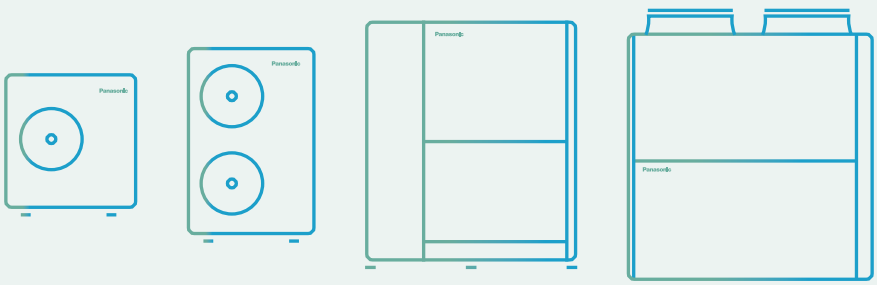
Panasonic

VRF systems
2022 / 2023



heating & cooling solutions

Panasonic environmental vision 2050

To achieve “a better life” and “a sustainable global environment,” Panasonic will work towards creation and more efficient utilisation of energy which exceeds the amount of energy used, aiming for a society with clean energy and a more comfortable lifestyle.

2050

Energy used < Energy created

One initiative in the Panasonic environmental vision 2050 is offering products with greater energy efficiency. In 2018, we celebrated the 60th anniversary of our Heating & Cooling Solutions business. Our expertise gained over the years has helped us launch a range of products that contribute to a more carbon-free society.

Current status of energy used and energy created

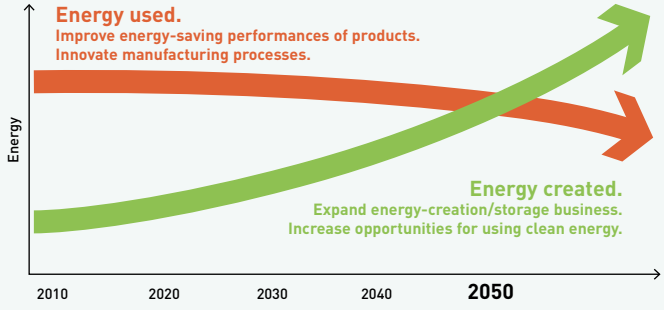
Energy used by Panasonic business activities and products.

10 Energy used

Clean energy created and / or made available by Panasonic products, etc.

1 Energy created

Working to realise environmental vision 2050



Projects and case studies of Panasonic Heating & Cooling Solutions

Panasonic, a partner with the knowledge and experience to achieve your objectives and green needs.

Integrated technology that permits better work, easy installation, high efficiency performance, and energy savings

Our main targets are the distributed services and B2B-integrated solutions.
Panasonic provides a single point of contact for the design and maintenance of your system, making things easy for you. Given our experience in processes, technologies and complex business models, we can offer you effective solutions that reduce costs, whilst also being efficient, user-friendly, reliable and innovative. 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.

Aquarea Heat Pumps provide heating and hot water for new rural housing development, UK. **Aquarea**

The Hotel Vincci Gala with efficiency class A, up to 70 % save energy. Barcelona, Spain. **ECOi - ECO G**

STEMCELL Technologies, a global biotechnology company, installed CO_2 condensing units - CR Series for cold rooms in the warehouse. France. **Refrigeration**

The EDEKA store in Germany, the first supermarket providing the maintenance-free nanoe™ X technology for better indoor air quality. Germany. **ECOi and nanoe™ X**

Aquarea T-CAP provides a complete solution of heating, cooling and DHW for the refurbishment of a luxury house in Voorthuizen, Netherlands. **Aquarea**

CÉDRUS LIGET, a complex facility including apartments, penthouses and showrooms etc. Hungary. **ECOi-W - ECOi - PACi**

Dolomiti Lodge Alverà hotel with nice wooden furnishings, located in Cortina d'Ampezzo, Italy. **ECOi**

LIAIGRE showroom, well-known as a luxury design architect in Paris, France. **ECOi**

Marina Village Greystones. 205 apartments and 153 houses. Ireland. **Aquarea**

ITK Engineering GmbH. An innovative office building located in Germany. **ECOi - PACi**

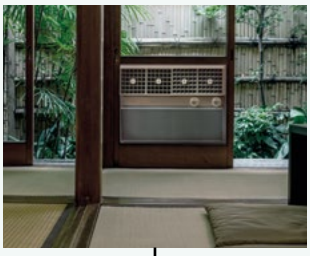
A historic building on Amsterdam's Marineterrein. Netherlands. **ECOi-W**

Nolan's supermarket in Ireland installs the first Panasonic CO_2 condensing units - CR Series for showcases. Ireland. **Refrigeration**

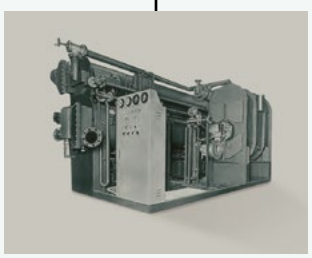
A desire to create things of value

"Recognising our responsibilities as industrialists, we will devote ourselves to the progress and development of society and the well-being of people through our business activities, thereby enhancing the quality of life throughout the world."
Panasonic Corporation's Basic Management Objective, formulated in 1929 by the company's founder, Konosuke Matsushita.

1958
First room air conditioner launched for domestic installation.



1971
Starts production of absorption chillers.



1975
Panasonic becomes one of the first Japanese air conditioner manufacturers in Europe.

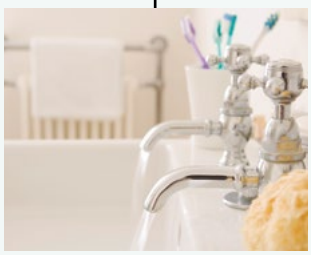
1982
Panasonic launches the first highly efficient air to water heat pump in Japan.

1985
Introduces first GHP (gas heat pump) VRF air conditioner.

1989
Introduces world's first simultaneous 3-Pipe heating / cooling VRF System.

2008
World's first air conditioner equipped with nanoe™

2010
New Aquarea. Panasonic introduces Aquarea, an innovative new, low-energy system in Europe.



Vitalize the future with air

These are times of exceptional challenge.
If the world is to move forward confidently, it must overcome the serious threats of the new global pandemics and the degrading of the environment. It must find ways large and small to reduce the stresses that affect people's health and the stability of their communities.
At Panasonic, we're utilizing the power of air to create positive change.
Air that benefits body and mind.
Air that energizes the places where people gather to work and play.
Air that reduces our burden on the Earth.
With more than a century of research and expertise to guide us, we're using air to open a more hopeful and vital future for all.

2012

New Panasonic GHP units. The gas-driven VRF Systems are ideal for projects where power restrictions apply.

2015

CO_2 condensing units in Europe. The ideal solution for supermarkets, shops and gas stations.

2016

New VRF Systems ECOi EX with extraordinary energy saving performance.

2018

The first Hybrid System with VRF and GHP in Europe.

2019

Panasonic introduces a new Chiller series which is named as ECOi-W.

2020

nanoe™ X, technology with the benefits of hydroxyl radicals. Improving protection 24/7.

2021

Mini VRF R32 up to 10 HP. Outstanding efficiency in a compact body.

Looking ahead

100 % Panasonic, the DNA of Japanese craftsmanship

JAPAN QUALITY

Applying advanced technologies that truly make life better, we live by an unparalleled commitment to product quality.
Panasonic is building on the Japanese tradition of uncompromising quality control worldwide, developing and manufacturing fine products and delivering them to customers everywhere.

At Panasonic, we believe that the best air conditioner is one that works quietly and effectively in the background whilst minimising its impact on the environment

People who use our products can look forward to long years of high-quality performance without the need for constant service. As part of our rigorous design and development process, Panasonic air conditioners undergo a variety of stringent tests to ensure their effectiveness and long-term reliability. Tests for durability, waterproofing, shock resistance, and noise are conducted on component parts or on the finished products themselves.
As a result of all of these time consuming efforts, Panasonic air conditioners meet industrial standards and regulations in every country where they are sold.

International Standard Quality

To uphold the company's reputation around the world, Panasonic strives continuously to offer quality with minimized environmental impact.

Reliable parts that meet or exceed industrial standards.
In every country where they are sold, Panasonic air conditioners comply with all required industrial standards and regulations. In addition, Panasonic conducts stringent testing to ensure the reliability of parts and materials. The strength of the resin material used in a propeller fan is confirmed by a tension test.

Compliance with RoHS / REACH substance restrictions.
Panasonic products and used materials strictly comply with chemical substance restrictions as defined by RoHS or REACH. During the development and production of parts, stringent inspections are conducted on over 100 materials to ensure that no hazardous substances are included.

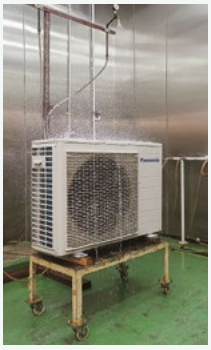
Sophisticated production process.
Panasonic's air conditioner production lines employ state-of-the-art factory automation technologies to ensure products are manufactured with high attention to quality to meet expectations of reliability and trustworthiness.

Durability

At Panasonic we know the importance of a long service life with minimal maintenance. That's why we subject our air conditioners to a wide range of stringent durability tests.

Long-term durability test.
To ensure durability and stable operation for many years, we conduct a long-term continuous operation test under conditions that are much more severe than actual operating conditions.

Compressor reliability test.
After the continuous operation test, we remove the compressor from a selected outdoor unit, disassemble it, and examine the internal mechanisms and parts for potential failure. This helps ensure reliable long-term performance under harsh conditions.



Waterproofing test.
The unit - which is subject to rain and wind - complies with IPX4 waterproof specifications. Contact sections on printed circuit boards are resin-potted to prevent adverse effects caused by exposure to water (an unlikely occurrence).

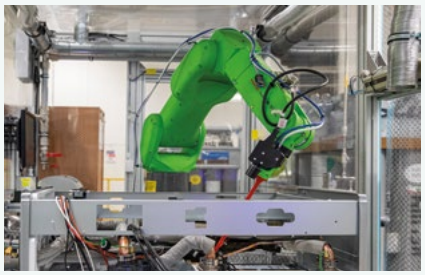
A globally trusted air conditioning brand

Panasonic – leading the way in Heating and Cooling.
With more than 50 years of experience, selling to more than 120 countries around the world, Panasonic is 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.

From, for and by Europe

In 2018 Panasonic initiated the production of air to water heat pumps in its factory in Pilsen, Czech Republic. Keeping an excellent combination of highly skilled human resources and production automation the big demand growth foreseen in Europe can be met with outstanding quality standards.

Factory in Pilsen, Czech Republic.



More than 40 years of experienced organization in Europe.

At Panasonic, we know that the best is always yet to come. This is why our air conditioning and heat pump solutions are constantly upgraded. Panasonic is committed to offering our customers innovative products in the heating and cooling market across Europe, and has the ambition to not only meet but also exceed their requirements. Our Technology and Design teams anticipate the needs of tomorrow. We look to produce smaller, quieter, efficient solutions - with better technological features – that can reduce energy consumption while providing suitable temperature conditions for the user.

Panasonic R&D Center Germany GmbH.

The European Research and Development Center of Panasonic focusing on technology development for intelligent and environmentally friendly future products, such as audio video, communication and energy solutions.

Panasonic R&D Center Germany GmbH.

38 Training Center in 19 countries in Europe

The Panasonic PRO Academy.

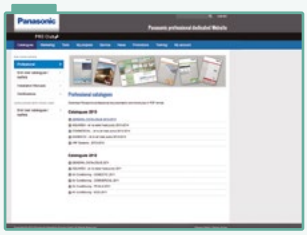
Heating and Cooling business is changing rapidly, new technologies, new regulations, new solutions that require continuous update for professionals. Panasonic takes its responsibility to its distributors, specifiers and installers seriously and has developed a comprehensive training programme with 38 Training Center in 19 countries in Europe.

PRO Club. The professional website of Panasonic

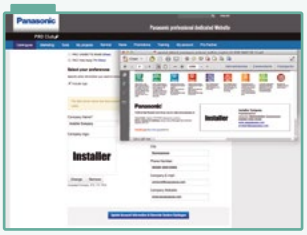
Panasonic has an impressive range of support services for designers, specifiers, engineers and distributors working in the heating and cooling markets.

Panasonic PRO Club (www.panasonicproclub.com) is the online tool which makes your life easier! You just have to register and a lot of functionalities are freely available to you, where ever you are, from your computer or smartphone!

- Print catalogues with your logo and contact details
- Access to the extensive library of professional design, selection and calculation tools (Aquarea Designer, VRF software, chiller selector, etc.)
- Get documents of conformity and all other documents you may need
- Download all the service manuals, end user manuals and installation manuals
- Download energy labels in PDF format using the energy label generators
- Download Revit and CAD files and specification texts
- Know what to do with error codes (error code search by error code or unit ref.)
- PRO Academy: register for training
- Download product images in high resolutions, advertisements, deco guidelines
- Get to know special offers and promotions
- Find out about the latest news first

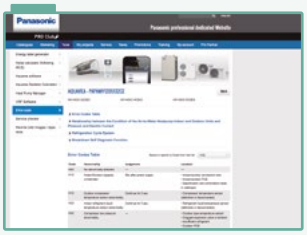


Easy download Panasonic service documentation and brochures.



Customise leaflets with your logo and contact details. Save and print the PDF.

Energy label generator. Download Energy labels of any device in PDF format.



Error Code on your smartphone and your PC: Search by error code or model reference. Online version + downloadable version for offline use.

Panasonic PRO Club is fully compatible with tablet computer and smartphone.

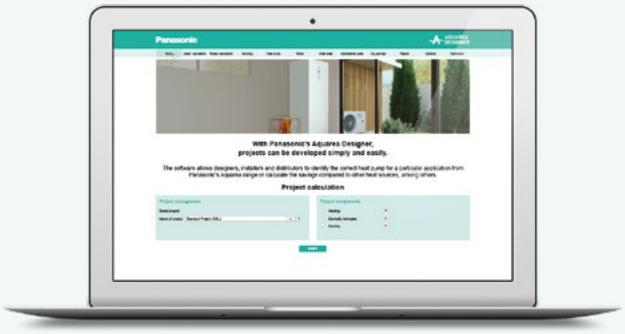
Visit www.panasonicproclub.com or connect simply with your smartphone to the PRO Club using this QR.

PRO Club

Panasonic provides bespoke software and tools helping system designers, installers and dealers to very quickly select, design and size systems or create wiring or hydraulic diagrams at the push of a button.

Aquarea Designer - online tool

With Panasonic's online tool, projects can be developed simply and easily. The newly developed tool is optimised to help HVAC professionals easily identify the most appropriate Aquarea air to water heat pump for a particular application.



Domestic AirCon Quick Selector

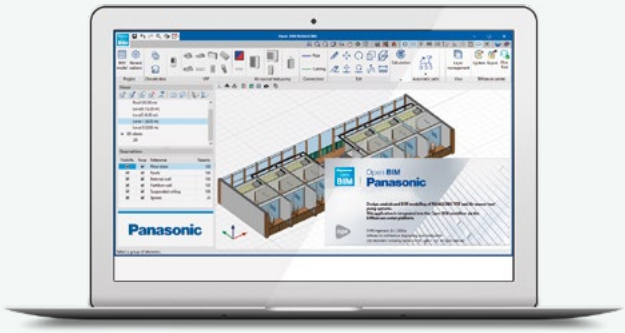
This user-friendly online tool for our domestic range allows to choose the best split or multi-split system for each project needs and get the specifications of that particular application.

VRF Designer

Building on the success of the ECOi VRF Designer software, this package provides air conditioning system designers, installers and dealers with a program to design and size projects for Panasonic's VRF ranges.

Open BIM

Design, analysis and BIM modeling of Panasonic VRF and Air to Water heat pump systems. Generates documents, 3D model, schematics and drawings. This application is integrated into the Open BIM workflow via the BIMserver.center platform.

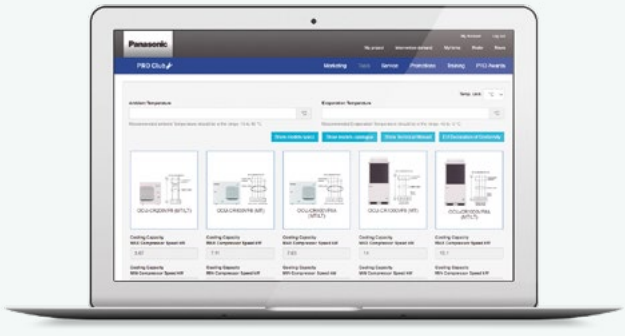


Chiller configurator

This online software solution offers a complete tool to allow the user to accurately calculate the performance at specified conditions, select and configure our range of commercial chillers, heat pumps and fan coils. It also provides a comprehensive report to share with customers and clients alike.

Refrigeration tool

Panasonic has launched a new online calculator to support engineers, installers, and technicians to quickly make calculations when specifying solutions for commercial refrigeration systems.

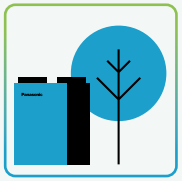


ECO i EX / ECO i / ECO G

Commercial VRF Systems

Professional solutions for commercial projects.
Panasonic VRF Systems are specifically designed for energy saving, easy installation and high efficiency performance. A wide range of outdoor and indoor unit models offer unique features which are designed for the most demanding offices and large buildings.






VRF outdoor units range

Page	Outdoor units	4 HP	5 HP	6 HP	8 HP	10 HP
P. 16	R32 Mini ECOi LZ2 Series · R32	 U-4LZ2E5 / U-4LZ2E8	 U-5LZ2E5 / U-5LZ2E8	 U-6LZ2E5 / U-6LZ2E8	 U-8LZ2E8	 U-10LZ2E8
P. 20	Mini ECOi LE2 / LE1 Series · R410A	 U-4LE2E5 / U-4LE2E8	 U-5LE2E5 / U-5LE2E8	 U-6LE2E5 / U-6LE2E8	 U-8LE1E8	 U-10LE1E8
P. 24	2-Pipe ECOi EX ME2 Series · R410A				 U-8ME2E8	 U-10ME2E8
P. 30	3-Pipe ECOi EX MF3 Series · R410A				 U-8MF3E8	 U-10MF3E8

12 HP	14 HP	16 HP	18 HP	20 HP
 U-12ME2E8	 U-14ME2E8	 U-16ME2E8	 U-18ME2E8	 U-20ME2E8
 U-12MF3E8	 U-14MF3E8	 U-16MF3E8		

Mini ECOi LZ2 Series R32

For light commercial and residential use. The most flexible VRF system ever. Meeting the needs of light commercial applications.

1 Low GWP and less refrigerant

The Mini ECOi LZ2 Series utilizes environmentally friendly R32 refrigerant, reducing the total amount of refrigerant by 20 % and more, resulting in lower GWP, reduced by 75 %*.

* As a result of applying R32 while at the same time reducing the total refrigerant amount.

2 Outstanding efficiency at the most challenging ambient conditions

Re-engineered for better performance, the LZ2 series produces extraordinary savings with SEER levels up to 8,50 and SCOP levels up to 5,05 (for 4 HP model). The large range of outdoor units from 12 kW to 28 kW can also work at extreme ambient temperatures, down to -20 °C in heating and up to 52 °C in cooling, providing a very wide range of operating ability.

3 More flexibility for your project

The ECOi LZ2 series provides ease of installation with long piping lengths and small footprints in a lightweight body. A variety of indoor units, supporting Panasonic's optional R32 refrigerant leak detector, increases the flexibility for installers. A wide range of individual and central controllers, the new generation Smart and Service Cloud, as well as apps for end users and installers, provide a fully customizable monitoring and controlling solution.

WIDE OPERATING RANGE
-20 °C in heating to 52 °C in cooling

8,50 SEER | 5,05 SCOP
EXTRAORDINARY SAVINGS

ECOi LZ2 mini VRF series from 12 to 28 kW

- Improving protection 24/7. Unique indoors with nanoe™ X, hydroxyl radicals contained in water
- SEER levels up to 8,50 and SCOP levels up to 5,05 (for 4 HP model)
- Low GWP and highly reduced refrigerant volume
- Improved connectivity with CONEX remote controllers and app support, Smart and Service Cloud applications and support for communication protocols for BMS integration
- Wide range of connectable units allowing wide range of installations with and without refrigerant mitigation
- Increased indoor / outdoor capacity ratio up to 150 %
- Quiet mode operation with low capacity drop
- Same Panasonic DNA with Panasonic compressors and precise temperature control thanks to discharge temperature sensors in the indoor units
- Continuous operation at extreme ambient temperatures: -20 °C (heating) to 52 °C (cooling)
- Flexible mitigation measures, with Panasonic R32 refrigerant leak detector / alarm to be installed only when required
- 35 Pa static pressure

SHORT HEIGHT
996 mm

Mini ECOi LZ2 Series 4 to 6 HP · R32

Outstanding efficiency in a compact body and continuous operation even at extreme ambient temperatures.

HP			4 HP	5 HP	6 HP	4 HP	5 HP	6 HP
Outdoor unit			**U-4LZ2E5**	**U-5LZ2E5**	**U-6LZ2E5**	**U-4LZ2E8**	**U-5LZ2E8**	**U-6LZ2E8**
Power supply	Voltage	V	220 - 230 - 240	220 - 230 - 240	220 - 230 - 240	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Single phase	Single phase	Single phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Cooling capacity		kW	12,1	14,0	15,5	12,1	14,0	15,5
EER [1]		W/W	4,53	4,12	3,88	4,53	4,12	3,88
Recommended combination			2 x S-60MU2E5B	4 x S-36MU2E5B	2 x S-36MU2E5B + 2 x S-45MU2E5B	2 x S-60MU2E5B	4 x S-36MU2E5B	2 x S-36MU2E5B + 2 x S-45MU2E5B
SEER [2]			**8,50**	**8,12**	**7,71**	**8,50**	**8,12**	**7,71**
$\eta_{s,c}$		**%**	**337,0**	**321,8**	**305,4**	**337,0**	**321,8**	**305,4**
Current		A	13,30 - 12,80 - 12,20	16,90 - 16,20 - 15,50	19,60 - 18,70 - 18,00	4,37 - 4,15 - 4,00	5,50 - 5,23 - 5,04	6,44 - 6,12 - 5,89
Input power		kW	2,67	3,40	4,00	2,67	3,40	4,00
Heating capacity		kW	12,5	16,0	16,5	12,5	16,0	16,5
COP [1]		W/W	5,27	4,71	4,42	5,27	4,71	4,42
SCOP [2]			**5,05**	**4,61**	**4,59**	**5,05**	**4,61**	**4,59**
$\eta_{s,h}$		**%**	**199,0**	**181,4**	**180,6**	**199,0**	**181,4**	**180,6**
Current		A	12,00 - 11,40 - 11,00	16,90 - 16,20 - 15,50	18,50 - 17,70 - 17,00	3,91 - 3,71 - 3,58	5,50 - 5,22 - 5,03	6,02 - 5,72 - 5,51
Input power		kW	2,37	3,40	3,73	2,37	3,40	3,73
Starting current		A	1,0	1,0	1,0	1,0	1,0	1,0
Maximum current		A	19,6	23,7	26,5	7,2	9,2	9,9
Maximum input power		kW	3,92 - 4,10 - 4,28	4,76 - 4,98 - 5,19	5,41 - 5,66 - 5,90	4,40 - 4,63 - 4,80	5,69 - 5,99 - 6,22	6,15 - 6,47 - 6,72
Maximum number of connectable indoor units [3]			7 (10)	8 (12)	9 (12)	7 (10)	8 (12)	9 (12)
External static pressure		Pa	0 ~ 35	0 ~ 35	0 ~ 35	0 ~ 35	0 ~ 35	0 ~ 35
Air flow		m^3/min	69	72	74	69	72	74
Sound pressure	Cool	dB(A)	52	53	54	52	53	54
	Cool (Silent 1/2/3/4)	dB(A)	49/47/45/45	50/48/46/45	51/49/47/45	49/47/45/45	50/48/46/45	51/49/47/45
	Heat	dB(A)	54	56	56	54	56	56
Sound power	Cool / Heat	dB(A)	69/72	70/74	72/75	69/72	70/74	72/75
Dimension	H x W x D	mm	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370
Net weight		kg	94	94	94	94	94	94
Piping diameter	Liquid pipe	Inch (mm)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas pipe	Inch (mm)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)
Maximum piping length (total)		m	90 (180)	90 (180)	90 (180)	90 (180)	90 (180)	90 (180)
Elevation difference (in / out)		m	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)
Refrigerant (R32)		kg	2,7	2,7	2,7	2,7	2,7	2,7
Maximum allowable indoor / outdoor capacity ratio [4]		%	50 ~ 150 (130)	50 ~ 150 (130)	50 ~ 150 (130)	50 ~ 150 (130)	50 ~ 150 (130)	50 ~ 150 (130)
Operating range	Cool Min ~ Max	°C	-10 ~ 52	-10 ~ 52	-10 ~ 52	-10 ~ 52	-10 ~ 52	-10 ~ 52
	Heat Min ~ Max	°C	-20 ~ 18	-20 ~ 18	-20 ~ 18	-20 ~ 18	-20 ~ 18	-20 ~ 18

1) EER and COP calculation is based on EN 14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) The number in parenthesis indicates maximum number of connectable indoor unit in case of 1,5kW indoor units connection. 4) The number in parenthesis indicates maximum allowed indoor / outdoor capacity ratio in case of 1,5 kW indoor units connection.

Minimum environmental impact

Panasonic has designed the LZ2 series in order to minimize the environmental impact of the system. Low GWP refrigerant R32 and highest efficiency levels ensure this through the total operational lifetime.

For the most challenging spaces

The Mini ECOi LZ2 R32 VRF system is the ideal solution to fit into any application thanks to its compact design and long piping lengths.

Technical focus

- SEER levels up to 8,50 and SCOP levels up to 5,05 (for 4 HP model)
- Continuous operation at extreme ambient temperatures: -20 °C (heating) to 52 °C (cooling)
- Wide range of connectable units
- Unique indoors with nanoe™ X, hydroxyl radicals contained in water
- Allowing wide range of installations with and without mitigation measures
- Flexible mitigation measures, with Panasonic R32 refrigerant leak detector / alarm to be installed only when required

R32 | INVERTER+ | R2 ROTARY COMPRESSOR | BLUEFIN | -10 °C COOLING MODE | -20 °C HEATING MODE | AUTOMATIC RESTART | PANASONIC AC SMART CLOUD | OPTIONAL WI-FI | 5 YEARS COMPRESSOR WARRANTY

INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

INDUSTRY 1ST 8 HP AND 10 HP MINI VRF UNITS WITH R32

Mini ECOi LZ2 Series 8 and 10 HP · R32

Introducing widest range of R32 Mini VRF.

HP			8 HP	10 HP
Outdoor unit			**U-8LZ2E8**	**U-10LZ2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase
	Frequency	Hz	50	50
Cooling capacity		kW	22,4	28,0
EER [1]		W/W	3,84	3,47
Recommended combination			4 x S-56MU2E5B	4 x S-73MU2E5B
SEER [2]			**7,56**	**7,08**
$\eta_{s,c}$		**%**	**293,3**	**274,7**
Current		A	9,73 - 9,25 - 8,91	13,2 - 12,5 - 12,1
Input power		kW	5,83	8,07
Heating capacity		kW	25,0	28,0
COP [1]		W/W	4,30	4,47
SCOP [2]			**4,59**	**4,60**
$\eta_{s,h}$		**%**	**170,3**	**178,5**
Current		A	9,81 - 9,32 - 8,98	10,5 - 9,93 - 9,57
Input power		kW	5,81	6,26
Starting current		A	1,0	1,0
Maximum current		A	13,7	19,5
Maximum input power		kW	8,21 - 8,64 - 8,96	11,9 - 12,6 - 13,0
Maximum number of connectable indoor units [3]			16	16
External static pressure		Pa	0 ~ 35	0 ~ 35
Air flow		m^3/min	158	167
Sound pressure	Cool	dB(A)	59,0	60,0
	Cool (Silent 1 / 2 / 3 / 4)	dB(A)	56 / 54 / 52 / 50	57 / 55 / 53 / 50
Sound power	Cool	dB(A)	72	74
Dimension	H x W x D	mm	1500 x 980 x 370	1500 x 980 x 370
Net weight		kg	125	126
Piping diameter	Liquid pipe	Inch (mm)	3/8 (9,52)	3/8 (9,52)
	Gas pipe	Inch (mm)	3/4 (19,05)	7/8 (22,22)
Maximum piping length (total)		m	100 (300)	100 (300)
Elevation difference (in / out)		m	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)
Refrigerant (R32)		kg	4,9	5,1
Maximum allowable indoor / outdoor capacity ratio [4]		%	50 ~ 150 (130)	50 ~ 150 (130)
Operating range	Cool Min ~ Max	°C	-10 ~ 52	-10 ~ 52
	Heat Min ~ Max	°C	-20 ~ 18	-20 ~ 18

1) EER and COP calculation is based on EN 14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) The number in parenthesis indicates maximum number of connectable indoor unit in case of 1,5kW indoor units connection. 4) The number in parenthesis indicates maximum allowed indoor / outdoor capacity ratio in case of 1,5 kW indoor units connection.

Perfect fit for small to medium size projects

8 and 10 HP LZ2 Mini VRF units bring in the total benefits of a VRF system in a smaller application. You can enjoy advanced individual and central VRF control options including the revolutionary Panasonic AC Smart Cloud and AC Service Cloud.

For the most difficult conditions

ECOi LZ2 series are able to operate at the hardest conditions from -20 °C up to +52 °C providing continuous and efficient, heating and cooling for your space all year long.

Technical focus

- SEER levels up to 7,56 and SCOP levels up to 4,59 (for 8 HP model)
- Continuous operation at extreme ambient temperatures: -20 °C (heating) to 52 °C (cooling)
- Widest range of connectable units in R32 VRF
- Unique indoors with nanoe™ X, hydroxyl radicals contained in water
- Allowing wide range of installations with and without refrigerant mitigation
- Flexible mitigation measures, with Panasonic R32 refrigerant leak detector / alarm to be installed only when required

R32 | INVERTER+ | R2 ROTARY COMPRESSOR | BLUEFIN | -10 °C COOLING MODE | -20 °C HEATING MODE | AUTOMATIC RESTART | PANASONIC AC SMART CLOUD | OPTIONAL WI-FI | 5 YEARS COMPRESSOR WARRANTY

INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).

Compatible with a large range of indoor units and controls

An expansion of Panasonic VRF line up, the Mini ECOi R32 is compatible with a large range of indoor units and can utilize all Panasonic's scalable control and monitoring solutions.

Wide range of indoor units, either supporting Panasonic's optional R32 refrigerant leak detector alarm or having built-in detectors provide a great flexibility for all types of installation.

Scaling your control options from a single zone to geographically distributed facilities.
LZ2 series are fully compatible with all control and connectivity solutions from Panasonic. With a wide range of individual controllers, hotel room controllers, optional wireless adapters, VRF Smart Connectivity+, easy BMS connection with S-Link and Panasonic AC Smart Cloud compatibility. LZ2 series, the most flexible control and monitoring R32 solution in the market.

Panasonic R32 refrigerant leak detector/alarm (optional)

For compatible indoor unit models, Panasonic offers its optional external Panasonic R32 refrigerant leak detector (CZ-CGLSC1). This enables the customer to decide if a Panasonic R32 refrigerant leak detector is required to comply with the restrictions, or if the indoor unit may be safely installed in this room without it. This optional leakage detection sensor has an integrated alarm buzzer and can output a signal to a central alarm system in the building. The device is connected to the remote control terminals of the indoor unit and can be used in combination with any of the Panasonic VRF remote controllers, either wired or wireless.

Panasonic R32 refrigerant leak detector.
CZ-CGLSC1

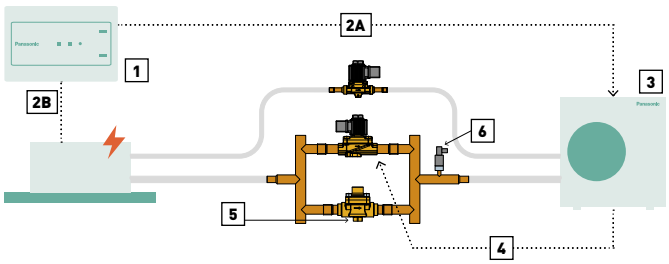
The alarm triggered by the Panasonic R32 refrigerant leak detector will also be transmitted and displayed on any connected centralised controller.

5 V external output (central monitoring etc.)

* Only one remote controller can be connected with the Panasonic R32 refrigerant leak detector.

R32 Pump Down solution

New R32 Pump Down solution which offers the assurance of additional safety protection, whilst expanding the potential installation cases, allowing for installation within smaller rooms.
Suitable for the Mini ECOi LZ2 range up to 10 HP, compatible indoor units connected to CZ-CGLSC1 or integrated Panasonic R32 refrigerant leak detector.



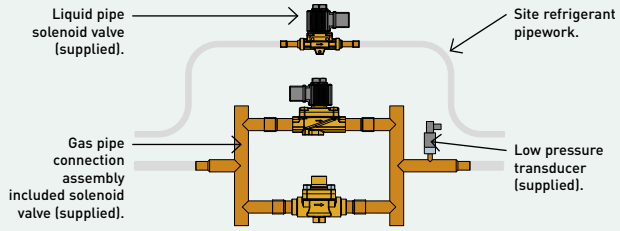
Operation steps: 1 | A leak is detected by the leak detection sensor. 2A | Leak alarm signal is sent to the outdoor unit. 2B | Indoor unit fan activated and runs at maximum speed. 3 | Pump Down procedure is activated. 4 | Solenoid valves are closed preventing refrigerant returning to indoor units. 5 | Outdoor unit is operating in Pump Down mode and check valve only allows flow to the outdoor unit. 6 | Low pressure switch threshold is reached. Error signal isolates the outdoor unit, preventing restart.

Technical focus

- Simplified design and installation
- Complies with IEC 60335-2-40 ed.6.0
- Recovers base charge within outdoor unit
- Expands potential installation cases
- IP rated connections for outdoor installation

Model reference	Description
PAW-PUD2WB-1	Basic Pump Down system (2 way) for one R32 Mini ECOi outdoor unit

Pump Down kit.
Indication of the items included within the Pump Down kit.



Mini ECOi LE Series R410A

ECO i

For light commercial and residential use. The most flexible VRF system ever. Meeting the needs of light commercial applications.

1 Efficiency energy control

Upgraded outdoor units deliver high efficiency rating and reduced energy costs.

2 Space saving

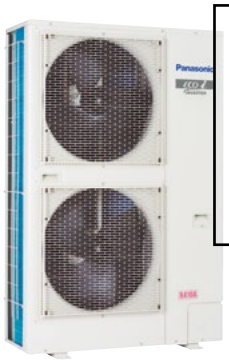
Ideal for commercial locations with limited space such as banks and shops. Compact units integrate easily and discreetly into building design.

3 Flexible installation

Reduced installation time thanks to compact units and extra long piping without additional refrigeration charge. High external static pressure 35 Pa and small chassis increase installation options.

7,9 SEER | 4,9* SCOP

INDUSTRY LEADING EFFICIENCY



6,4* SEER

4,3 SCOP

Compact design: LE2 Series - 4 / 5 / 6 HP

- Extraordinary energy saving: 7,9 SEER and 4,9 SCOP (4 HP)*
- 50 m piping length without additional refrigerant charge
- Quiet operation mode with 4 levels
- High COP mode option

* SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF.

LE1 Series - 8 / 10 HP

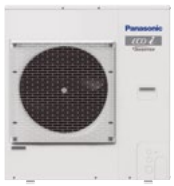
- 60 % smaller than ECOi ME2 8 / 10 HP with vertical flow type
- Flexible piping length (Total: 300 m, Furthest: 150 m)
- Maximum number of connectable indoor units: 15

Key features for LE2 / LE1.

High external static pressure 35Pa — Full range of ECOi indoor units and controllers — Variable evaporation temperature control as standard — Connectable maximum indoor / outdoor capacity ratio up to 130 % — Auto restart from outdoor units — Demand response (Peak cut) by optional parts — Suitable for R22 renewable projects

Mini ECOi LE2 Series high efficiency 4 to 6 HP · R410A

Panasonic Mini ECOi. Extraordinary energy-saving.
The most compact ECOi system ever.



HP			4 HP	5 HP	6 HP	4 HP	5 HP	6 HP
Outdoor unit			**U-4LE2E5**	**U-5LE2E5**	**U-6LE2E5**	**U-4LE2E8**	**U-5LE2E8**	**U-6LE2E8**
Power supply	Voltage	V	220 - 230 - 240	220 - 230 - 240	220 - 230 - 240	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Single phase	Single phase	Single phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Cooling capacity		kW	12,1	14,0	15,5	12,1	14,0	15,5
EER [1]		W/W	4,50	4,06	3,73	4,50	4,06	3,73
Recommended combination			3 x S-28MF2E5A + 1 x S-36MF2E5A	4 x S-36MF2E5A	2 x S-36MF2E5A + 2 x S-45MF2E5A	3 x S-28MF2E5A + 1 x S-36MF2E5A	4 x S-36MF2E5A	2 x S-36MF2E5A + 2 x S-45MF2E5A
SEER [2]			**7,9**	**7,5**	**7,3**	**7,9**	**7,5**	**7,3**
$\eta_{s,c}$		**%**	**311,0**	**296,2**	**286,8**	**311,0**	**296,2**	**286,8**
Current		A	13,30 - 12,70 - 12,20	16,30 - 15,60 - 17,00	20,30 - 19,40 - 18,60	4,39 - 4,17 - 4,02	5,58 - 5,30 - 5,11	6,71 - 6,37 - 6,14
Input power		kW	2,69	3,45	4,15	2,69	3,45	4,15
Heating capacity		kW	12,5	16,0	16,5	12,5	16,0	16,5
COP [1]		W/W	5,19	4,60	4,27	5,19	4,60	4,27
SCOP [2]			**4,9**	**4,4**	**4,2**	**4,9**	**4,4**	**4,2**
$\eta_{s,h}$		**%**	**191,8**	**172,9**	**166,7**	**191,8**	**172,9**	**166,7**
Current		A	12,20 - 11,60 - 11,20	17,60 - 16,80 - 16,10	19,10 - 18,20 - 17,50	3,98 - 3,78 - 3,64	5,62 - 5,34 - 5,14	6,24 - 5,93 - 5,71
Input power		kW	2,41	3,48	3,86	2,41	3,48	3,86
Starting current		A	1,00	1,00	1,00	1,00	1,00	1,00
Maximum current		A	17,30	24,30	27,40	7,90	10,10	10,70
Maximum input power		kW	3,50 - 3,66 - 3,82	4,92 - 5,14 - 5,37	5,61 - 5,86 - 6,12	4,34 - 5,09 - 5,28	6,25 - 6,55 - 6,82	6,62 - 6,97 - 7,23
Maximum number of connectable indoor units [3]			7 (10)	8 (10)	9 (12)	7 (10)	8 (10)	9 (12)
External static pressure		Pa	0 ~ 35	0 ~ 35	0 ~ 35	0 ~ 35	0 ~ 35	0 ~ 35
Air flow		m^3/min	69	72	74	69	72	74
Sound pressure	Cool	dB(A)	52	53	54	52	53	53
	Cool (Silent 1/2/3/4)	dB(A)	50,5/49/47/45	51,5/50/48/46	52,5/51/48/46	50,5/49/49/47	48,5/50/48/46	48,5/50/48/46
	Heat	dB(A)	54	56	56	54	56	56
Sound power	Cool / Heat	dB(A)	69/72	71/75	73/75	69/72	71/75	73/75
Dimension	H x W x D	mm	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370	996 x 980 x 370
Net weight		kg	106	106	106	106	106	106
Piping diameter	Liquid pipe	Inch (mm)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas pipe	Inch (mm)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)
Maximum piping length (total)		m	150 (180)	150 (180)	150 (180)	150 (180)	150 (180)	150 (180)
Elevation difference (in / out)		m	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)
Refrigerant (R410A) / CO_2 Eq.		kg / T	6,70 (14,40) / 13,9896	6,70 (14,40) / 13,9896	6,70 (14,40) / 13,9896	6,70 (14,40) / 13,9896	6,70 (14,40) / 13,9896	6,70 (14,40) / 13,9896
Maximum allowable indoor / outdoor capacity ratio		%	50 ~ 130	50 ~ 130	50 ~ 130	50 ~ 130	50 ~ 130	50 ~ 130
Operating range	Cool Min ~ Max	°C	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46	-10 ~ +46
	Heat Min ~ Max	°C	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18

1) EER and COP calculation is based in accordance to EN14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) In case of 1,5 kW indoor units connection, able to connect maximum 12 indoor units.

For light commercial use

Mini ECOi allows easier installation in condominiums and medium sized buildings with limited spaces. Utilising R410A and DC inverter technology, Panasonic offers VRF to a new and growing market.

Reduced height of 996 mm

In addition to raising efficiency, the outdoor unit has been designed to be as compact as possible. It can now be installed in places that were previously too small.

Technical focus

- Outstanding SEER and SCOP
- Better efficiency even compared to 2 fan outdoor units
- 50 m piping without additional refrigeration charge
- High static pressure 35 Pa
- High COP mode selectable with maintenance remote controller
- Selectable silent mode

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
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Mini ECOi LE1 Series high efficiency 8 and 10 HP · R410A

Prepare to be blown away by Panasonic's Mini VRF system.

The Mini VRF compact system is the ideal solution for minimum outdoor space. Panasonic extends the Mini VRF range by 8 and 10 HP units.

HP			**8 HP**	**10 HP**
Outdoor unit			**U-8LE1E8**	**U-10LE1E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase
	Frequency	Hz	50	50
Cooling capacity		kW	22,4	28,0
EER [1]		W/W	3,80	3,11
Recommended combination			4 x S-56MF2E5A	4 x S-73MF2E5A
SEER [2]			**6,3**	**6,4**
$\eta_{s,c}$		**%**	**247,9**	**251,8**
Current		A	9,60 - 9,15 - 8,80	14,70 - 14,00 - 13,50
Input power		kW	5,89	9,00
Heating capacity		kW	25,0	28,0
COP [1]		W/W	4,02	3,93
SCOP [2]			**4,2**	**4,3**
$\eta_{s,h}$		**%**	**166,4**	**169,5**
Current		A	10,20 - 9,65 - 9,30	11,60 - 11,10 - 10,70
Input power		kW	6,22	7,13
Starting current		A	1,00	1,00
Maximum current		A	13,70	19,60
Maximum input power		kW	9,16	13,10
Maximum number of connectable indoor units [3]			15	15
External static pressure		Pa	0 ~ 35	0 ~ 35
Air flow		m^3/min	150	160
Sound pressure	Cool	dB(A)	60	63
	Cool (Silent 1 / 2 / 3)	dB(A)	57 / 55 / 53	60 / 58 / 56
	Heat	dB(A)	64	65
Sound power	Cool / Heat	dB(A)	81 / 85	84 / 86
Dimension	H x W x D	mm	1500 x 980 x 370	1500 x 980 x 370
Net weight		kg	132	133
Piping diameter	Liquid pipe	Inch (mm)	3/8 (9,52) [4] / 1/2 (12,70) [5]	3/8 (9,52) [4] / 1/2 (12,70) [5]
	Gas pipe	Inch (mm)	3/4 (19,05) [4] / 7/8 (22,22) [5]	7/8 (22,22) [4] / 1 (25,40) [5]
Maximum piping length (total)		m	7,5 ~ 150 (7,5 ~ 300)	7,5 ~ 150 (7,5 ~ 300)
Elevation difference (in / out)		m	50 (OU above) / 40 (OU below)	50 (OU above) / 40 (OU below)
Refrigerant (R410A) / CO_2 Eq.		kg / T	6,30 (24,00) / 13,1544	6,60 (24,00) / 13,7808
Maximum allowable indoor / outdoor capacity ratio		%	50 ~ 130	50 ~ 130
Operating range	Cool Min ~ Max	°C	-10 ~ +46	-10 ~ +46
	Heat Min ~ Max	°C	-20 ~ +18	-20 ~ +18

1) EER and COP calculation is based in accordance to EN14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) If the heating utilized, it is necessary to increase 1 size with respect to the main liquid pipe, depending on the combination of the indoor unit. 4) Under 90 m for ultimate indoor unit. 5) Over 90 m for ultimate indoor unit. If the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas and liquid pipes.

Increase external static pressure

When unit is installed on a narrow balcony, the fence at front side will be the obstacle. High external static pressure will overcome this obstacle and maintain operation capacity.

High ambient temperature performance

Cooling operating range up to 46 °C. The system can maintain the rated (100 %) capacity up to 40 °C by 8 HP model and up to 37 °C by 10 HP model.

Technical focus

- Piping flexibility with 150 m maximum length
- High efficiency
- Connection of up to 15 indoor units
- Quiet operation mode (one of the lowest in the market)
- High ambient temp performance
- High static pressure 35 Pa

INVERTER+ · R2 ROTARY COMPRESSOR · BLUEFIN · -10 °C COOLING MODE · -20 °C HEATING MODE · AUTOMATIC RESTART · R22 → R410A R22 RENEWAL · PANASONIC AC SMART CLOUD · OPTIONAL WI-FI · 5 YEARS COMPRESSOR WARRANTY

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
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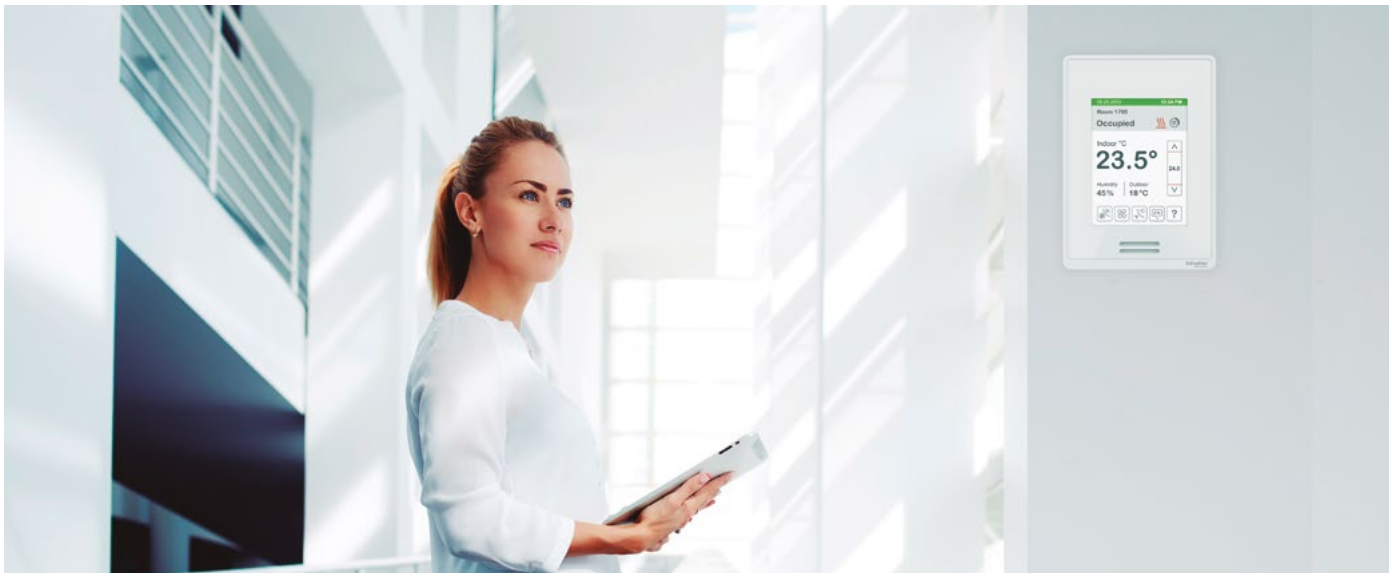
VRF Smart Connectivity+

The future of Control.
VRF Smart Connectivity+ offers efficient energy management and a new air conditioning control solution with high IAQ (Indoor Air Quality).

Panasonic Schneider Electric



Energy Management System for Rooms	Each room is monitored by high-precision sensors, making it possible to make every room's temperature comfortable without wasting energy.
Management System for the Entire Building	A Building Energy Management System (BEMS) can also be connected for Plug & Play centralised control of the building's entire energy consumption.

Connect to the future. VRF Smart Connectivity+

Through thorough energy management, Panasonic's VRF Smart Connectivity+ is a completely new, state-of-the-art solution providing energy saving and comfort as well as simple installation, operation and running.

Panasonic, passionately pursuing the ultimate in energy saving through the application of cutting-edge technology, and Schneider Electric, an advanced global energy management specialist offering innovative control systems. This collaboration has set the new standard for creating the next generation of contemporary buildings.

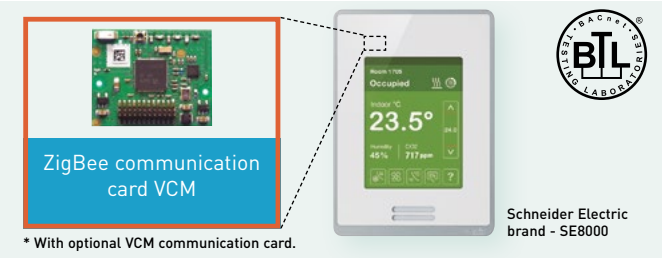
Smart connectivity devices

Door / window sensor.
SED-WDC-G-5045

Wall / ceiling motion / temperature / humidity sensor.
SED-MTH-G-5045

CO_2 temperature / humidity sensor.
SED-CO2-G-5045

Water leakage sensor.
SED-WLS-G-5045



Features

- Up to 5-year battery life batteries included
- Battery life of CO_2 sensor up to 10-year.
- Battery level is a data point
- Sensor points visible when SE8000 is integrated via BACnet MS / TP
- Sensor status and battery level visible when SE8150 is integrated via ZigBee® Pro
- Integration to BMS only recommended when each MPM is connected to Ethernet and set as a ZigBee® Coordinator node

2-Pipe ECOi EX ME2 Series

Energy saving performance, powerful operation, reliability and comfort surpassing anything previously possible.

1 High performance at extreme conditions

ECOi EX is highly reliable, with strong cooling and heating power, even when operating at extreme ambient temperatures. The units can operate at 100 % of capacity at 43 °C, reaching a great cooling operation up to 52 °C and in heating to -25 °C*. Also, the ECOi EX features include Bluefin in newly designed heat exchanger, improving efficiency in marine ambient. A silicone coated PCB (Printed Circuit Board) protects the unit from being damaged by environmental factors such as moisture and dust.

* Conditions of 2-Pipe ECOi EX ME2 Series.

2 Outstanding efficiency and comfort

The ECOi EX system is designed to increase energy efficiency by delivering high SEER rating, as well as high efficiency for part-load operation.
The system has reduced energy costs thanks to "All-Inverter Compressors" with independent control, to deliver highly flexible performance. Also, the ECOi EX features an enlarged heat exchanger with triple surfaces that allow for improved heat transfer and a newly designed curved air discharge bell-mouth, for better aerodynamics. The three-stage oil recovery design makes it able to minimise the frequency of forced oil recovery, leading to reduced energy costs and sustained comfort.

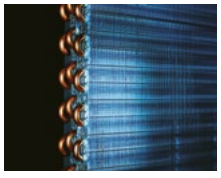
VRF with outstanding energy saving performance and powerful operation SEER 7,70 (18 HP model).

3 Superior flexibility

With up to 1000* meters of pipeline, 30 meters maximum height difference between indoor units and maximum 90 meters between outdoor unit and indoor unit, the design possibilities have grown exponentially, making the ECOi EX the ideal air conditioning option for expansive buildings, such as train stations, airports, schools or hospitals. These advantages are enhanced with the wide range of indoor unit models and capacities, facilitating the perfect adaptation to all kind of projects. The careful selection of controls and peripherals such as the Pump Down, the AHU and / or the chiller, enables an optimised system selection. Maximum allowable indoor / outdoor connected capacity ratio of up to 200 %.

* Conditions of 2-Pipe ECOi EX ME2 Series.

Remarkable improvement on key components: extraordinary energy saving performance and redesigned for smooth and better air discharge.



Enlarged heat exchanger surface area with triple surface.

Multiple large-capacity all Inverter compressors (from 14 HP).

Newly designed curved air discharge bell mouth for better aerodynamics.

* For 8 and 10 HP unit, the heat exchanger is 2 row design.

2-Pipe ECOi EX ME2 Series

A VRF system delivering energy-saving performance, powerful operation, reliability and comfort, surpassing anything previously possible. It represents a true paradigm shift in air conditioning solutions.

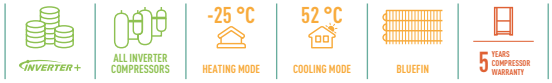
VRF with outstanding energy-saving performance and powerful operation SEER 7,70 (18 HP model).

			8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP
Outdoor unit			**U-8ME2E8**	**U-10ME2E8**	**U-12ME2E8**	**U-14ME2E8**	**U-16ME2E8**	**U-18ME2E8**	**U-20ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50
Cooling capacity		kW	22,4	28,0	33,5	40,0	45,0	50,0	56,0
EER [1]		W/W	4,70	4,37	3,96	3,88	3,52	3,52	3,35
ESEER		W/W	9,33	8,67	7,94	7,73	7,19	6,95	6,18
Recommended combination			4 x S-56MF2E5A	4 x S-73MF2E5A	6 x S-56MF2E5A	2 x S-60MF2E5A	6 x S-73MF2E5A	6 x S-60MF2E5A	8 x S-73MF2E5A
SEER [2]			**7,58**	**7,09**	**6,86**	**7,36**	**6,55**	**7,70**	**7,16**
$\eta_{s,c}$		%	**294,3**	**275,4**	**266,6**	**286,0**	**254,3**	**299,2**	**278,2**
Current		A	7,79 - 7,40 - 7,14	10,70 - 10,20 - 9,80	13,70 - 13,00 - 12,50	17,40 - 16,50 - 15,90	21,10 - 20,10 - 19,40	23,20 - 22,00 - 21,20	26,70 - 25,40 - 24,50
Input power		kW	4,77	6,41	8,47	10,30	12,80	14,20	16,70
Heating capacity		kW	25,0	31,5	37,5	45,0	50,0	56,0	63,0
COP [1]		W/W	5,13	4,76	4,73	4,56	4,42	4,38	3,94
SCOP [2]			**4,85**	**4,32**	**4,78**	**4,33**	**4,09**	**4,34**	**4,13**
$\eta_{s,h}$		%	**188,4**	**167,6**	**185,8**	**168,2**	**159,0**	**168,7**	**160,4**
Current		A	7,96 - 7,56 - 7,29	11,10 - 10,50 - 10,10	12,90 - 12,30 - 11,80	16,60 - 15,80 - 15,20	18,90 - 17,90 - 17,30	21,10 - 20,10 - 19,40	25,90 - 24,60 - 23,70
Input power		kW	4,87	6,62	7,92	9,86	11,30	12,80	16,00
Starting current		A	1,00	1,00	1,00	2,00	2,00	2,00	2,00
External static pressure (Max)		Pa	80	80	80	80	80	80	80
Air flow		m^3/min	224	224	232	232	232	405	405
Sound pressure	Normal mode	dB(A)	54	56	59	60	61	59	60
	Silent mode	dB(A)	51	53	56	57	58	56	57
Sound power	Normal mode	dB(A)	75	77	80	81	82	80	81
Dimension	H x W x D	mm	1842 x 770 x 1000	1842 x 770 x 1000	1842 x 1180 x 1000	1842 x 1180 x 1000	1842 x 1180 x 1000	1842 x 1540 x 1000	1842 x 1540 x 1000
Net weight		kg	210	210	270	315	315	375	375
Piping diameter [3]	Liquid pipe	Inch (mm)	3/8 (9,52) / 1/2 (12,70)	3/8 (9,52) / 1/2 (12,70)	1/2 (12,70) / 5/8 (15,88)	1/2 (12,70) / 5/8 (15,88)	1/2 (12,70) / 5/8 (15,88)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)
	Gas pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	7/8 (22,22) / 1 (25,40)	1 (25,40) / 1-1/8 (28,58)	1 (25,40) / 1-1/8 (28,58)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq		kg/T	5,60 / 11,6928	5,60 / 11,6928	8,30 / 17,3304	8,30 / 17,3304	8,30 / 17,3304	9,50 / 19,836	9,50 / 19,836
Maximum allowable indoor / outdoor capacity ratio % [4]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

1) EER and COP calculation is based in accordance to EN14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) Piping diameter under 90 m for ultimate indoor unit / over 90 m for ultimate indoor unit (if the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes). 4) If the following conditions are satisfied, the effective range is above 130 % and below 200 %: A. Obey the limited number of connectable indoor units. B. The lower limit of operating range for heating outdoor temperature is limited to -10 °C WB (standard -25 °C WB). C. Simultaneous operation is limited to less than 130 % of connectable indoor units.

Technical focus

- Twin rotary inverter compressor
- High performance at extreme conditions
- Outstanding efficiency and comfort
- Extraordinary partial load, SEER and SCOP
- SEER and SCOP following EN-14825
- Oil recovery intelligent control
- Top comfort
- Superior flexibility
- Bluefin full line up EX
- Extremely high capacity at -20 °C and unique heating capacity at -25 °C
- Smooth exhaust flow by new bell-mouth



Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

2-Pipe ECOi EX ME2 Series high efficiency model combination from 18 to 28 HP

			18 HP	20 HP	22 HP	24 HP	26 HP	28 HP
Outdoor unit			**U-8ME2E8**	**U-10ME2E8**	**U-10ME2E8**	**U-12ME2E8**	**U-10ME2E8**	**U-12ME2E8**
			U-10ME2E8	**U-10ME2E8**	**U-12ME2E8**	**U-12ME2E8**	**U-16ME2E8**	**U-16ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Cooling capacity		kW	50,0	56,0	61,5	68,0	73,0	78,5
EER [1]		W/W	4,55	4,38	4,13	3,93	3,80	3,69
Current		A	18,20 - 17,30 - 16,60	21,40 - 20,30 - 19,60	24,30 - 23,10 - 22,30	28,00 - 26,60 - 25,60	31,70 - 30,10 - 29,00	34,80 - 33,10 - 31,90
Input power		kW	11,00	12,80	14,90	17,30	19,20	21,30
Heating capacity		kW	56,0	63,0	69,0	76,5	81,5	87,5
COP [1]		W/W	4,96	4,77	4,76	4,69	4,55	4,56
Current		A	18,70 - 17,70 - 17,10	22,00 - 20,90 - 20,20	23,90 - 22,70 - 21,90	26,60 - 25,30 - 24,40	29,90 - 28,40 - 27,40	31,70 - 30,10 - 29,00
Input power		kW	11,30	13,20	14,50	16,30	17,90	19,20
Starting current		A	2,00	2,00	2,00	2,00	3,00	3,00
External static pressure (Max)		Pa	80	80	80	80	80	80
Air flow		m³/min	448	448	456	464	456	464
Sound pressure	Normal	dB(A)	58,50	59,00	61,00	62,00	62,50	63,50
	Silent mode	dB(A)	55,50	56,00	58,00	59,00	59,50	60,50
Sound power	Normal mode	dB(A)	79,50	80,00	82,00	83,00	83,50	84,50
Dimension / Net weight	H x W x D	mm / kg	1842 x 1600 x 1000 / 420	1842 x 1600 x 1000 / 420	1842 x 2010 x 1000 / 480	1842 x 2420 x 1000 / 540	1842 x 2010 x 1000 / 535	1842 x 2420 x 1000 / 585
Piping diameter [2]	Liquid pipe	Inch (mm)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Gas pipe	Inch (mm)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	11,20 / 23,3856	11,20 / 23,3856	13,90 / 29,0232	16,60 / 34,6608	13,90 / 29,0232	16,60 / 34,6608
Maximum allowable indoor / outdoor capacity ratio % [3]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

2-Pipe ECOi EX ME2 Series high efficiency model combination from 30 to 40 HP

			30 HP	32 HP	34 HP	36 HP	38 HP	40 HP
Outdoor unit			**U-14ME2E8**	**U-16ME2E8**	**U-10ME2E8**	**U-12ME2E8**	**U-10ME2E8**	**U-12ME2E8**
			U-16ME2E8	**U-16ME2E8**	**U-12ME2E8**	**U-12ME2E8**	**U-12ME2E8**	**U-12ME2E8**
					U-12ME2E8	**U-12ME2E8**	**U-16ME2E8**	**U-16ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Cooling capacity		kW	85,0	90,0	96,0	101,0	107,0	113,0
EER [1]		W/W	3,68	3,52	4,05	3,95	3,84	3,75
Current		A	38,60 - 36,60 - 35,30	42,30 - 40,20 - 38,70	38,70 - 36,80 - 35,50	41,40 - 39,30 - 37,90	46,10 - 43,80 - 42,20	49,20 - 46,70 - 45,00
Input power		kW	23,10	25,60	23,70	25,60	27,90	30,10
Heating capacity		kW	95,0	100,0	108,0	113,0	119,0	127,0
COP [1]		W/W	4,48	4,42	4,72	4,73	4,61	4,57
Current		A	35,40 - 33,60 - 32,40	37,70 - 35,80 - 34,60	37,80 - 35,90 - 34,60	39,00 - 37,10 - 35,80	42,60 - 40,50 - 39,00	45,90 - 43,60 - 42,00
Input power		kW	21,20	22,60	22,90	23,90	25,80	27,80
Starting current		A	4,00	4,00	3,00	3,00	4,00	4,00
External static pressure (Max)		Pa	80	80	80	80	80	80
Air flow		m³/min	464	464	688	696	688	696
Sound pressure	Normal	dB(A)	63,50	64,00	63,00	64,00	64,00	64,50
	Silent mode	dB(A)	60,50	61,00	60,00	61,00	61,00	61,50
Sound power	Normal mode	dB(A)	84,50	85,00	84,00	85,00	85,00	85,50
Dimension / Net weight	H x W x D	mm / kg	1842 x 2420 x 1000 / 630	1842 x 2420 x 1000 / 630	1842 x 3250 x 1000 / 750	1842 x 3660 x 1000 / 810	1842 x 3250 x 1000 / 795	1842 x 3660 x 1000 / 855
Piping diameter [2]	Liquid pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Gas pipe	Inch (mm)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	16,60 / 34,6608	16,60 / 34,6608	22,20 / 46,3536	24,90 / 51,9912	22,20 / 46,3536	24,90 / 46,3536
Maximum allowable indoor / outdoor capacity ratio % [3]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

Data is for reference. 1) EER and COP calculation is based in accordance to EN14511. 2) Piping diameter under 90 m for ultimate indoor unit / over 90 m for ultimate indoor unit (if the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes). 3) If the following conditions are satisfied, the effective range is above 130 % and below 200 %: A. Obey the limited number of connectable indoor units. B. The lower limit of operating range for heating outdoor temperature is limited to -10 °C WB (standard -25 °C WB). C. Simultaneous operation is limited to less than 130 % of connectable indoor units.

2-Pipe ECOi EX ME2 Series high efficiency model combination from 42 to 52 HP

			42 HP	44 HP	46 HP	48 HP	50 HP	52 HP
Outdoor unit			**U-10ME2E8**	**U-12ME2E8**	**U-14ME2E8**	**U-16ME2E8**	**U-10ME2E8**	**U-12ME2E8**
			U-16ME2E8	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-12ME2E8**	**U-12ME2E8**
			U-16ME2E8	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-12ME2E8**	**U-12ME2E8**
							U-16ME2E8	**U-16ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Cooling capacity		kW	118,0	124,0	130,0	135,0	140,0	145,0
EER [1]		W/W	3,69	3,62	3,62	3,52	3,87	3,82
Current		A	52,80 - 50,20 - 48,40	56,00 - 53,20 - 51,30	59,90 - 56,90 - 54,90	63,40 - 60,20 - 58,10	59,10 - 56,20 - 54,20	62,10 - 59,00 - 56,80
Input power		kW	32,00	34,30	35,90	38,40	36,20	38,00
Heating capacity		kW	132,0	138,0	145,0	150,0	155,0	160,0
COP [1]		W/W	4,49	4,50	4,46	4,42	4,65	4,66
Current		A	49,10 - 46,60 - 44,90	50,70 - 48,20 - 46,40	54,30 - 51,50 - 49,70	56,60 - 53,80 - 51,80	55,00 - 52,20 - 50,40	56,60 - 53,80 - 51,90
Input power		kW	29,40	30,70	32,50	33,90	33,30	34,30
Starting current		A	5,00	5,00	6,00	6,00	5,00	5,00
External static pressure (Max)		Pa	80	80	80	80	80	80
Air flow		m³/min	688	696	696	696	920	928
Sound pressure	Normal	dB(A)	65,00	65,50	65,50	66,00	65,50	66,00
	Silent mode	dB(A)	62,00	62,50	62,50	63,00	62,50	63,00
Sound power	Normal mode	dB(A)	86,00	86,50	86,50	87,00	86,50	87,00
Dimension / Net weight	H x W x D	mm / kg	1842 x 3250 x 1000 / 840	1842 x 3660 x 1000 / 900	1842 x 3660 x 1000 / 945	1842 x 3660 x 1000 / 945	1842 x 4490 x 1000 / 1065	1842 x 4900 x 1000 / 1125
Piping diameter [2]	Liquid pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Gas pipe	Inch (mm)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	22,20 / 51,9912	24,90 / 51,9912	24,90 / 51,9912	24,90 / 51,9912	30,50 / 63,6840	33,20 / 69,3216
Maximum allowable indoor / outdoor capacity ratio % [3]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

2-Pipe ECOi EX ME2 Series high efficiency model combination from 54 to 64 HP

			54 HP	56 HP	58 HP	60 HP	62 HP	64 HP
Outdoor unit			**U-10ME2E8**	**U-12ME2E8**	**U-10ME2E8**	**U-12ME2E8**	**U-14ME2E8**	**U-16ME2E8**
			U-12ME2E8	**U-12ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**
			U-16ME2E8	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**
			U-16ME2E8	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Cooling capacity		kW	151,0	156,0	162,0	168,0	174,0	180,0
EER [1]		W/W	3,75	3,71	3,65	3,60	3,60	3,52
Current		A	66,60 - 63,20 - 60,90	68,80 - 65,30 - 63,00	73,30 - 69,70 - 67,10	77,10 - 73,30 - 70,60	79,80 - 75,80 - 73,00	84,60 - 80,30 - 77,40
Input power		kW	40,30	42,10	44,40	46,70	48,30	51,20
Heating capacity		kW	169,0	175,0	182,0	189,0	195,0	201,0
COP [1]		W/W	4,56	4,56	4,47	4,47	4,45	4,42
Current		A	61,90 - 58,80 - 56,70	63,40 - 60,20 - 58,10	68,00 - 64,60 - 62,20	70,60 - 67,10 - 64,70	73,10 - 69,50 - 67,00	76,00 - 72,20 - 69,60
Input power		kW	37,10	38,40	40,70	42,30	43,80	45,50
Starting current		A	6,00	6,00	7,00	7,00	8,00	8,00
External static pressure (Max)		Pa	80	80	80	80	80	80
Air flow		m³/min	920	928	920	928	928	928
Sound pressure	Normal	dB(A)	66,00	66,50	66,50	67,00	67,00	67,00
	Silent mode	dB(A)	63,00	63,50	63,50	64,00	64,00	64,00
Sound power	Normal mode	dB(A)	87,00	87,50	87,50	88,00	88,00	88,00
Dimension / Net weight	H x W x D	mm / kg	1842 x 4490 x 1000 / 1110	1842 x 4900 x 1000 / 1170	1842 x 4490 x 1000 / 1155	1842 x 4900 x 1000 / 1215	1842 x 4900 x 1000 / 1260	1842 x 4900 x 1000 / 1260
Piping diameter [2]	Liquid pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Gas pipe	Inch (mm)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-5/8 (41,28) / 1-3/4 (44,45)	1-5/8 (41,28) / 1-3/4 (44,45)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	30,50 / 63,6840	33,20 / 69,3216	30,50 / 63,6840	33,20 / 69,3216	33,20 / 69,3216	33,20 / 69,3216
Maximum allowable indoor / outdoor capacity ratio % [3]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

Data is for reference. 1) EER and COP calculation is based in accordance to EN14511. 2) Piping diameter under 90 m for ultimate indoor unit / over 90 m for ultimate indoor unit (if the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes). 3) If the following conditions are satisfied, the effective range is above 130 % and below 200 %: A. Obey the limited number of connectable indoor units. B. The lower limit of operating range for heating outdoor temperature is limited to -10 °C WB (standard -25 °C WB). C. Simultaneous operation is limited to less than 130 % of connectable indoor units.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

2-Pipe ECOi EX ME2 Series space saving model combination from 22 to 34 HP

			22 HP	24 HP	26 HP	28 HP	30 HP	32 HP	34 HP
Outdoor unit			**U-10ME2E8**	**U-12ME2E8**	**U-10ME2E8**	**U-12ME2E8**	**U-14ME2E8**	**U-16ME2E8**	**U-14ME2E8**
			U-12ME2E8	**U-12ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-20ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50
Cooling capacity		kW	61,5	68,0	73,0	78,5	85,0	90,0	96,0
EER [1]		W/W	4,13	3,93	3,80	3,69	3,68	3,52	3,56
SEER [2]			**6,90**	**6,86**	**6,62**	**6,60**	**6,88**	**6,55**	**7,21**
Current		A	24,30-23,10-22,30	28,00-26,60-25,60	31,70-30,10-29,00	34,80-33,10-31,90	38,60-36,60-35,30	42,30-40,20-38,70	44,10-41,90-40,40
Input power		kW	14,90	17,30	19,20	21,30	23,10	25,60	27,00
Heating capacity		kW	69,0	76,5	81,5	87,5	95,0	100,0	108,0
COP [1]		W/W	4,76	4,69	4,55	4,56	4,48	4,42	4,17
SCOP [2]			**4,53**	**4,78**	**4,16**	**4,29**	**4,13**	**4,09**	**4,14**
Current		A	23,90-22,70-21,90	26,60-25,30-24,40	29,90-28,40-27,40	31,70-30,10-29,00	35,40-33,60-32,40	37,70-35,80-34,60	42,80-40,60-39,20
Input power		kW	14,50	16,30	17,90	19,20	21,20	22,60	25,90
Starting current		A	2,00	2,00	3,00	3,00	4,00	4,00	4,00
External static pressure (Max)		Pa	80	80	80	80	80	80	80
Air flow		m³/min	456	464	456	464	464	464	637
Sound pressure	Normal / Silent mode	dB(A)	61,00 / 58,00	62,00 / 59,00	62,50 / 59,50	63,50 / 60,50	63,50 / 60,50	64,00 / 61,00	63,00 / 60,00
Sound power	Normal mode	dB(A)	82,00	83,00	83,50	84,50	84,50	85,00	84,00
Dimension / Net weight	H x W x D	mm / kg	1842 x 2010 x 1000 / 480	1842 x 2420 x 1000 / 540	1842 x 2010 x 1000 / 525	1842 x 2420 x 1000 / 585	1842 x 2420 x 1000 / 630	1842 x 2420 x 1000 / 630	1842 x 2780 x 1000 / 690
Piping diameter [3]	Liquid pipe	Inch (mm)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Gas pipe	Inch (mm)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	13,90 / 23,3856	16,60 / 34,6608	13,90 / 29,0232	16,60 / 34,6608	16,60 / 34,6608	16,60 / 34,6608	17,80 / 37,1664
Maximum allowable indoor / outdoor capacity ratio % [4]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

2-Pipe ECOi EX ME2 Series space saving model combination from 36 to 48 HP

			36 HP	38 HP	40 HP	42 HP	44 HP	46 HP	48 HP
Outdoor unit			**U-16ME2E8**	**U-18ME2E8**	**U-20ME2E8**	**U-10ME2E8**	**U-12ME2E8**	**U-14ME2E8**	**U-16ME2E8**
			U-20ME2E8	**U-20ME2E8**	**U-20ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**
						U-16ME2E8	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50
Cooling capacity		kW	101,0	107,0	113,0	118,0	124,0	130,0	135,0
EER [1]		W/W	3,42	3,42	3,34	3,69	3,62	3,62	3,52
SEER [2]			**6,86**	**7,32**	**7,16**	**6,57**	**6,6**	**6,7**	**6,55**
Current		A	47,70-45,30-43,70	50,60-48,10-46,30	54,10-51,40-49,50	52,80-50,20-48,40	56,00-53,20-51,30	59,90-56,90-54,90	63,40-60,20-58,10
Input power		kW	25,9	31,3	33,8	32,0	34,3	35,9	38,4
Heating capacity		kW	113,0	119,0	127,0	132,0	138,0	145,0	150,0
COP [1]		W/W	4,14	4,13	3,92	4,49	4,50	4,46	4,42
SCOP [2]			**4,06**	**4,14**	**4,13**	**4,11**	**4,21**	**4,12**	**4,09**
Current		A	44,60-42,40-40,80	47,10-44,70-43,10	52,40-49,80-48,00	49,10-46,60-44,90	50,70-48,20-46,40	54,30-51,50-49,7	56,60-53,80-51,8
Input power		kW	27,30	28,80	32,40	29,40	30,70	32,50	33,90
Starting current		A	4,00	4,00	4,00	5,00	5,00	6,00	6,00
External static pressure (Max)		Pa	80	80	80	80	80	80	80
Air flow		m³/min	637	810	810	688	696	696	696
Sound pressure	Normal / Silent mode	dB(A)	63,50 / 60,50	62,50 / 59,50	63,00 / 60,00	65,00 / 62,00	65,50 / 62,50	65,50 / 62,50	66,00 / 63,00
Sound power	Normal mode	dB(A)	84,50	83,50	84,00	86,00	86,50	86,50	87,00
Dimension / Net weight	H x W x D	mm / kg	1842 x 2780 x 1000 / 690	1842 x 3140 x 1000 / 750	1842 x 3140 x 1000 / 750	1842 x 3250 x 1000 / 840	1842 x 3660 x 1000 / 900	1842 x 3660 x 1000 / 945	1842 x 3660 x 1000 / 945
Piping diameter [3]	Liquid pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Gas pipe	Inch (mm)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	17,80 / 37,1664	19,00 / 39,672	19,00 / 39,672	22,20 / 46,3536	24,90 / 51,9912	24,90 / 51,9912	24,90 / 51,9912
Maximum allowable indoor / outdoor capacity ratio % [4]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

1) EER and COP calculation is based in accordance to EN14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) Piping diameter under 90 m for ultimate indoor unit / over 90 m for ultimate indoor unit (if the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes). 4) If the following conditions are satisfied, the effective range is above 130 % and below 200 %: A. Obey the limited number of connectable indoor units. B. The lower limit of operating range for heating outdoor temperature is limited to -10 °C WB (standard -25 °C WB). C. Simultaneous operation is limited to less than 130 % of connectable indoor units.

2-Pipe ECOi EX ME2 Series space saving model combination from 50 to 64 HP

			50 HP	52 HP	54 HP	56 HP	58 HP	60 HP	62 HP	64 HP
Outdoor unit			**U-14ME2E8**	**U-16ME2E8**	**U-14ME2E8**	**U-16ME2E8**	**U-18ME2E8**	**U-20ME2E8**	**U-14ME2E8**	**U-16ME2E8**
			U-16ME2E8	**U-16ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-16ME2E8**	**U-16ME2E8**
			U-20ME2E8	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-16ME2E8**	**U-16ME2E8**
									U-16ME2E8	**U-16ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50
Cooling capacity		kW	140,0	145,0	151,0	156,0	162,0	168,0	174,0	180,0
EER [1]		W/W	3,55	3,46	3,49	3,41	3,40	3,35	3,60	3,52
SEER [2]			**6,96**	**6,72**	**7,16**	**6,92**	**7,3**	**7,16**	**6,68**	**6,55**
Current		A	64,40-61,10-58,90	68,50-65,00-62,70	70,00-66,50-64,10	74,00-70,30-67,80	76,90-73,10-70,40	80,10-76,10-73,40	79,80-75,80-73,00	84,60-80,30-77,40
Input power		kW	39,40	41,90	43,30	45,80	47,60	50,10	48,30	51,20
Heating capacity		kW	155,0	160,0	169,0	175,0	182,0	189,0	195,0	201,0
COP [1]		W/W	4,29	4,27	4,11	4,08	4,06	3,94	4,45	4,42
SCOP [2]			**4,08**	**4,05**	**4,13**	**4,07**	**4,13**	**4,13**	**4,11**	**4,09**
Current		A	59,60-56,60-54,60	61,90-58,80-56,70	67,10-63,80-61,50	70,10-66,60-64,20	73,20-69,50-67,00	77,60-73,70-71,00	73,10-69,50-67,00	76,00-72,20-69,6
Input power		kW	36,10	37,50	41,10	42,90	44,80	48,00	43,80	45,50
Starting current		A	6,00	6,00	6,00	6,00	6,00	6,00	8,00	8,00
External static pressure (Max)		Pa	80	80	80	80	80	80	80	80
Air flow		m³/min	869	869	1042	1042	1215	1215	928	928
Sound pressure	Normal / Silent mode	dB(A)	65,50 / 62,50	65,50 / 62,50	65,00 / 62,00	65,50 / 62,50	64,50 / 61,50	65,00 / 62,00	67,00 / 64,00	67,00 / 64,00
Sound power	Normal mode	dB(A)	86,50	86,50	86,00	86,50	85,50	86,00	88,00	88,00
Dimension / Net weight	H x W x D	mm / kg	1842 x 4020 x 1000 / 1005	1842 x 4020 x 1000 / 1005	1842 x 4380 x 1000 / 1065	1842 x 4380 x 1000 / 1065	1842 x 4740 x 1000 / 1125	1842 x 4740 x 1000 / 1125	1842 x 4900 x 1000 / 1260	1842 x 4900 x 1000 / 1260
Piping diameter [3]	Liquid pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Gas pipe	Inch (mm)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-5/8 (41,28) / 1-3/4 (44,45)	1-5/8 (41,28) / 1-3/4 (44,45)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	26,10/54,4968	26,10/54,4968	27,30/57,0024	27,30/57,0024	28,50 / 59,508	28,50 / 59,508	33,20/69,3216	33,20/69,3216
Maximum allowable indoor / outdoor capacity ratio % [4]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

2-Pipe ECOi EX ME2 Series space saving model combination from 66 to 80 HP

			66 HP	68 HP	70 HP	72 HP	74 HP	76 HP	78 HP	80 HP
Outdoor unit			**U-10ME2E8**	**U-12ME2E8**	**U-10ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-16ME2E8**	**U-18ME2E8**	**U-20ME2E8**
			U-16ME2E8	**U-16ME2E8**	**U-20ME2E8**	**U-16ME2E8**	**U-18ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**
			U-20ME2E8	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**
			U-20ME2E8	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**	**U-20ME2E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50
Cooling capacity		kW	185,0	190,0	196,0	202,0	208,0	213,0	219,0	224,0
EER [1]		W/W	3,52	3,49	3,47	3,42	3,42	3,39	3,38	3,35
SEER [2]			**6,92**	**6,91**	**7,09**	**6,86**	**7,03**	**7,01**	**7,18**	**7,16**
Current		A	85,00-80,80-77,80	88,10-83,70-80,70	91,30-86,80-83,60	95,40-90,60-87,30	98,30-93,40-90,00	101,70-96,60-93,10	103,50-98,30-94,70	106,80-101,50-97,80
Input power		kW	52,60	54,50	56,50	59,00	60,80	62,90	64,70	66,80
Heating capacity		kW	207,0	213,0	219,0	226,0	233,0	239,0	245,0	252,0
COP [1]		W/W	4,16	4,18	4,05	4,14	4,12	4,03	4,03	3,94
SCOP [2]			**4,11**	**4,17**	**4,13**	**4,06**	**4,12**	**4,07**	**4,13**	**4,13**
Current		A	81,20-77,10-74,30	83,30-79,20-76,30	87,40-83,10-80,10	89,20-84,70-81,70	92,30-87,70-84,50	96,90-92,00-88,70	98,30-93,40-90,00	103,40-98,30-94,70
Input power		kW	49,70	51,00	54,10	54,60	56,50	59,30	60,80	64,00
Starting current		A	7,00	7,00	7,00	8,00	8,00	8,00	8,00	8,00
External static pressure (Max)		Pa	80	80	80	80	80	80	80	80
Air flow		m³/min	1266	1274	1439	1274	1447	1447	1620	1620
Sound pressure	Normal / Silent mode	dB(A)	66,00 / 63,00	66,50 / 63,50	65,50 / 62,50	66,50 / 63,50	66,50 / 63,50	66,50 / 63,50	66,00 / 63,00	66,00 / 63,00
Sound power	Normal mode	dB(A)	87,00	87,50	86,50	87,50	87,50	87,50	87,00	87,00
Dimension / Net weight	H x W x D	mm / kg	1842 x 5210 x 1000 / 1275	1842 x 5620 x 1000 / 1335	1842 x 5570 x 1000 / 1335	1842 x 5620 x 1000 / 1380	1842 x 5980 x 1000 / 1440	1842 x 5980 x 1000 / 1440	1842 x 6340 x 1000 / 1500	1842 x 6340 x 1000 / 1500
Piping diameter [3]	Liquid pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	7/8 (22,22) / 1 (25,04)	7/8 (22,22) / 1 (25,04)	7/8 (22,22) / 1 (25,04)	7/8 (22,22) / 1 (25,04)	7/8 (22,22) / 1 (25,04)	7/8 (22,22) / 1 (25,04)	7/8 (22,22) / 1 (25,04)
	Gas pipe	Inch (mm)	1-5/8 (41,28) / 1-3/4 (44,45)	1-5/8 (41,28) / 1-3/4 (44,45)	1-5/8 (41,28) / 1-3/4 (44,45)	1-3/4 (44,45) / 2 (50,80)	1-3/4 (44,45) / 2 (50,80)	1-3/4 (44,45) / 2 (50,80)	1-3/4 (44,45) / 2 (50,80)	1-3/4 (44,45) / 2 (50,80)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	32,90/68,6952	35,60/74,3328	34,10 / 19,836	35,80/68,6952	36,80/76,8384	36,80/76,8384	38,00 / 79,344	38,00 / 79,344
Maximum allowable indoor / outdoor capacity ratio % [4]			50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)	50 ~ 130 (200)
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18	-25 ~ +18

1) EER and COP calculation is based in accordance to EN14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) Piping diameter under 90 m for ultimate indoor unit / over 90 m for ultimate indoor unit (if the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes). 4) If the following conditions are satisfied, the effective range is above 130 % and below 200 %: A. Obey the limited number of connectable indoor units. B. The lower limit of operating range for heating outdoor temperature is limited to -10 °C WB (standard -25 °C WB). C. Simultaneous operation is limited to less than 130 % of connectable indoor units.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

3-Pipe ECOi EX MF3 Series

Simultaneous heating and cooling VRF system. The Panasonic 3-Pipe ECOi EX MF3 Series offers the best solution for the most discerning customers and demanding installations.

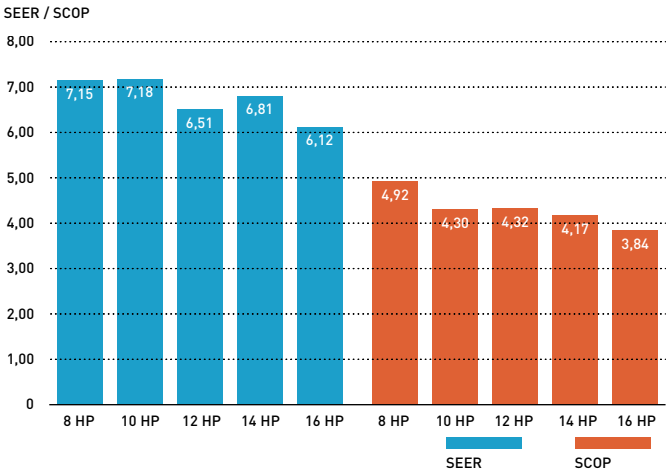
Simultaneous heating and cooling VRF System

The Panasonic 3-Pipe ECOi EX MF3 Series offers the ideal solution to meet customer's demand.

Upgraded energy efficiency utilized ECOi EX technology.
- SEER / SCOP improved in full capacities from 8 to 16 HP
- SEER / SCOP follows LOT21 (January 2018)
- Eurovent certified EER / COP

Design flexibility.
- High reliability even under extreme temperature conditions
- Connection of up to 52 indoor units
- Slim heat recovery box with just 200 mm height
- Farthest piping length between indoor and outdoor units: 200 m

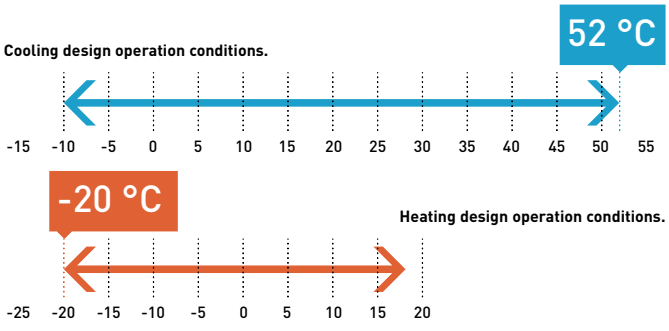
Excellent seasonal energy saving.



Extended design operation conditions

Cooling design operation conditions: The cooling operating range has been extended to -10 °C ~ 52 °C by changing the outdoor fan to an Inverter type.
Heating design operation conditions: Stable heating operation even with an outside air temperature of -20 °C. The heating operating range has been extended to -20 °C by use of a compressor with a high-pressure vessel.

Cooling design operation conditions.



Cooling: Outside air temperature °C (DB). Heating: Outside air temperature °C (WB).

Wide temperature setting range

Wired remote controller heating temperature setting range is 16 to 30 °C as standard.

4,92 SCOP

3-Pipe ECOi EX MF3 Series

Simultaneous heating and cooling operation with heat recovery type.

The 3-Pipe ECOi EX MF3 Series is one of the most advanced VRF systems.
Not only high-efficient performance for simultaneous heating and cooling, but also sophisticated installation and maintenance capability.

			8 HP	10 HP	12 HP	14 HP	16 HP
Outdoor unit			**U-8MF3E8**	**U-10MF3E8**	**U-12MF3E8**	**U-14MF3E8**	**U-16MF3E8**
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50
Cooling capacity		kW	22,4	28,0	33,5	40,0	45,0
EER [1]		W/W	5,11	4,72	3,91	3,70	3,49
Recommended combination			4 x S-56MF2E5A	4 x S-73MF2E5A	6 x S-56MF2E5A	2 x S-60MF2E5A + 4 x S-73MF2E5A	6 x S-73MF2E5A
SEER [2]			**7,15**	**7,18**	**6,51**	**6,81**	**6,12**
$\eta_{s,c}$		**%**	**277,7**	**278,9**	**252,7**	**264,4**	**237,7**
Current		A	7,16 - 6,80 - 6,55	9,90 - 9,41 - 9,07	3,19 - 13,20 - 12,70	18,20 - 17,30 - 16,70	21,30 - 20,20 - 19,50
Input power		kW	4,38	5,93	8,57	10,80	12,90
Heating capacity		kW	25,0	31,5	37,5	45,0	50,0
COP [1]		W/W	5,25	5,17	4,51	4,21	4,17
SCOP [2]			**4,92**	**4,30**	**4,32**	**4,17**	**3,84**
$\eta_{s,h}$		**%**	**190,9**	**166,8**	**167,8**	**162,1**	**149,3**
Current		A	7,78 - 7,39 - 7,12	10,20 - 9,66 - 9,31	13,40 - 12,80 - 12,30	18,10 - 17,20 - 16,50	20,00 - 19,00 - 18,30
Input power		kW	4,76	6,09	8,32	10,70	12,00
Starting current		A	1,00	1,00	1,00	2,00	2,00
External static pressure (Max)		Pa	80	80	80	80	80
Air flow		m^3/min	210	220	232	232	232
Sound pressure	Normal mode	dB(A)	54,00	57,00	60,00	61,00	62,00
	Silent mode 1 / 2	dB(A)	51,00 / 49,00	54,00 / 52,00	57,00 / 55,00	58,00 / 56,00	59,00 / 57,00
Sound power	Normal mode	dB(A)	76,00	78,00	81,00	82,00	82,00
Dimension	H x W x D	mm	1842 x 1180 x 1000	1842 x 1180 x 1000	1842 x 1180 x 1000	1842 x 1180 x 1000	1842 x 1180 x 1000
Net weight		kg	261	262	286	334	334
Piping diameter [3]	Liquid pipe	Inch (mm)	3/8 (9,52) / 1/2 (12,70)	3/8 (9,52) / 1/2 (12,70)	1/2 (12,70) / 5/8 (15,88)	1/2 (12,70) / 5/8 (15,88)	1/2 (12,70) / 5/8 (15,88)
	Discharge pipe	Inch (mm)	5/8 (15,88) / 3/4 (19,05)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	7/8 (22,22) / 1 (25,40)	7/8 (22,22) / 1 (25,40)
	Suction pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	7/8 (22,22) / 1 (25,40)	1 (25,40) / 1-1/8 (28,58)	1 (25,40) / 1-1/8 (28,58)	1-1/8(28,58)/1-1/4(31,75)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	6,80 / 14,1984	6,80 / 14,1984	8,30 / 17,3304	8,30 / 17,3304	8,30 / 17,3304
Maximum allowable indoor / outdoor capacity ratio %			50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18
	Simultaneous op.	°C	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24

1) EER and COP calculation is based in accordance to EN14511. 2) SEER / SCOP is calculated based on the seasonal space cooling / heating efficiency "η" values of the COMMISSION REGULATION (EU) 2016/2281. SEER, SCOP = (η + Correction) × PEF. 3) Piping diameter under 90 m for ultimate indoor unit / over 90 m for ultimate indoor unit (if the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes). 4) Available for S-45/56/73/106MK2E5B.

Solenoid valve kit		
KIT-P56HR3	**KIT-P56HR3**	3-Pipe control Solenoid valve kit (up to 5,6 kW)
	CZ-P56HR3	Solenoid valve kit (up to 5,6 kW)
	CZ-CAPE2	3-Pipe control PCB
KIT-P160HR3	**KIT-P160HR3**	3-Pipe control Solenoid valve kit (from 5,6 to 16,0 kW)
	CZ-P160HR3	Solenoid valve kit (from 5,6 kW to 16,0 kW)
	CZ-CAPE2	3-Pipe control PCB
CZ-CAPEK2 [4]		3-Pipe control PCB for wall-mounted

3-Pipe control box kit	
CZ-P456HR3	4 ports 3 pipe box (up to 5,6 kW per port)
CZ-P656HR3	6 ports 3 pipe box (up to 5,6 kW per port)
CZ-P856HR3	8 ports 3 pipe box (up to 5,6 kW per port)
CZ-P4160HR3	4 ports 3 pipe box (up to 16,0 kW per port)

- Achieving SCOP 4,92 as the top class in the industry (LOT21 Seasonal heating efficiency value for 8 HP outdoor unit)
- Simultaneous cooling and heating operation with up to 39 indoor units
- Slim heat recovery boxes with just 200 mm height fit with the ceiling space limited in hotel applications

Technical focus

- High SEER / SCOP at full Load capacity (follows LOT21)
- Eurovent certified EER / COP
- Standardisation of outdoor unit to one compact casing size
- Connection of up to 52 indoor units
- High external static pressure 80 Pa with a newly designed fan, fan guard, motor, and casing
- Silent outdoor unit operation: Minimum 54 dB(A) for 8 HP
- Bluefin coil coating as standard

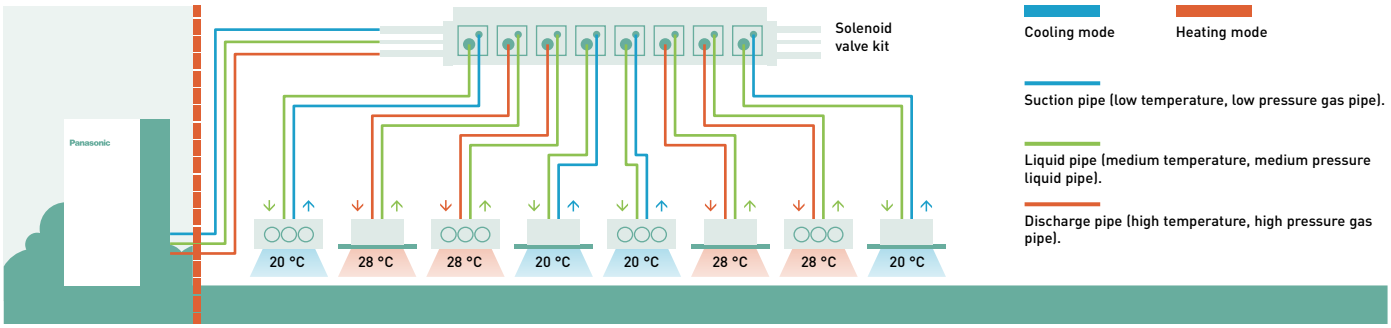
Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

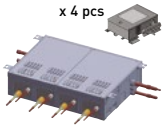
Slim 3-Pipe control box kit / Multiple connection type

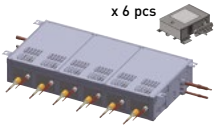
Heat recovery Box to connect multiple indoor units with just one box, 4, 6 and up to 8 indoor units or groups.
The height is only 200 mm, which is especially advantageous in hotel applications, where space for connecting several boxes is limited.

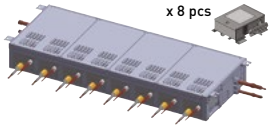
Individual control of multiple indoor units with solenoid valve kits.
· Any design and layout can be used in a single system.
· Cooling operation is possible up to an outdoor temperature of -10 °C.

System structure.



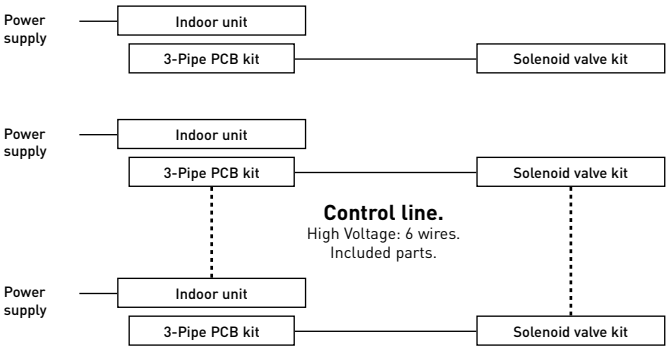




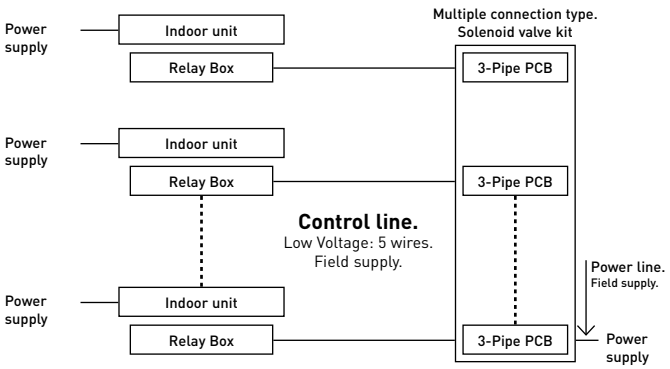
	1 port	4 port	6 port	8 port
56 type	CZ-P56HR3	CZ-P456HR3	CZ-P656HR3	CZ-P856HR3
160 type	CZ-P160HR3	CZ-P4160HR3	—	—

Solenoid valve kit / wiring work

Current model / single connection type.



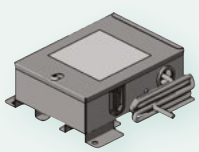
New model / multiple connection type.



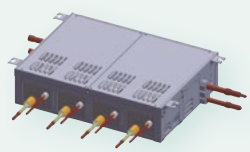
3-Pipe PCB kit.
Separately purchased.

Single HR3 kit.

Signal Relay Box.
Included accessory.



Multiple HR3 kit.



3-Pipe ECOi EX MF3 Series combination from 18 to 32 HP

HP			18 HP	20 HP	22 HP	24 HP	26 HP	28 HP	30 HP	32 HP
Outdoor unit			U-8MF3E8	U-8MF3E8	U-10MF3E8	U-12MF3E8	U-10MF3E8	U-12MF3E8	U-14MF3E8	U-16MF3E8
			U-10MF3E8	U-12MF3E8	U-12MF3E8	U-12MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50
Cooling capacity		kW	50,0	56,0	61,5	68,0	73,0	78,5	85,0	90,0
EER [1]		W/W	4,90	4,31	4,24	3,89	3,88	3,65	3,59	3,49
Current		A	16,8/16,0/15,4	21,0/20,0/19,2	23,7/22,5/21,7	28,3/26,9/25,9	31,0/29,5/28,4	35,1/33,4/32,2	39,6/37,6/36,2	42,6/40,5/39,0
Input power		kW	10,20	13,00	14,50	17,50	18,80	21,50	23,70	25,8
Heating capacity		kW	56,0	63,0	69,0	76,5	81,5	87,5	95,0	100,0
COP [1]		W/W	5,23	4,77	4,79	4,47	4,50	4,31	4,19	4,17
Current		A	17,7/16,8/16,2	21,3/20,3/19,5	23,5/22,3/21,5	27,6/26,3/25,3	30,2/28,7/27,7	33,5/31,8/30,7	37,9/36,0/34,7	40,1/38,1/36,7
Input power		kW	10,70	13,20	14,40	17,10	18,10	20,30	22,70	24,00
Starting current		A	2,00	2,00	2,00	2,00	3,00	3,00	4,00	4,00
External static pressure (Max)		Pa	80	80	80	80	80	80	80	80
Air flow		m³/min	430	442	452	464	452	464	464	464
Sound pressure	Normal mode	dB(A)	59,00	61,00	62,00	63,00	63,50	64,50	64,50	65,00
	Silent mode 1 / 2	dB(A)	56,00 / 54,00	58,00 / 56,00	59,00 / 57,00	60,00 / 58,00	60,50 / 58,50	61,50 / 59,50	61,50 / 59,50	62,00 / 60,00
Sound power	Normal mode	dB(A)	81,50	84,00	84,50	86,00	84,50	86,00	86,00	86,00
Dimension	H x W x D	mm	1842 x 2360 (+60) x 1000	1842 x 2360 (+60) x 1000	1842 x 2360 (+60) x 1000	1842 x 2360 (+60) x 1000	1842 x 2360 (+60) x 1000	1842 x 2360 (+60) x 1000	1842 x 2360 (+60) x 1000	1842 x 2360 (+60) x 1000
Net weight		kg	523	547	548	574	596	620	668	668
Piping diameter [2]	Liquid pipe	Inch (mm)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)	5/8 (15,88) / 3/4 (19,05)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Discharge pipe	Inch (mm)	7/8 (22,22) / 1 (25,40)	7/8 (22,22) / 1 (25,40)	1 (25,40) / 1-1/8 (28,58)	1 (25,40) / 1-1/8 (28,58)	1 (25,40) / 1-1/8 (28,58)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)
	Suction pipe	Inch (mm)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	13,60/28,3968	15,10/31,5288	15,10/31,5288	16,60/34,6608	15,10/31,5288	16,60/34,6608	16,60/34,6608	16,60/34,6608
Maximum allowable indoor / outdoor capacity ratio %			50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18
	Simultaneous op.	°C	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24

3-Pipe ECOi EX MF3 Series combination from 34 to 48 HP

HP			34 HP	36 HP	38 HP	40 HP	42 HP	44 HP	46 HP	48 HP
Outdoor unit			U-8MF3E8	U-8MF3E8	U-10MF3E8	U-8MF3E8	U-10MF3E8	U-12MF3E8	U-14MF3E8	U-16MF3E8
			U-10MF3E8	U-12MF3E8	U-12MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8
			U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8	U-16MF3E8
Power supply	Voltage	V	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415	380 - 400 - 415
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50
Cooling capacity		kW	96,0	101,0	107,0	113,0	118,0	124,0	130,0	135,0
EER [1]		W/W	4,10	3,90	3,88	3,72	3,72	3,58	3,55	3,49
Current		A	38,6/36,7/35,4	42,3/40,2/38,7	45,6/43,3/41,7	50,2/47,7/46,0	52,4/49,7/47,9	56,5/53,7/51,8	61,1/58,1/56,0	63,9/60,7/58,5
Input power		kW	23,40	25,90	27,60	30,40	31,70	34,60	36,60	38,70
Heating capacity		kW	108,0	113,0	119,0	127,0	132,0	138,0	145,0	150,0
COP [1]		W/W	4,64	4,48	4,51	4,31	4,36	4,25	4,18	4,17
Current		A	38,9/37,0/35,6	41,6/39,5/38,1	43,6/41,4/39,9	49,3/46,8/45,1	50,6/48,1/46,3	53,7/51,0/49,1	57,9/55,0/53,0	60,1/57,1/55,0
Input power		kW	23,30	25,20	26,40	29,50	30,30	32,50	34,70	36,00
Starting current		A	4,00	4,00	4,00	5,00	5,00	5,00	6,00	6,00
External static pressure (Max)		Pa	80	80	80	80	80	80	80	80
Air flow		m³/min	662	674	684	674	684	696	696	696
Sound pressure	Normal mode	dB(A)	64,00	64,50	65,00	65,50	66,00	66,50	66,50	67,00
	Silent mode 1 / 2	dB(A)	61,00 / 59,00	61,50 / 59,50	62,00 / 60,00	62,50 / 60,50	63,00 / 61,00	63,50 / 61,50	63,50 / 61,50	64,00 / 62,00
Sound power	Normal mode	dB(A)	84,50	85,50	85,50	85,50	86,00	86,50	87,00	87,00
Dimension	H x W x D	mm	1842 x 3540 (+120) x 1000	1842 x 3540 (+120) x 1000	1842 x 3540 (+120) x 1000	1842 x 3540 (+120) x 1000	1842 x 3540 (+120) x 1000	1842 x 3540 (+120) x 1000	1842 x 3540 (+120) x 1000	1842 x 3540 (+120) x 1000
Net weight		kg	857	881	882	929	930	954	1002	1002
Piping diameter [2]	Liquid pipe	Inch (mm)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)	3/4 (19,05) / 7/8 (22,22)
	Discharge pipe	Inch (mm)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/8 (28,58) / 1-1/4 (31,75)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/4 (31,75) / 1-1/2 (38,10)
	Suction pipe	Inch (mm)	1-1/4 (31,75) / 1-1/2 (38,10)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)	1-1/2 (38,10) / 1-5/8 (41,28)
	Balance pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
Refrigerant (R410A) / CO_2 Eq.		kg / T	21,90/45,72719	23,40/48,85919	23,40/48,85919	23,40/48,85919	23,40/48,85919	24,90/46,3536	24,90/51,9912	24,90/51,9912
Maximum allowable indoor / outdoor capacity ratio %			50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150	50 ~ 150
Operating range	Cool Min ~ Max	°C	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52	-10 ~ +52
	Heat Min ~ Max	°C	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18	-20 ~ +18
	Simultaneous op.	°C	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24

1) EER and COP calculation is based in accordance to EN14511. 2) Piping diameter under 90 m for ultimate indoor unit / over 90 m for ultimate indoor unit (if the longest piping equivalent length exceeds 90 m, increase the sizes of the main tubes by 1 rank for gas tubes and liquid tubes).

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

Eurovent certified technical data

Panasonic's VRF systems - ECOi range is now certified by Eurovent*. The Eurovent certification verifies the performance ratings of heating and cooling systems following European standards. Data provides products efficiency with full transparency, for the benefit of customers and professionals.

Eurovent certified technical data: Mini ECOi LZ2 Series 4 to 10 HP · R32

HP			4 HP		5 HP		6 HP		8 HP	10 HP
Outdoor unit			U-4LZ2E5	U-4LZ2E8	U-5LZ2E5	U-5LZ2E8	U-6LZ2E5	U-6LZ2E8	U-8LZ2E8	U-10LZ2E8
Indoor units combination			MU2	MU2	MU2	MU2	MU2	MU2	MU2	MU2
Cooling	Pc out [1]	kW	12,1	12,1	14,0	14,0	15,5	15,5	22,4	28,0
	Pec out [2]	kW	2,95	2,95	3,68	3,68	4,43	4,43	6,79	9,66
	EERout		4,1	4,1	3,8	3,8	3,5	3,5	3,3	2,9
Seasonal Cooling	SEER		8,5	8,5	8,1	8,1	7,7	7,7	7,6	7,1
	$\eta_{s,c}$	%	337	337	322	322	305	305	299	280
Cooling PL Condition B	PcB	kW	8,9	8,9	10,3	10,3	11,4	11,4	16,5	20,6
	EERB		6,5	6,5	5,9	5,9	5,4	5,4	5,2	4,6
Cooling PL Condition C	PcC	kW	5,7	5,7	6,6	6,6	7,3	7,3	10,6	13,2
	EERC		11,3	11,3	10,8	10,8	10,2	10,2	9,6	8,7
Cooling PL Condition D	PcD	kW	5,4	5,4	5,6	5,6	5,8	5,8	9,0	9,5
	EERD		15,6	15,6	15,2	15,2	15,0	15,0	16,6	18,0
Seasonal Heating	Pdesignh	kW	10,0	10,0	11,2	11,2	11,6	11,6	17,5	19,6
	SCOP		5,1	5,1	4,6	4,6	4,6	4,6	4,6	4,6
	$\eta_{s,h}$	%	199,0	199,0	181,4	181,4	180,6	180,6	180,6	181,0
Heating PL Condition A	PhA	kW	8,8	8,8	9,9	9,9	10,3	10,3	15,4	17,3
	COPA		3,1	3,1	2,9	2,9	2,9	2,9	2,9	2,8
Heating PL Condition B	PhB	kW	5,4	5,4	6,0	6,0	6,2	6,2	9,4	10,5
	COPB		4,8	4,8	4,1	4,1	4,1	4,1	4,2	4,2
Heating PL Condition C	PhC	kW	3,5	3,5	3,9	3,9	4,0	4,0	6,2	6,7
	COPC		7,2	7,2	7,2	7,2	7,1	7,1	6,9	7,1
Heating PL Condition D	PhD	kW	4,0	4,0	4,0	4,0	4,0	4,0	6,7	6,9
	COPD		9,1	9,1	9,3	9,3	9,3	9,3	8,7	9,2
T bivalent	Tbiv	°C	-10	-10	-7	-7	-7	-7	-7	-7
	PhTbiv	kW	10	10	10	10	10	10	15	17
	COPTbiv		2,5	2,5	2,9	2,9	2,9	2,9	2,9	2,8
Psbc		W	14	14	14	14	14	14	18	18
Psbh		W	18	18	18	18	18	18	26	26
Poffc		W	14	14	14	14	14	14	18	18
Poffh		W	18	18	18	18	18	18	26	26
Ptoc		W	14	14	14	14	14	14	18	18
Ptoh		W	18	18	18	18	18	18	26	26
Pckc		W	14	14	14	14	14	14	18	18
Pckh		W	18	18	18	18	18	18	26	26
Sound power level		dB(A)	69	69	70	70	72	72	72	74
Sound power level in heating		dB(A)	72	72	74	74	75	75	74	75

Eurovent certified technical data: Mini ECOi LE Series 4 to 10 HP · R410A

HP			4 HP				5 HP				6 HP				8 HP		10 HP	
Outdoor unit			U-4LE2E5		U-4LE2E8		U-5LE2E5		U-5LE2E8		U-6LE2E5		U-6LE2E8		U-8LE1E8		U-10LE1E8	
Indoor units combination			MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2
Cooling	Pc out [1]	kW	12,1	12,1	12,1	12,1	14	14	14	14	15,5	15,5	15,5	15,5	22,4	22,4	28	28
	Pec out [2]	kW	2,88	2,88	2,88	2,88	3,68	3,68	3,68	3,68	4,56	4,56	4,56	4,56	7,23	7,23	10,77	10,77
	EERout		4,2	4,2	4,2	4,2	3,8	3,8	3,8	3,8	3,4	3,4	3,4	3,4	3,1	3,1	2,6	2,6
Seasonal Cooling	SEER		7,8	7,8	7,8	7,8	7,5	7,5	7,5	7,5	7,2	7,2	7,2	7,2	6,3	6,3	6,4	6,4
	$\eta_{s,c}$	%	311	311	311	311	296,2	296,2	296,2	296,2	286,8	286,8	286,8	286,8	247,9	247,9	251,8	251,8
Cooling PL Condition B	PcB	kW	8,9	8,9	8,9	8,9	10,3	10,3	10,3	10,3	11,4	11,4	11,4	11,4	16,5	16,5	20,6	20,6
	EERB		6,7	6,7	6,7	6,7	5,9	5,9	5,9	5,9	5,4	5,4	5,4	5,4	4,8	4,8	4,4	4,4
Cooling PL Condition C	PcC	kW	5,7	5,7	5,7	5,7	6,6	6,6	6,6	6,6	7,3	7,3	7,3	7,3	10,6	10,6	13,2	13,2
	EERC		12,1	12,1	12,1	12,1	11	11	11	11	10,2	10,2	10,2	10,2	7,8	7,8	8,2	8,2
Cooling PL Condition D	PcD	kW	2,7	2,7	2,7	2,7	2,9	2,9	2,9	2,9	3,4	3,4	3,4	3,4	8	8	9	9
	EERD		9,6	9,6	9,6	9,6	10,3	10,3	10,3	10,3	11,7	11,7	11,7	11,7	12,8	12,8	15,4	15,4
Seasonal Heating	Pdesignh	kW	10	10	10	10	12,5	12,5	12,5	12,5	13	13	13	13	17,5	17,5	19,6	19,6
	SCOP		4,9	4,9	4,9	4,9	4,4	4,4	4,4	4,4	4,2	4,2	4,2	4,2	4,2	4,2	4,3	4,3
	$\eta_{s,h}$	%	191,8	191,8	191,8	191,8	172,9	172,9	172,9	172,9	166,7	166,7	166,7	166,7	166,4	166,4	169,5	169,5
Heating PL Condition A	PhA	kW	8,8	8,8	8,8	8,8	11	11	11	11	11,5	11,5	11,5	11,5	15,4	15,4	17,3	17,3
	COPA		3,5	3,5	3,5	3,5	2,8	2,8	2,8	2,8	2,6	2,6	2,6	2,6	2,7	2,7	2,6	2,6
Heating PL Condition B	PhB	kW	5,3	5,3	5,3	5,3	6,7	6,7	6,7	6,7	7	7	7	7	9,4	9,4	10,5	10,5
	COPB		4,1	4,1	4,1	4,1	3,7	3,7	3,7	3,7	3,6	3,6	3,6	3,6	3,8	3,8	3,9	3,9
Heating PL Condition C	PhC	kW	3,4	3,4	3,4	3,4	4,3	4,3	4,3	4,3	4,5	4,5	4,5	4,5	6	6	6,7	6,7
	COPC		7,7	7,7	7,7	7,7	7,5	7,5	7,5	7,5	7,4	7,4	7,4	7,4	6,6	6,6	6,8	6,8
Heating PL Condition D	PhD	kW	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	6,4	6,4	6,6	6,6
	COPD		9,8	9,8	9,8	9,8	9,8	9,8	9,8	9,8	9,8	9,8	9,8	9,8	8,1	8,1	8,9	8,9
T bivalent	Tbiv	°C	-10	-10	-10	-10	-9	-9	-9	-9	-7	-7	-7	-7	-7	-7	-7	-7
	PhTbiv	kW	10	10	10	10	12	12	12	12	11,5	11,5	11,5	11,5	15,4	15,4	17,3	17,3
	COPTbiv		2,9	2,9	2,9	2,9	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,7	2,7	2,6	2,6
Psbc		W	9	9	9	9	9	9	9	9	9	9	9	9	18	18	18	18
Psbh		W	33	33	33	33	33	33	33	33	33	33	33	33	48	48	48	48
Poffc		W	9	9	9	9	9	9	9	9	9	9	9	9	18	18	18	18
Poffh		W	33	33	33	33	33	33	33	33	33	33	33	33	48	48	48	48
Ptoc		W	33	33	33	33	33	33	33	33	33	33	33	33	48	48	48	48
Ptoh		W	33	33	33	33	33	33	33	33	33	33	33	33	48	48	48	48
Pckc		W	33	33	33	33	33	33	33	33	33	33	33	33	48	48	48	48
Pckh		W	33	33	33	33	33	33	33	33	33	33	33	33	48	48	48	48
PSB		W	33	33	33	33	33	33	33	33	33	33	33	33	48	48	48	48
Sound power level		dB(A)	69	69	69	69	71	71	71	71	73	73	73	73	79	79	83	83
Sound power level in heating		dB(A)	72	72	72	72	75	75	75	75	75	75	75	75	83	83	84	84

Eurovent certified technical data: 2-Pipe ECOi EX ME2 Series 8 to 20 HP · R410A

HP			8 HP		10 HP		12 HP		14 HP		16 HP		18 HP		20 HP	
Outdoor unit			U-8ME2E8		U-10ME2E8		U-12ME2E8		U-14ME2E8		U-16ME2E8		U-18ME2E8		U-20ME2E8	
Indoor units combination			MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2
Cooling	Pc out [1]	kW	19,7	19,7	24,6	24,6	33,5	33,5	40	40	45	45	50	50	56	56
	Pec out [2]	kW	5,79	5,79	8,79	8,79	11,55	11,55	13,33	13,33	18,75	18,75	17,86	17,86	23,33	23,33
	EERout		3,4	3,4	2,8	2,8	2,9	2,9	3	3	2,4	2,4	2,8	2,8	2,4	2,4
Seasonal Cooling	SEER		7,4	7,4	7	7	6,7	6,7	7,2	7,2	6,4	6,4	7,6	7,6	7	7
	$\eta_{s,c}$	%	294,3	294,3	275,4	275,4	266,6	266,6	286	286	254,3	254,3	299,2	299,2	278,2	277
Cooling PL Condition B	PcB	kW	14,5	14,5	18,1	18,1	24,6	24,6	29,4	29,4	33,1	33,1	36,8	36,8	41,2	41,2
	EERB		5,7	5,7	4,8	4,8	4,6	4,6	4,9	4,9	4,2	4,2	5	5	4,6	4,6
Cooling PL Condition C	PcC	kW	9,3	9,3	11,6	11,6	15,8	15,8	18,9	18,9	21,3	21,3	23,6	23,6	26,5	26,5
	EERC		11,8	11,8	9,6	9,6	8,1	8,1	9,4	9,4	8,2	8,2	9,8	9,8	9	9
Cooling PL Condition D	PcD	kW	8,2	8,2	9,3	9,3	8,2	8,2	8,4	8,4	9,4	9,4	10,5	10,5	11,7	11,7
	EERD		13,7	13,7	18,9	18,9	18,4	18,4	22,6	22,6	22,1	22,1	25,2	25,2	24,6	24,6
Seasonal Heating	Pdesignh	kW	17,5	17,5	22	22	26,2	26,2	31,5	31,5	35	35	39,2	39,2	44,1	44,1
	SCOP		4,8	4,8	4,3	4,3	4,7	4,7	4,3	4,3	4,1	4,1	4,3	4,3	4,1	4,1
	$\eta_{s,h}$	%	188,4	188,4	167,6	167,6	185,8	185,8	168,2	168,2	159	159	168,7	168,7	160,4	161
Heating PL Condition A	PhA	kW	15,4	15,4	19,4	19,4	23,1	23,1	27,8	27,8	30,9	30,9	34,6	34,6	39	39
	COPA		2,8	2,8	2,6	2,6	2,8	2,8	2,5	2,5	2,3	2,3	2,6	2,6	2,4	2,4
Heating PL Condition B	PhB	kW	9,4	9,4	11,8	11,8	14,1	14,1	16,9	16,9	18,8	18,8	21,1	21,1	23,7	23,7
	COPB		4,5	4,5	3,6	3,6	4,2	4,2	3,7	3,7	3,6	3,6	3,7	3,7	3,5	3,5
Heating PL Condition C	PhC	kW	6	6	7,6	7,6	9	9	10,9	10,9	12,1	12,1	13,5	13,5	15,2	15,2
	COPC		7,2	7,2	7,7	7,7	7,7	7,7	7,4	7,4	6,6	6,6	7,1	7,1	6,9	6,9
Heating PL Condition D	PhD	kW	7,1	7,1	7	7	7,2	7,2	6,7	6,7	6,6	6,6	7,4	7,4	7,4	7,4
	COPD		8,9	8,9	9,6	9,6	9,3	9,3	10,2	10,2	10	10	10,3	10,3	10,3	10,3
T bivalent	Tbiv	°C	-9	-9	-7	-7	-9	-9	-7	-7	-7	-7	-7	-7	-7	-7
	PhTbiv	kW	16,8	16,8	19,4	19,4	25,1	25,1	27,8	27,8	30,9	30,9	34,6	34,6	39	39
	COPTbiv		2,6	2,6	2,6	2,6	2,6	2,6	2,5	2,5	2,3	2,3	2,6	2,6	2,4	2,4
Psbc		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Psbh		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Poffc		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Poffh		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Ptoc		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Ptoh		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Pckc		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Pckh		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
PSB		W	48	48	48	48	48	48	88	88	88	88	88	88	88	88
Sound power level		dB(A)	80	80	81	81	85	85	86	86	87	87	86	86	86	86
Sound power level in heating		dB(A)	81	81	84	84	85	85	85	85	89	89	89	89	89	89

Eurovent certified technical data: 3-Pipe ECOi EX MF3 Series 8 to 16 HP · R410A

HP			8 HP		10 HP		12 HP		14 HP		16 HP	
Outdoor unit			U-8MF3E8		U-10MF3E8		U-12MF3E8		U-14MF3E8		U-16MF3E8	
Indoor units combination			MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2	MF2	MU2
Cooling	Pc out [1]	kW	22,4	22,4	28	28	33,5	33,5	40	40	45	45
	Pec out [2]	kW	7,23	7,23	10,77	10,77	12,88	12,88	15,38	15,38	19,57	19,57
	EERout		3,1	3,1	2,6	2,6	2,6	2,6	2,6	2,6	2,3	2,3
Seasonal Cooling	SEER		7	7	7	7	6,4	6,4	6,7	6,7	6	6
	$\eta_{s,c}$	%	277	277,7	278,9	278,9	252,7	252,7	264,4	264,4	237,7	237,7
Cooling PL Condition B	PcB	kW	16,5	16,5	20,6	20,6	24,6	24,6	29,4	29,4	33,1	33,1
	EERB		4,9	4,9	4,6	4,6	4,3	4,3	4,4	4,4	3,9	3,9
Cooling PL Condition C	PcC	kW	10,6	10,6	13,2	13,2	15,8	15,8	18,9	18,9	21,3	21,3
	EERC		9,1	9,1	9,3	9,3	7,7	7,7	8,3	8,3	7,4	7,4
Cooling PL Condition D	PcD	kW	7,2	7,2	8,5	8,5	7,1	7,1	8,5	8,5	9,4	9,4
	EERD		16,5	16,5	19,7	19,7	15,7	15,7	19,7	19,7	17,4	17,4
Seasonal Heating	Pdesignh	kW	17,5	17,5	22	22	26,2	26,2	31,5	31,5	35	35
	SCOP		4,8	4,8	4,2	4,2	4,3	4,3	4,1	4,1	3,8	3,8
	$\eta_{s,h}$	%	189	190,9	166,8	166,8	167,8	167,8	162,1	162,1	149,3	149,3
Heating PL Condition A	PhA	kW	15,4	15,4	19,4	19,4	23,1	23,1	27,8	27,8	30,9	30,9
	COPA		2,9	2,9	2,5	2,5	2,7	2,7	2,4	2,4	2,2	2,2
Heating PL Condition B	PhB	kW	9,4	9,4	11,8	11,8	14,1	14,1	16,9	16,9	18,8	18,8
	COPB		4,6	4,6	3,7	3,7	3,7	3,7	3,6	3,6	3,3	3,3
Heating PL Condition C	PhC	kW	6	6	7,6	7,6	9	9	10,9	10,9	12,1	12,1
	COPC		7,1	7,1	7,4	7,4	6,9	6,9	7,1	7,1	6,5	6,5
Heating PL Condition D	PhD	kW	6,7	6,7	6,9	6,9	6,5	6,5	6,6	6,6	6,6	6,6
	COPD		8,7	8,7	9,4	9,4	9	9	9,6	9,6	9,6	9,6
T bivalent	Tbiv	°C	-9	-9	-7	-7	-9	-9	-7	-7	-7	-7
	PhTbiv	kW	16,8	16,8	19,4	19,4	25,1	25,1	27,8	27,8	30,9	30,9
	COPTbiv		2,6	2,6	2,5	2,5	2,3	2,3	2,4	2,4	2,2	2,2
Psbc		W	17	17	17	17	17	17	25	25	25	25
Psbh		W	50	50	50	50	50	50	91	91	91	91
Poffc		W	17	17	17	17	17	17	25	25	25	25
Poffh		W	50	50	50	50	50	50	91	91	91	91
Ptoc		W	17	17	17	17	17	17	25	25	25	25
Ptoh		W	50	50	50	50	50	50	91	91	91	91
Pckc		W	50	50	50	50	50	50	91	91	91	91
Pckh		W	50	50	50	50	50	50	91	91	91	91
PSB		W	50	50	50	50	50	50	91	91	91	91
Sound power level		dB(A)	79	79	80	80	84	84	86	86	86	86
Sound power level in heating		dB(A)	77	77	82	82	86	86	86	86	88	88

1) Pc out= Capacity. 2) Pec out= Input power. * Please refer an official website (https://www.eurovent-certification.com/en) for each test condition.

Water heat exchanger for hydronic applications

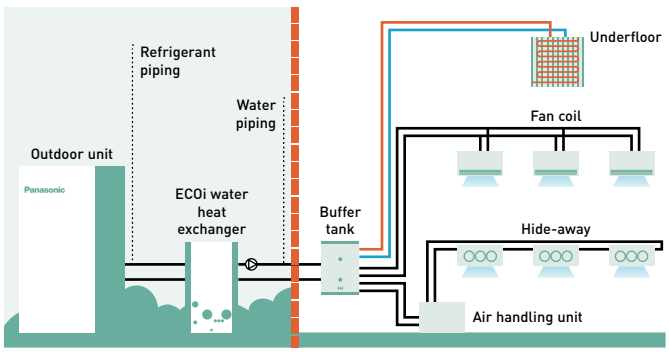
When a top London restaurant opened, it needed large volumes of fresh air to ensure the optimum dining environment. ECOi units connected to the cooling coils within the air handling equipment ensured the air was introduced in the right condition in both summer and winter.

ECOi water heat exchanger

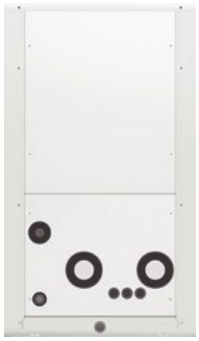
Electrical VRF with water heat exchanger

· With this easy to install water heat exchanger unit, you can now cover projects up to 51 kW hot water demand or 44 kW on chilled application on a efficient way and cost effective

System example.



A buffer tank of minimum 280 l for 28 kW and 500 l for 50 kW is always needed.



ECOi 2-Pipe with water heat exchanger for chilled and hot water production

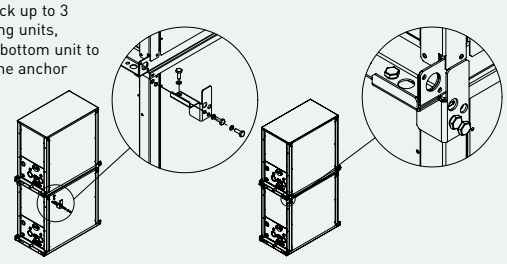
Water heat exchanger (WHE) for hydronic applications.
WHE for ECOi system controlled by a CZ-RTC5B timer remote control.
Energy-efficient capacity control with superior external static pressure is now ready.

Hydrokit with A class water pump			**PAW-250WP5G1**	**PAW-500WP5G1**
Hydrokit without pump			**PAW-250W5G1**	**PAW-500W5G1**
Cooling capacity (A 35 °C, W 7 °C)		kW	25,0	50,0
Heating capacity		kW	28,0	56,0
Heating capacity (A +7 °C, W 45 °C)		kW	28,0	56,0
COP (A +7 °C, W 45 °C)		W/W	2,97	3,10
Heating Energy Efficiency class at 35 °C [1]			**A++**	**A++**
$\eta_{s,h}$ (LOT1) [2]		**%**	**152,00**	**152,00**
Dimension	H x W x D	mm	1000 x 575 x 1110	1000 x 575 x 1110
Net weight		kg	135 (140 with pump)	155 (165 with pump)
Water pipe connector			Rp2 Female Thread (50A)	Rp2 Female Thread (50A)
Heating water flow (ΔT=5 K. 35 °C)		m^3/h	5,16	10,32
Capacity of integrated electric heater		kW	Not equipped	Not equipped
Flow switch			Equipped	Equipped
Water filter			Equipped	Equipped
Input power with A class water pump / without pump		kW	0,329 / 0,024	0,574 / 0,024
Maximum current with A class water pump / without pump		A	1,43 / 0,10	2,50 / 0,10
Outdoor unit			**U-10ME2E8**	**U-20ME2E8**
Sound pressure		dB(A)	56	60
Dimension	H x W x D	mm	1842 x 770 x 1000	1842 x 1540 x 1000
Net weight		kg	210	375
Piping diameter	Liquid pipe	Inch (mm)	3/8 (9,52)	5/8 (15,88)
	Gas pipe	Inch (mm)	7/8 (22,22)	1-1/8 (28,58)
Refrigerant (R410A) / CO_2 Eq.		kg	5,6 (need Additional gas amount at site)	9,5 (need Additional gas amount at site)
Pipe length range / Pipe length for nominal capacity		m	170 / 7,5	170 / 7,5
Elevation difference (in / out)		m	50 (OU above) 35 (OU below)	50 (OU above) 35 (OU below)
Pipe length for additional gas / Additional gas amount (R410A)		m / g/m	0 < / Refer to manual	0 < / Refer to manual
Operating range	Heat Min ~ Max	°C	-11 ~ +15 [3]	-11 ~ +15 [3]
Water outlet temperature range	Cool Min ~ Max	°C	+5 ~ +15	+5 ~ +15
	Heat Min ~ Max	°C	+35 ~ +45	+35 ~ +45

1) Unit efficiency energy level: Scale from A+++ to D. 2) Seasonal space cooling / heating energy efficiency following COMMISSION REGULATION (EU) 813/2013. 3) With accessory low temperature kit -25 ~ +15 °C. Available only as a spare part.
Performance calculation in agreement with Eurovent. Sound pressure measured at 1 m from the outdoor unit and at 1,5 m height.

Accessories	
PAW-3WSK	Stacking kit for vertically stacking up to 3 WHE (4 pieces per Kit)

Stacking kit PAW-3WSK.
It is possible to stack up to 3 units. When stacking units, always anchor the bottom unit to the ground using the anchor holes.



Availability of easy vertical stacking allows installations in a limited space (up to 3 units)*.

* Stacking kit (PAW-3WSK) is necessary.

Stainless steel plate heat exchanger with anti-freeze protection control.
Change over between heating and cooling operation.

Technical focus

- Heating, cooling and DHW
- A class water pump included (only in P model)
- Flexible modularity from 25 kW
- Better partial load vs standard chiller system
- Compatible with all centralized controllers
- Maximum distance between outdoor unit and WHE: 170 m
- Maximum hot water outlet temperature: 45 °C
- Minimum chilled water outlet temperature: 5 °C
- Outdoor temperature range in heating mode: -11 °C to +15 °C (with low temperature kit -25 °C*)

* Available as a spare part.

INVERTER+ | 5 YEARS COMPRESSOR WARRANTY

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

Leak detection and automatic Pump Down for R410A refrigerant

New line-up of Pump Down Systems to detect refrigerant leaks, that offers complete assurance and safety protection. It's an ideal solution for hotels, offices and public buildings where the strict safety for end users and workers is required.

The system monitors refrigerant leakage continually and provides a warning, preventing major refrigerant loss and potential damage to the installation's efficiency. The system can reduce potential refrigerant loss by up to 90 %.

As well as ensuring safe and reliable operation, Panasonic's Pump Down system contributes towards BREEAM POL1 points and enables compliance with current EN 378 standards, covering applications where refrigeration concentration levels exceed practical safety limits of 0,44 kg/m³.

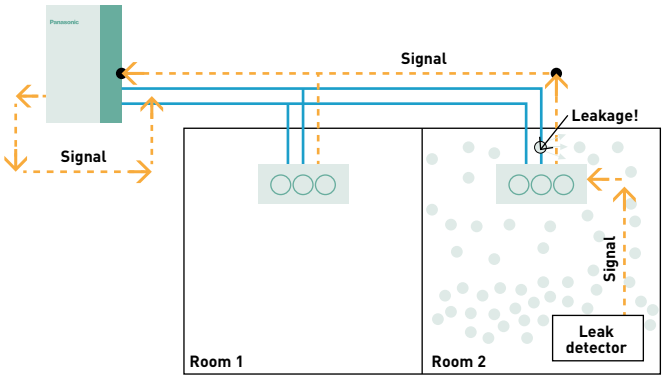
Basic Pump Down function:
· Leak detection
· Activate Pump Down process
· Collect refrigerant within receiver tank
· Close valves to isolate refrigerant

Technical focus:
· Compatible with Mini ECOi and ECOi EX Series with R410A refrigerant
· A receiver kit included as standard
· Includes updated controller
· Connection in two ways:
  1 | With local room leakage sensors
  2 | Using innovative algorithm
· R22 renewal possible

The Pump Down systems are ideal for hotels, offices and public buildings where safety of building occupants is a must.

Direct leak detection method: the safest solution for small rooms

The leak detector is connected directly to the indoor unit and the Pump Down system is directly connected to the outdoor unit PCB. The Pump Down system will activate when a leak is detected in the room and initiate a refrigerant reclaim operation immediately. This immediate reaction, and large refrigerant storage capacity, offers very high level of safety for end users, building occupants, as well as being environmentally friendly.
No additional communication panels, cabling or software is required. This option should be implemented in any area that is not compliant with BS EN 378:2008.



Indirect leak detection method: Unique PLC algorithm to determine refrigerant leakage

Pressure and temperature sensors constantly monitor the high / low pressure and discharge of the condensing unit to protect against potential leakage in areas not covered by leak detectors.
The innovative algorithm is able to detect leakage of R410A based on abnormal changes in the following conditions, high and low pressure, and compressor discharge temperature.
Once initiated via either direct or indirect detection, the unit will immediately close the liquid / discharge actuating ball valves, close the alarm terminals on the Pump Down PCB allowing an alarm to be raised at any nominated location.
Reclaim of the refrigerant is via the suction line to the heat exchanger(s) of the outdoor unit(s), with any surplus refrigerant collected in the 30 l receiver tank. Once fully pumped down the suction line is closed and the unit awaits a 'Reset' and 'Recharge' command.
Thanks to the simple installation and control, shown in Fig 1, Panasonic's ECOi Pump Down system can provide dramatic reduction in capital cost and installation time when compared to a standalone leak detection system, shown in Fig 2.

Fig 1: Panasonic's Pump Down system.

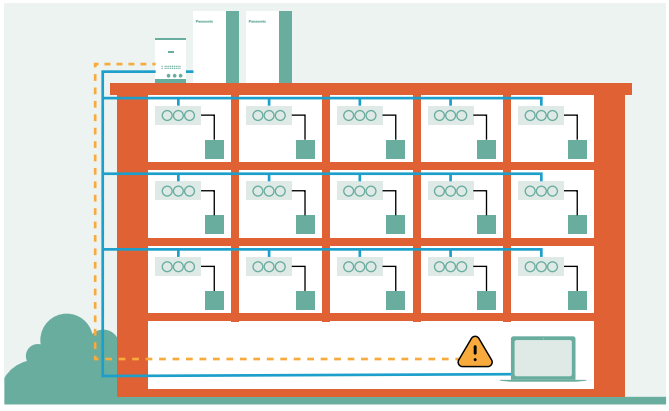
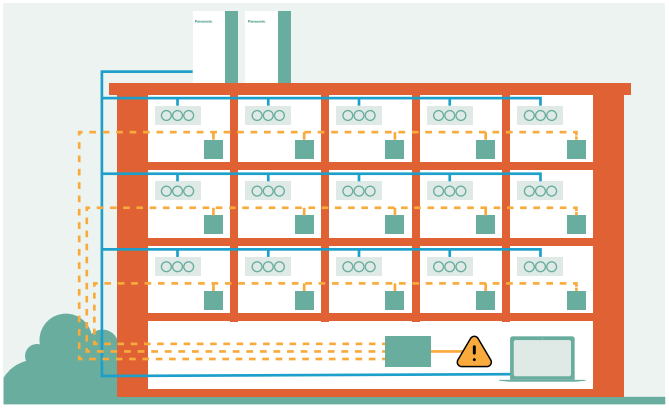


Fig 2: Standalone leak detection system.



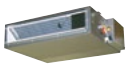
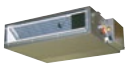
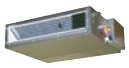
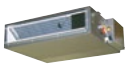
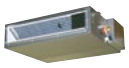
Quick and simple installation

The unit contains actuating ball valves, a 30 L storage vessel and PLC all housed in an IP54 rated encasement. Terminals in front of the unit allow easy wiring to the alarm terminal, high / low pressure transducers and discharge temperature sensor(s) of the condensing unit(s).

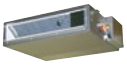
Reference	Description
PAW-PUD2W-1R	Pump Down system (2 way) for 1 outdoor unit
PAW-PUD2W-2R	Pump Down system (2 way) for 2 outdoor units
PAW-PUD2W-3R*	Pump Down system (2 way) for 3 outdoor units
PAW-PUD3W-1R	Pump Down system (3 way) for 1 outdoor unit
PAW-PUD3W-2R	Pump Down system (3 way) for 2 outdoor units
PAW-PUD3W-3R*	Pump Down system (3 way) for 3 outdoor units

* Special order requiring the longer lead time than usual. For the detailed information, please contact an authorized Panasonic dealer.

ECOi systems indoor units range

Page	Indoor units	1,5 kW	2,2 kW	2,8 kW	3,0 kW	3,6 kW	4,0 kW	4,5 kW
P. 46	U2 Type 4 way 90x90 cassette · R32 / R410A		 S-22MU2E5B	 S-28MU2E5B		 S-36MU2E5B		 S-45MU2E5B
P. 47	**NEW** Y3 Type 4 way 60x60 cassette · R32 / R410A	 S-15MY3E	 S-22MY3E	 S-28MY3E		 S-36MY3E		 S-45MY3E
P. 48	Y2 Type 4 way 60x60 cassette · R32 / R410A	 S-15MY2E5B	 S-22MY2E5B	 S-28MY2E5B		 S-36MY2E5B		 S-45MY2E5B
P. 49	L1 Type 2 way cassette · R410A		 S-22ML1E5	 S-28ML1E5		 S-36ML1E5		 S-45ML1E5
P. 50	D1 Type 1 way cassette · R410A			 S-28MD1E5		 S-36MD1E5		 S-45MD1E5
P. 51	F3 Type variable static pressure adaptive duct · R32	 S-15MF3E5B	 S-22MF3E5B	 S-28MF3E5B		 S-36MF3E5B		 S-45MF3E5B
P. 51	F3 Type variable static pressure adaptive duct · R410A	 S-15MF3E5A	 S-22MF3E5A	 S-28MF3E5A		 S-36MF3E5A		 S-45MF3E5A
P. 52	F2 Type variable static pressure hide-away · R410A	 S-15MF2E5A	 S-22MF2E5A	 S-28MF2E5A		 S-36MF2E5A		 S-45MF2E5A
P. 53	M1 Type slim variable static pressure hide-away · R32 / R410A	 S-15MM1E5B	 S-22MM1E5B	 S-28MM1E5B		 S-36MM1E5B		 S-45MM1E5B
P. 54	E2 Type high static pressure hide-away · R410A							
P. 55	Heat recovery with DX coil · R410A				 PAW-500ZDX3N		 PAW-800ZDX3N	 PAW-01KZDX3N
P. 56	T2 Type ceiling · R410A					 S-36MT2E5A		 S-45MT2E5A
P. 57	K2 Type wall-mounted · R32 / R410A	S-15MK2E5B	S-22MK2E5B	S-28MK2E5B		S-36MK2E5B		S-45MK2E5B
P. 58	G1 Type floor console · R410A		 S-22MG1E5N	 S-28MG1E5N		 S-36MG1E5N		 S-45MG1E5N
P. 59	P1 Type floor-standing · R410A		 S-22MP1E5	 S-28MP1E5		 S-36MP1E5		 S-45MP1E5
P. 60	R1 Type concealed floor-standing · R410A		 S-22MR1E5	 S-28MR1E5		 S-36MR1E5		 S-45MR1E5
P. 61	Hydrokit for ECOi, water at 45 °C · R410A							

OPTIONAL UNITS ON VENTILATION SECTION

5,6 kW	6,0 kW	7,3 kW	9,0 kW	10,6 kW	14,0 kW	16,0 kW	22,4 kW	28,0 kW
 S-56MU2E5B	 S-60MU2E5B	 S-73MU2E5B	 S-90MU2E5B	 S-106MU2E5B	 S-140MU2E5B	 S-160MU2E5B		
 S-56MY3E								
 S-56MY2E5B								
 S- 56ML1E5		 S-73ML1E5						
 S-56MD1E5		 S-73MD1E5						
 S-56MF3E5B	 S-60MF3E5B	 S-73MF3E5B	 S-90MF3E5B	 S-106MF3E5B	 S-140MF3E5B	 S-160MF3E5B		
 S-56MF3E5A	 S-60MF3E5A	 S-73MF3E5A	 S-90MF3E5A	 S-106MF3E5A	 S-140MF3E5A	 S-160MF3E5A		
 S-56MF2E5A	 S-60MF2E5A	 S-73MF2E5A	 S-90MF2E5A	 S-106MF2E5A	 S-140MF2E5A	 S-160MF2E5A		
 S-56MM1E5B								
							 S-224ME2E5	 S-280ME2E5
 S-56MT2E5A		 S-73MT2E5A		 S-106MT2E5A	 S-140MT2E5A			
S-56MK2E5B		S-73MK2E5B		S-106MK2E5B				
 S-56MG1E5N								
 S-56MP1E5		 S-71MP1E5						
 S-56MR1E5		 S-71MR1E5						
			 S-80MW1E5		 S-125MW1E5			

Bringing nature's balance indoors

nanoe™ X, technology with the benefits of hydroxyl radicals.

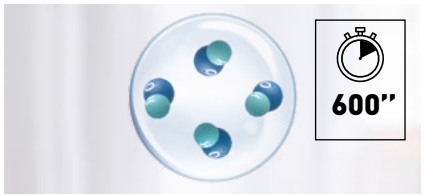
In today's health-conscious world, we care about taking exercise, we care about what we eat and what we touch, we also care about what we breathe – and technology exists to bring good outdoor air, indoors.

Abundant in nature, hydroxyl radicals (also known as OH radicals) have the capacity to inhibit pollutants, viruses, and bacteria to clean and deodorise. nanoe™ X technology can bring these incredible benefits indoors so that hard surfaces, soft furnishings, and the indoor environment can be a cleaner and more pleasant place to be, whether at home, work, or visiting hotels, shops and restaurants etc.

A naturally occurring process

Hydroxyl radicals are unstable molecules looking to react with other elements like hydrogen, capturing it. Thanks to this reaction, hydroxyl radicals have the potential to inhibit the growth of pollutants such as bacteria, viruses, moulds, and odours, breaking them down and neutralising the unpleasant effects. This naturally occurring process has major benefits to improve indoor environments.

Hydroxyl radicals in nature.

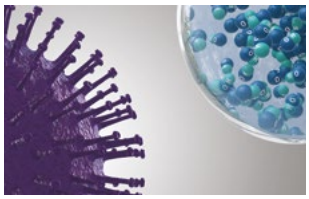


Hydroxyl radicals contained in water.

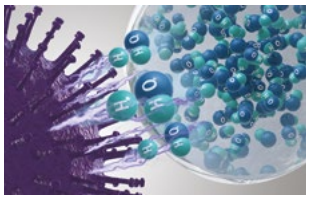
By creating hydroxyl radicals contained in water, nanoe™ X technology significantly boosts their effectiveness, increasing hydroxyl radicals lifetime from less than a second in nature, to more than 600 seconds – 10 minutes so that nanoe™ X can spread easily around the room.

Panasonic's nanoe™ X technology takes this a step further and brings nature's detergent – hydroxyl radicals – indoors to help create an ideal environment

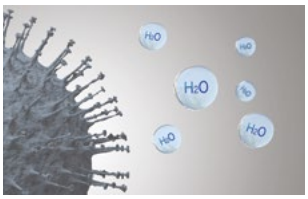
Thanks to the nanoe™ X properties, several types of pollutants can be inhibited such as certain types of bacteria, viruses, mould, allergens, pollen and certain hazardous substances.



1 | nanoe™ X reliably reaches pollutants.



2 | Hydroxyl radicals denature pollutants' proteins.



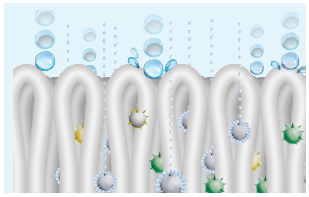
3 | Pollutants activity is inhibited.

The well-being benefits of nature are well known – but do you know the power of hydroxyl radicals?

What is unique about nanoe™ X?

Hydroxyl radicals inhibit pollutants, certain types of viruses, and bacteria to clean and deodorise. Thanks to this advanced technology, even tightly woven fabrics can be treated using this solution, meaning that curtains, blinds, carpets and furniture can all benefit from this technology to inhibit hazardous substances – including on hard surfaces and, of course, the air that we breathe.

Effective on fabrics and surfaces.



1 | At one billionth of a metre, nanoe™ X is much smaller than steam and can deeply penetrate cloth fabrics to deodorise.

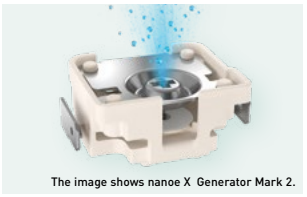
Longer lifespan.

2 | Contained in tiny water particles, nanoe™ X has a long lifespan, which is about 600 seconds, to spread easily around the room.

Huge quantity.

3 | nanoe X Generator Mark 2 produces 9,6 trillion hydroxyl radicals per second. Greater amounts of hydroxyl radicals contained in nanoe™ X lead to higher performance on inhibition of pollutants.

Maintenance-free.



The image shows nanoe X Generator Mark 2.

4 | No service and maintenance required. nanoe™ X is a filter free solution that does not require maintenance, as its atomisation electrode is enveloped with water during its generation process and it is made with Titatium.

7 effects of nanoe™ X – Panasonic unique technology

Deodorises

Odours

Capacity to inhibit 5 types of pollutants

Bacteria and viruses

Mould

Allergens

Pollen

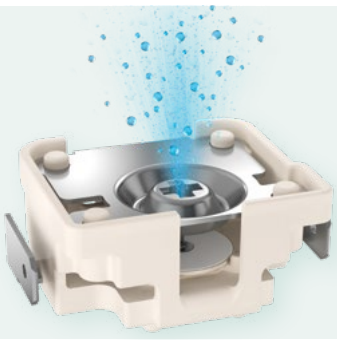
Hazardous substances

Moisturises

Skin and hair

* Refer to https://aircon.panasonic.eu for more details and validation data.

The latest nanoe™ X device uses a "multi-leader discharge" system that focuses the discharge to 4 needle-shaped electrodes, greatly expanding the hydroxyl radicals.



The image shows nanoe X Generator Mark 1.

How nanoe™ X is generated.

1 | Atomised electrode produces condensation.
2 | Electrical discharge is applied to the water
3 | nanoe™ X particles are generated

nanoe™ X, internationally-validated technology in testing facilities

The effectiveness of nanoe™ X technology has been tested by 3rd party laboratories in Germany, France, Denmark, Malaysia and Japan.

Test results conducted under controlled laboratory conditions. Performance of nanoe™ X might differ in real life environment.

Panasonic heat pump with nanoe™ X technology verified against SARS-CoV-2

Virus SARS-CoV-2: 91,4 % inhibited. Test conducted by TEXCELL (France), using a gauze saturated with SARS-CoV-2 virus solution exposed to Panasonic heat pump with nanoe™ X in a space of 6,7 m³ over 8 hours. Test report: 1140-01 C3. Performance of nanoe™ X might differ in real life environment.

	Tested contents		Result	Capacity	Time	Testing organisation	Report No.
Airborne	Virus	Bacteriophage ΦX174	99,7 % inhibited	Approx. 25 m³	6 h	Kitasato Research Center for Environmental Science	24_0300_1
	Bacteria	Staphylococcus aureus	99,9 % inhibited	Approx. 25 m³	4 h	Kitasato Research Center for Environmental Science	2016_0279
Adhered	Virus	SARS-CoV-2	91,4 % inhibited	6,7 m³	8 h	Texcell (France)	1140-01 C3
		SARS-CoV-2	99,9 % inhibited	45 L	2 h	Texcell (France)	1140-01 A1
		Feline Coronavirus	99,3 % inhibited	45 L	2 h	Yamaguchi University Faculty of Agriculture	—
		Xenotropic murine leukemia virus	99,999 % inhibited	45 L	6 h	Charles River Biopharmaceutical Services GmbH	—
		Influenza (H1N1 subtype)	99,9 % inhibited	1 m³	2 h	Kitasato Research Center for Environmental Science	21_0084_1
		Bacteriophage ΦX174	99,80% inhibited	25 m³	8 h	Japan Food Research Laboratories	13001265005-01
	Bacteria	Staphylococcus aureus	99,9 % inhibited	20 m³	8 h	Danish Technological Institute	868988
	Pollen	Ambrosia pollen	99,4 % inhibited	20 m³	8 h	Danish Technological Institute	868988
		Cedar	97 % inhibited	Approx. 23 m³	8 h	Panasonic Product Analysis Center	4AA33-151001-F01
	Odours	Cigarette smoke odour	Odour intensity reduced by 2,4 levels	Approx. 23 m³	0,2 h	Panasonic Product Analysis Center	4AA33-160615-N04

The nanoe™ X performance varies depending on the room size, environment and usage and it may take several hours to reach the full effect. nanoe™ X is not medical device, local regulations on building design and sanitary recommendations must be followed.

First nanoe™ device was developed by Panasonic in 2003

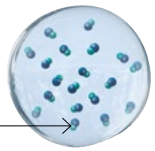
Generator: nanoe™

2003

480 billion hydroxyl radicals/sec

Ion particle structure

Hydroxyl Radicals

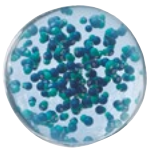


Generator: nanoe™ X

Mark 1 - 2016

4,8 trillion hydroxyl radicals/sec

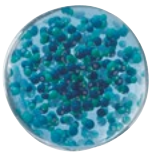
10x times



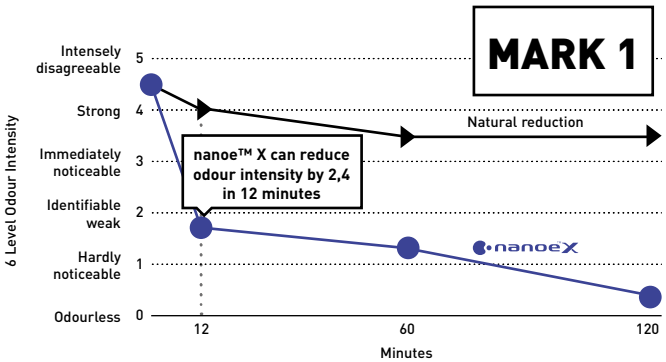
Mark 2 - 2019

9,6 trillion hydroxyl radicals/sec

20x times

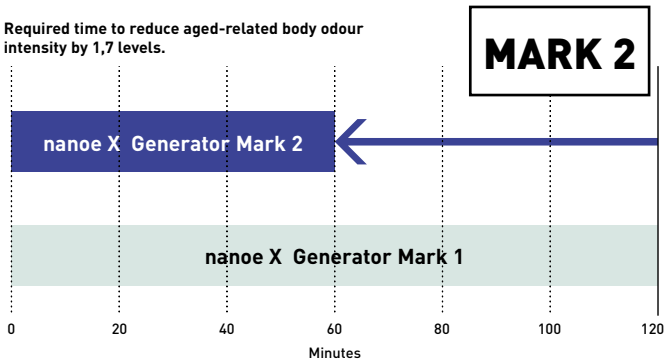


nanoe X Generator Mark 1 can reduce cigarette smoke odour intensity by 2,4 levels in 12 minutes



Deodorisation effect for adhering odour (cigarette smoke). Deodorisation test.
Testing organisation: Panasonic Product Analysis Center. Testing method: Verified using the six-level odour intensity scale method in an approximately 23 m³ sized test room. Deodorisation method: nanoe™ released. Test substance: Surface-attached cigarette smoke odour. Test result: Odour intensity reduced by 2,4 levels in 12 minutes. (4AA33-160615-N04).

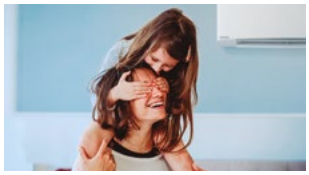
nanoe X Generator Mark 2 can reduce the aged-related body odour in half of the time



Deodorisation test.
Testing organization: Panasonic Product Analysis Center. Testing method: Verified using the six-level odour intensity scale method in an approximately 23 m³ sized test room. Deodorisation method: nanoe™ released. Test substance: Surface-attached aged related body odour. Test result: Odour intensity reduced by 1.7 levels in 1 hour (Y18HM059).

Where is nanoe™ X technology used?

Since 2003, nanoe™ has become a part of people's lives in Japan and other regions.
Such technology can be found in diverse applications for cleaning air and surfaces, inside trains, elevators, cars, home appliances and personal beauty ... as well as in air conditioning.
Panasonic Heating & Cooling Solutions is incorporating nanoe™ technology in a wide range of equipment for residential applications as well as for commercial spaces and, it is a solution that does not require filters or maintenance and can work independently from heating or cooling.


Home


Shop


Gym


Hotel


Office


Clinic


Restaurant

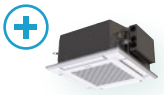

Hospital

It has been adopted in people's homes as well as in public facilities where improved air quality is desired, such as offices, hospitals, healthcare centres and hotels etc.

nanoe™ X: improving protection 24/7

Panasonic Heating & Cooling Solutions is incorporating nanoe™ technology in a wide range of equipment

NEW Built-in nanoe X Generator (TBC).



Y3 Type 4 way 60x60 cassette.
S-**MY3E.
6 capacities: 1,5 - 5,6 kW.

Built-in nanoe X Generator Mark 2.

U2 Type 4 way 90x90 cassette.
S-***MU2E5B.
11 capacities: 2,2 - 16,0 kW.

F3 Type adaptive duct.
S-***MF3E5B.
12 capacities: 1,5 - 16,0 kW.

Built-in nanoe X Generator Mark 1.

G1 Type floor console.
S-**MG1E5N.
5 capacities: 2,2 - 5,6 kW.

nanoe™ X: improving protection 24/7

nanoe™ X as a standard.

U2 Type 4 way 90x90 cassette · R32 / R410A

The 4 way 90x90 cassettes with integrated nanoe X Generator Mark 2 and new panel design.
Panasonic introduces a modern flat panel design to blend into any space. These cassettes have been developed to satisfy customer, needs such as high energy saving, comfort and better indoor air quality.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit		S..MU2E5B	22	28	36	45	56	60	73	90	106	140	160
Cooling capacity		kW	2,2	2,8	3,6	4,5	5,6	6,0	7,3	9,0	10,6	14,0	16,0
Input power		W	20,00	20,00	20,00	20,00	25,00	35,00	40,00	40,00	90,00	95,00	105,00
Current		A	0,21	0,21	0,21	0,21	0,23	0,33	0,36	0,38	0,71	0,74	0,82
Heating capacity		kW	2,5	3,2	4,2	5,0	6,3	7,1	8,0	10,0	11,4	16,0	18,0
Input power		W	20,00	20,00	20,00	20,00	25,00	35,00	40,00	40,00	85,00	90,00	100,00
Current		A	0,20	0,20	0,20	0,20	0,22	0,32	0,35	0,37	0,69	0,72	0,80
Fan type			Turbo fan	Turbo fan	Turbo fan	Turbo fan	Turbo fan	Turbo fan	Turbo fan	Turbo fan	Turbo fan	Turbo fan	Turbo fan
nanoe X Generator			Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2
Air flow	Hi/Med/Lo	m³/min	14,5/13,0/11,5	14,5/13,0/11,5	14,5/13,0/11,5	15,5/13,0/11,5	16,5/13,5/11,5	21,0/16,0/13,0	22,5/16,0/13,0	23,0/18,5/14,0	34,0/25,0/19,0	36,0/26,0/20,0	37,0/28,0/24,0
Sound pressure	Hi/Med/Lo	dB(A)	30/29/28	30/29/28	30/29/28	31/29/28	32/30/28	36/32/29	37/32/29	38/35/32	44/38/34	45/39/35	46/40/38
Sound power	Hi/Med/Lo	dB(A)	45/44/43	45/44/43	45/44/43	46/44/43	47/45/43	51/47/44	52/47/44	53/50/47	59/53/49	60/54/50	61/55/53
Dimension (H x W x D)	Indoor	mm	256 x 840 x 840	256 x 840 x 840	256 x 840 x 840	256 x 840 x 840	256 x 840 x 840	256 x 840 x 840	256 x 840 x 840	256 x 840 x 840	319 x 840 x 840	319 x 840 x 840	319 x 840 x 840
	Panel	mm	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950	33,5 x 950 x 950
Net weight (Panel)		kg	19 (5)	19 (5)	19 (5)	19 (5)	19 (5)	20 (5)	20 (5)	20 (5)	25 (5)	25 (5)	25 (5)
Piping diameter R32 model	Liquid	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)
Piping diameter R410A model	Liquid	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52) [1]	3/8 (9,52) [1]	3/8 (9,52) [1]	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88) [1]	5/8 (15,88) [1]	5/8 (15,88) [1]	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)

1) When the piping diameter is (liquid) Ø1/4 (6,35) - (gas) Ø1/2 (12,70), connect the liquid socket tube (Ø1/4 (6,35) - Ø3/8 (9,52)) to the liquid tubing side indoor unit and connect the gas socket tube (Ø1/2 (12,70) - Ø5/8 (15,88)) to the gas tubing side indoor unit. * Above values are in the case of nanoe™ X OFF.

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRU3W	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white

Accessories	
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-KPU3W	Standard panel
CZ-KPU3AW	Econavi exclusive panel
CZ-CENSC1	Econavi energy savings sensor
CZ-FDU3+CZ-ATU2	Fresh air-intake kit
CZ-CGLSC1	Panasonic R32 refrigerant leak detector

Technical focus

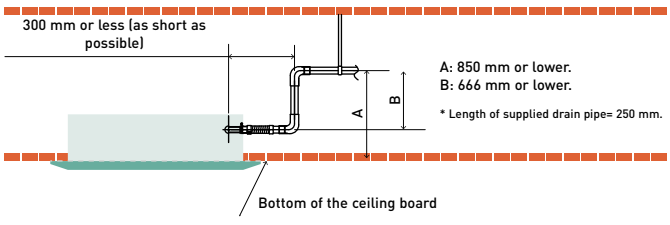
- High performance turbo fan
- Lower noise in slow fan operation
- Ceiling height up to 5,0 m
- Industry leading lightweight design
- Econavi: Temeprature, humidity and activity sensor
- nanoe™ X (Generator Mark 2= 9,6 trillion hydroxyl radicals/sec) as standard for better indoor air quality, indoor unit internal cleaning with nanoe™ X and dry operation
- Powerful drain pump gives 850 mm lift
- Fresh air knockout
- Branch duct connection
- High volume fresh air input with optional air-intake plenum and chamber (CZ-FDU3+CZ-ATU2)

Panel design

Flat design, well-matched with interior.
4-way individual flap control.

The drain pipe can be raised to a maximum height of 850 mm from the bottom of the ceiling

Integrated drain pump allows a drain height of 850 mm making the installation much easier.



28% ECONAVI | nanoe™ X | SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTO-FLAP CONTROL | AUTOMATIC RESTART | AIR SWEEP | BUILT-IN DRAIN PUMP | OPTIONAL WI-FI | BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

NEW 2022

nanoe™ X as a standard.

NEW Y3 Type 4 way 60x60 cassette · R32 / R410A

New mini cassette with a modern panel design is available in VRF range.

The Y3 Type not only perfectly matches with 600 x 600 mm ceiling grids but also provides the additional benefits of nanoe™ X, for better indoor air quality.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-15MY3E	S-22MY3E	S-28MY3E	S-36MY3E	S-45MY3E	S-56MY3E
Cooling capacity		kW	1,5	2,2	2,8	3,6	4,5	5,6
Input power		W	19,00	20,00	21,00	22,00	30,00	42,00
Current		A	0,24	0,24	0,25	0,26	0,34	0,43
Heating capacity		kW	1,7	2,5	3,2	4,2	5,0	6,3
Input power		W	17,00	18,00	19,00	20,00	28,00	40,00
Current		A	0,21	0,21	0,22	0,23	0,31	0,40
Fan type			Centrifugal fan	Centrifugal fan	Centrifugal fan	Centrifugal fan	Centrifugal fan	Centrifugal fan
Air flow	Cool (Hi / Med / Lo)	m³/min	8,5/7,0/6,0	8,7/7,0/6,0	9,0/7,5/6,0	9,5/7,8/6,0	11,5/9,0/6,5	13,5/10,5/8,0
	Heat (Hi / Med / Lo)	m³/min	8,5/7,0/6,0	8,7/7,0/6,0	9,0/7,5/6,0	9,5/7,8/6,0	11,5/9,0/6,5	13,5/10,5/8,0
Sound pressure	Hi / Med / Lo	dB(A)	33/30/28	33/30/28	34/30/28	35/31/28	39/34/30	42/37/33
Sound power	Hi / Med / Lo	dB(A)	48/45/43	48/45/43	49/45/43	50/46/43	54/49/45	57/52/48
Dimension (H x W x D) [1]	Indoor	mm	243x575x575	243x575x575	243x575x575	243x575x575	243x575x575	243x575x575
	Panel	mm	30x625x625	30x625x625	30x625x625	30x625x625	30x625x625	30x625x625
Net weight		kg	17,8 (15+2,8)	17,8 (15+2,8)	17,8 (15+2,8)	17,8 (15+2,8)	17,8 (15+2,8)	17,8 (15+2,8)
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)

1) Unit height is 230mm, but need 243mm height in ceiling space for its installation. * Available in Autumn 2022.

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRY3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor
CZ-CGLSC1	Panasonic R32 refrigerant leak detector

Compact and stylish design

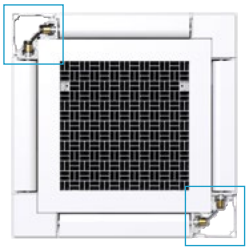
· Ceiling depth is only 250 mm
· Exposed area is only 30 mm

Technical focus

· Built-in drain pump
· DC drain pump and float switch to reduce the noise
· nanoe™ X as standard for better indoor air quality
· Self cleaning inside of the unit with nanoe™ X

Individual flap control

Better control of the air flow with 4 motors, providing individual flap control.
Perfect air distribution without direct airflow, to reduce the feeling of cold drafts.



28% ECONAVI | nanoe X | SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTO-FLAP CONTROL | AUTOMATIC RESTART | AIR SWEEP | BUILT-IN DRAIN PUMP | OPTIONAL WI-FI | BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

Y2 Type 4 way 60x60 cassette · R32 / R410A

Designed to fit exactly into a 600 x 600 mm ceiling grid without the need to alter the bar configuration.
The Y2 is ideal for small commercial and retrofit applications. In addition, the improvements to efficiency make this one of the most advanced units in the industry.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-15MY2E5B	S-22MY2E5B	S-28MY2E5B	S-36MY2E5B	S-45MY2E5B	S-56MY2E5B
Cooling capacity		kW	1,5	2,2	2,8	3,6	4,5	5,6
Input power		W	35,00	35,00	35,00	40,00	40,00	45,00
Current		A	0,30	0,30	0,30	0,30	0,32	0,35
Heating capacity		kW	1,7	2,5	3,2	4,2	5,0	6,3
Input power		W	30,00	30,00	30,00	35,00	35,00	40,00
Current		A	0,25	0,25	0,30	0,30	0,30	0,30
Fan type			Centrifugal fan	Centrifugal fan	Centrifugal fan	Centrifugal fan	Centrifugal fan	Centrifugal fan
Air flow	Cool (Hi / Med / Lo)	m³/min	8,9/8,2/5,6	9,1/8,2/5,6	9,3/8,4/5,6	9,7/8,7/6,0	10,0/9,3/8,2	10,4/9,8/8,5
	Heat (Hi / Med / Lo)	m³/min	9,1/8,4/5,6	9,3/8,4/5,6	9,6/8,7/5,6	9,9/9,1/6,0	10,3/9,6/8,2	11,1/9,8/8,7
Sound pressure	Hi / Med / Lo	dB(A)	34/31/25	35/31/25	35/31/25	36/32/26	38/34/28	40/37/34
Sound power	Hi / Med / Lo	dB(A)	49/46/40	50/46/40	50/46/40	51/47/41	53/49/43	55/52/49
Dimension (H x W x D)	Indoor	mm	288 x 583 x 583	288 x 583 x 583	288 x 583 x 583	288 x 583 x 583	288 x 583 x 583	288 x 583 x 583
	Panel AW	mm	31 x 700 x 700	31 x 700 x 700	31 x 700 x 700	31 x 700 x 700	31 x 700 x 700	31 x 700 x 700
	Panel BW	mm	31 x 625 x 625	31 x 625 x 625	31 x 625 x 625	31 x 625 x 625	31 x 625 x 625	31 x 625 x 625
Net weight		kg	20,4 (18 + 2,4)	20,4 (18 + 2,4)	20,4 (18 + 2,4)	20,4 (18 + 2,4)	20,4 (18 + 2,4)	20,4 (18 + 2,4)
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3	Infrared remote controller
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black

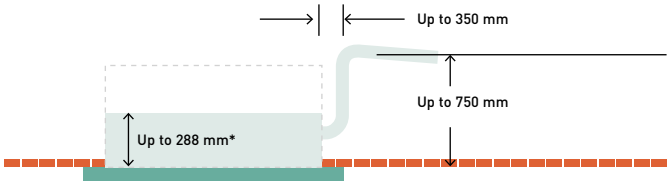
Accessories	
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-KPY3AW	Panel 700 x 700 mm
CZ-KPY3BW	Panel 625 x 625 mm
CZ-CENSC1	Econavi energy savings sensor
CZ-CGLSC1	Panasonic R32 refrigerant leak detector

Technical focus

- Mini cassette fits into a 600 x 600 mm ceiling grid
- Optimised air distribution
- Multidirectional air flow
- Powerful drain pump gives 750 mm lift
- Variable speed DC fan motors and optimised heat exchanger to maximize efficiency

A drain height of approximately 750 mm from the ceiling surface

The drain height can be increased by approximately 350 mm over the conventional value by using a high-lift drain pump, and long horizontal piping is possible.
A lightweight unit at 18,4 kg the unit is also very slim with a height of only 288 mm, making installation possible even in narrow ceilings.



28% ECONAVI · SELF-DIAGNOSING · AUTOMATIC FAN · HUMIDITY CONTROL DRY · AUTO-FLAP CONTROL · AUTOMATIC RESTART · AIR SWEEP · BUILT-IN DRAIN PUMP · OPTIONAL WI-FI · BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

L1 Type 2 way cassette · R410A

Slim, compact and lightweight units.

Remarkable size and weight reductions have been achieved by improvement of the design around the fan, the weight of all models now being 30 kg.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-22ML1E5	S-28ML1E5	S-36ML1E5	S-45ML1E5	S-56ML1E5	S-73ML1E5
Cooling capacity		kW	2,2	2,8	3,6	4,5	5,6	7,3
Input power		W	90,00	92,00	93,00	97,00	97,00	145,00
Current		A	0,45	0,45	0,45	0,45	0,45	0,65
Heating capacity		kW	2,5	3,2	4,2	5,0	6,3	8,0
Input power		W	58,00	60,00	61,00	65,00	65,00	109,00
Current		A	0,29	0,29	0,29	0,29	0,29	0,48
Fan type			Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
Air flow	Hi / Med / Lo	m³/min	8,0/7,0/6,0	9,0/8,0/7,0	9,7/8,7/7,7	11,0/9,0/8,0	11,0/9,0/8,0	19,0/16,0/14,0
Sound pressure	Hi / Med / Lo	dB(A)	30/27/24	33/29/26	34/31/28	35/33/29	35/33/29	38/35/33
Dimension (H x W x D)	Indoor	mm	350 x 840 x 600	350 x 840 x 600	350 x 840 x 600	350 x 840 x 600	350 x 840 x 600	350 x 1140 x 600
	Panel	mm	8 x 1060 x 680	8 x 1060 x 680	8 x 1060 x 680	8 x 1060 x 680	8 x 1060 x 680	8 x 1360 x 680
Net weight (Panel)		kg	26,0 (8,0)	26,0 (8,0)	26,0 (8,0)	26,0 (8,0)	26,0 (8,0)	26,0 (8,0)
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRL3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-02KPL2	Panel for S-22 to S-56 models
CZ-03KPL2	Panel for S-73 model

Technical focus

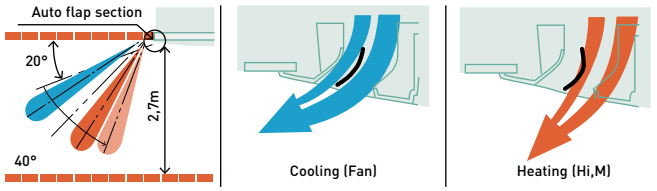
· Air flow and distribution is automatically altered depending on the operational mode of the unit
· Drain pump provides up to 500 mm lift height
· Simple maintenance

Simple maintenance

The drain pan is equipped with site wiring and can be removed. The fan case has a split construction, and the fan motor can be removed easily when the lower case is removed.

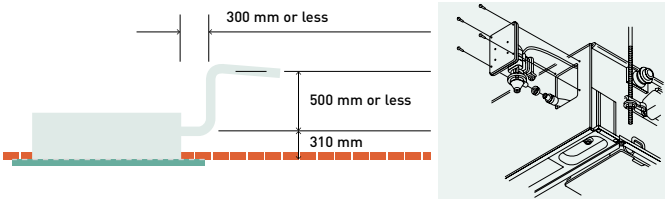
Auto flap control

Air flow and distribution is automatically altered depending on the operational mode of the unit.



Drain pump provides up to 500 mm lift height

Maintenance of the drain pump is possible from two sides, from the left side (piping side) and from the inside of the unit.



SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTO-FLAP CONTROL | AUTOMATIC RESTART | AIR SWEEP | BUILT-IN DRAIN PUMP | OPTIONAL WI-FI | BMS CONNECTIVITY

INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

D1 Type 1 way cassette · R410A

Designed for installation within the ceiling void, the D1 range of slimline 1 way blow cassettes feature powerful yet quiet fans for up to 4,2 m.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-28MD1E5	S-36MD1E5	S-45MD1E5	S-56MD1E5	S-73MD1E5
Cooling capacity		kW	2,8	3,6	4,5	5,6	7,3
Input power		W	51,00	51,00	51,00	60,00	87,00
Current		A	0,39	0,39	0,39	0,46	0,70
Heating capacity		kW	3,2	4,2	5,0	6,3	8,0
Input power		W	40,00	40,00	40,00	48,00	76,00
Current		A	0,35	0,35	0,35	0,41	0,65
Fan type			Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
Air flow	Hi / Med / Lo	m³/min	12,0 / 10,0 / 9,0	12,0 / 10,0 / 9,0	12,0 / 11,0 / 10,0	13,0 / 11,5 / 10,0	18,0 / 15,0 / 13,0
Sound pressure	Hi / Med / Lo	dB(A)	36 / 34 / 33	36 / 34 / 33	36 / 35 / 34	38 / 36 / 34	45 / 40 / 36
Dimension (H x W x D)	Indoor	mm	200 x 1000 x 710	200 x 1000 x 710	200 x 1000 x 710	200 x 1000 x 710	200 x 1000 x 710
	Panel	mm	20 x 1230 x 800	20 x 1230 x 800	20 x 1230 x 800	20 x 1230 x 800	20 x 1230 x 800
Net weight (Panel)		kg	23,5 (7,5)	23,5 (7,5)	23,5 (7,5)	23,5 (7,5)	24,5 (7,5)
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)

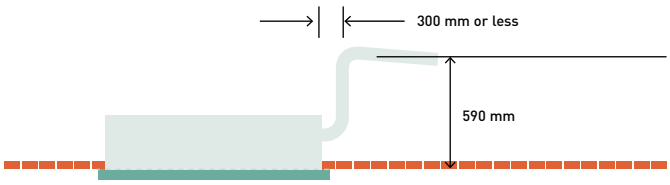
Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRD3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-KPD2	Panel

Technical focus

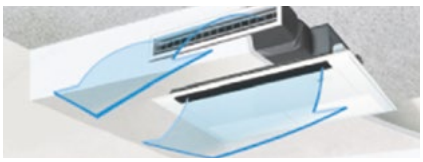
· Ultra-Slim
· Suitable for standard and high ceilings
· Built-in drain pump provides 590 mm lift
· Easy to install and maintain
· Hanging height can be easily adjusted
· Uses a DC fan motor to improve energy-efficiency

Drain height



With 3 types of air-blow systems, the units can be used in various ways

1. One-direction "down-blow" system.
Powerful one-direction "down-blow" system reaches the floor even from high ceilings (up to 4,2 m).



2. Two-direction ceiling-mounted system.
"Down-blow" and "front-blow" systems are combined in a ceiling-mounted unit to blow air over a wide area.

3. One-direction ceiling-mounted system.
This powerful ceiling-mounted "front-blow" system efficiently air-conditions the space in front of the unit. (Additional accessories required).

SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTO-FLAP CONTROL | AUTOMATIC RESTART | AIR SWEEP | BUILT-IN DRAIN PUMP | OPTIONAL WI-FI | BMS CONNECTIVITY

INTERNET CONTROL: Optional.

nanoe™ X as a standard.

F3 Type variable static pressure adaptive duct · R32 / R410A

Design adaptive ducted F3 range.

2 installation possibilities (horizontal / vertical) with high ESP 150 Pa allows for flexible installation.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

R32 indoor unit	**S . .MF3E5B**	**15**	**22**	**28**	**36**	**45**	**56**	**60**	**73**	**90**	**106**	**140**	**160**
R410A indoor unit	**S . .MF3E5A**	**15**	**22**	**28**	**36**	**45**	**56**	**60**	**73**	**90**	**106**	**140**	**160**
Cooling capacity	kW	1,5	2,2	2,8	3,6	4,5	5,6	6,0	7,3	9,0	10,6	14,0	16,0
Input power	W	60,00	60,00	60,00	60,00	60,00	89,00	79,00	79,00	136,00	146,00	265,00	330,00
Current	A	0,45	0,45	0,45	0,45	0,45	0,63	0,52	0,52	0,90	1,00	1,76	2,14
Heating capacity	kW	1,7	2,5	3,2	4,2	5,0	6,3	7,1	8,0	10,0	11,4	16,0	18,0
Input power	W	60,00	60,00	60,00	60,00	60,00	89,00	79,00	79,00	136,00	146,00	265,00	330,00
Current	A	0,45	0,45	0,45	0,45	0,45	0,63	0,52	0,52	0,90	1,00	1,76	2,14
R32 leakage sensors [1]		2	2	2	2	2	2	2	2	2	2	2	2
Fan type		Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
nanoe X Generator		Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2	Mark 2
Air flow [2]	Hi/Med/Lo m³/min	14,0/12,0/8,0	14,0/12,0/8,0	14,0/12,0/8,0	14,0/12,0/8,0	14,0/12,0/8,0	16,0/14,0/10,0	21,0/18,0/15,0	21,0/18,0/15,0	25,0/23,0/16,0	32,0/26,0/21,0	37,0/32,0/26,0	40,0/34,0/28,0
External static pressure	Pa	30 (10-150)	30 (10-150)	30 (10-150)	30 (10-150)	30 (10-150)	30 (10-150)	30 (10-150)	30 (10-150)	40 (10-150)	40 (10-150)	50 (10-150)	50 (10-150)
Sound pressure	Hi/Med/Lo dB(A)	31/28/20	31/28/20	31/28/20	31/28/20	31/28/20	35/32/24	31/28/23	31/28/23	35/33/25	36/32/27	41/36/32	43/37/33
Sound power	Hi/Med/Lo dB(A)	54/51/43	54/51/43	54/51/43	54/51/43	54/51/43	58/55/47	54/51/46	54/51/46	58/56/48	59/55/50	64/59/55	66/60/56
Dimension	H x W x D mm	250 x 800 x 730	250 x 800 x 730	250 x 800 x 730	250 x 800 x 730	250 x 800 x 730	250 x 800 x 730	250 x 1000 x 730	250 x 1000 x 730	250 x 1000 x 730	250 x 1400 x 730	250 x 1400 x 730	250 x 1400 x 730
Net weight	kg	26	26	26	26	26	26	31	31	31	40	40	40
Piping diameter R32 model	Liquid Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)
Piping diameter R410A model	Liquid Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)

1) Only available in the R32 version. 2) Value referred to standard settings at shipment (H curve 8, M curve 5, L curve 1).

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor
CZ-CGLSC1	Panasonic R32 refrigerant leak detector

Technical focus

- 4 installation possibilities with horizontal and vertical mounting, plus selectable rear or bottom air inlet
- Industry leading low noise with super quiet operation, minimum 22 dB(A)
- Only 250 mm height and lightweight unit from, 26 to 42 kg
- Integrated Panasonic R32 refrigerant leak detectors [1]
- Improved drain pan suitable for both horizontal / vertical installation
- Drain pump included [2]
- nanoe™ X (Generator Mark 2= 9,6 trillion hydroxyl radicals/sec) as standard, effective even at duct connections up to 10 m and 3 bends [3]

1) Only available in the R32 version.
2) For use with horizontal installation only
3) Panasonic internal survey.

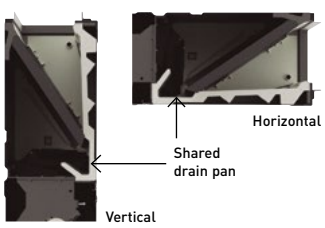
Vertical Installation

Vertical installation option. Variable external static pressure to support ducted installations with bends.

* Vertical installation requires additional settings on field, please check the installation manual.

Improved drain pan design

Drain pan is shared in both cases horizontal and vertical installation.
No need to modify the unit.



28% ECONAVI | nanoe X | FILTER INCLUDED | SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTOMATIC RESTART | BUILT-IN DRAIN PUMP | OPTIONAL WI-FI | BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

F2 Type variable static pressure hide-away · R410A

The F2 type is designed specifically for applications requiring fixed square ducting.
The internal filter is equipped as standard.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit		S . .MF2E5A	15	22	28	36	45	56	60	73	90	106	140	160
Cooling capacity		kW	1,5	2,2	2,8	3,6	4,5	5,6	6,0	7,3	9,0	10,6	14,0	16,0
Input power		W	70,00	70,00	70,00	70,00	70,00	100,00	120,00	120,00	135,00	195,00	215,00	225,00
Current		A	0,57	0,57	0,57	0,57	0,57	0,74	0,89	0,89	0,97	1,30	1,44	1,50
Heating capacity		kW	1,7	2,5	3,2	4,2	5,0	6,3	7,1	8,0	10,0	11,4	16,0	18,0
Input power		W	70,00	70,00	70,00	70,00	70,00	100,00	120,00	120,00	135,00	200,00	210,00	225,00
Current		A	0,57	0,57	0,57	0,57	0,57	0,74	0,89	0,89	0,97	1,34	1,42	1,50
Fan type			Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
Air flow [1]	Hi/Med/Lo	m³/min	14,0/13,0/9,0	14,0/13,0/9,0	14,0/13,0/9,0	14,0/13,0/9,0	14,0/13,0/10,0	16,0/15,0/12,0	21,0/19,0/15,0	21,0/19,0/15,0	25,0/23,0/19,0	32,0/26,0/21,0	34,0/29,0/23,0	36,0/32,0/25,0
External static pressure		Pa	70(10-150)	70(10-150)	70(10-150)	70(10-150)	70(10-150)	70(10-150)	70(10-150)	70(10-150)	70(10-150)	100(10-150)	100(10-150)	100(10-150)
Sound pressure	Hi/Med/Lo	dB(A)	33/29/22	33/29/22	33/29/22	33/29/22	34/32/25	34/32/25	35/32/26	35/32/26	37/34/28	38/34/31	39/35/32	40/36/33
Sound power	Hi/Med/Lo	dB(A)	55/51/44	55/51/44	55/51/44	55/51/44	56/54/47	56/54/47	57/54/48	57/54/48	59/56/50	60/56/53	61/57/54	62/58/55
Dimension	H x W x D	mm	290 x 800 x 700	290 x 800 x 700	290 x 800 x 700	290 x 800 x 700	290 x 800 x 700	290 x 800 x 700	290 x 1000 x 700	290 x 1000 x 700	290 x 1000 x 700	290 x 1400 x 700	290 x 1400 x 700	290 x 1400 x 700
Net weight		kg	29	29	29	29	29	29	34	34	34	46	46	46
Piping diameter	Liquid	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)

1) Value referred to standard settings at shipment (H curve 8, M curve 5, L curve 1).

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor

Technical focus

- Industry-leading low sound levels from 25 dB(A)
- Built-in drain pump provides 785 mm lift
- Easy to install and maintain
- Air OFF sensor avoids cold air dumping
- Configurable air temperature control

Air inlet plenum	Dampers diameters	Reference
15, 22, 28, 36, 45 and 56	2 x Ø200	CZ-DUMPA56MF2
60, 73 and 90	3 x Ø200	CZ-DUMPA90MF2
106, 140 and 160	4 x Ø200	CZ-DUMPA160MF2

More powerful drain pump

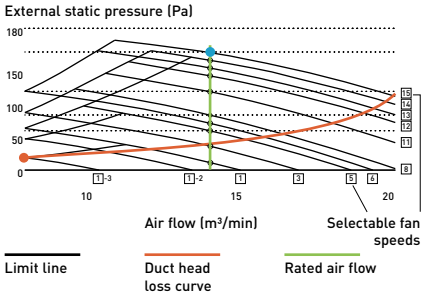
Using a high-lift drain pump, drain piping can be elevated to 700 mm from the base of the unit.

F2 Advantages

Automatic learning function for the required static pressure, to be activated easily by the standard wired timer remote controller.
Possible to increase the sensible cooling capacity by adjusting the air flow in order to almost completely eliminate latent losses. This is possible due to the outstanding big heat exchanger surface in combination with increasing the air flow by a manual selection of higher fan speed curves through the standard wired remote controller when commissioning the system together with the default active off-coil temperature control and the room load based variable evaporation temperature control.

ECONAVI and INTERNET CONTROL: Optional.

Diagram 1 S-22MF2E5A



M1 Type slim variable static pressure hide-away concealed duct · R32 / R410A

The ultra slim M1 type is one of the leading products of its type in the industry.
With a depth of only 200 mm it provides greater flexibility and can be used in far more applications.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-15MM1E5B	S-22MM1E5B	S-28MM1E5B	S-36MM1E5B	S-45MM1E5B	S-56MM1E5B
Cooling capacity		kW	1,5	2,2	2,8	3,6	4,5	5,6
Input power		W	36,00	36,00	40,00	42,00	49,00	64,00
Current		A	0,26	0,26	0,30	0,31	0,37	0,48
Heating capacity		kW	1,7	2,5	3,2	4,2	5,0	6,3
Input power		W	26,00	26,00	30,00	32,00	39,00	54,00
Current		A	0,23	0,23	0,27	0,28	0,34	0,45
Fan type			Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
Air flow	Hi / Med / Lo	m³/min	8,0/7,0/6,0	8,0/7,0/6,0	8,5/7,5/6,5	9,0/8,0/7,0	10,5/9,5/8,0	12,5/11,5/10,0
External static pressure		Pa	10 (30)	10 (30)	15 (30)	15 (40)	15 (40)	15 (40)
Sound pressure	Hi / Med / Lo [1]	dB(A)	28/27/25 (30/29/27)	28/27/25 (30/29/27)	30/29/27 (32/31/29)	32/30/28 (34/32/30)	34/32/30 (36/34/32)	35/33/31 (37/35/32)
Sound power	Hi / Med / Lo	dB(A)	43/42/40	43/42/40	45/44/42	47/45/43	49/47/45	50/48/46
Dimension	H x W x D	mm	200 x 750 x 640	200 x 750 x 640	200 x 750 x 640	200 x 750 x 640	200 x 750 x 640	200 x 750 x 640
Net weight		kg	19	19	19	19	19	19
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)

1) By DIP switches or by RC setting.

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor
CZ-CGLSC1	Panasonic R32 refrigerant leak detector

Technical focus

· Ultra-slim profile: 200 mm for all models
· DC fan motor greatly reduces power consumption
· Ideal for hotel application with very narrow false ceilings
· Easy maintenance and service by external electrical box
· Up to 40 Pa static pressure enables ductwork to be fitted
· Includes drain pump

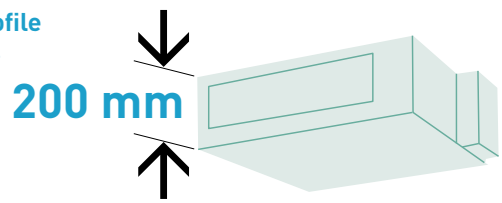
In addition, its high-efficiency and extremely quiet sound levels make it very popular with many users, including hotels and small offices.

Air outlet and inlet plenum

	Diameters	Air outlet plenum	Diameters	Air inlet plenum
22 , 28 and 36	2 x Ø200	CZ-DUMPA22MMS2	2 x Ø200	CZ-DUMPA22MMR2
45 and 56	3 x Ø160	CZ-DUMPA45MMS3		

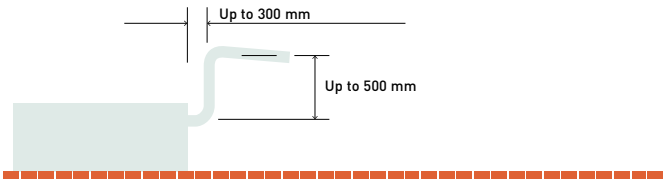
* Plenums installed with an R32 Mini ECOi system may only be used when no Panasonic R32 refrigerant leak detector is required. Please refer to technical data manual for refrigerant installation requirements.

Ultra-slim profile for all models



Drain pump with increased power!

By adoption of a high-lift drain pump, the drain piping can achieve up to 500 mm lift from the outlet port of the unit.



28% ECONAVI | FILTER INCLUDED | SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTOMATIC RESTART | BUILT-IN DRAIN PUMP | OPTIONAL WI-FI | BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

E2 Type high static pressure hide-away · R410A

High pressure duct and 100 % fresh air duct function.
The E2 range of ducted units offers improved design flexibility for extended duct layouts as a result of their increased external static pressures and reduces energy consumption, while providing fresh air to larger spaces.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Type			100 % fresh air duct function (by using kit for 100 % fresh air)				High pressure duct			
Indoor unit			S-224ME2E5		S-280ME2E5		S-224ME2E5		S-280ME2E5	
			Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating
Capacity		kW	22,4	21,2	28,0	26,5	22,4	25,0	28,0	31,5
Input power		W	290,00	290,00	350,00	350,00	440,00	440,00	715,00	715,00
Current		A	1,85	1,85	2,20	2,20	2,45	2,45	3,95	3,95
Air flow	Hi / Med / Lo	m³/min	28,3 / — / —		35,0 / — / —		56,0 / 51,0 / 44,0		72,0 / 63,0 / 53,0	
External static pressure		Pa	200		200		140 (60 - 270) [1]		140 (72 - 270) [1]	
Sound pressure [2]	Hi / Med / Lo	dB(A)	43 / — / —		44 / — / —		45 / 43 / 41		49 / 47 / 43	
Sound power	Hi / Med / Lo	dB(A)	75 / — / —		76 / — / —		77 / 75 / 73		81 / 79 / 75	
Dimension	H x W x D	mm	479 x 1453 x 1205		479 x 1453 x 1205		479 x 1453 x 1205		479 x 1453 x 1205	
Net weight		kg	102		106		102		106	
Piping diameter	Liquid pipe	Inch (mm)	3/8 (9,52)		3/8 (9,52)		3/8 (9,52)		3/8 (9,52)	
	Gas pipe	Inch (mm)	3/4 (19,05)		7/8 (22,22)		3/4 (19,05)		7/8 (22,22)	

Rating Conditions for 100 % Fresh air duct function: Cooling Outdoor 33 °C DB / 28 °C WB. Heating Outdoor 0 °C DB / -2,9 °C WB.
1) Available to select the setting by initial setup. 2) Values with 140 Pa setting. * No filter included.

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor

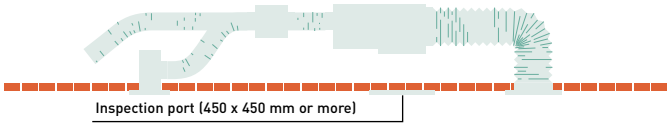
Technical focus

- No need of rap valve
- 100 % fresh air duct function*
- DC fan motor for more savings
- Complete flexibility for ductwork design
- Can be located into a weatherproof housing for external siting
- Air OFF sensor avoids cold air dumping
- Configurable air temperature control

* Rap valves required, see 100 % fresh air duct function below.

System example

An inspection port (450 x 450 mm or more) is required at the lower side of the indoor unit body (field supply).



100 % fresh air duct function

The E2 duct with 100 % fresh air duct function have exceptional discharge temperature.

	Discharge Range		
	Min	Max	Default
Cooling	15 °C	24 °C	18 °C
Heating	17 °C	**45 °C**	40 °C

Kit for 100 % fresh air function

Kit for 100 % fresh air function for 2 way systems	
2x CZ-P160RVK2	Rap valve kit
2x CZ-CAPE2	3 way control PCB
CZ-P680BK2BM	Distribution joint kit
	1x remote controller

Kit for 100 % fresh air function for 3 way systems	
2x CZ-P160HR3	3 way valve Kit
2x CZ-CAPE2	3 way control PCB
CZ-P680BH2BM	Distribution joint kit
	1x remote controller

Plenums

Air outlet plenum (suitable for rigid + flexible duct)		
	Number of exits with diameters	Model
S-224ME2E5	1 x 500 mm	CZ-TREMIESPW705
S-280ME2E5	1 x 500 mm	CZ-TREMIESPW706

ECONAVI and INTERNET CONTROL: Optional.

Heat recovery with DX coil · R410A

Motorised heat recovery by-pass device automatically controlled by unit control to use fresh air free-cooling when convenient.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			PAW-500ZDX3N		PAW-800ZDX3N		PAW-01KZDX3N	
Power supply	Voltage	V	230		230		230	
	Phase		Single phase		Single phase		Single phase	
	Frequency	Hz	50		50		50	
Air flow		m³/min	8,3		13,3		16,7	
External static pressure [1]		Pa	90		120		115	
Maximum current	Total full load	A	0,6		1,4		2,1	
Input power		W	150		320		390	
Sound pressure [2]		dB(A)	39		42		43	
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)		1/4 (6,35)		1/4 (6,35)	
	Gas pipe	Inch (mm)	1/2 (12,70)		1/2 (12,70)		1/2 (12,70)	
Heat recovery			**Cooling**	**Heating**	**Cooling**	**Heating**	**Cooling**	**Heating**
Temperature efficiency		%	76	76	76	76	76	76
Enthalpy efficiency		%	63	67	63	65	60	62
Saved power summer mode or winter mode*		kW	1,70	4,30 (4,80)	2,50	6,50 (7,30)	3,20	8,20 (9,00)
DX coil								
Total / Sensible capacity		kW	3,00 / 2,10	2,50 / 2,70	5,10 / 3,50	4,40 / 4,80	5,80 / 4,10	5,20 / 6,70
OFF temperature		°C	15,9	28,0 (27,3)	15,5	29,6 (29,0)	16,2	28,5 (27,8)
OFF relative humidity		%	90	16 (15)	90	14 (13)	89	15 (14)

Nominal summer conditions: Outside air: 32 °C DB, RH 50 %. Ambient air: 26 °C DB, RH 50 %. Nominal winter conditions: Outside air: -5 °C DB, RH 80 %. Ambient air: 20 °C DB, RH 50 %. Cooling mode air inlet condition: 28,5 °C DB, RH 50 %; evaporating temperature 7 °C. Heating mode air inlet condition: 13 °C DB, RH 40 % (11 °C DB, RH 45 %); condensating temperature 40 °C. DB: Dry Bulb; RH: Relative Humidity. 1) Referred to the nominal air flow after filter and plate heat exchanger. 2) Sound pressure level calculated at 1 m far from: ducted supply exhaust air ducted return - first air intake / service side, at normal condition. * Tentative data.

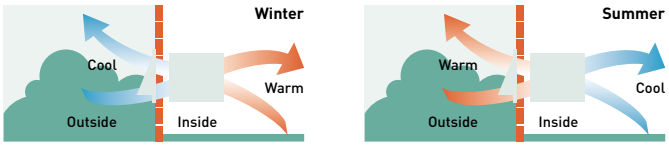
Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black

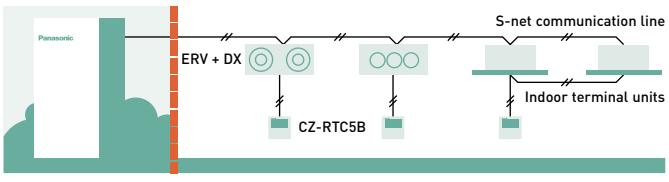
Technical focus

- Galvanized steel self-supporting panels, internally and externally insulated
- High efficiency enthalpic heat recover, static cross flow type, made by membrane with high moisture permeability, good air tightness, excellent tear, and aging resistance, structure consisting of flat and corrugated plates. Total heat exchange with temperature efficiency up to 76 % and enthalpy efficiency up to 67 %, also at high level during summer season
- ISO16890 ePm2,5 95 % (F9 EN 779) efficiency class filter with synthetic cleanable media and COARSE 50 % (G3 EN 779) pre-filter ON fresh air, COARSE 50 % filter on return air intake
- Removable side panel to access filters and heat recovery in the event of scheduled maintenance
- Low consumption, high efficiency and low noise direct driven fans
- Supply section complete with DX coil (R410A) fitted with solenoid control valve, freon filter, contact temperature sensors on liquid and gas line, NTC sensors upstream and downstream of air flow
- Built-in electric box equipped with PCB to control internal fan speed and to interconnect outdoor / indoor units
- Duct connection by circular plastic collars

Balanced ventilation



Interconnection to outdoor / indoor units



SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTOMATIC RESTART | BUILT-IN DRAIN PUMP | OPTIONAL WI-FI | BMS CONNECTIVITY

INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

T2 Type ceiling · R410A

The T2 Type ceiling mounted units feature a DC fan motor for increased efficiency and reduced operating sound levels.

All the units are the same height and depth for a uniform appearance in mixed installations, and feature a fresh air knockout for improved air quality.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-36MT2E5A	S-45MT2E5A	S-56MT2E5A	S-73MT2E5A	S-106MT2E5A	S-140MT2E5A
Cooling capacity		kW	3,6	4,5	5,6	7,3	10,6	14,0
Input power		W	35,00	40,00	40,00	55,00	80,00	100,00
Current		A	0,36	0,38	0,38	0,44	0,67	0,79
Heating capacity		kW	4,2	5,0	6,3	8,0	11,4	16,0
Input power		W	35,00	40,00	40,00	55,00	80,00	100,00
Current		A	0,36	0,38	0,38	0,44	0,67	0,79
Fan type			Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
Air flow	Hi / Med / Lo	m³/min	14,0/12,0/10,5	15,0/12,5/10,5	15,0/12,5/10,5	21,0/18,0/15,5	30,0/25,0/23,0	32,0/28,0/24,0
Sound pressure	Hi / Med / Lo	dB(A)	36/32/30	37/33/30	37/33/30	39/35/33	42/37/36	46/40/37
Sound power	Hi / Med / Lo	dB(A)	54/50/48	55/51/48	55/51/48	57/53/51	60/55/54	62/58/55
Dimension	H x W x D	mm	235 x 960 x 690	235 x 960 x 690	235 x 960 x 690	235 x 1275 x 690	235 x 1590 x 690	235 x 1590 x 690
Net weight		kg	27	27	27	33	40	40
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)	5/8 (15,88)	5/8 (15,88)

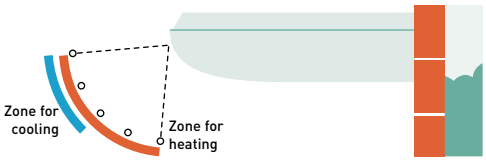
Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRT3	Infrared remote controller and receiver
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor

Technical focus

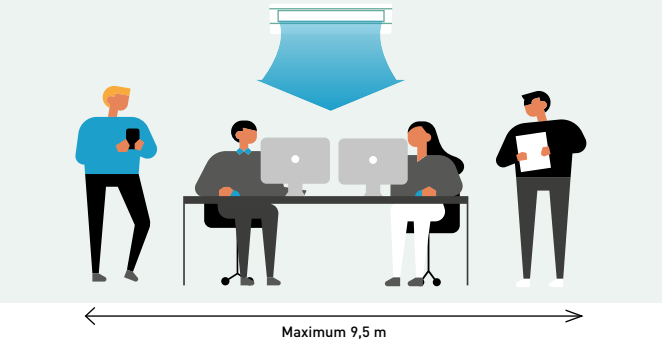
· Low sound levels
· All units just 235 mm high
· Large and wide air distribution
· Easy to install and maintain
· Fresh air knockout

Air distribution is altered depending on the operational mode



Further comfort improvement with air flow distribution

Horizontal air flow reaches maximum 9,5 m. This is ideal for wide rooms.
The wide air discharge opening expands the air flow to the left and right. The unpleasant feeling caused when the air flow directly hits the human body is prevented by the "Draft prevention position", which changes the swing width, increasing the degree of comfort.



28% ECONAVI · SELF-DIAGNOSING · AUTOMATIC FAN · HUMIDITY CONTROL DRY · AUTO-FLAP CONTROL · AUTOMATIC RESTART · AIR SWEEP · OPTIONAL WI-FI · BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

K2 Type wall-mounted · R32 / R410A

The wall-mounted unit has a stylish smooth panel that looks good and is 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.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-15MK2E5B	S-22MK2E5B	S-28MK2E5B	S-36MK2E5B	S-45MK2E5B	S-56MK2E5B	S-73MK2E5B	S-106MK2E5B
Cooling capacity		kW	1,5	2,2	2,8	3,6	4,5	5,6	7,3	10,6
Input power		W	25,00	25,00	25,00	30,00	30,00	35,00	55,00	80,00
Current		A	0,20	0,21	0,23	0,25	0,32	0,35	0,51	0,70
Heating capacity		kW	1,7	2,5	3,2	4,2	5,0	6,3	8,0	11,4
Input power		W	25,00	25,00	25,00	30,00	30,00	35,00	55,00	80,00
Current		A	0,20	0,21	0,23	0,25	0,32	0,35	0,51	0,70
Fan type			Cross flow	Cross flow	Cross flow	Cross flow	Cross flow	Cross flow	Cross flow	Cross flow
Air flow	Cool (Hi / Med / Lo)	m³/min	7,9/7,4/6,5	9,0/7,5/6,5	9,5/8,3/6,5	10,9/9,0/6,5	14,5/12,5/10,0	16,0/14,0/12,0	19,5/17,0/14,0	21,5/18,5/15,0
	Heat (Hi / Med / Lo)	m³/min	9,0/7,7/6,8	9,2/8,3/6,8	9,7/8,5/6,8	11,2/9,5/6,8	14,5/12,5/10,0	16,0/14,0/12,0	19,5/17,0/14,0	21,5/18,5/15,0
Sound pressure	Hi / Med / Lo	dB(A)	34/32/29	36/33/29	37/34/29	40/36/29	38/35/33	40/37/35	47/44/40	49/46/42
Sound power	Hi / Med / Lo	dB(A)	49/47/44	51/48/44	52/49/44	55/51/44	53/50/48	55/52/50	62/59/55	64/61/57
Dimension	H x W x D	mm	290 x 870 x 214	290 x 870 x 214	290 x 870 x 214	290 x 870 x 214	302 x 1120 x 236	302 x 1120 x 236	302 x 1120 x 236	302 x 1120 x 236
Net weight		kg	9	9	9	9	13	13	14	14
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52) [1]	3/8 (9,52)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88) [1]	5/8 (15,88)

1) When the piping diameter is (liquid) Ø1/4 (6,35) - (gas) Ø1/2 (12,70), connect the liquid socket tube (Ø1/4 (6,35) - Ø3/8 (9,52)) to the liquid tubing side indoor unit and connect the gas socket tube (Ø1/2 (12,70) - Ø5/8 (15,88)) to the gas tubing side indoor unit.

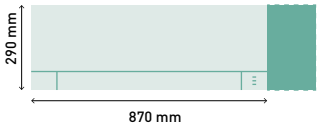
Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3	Infrared remote controller
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black

Accessories	
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor
CZ-P56SVK2	External valve for model sizes 15 to 56
CZ-P160SVK2	External valve for model sizes 60 to 106
CZ-CGLSC1	Panasonic R32 refrigerant leak detector

Technical focus

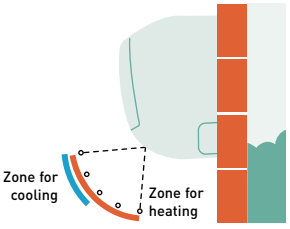
- Compact lightweight units for easy installation
- Quiet operation
- Smooth and durable design
- Piping outlet in six directions
- Air distribution is automatically altered depending on the operational mode

Lighter and smaller units

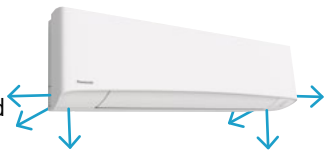


Compact and lightweight units make for easy installation. When the unit is turned OFF, the flap closes completely to prevent entry of dust into the unit and to keep the equipment clean.

Air distribution is automatically altered depending on the operational mode of the unit



Piping outlet in six directions



Piping outlet is possible in six directions of; right, right rear, right bottom, left, left rear and left bottom, making installation flexible.

Quiet operation

These units are among the quietest in the industry, making them ideal for hotels and hospitals.

External valve (optional)

CZ-P56SVK2 (model sizes 15 to 56).
CZ-P160SVK2 (model sizes 60 [1] to 106).

1) When the piping diameter is liquid 1/4 (6,35) and gas 1/2 (12,70), use CZ-P56SVK2

28% ECONAVI | SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTO-FLAP CONTROL | AUTOMATIC RESTART | AIR SWEEP | OPTIONAL WI-FI | BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
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nanoe™ X as a standard.

G1 Type floor console · R410A

The stylish and compact unit profile, also used for residential market range, is easy to integrate into any design of building.

Compact and versatile, this system is capable of being installed in an area with limited space. It is a perfect solution for retrofit, replacing existing radiator panels.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-22MG1E5N	S-28MG1E5N	S-36MG1E5N	S-45MG1E5N	S-56MG1E5N
Cooling capacity		kW	2,2	2,8	3,6	4,5	5,6
Input power		W	20,00	20,00	22,00	28,00	31,00
Current		A	0,20	0,20	0,23	0,25	0,28
Heating capacity		kW	2,5	3,2	4,2	5,0	6,3
Input power		W	21,00	21,00	23,00	29,00	32,00
Current		A	0,20	0,20	0,24	0,26	0,28
Fan type			Cross flow	Cross flow	Cross flow	Cross flow	Cross flow
nanoe X Generator			Mark 1	Mark 1	Mark 1	Mark 1	Mark 1
Air flow	Cool (Hi / Med / Lo)	m³/min	9,2/7,5/6,0	9,2/7,5/6,0	9,7/8,2/6,0	10,5/9,0/6,5	12,0/9,5/6,5
	Heat (Hi / Med / Lo)	m³/min	9,7/8,0/6,5	9,7/8,0/6,5	10,2/8,7/6,5	11,0/9,5/7,0	12,5/10,0/7,0
Sound pressure	Hi / Med / Lo	dB(A)	38/34/29	38/34/29	39/35/29	42/37/30	44/38/30
Dimension	H x W x D	mm	600 x 750 x 207	600 x 750 x 207	600 x 750 x 207	600 x 750 x 207	600 x 750 x 207
Net weight		kg	14	14	14	14	14
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)

Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3*	Infrared remote controller
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white

Accessories	
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black
CZ-CENSC1	Econavi energy savings sensor

* Infrared receiver is integrated with the unit as standard.

1 nanoe™ X: Bringing nature's balance indoors

Panasonic's nanoe™ X technology brings nature's detergent – hydroxyl radicals – indoors to help improve protection 24/7 against several types of pollutants can be inhibited such as certain types of bacteria, viruses, mould, allergens, pollen or hazardous substances.

2 Stylish and simple

- Clean and modern European design with slim depth
- Modern matt white color panel
- Washable air filter

The stylish and compact unit profile, also used for residential market range, is easy to integrate into any design of building.

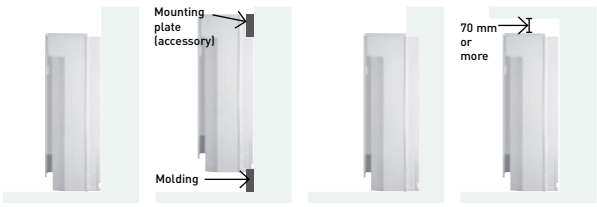
Dimension:
W x H x D = 750 x 600 x 207 mm

Weight:
14kg

3 Flexible easy installation

Four different mounting styles possible:
- Exposed (floor or wall)
- Semi-recessed
- Recessed

Flexible installation with 4 different options.



4 Functions for comfort

- Double Air Flow direction to maximize comfort
- Self-cleaning function
- Compatible with Commercial Wi-Fi Adaptor for cloud control

Self-cleaning function.
- Self cleaning function can be pre-scheduled with remote controller, up to a maximum of 90 minutes following cooling / dry operation
- Air flow will not blow directly at occupants during self-cleaning

28% ECONAVI | nanoe X | SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTOMATIC RESTART | OPTIONAL WI-FI | BMS CONNECTIVITY

ECONAVI and INTERNET CONTROL: Optional.

P1 Type floor-standing · R410A

The compact floor-standing P1 units are the ideal solution for providing perimeter air conditioning.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-22MP1E5	S-28MP1E5	S-36MP1E5	S-45MP1E5	S-56MP1E5	S-71MP1E5
Cooling capacity		kW	2,2	2,8	3,6	4,5	5,6	7,1
Input power		W	56,00	56,00	85,00	126,00	126,00	160,00
Current		A	0,25	0,25	0,38	0,56	0,56	0,72
Heating capacity		kW	2,5	3,2	4,2	5,0	6,3	8,0
Input power		W	40,00	40,00	70,00	91,00	91,00	120,00
Current		A	0,18	0,18	0,31	0,41	0,41	0,54
Fan type			Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
Air flow	Hi / Med / Lo	m³/min	7,0/6,0/5,0	7,0/6,0/5,0	9,0/7,0/6,0	12,0/9,0/8,0	15,0/13,0/11,0	17,0/14,0/12,0
External static pressure		Pa	15	15	15	15	15	15
Sound pressure	Hi / Med / Lo	dB(A)	33/30/28	33/30/28	39/35/29	38/35/31	39/36/31	41/38/35
Dimension	H x W x D	mm	615 x 1065 x 230	615 x 1065 x 230	615 x 1065 x 230	615 x 1380 x 230	615 x 1380 x 230	615 x 1380 x 230
Net weight		kg	29	29	29	39	39	39
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)

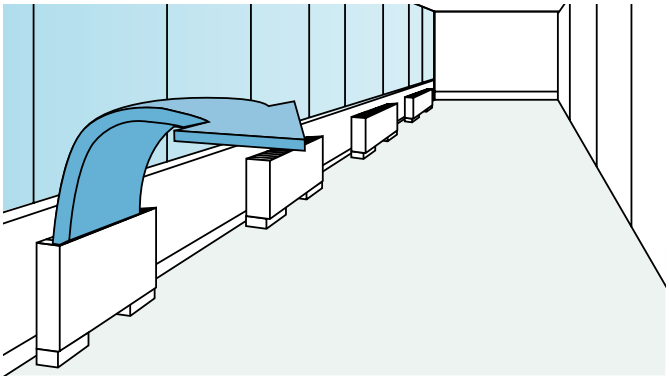
Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver

Accessories	
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black

Technical focus

- Pipes can be connected to either side of the unit from the bottom or rear
- Easy to install
- Front panel opens fully for easy maintenance
- Removable air discharge grille gives flexible airflow
- Room for condensate pump

Effective perimeter handling



SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTOMATIC RESTART | OPTIONAL WI-FI | BMS CONNECTIVITY

INTERNET CONTROL: Optional.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
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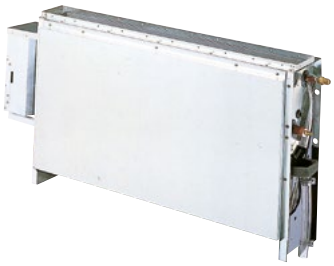


R1 Type concealed floor-standing · R410A

At just 229 mm deep, the R1 unit can be easily concealed in perimeter areas to provide powerful and effective air conditioning.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit			S-22MR1E5	S-28MR1E5	S-36MR1E5	S-45MR1E5	S-56MR1E5	S-71MR1E5
Cooling capacity		kW	2,2	2,8	3,6	4,5	5,6	7,1
Input power		W	56,00	56,00	85,00	126,00	126,00	160,00
Current		A	0,25	0,25	0,38	0,56	0,56	0,72
Heating capacity		kW	2,5	3,2	4,2	5,0	6,3	8,0
Input power		W	40,00	40,00	70,00	91,00	91,00	120,00
Current		A	0,18	0,18	0,31	0,41	0,41	0,54
Fan type			Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan	Sirocco fan
Air flow	Hi / Med / Lo	m³/min	7,0/6,0/5,0	7,0/6,0/5,0	9,0/7,0/6,0	12,0/9,0/8,0	15,0/13,0/11,0	17,0/14,0/12,0
External static pressure		Pa	15	15	15	15	15	15
Sound pressure	Hi / Med / Lo	dB(A)	33/30/28	33/30/28	39/35/29	38/35/31	39/36/31	41/38/35
Dimension	H x W x D	mm	616 x 904 x 229	616 x 904 x 229	616 x 904 x 229	616 x 1219 x 229	616 x 1219 x 229	616 x 1219 x 229
Net weight		kg	21	21	21	28	28	28
Piping diameter	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	3/8 (9,52)
	Gas pipe	Inch (mm)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)

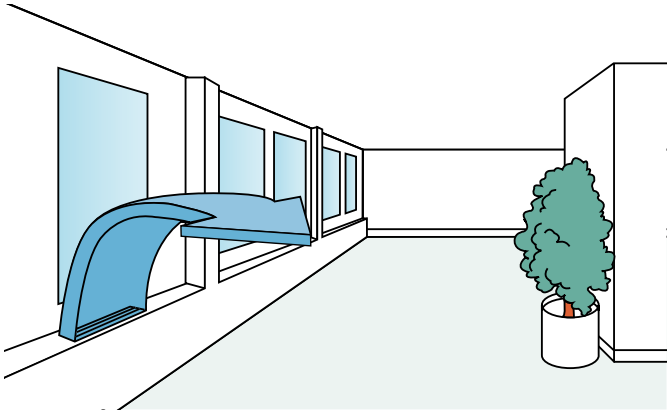
Accessories	
CZ-RTC6	CONEX wired remote controller (non-wireless)
CZ-RTC6BL	CONEX wired remote controller with Bluetooth®
CZ-RTC5B	Wired remote controller with Econavi function
CZ-RWS3 + CZ-RWRC3	Infrared remote controller and receiver

Accessories	
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black

Technical focus

- Chassis unit for discreet installation
- Complete with removable filters
- Pipes can be connected to either side of the unit from the bottom or rear
- Easy to install

Perimeter air conditioning with high interior quality



SELF-DIAGNOSING | AUTOMATIC FAN | HUMIDITY CONTROL DRY | AUTOMATIC RESTART | OPTIONAL WI-FI | BMS CONNECTIVITY

INTERNET CONTROL: Optional.

Hydrokit for ECOi, water at 45 °C · R410A

Connect the Hydrokit to your VRF system, together with other indoor units.

Total system performs high energy efficiency through heat recovering operation, and it gives an advantage for sustainability related assessment methods, such as BREEAM in UK.

COMPATIBLE WITH ALL PANASONIC CONNECTIVITY SOLUTIONS. FOR DETAILED INFORMATION GO TO THE CONTROL SYSTEMS SECTION

Indoor unit				S-80MW1E5	S-125MW1E5
Power supply	Voltage	V		230	230
	Phase			Single phase	Single phase
	Frequency	Hz		50	50
Cooling capacity			kW	8,0	12,5
Heating capacity			kW	9,0	14,0
Maximum temperature			°C	~45/~65 [1]	~45/~65 [1]
Dimension	H x W x D		mm	892 x 502 x 353	892 x 502 x 353
Water pipe connector			Inch	R 1 ¼	R 1 ¼
Water pump (built-in)				DC motor (A class)	DC motor (A class)
Water flow rate	Cool		L/min	22,90	35,80
	Heat		L/min	25,80	40,10
Piping diameter	Liquid pipe		Inch (mm)	3/8 (9,52)	3/8 (9,52)
	Gas pipe		Inch (mm)	5/8 (15,88)	5/8 (15,88)
	Drain pipe		mm	15 ~ 17 (inner size)	15 ~ 17 (inner size)
Operating range	Cool	Ambient	°C	+10 ~ +43	+10 ~ +43
		Water	°C	+5 ~ +20	+5 ~ +20
	Heat	Ambient	°C	-20 ~ +43	-20 ~ +43
		Water	°C	+25 ~ +45	+25 ~ +45
Connectable system				3-Pipe (heat recovery type) VRF System (system capable up to 48 HP)	
Maximum Indoor ratio (connectable hydrokit module capacity ratio)				Total indoor unit + Hydrokit capacity: up to 130 % (** ~ **% vs total outdoor unit capacity)	

1) Maximum 45 °C by refrigerant circuit (heat pump cycle), over 45 °C is provided by electric heater operation.

Accessories	
CZ-RTC5B	Wired remote controller with Econavi function
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black

Accessories	
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black

Basic principle and advantage.

Hydrokit module provides hot water by using waste heat that is recovered from standard air-conditioning indoor unit in cooling mode.

Technical focus

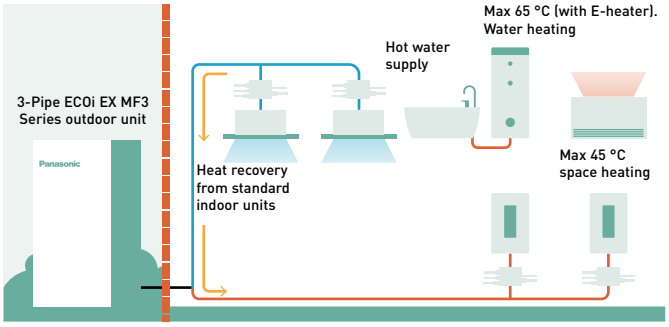
- Only with 3-Pipe ECOi EX MF3 Series outdoor units
- Remote controller CZ-RTC5B common use with DX coil indoor units ECOi and PACi

Hydrokit control function / CZ-RTC5B

- CZ-RTC5B can be used for hydrokit and also normal indoor unit. CZ-RTC5B checks the type of connected unit and switches between hydrokit and air conditioner display automatically
- Hydrokit mode (tank or air conditioning mode) is set during initial startup

Overview: hydromodule in VRF system

- Multiple hydromodule connection in same circuit is available
- The mode of each module can be individually set from either hot water or space heating (once set the units cannot operate in another mode, resetting will be required)
- 3-Pipe control solenoid valve kit is necessary for each indoor unit and hydromodule



* Cold water also available.

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
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PRO-HT *TANK*

PRO-HT Tank DHW

Enjoy an efficient DHW.
Panasonic commercial PRO-HT Tank solutions meet all needs of your hot water applications providing 65 °C maximum water temperature.

High temperature hot water is efficiently produced without any boosters.
Can be combined with 3-Pipe ECOi EX MF3 Series to adapt various projects from high-end residentials to offices and hotels.

PRO-HT Tank			**PAW-VP750LDHW-1**	**PAW-VP1000LDHW-1**
COP DHW (A +7 °C, W 10~55 °C) EN 16147 [1]			5,29	4,81
COP DHW (A +15 °C, W 10~55 °C) EN 16147 [2]			7,01	5,32
Volume (net)		L	726	933
Reference tapping cycle			2XL	2XL
Standby heat loss according to EN16147		W/h	77	80
Maximum water temperature	Heat pump	°C	65	65
	Electrical heater	°C	85	85
Dimension	H x Ø	mm	1855 x 990	2210 x 990
Net weight / with water		kg	179 / 905	191 / 1124
Stainless steel 316 L tank			Yes	Yes
Connections to the water supply network			RP 1¼	RP 1¼
Average insulation thickness		mm	100	100
Number of electrical heaters x power		W	1 x 6000	1 x 6000
Electric protection		A	16	16
Moisture protection (PAW-VP-RTC5B-VRF)			IP24	IP24
Heat exchanger connection	Inlet	Inch (mm)	1/2 (12,70)	1/2 (12,70)
	Outlet	Inch (mm)	3/4 (19,05)	3/4 (19,05)
Tubing connection between SVK and tank	Liquid pipe	Inch (mm)	3/8 (9,52)	3/8 (9,52)
	Gas pipe	Inch (mm)	3/4 (19,05)	3/4 (19,05)
Outdoor unit			**U-16MF3E8**	**U-16MF3E8**
Energy consumption by chosen cycle (A +7 °C, W 10~55 °C)		kWh	4,14	5,10
Energy consumption by chosen cycle (A +15 °C, W 10~55 °C)		kWh	3,50	4,61
Power supply	Voltage	V	400	400
	Phase		Three phase	Three phase
	Frequency	Hz	50	50
Maximum power consumption	Without heater	W	20400	20400
	With heater	W	26400	26400
Sound pressure at 1m from outdoor unit		dB(A)	52	52
Refrigerant (R410A) / CO_2 Eq.		kg / T	8,3 / 17,300	8,3 / 17,300
Pipe length range from outdoor unit		m	50	50
Elevation difference (in / out)		m	30 (OU above) 30 (OU below)	30 (OU above) 30 (OU below)
Pipe length for nominal capacity		m	7,5	7,5
Pipe length for additional gas		m	> 7,5	> 7,5
Additional gas amount		g/m	Refer to manual	Refer to manual
Operating range - outdoor ambient	Heat Min ~ Max	°C	-20 ~ +35	-20 ~ +35

1) Heating of sanitary water up to 55 °C with inlet air temperature at 7 °C, humidity at 89 % and inlet water temperature at 10 °C. According to EN16147. 2) Heating of sanitary water up to 55 °C with inlet air temperature at 15 °C, humidity at 74 % and inlet water temperature at 10 °C. According to EN16147.

This product is designed to comply with the European Water Quality Directive 98/83/EC amended by 2015/1787/EU. The lifespan of the product is not guaranteed in the case of the use of groundwater, such as spring water or well water, the use of tap water when salt or other impurities are contained, nor in areas of acidic water quality. Maintenance and warranty costs related to these cases are the customer's responsibility.

* When connected as pressurised, safety valve is mandatory.

Accessories	
PAW-VP-RTC5B-VRF	Tank Controller for ECOi system
PAW-VP-VALV-160	Expansion valve kit 16 kW
PAW-VP-VALV-280	Expansion valve kit 28 kW

Technical focus

- Water volume 750 L and 1000 L
- Maximum hot water production 65 °C without boosters
- Heating coil 52 m (750 L) and 63 m (1000 L)
- Tank material 3 mm
- ABS external case

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Heating Outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
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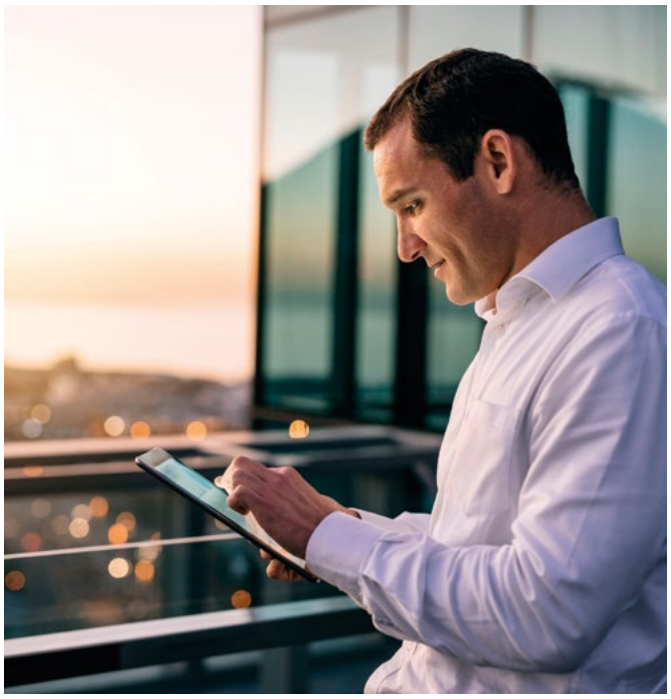
BMS interface with S-Link

BMS interface with Panasonic communication bus helps you to get significant savings.



1 Direct connection to P-Communication bus

- No need for additional gateway (CZ-CFUNC2)
- Significant 50 % cost saving for BMS interface*
- Avoid mistakes and reduce configuration time.

* In the case of PAW-AC2-BAC-16P by Panasonic calculation.

2 Easy configuration

- Single configuration tool for all models (Intesis MAPS)
- Firmware updates with new improvements and features
- Scan: Automatic identification of the units present in the VRF system
- Front cover LED indicators provide easy to check communication status.

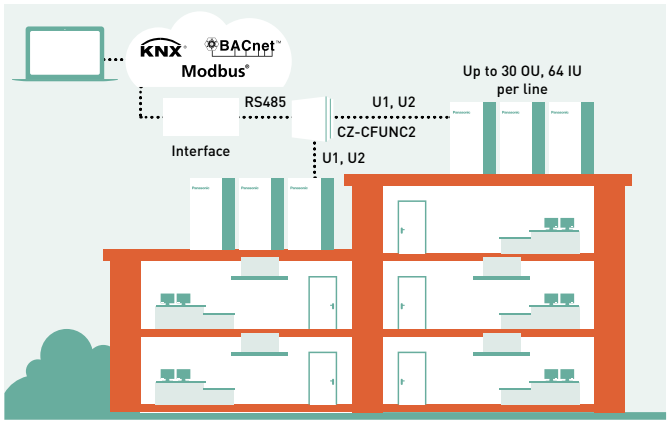
3 Upgraded specifications

- Outdoor unit's signal available for the integration
- BACnet: Version 14 and BTL Certified
- Datalogging through external USB port (for service)

Direct connection to P-Communication bus

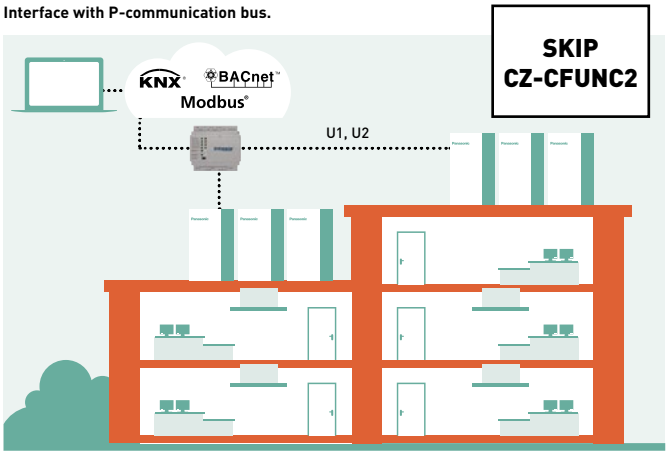
The interface can provide faster, cheaper, easier solution in your projects!

Old interface.



Maximum 128 indoor units can be connected. Panasonic Gateway, CZ-CFUNC2 is required.

Interface with P-communication bus.



U1U2 link is connected directly to IntesisBox. Support from 16 to 128 per each box.

Home automation compatibility for Smart Home systems for PAW-AC2-MBS

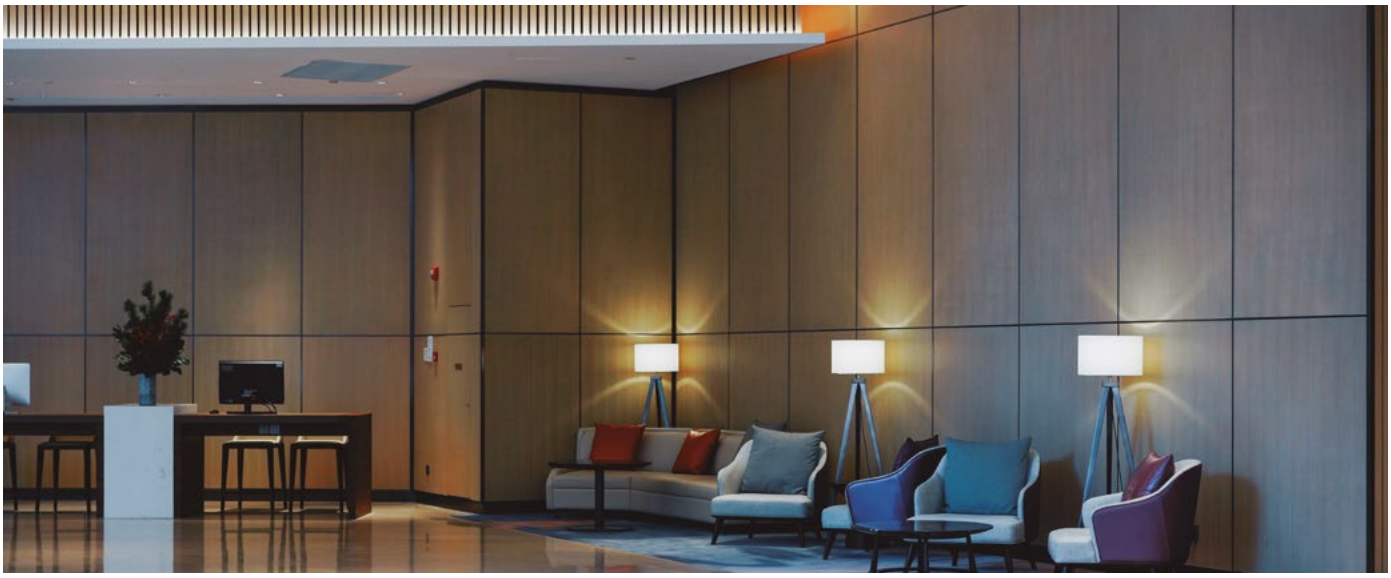
Drivers available for:

- AMX
- Control4
- eedomus
- Elan
- Fibaro
- iRidium
- Eedom
- RTI
- Savant

Creston, Kuju and Vera available soon.

Model for BACnet	Maximum number of indoor units connected
PAW-AC2-BAC-16P	16 indoor units
PAW-AC2-BAC-64P	64 indoor units
PAW-AC2-BAC-128P	128 indoor units
Model for Modbus	**Maximum number of indoor units connected**
PAW-AC2-MBS-16P	16 indoor units
PAW-AC2-MBS-64P	64 indoor units
PAW-AC2-MBS-128P	128 indoor units
Model for KNX	**Maximum number of indoor units connected**
PAW-AC2-KNX-16P	16 indoor units
PAW-AC2-KNX-64P	64 indoor units

AHU connection kit 16,0 to 56,0 kW for ECOi



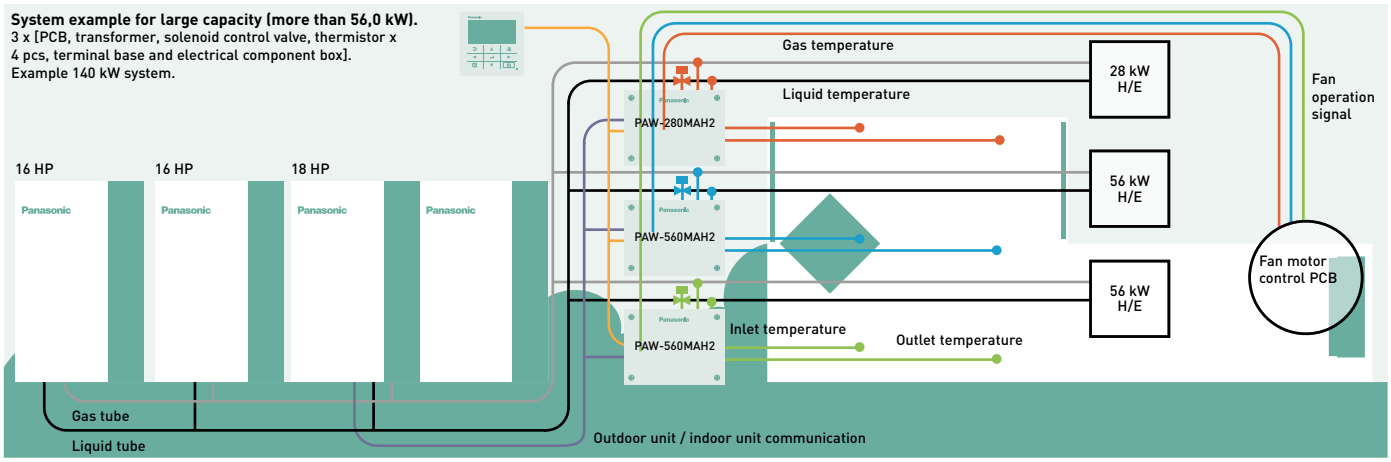
3 types of AHU connection kit: Advanced, Medium and Light

Reference	IP 65	0-10 V demand control*	Outdoor temperature shift compensation. Cold draft prevention
PAW-160MAH2 / PAW-280MAH2 / PAW-560MAH2	Yes	Yes	Yes
PAW-160MAH2M / PAW-280MAH2M / PAW-560MAH2M	Yes	Yes	No
PAW-160MAH2L / PAW-280MAH2L / PAW-560MAH2L	Yes	No	No

* With CZ-CAPBC2.

With ECOi outdoor units

ECOi outdoor units shall be used for AHU connection kit. 3 models for VRF system: 5 HP (PAW-160MAH2/M/L), 10 HP (PAW-280MAH2/M/L) and 20 HP (PAW-560MAH2/M/L).



AHU connection kit 16,0 to 56,0 kW for ECOi

Reference		PAW-	5 HP 160MAH2/M/L	10 HP 280MAH2/M/L	20 HP 560MAH2/M/L	30 HP 280MAH2/M/L 560MAH2/M/L	40 HP 560MAH2/M/L 560MAH2/M/L	50 HP 560MAH2/M/L 560MAH2/M/L 280MAH2/M/L	60 HP 560MAH2/M/L 560MAH2/M/L 560MAH2/M/L
Cooling capacity		kW	14,0	28,0	56,0	84,0	112,0	140,0	168,0
Heating capacity		kW	16,0	31,5	63,0	95,0	127,0	155,0	189,0
Air flow	Cool Min / Max	m³/h	2598 / 1140	4998 / 3498	10002 / 7002	15000 / 10500	19998 / 13998	24996 / 17496	30000 / 21000
Bypass factor recommended			0,9	0,9	0,9	0,9	0,9	0,9	0,9
Dimension	H x W x D	mm	278 x 278 x 180	278 x 278 x 180	278 x 278 x 180	278 x 278 x 180	278 x 278 x 180	278 x 278 x 180	278 x 278 x 180
Net weight		kg	3,2	6,3	6,3	6,3	6,3	6,3	6,3
Pipe length range		m	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100	10 ~ 100
Elevation difference (in / out)	Max	m	10	10	10	10	10	10	10
Piping diameter	Liquid pipe	Inch (mm)	3/8 (9,52)	3/8 (9,52)	5/8 (15,88)	3/4 (19,05)	3/4 (19,05)	3/4 (19,05)	3/4 (19,05)
	Gas pipe	Inch (mm)	5/8 (15,88)	7/8 (22,22)	1 1/8 (28,58)	1 1/4 (31,75)	1 1/2 (38,15)	1 1/2 (38,15)	1 1/2 (38,15)
Intake temperature of AHU connection kit	Cool Min ~ Max	°C DB	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32	+18 ~ +32
	Cool Min ~ Max	°C WB	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23	+13 ~ +23
	Heat Min ~ Max	°C	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30	+16 ~ +30
Ambient temperature of outdoor unit	Cool Min ~ Max	°C	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43
	Heat Min ~ Max	°C	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15	-20 ~ +15

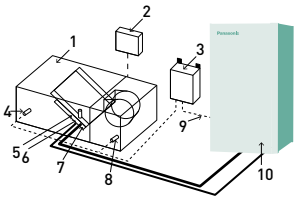
AHU connection kit / System combination

Capacity		Outdoor unit combination			AHU connection kit combination		
5 HP	16 kW	All ECOi outdoor units			PAW-160MAH2(M/L)	—	—
10 HP	28 kW	U-10ME2E8	—	—	PAW-280MAH2(M/L)	—	—
20 HP	56 kW	U-20ME2E8	—	—	PAW-560MAH2(M/L)	—	—
30 HP	84 kW	U-16ME2E8	U-14ME2E8	—	PAW-560MAH2(M/L)	PAW-280MAH2(M/L)	—
40 HP	112 kW	U-20ME2E8	U-20ME2E8	—	PAW-560MAH2(M/L)	PAW-560MAH2(M/L)	—
50 HP	140 kW	U-18ME2E8	U-16ME2E8	U-16ME2E8	PAW-560MAH2(M/L)	PAW-560MAH2(M/L)	PAW-280MAH2(M/L)
60 HP	168 kW	U-20ME2E8	U-20ME2E8	U-20ME2E8	PAW-560MAH2(M/L)	PAW-560MAH2(M/L)	PAW-560MAH2(M/L)

Technical focus

- Maximum capacity / system: 60 HP (168 kW)
- Maximum piping length: 100 m (120 m equivalent)
- Elevation difference (indoor unit / indoor unit): 4 m
- In / out capacity ratio: 50~100 %
- Maximum number of AHU connection kits: 3 units*
- Outdoor temperature range in heating: -20 ~ +15 °C
- Available temperature range for the suction air at AHU connection kit: cool: +18 ~ +32 °C / heat: +16 ~ +30 °C
- The systems is controlled by the suction air (or room return air) temperature (same as standard indoor unit)
- The discharge air temperature is also controlled to prevent too-low air discharge in cooling or too-high air discharge in heating (in case of VRF)
- Demand control (forcible thermostat-OFF control by operating current)
- Defrost operation signal, Thermo-ON / OFF states output
- Drain pump control (drain-pump and the float switch to be supplied in local)
- External target temperature setting via indoor / outdoor signal interface is available with CZ-CAPBC2 (Ex. 0-10 V)
- Demand control 40 % to 120 % (5 % steps) by 0-10 V input signal
- Connectable with S-Link system. Special care for electrical noise may be necessary depending on the on-site system
- Fan control signal from the PCB can be used for control the air flow (high / mid / low and LL for Th-OFF). Need to change the fan control circuit wiring at field

* To be simultaneous operation controlled by one remote controller sensor.



System and regulations. System overview.
1 | AHU Unit equipment (field supplied)
2 | AHU Unit system controller field supplied)
3 | AHU connection kit controller box (with control PCB)
4 | Thermistor for discharge air
5 | Electronic expansion valve
6 | Thermistor for gas pipe (E3)
7 | Thermistor for liquid pipe (E1)
8 | Thermistor for suction air
9 | Inter-unit wiring
10 | Outdoor unit

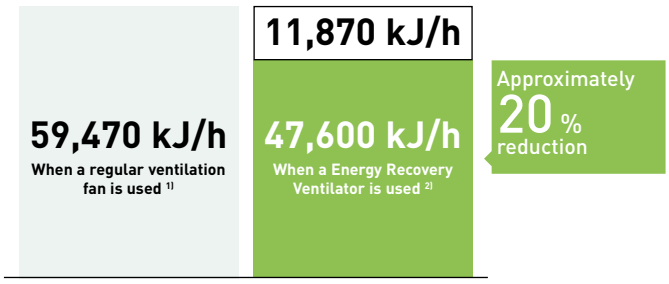
Energy recovery ventilation

Panasonic energy recovery ventilators help you with your comfort and energy-saving plan.

Panasonic energy recovery ventilators can reduce the outside air load because they efficiently recover the energy lost by ventilation during the energy recovery process

This results in energy-saving ventilation and lower running costs for air-conditioning and heating equipment. Furthermore, by designing our current models with a counter-flow heat-exchange element, we achieved products with slim body shapes and quiet operation, that create a comfortable and pleasant air-conditioned environment, whilst saving energy.

- Dramatic energy savings achieved through adoption of a high-efficiency counter-flow heat-exchange element
- Counter-flow heat exchange element used for reduced noise and slimmer, more compact body shape
- All maintenance can be performed through a single inspection aperture
- Straight air supply / exhaust system used for easier installation



1) Two FY-27FPK7 units. 2) One FY-500ZDY8R unit.

Energy efficiency and ecology

Energy consumption is dramatically reduced by using a counter-flow heat-exchange element. Air conditioning load is reduced by approximately 20 %, resulting in significant energy savings.

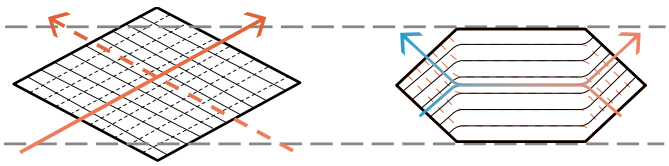
More comfort

Quiet operation.

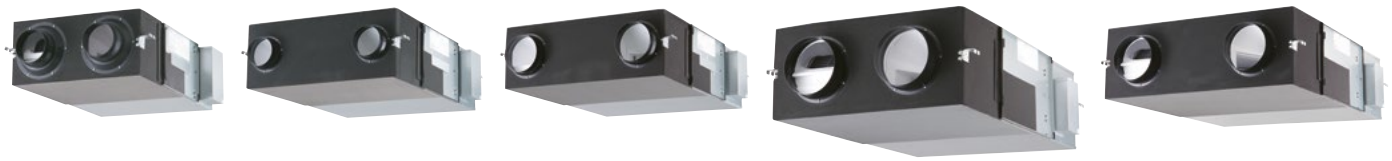
Low noise operation results in noticeably quieter units. All models with capacities below 500 m³/h run at noise levels below 32 dB (high setting) and even our largest 1000 m³/h-capacity model runs at only 37,5 dB (high setting).

Comparison of former and current elements

With the cross-flow element, air moves in a straight line across the element; with the counter-flow element, air flows through the element for a longer time (longer distance), so the heat-exchange effect remains unchanged even if the element is made thinner.



Former (cross-flow element) New (counter-flow element)



Rated flow rate			250 m³/h			350 m³/h			500 m³/h			800 m³/h			1000 m³/h		
Indoor unit			**FY-250ZDY8R**			**FY-350ZDY8R**			**FY-500ZDY8R**			**FY-800ZDY8R**			**FY-01KZDY8R**		
Power supply	Voltage	V	220 - 240			220 - 240			220 - 240			220 - 240			220 - 240		
	Phase		Single phase			Single phase			Single phase			Single phase			Single phase		
	Frequency	Hz	50			50			50			50			50		
Notch			**Extra high**	**High**	**Low**	**Extra high**	**High**	**Low**	**Extra high**	**High**	**Low**	**Extra high**	**High**	**Low**	**Extra high**	**High**	**Low**
Input power		W	112,0 - 128,0	108,0 - 123,0	87,0 - 96,0	182,0 - 190,0	178,0 - 185,0	175,0 - 168,0	263,0 - 289,0	204,0 - 225,0	165,0 - 185,0	387,0 - 418,0	360,0 - 378,0	293,0 - 295,0	437,0 - 464,0	416,0 - 432,0	301,0 - 311,0
Air flow		m³/h	250	250	190	350	350	240	500	500	440	800	800	630	1000	1000	700
External static pressure		Pa	105	95	45	140	60	45	120	60	35	140	110	55	105	80	75
Sound power	Heat exchange	dB(A)	30,0 - 31,5	29,5 - 30,5	23,5 - 26,5	32,5 - 33,0	30,5 - 31,0	22,5 - 25,5	36,5 - 37,5	34,5 - 35,5	31,0 - 32,5	37,0 - 37,5	36,5 - 37,0	33,5 - 34,5	37,5 - 38,5	37,0 - 37,5	33,5 - 34,5
	Normal	dB(A)	30,0 - 31,5	29,5 - 30,5	23,5 - 26,5	32,5 - 33,0	30,5 - 31,0	22,5 - 25,5	37,5 - 38,5	37,0 - 38,0	31,0 - 32,5	37,0 - 37,5	36,5 - 37,0	33,5 - 34,5	39,5 - 40,5	39,0 - 39,5	35,5 - 36,5
Temperature exchange efficiency		%	75	75	77	75	75	78	75	75	76	75	75	76	75	75	79
Dimension	H x W x D	mm	270 x 882 x 599			317 x 1050 x 804			317 x 1090 x 904			388 x 1322 x 884			388 x 1322 x 1134		
Net weight		kg	29			49			57			71			83		

The noise level was measured within an acoustic chamber. Due to installation arrangement and surfaces within the space, actual noise levels may increase. The input, the current and the exchange efficiency are values relevant to the indicated air flows. The noise level is measured 1,5 m below the centre of the unit. The temperature exchange efficiency is an average of both cooling and heating operation.

Features

Energy efficiency and ecology.
· Up to 20 % energy saving in the installation
· Recovers up to 77 % of the heat in the outgoing air

Comfort.
· Cleaning reduced due to the revolutionary structure (every 6 months)
· Ideal for indoor spaces without windows

Easy installation and maintenance.
· 5 models for easier selection
· Reduced system height (270 mm, 317 mm and 388 mm)
· Side opening for cleaning (inspection of filter, motor and other parts)
· Installation can be reversed to share an inspection access between 2 machines
· Easy connection to the air conditioning unit
· Installation in false ceilings
· Units operate at 220 - 240 V
· High static pressure for easier installation

Technical focus

· High energy saving, up to 20 %
· Counter Cross Flow technology for better efficiency
· Long life element core
· Easy installation and 20 % less thickness
· Easy connection to air conditioning units
· Silent units

A intuitive and stylish control

· Wire controller included as standard
· Compact and flat front panel
· Filter cleaning support
  - Signal alert for clearing
  - Filter usage condition by 1/2/3/4 months
· Size (W x H x D) 116 x 120 x 40 mm

Electric air curtain with DX coil

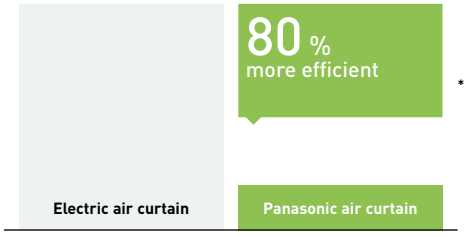
Designed to improve energy efficiency, minimise heat loss from a building, and allow retailers to keep doors open to encourage customers, our air curtains are suitable for connection to both VRF and PACi Systems.

Highly efficient heating effect

The combined air stream, which has a desirable low air current induction factor (mixing factor), can carry the selected initial temperature effect over long distances, and will reach the floor area while still at room temperature. This is necessary to avoid cooling down the interior spaces.
Available in different lengths to suit requirements between 1 and 2,5 m, both air curtains have outlet grilles that can be adjusted to five different positions. The HS model can be installed up to a height of 3,0 m with the LS model up to 2,7 m. The outlet grilles can be easily adjusted into five positions to suit different installation requirements and the air filter can be accessed without the need for specialist tools.

- High performance with EC fan motor (40 % lower running costs compared to a standard AC fan motor)
- Easy Cleaning and Servicing
- Can be connected to either Panasonic VRF or PACi systems

Heating capacity comparison: Electrical air curtain / Panasonic air curtain.



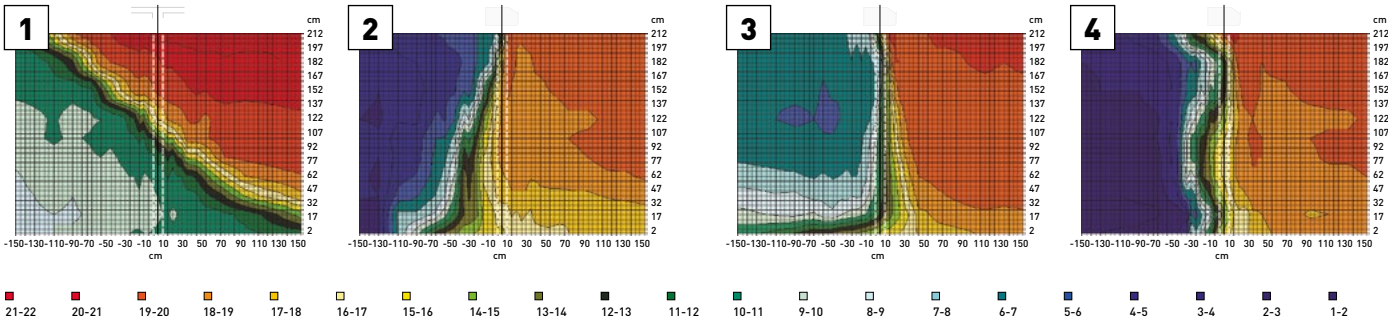
* With the U-100PZH2E5 on the PAW-20PAIRC-LS. Calculation method: Taking as consideration SCOP of the Panasonic combination of 6,0. If 100 is the energy needed for a air curtain, Panasonic air curtain will need 1/(1-6)*100=20.

- Optional drain pump for cooling operation
- HS and LS models can be controlled via Panasonic's range of remote internet controls

The HS and LS models are ideal for connection to a ECOi or PACi system. With simple "plug and play" installation, both are fitted with an EC fan motor for a smooth operation and efficient performance. This fan guarantees 40 % lower running cost than with a standard AC fan motor. Air curtains run approximately 12 hours per day at shops, and efficient performance contributes to energy savings.

Optimised air flow velocity

1 | Energy losses, no air curtain installed
2 | Too low velocity air curtain – air curtain not efficient
3 | Too high velocity air curtain – considerable turbulence, energy lost to the outside, air curtain not efficient
4 | Optimum results with the Frico air curtain connected to Panasonic VRF



Opening without air curtain.
In an unprotected opening the cold air flows out and the cold storage room becomes much too warm.

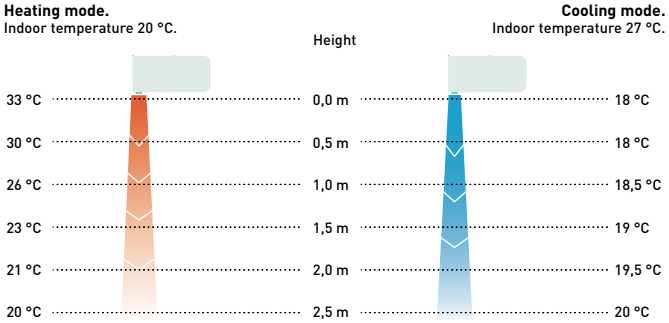
Opening with air curtain, wrong angle.
If the angle is too small the hot air is blown into the cold storage room.

Opening with air curtain, too high speed.
Excessive speed creates turbulence, which causes energy loss and increases the cold storage temperature.

Opening with correctly adjusted air curtain.
With a correctly set air curtain unit there is a sharp separation between the different temperature zones.

Intelligent operation

Our air curtains combine air flow and heating / cooling technology to ensure optimum comfort and energy efficiency whilst also creating an effective barrier between indoor and outdoor environments. Design and installation is key to achieving the correct height / temperature settings to achieve optimum performance. Our air curtains are designed to answer the demands of the retail, commercial and industrial markets.



Air curtain with DX coil, connected to VRF systems

Comfort: Easy redirection of air flow by means of manual deflector.

Ease of use: Speed selector (high and low) on the unit itself.

Easy installation and maintenance: Easy installation / Compact dimensions improve installation and positioning / Easy cleaning of grid without opening of the unit.

Outdoor unit			**4 HP**	**4 HP**	**5 HP**	**8 HP**
Air outlet height 2,7 m			**PAW-10EAIRC-LS**	**PAW-15EAIRC-LS**	**PAW-20EAIRC-LS**	**PAW-25EAIRC-LS**
Cooling capacity [1]	Max	kW	6,1	9,7	13,0	17,0
Heating capacity [2]	Max	kW	7,9	12,0	15,0	19,0
Air flow	High	m³/h	1800	2700	3600	4500
Heat Exchanger	Volume	L	1,67	2,85	3,94	5,03
Electric consumption fan	230 V / 50 Hz	kW	0,30	0,50	0,60	0,80
Current	230 V / 50 Hz	A	2,10	3,10	4,10	5,10
Sound pressure [3]	Max	dB(A)	65	66	67	69
Air outlet height 3,0 m			**PAW-10EAIRC-HS**	**PAW-15EAIRC-HS**	**PAW-20EAIRC-HS**	**PAW-25EAIRC-HS**
Cooling capacity [1]	Max	kW	9,1	13,0	19,5	23,7
Heating capacity [2]	Max	kW	11,8	15,8	23,6	27,6
Air flow	High	m³/h	2700	3600	5400	6300
Heat Exchanger	Volume	L	1,67	2,85	3,94	5,12
Electric consumption fan	230 V / 50 Hz	kW	0,75	1,00	1,50	1,75
Current	230 V / 50 Hz	A	4,10	5,50	8,20	9,60
Sound pressure [3]	Max	dB(A)	66	67	68	68
Common data						
Dimension [4]	H x W x D	mm	260 (+140) x 1000 x 460	260 (+140) x 1500 x 460	260 (+140) x 2000 x 460	260 (+140) x 2500 x 460
Net weight	Air outlet height 2,7 m	kg	50	65	80	95
	Air outlet height 3,0 m	kg	55	65	85	110
Fan type			EC	EC	EC	EC
Piping diameter	Liquid pipe / Gas pipe	Inch (mm)	3/8 (9,52) / 5/8 (15,88)	3/8 (9,52) / 3/4 (19,05)	3/8 (9,52) / 7/8 (22,22)	3/8 (9,52) / 7/8 (22,22)
Door width		m	1,0	1,5	2,0	2,5
Refrigerant			R32 / R410A	R32 / R410A	R32 / R410A	R32 / R410A

1) Cooling capacity DX coil, air temperature in / out +27 / +18 °C, R32 and R410. 2) Heating capacity condenser, air temperature in / out +20 / +33 °C, R32 and R410. In the case of lower outdoor temperatures, an outdoor model with higher capacity may be necessary. 3) Measured in distance up to 5,0 m, direction factor 2, absorbing surfaces 200 m², Min / Max air flow. 4) 140 mm is the height of an electrical box if it is installed on the top.

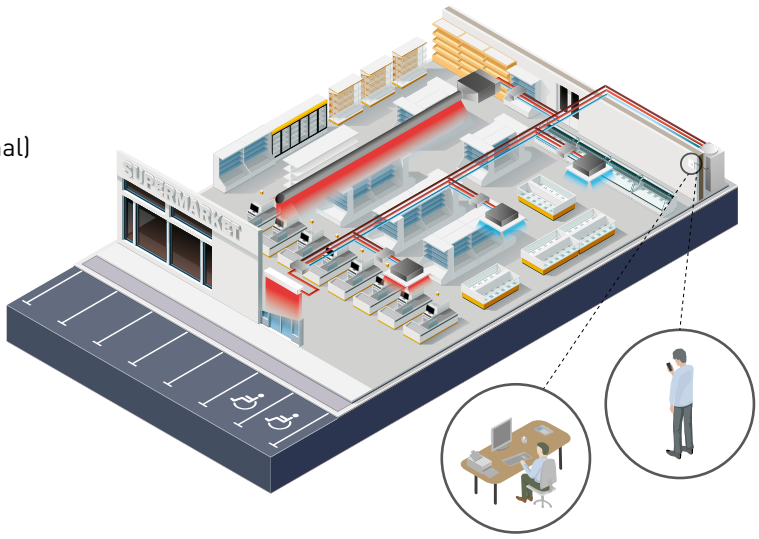
Accessories	
PAW-AIR1-DP	Optional drain pump

Technical focus

- Compatible with R32 and R410A refrigerant
- Save up to 40 % energy costs by use of the integrated EC fan technology (higher efficiency than conventional AC fan, soft start and longer motor duration)
- 4 length of air curtain LS and HS are available 1,0, 1,5, 2,0 and 2,5 m
- Installation height up to 3,0 m
- Outlet grilles can be adjusted in five positions, to suite different indoor and installation requirements
- Control with Panasonic remote control systems (optional)
- Direct integration to BMS by optional Panasonic interfaces
- Drip tray included in all DX air curtain steps

Internet control

An app added to your tablet or smartphone or via the Internet allows you to control and manage the system remotely. There is also the option to integrate into existing BMS systems by using other Panasonic interfaces.



GREEN TECH
BMS CONNECTIVITY

Rating Conditions: Cooling Outdoor +35 °C DB Indoor +27 °C DB / +19 °C WB, Discharge temperature 16 °C. All combinations under rated conditions: Heating Outdoor +7 °C DB/+6 °C WB Indoor +20 °C DB. In case of lower outdoor temperatures a higher capacity outdoor unit model may be necessary. Specifications subject to change without notice. For detailed information about ErP, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

Panasonic AC Smart Cloud

Centralise control of your business premises, from wherever you are, 24/7/365.

The AC Smart Cloud system from Panasonic allows you to have complete control of all your installations from your tablet or from your computer. In a simple click, receive status updates, from all of your installations wherever the location, reducing potential breakdowns and optimising costs.

1 Comfort

Keep the comfort of workers, visitors and / or customers to increase satisfaction and productivity.

2 Return on investment

Optimising the operation of your heating and cooling system and the possibility to monitor remotely can expand the life of your assets.

3 Lower running cost

The control of settings in real time and the energy consumption monitor contributes to reduce your energy bill.

Flexible solution for your business

Anytime | Anywhere | Multiplatform | Internet browser

Scalable solution for your business

Small to large | 1 to multi-sites | Upgrade features [1] | RAC [2] / PACi / ECOi

1) Customized to meet user demand / Continuous upgrades: new functions and product introductions / IT smart management. 2) CZ-CAPRA1 is required.

Full multi-site and user control

Each location can allow access for multiple users whether in the same building or via remote access. The scalability allows addition of multiple sites and customise the access of your team and the access of your trusted service.

Key functions and uniqueness

Multi-site monitoring.
· It doesn't matter how many sites you have. It is easy to manage, operate, compare sites, locations and rooms.

Powerful statistics for energy savings.
· Power consumption, capacity and efficiency level can be compared with different parameters (yearly / monthly / weekly / daily basis)

Schedule setting.
· Set yearly / weekly / holidays timers as you please

Maintenance notification.
Receive an error notification by email and with floor layout:
· Maintenance notification of ECOi outdoor units
· Remote service checker function

Panasonic AC Service Cloud

Panasonic AC Service Cloud provides maintenance companies a unique tool to deliver advanced service and maintenance features, decreasing response times, reduce sites visits and better allocate resources.

Owners can manage different maintenance companies for each site, enabling or disabling access with just one click. Maintenance companies can have access to all sites where different owners gave permissions.

1 Response time and zero down time

Providing technical information about abnormalities and checker functions remotely enables the AC installer and maintainer to identify and fix issues much quicker, even before it occurs.

2 Reduce unnecessary trips

It reduces the cost of unnecessary trips, reducing the CO_2 emissions associated to the transport.

3 Maintenance planning

With a simple click, easily identify the nature of potential issues, enabling issue classification, prioritisation of resources and better planned site visits, through assigning the right engineer for the job.

4 All at a glance and scalability

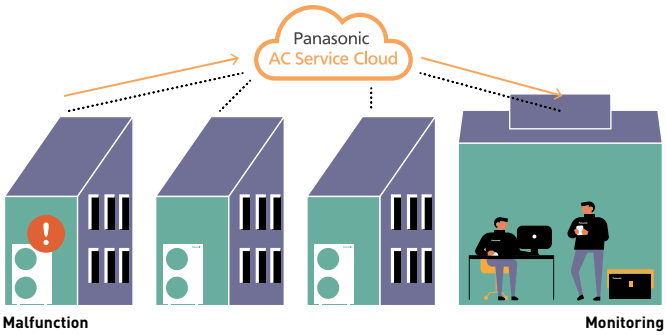
Remotely view all sites requiring maintenance of Panasonic HVAC. Increase the number of sites maintained, taking advantage of future updates and features of the Panasonic AC Service Cloud.

New system health check function

Self diagnosis function is ready in the Panasonic AC Service Cloud. It automatically detects potential malfunctions and helps to speed up your service process.

- Consecutive automatic monitoring at 15 minute intervals
- Key notifications in the event potential malfunction is detected
- 2D graph display to help with detailed analysis
- Threshold values can be easily adjusted

* For compatible models, please contact an authorized Panasonic dealer.



Panasonic AC Smart Cloud and
Panasonic AC Service Cloud packages.

Get the cloud base kit (CZ-CFUSCC1 + start up) and register to one of the subscription periods (1, 3 or 5 years).

CONEX. Devices and apps

CONEX provides comfort and control for varying user needs. Accessible, flexible and scalable with different controllers and apps. Perfectly meeting requirements of modern controls for end user, installer and service. With nanoe™ X function, technology with the benefits of hydroxyl radicals.

1 Intuitive control with stylish design

- Simple operation at a glance
- Clean face with full flat and black LCD display
- Compact body, only 86x86 mm

2 Control comfort with your smartphone

- Flexible control options with IoT integration
- Panasonic H&C Control App for daily remote control operation
- Panasonic Comfort Cloud App for remote operation 24/7/365

3 Easy maintenance with service support app

- Quick and easy app set-up for system setting
- Panasonic H&C Diagnosis App enables the user to obtain detailed system operation data

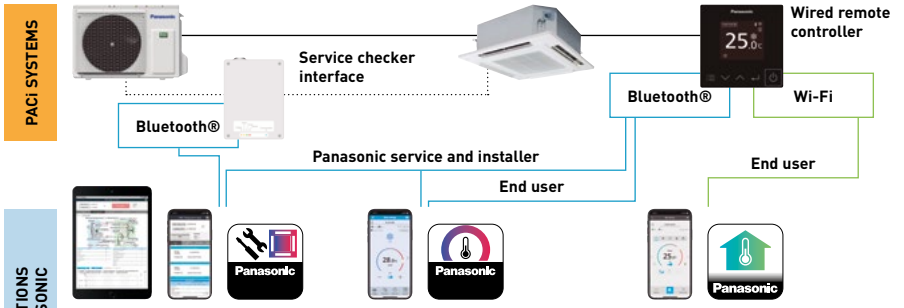
* The use of apps depends on the remote controller model.

CONEX with IoT integration

CONEX

The wired remote controller series is fully integrated with IoT solutions developed by Panasonic.
Detailed operation, maintenance setting and service operation are all possible with smartphone or tablet.

https://youtu.be/_USzG_9f6bk



Panasonic H&C Diagnosis App [1]. Service checker function (detailed operation data etc...).

Panasonic H&C Control App [2]. Detailed operation setting. Detailed maintenance setting.

Panasonic Comfort Cloud App [3]. Detailed operation setting. Remote operation via Wi-Fi.

1) A service checker interface is required when this app is used from outdoor location. Wired remote controller (CZ-RTC6BL or CZ-RTC6BLW) is required when this app is used from indoor location. Compatible with PZ3 and PZH3 outdoor units. 2) CZ-RTC6BL or CZ-RTC6BLW required. 3) CZ-RTC6BLW required.

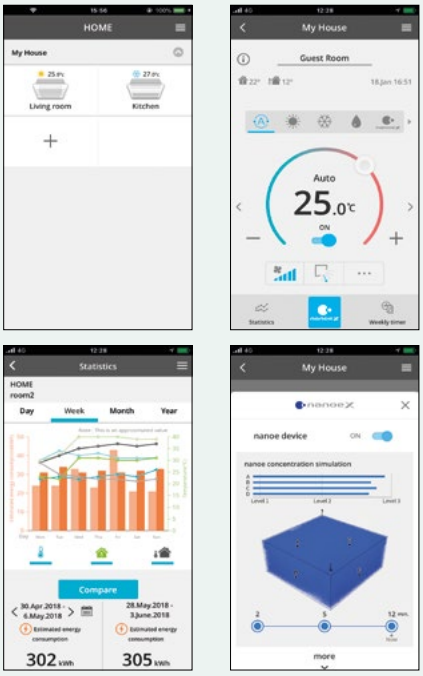
Model	CZ-RTC6	CZ-RTC6BL	CZ-RTC6BLW
Wired connection compatible with	PACi, PACi NX, ECOi, GHP	PACi, PACi NX, ECOi, GHP	PACi NX only
Wireless functions	No wireless capability	Bluetooth®	Bluetooth® + Wi-Fi
App compatibility			
Panasonic Comfort Cloud App	—	—	✔
Panasonic H&C Control App	—	✔ PACi, PACi NX, ECOi, GHP	✔ PACi NX only
Panasonic H&C Diagnosis App [1]	—	✔ PACi NX only [2]	✔ PACi NX only [2]
Outdoor unit settings (remote controller connected to indoor unit)	✔ PACi NX only [2]	✔ PACi NX only [2]	✔ PACi NX only [2]

1) Compatible with U-71/100/125/140PZH3E5/8 and U-100/125/140PZ3E5/8. 2) When connected to PACi NX indoor and outdoor unit combination.

Panasonic H&C Diagnosis App for service and installer.

Panasonic H&C Control App for end user, service and installer.

Panasonic Comfort Cloud App for end user.



Control and connectivity

A wide variety of control options to meet the requirements of different applications.

Centralized control systems

Centralised control.

P-AIMS core software.
Up to 1024 indoor units.
CZ-CSWKC2

Intelligent controller.

Intelligent controller.
Up to 256 indoor units touch screen with web server.
CZ-256ESMC3

Panasonic AC Smart Cloud.

Cloud internet control.
Up to 128 groups. Controls 128 units.
CZ-CFUSCC1

Connection with general equipment.

ON / OFF control for external devices such as ERV.
Controls 1 unit.
CZ-CAPC3

Mini Seri-Para I/O Unit 0 - 10 V.
Controls 1 indoor unit or a group of 8 indoor units.
CZ-CAPBC2

Communication Adaptor.
Up to 128 groups. Controls 128 units.
CZ-CFUNC2

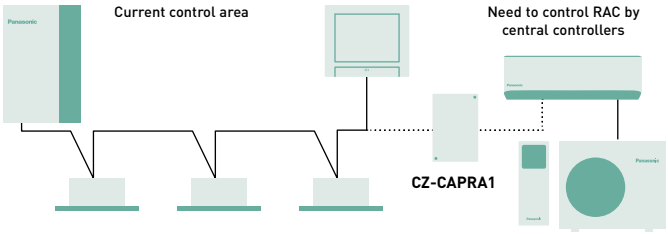
Domestic integration to S-Link - CZ-CAPRA1

Can connect RAC range to S-Link. Full control is now possible.

Integrates any unit in big system control.

- YKEA server room integration [1]
- Small offices with domestic indoors
- Tender for refurbishment (old system Domestic and VRF in one installation)

1) When duty rotation using the remote controller is set up, CZ-CAPRA1 cannot be connected.



Current system for PACi / VRF. Central controller can connect to S-Link line to control units directly.

RAC units cannot connect directly to S-Link to be managed by Central Controllers.

It's necessary to have interface between S-Link and RAC protocol to cover basic operating items.

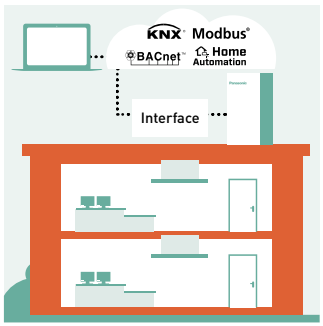
Basic operation items: ON / OFF, Mode select, Temperature setting, Fan speed, Flap setting, Remote control prohibit.
External input: ON / OFF control signal, Abnormal stop signal.
External output for Relay [1]**:** Operation status (ON / OFF), Alarm status output.

1) Because current CN-CNT connector can not provide the power for external output relay, additional Input power for external relay is necessary.

Easy connection to KNX, Modbus, Lonworks, BACnet and Propietary Home Automation Systems

Easy and reliable solution to integrate your Panasonic heating and cooling systems into any B.M.S or E.M.S. Fully bi-directional communications with all necessary parameters.

For more information, contact Panasonic.

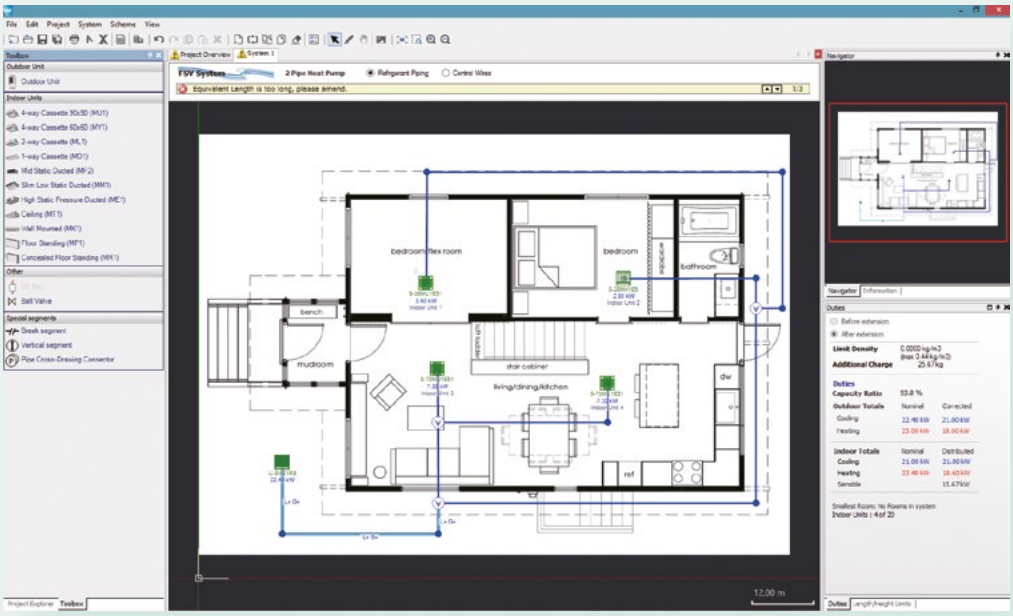


			Econavi control	Built-in thermostat	Indoor units which can be controlled	Use limitations	Function ON / OFF	Mode setting	Fan speed setting	Temperature setting	Air flow direction	Permit/Prohibit switching	Weekly program	BMS protocol
Individual controllers														
Touch room controller for hotel with Dry Contacts		PAW-RE2C4-MOD-WH PAW-RE2C4-MOD-BK WH: White, BK: Black. Bespoke finish available on request.	–	✔	1 indoor unit	–	✔	✔	✔	✔	–	✔	–	Modbus + 4 digital I/O signals
Touch display control for hotel with Dry Contacts		PAW-RE2D4-WH PAW-RE2D4-BK WH: White, BK: Black. Bespoke finish available on request.	–	✔	1 indoor unit	–	✔	✔	✔	✔	–	✔	–	Stand Alone + 2 digital inputs
Design wired remote controller		CZ-RTC5B	✔	✔	1 group, 8 units	· Up to 2 controllers can be connected per group	✔	✔	✔	✔	✔	–	✔	–
Wired remote controller		CZ-RTC6 Non-wireless	✔	✔	1 group, 8 units	· Up to 2 controllers can be connected per group	✔	✔	✔	✔	✔	–	–	–
		CZ-RTC6BL With Bluetooth®	✔	✔	1 group, 8 units	· Up to 1 controller can be connected per group	✔	✔	✔	✔	✔	–	✔	–
		CZ-RTC6BLW With Wi-Fi and Bluetooth®	✔	✔	1 group, 8 units	· Up to 1 controller can be connected per group	✔	✔	✔	✔	✔	–	✔	–
Infrared remote controller		CZ-RWS3 + CZ-RWRU3W CZ-RWS3 + CZ-RWRY3 CZ-RWS3 CZ-RWS3 + CZ-RWRL3 CZ-RWS3 + CZ-RWRD3 CZ-RWS3 + CZ-RWRT3 CZ-RWS3 + CZ-RWRC3	✔	–	1 group, 8 units	· Up to 2 controllers can be connected per group	✔	✔	✔	✔	✔ [1]	–	–	–
Centralized controllers														
System controller with weekly timer		CZ-64ESMC3	✔	–	64 groups, maximum 64 units	· Up to 10 controllers, can be connected to one system · Main unit/sub unit (1 main unit + 1 sub unit) connection is possible · Use without remote controller is possible	✔	✔	✔	✔	✔ [1]	✔	✔	–
Central ON / OFF controller		CZ-ANC3	–	–	16 groups, maximum 64 units	· Up to 8 controllers (4 main units + 4 sub units) can be connected to one system · Use without remote controller is impossible	✔	–	–	–	–	✔	–	–
Intelligent controller (touch screen / web server)		CZ-256ESMC3	✔	–	Main unit: 128. Up to 256 units can be expanded	· Communication adaptor CZ-CFUNC2 is necessary for connection with more than 128 units	✔	✔	✔	✔	✔ [1]	✔	✔	–

1. Setting is not possible when a remote controller unit is present (use the remote controller for setting). * All specifications subject to change without notice.

Design support software for VRF

Features the unique Mounting Scheme function, providing thorough spec-in and tender quotation support for easier and faster completion of work.



The Panasonic VRF Designer software can be used for Panasonic's latest R410A and R32 VRF Systems.
Panasonic understands the importance of the ever-increasing demands for fast and accurate responses. More and more emphasis is being placed upon energy-efficiency in our marketplace. The ability to calculate cooling / heating loads and produce information of actual design conditions is a major advantage to any architect, consultant, contractor or end user.
Panasonic appreciates the time constraints and demanding industry we are in and we are pleased to announce the launch of the next generation of our system design software program.
The Panasonic VRF Designer software has been customised to make the selection and design process as quick and easy as possible.
The design package utilises system wizards and import tools to enable both simple and complex systems to be created. In addition, the system will allow outdoor and indoor units to be dragged on an interactive desktop. This allows users to create everything from realistic floor plans with detailed piping and wiring schematics, through to installation guidance drawings, which can be sent with quotations.

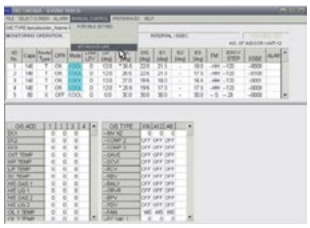
Features include:
- Mounting scheme. Design selection from building floor drawing
- Variety of drawing formats. (dxf, jpg, png..etc.)
- Conventional principal scheme
- Easy to use system wizards
- Auto piping and wiring features
- Converted duties for conditions and pipework
- Auto(CAD) (dxf), Excel and PDF export
- Detailed wiring and pipework diagrams
- Automatic price quotation
- Automatic tender document assist
- SEER, SCOP
- ESEER

Panasonic's Advanced VRF software with AutoCAD® compatibility makes design easier than ever

Panasonic provides bespoke software helping system designers, installers and dealers to very quickly design and size systems, create wiring diagrams and issue bill of quantities at the push of a button.

Panasonic VRF service checker

Panasonic will make available to installers and commissioning companies the VRF service checker as a communication interface to Panasonic VRF systems. This easy to manage tool checks all parameters of the system.



Interface Box

The VRF service checker allows:

- Connect anywhere on the S-Link for ECOi and Mini ECOi
- Search the S-Link to validate systems that are connected
- Monitor all indoor and outdoor units simultaneously on 1 screen
- Monitor all Temperature data, Pressure data, Valve position, and alarm status on 1 screen
- Data can be viewed in Graph or tabular display
- Controlling the indoor unit ON / OFF, MODE, SET POINT, FAN, and TEST mode
- Switching between various systems on the same communication S-Link (ECOi only)
- Monitor and record at a set interval
- Record and review the data at a later date
- Update software via ROM flash writer

This Panasonic VRF service checker is available from your local service partner.

R22 Renewal

Panasonic's advanced technology enables the system to work with previously installed pipe work by managing the working pressure within the system down to R22 (33 bar) levels, this ensures the system works safely and efficiently without loss of capacity.
The new equipment can offer increased COP / EER by using state of the art inverter compressor and heat exchanger technology.
Having contacted your Panasonic supplier regarding pipe work restrictions, and gained approval to use the Panasonic Renewal System, there are three main tests that have to be carried out to ensure that the system can be used effectively. Firstly a thorough inspection of the pipe work must be carried out and any damage must be repaired. Secondly an oil test must be performed to ensure that the system has not been subject to a compressor burnout during its lifetime. Lastly a VRF Renewal Kit (CZ-SLK2) must be installed within the pipe work to ensure that the system is cleaned and free of oil remnants.

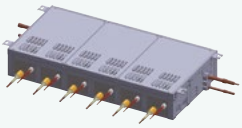
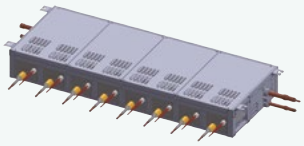
Accessories and control

Distribution joint kits

2-Pipe ME2 for outdoor units (up to 68,0 kW). ———— CZ-P680PH2BM	**2-Pipe ME2 for outdoor units (from 68,0 kW to 168,0 kW).** ———— CZ-P1350PH2BM	**2-Pipe ME2 and Mini ECOi for indoor units (up to 22,4 kW*).** ———— CZ-P224BK2BM
2-Pipe ME2 for indoor units (from 22,4 kW to 68,0 kW*). ———— CZ-P680BK2BM	**2-Pipe ME2 for indoor units (from 68,0 kW to 168,0 kW*).** ———— CZ-P1350BK2BM	**3-Pipe MF3 for outdoor units (up to 68,0 kW).** ———— CZ-P680PJ2BM
3-Pipe MF3 for outdoor units (from 68,0 kW to 135,0 kW). ———— CZ-P1350PJ2BM	**3-Pipe MF3 for indoor units (up to 22,4 kW).** ———— CZ-P224BH2BM	**3-Pipe MF3 for indoor units (from 22,4 kW to 68,0 kW).** ———— CZ-P680BH2BM
3-Pipe MF3 for indoor units (up to 68,0 kW). ———— CZ-P1350BH2BM	**2-Pipe ME2 header pipe.** ———— CZ-P4HP4C2BM	**3-Pipe MF3 header pipe.** ———— CZ-P4HP3C2BM

* In case the total capacity of indoor units connected after distribution exceeds the total capacity of the outdoor units, select the distribution piping size for the total capacity of the outdoor units.

Heat recovery box

		
3-Pipe control Solenoid valve kit (up to 5,6 kW). CZ-P56HR3 + CZ-CAPE2. ———— KIT-P56HR3	**Solenoid valve kit (up to 5,6 kW).** ———— CZ-P56HR3	**3-Pipe control PCB.** ———— CZ-CAPE2
3-Pipe control Solenoid valve kit (from 5,6 to 16,0 kW). CZ-P160HR3 + CZ-CAPE2. ———— KIT-P160HR3	**Solenoid valve kit (from 5,6 kW to 16,0 kW).** ———— CZ-P160HR3	**3-Pipe control PCB for wall-mounted.** ———— CZ-CAPEK2
		
4 ports 3 pipe box (up to 5,6 kW per port). ———— CZ-P456HR3 **4 ports 3 pipe box (up to 16,0 kW per port).** ———— CZ-P4160HR3	**6 ports 3 pipe box (up to 5,6 kW per port).** ———— CZ-P656HR3	**8 ports 3 pipe box (up to 5,6 kW per port).** ———— CZ-P856HR3

Panels

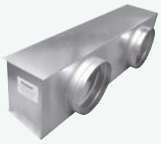
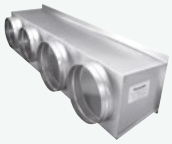
			
Standard panel for 4 way 90x90 cassette. ———— CZ-KPU3W	**Econavi panel for 4 way 90x90 cassette.** ———— CZ-KPU3AW	**Panel for 60x60 cassette - PY2 size 700 x 700 mm.** ———— CZ-KPY3AW	**Panel for 60x60 cassette - PY2 size 625 x 625 mm.** ———— CZ-KPY3BW

			
Panel for 4 way 60x60 cassette - PY3.	**Panel for 2 way cassette (for S-22 to S-56 models).**	**Panel for 2 way cassette (for S-73 model).**	**Panel for 1 way cassette.**
CZ-KPY4	CZ-02KPL2	CZ-03KPL2	CZ-KPD2

Sensors

		
Panasonic R32 refrigerant leak detector for MU2, MY2, MK2, MF3 and MM1 models.	**Econavi energy savings sensor.**	**Remote temperature sensor.**
CZ-CGLSC1	CZ-CENSC1	CZ-CSRC3

Plenums

Air inlet plenum for S . .MF3E5B, S . .MF3E5A and S . .MF2E5A 15, 22, 28, 36, 45 and 56.
CZ-DUMPA56MF2

Air inlet plenum for S . .MF3E5B, S . .MF3E5A and S . .MF2E5A 60, 73 and 90.
CZ-DUMPA90MF2

Air inlet plenum for S . .MF3E5B, S . .MF3E5A and S . .MF2E5A 106, 140 and 160.
CZ-DUMPA160MF2

Air inlet plenum for S . .MM1E5B 22, 28, 36, 45 and 56.
CZ-DUMPA22MMR2

Air outlet plenum for S . .MM1E5B 22, 28 and 36.
CZ-DUMPA22MMS2

Air outlet plenum for S . .MM1E5B 45 and 56.
CZ-DUMPA45MMS3

Air outlet plenum for S-224ME1E5A.
CZ-TREMIESPW705

Air outlet plenum for S-280ME1E5.
CZ-TREMIESPW706

* Plenums installed with an R32 Mini ECOi system may only be used when no Panasonic R32 refrigerant leak detector is required. Please refer to technical data manual for refrigerant installation requirements.

Valves

		
E2 Type high static pressure hide-away rap valve kit for 100 % Fresh air function.	**Wall-mounted external valve for model sizes 15 to 56.**	**Wall-mounted external valve for model sizes 60 to 106.**
CZ-P160RVK2	CZ-P56SVK2	CZ-P160SVK2

VRF Smart Connectivity+

		
Remote controller Panasonic Net Con, RH, No PIR, R1/R2.	**Remote controller Panasonic Net Con, RH, PIR, R1/R2.**	**Wireless ZigBee® Pro module / Green Com card.**
SER8150R0B1194	SER8150R5B1194	VCM8000V5094P

Accessories and control

Hotel Room Expansion Module 14 indoor units.

HRCEP14R

Hotel Room Controller w/ Display 42 indoor units.

HRCPDG42R

Hotel Room Controller 28 indoor units.

HRCPBG28R

Door / window wireless sensor.

SED-WDC-G-5045

Wall / ceiling (motion) wireless sensor.

SED-MTH-G-5045

CO_2 sensor.

SED-CO2-G-5045

Sensor with room temperature and humidity.

SED-TRH-G-5045

Water leakage sensor.

SED-WLS-G-5045

Cover frame. Silver.

FAS-00

Cover frame. White.

FAS-01

Cover frame. Glossy translucent white.

FAS-03

Cover frame. Light tan wood.

FAS-05

Cover frame. Dark brown wood.

FAS-06

Cover frame. Dark black wood.

FAS-07

Cover frame. Brushed steel finish.

FAS-10

Controller and touch controllers for hotels with dry contacts

Modbus RS-485 touch room controller with I/O, white.

PAW-RE2C4-MOD-WH

Touch display control with 2 digital inputs, white.

PAW-RE2D4-WH

Modbus RS-485 touch room controller with I/O, black.

PAW-RE2C4-MOD-BK

Touch display control with 2 digital inputs, black.

PAW-RE2D4-BK

Hotel sensors for dry contacts

Wall motion sensor 24 V.

PAW-WMS-DC

Wall motion sensor 240 V AC.

PAW-WMS-AC

Ceiling motion sensor 24 V.

PAW-CMS-DC

Ceiling motion sensor 240 V AC.

PAW-CMS-AC

Power supply 24 V.

PAW-24DC

Door or window contact.

PAW-DWC

Centralised controls

System controller for 64 indoor units with weekly timer.

———

CZ-64ESMC3

Central ON / OFF controller, up to 16 groups, 64 indoor units.

———

CZ-ANC3

Intelligent controller (touch screen/web server) to control up to 256 indoors with included load distribution ratio (LDR).

———

CZ-256ESMC3

Centralised controls. BMS system. PC base

P-AIMS core software: Centralised software to control up to 1024 indoor units.

———

CZ-CSWKC2

P-AIMS consumption calculation extension.

———

CZ-CSWAC2

P-AIMS BACnet extension.

———

CZ-CSWBC2

P-AIMS communication adaptor.

———

CZ-CFUNC2

P-AIMS layout display extension.

———

CZ-CSWGC2

P-AIMS web application extension.

———

CZ-CSWWC2

Panasonic AC Smart Cloud

Panasonic AC Smart Cloud. Cloud internet control. Up to 128 groups. Controls 128 units.

———

CZ-CFUSCC1

Accessories interfaces

Modbus RTU and TCP interface for 16 indoor units.

———

PAW-AC2-MBS-16P

Modbus RTU and TCP interface for 64 indoor units.

———

PAW-AC2-MBS-64P

Modbus RTU and TCP interface for 128 indoor units.

———

PAW-AC2-MBS-128P

KNX interface for 16 indoor units.

———

PAW-AC2-KNX-16P

KNX interface for 64 indoor units.

———

PAW-AC2-KNX-64P

BACnet IP and MSTP interface for 16 indoor units.

———

PAW-AC2-BAC-16P

BACnet IP and MSTP interface for 64 indoor units.

———

PAW-AC2-BAC-64P

BACnet IP and MSTP interface for 128 indoor units.

———

PAW-AC2-BAC-128P

Accessories and control

Commercial Wi-Fi Adaptor.

———
CZ-CAPWFC1

KNX interface.

———
PAW-RC2-KNX-1i

Modbus RTU interface.

———
PAW-RC2-MBS-1

Modbus RTU interface to control 4 indoor/groups.

———
PAW-RC2-MBS-4

BACnet IP and MSTP.

———
PAW-RC2-BAC-1

RAC interface adapter for integration into S-Link, plus external input and alarm/ status output.

———
CZ-CAPRA1

LonWorks® Interface controls up to 16 groups and 64 indoor units.

———
CZ-CLNC2

Centralised controls. Connection with general equipment

Adaptor for ON / OFF control of external devices.

———
CZ-CAPC3

Mini series parallel device controlling indoor units, maximum 1 group and 8 indoor unit.

———
CZ-CAPBC2

Communication Adaptor. Up to 128 groups. Controls 128 units.

———
CZ-CFUNC2

Individual controls

CONEX wired remote controller (non-wireless).

———
CZ-RTC6

CONEX wired remote controller with Bluetooth®.

———
CZ-RTC6BL

Design wired remote controller with Econavi function.

———
CZ-RTC5B

Infrared remote controller and receiver for 4 way 90x90 cassette.

———
CZ-RWS3 + CZ-RWRU3W

Infrared remote controller for wall-mounted, 4 way 60x60 with panel and floor console.

———
CZ-RWS3

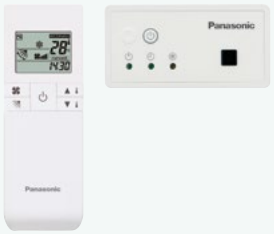
Infrared remote controller and receiver for 4 way 60x60 cassette PY3 with panel.

———
CZ-RWS3 + CZ-RWRY3

Infrared remote controller and receiver for 2 way cassette.

———

CZ-RWS3 + CZ-RWRL3



Infrared remote controller and receiver for 1 way cassette.

———

CZ-RWS3 + CZ-RWRD3

Infrared remote controller and receiver for ceiling.

———

CZ-RWS3 + CZ-RWRT3

Infrared remote controller and receiver for all indoor units.

———

CZ-RWS3 + CZ-RWRC3

Accessories PCB

T10 interface PCB with digital and relay connections.

———

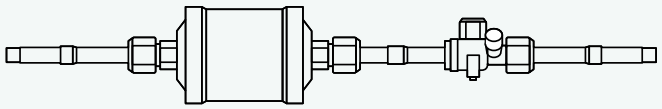
PAW-T10

PCB for fan speed control of external EC Fan.

———

PAW-ECF

R-22 Replacement Kit



Replacement kit for R-22.

———

CZ-SLK2

Accessories cables

Cable for all the T10 functions.

———

CZ-T10

Cable to operate external EC fan.

———

PAW-FDC

Cable for all option monitoring signals.

———

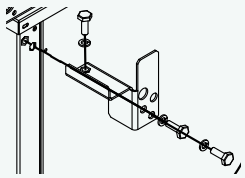
PAW-OCT

Cable with force thermo OFF/ leakage detection.

———

PAW-EXCT

Water heat exchanger accessories



Stacking kit for vertically stacking up to 3 WHE (4 pieces per Kit).

———

PAW-3WSK

PRO-HT Tank accessories

Tank Controller for ECOi system.

———

PAW-VP-RTC5B-VRF

Expansion valve kit 16 kW.

———

PAW-VP-VALV-160

Expansion valve kit 28 kW.

———

PAW-VP-VALV-280

Dimensions and tube sizes of branches and headers for 2-Pipe ECOi EX ME2 and Mini ECOi Series

Optional distribution joint kits

See the installation instructions packaged with the distribution joint kit for the installation procedure.

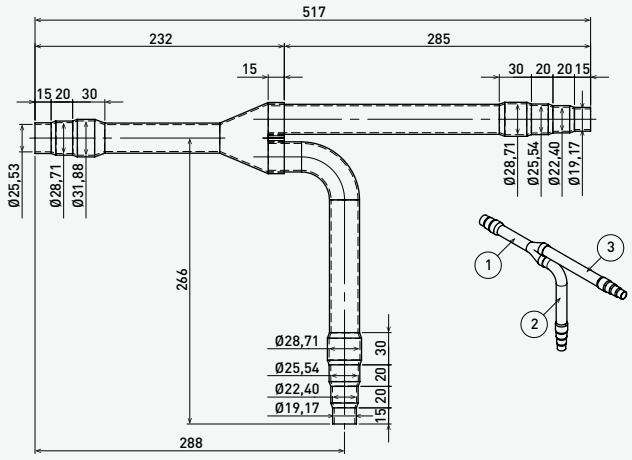
* In case the total capacity of indoor units connected after distribution exceeds the total capacity of the outdoor units, select the distribution piping size for the total capacity of the outdoor units.

Model name	Cooling capacity after distribution	Remarks
1. CZ-P680PH2BM	Up to 68,0 kW	For outdoor unit
2. CZ-P1350PH2BM	From 68,0 kW to 168,0 kW	For outdoor unit
3. CZ-P224BK2BM*	Up to 22,4 kW	For indoor unit
4. CZ-P680BK2BM*	From 22,4 kW to 68,0 kW	For indoor unit
5. CZ-P1350BK2BM*	From 68,0 kW to 168,0 kW	For indoor unit

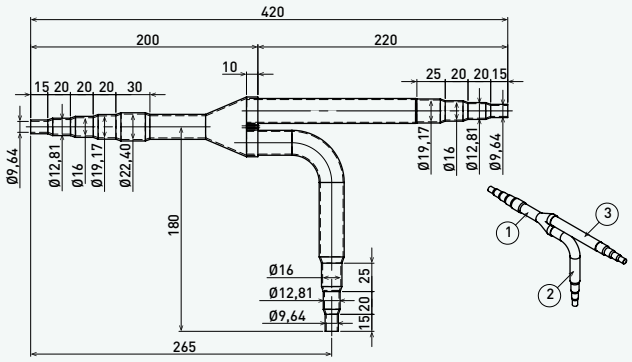
Tubing size (with thermal insulation)

1. CZ-P680PH2BM: For outdoor unit side (capacity after distribution joint up to 68,0 kW).

Gas piping



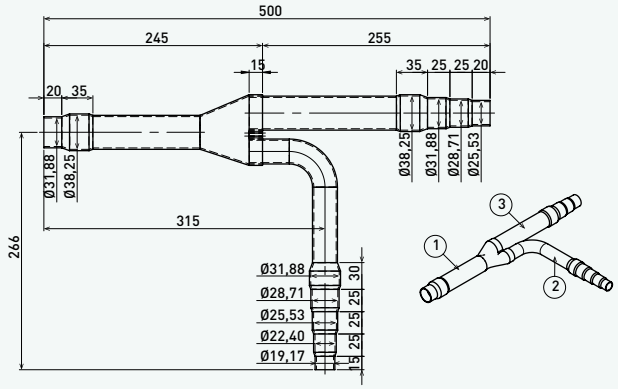
Liquid piping



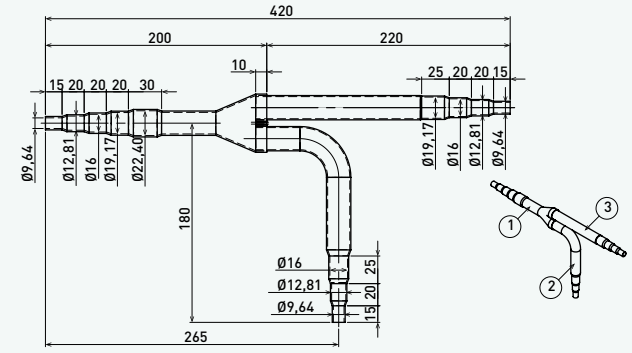
Unit: mm

2. CZ-P1350PH2BM: For outdoor unit side (capacity after distribution joint is from 68,0 kW to 168,0 kW).

Gas piping



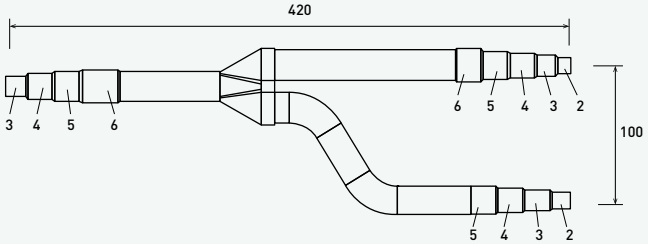
Liquid piping



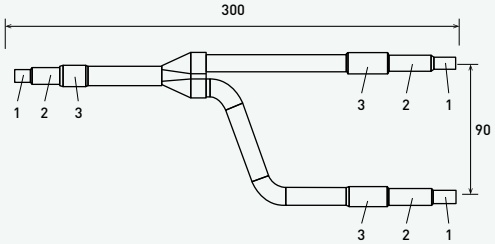
Unit: mm

3. CZ-P224BK2BM: For indoor unit side (capacity after distribution joint up to 22,4 kW).

Gas piping



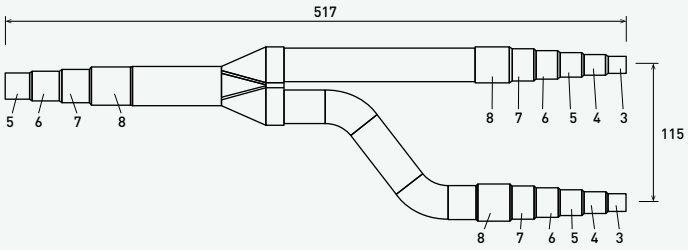
Liquid piping



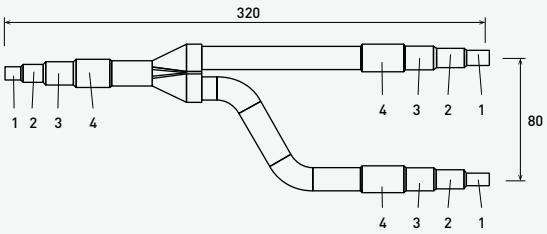
Unit: mm

4. CZ-P680BK2BM: For indoor unit side (capacity after distribution joint is from 22,4 kW to 68,0 kW).

Gas piping



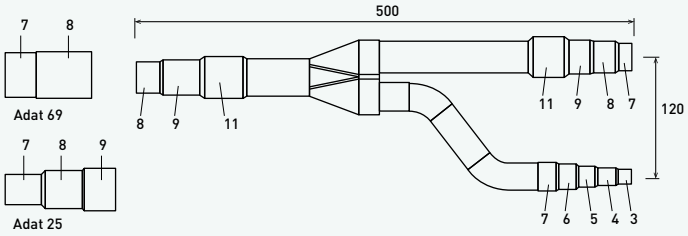
Liquid piping



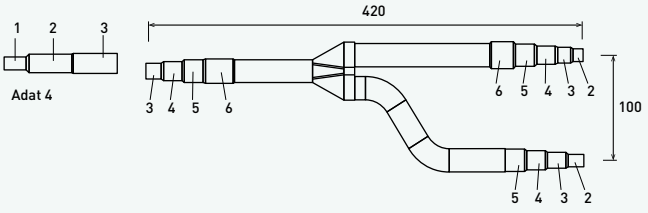
Unit: mm

5. CZ-P1350BK2BM: For indoor unit side (capacity after distribution joint is from 68,0 kW to 168,0 kW).

Gas piping



Liquid piping

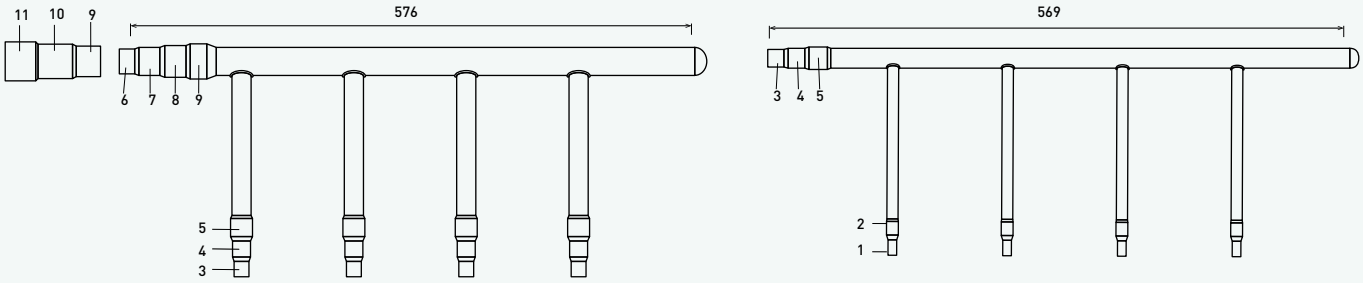


Unit: mm

Size of connection point on each part (shown are inside diameters of piping)														
Diameters		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Dimension	Inch	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	2
	mm	6,35	9,52	12,70	15,88	19,05	22,40	25,40	28,57	31,75	34,92	38,10	41,28	44,45	50,80

Header pipe set

CZ-P4HP4C2BM

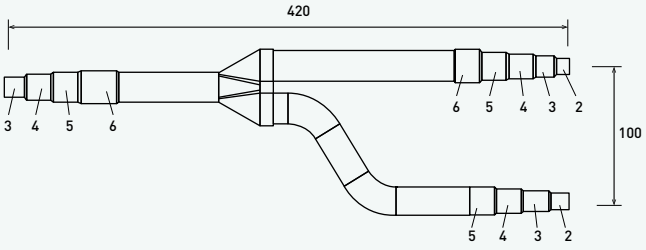


Size of connection point on each part (shown are inside diameters of piping)												
Diameters		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dimension	Inch	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2
	mm	6,35	9,52	12,70	15,88	19,05	22,40	25,40	28,57	31,75	34,92	38,10

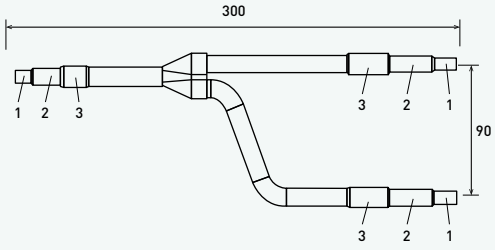
Distribution joint Kits for Mini ECOi LE/LZ Series

CZ-P224BK2BM: For indoor unit side (capacity after distribution joint up to 22,4 kW).

Gas piping



Liquid piping



Unit: mm

Size of connection point on each part (shown are inside diameters of piping)							
Diameters		**1**	**2**	**3**	**4**	**5**	**6**
Dimension	Inch	1/4	3/8	1/2	5/8	3/4	7/8
	mm	6,35	9,52	12,70	15,88	19,05	22,40

Dimensions and tube sizes of branches and headers for 3-Pipe ECOi EX MF3 Series

Optional distribution joint kits

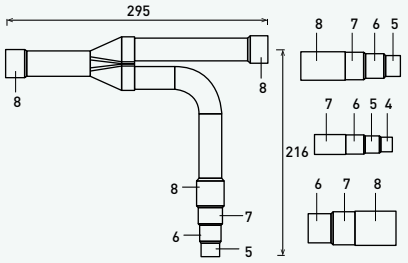
See the installation instructions packaged with the distribution joint kit for the installation procedure.

Model name	Cooling capacity after distribution	Remarks
1. CZ-P680PJ2BM	Up to 68,0 kW	For outdoor unit
2. CZ-P1350PJ2BM	From 68,0 kW to 135,0 kW	For outdoor unit
3. CZ-P224BH2BM	Up to 22,4 kW	For indoor unit
4. CZ-P680BH2BM	From 22,4 kW to 68,0 kW	For indoor unit
5. CZ-P1350BH2BM	From 68,0 kW to 135,0 kW	For indoor unit

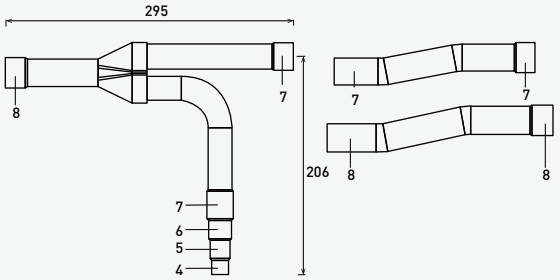
Piping size

1. CZ-P680PJ2BM: For outdoor unit side (capacity after distribution joint up to 68,0 kW).

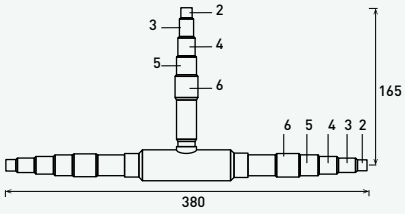
Gas piping



Discharge piping



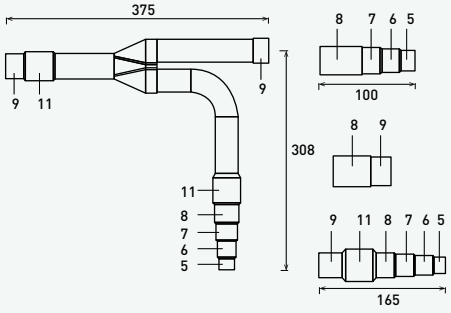
Liquid piping



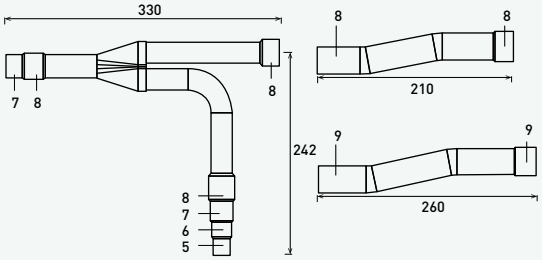
Unit: mm

2. CZ-P1350PJ2BM: For outdoor unit side (capacity after distribution joint is from 68,0 kW to 135,0 kW).

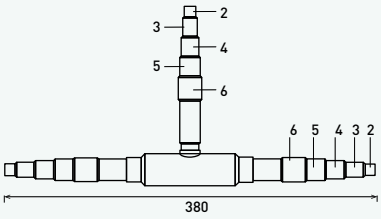
Suction piping



Discharge piping



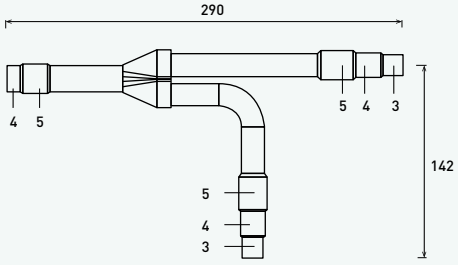
Liquid piping



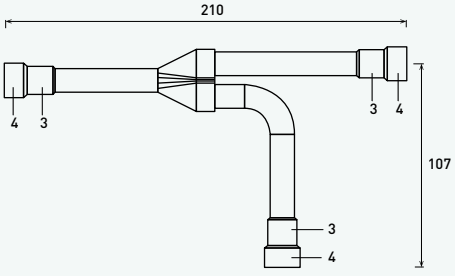
Unit: mm

3. CZ-P224BH2BM: For indoor unit side (capacity after distribution joint up to 22,4 kW).

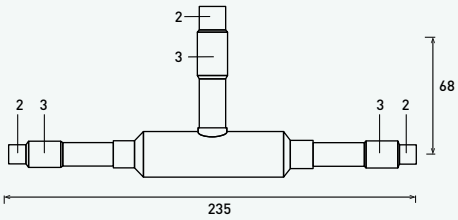
Suction piping



Discharge piping



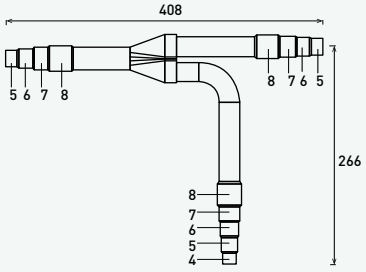
Liquid piping



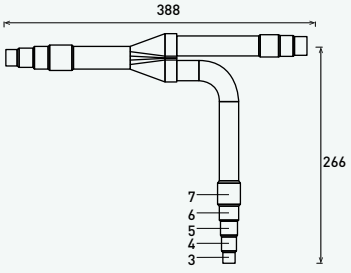
Unit: mm

4. CZ-P680BH2BM: For indoor unit side (capacity after distribution joint is from 22,4 kW to 68,0 kW).

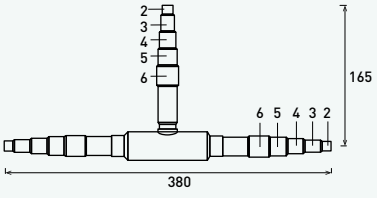
Suction piping



Discharge piping

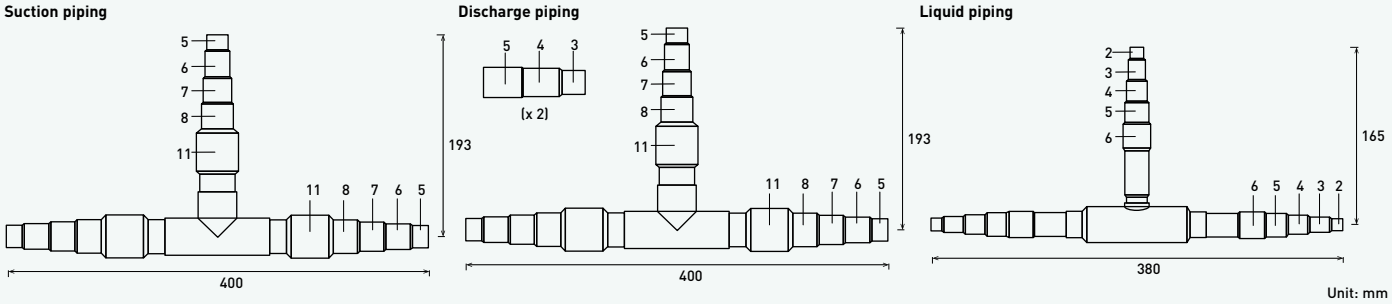


Liquid piping



Unit: mm

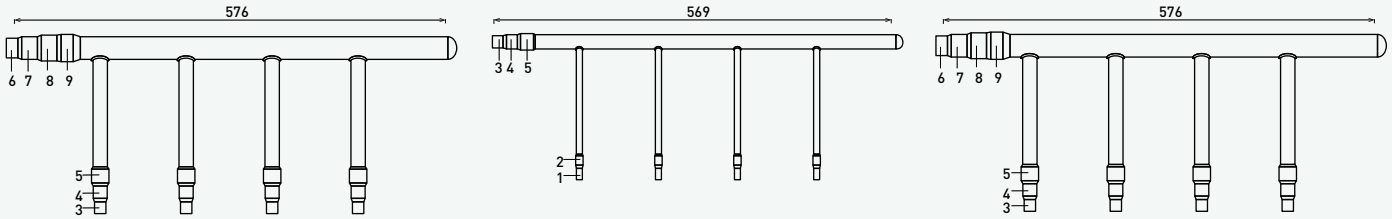
5. CZ-P1350BH2BM: For indoor unit side (capacity after distribution joint is from 68,0 kW to 135,0 kW).



Size of connection point on each part (shown are inside diameters of piping)														
Diameters		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Dimension	Inch	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	2
	mm	6,35	9,52	12,70	15,88	19,05	22,40	25,40	28,57	31,75	34,92	38,10	41,28	44,45	50,80

Header pipe set

CZ-P4HP3C2BM



Size of connection point on each part (shown are inside diameters of piping)											
Diameters		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dimension	Inch	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2
	mm	6,35	9,52	12,70	15,88	19,05	22,40	25,40	28,57	31,75	34,92	38,10

Energy saving

R32

Refrigerant gas. R32 Our heat pumps containing the refrigerant R32 show a drastic reduction in the value of Global Warming Potential (GWP).

28% ECONAVI

Commercial Econavi. Intelligent Human Activity Sensor and new Sunlight Sensor technologies that can detect and reduces the waste of energy by optimising air conditioner operation according to room conditions. With just one touch of a button, you can save energy.

INVERTER+

Inverter Plus System classification highlights Panasonic's highest performing systems.

R2 ROTARY COMPRESSOR

Panasonic R2 Rotary Compressor. Designed to withstand extreme conditions, it delivers high performance and efficiency.

ALL INVERTER COMPRESSORS

All inverter compressors. Multiple large-capacity all inverter compressors (more than 14 HP).Two independently controlled inverter compressors achieve high efficiency. Redesigned components in the body provide performance improvement especially in the rated cooling condition and EER performance.

HIGH COP

High efficiency models performs higher COP than standard units and standard combinations.

ErP

ERP 2018: compliant following COMMISSION REGULATION (EU) No2016/2281.

High performance and indoor air quality

nanoeX

nanoe™ X. Technology with the benefits of hydroxyl radicals has the capacity to inhibit pollutants, viruses, and bacteria to clean and deodorise.

HUMIDITY CONTROL DRY

Mild Dry. By intermittent control of compressor and indoor unit's fan, "Mild Dry" gives you comfort. It realizes efficient dehumidification according to room temperature.

FILTER INCLUDED

Filter included. Hide-away with filter included.

BLUEFIN

Bluefin. Panasonic has extended the life of its condensers with an original anti-rust coating.

LARGE FAN

Large fan provides larger air flow rate and very quiet operation at low speed.

AUTOMATIC FAN

Automatic fan operation. Convenient microprocessor control automatically adjusts fan speed to High, Medium or Low, corresponding to room sensor and maintains comfortable air flow throughout the room.

SELF-DIAGNOSING

Self-diagnosing function. By using electronic control valves past warnings are stored. This makes it easier to diagnose malfunctions, reducing service labour and therefore costs.

AUTO-FLAP CONTROL

Comfortable auto-flap control. When the unit is first turned on, flap position is automatically adjusted in accordance with the cooling or heating operation.

AUTOMATIC RESTART

Automatic restart. Automatic restart function for power failure. Even when power failure occurs, preset programmed operation can be reactivated once power is resumed.

CE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Quality Management System Certificate

ISO 9001: 2015
Panasonic Appliances Air-Conditioning Malaysia. Sdn.Bhd.
Cert. No.: QMS 00413

GB/T 19001-2016/ISO 9001: 2015
Panasonic Appliances Air-Conditioning (GuangZhou) Co., Ltd.
Registration Number: 01218Q30835R8L

Environmental Management System Certificate

ISO 14001: 2015
Panasonic Appliances Air-Conditioning Malaysia Sdn.Bhd.
Cert. No.: EMS 00109

GB/T 24001-2016/ISO 14001: 2015
Panasonic Appliances Air-Conditioning (GuangZhou) Co., Ltd.
Registration Number: 02118E10944R7M

Air Sweep. The air sweep function moves the flap up and down in the air outlet, directing air in a “sweeping” motion around the room and providing comfort in every corner.

Built-in drain pump. Maximum head 50cm (or 75cm for U type) from the bottom of the unit.

Down to -10 °C in cooling mode. The air conditioner works in cooling mode when the outdoor temperature of -10 °C.

Down to -25 °C in heating mode. The air conditioner works in heat pump mode when the outdoor temperature is as low as -25 °C.

-20 °C operating range. The PRO-HT Tanks work with an outdoor temperature is as low as -20 °C.

Cooling with outdoor temperature up to 52 °C. The ECOi EX system works in cooling mode with performance data at outdoor temperature up to 52 °C.

DHW. You can also heat your domestic hot water at a very low cost with the optional hot water cylinder.

45 °C Output water. Maximum water outlet temperature up to 45 °C.

R410A/R22 renewal. The Panasonic renewal system allows good quality existing R410A or R22 pipe work to be re-used whilst installing new high efficiency R32 systems.

R22 renewal. The Panasonic renewal system allows good quality existing R22 pipe work to be re-used whilst installing new high efficiency R410A systems.

High connectivity

Domestic integration to S-Link - CZ-CAPRA1. Can connect RAC range to S-Link. Full control is now possible.

Internet control. A next generation system providing user-friendly remote control of air conditioning or heat pump units from everywhere, using a simple Android™ or iOS smartphone, tablet or PC via the internet.

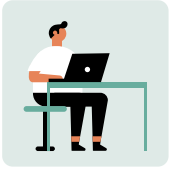
Connectivity. The communication port can be integrated into the indoor unit and provides easy connection to, and control of, your Panasonic heat pump to your home or building management system.

Panasonic AC Smart Cloud. The AC Smart Cloud from Panasonic allows you to have complete control of all your installations. In a simple click, receive status updates from all your units in real-time, preventing breakdowns and optimising costs.

5 Years compressor warranty. We guarantee the outdoor unit compressors in the entire range for five years.

Panasonic Heating & Cooling Solutions customer service

If your end customer is seeking further support from Panasonic directly, please forward the following ways to contact us:



Use our European website **www.aircon.panasonic.eu** for contacting us.
Panasonic has implemented a new contact page on the Panasonic Heating & Cooling Solutions website for potential or existing Panasonic customers.

Another option is to contact the highly experienced teams at the Panasonic call centres, who are more than qualified to support Panasonic clients in 13 different languages across Europe.

Our call centres in Europe for end customers:

Country	Phone number	Opening times
Belgium	+32 2 320 55 38	Mo-Fr 9-17h
Denmark	+45 89 87 45 00	Mo-Fr 9-17h
Finland	+35 8646041590	Mo-Fr 9-17h
France	0800 805 215	Mo-Fr 9-17h
Germany	+49 611 71187211	Mo-Sat 7-18h
Hungary	+36 1 700 89 65	Mo-Fr 9-17h
Ireland	1800 939 977	Mo-Fr 9-17h
Italy	+39 2 6433235	Mo-Fr 9-17h
Luxembourg	+32 2 320 55 38	Mo-Fr 9-17h
Netherlands	+31 73 6402 538	Mo-Sat 7-18h

Country	Phone number	Opening times
Norway	+47 69 67 61 00	Mo-Fr 9-17h
Poland	800 080 911	Mo-Fr 9-17h
Portugal	800 78 22 20	Mo-Fr 9-17h
Spain	+34 900 828 787	Mo-Fr 9-17h
Sweden	+46 85 221 81 00	Mo-Fr 9-17h
Switzerland DE	+41 415615366	Mo-Fr 9-17h
Switzerland FR	+41 435880049	Mo-Fr 9-17h
Switzerland IT	+41 435880048	Mo-Fr 9-17h
United Kingdom	0808 208 2115	Mo-Fr 9-17h

www.aircon.panasonic.eu

heating & cooling solutions

Do not add or replace refrigerant other than the specified type. Manufacturer is not responsible for the damage and deterioration in safety due to usage of the other refrigerant.
The outdoor units in this catalogue contains fluorinated greenhouse gases with a GWP higher than 150.

Panasonic®

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

Panasonic Nordic
Branch of Panasonic Marketing Europe GmbH, Germany
Panasonic Heating & Ventilation Air-conditioning Europe
Sundbybergsvägen 1, SE-171 73 Solna, SWEDEN

NE/EN-CATCAC1022/01