

Reach-in CO₂ Incubator

MCO-80IC



SANYO's large capacity, Reach-in CO₂ incubator has the capacity and flexibility to grow with your culturing needs while providing a precise and repeatable temperature, humidity and CO₂ environment.

Model: MCO-80IC, 30.1 cu.ft. (851L)

MCO-80IC Reach-in CO₂ Incubator

The MCO-80IC is ideal for culturing large volumes of patient samples, performing short-term studies, and working with large volume cell culture apparatus. It includes SANYO's exclusive incubator technologies such as inCu saFe™ interiors, UV decontamination option, IR CO₂ sensor with P.I.D. control, and features exceptionally low CO₂ gas consumption.

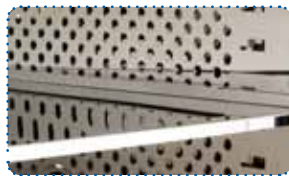


Usability

- 30.1 cu.ft. (851L) large capacity cabinet allows flexibility in usage.
- Cabinet will accommodate a roller bottle apparatus, 5 bottles wide x 7 bottles high (requires mounting ramp kit, MCO-80RBS).
- Full view, double paned glass door allows easy observation of cultured samples.
- Large LED digital display and keypad for greater visibility and ease of set-up.



Easy to reach control panel



Adjustable inCu saFe™ Germicidal Shelves & Interior

Superior CO₂ and Temperature Control

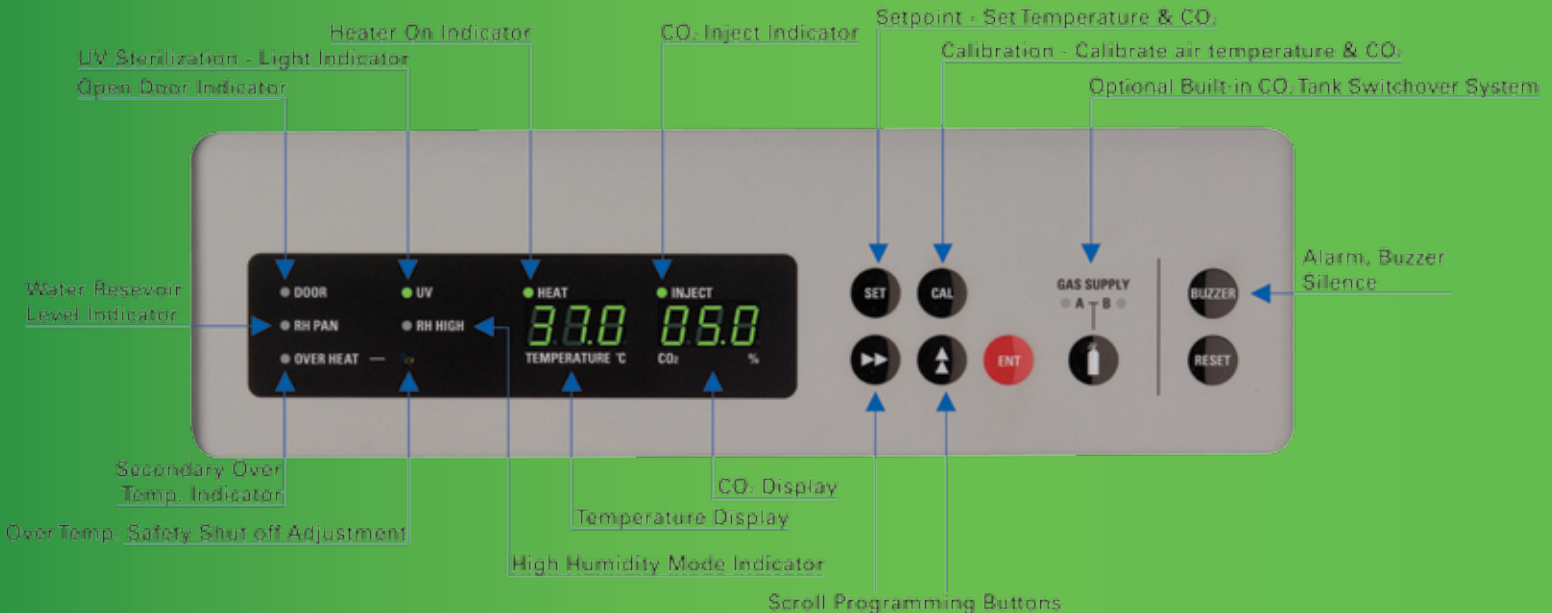
- Infrared (IR) CO₂ sensor with P.I.D. microprocessor control and forced air circulation system delivers fast CO₂ recovery characteristics.
- Exceptionally low CO₂ gas consumption rates, less than half of similar competitive units.
- P.I.D. temperature control with deviation of +/- 0.1°C

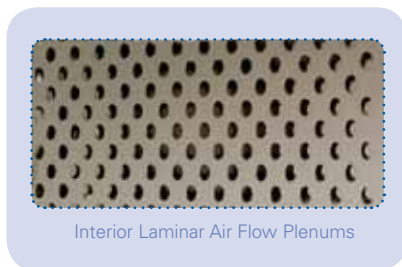
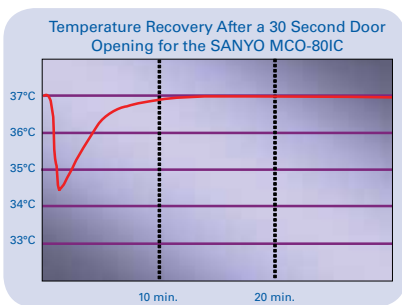
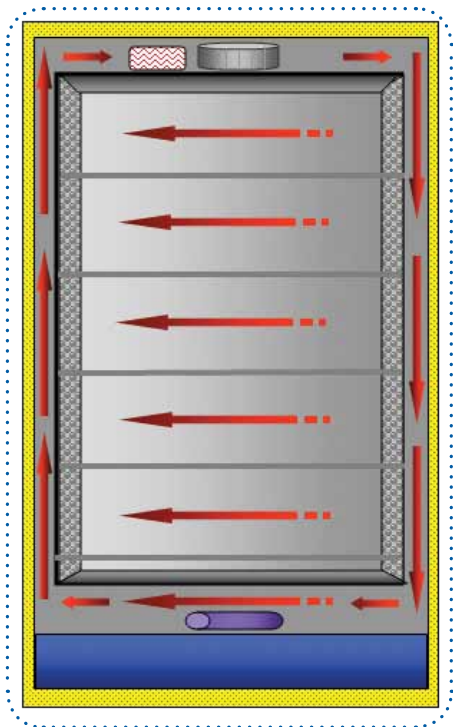
Anti-contamination Measures

- Interior, plenums and shelving constructed of SANYO's exclusive inCu saFe™, germicidal, copper-enriched stainless steel.
- Optional UV decontamination system for humidity reservoir
- Extra heaters positioned on the outer glass door to eliminate condensation.

Industry Leading Warranty

- The MCO-80IC incubator carries SANYO's world class warranty of **3 years parts and labor**, the best in the industry.





Horizontal Laminar Airflow System

SANYO's reach-in incubator's cross-shelf directed air flow system promotes optimum temperature uniformity throughout the chamber and contributes to quick temperature recovery after door openings. Utilizing SANYO's exclusive inCu saFe™ chamber material in the perforated side plenums helps minimize contamination concerns and direct positive and negative pressure air flow.

Optional UV Decontamination and Humidity Selection

SANYO's patented and laboratory proven Safe Cell UV™ sterilization system is employed to sterilize the humidifying water reservoir and help eliminate contamination concerns. The unit can be set to both nominal and high humidity setpoints.



Humidity reservoir heaters are located on the outside walls of the reservoir and are not susceptible to corrosion and scaling from water as competitive systems are. An optional auto fill secondary tank (Model MCO-80AS) system is also available to ensure continuous water supply to the humidity reservoir. This system employs a large tank (4.8 gallons), with electronic water level sensor and autofill solenoid valve.

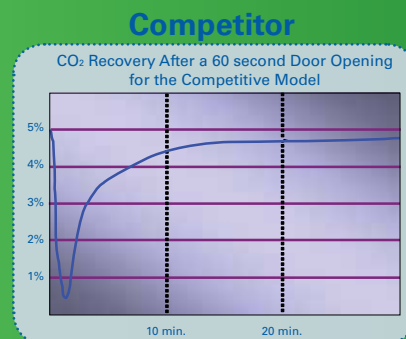
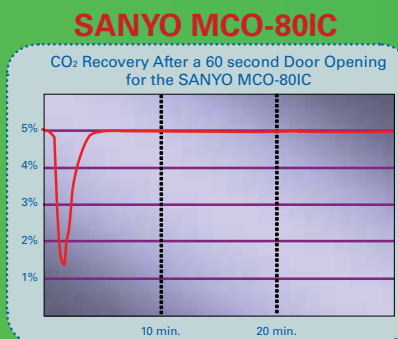


Faster CO₂ Recovery & Lower CO₂ Consumption



SANYO's large capacity reach-in incubator was designed specifically for critical applications in pharmaceutical, biotechnology and clinical investigation.

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



	SANYO MCO-80IC			Competitive Model		
	No Door Openings per day	2 x 30 Second Door Openings per day	2 x 60 Second Door Openings per day	No Door Openings per day	2 x 30 Second Door Openings per day	2 x 60 Second Door Openings per day
CO ₂ Consumption	280 Liters/day	440 Liters/day	457 Liters/day	597 Liters/day	728 Liters/day	752 Liters/day
30 kg CO ₂ Cylinder Retention Time*	60 days	39 days	37 days	28 days	23 days	23 days

*Test Conditions: Room Temp.=20°C,Temp. SV=37°C,CO₂ SV=5%

* All values are actual test values for reference only and cannot be guaranteed in operation.

Specifications



Model	MCO-80IC
Exterior dimensions	W38.8" x D33.6" x H80.3" (W986 X D853 X H2040mm)
Interior dimensions	W31.7" x D27.3" x H60.0" (W806 X D693 X H1524mm)
Exterior cabinet	Electrogalvanized steel (Acrylic resin baking painted finish)
Interior volume	30.1cu.ft (851 L)
Interior cabinet	Copper alloy Stainless Steel (except humidifying reservoir)
External door	Double paned glass door with outer door latch
Inner door system (option)	Available as an option (Polycarbonate, 5 doors set), Model MCO-80ID
Shelves	Copper alloy Stainless Steel, 5 standard Dimensions W30.5" x D25.9" x H0.4" (W776 X D659 X H10mm) Load Capacity: 30kg (66 lbs.) per shelf
Access ports	Φ40 mm(1.57"), 2 locations (Right and left sides) with silicone rubber stopper
Humidifying reservoir	Integrated with an inner chamber (Stainless Steel, SUS304) Front accessible drainage valve
Humidifying water sterilization system (option)	UV light over the humidifying reservoir (available as an option), Model MCO-80UVS
Heating method	Heater with fan air circulation, Cross shelf laminar air flow
Temp. control system	Microprocessor P.I.D. with thermistor sensor, Temp. fluctuation range $\pm 0.1^{\circ}\text{C}$
Temp. display	Digital display (0.1 $^{\circ}\text{C}$ increments)
Ambient temperature condition	20 $^{\circ}\text{C}$ to 35 $^{\circ}\text{C}$
Temp. controllable range	(Ambient temperature + 5 $^{\circ}\text{C}$) to 50 $^{\circ}\text{C}$
Temp. distribution	$\pm 0.5^{\circ}\text{C}$ (AT 25 $^{\circ}\text{C}$, SV 37 $^{\circ}\text{C}$, CO ₂ 5%, No load, 9 point measurement)
Temp. fluctuation margin	$\pm 0.1^{\circ}\text{C}$ (AT 25 $^{\circ}\text{C}$, SV 37 $^{\circ}\text{C}$, CO ₂ 5%, No load)
Humidifying method	Heated vaporization with water in humidity pan (High humidity mode available)
Chamber humidity	Over 80%RH (High humidity mode: over 90%RH)
High humidity mode	Selectable by function mode (for over 90%RH)
Humidifying water retention days (Reference)	15 days (Reference) (Under a condition of AT20 $^{\circ}\text{C}$, SV 37 $^{\circ}\text{C}$, CO ₂ 5%, no load, no door opening, and 80%RH)
Water drainage	Drainage valve (lower side of front frame) Drainage into a drainage tray/bottle (provided)
Water Fill	Water fill located at the front side of interior bottom
Automatic water supply system (Option)	Water supply connection (chamber bottom rear side) Tank connection only (Direct connection with public water line is not advised), Solenoid valve opens in response to low water level sensor
Overflow	Drain outlet on front lower side
CO ₂ gas control	Microprocessor P.I.D. with infrared sensor
CO ₂ level display	Digital display (0.1% increments)
CO ₂ gas range	0% to 20%
CO ₂ level fluctuation range	$\pm 0.15\%$ (AT 25 $^{\circ}\text{C}$, SV 37 $^{\circ}\text{C}$, CO ₂ 5%, no load)
CO ₂ gas inlet pressure	15 psi (0.1 MPa) at injection
Net unit weight	605 lbs. (275 kg.)
Inner circulation system	Forced air circulation, Horizontal laminar cross shelf airflow
Power requirements	115V, 20 Amps, 60 Hz, NEMA 5-20P Plug
Interior/Exterior convenience receptacle	Interior Duplex: Vapor Proof. 115V, 3 Amp. Max. Rating - Exterior Duplex: 115V, 1Amp. Max. Rating
Alarms	High/Low temp. alarm, CO ₂ density alarm, Upper limit temp. alarm, Door ajar alarm
Remote alarm contacts	N.O. (normally open) and N.C. (normally closed) contacts included, rating DC 30V, 2A
Options	Built-in type gas automatic switcher kit (MCO-80GC) Roller bottle apparatus mounting ramp kit (MCO-80RBS) Inner Door Kit(MCO-80ID) 5 partition doors, made with acrylate resin UV sterilization system (MCO-80UVS) Sterilization of humidifying water resevoir only Automatic water supply system kit (MCO-80AS) Includes control box, water tank, water supply hose, 18L (4.8 gallon) tank Additional shelf (MCO-80ST) 4 to 20 mA analog output module (MCO-420MA) CO ₂ tank regulator, (MCO-100L)

SANYO

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