a TECNIPLAST company

Technical Data Sheet
ULT Plasma Freezer -80°C

MANUFACTURER	
KW Apparecchi Scientifici S.r.l.	
Via della Resistenza 119 - 53035 Monteriggioni (SI) - Italy	
MODEL	
K64 HPL	
Upright ULT plasma freezer -80°C	
CE Certification	Medical Device Class IIa (MDD 93/42 - 2007/47/CE)
HS Code	84184080

TECHNICAL CHARACTERISTICS	
Net Storage Volume	708 lt
Racks Max Capacity	20
2" Cryoboxes Max Capacity	500
1,5/2ml Vials Max Capacity	50.000
Temperature Range	-40°C / -86°C
Ambient Operating Temperature	+10°C/+43°C, 90% RH
Power Supply	230V ±10% - 50Hz
Max Absorbed Power	800 W
Daily Energy Consumption	11,80 kWh/24h
Noise Level	< 52 dB

STRUCTURE			
Internal Surface	AISI 304 Stainless Steel	**Standard Adjustable Shelves**	n°3 in AISI 304 stainless steel + base (max load kg 55 each)
External Surface	Cold-rolled steel with anti-corrosive coating	**Compartments**	4
External Dimensions	W 1160 x D 1070 x H 2050 mm	**Insulated Inner Doors**	4
Internal Dimensions	W 802 x D 690 x H 1280 mm	**Handle**	Ergonomic design with integrated key lock system
Weight	340 kg	**Door Type**	Solid type (with n°3 hinges for max stability)
Shipping Size (with wooden crate)	W 1300 x D 1300 x H 2300 mm	**Door Sealing**	Heated triple-layer silicone gasket
	450 kg	**Standard Equipment**	n°4 wheels (n°2 pivoting)
Int/Ext Edges	Rounded for easy cleaning		Internal/External porthole (Ø25 mm)
Insulation	140 mm (CFC-free PUR foam)		External vacuum relief valve

REFRIGERATION SYSTEM				
Cooling System	Fully sealed circuit; static cooling with n°2 hermetic compressors (with thermal protector) in cascade system			
Condensing System	Air-cooled condenser with filterless design to reduce routine cleaning activities			
Refrigerant Gases (HC)	1° Stage	R1270	2° Stage	R170
Defrost	Manual			

DIGITAL CONTROL SYSTEM		
HPL (Microprocessor Technology)		
Display	7" touch screen LED display	
T Regulation Accuracy	± 0.1°C	
Thermal Probes	n°2 thermal probes RTD Pt100 (stainless steel)	
Access Control	PIN code protection for ON/OFF switching and access to the user/service menu	
Features	The main screen displays the T Set Point, high/low temperature limits, battey level, date and time, current voltage and real-time graph	
	Data logger function with automatic recording of temperature data (at 30-seconds intervals) and events	
	Internal memory (further expandable via SD card) capable of recording data for a minimum period of 10 years	
	Data history menu for consultation and selection of temperature data records, events and alarms of the device	
	ECO mode (possibility to set an automatic increase of the T set point in a settable time interval, to reduce energy consumption)	
	Back-up battery with self-charging circuit (48h autonomy in case of power failure)	
	In-built power stabilizer with linear voltage regulation (±20 Volts)	
Connectivity	USB port	RJ45 port for LAN connection (TCP/IP Modbus) to BMS/SCADA
	Remote alarm contacts	SD card slot
	SIM card slot	
Main Alarms List (Audio/Visual)	Power failure	Temperature probes failure
	High/Low temperature (freely settable limits by the user)	Back-up battery failure / low charge
	Door open	Thermal protection warning
	High pressure in condensation	High compressor usage warning
	Abnormal ambient temperature	Abnormal voltage
	High temperature in condensation	Dirty condenser

OPTIONAL ACCESSORIES AVAILABLE ON REQUEST	
n°4 pivoting wheels (n°2 fronts with brakes)	Weekly cycle chart disk recorder (n°52 spare paper disks included)
n°4 pivoting wheels (n°2 fronts with leveling feet)	Power voltage stabilizer
Additional internal/external porthole (Ø 25 mm)	Additional mains water condensation device
Additional shelf in AISI 304 stainless steel	Condenser air filter
Additional insulated inner door	GSM Module with SIM card bridge
24V CO2 backup system for activation in case of mechanical failure	Wi-Fi kit (TCP/IP Modbus) for connection to BMS/SCADA and remote monitoring
24V LN2 backup system for activation in case of mechanical failure	Electric lock for door opening with PASSWORD
12V CO2 backup system for activation in case of mechanical/power failure	Electric lock for door opening with BADGE/RFID
12V LN2 backup system for activation in case of mechanical/power failure	

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