



2018 / POL-EKO-APARATURA products





POL-EKO-APARATURA has been present in the Polish market for 28 years.

Highest quality equipment and service we provide ensure your satisfaction. Our wide range of products and professional solutions will suit the most demanding customers.

We remain open to assist in choosing the right product for your needs, as well as to provide you with customized solutions.

We are your partner in lab analysis and technological processes.

Thank you for your confidence.

POL-EKO-APARATURA team

January 1990

POL-EKO-APARATURA company established

1990

Start of cooperation with WTW Germany; POL-EKO-APARATURA as general distributor in Poland

2002

Start of cooperation with foreign laboratory and measuring equipment producers: KNICK and HAMILTON

December 2004

Implementing ISO 9001 and 18001 systems

November 2005

Moving the company to the new headquarters in Wodzisław Śląski

April 2006

Measurement Laboratory founded

April 2008

Measurement Laboratory receives accreditation from the Polish Centre for Accreditation

January 2009

1st production hall completed

March 2013

2nd production hall completed

September 2015

25th Anniversary

2015

Global export to over 80 countries

July 2015

Accreditation for length measurement

2016

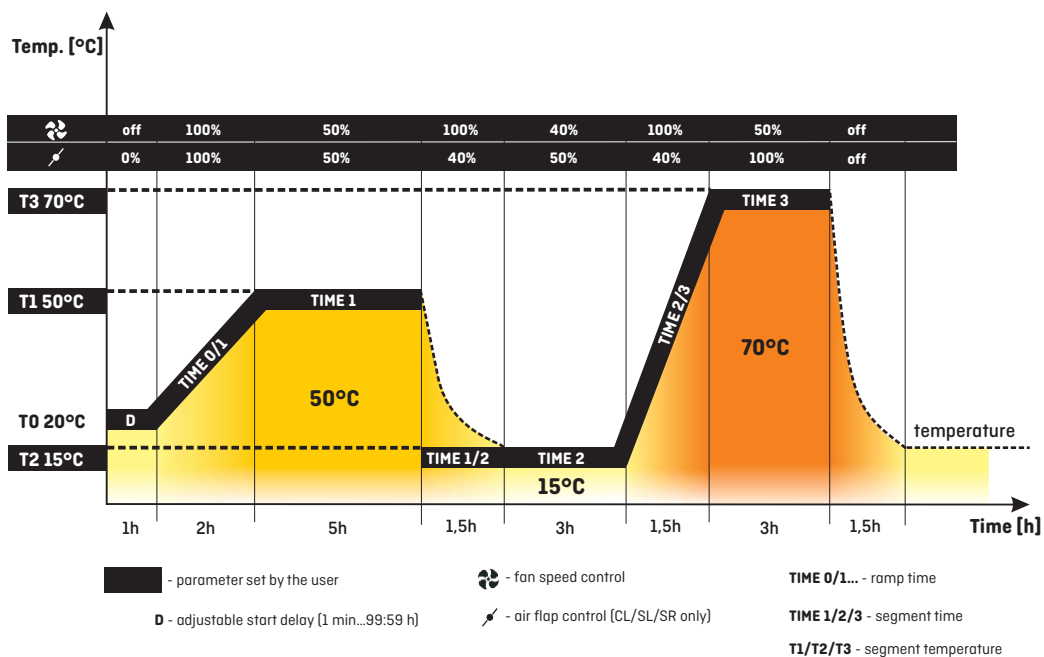
3rd production hall completed

Drying ovens, incubators, cooled incubators

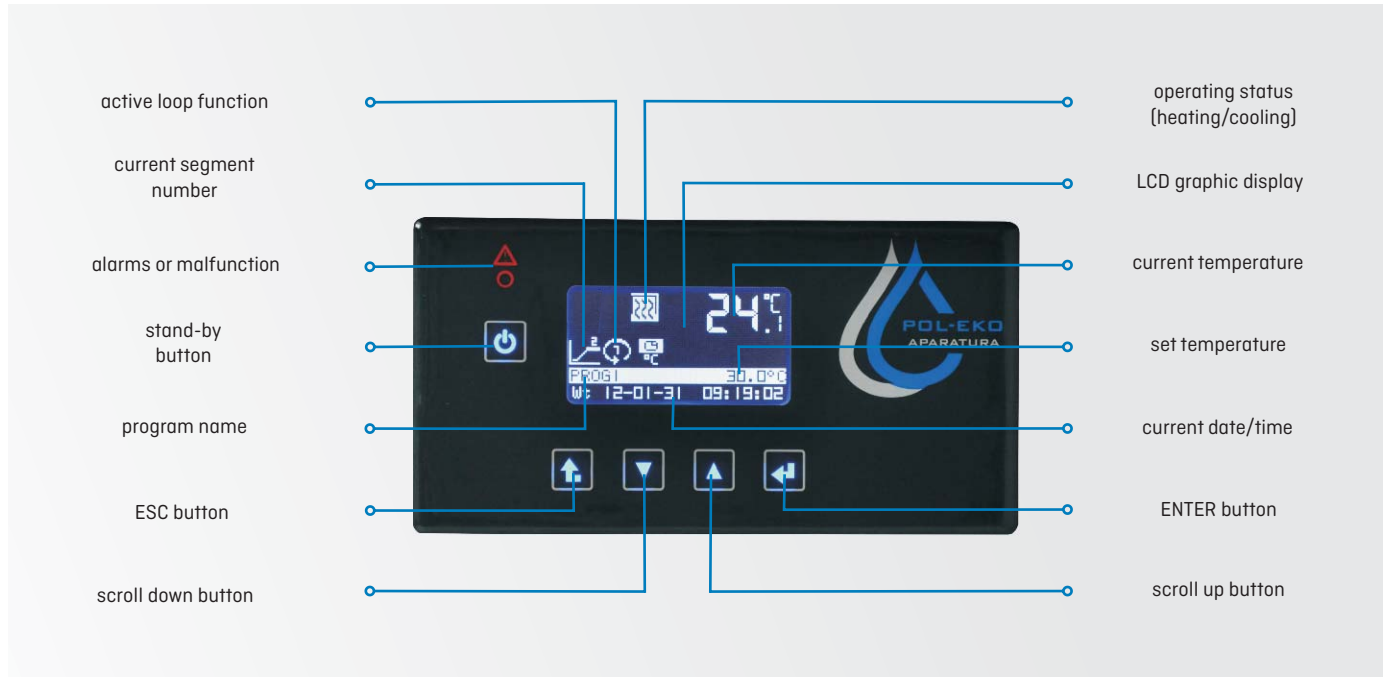
All the units in the STD version are equipped with a PID microprocessor controller with an LCD graphic display and illuminated touch buttons.

Controller advantages

- six-segment temperature-time profile
- loop function up to 99 times or endless
- 3 user programs memory
- adjustable start delay feature (from 1 min to 99:59 h)
- adjustable hold at set point time for temperature and lighting (for IL/FOT) from 1 min to 100 days, or continuous operating
- adjustable ramps
- overview of set and current parameters while operating
- recording of min, average and max temperature value for each segment
- possibility of temperature calibration by the user
- audible and visual temperature alarm
- operating with temperature priority
- temperature sensor fail alarm
- power failure control system (program continued after restoring power)
- digital timer
- real time clock
- auto-diagnostic function
- internal memory to store up to 2046 data records
- natural (SL/SR/CL) or forced (SL/SR/CL/IL) air convection with fan speed control (for CLW/SLW/SRW 15-115 0 ... 100%, CLW/SLW/SRW 180-1000 and ILW 10 ... 100%)
- automatic fan shut-down after completing the program
- automatic air-flap control (CL/SL/SR)



Control panel



Standard features

- temperature range: SL [+5°C above ambient temp. ... +300°C], SR [+5°C above ambient temp. ... +250°C], CL [+5°C above ambient temp. ... +100°C], IL [0°C up to 70°C / optionally -10°C up to 70°C]
- quality control protocol (at +37°C for CL/IL, at +105°C for SL, at +170°C for SR)
- English instruction manual
- available menu languages: Czech, English, Estonian, French, German, Italian, Polish, Portuguese, Russian, Spanish
- temperature protection class 2.0 to DIN 12880
- open door alarm
- wheels in standard for models 400, 750, 1000
- air-flap diameter for CL/SL 15-180 - Ø40 mm, for CL/SL 240-1000 - Ø60 mm

RS 232 and USB ports for data transfer

access port: Ø30 mm for models 53-1000 or Ø9 mm for models 15-32

wire stainless steel shelves

solid door, internal glass door for CL and IL

door lock



TOP+ version

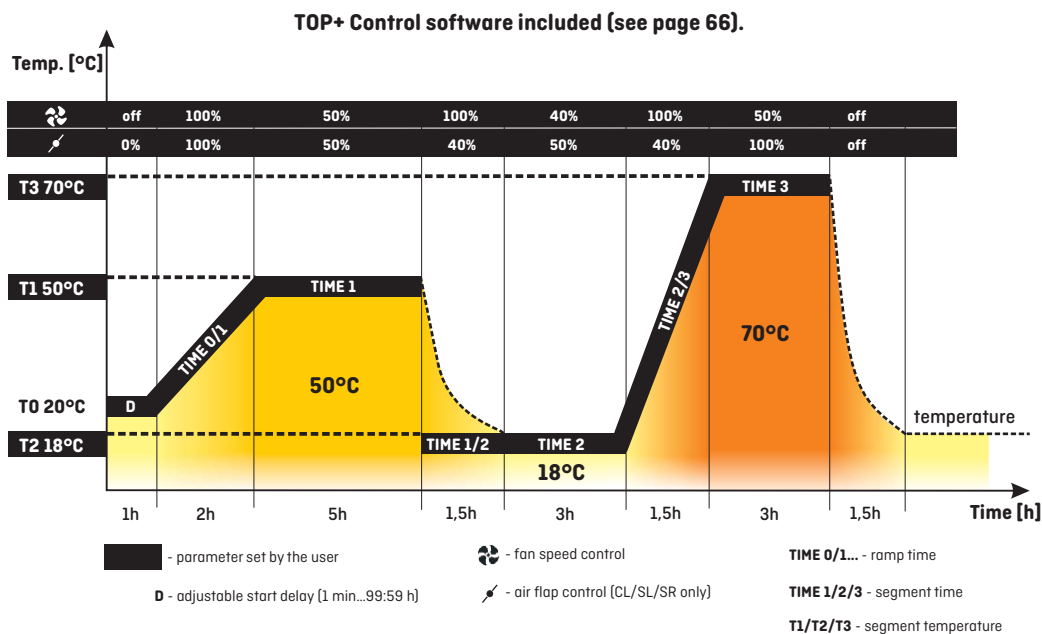
All the units in the TOP+ version are equipped with a PID microprocessor controller with a large (5,7") full colour touch screen, intuitive menu and user friendly software. They can be connected to Ethernet network for remote control from any computer, being one of the greatest advantages.

Controller advantages

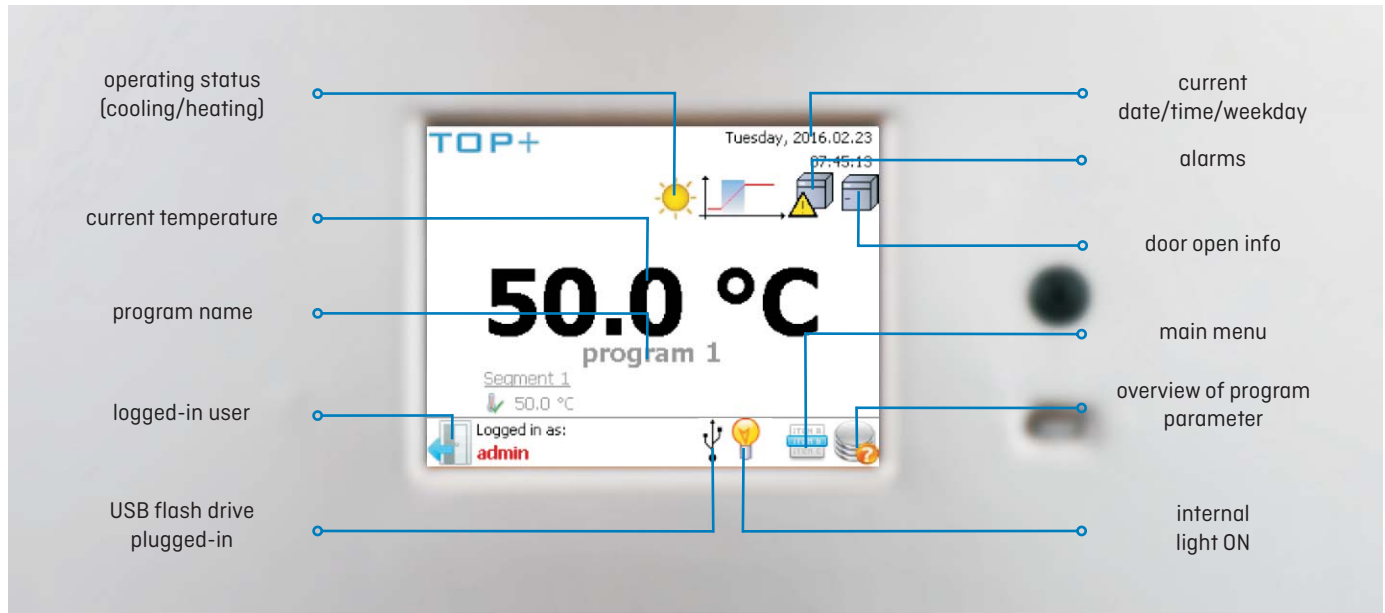
- multi-segment temperature-time profile (up to 100)
- Administrator function to manage User accounts
- adjustable start delay feature (from 1 min to 99:59 h)
- access control via login
- 7 days programming
- loop function up to 99 times or endless
- adjustable hold at set point time for temperature and lighting (for IL/FIT) from 1 min to 999:59 h, or continuous operating
- adjustable ramps
- overview of set and current parameters while operating
- recording of min, average and max temperature value for each segment
- possibility of temperature calibration by the user
- audible and visual temperature alarm
- operating in temperature or time priority mode
- temperature sensor fail alarm
- power failure control system (program continued after restoring power)
- digital timer
- real time clock
- auto-diagnostic function
- natural (SL/CL) or forced (SL/CL/IL) air convection with fan speed control for CLW/SLW 53/115 0...100%; CLW/SLW 180-1000 and ILW 10...100%
- automatic fan shut-down after completing the program
- automatic air-flap control (CL/SL)

GLP supporting functions

- password protected settings
- 20 user programs memory
- internal memory to store up to 4100 data records for each user, possibility to overview the values on the display or a PC computer in a tabular or graphic form
- USB port to allow direct data recording or transfer to a USB mass storage device
- events registry



Control panel



Standard features

- temperature range: SL (+5°C above ambient temp. ... +300°C), CL (+5°C above ambient temp. ...+100°C), IL (0°C up to 100°C / optionally -10°C up to 100°C)
- Ethernet cable
- TOP+ Control software
- USB port to allow direct recording and data transfer onto a flash drive
- quality control protocol (at +37°C for CL/IL, at +105°C for SL)
- English instruction manual
- available menu languages: Czech, English, Estonian, French, German, Hungarian, Italian, Latvian, Polish, Portuguese, Romanian, Russian, Spanish
- temperature protection class 3.3 (IL), class 3.1 (CL/SL) to DIN 12880
- open door alarm
- wheels in standard for models 400, 750, 1000
- air-flap diameter for CL/SL 15-180 - Ø40 mm, for CL/SL 240-1000 - Ø60 mm

RS 232 port for data transfer

LAN port for remote control

access port: Ø30 mm

wire stainless steel shelves

solid door, internal glass door for CL and IL

USB port to allow direct recording and data transfer to a USB mass storage device

door lock



Laboratory incubators

Application

- incubation of samples for microbiological determinations
- analysis of thermal resistance of samples subjected to higher temperatures
- antibodies tests
- bacteria tests
- crystallization observations
- cultivation of thermophilic microorganisms
- pharma stability tests
- food industry denaturalizing tests



Laboratory incubators are perfect for incubation of samples at temperatures above ambient up to +100°C.

Calibration



All thermostatic equipment manufactured by POL-EKO-APARATURA can be provided with Calibration Certificate issued by accredited Measurement Laboratory. Detailed information on accreditation is available on website: www.pol-eko.eu.

		CL 15	CL 32	CL 53	CL 115	CL 180	CL 240	CL 400	CL 750	CL 1000
Parameter										
air convection		natural [CLN] / forced [CLW]						forced [CLW]		
chamber capacity ¹ [l]		15	32	56	112	180	245	424	749	1005
door type		double			double/door with viewing window (option)					
temperature range		+5°C above ambient temperature ...+100°C								
temperature resolution [°C]		every 0,1								
controller		microprocessor with external LCD graphic display								
interior		acid-proof stainless steel to DIN 1.4301								
housing	-	powder coated sheet								
	INOX/G	stainless steel linen finish								
overall dims ² [mm]	A width	510	590	590	650	650	810	1010	1260	1260
	B height	550	630	700	850	1030	1200	1430	1600	2000
	C depth	470	520	620	710	820	770	780	870	880
internal dims [mm]	D width	320	400	400	460	470	600	800	1040	1040
	E height	230	320	390	540	720	800	1040	1200	1610
	F depth	200	250	360	450	560	510	510	600	600
max shelf workload ⁵ [kg]	-	10	10	25	25	25	25	25	-	-
	PW ³ version	-	-	50	50	50	100	100	100	100
max unit workload [kg]	-	20	30	40	60	75	90	120	140	-
	W ⁴ version	-	-	80	120	120	300	300	300	300
nominal power [W]		350	350	450	450	650	850	1300	1900	1900
weight ⁶ [kg]		27	35	50	65	94	126	174	260	330
over temperature protection		class 2.0 according to DIN 12880 / class 3.1 (option) / 3.1 in TOP+								
power supply*		230 V 50 Hz								
shelves fitted/max		1/2	1/3	2/5	2/7	3/9	3/10	3/14	5/16	6/22
warranty		24 months								
manufacturer		POL-EKO-APARATURA								

all the above technical data refer to standard units (without optional accessories)

* also available: 230V 60Hz, 115V 60Hz

1 - working capacity of chamber can be smaller

2 - depth doesn't include 50 mm of power cable

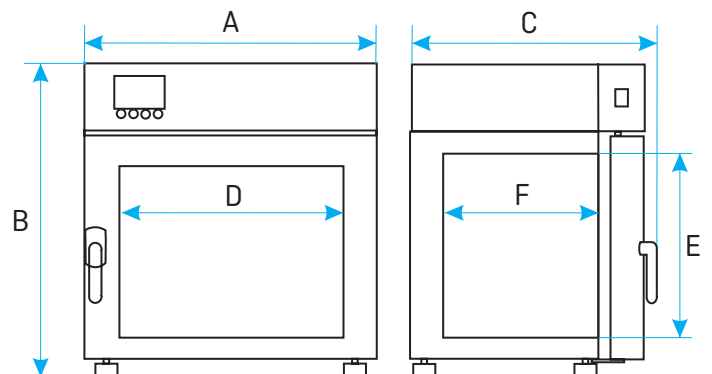
3 - reinforced shelf

4 - reinforced version

5 - on uniformly loaded surface

6 - for units with double door without optional equipment

Options and accessories (icon description see pages 78-79)



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DISTRIBUIDOR EXCLUSIVO DE LA MARCA

2018

POL-EKO-APARATURA

*manufacturer of controlled environment
equipment for laboratory analysis
and technological processes,
distributor in Poland of:
KNICK, THERMO SCIENTIFIC, WTW*

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Catalogue "Products of POL-EKO-APARATURA" version 12/2018.
While we make every effort to provide accurate technical data, inconsistencies may occur.
We reserve the right to change technical specifications without notice.
All dimensions are given exact to $\pm 5\%$.