KW APPARECCHI SCIENTIFICI

Technical Data Sheet

ULT Freezer -86°C

MANUFACTURER
KW Apparecchi Scientifici S.r.l.
Via della Resistenza 119 - 53035 Monteriggioni (SI) - Italy
MODEL
K60 HTS IN UP V
Upright Ultra-low Temperature Freezer

TECHNICAL CHARACTERISTICS	
Storage Volume	506 lt
Boxes (h=2") Capacity	320 (with full load of 20 racks)
Temperature Range	-50°C / -86°C
T stability	± 0,2°C (with set point -80°C)
T uniformity	± 4°C (with set point -80°C)
Climate Class	N
Power Supply	220V-230V / 1 / 50-60Hz
Power Consumption	0,6 Kw
Noise Level	< 45 dB

STRUCTURE			
Internal Surface	Stainless Steel AISI 304	Shelves	n°3 in AISI 304 S.S. + base
External Surface	White pre-painted steel sheet	Compartments	4
External Dimensions	105 W x 103 D x 189 H cm	Inner Doors	4
Internal Dimensions	70 W x 65 D x 111 H cm	Handle	Ergonomic design with key lock system
Weight	300 kg	Door Type	One wing, solid type
Shipping Size (with wooden crate)	130 W x 130 D x 210 H cm	Door Sealing	Heated triple silicone gasket
	400 kg	Standard Equipment	4 pivoting wheels (front wheels w/brake)
Int/Ext Edges	Rounded for easy cleaning		Int/Ext pass-through hole
Insulation	140 mm (PUR 80 mm + V.I.P. 60 mm)		Pressure compensation valve

REFRIGERATION SYSTEM				
Cooling System	Fully sealed circuit			
	n°2 hermetic compressors at variable speed equipped with inverter, arranged in cascade			
Refrigerant Gas	1° Stage	R1270	2° Stage	R170
Evaporating System	Copper tube coil thermally connected to the outer peripheral surface of the inner case			
Condensing System	Air-type high-surface condenser, for forced air circulation			
Defrost	Manual			

DIGITAL CONTROL SYSTEM		
HTS (High Technology System)		
Display	Display Touch-Screen TFT 7" - Microprocessor technology (n.2 indipendent motherboards)	
T regulation accuracy	± 0.1°C	
Thermal Probes	n.2 thermal probes RTD Pt100 class A (n.1 for thermoregulation - n.1 for T alarm)	
Available Languages	Italian / English / French / Spanish / German	
Data Recording Format	CSV (Excel)	
Access Control	Access to controller functions via safety password	
Maintenance	Possibility to connect remotely via IP address	
Special Functions	Real-time temperature graph on display	
	Disaster recovery (the freezer continues to run even in the event of a CPU failure)	
	Safety control (the freezer continues to operate even if the control probe breaks)	
	Environmental adaptability (separate management of the condenser fans)	
	Key test (The user can simulate alarm conditions by simply pressing a button)	
	Data logger function (Automatic recording of temperatures and alarms data)	
Connectivity	USB port	Dry contacts for remote alarms
	SD Card port	Bridge RS485 port with ModBus protocol
Alarm List (Audio/Visual)	Min/Max Temperature	Faulty probes
	Power failure alarm	Compressor alarm
	Door open	High T in condensation
	High condenser pressure	Dirty condenser
	Battery Failure	

OPTIONAL ACCESSORIES AVAILABLE ON REQUEST	
24V CO_2 backup system for mechanical failure	Additional RTD Pt 100 probe
24V LN_2 backup system for mechanical failure	Additional RTD Pt 100 probe with 4-20mA converter
12V CO_2 backup system for mechanical/electric failure	Weekly cycle chart disk recorder (n°52 spare disks included)
12V LN_2 backup system for mechanical/electric failure	Strip-chart electronic recorder
Water condensing device with automatic barostatic valve	GSM Module and SIM Card port bridge
4000VA power voltage stabilizer	Electric lock for door opening through PIN/Transponder
Additional shelf in AISI 304 stainless steel	Wi-Fi router
Transparent panel for display cover	Ethernet port