



# 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<sub>2</sub> 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<sub>2</sub> 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

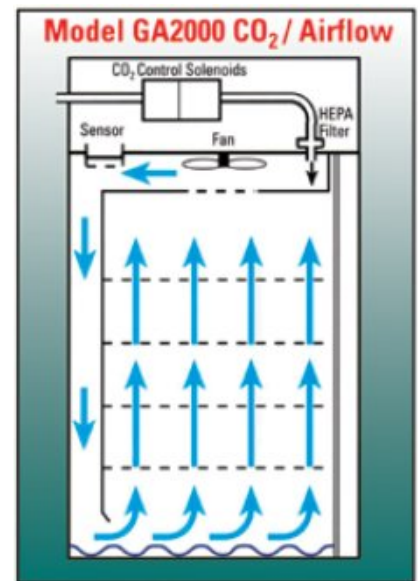
- Unidirectional airflow (fan assisted).
- CO<sub>2</sub> HEPA filter removes airborne contaminants from the incoming CO<sub>2</sub> gas.
- High temperature 95°C decontamination (models GA2000 and GA3000 only).
- Indirectly heated inner glass door prevents condensation.



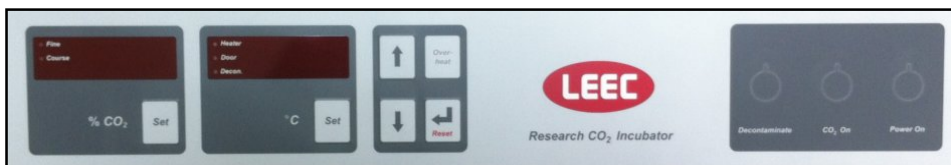
	Research models GA2000 / GA3000	Standard models GA2010 / GA3010
<b>Temperature Range</b> <b>Control Variation</b> <b>Recovery Sensor</b>	ta <sup>(1)</sup> to +60°C <±0.1° at +37°C <±0.2° at +37°C Typically < 6 minutes AD590	ta(1) to +60°C <±0.1° at +37°C <±0.2° at +37°C Typically < 6 minutes AD590
<b>CO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

### 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)



ta<sup>(1)</sup> = 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).



### Dimensions

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

\*One chamber with two inner glass doors, and one outer door.



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