DEEP FREEZER -40°C
Model NADEE 500
(505 Lt.)

LOW TEMPERATURE -40°C VERTICAL FREEZERS HPLL series

Thalheimer, through a careful and complex research and development plan, has manufactured this completely new series “High Performance Line” freezers at -40 °C. This Vertical Freezers PL Series (Premium Line) represents excellence in very-low-temperature freezers for laboratory use.

CHARACTERISTICS:

- CAPACITY: 505 Lt.;
- EXTERNAL DIMENSIONS: cm 97 x 96 x 184 (W x D x H);
- INTERNAL DIMENSIONS: cm. 70 x 65 x 111 (W x D x H);
- INTERNAL COMPARTMENTS DIMENSIONS: cm. 70 x 65 x 26 (W x D x H);
- CABINETS: 1 ea,
- WEIGHT: 290 Kg.;
- POWER SUPPLY: 230 / 50-60 / 1 + G;
- POWER CONSUMPTION: Ca. 550 W (average referred at ambient T°C +23°C with a normal operation);
- TEMPERATURE RANGE: from -35°C to -50°C;
- SHELVES: 4 ea.; with independent door and built in evaporating system + 4 movable shelves.
- CERTIFICATIONS: The equipment is certified in accordance with:
  - CEI 66/5 UNI EN 61010-1/A2;
  - CEI EN 61326-1
  - ISO 9001:2008 certified manufacturer;

MECHANICAL STRUCTURE:

- INTERNAL FRAME: AISI 304 stainless steel (AISI 316 on request) with polished external BA finish for best resistance and cleanliness;
- EXTERNAL FRAME: zinc-plated and pre-painted steel sheet (AISI 304 stainless steel on request) satin finish;
- THERMAL INSULATION: non-CFC, non-HCFC PU foam, min. thickness 140 mm;
- SEALING GASKET: Triple silicone rubber (prevention against air leaks);
- **GASKET HEATING:** frost formation prevention by means of the “hot gas” recirculation coils; high reliability and energy saving (it does not use additional power by electric heaters);

- **COMPENSATION VALVE:** for internal/external pressure compensation, to facilitate door open/close;

- **INTERNAL ROOMS:** 4 ea. stainless steel at standard;

- **COUNTER DOORS:** 4 ea. (for each shelves) with 20-mm. PU foam, to minimize cold loss when the external door is open;

- **DOOR:** one wing type, with one-hand minimum force opening system, highly ergonomic to facilitate closing/opening, complete with locking key;

- **COMPENSATION VALVE:** to facilitate the in/out pressure compensation, to ease the opening/closing actions;

- **WHEELS:** 4 ea. pivoting wheels for ease of maneuvering of the freezer inside the laboratory;

**REFRIGERATION SYSTEM**

- **COOLING SYSTEM:** fully sealed cooling circuit with hermetic compressors arranged in cascade, complete with MCB protection and pressure gauge to monitor condensation pressure (MR);

- **EVAPORATING SYSTEM:** direct expansion s.steel coils thermally connected to the inner s.steel shelves surfaces, for a high internal temperature uniformity;

- **CONDENSING SYSTEM:** air-type high-surface finned condenser; the blower is controlled by an inverter to change its speed according to the air temperature at the condenser exit;

- **THERMAL PROBES:** 2 ea. Pt100 probes, one used for thermoregulation, the second for alarm (switched to regulation in case of main probe failure);

- **SAFETY THERMOSTAT:** switches off the appliance from power supply in case of a main regulator breakdown. Temperature exceeds the max safety value (adjustable and preset by the user);

- **Control system:** micro processor ARM9, the same processor applied in smart-phones. The controller has a video-graphic interface, done with a touch screen TFT display. This controller, not only is equipped with a more powerful processor and with much capacity of memory RAM, if compared to the previous models, it has an user interface so direct, that anyone will find it really user-friendly.