

# PLANT GROWTH CHAMBER

RK-340 CH

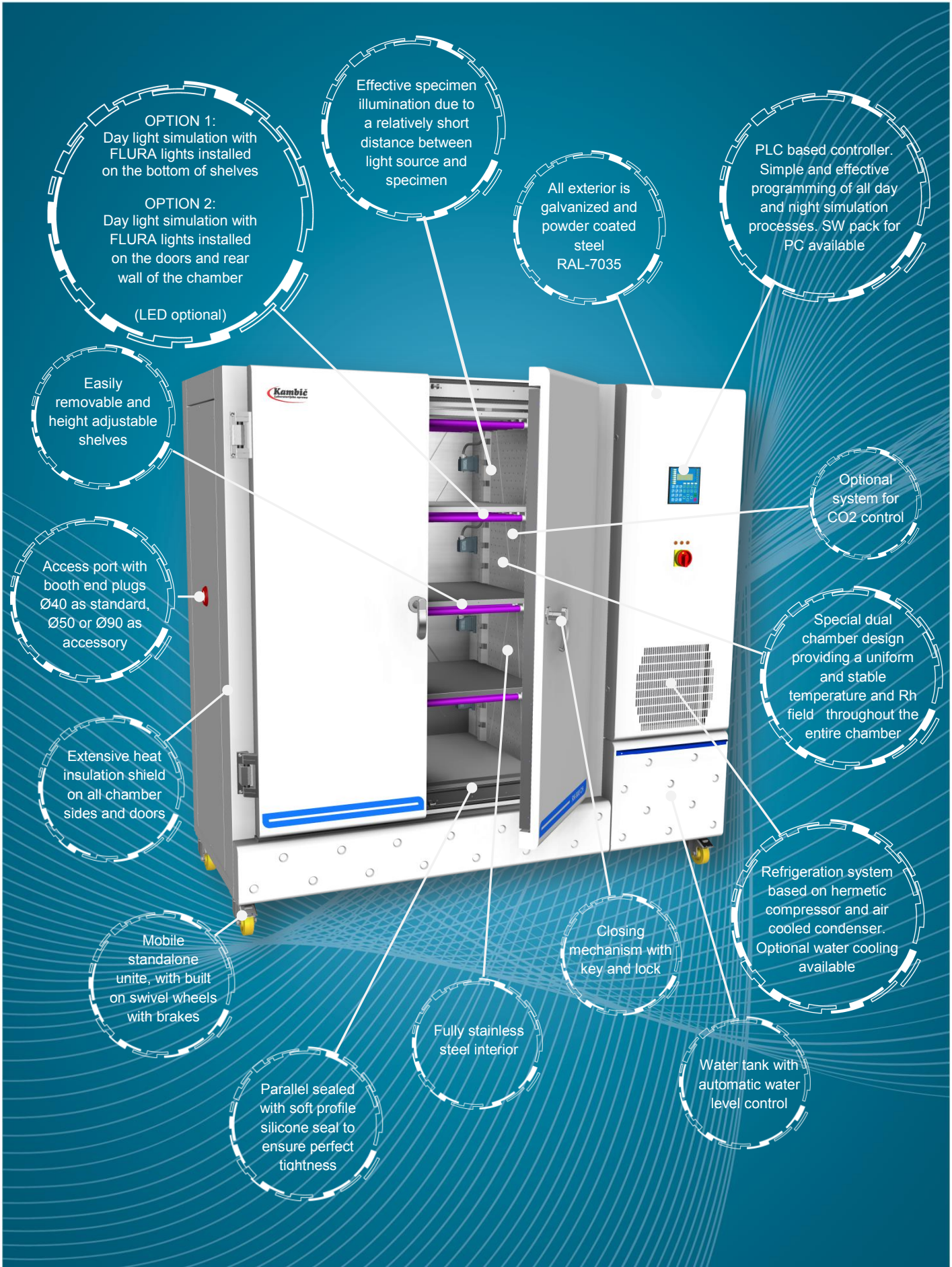
RK-500 CH

RK-1000 CH

Perfect solution for botanical and agricultural applications, plant pathology, plant tissue culture studies, seed germination studies, plant genetic research...

- Three different sizes (small, medium, large)
- Easy to use fully programmable controller
  - State of the art repeatability
  - Day light simulation control
- Relative humidity control
  - Temperature control
  - CO2 control (option)





OPTION 1:  
Day light simulation with  
FLURA lights installed  
on the bottom of shelves

OPTION 2:  
Day light simulation with  
FLURA lights installed  
on the doors and rear  
wall of the chamber

(LED optional)

Effective specimen  
illumination due to  
a relatively short  
distance between  
light source and  
specimen

All exterior is  
galvanized and  
powder coated  
steel  
RAL-7035

PLC based controller.  
Simple and effective  
programming of all day  
and night simulation  
processes. SW pack for  
PC available

Easily  
removable and  
height adjustable  
shelves

Access port with  
booth end plugs  
Ø40 as standard,  
Ø50 or Ø90 as  
accessory

Extensive heat  
insulation shield  
on all chamber  
sides and doors

Mobile  
standalone  
unite, with built  
on swivel wheels  
with brakes

Fully stainless  
steel interior

Parallel sealed  
with soft profile  
silicone seal to  
ensure perfect  
tightness

Closing  
mechanism with  
key and lock

Water tank with  
automatic water  
level control

Refrigeration system  
based on hermetic  
compressor and air  
cooled condenser.  
Optional water cooling  
available

Special dual  
chamber design  
providing a uniform  
and stable  
temperature and Rh  
field throughout the  
entire chamber

Optional  
system for  
CO2 control

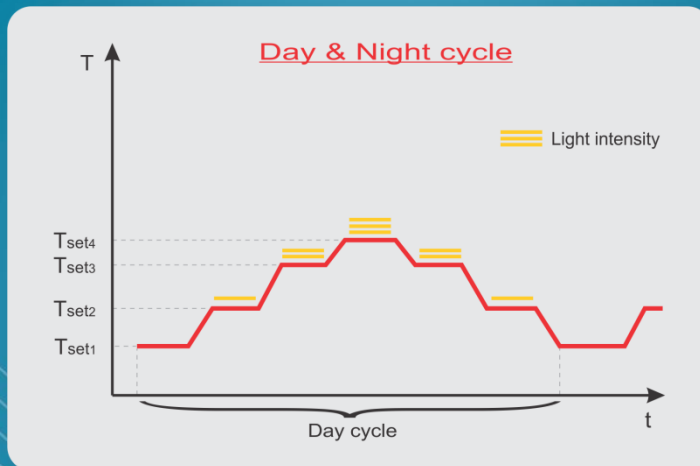
**Controller functions:**

**24 hour day & night cycle control:**

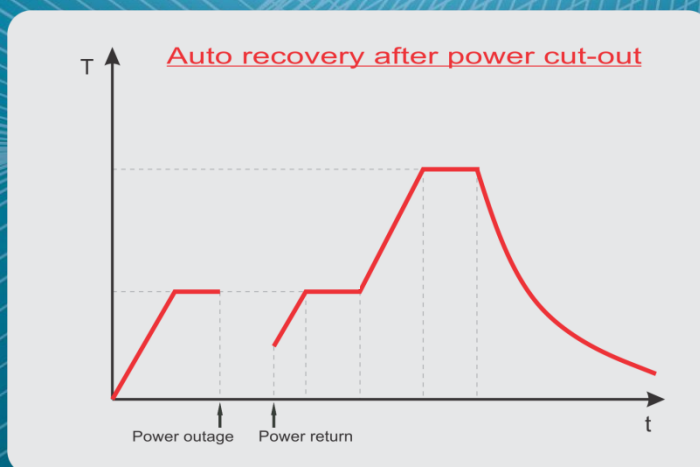
24 hours (one day) can be divided into five phases of day and five phases of night!

Example:


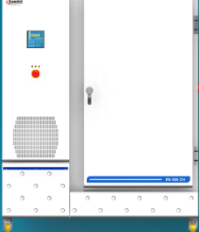

- Phase 1 (day): 07:00 to 10:00, T = 15°C, Rh = 70%, light intensity 1
- Phase 2 (day): 10:00 to 18:00, T = 30°C, Rh = 80%, light intensity 3
- Phase 3 (day): 18:00 to 21:00, T = 23°C, Rh = 75%, light intensity 2
- .....
- Phase 1 (night): 21:00 to 01:00, T = 20°C, Rh = 70%, no lights
- Phase 2 (night): 01:00 to 05:00, T = 18°C, Rh = 73%, no lights
- Phase 3 (night): 05:00 to 07:00, T = 19°C, Rh = 75%, no lights
- .....



**Auto recovery after power cut-out:**



**Technical data:**

	<b>RK-340 CH</b>	<b>RK-500 CH</b>	<b>RK-1000 CH</b>
			
External dimensions (WxHxD) in mm	834 x 1895 x 1135	1600 x 1980 x 700	2040 x 1983 x 886
Internal dimensions (WxDxH) in mm	600 x 830 x 685	680 x 1400 x 520	1045 x 1400 x 700
Volume (L)	~340	~500	~1000
Number of shelves with lights (lights on shelves option)	2	3	3
Number of wire shelves	2	3	3
Temperature range (°C) (lights on or off)	+5...+60	+5...+60	+5...+60
Rh range (%) (DEW point limits)	10...95	10...95	10...95
Temperature & Rh display resolution	0.1°C / 1%	0.1°C / 1%	0.1°C / 1%
Temperature set resolution (°C)	0.1	0.1	0.1
Rh set resolution (%)	1	1	1
Temperature stability (°C) (lights off)	Better than ±0,3°C	Better than ±0,3°C	Better than ±0,3°C
Temperature uniformity (°C) (lights off)	< ± 1 @ +37°C	< ± 1 @ +37°C	< ± 1 @ +37°C
Rh Stability (%) (lights off)	Better than ±3	Better than ±3	Better than ±3
Heating rate	~ 2°C/min	~ 2°C/min	~ 2°C/min
Cooling rate	~ 1.5°C/min	~ 1.5°C/min	~ 1.5°C/min
Day light simulation	FLUORA lights (LED option)	FLUORA lights (LED option)	FLUORA lights (LED option)
Illumination intensity	1/3, 2/3, 3/3	1/3, 2/3, 3/3	1/3, 2/3, 3/3
Temperature Control	PID	PID	PID
Cooling	Air cooled compressor aggregate	Air cooled compressor aggregate	Air cooled compressor aggregate
Power supply	3x400 V 50/60 Hz (± 10%)	3x400 V 50/60 Hz (± 10%)	3x400 V 50/60 Hz (± 10%)
Wattage (W)	4500	4500	4500
Interface	RS 232 (USB or Ethernet optional)	RS 232 (USB or Ethernet optional)	RS 232 (USB or Ethernet optional)
Weight (kg)	318	469	642

**Ordering information and accessories:**

Description	Part no.
Plant Growth Chamber RK-340 CH	922
Plant Growth Chamber RK-500 CH	903
Plant Growth Chamber RK-1000 CH	2638
Access Port w. Plug Ø 40 mm	2629
Access Port w. Plug Ø 50 mm	608
Access Port w. Plug Ø 90 mm	1731
Evaluation report	1719
Monitoring and data collection software for PC	104
USB interface	1466
Ethernet interface	1716
Automatic water feeding	1744
Password protection	1718
CO2 control system	2108
Shelve wire RK-340 CH	2109
Shelve wire RK-500 CH	2110
Shelve wire RK-1000 CH	2111
Shelve with lights RK-340 CH	2112
Shelve with lights RK-500 CH	2113
Shelve with lights RK-1000 CH	2114

