

Incubators, cooled incubators, drying ovens, sterilizers, climatic chambers

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Laboratory incubators (**CL**) and drying ovens (**SL**) are available in 3 versions: **ECO**, **STD** and **TOP+**, cooled incubators (**IL**) and climatic chambers (**KK**) in **STD** and **TOP+** versions, and sterilizers in **STD** version only.

ECO (CL/SL 15,32)



ECO, STD



TOP+



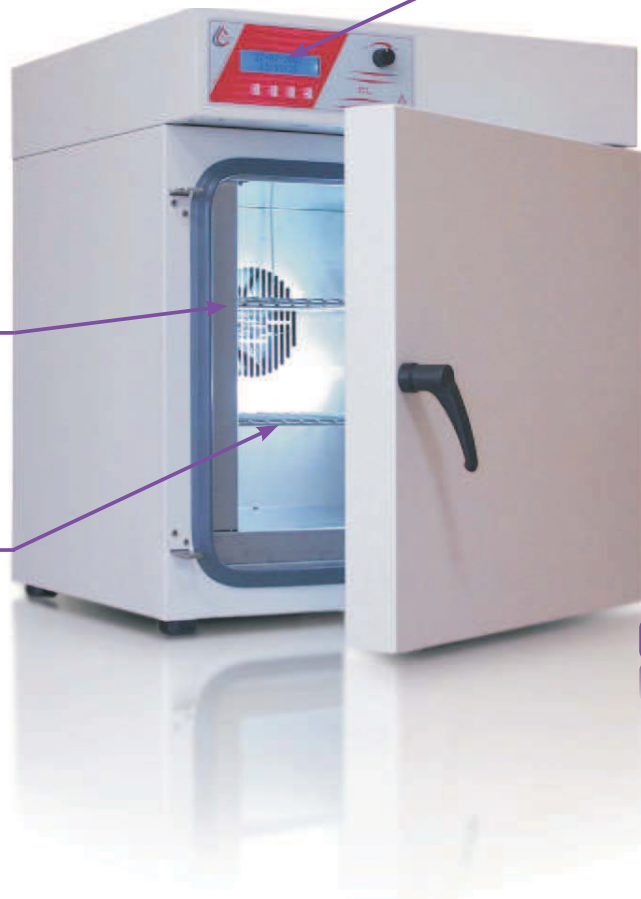
displays



fan



stainless steel interior



CLW 53 STD

Equipment available in ECO version

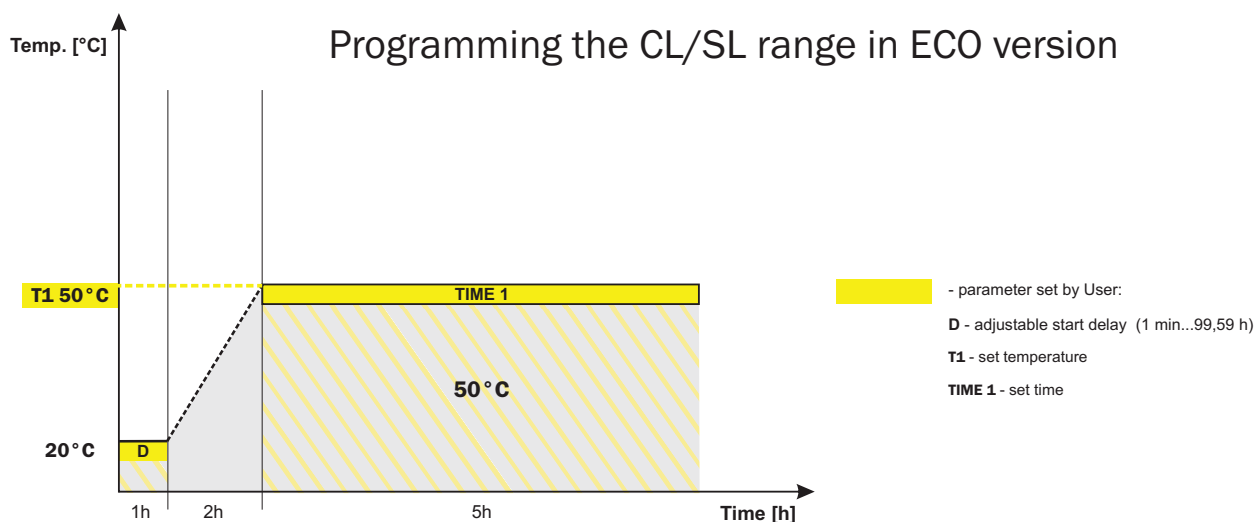
- Incubators (CL)
- Drying ovens (SL)

ECO - basic version

- combination of basic parameters and indispensable accessories
- designed for simple application
- very attractive price

Program possibilities

- single segment temperature-time profile
- temperature program priority
- adjustable start delay feature (from 1 min to 99,59 h)
- adjustable time of holding set temperature (from 1 min to 99,59 h), or continuous operating
- 1 user program memory
- overview of parameters during operating time



Standard equipment

- stainless steel interior
- housing, depending on model: powder coated sheet or stainless steel linen finish (**INOX/G**)
- forced or natural air convection (depending on model)
- automatic fan shut down after completing the program
- solid door
- manual air-flap control, adjustable
- LCD time and temperature display (except models SL/CL 15 and 32 with LED display)
- microprocessor time and temperature control
- temperature sensor fail alarm (see page 56)
- power failure control system (see page 56)
- real time clock
- sound alarm (see page 56)
- RS 232 interface
- self-check function (auto control)
- manufacturer's test certificate
- operation manual in English and English menu (other languages on request)
- stainless steel wire shelves (1-6 pieces, depending on model) with slides set
- over temperature protection according to DIN 12880: 1.0 class

Equipment available in STD version

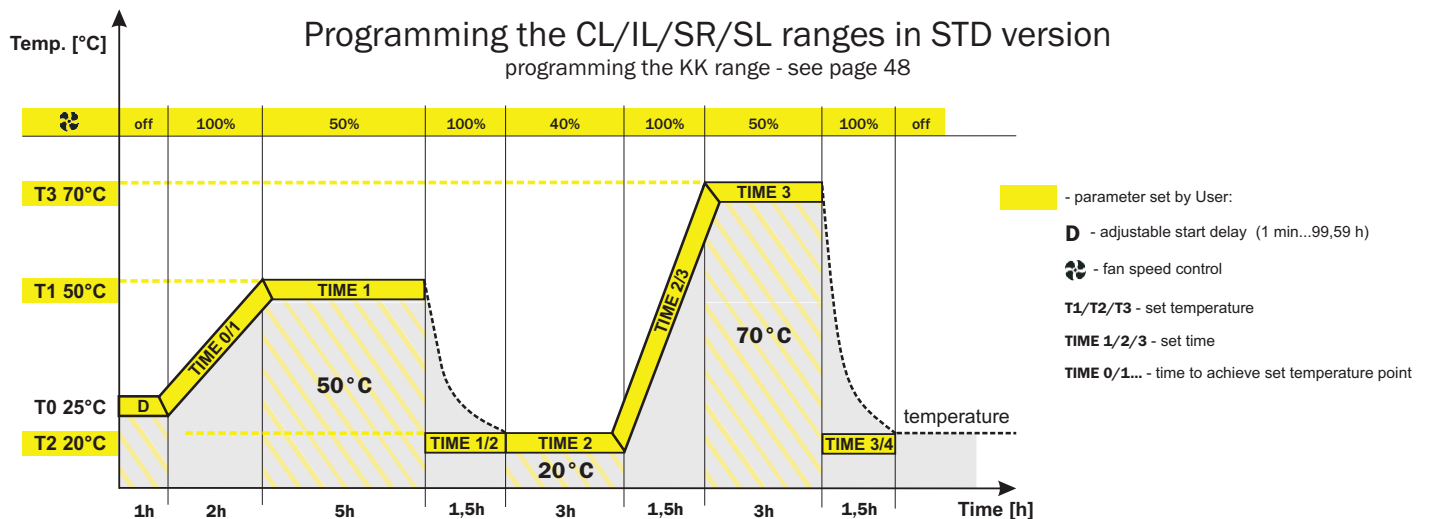
- Incubators (CL 53-1000)
- Cooled incubators (IL)
- Drying ovens (SL 53-1000)
- Sterilizers (SR)
- Climatic chambers (KK)

STD-standard version

- extended programming possibilities
- wide range of optional equipment
- affordable price

Program possibilities

- six segment temperature-time profile
- program priority: temperature for CL/IL/SL/SR and time for KK
- 3 user programs memory
- cycle run of the program
- adjustable heating up/cooling down system
- adjustable start delay feature (from 1 min to 99,59 h)
- adjustable hold at set point (from 1 min to 999 h), or continuous operating (temperature; humidity in KK; light with FOT and FIT options)
- overview of parameters during operating time
- recording min, average and max temperature (and humidity in KK) value for each segment
- over temperature (and humidity in KK) sound alarm (see page 56)
- fan speed regulation (for instruments with forced air convection)



Standard equipment

- stainless steel interior
- housing, depending on model: powder coated sheet, stainless steel linen finish (INOX/G) or polished (INOX/S)
- solid door
- forced or natural air convection (depending on model)
- automatic fan shut down after completing the program
- manual air-flap control, adjustable (CL/SL)
- automatic air-flap control in SR
- LCD time and temperature display
- microprocessor time, temperature (and humidity in KK; light with FIT option) control
- temperature (and humidity in KK) sensor fail alarm (see page 56)
- power failure control system (see page 56)
- real time clock
- sound alarm (see page 56)
- RS 232 interface
- self-check function (auto control)
- automatic defrosting in KK range
- manufacturer's test certificate
- operation manual in English and English menu (other languages on request)
- stainless steel wire shelves (2-6 pieces, depending on model) with slides set over temperature protection according to DIN 12880:
 - 1.0 class in CL/IL/SL/SR/KK;
 - 2.0 class in CL/IL/SL/SR;
 - 3.3 class in KK

TOP+ - professional version

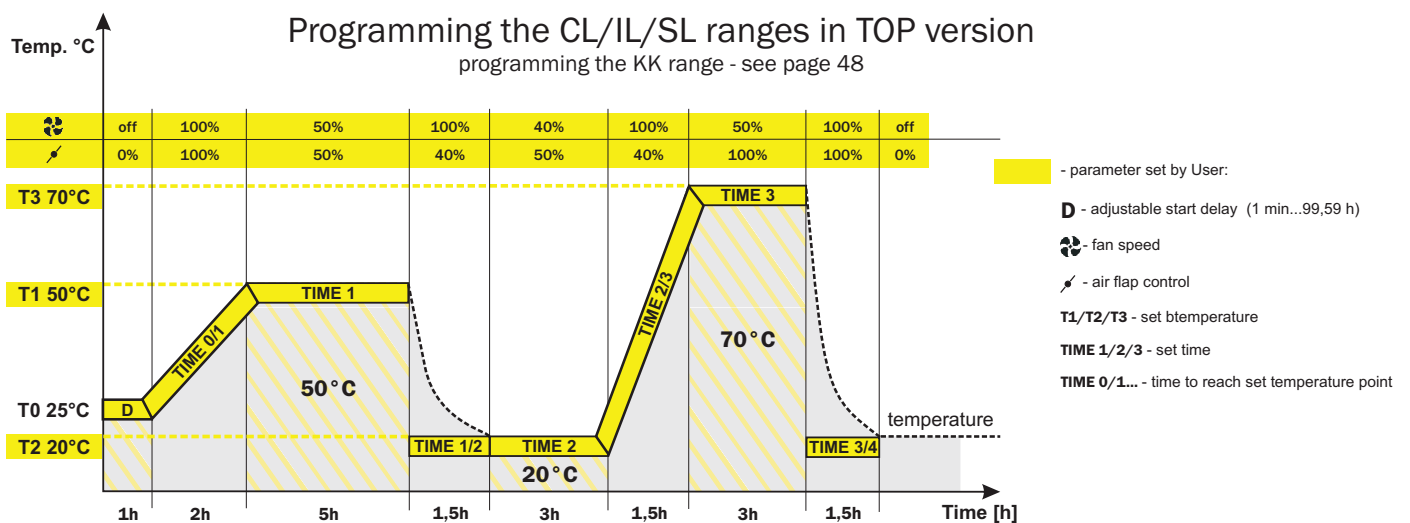
Equipment available in TOP+ version

- Incubators (CL 53-1000)
- Cooled incubators (IL)
- Drying ovens (SL 53-1000)
- Climatic chambers (KK)

TOP+ - professional version

World's first full colour touch screen thermostatic equipment with Ethernet network connection!

To meet the expectations of the most demanding customers, POL-EKO-APARATURA has introduced a new professional range of ovens, incubators, cooled incubators and climatic chambers called "TOP+". First in the market to feature Ethernet network connection which allows to connect several units and program, monitor or record their parameters on any computer inside a laboratory or remotely via internet. Equipped with a full colour, transparent 5.7" LCD touch screen, easy-to-use intuitive software, USB slot for data transfer make the operating comfortable. The large size of the display enables the user to view the unit's current parameters and program stage with only one touch of the screen.



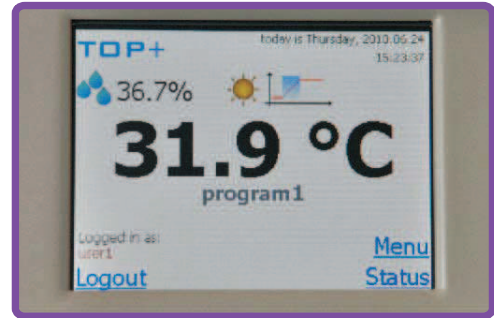
Standard equipment

- stainless steel interior
- housing, depending on model: powder coated sheet, stainless steel linen finish (**INOX/G**) or polished (**INOX/S**)
- solid door
- forced or natural air convection (depending on model)
- automatic fan shut down after completing the program
- automatic air-flap control, adjustable (CL/SL)
- full colour, transparent 5.7" LCD touch screen
- microprocessor time, temperature (and humidity in KK; light with FIT option)
- temperature (and humidity in KK) sensor fail alarm (see page 56)
- power failure control system (see page 56)
- real time clock
- sound alarm (see page 56)
- USB slot
- RS 232 interface
- self-check function (auto control)
- automatic defrosting in KK range
- manufacturer's test certificate
- operation manual in English and English menu (other languages on request)
- stainless steel wire shelves (2-6 pieces, depending on model) with slides set
- over temperature protection according to DIN 12880: 1.0 class in CL/IL/SL/KK; 3.1 class in CL/SL; 3.3 class in IL/KK
- Ethernet connection
- TOP+ Control software, temperature (and humidity in KK, light with FIT option) control and monitoring via PC

TOP+ - professional version

Advanced program possibilities of the “TOP+” range:

- administrator function that allows to manage user accounts
- access control via login
- nine segment temperature-time profile or 7 days programming
- automatic air-flap control (each 10% regulation)
- cycle run of the program
- adjustable heating up / cooling down system
- adjustable start delay feature (from 1 min to 99,59 h)
- adjustable hold at set point (from 1 min to 999 h), or continuous operating (temperature; humidity in KK; light with FOT and FIT options)
- overview of parameters during operating time
- recording min, average and max temperature (and humidity in KK) value for each segment
- over temperature (and humidity in KK) sound alarm (see page 56)
- fan speed regulation (for instruments with forced air convection)



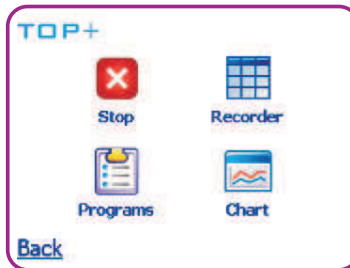
5.7" LCD touch screen panel

GLP supporting functions:

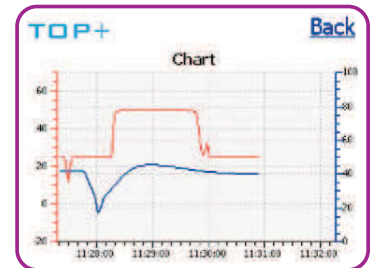
- password protected settings
- 20 user programs memory
- measurement memory with possibility of displaying the values in tabular or graphic form
- measurement data saving on external memory through the USB port



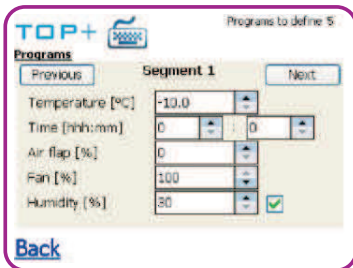
Main screen



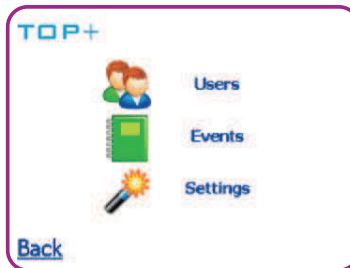
User's menu



Temperature chart



Program settings



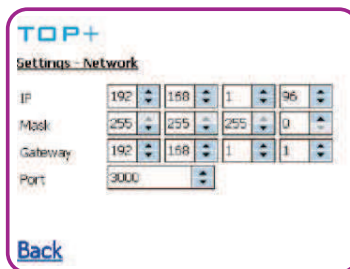
Administrator panel settings



Administrator panel settings



Administrator panel settings



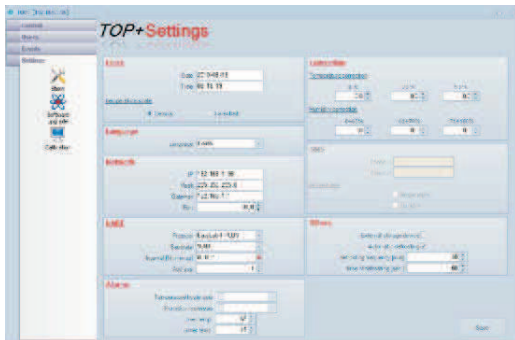
Administrator panel settings

Date	Temperature	Humidity	Program
2010-05-27 11:29:01	25.3	49.3	SimpleProg
2010-05-27 11:29:01	25.2	49.2	SimpleProg
2010-05-27 11:40:01	25.3	49.3	SimpleProg
2010-05-27 11:41:01	25.3	49.1	SimpleProg
2010-05-27 11:42:01	25.3	49	SimpleProg

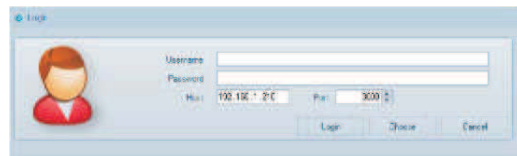
Measurement recording

TOP+ Control

To facilitate the configuration of complex programs, a TOP+ Control software has been introduced. Moreover, the user is able to program and control the "TOP+" equipment with ease from any corner of the world by accessing the unit via Internet!



Device manager



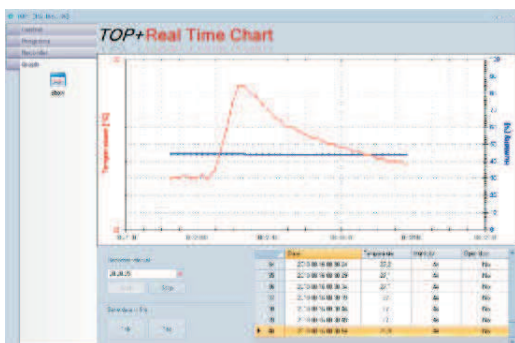
Login window



Program selection



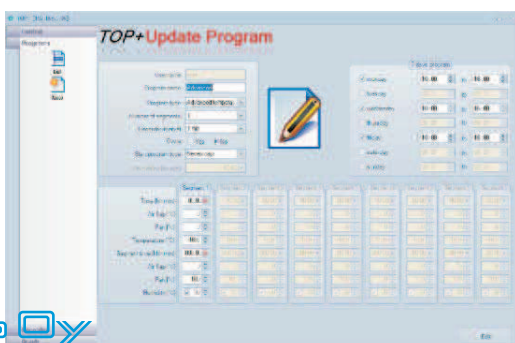
Status



Temperature and humidity chart

No	Date	Temp	Humidity	Humidity (%)	Open	Print
1	27-08-2010 08:00	27.0	44.4	44.4	+	+
2	27-08-2010 08:30	27.0	44.4	44.4	+	+
3	27-08-2010 09:00	27.0	44.4	44.4	+	+
4	27-08-2010 09:30	27.0	44.4	44.4	+	+
5	27-08-2010 10:00	27.0	44.4	44.4	+	+

Measurement recording



Program settings

Program	Min	Max	Avg
Program 1	25.0	27.0	26.0
Program 2	26.0	27.0	26.5
Program 3	26.0	27.0	26.5
Program 4	26.0	27.0	26.5

Program statistic