



## KS 4000 ic control

New innovative incubator shaker design with built-in cooler allowing unattended operation in a temperature-controlled environment.

- Large LED display for speed and time settings
- Controls with antimicrobial coating for reduction of bacteria
- Integrated PID temperature control (use of two PT 1000 temperature sensors)
   Junction box in the workspace for connection of an additional temperature
- sensor e.g. PT 1000.60 (included with delivery)
- Electronic temperature and speed control
- Electronic timer switch: 0 999 h (set by the minute or by the hour)
- With built-in cooling spiral for connection to an external cooling unit e.g. KV 600
- Unit stops automatically when hood is lifted
- Collecting tray with drain hose on rear of unit
- Simple operation
- All functions can be controlled and documented using the labworldsoft® software
- Attachments not included please order accessories as required

Accessories: AS 4000.1 Universal attachment, STICKMAX, AS 4000.2 Fixing clip attachment, AS 4000.3 Dish attachment , AS 2.1 Fixing clips, AS 2.2 Fixing clips, AS 2.3 Fixing clips, AS 2.4 Fixing clips, AS 2.5 Fixing clips, AS 2.6 Fixing clips, KV 600 cooling water supply, PT 1000.60 Temperature sensor, stainless steel, labworldsoft®, PC 1.1 Cable, H 11 Mains cable Euro plug, H 11 Mains cable UK plug, H 11 Mains cable CH plug, H 11 Mains cable USA plug

| Type of movementorbitalShaker diameter [mm]20Permissible shaking weight (incl. attachment) [kg]20Motor rating input [W]82Motor rating output [W]24Permissible ON time [%]100Speed min (adjustable) [rpm]10Speed range [rpm]10 - 500Speed displayLEDTimeryesTimer display7 segment LEDTime setting range [min]1 - 5940Operating modetimer and continuous operationTouch functionnoShaking table locknoWorking with microtiter platesnoHeating temperature range [°C]room temp. +5° - 80Heat output [W]10000Temperature displayyesTemp. stability (0,21 H2O; RT 25°C, T=37°C) [±K]0.1Temperature isplay55Permissible relative humidity [%]80Protection class according to DIN EN 60529IP 30RS 232 interfaceyesVoltage [V]230 / 115 / 100Frequency [H2]50/60Power input [W]1120  | Technical Data                                   |                                |
|---|--|--------------------------------|
| Shaker diameter [mm]         20           Permissible shaking weight (incl. attachment) [kg]         20           Motor rating input [W]         82           Motor rating output [W]         24           Permissible ON time [%]         100           Speed min (adjustable) [rpm]         10           Speed range [rpm]         10 - 500           Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microiter plates         no           Heat output [W]         10000           Temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature range (inlet T>3°C) [°C]         room temp10° - 80°           Dimensions (W x H x D) [mm]         580 x 552 x 750           Weight [kg]         55           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]<                                |  |                                |
| Permissible shaking weight (incl. attachment) [kg]         20           Motor rating input [W]         82           Motor rating output [W]         24           Permissible ON time [%]         100           Speed min (adjustable) [rpm]         10           Speed range [rpm]         10 - 500           Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microiter plates         no           Heat output [W]         10000           Temperature range [°C]         room temp. +5° - 80           Heat output [W]         10000           Temperature range (inlet T>3°C, [°C]         room temp10° - 80°           Dimensions (W x H x D) [rmn]         580 x 552 x 750           Weight [kg]         55           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Freque                                |  |                                |
| Motor rating input [W]         82           Motor rating output [W]         24           Permissible ON time [%]         100           Speed min (adjustable) [rpm]         10           Speed range [rpm]         10 - 500           Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature range (inlet T>3°C) [°C]         room temp10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes   |  |                                |
| Motor rating output [W]         24           Permissible ON time [%]         100           Speed min (adjustable) [rpm]         10           Speed range [rpm]         10 - 500           Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature range (inlet T>3°C) [°C]         room temp10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100 <t< td=""><td></td><td></td></t<>       |  |                                |
| Permissible ON time [%]         100           Speed min (adjustable) [rpm]         10           Speed range [rpm]         10 - 500           Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 5940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature range [net T>3°C) [*C]         room temp. +5° - 80           Heat output [W]         1000           Temperature range (inlet T>3°C) [*C]         room temp10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120 <td></td> <td></td>  |  |                                |
| Speed min (adjustable) [rpm]         10           Speed range [rpm]         10 - 500           Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 5940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         10000           Temperature range [°C]         room temp. +5° - 80           Heat output [W]         10000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp. +10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60 <td< td=""><td></td><td>24</td></td<> |  | 24                             |
| Speed range [rpm]         10 - 500           Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         10000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp. +10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Permissible ON time [%]                          | 100                            |
| Speed display         LED           Timer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp. +10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Speed min (adjustable) [rpm]                     | 10                             |
| Imer         yes           Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp. +10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Speed range [rpm]                                | 10 - 500                       |
| Timer display         7 segment LED           Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature range (°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) (°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Speed display                                    | LED                            |
| Time setting range [min]         1 - 59940           Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Timer  | yes                            |
| Operating mode         timer and continuous operation           Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heat output [W]         1000           Temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Timer display                                    | 7 segment LED                  |
| Touch function         no           Shaking table lock         no           Working with microtiter plates         no           Heating temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Time setting range [min]                         | 1 - 59940                      |
| Shaking table lock         no           Working with microtiter plates         no           Heating temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C)         [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         115 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Operating mode                                   | timer and continuous operation |
| Working with microtiter plates         no           Heating temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp. +10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         115 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Touch function                                   | no                             |
| Heating temperature range [°C]         room temp. +5° - 80           Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp. +10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         115 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Shaking table lock                               | no                             |
| Heat output [W]         1000           Temperature display         yes           Temp. stability (0,2l H2O; RT 25°C, T=37°C) [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         115 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Working with microtiter plates                   | no                             |
| Temperature display         yes           Temp. stability (0,2I H2O; RT 25°C, T=37°C)         [±K]         0.1           Temperature range (inlet T>3°C) [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Heating temperature range [°C]                   | room temp. +5° - 80            |
| Temp. stability (0,2I H2O; RT 25°C, T=37°C)         [±K]         0.1           Temperature range (inlet T>3°C)         [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Heat output [W]                                  | 1000                           |
| Temperature range (inlet T>3°C) [°C]         room temp 10° - 80°           Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Temperature display                              | yes                            |
| Dimensions (W x H x D) [mm]         580 x 525 x 750           Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Temp. stability (0,2I H2O; RT 25°C, T=37°C) [±K] | 0.1                            |
| Weight [kg]         55           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Temperature range (inlet T>3°C) [°C]             | room temp 10° - 80°            |
| Permissible ambient temperature [°C]         15 - 32           Permissible ambient temperature [°C]         15 - 32           Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Dimensions (W x H x D) [mm]                      | 580 x 525 x 750                |
| Permissible relative humidity [%]         80           Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Weight [kg]                                      | 55                             |
| Protection class according to DIN EN 60529         IP 30           RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Permissible ambient temperature [°C]             | 15 - 32                        |
| RS 232 interface         yes           Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120  | Permissible relative humidity [%]                | 80                             |
| Voltage [V]         230 / 115 / 100           Frequency [Hz]         50/60           Power input [W]         1120   | Protection class according to DIN EN 60529       | IP 30                          |
| Frequency [Hz]         50/60           Power input [W]         1120   | RS 232 interface                                 | yes                            |
| Power input [W] 1120  | Voltage [V]                                      | 230 / 115 / 100                |
|   | Frequency [Hz]                                   | 50/60                          |
| Ident. No. 0003510100   | Power input [W]                                  | 1120                           |
|   | Ident. No.                                       | 0003510100                     |