



Technology partnership with Midea Biomedical



CLASS-LEADING

PHARMACEUTICAL REFRIGERATORS

For over 30 years, FC-BIOS has supported healthcare, research and industrial facilities throughout the Malaysia with innovative temperature monitoring technology and products. Expanding on our product portfolio, we are bringing you high performance ECOFRIJ pharmaceutical refrigerator for storage of your temperature-sensitive components as well as reagents and medications.

Available exclusively through FC-BIOS in Malaysia, these pharmaceutical-grade refrigerators are manufactured by Midea, a FORTUNE 500 company. Midea Biomedical Division, formed in 2011 continued to invest and has developed the state of art cold storage fridge and freezers, with many first of its kind innovations incorporated.

Call us now to secure your pharmaceutical refrigeration needs!

www.fcbios.com.my

Call/Whatsapp 019-220 8238 | enquiry@fcbios.com.my

FC-BIOS

Pharmaceutical Refrigerator



**2+3
warranty**
(2 years on part,
3 years on
compressor)



Pharmaceutical-grade temperature uniformity and stability .



High-efficiency air-cooled condenser and finned evaporator - ensuring fast refrigeration.



Premium compressor & parts from world-renowned manufacturers.



High-precision temperature control for a reliable refrigeration.



Well-developed audible & visual alarm.



LED light - brighter and energy-saving.



Elegance door handle made of aluminum alloy.



Electrical heating with a LOW-E glass door design - more resistant to condensation.



Adjustable shelves with label holders.



Built-in data logger with USB port.



Stay chill, minus the big electricity bill.

The integrated inverter compressor modulates the compressor motor speed according to temperature needs. As opposed to a regular ON/OFF compressor, the inverter compressor runs more consistently and at controlled speeds, which means it uses significantly less energy, reduced environmental impact and substantially lower running costs.



GMCC TOSHIBA

ECOFRIJ's inverter compressor is manufactured by GMCC Toshiba, which is the world's largest and most advanced manufacturer of rotary compressors worldwide. It offers a **low noise and energy-saving compressor**, thanks to the use of latest BLDC inverter technology.



ECOFRIJ refrigerator is designed with LED lamp which is **brighter and more cost and energy-efficient** compared to fluorescent bulbs.

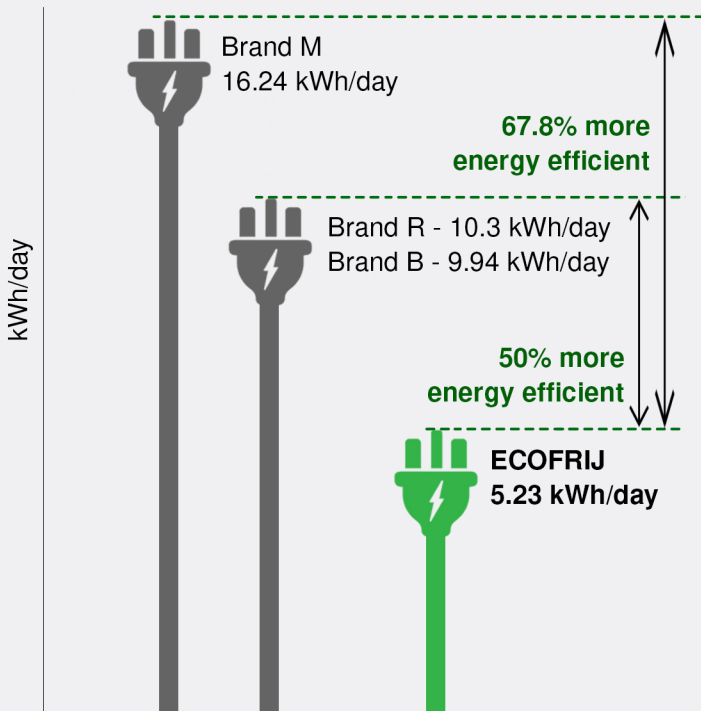
Normal Refrigerator

Normal ON/OFF Compressor
Continuously switching between sprinting and resting wastes more energy.

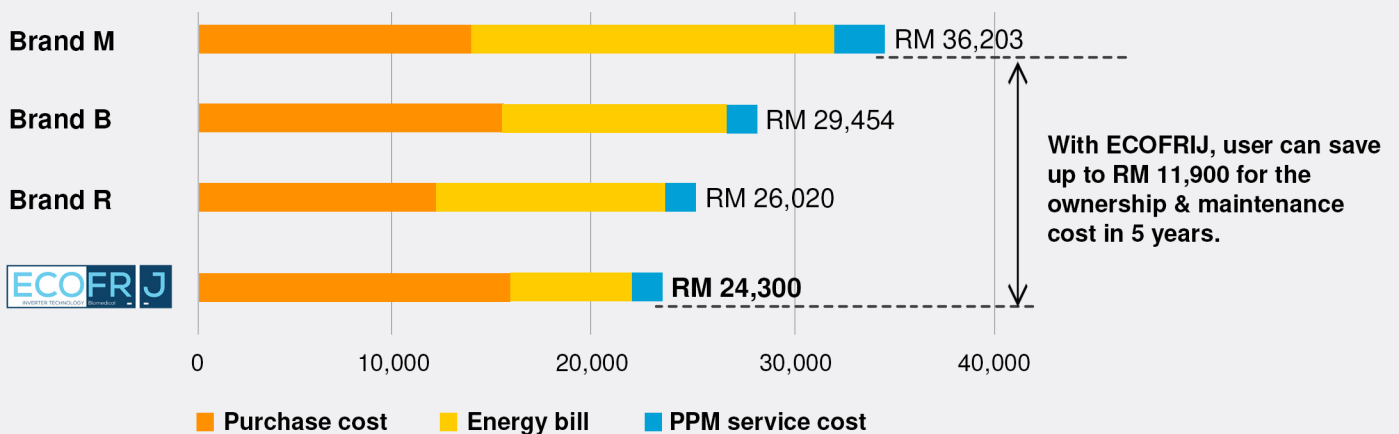
ECOFRIJ Refrigerator

Inverter Compressor
Maintaining a steady pace and making small adjustments is more energy-efficient.

Power consumption per day (based on double door refrigerator model)



Projection of ownership & maintenance cost for 5 years (based on double door refrigerator model)

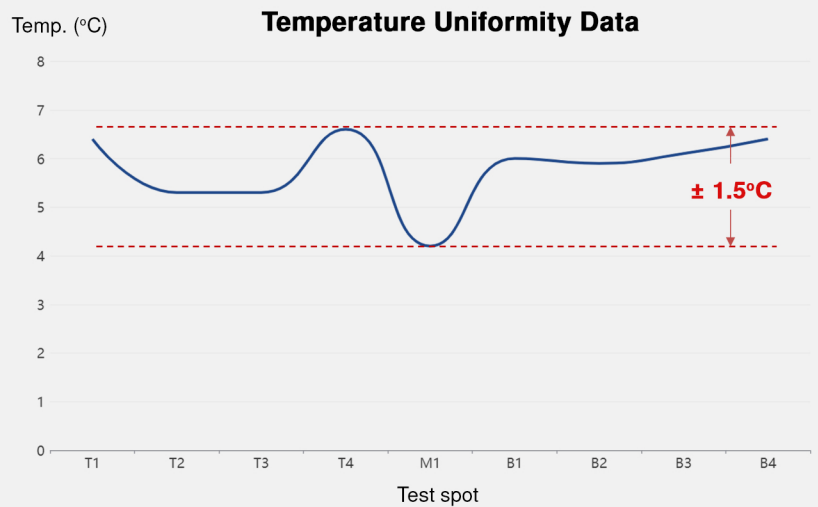


*Applies to single & double door model only.

Excellent temperature uniformity, stability & recovery.

Superior temperature uniformity, outstanding reliability, and exceptional benefits bring value every day, leaving you to focus on your critical work while your products receive our ECOFRIJ protection.

ECOFRIJ refrigerators have been designed and tested to ensure a remarkable temperature uniformity. ECOFRIJ will maintain consistent interior temperatures across all storage locations from top-to-bottom, front-to-back and side-to-side. This provides confidence that contents are stored at the right temperature regardless of where they are placed within the unit.



Ambient & humidity sensor.

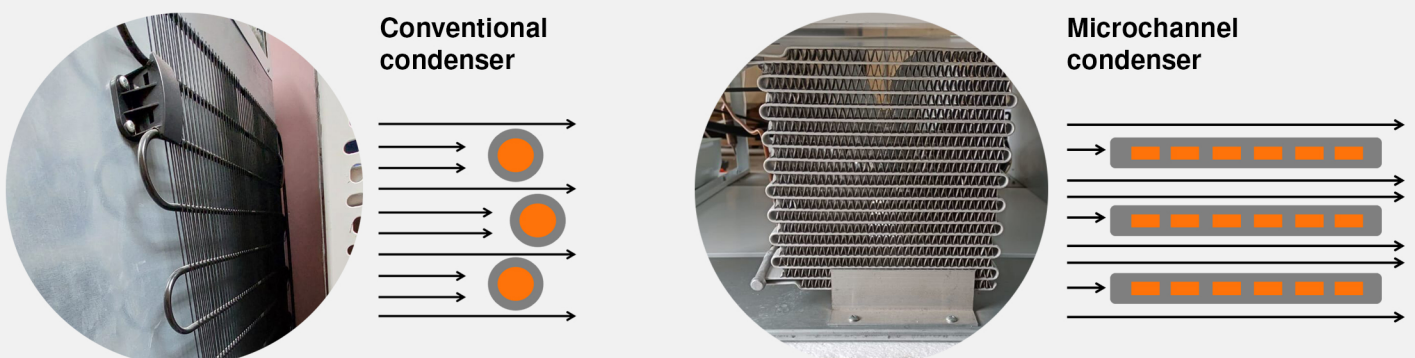
When storing medications, the correct humidity is essential as it prevents frost lingering on the evaporator coils. The World Health Organization (WHO) recommends maintaining relative humidity levels around 50 percent. Both temperature and humidity exposure are the primary factors that could cause products to become ineffective.

ECOFRIJ refrigerator protects against the possibility of freezing with a combination of precise temperature control and positive airflow balanced within the cabinet and supervised by the ambient temperature and humidity level sensor.



Data monitoring and data log exported via the built-in USB port.

Consistent heat dissipation to prevent overheating.



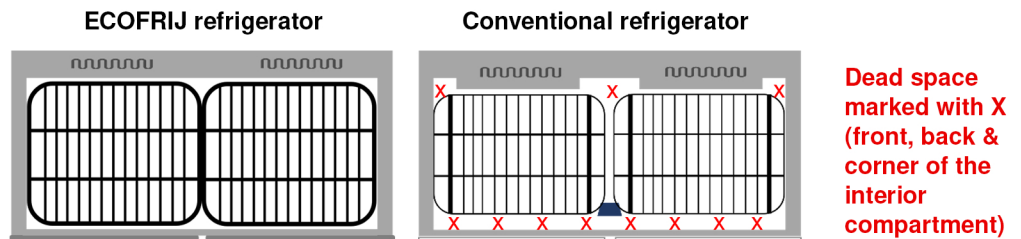
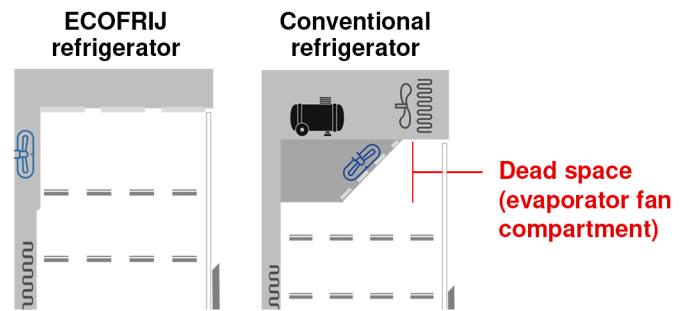
ECOFRIJ refrigerators are equipped with a microchannel condenser type which effectively preventing overheating of the compressor and electrical components.

The microchannel condenser coils utilize an ultra-efficient design providing up to 40% more heat rejection thanks to the multiple channels architecture within the tube and a brazed joint between the tube and fin. This proven cooling technology improves the transfer of heat from the refrigerant into the ambient air.

*Applies to single & double door model only.

No dead space - leave nothing behind.

The well-constructed & simplified interior chamber of ECOFRIJ without any dead space, allows for a maximum storage capacity, to cope with high use and large storage demands of hospital pharmacies. Conventional pharmacy fridge is often designed with a dead space which minimize the actual storage capacity.



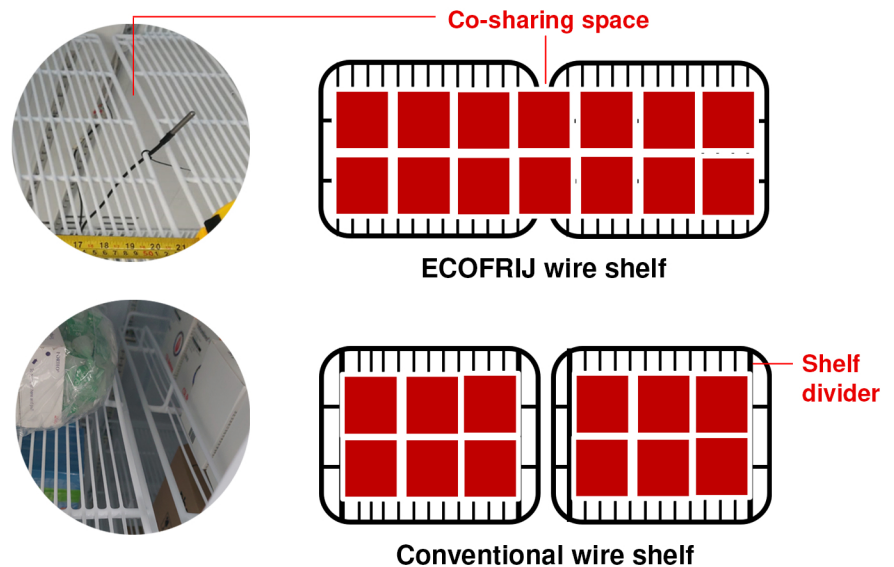
Double door refrigerator from top view

Larger storage footprint.

Fridge capacity does not indicate a total storage footprint. The shelf design and dimension determine the total storage footprint and the actual storage volume.

ECOFRIJ wire shelves are constructed with no divider at both sides, allow item storage at the middle area – called co-sharing space, which provides more effective storage space.

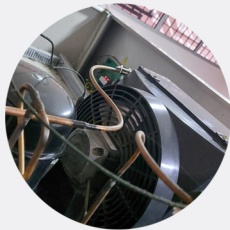
Diagram shows schematic drawing of items arrangement on shelf (from top view).



*Applies to single & double door model only.

Storage footprint comparison	ECOFRIJ [®] INVERTER TECHNOLOGY Biomedical	Brand B	Brand R	Brand H
Product Dimension (WxDxH) mm	1220x780x1920	1228x766x2020	1280x840x2070	1030x590x1425
Capacity	1006 L	1000 L	1050 L	940 L
Shelf Dimension (WxD)	55 x 54 cm	51.5 x 44.5 cm	54 x 47 cm	45 x 47 cm
Storage Footprint (per shelf)	2970 cm ²	2291.75 cm ²	2538 cm ²	2115 cm ²
Quantity of shelf	10	10	10	12
Total Storage Footprint	29,700 cm²	22,917.5 cm²	25,380 cm²	25,380 cm²

ECOFRIJ - fully enclosed top exterior



Conventional pharmaceutical refrigerator with exposed top exterior.

Fully enclosed exterior construction.

ECOFRIJ refrigerator is constructed of a fully enclosed unit with complete exterior cover helps to protect fridge parts and components from dust and rodents. Rodents are attracted to warm places, so it is not unusual to find them in or around warm equipment and machines. They can easily die in these areas resulting in stench, airflow problems, and electrical shorts.



ECOFRIJ - fully enclosed side and back exterior

Our Key Clients



Pejabat Farmasi Bahagian Limbang
PKD Timur Laut
PKD Gua Musang
PKD Kuala Nerus
PKD Jerantut
PKD Seberang Perai Utara
Klinik Desa Temoh Stesen



Hospital Batu Gajah, Perak
Pharmacy Department



Hospital Baling, Kedah
Stor Perubatan
Ward



Hospital Pulau Pinang
Pathology Department



Bukit Tinggi
Medical Centre



Pharmacy Department



Inpatient Pharmacy (Sterile Complex)
Pediatric Pharmacy



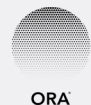
GMP Lab, Hematologi Unit



KPJ BANDAR DATO' ONN
SPECIALIST HOSPITAL



Institut Kemahiran Tinggi Belia
Negara Dusun Tua,
Selangor
Pharmacy



M04-ECO-FRIJ-0416S
M04-ECO-FRIJ-1006D
M04-ECO-FRIJ-1505T

Capacity (L)	416	1006	1505
Product Dimensions (mm)	690(W) x 660(D) x 1920(H)	1220(W) x 780(D) x 1920(H)	1798(W) x 886(D) x 1997(H)
Interior Dimensions (mm)	600(W) x 517(D) x 1358(H)	1130(W) x 637(D) x 1358(H)	1685(W) x 670(D) x 1514(H)
Net/Gross Weight (kg)	92/100	220/260	322/414

Technical Data

Compressor Type	Inverter Technology	Inverter Technology	Non-Inverter Technology
Door Design	Anti-condensing, Self-closing	Anti-condensing, Self-closing	Anti-condensing, Self-closing
Cooling Method	Air Cooling	Air Cooling	Air Cooling
Defrost Type	Automatic	Automatic	Automatic
Climate Class	N	N	N

Product Performance

Temperature Range (°C)	2 - 8	2 - 8	2 - 8
Temperature Accuracy (°C)	0.1	0.1	0.1
No. of Temperature Sensor	6	6	7
No. of Humidity Sensor	1	1	0

Control

Temperature Control	Microprocessor	Microprocessor	Microprocessor
Display	LED, Dual Display (Temperature & Humidity)	LED, Dual Display (Temperature & Humidity)	LED Display

Electrical Data

Rated Power (W)	260	380	620
Rated Current (A)	1.5	2.2	5.2
Power Supply	220~240V 50Hz (single phase)	220~240V 50Hz (single phase)	220~240V 50Hz (single phase)

Alarms

High/Low Temperature Alarm	Yes	Yes	Yes
Power Failure Alarm	Yes	Yes	Yes
Sensor Failure Alarm	Yes	Yes	Yes
Environment Temperature Alarm	Yes	Yes	Yes
Door Ajar Alarm	Yes	Yes	Yes
Remote Alarm	Optional	Optional	Optional

Accessories

No. of Shelves	5	10	18
Label Card Holder (on shelves)	Yes	Yes	Yes
Cable Port	Yes	Yes	Yes (1 pc., dia. 25mm)
Castors Quantity & Type	4, Omni-directional	4, Omni-directional	6, Omni-directional
USB Port	Yes	Yes	Yes
RS-485 Port	Yes	Yes	Yes
Backup Battery	Yes	Yes	Yes
Door Lock with Key	Yes	Yes	Yes
Built-in Data Logger	Yes	Yes	Yes