

MONITORING, TRACEABILITY & COMMUNICATION

Reassurance that your cultures are being maintained under ideal conditions is an area in which the EC 160 excels. The key parameters are perpetually recorded, no action for you to remember during the most recent period and connection to an external device permits all cycle data to be permanently recorded and stored.

There is no need to worry what is happening in your absence. A full set alarm is built in and an optional feature will inform you instantly and wherever you are.

- On-board NüveTrack™ automatically records conditions of the last 72 hours
- Recall any time, e.g., on Monday to check the weekend's conditions
- Data tracking and storage on PC via optional RS 232 port and NüveCell™ software
- Optional NüveStore™ SD card writer stores substantial data in mobile format
- Collects between 2 months' data (at 1 minute interval recording) and 5 years' data (at 1 hourly recording) stored on a tiny 2 Gb SD card
- Audible alarms and on-screen messages in plain language, no codes
- Remote or central alarm devices can be connected to a relay switch
- Optional NüveWarn™ remote alarm system
- Optional AlerText™ for the ultimate security will send a text to cell (mobile) phones
- Could call a service engineer for rapid response and expert assistance



TECHNICAL SPECIFICATIONS

Control System	LifeCell™ microprocessor control system
Temperature Range	Ambient temperature plus 7° C to 50° C
Temperature Set & Display Sensitivity	0,1°C
Temperature Variation / Fluctuation	±0,3°C at 37 °C / ±0,1°C
Programmable Temperature Alarm Range	±0,5°C to 5°C
Temperature Sensor	Pt 100
CO ₂ Range	0 % to 20 %
CO ₂ Set & Display Sensitivity	0,1 %
CO ₂ Variation / Fluctuation	±0,3 % / ±0,1 %
Programmable CO ₂ Alarm Range	±0,5 % to 5.0 %
CO ₂ Sensor	Infra-Red (IR) with high stability
Calibration	Auto-zero every 12 minutes. Annual check.
Contamination resistance	0.22 µm sterilizing filters on CO ₂ , air and gas sampling lines
Relative Humidity Level	95 % RH ±5 % @ 37°C
Recovery Times after 30 sec. door opening	Temperature to 36,5°C = 10 min. – CO ₂ to 4.9 % = 3 min.
Disinfection	NüveDis™ 90°C high humidity; password protected and timed
Chamber Volume, Material & Design	160 Litres Stainless steel Rounded corners No fittings
Number of Shelves (standard / maximum)	3 / 8
Shelf Load Area (WxD) mm	465 x 400, 20 x Ø90 mm / 56 x Ø55 mm Petri dishes; 15 x 250 ml CC flasks
Casing / Insulation Materials	Epoxy-polyester powder coated steel / Foil-encapsulated glass wool
Display	Bright white on blue backlit LCD, 128 x 64 pixels
Data Recall	NüveTrack™ shows Date, Time, T °C and CO ₂ % for last 72 hours
Data Reporting	NüveCell™ data tracking software or NüveStore™ SD card writer connection with RS 232C
Alarms	Audible (mutable, with callback), Visual message, Relay to NüveWarn™ remote or central alarm system. Optional AlerText™ text message to cell phone
Power Consumption	900 W
Power Supply	230 V 50/60 Hz
Internal Dimensions (WxDxH) mm	500x460x700
External Dimensions (WxDxH) mm	850x730x910
Packing Dimensions (WxDxH) mm	890x770x1170
Net/Packed Weight kg	108 - 132

FACTORY FITTED OPTIONS

EC 160H	Cable port
EC 160W	NüveCell™ software and RS 232 port

OPTIONS :

A 08 142	AlerText™ GSM alarm module
K 13 009	NüveWarn™ remote alarm system with 10 m cable
A 08 143	nUVeRay™ UV light sterilization kit
Y 07 004	NüveStore™ SD card writer with 2 GB SD card
A 08 144	NüveClean™ decontamination kit for humidity tray (20 doses)
R 01 154	Stainless steel shelf
A 08 146	Stacking adapter
A 08 147	Support frame
A 08 148	Roller base
F 06 003	0,22 µm Biological filter (Spare)
R 11 007	Single stage regulator for CO ₂ gas cylinder
A 08 149	Gas changeover unit for two CO ₂ gas cylinders

Note: A 08 142 and k 13 009 cannot be used at the same time



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EC 160

CO₂ Incubator



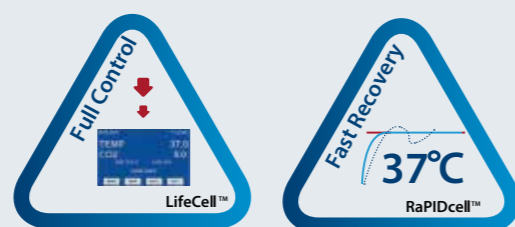
EC 160

CO₂ Incubator

OPTIMIZED CULTURE CONDITIONS

Reproducible and reliable cell growth is dependent upon three critical parameters, temperature, CO₂ concentration and relative humidity. EC 160 CO₂ Incubator offers the researcher all that is required to ensure optimum cell culture conditions.

- LifeCell™ control software for continuous optimization of conditions
- Homogeneous thermal conditions to give comparable results in cultures in any position within the chamber
- PID control for stable temperature and CO₂ during the cycle
- RaPIDcell™ proportional control for fast recovery & no overshoot after a door opening
- Constant >95 % RH throughout the growth cycle; large area heated humidity tray
- Infra-Red CO₂ sensor unaffected by temperature or humidity, even with frequent door openings. Also accurate when set values are changed. Auto-zeros every 12 minutes



CONTAMINATION RESISTANCE

Prevention is better than cure. That is why NÜVE has designed its EC Series to resist contamination with its clean chamber concept. Should contaminants enter during door opening, then an efficient wet disinfection system killing mycoplasma, fungal spores, molds and bacteria is available for immediate use. Because the smooth chamber contains zero components, the optional UV system upgrades its effectiveness to sterilization level. One more defense for the scientist.

- No vigorous fan-assisted circulation required; no promotion of cross-contamination
- Minimum number of parts in the chamber, only racks, shelves, & sample containers
- Easily cleaned rounded corners in the one-piece chamber; no welds
- Minimized contact of flat shelves & round racking; no contaminant growth sites
- Automated NüveDis™ 90 °C wet disinfection function is standard,
- Optional nUveRay™ fast UV disinfection; can sterilize an empty chamber
- NüveClean™ reagents added to the humidity tray make contamination negligible
- The IR sensor, auto-zero reference air and injection of new CO₂ are protected by 0.22 µm sterilizing filters, elimination potential contamination



CONVENIENT OPERATION

Time is a very valuable commodity that no researcher can afford to waste.

EC 160 offers the ultimate in convenience, eliminating unnecessary actions and delays and simplifying manipulation.

The operator interface makes life simple with the minimum of actions and the maximum of information.

- Anti-tip shelves simplify introduction, removal and exchange of samples
- Sterilizing 0,22 µm filters outside; no space-wasting or expensive HEPA filters to change
- No probes or filters to be removed for disinfection; just press and go
- The large surface area humidity tray can be removed in seconds for cleaning
- Password protected Menu eliminates any possibility of changing parameters
- Shelf dimensions have been optimized to accept the largest sample capacity
- Shelves and racks can be removed in 10-20 seconds for autoclaving
- Thorough sanitization of the chamber in no time as there are no chamber fittings
- The user is guided through all steps via the on-screen display
- Easy to understand display in various languages
- The information is still visible when the door is open
- Reminder for calibration or servicing, so optimizing culture conditions
- Optional access port permits a hard wired EU mains plug to pass through
- UV operation is controlled by on-board timer when using optional power outlet
- NüveClean™ reagents are ready to use; no weighing necessary

