

# 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 India 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**

**Comprehensive portfolio of proprietary & patented technologies**

All air units up to **100.000m<sup>3</sup>/h** air flow

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:**

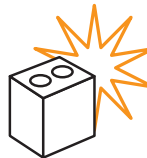


**Smart Integration of the most advanced technologies**



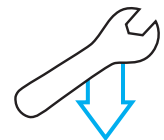
The extensive experience in the peculiarities of process cooling applications allows Climaveneta to offer the smartest combination of the most advanced technologies such as: full inverter concept, free cooling, heat recovery management, and evaporative cooling.

**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**



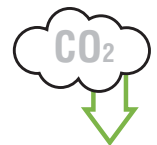
Guaranteeing that the HVAC system always runs at the highest efficiency, through a strong focus on premium performances and the implementation of advanced plant room control and optimisation software.

**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 CO<sub>2</sub> emissions in industrial processes.

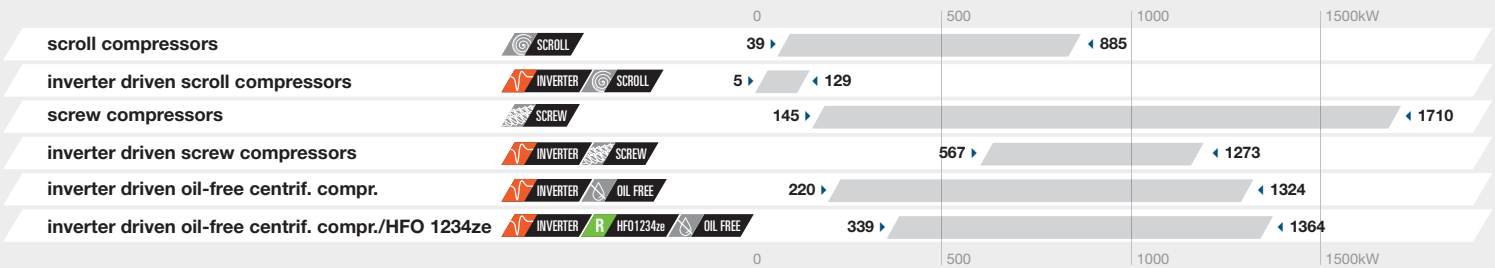
# CHILLERS



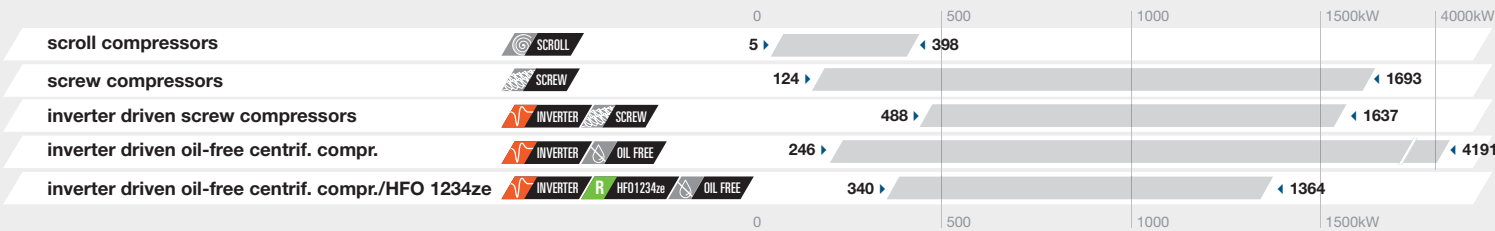
- ▶ Highest Energy Efficiency
- ▶ Perfect Indoor Climate Control
- ▶ Lowest Noise Emissions

- ▶ Minimum environmental impact
- ▶ HFO Green Refrigerants

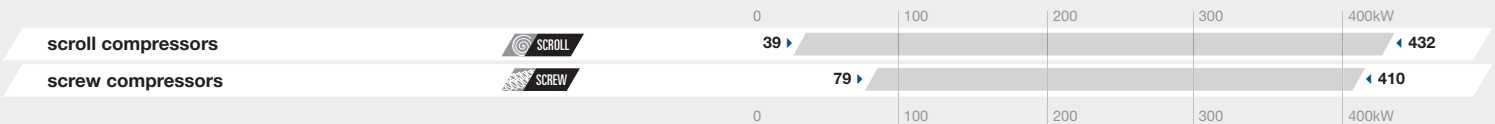
## Air Cooled Chillers



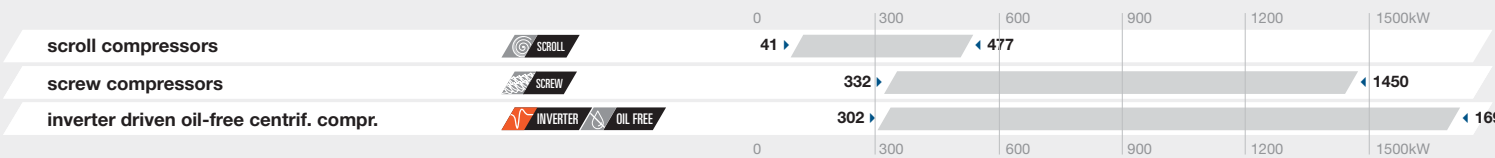
## Water Cooled Chillers



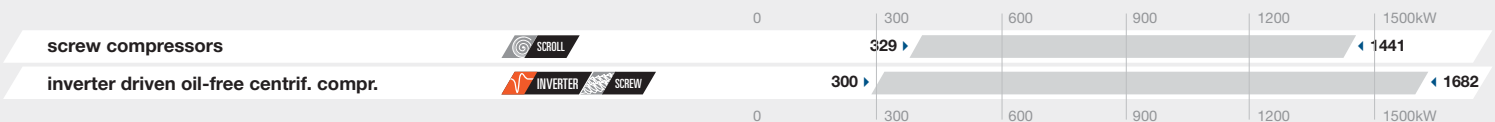
## Chillers with Remote Condenser



## Chillers with Free Cooling



## Chillers with Evaporative Free Cooling



## 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.



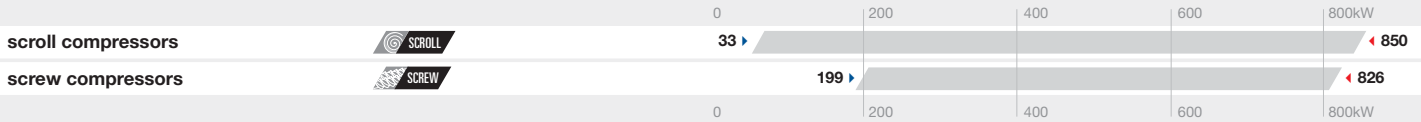
# UNITS FOR SIMULTANEOUS AND INDEPENDENT PRODUCTION OF HOT AND COLD WATER



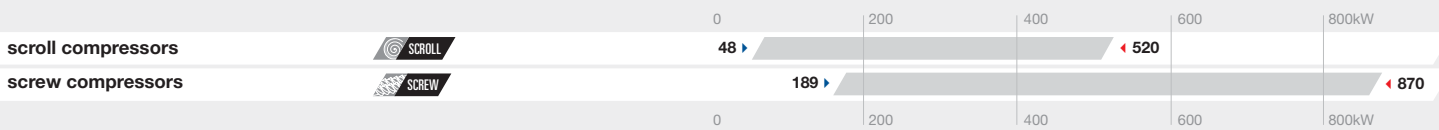
- ▶ Simultaneous & independent heating, cooling and domestic hot water production
- ▶ TER up to 8

- ▶ Reduced footprint and onsite operations
- ▶ Rationalized system design
- ▶ No fossil fuel emissions

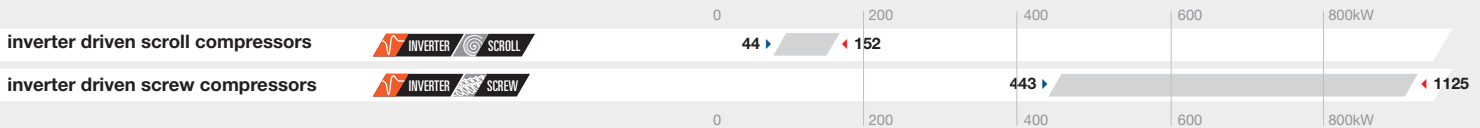
## Air to Water Units



## Water to Water Units



## Air to Water Units with Full Inverter Technology



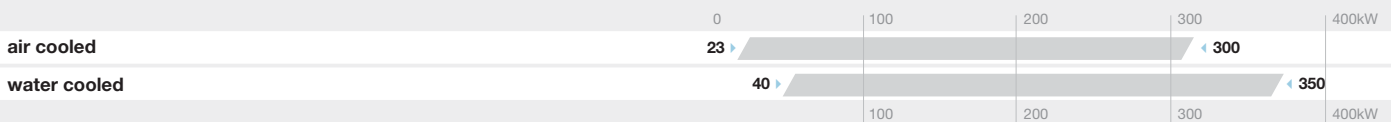
# ROOFTOP UNITS



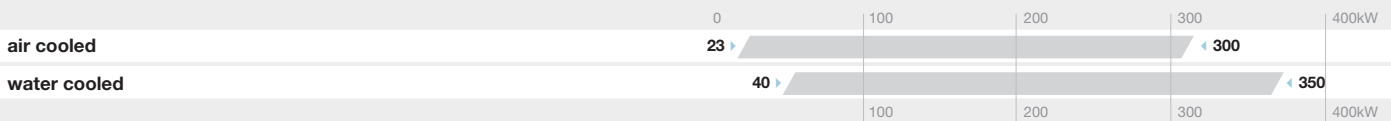
- ▶ Widest range and complete configurability
- ▶ Perfect thermoigrometric control

- ▶ Maximum flexibility in air flow design
- ▶ Highest energy efficiency

## Cooling only Units



## Reversible Units



### Active Free Cooling

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



### 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.



### Fast Restart

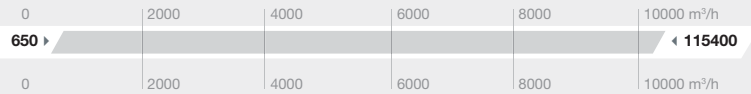
Control function for quick resumption of resources, allowing a chiller to restart in only 25" after power is restored, ensuring operational continuity and minimized downtime.

# AIR HANDLING UNITS



- ▶ **System's integration and reduced on-site operations.**  
Ideal for handling large air volumes in all kinds of applications.

fully configurable air handling units



# CONTROL, SUPERVISION AND OPTIMISATION SYSTEMS



## ▶ Control Systems

- ▶ **DATA MANAGER 3000**  
Specialized group control

## ▶ Optimisation systems

- ▶ **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.



## ▶ Supervision and Monitoring Systems

The ultimate solutions for supervision, remote monitoring, service, and preventive maintenance

- ▶ **FWS3 / FWS3000** remote monitoring systems
- ▶ **RC Cloud - Cloud based remote monitoring system**
- ▶ **WS3000**  
Remote monitoring system for service and proactive maintenance

## ▶ Human Machine Interfaces

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



### 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.



### V-AIR

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

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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.



# CLIMAVENETA INDIA

[www.melcohit.com](http://www.melcohit.com)