

Panasonic



PANASONIC CONDENSING UNITS WITH NATURAL REFRIGERANT

The new environmentally friendly
CO₂ condensing units for commercial
refrigeration.



heating & cooling solutions

Choose the sustainable green solution by Panasonic

Environmentally friendly CO₂ condensing units.



CO ₂ condensing units - CR Series				
MT/LT Type	MT Type	MT/LT Type	MT Type	MT/LT Type
Capacity range (kW)				
4 (MT) / 2 (LT)	7,5	8 (MT) / 4 (LT)	15	16 (MT) / 8 (LT)
Low temperature				
✓	—	✓	—	✓
Medium temperature				
—	✓	✓	—	✓
High Temperature				
—	—	—	—	—
Heat recovery port				
—	✓	✓	—	✓
ET (Evaporation Temperature) set points range				
-45 ~ -5 °C	-20 ~ -5 °C	-45 ~ -5 °C	-20 ~ -5 °C	-45 ~ -5 °C
Room size example (m²)*				
40 (MT) / 10 (LT)	80	80 (MT) / 20 (LT)	200	200 (MT) / 50 (LT)

* Room size is reference. Please contact to authorized Panasonic dealer for calculation.



Energy saving



Natural CO₂ / R744.
R744 refrigerant provides higher energy saving and lower CO₂ emission compared to R404A. Zero ODP and GWP=1 means natural substance.



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



High efficiency compressor.
Powerful 2-stage CO₂ rotary compressor by Panasonic. It delivers high performance all year around.

High connectivity



BMS connectivity.
The system can be supervised with major monitoring system.

High performance and comfortability



Super quiet.
Systems operate extremely quiet. Minimum 33 dB(A) @10 m with 4 HP model.



Operating range up to 43 °C.
The system operates up to 43 °C, allowing for installation in various locations.



Anti corrosion coating.
Selectable fin type with or without an anti corrosion coating. The anti corrosion coating prevents salt damage for a longer lifespan.



Heat recovery port.
The heat recovery port is available to cut running costs as optional. By utilizing exhausted heat generated by refrigeration to the energy source for heating.



Automatic fan.
Microprocessor control automatically adjusts the outdoor fan speed in CO₂ systems for efficient operation.



2 Years compressor warranty.
We guarantee the outdoor unit compressors in the entire range for 2 years.

Why CO₂?: Natural refrigerant

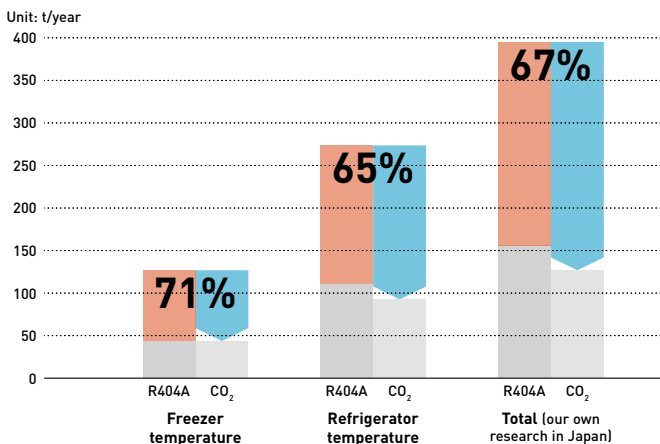
EU F-Gas regulation is a key priority for European countries. It ensures compliance with the Kigali Amendment supporting international climate commitments on greenhouse gases and leading the global transition to climate-friendly HFC-free technologies. Carbon dioxide (R744) is regaining its place in the refrigeration world. Driven by environmental concerns, legislation now requires increased adoption of 'alternative' refrigerants, such as CO₂. CO₂ is an environmentally-friendly solution, with zero ODP and "GWP" (Global Warming Potential)=1 means natural substance in the atmosphere.

In Europe a step-by-step HFC reduction has been in place since the F-Gas regulation was introduced in 2015. Countries all over the world have actively been preparing to enact the necessary domestic legislation to implement the agreement to reduce the use of HFCs. Panasonic is now able to provide a solution in Europe with CO₂ refrigeration systems to prevent global warming and to support environment-friendly retail operations. The following table shows how well R744 (CO₂) performs regarding environmental impact and safety.

ODP (Ozone Depletion Potential) = 0 - GWP (Global Warming Potential) = 1.

	Next generation refrigerant			Current refrigerant	
	CO ₂	Ammonia	Isobutane	R410A	R404A
ODP	0	0	0	0	0
GWP	1	0	4	2090	3920
Flammability	Non flammable	Light flammable	Flammable	Non flammable	Non flammable
Toxicity	No	Yes	No	No	No

Comparison of CO₂ emissions



ENERGY SAVING
25,4 % Freezer
16,2 % Refrigeration

CO₂ EMISSION
67 % Reduction

Direct influence ¹⁾ Indirect influence ²⁾

1) Direct influence presents the effect of refrigerant leakage comparing R744 (CO₂) with R404A.
2) Indirect influence presents CO₂ emissions linked to power consumption of CO₂ unit and conventional units.

By Panasonic research in Japan. Comparing 6 shops average for R404A inverter multi condensing unit.

Natural solution with high energy saving

Panasonic CO₂ condensing units with natural refrigerant: The environmentally friendly and reliable solution for convenience stores, supermarket, gas stations and cold rooms.



CO₂ transcritical condensing units - CR Series

4 HP MT/LT Type, a new line-up in CR Series, offers a wide range of refrigeration systems, meeting the specific needs of small retail stores.



1 Superior efficiency with reliable quality

- Panasonic has combined the 2-stage compressor with the split cycle for increased efficiency
- High seasonal performance. SEPR: Maximum 3,83 in cooling, 1,92 in freezing ¹⁾
- High COP at high ambient temperature

1) 200VF5A.

2 Flexible installation

- Set-points at medium or low temperature available depending on applications
- Compact unit
- Silent operation
- Long piping length: Maximum 100 m ²⁾
- High external static pressure ²⁾
- Transfer pressure control for stable electric expansion valve control in showcases ²⁾

2) 1000VF8/8A.

3 Heat recovery port as renewable energy

- Maximum 16,7 kW of heating for free
- Optional possibility to get subsidy (depending on location)
- Easy connection process

Superior cooling capacity at each evaporating temperature

CO₂ transcritical condensing units have a high cooling capacity at each set point. The CO₂ 2-stage compressor developed by Panasonic is designed to compress CO₂ refrigerant twice; it reduces the load in operation by half (compared to 1-stage refrigerant compression) and delivers increased durability and reliability.

Units can be programmed to run at low and medium temperatures at initial set-up. These settings can then be modified by turning a simple and user friendly rotary switch to further enhance energy savings.

MT/LT TYPE
200VF5A - 4 kW / 2 kW

MT TYPE
400VF8 - 7,5 kW

MT TYPE
1000VF8 - 15 kW

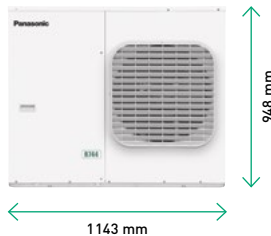
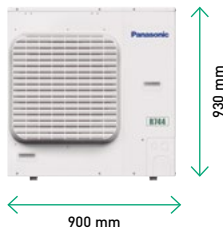
NEW MT/LT TYPE
400VF8A - 8 kW / 4 kW

MT/LT TYPE
1000VF8A - 16 kW / 8 kW

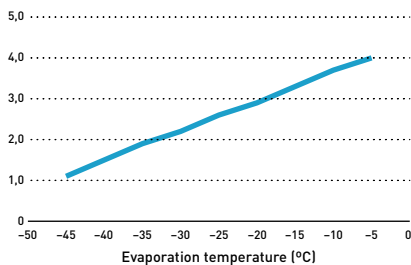
3,83
SEPR
COOLING*

1,92
SEPR
FREEZING*

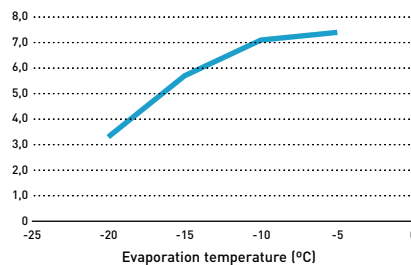
* SEPR values has been tested at 3-part laboratory.



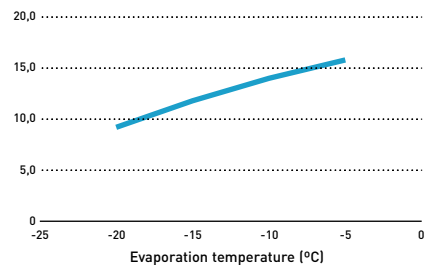
OCU-CR200VF5A(SL) ¹⁾.
Cooling capacity (kW)



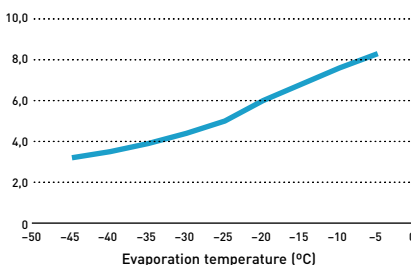
OCU-CR400VF8(SL) ²⁾.
Cooling capacity (kW)



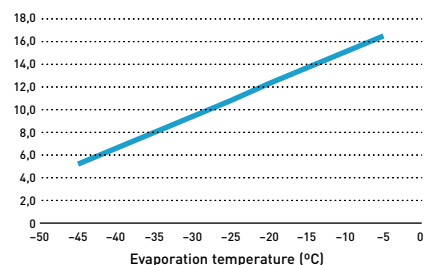
OCU-CR1000VF8(SL) ²⁾.
Cooling capacity (kW)



OCU-CR400VF8A(SL) ²⁾.
Cooling capacity (kW)



OCU-CR1000VF8A(SL) ²⁾.
Cooling capacity (kW)



1) Ambient temperature: 32 °C, 230 V, refrigerant: R744, suction gas temperature: 18 °C.

2) Ambient temperature: 32 °C, 400 V, refrigerant: R744, suction gas temperature: 18 °C.

Technology by Panasonic

Excellent quality control established by skilled factory team.
Reliability is our main target and therefore we offer 2 year warranties



Reliable CO₂ technology by Panasonic

- Reliable quality: Made in Japan
- 10000 units sold and installed in 3700 retail operations such as convenience stores and supermarkets in Japan*
- Excellent quality control established by skilled factory team
- Panasonic offers 2 year warranties on compressors and on components
- The 2 year compressor warranty matches the products long lifespan

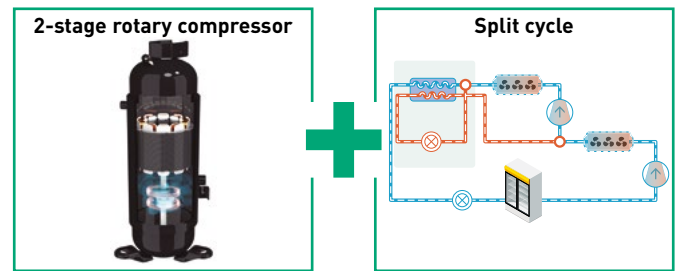
* As of the end of November 18.

Panasonic's combined technology of the 2-stage compressor with the split cycle

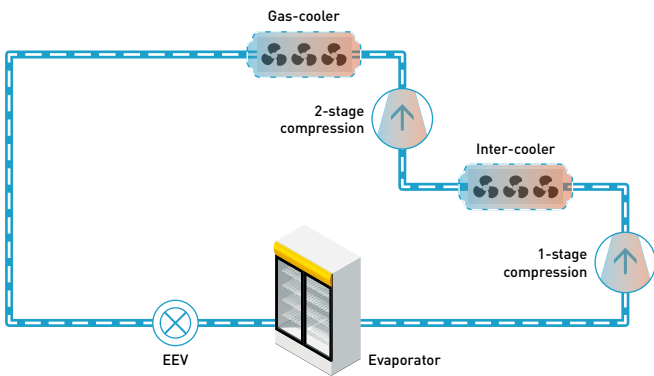
- Panasonic 2-stage rotary compressor delivering powerful performance for more than 20 years
- Split cycle* enhances cooling effect

The video for detailed information is ready!

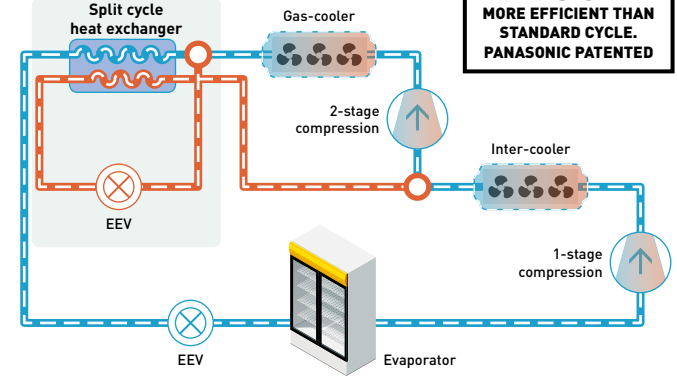
* Available for 200VF5A and 1000VF8A models.
** In the case that the standard cycle with 1-stage rotary compressor was compared.



Standard cycle.



Split cycle.



UP TO 50%
MORE EFFICIENT THAN
STANDARD CYCLE.
PANASONIC PATENTED**

Heat recovery function for heating

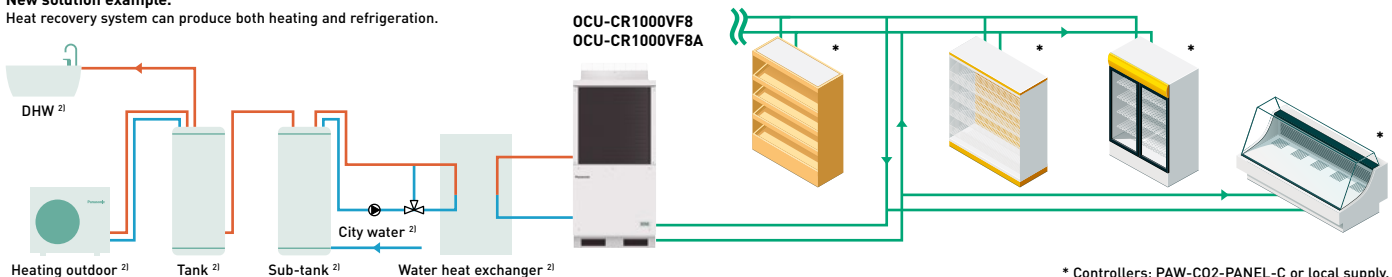
This function offers refrigeration combined with heating all in one system. The ground-breaking solution allows for increased opportunity to cut running costs by utilizing exhausted heat from refrigeration and transferring to the energy source for heating.

1) Under the condition: ambient temperature 32 °C, evaporation temperature -10 °C. 100 % Partial load.2) Local supply.

What is heat recovery function?

New solution example.

Heat recovery system can produce both heating and refrigeration.



* Controllers: PAW-CO2-PANEL-C or local supply.

Range of CO₂ condensing units - CR Series

Outdoor units	MT	4,0 kW	7,0 kW	8,0 kW	15,0 kW	16,0 kW
	LT		2,0 kW		4,0 kW	

4 kW MT / LT
(200VF5A)



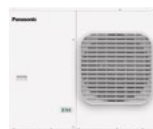
OCU-CR200VF5A
OCU-CR200VF5ASL

7,5 kW MT
(400VF8)



OCU-CR400VF8
OCU-CR400VF8SL

7,5 kW MT / LT
(400VF8A)



OCU-CR400VF8A
OCU-CR400VF8ASL

15 kW MT
(1000VF8)



OCU-CR1000VF8
OCU-CR1000VF8SL

16 kW MT / LT
(1000VF8A)



OCU-CR1000VF8A
OCU-CR1000VF8ASL

CO₂ Condensing units - CR Series



Standard model		OCU-CR200VF5A	OCU-CR400VF8	OCU-CR400VF8A	OCU-CR1000VF8	OCU-CR1000VF8A
Anti corrosion coating model		OCU-CR200VF5ASL	OCU-CR400VF8SL	OCU-CR400VF8ASL	OCU-CR1000VF8SL	OCU-CR1000VF8ASL
Type (MT: medium temp. LT: low temp.)		MT (4 kW) / LT (2 kW)	MT (7,5 kW)	MT (8 kW) / LT (4 kW)	MT (15 kW)	MT (16 kW) / LT (8 kW)
Power supply	Voltage	V	220/230/240	380/400/415	380/400/415	380/400/415
	Phase		Single phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50
Cooling capacity at ET -10 °C AT 32 °C	kW	3,70	7,10	7,7	14,00	15,10
Cooling capacity at ET -35 °C AT 32 °C	kW	1,80	—	3,8	—	8,00
Evaporator connection		Multiple	Multiple	Multiple	Multiple	Multiple
Evaporation temperature	Min ~ Max °C	-45 ~ -5	-20 ~ -5	-45 ~ -5	-20 ~ -5	-45 ~ -5
Ambient temperature	Min ~ Max °C	-20 ~ +43	-15 ~ +43	-20 ~ +45	-15 ~ +43	-15 ~ +43
Refrigerant		R744	R744	R744	R744	R744
Design pressure liquid line	Mpa	12	8	8	8	8
Design pressure suction line	Mpa	8	8	8	8	8
User system external alarm. Digital input. Non-voltage contact		Yes	Yes	Yes	Yes	Yes
Liquid tube electromagnetic valve	Vac	220/230/240	220/230/240	220/230/240	220/230/240	220/230/240
Showcase operation ON / OFF signal. Digital input. Non-voltage contact		Yes	Yes	Yes	Yes	Yes
Modbus communication line (RS485)	Ports	2	2	2	2	2
Compressor type		2- stage rotary	2- stage rotary	2- stage rotary	2- stage rotary	2- stage rotary
Dimension	H x W x D mm	930 x 900 x 437	948 x 1143 x 609	948 x 1143 x 609	1941 x 890 x 890	1941 x 890 x 890
Net weight	Kg	70	136	136	293	320
Piping diameter	Suction pipe	Inch (mm)	3/8(9,52)	1/2(12,70)	1/2(12,70)	3/4(19,05)
	Liquid pipe	Inch (mm)	1/4(6,35)	3/8(9,52)	3/8(9,52)	5/8(15,88)
Length of connection piping	m	25	50	50	100 ¹⁾	100 ¹⁾
PED	CAT	I	II	II	II	II
Air flow	m ³ /min	54	59	59	220	220
External static pressure	Pa	17	50	50	58	58
Heat recovery port		—	—	Yes	—	Yes
Standard performance						
Ambient temperature	°C	32	32	32	32	32
Evaporating temperature	°C	-10	-35	-10	-10	-35
Cooling capacity	kW	3,70	1,80	7,10	7,7	3,8
Power consumption	kW	1,79	1,65	4,00	4,5	3,8
Nominal load ampere	A	7,94	7,26	6,14	7,2	6,2
Sound pressure	dB(A)	35,5 ²⁾	35,5 ²⁾	33 ³⁾	33 ³⁾	33 ³⁾
Necessary accessories						
Drier filter liquid line, diameter 6,35 mm	D-152T	Yes (included: delivered with the unit)	Yes (included: delivered with the unit)	Yes (included: delivered with the unit)	—	—
Drier filter liquid line, diameter 15,88 mm	D-155T	—	—	—	Yes (included: delivered with the unit)	Yes (included: delivered with the unit)
Suction filter, diameter 19,05 mm (outer diameter welding)	S-008T	—	Yes (included: delivered with the unit)	Yes (included: delivered with the unit)	Yes (included: delivered with the unit)	Yes (included: delivered with the unit)

1) PZ-68S (refrigeration oil) must be added if >50 m. 2) ET-10 °C, 65 S-1, 10 m from product. 3) ET-10 °C, 80 S-1, 10 m from product. 4) ET -10 °C, 60 S-1, 10 m from product.

Accessories	
SPK-TU125	Tube connector adaptor for vacuum and service

Spare parts for service and maintenance	
80203513179000	Suction filter, diameter 19,05 mm (outer diameter welding)
80203517115003	Lubrication oil PZ-68S (4 L)
80203517117000	Lubrication oil PZ-68S (0,5 L)
80203513180000	Filter dryer D-152T (type CO-082-S)
80203513179000	Filter dryer D-155T (type CO-085-S)



MC ALPINE HUSSMANN®

A Panasonic Company

Panasonic®

Due to the ongoing innovation of our products, the specifications of this catalogue are valid barring typographic errors, and may be subject to minor modifications by the manufacturer without prior warning in order to improve the product.



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.

McAlpine Hussmann

2-6 Niall Burgess Road, Mt Wellington, Auckland 1060, New Zealand

ph. +64 9526 6800

e. commercialnz@hussmann.com

w. www.mcalpinehussmann.co.nz

