

## CO<sub>2</sub> Incubators

These CO<sub>2</sub> incubators set advanced standards in performance and freedom from contamination. The two Research models have the added benefit of a high temperature decontamination facility (95°C).

## **Advanced Microprocessor Control**

The specially developed microprocessor controller gives the user day to day control over all alarm settings, alarm delay and calibration adjustment. These settings are protected by an anti-tampering procedure. Sensors placed within key areas of the chamber constantly monitor and enable the control system to optimise temperature and  $CO_2$  levels. After door opening, the culture conditions quickly recover without overshoot, and stable control is maintained. Profiled heating, a technique developed by LEEC, eliminates all risk of "hot-spots".

## **Active Contamination Control**

All models have a unidirectional airflow (fan assisted) in the work area, an in-line CO<sub>2</sub> HEPA filter, and an ultra-smooth stainless-steel chamber with rounded edges. The indirectly heated inner glass door remains condensation free. These features all help to reduce the risk of contamination. The Research models also have a high temperature decontamination facility operated by a security key switch. User experience has shown high temperature to be especially effective in eliminating culture contamination.

### In-Vivo Simulation

The advanced LEEC-20.2 microprocessor combined with the ducted airflow system ensures that temperature and  $CO_2$  stabilities (typically +0.1 °C and ±0.2%) are maintained to the tightest tolerances, in order to give optimum cell culture conditions.

## **Standard Features:**

### Control

- Microprocessor control with soft touch panel.
- Bright LED digital displays for temperature and CO<sub>2</sub>.
- Comprehensive alarm system (audible and visual).

### Construction

- Stainless steel outer cabinet for longer life.
- Ultra smooth stainless-steel chamber helps contamination control.
- Adjustable levelling feet.
- Two cable access ports (12mm diameter).

## **Heating and Safety**

- Built-in cooling coil (can be connected to a C3 self-contained Recirculating cooler unit for operation close to or below ambient).
- High and low alarm warnings (temperature and CO<sub>2</sub>).
- Independent over temperature safety cut out with failsafe.
- Remote alarm connections (volt-free, N/O, N/C).

### **Contamination Control**

- Unidirectional airflow (fan assisted).
- CO<sub>2</sub> HEPA filter removes airborne contaminants from the incoming CO<sub>2</sub> gas.
- High temperature 95°C decontamination (models GA2000 and GA3000 only).
- Indirectly heated inner glass door prevents condensation.





## **CO<sub>2</sub> Incubators**

	Research models	Standard models			
	GA2000 / GA3000	GA2010 / GA3010			
Temperature					
Range	ta <sup>(1)</sup> to +60°C	ta(1) to +60°C			
Control	<±0.1° at +37°C	<±0.1° at +37°C			
Variation	<±0.2° at +37°C	<±0.2° at +37°C			
Recovery	Typically < 6 minutes	Typically < 6 minutes			
Sensor	AD590	AD590			
CO <sub>2</sub>					
Range	0-20%	0-20%			
Control	<±0.2% at 5%	<±0.2% at 5%			
Recovery	Typically 3 minutes	Typically 3 minutes			
Sensor	Infrared (IR)	Infrared (IR)			
RH					
Range	All models – ambient or 95-98% by forced evaporation				
Construction	Stainless steel chamber (316). Powder coasted white				
	painted stainless steel outer cabinet. Indirectly heated				
	inner door. Slow speed fan circulation. CFC free				
	thermal insulation.				
Alarms	High / low temperature	High / low temperature			
	High / low CO <sub>2</sub>	High / low CO <sub>2</sub>			
	Time delay	Time delay			
	Remote connections	Remote connections			
High Temperature					
Decontamination	Yes	No			
Facility	(95°C)				
Electrical Supply	220-240V AC, 50/60 Hz	220-240V AC, 50/60 Hz			
Warranty	1 year	1 year			

 $ta^{(1)}$  = at least 5°C above ambient. Temperatures down to +20°C, using a LEEC C3 self-contained recirculating cooler unit (or lower with a special cooling coil).



## **Accessories:**

**ST1** Wheeled platform for one incubator

**ST2** Stacking stand for two incubators

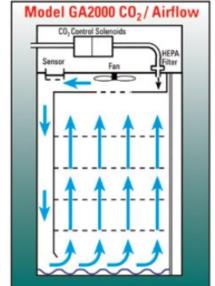
**ST3** Stacking stand on castors for two incubators

**C3** Self-contained recirculating cooler unit

**PNEU** Automatic two-cylinder changeover unit for CO<sub>2</sub>

**PRV2** Two-stage CO<sub>2</sub> cylinder pressure reducing valve with gauges

**R06** In-line CO<sub>2</sub> pressure reducing valve with gauge (2-30 psi)



## **Dimensions**

Model	Capacity	External (mm)	Internal (mm)	Shelves	Weight	Power
						Rating
GA2000	150 litres	880H x 635W x 660D	600h x 510W x 500D	4	85 kg	Typically
GA2010						250W
GA3000*	320 litres	1550H x 635W x 660D	1275H x 510W x 500D	6	135 kg	Typically
GA3010*						350W

<sup>\*</sup>One chamber with two inner glass doors, and one outer door.



Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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