

02

COOLING EQUIPMENT



Laboratory Refrigerators CHL
Laboratory Freezers ZL
Ultra-Low Freezers ZLN-UT



LABORATORY REFRIGERATORS

are equipped with a cooling system and can provide a stable temperature between 0°C ... +15°C



SMART/SMART PRO controller with USB port



access port (Ø30 mm)



door lock and door lock sensor with alarm

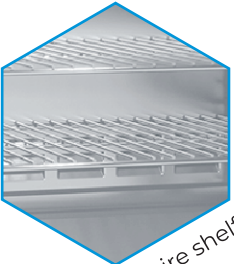


glass door (option)

Laboratory refrigerator CHL 2 P SMART PRO



internal LED lighting, temperature sensors and fan



wire shelf



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.polekolab.pl and on page 161.



MAIN STANDARD BENEFITS

- temperature range: 0...+15°C
- quality control protocol (at +4°C)
- English instruction manual
- temperature protection class 1.0 to DIN 12880
- open door alarm
- castors for CHL 1200 and 1450
- LAN and USB ports
- internal LED lighting
- height adjustable feet for CHL 1, 2, 3, 4, 5, 6, 500, 700
- access port (Ø30 mm) with silicone plug on the left wall
- door lock
- stainless steel wire shelves (INOX)
- solid door
- main power switch flush with housing prevents unintentional switch off
- anchoring kit for CHL 500, 700, 1200, 1450 and double/triple chamber units
- automatic defrosting function for CHL 500, 700, 1200, 1450

EXTRA FOR SMART PRO

- Wi-Fi
- LAN cable
- LabDesk
- fan speed control in the range 50...100% for CHL 1-6
- temperature protection class 3.2 to DIN 12880

AVAILABLE VERSIONS

- SMART
- SMART PRO
- TR tropic (on request) for higher ambient temperatures
- double/triple chamber units
- combined with ZLN 85 or ST

SOFTWARE

- LabDesk for data download to a PC via LAN or Wi-Fi (optional for SMART version)
- LabDesk Cloud platform for remote data monitoring



TECHNICAL DATA

											
parameters		CHL 1	CHL 2	CHL 3	CHL 4	CHL 5	CHL 6	CHL 500 M	CHL 700 M	CHL 1200 M	CHL 1450 M
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 (option) or double ¹ (option) or SMART window (option)									
temperature range [°C]		0...+15									
temperature resolution [°C]		every 0,1									
controller		microprocessor PID, 4,3" (SMART) / 7" (SMART PRO) full-colour touch screen									
interior	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	C (comfort)	powder coated sheet									
	CS (comfort/S)	polished stainless steel to DIN 1.4301									
	P (premium)	powder coated sheet									
	PS (premium/S)	polished stainless steel to DIN 1.4301									
max shelf workload ² [kg]	-	10	10	10	10	10	10	20	30	30	30
	PW ³ version	on request						100	100	100	100
max unit workload [kg]		20	30	40	50	60	60	100	150	300	300
nominal power [W]		250	250	250	250	350	350	650	650	650	950
weight ⁴ [kg]		43	63	72	82	89	107	125	145	221	239
castors		option								yes	
temperature fluctuation ⁵ at +4°C [±/- °C]		0,4	0,4	0,4	0,4	0,4	0,6	0,6	0,8	1,0	1,0
temperature variation ⁵ at +4°C [±/- °C]		0,7	0,7	0,7	0,8	0,9	0,9	1,0	1,0	1,2	1,2
temperature protection		class 1.0 to DIN 12880 / class 3.2 (option) / class 3.2 in SMART PRO									
power supply		230V 50-60Hz / 115V 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 ⁶	2 x 3/11 ⁶
refrigerant		R1234ze / GWP=7						R290 / GWP=3			
warranty		24 months									
manufacturer		POL-EKO®									

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

1 - additional internal glass door

2 - on uniformly loaded surface

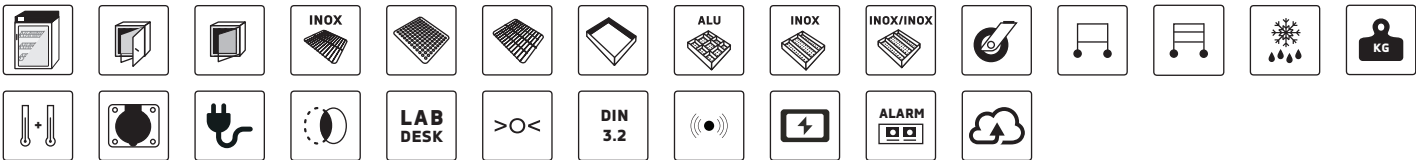
3 - reinforced shelf

4 - for units with solid door, in version C (comfort)

5 - fluctuation measured in centre of chamber; in space, variation (K) calculated for chamber as: $K = \frac{T_{avg\ max} - T_{avg\ min}}{2}$
for CHL 2-6 parameters given for the chamber above the bottom step

6 - two columns with 3 shelves each

OPTIONS & ACCESSORIES (icon description see pages 117-124)



DIMENSIONS & DATA

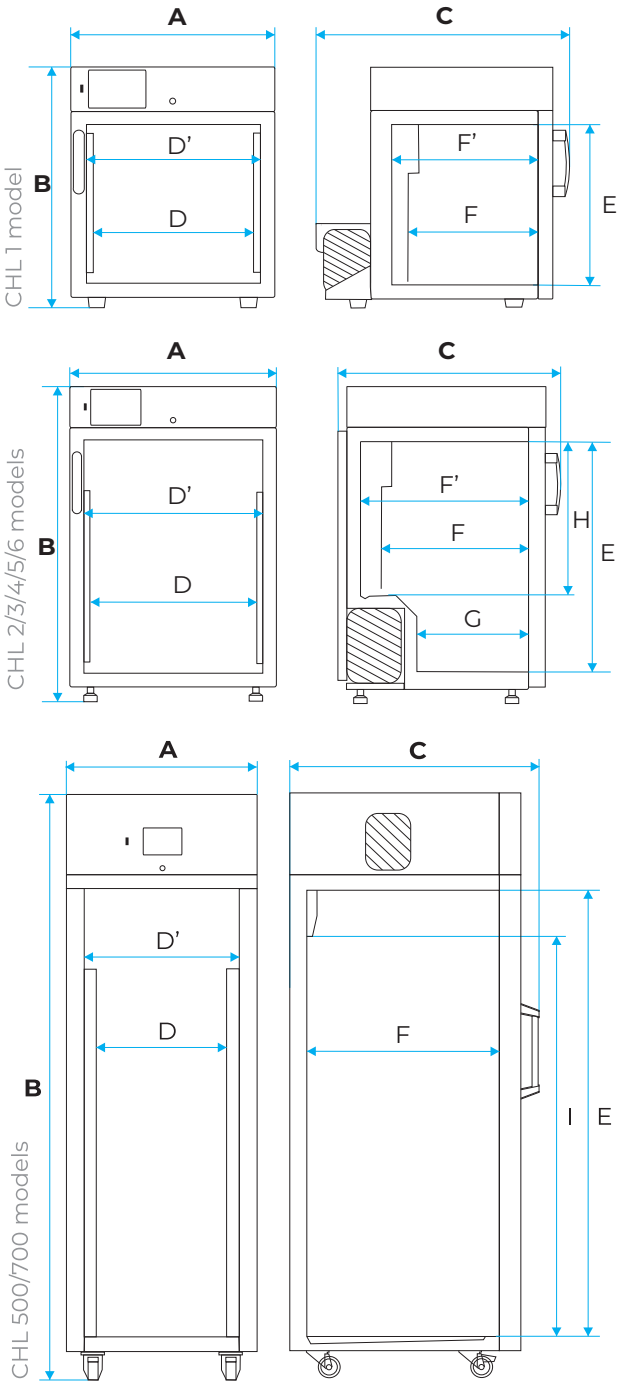
All dimensions refer to standard units (without optional accessories).

Overall depth doesn't include 50 mm of power cable, the width does not include the 20 mm of access port's silicone plug.

The internal depth of units with double door is smaller.

Possibility of changing the shelf position:

- CHL 1-6 every 25 mm
- CHL 500-1450 every 56 mm



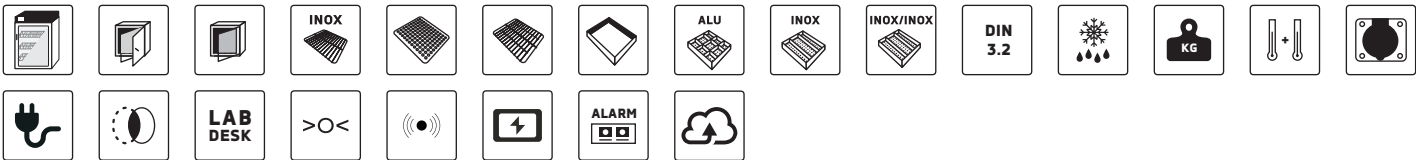
		CHL 1	CHL 2	CHL 3	CHL 4	CHL 5	CHL 6	CHL 500 M	CHL 700 M	CHL 1200 M	CHL 1450 M
overall dims [mm]	A width	560	610	610	610	610	610	640	730	1470	1450
	B height	660	900	1100	1300	1500	1900	1990	1990	1990	1940
	C depth	690	650	650	650	650	650	840	900	900	990
internal dims [mm]	D width	430	480	480	480	480	480	470	540	2 x 540	2 x 550
	D' width	470	520	520	520	520	520	510	600	2 x 600	2 x 615
	E height	430	660	860	1060	1260	1660	1510	1510	1510	1450
	F depth	300	420	420	420	420	420	610	680	680	790
	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	1320

TECHNICAL DATA

					
parameters		CHL 1/1	CHL 1/1/1	CHL 2/2	CHL 2/3
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 (option) or double ¹ (option) or SMART window (option)			
temperature range [°C]		0...+15			
temperature resolution [°C]		every 0,1			
controller		microprocessor PID, 4,3" (SMART) / 7" (SMART PRO) full-colour touch screen			
interior	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	C (comfort)	powder coated sheet			
	CS (comfort/S)	polished stainless steel to DIN 1.4301			
	P (premium)	powder coated sheet			
	PS (premium/S)	polished stainless steel to DIN 1.4301			
max shelf workload ² [kg]	-	10	10	10	10
	PW ³ version	on request			
max unit workload [kg]		20 / 20	20 / 20 / 20	30 / 30	30 / 40
nominal power [W]		500	750	500	500
weight ⁴ [kg]		76	115	128	134
temperature fluctuation ⁶ at +4°C [± °C]		0,4	0,4	0,4	0,4
temperature variation ⁶ at +4°C [± °C]		0,7	0,7	0,7	0,7
temperature protection		class 1.0 to DIN 12880 / class 3.2 (option) / class 3.2 in SMART PRO			
power supply		230V 50-60Hz / 115V 50-60Hz			
shelves fitted/max		see page 33			
refrigerant		R1234ze / GWP=7			
warranty		24 months			
manufacturer		POL-EKO®			

all the above technical data refer to standard units (without optional accessories)
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3 - reinforced shelf
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OPTIONS & ACCESSORIES (icon description see pages 117-124)



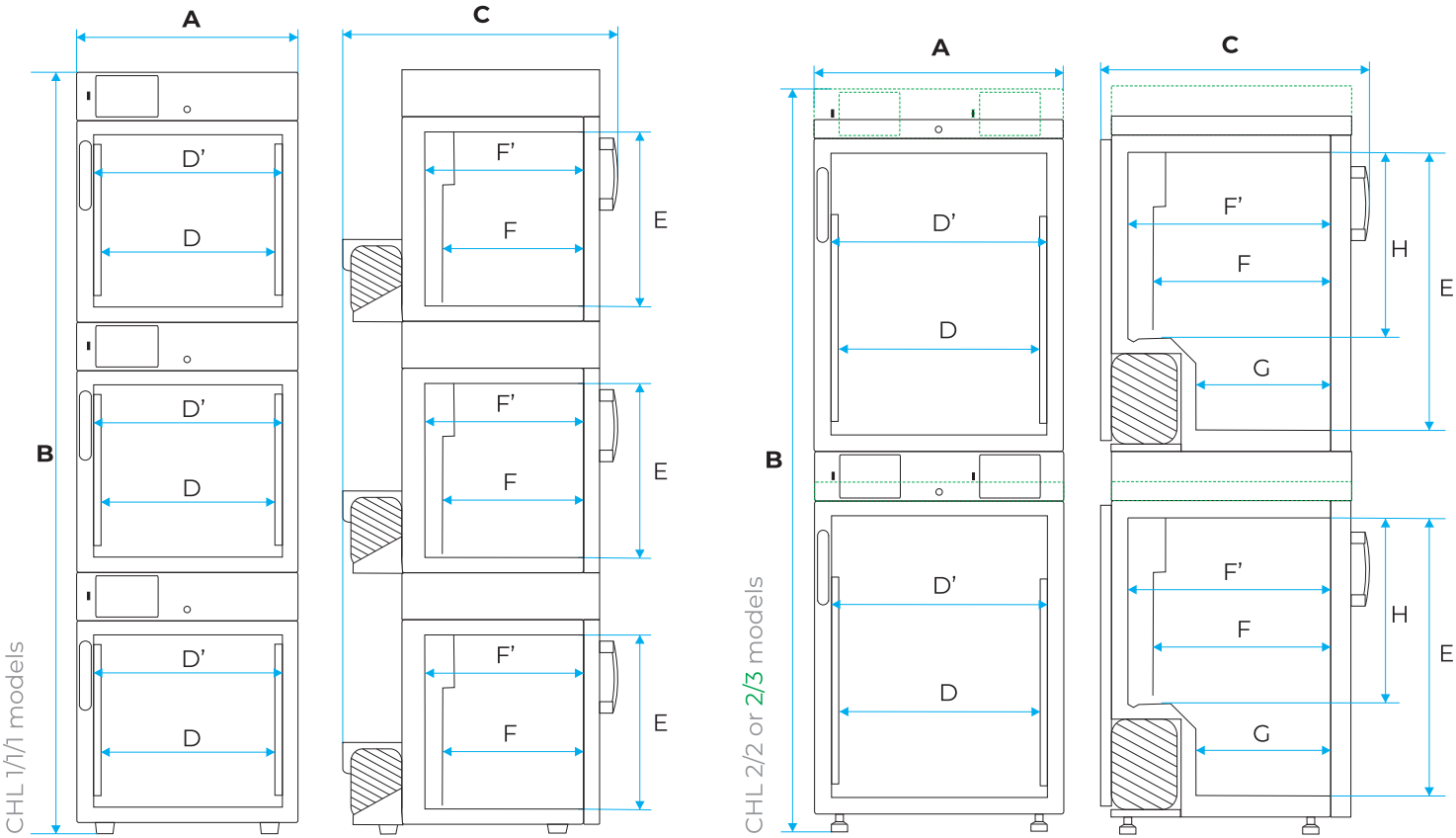
 DIMENSIONS & DATA

All dimensions refer to standard units
(without optional accessories).

Overall depth doesn't include 50 mm of power cable,
the width does not include the 20 mm of access port's
silicone plug.

The internal depth of units with double door is smaller.

Possibility of changing the shelf position every 25 mm.



..... Control panel for ST 2/2 and ST 2/ZLN85 models is located between chambers, while for ST 2/3, ST 2/ZLN 85 and ST 3/ZLN 85 at the top

		CHL 1/1	CHL 1/1/1	CHL 2/2	CHL 2/3
overall dims [mm]	A width	580	580	630	630
	B height	1300	1920	1720	1920
	C depth	690	690	650	650
internal dims [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