edition version 1.2

NEW

BlueLine

High Performance Line

HPL KW series

KLAB

New Touch Screen

4.3” TFT Display

Green ICE

KW Antibacteria

APPARECCHI SCIENTIFICI

KW

KLAB series

refrigerators, fridge-freezers, freezers at -20°C -30°C

HPL LINE *(High Performance Line)*

(TT) TOUCH TECNOLOGY

KW is always very innovative and gets inspiration by the news from informatics, electronics and thermodynamics. KW has thought a controller with a technology based on micro processor ARM9, the same processor applied in smart-phones. It's name is **i-KW**.
I-KW works with operative system Linux and it's a true on–board computer. The new controller has a graphic interface, done with a touch screen **TFT DISPLAY.**
KW slogan is: ***let's put an iPad in our apparatus!***
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.

CONNECTIVITY, TRACEABILITY AND TOTAL SAFETY

Guarantying the maximum connectivity and traceability, i-KW is able to satisfy the requirements of the pharmaceutical industry and health laboratories, completely.
The fridges and freezers HPL, with the new smart controller i-KW, **can have a full connectivity with the laboratory environmental, by means of: slot USB, slot SIM, Wi-Fi, Ethernet wired.**

Above all, the Wi-Fi connection will make the HPL freezer or refrigerator 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 refrietion 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 i-KW has been designed to guarantee an integrated safety about all the functions, through the regulation and the management of the refrigeration powers. 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.**

HPL LINE *(High Performance Line)*

NEW

THE INNOVATION OF HUMAN INTERFACE

A true challenge to the common sense for dimensions, structure and possible information. I-KW is the new reference for the user interface and for the connectivity attached to the control of the temperature freezers, where a simple, intuitive and nice to see interface is combined with a sophisticated management of the refrigeration unit.

- Recording of the functional variables on SD card, in real time
- Menu sensitive to the fingering (touch) with many windows and with temperature graphics
- USB interface on the front panel to download the temperature recording and updating (SW-FW)
- Possibility of door opening, in safety (password) through touch button or transponder
- Italian, English, French, Spanish, German languages available

Badge KW

Instant termperature

THE ACCESS CONTROL AND THE AIDED MAINTENANCE

The fridges and freezers HPL, equipped with the new i-KW controller, have a controlled access: it comes as standard the possibility to use an **electronic key** (alphanumerical code customized by the user) to put together with an electrical lock for a controlled door opening, or, as optional equipment, to use a **badge or transponder (or finger pass, with the finger print storage)**, throught added USB Port.

The new i-KW controller guarantees high use simplicity and an easy maintenance. The user will be able to arrange many tools which will teach him how to use them.

Think to the possibility to have a user guide on display and to scroll it as if it was a smart phone; and therefore to enjoy immediately an user manual, a start up sequence, or video files, which show the maintenance activities and so on.

Through the possibility for the manufacturer or the service engineer to connect by an IP address, and by a sequence of passwords (safety and traceability) to ask questions to the freezer status, or to modify the parameters, the freezer management can also happen from remote, with low costs and in very short time, with undoubted advantages for the failures preventing.

It will be possible to activate a telecare, with the mailing of instructions and recommendations on display, activating GSM function, by the slot for SIM.

BlueLine

KLAB series

refrigerators, fridge-freezers, freezers at -20°C -30°C

HPL LINE *(High Performance Line)*

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.
The control and recording of all the functional parameters, by the computer memory, guarantees a very high operative efficiency, allowing the measurements of the energy consumpation and the actuation of the parameters useful for COP rising together with Green Ice project.
The user can display also the recording of electrical consumpation.
New functions and an arrangement to future updating

INTERACTIVE
ENERGY SAVING

About energy saving, the smart controller i-KW has new functions:

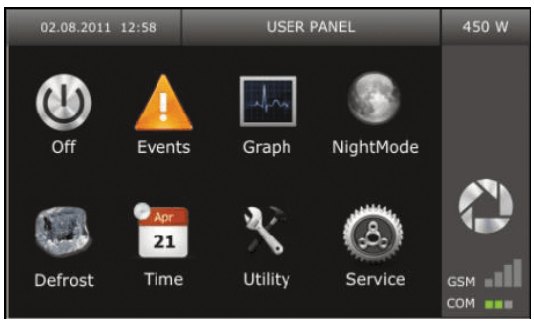
- **ECO MODE** allows raising the temperature set during the night hours with a pre-definite value (settable by the user or by the manufacturer)
- **ENERGY SAVING**, allows, when the percentage of the compressor use reaches a pre definite value, to raise the temperature set point, temporarily and automatically, with a pre definite value (settable by the user or by the manufacturer). The restore, at the pre definite conditions, happens automatically.

These two new functions allow to integrate themselves to those offered by NIA system and to aid the energy saving and the reduction of the global warming, with a smaller not direct CO2 emission in the atmosphere. **The energy saving is at least -15%, in comparison with a standard freezer.**

- **SOFT SMART DEFROST**, authorization for automatic defrosting is only given when there is frost on the evaporator, not periodically as is the norm. This result in a relevant decrease in power comsumption and guarantees a more stable conservation temperature.

Besides, the new controller is equipped to accept future updating easily and at low costs, so it'll be able to adapt itself to the new technological innovations and to response to the raising requirements from the rules and the directives in pharmaceutical and health filed.

Smart controller i-KW is the last stage of the art for the control system of the temperature freezers and refrigerators.



User panel

KLAB series

refrigerators, fridge-freezers, freezers at -20°C -30°C

HPL LINE *(High Performance Line)*

STRUCTURE KLAB SERIES:

The KLAB line offers scientific laboratory operators a vast array of models with numerous solutions for T ranges (R for positive temperatures, F for negative temperatures), structure, furnishings and system implementation.
The volumes include: 180 - 400 - 700 - 1500 - 2300 litres.
For different capacities, search: **the Medical Project lines** for volumes up to 600 litres; the KLAB Prefabricated – LAB_P(re)F(abricated) line for volumes from 2,000 to 5,000 litres.
All models have a single-body structure with internal and external steel sheets pre-enamelled or plasticized in white, or AISI 304 stainless steel; **the internal angles are rounded (for easy cleaning and maximum hygiene); the same goes for internal edges.**
The models offered with the final **X** have both the internal and external walls in AISI 304 stainless steel.

Thermal insulation is with high-density (40 Kg/mc.) polyurethane foamed on site, with an average **thickness of 60 mm; the models for 700 and 1,500 litres**, in any R or F version, **can be manufactured upon request with insulation thickness of 75 mm. for energy savings.**
The cabinet has adjustable support feet in stainless steel; upon request **pivoting wheels** (with brakes) can be mounted to facilitate placing the equipment in the laboratory.
C models include doors with blind-closed panels.
V models include doors in double or triple glass chambers, with anti-clouding noble gas loads.
The PASSTHRU models (only with 700 and 1,500 litre capacity) provide access to the preservation compartments through the doors on both sides (2 doors, one per side, for the 700-litre model; 4 doors, two per side, on the 1,500-litre model).

All doors are reversible, with magnetic gaskets and automatic closing with key lock.
Each door comes with a micro switch to block, upon opening, the operation of the internal ventilation; this **allows better functionality and less consumption, minimizing any alterations in the internal micro-climate** and preventing the operator from being exposed to cold air; **it also activates the door open alarm when the opening time is greater than a critical value predefined by KW -which can also be set by the user.**
A prolonged time with the door open is signalled by a sound and visual alarm, which flashes on the temperature control display.

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refrigerators, fridge-freezers, freezers at -20°C -30°C

HPL LINE *(High Performance Line)*

Internal lighting is activated when the door is opened in models with blind doors; in models with glass doors this is done with an external switch.
The R900V - SL (slide) model has two sliding, self-closing glass doors with key lock.
The internal grilled shelves are height adjustable by means of racks on the lateral and back walls. These are made of plasticized steel sheets or stainless steel.
The racks can be placed to house sliding drawers on removable tracks.

REFRIGERATION SYSTEM:

Ventilated refrigeration for optimum temperature uniformity in the entire compartment; airtight compressor and air condensation; guaranteed silence; hermetically sealed circuit for maximum security against the loss of refrigerant, in conformity with recent provisions and recommendations on gases; **HFC (R404a) refrigerant; automatic and/or manual defrost with automatic evaporation of the condensation water.**

Some standard improvements include:
- tropicalized execution of the refrigerating system (up to +43 °C)
- backup execution of the evaporator group, in order to maximize internal space and facilitate internal cleaning
- execution with hot gas air or electrical defrost: depending of the working temperatures, in order to optimize the stability of the internal temperature and to reduce as much as possible the energy consumption

KW is researching alternative solutions with lower environmental impact; it is always updated with respect to the availability of new gases with very low or no impact in terms of greenhouse effect, in order to develop new models that are always top in this regard.
For this purpose, we suggest you read about the **ATVANGUARD line with 75-mm insulation** and integral application of the HPL control system.

Customized temperature limits

COMPLETELY CUSTOMIZED

SAFETY - Customized password protection

HPL LINE *(High Performance Line)*

Display to set and to read the temperature:

i–KW video – graphic interface is a color touch screen display 4.3" TFT; micro processor ARM9 technology, the same processor used in the smart phones, which functions with Linux operative system; menu sensitive to the fingering with many windows and with temperature graphics; system available in 5 languages: Italian, English, German, French, Spanish.

- Controller startup and shutdown: access protected by electronic key with password

SD

USB

SIM GSM

ETHERNET

Display	TFT Touch screen 4.3" wide
Power supply	from Power Board
Dimensions	170x110x35 mm
Front ports	USB - Slot per SIM Card e SD Card
Ports	Ethernet
Slot	for modem GSM
CPU	Atmel® at91 sam9261 256 Mb flash
	Operating System Linux 2.6.33

CONTROL SYSTEM:

Control, recording, supervision, full traceability of all the parameters and the events , full connectivity to the environmental, very high safety about the operations and the accesses. **2-ch monitoring kit with two independent sensors: one RTD Pt 100 Ω (class A) for alarms and recording and one RTD PT 1000 Ω (class A) for the regulation**. Automatic recording of the temperature and the alarms; recording in real time of all the functional variables on SD card and on USB port; this last part on the front panel to download data of thermal recording and for updating; registration in SQL format for easy reading by dedicated software **KWCRC TRACER**; **Ni-MH backup battery; and battery recharge circuit.**

- Set point and alarm limits change: controlled change through an electronic key, with password against violations, accidental handlings, and for the best traceability.

- Access to the menu, with sensible data and parameters: controlled access to SW parameters, by electronic key, for the maximum security and in compliance with laboratory rules and standard.

- All data are continously recorded on SD card and on USB Port.

ALARMS:

temperature alarm system fully independent with the regulation control; reading of alarm probe by 2nd micro processor on the electronic board: visual and acoustic alarm for power failure, door opening, high condenser pressure, battery alarm, damaged probe/s, compressors time, high temperature condenser, clogged condenser; for any temperature alarm, automatic recording (high T, low T) black out, critical alarm temperature, month/day/hour/minute of the alarm start; month/day/hour/minute of the alarm end.

BlueLine

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refrigerators, fridge-freezers, freezers at -20°C -30°C

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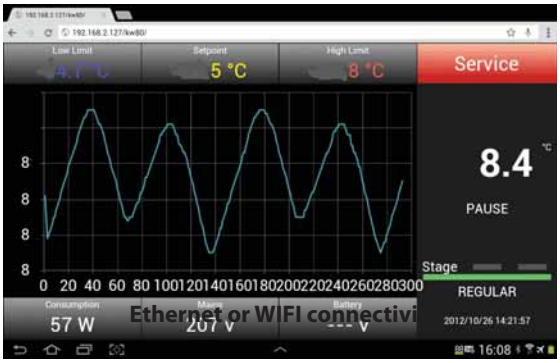
- Door opening: n° daily openings, n° critical openings, total opening time are all recorded in the memory
List of the monitored failures: damage of T probe, compressor time, dirty condenser, high condenser T, power failure, thermal protection, damaged plant probe
- Safety control: the freezer continues to run a timed thermo stabilization with compressor on/off times collected before the sensor(s) broke down.

Disaster recovery: in the event the CPU is destroyed, it allows cycling the functions on the remote unit, with the exception of data visualization, that is, the freezer continues working with average on/off times recorded before the failure.
Enviromental adaptability: the condenser vents are managed separately by means of a sensor; **condenser fan speed modulation within a band of temperatures.**

Energy saving, activating the under mentioned functions, it's possible save over 15% energy in respect of the freezer with standard controllers – **GREEN ICE SOLUTIONS**; economic management of the consumptions
- **ECO MODE**: during the night, when the user procedures and stored product so permit it is possible to raise the set temperature by a predefined value, thereby obtaining important energy savings.
- **ENERGY SAVING** this reduces the consumption rates of the refrigerating unit as soon as the compressor use percentage reaches a predefined value. In this condition, the operating set point is temporarily and automatically increased by a value preset by the user; resetting takes place automatically at the defined conditions.

GSM: optional, every i-KW80, can have a GSM form, becoming an independent unit, which transmits and receives SMS on own phone number, towards the recorded users;
Dry contacts: remote management of the alarm signals;
Human interface: user guide on display; files (also video) with maintenance programs on display; maintenance KW program: informs about periodic operations recommended for the maximum reliability of the refrigerator and freezer and for the minimum energy consumption;
Recording (standard): with data logger function and the possibility to display the temperature - time graphic on display touch screen;

ETHERNET PEER TO PEER WIRED: by a configuration of PPP type, many i-KW controllers can be connected in a same network. This configuration allows the supervision per single address IP from PC in the network , by a browser with the display of the HTML pages, pre installed in every single terminal;
WI-FI: through the WI-FI form, optional, the i-KW units can be connected in wireless network , in the environmental where an access point is present (Router WI-FI) or **through router connected directly;**



TOTAL CONNECTIVITY
TOTAL TRACEABILITY
CONTROLLED ACCESS

4.3” TFT DISPLAY

DATA LOG

KLAB BBR 1500V

TOTAL CONNECTIVITY
TOTAL TRACEABILITY
CONTROLLED ACCESS

BlueLine

KLAB series

refrigerators, fridge-freezers, freezers at -20°C

With New Control HPL

refrigerators, fridge-freezers, freezers at -20°C					
MODEL	KLAB Freezer vertical freezers at -20°C				
	F180C/V NF	F400C NF	F700C/V	F1500C/V	F2300C/V
External dimensions (WxDxH)	cm63x58x105	cm60x60x190	cm71x80x200	cm142x80x200	cm216x80x202
Internal dimensions (WxDxH)	cm53x41x63	cm50x50x135	cm59x68x140	cm130x68x140	cm204x65x140
Set Point	-20°C	-20°C	-20°C	-20°C	-20°C
Working range	-10°C/-22°C	-10°C/-22°C	-10°C/-22°C	-10°C/-22°C	-10°C/-22°C
Capacity (litres)	180	400	700	1500	2300
N° door small	1	1	1/2	2/3/4	3/4/5/6
Shelves	3	3	3	6	6
Weight Kg	45/50	120	140/150	220/240	290/330
Internal surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
External surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
Insulation thickness	60mm	60mm	60mm	60mm	60mm
Key Lock	ST	ST	ST	ST	ST
Small rollers/wheels + stabilizing feets	√	√	√	√	√
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)					
Controller HPL	ST	ST	ST	ST	ST
Probe: N.1 PT 1000 and N.1 PT 100	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST
Ventilated refrigeration	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES					
Completely inox	√	√	√	√	√
GSM Port	√	√	√	√	√
N.° plastic drawers	√	√	√	√	√
Additional shelves	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√
Temperature recorder	√	√	√	√	√
Electrical key	√	√	√	√	√
Printer (Strip Chart)	√	√	√	√	√
Voltage regulator	√	√	√	√	√
Internal - external hole	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system)	√	√	√	√	√
Data logger wireless+software/hardware (temperature management Spy KW)	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√
SPLIT	NO	NO	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

All Models are available with Solid (C) or Glass (V) door

BlueLine

KLAB series

refrigerators, fridge-freezers, freezers at -20°C

With New Control HPL

Only one display, two control boards!!

refrigerators, fridge-freezers, freezers at -20°C					
MODELS	KLAB 2T series vertical refrigerators with dual temperaute +2°C/ +15°C				
	RR360C/V	RR700C/V	RR800C/V	RR1500C/V	RR2300C/V
External dimensions (WxDxH)	cm64x60x184	cm71x80x200	cm120x60x190	cm142x80x200	cm216x80x202
Compartment dimensions (WxDxH)	cm53x41x63	cm59x68x60	cm50x50x135	cm59x68x140	cm117/57x65x140
Set Point	4°C	4°C	4°C	4°C	4°C
Working range	+2°C/ +15°C	+2°C/ +15°C	+2°C/ +15°C	+2°C/ +15°C	+2°C/ +15°C
Capacity (litres)	180+180	350+350	400+400	700+700	1500+700
N° door small	1+1	1+1	1+1	1+1	2+1
Shelves	3+3	3+3	3+3	3+3	6+3
Weight Kg	100/100	150/160	150/160	250/260	340/390
Internal surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
External surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
Insulation thickness	60mm	60mm	60mm	60mm	60mm
Key Lock	ST	ST	ST	ST	ST
Small rollers/wheels + stabilizing feets	√	√	√	√	√
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)					
Controller HPL	ST	ST	ST	ST	ST
Probe: N.1 PT 1000 and N.1 PT 100	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST
Ventilated refrigeration	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES					
Completely inox	√ √	√ √	√ √	√ √	√ √
GSM Port	√	√	√	√	√
N.° plastic drawers	√	√	√	√	√
Additional shelves	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	
Temperature recorder	√	√	√	√	√
Electrical key	√	√	√	√	√
Printer (Strip Chart)	√	√	√	√	√
Voltage regulator	√	√	√	√	√
Internal - external hole	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system)	√	√	√	√	√
Data logger wireless+software/hardware (temperature management Spy KW)	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√
SPLIT	NO	NO	NO	NO	NO

√	OPTIONAL
ST	STANDARD
NO	Not Available

All Models are available with Solid (C) or Glass (V) door

TOTAL CONNECTIVITY
TOTAL TRACEABILITY
CONTROLLED ACCESS

BlueLine

KLAB series

refrigerators, fridge-freezers, freezers at -20°C

With New Control HPL

refrigerators, fridge-freezers, freezers at -20°C					
MODELS	KLAB Refrigerators vertical refrigerators at +4°C				
	R400C/V	R700C/V	R900V-SL	R1500C/V	R2300C/V
External dimensions (WxDxH)	cm60x60x190	cm71x80x200	cm101x74x200	cm142x80x200	cm216x80x202
Internal dimensions (WxDxH)	cm50x50x135	cm59x68x140	cm93x62x140	cm130x68x140	cm204x65x140
Set Point	+4°C	+4°C	+4°C	+4°C	+4°C
Working range	0°C/+10°C	0°C/+10°C	0°C/+10°C	0°C/+10°C	0°C/+10°C
Capacity (litres)	400	700	900	1500	2300
N° door small	1	1/2	2	2/3/4	3/4/5/6
Shelves	3	3	6	6	9
Weight Kg	120/125	140/150	165	220/240	290/330
Internal surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
External surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
Insulation thickness	60mm	60mm	60mm	60mm	60mm
Key Lock	ST	ST	ST	ST	ST
Small rollers/wheels + stabilizing feets	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)					
Controller HPL	ST	ST	ST	ST	ST
Probe: N.1 PT 1000 and N.1 PT 100	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST
Ventilated refrigeration	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES					
Completely inox	√ √	√ √	√ √	√ √	√ √
GSM Port	√	√	√	√	√
N.° plastic drawers	√	√	√	√	√
Additional shelves	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√
Temperature recorder	√	√	√	√	√
Electrical key	√	√	√	√	√
Printer (Strip Chart)	√	√	√	√	√
Voltage regulator	√	√	√	√	√
Internal - external hole	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system)	√	√	√	√	√
Data logger wireless+software/hardware (temperature management Spy KW)	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√
SPLIT	NO	√	√	√	√
Power supply V115/1/60Hz	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

All Models are available with Solid (C) or Glass (V) door

NEW

BlueLine

KLAB series

refrigerators, fridge-freezers, freezers at -20°C

With New Control HPL

Only one display, two control boards!!

refrigerators, fridge-freezers, freezers at -20°C					
MODELS	KLAB series dual temp vertical fridge-freezers at +4°C / -20°C				
	RF360C-NF	RF700C-NF	RF800C-NF	RF1500C	RF2300C
External dimensions (WxDxH)	cm64x60x184	cm71x80x200	cm120x60x190	cm142x80x200	cm216x80x202
Compartment dimensions (WxDxH)	cm53x41x63	cm59x68x60	cm50x50x135	cm59x68x140	cm117/57x65x140
Set Point	+4°C -20°C	+4°C -20°C	+4°C -20°C	+4°C -20°C	+4°C -20°C
Working range	0°C/+10°C -10°C/-22°C	0°C/+10°C -10°C/-22°C	0°C/+10°C -10°C/-22°C	0°C/+10°C -10°C/-22°C	0°C/+10°C -10°C/-22°C
Capacity (litres)	180+180	350+350	400+400	700+700	1500+700
N° door small	1+1	1+1	1+1	1+1	1+1
Shelves	3+3	2+2	3+3	3+3	3+3
Weight Kg	100	160	160	270	340
Internal surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
External surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white	Coated steel white
Insulation thickness	60mm	60mm	60mm	60mm	60mm
Key Lock	ST	ST	ST	ST	ST
Small rollers/wheels + stabilizing feets	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)					
Controller HPL	ST	ST	ST	ST	ST
Probe: N.1 PT 1000 and N.1 PT 100	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST
Ventilated refrigeration	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES					
Completely inox	√ √	√ √	√ √	√ √	√ √
GSM Port	√	√	√	√	√
N.° plastic drawers	√	√	√	√	√
Additional shelves	√	√	√	√	√
Opening door by transponder personal key	√	√	√	√	√
Temperature recorder	√	√	√	√	√
Electrical key	√	√	√	√	√
Printer (Strip Chart)	√	√	√	√	√
Voltage regulator	√	√	√	√	√
Internal - external hole	√	√	√	√	√
Additional PT100 probe (free contacts for external data management system)	√	√	√	√	√
Data logger wireless+software/hardware (temperature management Spy KW)	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√
SPLIT	NO	NO	NO	NO	NO
Power supply V115/1/60Hz	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

TOTAL CONNECTIVITY
TOTAL TRACEABILITY
CONTROLLED ACCESS

BlueLine

KLAB series

refrigerators, fridge-freezers, freezers at -20°C -30°C

With New Control HPL

refrigerators, fridge-freezers, freezers at -20°C -30°C						
MODELS	KLAB Atvanguard refrigerators and freezers at -20°C -30°C					
	R700C/VX ADV	R1500C/VX ADV	F700CX ADV	F700CX ADV NF	F1500CX ADV	F1500CX ADV NF
External dimensions (WxDxH)	cm74x80x203	cm145x80x203	cm74x80x203	cm74x80x203	cm145x80x203	cm145x80x203
Internal dimensions (WxDxH)	cm59x68x140	cm130x68x140	cm59x68x140	cm59x68x140	cm130x68x140	cm130x68x140
Set Point	+4°C	+4°C	-20°C	-30°C	-20°C	-30°C
Working range	0°C/+10°C	0°C/+10°C	-10°C/-22°C	-18°C/-30°C	-10°C/-22°C	-18°C/-30°C
Capacity (litres)	700	1500	700	700	1500	1500
N° door small	1/2	2/3/4	1/2	1/2	2/3/4	2/3/4
Shelves	3	6	3	3	6	6
Weight Kg	140/150	240/220	140	140	220	220
Internal surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
External surfaces standard	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet	AISI 304 stainless sheet
Insulation thickness	75mm	75mm	75mm	75mm	75mm	75mm
Key Lock	ST	ST	ST	ST	ST	ST
Small rollers/wheels + stabilizing feets	ST	ST	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)						
Controller HPL	ST	ST	ST	ST	ST	ST
Probe: N.1 PT 1000 and N.1 PT 100	ST	ST	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST	ST	ST
Defrosting	ST	ST	ST	ST	ST	ST
AVAILABLE ACCESSORIES						
Opening door by transponder personal key	√	√	√	√	√	√
GSM Port	√	√	√	√	√	√
N.° plastic drawers	√	√	√	√	√	√
Additional shelves	√	√	√	√	√	√
Completely inox	ST	ST	ST	ST	ST	ST
Temperature recorder	√	√	√	√	√	√
Electrical key	√	√	√	√	√	√
Printer (Strip Chart)	√	√	√	√	√	√
Voltage regulator	√	√	√	√	√	√
Additional PT100 probe (free for external data management system)	√	√	√	√	√	√
Data logger wireless and software/hardware	√	√	√	√	√	√
IQ/QQ/ecc.	√	√	√	√	√	√
SPLIT	√	√	√	NO	NO	NO
Internal - external hole	√	√	√	√	√	√

√	OPTIONAL
ST	STANDARD
NO	Not Available

All Models are available with Solid (C) or Glass (V) door

BlueLine

KLAB series TG (Twin Group)

With New Control HPL

refrigerators, fridge-freezers, freezers at -20°C				
MODELS	**KLAB TG (Twin Group) series with dual system**			
	F1500C-TG	F2300C-TG	R1500C/V-TG	R2300C/V -TG
External dimensions (WxDxH)	cm142x80x200	cm216x80x202	cm142x80x200	cm216x80x202
Internal dimensions (WxDxH)	cm130x68x140	cm204x65x140	cm130x68x140	cm204x65x140
Set Point	-20°C	-20°C	+4°C	+4°C
Working range	-10°C/-22°C	-10°C/-22°C	0°C/+10°C	0°C/+10°C
Capacity (litres)	1500	2300	1500	2300
N° door small	2/3/4	3/4/5/6	2/3/4	3/4/5/6
Shelves	6	9	6	9
Weight Kg	270	370	270/290	370/410
Internal surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white
External surfaces standard	Coated steel white	Coated steel white	Coated steel white	Coated steel white
Insulation thickness	60mm	60mm	60mm	60mm
Key Lock	ST	ST	ST	ST
Small rollers/wheels + stabilizing feets	ST	ST	ST	ST
(*) Controller HPL (display Touch Screen, Smart defrost, HT, LT, BLACK OUT, failure list, door open, switching on/off password, alarm memory, alarm test, SAFETY CONTROL, DISASTER RECOVERY, key alarm test, USB port, WI.FI, Ethernet wired)				
Controller HPL	ST	ST	ST	ST
Probe: N.1 PT 1000 and N.1 PT 100	ST	ST	ST	ST
RS485, USB Port and SD Card	ST	ST	ST	ST
Defrosting	ST	ST	ST	ST
AVAILABLE ACCESSORIES				
Completely inox	√ √	√ √	√ √	√ √
GSM Port	√	√	√	√
N.° plastic drawers	√	√	√	√
Additional shelves	√	√	√	√
Opening door by transponder personal key	√	√	√	√
Temperature recorder	√	√	√	√
Electrical key	√	√	√	√
Printer (Strip Chart)	√	√	√	√
Voltage regulator	√	√	√	√
Internal - external hole	√	√	√	√
Additional PT100 probe (free contacts for external data management system)	√	√	√	√
Data logger wireless+software/hardware (temperature management Spy KW)	√	√	√	√
IQ/QQ/ecc.	√	√	√	√
SPLIT	NO	NO	NO	NO
Power supply V115/1/60Hz	√	√	√	√

In case of the two systems fails (either the thermal fluid dynamics or electrical portion), an internal control system signals the event with (permanent) visual and sound alarms and excludes the damaged system: this allows to comfortably fix the damage, not having to rush the repair and at the same time providing a faster repair operation because the internal T is maintained by the other system. By default, both systems are programmed for alternating operation so the wear of each group is reduced to 50% and component-life is extended to twice the standard solutions. the reliability is maximum and also allowing the repair of the fault group maintaining internal T of work.

√	OPTIONAL
ST	STANDARD
NO	Not Available

All Models are available with Solid (C) or Glass (V) door

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Sales Manager: **sales@kwkw.it**
Tender Commercial Office: **commerciale@kwkw.it**
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Technical Support & Spare Parts: **assistenza@kwkw.it**
Service line: **service@kwkw.it**
Delivery Office: **delivery@kwkw.it**
Administration: **administration@kwkw.it**

= min./max temperature alarm

= Internal light

= DATA LOGGER function

= energy failure alarm

= Alarm broken down probe

= Open door alarm

= Lock

= Disaster Ricovery / Safety Control

= Temperature recorder

= Wheels

Cold storage equipment

Incubation and microbiological test equipment

Ovens, drying and sterilizing equipment

Maintenance, IQ,OQ,PQ, hardware and software for equipment management

Medical devices for transfusion centres

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ISO 9001:2008 ISO 13485:2003 ISO 14001:2004 OHSAS 18001 2007

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