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 ºC to +70 ºC
- 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.

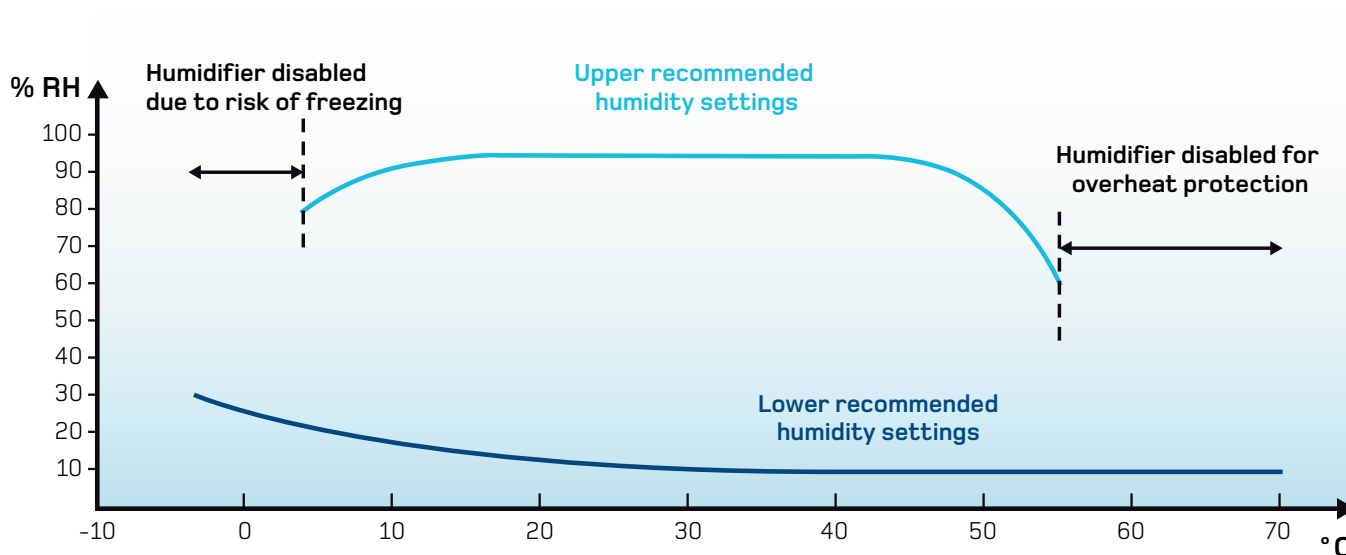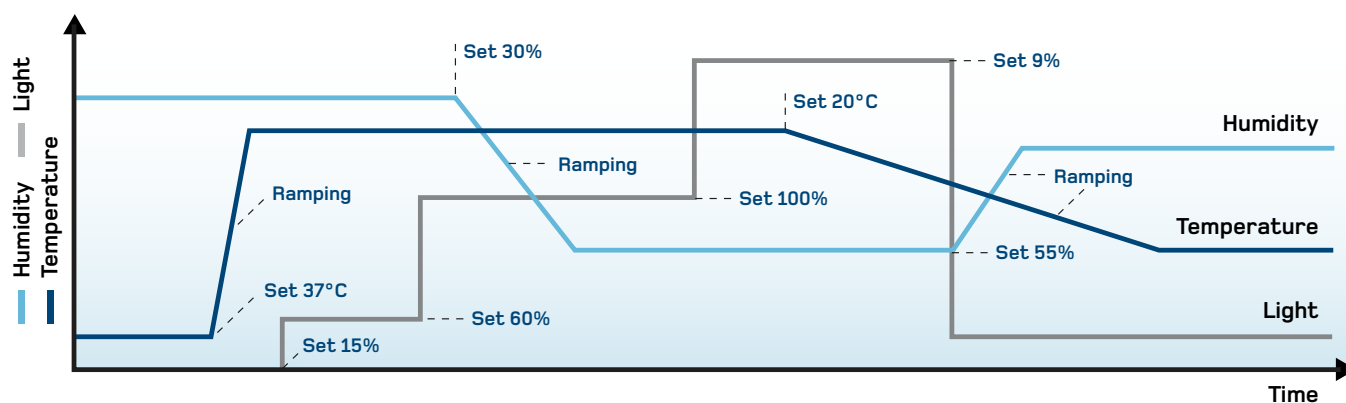## AUTOMATIC SAFETY THERMOSTAT SETTINGS

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 satety 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		Destilled/Ionizied	Destilled/Ionizied
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.