K-SYSTEMS

Instruction Manual

Portable Incubator

G95

SYSTEMS
KIVEX BIOTEC LTD

Continued on next page

1. General information and service

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Users of K-SYSTEMS products should not hesitate to contact us if there are any unclear points or ambiguities in this manual.

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Service adress:
Please refer to your local K-SYSTEMS distributor for details of your nearest authorised service agent.

CAUTION *If the equipment is used in a manner not specified by this manual, the safety of the user may be at risk and the equipment may be damaged. Always use the equipment as outlined in this instruction manual.*

2. Unpacking and inspection

- **Unpack the equipment.**
- **Check the packing list to insure all accessories are there.**
- **Examine the packing material carefully for separately packed items.**
- **Check the incubator for external surface damage.**
- **Check that the display is not broken or damaged.**
- **Check that the lid and locking mechanism operate correctly without any hinderence.**

3. Accessories

3.1 Standard accessories

24 volts main adapter (PSU) Order code: 51115	
Mains Cable Standard Schuko - Order code: 52768 UK - Order code: 53886 US - Order code: 52773	
Connection cable for 12 volt car cigarette lighter socket. Order code: 51016	

Two plastic blocks for holding the warming blocks in place. Plastic insulation, white Order code: 50004 Plastic insulation, black Order code: 52772	
Gas connector. Order code: 52156, 51086, 52192 Silicone tube. Order code: 11066	

3.2 Optional equipment

Optional equipment consists of a range of warming blocks, flowmeters and gas humidifiers. K-SYSTEMS recommends that the GH01 is used for supplying gas to the portable incubator. *(see 3.3 Supplementary equipment)*

Warming blocks for tubes

Warming block B06 Holds twelve tubes of Ø12 mm Falcon 352003 Order code: 26006	
Warming block B08 Holds ten tubes of Ø17 mm Falcon 352001 Order code: 26008	

Warming blocks for dishes

Warming block B16 Holds two culture dishes B16F - Falcon 353001 Order code: 26059 B16N - NUNC 150318 Order code: 26060	
Warming block B24 Holds one center well dish Falcon 353653 Order code: 260027	
Warming block B25 Holds one 60 mm culture dish Falcon 353002 NUNC 150288 Order code: 26028	
Warming block B26 Holds one 4-well Falcon dish with lid Falcon 353654 Order code: 26031	

Warming block B28 Holds one 4-well dish NUNC 176740 Order code: 26029	
Warming block B29 Holds one 5-well dish MiniTüb 19021/0005 Order code: 26030	

3.3 Supplementary equipment

The G95 is designed as a transport device, and not as a blockwarmer.
It can be used in conjunction with the following K-SYSTEMS products.

GH01 Stand alone humidifier to obtain correct humidity and warm gas Order code: 31059	
G73 Dry Bath incubator for heating samples in test tubes Order code: 22065	

4. Users Manual

4.1 Definition of use

The K-SYSTEMS Kivex Biotec G95 Portable incubator is designed for transporting gametes and embryos which require protection form fluctuations in temperature, pH levels and light.

The warming blocks should be pre warmed to the desired temperature and allowed to stabilise before placing inside the G95 transport incubator.
The incubator is designed to maintain a stable temperature environment for the transportation of pre warmed warming blocks.
The temperature indication on the display is that of the maintaining temperature. If cool blocks are placed within the incubator, sufficient time is required for the temperature to stabilise.

When the unit is not in use it is recommended that it is left on charge.

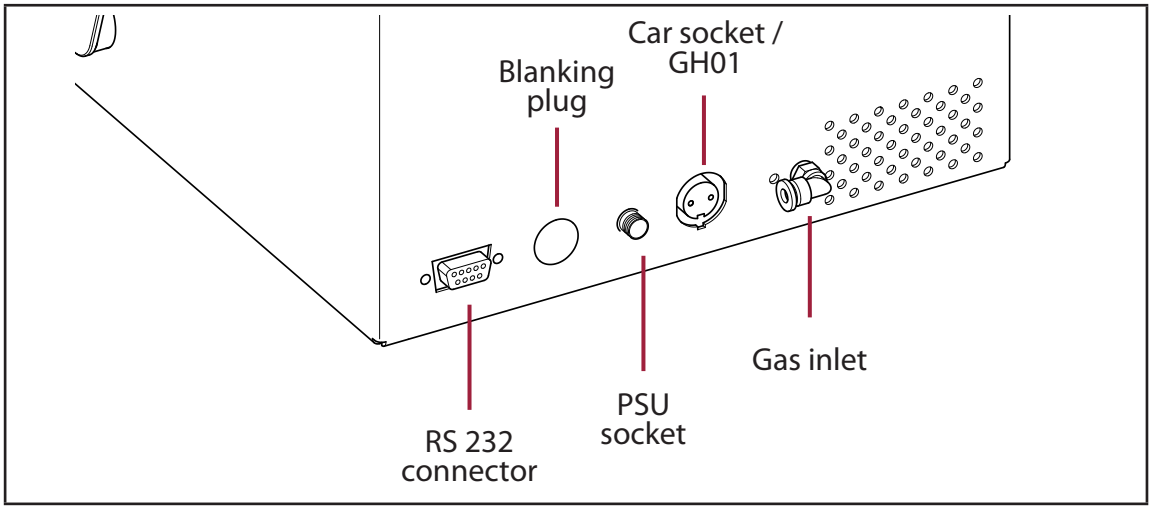
4.2 General description

The compartment and aluminium warming blocks maintain a preset temperature in the range of 35° to 45° C. The temperature is electronically controlled and can be read on the display in increaments of 0.1°C resolution. An alarm system provides both visual and audible alarm, if the temperature should be out of range or in case of low battery (when the mains adapter is not connected).

There are two options of supplying the portable incubator with electric power. Either the incubator can be connected to the wallsocket using the 24 V external power supply or the incubator can be connected to a 12 V car cigarette lighter socket.

A built-in battery maintains the temperature for 4,5 to 5,5 hours depending on ambient temperature. The battery is automatically charged when the incubator is connected to the 24 volt adapter. When the portable incubator is connected to the car cigarette lighter socket the battery is not charged as the car generator cannot charge beyond 13,8 volt.

The atmosphere is controlled by flushing with a gas mixture. The gas valve is automatically closed when the quick connector is disconnected. Interchangeable aluminium warming blocks, holding a variety of culture dishes and test tubes, are available. The blocks are held in position during transport by a removable POM block.



4.3 Unit performance

The unit is connected and allowed to stabilise to the setpoint.
Culture dishes and/or test tubes are placed in the interchangeable warming blocks which are held in secure positions during transport.
The chamber is purged with the desired gas mixture (regulated for example by the GH01). During purging, the door is closed, but only sealed after purging. (See page 27)
The gas supply is disconnected from the (quick release) valve at the back of the unit.

4.4 Connections

Should the transport time exceed the charge time (of the built in battery) the unit can be connected to the cigarette lighter socket found in most automobiles.
Note that the voltage from the car must be 12V, which is standard for cars.
When not in use the unit should be connected to the mains power supply.
The unit can only be heated up using the mains supply.
The car adaptor can only be used to hold the battery power, IT IS NOT A CHARGER.

4.5 General care

Do not obstruct or block the ventilation holes at the back of the unit.
Undue force or pressure should not be put on the front door when it is fully opened.
Ensure that the door hinges are clean and free of any obstructions.
When closing the door, ensure that there are no objects preventing it form closing, as too much force will damage the closing catches. Thereby hindering its performance.

WARNING *This incubator is designed to transport pre warmed blocks and does not have the capability of warming the blocks in a short period of time.*

5. Features and operation

5.1 Assembling the G95

No assembly needed. Just follow directions in **5.2** and the unit is now ready for use.

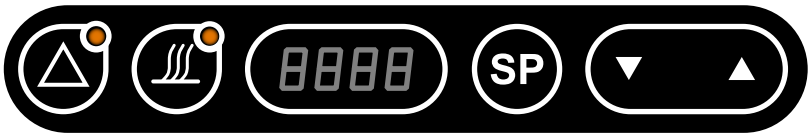
5.2 Connection to the mains

The mains voltage is automatically regulated to the correct level by the main adapter (PSU).
Connect the G95 to the mains supply using the enclosed PSU.
For safety reasons the unit has an external PSU which operates at a low voltage.

5.2.1 Start of apparatus

Connect the unit to the PSU and the PSU to the mains wall socket.
To power up the unit, press the heat on button on the keyboard. The display will indicate the current temperature.

5.3 Keyboard functions



Alarm	
Heat ON/OFF	
LED Display	
Setpoint	
Arrow keys UP/DOWN	

5.4 Operating the heated compartment

Action	Key	Display
Press heat ON/OFF key to show the actual temperature.		

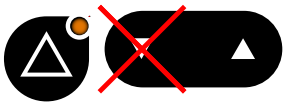
5.5 Temperature setting and control

The display indicates the average temperature of the chamber.

Action	Key
Press setpoint key until set temperature is shown.	
Press and hold setpoint key.	
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to raise or lower the set temperature. When the desired temperature is reached, let go of the setpoint key.	

Note *The setpoint can be adjusted to a reading between ambient and 49,9° C.*

5.6 Combination keys.

Action	Key	Display
Press alarm and UP key.		The keyboard is locked.
Press alarm and UP key.		The keyboard is unlocked.
Press Heat ON/OFF and setpoint key.		Switches between temperature and time
Press alarm and setpoint key to go into powersave mode.		Switches off the display

Note *Powersave mode:*
Now only a small LED will light, showing when the heat is active. All other functions are kept normal. By switching off the display the energy is conserved and the battery charge holding time prolonged.

5.7 Temperature alarm

The temperature alarm indicates too high or too low temperature.
The alarm will be activated if the temperature rises or falls more than 0.5° C from the setpoint.
There will be an acoustic signal and the red LED light in the alarm key will be activated.

Action	Key
Press alarm key to mute the acoustic signal.	
Press alarm key once again to bring the signal back on.	

Note *The red LED light and the acoustic signal will turn off when the temperature stabilises to the setpoint level.*

5.8 Warming up

Warming up from 20.0 to 39. 0° C takes less than 15 minutes under normal conditions. When a cold item is placed in the chamber it may need up to 30 minutes to stabilise, depending on the thermal mass of the object and the initial temperature.

Always let the unit stabilise before use.

5.9 Warming blocks

It is necessary to use warming blocks. Please contact your local distributor or K-SYSTEMS for details about the full range of warming blocks.

A selection of different tubes and dishes can be transported. Either tubes or dishes can be transported at one time, not a combination of both.

WARNING *Warming blocks should always be pre-heated before usage.*

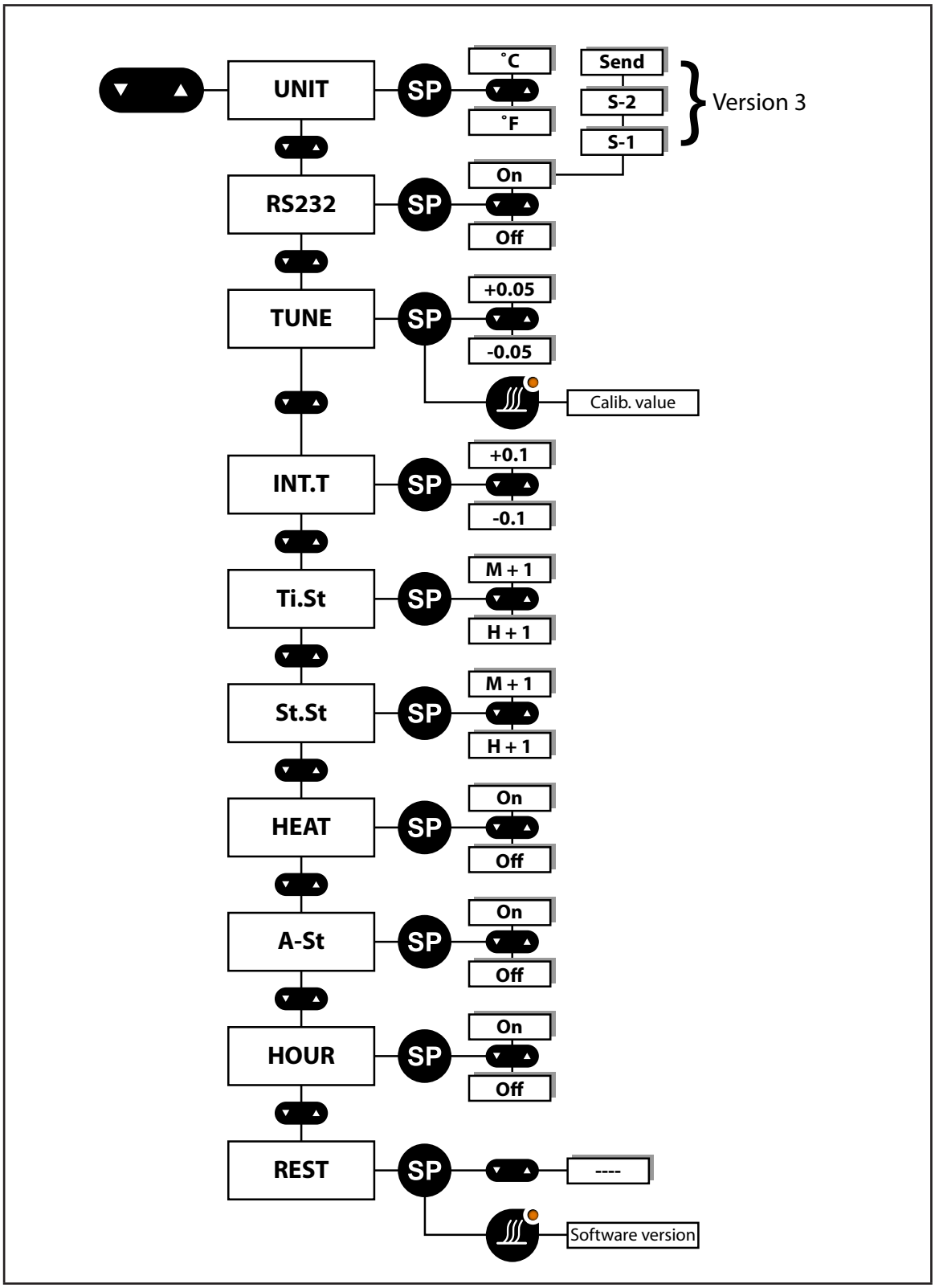
6. Menu function

The user can access a number of advanced functions via the menu.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The first option "UNIT" will appear in the display.		
Press UP/DOWN key to navigate within the Menu.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to change values within the options.		
Press and hold UP+DOWN key for 3 seconds again to exit the menu.		

The menu consist of the 10 options listed below.
For further detail see the description on the following pages.

6.1 Overview of options



UNIT

In the UNIT option the **displayed temperature** unit can be selected to be either degrees **Celsius** or **Fahrenheit.**

Follow these steps to navigate in the UNIT option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to select the required type of unit. When the required type has been selected let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

RS232

The RS232 option is for serial communication and data logging of the **temperature and alarm conditions.**

Follow these steps to navigate in the RS232 option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "RS232" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to select between "ON" and "OFF". "OFF" : The RS232 function is turned off. "ON": Data is send once every two seconds. When the required setting is activated, let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

Data logging the temperature valves during use:

Note *The RS232 cable must be connected before start.*

Follow the steps in the table above and choose "ON".
Choose one of the settings to get the required data

S-1	Sends the data for the last one hour.
S-2	Sends the data for the last two hours
send	Sends the data for the last five hours.

Note *The use of this function warrants extra equipment software (Ver. 3) and on some base models addition of a Serial PCB. The parameters on or off will not affect normal usage when serial communication is not connected.*

TUNE

The TUNE option is for **calibration** of the **displayed temperature.**
If there is an offset between the value on the display and any measurements made with a high precision external temperature sensor, this can be corrected.
The new temperature reading will be kept as the displayed value, and temperature controlling conducted on this basis. **When the power (incl. battery) is disconnected default values will be restored.**

Follow these steps to navigate in the TUNE option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "TUNE" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to select the value of temperature. When the required temperature has been selected let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

To see the calibrate value

Press and hold setpoint key. While holding the setpoint key in, press the HEAT key		The calibrate value is shown

CAUTION *Any change in the factory set calibration should always be based on very certain temperature measurements. K-SYSTEMS only recommend the use of a high quality PT-100 sensor that is calibrated with the precision instrument used for measuring according to the manufacturers specifications. Also ensure an optimal contact between the sensor and the place measured. Use only a sensor type that is correct for the purpose and of correct size. If in doubt contact your local distributor or K-SYSTEMS.*

INT.T

The INT.T (Integral Time) option is for changing the **base value** for the **PID controller.**
This should not be attempted by unauthorised persons. If set at a different level the controlling principle will be affected.
From the factory it is set to a closely calculated value specific for the model.
In version 3, this value is locked and can't be changed.

CAUTION *Do not change the value here. If by mistake any changes are made or doubts occur if the value are correct please see the REST function in the menu for the restore of the defaults*

Ti.St

The Ti.St (Time Set) option is for **setting the time.**

Follow these steps to navigate in the Ti.St option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "Ti.St" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to change the hour. When the time is set, let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

St.St

The St.St (Start Set) option is the **timer function** for the **heat.**
By using this option, time can be saved as the G95 can be ready for use before procedures start in the morning.

Note *This function will only be working correctly if the clock is set.*

Follow these steps to navigate in the St.St option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "St.St" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press the arrow UP to change the minutes and arrow DOWN key to change the hour. When the time is set, let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

Note *If the function Heat is set, a dot will light up in the right side of display.*

St.St is connected with HEAT. It must be chosen when the timer starts.
To turn the heater on, **please see the option HEAT:**

WARNING *Always make sure when the timer function is being used, that the heated area is clear of any objects that might be damaged by the heat or adversely affected by it in any way.*
Caution should always be exercised when a heated area is turned on without any supervision.

HEAT

The HEAT option is used for the heater to **turn on at a time**.

Note *This function only works in conjunction with St.St.*
If St.St is set to 8.00 and heat function is on, the heater will automatically turn on at 8.00 using 24 hour clock.

Follow these steps to navigate in the HEAT option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "HEAT" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to select between "ON" and "OFF". When the required setting is activated, let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

A-St

The A-st (Automatic Start) option is used to **repeat the timer** (St.St) function **every day of the week.**

Note *This function works in conjunction with St.St and HEAT.*
If St.St is set to 8.00 and heat function is on, the heater will automatically turn on at 8.00 every day.

Follow these steps to navigate in the As-t option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "A-st" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to select between "ON" and "OFF". When the required setting is activated, let go of the setpoint key.		
Press and hold UP/DOWN key for 3 seconds to exit the the menu.		

Note *If this function is set to 'on' the heat function will be repeated every day, but if A-St function is set to 'off' the heat function will only be activated one time.*

HOUR

The HOUR option gives the opportunity to **show the time** on the display when the **heat is off.**

Follow these steps to navigate in the HOUR option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "HOUR" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or arrow DOWN key to select between "ON" and "OFF". When the required setting is activated, let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

If you want to see the time on the display when the heater is on.
Follow these steps to switch between time and temperature

Action	Key	Display
Press and hold setpoint key .		
Press the HEAT key one time, then let go of the setpoint key. The display now shows the time.		

To change back to temperature

Action	Key	Display
Press and hold setpoint key .		
Press the HEAT key one time, then let go of the setpoint key. The display now shows the temperature.		

Note *The time is shown as a 24 hour clock e.g 19.30 not 7.30 PM.*

REST

The REST function will **restore all factory set values.**
Any changes made to the displayed temperature, unit readings and controller value will be reset.

Note *Calibration value in the TUNE option will remain and not be reset.*

Follow these steps to navigate in the REST option.

Action	Key	Display
Press and hold UP+DOWN key for 3 seconds to enter the the menu. The option "UNIT" will appear in the display.		
Press DOWN key until the option "REST" appears in the display.		
Press and hold setpoint key to change values.		
While holding the setpoint key in, press either the arrow UP or DOWN key. When the display shows "----", * let go of the setpoint key.		
Press and hold UP+DOWN key for 3 seconds to exit the the menu.		

*This means all factory values have now been restored

7. Battery functions

7.1 Charging the battery

The built-in battery is charged whenever the incubator is connected to a main power source through the 24 volt adapter.
The charging time to 100% capacity depends on how much the battery is discharged. A battery discharged to 50% of the normal capacity takes approximately 1.5 hours to recharge. If the battery has been fully discharged, it takes 2-3 hours to recharge it.
When charging the battery, the portable incubator should be placed on a hard, smooth surface to ensure adequate air circulation under the portable incubator.

Note *The battery cannot be charged fully from the 12 volt car cigarette lighter socket. Full recharging can only be done when the unit is connected to a mains power source.*

Battery Indications

When the unit runs on battery:

Action	Key	Display
Press UP+DOWN key to see the charge percent of the battery.		

When the unit is connected to mains power:

Indication	Key
A flashing light in the HEAT key indicates that the unit is being charged.	
A constant light in the HEAT key indicates that the unit is fully charged.	

The LED light will not be activated when the G95 is operating only on the internal battery.

7.2 Testing the battery

The charge holding level of the battery can be tested by:

- Fully discharging the battery by leaving it switched on for five hours (the unit will turn off)
- Fully recharging the battery by connecting to mains power for around two hours The charge light on HEAT key should be ON constantly.
- The charge of the battery should hold for five hours, (depending on the ambient temperature)

Note *If the holding time for the battery is below five hours, please contact your local K-SYSTEMS distributor or K-SYSTEMS.*

8. The use of tubes or dishes

A selection of different tubes and dishes can be transported. Either tubes or dishes can be transported at one time, not a combination of both.

Please contact your local distributor or K-SYSTEMS for details about the full range of warming blocks.

The empty compartment. Note the small metal-stop in the back.	

8.1 Loading with tubes

Put the two warming blocks in the compartment. The metal-stop will keep them in place.	
Put the black plastic insulation piece in place and the blocks are fixated. Then the lid can be closed and sealed.	

Note *Always use two blocks at a time in order to have a level temperature and keep the blocks from moving around.*

8.2 Loading with dishes

Put the white plastic insulation piece in the bottom.	

There is a groove in the back that must fit over the metal-stop.	
Stack the warming blocks with the dishes in.	
	
Put the black plastic insulation piece in place and the blocks are fixated. Then the lid can be closed and sealed.	

Note *Always fill up the compartment so the blocks do not slide around.*

9. Gassing of CO^2 incubators

9.1. Why gassing?

Most of the culture media which are used in assisted reproduction techniques are sensitive to changes in pH. Culture media must be maintained at a pH about 7.4. This can be obtained by gassing with an atmosphere of 5% or 6% CO_2.

9.2. Gas supply

Gas mixtures are typically supplied in 50 liter steel tanks with a pressure of 150 bar (2000 PSI), however smaller tanks are also available.

9.3. Gas pressure

The gas pressure must be reduced by using a two stage regulator.
It is recommended that the range of the output pressure on the two stage regulator is 0-2 bar (0-27 PSI).
The output pressure from the two stage regulator must be set between 0.5 and 1.0 bar (4-10 PSI).

9.4. Humidifying the gas mixture

In order to reduce evaporation from the culture media, humidification of the gas mixture may be necessary if larger gas flow rates are used.
We recommend the K-SYSTEMS GH01, which must be connected between the regulator and the G95 portable incubator.

9.5. Gas flow rate

In general, the flow rate should be between 5 - 20 litres per hour, depending on the application and how often the lid of the portable incubator is opened.
The flow rate should not be higher than necessary in order to reduce the risks of changing the osmolarity of the culturemedia.

To quickly establish the correct CO_2 concentration, it is recommended to gas with 6 litres of 5% CO_2 in air for instance, with the K-SYSTEMS GH01 flowmeter set at 29 l/h gas for approx. 15 minutes.

Higher flow rates can be used if the flow meter has a flush-flow valve for rapid purging.

9.6. Purging

Attach the gas supply to the rear of the incubator, where the gas connector is situated.	

Note *Make sure to read all instructions regarding the gas supply.*

When gassing, the lid should be closed but not secured with the locks, in order for the air to exit the incubator.	

When the portable incubator is opened, the gas mixture is partly replaced with atmospheric air. The atmospheric air mixture must be replaced by the correct gas mixture as quickly as possible. The flowrate should be high for 20-30 seconds after opening and then set back to the lower value.

When frequent openings of the portable incubator are required, it may be necessary to use a flowmeter with a flush-flow valve for rapid purging. In this case, K-SYSTEMS recommends the GH01.

After gassing, the lid should then be secured with the two locks and the incubator is ready for transport.	

10. User maintenace

10.1 Cleaning

The G95 is a low maintenance unit designed to be both easy to use and clean, plus it is durable due to its construction.

All surfaces should be cleaned with a 70% alcohol solution on a clean cloth or lint-free paper towel.

- **Clean all surface components by wiping gently with gauze.**
- **To remove fingerprints or oil smudges, wipe with gauze slightly moistened with a mixture of ether (70%) and alcohol (30%).**

Note *Since solvents such as ether and alcohol are highly flammable, they must be handled carefully. Be sure to keep these chemicals away from open flames or potential sources of ignition – for example, electrical equipment that is being switched on or off. Also remember to always use these chemicals only in a well ventilated room.*

- **If smudges are difficult to clean, wipe them with a soft cloth slightly moistened with a diluted neutral detergent.**
- **The heated compartment is able to withstand some water spills. However, precautions are still necessary if water is spilled on the surface. Unplug the power cord, and then wipe dry with a dry cloth immediately.**

Note *If water gets inside the unit, contact your K-SYSTEMS representative to check electrical safety.*

10.2 Calibration

For optimal performance the unit should be calibrated once a year by authorized K-SYSTEMS Service provider.

11. Trouble shooting

SYMPTOM	CAUSE	ACTION
Temperature alarm is on.	Temperature more than +/- 0,5° C from set temperature.	Check the set temperature. Wait for the temperature to stabilise.
No heating.	Setpoint below ambient.	Change setpoint (eg. 37° C).
Display remains off when "HEAT" key is activated.	No mains supply.	Plug in the power connector.
	Power connector, not connected.	Replace the display PCB.
	Defective "HEAT" key.	Replace the keyboard.
Display read "E-1".	Defect temperature sensor.	Replace temperature sensor.

12. Technical data

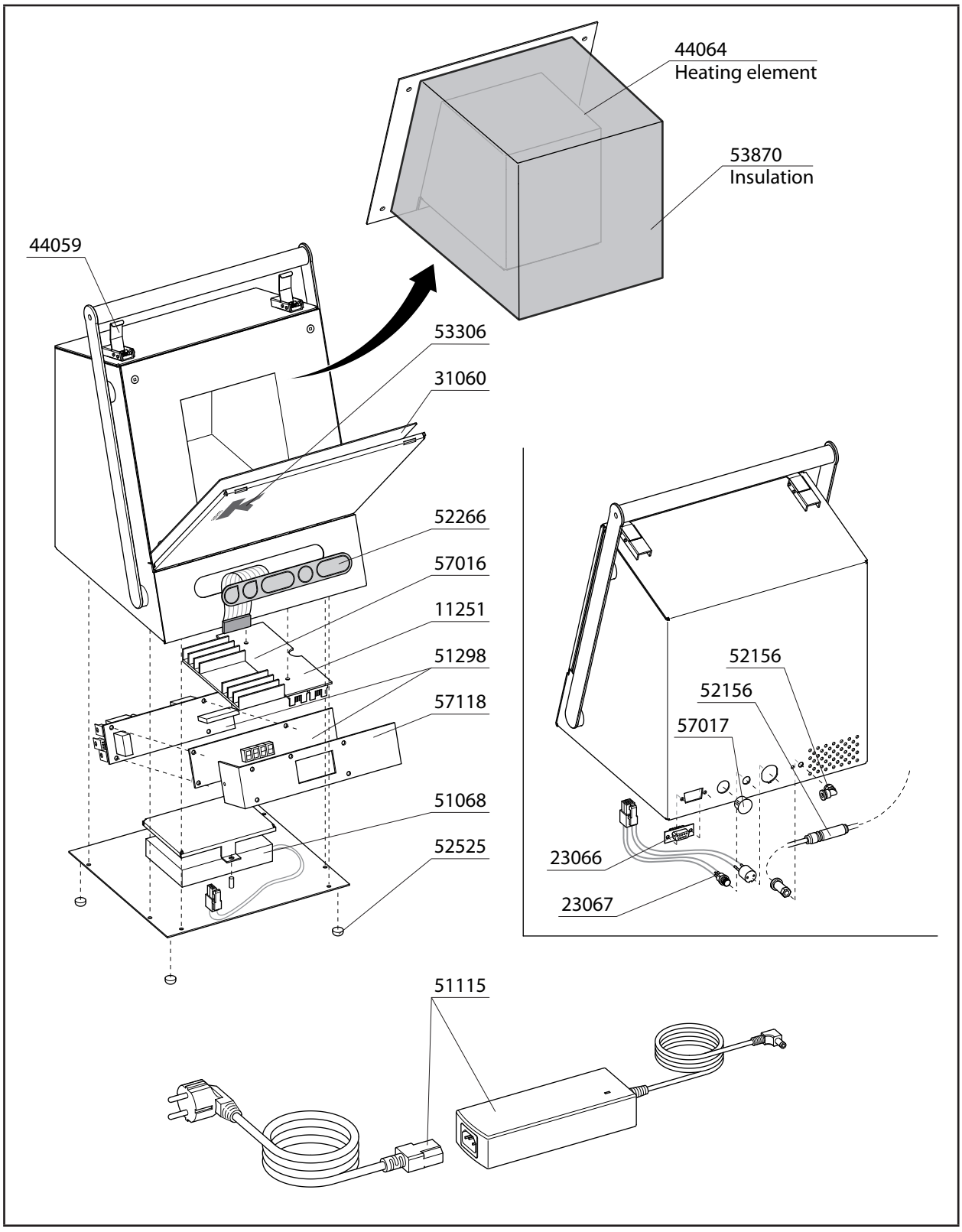
Material of cabinet and compartment	Stainless steel
Weight (without PSU and BLOCK)	5, 68 kg
Overall dimensions incl. handle (WxDxH)	245x220x315 mm
Chamber dimensions (WxDxH)	101x117x125 mm
Temperature range	35,0° to 49,9°C
Temperature accuracy	+/- 0.2° C
Temperature set/read	Digital LED display
Power consumption (when charging)	40W (105W)
Heating	30W
Alarms	Visual and acoustic for out-of-range temperature and battery
Charging time	3 Hours
Battery holding time (ambient temperature 23° C and new battery)	5 - 6 Hours
Gas consumption flushing	30 liters per Hour
Gas consumption normal	10 liters per Hour
Gas pressure	0.5-1.0 Bar
Gas	5% CO_2 in air
CO_2 holding time	1% drop per 3 Hours
Power supply car	12 V
PSU	AC input 100-240V 50-60 HZ 1, 6 A MAX DC output 24 V- 5 A

13. Spareparts

13.1 List of spare part numbers

DESCRIPTION	PART NUMBER
Electronics Power PCB	11251
Battery	51068
Lock for lid	44059
Keyboard	52266
Heating element	44064
Blanking plug	57017
Power connector	23067
RS-232 connector	23066
PSU and mains cable.	51115
Sticker K-SYSTEMS.	53306
Rubber feet 4 pieces	52525
Display PCB	51050
Sealing rubber for lid	31060
Gasconnector	52156
Cooling Plate	57016

13.2 Spare parts - exploded view



14. Limited warranty

K-SYSTEMS Kivex Biotec warrants to the purchasers of all devices and products manufactured by K-SYSTEMS Kivex Biotec, the product was prepared and tested in accordance with good manufacturing practices and guidelines and are in compliance to the CE norms issued by the competent authority.

In the event of product failure under normal use, due to defects in material or workmanship, within a period of thirteen months (13) months from the date of shipment of the Product and from the point of origin, the product will be repaired, or at K-SYSTEMS Kivex Biotec option, replaced, at no charge. This limited warranty does not apply to products subjected to abnormal use or conditions, improper storage, damaged by accident, misuse or abuse, improper line voltage, products whose serial number has been altered, to products not shipped in accordance with the recommendations of K-SYSTEMS Kivex Biotec, and/or to products altered or serviced by anyone other than K-SYSTEMS Kivex Biotec authorised distributors. Distributor is responsible for the labour and travel costs during this period.

This limited warranty is exclusive and in lieu of all other warranties whether written, oral, expressed or implied. In particular, K-SYSTEMS Kivex Biotec does not warrant that the product is suitable for the needs of the purchaser and there are no warranties given as to merchantability or fitness for a particular purpose other than the one specified in K-SYSTEMS Kivex Biotec literature that accompanies every specific product. K-SYSTEMS Kivex Biotec assumes that the Purchaser is experienced in the use of this device and is able to judge from his/her own expertise the suitability or otherwise of the product for the intended use.

K-SYSTEMS Kivex Biotec reserves the right to change or discontinue this product without prior notice.

15. Liability

Because K-SYSTEMS Kivex Biotec has no control or influence over the conditions under which this device is used, over its method of use or administration, or on handling of the product after it leaves its possession, K-SYSTEMS Kivex Biotec takes no responsibility for the results, use and/or performance of the product. K-SYSTEMS Kivex Biotec expects that use of the product will be confined to trained and expert users.

In no event shall K-SYSTEMS Kivex Biotec be liable for any direct or indirect damages including incidental, consequential or special damages, arising out of or in connection with the use or performance of the product.

If K-SYSTEMS Kivex Biotec provides you with technical documentation, this does not authorise you to perform repairs, adjustments or alterations on the device or accessories.

No representative of K-SYSTEMS Kivex Biotec and no vendor of the product is authorised to change any of the foregoing terms and conditions, and the purchaser accepts the product subject to all terms and conditions herein, subject always to any contrary provisions which are necessarily implied by stature or law notwithstanding the within terms and conditions.

16. Replacement

As mentioned in the Limited Warranty, The decision whether to provide any remedy or whether to refund any portion of the purchase price shall be at the discretion of K-SYSTEMS Kivex Biotec.

Before returning a product for any reason, please contact your nearest K-SYSTEMS Kivex Biotec distributor for assistance and instructions.

Only for all customers in Denmark, Norway and Sweden,
please take direct contact with our head office at:

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