DEEP FREEZER -40°C
Model NADEE 125
(125 Lt.)
LOW TEMPERATURE -40°C VERTICAL FREEZERS NADEE 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.

MAIN TECHNICAL CHARACTERISTICS:

- **CAPACITY:** 125 Lt.;
- **EXTERNAL DIMENSIONS:** cm 80 x 79 x 132 (W x D x H);
- **INTERNAL DIMENSIONS:** cm 50 x 45 x 54 (W x D x H);
- **COMPARTMENTS:** 2 ea.;
- **COMPARTMENTS INTERNAL DIMENSIONS:** cm 50 x 45 x 26 (W x D x H);
- **WEIGHT:** 200 Kg.;
- **POWER SUPPLY:** 230 / 50-60 / 1 + G;
- **POWER CONSUMPTION:** Ca. 470 W (average referred at ambient T°C +23°C with a normal operation);
- **TEMPERATURE RANGE:** from -35°C to -45°C;
- **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.