Direct Heat & Air Jacket™ CO_2 Incubator - MCO-17AC MCO-34AC

SUPERIOR CO_2, TEMPERATURE AND CONTAMINATION CONTROL

MCO-17AC

5.8 CU. FT.

MCO-34AC

11.6 CU. FT.

- Sanyo Laboratory CO_2 Incubators are designed for a wide range of applications in biomedical, pharmaceutical and clinical laboratories.
- 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.
- Patented Direct Heat & Air Jacket™ temperature control ensures for accurate and uniform chamber temperature and CO_2 levels.

FEATURE	BENEFIT
inCu saFe™ Interior	Copper-enriched stainless steel interior surfaces provide preventative germicidal protection
Direct Heat and Air Jacket™ Temperature Control	Patented, radiant wall heating with air jacket is microprocessor controlled to maintain temperature uniformity and optimum humidity
CO_2 Control	Available with high precision, reliable thermal conductivity (T.C.) CO_2 sensor

TECHNOLOGY

- inCu safe™ Construction for Germicidal Protection
- Direct Heat and Air Jacket™ Heating System
- Precise and reliable CO_2 Control

Selected to provide natural germicidal protection without rust or corrosion, inCu saFe™ expresses a natural germicidal attribute to inhibit the growth of mold, fungi, mycoplasma and bacteria. Interior components, including the air flow plenum, shelf supports, humidity pan and blower wheel assembly are easily removable without tools if necessary. When components are removed, all interior surfaces are exposed for conventional cleaning wipe down. Large coved corners and electro-polished surfaces are easy to clean.

The U.S. patented Direct Heat and Air Jacket™ surrounds the inner walls with a natural convection airflow that converts to radiant wall heat through thermal conduction. This technique achieves accurate, uniform and highly responsive temperature control within the chamber. The microprocessor controller directs proportional distribution of power to independent heating sources surrounding the chamber. Arranged in two zones, each zone is controlled by the microprocessor which manages continuous feedback from the incubator chamber sensors via a P.I.D. control algorithm.

*Direct Heat and Air Jacket™ U.S. Patent5519188;

ANTI-CONTAMINATION DESIGN BENEFITS

■ Circulation blower and CO_2 injection cuts off when door is opened, keeping contaminated ambient 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 plenums, shelves and brackets extend contamination control to the chamber interior. All are easily removed for cleaning.

■ An inert gas tube is used to supply and sample the CO_2. To help eliminate contamination, the inert gas tube and air circulation fan blade are autoclavable.

Intuitive Control Panel

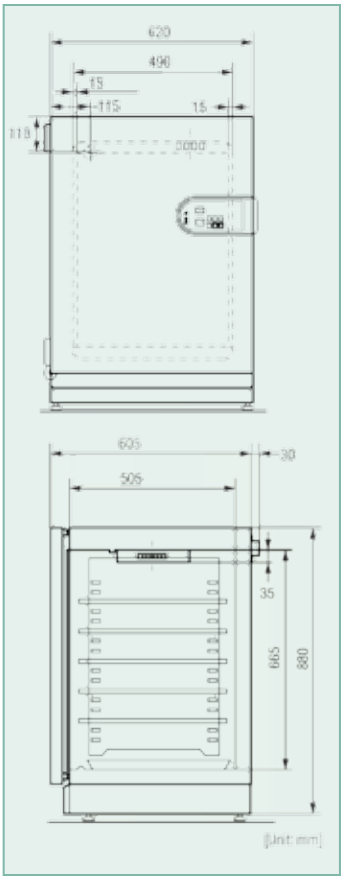
CONTROL, ALARM & MONITORING

A range of setpoint, alarm and programmable inputs are established through the use of 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.



Specifications

Model	MCO-17AC
Exterior dimensions (WxDxH)	24.4" x 24.0" x 35.4"
Interior dimensions (WxDxH)	19.2" x 19.8" x 26.2"
Effective capacity	5.8 cu. ft.
Shelves	Standard 5 max. 17
Exterior finish	Baked-on acrylic finish on galvanized steel
Interior finish	Copper Alloy stainless steel
Door	Baked-on acrylic finish on galvanized steel with door heater
Inner door	Tempered glass
Insulation	Foamed in place polyurethane (non CFC)
Heating method	Direct Heat & Air (DHA) jacket system
Humidifying system	Natural evaporation with water in humidity pan
Temperature control	Microprocessor P.I.D. control
CO_2 control	Microprocessor control (sensor: Thermal Conductivity)
Air circulation system	Gentle air circulation, upward flow
Temperature range	Ambient temperature +5°C~50°C
Temperature uniformity	± 0,2°C (setting temperature: 37°C, ambient temperature: 20°C)
CO_2 range	0 – 20%
CO_2 variation	± 0.15%
CO_2 inlet pressure	5-7 psi
Chamber humidity	95% ± 5% RH (AT: 20°C, 60% RH)
Power source	
Voltage	115 V, 60hz
Amps	3.6 A
Plug/Breaker	NEMA 5-15 P / 15A
Alarm system	▪ Audible and visual alarm ▪ Temperature, CO2, Door alarm ▪ Independent overheat protection circuit and sensor ▪ Remote alarm contacts
Power consumption	405 W
Net weight	185 lbs. / 84 Kgs

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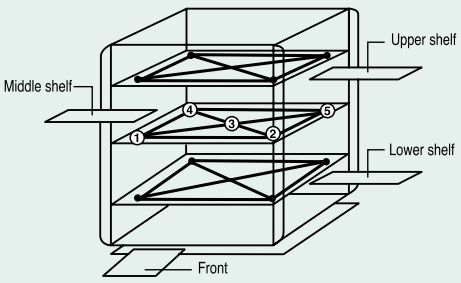
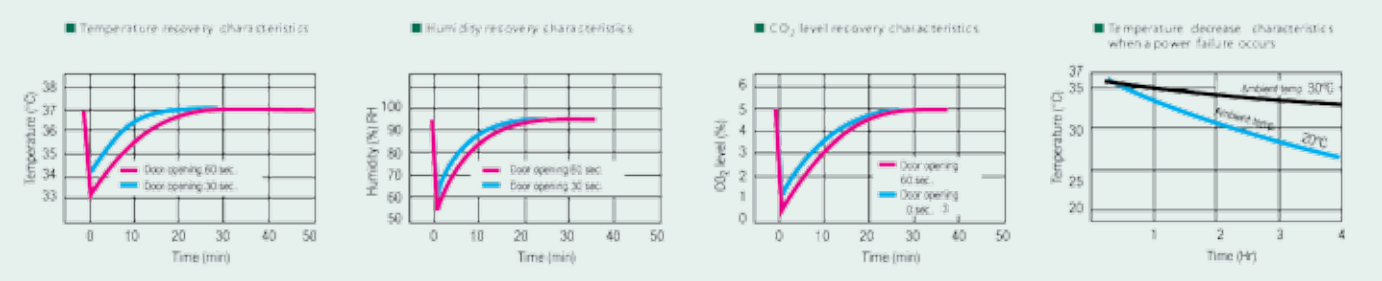


Temperature Uniformity

Measurement position / Shelf position	①	②	③	④	⑤
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%, CO_2 level setting 5,0%, Water humidity pan 2,0 litres



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