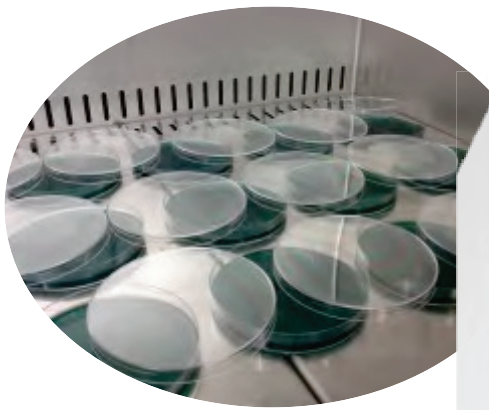# laftech
## LAF Technologies Pty Ltd

// **CLIMATIC TEST CHAMBERS**

// **HORIZONTAL FLOW CHAMBERS FOR ICH TESTS**

// **PHARMACEUTICAL STABILITY TEST CHAMBERS**

// **PHOTOSTABILITY TESTING**

// **FROST FORMATION TEST**

// **DROSOPHILIA AND ENTOMOLOGY CHAMBERS**

// **LARGE CAPACITY INCUBATORS**

// **LOW TEMPERATURE CHAMBERS**

// **TISSUE CULTURE TEST CHAMBERS**

// **REFRIGERATED INCUBATORS FOR BOD**

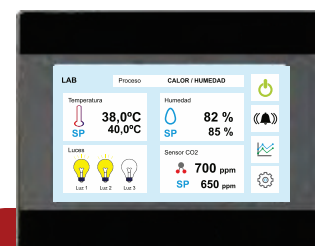## MULTI-USE REFRIGERATED INCUBATORS (ERIS MODELS) TECHNICAL SPECIFICATIONS

- Cooling system by vertical forced air, evenly distributed, with high homogeneity inside the chamber.
- PID microprocessor, to control all parameters, with fuzzy logic, to ensure high stability of the temperature inside the chamber.
- Temperature range from +4ºC to 55ºc, optional from -10ºC/-20ºC/-30ºC to +55ºC/+60ºC.
- Security thermostat, to protect from high temperatures.
- +/-0.1ºC precision on-screen.
- +/-1.0ºC homogeneity on the chamber's inside at 37ºC.
- +/-0.85ºC stability on the chamber's inside at 37ºC. (acc. to the model)
- NTC Probe for temperature control, depending on the model.
- Independent cooling and heating systems.

## TECHNICAL SPECIFICACIONS FOR ERIS, ERIS/HR, ERI AND ERI/HR MODELS

- Includes series 4100 controller with graphical data representation, temperature range from +4ºC ti +55ºC (from -10ºC/-20ºC/-30ºC to +55ºC is optional).
- 4.3" TFT Touchscreen with graphical representation of the temperature and humidity curve.
- Independent alarms, audibles and visuales, for maximum and minimum temperatures, probe and power failure.
- On ERIS models: backup batteries (48h autonomy) with built-in charger.
- Control panel protection by numerical password.
- Blind door models with opening aids and large handle.
- Internal LED lightning with separated switch (optional).
- "C" type models include thermic glass door in the data table (with heated frame in models with humidity and low temperature control).
- Door opening, on the right or left (please, specify when ordering).
- Safety lock with key on the door.
- Cooling gas, CFC and HCFC free, biodegradable.
- Hermetic compressor, on the dampers to reduce noise levels.
- AISI 304 stainless steel internal and external finish.
- Steel rod tray covered in plastic (stainless steel optional), with adjustable height.
- Magnetic seal in external door, to ensure perfect closure.
- Wall bypass to introduce wires and external instruments.
- 60mm density polyurethane insulator, CFC and HCFC free.
- Stainless steel legs with adjustable height.
- Functionning in work areas with temperatures up to +32ºC.

// ERIS 1240



### ICH NANODAC test Controller for models finished in "3"

- TFT Touchscreen of 4.3" (7.0" optional) with graphical measurement data representation.
- GSM Telephone alarm module (optional).
- RS 485 Conexion for remote control (optional)
- Ethernet output, to monitor data by cable (MODBUS TCP/ICP) or by wireless module, including specific software for visualization and control of the data (optional).
- Battery duration with bigger backup of 48 hours (72 hours optional).

# REFRIGERATED INCUBATORS - INOX BASIC LINE
## FOR CLIMATIC AND STABILITY TESTS
## VERTICAL FLOW AIR FORCED
## MODELS WITH HUMIDITY CONTROL

*ERIS/HR AND ERI/HR MODELS FROM +4ºC TO +55ºC*
*HUMIDITY RANGE FROM 20% TO 89% RH*

*OPTIONAL*
*HUMIDITY RANGE FROM 20% TO 90% RH*

**From -30º a +55ºC**
**From 20% to 90% HR**

## ERIS/HR AND ERI/HR
## TECHNICAL SPECIFICATIONS

- Humidity control: work range from 20% to 80% RH (+/-3% RH), temperature range from +20ºC to +40ºC, optional: 20% to 90% RH.
- Forced air cooling system, vertically distributed with high temperature homogeneity in the chamber's inside.
- PID Microprocessor, for parameters control, ensures high stability temperature.
- Temperature range from +4ºC to +55ºC, optional from -10ºC to +55ºC/ -20ºC to +55ºC/ -30ºC to +55ºC/ +60ºC without humidity.
- 4.3" TFT Touchscreen with graphical representation of the temperature's and/or humidity's curv.
- +/-0.1ºC precision on-screen.

- +/-1.0ºC Homogeneity on the chamber's inside at 37ºC
- +/-0.85ºC stability on the chamber's inside at 37ºC, (acc. to the model )
- Independent cooling and heating systems, depending on the model.
- Pt100 or capacitive probe (depending on the model) for temperature's control.
- Capacitive electronic probe (4-20 mA), for humidity control, with a +/-2% RH precision.
- Ultrasounds humidity generator, introduces microscopic water drops at ambient temperature inside the chamber.
- Optional: electrode vapour generation.
- Condensation drying system, cooling vaporizer.

## OPTIONAL ACCESSORIES

// **ERI 1240 HR**

### 2000 series Controller for ERI models

- Numerical password protection, with PIN and independent code.
- Visual and audible alarm signalling:
  - High/Low temperature with programmed limits by user through main menu.
  - Open door alarm with 30" leeway to allow standard operations (optional).
  - Alarm delay time programmable through the menu.
  - Probe failure.
- Audible alarm system, with continuous indication on-screen and automatic back-light if the situation persists.
- Optional: power failure alarm with backup battery loner than 48 hours (72 hours optional)

| RANGE | REFRIGERATED INCUBATORS - INOX BASIC LINE | | | | | |
|---|---|---|---|---|---|---|
| ERIS MODELS WITH HUMIDITY CONTROL | ERIS 325 HR | ERIS 525 HR | ERIS 615 HR | ERIS 900 HR | ERIS 1120 HR | ERIS 1240 HR |
| ERIS MODELS WITHOUT HUMIDITY CONTROL | ERIS 325 | ERIS 525 | ERIS 615 | ERIS 900 | ERIS 1120 | ERIS 1240 |
| ERI MODELS WITH HUMIDITY CONTROL | ERI 325 HR | ERI 525 HR | ERI 615 HR | ERI 900 HR | ERI 1120 HR | ERI 1240 HR |
| ERI MODELS WITHOUT HUMIDITY CONTROL | ERI 325 | ERI 525 | ERI 615 | ERI 900 | ERI 1120 | ERI 1240 |
| TEMP. [ºC] RANGE WITHOUT HUMIDITY CONTROL | +4/+55 (Optional: -10ºC/-20ºC/-30ºC) | | | | | |
| TYPE OF ERIS/ERI CONTROLLER | 4001 CONTROLLER in ERIS models / 2000 CONTROLLER in ERI models | | | | | |
| MODELS WITH CONTROLLED HUMIDITY | from 20% to 90% HR | | | | | |
| TEMP. RANGE WITH CONTROLLED HUMIDITY (ºC) | +20/+40 | +20/+40 | +20/+40 | +20/+40 | +20/+40 | +20/+40 |
| RATED CAPACITY NET/GROSS (liters) | 300/325 | 515/525 | 610/615 | 828/900 | 1120/1126 | 1240/1289 |
| INTERIOR MEASUREMENTS (mm) W x D x H* | 372 x 558 x 1412 | 544 x 683 x 1388 | 544 x 683 x 1529 | 637 x 851 x 1529 | 1235 x 683 x 1335 | 1235 x 683 x 1529 |
| EXTERIOR MEASUREMENTS (mm) W x D x H* | 482 x 695 x 2100 | 687 x 794 x 1989 | 687 x 794 x 2130 | 756 x 960 x 2130 | 1385 x 794 x 1989 | 1385 x 794 x 2125 |
| CLEAR OF DOOR (mm) W x H** | 375 x 1495 | 580 x 1345 | 580 x 1304 | 650 x 1495 | 580 x 1104 | 580 x 1304 |
| INSULATOR THICKNESS (mm) | 55 | 75 | 75 | 75 | 55 | 75 |
| INTERIOR FINISH | Stainless steel | | | | | |
| EXTERIOR FINISH | Stainless steel | | | | | |
| INTERIOR DOOR | Optional | Optional | Optional | Optional | Optional | Optional |
| TYPE OF EXTERIOR DOOR | Blind | Blind | Blind | Blind | Blind | Blind |
| LOCK | Yes | Yes | Yes | Yes | Yes | Yes |
| NUMBER OF SHELVES | 3 | 3 | 3 | 3 | 3 + 3 | 3 + 3 |
| SIZE OF THE SHELVES (mm) W X D*** | 325 x 530 | 530 x 650 | 530 x 650 | 660 x 800 | 530 x 650 | 530 x 650 |
| MATERIAL OF THE SHELVES | Steel rod covered in plastic | | | | | |
| SHELVES SURFACE/ CHAMBER'S TOTAL (m²) | 0,17 | 0,34 | 0,34 | 0,54 | 0,34 | 0,34 |
| WALL BYPASS / CABLE GLAND | Yes | Yes | Yes | Yes | Yes | Yes |
| INTERNAL SOCKETS | Optional | Optional | Optional | Optional | Optional | Optional |
| DATALOGGER | In models with 4001 series controller | | | | | |
| USB OUTPUT | In models with 4001 series controller | | | | | |
| SCREEN GRAPHICS | In models with 4001 series controller | | | | | |
| RS485 CONNECTION PORT WITH MODBUS | In models with 4001 series controller | | | | | |
| REMOTE ALARM EXIT FREE OF POTENTIAL | Yes | Yes | Yes | Yes | Yes | Yes |
| BATTERY | In models with 4001 series controller | | | | | |
| VOLTAGE FAILURE ALARM | In models with 4001 series controller | | | | | |
| ROOM TEMPERATURE PROBE | Optional | Optional | Optional | Optional | Optional | Optional |
| TYPE OF COOLING | R134a optional R290, depending on the application | | | | | |
| ROOM TEMPERATURE PROBE | from +10ºC to +32ºC | | | | | |
| ELECTRIC POWER (W) | 200 | 200 | 500 | 1000 | 1100 | 1500 |
| VOLTAGE / FREQUENCY (V/HZ) | 230/50 optional 110/60 and 220/60 | | | | | |
| WEIGHT (KG) | 104 | 127 | 148 | 180 | 187 | 246 |

*Width x Depth x Height   **Width x Height   ***Widht x Depth

# REFRIGERATED INCUBATORS - LINE 4000
## FOR CLIMATIC AND STABILITY TESTS
## VERTICAL FORCED AIR MODELS

*LABORATORY INCUBATORS*
*REFRIGERATED WITH FORCED AIR*

*ERIS 4000 AND ERI 4000 MODELS*
*FROM +4ºC TO +55ºC*

*OPTIONAL*
*FROM -10ºC TO +55ºC*

**From +4º to +55ºC**

// **ERIS 40455**
**4001 series Controller**

**// ERI 40070**
2000 series Controller

**Optional internal sockets**
for instrument conexion

## TECHNICAL SPECIFICATIONS

- Forced air cooling system
- PID microprocessor to control parameters
- Temperature range from +4ºC to +55ºC, optional: -10ºC to +55ºC/
- -20ºC to +55ºC/ -30ºC to +55ºC
  Safety thermostat to protect the product.
- Audible, visible and independent alarm for maximal and minimal temperatures.
- Backlighted LED screen for temperature and parameters control.
- +/-0.1ºC precision on-screen.
- +/-1.0ºC homogeneity on the chamber's inside at 37ºC.
- +/-0.5ºC stability on the chamber's inside at 37ºC.
- Pt 100 probe, for temperature control.
- Optional: glass internal door with independent seal.
- Control panel with touchscreen.
- Internal illumination with separated switch.
- Optional: temperature/ time ramps programming, with storage of different working cycles.
- Stop alarm switch, it rearms when the programmed temperature is reached.
- Wall bypass for wire access, probes, for external/ internal instruments conexion.

- PID controlled temperature.
- Finned heating element, improves the temperature's distribution.
- Independent heating and cooling systems.
- Forced air venting, with vertical air flow, evenly distributed, allowing more homogeneity of the air's temperature inside the chamber.
- R134a cooling gas, R290 alternative, CFC and HCFC free.
- Hermetic compressor, installed on the dampers to reduce noise levels.
- Steel exterior finish covered in epoxy.
- Interior finish: steel covered in epoxy or inox, optional.
- Magnetic all-round seal allowing a perfect closure of the door.
- High density injected polyurethane insulator, CFC and HCFC free.
- Adjustable-height legs, optional wheels.
- Functioning in work areas with temperatures up to +32ºC.

## OPTIONAL ACCESSORIES

See page 31

| RANGE | VERTICAL FLOW REFRIGERATED INCUBATORS - LINE 4000 | | | | | |
|---|---|---|---|---|---|---|
| ERIS MODELS WITH HUMIDITY CONTROL | | ERIS 40070 HR INOX | | ERIS 40150 HR INOX | | ERIS 40255 HR INOX |
| ERIS MODELS WITHOUT HUMIDITY CONTROL | ERIS 40070 | ERIS 40070 INOX | ERIS 40150 | ERIS 40150 INOX | ERIS 40255 | ERIS 40255 INOX |
| ERI MODELS WITH HUMIDITY CONTROL | | ERI 40070 HR INOX | | ERI 40150 HR INOX | | ERI 40255 HR INOX |
| ERI MODELS WITHOUT HUMIDITY CONTROL | ERI 40070 | ERI 40070 INOX | ERI 40150 | ERI 40150 INOX | ERI 40255 | ERI 40255 INOX |
| TEMP. [ºC] RANGE WITHOUT HUMIDITY CONTROL | +4/+55 (Optional: -10ºC/-20ºC/-30ºC) | | | | | |
| TYPE OF ERIS/ERI CONTROLLER | from 20% to 90% HR | | | | | |
| MODELS WITH CONTROLLED HUMIDITY | +20/+40 | | | | | |
| TEMP. RANGE WITH CONTROLLED HUMIDITY (ºC) | 4001 CONTROLLER in ERIS models / 2000 CONTROLLER in ERI models | | | | | |
| RATED CAPACITY NET/GROSS (liters) | 65/70 | 65/70 | 135/150 | 135/150 | 223/255 | 223/255 |
| INTERIOR MEASUREMENTS (mm) W x D x H* | 366 x 352 x 523 | 366 x 352 x 523 | 510 x 478 x 555 | 510 x 478 x 555 | 570 x 523 x 1045 | 570 x 523 x 1045 |
| EXTERIOR MEASUREMENTS (mm) W x D x H* | 445 x 475 x 810 | 445 x 475 x 810 | 600 x 600 x 825 | 600 x 600 x 825 | 670 x 660 x 1530 | 670 x 660 x 1530 |
| CLEAR OF DOOR (mm) W x H** | 358 x 516 | 358 x 516 | 504 x 552 | 504 x 552 | 568 x 855 | 568 x 855 |
| INSULATOR THICKNESS (mm) | 40 | 40 | 45 | 45 | 75 | 75 |
| INTERIOR FINISH | Epoxy covered steel | Stainless steel | Epoxy covered steel | Stainless steel | Epoxy covered steel | Stainless steel |
| EXTERIOR FINISH | Stainless steel | | | | | |
| INTERIOR DOOR | Optional | Optional | Optional | Optional | Optional | Optional |
| TYPE OF EXTERIOR DOOR | Blind | Blind | Blind | Blind | Blind | Blind |
| LOCK | Yes | Yes | Yes | Yes | Yes | Yes |
| NUMBER OF SHELVES | 2 | 2 | 2 | 2 | 3 | 3 |
| SIZE OF THE SHELVES (mm) W X D*** | 358 x 516 | 358 x 516 | 530 x 650 | 660 x 800 | 530 x 650 | 530 x 650 |
| MATERIAL OF THE SHELVES | Epoxy covered steel | Stainless steel | Epoxy covered steel | Stainless steel | Epoxy covered steel | Stainless steel |
| SHELVES SURFACE/ CHAMBER'S TOTAL (m²) | 0,17 | 0,17 | 0,18 | 0,18 | 0,34 | 0,18 |
| WALL BYPASS / CABLE GLAND | Optional | Optional | Optional | Optional | Optional | Optional |
| INTERNAL SOCKETS | Yes | Yes | Yes | Yes | Yes | Yes |
| DATALOGGER | In models with 4001 series controller | | | | | |
| USB OUTPUT | In models with 4001 series controller | | | | | |
| SCREEN GRAPHICS | In models with 4001 series controller | | | | | |
| RS485 CONNECTION PORT WITH MODBUS | In models with 4001 series controller | | | | | |
| REMOTE ALARM EXIT FREE OF POTENTIAL | Yes | Yes | Yes | Yes | Yes | Yes |
| BATTERY | In models with 4001 series controller | | | | | |
| VOLTAGE FAILURE ALARM | In models with 4001 series controller | | | | | |
| ROOM TEMPERATURE PROBE | Optional | Optional | Optional | Optional | Optional | Optional |
| TYPE OF COOLING | R134a optional R290, depending on the application | | | | | |
| ROOM TEMPERATURE PROBE | from +10ºC to +32ºC | | | | | |
| ELECTRIC POWER [W] | 520 | 520 | 520 | 520 | 750 | 750 |
| VOLTAGE / FREQUENCY [V/HZ] | 230/50 optional 110/60 and 220/60 | | | | | |
| WEIGHT [KG] | 40 | 40 | 60 | 60 | 118 | 118 |

*Width x Depth x Height   **Width x Height   ***Widht x Depth

| RANGE | VERTICAL FLOW REFRIGERATED INCUBATORS - LINE 4000 | | | | |
|---|---|---|---|---|---|
| ERIS MODELS WITH HUMIDITY CONTROL | | ERIS 40455 HR INOX | ERIS 40655HR INOX | ERIS 40805 HR INOX | ERIS 41315 HR INOX |
| ERIS MODELS WITHOUT HUMIDITY CONTROL | ERIS 40455 HR | ERIS 40455 INOX | ERIS 40655 INOX | ERIS 40805 INOX | ERIS 41315 INOX |
| ERI MODELS WITH HUMIDITY CONTROL | | ERI 40455 HR INOX | ERI 40655 HR INOX | ERI 40805 HR INOX | ERI 41315 HR INOX |
| ERI MODELS WITHOUT HUMIDITY CONTROL | ERI 40455 HR | ERI 40455 INOX | ERI 40655 INOX | ERI 40805 INOX | ERI 41315 INOX |
| TEMP. [ºC] RANGE WITHOUT HUMIDITY CONTROL | +4/+55 (Optional: -10ºC/-20ºC/-30ºC) | | | | |
| TYPE OF ERIS/ERI CONTROLLER | from 20% to 90% HR | | | | |
| MODELS WITH CONTROLLED HUMIDITY | +20/+40 | | | | |
| TEMP. RANGE WITH CONTROLLED HUMIDITY (ºC) | 4001 CONTROLLER in ERIS models / 2000 CONTROLLER in ERI models | | | | |
| RATED CAPACITY NET/GROSS (liters) | 438/455 | 438/455 | 615/655 | 780/805 | 1353/1395 |
| INTERIOR MEASUREMENTS (mm) W x D x H* | 570 x 523 x 1470 | 570 x 523 x 1470 | 580 x 693 x 1529 | 606 x 848 x 1512 | 1277 x 693 x 1529 |
| EXTERIOR MEASUREMENTS (mm) W x D x H* | 670 x 660 x 1955 | 670 x 660 x 1955 | 687 x 815 x 2125 | 757 x 979 x 2121 | 1384 x 814 x 2123 |
| CLEAR OF DOOR (mm) W x H** | 568 x 1280 | 568 x 1280 | 575 x 1488 | 605 x 1494 | 575 x 1488 |
| INSULATOR THICKNESS (mm) | 50 | 50 | 55 | 55 | 55 |
| INTERIOR FINISH | Galvanized steel plastified in white | Stainless steel | Stainless steel | Stainless steel | Stainless steel |
| EXTERIOR FINISH | Stainless steel | | | | |
| INTERIOR DOOR | Optional | Optional | Optional | Optional | Optional |
| TYPE OF EXTERIOR DOOR | Blind | Blind | Blind | Blind | Blind |
| LOCK | Yes | Yes | Yes | Yes | Yes |
| NUMBER OF SHELVES | 4 | 4 | 4 | 4 | 4 + 4 |
| SIZE OF THE SHELVES (mm) W X D*** | 500 x 445 | 500 x 445 | 500 x 518 | 570 x 790 | 500 x 518 |
| MATERIAL OF THE SHELVES | Galvanized steel plastified in white | Stainless steel | Stainless steel | Stainless steel | Stainless steel |
| SHELVES SURFACE/ CHAMBER'S TOTAL (m$^2$) | 0,22 | 0,22 | 0,26 | 0,18 | 0,26 |
| WALL BYPASS / CABLE GLAND | Optional | Optional | Optional | Optional | Optional |
| INTERNAL SOCKETS | Yes | Yes | Yes | Yes | Yes |
| DATALOGGER | In models with 4001 series controller | | | | |
| USB OUTPUT | In models with 4001 series controller | | | | |
| SCREEN GRAPHICS | In models with 4001 series controller | | | | |
| RS485 CONNECTION PORT WITH MODBUS | In models with 4001 series controller | | | | |
| REMOTE ALARM EXIT FREE OF POTENTIAL | Yes | Yes | Yes | Yes | Yes |
| BATTERY | In models with 4001 series controller | | | | |
| VOLTAGE FAILURE ALARM | In models with 4001 series controller | | | | |
| ROOM TEMPERATURE PROBE | Optional | Optional | Optional | Optional | Optional |
| TYPE OF COOLING | R134a optional R290, depending on the application | | | | |
| ROOM TEMPERATURE PROBE | from +10ºC to +32ºC | | | | |
| ELECTRIC POWER (W) | 850 | 850 | 950 | 1000 | 1250 |
| VOLTAGE / FREQUENCY (V/HZ) | 230/50 optional 110/60 and 220/60 | | | | |
| WEIGHT (KG) | 141 | 141 | 160 | 178 | 278 |

*Width x Depth x Height   **Width x Height   ***Widht x Depth