

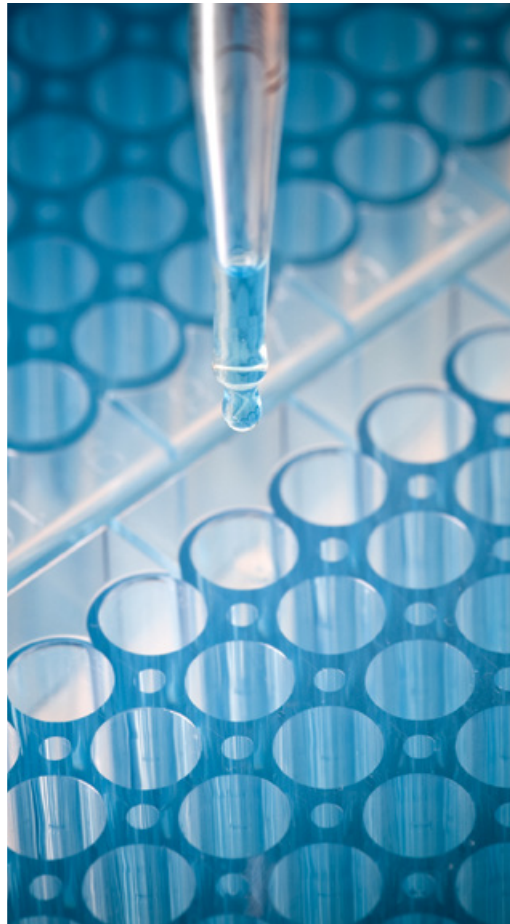
Termaks ³¹⁵ &

For more than **60 Years...**



CREATES THE ENVIRONMENT YOU NEED





ABOUT TERMAKS



Termaks is one of the leading suppliers of laboratory drying ovens, laboratory incubators, cooling incubators and environmental chambers in Scandinavia.

We enjoy a rapidly growing market worldwide, based

on our selected distributors in Asia and Europe – all with a good local knowledge and a well established position within the supply of laboratory equipment.

Termaks AS can look back on more than 60 years of ac-



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tivity. The company was founded in 1952, and the first years it supplied exclusively the Norwegian market with environmental laboratory equipment. From the base in Bergen on the Norwegian West coast the activity has increased

considerably so today we export our products worldwide. Approximately 80% of the turnover is export.

Termaks products are marketed by a net of well established and skilled distributors who are able to give

excellent support regarding both sales and service.

BERGEN, NORWAY



TS 9000 SERIES:

STERILIZERS, LABORATORY DRYING OVENS

Series TS9000 consists of four different cabinets available in sizes from 26 litres to 430 litres.

Interior housing and shelves are in stainless steel. Externally, the cabinets are constructed of electrolytically galvanized steel sheets, coated with a grey epoxy polyester paint (RAL 7035).

The three smallest models are table models that are stackable. They can be wall mounted using brackets. The largest model is freestanding and has adjustable feet.



KEY FEATURES

- **Automatic safety thermostat** Increased safety – simpler to operate
- **LCD display** Explanatory text – simpler to operate
- **Motorised valve** Automatic shut off end of cycle and overheating
- **Touch buttons** Extended lifetime in humid surroundings
- **Software** Alternates between two temperatures at specified time, daily or weekly
- **Extended temperature range** Can operate down to 2°C above ambient temperature
- **Keypad with PIN code** Prevents undesirable settings
- **Potential free alarm contact** Can connect to external alarm system
- **USB outlet** Simple updates possible via PC
- **10 speed fan**

TIMERS

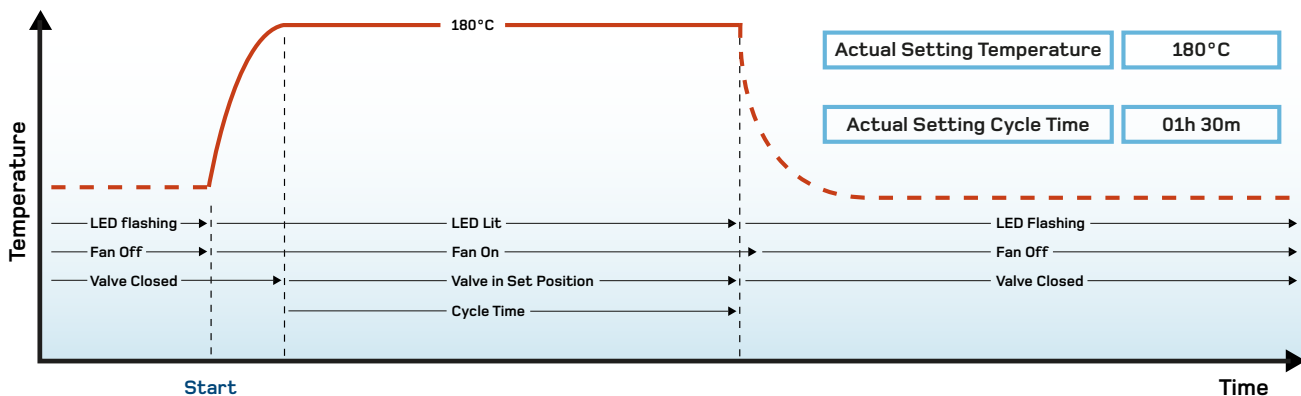
In the **System Setup**, one of **two timer systems** can be chosen:



STANDARD TIMER (DEFAULT):

- Can be set to maximum 99 hours and 59 minutes.
- Starts counting down when the Set Temperature is reached.
- In the case of power failure, lasting more than 5 minutes, the counting will restart from the beginning.
- The Fan and Air valve are controlled as illustrated below.
- If the chamber shall run without any timing, the time setting should be set to 00h 00m. This will avoid accidental start of the timer.

STANDARD TIMER, EXAMPLE



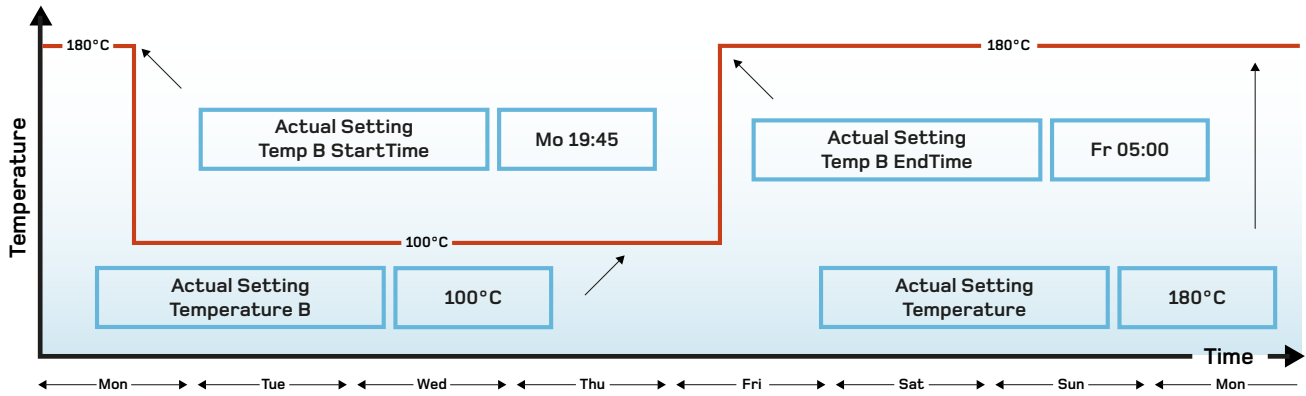
REAL TIME PROGRAM:

- Optional, can be chosen in the System Setup Menu.
- Makes it possible to operate the chamber at two different temperatures.
- The extra temperature is named **Temperature B** in the menus.
- Setting Temperature B to 000°C means that heater and fan are turned off in that period (Sleep Mode).
- **Start- and end Time** for Temperature B can be set to any time during the **week or on daily basis**.
- When choosing **xx** instead of a specified day, the change will occur daily at the given time.
- The **Real Time Clock** is backed up for about 10 minutes if power fails. A warning is given if adjustment is needed.

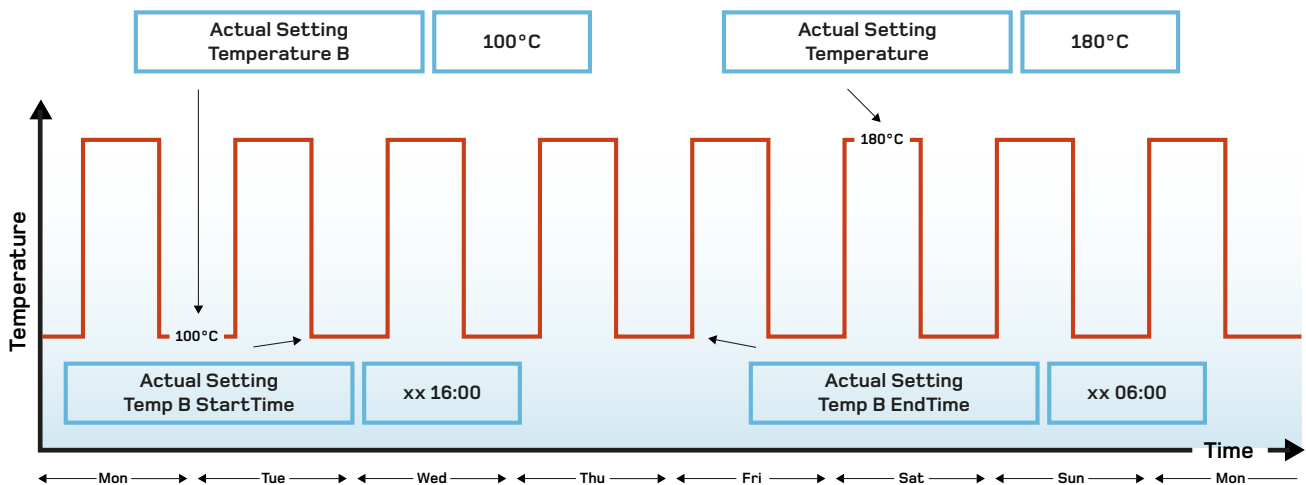




WEEK CYCLE, EXAMPLE



DAY CYCLE, EXAMPLE



THE FAN

- Adjustable speed, 1 to 10.
- When heating up, settings lower than 6 will be ignored.
- Stops for about 30 seconds when the door is opened while running at set temperature. This function is disabled for 4 minutes after last door opening or after last Air Valve adjustment.
- May reduce speed, or even stop, if operating at a temperature close to the ambient temperature.

THE AIR VALVE

- Adjustable opening in steps of 10% (00 = closed, 100 = open).
- Movement may be 10 sec delayed.
- Should be open when used for drying purposes.
- Closes automatically when heating up, when a timer cycle is completed or in Sleep mode (Real Time Program).

PIN CODE

- Optional system to stop unwanted settings from unauthorized persons.
- A **personal pin code** can be entered during the first 30 seconds after turning the chamber on with the main switch or waking up from Standby Mode. Actual code is displayed after pressing the Set key in that period. A unique code can be chosen in the range from 001 to 999.
- 000 means deactivated Pin Code System.
- When activated, **Pin Code?** will be displayed in the left display.
- **Actual code must be set by Up/Down Keys**, followed by pressing the **Enter Key**.
- The system will remain opened for 30 seconds after the last key operation.
- Alarms can be acknowledged by the Standby Key even if the keys are locked.
- If assembled with door lock system, the door will be locked as the keys are locked.

STANDBY

- Preferred way to shut down the chamber. Keeps the real time clock running.
- Turns off Heaters, Fan and Display.
- Press the Standby Key for about 3 seconds until the backlight in the display turns off.
- The Standby LED turns on when the key is released.
- The chamber can be restarted by pressing the Standby Key for 3 seconds.
- The right display will show **Wait... for a moment** during initialization.

ALARMS

- A number of alarm situations may occur, listed below.
- Actual warning is given in the lower line of the left display.
- The backlight starts flashing and the buzzer starts sounding whenever an alarm occur.
- The flashing and the sound can be stopped by pressing the Standby Key.

CALIBRATION

Two calibration constants can be adjusted in order to bring the temperature measurement equal to the true value according to a control device.

ALARM OUTPUTS

- A potential free contact is available for external use (see drawing Main Switch and External Connections).
- The output switches when an alarm situation occurs, one minute delayed.
- Switches immediately at power failure.
- Immediate return to normal when the alarm situation is over.

SAFETY THERMOSTAT

- Automatic system, preventing risky temperatures in the case of a controller failure.
- Completely independent from the ordinary temperature control system
- Automatically adjusted whenever a new Temperature Set is entered
- Adjustable limit (offset from target)
- Cuts power to the heaters when the limit is exceeded
- Generates an alarm warning
- Turns to normal when the temperature has dropped 0.5°C below the limit



STERILIZERS – LABORATORY DRYING OVENS

TEMPERATURE CONTROL		TS 9026	TS 9053	TS 9135	TS 9430
Variation	+ / - °C	1	1	1	1
Deviation (spatial)	+ / - %	1,5	1,5	1,5	1,5
Readability / Setability	°C	1	1	1	1
Range	°C	t _b -250	t _b -250	t _b -250	t _b -250
Sensor thermocouple "K"		Yes	Yes	Yes	Yes
Controller		PID	PID	PID	PID
Display		LCD	LCD	LCD	LCD
TIMER					
Standard hours/minutes		99h/59m	99h/59m	99h/59m	99h/59m
Real time program *		Yes	Yes	Yes	Yes
SAFETY					
Alarm flashing / Acoustic		Yes	Yes	Yes	Yes
Alarm limit settable		Yes	Yes	Yes	Yes
Automatic safety setting		Yes	Yes	Yes	Yes
FEATURES					
Fan speed control		1/10	1/10	1/10	1/10
Exhaust valve	mm	30 × 30	30 × 30	30 × 30	60 × 60
Ventilation slide	0-100 %	Yes	Yes	Yes	Yes
Data Port, Serial USB		Yes	Yes	Yes	Yes
Pot. free alarm output		Yes	Yes	Yes	Yes
SHELVES					
Standard / Max	pcs	2/7	2/8	3/16	3/23
Dimensions W×D	mm	346 × 235	434 × 325	534 × 325	602 × 570
Max load pr shelf	kg	20	20	20	30
Permitted total load	kg	50	50	70	100
HEATING					
Heating up time to 250 °C	mins	40	50	65	20
Heat transfer at 250 °C	W	400	460	710	1500
Air changes	Hz	110	50	20	60
POWER					
Nominal Power	W	930	1430	1430	4600
Nominal voltage	V	230,1~	230,1~	230,1~	230/400,3~
Frequency	Hz	50/60	50/60	50/60	50/60
DIMENSIONS					
Exterior W×D×H	mm	490×480×500	580×575×550	680×675×750	753×845×1360
Interior W×D×H	mm	350×255×300	440×345×350	540×455×555	610×600×1180
Volume	litres	26	53	135	430
WEIGHTS / VOLUME					
Net weight	kg	20	35	52	120
Shipping weight	kg	25	40	60	140
Shipping volume	dm ³	0,21	350	558	1280

t_b = 2°C ABOVE AMBIENT
 * CAN BE SET AT TWO TEMPERATURES, DAILY OR WEEKLY

B 9000 SERIES:**INCUBATORS, BACTERIOLOGICAL CABINETS**

Series B9000 consists of four different cabinets ranging in size from 23 litres to 420 litres.

Interior housing and shelves are in stainless steel. All cabinets are equipped with a glass inner door.

Externally, the cabinets are constructed of electrolytically galvanized steel sheets, coated with a grey epoxy polyester paint (RAL 7035).

The three smallest models are table models that are stackable. The largest model is freestanding and has adjustable feet.



- **Automatic safety thermostat** Increased safety – simpler to operate
- **LCD display** Explanatory text – simpler to operate
- **Touch buttons** Extended lifetime in humid surroundings
- **Software** Alternates between two temperatures at specified time, daily or weekly
- **Extended temperature range** Can operate down to 2°C above ambient temperature
- **Keypad with PIN code** Prevents undesirable settings
- **Potential free alarm contact** Can connect to external alarm system
- **Sterilizing cycle** Possible to sterilize
- **USB outlet** Simple updates possible via PC
- **10 speed fan**

TIMERS

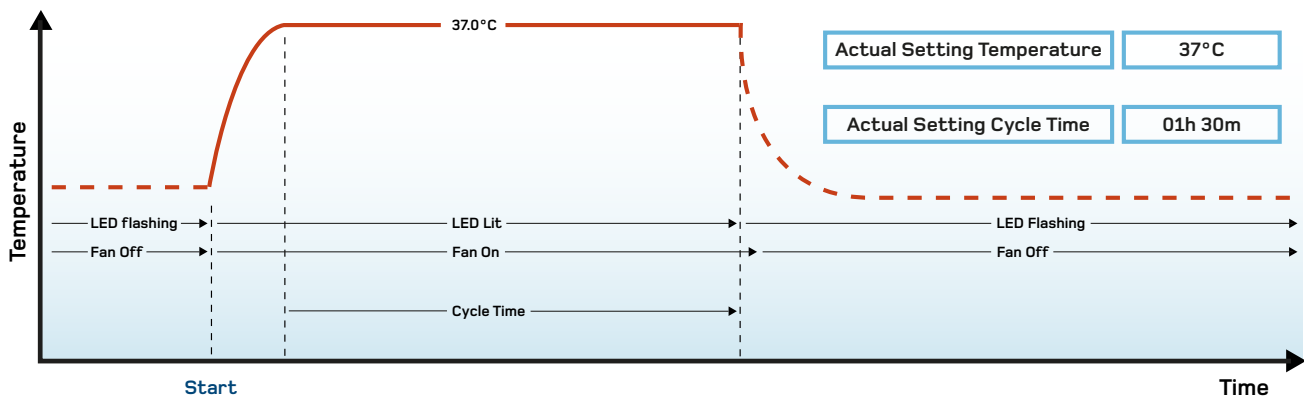
In the **System Setup**, one of two timer systems can be chosen:



STANDARD TIMER (DEFAULT):

- Can be set to maximum 99 hours and 59 minutes.
- Starts counting** down when the **Set Temperature** is reached.
- In the case of power failure, lasting more than 5 minutes, the counting will restart from the beginning.
- The Fan and Air valve (if assembled) are controlled as illustrated below.
- If the chamber shall run without any timing, the time setting should be set to 00h 00m. This will avoid accidental start of the timer.

STANDARD TIMER, EXAMPLE

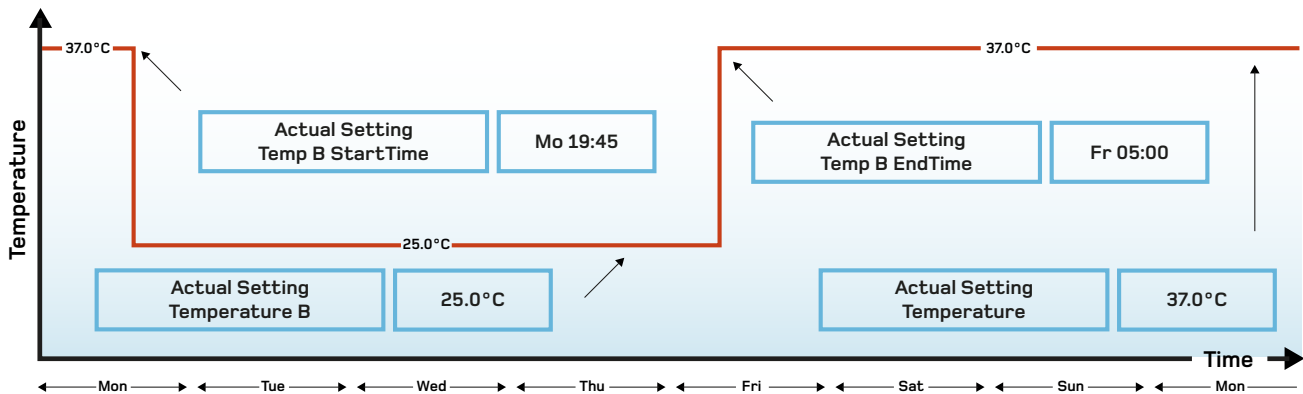


REAL TIME PROGRAM:

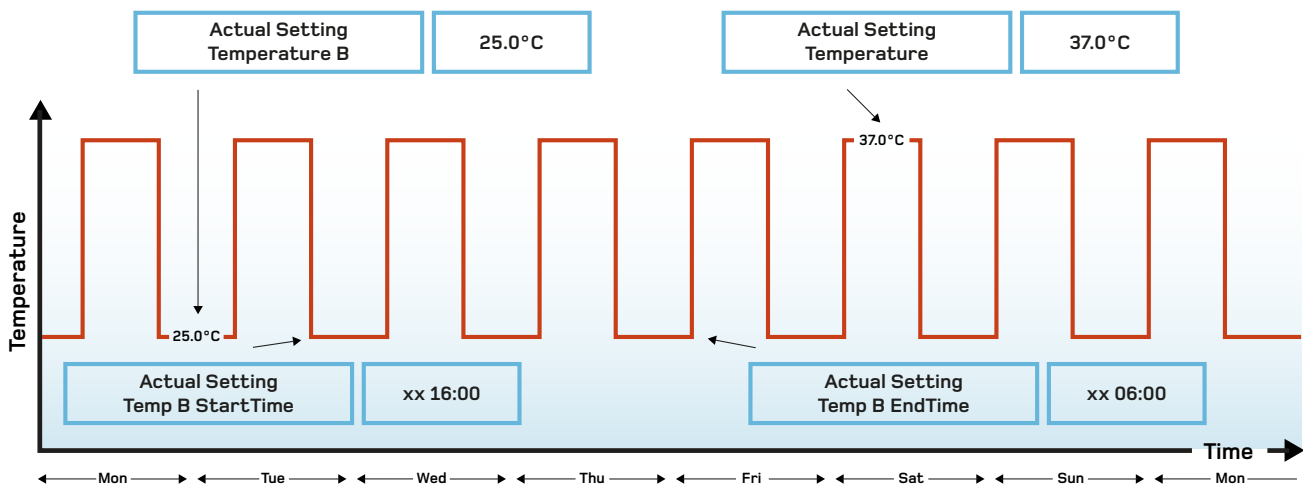
- Optional, can be chosen in the System Setup Menu
- Makes it possible to operate the chamber at two different temperatures
- The extra temperature is named **Temperature B** in the menus
- Setting Temperature B to 00.0°C means that heater and fan are turned off in that period. (Sleep Mode)
- Start- and end Time** for Temperature B can be set to any time during the **week or on daily basis**
- When choosing xx instead of a specified day, the change will occur daily at the given time
- The **Real Time Clock** is backed up for about 10 minutes if power fails. A warning is given if adjustment is needed.



WEEK CYCLE, EXAMPLE



DAY CYCLE, EXAMPLE



STERILIZATION CYCLE

- A **fixed sterilization cycle** for the chamber is available, 180°C in 40 minutes
- **Standard timer** must have been chosen in the **Setup Menu**
- Acts as Standard Timer, but temperature and time can't be adjusted
- The cycle can be **started** by pressing **Up, Down and Timer keys** for 3 seconds
- The message **Sterilization** appears in the left display and the Timer LED turns on
- **Heating Up** is displayed until the 180°C has been reached
- **Time Left** (Minutes) will be displayed when the set temperature has been reached.
- When finished, **Cycle Complete** will be displayed and the LED starts flashing
- Return to normal operation, timer or continuous, by pressing Timer key for 3 sec

THE FAN

- Adjustable speed, 1 to 10.
- When heating up, settings lower than 6 will be ignored.
- Stops for about 30 seconds when the door is opened while running at set temperature. This function is disabled for 4 minutes after last door opening or after last Air Valve adjustment.
- May reduce speed, or even stop, if operating at a temperature close to the ambient temperature.





PIN CODE

- Optional system to stop unwanted settings from unauthorized persons.
- A **personal pin code** can be entered during the first 30 seconds after turning the chamber on with the main switch or waking up from Standby Mode. Actual code is displayed after pressing the Set key in that period. A unique code can be chosen in the range from 001 to 999.
- 000 means deactivated Pin Code System.
- When activated, **Pin Code?** will be displayed in the left display.
- **Actual code must be set by Up/Down Keys**, followed by pressing the **Enter Key**.
- The system will remain opened for 30 seconds after the last key operation.
- Alarms can be acknowledged by the Standby Key even if the keys are locked.
- If assembled with door lock system, the door will be locked as the keys are locked.

STANDBY

- Preferred way to shut down the chamber. Keeps the real time clock running.
- Turns off Heaters, Fan and Display.
- Press the Standby Key for about 3 seconds until the backlight in the display turns off.
- The Standby LED turns on when the key is released.
- The chamber can be restarted by pressing the Standby Key for 3 seconds.
- The right display will show Wait... for a moment during initialization.

CALIBRATION

Two calibration constants can be adjusted in order to bring the temperature measurement equal to the true value according to a control device.

ALARMS

- A number of alarm situations may occur, listed below.
- Actual warning is given in the lower line of the left display.
- The backlight starts flashing and the buzzer starts sounding whenever an alarm occur.
- The flashing and the sound can be stopped by pressing the Standby Key.

ALARM OUTPUT

- A potential free contact is available for external use (see drawing Main Switch and External Connections).
- The output switches when an alarm situation occurs, one minute delayed.
- Switches immediately at power failure.
- Immediate return to normal when the alarm situation is over.

SAFETY THERMOSTAT

- Automatic system, preventing risky temperatures in the case of a controller failure.
- Completely independent from the ordinary temperature control system.
- Automatically adjusted whenever a new Temperature Set is entered.
- Adjustable limit (offset from target).
- Cuts power to the heaters when the limit is exceeded.
- Generates an alarm warning.
- Turns to normal when the temperature has dropped 0,5°C below the limit.

INCUBATORS, BACTERIOLOGICAL CABINETS

TEMPERATURE CONTROL		B 9025	B 9051	B 9130	B 9420
Variation	+ / - °C	0,2	0,2	0,2	0,2
Deviation (spatial)	+ / - %	1	1	1,5	1,5
Readability / Setability	°C	0,1/0,1	0,1/0,1	0,1/0,1	0,1/0,1
Range	°C	t _b -99,9	t _b -99,9	t _b -99,9	t _b -99,9
Sensor thermocouple "K"		Yes	Yes	Yes	Yes
Controller		PID	PID	PID	PID
Display		LCD	LCD	LCD	LCD

TIMER

Standard hours/minutes		99h/59m	99h/59m	99h/59m	99h/59m
Real time program *		Yes	Yes	Yes	Yes

SAFETY

Alarm flashing / Acoustic		Yes	Yes	Yes	Yes
Alarm limit settable	°C	Yes	Yes	Yes	Yes
Automatic safety setting	°C	Yes	Yes	Yes	Yes

FEATURES

Fan speed steps		1/10	1/10	1/10	1/10
Door gasket silicone		Yes	Yes	Yes	Yes
Glass innerdoor		Yes	Yes	Yes	Yes
Data port, Serial USB		Yes	Yes	Yes	Yes
Pot free alarm, output		Yes	Yes	Yes	Yes

SHELVES

Standard / Max	pcs	2/7	2/8	3/16	3/23
Dimensions W x D	mm	346 x 235	434 x 325	534 x 325	602 x 570
Max load pr shelf	kg	20	20	20	30
Permitted total load	kg	50	50	70	100

HEATING

Heating up time to 37°C	mins	27	30	33	30
Heat transfer at 70°C	W	65	75	90	190

POWER

Nominal Power	W	480	480	930	1430
Nominal voltage	V	230,1~	230,1~	230,1~	230,1~
Frequency	Hz	50/60	50/60	50/60	50/60

DIMENSIONS

Exterior W x D x H	mm	490 x 480 x 500	580 x 575 x 550	680 x 675 x 750	753 x 845 x 1360
Interior W x D x H	mm	350 x 255 x 300	440 x 345 x 350	540 x 455 x 555	610 x 600 x 1180
Volume	litres	25	51	130	420

WEIGHTS / VOLUME

Net weight	kg	20	35	52	120
Shipping weight	kg	25	40	60	140
Shipping volume	dm ³	0,21	350	558	1280

t_b = 2°C ABOVE AMBIENT

* CAN BE SET AT TWO TEMPERATURES, DAILY OR WEEKLY

KB 8000 SERIES: COOLING INCUBATORS

Series KB 8000 consists of three different cabinets in two different sizes. The KB 8400L is equipped with programmable light.

These cabinets have been developed to meet the needs of reliability, accurate and safe control over the entire temperature range and low power consumption.

To achieve those goals, the latest technology available in cooling, temperature control and insulation is used.

Interior housing and shelves are in stainless steel. Externally, the cabinets are constructed of electrolytically galvanized steel sheets, coated with a grey epoxy polyester paint (RAL 7035).



KEY FEATURES

- ✓ Temperature range from -9,9 °C to +70 °C (KB 8400L -2 °C to +70 °C)
- ✓ Accurate control over the entire temperature range
- ✓ Automatic safety thermostat settings
- ✓ Low power consumption
- ✓ Temperature /light programming in real time *
- ✓ Printer reporting *
- ✓ Air jacket
- ✓ PID Temperature controller
- ✓ Digital Calibration
- ✓ Alarm
- ✓ Timer
- ✓ Data logging

* Optional

ACCESSORIES

	KB 8182	KB 8400	KB 8400 L
Internal Power Socket 220v	✓	✓	✓
Programmable light function	-	-	✓
Door Lock	✓	✓	✓
Access Port 30 mm	✓	✓	✓
Printer report system	✓	✓	✓
Real time program	✓	✓	✓
Thermal printer	✓	✓	✓
Trippel glass window with cover	✓	✓	✓

- Not available

EASY TO OPERATE

The basic operations can be learned in a minute. A number of "Pages" can be selected in the LCD display. The information is easy to understand. All settings can easily be changed with the five buttons.

AUTOMATIC SAFETY THERMOSTAT SETTINGS

This unique feature also simplifies the operation. A safety thermostat system is integrated in the electronic control system. Both the upper and lower safety thermostats are automatically set whenever a new temperature is set. The samples inside the cabinet are thereby fully protected against temperature extremes.

TIMER

The KB8182 and KB8400 have a timer system included. It can be used as a delayed stop or start timer. This timer is disabled when the optional Real Time Program is used.





REAL TIME PROGRAMMING (OPTIONAL)

The program system can handle up to twenty settings of temperature and light. A setting is made active when the real time matches the time connected to a particular setting. The changes can be done a number of times every day, on a specific day of the week, or on a specific week in the year, or a combination of all of them. In addition, the settings can be ramped towards the new setting at a defined rate. The system can be automatically adjusted for European Daylight Saving Time, DST.

PRINTER REPORT (OPTIONAL)

An optional thermal printer (SEIKO OPU-414) can be connected to the serial data port on the cabinet. The date, time, temperature and humidity can be printed at an adjustable time rate, down to one minute.

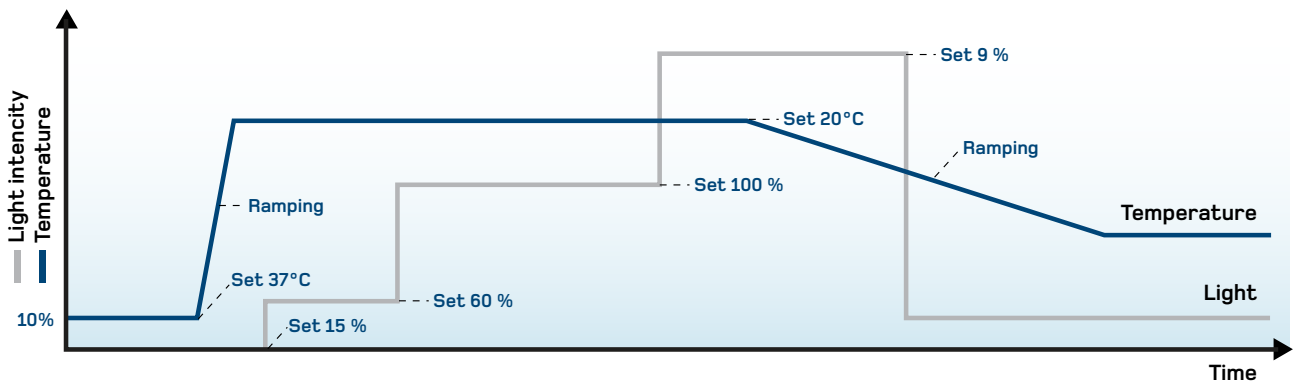
Events, such as new settings and alarm conditions can also be printed. This can be a useful aid in documentation of a test cycle.

By using a PC instead of a printer, remote settings and monitoring are possible.

CUSTOM SPECIALS AND UPGRADES

The system software can easily be replaced via a Windows based PC connected to the serial port. This makes it possible to keep the system up to date.

Customers with special functional needs, can get their software on a CD or via the Internet from Termaks.



COOLED INCUBATORS

TEMP. CONTROL		KB 8182	KB 8400	KB 8400 L
Variation	+ / - °C	0,1	0,1	0,1
Deviation (spatial)	+ / - °C	0,2	0,2	0,2
Readability / Set ability	°C	0,1	0,1	0,1
Range	°C	-9,9-70,0	-9,9-70,0	-2-70,0
Sensor thermocouple "K"		Yes	Yes	Yes
Controller		PID	PID	PID
Display		LCD	LCD	LCD

TIMER

Minutes / hours		0-999	0-999	0-999
Delayed start options		Yes	Yes	Yes
Real time program		Optional *	Optional *	Optional *
Printer report		Optional*	Optional*	Optional*
Free trial periode		1 month	1 month	1 month

SAFETY

Alarm flashing / Acoustic		Yes	Yes	Yes
Alarm limit settable		Yes	Yes	Yes
Fuses		10A	10A	10A

LIGHT CONTROL

Light readability/set ability	%	No	No	3-100
Light intensity in the middle	Lux	0	0	12000
Light intensity both sides	Lux	0	0	25000

FEATURES

Access port	30mm	Optional	Optional	Optional
Inspection window		Optional	Optional	Optional
Castors, lockable		Yes	Yes	Yes
Data Port, Serial	RS 232	Yes	Yes	Yes
Automatic de-icing **		Yes	Yes	Yes
Pot. free alarm output		Optional	Optional	Yes

SHELVES

Standard / Max	pcs	3/14	3/22	3/22
Dimensions WxD	mm	500×450	610×580	610×580
Max load pr shelf	kg	20	30	30
Permitted total load	kg	80	120	120

POWER

Maximum power usage	W	950	950	1200
Nominal voltage	VAC	230	230	230
Frequency	Hz	50		50

DIMENSIONS

Exterior WxDxH	mm	680×580×1430	830×720×1840	960×720×1840
Interior WxDxH	mm	520×451×777	630×592×1073	630×592×1073
Volume	litres	182	400	400

WEIGHTS / VOLUME

Net weight	kg	95	180	210
Shipping weight	kg	120	210	240
Shipping dimensions WxDxH	mm	780×680×1630	930×830×2040	82×106×202
Shipping volume	dm ³	865	1575	1795

* THIS OPTION IS STORED IN THE SYSTEM AND CAN FREELY BE TESTED FOR 30 DAYS. A UNIQUE CODE IS NEEDED IN ORDER TO MAKE IT AVAILABLE FOR PERMANENT USE

** AT LOW TEMPERATURES THIS SYSTEM WILL AFFECT TEMPERATURE CONTROL

THESE TECHNICAL DATA ARE SPECIFIED FOR AN EMPTY CABINET AND AMBIENT TEMPERATURE OF 23°C
SUBJECT TO TECHNICAL ALTERATION.

KB 8000F SERIES: ENVIRONMENTAL CHAMBERS

Series KB 8000 F consists of two cabinets with and without programmable light function.

These cabinets have been developed to meet the needs of reliability, accurate and safe control over the entire temperature range and low power consumption.

To achieve those goals, the latest technology available in cooling, temperature, and humidity control as well as insulation is used.

Interior housing and shelves are in stainless steel. Externally, the cabinets are constructed of electrolytically galvanized steel sheets, coated with a grey epoxy polyester paint (RAL 7035).



KEY FEATURES

- ✓ Temperature range from -2 °C to +70 °C
 - ✓ Ultrasonic humidifier
 - ✓ Thermoelectric dehumidifier
 - ✓ Accurate control over the entire temperature range
 - ✓ Automatic safety thermostat settings
 - ✓ Low power consumption
 - ✓ Temperature, humidity and light programming in real time
 - ✓ Printer reporting *
 - ✓ Air jacket
 - ✓ PID Temperature controller
 - ✓ Digital Calibration
 - ✓ Alarm
 - ✓ Timer
 - ✓ Data logging
- * Optional

ACCESSORIES

	KB 8400F	KB 8400 FL
Internal Power Socket 220v	✓	✓
Programmable light function	—	✓
Door Lock	✓	✓
Access Port 30 mm	✓	✓
Printer report system	✓	✓
Thermal printer	✓	✓
Trippel glass window with cover	✓	✓
— Not available		

REAL TIME PROGRAMMING

The program system can handle up to twenty settings of temperature, light and humidity. A setting is made active when the real time matches the time connected to a particular setting. The changes can be done a number of times every day, on a specific day of the week, or in a specific week in the year, or a combination of all of them. In addition, the settings can be ramped towards the new setting at a defined rate. The system can be automatically adjusted for European Daylight Saving Time, DST.

PRINTER REPORT (OPTIONAL)

An optional thermal printer (SEIKO OPU-414) can be connected to the serial data port on the cabinet. The date, time, temperature and humidity can be printed at an adjustable time rate, down to one minute.

Events, such as new settings and alarm conditions can also be printed. This can be a useful aid in documentation of a test cycle.

By using a PC instead of a printer, remote settings and monitoring are possible.

CUSTOM SPECIALS AND UPGRADES

The system software can easily be replaced via a Windows based PC connected to the serial port. This makes it possible to keep the system up to date.

Customers with special functional needs, can get their software on a CD or via the Internet from Termaks.





EASY TO OPERATE

The basic operations can be learned in a minute. A number of “Pages” can be selected in the LCD display.

The information is easy to understand. All settings can easily be changed with the five buttons.

AUTOMATIC SAFETY THERMOSTAT SETTINGS

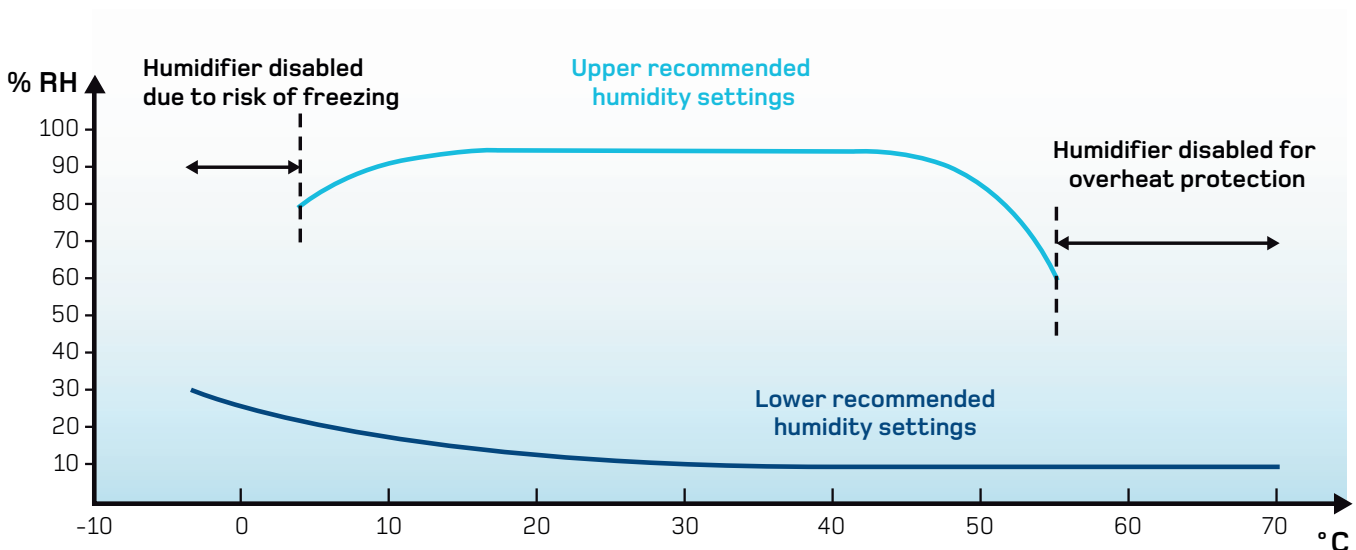
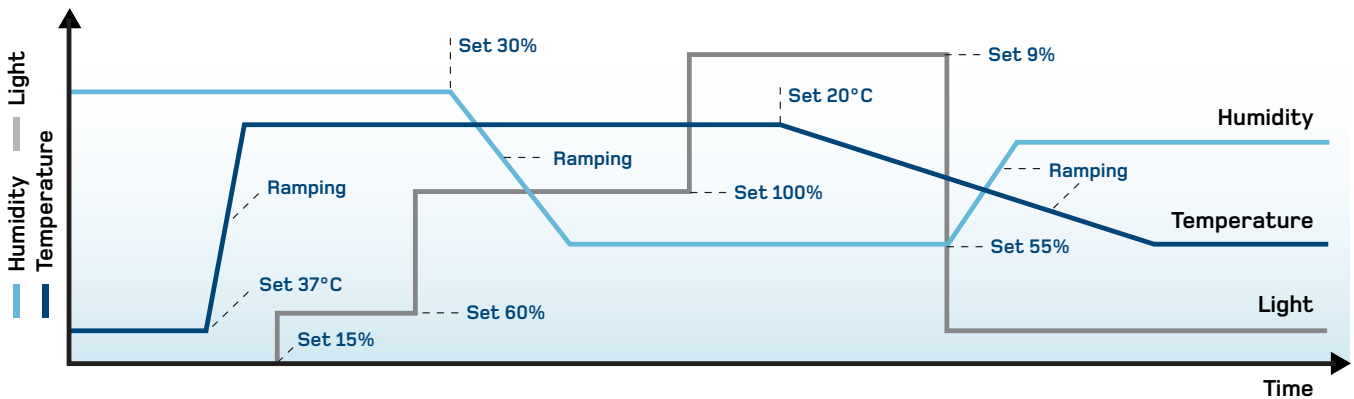
This unique feature also simplifies the operation. A safety thermostat system is integrated in the electronic control system. Both the upper and lower safety thermostats are automatically set whenever a new temperature is set. The samples inside the

cabinet are thereby fully protected against temperature extremes.

TIMER

The KB 8400F and KB8400FL have a timer system included.

It can be used as a delayed stop or start timer. This timer is disabled when the optional Real Time Program is used.



ENVIRONMENTAL CHAMBERS

TEMP. CONTROL		KB 8400 F	KB 8400 FL
Variation	+ / - °C	0,1	0,1
Deviation (spatial)	+ / - °C	0,2	0,2
Readability / Set ability	°C	0,1	0,1
Range	°C	-2-70,0	-2-70,0
Sensor thermocouple "K"		Yes	Yes
Controller		PID	PID
Display		LCD	LCD
TIMER			
Real time program		Yes	Yes
Printer report		Optional*	Optional*
Free trial periode		*	*
SAFETY			
Alarm flashing / Acoustic		Yes	Yes
Alarm limit settable		Yes	Yes
Automatic safety setting		Yes	Yes
HUMIDITY CONTROL			
Humidity Variation (time)	+/- %RH	2	2
Humidity deviation (Spaltial)	+/- %RH	2	2
Readability	% RH	0,1	0,1
Setability	% RH	1	1
Range setting	% RH	1-99	1-99
Working range	% RH	15 - 96 ***	15 - 96 ***
Capasitive sensor		Yes	Yes
Controller		PID	PID
Water quality		Distilled/Ionized	Distilled/Ionized
Water reservoir	Litres	18	18
LIGHT CONTROL			
Light readability/set ability	%	No	3-100
Light intensity in the middle	Lux	0	12000
Light intensity both sides	Lux	0	25000
FEATURES			
Access port	30mm	Optional	Optional
Inspection window		Optional	Optional
Castors, lockable		Yes	Yes
Data Port, Serial	RS 232	Yes	Yes
Automatic de-icing		Yes	Yes
Pot. free alarm output		Optional	Yes
SHELVES			
Standard / Max	pcs	3/22	3/22
Dimensions WxD	mm	610x580	610x580
Max load pr shelf	kg	30	30
Permitted total load	kg	120	120
POWER CONSUMPTION			
Maximum power usage	W	1200	1200
Nominal voltage	VAC	230	230
Frequency	Hz	50	50
DIMENSIONS			
Exterior WxDxH	mm	830x720x1840	960x720x1840
Interior WxDxH	mm	630x592x1073	630x592x1073
Volume	litres	400	400
WEIGHTS / VOLUME			
Net weight	kg	210	240
Shipping weight	kg	240	275
Shipping dimensions WxDxH	mm	930x830x2040	1060x830x2040
Shipping volume	dm ³	1575	1795

* THIS OPTION IS STORED IN THE SYSTEM AND CAN FREELY BE TESTED FOR 30 DAYS. A UNIQUE CODE IS NEEDED IN ORDER TO MAKE IT AVAILABLE FOR PERMANENT USE

** AT LOW TEMPERATURES THIS SYSTEM WILL AFFECT TEMPERATURE CONTROL

*** HUMIDIFYER DISABLED BELOW 4 °C AND ABOVE 55 °C

THESE TECHNICAL DATA ARE SPECIFIED FOR AN EMPTY CABINET AND AMBIENT TEMPERATURE OF 23 °C. SUBJECT TO TECHNICAL ALTERATION.



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