

**Kambič**

# CLIMATIC CHAMBERS

**(- 40 °C ...+ 180 °C)**

**Model:**

**KK-68 CHLT**

**KK-190 CHLT**

**KK-340 CHLT**

**KK-500 CHLT**

**KK-1000 CHLT**

- Temperature & Relative humidity-controlled test polygon
- Material temperature & Rh resistance and product testing
  - Maintaining superior temperature & Rh stability
  - Sample conditioning prior to other tests
  - Data loggers and sensors calibration
  - World class metrology performance
    - Accelerated ageing
    - Stress tests



Temperature



Relative humidity

**Device description:**



Fan for internal air circulation with speed control

7" capacitive touch screen controller with user friendly interface, advance settings options, Ethernet and USB communication ports

2 level over temp. protection:  
 1. 5°C over set point heating disabled  
 2. 10°C above max. temp mechanical shut off

Extensive heat insulation shield on all chamber sides and doors

Main switch

Access port with both end plugs Ø50 mm (On left side)

All exterior in galvanized and powder coated aluminized steel

Door sealed with double soft profile silicone seal to ensure perfect tightness

Heavy duty closing mechanism with key lock

Height Adjustable stainless steel wire shelves (1 pcs included)

Full door heated observation window with LED illumination

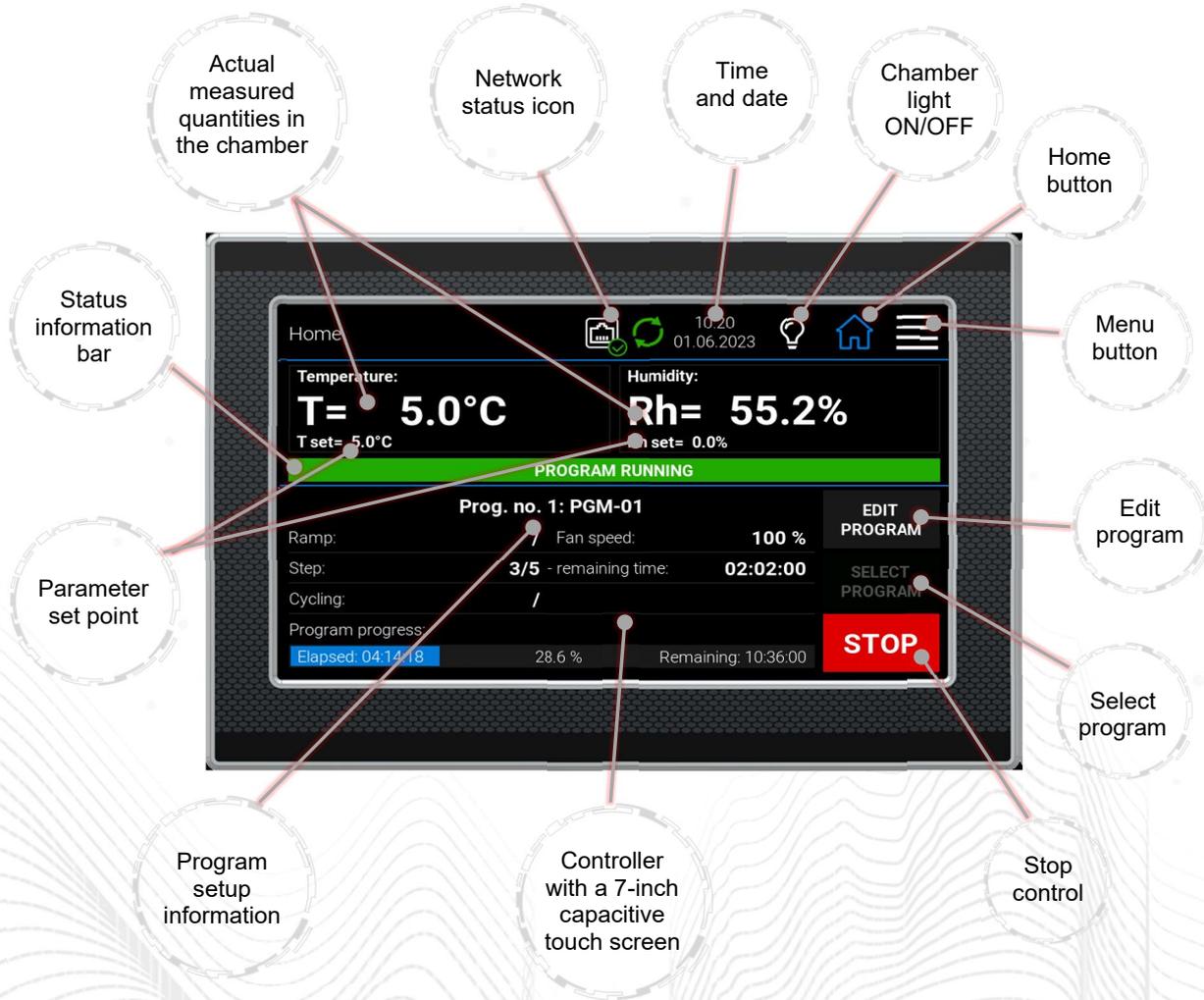
Heavy duty swivel wheels with brake for simple manipulation

Full 4 side maintenance access to ref. system

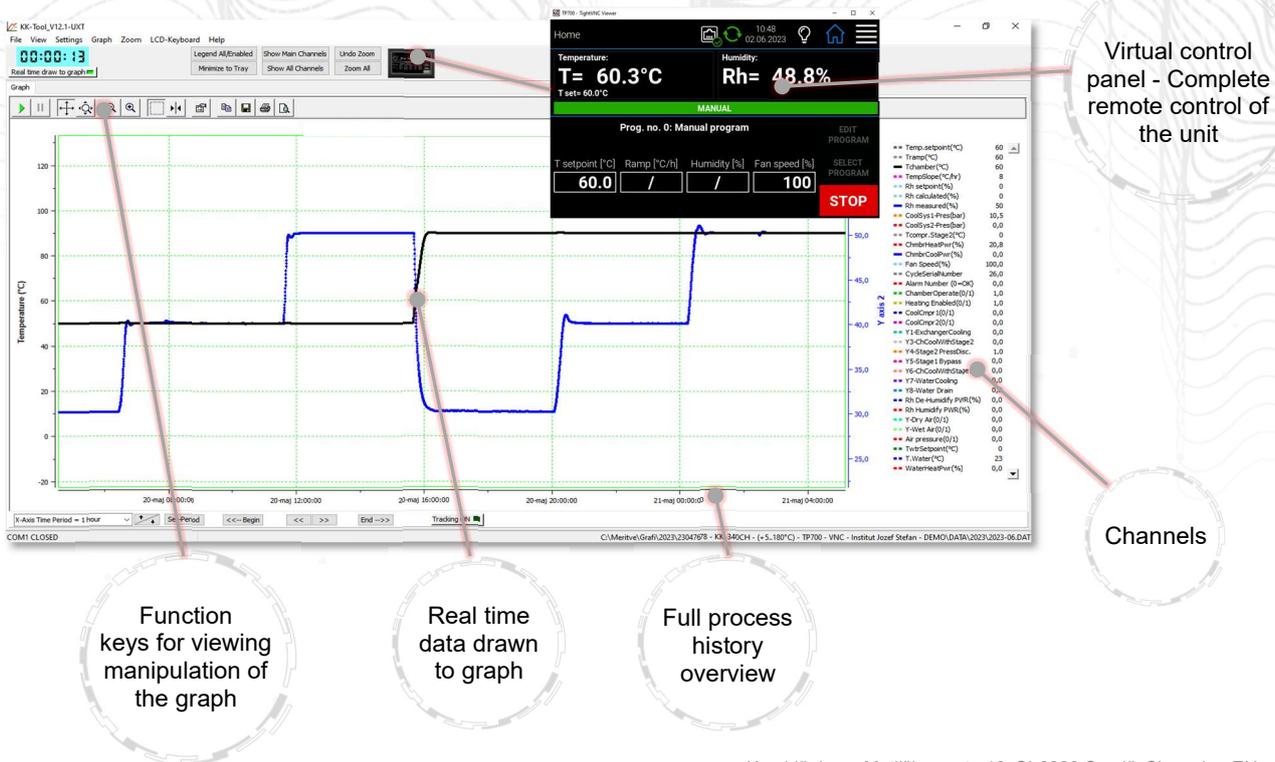
Easily accessible water tank with level switch

Fully stainless-steel interior chamber

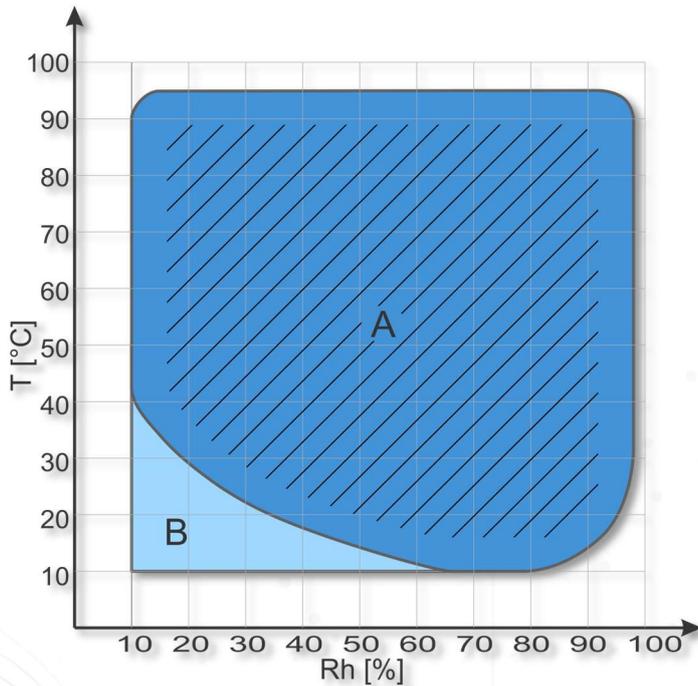
## Touch display with advanced controller functions:



## KK-Tool software for PC (free – included with every unit):

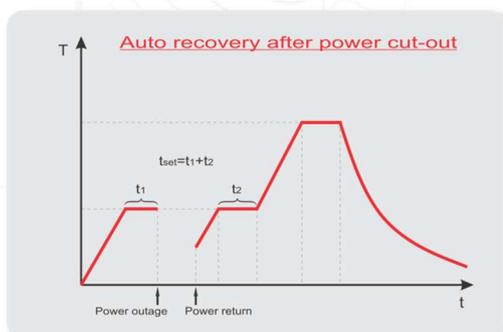
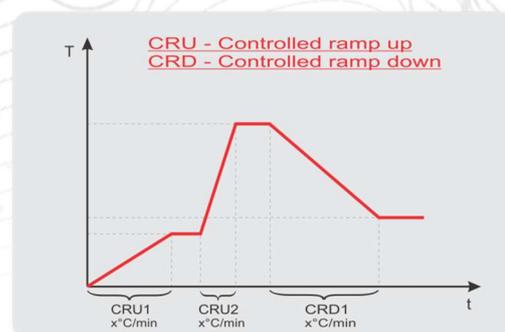
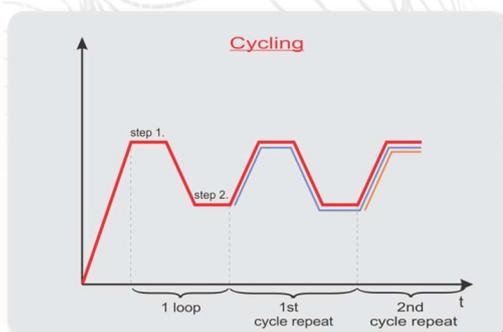
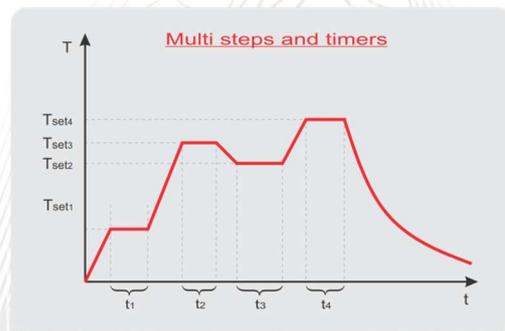
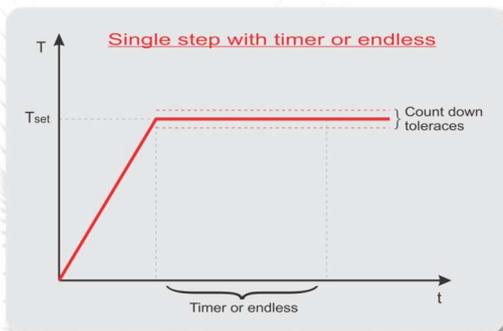


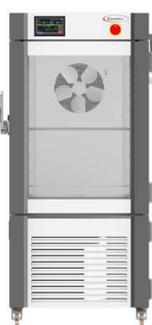
**Rh range:**



- Ideal range
- A - Standard range
- B - Extended humidity range

**Controller functions:**



	<b>KK-68 CHLT</b>	<b>KK-190 CHLT</b>	<b>KK-340 CHLT</b>
			
External dimensions (WxHxD) [mm]	650 x 1223 x 796	835 x 1661 x 951	835 x 1881 x 1126
Internal dimensions (WxHxD) [mm]	410 x 475 x 350	600 x 615 x 510	600 x 835 x 685
Volume [L]	~ 68	~ 190	~ 340
Temperature range [°C]	- 40 ...+ 180	- 40 ...+ 180	- 40 ...+ 180
Heat up rate [°C/min] (according to EN 60068-3-5)	4,0	2,0	1,5
Cool down rate [°C/min] (according to EN 60068-3-5)	2,5	3,0	2,5
Temperature display res [°C]	0.1	0.1	0.1
Temperature set res. [°C]	0.1	0.1	0.1
Temperature stability [°C]	± 0.15°C @ - 40°C ± 0.05°C @ 50°C 50 % Rh ± 0.05°C @ 90°C 90 % Rh ± 0.15°C @ 180°C	± 0.15°C @ - 40°C ± 0.05°C @ 50°C 50 % Rh ± 0.05°C @ 90°C 90 % Rh ± 0.15°C @ 180°C	± 0.15°C @ - 40°C ± 0.05°C @ 50°C 50%Rh ± 0.05°C @ 90 °C 90%Rh ± 0.15°C @ 180°C
Temperature uniformity [°C]	± 0.8°C @ - 40°C ± 0.3°C @ 50°C 50 % Rh ± 0.3°C @ 90°C 90 % Rh ± 2.0°C @ 180°C	± 0.5°C @ - 40°C ± 0.3°C @ 50°C 50 % Rh ± 0.3°C @ 90°C 90 % Rh ± 1.5°C @ 180°C	± 0.5°C @ -40°C ± 0.3°C @ 50°C 50 % Rh ± 0.3°C @ 90°C 90 % Rh ± 1.5°C @ 180°C
Heat compensation [W]	~ 250 @ - 30 °C ~ 750 @ - 10 °C ~ 1500 @ + 20 °C	~ 350 @ - 30 °C ~ 950 @ - 10 °C ~ 3000 @ + 20 °C	~ 350 @ - 30 °C ~ 1150 @ - 10 °C ~ 3000 @ + 20 °C
Rh range [%]	10...98	10...98	10...98
Rh display resolution [%]	0.1	0.1	0.1
Rh set resolution [%]	1	1	1
Rh stability [%]	± 0.3 % @ 50 °C 50 % Rh ± 0.3 % @ 90 °C 90 % Rh	± 0.3 % @ 50 °C 50 % Rh ± 0.3 % @ 90 °C 90 % Rh	± 0.3 % @ 50 °C 50 % Rh ± 0.3 % @ 90 °C 90 % Rh
Temperature control	PID (PT-100)	PID (PT-100)	PID (PT-100)
Relative humidity control	Dew point RH control via Rh capacitive sensor/ dry air purge for extended range	Dew point RH control via Rh capacitive sensor/ dry air purge for extended range	Dew point RH control via Rh capacitive sensor/ dry air purge for extended range
Power supply	230V 50/60 Hz	230V 50/60 Hz	230V 50/60 Hz
Wattage [W]	3500	3500	3500
Interface	USB and Ethernet	USB and Ethernet	USB and Ethernet
Shelve	1 (max 6)	1 (max 8)	1 (max 8)
Shelve capacity [kg]	25	35	35
Max capacity [kg]	40	80	100
Water reservoir capacity [L]	8.2	19.6	19.6
Water consumption [L/24h] (operating at +90 °C / 90 %Rh)	~0.5	~1.5	~1.5
Observation window	As standard	As standard	As standard
Access port [mm]	Ø 50 (left side)	Ø 50 (left side)	Ø 50 (left side)
Noise [dBA] @ 1 m distance	58	60	60
Weight [kg]	195	278	324

\*All performance in controlled environment ( $T_{ambient} = 22 \text{ °C} \pm 3 \text{ °C}$ )!

\*Accessories might affect performance!

	<b>KK-500 CHLT</b>	<b>KK-1000 CHLT</b>
		
External dimensions (WxHxD) [mm]	1035 x 1880 x 1381	1235 x 1928 x 1579
Internal dimensions (WxHxD) [mm]	800 x 835 x 800	1000 x 1035 x 1000
Volume [L]	~ 500	~ 1000
Temperature range [°C]	- 40 ... + 180	- 40 ... + 180
Heat up rate [°C/min] (according to EN 60068-3-5)	3.5	3.3
Cool down rate [°C/min] (according to EN 60068-3-5)	3.0	2.5
Temperature display res [°C]	0.1	0.1
Temperature set res. [°C]	0.1	0.1
Temperature stability [°C]	± 0.15°C @ - 40°C ± 0.05°C @ 50°C 50% Rh ± 0.05°C @ 90°C 90% Rh ± 0.2°C @ 180°C	± 0.15°C @ - 40°C ± 0.05°C @ 50°C 50% Rh ± 0.05°C @ 90°C 90% Rh ± 0.2°C @ 180°C
Temperature uniformity [°C]	± 0.5°C @ - 40°C ± 0.3°C @ 50°C 50% Rh ± 0.3°C @ 90°C 90% Rh ± 1.5°C @ 180°C	± 0.5°C @ - 40°C ± 0.3°C @ 50°C 50% Rh ± 0.3°C @ 90°C 90% Rh ± 1.5°C @ 180°C
Heat compensation [W]	~ 850 @ - 30 °C ~ 2050 @ - 10 °C ~ 3000 @ + 20 °C	~ 500 @ - 30 °C ~ 2000 @ - 10 °C ~ 5000 @ + 20 °C
Rh range [%]	10...98	10...98
Rh display resolution [%]	0.1	0.1
Rh set resolution [%]	1	1
Rh stability [%]	± 0.3 % @ 50 °C 50 % Rh ± 0.3 % @ 90 °C 90 % Rh	± 0.3 % @ 50 °C 50 % Rh ± 0.3 % @ 90 °C 90 % Rh
Temperature control	PID (PT-100)	PID (PT-100)
Relative humidity control	Dew point RH control via Rh capacitive sensor/ dry air purge for extended range	Dew point RH control via Rh capacitive sensor/ dry air purge for extended range
Power supply	3x400V 50/60Hz	3x400V 50/60Hz
Wattage [W]	11400	11400
Interface	USB and Ethernet	USB and Ethernet
Shelve	1 (max 8)	1 (max 8)
Shelve capacity [kg]	50	50
Max capacity [kg]	150	200
Water reservoir capacity [L]	29.3	39.3
Water consumption [L/24h] (operating at +90 °C / 90 %Rh)	~1.5	~2.0
Observation window	As standard	As standard
Access port [mm]	Ø 50 (left side)	Ø 50 (left side)
Noise [dBA] @ 1 m distance	62	62
Weight [kg]	435	604

\*All performance in controlled environment ( $T_{ambient} = 22 \text{ °C} \pm 3 \text{ °C}$ )!

\*Accessories might affect performance!

**Ordering information and accessories:**

<b>Description</b>	<b>Part no.</b>
Climatic chamber KK-68 CHLT	2981
Climatic chamber KK-190 CHLT	282
Climatic chamber KK-340 CHLT	882
Climatic chamber KK-500 CHLT	884
Climatic chamber KK-1000 CHLT	1030
Shelve wire KK-68 CHLT	792
Shelve wire KK-190 CHLT	953
Shelve wire KK-340 CHLT	956
Shelve wire KK-500 CHLT	958
Shelve wire KK-1000 CHLT	960
Shelve perforated KK-68 CHLT	793
Shelve perforated KK-190 CHLT	954
Shelve perforated KK-340 CHLT	957
Shelve perforated KK-500 CHLT	959
Shelve perforated KK-1000 CHLT	961
Access Port w. Plug Ø 50 mm right ( <i>*specify position</i> )	899
Access Port w. Plug Ø 100 mm right ( <i>*specify position</i> )	900
Automatic water feeding	1744
Extended Rh range via dry air purge	1758
Trolley for KK-68 CHLT	794
Evaluation report 9 points, 3 climatic values - performed by Kambič	1719
Evaluation report 9 points, 3 climatic values - Accredited	1777

*\*Accessories might affect performance!*

