memmert

Incubators

PERFECTLY COORDINATED. PERFECTLY CONTROLLED.

INCUBATOR I

CO_2 INCUBATOR ICO

COMPRESSOR-COOLED INCUBATOR ICPeco/ICP

PELTIER-COOLED INCUBATOR IPPeco

MADE IN GERMANY.

www.memmert.com

Stable.
Safe.
Sensitive.

Memmert incubators for microbiology.
Energy efficient and precise.

Even slight temperature deviations in the working chamber of an incubator may cause a test to fail. For this reason, the heating and control system of Memmert incubators are perfectly adapted to each other. During heating up and cooling down as well as in running operation, all appliances precisely keep the desired parameters within the smallest tolerance limits. Not only at one measuring point, but in the entire working chamber. Each individual Memmert incubator complies with the strict requirements of DIN 12880:2007-05 and is equipped with a maximum of safety functions.

INCUBATORS I PAGE 4 - 8

Microbiological tests, colony counts, virology, toxicology

CO_2 INCUBATORS ICO PAGE 9 - 14

Microbiological tests, colony counts, virology and toxicology

COMPRESSOR-COOLED INCUBATORS ICPeco PAGE 15 - 19

Microbiological tests, colony counts, virology, toxicology, cultivation above and below room temperature, alternate stability tests

COMPRESSOR-COOLED INCUBATORS ICP PAGE 20 - 21

Microbiological tests, colony counts, virology, toxicology, cultivation above and below room temperature, alternate stability tests

PELTIER-COOLED INCUBATORS IPPeco PAGE 22 - 26

Protein crystallography, microbiological tests, colony counts, virology, toxicology, cultivation above and below room temperature, alternate stability tests

ADDITIONAL INFORMATION PAGE 27

Incubator IN and IF with SingleDISPLAY
Incubator INplus and IFplus
with TwinDISPLAY
Natural convection or forced air circulation
AtmoCONTROL software

Model sizes:
30 / 55 / 75 / 110 / 160 / 260 / 450 / 750
+20 °C to +80 °C

INCUBATOR I Memmert incubators I are at home in the world of research, pharmaceutics and food technology. The heating and control system are especially optimised for low temperatures of up to +80 °C. To prevent temperature overshoots, temperature is increased within a very narrow control range and kept exactly at the setpoint value. As required, the models with natural convection or with forced air circulation are available.

As little air circulation as possible in the incubator

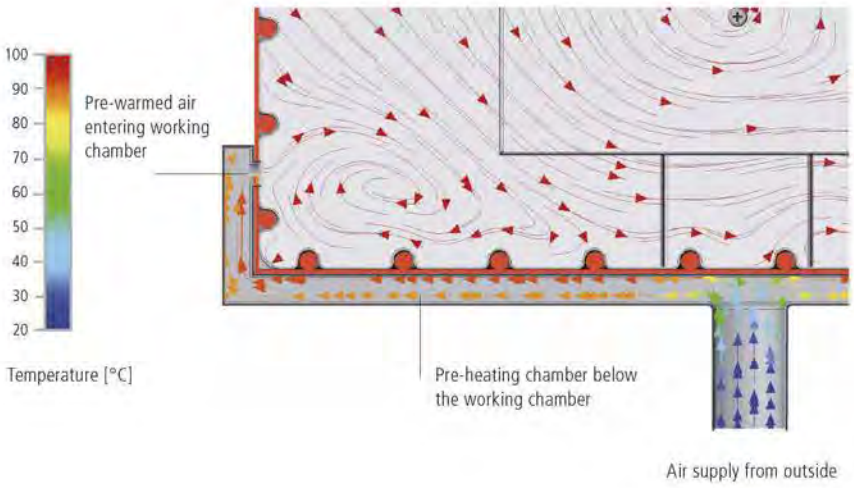
Forced air convection may destroy the protective layer from moist air that is generated during incubation over the samples. This would lead to dehydration of the culture. In a Memmert incubator, the perfect combination of all-round surface heating and temperature control system ensures that incubation generally takes place without forced air circulation. Provided the chamber is fully loaded and forced air circulation is required, it can be precisely adjusted in 10 % steps from 0 to 100 %.

Sterilisation

The chamber of the incubators INplus/IFplus, including all installations and sensors, can be sterilised at +160 °C in a 4-hour programme to guarantee optimum hygiene.

Fresh air is preheated

Temperature deviations caused by fresh air can influence sample characteristics or prolong drying. In Memmert incubators, the fresh air is therefore fed through a pre-heating chamber and seamlessly introduced into the working chamber.



INCUBATORS I

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

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

Interior: Stainless steel, material 1.4301 (ASTM 304) with all-round deep-drawn ribs to integrate the large-area heating with ceramic-metal sheath

Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated SingleDISPLAY or TwinDISPLAY (TFT colour display) with touchscreen; inner glass door, outside fully insulated stainless steel door (from size 450 two leaves)

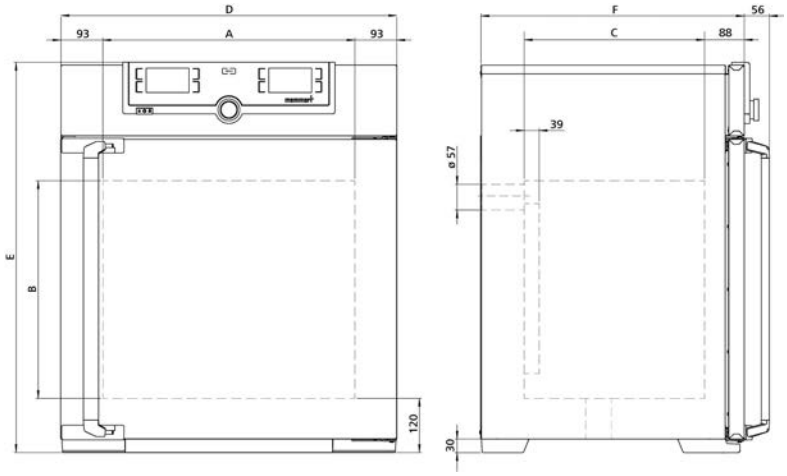
Fresh air: Admixture of pre-heated fresh air by electronically adjustable airflap

Connection: Mains cable with plug (German type)

Installation: 4 feet; sizes 450/750 mounted on lockable castors

Interfaces: Ethernet LAN, USB

USB: only TwinDISPLAY



Model sizes/Description				30	55	75	110	160	260	450	750
Stainless steel interior	Volume		approx. l	32	53	74	108	161	256	449	749
	Width	(A)	mm	400			560		640	1040	
	Height	(B)	mm	320	400	560	480	720	800	720	1200
	Depth (less 39 mm for fan)	(C)	mm	250	330		400		500	600	
	Max. number of grids/shelves		number	3	4	6	5	8	9	8	14
	Max. loading per grid/shelf		kg	20						30	
	Max. loading of chamber		kg	60	80	120	175	210	300		
	Max. loading per slide-in drip tray		kg	1,5			3		4	8	
	Max. loading per bottom drip tray		kg	1,5			3		4	8	
Textured stainless steel exterior	Width	(D)	mm	585			745		824	1224	
	Height (size 450, 750 with castors)	(E)	mm	704	784	944	864	1104	1183	1247	1720
	Depth (without door handle, depth of handle +56 mm)	(F)	mm	434	514		584		684	784	
Standard equipment	Stainless steel grids, electropolished		number	1		2					
	Standard works calibration certificate (measuring point chamber center)		°C	+37							
Temperature	Working temperature range		°C	at least 5 (IN/INplus) 10 (IF/IFplus) above ambient temperature up to +80							
	Setting temperature range		°C	+20 to +80							
	Setting accuracy		°C	0.1							
Further data	Electrical load at 230 V, 50/60 Hz		approx. W	1600	1000	1250	1400	1600	1700	1800	2000
	Electrical load at 115 V, 50/60 Hz		approx. W	800	900					1500	1800
Packing data	Net weight		approx. kg	48	57	66	76	96	110	161	217
	Gross weight (packed in carton)		approx. kg	64	76	85	101	122	161	227	288
	Width		approx. mm	660	730		830		930	1330	
	Height		approx. mm	890	950	1130	1050	1300	1380	1440	1910
	Depth		approx. mm	650	670		800		930	1050	

Order No. Incubators	IN30	IN55	IN75	IN110	IN160	IN260	IN450	IN750
I = Incubator	IN30plus	IN55plus	IN75plus	IN110plus	IN160plus	IN260plus	IN450plus	IN750plus
N = Natural convection	IF30	IF55	IF75	IF110	IF160	IF260	IF450	IF750
F = Forced convection plus = Model with TwinDISPLAY	IF30plus	IF55plus	IF75plus	IF110plus	IF160plus	IF260plus	IF450plus	IF750plus

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Options	30	55	75	110	160	260	450	750
Voltage 115 V, 50/60 Hz	X2							
Extended overtemperature protection by additionally integrated Pt100 sensor for independent temperature monitoring for models with SingleDISPLAY	A6							
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 standard grids by reinforced grids	-						K1	
Interior lighting for observing the load	R0							
Interior socket (can only be ordered with limited temperature range - max. +70 °C), ampacity 230 V, 2.2 A, can be switched off with the On/Off switch, cannot be switched individually, moisture tight IP68 (only with SingleDISPLAY), (option A8 necessary)	R3							
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap and silicone stopper, standard positions – left centre/centre	F0							
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap and silicone stopper, standard positions – left centre/top	F1							
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap and silicone stopper, standard positions – right centre/centre	F2							
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap and silicone stopper, standard positions – right centre/top	F3							
Entry port, 23 mm clear diameter, can be closed by flap, in special positions (please state location) – left	F4							
Entry port, 23 mm clear diameter, can be closed by flap, in special positions (please state location) – right	F5							
Entry port, 23 mm clear diameter, can be closed by flap, in special positions (please state location) – 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							
Entry port, 57 mm clear diameter, can be closed by flap, in special positions in the back wall (please state location; not possible for IF/IFplus size 30-75)	F8							
Entry port, 100 mm clear diameter, can be closed by flap, in special positions in the back wall (please state location; not possible for IF/IFplus size 75)	-	F9						
4 - 20 mA current loop interface (0 to +90 °C = 4 - 20 mA) – Temperature controller, actual value	V3							
4 - 20 mA current loop interface (0 to +90 °C = 4 - 20 mA) – Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY) - price per sensor	V6							
Fan speed monitoring with switching-off the heating and with alarm in case of failure - only for IFplus	V4							
Works calibration certificate for 3 temperatures: +37, +52, +70 °C	D00126							
Works calibration certificate for one (freely selectable) temperature value according to customer specification	D00109							
Door with lock and key (safety lock)	B6							
Door hinged on the left	B8						-	
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)	H6							
Door-open-recognition (only for units with TwinDISPLAY)	V5							
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)	C3							
Temperature restriction; Temperatures: +50, +55, +60, +65, +70 or +75 °C (Please indicate upon ordering)	A8							
Fresh-air filter (filtration efficiency 80 %) mounted at the appliance bottom (for IF/IFplus, for sizes 30 – 260 requires castor frame R9 or subframe)	R8							
Castor frame (2-part), height 140 mm	R9						-	

Accessories	30	55	75	110	160	260	450	750
Stainless steel grid, electropolished	E28884	E20164		E20165		E28891	E20182	
Reinforced stainless steel grid, electropolished, max. loading 60 kg; from size 450 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	
Reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (requires option K1). Please consider max. loading of chamber	-						B32191	
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	E02070	E02072		E02073		E29726	E02075	
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (may affect the temperature distribution, only in connection with option K1)	-						B32763	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	B04356	B04358		B04359		B29722	B04362	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, only in connection with option K1)	-						B34055	
Wall bracket for wall mounting	B29755	B29756	B29757	B29758	B29759	-		
Guarantee extension by 1 year	GA1Q5					GA2Q5		
USB-Ethernet adapter	E06192							
Ethernet connection cable 5 m for computer interface	E06189							

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Accessories	30	55	75	110	160	260	450	750
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). When reordering please specify serial number	B33172							
Set of height adjustable feet (4 pcs)	B29768						-	
Stacking set (4 pcs) for stacking of appliances of same size	B29744					-		
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), straight, for exhaust air ducting (if necessary for connection by hose)	B29718							
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), angled, for exhaust air ducting (if necessary for connection by hose)	B29719							
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), with air slots	B29728	B29730	B29732	B29734	B29736	B29738	B29740	B29742
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots	B29729	B29731	B29733	B29735	B29737	B29739	B29741	B29743
Subframe, adjustable in height (size 30 to 75: height 600 mm, size 110 to 450: height 500 mm)	B29745	B29747		B29749		B29751	B29753	-
Subframe, on castors (size 30 to 75: height 660 mm, size 110 to 160: height 560 mm)	B29746	B29748		B29750		-		
Subframe, adjustable in height, height 130 mm, for example for units with fresh air filter	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). Respective IQ/OQ documents available in German and English language (without surcharge)	FDAQ1							
Integration of one additional unit (up to max. 31 units) into an already existent FDA-software licence (only for units with TwinDISPLAY)	FDAQ2							
DAkkS calibration for one free-selectable temperature value according to method C (DKD-R 5-7)	E39696							
DAkkS calibration for further temperature values according to method C (DKD-R 5-7)	E39697							
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. 305 € for further temperature values	D00125	D00127						
On-site IQ/OQ for a freely selectable temperature value, including temperature distribution survey for 9 measuring points (size 30), 27 measuring points (sizes 55 - 750) to DIN 12880: 2007-05 (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ100							
Extension of DLQ100 by an additional freely selectable temperature value (not subject to discount)	DLQ100A							
Individual on-site Performance Qualification (PQ)	DLQ200							
Maintenance UIS - carrying out and documentation according to Memmert maintenance plan (excluding travel costs, not subject to discount, GER, AT, FR only)	S00311							
Maintenance contract UIS - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (excluding travel costs, not subject to discount, GER, AT, FR only)	S00311J							
Calibration of one freely selectable temperature value (excluding travel costs, not subject to discount, GER, AT, FR only)	S00205							
Calibration of an additional temperature value (not subject to discount)	S00215							

Prices for options are only valid when ordering new appliances.
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PERSONAL NOTES

CO_2 Incubator ICO with TwinDISPLAY
AtmoCONTROL software

Model sizes: 50 / 105 / 150 / 240
+18 °C to +50 °C
Humidity 40 to 97 % rh
CO_2 concentration 0 to 20 %
O_2 concentration 1 to 20 %

CO_2 INCUBATOR ICO Safety at all times. When it comes to safety and user friendliness, the highly modern CO_2 incubator ICO is the perfect solution: Thanks to the battery-buffered ControlCOCKPIT, the operating display, logging and CO_2 control remain fully functional even when there is a power failure. All parameters are logged in accordance with the FDA and, when individually adjusted ranges for CO_2, O_2, temperature and humidity are exceeded, notifications can be sent to a mobile phone in addition to an alarm.

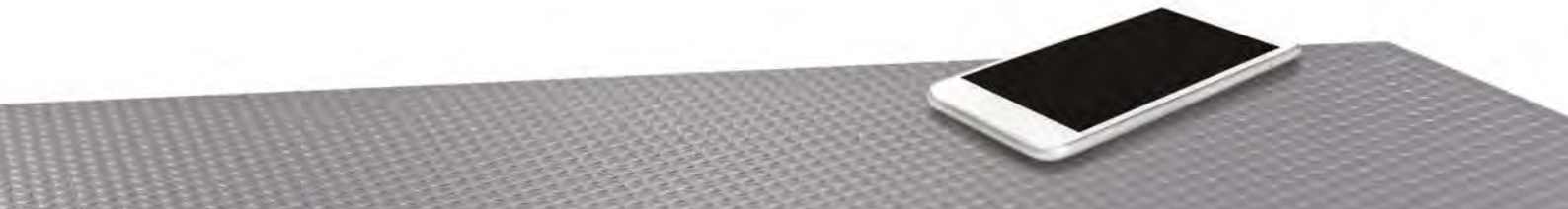
The control technology is so finely tuned that the setpoint temperature is guaranteed to be reached without temperature overshoots. With its rounded corners, the interior is easy to clean and can be sterilised for 60 minutes at 180 °C (including all sensors).

Unrivalled user friendliness

All parameters can be set easily and intuitively both with the ControlCOCKPIT or the AtmoCONTROL software. The shutter box can be opened, allowing fast access to controls. Maintenance is possible even if the appliances are stacked. The appliance has USB and Ethernet connections as well as a data logger with a ten-year storage capacity. Data can be read and programmes can be transferred by remote access.

Minimising vaporisation and condensation

The active humidity control minimises vaporisation in the interior and ensures short recovery times after the door has been opened. Together with the heating of the interior from all six sides including the heated inner glass door, it prevents the dangerous formation of condensation and offers maximum protection for cell and tissue cultures. The turbulence-free chamber ventilation ensures a constant and uniform atmosphere.



CO_2 INCUBATORS ICO

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

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

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

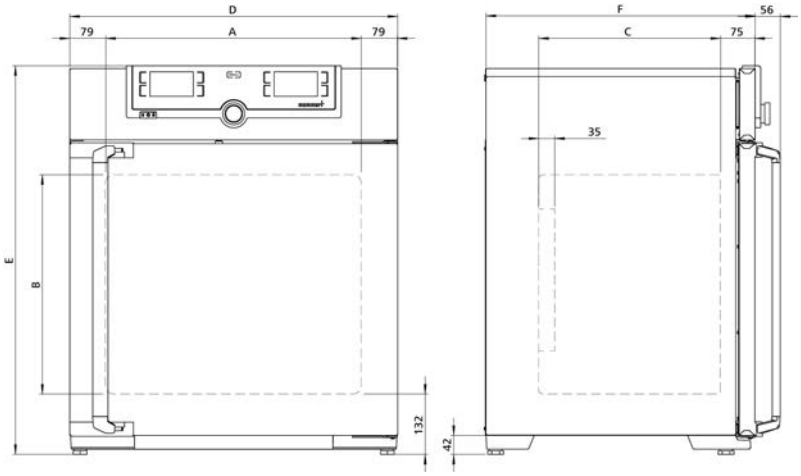
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour display) with touchsceen; fully insulated stainless steel door and heated inner glass door

Automatic sterilisation: Humidity and CO_2 sensor sterilised inside the CO_2 incubator

Connection: Mains cable with plug (German type)

Installation: 4 adjustable feet

Interfaces: Ethernet LAN, USB



Model sizes/Description				50	105	150	240
Stainless steel interior	Volume		approx. l	56	107	156	241
	Width	(A)	mm	400	560		600
	Height	(B)	mm	425	480	700	810
	Depth (less 35 mm for fan)	(C)	mm	330	400		500
	Max. number of perforated shelves		number	5	6	10	12
	Max. loading per perforated shelf		kg	15			
	Max. loading of chamber		kg	75	90	120	140
Textured stainless steel exterior	Width	(D)	mm	559	719		759
	Height (variable through adjustable feet)	(E)	mm	795	850	1070	1180
	Depth (without door handle, depth of handle +56 mm)	(F)	mm	521	591		691
	Fully insulated heated stainless steel door			●			
	Additional heated inner glass door			●			
Standard equipment	Stainless steel shelves, perforated		number	1	2		
	Stainless steel water dish (not applicable with option K7)		number	1			
	Works calibration certificate (measuring point chamber centre) at +37 °C, 5 % CO_2 for standard units			●			
	Works calibration certificate at +37 °C, 5 % CO_2, 90 % rh and 10 % O_2 (requires option K7 and option T6); standard equipment for units with O_2 control			●			
	Works calibration certificate at +37 °C, 5 % CO_2 and 90 % rh (requires option K7); standard equipment for units with active humidity control			●			
	CO_2 connection set: hose with coupling and clamp			●			
	Standard sterilisation programme (without removing the sensors), humidity and CO_2 sensor sterilised inside the CO_2 incubator			60 minutes at 180 °C			
	Membrane filter (in order to remove impurities and pollutants, all incoming gases pass through a membrane filter before they reach the chamber)			●			
Temperature	Working temperature range		°C	at least 5 above ambient temperature up to +50			
	Setting temperature range		°C	+18 to +50			
	Setting accuracy		°C	0.1			
	Temperature fluctuations with time at +37 °C		K	+/- 0.1			
	Temperature variation in chamber at +37 °C		K	+/- 0.3			
Humidity	Humidity limitation thanks to a Peltier element; when water dish is full and inserted, the Peltier element limits the value of relative humidity in the interior to 93 % rh +/- 2.5 %			●			
	Setting range active humidity control (with option K7)		% rh	40 to 97 and rh-Off			
	Setting accuracy		% rh	0.5			
CO_2 / O_2	Digital electronic CO_2 control with dual beam NDIR system, with auto-diagnostic system and acoustic fault indication, barometric pressure compensation			●			
	Setting range CO_2		% CO_2	0 to 20			
	Variation in time CO_2		% CO_2	+/- 0.2			
	Setting accuracy CO_2		% CO_2	0.1			
	Setting range O_2		% O_2	1 to 20			
	Setting accuracy O_2		% O_2	0.1			
Further data	Electrical load at 230/115 V, 50/60 Hz		approx. W	1100	1300	1500	1650

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Model sizes/Description			50	105	150	240
Packing data	Net weight	approx. kg	55	75	90	110
	Gross weight (packed in carton)	approx. kg	74	100	116	145
	Width	approx. mm	730	800		840
	Height	approx. mm	950	1030	1250	1360
	Depth	approx. mm	640	800		900
Order No. CO_2 Incubators			ICO50	ICO105	ICO150	ICO240

Options	50	105	150	240
Voltage 115 V, 50/60 Hz	X2			
Battery-buffered ControlCOCKPIT: Uninterrupted supply for the entire display unit (ControlCOCKPIT) and therefore complete documentation of all parameters even when there is a power failure. The CO_2 parameter is continously regulated	C2			
Two gas connections with quick release connectors for automatic switch-over of gas cylinders; incl. two CO_2 connection sets: hose with coupling and clamp	T1			
Electropolished interior	T2			
Active microprocessor control for humidifying and dehumidifying (40 - 97 % rh), incl. digital indication and auto-diagnostic system ensures even more rapid reaching of set humidity and very short recovery times while avoiding condensate formation. Humidity supply with water (only for demineralised water with a conductivity of 5 to 10 µS/cm and a pH value between 5and 7; from an external tank) by a self-priming pump; integral bacteria block by generating hot steam, dehumidifying via sterile filter (combination of options K7 and F7 for ICO50 not possible)	K7			
Control of oxygen concentration by N_2 inlet; adjustment range 1 % up to 20 % O_2 ; setting accuracy 0.1 % (requires option K7). Incl. N_2 connection set: hose with coupling and clamp	T6			
Peltier cooling unit enables a working temperature of +37 °C even at higher ambient temperatures of up to +35 °C	K5			
Capacitive humidity sensor for measuring and displaying the relative humidity	K6			
Entry port (silicone), 40 mm clear diameter, moisture tight, can be closed by silicone stopper, at the back, centre right; not available for ICO50 with active humidity control (option K7) or humidity display (option K6)	F7			
Heated inner door with partitioned glass doors; size105/150/240 has 2/3/4 partitioned glass doors	-	K4		
4 - 20 mA current loop interface — Temperature controller, actual value (0 to +70 °C = 4 - 20 mA)	V3			
4 - 20 mA current loop interface — Humidity controller, actual value (0 to 100 % rh = 4 - 20 mA) (requires option K7 or K6)	V7			
4 - 20 mA current loop interface — CO_2 controller, actual value (0 to 25 % CO2 = 4 - 20 mA)	V9			
4 - 20 mA current loop interface — O_2 controller, actual value (0 to 25 % O2 = 4 - 20 mA) (requires option T6)	V1			
Works calibration certificate for 5 %, 7 % and 10 % CO_2 (measured at +37 °C) special works calibration certificates upon request	D00106			
Works calibration certificate for one (freely selectable) temperature, humidity and CO_2 value according to customer specification (requires option K7)	D00131			
Works calibration certificate for one (freely selectable) temperature, humidity, CO_2 and O_2 value according to customer specification (requires option T6)	D00143			
Door hinged on the left	B8			
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)	H6			
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)	C3			
MobileALERT for up to 4 alarm notifications; notification by SMS. temperature and CO_2 alarm (standard), additionally humidity alarm (when equipped with option K7) and O_2 alarm (when equipped with option T6)	C4			
Door with lock and key (safety lock)	B6			

Accessories	50	105	150	240
Perforated stainless steel shelf	E35160	E37418		E35158
Water dish	B38737			
Subframe (622 mm high) adjustable in height (sizes 150/240: should not be used for 2 stacked units)	B33504	B33505		B33506
Subframe (130 mm high); sizes 150/240: only in combination with the corresponding stacking sets for stacked appliances	B33507	B33508		B33509
Subframe, on castors (height 120 mm; stainless steel, material 1.4301)	-			B43598
HEPA14-filter for chamber according to EN 1822, packed in sterile condition, incl. fixing unit	B49800			
3 HEPA14-filters (B49800) for chamber according to EN 1822, packed in sterile condition, incl. fixing unit	B39698			
CO_2 pressure reducing valve to DIN 8546, incl. gas cylinder monitor	E02087			
N_2 pressure reducing valve to DIN EN ISO 2503, incl. gas cylinder monitor (requires option T6)	E06162			
Central water supply, with filter cartridges for connection to the domestic water supply (requires option K7). Product information on demand	ZWVR6			
Central water supply, without filter cartridges for connection to the domestic water supply (only for demineralised water with a conductivity of 5 to 10 µS/cm and a pH value between 5 and 7, requires option K7). Product information on demand	ZWVR7			
Guarantee extension by 1 year	GA3Q5			
Celltron benchtop shaker (not subject to discount) - accessories upon request (only in combination with E06726)	-			E06724
Base plate with sticky stuff (not subject to discount) (only in combination with E06724)	-			E06726
USB-Ethernet adapter	E06192			

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Accessories	50	105	150	240
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	B33170			
Stacking set (4 pcs) for stacking of appliances of same size	B29744		-	
Stacking set (consisting of stacking corners, one connecting plate for the rear, two wall brackets) for stacking of two units of same size	-		B42114	-
Stacking set (consisting of stacking corners, one connecting plate for the rear, two wall brackets) for stacking of two units of same size (only in connection with subframe B33509 or B43598)	-			B48129
FDA conforming software AtmoCONTROL (FDA edition). 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. Respective IQ/OQ documents available in German and English language (without surcharge)	FDAQ1			
Integration of additional units (up to max. 31 units) into an already existent FDA-software licence	FDAQ2			
External measuring instrument with additional measuring head for temperature and humidity measurement. Product information on demand	B04714			
DAkkS calibration for one (freely selectable) temperature and humidity value according to method C (DKD-R 5-7) (requires option K7)	E48847			
DAkkS calibration for further temperature and humidity values according to method C (DKD-R 5-7) (requires option K7)	E48848			
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 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. 475 € for further CO_2 and temperature values	D38898			
IQ/OQ document with device-specific works test data for one free-selectable CO_2, humidity 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 (requires option K7). 605 € for further CO_2, humidity and temperature values	D38897			
On-site IQ/OQ for a freely selectable temperature and CO_2 value, including temperature distribution survey for 27 measuring points to DIN 12880: 2007-05 (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ102			
Extension of DLQ102 by an additional freely selectable temperature and CO_2 value (not subject to discount)	DLQ102A			
On-site IQ/OQ for a freely selectable temperature, humidity and CO_2 value, including temperature distribution survey for 27 measuring points to DIN 12880: 2007-05 (requires option K7) (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ103			
Extension of DLQ103 by an additional freely selectable temperature, humidity and CO_2 value (requires option K7) (not subject to discount)	DLQ103A			
On-site IQ/OQ for a freely selectable temperature, CO_2 and O_2 value, including temperature distribution survey for 27 measuring points to DIN 12880:2007-05 (requires option T6) (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ104			
Extension of DLQ104 by an additional freely selectable temperature, CO_2 and O_2 value (requires option T6) (not subject to discount)	DLQ104A			
On-site IQ/OQ for a freely selectable temperature, humidity, CO_2 and O_2 value, including temperature distribution survey for 27 measuring points to DIN 12880: 2007-05 (requires option K7 and T6) (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ105			
Extension of DLQ105 by an additional freely selectable temperature, humidity, CO_2 and O_2 value (requires option K7 and T6) (not subject to discount)	DLQ105A			
Individual on-site Performance Qualification (PQ)	DLQ200			
Maintenance ICO/ ICOmed active humidity - carrying out and documentation according to Memmert maintenance plan (requires option K7) (excluding travel costs, not subject to discount, GER, AT, FR only)	S00312			
Maintenance contract ICO/ ICOmed active humidity - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (requires option K7) (excluding travel costs, not subject to discount, GER, AT, FR only)	S00312J			
Maintenance ICO/ ICOmed passive humidity - carrying out and documentation according to Memmert maintenance plan (excluding travel costs, not subject to discount, GER, AT, FR only)	S00323			
Maintenance contract ICO/ ICOmed passive humidity - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (excluding travel costs, not subject to discount, GER, AT, FR only)	S00323J			
Calibration of one freely selectable temperature value (excluding travel costs, not subject to discount, GER, AT, FR only)	S00205			
Calibration of an additional temperature value (not subject to discount)	S00215			
Calibration of one freely selectable temperature and humidity value (requires Option K7) (excluding travel costs, not subject to discount, GER, AT, FR only)	S00207			
Calibration of an additional temperature and humidity value (requires option K7) (not subject to discount)	S00216			
Calibration of one freely selectable temperature and humidity value including CO_2 (requires option K7) (excluding travel costs, not subject to discount, GER, AT, FR only)	S00211			
Calibration of an additional temperature and humidity value including CO_2 (requires option K7) (not subject to discount)	S00217			

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

PERSONAL NOTES

CO_2-cooled incubator ICPeco
with TwinDISPLAY
AtmoCONTROL software

Model sizes: 110 / 260 / 450 / 750
-12 °C to +60 °C

COMPRESSOR-COOLED INCUBATOR ICPeco These environmentally-friendly cooled incubators are cooled with climate-friendly CO_2. Thanks to this refrigerant's excellent thermodynamic properties and the finely adjusted control technology, an ICPeco is both powerful and high-precision. Without critical temperature overshoots, it keeps the temperatures exactly at the setpoint.

Refrigerant CO_2 is climate-friendly

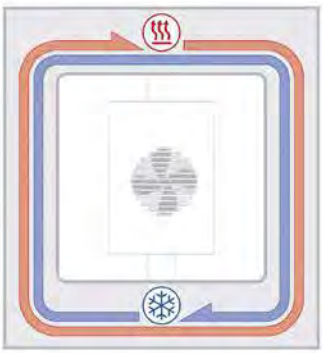
A CO_2-cooled incubator ICPeco is in every respect positive for the ecological balance of a laboratory. Legal restrictions for use are completely excluded in the future, as the refrigerant CO_2 (R744), unlike fluorine-based refrigerants, has no greenhouse gas reduction potential. It is a by-product of industrial processes, which is why far less energy is used for its manufacture than for synthetic, fluorinated refrigerants. R744 is neither flammable nor toxic and does not cause ozone depletion in the atmosphere.

Refrigerant CO_2 ensures better cooling performance

The contribution to process optimisation is also impressive. An ICPeco is extremely powerful. Compared to appliances with R134a as refrigerant, it has faster temperature change rates during cooling-down.

Completely enclosed working chamber

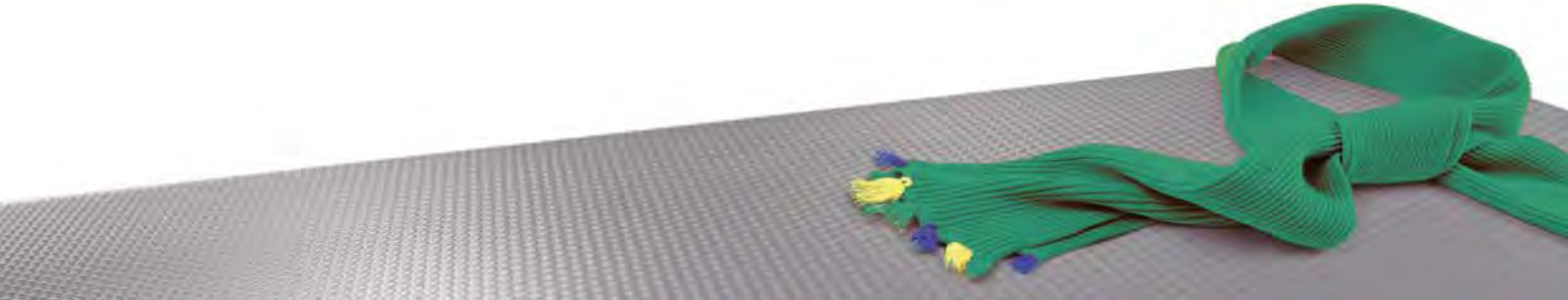
Cooling and heating units are situated outside the working chamber inside the air jacket temperature control system surrounding the entire chamber interior ensuring quick and precise temperature control. The motor-driven forced air circulation, adjustable in 10 % steps via the ControlCOCKPIT ensures optimum temperature distribution.



ICP air jacket temperature control system

Integrated energy saving function

The cooling unit works extremely energy-efficient because the heating is completely switched off in cooling mode. An intelligent DEFROST function enables defrosting as required.



COMPRESSOR-COOLED INCUBATORS ICPeco

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

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

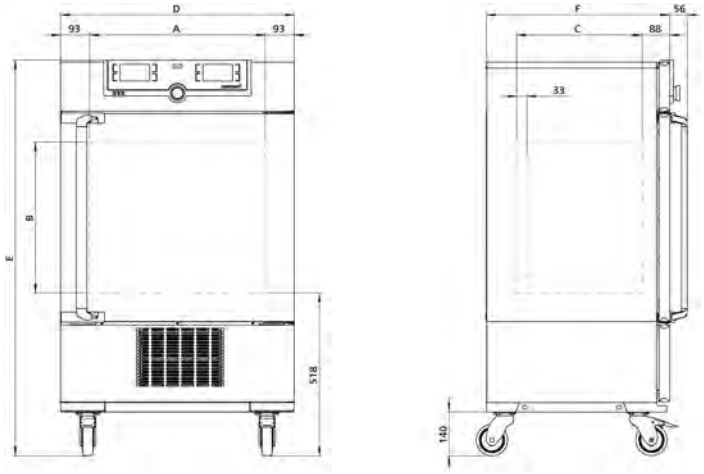
Interior: Stainless steel, material 1.4301 (ASTM 304)

Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour display) with touchscreen; inside glass door, outside fully insulated stainless steel door (from size 450 two leaves)

Connection: Mains cable with plug (German type)

Installation: Mounted on lockable castors

Interfaces: Ethernet LAN, USB



Model sizes/Description				110	260	450	750
Stainless steel interior	Volume		approx. l	108	256	449	749
	Width	(A)	mm	560	640	1040	
	Height	(B)	mm	480	800	720	1200
	Depth (less 33 mm for fan)	(C)	mm	400	500	600	
	Max. number of grids/shelves		number	5	9	8	14
	Max. loading per grid/shelf		kg	20		30	
	Max. loading of chamber		kg	150	200		
	Max. loading per slide-in drip tray		kg	3	4	8	
	Max. loading per bottom drip tray		kg	3	4	8	
Textured stainless steel exterior	Width	(D)	mm	745	824	1224	
	Height (with castors)	(E)	mm	1233	1552	1467	1950
	Depth (without door handle, depth of handle +56 mm)	(F)	mm	584	684	784	
Standard equipment	Stainless steel grids, electropolished		number	2			
	Standard works calibration certificate (measuring point chamber center)		°C	+10 and +37			
Temperature	Working temperature range (not suitable for long-term storing at sub-zero temperatures. During permanent operation, the inner glass door may ice over)		°C	-12 to +60			
	Setting temperature range		°C	-12 to +60			
	Setting accuracy		°C	0.1			
Further data	Electrical load at 230 V, 50 Hz		approx. W	1200			
Packing data	Net weight		approx. kg	118	162	222	254
	Gross weight (packed in carton)		approx. kg	146	219	287	324
	Width		approx. mm	880	930	1330	
	Height		approx. mm	1410	1760	1700	2150
	Depth		approx. mm	810	930	1050	
Order No. Compressor-Cooled Incubators				ICP110eco	ICP260eco	ICP450eco	ICP750eco

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Options		110	260	450	750
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 standard grids by reinforced grids		-		K1	
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 at the side, can be closed by flap and silicone stopper, standard positions	left centre/centre	F0			
	left centre/top	F1			
	right centre/top	-	F3		
Entry port (silicone), 40 mm clear diameter, moisture tight, can be closed by silicone stopper, at the back (please state location)		F7			
4 - 20 mA current loop interface	Temperature controller, actual value (-20 to +70 °C = 4 – 20 mA)	V3			
	Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 3) - price per sensor (-20 to +70 °C = 4 - 20 mA)	V6			
Fan speed monitoring with switching off the heating and with alarm in case of failure		V4			
Works calibration certificate for 3 temperatures: 0, +37, +60 °C		D00130			
Works calibration certificate for one (freely selectable) temperature value according to customer specification		D00109			
Door with lock and key (safety lock)		B6			
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)		H6			
Door-open-recognition		V5			
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)		C3			

Accessories	110	260	450	750
Stainless steel grid, electropolished	E20165	E28891	E20182	
Reinforced stainless steel grid, electropolished, max. loading 60 kg; from size 450 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	B00325	B29725	B00328	
Reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (requires option K1). Please consider max. loading of chamber	-		B32191	
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	E02073	E29726	E02075	
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (may affect the temperature distribution, only in connection with option K1)	-		B32763	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	B04359	B29722	B04362	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, only in connection with option K1)	-		B34055	
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	B33170			
FDA conforming software AtmoCONTROL (FDA edition). 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. Respective IQ/OQ documents available in German and English language (without surcharge)	FDAQ1			
Integration of additional units (up to max. 31 units) into an already existent FDA-software licence	FDAQ2			
DAkkS calibration for one free-selectable temperature value according to method C (DKD-R 5-7)	E39696			
DAkkS calibration for further temperature values according to method C (DKD-R 5-7)	E39697			
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 27 measuring points to DIN 12880:2007-05. PQ check list as support for validation by customer. 305 € for further temperature values	D00127			
On-site IQ/OQ for a freely selectable temperature value, including temperature distribution survey for 27 measuring points to DIN 12880: 2007-05 (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ100			
Extension of DLQ100 by an additional freely selectable temperature value (not subject to discount)	DLQ100A			
Individual on-site Performance Qualification (PQ)	DLQ200			
Maintenance ICP/ ICPeco - carrying out and documentation according to Memmert maintenance plan (excluding travel costs, not subject to discount, GER, AT, FR only)	S00315			
Maintenance contract ICP/ ICPeco - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (excluding travel costs, not subject to discount, GER, AT, FR only)	S00315J			
Calibration of one freely selectable temperature value (excluding travel costs, not subject to discount, GER, AT, FR only)	S00205			
Calibration of an additional temperature value (not subject to discount)	S00215			

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

COMPRESSOR-COOLED INCUBATORS ICP

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

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

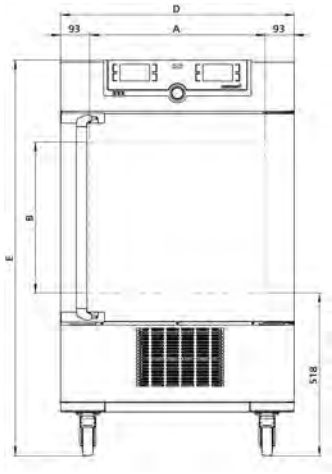
Interior: Stainless steel, material 1.4301 (ASTM 304)

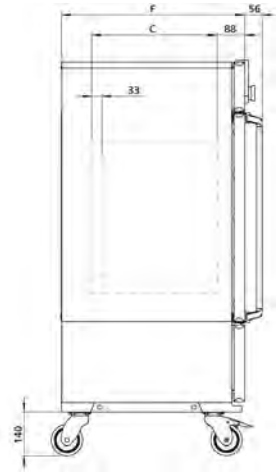
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour display) with touchscreen; inside glass door, outside fully insulated stainless steel door (from size 450 two leaves)

Connection: Mains cable with plug (German type)

Installation: Mounted on lockable castors

Interfaces: Ethernet LAN, USB





Model sizes/Description				110	260	450	750
Stainless steel interior	Volume		approx. l	108	256	449	749
	Width	(A)	mm	560	640	1040	
	Height	(B)	mm	480	800	720	1200
	Depth (less 33 mm for fan)	(C)	mm	400	500	600	
	Max. number of grids/shelves		number	5	9	8	14
	Max. loading per grid/shelf		kg	20		30	
	Max. loading of chamber		kg	150	200		
	Max. loading per slide-in drip tray		kg	3	4	8	
	Max. loading per bottom drip tray		kg	3	4	8	
Textured stainless steel exterior	Width	(D)	mm	745	824	1224	
	Height (with castors)	(E)	mm	1233	1552	1467	1950
	Depth (without door handle, depth of handle +56 mm)	(F)	mm	584	684	784	
Standard equipment	Stainless steel grids, electropolished		number	2			
	Standard works calibration certificate (measuring point chamber center)		°C	+10 and +37			
Temperature	Working temperature range (not suitable for long-term storing at sub-zero temperatures. During permanent operation, the inner glass door may ice over)		°C	-12 to +60			
	Setting temperature range		°C	-12 to +60			
	Setting accuracy		°C	0.1			
Further data	Electrical load at 230/115 V, 50/60 Hz		approx. W	1200			
Packing data	Net weight		approx. kg	113	157	217	249
	Gross weight (packed in carton)		approx. kg	141	214	282	319
	Width		approx. mm	880	930	1330	
	Height		approx. mm	1410	1760	1700	2150
	Depth		approx. mm	810	930	1050	
Order No. Compressor-Cooled Incubators				ICP110	ICP260	ICP450	ICP750

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Options		110	260	450	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 standard grids by reinforced grids		-		K1	
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 at the side, can be closed by flap and silicone stopper, standard positions	left centre/centre	F0			
	left centre/top	F1			
	right centre/top	-	F3		
Entry port (silicone), 40 mm clear diameter, moisture tight, can be closed by silicone stopper, at the back (please state location)		F7			
4 - 20 mA current loop interface	4 - 20 mA current loop interface (-20 to +70 °C = 4 to 20 mA)	V3			
	Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 3) - price per sensor (-20 to +70 °C = 4 - 20 mA)	V6			
Fan speed monitoring with switching off the heating and with alarm in case of failure		V4			
Works calibration certificate for 3 temperatures: 0, +37, +60 °C		D00130			
Works calibration certificate for one (freely selectable) temperature value according to customer specification		D00109			
Door with lock and key (safety lock)		B6			
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)		H6			
Door-open-recognition		V5			
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)		C3			

Accessories	110	260	450	750
Stainless steel grid, electropolished	E20165	E28891	E20182	
Reinforced stainless steel grid, electropolished, max. loading 60 kg; from size 450 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	B00325	B29725	B00328	
Reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (requires option K1). Please consider max. loading of chamber	-		B32191	
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	E02073	E29726	E02075	
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (may affect the temperature distribution, only in connection with option K1)	-		B32763	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	B04359	B29722	B04362	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, only in connection with option K1)	-		B34055	
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	B33170			
FDA conforming software AtmoCONTROL (FDA edition). 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. Respective IQ/OQ documents available in German and English language (without surcharge)	FDAQ1			
Integration of additional units (up to max. 31 units) into an already existent FDA-software licence	FDAQ2			
DAkkS calibration for one free-selectable temperature value according to method C (DKD-R 5-7)	E39696			
DAkkS calibration for further temperature values according to method C (DKD-R 5-7)	E39697			
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 27 measuring points to DIN 12880:2007-05. PQ check list as support for validation by customer. 305 € for further temperature values	D00127			
On-site IQ/OQ for a freely selectable temperature value, including temperature distribution survey for 27 measuring points to DIN 12880: 2007-05 (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ100			
Extension of DLQ100 by an additional freely selectable temperature value (not subject to discount)	DLQ100A			
Individual on-site Performance Qualification (PQ)	DLQ200			
Maintenance ICP/ ICPeco - carrying out and documentation according to Memmert maintenance plan (excluding travel costs, not subject to discount, GER, AT, FR only)	S00315			
Maintenance contract ICP/ ICPeco - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (excluding travel costs, not subject to discount, GER, AT, FR only)	S00315J			
Calibration of one freely selectable temperature value (excluding travel costs, not subject to discount, GER, AT, FR only)	S00205			
Calibration of an additional temperature value (not subject to discount)	S00215			

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Peltier-cooled incubator IPPeco
with SingleDISPLAY
Peltier-cooled incubator IPPecoplus
with TwinDISPLAY
with Advanced Peltier Technology
AtmoCONTROL software

Model sizes:
IPP: 30 / 55
IPPeco: 110 / 260 / 410 / 750 / 1060
0 °C to +70 °C

Model sizes:
IPPeco: 1400 / 2200
+15 °C to +60 °C

PELTIER-COOLED INCUBATOR IPPeco Heating and cooling seamlessly with one system thanks to Peltier technology. In this respect, cooled incubators IPPeco 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.

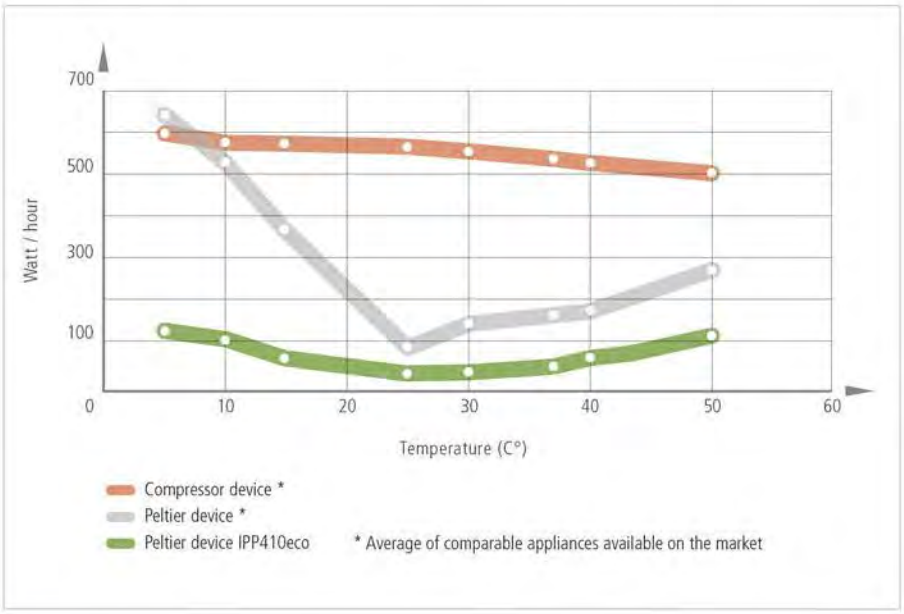
Smooth running

The fact that no compressor is required saves space and brings peace and quiet to the laboratory. As Peltier-cooled incubators IPPeco 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 HPPeco, which is also equipped with the Advanced 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 absolutely homogenous distribution of temperature.

Despite the significantly reduced energy consumption, the IPPeco's perfromance is impressive. Heating up, cooling down and recovering after opening the door occur fine-tuned and yet at top speed.



PELTIER-COOLED INCUBATORS IPPeco

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

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

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

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

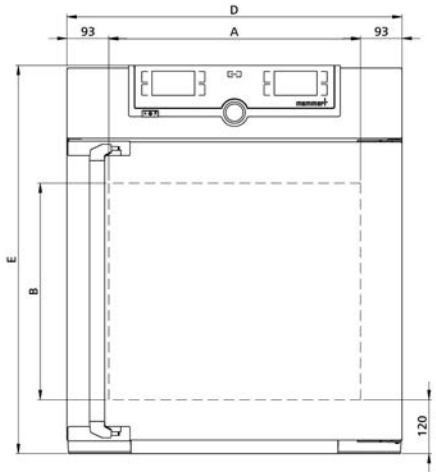
Double doors: Outside stainless steel, fully insulated, inside glass (size 1400/2200 stainless steel doors with glass sector, fully heated inner glass panes integrated in the full-sight glass door with 2-point locking – compression door lock). Sizes 750, 1060 and 1400 two leaves, size 2200 three leaves

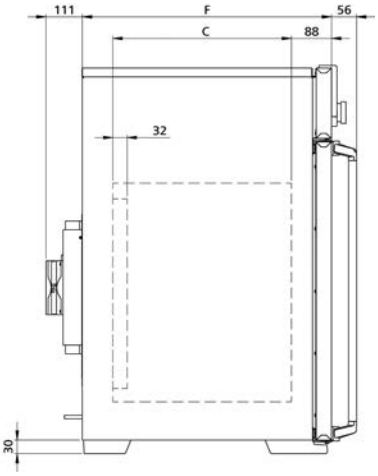
Connection: Mains cable with plug (German type)

Installation: 4 feet; sizes 410, 750 and 1060 mounted on lockable castors, 1400 and 2200 mounted on height-adjustable and lockable castors

Interfaces: Ethernet LAN, USB

USB: only for TwinDISPLAY





Model sizes/Description				30	55	110	260	410	750	1060	1400	2200
Stainless steel interior	Volume		approx. l	32	53	108	256	384	749	1060	1360	2140
	Width	(A)	mm	400		560	640		1040		1250	1972
	Height	(B)	mm	320	400	480	800	1200			1450	
	Depth (less 10 mm (sizes 30 and 55), less 32 mm (sizes 110 to 2200) for fan – Peltier)	(C)	mm	250	330	400	500		600	850	750	
	Max. number of grids/shelves		number	3	4	5	9	14			28	42
	Max. loading per grid/shelf		kg	20					30	20	30	
	Max. loading of chamber		kg	60	80	150	200				250	330
	Max. loading per slide-in drip tray		kg	1,5		3	4		8		-	
	Max. loading per bottom drip tray		kg	1,5		3	4		8		-	
Textured stainless steel exterior	Width	(D)	mm	585		745	824		1224		1435	2157
	Height (sizes 410, 750, 1060 with castors)	(E)	mm	704	784	864	1183	1720			1913	
	Depth (without door handle, depth of handle +56 mm)	(F)	mm	434	514	555	655		755	1005	905	
Standard equipment	Stainless steel grids, electropolished		number	1		2					4	6
	Standard works calibration certificate (measuring point chamber center)		°C	+10 and +37							+25 and +40	
Temperature	Working temperature range without light		°C	0 (at least 20 below ambient temperature) to +70							+15 (at least 10 below ambient temperature) to +60	
	Working temperature range with light		°C	-		+10 to +40				-		
	Setting temperature range		°C	0 to +70							+15 to +60	
	Setting accuracy		°C	0.1								
Further data	Electrical load at 230 V, 50/60 Hz		approx. W	140	275	320	600		1200			1800
	Electrical load at 115 V, 50/60 Hz		approx. W	140	275	320	600		1200			-
	Peltier elements in the rear		number	1			2		4			6
Packing data	Net weight		approx. kg	40	52	78	114	157	230	255	450	493
	Gross weight (packed in carton)		approx. kg	56	71	103	165	210	301	419	639	730
	Width		approx. mm	660	730	830	930		1330	1370	1560	2300
	Height		approx. mm	890	950	1050	1380	1930	1910	1970	2200	
	Depth		approx. mm	650	670	800	930		1050	1300	1190	
Order No. Peltier-Cooled Incubators				IPP30	IPP55	IPP110eco	IPP260eco	IPP410eco	IPP750eco	IPP1060eco	IPP1400eco	IPP2200eco
IPP = Peltier-Cooled Incubators plus = Model with TwinDISPLAY (IPP1400eco/ IPP1400ecoplus and IPP2200eco/ IPP2200ecoplus available from Q2 2021)				IPP30plus	IPP55plus	IPP110ecoplus	IPP260ecoplus	IPP410ecoplus	IPP750ecoplus	IPP1060ecoplus	IPP1400ecoplus	IPP2200ecoplus

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Options	30	55	110	260	410	750	1060	1400	2200
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 standard grids by reinforced grids (standard with 1060)	-					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 260/410/750, programme-controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature (only with TwinDISPLAY; not in combination with F6, F7, D8)	-		T7				-		
Light module cold white 6,500 K + warm white 2,700 K: LED light strips - 10 strips for model 110, 14 for model 260/410/750 - (6 resp. 8 alternating cold white light strips and 4 resp. 6 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; not in combination with F6, F7, D8)	-		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 260/410/750, programme-controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature (only with TwinDISPLAY; not in combination with F6, F7, D8)	-		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 at the side, 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, can be closed by flap (please state location) — left	F4								
right	F5								
rear	F6							-	
Entry port, 38 mm clear diameter, can be closed by flap, in special positions in the back wall (please state location; not in combination with T7, T8, T9)	F7							-	
Entry port (silicone), 40 mm clear diameter, moisture tight, can be closed by silicone stopper, standard position rear (not in combination with T7, T8, T9)	D8								
4 - 20 mA current loop interface (-10 to +80 °C = 4 - 20 mA) — Temperature controller, actual value	V3								
Works calibration certificate for 3 temperatures: +5, +37, +60 °C	D00129							-	
Works calibration certificate for one (freely selectable) temperature value according to customer specification	D00109								
Door with lock and key (safety lock) — One lock	B6							-	
Two locks (one each door)	-							B62	-
Three locks (one each door)	-								B63
Door hinged on the left	B8					-			
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)	H6								
Process-dependent programmable door lock (only for units with TwinDISPLAY) — One	D4							-	
Two (one each door)	-							D42	-
Three (one each door)	-								D43
Door-open-recognition (only for units with TwinDISPLAY) — One	V5							-	
Two (one each door)	-							V52	-
Three (one each door)	-								V53
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)	C3								
Castor frame (2-part), height 140 mm	R9					-			

Accessories	30	55	110	260	410	750	1060	1400	2200
Stainless steel grid, electropolished	E28884	E20164	E20165	E28891		E20182	B41251	B38955	
Reinforced stainless steel grid, electropolished, max. loading 60 kg; size 750 with guide bars and fixing screws (requires option K1). Please consider max. loading of chamber	-		E29767	E29766		B32190	B32550	-	
Perforated stainless steel shelf	B29727	B03916	B00325	B29725		B00328	-		
Reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (requires option K1). Please consider max. loading of chamber	-					B32191	B32549	-	
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	E02070	E02072	E02073	E29726		E02075	B32599	-	
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (may affect the temperature distribution, only in connection with option K1)	-					B32763	-		
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	B04356	B04358	B04359	B29722		B04362	B29769	-	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, only in connection with option K1)	-					B34055	-		

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Accessories	30	55	110	260	410	750	1060	1400	2200
Guarantee extension by 1 year	GA1Q5			GA2Q5			GA4Q5		
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). When reordering please specify serial number	B33172								
Set of height adjustable feet (4 pcs)	B29768				-				
Stacking set (4 pcs) for stacking of appliances of same size	B29744			-					
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), with air slots	B29728	B29730	B29734	B29738	B42116	B29742		-	
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots	B29729	B29731	B29735	B29739	B42117	B29743		-	
Subframe, adjustable in height (size 30 and 55: height 600 mm, size 110 and 260: height 500 mm)	B29745	B29747	B29749	B29751	-				
Subframe, on castors (size 30 and 55: height 660 mm, size 110: height 560 mm)	B29746	B29748	B29750	-					
Subframe, adjustable in height, height 130 mm, for example for units with fresh air filter	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). Respective IQ/OQ documents available in German and English language (without surcharge)	FDAQ1								
Integration of one additional unit (up to max. 31 units) into an already existent FDA-software licence (only for units with TwinDISPLAY)	FDAQ2								
External measuring instrument with sensors for daylight and UV-light. Product information on demand (models IPPecoplus/ IPPplus)	B04713						-		
External measuring instrument with additional measuring head for temperature and humidity measurement. Product information on demand (models IPPecoplus/ IPPplus)	B04714								
DAkkS calibration for one free-selectable temperature value according to method C (DKD-R 5-7)	E39696								
DAkkS calibration for further temperature values according to method C (DKD-R 5-7)	E39697								
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, 2200) and 26 measuring points (size 1400) according to DIN 12880:2007-05. PQ check list as support for validation by customer. 305 € for further temperature values	D00125	D00127							
On-site IQ/OQ for a freely selectable temperature value, including temperature distribution survey for 9 measuring points (size 30), 27 measuring points (sizes 55 - 1060, 2200) and 26 measuring points (size 1400) to DIN 12880: 2007-05 (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ100								
Extension of DLQ100 by an additional freely selectable temperature value (not subject to discount)	DLQ100A								
Individual on-site Performance Qualification (PQ)	DLQ200								
Maintenance IPP/ IPPeco - carrying out and documentation according to Memmert maintenance plan (excluding travel costs, not subject to discount, GER, AT, FR only)	S00317								
Maintenance contract IPP/ IPPeco - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (excluding travel costs, not subject to discount, GER, AT, FR only)	S00317J								
Calibration of one freely selectable temperature value (excluding travel costs, not subject to discount, GER, AT, FR only)	S00205								
Calibration of an additional temperature value (not subject to discount)	S00215								

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PERSONAL NOTES

MODEL VARIANTS

SingleDISPLAY ControlCOCKPIT with one TFT display	TwinDISPLAY ControlCOCKPIT with two TFT displays
AVAILABLE APPLIANCES	**AVAILABLE APPLIANCES**
UN / UF / IN / IF / IPPeco / IPP / UNm / UFm / INm / IFm / SN / SF / IFbw	**HPPeco / ICHeco / ICH / HCP / UNplus / UFplus / UF TS / UNpa / VO / INplus / IFplus / ICO / IPPecoplus / IPPplus / ICPeco / ICP / UNmplus / UFmplus / INmplus / IFmplus / SNplus / SFplus / ICOmed**
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 Control COCKPIT: All parameters of the SingleDISPLAY and device-specific parameters like relative humidity, illumination and 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, HPP110eco, IPP110ecoplus, ICPeco, ICP, ICHeco, ICH)
AtmoCONTROL software[1] 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[1] 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 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

1) As a manufacturer, Memmert GmbH + Co. KG clearly labels its devices, which are medical devices in the sense of the European legislation. The AtmoCONTROL software is not a medical device. All Memmert medical devices can be used for their purpose without the software AtmoCONTROL. AtmoCONTROL is only intended for reading the data logging in conjunction with Memmert GmbH + CO. KG medical devices.

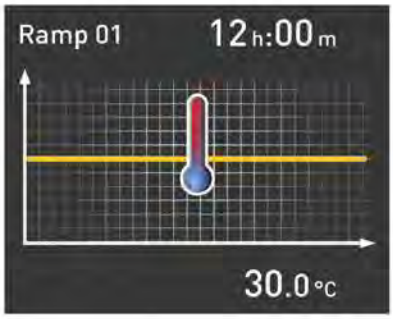
SOFTWARE AtmoCONTROL

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.

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 for appliances with 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 for appliances with 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

Device Modifications - Proven and Good

The perfect extension for your Memmert appliance

Our mission at Memmert is to provide you with the best possible solution for your individual application. With the increasing complexity of customer processes, a custom-fit modification of our appliances has many advantages for your application. Through modifications, process and set-up times can be significantly reduced or errors in the application can be completely ruled out by monitoring devices. Even small measures, such as individually adapted accessories, have a noticeable influence on the ergonomics and user-friendliness in the operation of the appliance.

You as a customer have the best ideas - and often already have a specific idea of how our products can be better used in your working environment.

Tell us about your thoughts and let us create an individual solution together with you! Please contact us and call us at +49 9122-925-0 or send us an email to sonderbau@memmert.com.

The Memmert customisation department team is looking forward to hearing from you!

Versatile modifications for our standard appliances

Mechanics

- Customised interior fittings
- Individual entry ports in all sizes and shapes
- Telescopic slide pull-outs for ergonomic loading

Electronics

- Extended parameter monitoring e.g. by means of additional measuring sensors
- Optical and acoustic process monitoring e.g. by means of a traffic light system

Software

- Additional interfaces for data evaluation
- Individual temperature, humidity and CO_2 parameters

Accessories

- Tailor-made subframe and stacking options
- Modified grids and shelves
- Individual air filters

Customised solutions for your requirements

Our expertise as a development partner in plant and project business
The Memmert customisation department has been active in the project business for over 20 years now and has proven itself in countless projects as a strong and reliable partner. The experts in customisation benefit from two aspects: Access to the complete capacities of an ultra-modern and specialised production line, as well as the entire technical know-how of the Memmert company in designing climate and temperature control appliances. Combined with the experience of our project managers, the Memmert customisation department is also able to find a solution for the most complex requirements.

Special sizes
Does your product not fit into a standard unit? We build appliances to measure! Whether you need more volume in the interior or there is not enough space for installation at the installation location, we have the expertise to design your appliance individually. Ask us!

Process and plant integration
Integrate our technology seamlessly into your plant or your work organisation. We will find the right solution together for your process integration:

- Preparation for integration into your plant
- Integration of your processes into our appliances
- Inclusion of customer-specific installations
- Interface for semi-automatic assembly

Project business
Are you a project developer with ideas for innovative products and looking for a strategic cooperation? Take advantage of our know-how and manufacturing capacities for your project. Our customisation department will be pleased to hear from you!

memmert

CLIMATE CHAMBERS

- CONSTANT CLIMATE CHAMBERS HPPeco
- HUMIDITY CHAMBERS HCP
- CLIMATE CHAMBERS ICHeco / ICH
- ENVIRONMENTAL TEST CHAMBERS CTC / TTC

HEATING AND DRYING OVENS

- UNIVERSAL OVENS U
- PASS-THROUGH OVENS UF TS
- PARAFFIN OVENS UNpa
- VACUUM OVENS VO

INCUBATORS

- INCUBATORS I
- CO_2 INCUBATORS ICO
- COMPRESSOR-COOLED INCUBATORS ICPeco / ICP
- PELTIER-COOLED INCUBATORS IPPeco

MEDICAL DEVICES

- UNIVERSAL OVENS Um
- INCUBATORS Im
- STERILISERS S
- CO_2 INCUBATORS ICOmed
- BLANKET WARMERS IFbw

WATERBATHS

- WATERBATHS WTB

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