
	MANUFACTURER			
	KW Apparecchi Scientifici S.r.l.			
	Via della Resistenza 119 - 53035 Monteriggioni (SI) - Italy			
	MODEL			
	K54S HPL IN			
	Chest Type Ultra-low Temperature Freezer			
	TECHNICAL CHARACTERISTICS			
Storage Volume	230 lt			
Boxes (h=2") Capacity	128 (with full load of 16 racks)			
Temperature Range	-40°C / -86°C			
Climate Class	N			
Power Supply	220V-230V / 1 / 50-60Hz			
Power Consumption	0,6 kW (1,2 kW with booster function)			
Noise Level	< 52 dB			
STRUCTURE				
Internal Surface	Stainless Steel AISI 304	Door Lock	Closing hooks with key lock	
External Surface	White pre-painted steel sheet	Insulation	175 mm (High density PUR foam)	
External Dimensions	150 W x 87 D x 127 H cm	Inner Doors	2	
Internal Dimensions	115 W x 40 D x 50 H cm	Door Type	One wing, solid type	
Weight	270 kg	Door Sealing	Heated triple silicone gasket	
Shipping Size (with wooden crate)	200 W x 110 D x 170 H cm	Standard Equipment	4 pivoting wheels (front wheels w/brake)	
	370 kg		Int/Ext pass-through hole	
Int/Ext Edges	Rounded for easy cleaning			Pressure compensation valve
REFRIGERATION SYSTEM				
Cooling System	Double independent refrig. systems (4 compressors + 2 evaporators) arranged in cascade			
	Alternate operation with fully automatic management			
	The life span of the engines has almost doubled, with mechanical wear being halved			
	If one system fails, the control system signals the event and excludes the system in failure			
Refrigerant Gases	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				
HPL (High Performance Line)				
Display	Display touch-screen TFT 7" - Microprocessor ARM9 technology (n°2 independent 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	SQLite (Tracer® software included for data reading)			
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)			
	Data logger function (Automatic recording of temperatures and alarms)			
	Key test (the user can simulate alarm conditions with a simple key pressure)			
Connectivity	Info test (The functional test performed in the factory can be repeated by the user)			
	USB port	Ethernet port		
	SD Card port	Dry contacts for remote alarms		
Alarms List (Audio/Visual)	High/Low temperature	Faulty probes		
	Power failure alarm with back-up battery	Compressor timing failure		
	Door open	High temperature condenser		
	High condenser pressure	Dirty condenser		
	Battery failure	Communication failure with motherboards		
Pressure switch intervention failure	Pressure transducer intervention failure			
OPTIONAL ACCESSORIES AVAILABLE ON REQUEST				
24V CO2 backup system for mechanical failure	Additional RTD Pt 100 probe			
24V LN2 backup system for mechanical failure	Additional RTD Pt 100 probe with 4-20mA converter			
12V CO2 backup system for mechanical/electric failure	Weekly cycle chart disk recorder (n°52 spare disks included)			
12V LN2 backup system for mechanical/electric failure	Strip-chart electronic recorder			
Water condensing device with automatic barostatic valve	GSM Module and SIM Card port activation			
4000VA power voltage stabilizer	Electric lock for door opening through PIN/Transponder/Finger print			
Additional shelf in AISI 304 stainless steel	Wi-Fi router			
Transparent panel for display cover				