

Process Cooling

PRODUCT OVERVIEW

► **CHILLERS**

► **UNITS FOR SIMULTANEOUS AND INDEPENDENT PRODUCTION OF HOT AND COLD WATER**

► **ROOFTOP UNITS**

► **AIR HANDLING UNITS**

► **CONTROL, SUPERVISION AND OPTIMISATION SYSTEMS**

CLIMAVENETA'S MISSION



Climaveneta's mission in process cooling is to provide high performing, resilient, and reliable cooling solutions in all production, conservation, storage, and logistics applications where cooling systems are critical for productivity and sustainability.

Climaveneta, as a brand of Mitsubishi Electric Hydronics & IT Cooling Systems Spa, is aware of the important role cooling systems play as well as of their peculiarities and challenges in each type of process application.

From the correct conservation of perishable goods and the effectiveness of specific manufacturing phases, to the potential economic and environmental benefits resulting from free cooling

and heat recovery, process cooling represents one of the strongest and most consolidated segments where Climaveneta units are employed. Vast experience, profound know-how, and the capability to combine the highest standards of manufacturing and operational quality with flexible, customized solutions are the key distinctive factors that make Climaveneta solutions the preferred choice in the most challenging and innovative process cooling projects worldwide.

Highest manufacturing quality standards & tailor-made solutions

All air units up to
100.000m³/h
air flow

Comprehensive portfolio of proprietary & patented technologies

Extensive range of chillers and multiuse units from 1 to 4.200kW

13 specialized manufacturing hubs

Worldwide distribution and service network

Dedicated products & specialised solutions

8 R&D and testing labs in Italy, China and India

- Sales network
- Manufacturing hubs or R&D labs





Climaveneta range of dedicated process cooling solutions are designed to deliver even in the most challenging projects:

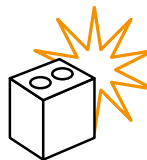


Smart Integration of the most advanced technologies



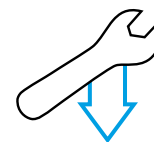
The extensive experience in the peculiarities of process cooling applications allows Climaveneta to offer the smartest combination of the most advanced technologies such as: full inverter concept, free cooling, heat recovery management, and evaporative cooling.

Highest industrial quality also in bespoke solutions



The Climaveneta approach, by combining the highly industrialized organisation with the widest range of versions, configurations and bespoke solutions, offers complete flexibility in the product proposal with all the advantages of the highest standards of product manufacturing and quality testing.

Complete Reliability



Thanks to high quality components and materials, and continuous improvement programmes aimed at cutting maintenance costs and ensuring 24/7 premium performance.

High Efficiency



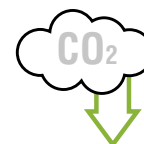
Guaranteeing that the HVAC system always runs at the highest efficiency, through a strong focus on premium performances and the implementation of advanced plant room control and optimisation software.

The smartest use of energy



Integrated in the cooling system, advanced heat recovery systems provide an innovative look at heat rejection as a free source of energy for adjoining applications.

Increased sustainability



Intelligent energy management is also crucial for sustainability, considering the extensive use of energy and levels of CO₂ emissions in industrial processes.

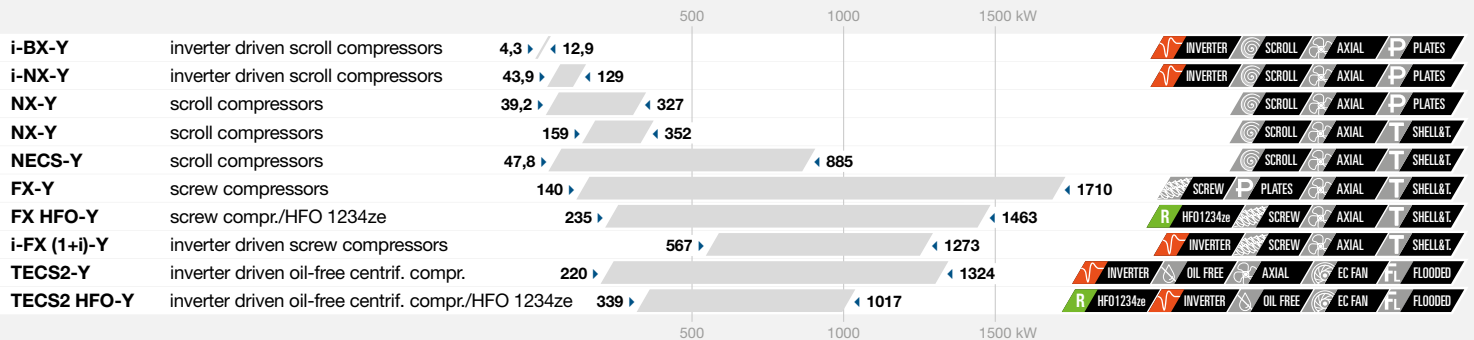
CHILLERS



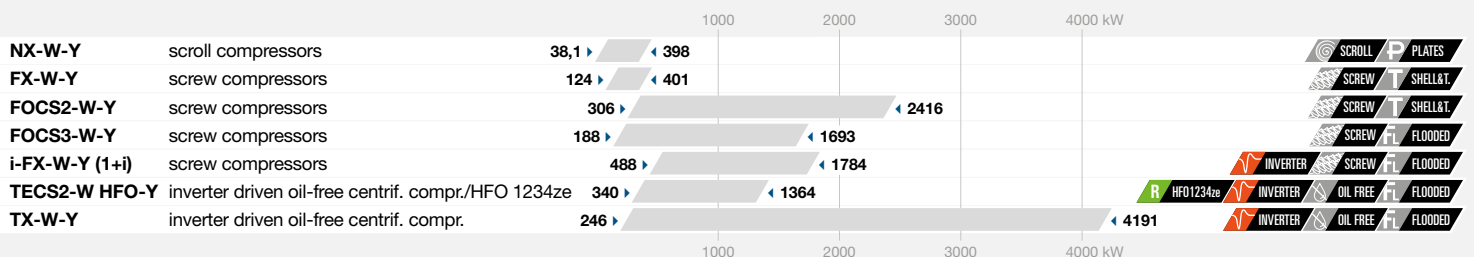
- ▶ Highest energy efficiency
- ▶ Complete dependability in cooling operation
- ▶ Lowest noise emissions



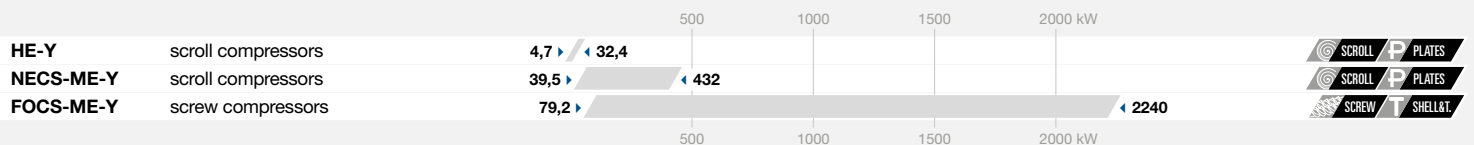
Air cooled chillers



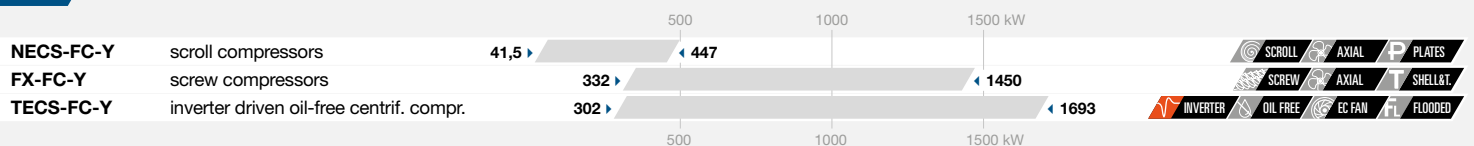
Water cooled chillers



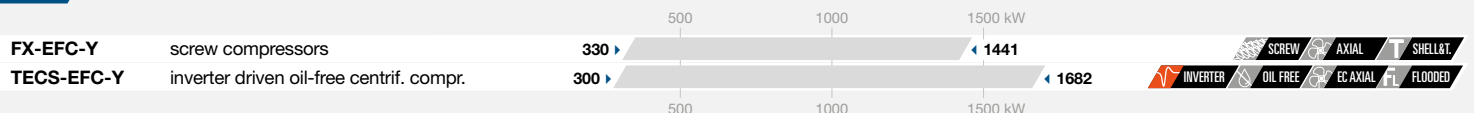
Condenserless chillers



Air cooled chillers with free-cooling technology



Air cooled chillers with evaporative free-cooling technology



ADVANCED TECHNOLOGIES FOR EFFICIENT HIGH PERFORMING PROCESS COOLING SYSTEMS

Climaveneta's leadership in process cooling applications is backed by over 45 years experience in the smart integration of premium technologies for complex installations.



Magnetic Levitation

A extended range of chillers with magnetic levitation centrifugal compressors from 200kW to 4MW, both air source and water source, available also in free cooling and evaporative free cooling versions, to deliver highest efficiency in every application.

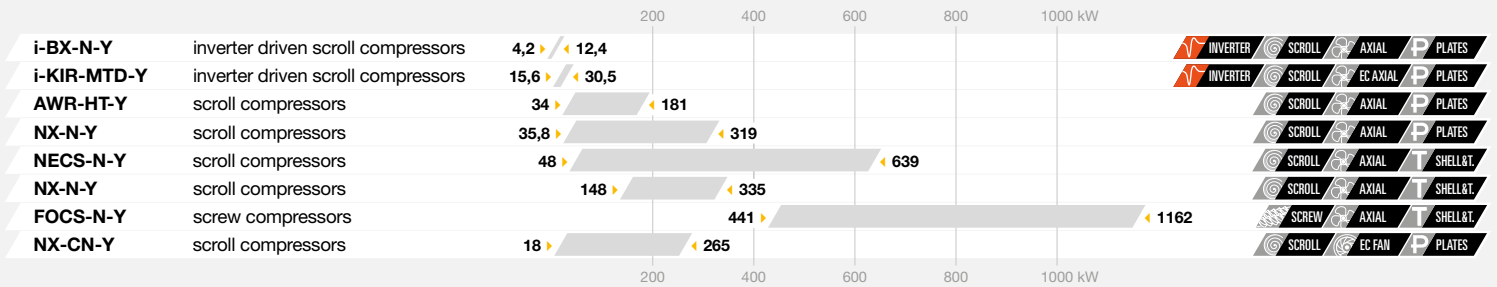
HEAT PUMPS



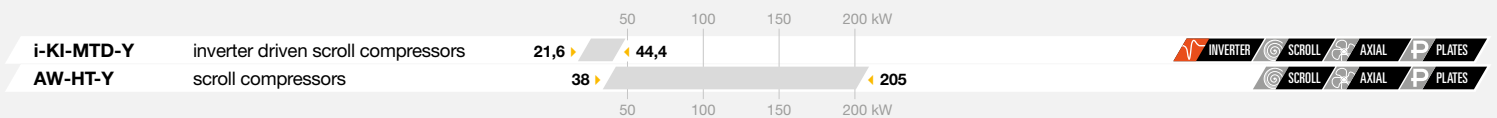
- ▶ Highest energy efficiency
- ▶ Operating limits up to -20°C
- ▶ Hot water production up to 78°C



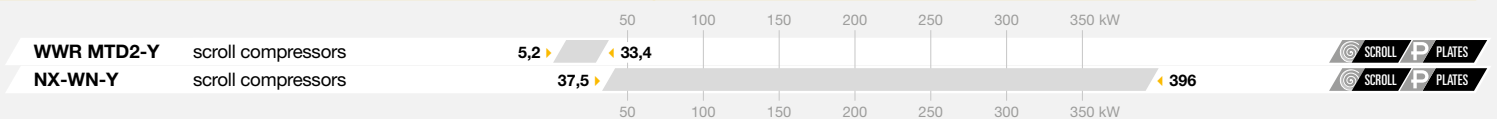
Air to water reversible heat pumps



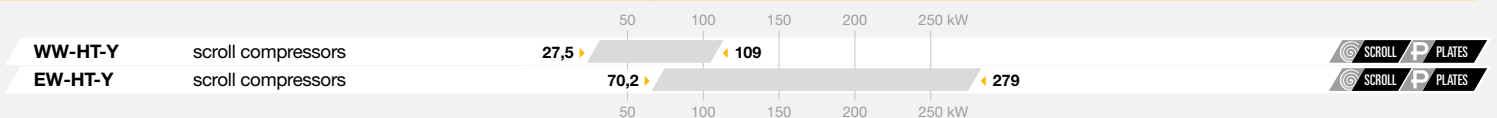
Air to water heat pumps (heating only)



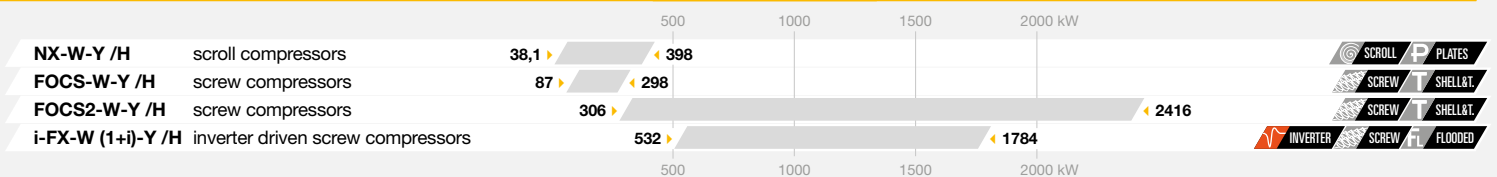
Water to water reversible heat pumps



Water to water heat pumps (heating only)



Water to water heat pumps reversible on the hydraulic side



Smart Thermal Energy Management

An innovative heat recovery system that allows the smart use of rejection heat from the industrial process for comfort heating and other neighbouring applications.



Inverter Driven Compressor

The possibility to modulate cooling capacity results in increased efficiency as well as in the possibility to effectively implement smart management solutions such as active redundancy.



Green HFO Refrigerants

Following on vast experience in using green refrigerants, Climaveneta has already employed extensively green HFO refrigerants such as HFO1234ze and HFO1234yf in many ranges, in order to continue to be at the forefront with green best practices.

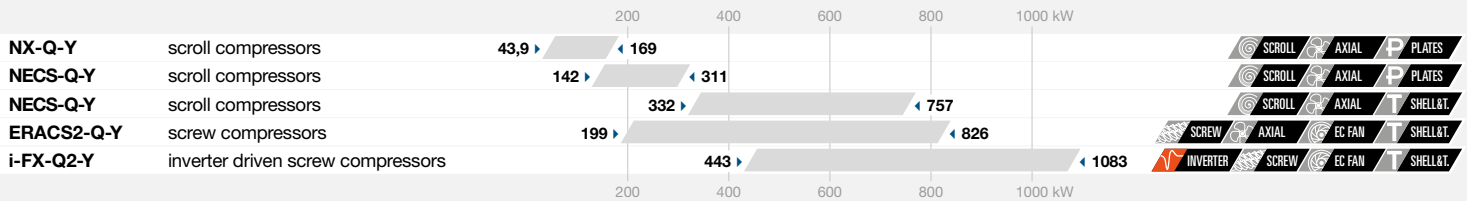
UNITS FOR SIMULTANEOUS AND INDEPENDENT PRODUCTION OF HOT AND COLD WATER



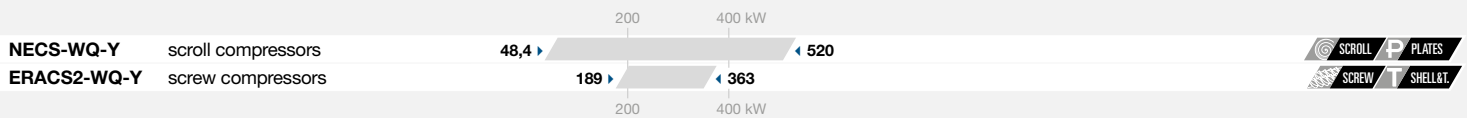
- ▶ Smart heat recovery of the thermal energy from the cooling process
- ▶ Easy integration with process HVAC plants



Air source heat pumps



Water source heat pumps



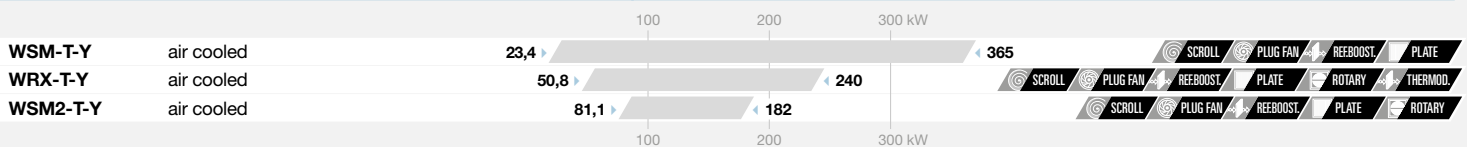
ROOFTOP UNITS



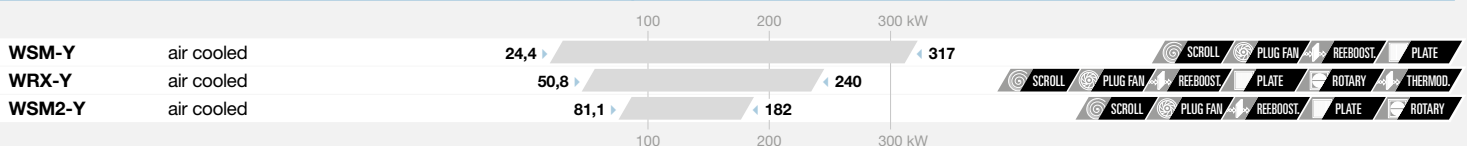
- ▶ Complete configurability of the air flows
- ▶ Precise temperature and humidity control
- ▶ Highest efficiency



Air to air rooftop unit, cooling only



Reversible air cooled rooftop unit



V-AIR

High efficiency EC technology fans are extensively adopted for their advantages with energy reduction up to 15% compared to traditional EC fans.



Fast Restart

Control function for quick resumption of resources, allowing a chiller to restart in only 25" after power is restored, ensuring operational continuity and minimized downtime.



High Water Temperature

Climaveneta vast experience in high leaving water temperature applications is proven by a complete range of technical solutions in these areas, to cope with any heating requirement, from 6 pipe applications to high temperature heating.

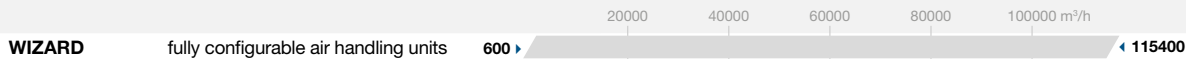
AIR HANDLING UNITS



- ▶ System's integration and reduced on-site operations
- ▶ Ideal for handling large air volumes in all kinds of applications
- ▶ Fully configurable according to the HVAC requirements



Configurable air handling units



CONTROL, SUPERVISION AND OPTIMISATION SYSTEMS



Group devices

- ▶ **ClimaPRO Plant Room Optimisation System**
Plant Room Optimiser for real time, smart management of energy indexes for the single units and the entire plant room.
- ▶ **MANAGER 3000**
Specialized group control.
- ▶ **SEQUENCER**
The ultimate solutions for supervision, remote monitoring, service, and preventive maintenance.



Supervision and monitoring systems

- ▶ **IDRORELAX**
Monitoring and supervision system.



Human Machine Interfaces

- ▶ **KIPlink**
Control interface for smart phones and tablets.

ANCILLARY PRODUCTS



Remote condensers



AXIAL



Proprietary Control Logics

The performance of Climaveneta units is enhanced also by their control logics, based on a proprietary logics and know-how, deployed in a vast range of solutions.



Leading Heat Recovery Technology

Climaveneta is a recognized leader in heat recovery applications and in its product employs in the most effective way all the most performing solutions such as thermodynamic, plate and rotary heat recovery as well as refrigerant booster.



Active Free Cooling

An advanced free cooling system available both as direct and indirect free cooling, to exploit the outdoor air to provide cooling.



for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.



mitsubishi electric hydronics & it cooling systems s.p.a.

Head Office: Via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

Tel (+39) 0424 509 500 - Fax (+39) 0424 509 509

www.climaveneta.com

www.melcohit.com