

# COMFORT APPLICATIONS

## PRODUCT OVERVIEW

▶ CHILLERS

▶ HEAT PUMPS

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

▶ ROOFTOP UNITS

▶ AIR HANDLING UNITS

▶ HYDRONIC TERMINALS

▶ CONTROL, SUPERVISION AND OPTIMISATION SYSTEMS

▶ ANCILLARY PRODUCTS

NEW GREEN  
REFRIGERANT SERIES

R1234ze

G04  
SERIES

R513A

G05  
SERIES

# CLIMAVENETA'S MISSION



**Climaveneta's mission is to provide energy efficient heating, air conditioning, and optimisation solutions that enhance everyone's comfort, improve the profitability of a building, and do not contribute to an increase in CO<sub>2</sub> levels.**

As a European leader in the HVAC industry, Climaveneta has provided premium air conditioning and heating solutions for the most challenging and demanding projects worldwide for over 45 years. Building on this strong legacy, Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A. has decided to turn Climaveneta into the Group's specialized brand for hydronic comfort applications.

The result is the most complete range of advanced solutions providing enhanced usability, energy

efficiency, and environmental sustainability to modern buildings, as well as for the health, and well-being of the people who spend their time there.

These solutions are backed by a business approach based on flexibility and capability to adapt the system to the requirements of each project, as well as on vast experience and on the strength of belonging to a large multinational group such as Mitsubishi Electric in terms of integrated R&D, operations and central functions.

## Leadership in smart heat pumps for 4 and 6 pipe systems

Extensive Range of Hydronic units from 1 to 4.549kW

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

- Sales network
- Manufacturing hubs or R&D labs





**Climaveneta solutions for comfort applications are designed to provide even in the most challenging residential, office, hotel and retail projects:**



**Perfect Comfort and Well-being**



Ensuring a perfect control of temperature, humidity as well as of air quality and noise level, ideal comfort conditions are ensured even in the most demanding applications and challenging climate conditions.

**Environmental Respect**



Decreasing energy consumption, cutting carbon emissions and making the most extensive use of renewable sources are key elements of a high quality HVAC, making a positive contribution to greener buildings and better energy performance ratings.

**Specific Solution for each project**



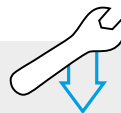
A vast range of highly configurable products, combined with solutions dedicated to each project, when even the highest configurability is not enough, is key to delivering best comfort with no limitations on architectural choices, reduced footprint of technical systems and no aesthetical impact.

**Lowest cost of ownership**



Thanks to cutting-edge solutions designed around technological innovation and sustainability in order to drive down initial investment, running costs and maintenance, and to increase the total life cycle of the product.

**Simplified on-site operations**



Climaveneta units apply a “plug & play” design approach that integrates many functions traditionally provided by different systems, such as heating and cooling. They are equipped with all options and accessories in order to make on site operations rational, simple and predictable, with countless advantages in project management.

**Enhanced value of the real estate development**



By reducing operational expenses due to running costs and maintenance, as well as by optimising initial investment and opening the opportunity to benefit for energy reduction and green solutions incentives, Climaveneta solutions are a key asset in making new or existing properties more valuable and profitable.



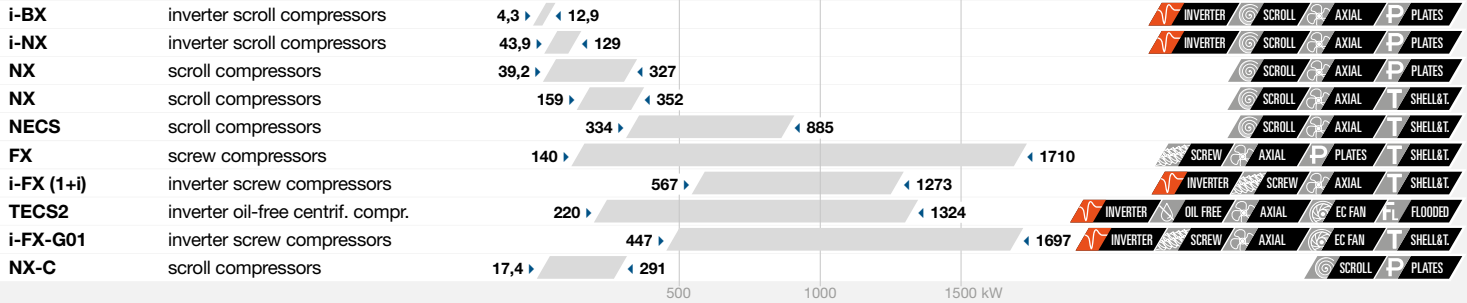
# CHILLERS



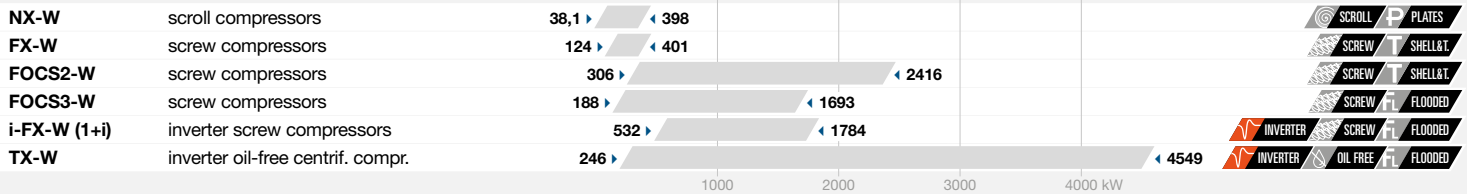
- ▶ Highest energy efficiency
- ▶ Perfect indoor climate control
- ▶ Lowest noise emissions



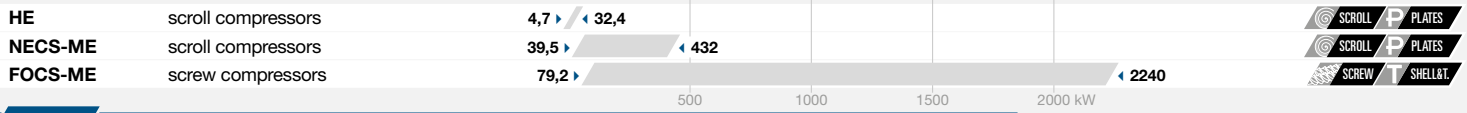
## Air cooled chillers



## Water cooled chillers



## Condenserless chillers



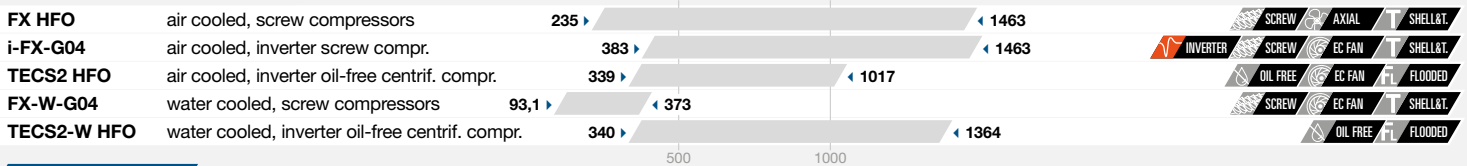
## Air cooled chillers with free-cooling technology



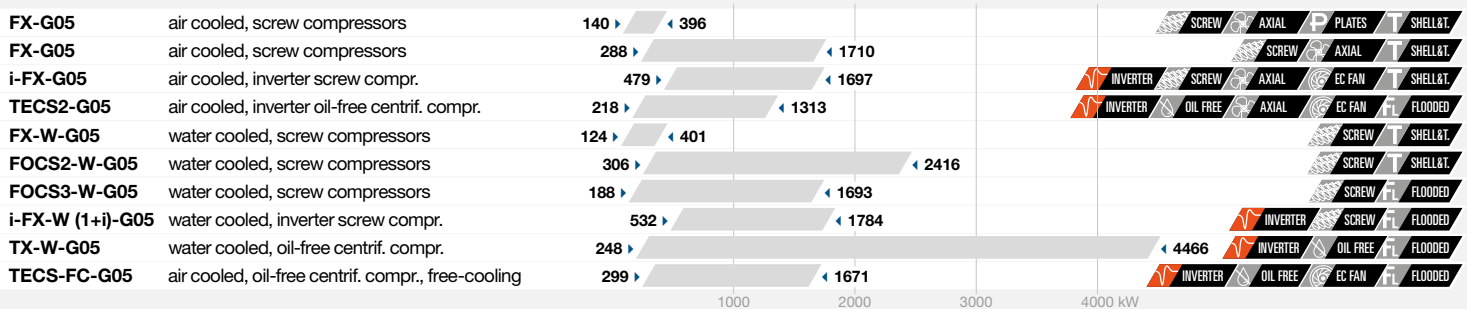
## Air cooled chillers with evaporative free-cooling technology



## G04 SERIES Air and water cooled chillers with HFO 1234ze R 1234ze



## G05 SERIES Air and water cooled chillers with R513A R 513A



## 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.

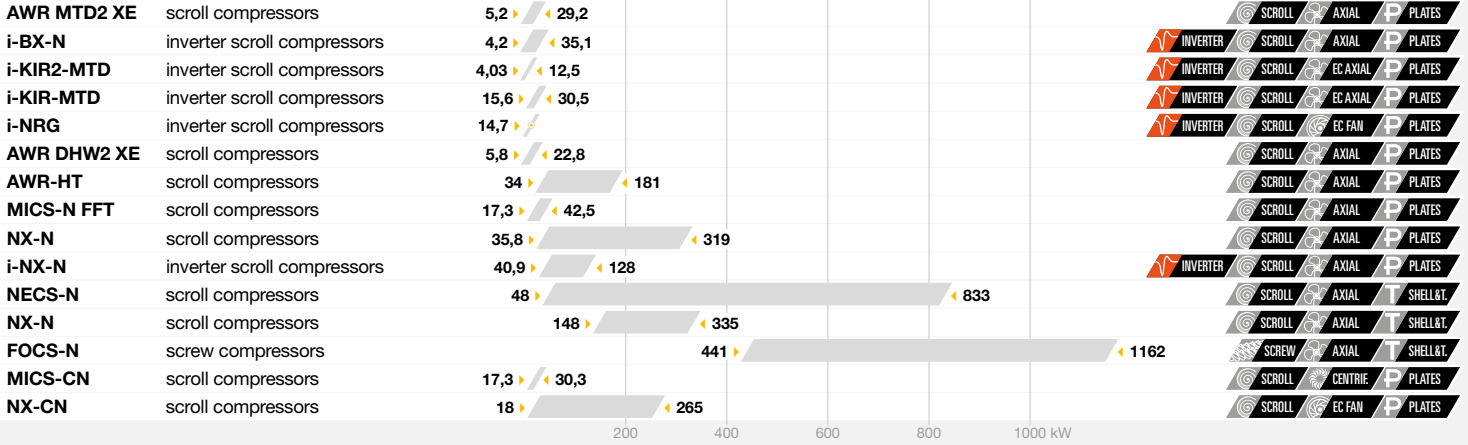
# HEAT PUMPS



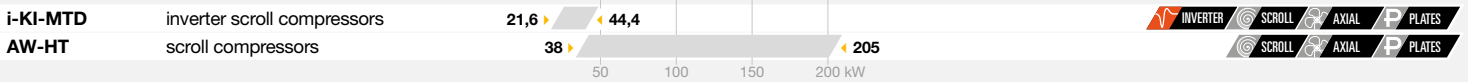
- ▶ Operating limits up to -20°C
- ▶ Hot water production up to 78°C
- ▶ Highest energy efficiency



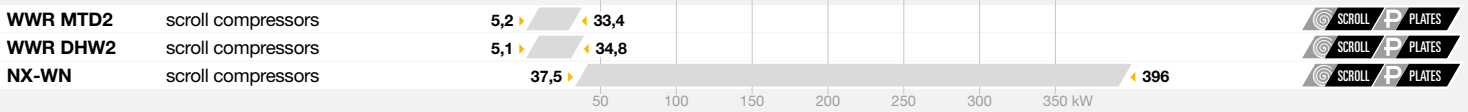
## Air to water reversible heat pumps



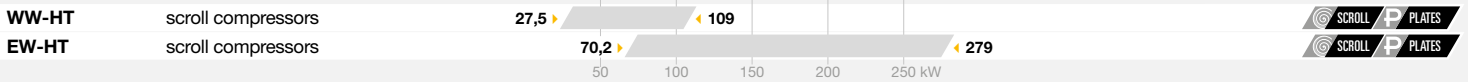
## Air to water heat pumps (heating only)



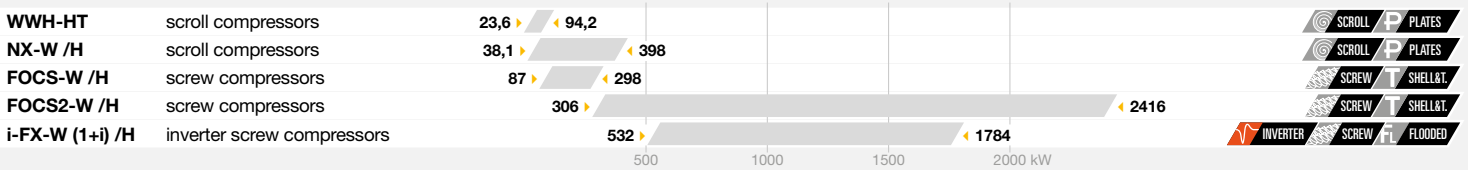
## Water to water reversible heat pumps



## Water to water heat pumps (heating only)



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



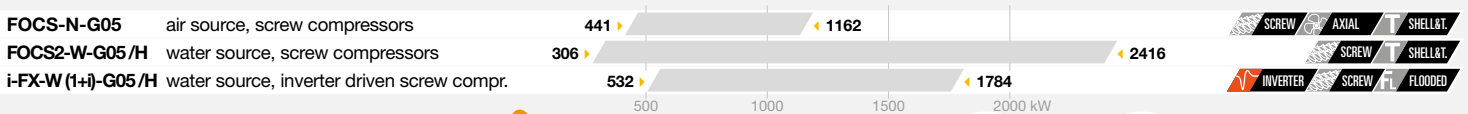
## Geothermal reversible heat pumps



## Geothermal reversible heat pumps (heating only)



## G05 SERIES Air and water source heat pumps with R513A



**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 and G05 Series using green refrigerants**  
Following on vast experience in using green refrigerants, Climaveneta has already employed extensively green HFO refrigerants such as HFO1234ze and R513A in many ranges, in order to continue to be at the forefront with green best practices.

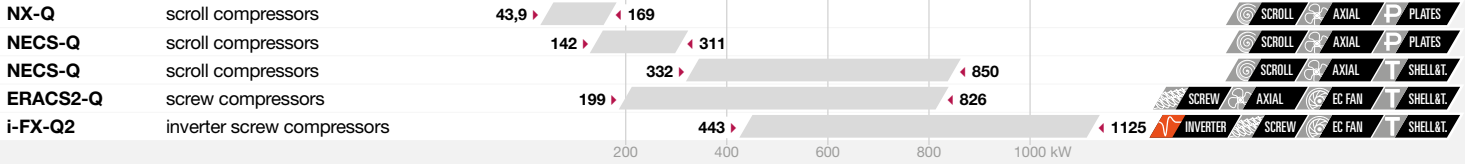
# UNITS FOR SIMULTANEOUS AND INDEPENDENT PRODUCTION OF HOT AND COLD WATER



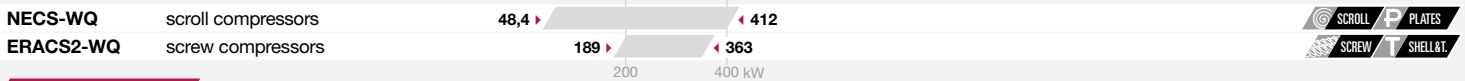
- ▶ Highest efficiency in combined hot and cold water production
- ▶ Rationalized system design and reduced footprint



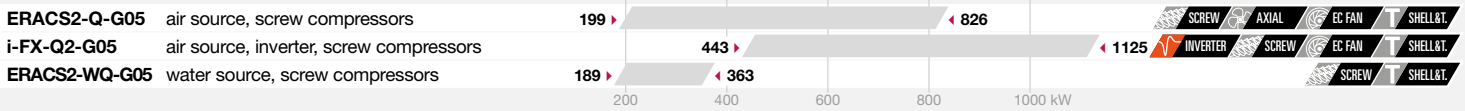
## Air source heat pumps



## Water source heat pumps



## G05 SERIES Air and water source 4-pipe heat pumps with R513A



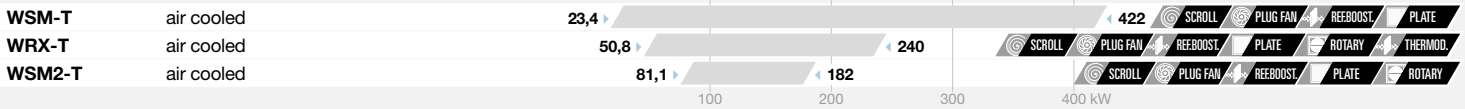
## ROOFTOP UNITS



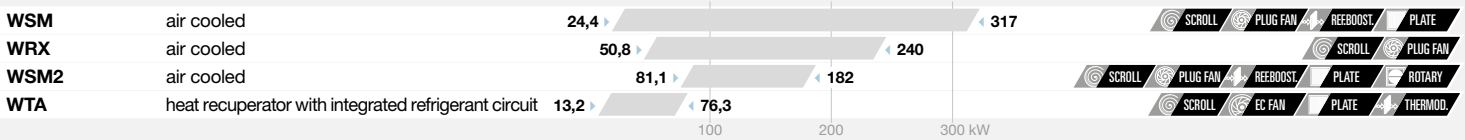
- ▶ Widest range and complete configurability
- ▶ Perfect thermoigrometric control
- ▶ Maximum flexibility in the air flow management



## Air to air rooftop unit, cooling only



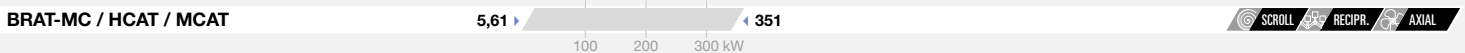
## Reversible air cooled rooftop unit



## ANCILLARY PRODUCTS



## Condensing units



## Remote condensers

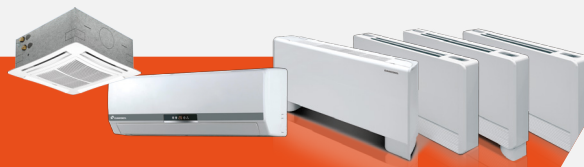


**V-AIR**  
High efficiency EC technology fans are extensively adopted for their advantages with 15% energy reduction compared to traditional EC fans.

**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.

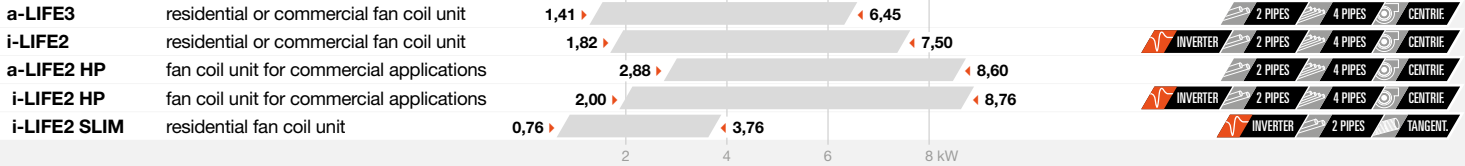
# HYDRONIC TERMINALS



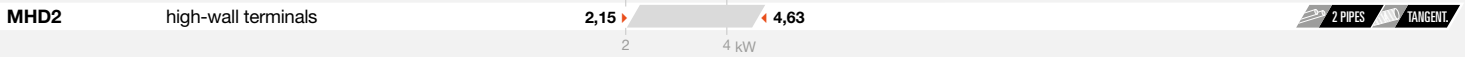
- ▶ Fan coil range for residential and commercial applications
- ▶ Complete range of accessories
- ▶ For exposed or concealed installation



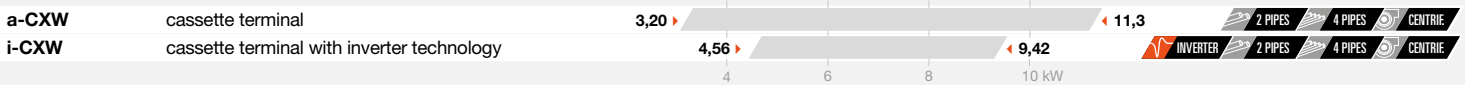
## Fan coils



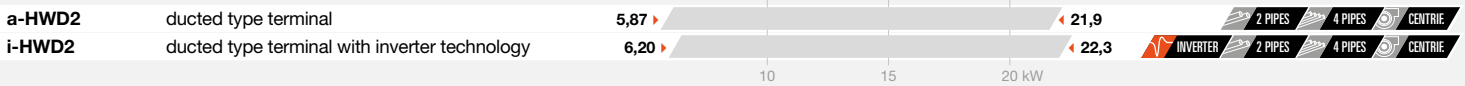
## Hi-wall type terminals



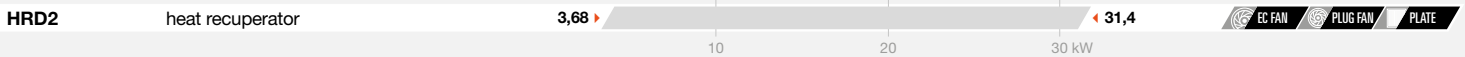
## Cassette type terminals



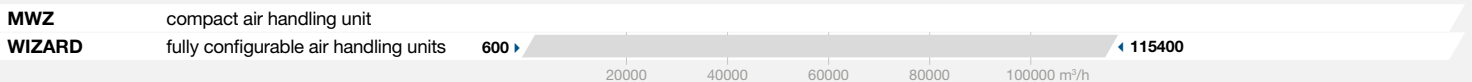
## Ducted type terminals



## Heat recuperators



# 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.



### 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.



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.



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