


**MANUFACTURER**

KW Apparecchi Scientifici S.r.l.

Via della Resistenza 119 - 53035 Monteriggioni (SI) - Italy

**MODEL**

K52E HPL IN

Chest Type Ultra-low Temperature Freezer

**TECHNICAL CHARACTERISTICS**

|                       |                                |
|-----------------------|--------------------------------|
| Storage Volume        | 174 lt                         |
| Boxes (h=2") Capacity | 64 (with full load of 8 racks) |
| Temperature Range     | -40°C / -86°C                  |
| Climate Class         | N                              |
| Power Supply          | 220V-230V / 1 / 50-60Hz        |
| Power Consumption     | 0,6 kW                         |
| Noise Level           | < 52 dB                        |


**STRUCTURE**

|                                      |                               |                       |  |
|--------------------------------------|-------------------------------|-----------------------|--|
| Internal Surface                     | Stainless Steel AISI 304      | Door Lock             | Closing hook with key lock               |
| External Surface                     | White pre-painted steel sheet | Insulation            | 140 mm (High density PUR foam)           |
| External Dimensions                  | 90 W x 84 D x 127 H cm        | Inner Doors           | 1  |
| Internal Dimensions                  | 64 W x 49 D x 55 H cm         | Door Type             | One wing, solid type                     |
| Weight                               | 140 kg                        | Door Sealing          | Heated triple silicone gasket            |
| Shipping Size<br>(with wooden crate) | 130 W x 110 D x 210 H cm      | Standard<br>Equipment | 4 pivoting wheels (front wheels w/brake) |
|                                      | 240 kg                        |                       | Int/Ext pass-through hole                |
| Int/Ext Edges                        | Rounded for easy cleaning     |                       | Pressure compensation valve              |

**REFRIGERATION SYSTEM**

|                    |  |       |          |
|--------------------|--|-------|----------|
| Cooling System     | Fully sealed circuit with n.2 hermetic compressors arranged in cascade                 |       |          |
| 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**

|  |   |  |
|--|---|--|
| <b>HPL<br/>(High Performance Line)</b> |          |  |
| 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                           | USB port  | Ethernet port                            |
|  | SD Card port  | Dry contacts for remote alarms           |
|  | High/Low temperature  | Faulty probes                            |
| Alarms List<br>(Audio/Visual)          | 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                     |   |