

Multi-gas-Incubator

MCO-18M



Professional Cell Culture Multi-gas Incubator

- Continuous contamination control with inCu saFe® interior and safeCell™ UV (option) technologies.
- P.I.D. controls for fast recovery of temperature, CO₂ and O₂ levels
- Speedy humidity level recovery by N₂ gas bubbler



Decontamination via UV radiation (Option)



Inner cabinet is made from Copper stainless steel alloy



Infrared CO₂ sensor

The new MCO-18M automatic air jacket multi-gas incubator provides precise CO₂ and O₂ level controls to realise a stable cell culture environment. It features multiple-patented technologies to safely achieve in vitro performance. Also, the MCO-18M has been cleared by the US FDA for In-Vitro Fertilisation (IVF) use.

CO ₂ -concentration:	0-20,0%
O ₂ -concentration:	1-18,0% 22-80,0%
Temperature	5-50°C
Effective Capacity	170L

- In vitro/micro fertilization
- Gene research
- ES cell research
- Regenerative medicine research
- Cancer research
- Biological research
- Cell test

Fast Recoveries

Rapid CO₂ and O₂ recovery without the risk of overshoot is achieved through the use of IR(CO₂) and Zirconia(O₂) sensors and PID control of gas injection. The Sanyo solid-state IR sensor incorporates no moving parts providing long-term, reliable performance.

To optimise humidity recovery rates after door openings, N₂ gas used to control reduced O₂ levels is injected via the humidity pan. The resulting bubbling effect increases humidity transfer into the incubator.

Easy-to-Access Double Inner Door System

A double inner door system keeps gas consumption low and prevents outside air



influx. An optional half tray adds greater flexibility.

Water Level Sensor

The humidity pan has an optical water level sensor to warn of low water level.

Automatic Gas Cylinder Switchover System

This system automatically switches from the primary to secondary gas cylinder when the O₂ gas level does not change while an injection valve is open. An optional gas switchover for CO₂ gas is also available. The in-use gas cylinder is confirmed on the control panel.

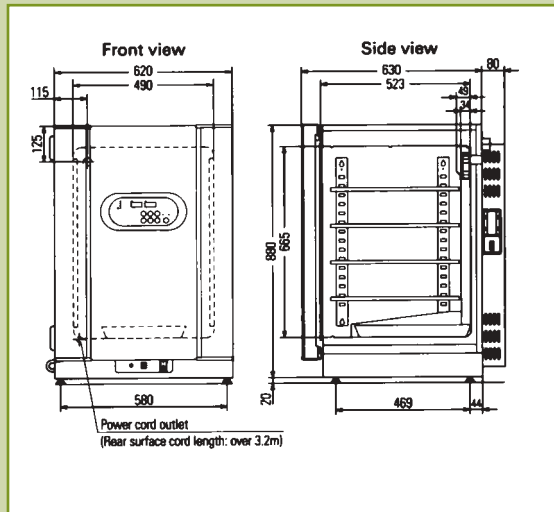
Preventive Contamination Control

InCu saFe interior chamber with fully rounded corners inhibits bacteria growth continuously. An automatic ultraviolet lamp

(option) can also eliminate contaminants in the circulating air and water in the humidity pan without affecting cell cultures. The two powerful measures result in complete contamination control.

Improved Temperature Stability with D.H.A. System

P.I.D. controlled 3-way heaters plus SANYO's proprietary D.H.A. (Direct Heat and Air jacket) provides a high-precision temperature environment, and minimises the risk of condensation and subsequent contamination.



Exterior dimensions (WxDxH)	620 x 710 x 900 mm	
Interior dimensions (WxDxH)	490 x 523 x 665 mm	
Interior volume	170 L	
Net Weight	97 kg	
Heating Method	Direct heat & Air jacket (DHA)	
Temperature	Temp. control system	Microprocessor PID
	Temp. range	5°C above ambient temperature to +50°C (Ambient temp.: +5°C to 35°C)
	Temp. uniformity	± 0,25°C
CO ₂	Temp. controllability	± 0,1°C *1
	CO ₂ control system	Microprocessor PID
	CO ₂ sensor	Infrared
O ₂	CO ₂ range	0 to 20 %
	CO ₂ controllability	± 0,15%
	O ₂ control system	Microprocessor PID
Humidity	O ₂ sensor	Zirconia
	O ₂ range	1 to 18 % / 22 to 80%
	O ₂ controllability	± 0,2%
Shelves	Humidifying system	Natural evaporation by water in humidity pan over bottom heater (with water level sensor)
	Chamber humidity	95 ± 5% RH
	Shelf (WxDxH)	450 x 450 x 12 mm
Contamination control	Shelf material	Copper Alloy stainless steel
	Maximum load	7kg per shelf
	Shelves	4(standard)
Access port	Interior surface	Copper Alloy stainless steel
	UV lamp (ozone-free)	UV system kit (option)
	Access port	30mm diameter
Alarm system	Alarm system	High/low temperature, CO ₂ level, door and UV lamp failure, independent overheat protection
	Remote alarm contacts	30V DC, 2A allowable

*1 Conditions
Ambient temperature: 25°C, Temperature setting: 37°C, CO₂ level setting: 5%, O₂ level setting 5%, no load.

*2 Stacking plate for 18M + 18M is included in the main body