

MCO-801C

Large Scale Cell Culture CO₂ Incubator



dedicated

reliable

precise control

- Reach-in design with large 851 litres capacity
- Superior temperature and CO₂ control with rapid recovery times
- Exceptionally low CO₂ consumption rates
- Preventative contamination control





reliable

accurate

secure

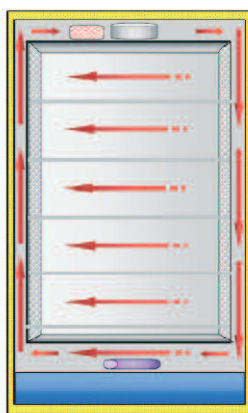
MCO-80IC Large Scale Cell Culture CO₂ Incubator



The MCO-80IC is ideal for culturing high volumes of patient samples, performing short-term studies, and working with large volume cell culture apparatus. The MCO-80IC includes SANYO's advanced incubator technologies such as inCu saFe[®] interior, UV decontamination option and solid-state infrared CO₂ sensor with P.I.D. control to provide outstanding performance and anti-contamination control. The incubator also features exceptionally low CO₂ gas consumption for economic operation.

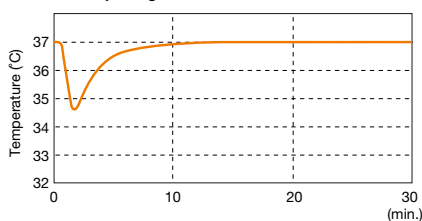
Superior Temperature and CO₂ Control

- **Horizontal laminar airflow system**
The MCO-80IC features a cross-shelf horizontal airflow system, which promotes optimum temperature and CO₂ uniformity throughout the incubator and contributes to rapid recovery after door openings. The conditioned air is directed evenly through the incubator using perforated wall plenums made from SANYO's exclusive inCu saFe[®] copper-enriched stainless steel. The horizontal airflow helps to maintain uniform air circulation and even temperature distribution when samples are placed in the incubator.
- **P.I.D. temperature control**
Limits temperature fluctuation to $\pm 0.1^{\circ}\text{C}$.
- **Infrared (IR) CO₂ sensor with P.I.D. microprocessor control**
Delivers precise control and fast CO₂ recovery characteristics.
- **Exceptionally low CO₂ gas consumption rates**
Less than half of a similar competitor unit.



Horizontal laminar airflow system

Temperature level recovery after a 30 second door opening for the SANYO MCO-80IC





**MCO-801C
851 LITRES**

CO₂ Control - Faster Recovery & Lower Gas Consumption

SANYO's large scale cell culture incubator has been designed specifically for critical applications in pharmaceutical, biotechnology and clinical investigation.

Large chamber capacity applications require special consideration of gas usage and recovery times. SANYO's proprietary IR sensor with P.I.D. CO₂ control algorithm is paramount to the industry's leading design. An optional inner door system (MCO-80ID) is also available to enhance these results further.



	SANYO MCO-801C			Competitor Model		
	0	2 x 30 sec	2 x 60 sec	0	2 x 30 sec	2 x 60 sec
CO ₂ Consumption (Litres per day)	280 l/day	440 l/day	457 l/day	597 l/day	728 l/day	752 l/day
30kg CO ₂ Cylinder Retention Time*	60 days	39 days	37 days	28 days	23 days	23 days

* Test conditions: Set temperature = 37°C, set CO₂ = 5%, Ambient temperature = 20°C.
* All values are actual test values for reference only, and cannot be guaranteed in operation.

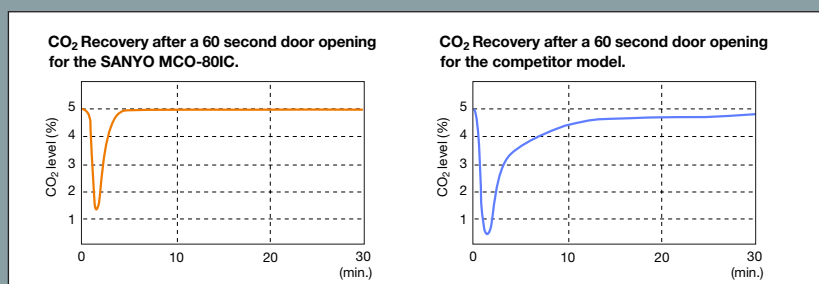
Flexibility and Ease of Use

- Large capacity, 851 litre CO₂ incubator with adjustable shelving provides flexibility in use.
- Accommodates roller bottle apparatus, 5 bottles wide x 7 bottles high (requires optional Mounting Ramp Kit, MCO-80RBS).
- Full view, double paned glass door allows clear observation of cultured samples.
- Large LED digital display and keypad for greater visibility and ease of set-up.

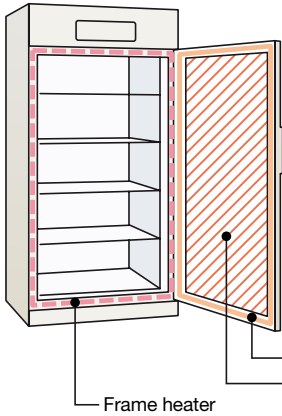
MCO-801C Control Panel



Comparative performance data



Preventative Contamination Control



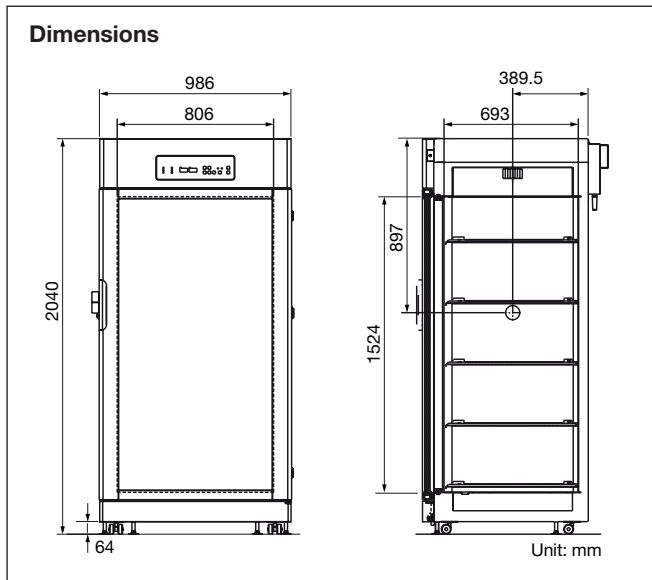
- Incubator interior and plenums made from SANYO's exclusive inCu saFe[®] germicidal, copper-enriched stainless steel.
- Heated glass door and door frame heater prevent condensation.
- Optional UV sterilisation system for humidity reservoir.

Humidity Selection and Optional UV Sterilisation



As standard, the MCO-80IC offers a choice of normal and high humidity modes for different application needs. For reliability and reduced maintenance the humidity reservoir heater is located on the outside wall of the reservoir and is not susceptible to corrosion or scaling through contact with water. An optional auto-fill 20 litre secondary water tank (Model MCO-80AS) provides an additional water supply to the humidity reservoir.

SANYO's patented and laboratory proven SafeCell™ UV sterilisation system (option) is employed to sterilise the humidifying water reservoir and help minimise contamination concerns (U.S. Patent 6255103).



MCO-80IC Specifications

Exterior dimensions (W x D x H)	986 x 853 x 2040 (mm)
Interior dimensions (W x D x H)	806 x 693 x 1524 (mm)
Interior volume	851 Litres
Net weight	275 kg
Exterior	Painted steel
Outer door	Double-glazed glass with door heater
Air circulation	Fan assisted horizontal laminar airflow
Temperature	
Heating method	Heater with fan circulation
Control system	Microprocessor PID
Range	5°C above ambient temp. to +50°C
Uniformity	± 0.5°C*
Fluctuation	± 0.1°C*
CO₂	
CO ₂ control system	Microprocessor PID
CO ₂ sensor	Infrared
CO ₂ range	0 to 20%
CO ₂ fluctuation	± 0.15%*
Humidity	
Humidifying system	Normal mode: Natural evaporation of humidifying water High humidity mode: Heated evaporation of humidifying water
Chamber humidity	Normal mode: Over 80%RH High humidity mode: Over 90%RH
Shelves	
Shelf dimensions (W x D x H)	776 x 659 x 10 (mm)
Shelf material	Copper-enriched stainless steel
Maximum load	30 kg per shelf
Quantity	5 (standard)
Contamination control	
Interior surface	Copper-enriched stainless steel (except humidifying reservoir)
UV lamp (ozone-free)	UV System Kit for humidifying water reservoir only (Option)
Display	Digital display (LED)
Access port	2 x 40 mm diameter (left and right side)
Alarm system	High/low temperature High/low CO ₂ Low water Independent overheat protection Door ajar, Remote alarm
Remote alarm contact	30V DC, 2A N.O. N.C.
Power source	Single phase, 220-240 V, 50 Hz, 7,8 A Max.
Options	
Automatic CO ₂ cylinder changeover system (MCO-80GC), Extra shelf (MCO-80ST), Roller bottle mounting kit (MCO-80RBS), Inner door kit (MCO-80ID), UV system kit (MCO-80UVS), Automated water supply system kit (MCO-80AS), Analogue output (MCO-420MA), Communication interface (MTR-2000 , MTR-480)	

- * Conditions: Ambient temperature: 25°C, Temperature setting: 37°C, CO₂ level setting: 5%, no load
 • Specifications subject to change without notice.

SANYO Electric Co., Ltd., Biomedical Division, Gunma is certified for:
 Quality management system: ISO9001/ Medical devices quality management system:
 ISO13485 Environmental management system: ISO14001



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