Panasonic

Incubator series

Large Scale Cell Culture CO_2 Incubator

MCO-80IC-PE

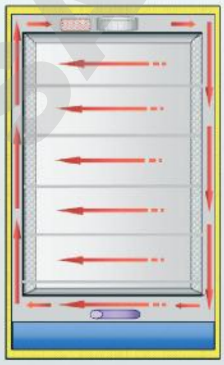
Superior temperature and CO_2 control

- Reach-in design with large 851 litres capacity
- Superior temperature and CO_2 control with rapid recovery times
- Exceptionally low CO_2 consumption rates
- Preventative contamination control

Discovery powered by precision

MCO-80IC
with optional
inner door kit
(MCO-80ID-PW)

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 Panasonic's advanced incubator technologies such as inCu saFe® interior, UV decontamination option and solid-state infrared CO_2 sensor with P.I.D. control to provide outstanding performance and anti-contamination control.
The incubator also features exceptionally low CO_2 gas consumption for economic operation.



Horizontal
laminar
airflow
system

Superior Temperature and CO_2 Control

- **Horizontal laminar airflow system**
  The MCO-80IC features a cross-shelf horizontal airflow system, which promotes optimum temperature and CO_2 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 Panasonic'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 ±0.1°C.
- **Infrared (IR) CO_2 sensor with P.I.D. microprocessor control**
  Delivers precise control and fast CO_2 recovery characteristics.
- **Exceptionally low CO_2 gas consumption rates**
  Less than half of a similar competitor unit.

Flexibility and Ease of Use

- Large capacity, 851 litre CO_2 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.

Control Panel

CO_2 Control - Faster Recovery & Lower Gas Consumption

Panasonic'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.

Panasonic's proprietary IR sensor with P.I.D. CO_2 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.

	Panasonic MCO-80IC			Competitor Model		
Door Openings (Number per day)	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 CO_2 = 5%, Ambient temperature = 20°C.
* All values are actual test values for reference only, and cannot be guaranteed in operation.

Preventative Contamination Control

- Incubator interior and plenums made from Panasonic'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

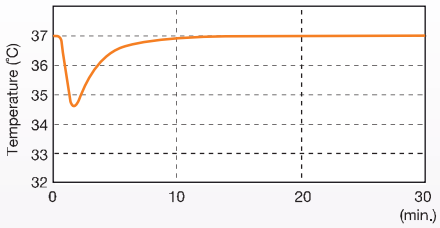
As standard, the MCO-80IC offers a choice of normal and high humidity modes for different application needs. For reliability and reduced maintenance the humidity reservoir heater is located on the outside wall of the reservoir and is not susceptible to corrosion or scaling through contact with water.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

Panasonic's patented and laboratory proven SafeCell UV sterilisation system (option) is employed to sterilise the humidifying water reservoir and help minimise contamination concerns.

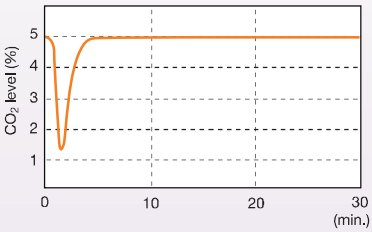
Large Scale Cell Culture CO_2 Incubator MCO-80IC-PE

The MCO-80IC is ideal for culturing high volumes of patient samples, performing short-term studies, and working with large volume cell culture apparatus.

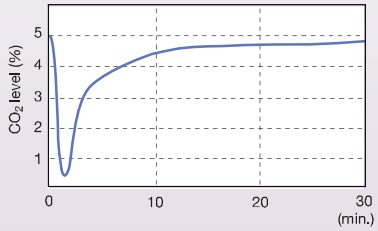
Temperature level recovery after a 30 second door opening for the Panasonic MCO-80IC



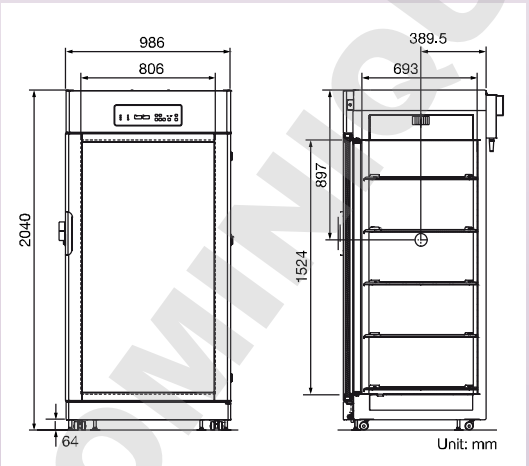
CO_2 Recovery after a 60 second door opening for the Panasonic MCO-80IC.



CO_2 Recovery after a 60 second door opening for the competitor model.



Dimensions



CO_2 reach-In Incubator		
Characteristics PUF = Rigid polyurethane foamed insulation V = Visual alarm B = Buzzer alarm R = Remote alarm		
MODEL		**MCO-80IC-PE**
Dimensions		
External dimensions (W x D x H)	mm	986 x 853 x 2040
Internal dimensions (W x D x H)	mm	806 x 693 x 1524
Volume	ltr	851
Net weight	kg	275
Performance		
Temp. control range and fluctuation	°C	Ambient temp. +5 to 50 (AT; 20°C to 35°C)
Temperature uniformity	°C	±0.5 [1]
CO_2 control range and fluctuation	%	0 ~ 20, ±0.15
Humidity control range and fluctuation	%RH	Normal mode; >80% R.H. High mode; > 90% R.H.
Control		
Temperature sensor		Thermistor
CO_2 sensor		IR
Alarms		
Power failure		R
Out of temperature setting		V-B-R
High temperature		V-B-R
Out of CO_2 setting		V-B-R
Door open		V
Water level sensor		V
Construction		
Insulation material		PUF
Outside door	qty	1 double paned glass
Reversable door		Y
InCu saFe® shelves	qty	5
Access port	qty	2
- position	qty	One on each side
- diameter	Ø mm	40
Electrical and noise level		
Power supply	V	230
Frequency	Hz	50
Noise level [2]	dB	33
Options		
SafeCell® UV system		MCO-80UVS-PE
InCu saFe® shelves and brackets		MCO-80ST-PW
Multiple inner door kit		MCO-80ID-PW (5 small doors)
Roller bottle rack mounting kit		MCO-80RBS-PW
CO_2-gas pressure regulator		MCO-100L-PW
Automatic CO_2 switchover system		MCO-80GC-PW
Automatic water supply system kit		MCO-80AS-PW
Optional communication systems		
Ethernet interface (LAN)		MTR-L03-PW
Digital interface		MTR-480-PW
Analogue interface		MCO-420MA-PW

notes: [1] Ambient temp 25°C, settings 37°C, CO_2 5%, no load
[2] Nominal Value

Appearance and specification are subject to change without notice.

Panasonic

for more online information:

www.biomedical.panasonic.eu

Panasonic Healthcare Co., Ltd. Gunma factory is certified for:
Quality management system: ISO9001 / Medical devices quality management system: ISO13485 / Environmental management system: ISO14001