

Panasonic
BUSINESS

NEW

ECOi EX System

VRF Air Conditioning Systems

ECO i

EX
Eco Extreme



**Building Passion,
Building Solutions.**
Panasonic Air Conditioning Systems



THE GAME CHANGER



VRF with Extraordinary Energy-Saving
Performance and Powerful Operations



Advantages

1 Exceptional performance at any occasion

Extraordinary **EER** throughout the capacity ranges
Top Class Cooling
EER at 100% Full Load capacity

Extraordinary **ESEER** throughout the capacity ranges
Highest Cooling
ESEER
Part Load capacity

Extraordinary **COP** throughout the capacity ranges
Top Class Heating
COP at 100% Full Load capacity

 Minimizes oil recovery
Intelligent 3-stage Oil Management System –

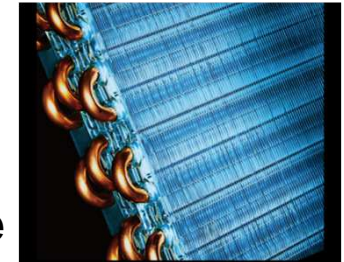
2 Powerful Operation range

52°C Extended operation range
- 25°C - 25 heating to 52°C cooling

43°C Keep 100% capacity until 43°C

3 Powerful but Gentle

Low-Noise design
53dB(A) at 8HP



Enlarged heat exchanger surface area with triple surface



Multiple large-capacity all inverter compressors



Newly designed curved air discharge bell mouth for better aerodynamics

1 The highest EER rating in all outdoor capacities

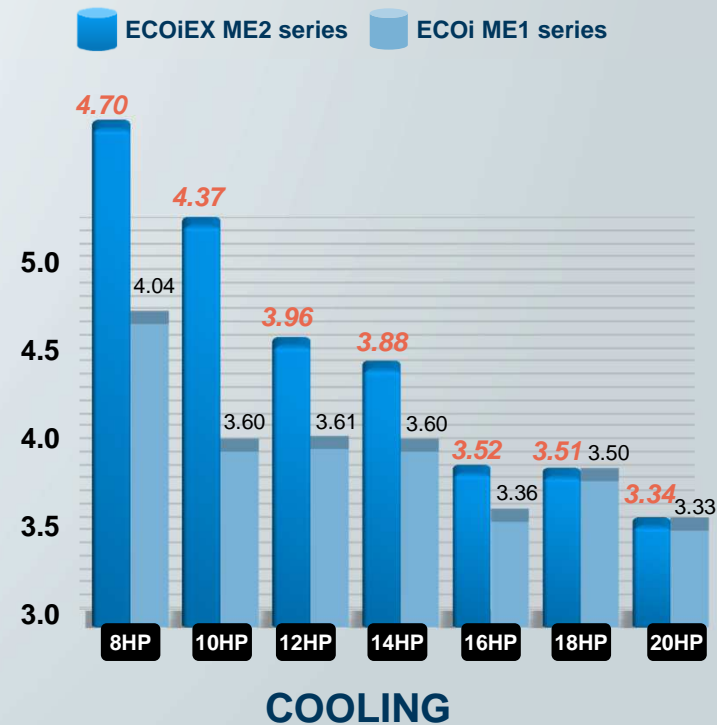


Excellent energy saving

Compared to conventional model ECOi [ME1]

The ECOi-EX marks a revolutionary step forward in VRF efficiency. A look at the incredible EER value clearly indicates that. What's more, this high EER value is achieved even during part load operation.

This shows the extraordinary energy-saving performance the ECOi-EX is capable of providing.



3 The highest COP rating in all outdoor capacities



Excellent energy saving

Compared to conventional model ECOi [ME1]

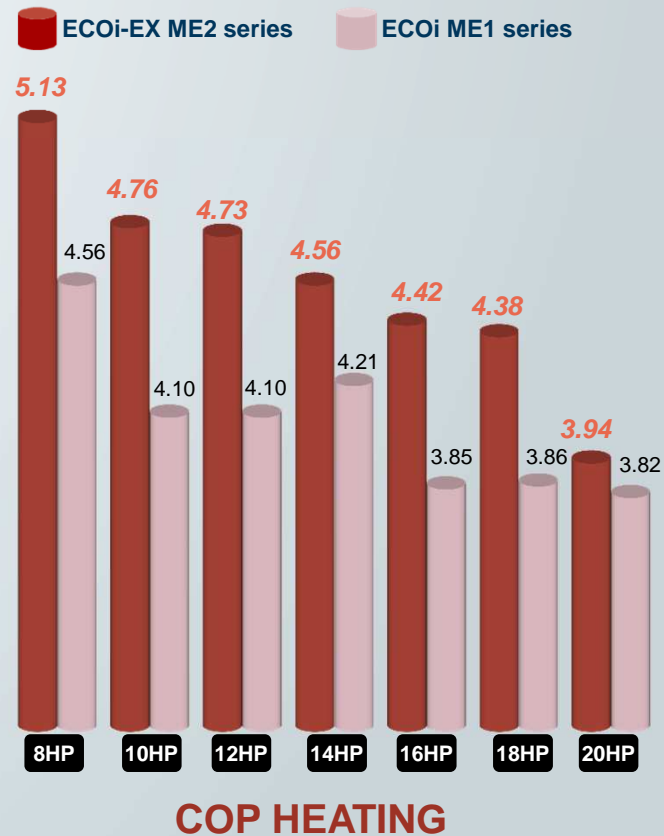
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Extraordinary

COP

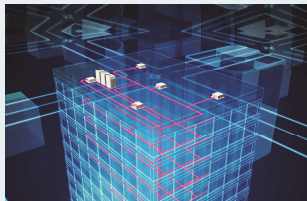
throughout
the capacity ranges



Practical Design for Actual Operation

Panasonic builds air conditioning systems not only with a high EER for rated operation, but also with Seasonal-EER appropriate to the customer's actual environment of use.

Rapidly reaches set temperature full-load operation duration minimised



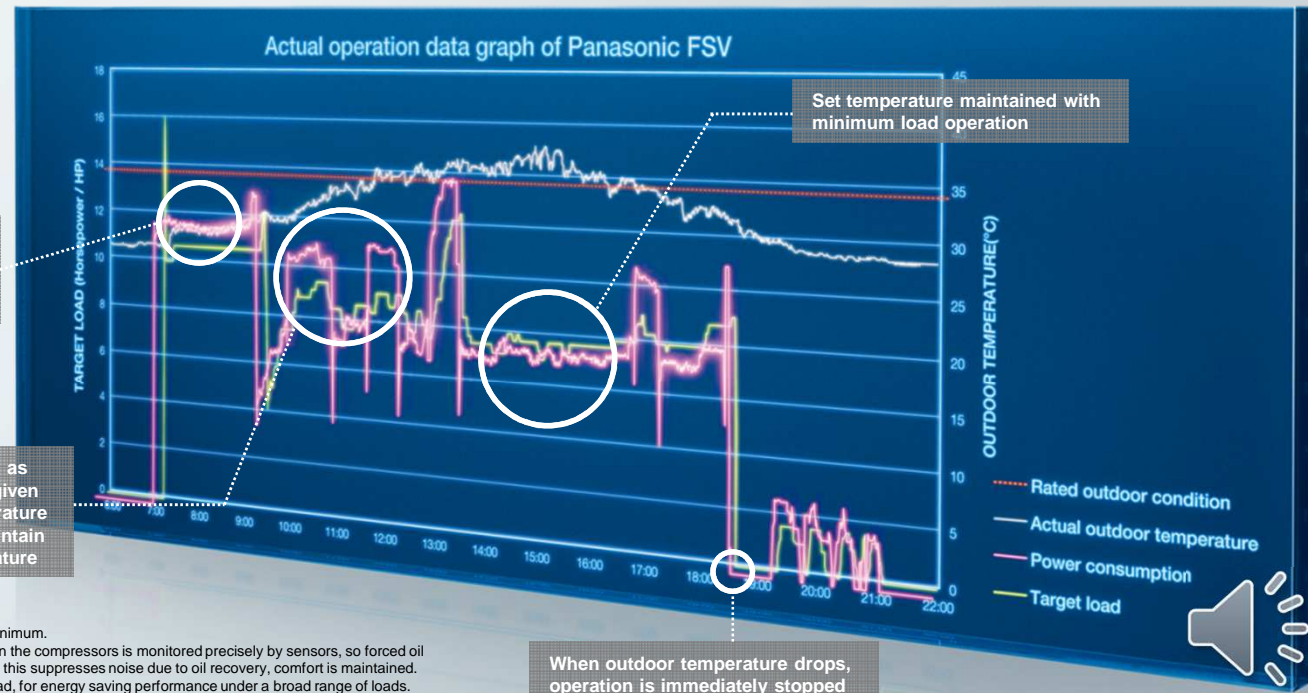
Load increased as required for a given outdoor temperature increase to maintain the set temperature

1. Set temperature is rapidly attained; full-load operating time is kept to a minimum.
2. The frequency of forced oil recovery is minimised. The volume of oil within the compressors is monitored precisely by sensors, so forced oil recovery under full-load operation is conducted only when necessary. Since this suppresses noise due to oil recovery, comfort is maintained.
3. Panasonic pursues a high EER, of course, as well as high EER in part load, for energy saving performance under a broad range of loads. Panasonic's design concept contributes to substantial energy cost reductions.

Actual performance data of Panasonic ECOi-EX

Simulated conditions

Location: Panasonic building in Malaysia System: One 16HP outdoor unit, 4 cassette-type indoor units



7 Strong at High and Low ambient condition



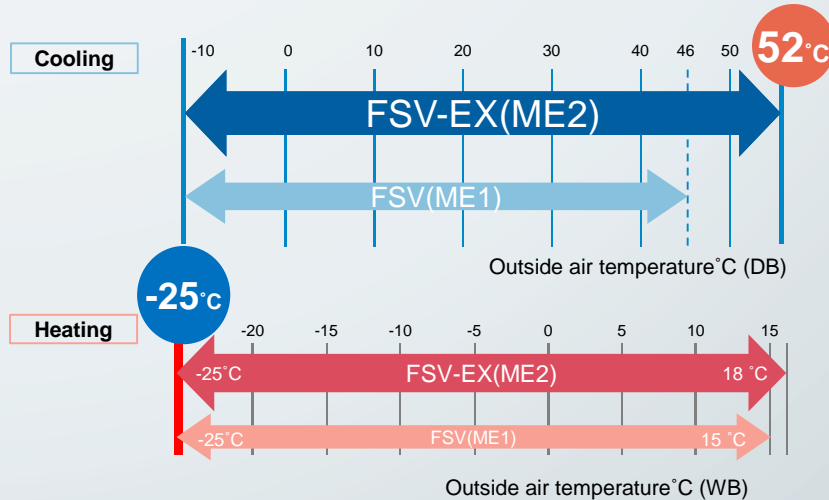
Trusted reliability even under High and Low temperature conditions

Designed to be durable enough to withstand extreme heat, ECOi EX ensures reliable cooling operation over an extended operation range up to 52°C, and heating operation down to minus 25°C

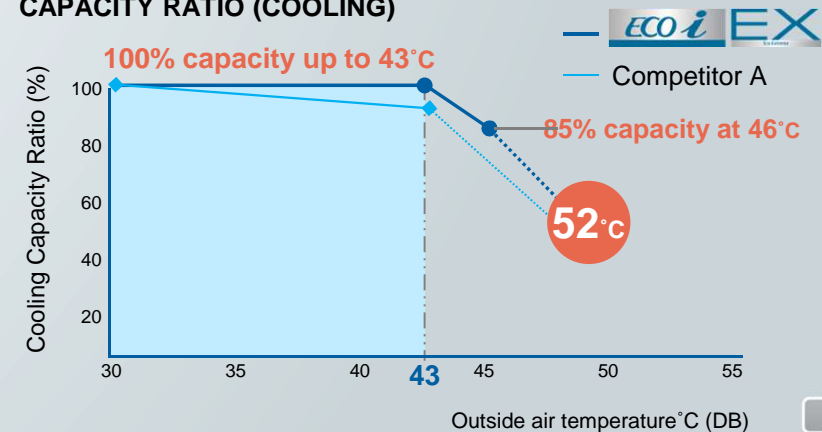
Full-capacity Operation up to 43°C for cooling

The ECOi-EX can provide cooling even when the outside temperature reaches a maximum of about 52 °C. And amazingly, it can still operate at 100% capacity when the outside temperature is as high as 43 °C. This high power capability enables reliable operation even under extremely high temperature conditions.

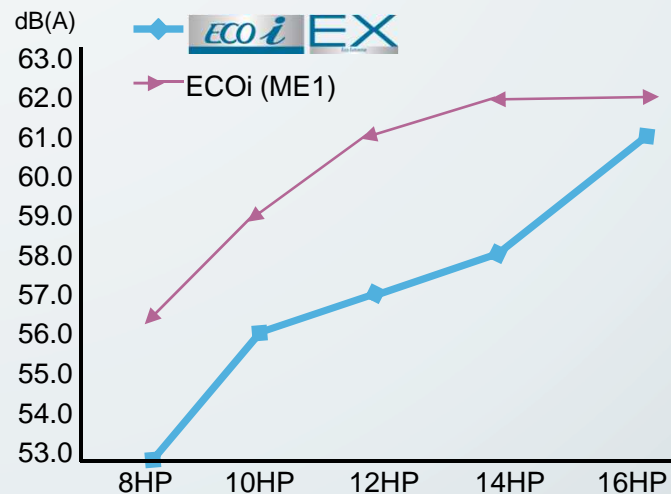
OPERATING RANGE



CAPACITY RATIO (COOLING)

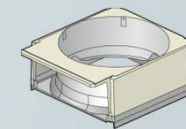


Numerous technological innovations, including an improved compressor and a newly designed bell mouth and larger fan, have dramatically reduced the outdoor noise level. The result is an even more comfortable building environment.

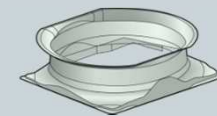


Newly designed curved air discharge bell mouth for better aerodynamics

The new curved shape with integrated top and bottom assure smooth exhaust flow. This gives more air-volume with same sound level, less power input at same air-volume.



Conventional model
ECOi[ME1]



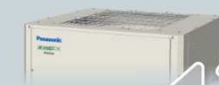
New model
ECOi-EX[ME2]

Large air discharge area with new flush surface top panel

To reduce air resistance, instead of a tubular fan design, a new large flat fan guard design, flush with the top panel, is employed. This design lead to the improvements in air resistance, but also contributed to better appearance designing.



Conventional model
ECOi[ME1]



New model
ECOi-EX[ME2]

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Enlarged heat exchanger surface area with triple surface



The new heat exchanger features a triple-surface construction. Compared to the divided dual-surface construction in current models, there is no division of space and the area for heat exchange is larger. Also, highly efficient piping pattern increases heat exchange performance by 5%.

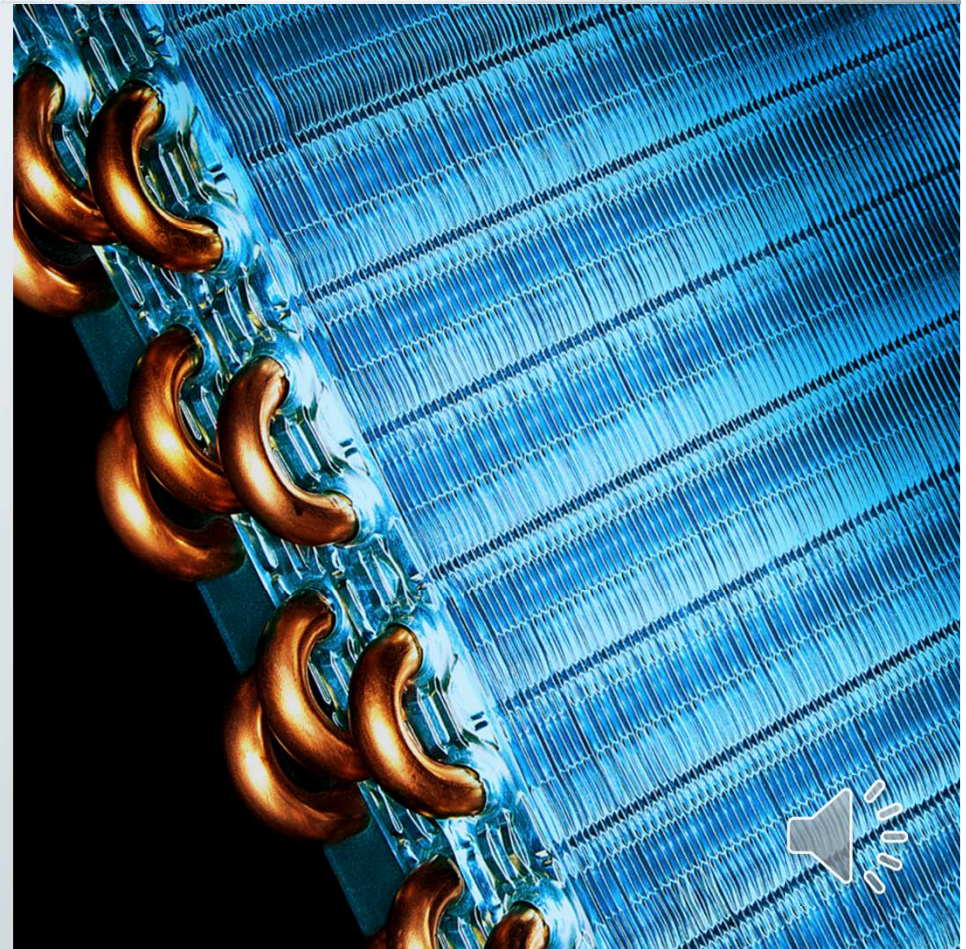
* For 8 & 10HP unit, the heat exchanger is 2 row design.



Conventional model
ECOi[ME1]



New model
ECOi-EX[ME2]





Extraordinary energy-saving performance

Multiple large-capacity
all inverter compressors
(more than 14HP)

Two independently controlled inverter compressors achieve high efficiency. Redesigned components in the body provide performance improvement especially in the EER/COP/ESEER performance.



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