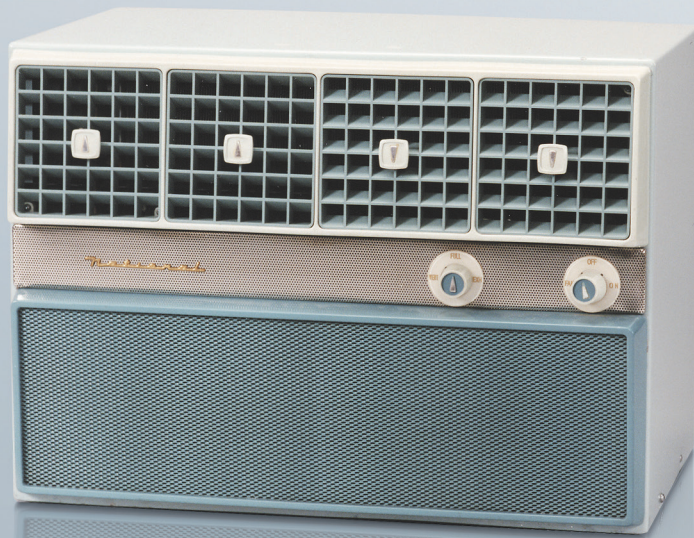




Panasonic

INTEGRATED SOLUTIONS
FOR RETAIL

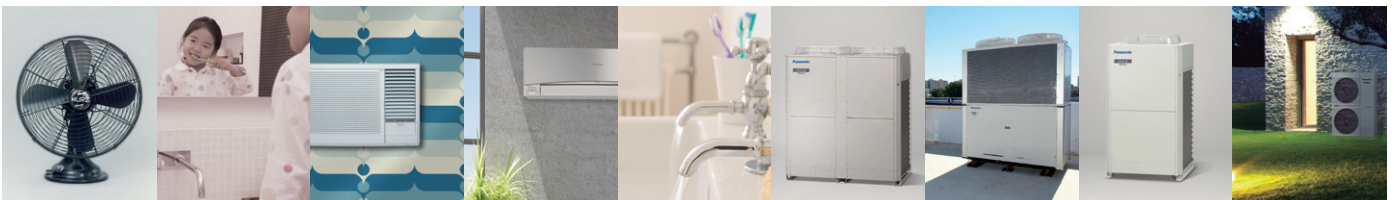


1958: First room air conditioner launched for domestic installation.

Prior to this date, air conditioners were large and only for commercial use. Panasonic developed the first compact air conditioner for windows; it was lightweight and easy to install, improving the quality of life in Japanese homes. 1,100 units were sold in Japan in the first year, and just two years later, in 1960, this figure rose to 230,000.

PANASONIC – LEADING THE WAY IN HEATING & COOLING

Panasonic starts with a desire to create things of value. As hard work and dedication results in one innovative product after another, the fledgling company takes its first steps towards becoming the electronics giant of today. With more than 30 years of experience, selling to more than 120 countries around the world, Panasonic is unquestionably one of the leaders in the heating and cooling sector. With a diverse network of production and R&D facilities, Panasonic delivers innovative products incorporating cutting-edge technologies that set the standard for air conditioners worldwide. Expanding globally, Panasonic provides superior international products transcending borders.



1936
First electric Fan with Automatic Oscillation (36 cm table top model).

1973
Panasonic launches the first highly efficient air-to-water heat pump in Japan.

1975
Panasonic becomes the first Japanese air conditioner manufacturer in Europe.

2008
Etherea new concept of air conditioning systems: high efficiency and high performances with a great design. Etherea also includes a very innovative air quality sensor and air purifier in order to enjoy healthy air at home at all times.

2010
Panasonic has created Aquarea, an innovative new, low-energy system, designed to help you enjoy ideal temperatures and hot water in your home, even with extreme outdoor temperatures. Aquarea is far cleaner, safer, cheaper and environmentally friendly than alternatives using gas, oil and other electrical systems.

2011
New Eco i VRF solution. The new Panasonic VRF solution for big buildings is the most efficient in the industry in more than 74% of combinations. ECO i satisfies the most demanding standards required by design offices, architects, owners and installers.

2012
New GHP units. Panasonic's gas-driven VRF systems are ideal for projects where power restrictions apply. In 2012, Panasonic extends the Gas Heat Pump range with a new GHP line-up, new GHP G Power (electricity production) and the new Chiller Units.

2013
New ECOi 3-pipes. The best efficiency for your building. Our New 6 Series 3-pipes is achieving a COP of 4.77 at full load, and even more when recovering heat from the building. There is no doubt, Panasonic is reducing environmental impact!

2014
New Aquarea 16kW T-CAP. Improvements deliver impressive, high efficiencies at low ambient temperatures. T-CAP stands for Total Capacity and is capable of maintaining the same nominal capacity even at -15°C without the help of an electric booster heater. Ideal for retrofit and commercial applications.



100% PANASONIC: WE CONTROL THE PROCESS

The company is also a world leader in innovation as it has filed more than 91,539 patents to improve its customers' lives. Moreover, Panasonic is determined to remain at the forefront of its market. In all, the company has produced more than 200 million compressors and its products are manufactured in 294 plants which are located all over the world. You can be assured of the extremely high quality of Panasonic's heat pumps.

This wish to excel has made Panasonic the international leader in heating and turn-key air conditioning solutions for homes, medium-sized buildings such as offices and restaurants, and large-scale buildings. These offer maximum effectiveness, comply with the strictest environmental standards and meet the most avant-garde construction requirements of our time.

At Panasonic we know what a great responsibility it is to install heating and cooling systems.



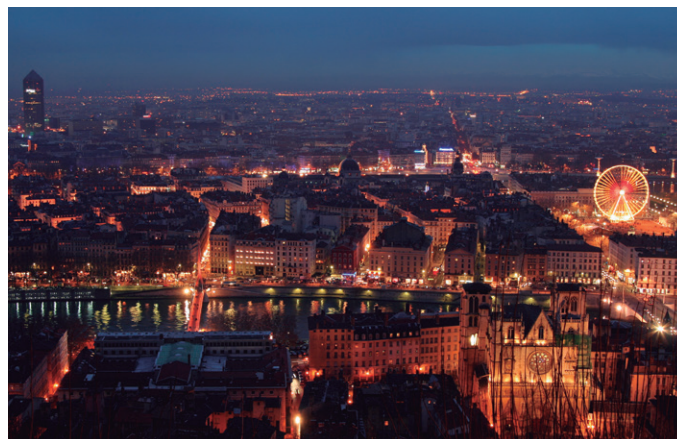
PANASONIC EUROPE ANNOUNCES SUSTAINABILITY DECLARATION



Panasonic establishes new targets for our environmental performance and CSR initiatives. Best Global Green Brand 2013

We were recently awarded Interbrand's 4th Best Global Green Brand 2013 – the highest of any consumer electronics brands.

This is the result of our commitment to energy efficient products, reduction in CO₂ emissions, our kids school 'eco learning' programme and much more.



Exemplary sustainable project. Panasonic joins Smart Electric Lyon consortium

Smart Electric Lyon is a project that looks at electricity consumption as a key part of the building energy solutions of tomorrow. The project aims to develop a wide range of innovative facilities and services through real-life experiments to test energy saving technologies and to measure how consumers can control energy consumption. This experiment, unprecedented in scale in Europe, will be conducted for four years in more than 25,000 homes, businesses and communities of Grand Lyon. It is intended to test innovative solutions that will consume less and perform better.



PANASONIC OFFERS A GLOBAL SOLUTION TO MEET ALL OF YOUR RETAIL NEEDS UNDER A SINGLE CONTROL

INTEGRATED TECHNOLOGY THAT PERMITS BETTER WORK

Our main targets are the distributed services and B2B-integrated solutions.

Given our experience in processes, technologies and complex business models, we can offer you effective systems that reduce costs, whilst also being efficient, user-friendly, reliable and confidence-inspiring.

We also incorporate our products in third-party systems in order to optimize and make integration easier using standard protocols. Another advantage we offer to our clients is a support service for systems integration projects, which we provide through our wide range of services and solutions.

As a global company, we have at our disposal the financial, logistical and technical resources to develop complex and wide-ranging solutions, both at country and international level by implementing them both on-time and on-budget.

With Panasonic's services and technical resources, along with experienced system integrators, we bring comprehensive solutions to our end users.

We can manage every stage of every project, like the design of the systems architecture, the setup and commissioning of the system, project management, installation, service providers, plus we are also the single contact partner and bear the responsibility for the project from concept to completion.

WITH PANASONIC YOU HAVE AN INSPIRING TECHNOLOGICAL PARTNER



COMMUNICATE WITH STAFF, ANYWHERE AND AT ANY TIME

Staying connected to colleagues and information is vital for your mobile staff. Our unified communications and wireless PBX solutions ensure that office-based workers and field-based team members are never out of touch.



IMPROVE LOSS PREVENTION AND ENHANCE SAFETY

Our security solutions are an integral part of Panasonic's loss-prevention solution, increasing safety and reducing theft in retail environments. They provide the latest technology and a wealth of innovative features for any number of security applications. From network cameras, equipped for cutting-edge face detection and 360-degree coverage, to high-performing Full HD network video recorders, and network encoders and decoders.



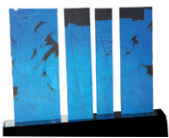
DELIVER SALES MESSAGES FASTER THAN EVER BEFORE

Panasonic's range of large LCD displays with LED backlit technology brings uncompromising image quality, supreme brightness, and exceptional clarity to deliver signage that captivates and engages in retail environments. The speed with which promotions and information can be updated or changed means you can deliver your sales messages to target customers faster than ever before.



OPTIMISE THE IN-STORE SHOPPING EXPERIENCE

Providing excellent visibility and colour reproduction, our interactive display technology means information can be targeted and brought to life, providing an immersive experience for customers that enhances their visit to your store, and engages them more fully with your products.



ENCOURAGE CUSTOMERS INTO YOUR STORE

Cutting-edge technology means that advertising and promotional information can now be projected onto glass outside or inside your store. Which means that customers are presented with an all-new experience that will encourage greater footfall through your front door.



CAMERAMANAGER (CLOUD VIDEO SECURITY)

Providing 24/7 remote video surveillance of your premises and vehicles, accessed via your PC, laptop, tablet or smartphone, Cameramanager allows you to keep a close eye on all aspects of your business, wherever you are.



ENHANCED CUSTOMER SERVICE

At the checkout or with a sales professional on the shop floor, Panasonic's innovative POS solutions and rugged Toughpad tablets are built to help your business run more efficiently in a stylish, small-footprint design.

OPTIMISE YOUR STORE LAYOUT

Our range of visual analysis solutions, including heat mapping technology, gives you instant access to previously unattainable insight into the effectiveness of your store layout, identifying customer flows, dwell times, pinch points, hot and cold spots and customer data that helps you to optimise every inch of your retail business.



ENSURE PROMPT, ACCURATE SERVICE

Our durably designed EPOS systems provide a long product life cycle with maximum uptime and minimum maintenance. What's more, Panasonic EPOS workstations can be combined with digital signage and loss-prevention solutions for a fully integrated retail solution.



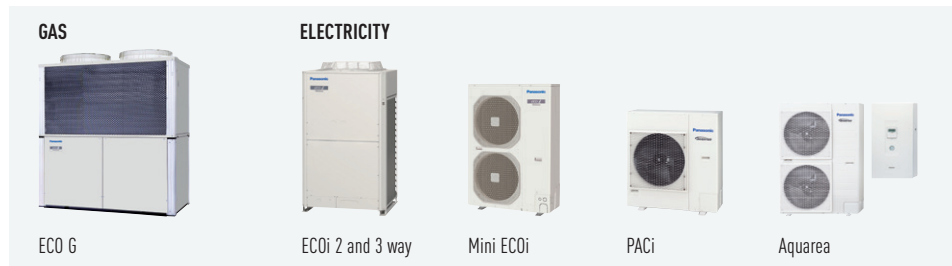
MANAGE INVENTORY WITH REAL-TIME STATUS UPDATES

Combining our rugged Toughpad tablets with our Business Intelligence Video Systems allows you to monitor and manage stock levels and in-store merchandising in real time, with information relayed to and from the shop floor on a constant basis.



SECURE YOUR INVESTMENT AND SAFEGUARD YOUR CUSTOMERS

To protect visitors, staff, premises and assets, Panasonic has developed a range of fire solutions with the precise requirements of the retail sector in mind. A range of programmable functions, intelligent algorithms and the ability to monitor multiple zones mean early, safe and reliable fire detection and prevention is achieved, in every retail setting. Remote monitoring is also possible, thanks to security software.



GAS

ELECTRICITY

ECO G

ECOi 2 and 3 way

Mini ECOi

PACi

Aquarea

HEATING AND COOLING SOLUTIONS

Panasonic provides reliable, high quality, energy efficient and attractive heating and cooling systems, designed especially for the challenging demands of the retail environment. Ensuring a comfortable and inviting climate, Panasonic heating and cooling units feature the latest space-saving and energy-saving technologies, are quiet and stylish, and are cleverly designed for easy installation and maintenance.

MULTI ENERGY SOLUTION FOR MORE FLEXIBILITY

The Multi energy solution (Gas and Electric) from Panasonic gives the best in energy saving and flexibility for installation. Panasonic solutions can be connected direct expansion systems, water chiller installations and ventilation systems as air handling units.

PANASONIC SMART CLOUD. TAKE CONTROL OF ALL YOUR SHOPS



CENTRALIZE CONTROL OF YOUR BUSINESS PREMISES, FROM WHEREVER YOU ARE, 24/7

It doesn't matter how many sites you have, or where they are!

The new Cloud system from Panasonic allows you to have complete control of all your installations, from your smartphone or from your computer. In a simple click, all your units from several locations, receive status updates in real-time of all your installations, preventing breakdowns and optimizing costs

WITH PANASONIC SMART CLOUD, HAVE YOUR BUSINESS UNDER CONTROL, AND START SAVING!

- Monitor temperature in your shops, optimize temperatures, reduce energy costs!
- Monitor running time, anticipate maintenance and optimise costs consumption
- Monitor breakdowns in order to take quick action to maintain the comfort in the shops
- Monitor energy consumption and running time of the units
- Compare the performance of your shops easily and develop best practices plan
- Alarms
- 2 connections possible:
 - by internet, using the shop internet connection
 - by 3G module. In this case, the system does not need internet connection, but a SIM Card and the 3G contract should be supply on the field.

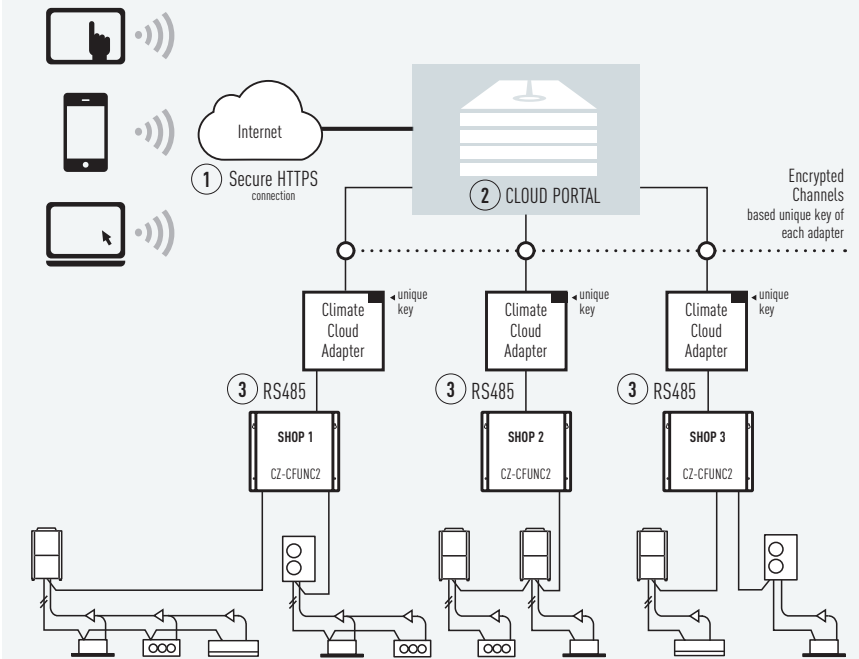
SECURITY

Panasonic has developed both physical and software protection with a high level of encryption to secure your data on our servers which are located in Germany.

SCALABLE SOLUTION ACCORDING TO THE NEEDS

Panasonic Smart Cloud is fully scalable to the needs of your shops, franchises, facility companies.

PANASONIC SMART CLOUD IS GIVING VALUE NOT ONLY FOR YOUR BUSINESS BUT ALSO FOR YOUR PARTNERS



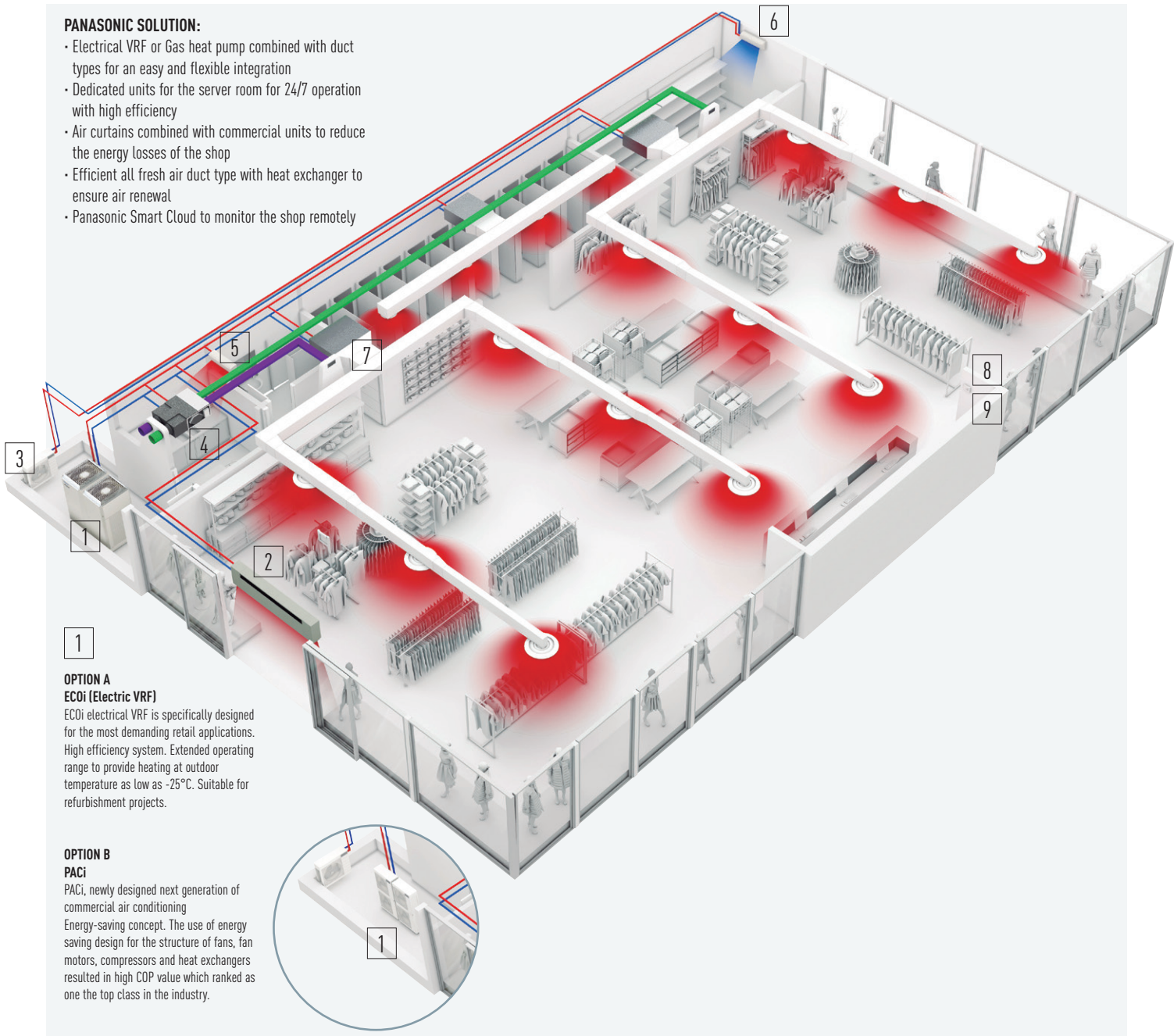
1. Secure connection between portal and adapters (encryption). 2. Portal: Single point of access for shops owners, employers, franchisers and facility companies. 3. Easy integration in existing systems via RS485 protocol.



EXAMPLE OF APPLICATIONS: RETAIL SHOP OF 1.000/2.000m²

PANASONIC SOLUTION:

- Electrical VRF or Gas heat pump combined with duct types for an easy and flexible integration
- Dedicated units for the server room for 24/7 operation with high efficiency
- Air curtains combined with commercial units to reduce the energy losses of the shop
- Efficient all fresh air duct type with heat exchanger to ensure air renewal
- Panasonic Smart Cloud to monitor the shop remotely



1

OPTION A

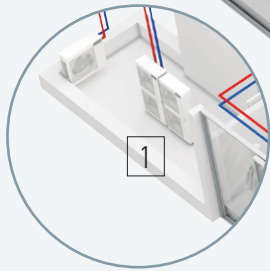
ECOi (Electric VRF)

ECOi electrical VRF is specifically designed for the most demanding retail applications. High efficiency system. Extended operating range to provide heating at outdoor temperature as low as -25°C. Suitable for refurbishment projects.

OPTION B

PACi

PACi, newly designed next generation of commercial air conditioning. Energy-saving concept. The use of energy saving design for the structure of fans, fan motors, compressors and heat exchangers resulted in high COP value which ranked as one the top class in the industry.



Air Curtain with DX coil
The Panasonic range of air curtains is designed for smooth operation and efficient performance.

- 3 possible outdoor units based on the request of the customer
- Jet flow for a perfect air flow
- EC fan motor for a high efficiency



PKEA for server room
Steady cooling, nonstop, even at -20°C and still with high efficiency. Ready for continuous operation and easy to connect 2 systems to automatically alternate and ensure server rooms are kept cool with maximum operating guaranteed.



Heat recovery with DX Coil
Motorised heat recovery by-pass device automatically controlled by unit control to use fresh air free-cooling when convenient. The Bioxigen® purifying system, activates when the fan runs, provides an efficient antibacterial treatment, ensuring optimum health of supplied air.



K2/K1 type wall mounted
The K2/K1 Type wall mounted unit has a stylish smooth panel which not only looks good but is also easy to clean. The unit is also smaller, lighter and substantially quieter than previous models making it ideal for small offices and other commercial applications.



Duct designed for retail
Super silent units deliver the ideal air supply for retail. Units available from 1.5kW providing precise temperature control even in small rooms. Two models available: slim unit for height restricted areas (MM unit only 200mm deep), another which allows 100% fresh air (ME).



Control your way
Wide variety of controls, from simple user control to full system control via remote access functionality. Touch panel, web server, consumption control, smartphone control... everything is possible.

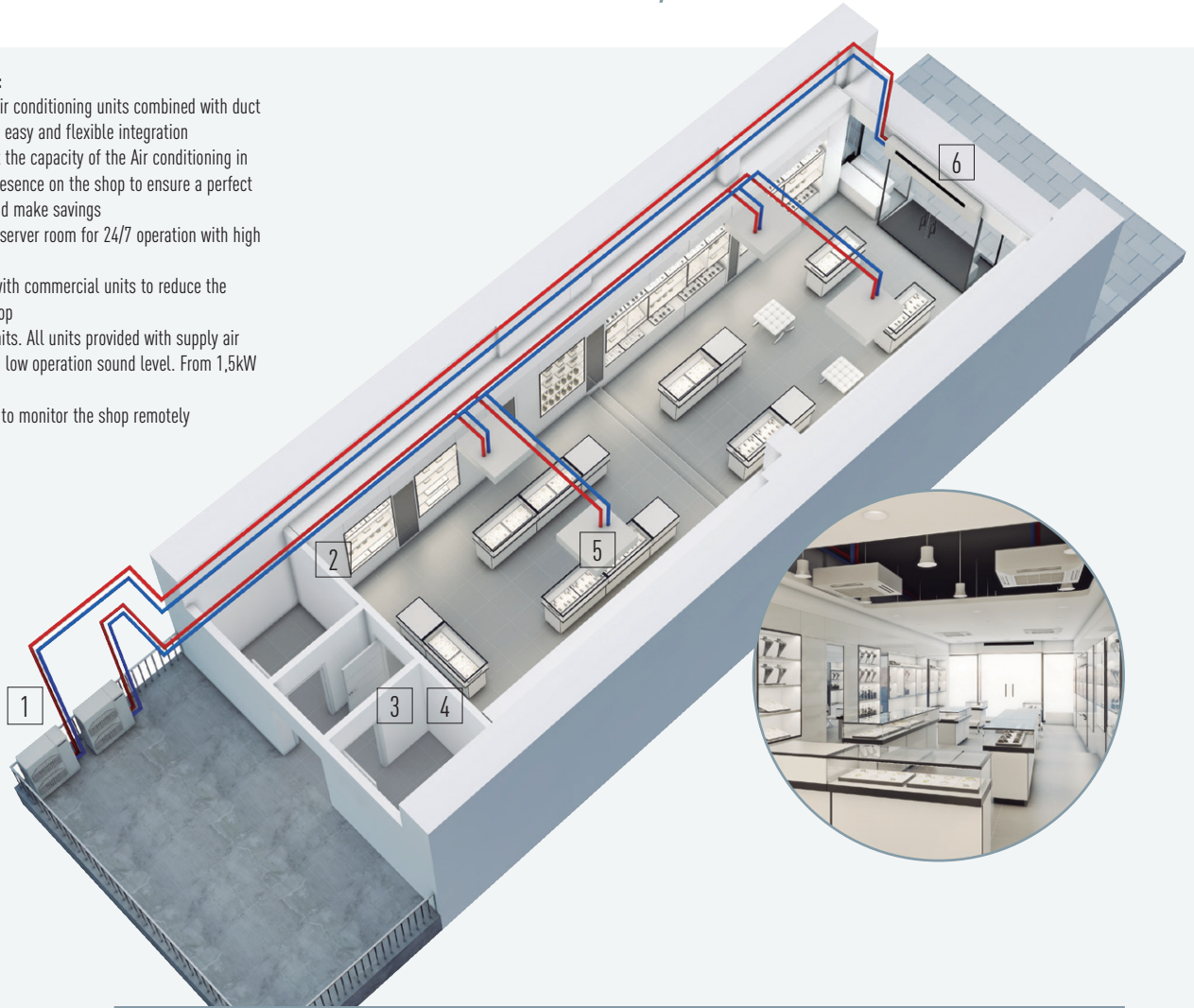


Protocol friendly
Great flexibility for integration into your KNX / EnOcean / Modbus / LonWorks / BACnet projects allows fully bi-directional monitoring and control of all the functioning parameters. Range of solutions to control locally or remotely the full system in bi-directional.

EXAMPLE OF APPLICATIONS: RETAIL SHOP OF 70/200m²

PANASONIC SOLUTION:

- Electrical commercial air conditioning units combined with duct of cassette types for an easy and flexible integration
- Econavi sensor to adapt the capacity of the Air conditioning in function of customer presence on the shop to ensure a perfect customer experience and make savings
- Dedicated units for the server room for 24/7 operation with high efficiency
- Air curtains combined with commercial units to reduce the energy losses of the shop
- Wide range of indoor units. All units provided with supply air temperature sensor and low operation sound level. From 1,5kW up to 30kW.
- Panasonic Smart Cloud to monitor the shop remotely



OPTION A

PACi
PACi, newly designed next generation of commercial air conditioning Energy-saving concept. The use of energy saving design for the structure of fans, fan motors, compressors and heat exchangers resulted in high COP value which ranked as one the top class in the industry.

OPTION B

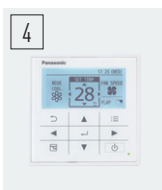
ECOi (Electric VRF)
ECOi electrical VRF is specifically designed for the most demanding retail applications. High efficiency system. Extended operating range to provide heating at outdoor temperature as low as -25°C. Suitable for refurbishment projects.



Econavi sensor
Better comfort, savings and better efficiency. The all new Econavi Sensor detects presence in the room, and quietly adapts the air conditioning system in order to improve comfort and maximise energy savings.
* Only with CZ-RTC3 remote control.



Protocol friendly
Great flexibility for integration into your KNX / EnOcean / Modbus / LonWorks / BACnet projects allows fully bi-directional monitoring and control of all the functioning parameters. Range of solutions to control locally or remotely the full system in bi-directional mode.



Control your way
Wide variety of controls, from simple user control to full system control via remote access functionality. Touch panel, web server, consumption control, smartphone control... everything is possible.



360° Air Flow 4 Way 90x90 Cassette
Wide & Comfortable Airflow. This proprietary design provides a wide and very comfortable airflow. The cassette's wide-angle discharge outlets and flaps are larger in the middle, featuring a shape that was selected based on geometrics and testing of actual prototype units.



Air Curtain with DX coil
The Panasonic range of air curtains is designed for smooth operation and efficient performance.
• 3 possible outdoor units based on the request of the customer
• Jet flow for a perfect air flow
• EC fan motor for a high efficiency

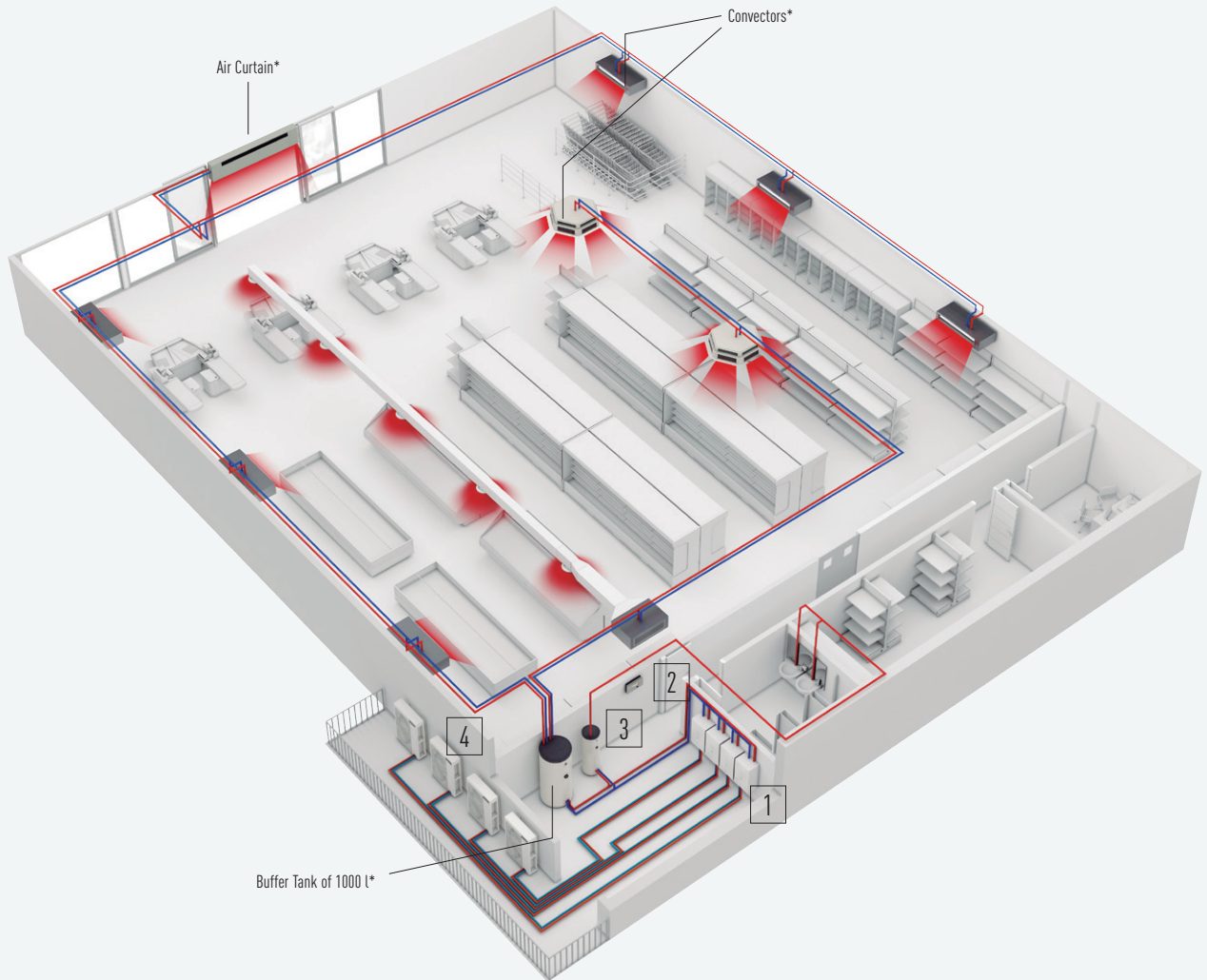


Duct designed for retail
Super silent units deliver the ideal air supply for retail. Units available from 1.5kW providing precise temperature control even in small rooms. Two models available: slim unit for height restricted areas (MM unit only 200mm deep), another which allows 100% fresh air (ME).

EXAMPLE OF APPLICATIONS: RETAIL SHOP OF 500/2.000m², WATER BASED HEATING

PANASONIC SOLUTION:

- Efficient Aquarea heat pumps air to water, to heat and cool water based installation (with fan coils or convectors)
- Efficient load management during inter-seasons and cascade management with Heat Pump Manager
- Dedicated units for the server room for 24/7 operation with high efficiency



* Field supply

Supermarket with Aquarea

Heat pump technology is scalable, meaning that it can be installed in buildings of varying sizes, offering both small- and large-scale heating solutions. The technology is also environmentally friendly when compared to existing technologies, offering demonstrable energy-use and emissions savings and in most cases; will deliver operational cost savings when compared with fossil fuel alternatives.

- Easy connection to existing system
- Fan Coils
- Floor Heating
- 4 way and 2 way convectors
- Domestic hot water tanks
- High efficiency
- Very good part load management
- Cascade management for higher durability of the system



1 High Efficiency Aquarea Hydrokit
New indoor unit design. New A-class pump with 7 speeds, expansion vessel of 10L and selectable back-up heater (3/6/9kW).

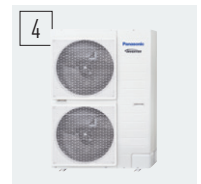


2 HPM to control the 4 heat pumps on cascade mode*
The next generation of Aquarea Manager. This new generation of smart controllers for eco-efficient heating features our versatile stand-alone controller for heating and domestic hot water.

* 1 HPM can control 3 HP, on this case 2 HPM are needed



3 Super High Efficiency Tanks From 200L to 500L for domestic hot water
High efficiency water tanks with a large exchange surface and high levels of insulation to minimise energy losses.



4 Aquarea T-Cap Heat Pump 16kW on cascade mode
Efficient Panasonic heat pumps can help to significantly reduce the energy consumption of your business. Recent improvements to air source heat pump technology, including compact single unit systems, can provide an ideal commercial solution.

8 REASONS WHY PANASONIC IS THE BEST SOLUTION FOR YOUR RETAIL



1

COMPLETE SOLUTION

Panasonic offers the widest available range in Heating, Cooling, Domestic Hot Water and Ventilation based on gas or electricity. That enables us to offer the most suitable solution to any project - whatever its size or complexity. And this all with the peace of mind provided by a fast customer service which is available 24 hours a day, 365 days a year.

No matter how big your shop, Panasonic has the solution that offers you the best profitability. Working from as low an outside temperature as -25°C and a 5 year warranty on the compressor, both you and your customers can relax in comfort.

2

FLEXIBILITY AND ADAPTATION

The modularity as well as the flexibility of our systems allow for easy adaptation to any technical or architectural constraints. Be it for small or big shops, our solution is the one that adapts best, both to new projects and to refurbishing existing ones.

Compact Heat recovery boxes powered by the indoor unit (no need of additional power line). Quieter, more efficient and smaller than ever, the new super-efficient design also means reduced installation and maintenance.

3

GO GREEN RETAIL: LOWEST CO₂ EMISSIONS

Excellent all year round efficiency. Its operational performance while working at partial load is, by far, the variable that will offer real running cost savings throughout the year. The energy savings provided by our solutions, plus the available choice between electricity and gas, will enable you to reduce your CO₂ emissions.



4

COMFORT - MAXIMUM SATISFACTION

The satisfaction of your customers depends to a great extent on two elements: comfort and noise. Panasonic solutions not only ensure a higher customer satisfaction but also deliver peace of mind that is assured by Panasonic's extensive experience in these fields.

- Quieter shops: Both the interior and outdoor units have been designed with extremely low noise levels. Besides which, Panasonic offers the possibility of installing the expansion valve up to 15 metres away from the indoor unit which reduces noise levels further
- User-friendly Intuitive controls. Besides the simplified controls. With a single unit, you can control the lighting, the air curtain, switch air conditioning on and off...

5

FUTURE EXPANSION

An advantage of the modularity is that it allows for expansion in a simple way. For instance, if an expansion of the air conditioning system is required, we add an additional system with the requisite capacity, with the maximum flexibility in terms of its location. But, beyond doubt, one of the distinct traits with Panasonic is that it allows for cutout valves. When there are plans for future expansion, the installation can be built using the units sized for future expansion requirements.

6

PANASONIC IS DEFINITELY THE MOST EFFICIENT SYSTEM OVER THE YEARS

Super high efficiency at part load conditions: When many other manufacturers do not declare performance data under 50% part load, Panasonic covers up to 30% part load with extremely high efficiency.

LOAD %	110 %	100 %	60 %	50 %	40 %	30 %
Other competitors	3,52	3,38	3,45	3,50		
Panasonic VRF 6N Series 32HP Standard	3,38	3,41	4,41	4,69	4,85	4,93
Panasonic VRF 6N Series 32HP HI COP	3,91	3,94	5,14	5,54	6,03	6,51

Conditions: Outdoor temperature 0°C DB, Room temperature 20°C DB.



7

HIGH QUALITY OF SERVICE WITH PANASONIC PRO-PARTNER INSTALLATION TEAM

Panasonic is able to deliver outstanding levels of service quality through the Panasonic Pro-Partner team:

- Spare part delivery in 24h or next day dispatch directly to the installer
- Dedicated hotline to answer to technical questions
- 5 years compressor warranty
- Warranty extension plan to 5, 7 and 10 years (see conditions with Panasonic representative)

Panasonic Spec-in team and Key Account team is also able to follow your retrofit and expansion plan and offers you the best option to meet your targets.



8

OTHER PANASONIC BENEFITS

- The system will still operate up to 25% of the connected indoor units. System will not stop when up to 25% of indoor units have power supply breakdown when they are ON Mode
- High safety operation in case of breakdown! Ensures heating and cooling. AUTOMATIC BACK-UP OPERATION. It is possible for the system to keep working, even if the compressors, fan motor and the temperature sensor are damaged (even when compressor fails in single unit with 2 or more compressor inside)



SUPPORTING MAJOR NAMES ACROSS THE RETAIL INDUSTRY

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CHARLES VÖGELE GROUP IS ONE OF EUROPE'S LEADING VERTICAL FASHION RETAILERS

With attractively presented goods, combined with friendly, knowledgeable advice, it creates a relaxed shopping experience. Charles Vögele has more than 800 outlets in nine countries (e.g. Switzerland, Germany). Panasonic Heating and Cooling Systems provided an efficient and sustainable solution. Charles Vögele Group chose Panasonic because of the energy efficiency, easy maintenance and reliability and the expertise of an installer offering service and installation nationwide for Charles Vögele Group. With PACi products connected with air curtain the retail shop Charles Vögele received perfectly customised concepts for their individual, high quality requirements.



UK RESTAURANT CHAIN CARLUCCIO'S ACHIEVES SIGNIFICANT ENERGY SAVINGS BY USING AN AQUAREA HEAT PUMP

A 12kW Aquarea T-CAP mono bloc unit was installed at their Sheffield site which allowed for the free air from the kitchen roof space to be transferred through condensing unit providing hot water at the optimum temperature. When they compared this restaurant to another of their sites of a similar size, the energy savings were considerable. To heat the water for their Leeds restaurant cost £2027 whilst in Sheffield the comparable cost was just £476. These sizable savings meant the site saw a return on investment in about 2 years and has achieved a COP of about 3.91.



To find out how Panasonic cares for you, log on to: www.aircon.panasonic.eu

Panasonic Marketing Europe GmbH
Panasonic Air Conditioning: Hagenauer Strasse 43, 65203 Wiesbaden, Germany

heatingandcoolingsystems

