

# PROCESS COOLING

## PRODUCT OVERVIEW

▶ CHILLERS AND FREE-COOLING CHILLERS

▶ HEAT PUMPS

▶ MULTIFUNCTION UNITS

▶ ROOFTOP UNITS

▶ AIR HANDLING UNITS

▶ CONTROL, SUPERVISION AND OPTIMISATION SYSTEMS

▶ HEAT REJECTION PRODUCTS

### NEW GREEN REFRIGERANT SERIES

**R**1234ze **G04 SERIES**

**R**513A **G05 SERIES**

**R**454B **G06 SERIES**

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.

Leadership in smart heat pumps for 4 and 6 pipe systems

Extensive Range of Hydronic units from 1 to 4.549 kW

Complete range of rooftop units up to 350kW and AHUs up to 100.000m<sup>3</sup>/h air flow

Vast portfolio of Control, Monitoring and Optimisation systems

12 specialized manufacturing hubs

Countless succesful projects worldwide

3 standard energy efficiency settings

8 standard noise reduction configurations





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.

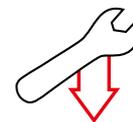
**Climaveneta range of dedicated process cooling solutions are designed to deliver even in the most challenging projects:**



**Perfect Comfort and Well-being**



**Environmental Respect**



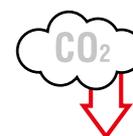
**Specific Solution for each project**



**Lowest cost of ownership**



**Simplified on-site operations**



**Enhanced value of the real estate development**

# Advanced technologies for high efficiency and high quality air conditioning systems.

Climaveneta's leadership in air conditioning and heating is backed by over 45 years experience in the smart integration of premium technologies for the most challenging projects worldwide

## Magnetic levitation



An 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.

## 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.

## New G04, G05 and G06 Series using green refrigerants



Following on vast experience in using green refrigerants, Climaveneta has already employed extensively green refrigerants such as HFO124ze, R513A and R514B in many ranges, in order to continue to be at the forefront with green best practices.

## V-AIR



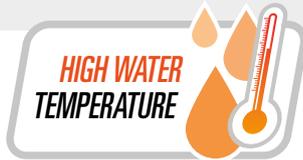
High efficiency EC technology fans are extensively adopted for their advantages with 15% energy reduction compared to traditional EC fans.

## VPF



The VPF (Variable Primary Flow) dynamically optimizes the unit's thermoregulation for variable flow operation, thus ensuring both the highest pump energy savings and chiller stable operation.

## 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.

## 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.

## Configurable Efficiency Set

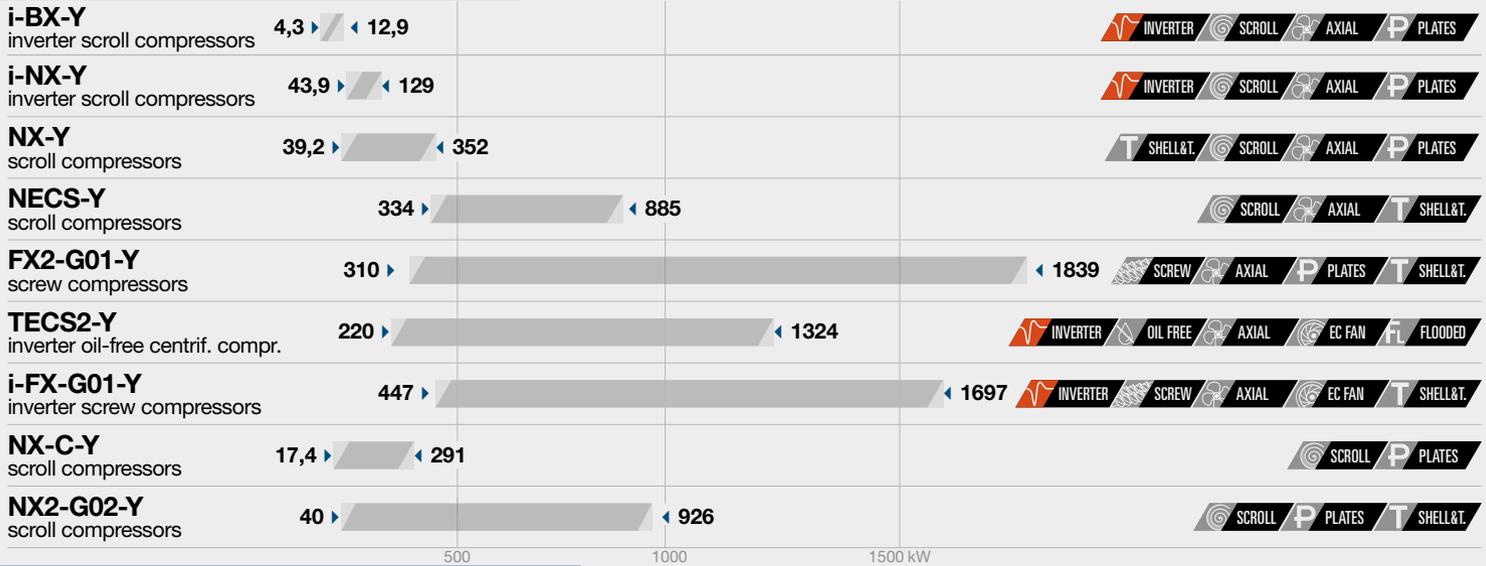


The willingness to cope even with the most demanding energy efficiency projects is reflected by the availability of 3 energy efficiency standard configurations in most hydronic units.

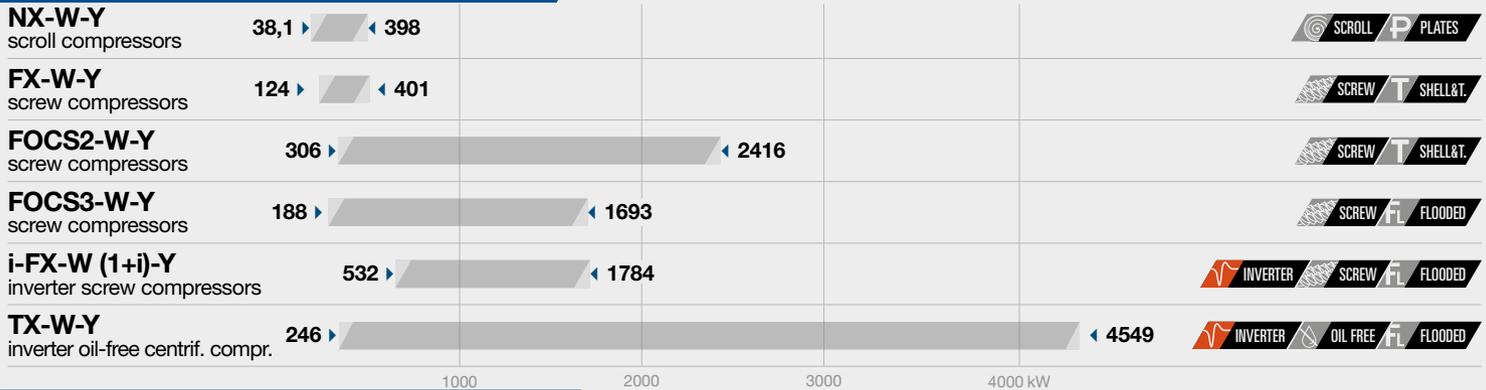
# CHILLERS AND FREE-COOLING CHILLERS



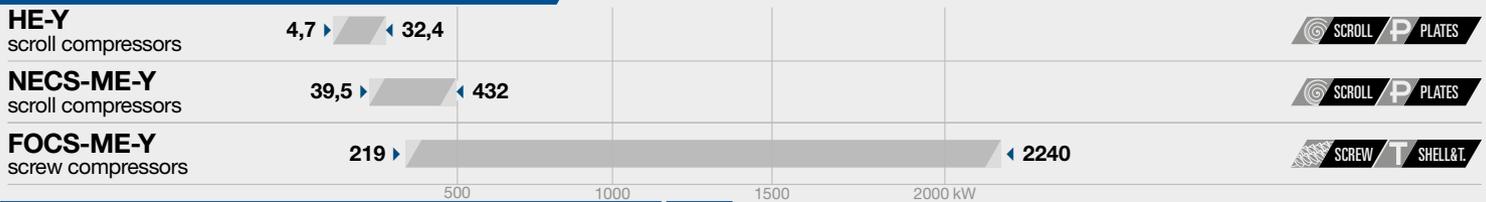
## Air cooled chillers



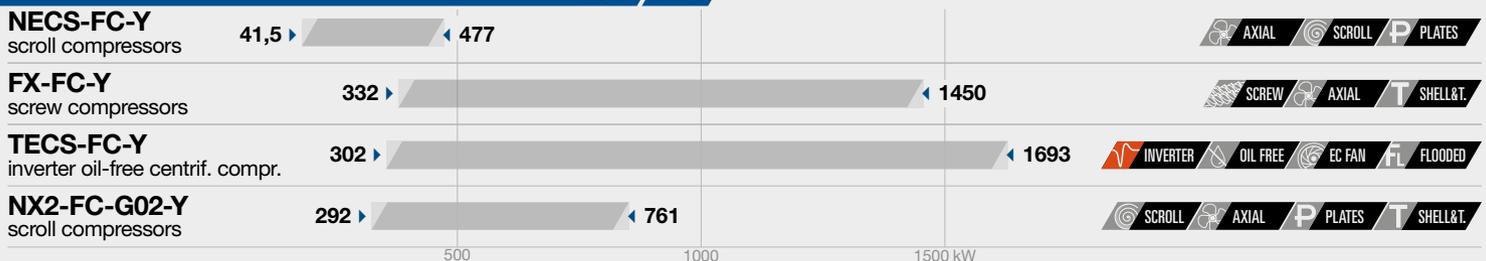
## Water cooled chillers



## Water cooled chillers



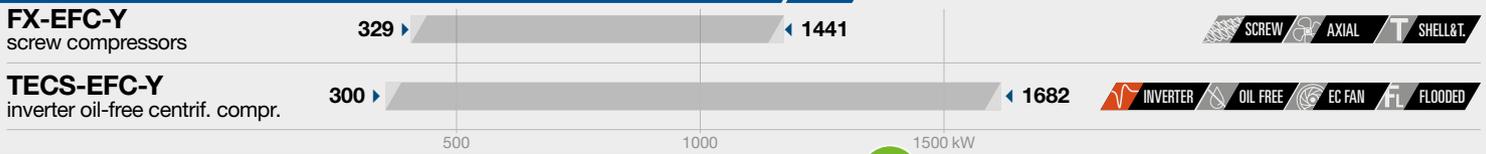
## Air cooled chillers with free-cooling technology



- ▶ Highest energy efficiency
- ▶ Perfect indoor climate control
- ▶ Lowest noise emissions

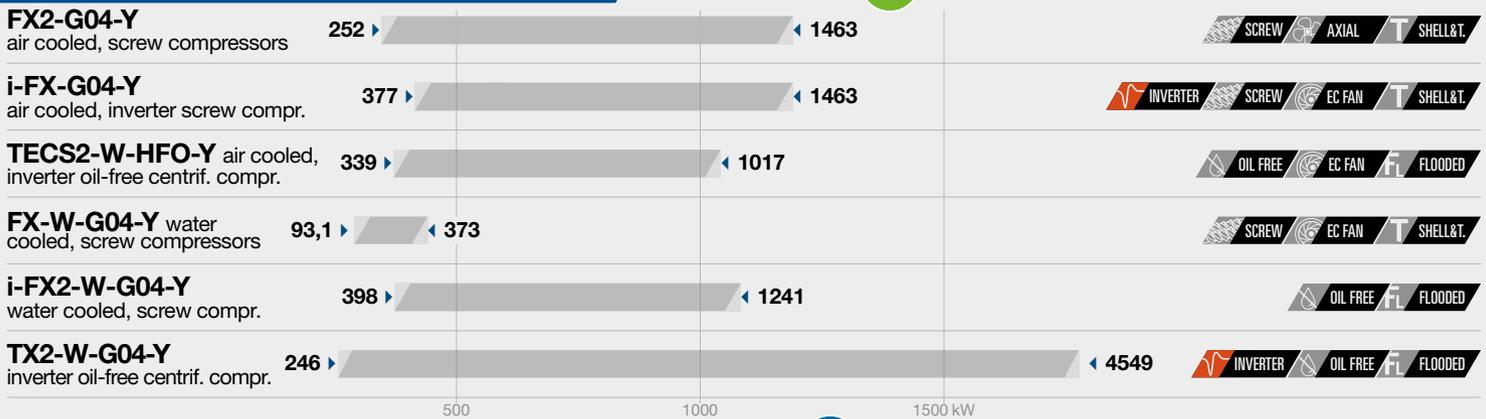


### Air cooled chillers with evaporative free-cooling technology



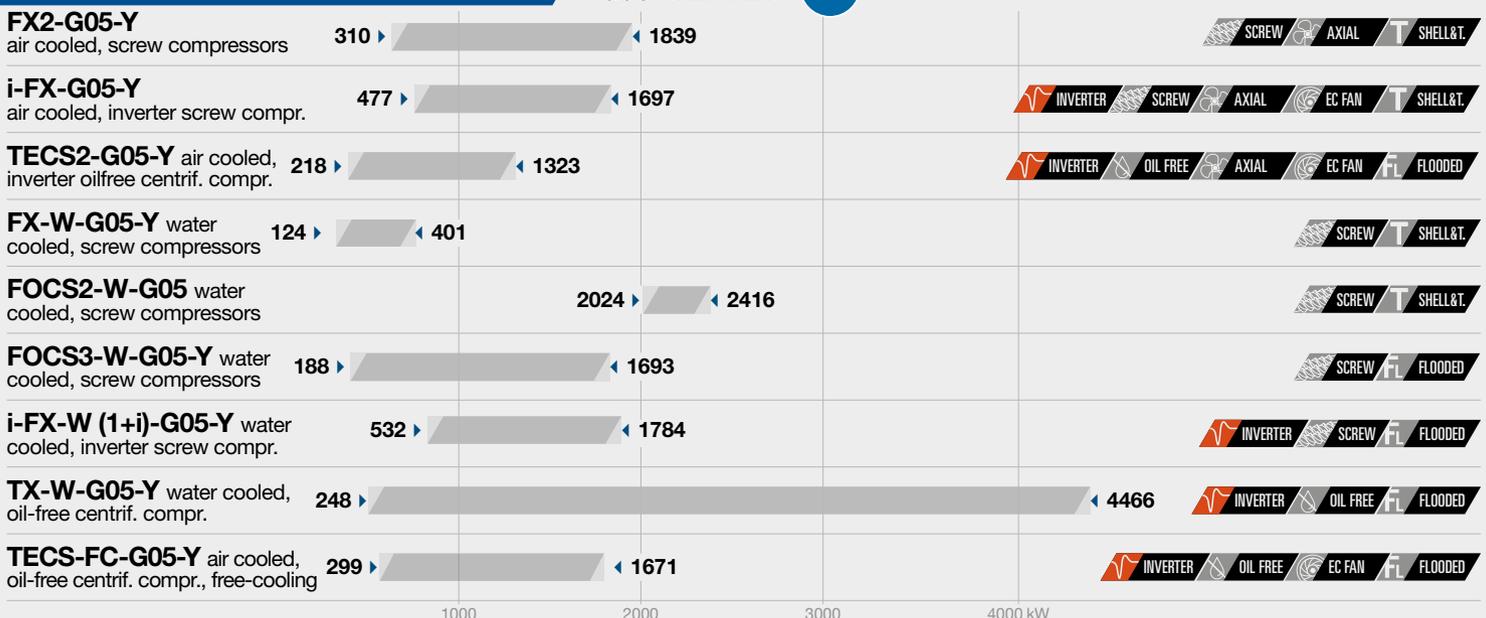
### Air and water cooled chillers with HFO 1234ze

### G04 SERIES 1234ze



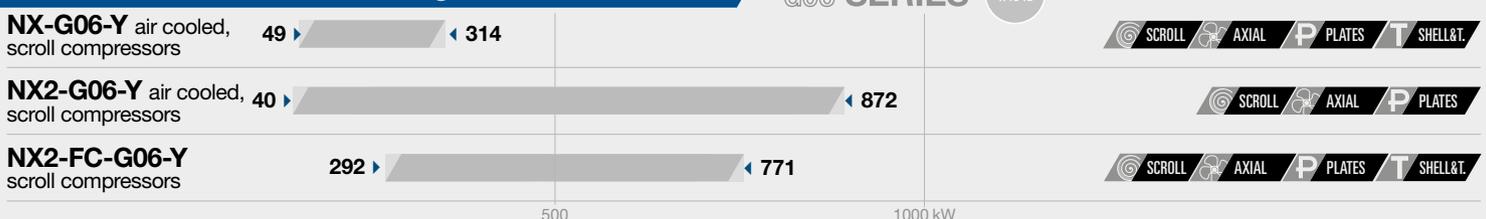
### Air and water cooled chillers with R513A

### G05 SERIES R513A



### Air Cooled chillers and free-cooling chillers with R454B

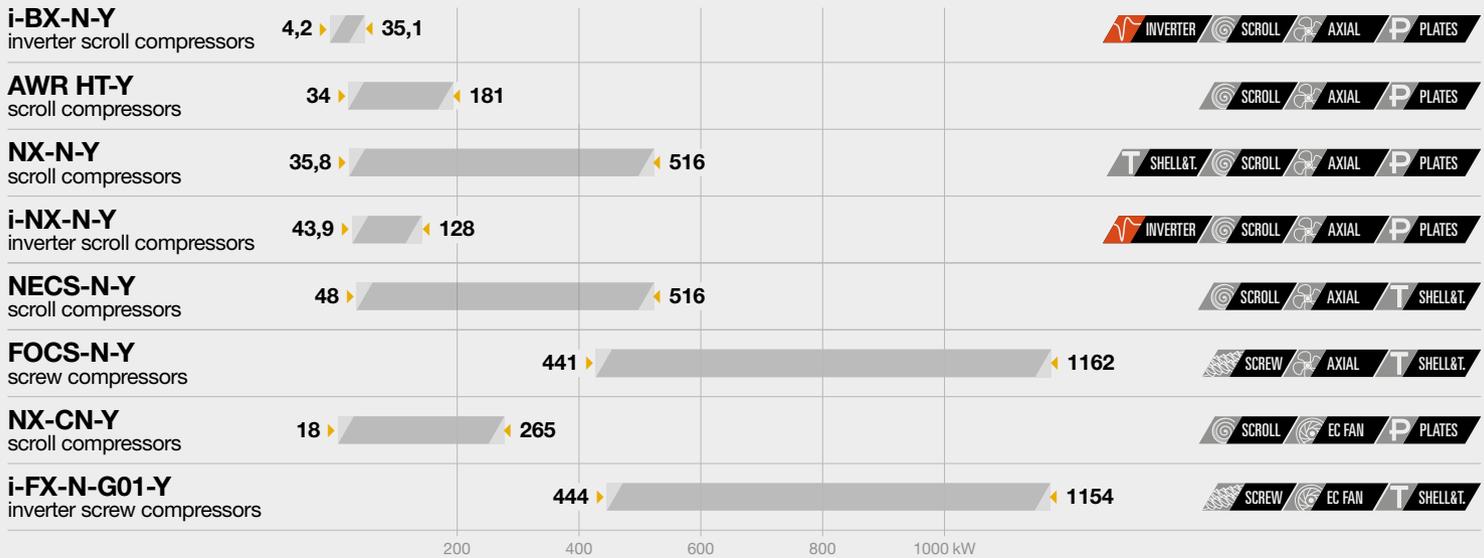
### G06 SERIES R454B



# HEAT PUMPS



## Air to water reversible heat pumps



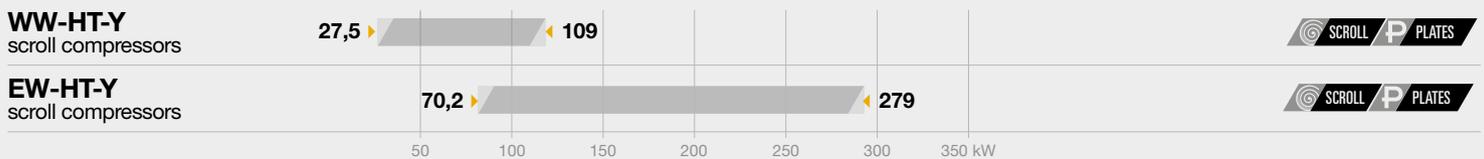
## Air to water heat pumps (heating only)



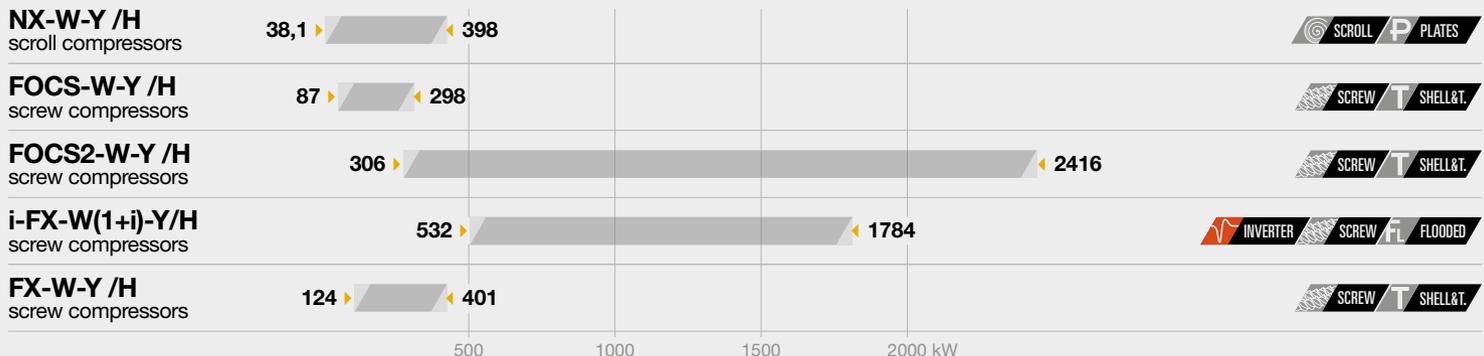
## Water to water reversible heat pumps



## Water to water heat pumps (heating only)



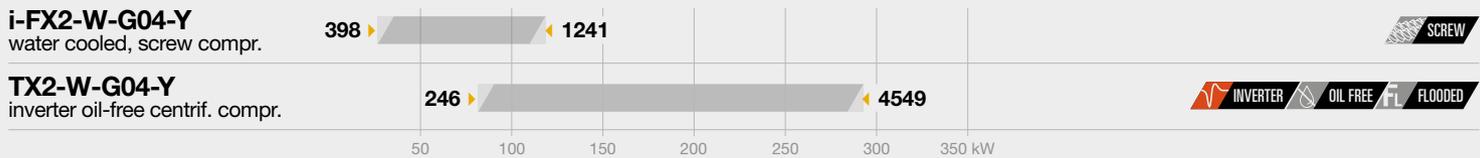
## Water to water heat pumps reversible on the hydraulic side



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

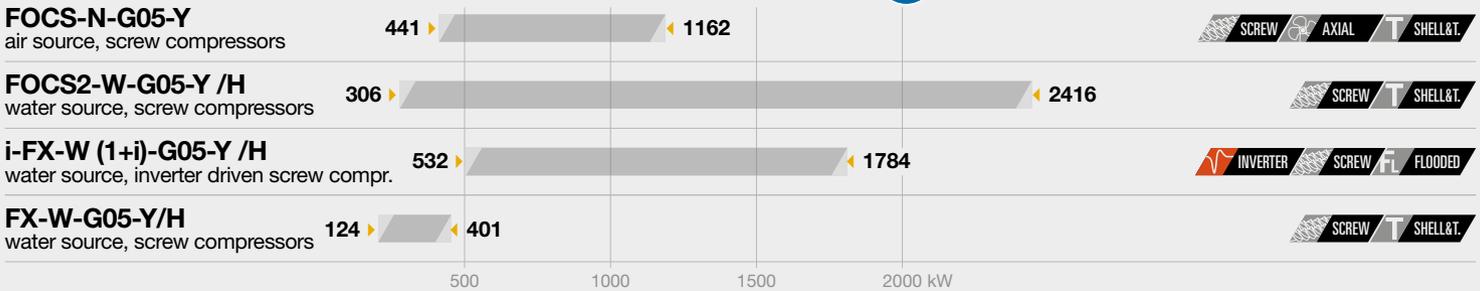


### Water cooled chillers with HFO 1234ze



### Air and water source heat pumps with R513A

#### G05 SERIES R513A



### Air cooled chillers with R454B

#### G06 SERIES R454B



## 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.



### Human Machine Interfaces

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

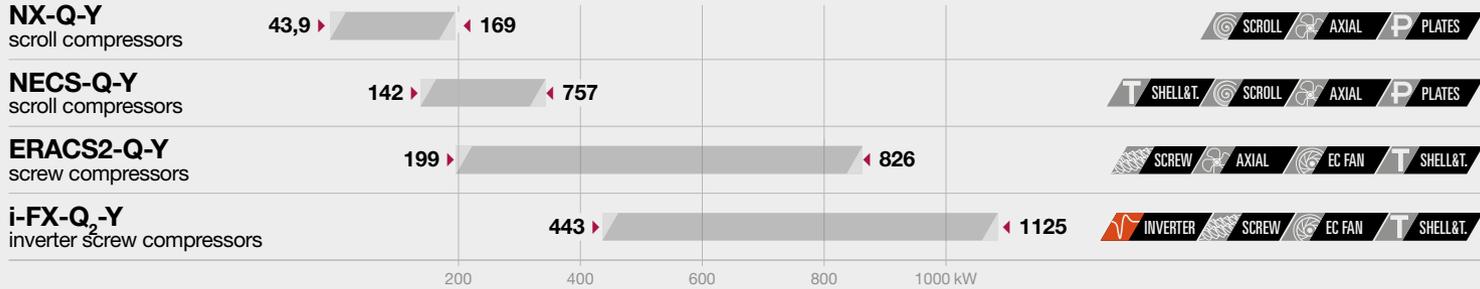
# MULTIFUNCTION UNITS



- ▶ Highest efficiency in combined hot and cold water production
- ▶ Rationalized system design and reduced footprint



## Air cooled chillers

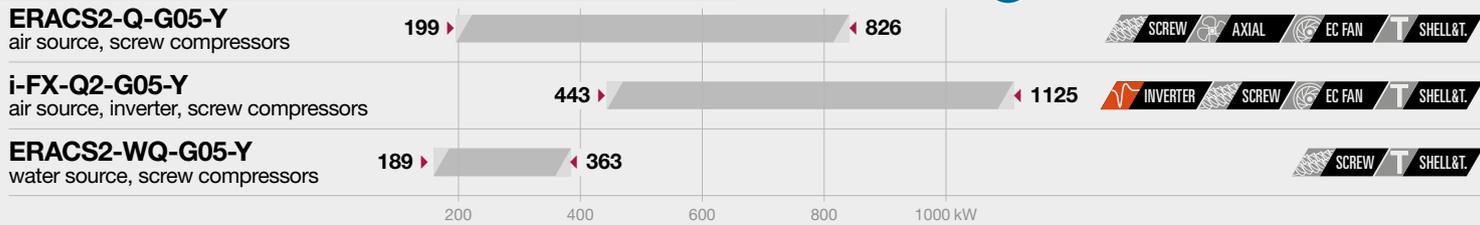


## Water source heat pumps



## Air and water source 4-pipe heat pumps with R513A

G05 SERIES R513A



## Air cooled chillers

G06 SERIES R454B



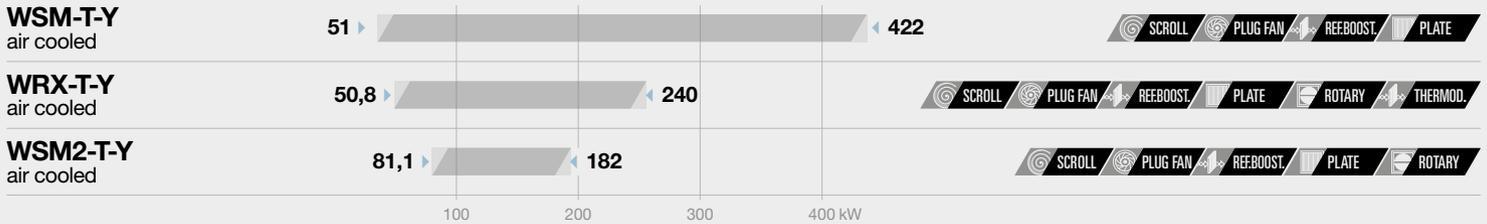
# ROOFTOP UNITS



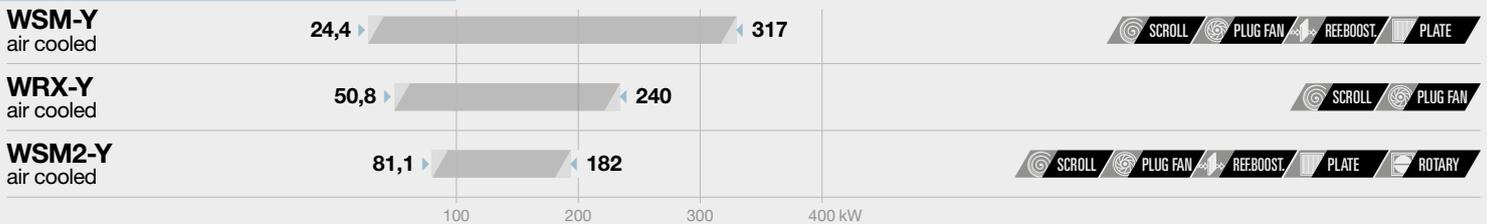
- ▶ **Widest range and complete configurability**
- ▶ **Perfect thermoigrometric control**
- ▶ **Maximum flexibility in the air flow management**



## Air to air rooftop unit, cooling only



## Reversible air cooled rooftop unit



# HEAT REJECTION PRODUCTS



## Reversible air cooled rooftop unit



# AIR HANDLING UNITS



## Air to air rooftop unit, cooling only





## **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](http://www.climaveneta.com)

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