



MORE THAN TECHNOLOGY

since 1932



CO₂ incubators

BIOLLAB 190



BIOLAB 190

CO₂ AIR-JACKETED INCUBATORS

The BIOLAB 190 air-jacketed incubator has been designed to provide a reliable and accurate controlled environment for optimal tissue cell culture growth.

The BIOLAB 190 provides a leading edge computer technology, precise temperature control and an accurate CO₂ gas control system.

ELECTRONIC SYSTEM

A microprocessor-based control system designed specifically to deliver the precisely control the chamber environment, providing optimum programmable conditions for culture growth. The user-friendly microprocessor has status indicators, LED display of control parameters, and a touch control keypad for an efficient data entry.

ACCURATE INFRARED CO₂ CONTROL SYSTEM

The BIOLAB 190 uses a microprocessor based non-dispersive infrared CO₂ sensor. The amount of energy is an exact logarithmic function of the CO₂ concentration in the gas between source and detector.

The wavelengths used are absorbed by a filter in the CO₂ wavelength making the measurements insensitive to other components, such as water vapour.

Advanced design provides a very stable drift-free output thus requiring less frequent calibration.

The sensor is inside the chamber air plenum to secure accurate CO₂ control.

CLASS 100 (ISO CLASS 5) AIRFLOW WITHIN THE CHAMBER

A HEPA filter surrounds the blower on the positive pressure side and continuously cleans the circulated air inside the incubator.

The HEPA filter uniformly distributes and cleans the air inside the chamber at a rate of one complete change per minute.

FAST TEMPERATURE RECOVERY TIME

Temperature recovery in the chamber is very fast.

Even with frequent door openings and closings, the temperature recovers at a rate of 0.3°C per minute (on average).

CONTINUOUS HUMIDITY SUPPLY SYSTEM

Large stainless steel pan filled with distilled water, and placed on the bottom of the chamber, secure a relative humidity level up to 95%. The door and front peripheral heater control condensation inside the chamber.

- 100% Stainless steel execution
- Full size water pan
- Heated door
- CO₂ sample port on front panel



| | BIOLAB 190 | BIOLAB 190 S |
|---|---|---|
| TEMPERATURE RANGE* | 18°C to 55°C | 18°C to 55°C |
| TEMPERATURE ACCURACY | +/- 0,1°C | +/- 0,1°C |
| TEMPERATURE UNIFORMITY | +/- 0,3°C at +37°C | +/- 0,3°C at +37°C |
| TEMPERATURE RECOVERY | 0,3°C / minute average | 0,3°C / minute average |
| CO₂ RANGE | 0 - 20% | 0 - 20% |
| CO₂ ACCURACY | +/- 0,1% | +/- 0,1% |
| CO₂ RECOVERY | up to 5%+/- 0,2% in 4 minutes after door opening | up to 5%+/- 0,2% in 3 minutes after door opening |
| UNIFORM TEMPERATURE CONTROL | +/- 0,3°C at +37°C setpoint | +/- 0,3°C at +37°C setpoint |
| HUMIDIFICATION | from water evaporation through reservoir in chamber | from water evaporation through reservoir in chamber |
| GAS INPUT PRESSURE | 1,4 BAR | 1,4 BAR |
| OVERALL DIMENSIONS | 650 x 670 x 1010 mm (wxdxh) | 650 x 670 x 1010 mm (wxdxh) |
| INTERNAL DIMENSIONS (COVERED CORNER) | 550 x 540 x 650 mm (wxdxh) | 550 x 540 x 650 mm (wxdxh) |
| VOLUME (LITERS) | 190 | 190 |
| NET WEIGHT (KG) | 95 | 95 |
| SHELVES SIZE | 4 (max 17) 489 x 489 mm | 4 (max 17) 489 x 489 mm |

* Maintains 5°C above ambient to a +30°C ambient maximum

BIOLAB 190 & BIOLAB 190 S

| | |
|-----------------------------------|----------------------------|
| ELECTRONIC CONTROL SYSTEM | Microprocessor |
| GAS CONTROL SYSTEM | CO ₂ - Infrared |
| TEMPERATURE CONTROL SYSTEM | Direct - Heat |
| HUMIDITY CONTROL SYSTEM | Convection |
| HEPA FILTRATION SYSTEM | Air - Gas ¹ |
| CONFIGURATION | Single ² |

1. Internal recirculation system to Class 100 (ISO Class 5) within 3 minutes

| | BIOLAB 190 | BIOLAB 190 S |
|------------------------|-------------------|---|
| DECONTAMINATION | // | 95°C Wet decontamination cycle eradicates contaminating agents (14 hours average) |
| DECONTAMINATION | // | 145°C high temperature dry decontamination cycle eradicates contaminating agents (10 hours average) |



OPTIONAL FEATURES AND ACCESSORIES

- Automatic internal tank switch
- RS-232 communication port
- Additional shelves
- External CO₂ tank alarm
- External tank switch
- Surge protector
- Chart recorder outputs

Angelantoni Industrie headquarters in Massa Martana (Perugia, Italy) extend over an area of 80.000 square metres (more than 16.000 square metres are covered by factories and offices).

Massa Martana is located in Umbria, a region rich in art, history and tradition.

No location could be more appropriate; Angelantoni Industrie S.p.A. learns from the past to better understand and anticipate the future.

This, combined with dedication and ever growing expertise, is why Angelantoni Industrie S.p.A. has become the most complete and diversified European group for advanced cold technology for industry and research. Founded in 1932, Angelantoni Group: has today more than 600 employees working in 6 units (Italy, France, Germany, China, India).



AS biomedical division also produces:

- reach-in refrigerators (+4°C and -20°C)
- blood bank refrigerators
- Hemosafe® system for blood management
- -30°C freezers
- automatic ice cubers or flakers
- -40°C and -85°C Platinum freezers
- chambers for pharmaceutical stability tests
- plant growth chambers (sun light)
- -152°C freezers (with compressors)
- prefabricated cold and hot chambers
- special execution and Ex-d refrigerators



ISO 9001:2000

ISO 14001

AQAP 110



MORE THAN TECHNOLOGY

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