

SECTION 7

Ultra Low Freezer -86 °C

TEKNALAB is always innovative and gets inspiration by the news from informatics, electronics and thermodynamics.

TEKNALAB has thought a controller with a technology based on micro-processor **ARM9 Dual Core** and it has an Operative System Linux and it is a true on-board computer. The new controller has a graphic interface touch screen **TFT DISPLAY**.

This processor has a high capacity of memory RAM and it has an user interface so direct, that anyone will find it really user-friendly. In order to **guarantying the maximum connectivity and traceability** the Ultra Low Temperature Freezers **Series HPL**, with the new smart controller, **can have a full connectivity with the laboratory and hospital environmental, by means of:**

Slot USB, Slot SIM, Wi-Fi, Ethernet wired, and RS485 port with ModBus protocol.

Above all, the Wi-Fi connection will make the HPL freezer visible in the LAN of the hospital or of the industrial laboratory. **From a PC workstation, connected in the same network as the freezer, through the browser, you can connect with the refrigeration unit by typing the IP address of the same. Or, from any Internet terminal in the world will be able to connect to the refrigeration unit accessing the static IP address of the company, whose network is connected in the freezer, of course having the login credentials, which may be granted by the administrator corporate network.**

The controller also warrants a full traceability, since the system continuously records, at high frequency, the functional data, bar codes, or other forms of coding, combining them with the freezing or cryo preservation process, etc. The user, without needing any specific SW, will be able to transfer the data to PC and/or to LAN in a very friendly way thanks to the standards which are developed in compliance with Windows. The smart controller has been designed to guarantee an integrated safety about all the functions, through the regulation and the management of the refrigeration power. The data recording complies with the most evolved standards, like GMP, JACIE, FACT, and so on. **There is also the availability of a temperature - time graphic, with no need to install a specific recorder.**

The new controller assures safer procedures, automatic recording of the data and shorter working time for the technician.

In fact it obtains the maximum saving for the procedures of freezing, storage, by the automatic writing of the introduced items, by the automatic recording of materials and thermal cycle, and their association. In this way it obtains to amend many errors and many not conformities of the laboratory processes, and in last analysis it gives a sensible saving of the indirect costs.

Structure. The external cabinet is a plasticized, zinc-plated steel sheet with



Optional

rounded edges for maximum ergonomics; **Internal casing in AISI 304 S/Steel** (or AISI 316 upon request) with rounded angles for easy cleaning; no.4 insulated internal counter doors (n. 5 upon request) for upright models; the handle has an ergonomic design and key lock; pivoting wheels to facilitate transportation and placement inside the laboratory; not heated pressure-compensation valve to facilitate the operation of opening the door, Insulation is in CFC- and HCFC-free polyurethane resin foamed on site, with a density of **40 Kg m³ and with an average thickness of 140 mm or more.**

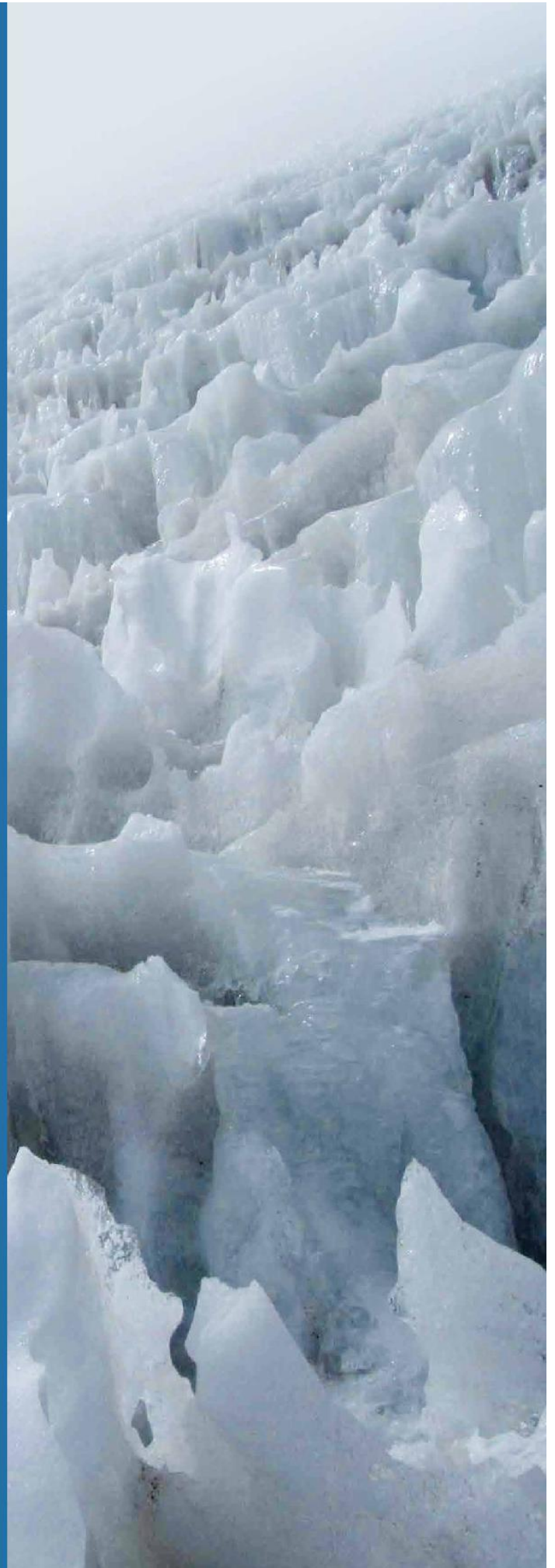
Gaskets. Triple silicone rubber seal, welded joints, heated by the refrigerant itself and with virtually unlimited duration.

Cooling System at -86 °C.

The refrigeration system is fully sealed; it uses a cascade circuit with innovative components and fluids to obtain, together, maximum cooling reliability and performance; 2 silent, airtight compressors (dB <55) with a high refrigeration capacity; the refrigerants are non-toxic, non-flammable, non-explosive and environmentally friendly. The condensation is obtained with forced air circulation; on request, water condenser.

Voltage stabilizer. 4,000-VA voltage regulation, capable of compensating the fluctuations of the utility power supply ($\pm 15\%$), protecting the compressors and guaranteeing a long useful life.

Medical Device.
CE Certified Class IIA.



Series UF

TK55



TK60



MODELS	TYPE	TEMPERATURE	OUTER DIMENSIONS
TK57	UPRIGHT	-40 / -86 °C	80x79x132
TK56	UPRIGHT	-40 / -86 °C	80x79x188
TK58	UPRIGHT	-40 / -86 °C	96x80x188
TK60	UPRIGHT	-40 / -86 °C	97x96x184
TK62	UPRIGHT	-40 / -86 °C	106x90x199
TK64	UPRIGHT	-40 / -86 °C	106x100x199
TK66	UPRIGHT	-40 / -86 °C	110x103x199
TKC52	HORIZONTAL	-40 / -86 °C	90x100x124
TKC54	HORIZONTAL	-40 / -86 °C	150x86x124
TKC55	HORIZONTAL	-40 / -86 °C	195x88x112
TKC5578	HORIZONTAL	-40 / -86 °C	249x96,5x112



TK58



TK62

CAPACITY (LT)	SHELVES/COMPARTMENTS	208/230 60 HZ	115/60 hz
125	2/2	opt	opt
250	4/4	opt	opt
354	4/4	opt	opt
505	4/4	opt	opt
604	4/4	opt	opt
706	4/4	opt	opt
806	4/4	opt	opt
110	---	opt	opt
230	---	opt	opt
480	---	opt	opt
785	---	opt	opt