TECHNICAL DATA										
Air Convection	FORCED									
MODEL NO	CHL 1	CHL 2	CHL 3	CJHL 4	CHL 5	CHL 6	CHL 500	CHL 700	CHL 1200	CHL 1400
Chamber Capacity [l]	70	150	200	250	300	400	500	625	1365	1540
Working Capcity [l]	55	122	163	203	243	324	411	499	1239	1376
Controller	Microprocessor PiD									
Display	4.3" or 7" fill Colour Touch Screen									

TEMPERATURE	
Temperature Range [°C]	0...+15
Temperature Resolution Every … [°C]	0.1
Temperature Fuctiation at 4°C [°C]	0.4-0.5
Temperature Variation at 4°C [°C]	0.7-1.2
Over Temperature Protection	Class 1.0 to DIN 12880 / Class 3.2

CHAMBER	
Door type	Solid / Glass or Double (option) /5/

INTERIOR	
P SMART PRO	Acid-Proof Stainless Steel to DIN 1.4301
PS SMART PRO	Acid-Proof Stainless Steel to DIN 1.4301

HOUSING	
P SMART PRO	Powder Coated Sheet
PS SMART PRO	Stainless Steel Polished

Parameter	CHL 1/1	CHL 1/1/1	CHL 2/2	CHL 2/3	CHL 2/4	CHL 3/3
Air Convection	FORCED					
Chamber Capacity [l]	70/70	70/70/70	150/150	150/200	150/250	200/200
Working Capacity [l]	55/55	55/55/55	122/122	122/163	122/203	163/163

TECHNICAL DATA										
Air Convection	FORCED									
MODEL NO	ST 1	ST 2	ST 3	ST 4	ST 5	ST 6	ST 500	ST 700	ST 1200	ST 1400
Chamber Capacity [l]	70	150	200	250	300	400	500	625	1365	1540
Working Capacity [l]	55	122	163	203	243	324	411	499	1239	1376
Controller	Microprocessor PID									
Display	4.3" or 7" fill Colour Touch Screen									

TEMPERATURE	
Temperature Range [°C]	+3…+40 / +70 (option)
Temperature Resolution Every … [°C]	0.1
Temperature Fluctuation at 37°C [°C]	0.5 – 1.0
Temperature Variation at 37°C [°C]	0.5
Over Temperature Protection	Class 1.0 to DIN 12880 / class 3.3

CHAMBER	
Door Type	Solid / Glass or Double (option) /5/

INTERIOR	
P Smart PRO	Acid-Proof Stainless Steel to DIN 1.4301
PS Smart PRO	Acid-Proof Stainless Steel to DIN 1.4301

HOUSING	
P Smart Pro	Powder Coated Sheet
PS Smart PRO	Stainless Steel Polished

Parameter	ST 1/1	ST 1/1/1	ST 2/2	ST 2/3	ST 2/4	ST 3/3
Air Convection	FORCED					
Chamber Capacity [l]	70/70	70/70/70	150/150	150/200	150/250	200/200
Working Capacity [l]	55/55	55/55/55	122/122	122/163	122/203	163/163

TECHNICAL DATA					
Air Convection	**FORCED**				
Model No	ILW 53	ILW 115	ILW 240	ILW 400	ILW 750
Working Capacity [l]	56	112	245	424	749
Controller	Microprocessor PID				
Display	4.3" or 7" fill Colour Touch Screen				
TEMPERATURE					
Remperature Range [°C]	-10 (option)/ 0...+70 (+100 for Smart Pro)				
Temperature Resolution Every ....[°C]	0.1				
Temperature Fuctiation at 4°C [°C]	0.2				
Temperature Variation at 4°C [°C]	0.3				
Over Temperature Protection	Class 3.3 to DIN 12880				
CHAMBER					
Door Type	Double(5) / door with viewing window (option)				
INTERIOR					
P Smart PRO	Acid-Proof Stainless Steel to DIN 1.4301				
PS Smart PRO	Acid-Proof Stainless Steel to DIN 1.4301				
HOUSING					
P Smart PRO	Powder Coated Sheet				
PS Smart PRO	Stainless Steel Polished				

TECHNICAL DATA										
Air Convection	**NATURAL (CLN) / FORCED (CLW)**									
Model No	CL 15	CL 32	CL 53	CL 75	CL 115	CL 180	CL 240	CL 400	CL 750	CL 1000
Chamber Capacity [l]	15	32	56	76	112	180	245	424	749	1005
Controller	Microprocessor PID									
Display	7" Full Colour Touch Screen									
TEMPERATURE										
Temperature Range [°C]	5°C above ambient temperature … +100°C									
Temperature Resolution Every … [°C]	0.1									
Temperature Fuctiation at 37°C [°C]	0.2									
Temperature Variation at 37°C [°C]	0.4 – 0.6									
Over Temperature Protection	Class 2.0 to DIN 12880 / Class 3.1									
CHAMBER										
Door type	Double/Door with Viewing Window (option)									
INTERIOR										
P Smart PRO	Acid-Proof Stainless Steel to DIN 1.4301									
PS Smart PRO	Acid-Proof Stainless Steel to DIN 1.4301									
HOUSING										
P Smart PRO	Powder Coated Sheet									
PS Smart PRO	Stainless Steel Polished									

TECHNICAL DATA				
Air Convection	**FORCED**			
Model No	ILP 53	ILP 115	ILP 240	ILP 750
Working Capacity [l]	56	112	245	749
Controller	Microprocessor PID			
Display	4.3" or 7" fill Colour Touch Screen			
TEMPERATURE				
Temperature Range [°c]	0…+70 (max 20°C below ambient temperature)			
Temperature Resolution Every ...[°c]	0.1			
Temperature Fluctuation at 37°C [°C]	0.1			
Temperature Variation at 37°C [°C]	0.2-0.3			
Over Temperature Protection	Class 2.0 to DIN 12880 / Class 3.3			
CHAMBER				
Door Type	Double(5) / door with viewing window (option)			
INTERIOR				
P Smart PRO	Acid-Proof stainless steel to DIN 1.4301			
PS Smart PRO	Acid-Proof stainless steel to DIN 1.4301			
HOUSING				
P Smart PRO	Powder Coated Sheet			
PS Smart PRO	Stainless Steel Polished			

PELTIER-COOLED INCUBATOR ILP

Advantages Over Compressor-Cooled Incubators:

- **Environmentally friendly :** Elimination of compressor and refrigerants ensures environmental protection.

- **Lighter and smaller :** The Peltier-element system has reduced the size and weight of the unit.

- **Vibration-free :** With the introduction of the Peltier-element system, vibrations previously generated by the compressor have been eliminated.

- Perfect performance : The cooling system based on the Peltier-element features excellent temperature stability and uniformity. It also improves the temperature recovery time (e.g. after door opening).
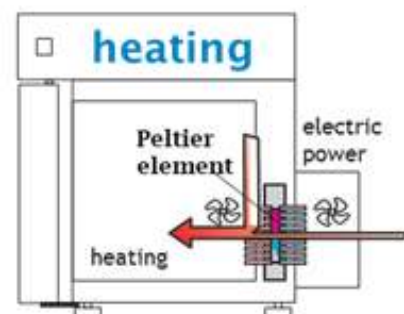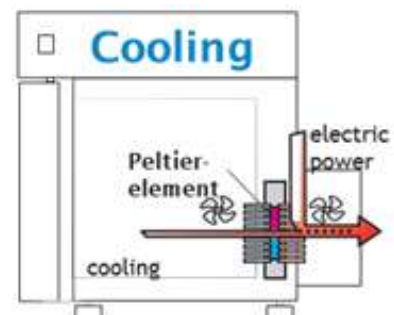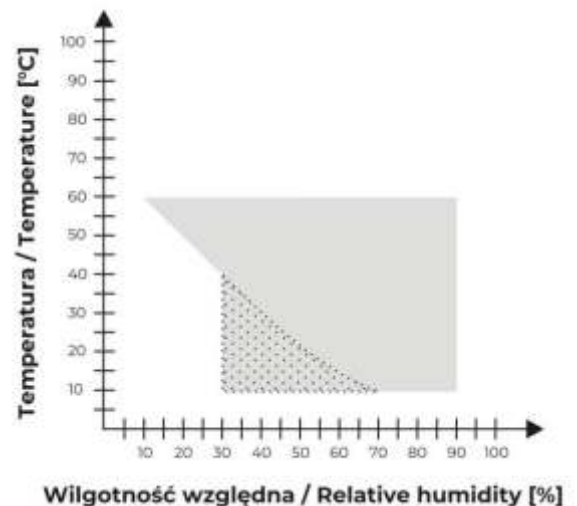
TECHNICAL DATA									
Air Convection	FORCED								
Model No	KK 115	KK 240	KK 350	KK 400	KK 500	KK 700	KK 750	KK 1200	KK 1450
Chamber Capacity [l]	109	240	322	416	470	600	749	1330	1485
Chamber Capacity [l]	109	240	283	416	392	485	749	1132	1264
Controller	Microprocessor PID								
Display	4.3" or 7" fill Colour Touch Screen								

TEMPERATURE	
Temperature Range [°C]	0…+60
Temperature Resolution Every … [°C]	0.1
Temperature Fluctuation at 25°C and 60%rH [°C]	2
Relative Humidity Range [%]	30…90 (see chart for details)
Humidity Resolution Every … [%]	1.0
Humidity Fluctuation at 25°C and 60% rH [%rH]	5
Over Temperature Protection	class 3.3 to DIN 12880

CHAMBER	
Door Type	Double (external solid, internal glass) / external glass (option)

INTERIOR	
P Smart PRO	Acid-Proof stainless steel to DIN 1.4301
PS Smart PRO	Acid-Proof stainless steel to DIN 1.4301

HOUSING	
P Smart PRO	Powder Coated Sheet
PS Smart PRO	Stainless Steel Polished

APPLICATION:

- Growth Of Plants And Fungus
- Seeds Germination
- Microorganisms and Insects Breeding
- Photostability Tests
- Food Preservation Tests
- Any kind of Research that Requires A Stable Temperature and Humidity Environment (Optionally Light)

Wilgotność względna / Relative humidity [%]

TECHNICAL DATA						
Air Convection	NATURAL				FORCED	
Model No	ZLN 85	ZLN-T 125	ZLN-T 200	ZLN-T 300	ZLW-T 200	ZLW-T 300
Chamber Capacity [l]	85	130	210	310	210	310
Chamber Capacity [l]	73	109	180	262	140	213
Controller	Microprocessor PID					
Display	4.3" or 7" fill Colour Touch Screen					
TEMPERATURE						
Temperature Range [°C]	-40…0					
Temperature Resolution Every … [°C]	0.1					
Temperature fluctiation At -20°C [°C]	0.5					
Temperature Variation at -20°C [°C]	2					
Over Temperature Protection	Class 3.1 to DIN 12880					
CHAMBER						
Door Type	Solid					
INTERIOR						
P Smart Pro	Acid-proof Stainless Steel to DIN 1.4301					
Ps Smart Pro	Acid-proof Stainless Steel to DIN 1.4301					
HOUSING						
P Smart Pro	Powder Coated Sheet					
Ps Smart Pro	Stainless Steel Polished					

Ultra-Low Freezer (ZLN-UT)

TECHNICAL DATA			
Air convection	NATURAL		
Model no	ZLN-UT 20085	ZLN-UT 300	ZLN-UT 500
Chamber capacity [l]	242	326	483
Number of boxes 133x133x50mm [pcs]	108	144	352
Controller	Microprocessor		
Display	7" Full Colour Touch Screen		
TEMPERATURE			
Temperature Range [°c]	-86…-50		
Temperature Resolution Every … [°c]	0.1		
Cooling Time From +20°c To -80°c [h]	3.5		
Heating Time In Case Of Power Failure -80°c To -60°c [h]	1.5		
Temperature Fluctuation At -80°c [°c]	1.5		
Temperature Variation At -80°c [°c]	4		
Door type	Solid		
INTERIOR			
P Smart PRO	Stainless Steel to DIN 1.4016 (Pro: DIN 1.4301)		
Ps Smart PRO	Acid-Proof Stainless steel to DIN 1.4301		
HOUSING			
P Smart PRO	Powder coated sheet		
Ps Smart PRO	Stainless steel polished		

Drying Oven (SLN/SLW)

TECHNICAL DATA										
Air Convection	NATURAL (SLN) / FORCED (SLW)							FORCED (SLW)		
Model No	SL 15	SL 32	SL 53	SL 75	SL 115	SL 180	SL 240	SL 400	SL 750	SL 1000
Chamber Capacity [l]	15	32	56	76	112	180	245	424	749	1005
Controller	Microprocessor PID									
Display	4.3" or 7" fill Colour Touch Screen									

TEMPERATURE	
Temperature Range [°c]	5°C above Ambient Temperature … +300°C
Temperature Resolution Every … [°c]	0.1
Temperature Fluctuation at 105°c [°c]	0.3 - 0.6
Temperature Variation at 105°c [°c]	2 - 3
Over Temperature Protection	class 2.0 to DIN 12880 / class 3.1

CHAMBER	
Door Type	Solid / Door With Viewing Window (option)

INTERIOR	
P Smart Pro	Acid-proof Stainless Steel to DIN 1.4301
Ps Smart Pro	Acid-proof Stainless Steel to DIN 1.4301

HOUSING	
P Smart Pro	Powder Coated Sheet
Ps Smart Pro	Stainless Steel Linen Finish

Laboratory Shakers (LS)

TECHNICAL DATA				
Model	LS-280	LS-350	LS-500	LS-700
Movement	Orbital			
Controller	Microprocessor			
Display	LCD			
Speed Range [rpm]	30…500		30…300	
Acurracy [rpm]	10			
Amplitude [mm]	5	5 or 10		
Max Load Capacity [kg]	10			
Shaking Mode	1min…. 99h or continuous operation			
DIMENSION				
Width	320	390	550	700
Heigth	120/220			
Depth	330	400	440	420
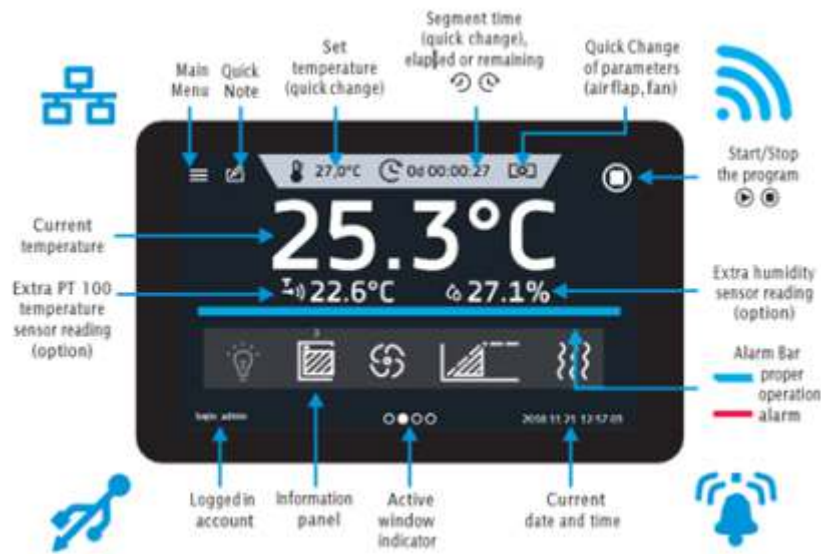
Advantages of the Smart Pro Controller:

- Large (7"), Clear, Full Colour Touch Screen

- Lan, Usb Ports And Wifi For Communication And Data Transfer

- Mmulti-segment Time And Temperature Programs

- Overview Of Data In Tabular And Graphic Form

- Visual And Sound Alarm

- Administrating Functions For Management Password Protected Log-in

- Internal Memory For Programs And Data Storage Operating With Gloves On

- Event Registry With User Notifications

- Labdesk Software And User Manual For Direct Download

- Alarm Bar - Quick Visual Information About Device Status

- Quick Note - User Can Save Messages (50 Characters) In Smart Pro Controller Memory

- Quick Change Of Parameters: Temperature, Humidity, Time, Air Flap And Fan

Alarm Bar and E-mail Notifications

Types of accounts and their limits:
- **Super Admin /Admin/User**

Quick Change – Quick and Easy Change of Parameters

E-mail Notifications

The user with Super Admin permissions can set &
activate e-mail notification reports for up to 3
e-mail addresses.

Controller	Smart	Smart PRO
Display	4.3" + touch screen	7" + touch screen
Network	LAN	LAN and Wi-Fi
USB	YES saving registration data saving events	YES saving registration data saving events uploading programs
Kaypad	Numeric	Alphanumeric
Languages	PL, EN	PL, EN
Main Screen	Dashboard (all relevant data visible from one main window)	Dashboard (all relevant data visible from one main window)
Users	-	5
Users account types	-	User / Admin / Super-Admin
Programs	5	40
Program name	Free number assigned	Any
Priority	Parameters	Parameters, time
Segments	6	100
Light control	-	YES
Schedule	-	10 schedules
Data registry	max. 10,000 measurement data stored for a maximum of 6 months	max. 10,000 measurement data stored for a maximum of 12 months
Events registry	YES	YES
Statistics	YES - only the current cycle	YES - from every segment and program cycle
Temperature protection class	2	3.1 or 3.2 or 3.3
Quick Note	-	Ability to enter user own text messages
Graph	-	YES
Mail notifications	-	alarm notifications
Device name	Fixed (serial number)	editable
Alarm Bar	YES	YES
Quick change	YES	YES
Additional software for PC	LabDesk (option)	LabDesk