

Direct Heat & Air Jacket™ CO₂ Incubator

MCO-17AC
MCO-34AC

SANYO laboratory CO₂ incubators are designed for a wide range of applications in biomedical, pharmaceutical and clinical laboratories.



control panel



inCu saFe Interior

SANYO is known for innovative and exclusive contamination control features such as inCu saFe™, a copper enriched stainless steel alloy with inherent germicidal protection against contaminants. InCu saFe™ expresses a natural germicidal attribute to inhibit the growth of mold, fungi, mycoplasma and bacteria.

Direct Heat and Air Jacket Temperature™ Control

Patented Direct Heat and Air Jacket™ temperature control ensures for accurate and uniform chamber temperature and CO₂ levels. The MCO-17AC/34AC is microprocessor controlled to maintain temperature uniformity and optimum humidity levels.

CO₂ Control

Available with high precision, reliable thermal conductivity (T.C.) CO₂ sensor.

Anti Contamination Design Benefits

- Circulation blower and CO₂ injection cuts off when door is opened, keeping contaminated outside air from being drawn into the chamber.
- Full rounded corners in the interior chamber are constructed of electro-polished copper-alloy stainless steel. Copper-alloy stainless steel plenums, shelves and brackets extend contamination control to the chamber interior. All are easily removed for cleaning.

Control, Alarm and Monitoring

A range of setpoint, alarm and programmable inputs are established through the use of an intuitive keypad. Extra large digital displays are easy to read.

- Tactile feedback, touch pad and entry keys simplify operation
- Standard parameters are factory-set for quick start-up, and all parameters can be changed as required.
- A remote alarm terminal mounted at the rear of the cabinet can be connected to an external remote alarm system.



*Direct Heat and Air Jacket™ U.S. Patent 5519188;
**inCu saFe Direct Heat and Air Jacket™, P.I.D./R™
and Active Background Contamination Control™ are
trademarks of SANYO Electric Biomedical Co., Ltd.

Incubation
My life. My work. My choice.

Specifications

Model	MCO-17AC/MCO-34AC (2 x MCO-17AC + stacking kit)	
Exterior dimensions (W x D x H)	24.4" x 24.0" x 35.4" (619.7 x 609.6 x 899.2mm)	
Interior dimensions (W x D x H)	19.2" x 19.8" x 26.2" (487.7 x 502.9 x 665.5mm)	
Effective capacity	5.8 cu.ft.	
Net weight	185lbs / 84kgs	
Shelves	Standard 5, Max. 7	
Exterior finish	Baked-on acrylic finish on galvanized stainless steel	
Interior finish	Copper alloy stainless steel	
Door	Baked-on acrylic finish on galvanized steel with door heater	
Inner door	Tempered glass	
Insulation	Foam in place polyurethane (non CFC)	
Air circulation system	Gentle air circulation, upward air flow	
Temperature	Heating method	Direct Heat & Air (DHA) jacket system
	Temperature Control	Microprocessor P.I.D. control
	Temperature range	Ambient temperature +5°C ~ 50°C
	Temperature uniformity	± 0.2°C (setting temperature: 37°C, ambient temperature: 20°C)
Humidity	Chamber humidity	95% ± 5% RH (at: 20°C, 60% RH)
	Humidifying system	Natural evaporation with water in humidity pan
CO ₂	CO ₂ control	Microprocessor control (sensor: Thermal Conductivity)
	CO ₂ range	0 - 20%
	CO ₂ variation	± 0.15%
	CO ₂ inlet pressure	5 - 7 psi
Power source	Voltage: 115V, 60hz, Amps: 3.6A, Plug/Breaker: NEMA 5-15P/15A	
Power consumption	405W	
Alarm system	<ul style="list-style-type: none"> Audible and visual alarm Temperature, CO₂, Door alarm Independent overheat protection circuit sensor Remote alarm contacts 	

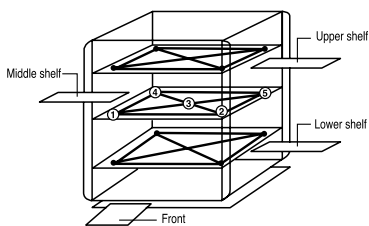
Optional Accessories:

- Rollerbase, MCO-18RB
- CO₂ Regulator, MCO-100L
- Stacking Kit, MCO-18PS
(required to create MCO-34AC)



SANYO is committed to developing green technologies that provide energy efficiency resulting in lower operational costs with less impact on the environment.

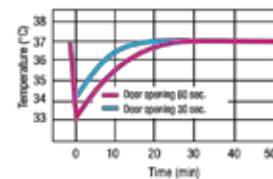
Temperature Uniformity



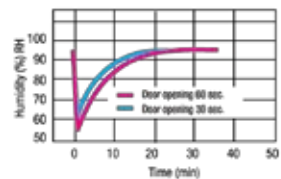
Measurement position	①	②	③	④	⑤
Shelf position					
Upper shelf	+0.03	+0.14	0.00	-0.15	+0.05
Middle shelf			0.00		
Lower shelf	-0.15	-0.13	-0.18	-0.13	+0.05

Condition: Set temperature 37° C, Ambient temp. 20°C, Ambient humidity 45%, CO₂ level setting 5.0%, Water humidity pan 2.0 litres

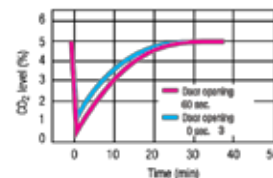
■ Temperature recovery characteristics



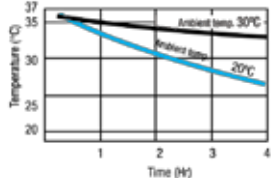
■ Humidity recovery characteristics



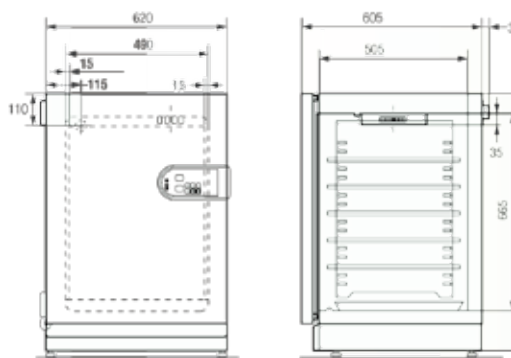
■ CO₂ level recovery characteristics



■ Temperature decrease characteristics when a power failure occurs



Dimensions



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

SANYO

SANYO Commercial Solutions
A Division of SANYO North America Corporation
1300 Michael Drive, Suite A, Wood Dale, IL 60191 USA
Toll Free USA 800-858-8442 • Fax 630-238-0074
www.sanyobiomedical.com

SANYO Canada, Inc.
1-300 Applewood Crescent, Concord, Ontario L4K 5C7
905-760-4025 • Fax 905-760-9945