

Cooled incubators (ST) can provide stable temperature between +3...+70°C regardless of ambient conditions



Cooled incubator ST 2 C Smart PRO



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

The wide range of our products requires specialisation in many fields. The production of each part involves complex sequence of technological processes, but modern machinery park comes to our aid. To achieve repeatability and highest quality of our components, most of the work is ensured by CNC machines and robots. We put our passion, heart and experience in every detail.



## STANDARD FEATURES

- temperature range +3...+40°C (+70°C for Smart PRO)
- quality control protocol (at +37°C)
- English instruction manual
- temperature protection class 1.0 to DIN 12880 for B (basic) and C (comfort) versions, 2.0 for P (premium) version and 3.3 for Smart PRO
- open door alarm
- castors in standard for models ST 1200 and 1450
- LAN and USB ports
- internal LED light
- access port (Ø30 mm) on the left wall
- door lock
- wire shelves in B (basic) models, stainless steel wire shelves (INOX) in C (comfort) and P (premium) models
- solid door
- anchoring kit for ST 500, 700, 1200, 1450 and double/triple chambers

## EXTRA FOR SMART PRO

- Wi-Fi
- LAN cable
- LabDesk

## AVAILABLE VERSIONS

- Smart
- Smart PRO
- FOT photoperiod (see page 44)
- FIT phytotron (see page 45)
- TR tropic (on request) for higher ambient temperatures
- double/triple chamber
- combined with ZLN 85 or CHL











## SOFTWARE

- LabDesk for data download to a PC via LAN or Wi-Fi (optional for Smart version)

## Application

- BOD determination
- microbiological research
- plant growing and microorganisms breeding at specified temperature
- storage of liquids and samples for physicochemical analysis



|  |                         | ST 1  | ST 2  | ST 3  | ST 4  | ST 5  | ST 6  | ST 500  | ST 700  | ST 1200   | ST 1450   |
|--|-------------------------|---|---|---|---|---|---|---|---|---|---|
| Parameter                                |                         |              |  |  |  |  |  |  |  |  |  |
| air convection                           |                         | forced  |   |   |   |   |   |   |   |   |   |
| chamber capacity [l]                     |                         | 70  | 150   | 200   | 250   | 300   | 400   | 500   | 625   | 1365  | 1540  |
| working capacity [l]                     |                         | 55  | 122   | 163   | 203   | 243   | 324   | 469   | 611   | 1355  | 1525  |
| door type                                |                         | solid / glass or double <sup>i</sup> (option)   |   |   |   |   |   |   |   |   |   |
| temperature range [°C]                   |                         | +3...+40 / up to +70 (option) / +3...+70 in Smart PRO   |   |   |   |   |   |   |   |   |   |
| temperature resolution [°C]              |                         | every 0,1   |   |   |   |   |   |   |   |   |   |
| controller                               |                         | microprocessor PID, 4,3" (Smart) / 7" (Smart PRO) full colour touch screen                    |   |   |   |   |   |   |   |   |   |
| interior                                 | B (basic)               | aluminum  |   |   |   |   |   |   |   |   |   |
|  | C (comfort)             | stainless steel to DIN 1.4016   |   |   |   |   |   |   |   |   |   |
|  | CS (comfort/S)          | stainless steel to DIN 1.4016   |   |   |   |   |   |   |   |   |   |
|  | P (premium)             | acid-proof stainless steel to DIN 1.4301  |   |   |   |   |   |   |   |   |   |
|  | PS (premium/S)          | acid-proof stainless steel to DIN 1.4301  |   |   |   |   |   |   |   |   |   |
| housing                                  | B (basic)               | powder coated sheet   |   |   |   |   |   |   |   |   |   |
|  | C (comfort)             | powder coated sheet   |   |   |   |   |   |   |   |   |   |
|  | CS (comfort/S)          | polished stainless steel  |   |   |   |   |   |   |   |   |   |
|  | P (premium)             | powder coated sheet   |   |   |   |   |   |   |   |   |   |
|  | PS (premium/S)          | polished stainless steel  |   |   |   |   |   |   |   |   |   |
| overall dims [mm]                        | A width                 | 550   | 600   | 600   | 600   | 600   | 600   | 640   | 710   | 1460  | 1440  |
|  | B height                | 660   | 900   | 1100  | 1300  | 1500  | 1900  | 1990  | 1990  | 1990  | 1940  |
|  | C depth                 | 680   | 650   | 650   | 650   | 650   | 650   | 880   | 960   | 960   | 1060  |
| internal dims <sup>3</sup> [mm]          | D width                 | 430   | 480   | 480   | 480   | 480   | 480   | 480   | 540   | 1270  | 1270  |
|  | D' width                | 470   | 520   | 520   | 520   | 520   | 520   | 510   | 600   | 1330  | 1340  |
|  | E height                | 430   | 660   | 860   | 1060  | 1260  | 1660  | 1510  | 1510  | 1510  | 1460  |
|  | F depth                 | 300   | 420   | 420   | 420   | 420   | 420   | 610   | 680   | 680   | 780   |
|  | F' depth                | 360   | 480   | 480   | 480   | 480   | 480   | -   | -   | -   | -   |
|  | G depth                 | -   | 320   | 320   | 320   | 320   | 320   | -   | -   | -   | -   |
|  | H height                | -   | 440   | 640   | 840   | 1040  | 1440  | -   | -   | -   | -   |
|  | I height                | -   | -   | -   | -   | -   | -   | 1380  | 1380  | 1380  | 1380  |
| max shelf workload <sup>4</sup> [kg]     | -                       | 10  | 10  | 10  | 10  | 10  | 10  | 20  | 30  | 30  | 30  |
|  | PW <sup>5</sup> version | on request  |   |   |   |   |   | 100   | 100   | 100   | 100   |
| max unit workload [kg]                   | -                       | 20  | 30  | 40  | 50  | 60  | 60  | 100   | 150   | 300   | 300   |
|  | W <sup>6</sup> version  | on request  |   |   |   |   |   |   |   |   |   |
| nominal power [W]                        |                         | 250   | 250   | 250   | 250   | 350   | 350   | 650   | 650   | 650   | 950   |
| weight <sup>7</sup> [kg]                 |                         | 37  | 54  | 61  | 69  | 75  | 90  | 105   | 121   | 185   | 200   |
| temperature fluctuation* at +37°C [±/°C] |                         | 0,3   | 0,3   | 0,3   | 0,3   | 0,3   | 0,3   | 0,3   | 0,3   | 0,3   | 0,3   |
| temperature variation* at +37°C [±/°C]   |                         | 0,5   | 0,5   | 0,5   | 0,6   | 0,6   | 0,6   | 1,0   | 1,0   | 1,0   | 1,0   |
| temperature protection                   |                         | class 1.0 to DIN 12880 / class 3.3 (option) / class 2.0 in P version / class 3.3 in Smart PRO |   |   |   |   |   |   |   |   |   |
| power supply**                           |                         | 230V 50-60Hz  |   |   |   |   |   |   |   |   |   |
| shelves fitted/max                       |                         | 2/2   | 3/4   | 3/4   | 4/6   | 4/7   | 4/10  | 3/11  | 3/11  | 2 x 3/11 <sup>8</sup>   | 2 x 3/11 <sup>8</sup>   |
| refrigerant                              |                         | R1234ze / GWP=1   |   |   |   |   |   | R290 / GWP=3  |   |   |   |
| warranty                                 |                         | 24 months   |   |   |   |   |   |   |   |   |   |
| manufacturer                             |                         | POL-EKO   |   |   |   |   |   |   |   |   |   |

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

\* - fluctuation measured in centre of chamber; in space, variation (K) calculated for chamber as:  $K = \pm (T_{avg\ max} - T_{avg\ min}) / 2$

\*\* - other power supplies on request

1- additional internal glass door

2- depth does not include 50 mm of power cable,

the width does not include the 20 mm of rubber plug

3- dims of units with double door are smaller

4- on uniformly loaded surface

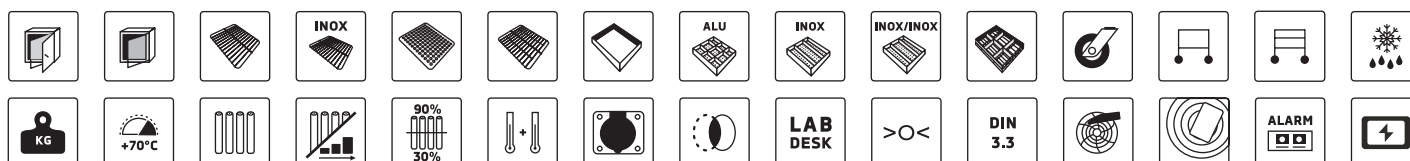
5- reinforced shelf





6- reinforced version

7- for equipment with solid door, in version B (basic)

8- two columns with 3 shelves each

## Options and accessories (icon description see pages 80-86)



|  |                         | ST 1/1  | ST 1/1/1   | ST 2/2  | ST 2/3  |
|--|-------------------------|---|--|---|---|
| Parameter                                |                         |              |  |  |  |
| air convection                           |                         | forced  |  |   |   |
| chamber capacity [l]                     |                         | 70 / 70   | 70 / 70 / 70   | 150 / 150   | 150 / 200   |
| working capacity [l]                     |                         | 55 / 55   | 55 / 55 / 55   | 122 / 122   | 122 / 163   |
| door type                                |                         | solid / glass or double* (option)   |  |   |   |
| temperature range [°C]                   |                         | +3...+40 / up to +70 (option) / +3...+70 in Smart PRO   |  |   |   |
| temperature resolution [°C]              |                         | every 0,1   |  |   |   |
| controller                               |                         | microprocessor PID, 4,3" (Smart) / 7" (Smart PRO) full colour touch screen                    |  |   |   |
| interior                                 | B (basic)               | aluminum  |  |   |   |
|  | C (comfort)             | stainless steel to DIN 1.4016   |  |   |   |
|  | CS (comfort/S)          | stainless steel to DIN 1.4016   |  |   |   |
|  | P (premium)             | acid-proof stainless steel to DIN 1.4301  |  |   |   |
|  | PS (premium/S)          | acid-proof stainless steel to DIN 1.4301  |  |   |   |
| housing                                  | B (basic)               | powder coated sheet   |  |   |   |
|  | C (comfort)             | powder coated sheet   |  |   |   |
|  | CS (comfort/S)          | polished stainless steel  |  |   |   |
|  | P (premium)             | powder coated sheet   |  |   |   |
|  | PS (premium/S)          | polished stainless steel  |  |   |   |
| overall dims <sup>2</sup> [mm]           | A width                 | 550   | 550  | 600   | 600   |
|  | B height                | 1290  | 1920   | 1720  | 1930  |
|  | C depth                 | 680   | 680  | 650   | 650   |
| internal dims <sup>3</sup> [mm]          | D width                 | 430   | 430  | 480   | 480   |
|  | D' width                | 470   | 470  | 520   | 520   |
|  | E height                | 430   | 430  | 660   | 660 / 860   |
|  | F depth                 | 300   | 300  | 420   | 420   |
|  | F' depth                | 360   | 360  | 480   | 480   |
|  | G depth                 | -   | -  | 320   | 320   |
|  | H height                | -   | -  | 440   | 440 / 640   |
|  | I height                | -   | -  | -   | -   |
| max shelf workload <sup>4</sup> [kg]     | -                       | 10  | 10   | 10  | 10  |
|  | PW <sup>5</sup> version | on request  |  |   |   |
| max unit workload [kg]                   | -                       | 20 / 20   | 20 / 20 / 20   | 30 / 30   | 30 / 40   |
|  | W <sup>6</sup> version  | on request  |  |   |   |
| nominal power [W]                        |                         | 500   | 750  | 500   | 500   |
| weight <sup>7</sup> [kg]                 |                         | 65  | 98   | 109   | 114   |
| temperature fluctuation* at +37°C [± °C] |                         | 0,3   | 0,3  | 0,3   | 0,3   |
| temperature variation* at +37°C [± °C]   |                         | 0,5   | 0,5  | 0,5   | 0,5   |
| temperature protection                   |                         | class 1.0 to DIN 12880 / class 3.3 (option) / class 2.0 in P version / class 3.3 in Smart PRO |  |   |   |
| power supply**                           |                         | 230V 50-60Hz  |  |   |   |
| shelves fitted/max                       |                         | see page 36   |  |   |   |
| refrigerant                              |                         | R1234ze / GWP=1   |  |   |   |
| warranty                                 |                         | 24 months   |  |   |   |
| manufacturer                             |                         | POL-EKO   |  |   |   |

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

\* - fluctuation measured in centre of chamber; in space, variation (K) calculated for chamber as:  $K = \frac{T_{avg\ max} - T_{avg\ min}}{2}$

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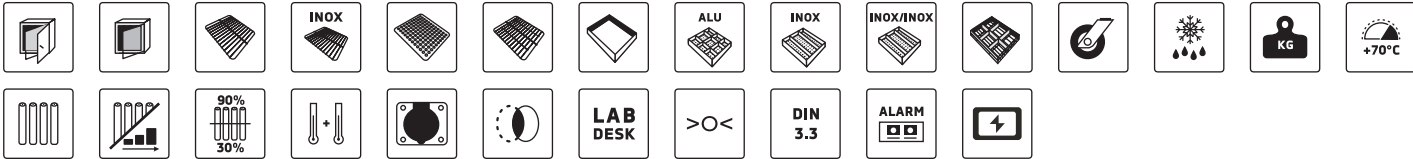
4- on uniformly loaded surface

5- reinforced shelf

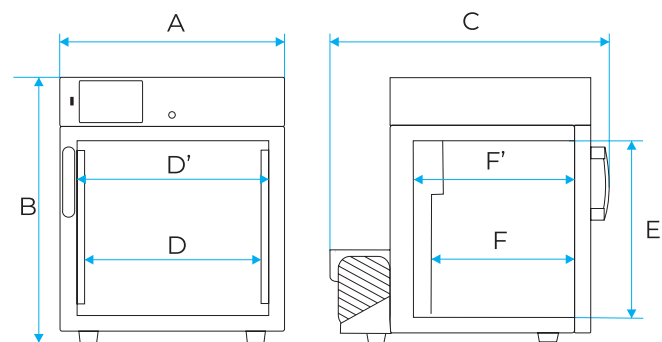
6- reinforced version

7- for units with solid door, in version B (basic)

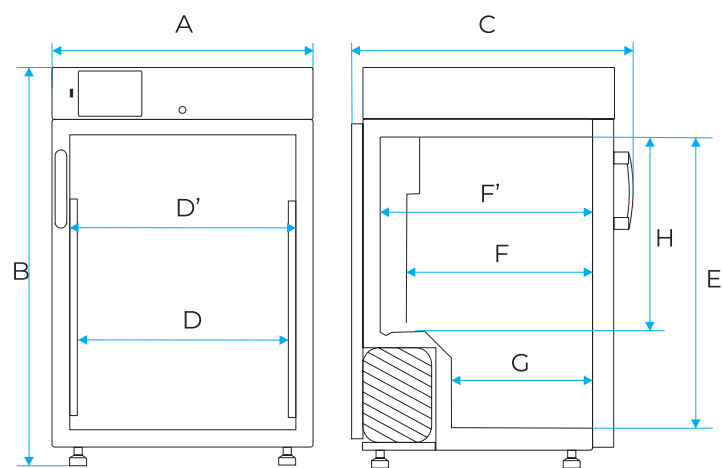
## Options and accessories (icon description see pages 80-86)



■ Dimensions ST 1



■ Dimensions ST 2/3/4/5/6



■ Dimensions ST 500/700/1200/1450

