TR (300 kW to 4000 kW)

Base Models



T^W-Class WE Series Chillers



Model nomenclature for the Smardt TW-Class WE series chiller.

About Smardt

The Smardt team shares more than 25 years' experience working with magnetic bearings and oil-free centrifugal chillers. Smardt was founded in 2005 by Turbocor founder, Roger Richmond-Smith. Accordingly, Smardt has worked with Turbocor technology longer than any other HVAC manufacturer in the world.

Global reach, single focus

The Smardt Chiller Group is both the pioneer and world-leader in oil-free centrifugal chillers, with production facilities in Canada (Montreal area),

Australia (Melbourne area), United States (Plattsburgh, New York), Germany (Stuttgart area), and China (Guangzhou).

Smardt service networks extend across the globe to monitor and support the world's largest installed base of oil-free high-efficiency chillers, with more than 9000 chillers installed globally.

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AMERICAS

Canada

Smardt Chiller Group Inc.

1800 Trans-Canada Highway
Dorval Quebec H9P1H7

T +1 514 426 8989

E sales.na@smardt.com

USA

Smardt Chillers Inc.

22 Colorado Street Bldg 2815
Plattsburgh NY 12903

T +1 518 324 5741

E sales.na@smardt.com

Brazil

Smardt-Transcalor

Av. Eldorado, 187 – Jardim Ruyce – Diadema
SP – Brasil – CEP: 09961-470

T +55 11 4351-4089 / 4351-3803

E contato@transcalor.com.br

ASIA PACIFIC

Australia

Smardt Chiller Pty Ltd

144 Colchester Road
Bayswater North VIC 3153

T +61 3 9761 7905

E sales.au@smardt.com

China

Guangzhou Smardt Chillers Manufacturing Co. Ltd

Mei Xing Industrial Park
No. 30 Dong Zhong Road ETDD Guangzhou

T +86 20 8205 7161

E sales.cn@smardt.com

TICA Smardt Hong Kong Ltd

11/F, The Bedford, 91-93 Bedford Road
Tai Kok Tsui, Kowloon, Hong Kong

T +852 2772 8448

E hk.info@smardt.com

Singapore

Smardt Chillers Pte Ltd

438A Alexandra Road #08-11
Alexandra Technopark 119967

T +65 6273 1120

E sales.as@smardt.com

EUROPE, MIDDLE EAST, AFRICA

Germany

Smardt-OPK Chillers AG

Bahnhofstraße 74
D73240 Wendlingen

T +49 7024 79429 0

E sales.eu@smardt.com

www.opk.de

United Kingdom

Smardt Chiller UK

10A Burrell Way, Thetford,
Norfolk IP24 3RW

T +44 1842 824830

E sales.uk@smardt.com

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All Smardt chillers are ETL-listed. Electrical safety for the life of the chiller is a fundamental requirement throughout the company. Smardt evaporators and condensers conform to the ASME pressure vessel codes.

Smardt G-Class energy efficiency performance is certified according to AHRI standard 551/591, as is confirmed by AHRI on its website www.ahrinet.org. The IPLV performance of its chillers always exceeds minimum levels set out by ASHRAE standard 90.1, CSA 743, Eurovent, Australia's MEPS, China's CRAA and others, usually by a very considerable margin. Smardt, in company with the majority of the HVACR industry's leading engineers, considers the use of full-load energy efficiencies to predict any chiller's actual year-round energy-efficiency under US comfort-cooling conditions to be totally misleading, and therefore discourages their use.

Witness tests can be arranged on appropriate notice and for an appropriate fee on Smardt's AHRI-certified test stands in Montreal, Canada; Melbourne, Australia; Plattsburgh, USA and Guangzhou, China.

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