

Peltier-cooled incubator IPP with SingleDISPLAY
Peltier-cooled incubator IPPplus with TwinDISPLAY
AtmoCONTROL software

Model sizes: 30 / 55 / 110 / 260 / 750
0 °C to +70 °C

PELTIER-COOLED INCUBATOR IPP Heating and cooling seamlessly with one system thanks to Peltier technology. In this respect, cooled incubators IPP not only contribute to climate protection, but it also achieves an additional decrease in operating costs of up 90 % compared to compressor technology. This perfect development from the environmentally friendly and energy-saving heating/cooling technology by Memmert convinces by outstanding control precision and extremely small fluctuations.





Extremely quiet and vibration-free

The fact that no compressor is required saves space and brings peace and quiet to the laboratory. As Peltier-cooled incubators IPP are almost vibration-free, they can also be applied in entomology. If defined humidity is also required, an alternative would be the constant climate chamber HPP, which is also equipped with Peltier technology.

No condensation in the interior chamber

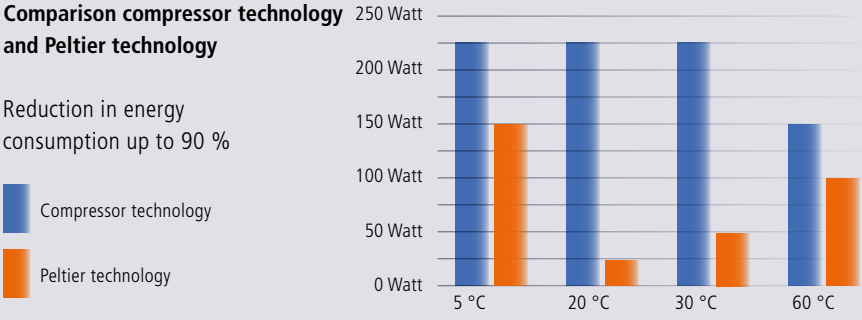
Due to the closed Peltier cooling system, no outside air is exchanged. Physically derived, unavoidable formation of condensation during the cooling process does not take place in the interior chamber but on the outside heat sink. In addition, the in the Peltier elements integrated fans ensure a rapid transport of energy as well as an optimal temperature distribution.

Energy-saving heating/cooling technology combination

In contrast to compressor systems, Peltier technology is particularly economical at temperatures close to the ambient temperature, since energy is only required during heating or cooling. Therefore heating and cooling function are particularly precisely adjusted to each other.

Comparison compressor technology and Peltier technology

Reduction in energy consumption up to 90 %





PELTIER-COOLED INCUBATORS IPP

according to DIN 12880:2007-05 , EN 61010-1 (IEC 61010-1), 61010-2-010

Standard units are safety-approved and bear the test marks: CE EAC

Standard equipment

Interior: Stainless steel, material 1.4301 (ASTM 304), deep-drawn

Internals: Stainless steel grids, electropolished (sizes 30 and 55: 1, sizes 110 to 750: 2)

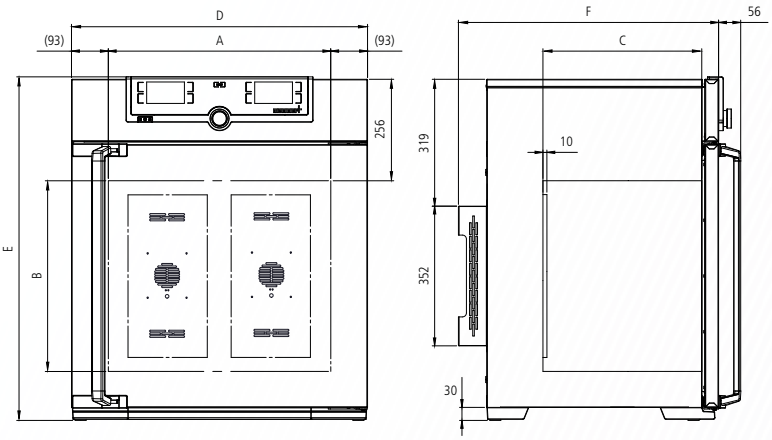
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated SingleDISPLAY or TwinDISPLAY (TFT colour display) with touchscreen

Double doors: Outside stainless steel, fully insulated, inside glass (size 750 two-leaves)

Connection: Mains cable with plug (German type)

Installation: 4 feet; size 750 mounted on lockable castors

Interfaces: Ethernet LAN, USB (only TwinDISPLAY)



Number of Peltier elements in the rear:
Sizes 30 to 55: 1
Size 110: 2
Size 260: 3
Size 750: 6

Model sizes/Description				30	55	110	260	750
Stainless steel interior	Volume		approx. l	32	53	108	256	749
	Width	(A)	mm	400	400	560	640	1040
	Height	(B)	mm	320	400	480	800	1200
	Depth (less 10 mm for fan – Peltier)	(C)	mm	250	330	400	500	600
	Stainless steel grids, electropolished (standard equipment)		number	1			2	
	Max. number of grids/shelves		number	3	4	5	9	14
	Max. loading per grid/shelf		kg	20				30
	Max. loading of chamber		kg	60	80	150	200	
Textured stainless steel exterior	Width	(D)	mm	585	585	745	824	1224
	Height (size 750 with castors)	(E)	mm	704	784	864	1183	1726
	Depth (without door handle), door handle + 56 mm	(F)	mm	524	604	674	774	874
Further data	Electrical load at 230/115 V, 50/60 Hz		approx. W	140	275	550	820	1100
	Working-temperature range without light Working-temperature range with light		°C °C	0 (at least 20 below ambient temperature) to +70 +10 to +40				
	Setting temperature range		°C	0 to +70				
	Setting accuracy		°C	0.1				
Packing data	Net weight		approx. kg	40	52	78	114	230
	Gross weight (packed in carton)		approx. kg	56	71	103	165	301
	Width		approx. cm	66	73	83	93	133
	Height		approx. cm	89	95	105	138	191
	Depth		approx. cm	65	67	80	93	105
Order No. Peltier-Cooled Incubators IPP = Peltier-Cooled Incubators plus = Model with TwinDISPLAY				**IPP30**	**IPP55**	**IPP110**	**IPP260**	**IPP750**
				IPP30plus	**IPP55plus**	**IPP110plus**	**IPP260plus**	**IPP750plus**

Options	30	55	110	260	750
Voltage 115 V, 50/60 Hz	X2				
Chamber modification for the application of reinforced perforated stainless steel shelves or stainless steel grids (bearing rails mounted in the working chamber) – includes replacement of 2 standard grids by 2 reinforced grids	–				K1
Light module cold white 6,500 K: light strips arranged on the side walls of the interior, 10 strips for model 110, 14 for model 260/750, programme-controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature (only with TwinDISPLAY)	–		T7		
Light module cold white 6,500 K + warm white 2,700 K: LED light strips – 10 strips for model 110, 14 for models 260/750 – (5 resp. 7 alternating cold white light strips and 5 resp. 7 warm white light strips) on the side walls of the interior, programme-controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature (only with TwinDISPLAY)	–		T8		
Light module warm white 2,700 K: light strips arranged on the side walls of the interior, 10 strips for model 110, 14 for model 260/750, programme-controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature (only with TwinDISPLAY)	–		T9		
Interior socket, ampacity 230 V/2.2 A, can be switched off with the On/Off switch, cannot be switched individually, moisture tight IP68	R3				
Entry port, 23 mm clear diameter, for introducing connections, can be closed by flap, standard positions (F0 and F2 not for model size 260 with light module; F0 – F3 not for model size 110 with light module)					
left centre/centre	F0				
left centre top	F1				
right centre/centre	F2				
right centre top	F3				
Entry port, 23 mm clear diameter for introducing connections, can be closed by flap (please, state location)					
left	F4				
right	F5				
rear	F6				
Entry port, 14 mm clear diameter, can be closed by flap, in special positions in the back wall (please, state location)	D6				
Entry port, 38 mm clear diameter, can be closed by flap, in special positions in the back wall (please, state location)	F7				
4 – 20 mA current loop interface (-10 to +80 °C ≙ 4 – 20 mA)					
Temperature controller, actual value	V3				
Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY)	V6				
Works calibration certificate for 3 temperatures: +5 °C, +37 °C, +60 °C Standard works calibration certificate (measuring point chamber centre) at +10 °C and +37 °C	D00129				

Accessories	30	55	110	260	750
Stainless steel grid, electropolished (standard equipment)	E28884	E20164	E20165	E28891	E20182
Additional reinforced stainless steel grid, electropolished, max. loading 60 kg; size 750 with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–		E29767	E29766	B32190
Perforated stainless steel shelf	B29727	B03916	B00325	B29725	B00328
Additional reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–				B32191
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	E02070	E02072	E02073	E29726	E02075
Max. loading per slide-in drip tray (kg)	1.5		3	4	8
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (can be used only in connection with option K1)	–				B32763
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	B04356	B04358	B04359	B29722	B04362
Max. loading per bottom drip tray (kg)	1.5		3	4	8
Stainless steel bottom drip tray, 15 mm rim (can be used only in connection with option K1)	–				B34055
Guarantee extension by 1 year	GA1Q5			GA2Q5	

Further options/accessories see pages 24 - 26.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

SOFTWARE AtmoCONTROL

AtmoCONTROL – The innovative control and logging software

Parameters such as temperature and humidity as well as the process time can be set directly at the ControlCOCKPIT.
Ramp programming is done via the control and logging software AtmoCONTROL, which features a completely new software design.



Drag, drop & go!

Numerical and graphic programming of complex processes is a thing of the past. Today, programming is done via AtmoCONTROL by means of the mouse or touchpad on your notebook. Even the most complex ramp programmes are created within minutes. Simply drag & drop the graphical symbols for the desired parameters to the input field and change the values according to your wishes with a mouse click.

Programme functions SingleDISPLAY and TwinDISPLAY

- Reading out, managing and organising the data logger
- Saving the log memory in various formats
- Online monitoring of up to 32 connected appliances
- Optical alarms when the alarm limits individually set at the ControlCOCKPIT are exceeded
- Automatic alarm to one or several e-mail addresses

Additional functions TwinDISPLAY

- Intuitive programming and archiving of ramps and programme sequences
- Synchronous visualisation of the created programme sequence during programming
- Application-specific repeat functions (loops) can be inserted within a temperature control programme in any place
- Simple creation of repeating weekly programmes
- Programming, managing and transferring programmes via Ethernet interface or USB port

SPECIAL EQUIPMENT FOR MODELS U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH | ICOmed

Options for models U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH	30	55	75	110	160	260	400	450	750	1060	1400	50 / 105 / 150 / 240
Door with lock (safety lock); for models UF TS per side; standard with SN/SF and SNplus/SFplus 450 and 750 (not for models ICOmed)	B6											–
Door hinged on the left; for models UF TS per side	B8						–					B8
Potential-free contact (24 V/2 A) with socket to NAMUR NE 28 for external monitoring (indicates when setpoint is reached); models ICOmed: when set points of temperature and CO_2 are reached	H5											
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)	H6											
Potential-free contact (24 V/2 A) with socket to NAMUR NE 28, for signal generation, controlled by programme segment, for free-selectable functions to be activated (e.g. activation of audible and visual signals, exhaust motors, fans, stirrers, etc.). Only for units with TwinDISPLAY; max. 2 contacts on 1-phase appliances; max. 4 contacts on 3-phase appliances (not for models ICOmed)												
2 contacts	H72											–
4 contacts	–							H74				–
Process-dependent door lock (only for units with TwinDISPLAY); for models UF TS see page 11 of oven brochure; not for models ICOmed	D4											–
Door-open-recognition, incl. alarm, shuts down fan and after 30 sec. also heating (only for units with TwinDISPLAY); for models UF TS per side; standard with ICOmed, ICH C, ICH L	V5											–
Flexible Pt100 for positioning in chamber or in load with socket, 4-pin, according to NAMUR NE 28, for external temperature recording (load temperature) max. 3 sensors; not for models ICOmed	H4											–
Flexible Pt100 temperature sensor, positioned flexibly in chamber or load, for local temperature measurement (up to 3 additional sensors are possible). The measured temperature can, if required, be indicated on the display, recorded in the integral data store, and can be documented via the AtmoCONTROL software. Not for models ICOmed	H8											–
MobileALERT, notification by SMS in case of any error or alarm of the device. Requires option H6 "floating contact for alarm"	C3											
MobileALERT for up to 4 alarm notifications; standard: temperature and CO_2 alarm, additionally humidity alarm (when equipped with option K7) and O_2 alarm (when equipped with option T6)	–											C4
Temperature restriction (for UN/UF/UNplus/UFplus/UNm/UFm/UNmplus/ UFmplus and models UF TS); Temperatures: +60, +70, +80, +95, +100, +120, +160, +180, +200, +220 or +250 °C (Please, indicate upon ordering)	A8						–	A8				–
Castor frame (2-part), height 140 mm (not for models UF TS, ICP, ICH, ICH L, ICH C, ICOmed)	R9						–					

Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

SPECIAL EQUIPMENT FOR MODELS U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH — ICOmed

Accessories for models U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH	30	55	75	110	160	260	400	450	750	1060	1400	50 / 105 / 150 / 240
USB-Ethernet adapter	E06192											
Ethernet connection cable 5 m for computer interface	E06189											
USB User-ID stick (with User-ID licence): Oven-linked authorisation licence (User-ID-programme) on Memory-stick, prevents undesired manipulation by unauthorised third parties. When reordering please specify serial number (only for units with TwinDISPLAY)	B33170											
USB stick with documentation software AtmoCONTROL and operation manual for products with SingleDISPLAY (the standard equipment of appliances with TwinDISPLAY includes one USB stick with AtmoCONTROL)	B33171											
Set of height adjustable feet (4 pcs) not available for ICP, ICH, ICH L, ICH C – standard on models ICOmed	B29768						–					
Stacking set (4 pcs) for stacking of appliances of same size (not for models 160, 260, 450, 750, 1060, 1400, ICH110, ICH110L, ICH110C, ICP55, ICP110)	B29744				–							B29744 / –
Stacking set (consisting of stacking corners, one connecting plate for the rear, two wall brackets) for stacking two units ICO150med or ICO240med	–											B42114 (150) B42115 (240)
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), straight, for exhaust air ducting (if necessary for connection by hose), only models U, I, S not for models UF TS	B29718										–	
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), angled, for exhaust air ducting (if necessary for connection by hose), only models U, I, S not for models UF TS	B29719										–	
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), with air slots	B29728	B29730	B29732	B29734	B29736	B29738	B42116	B29740	B29742	B42118	–	
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots for models UF TS see page 11 of oven brochure; not for models ICOmed	B29729	B29731	B29733	B29735	B29737	B29739	B42117	B29741	B29743	B42119	–	
Subframe, adjustable in height (size 30 to 75: height 600 mm, size 110 to 450: height 500 mm); not for models ICOmed, UF TS and HPP400	B29745	B29747		B29749		B29751	–	B29753		–		
Subframe, on castors (size 30 to 75: height 660 mm, size 110 to 160: height 560 mm); not for models ICOmed and UF TS	B29746	B29748		B29750						–		
Subframe, adjustable in height, height 130 mm, for example for units with fresh air filter; not for models ICOmed and UF TS	B33657	B33659		B33661		B33664				–		
Software conforming to FDA AtmoCONTROL. Meets the requirements for the use of electronically stored data sets and electronic signatures as laid down in Regulation 21 CFR Part 11 of the US Food and Drug Administration (FDA). Base licence for the control of one unit (only for units with TwinDISPLAY)	FDAQ1											
Integration of additional units (up to max. 15 units) into an already existent FDA-software licence (only for units with TwinDISPLAY)	FDAQ2											
IQ document with device-specific works test data, OQ/PQ check list as support for validation by customer	D00124											
IQ/OQ document with device-specific works test data for one free-selectable temperature value, incl. temperature distribution survey at Memmert for 9 measuring points (size 30), 27 measuring points (sizes 55 – 1060) to DIN 12880:2007-05, PQ check list as support for validation by customer. Further temperature values and validation at customer site on demand	D00125					D00127					–	
IQ/OQ document with device-specific works test data for one free-selectable temperature and humidity value, incl. temperature distribution survey at Memmert for 27 measuring points (26 measuring points on model HPP1400) to DIN 12880:2007-05, PQ check list as support for validation by customer (models HPP and ICH). Validation at customer site on demand	–			D00136	–	D00136	–		D00136	–	D00136	–
IQ/OQ document with device-specific works test data for one free-selectable temperature, humidity and light value, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05, PQ check list as support for validation by customer (models HPP with light and ICH L). Validation at customer site on demand	–			D00137	–	D00137	–		D00137			–
IQ/OQ document with device-specific works test data for one free-selectable CO_2, humidity and temp. value, incl. temp. distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05, PQ check list as support for validation by customer (models ICH C and ICOmed, on models ICOmed a free-selectable humidity value is only possible with option K7). Validation at customer site on demand	–			D38897	–	D38897	–		D38897	–		D38897
IQ/OQ document with device-specific works test data for one free-selectable CO_2 and temperature value, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05, PQ check list as support for validation by customer (model ICOmed). Validation at customer site on demand	–											D38898
External measuring instrument with sensors for daylight and UV-light. Product information on demand (models HPP, ICH L, IPPplus)	B04713									–	B04713	–
Ditto with additional measuring head for temperature and humidity measurement. Product information on demand (models HPP, ICH L, IPPplus)	B04714									–	B04714	–

Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

MODEL VARIANTS

SingleDISPLAY ControlCOCKPIT with one TFT display	TwinDISPLAY ControlCOCKPIT with two TFT displays
AVAILABLE APPLIANCES **UN/UNm / UF/UFm / IN/INm / IF/IFm / SN / SF / IPP / IPS**	**AVAILABLE APPLIANCES** **UNplus/UNmplus / UFplus/UFmplus / UF TS / UNpa** **INplus/INmplus / IFplus/IFmplus / SNplus / SFplus** **ICOmed / IPPplus / ICP / HPP / ICH**
One high-resolution TFT colour display with touch-sensitive buttons for selection of functions	Two high-resolution TFT colour displays with touch-sensitive buttons for selection of functions
Available parameters on the ControlCOCKPIT: Temperature (Celsius or Fahrenheit), fan speed, exhaust air flap position, programme time	Available parameters on the ControlCOCKPIT: Temperature (Celsius or Fahrenheit), fan speed, exhaust air flap position, programme time, relative humidity, illumination, CO_2
One temperature sensor Pt100 DIN class A in a 4-wire circuit	Two Pt100 sensors DIN class A in a 4-wire circuit for mutual monitoring, taking over functions in case of an error
	HeatBALANCE function for application specific adjustment of heat output distribution (balance) between the upper and lower heating groups in an adjustment range between -50 % and +50 % (not valid for models 30, HPP110, IPP110plus, ICP, ICH)
AtmoCONTROL software for reading out, managing and organising the data logger via Ethernet interface (temporary trial version can be downloaded). USB stick with AtmoCONTROL software available as accessory (on demand)	AtmoCONTROL software on a USB stick for programming, managing and transferring programmes via Ethernet interface or USB port
	ControlCOCKPIT with USB port for uploading programmes, reading out protocol logs, activating the User-ID function
	Displaying of already logged protocol data on the ControlCOCKPIT (max 10,000 values correspond to approx. 1 week)
Ethernet interface on the rear of the appliance for reading out the protocol log and for online logging	Ethernet interface on the rear of the appliance for reading out the protocol log and for uploading programmes and for online logging
Double overtemperature protection: Electronic temperature monitoring with freely adjustable monitoring temperature, for models U, I, S with option A6 TWW/TWB (protection class 3.1 or 2), mechanical temperature limiter TB acc. to DIN 12880	Multiple overtemperature protection: Electronic temperature monitoring TWW/TWB (protection class 3.1 or 2 resp. 3.3 for units with active cooling) and mechanical temperature limiter TB (protection class 1) acc. to DIN 12880, AutoSAFETY automatically adjusts to the set value within a freely adjustable tolerance range. Setting individual MIN / MAX values for over/undertemperature alarm and also for all other parameters such as relative humidity, CO_2

PID microprocessor control with integrated auto-diagnostic system

Structured stainless steel housing, scratch-resistant, robust and durable; rear of zinc-plated steel

High-temperature connectors on the rear of the appliance for single-phase power connection according to country specific systems and IEC standards

Internal data logger with a storage capacity of at least 10 years

German, English, French, Spanish, Polish, Czech, Hungarian language settings available on the ControlCOCKPIT

Digital backwards counter with target time setting, adjustable from 1 minute to 99 days

The SetpointWAIT function guarantees that the process time does not start until the set temperature is reached at all measuring points – optional for temperature values recorded by the freely positionable Pt100 sensors inside the chamber

Adjustment of three calibration values for temperature and additional appliance specific parameters directly at the ControlCOCKPIT