memmert

Experts in Thermostatics

Incubators

PERFECTLY COORDINATED. PERFECTLY CONTROLLED.

INCUBATOR I

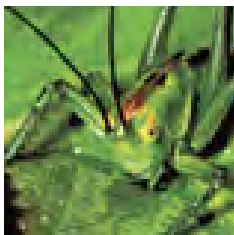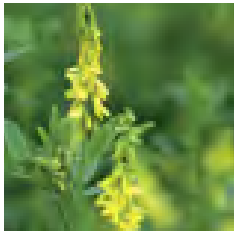CO_2 INCUBATOR ICO

CO_2 INCUBATOR INCOmed

COMPRESSOR-COOLED INCUBATOR ICP

PELTIER-COOLED INCUBATOR IPP

COOLED STORAGE INCUBATOR IPS

100% ATMOSAFE. MADE IN GERMANY.

www.memmert.com | www.atmosafe.net

Stable.
Safe.
Sensitive.

Memmert incubators for microbiology.
Energy efficient, precise, 100% AtmoSAFE.

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. Each individual Memmert incubator
is 100% AtmoSAFE.

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
+30 °C to +80 °C

INCUBATOR I Memmert incubators I are at home in the world of research, medicine, pharmaceutics and food technology. Organic chamber loads require gentle heating. For this reason, 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 IN with natural convection or IF 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 %.
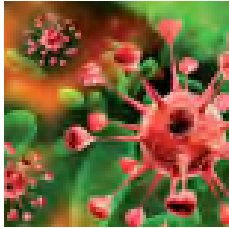
Sterilisation

The chamber of the incubators INplus and 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.

Pre-warmed air entering working chamber

Temperature [°C]

Pre-heating chamber below the working chamber

Air supply from outside
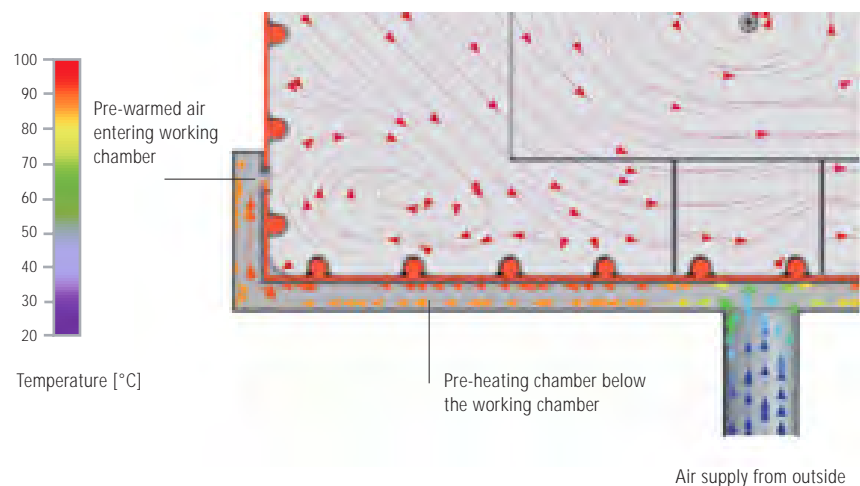
✚ Intended use as a medical device:

The intended use of incubators INplus/IFplus is warming of rinsing solutions and infusions. IF (with extended overtemperature protection – option A6) and IFplus are also accredited for warming non-sterile cloths and blankets.

INCUBATORS I

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:

Standard equipment

Interior:	Stainless steel, material 1.4301 (ASTM 304) with all-round deep-drawn ribs to integrate the large-area heating with ceramic-metal sheath
Internals:	Stainless steel grids (size 30 and 55: 1, size 75 to 750: 2)
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 adjusted airflap
Connection:	Mains cable with plug (German type)
Installation:	4 feet; size 450 and 750 mounted on lockable castors
Interfaces:	Ethernet LAN USB (only TwinDISPLAY)

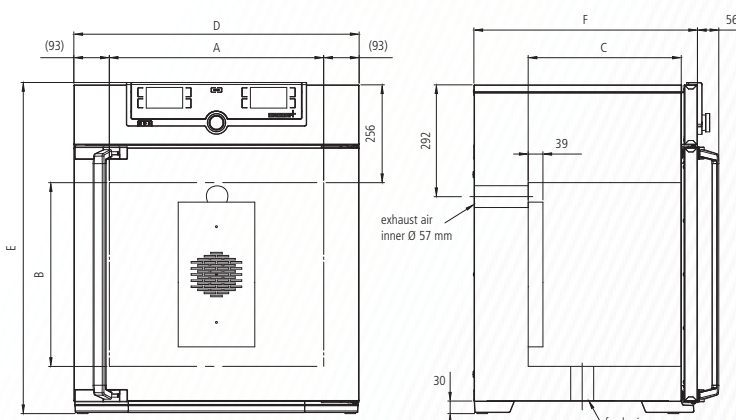| Model sizes/Description				30	55	75	110	160	260	450	750
Stainless steel interior	Volume		approx. l	32	53	74	108	161	256	449	749
	Width	(A)	mm	400	400	400	560	560	640	1040	1040
	Height	(B)	mm	320	400	560	480	720	800	720	1200
	Depth (less 39 mm for fan)	(C)	mm	250	330	330	400	400	500	600	600
	Stainless steel grids (standard equipment)		number	1		2					
	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		
Textured stainless steel exterior	Width	(D)	mm	585	585	585	745	745	824	1224	1224
	Height (size 450, 750 with castors)	(E)	mm	704	784	944	864	1104	1183	1247	1726
	Depth (without door handle), door handle + 56 mm	(F)	mm	434	514	514	584	584	684	784	784
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
	Working-temperature range		°C	min. 5 (IN/INplus) 10 (IF/IFplus) above ambient temperature up to +80							
	Setting temperature range		°C	+20 to +80							
	Setting accuracy		°C	0.1							
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. cm	66	73	73	83	83	93	133	133
	Height		approx. cm	89	95	113	105	130	138	144	191
	Depth		approx. cm	65	67	67	80	80	93	105	105
Order No. Incubators I = Incubator N = Natural convection F = Forced convection plus = Model with TwinDISPLAY				IN30	IN55	IN75	IN110	IN160	IN260	IN450	IN750
				IN30plus	IN55plus	IN75plus	IN110plus	IN160plus	IN260plus	IN450plus	IN750plus
				IF30	IF55	IF75	IF110	IF160	IF260	IF450	IF750
				IF30plus	IF55plus	IF75plus	IF110plus	IF160plus	IF260plus	IF450plus	IF750plus

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 IN/IF				A6				
Chamber modification for the appplication 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	
Interior lighting for observing the load				R0				
Interior socket can only be ordered with limited temperature range up to 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)				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 left centre top right centre/centre right centre top				F0 F1 F2 F3				
Entry port, 23 mm clear diameter, can be closed by flap, in special positions (please, state location) left right rear				F4 F5 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)				F8				
Entry port, 100 mm clear diameter, can be closed by flap, in special positions in the back wall (please, state location)				F9				
4 – 20 mA current loop interface (0 to 90 °C ≙ 4 to 20 mA) Temperature controller, actual value Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY)				V3 V6				
Fan speed monitoring with switching off the heating and with alarm in case of failure optional only for IFplus				V4				
Works calibration certificate for 3 temperatures: +37 °C, +52 °C, +70 °C Standard works calibration certificate (measuring point chamber centre) at +37 °C				D00126				

Accessories	30	55	75	110	160	260	450	750
Stainless steel grid (standard equipment)	E28884	E20164		E20165		E28891	E20182	
Additional reinforced stainless steel grid, 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	
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	
Wall bracket for wall mounting	B29755	B29756	B29757	B29758	B29759		–	
Guarantee extension by 1 year			GA1Q5				GA2Q5	

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

CO_2 Incubator ICO with TwinDISPLAY
Software AtmoCONTROL

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).
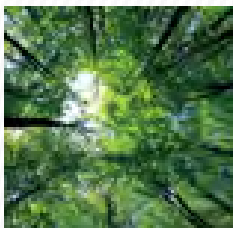
Comfort options for every application

These are only a few of the numerous features that don't let anything open to be desired:

- Two gas connections with quick release connectors for automatic switch-over of gas cylinders

- Electropolished working chamber

- Electronic control for active humidification and dehumidification (40 to 97 % rh)

- Control of oxygen concentration by introducing nitrogen, adjustment range from 1 % to 20 % O_2

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.
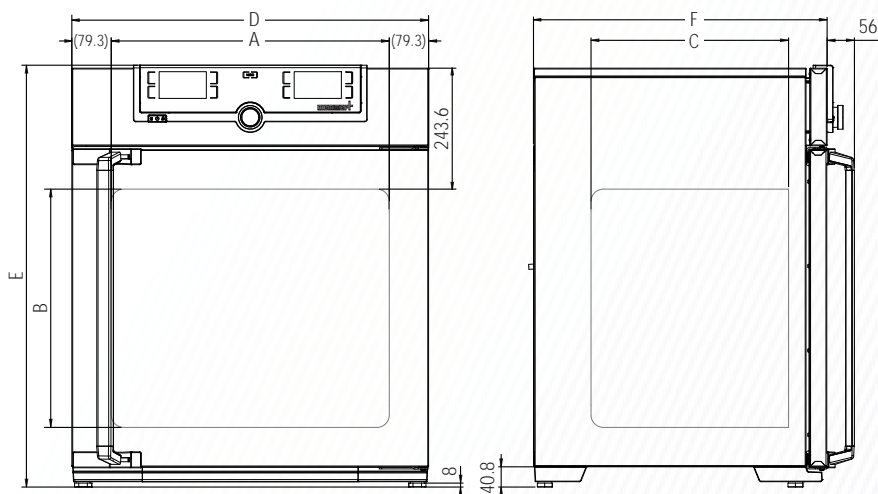
CO$_2$ INCUBATORS ICO

with standard sterilisation programme (Humidity and CO$_2$ sensor sterilised inside the CO$_2$ incubator)

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

CE

Standard equipment

Interior:	Stainless steel, material 1.4301 (ASTM 304), deep-drawn, seamlessly welded
Internals:	Perforated stainless steel shelves size 50: 1, sizes 105 – 240: 2; and 1 stainless steel water dish (all sizes)
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
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	560	600
	Height	(B)	mm	425	480	700	810
	Depth (less 35 mm for fan)	(C)	mm	330	400	400	500
	Stainless steel shelves, perforated (standard equipment)		number	1	2	2	2
	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
Stainless steel exterior	Width	(D)	mm	559	719	719	759
	Height (variable through adjustable feet)	(E)	mm	791	846	1066	1176
	Depth (without door handle, depth of door handle 56 mm)	(F)	mm	521	591	591	691
	Fully insulated stainless steel door			□	□	□	□
	Additional heated inner glass door			□	□	□	□
Further data	Electrical load at 230/115 V, 50/60 Hz		approx. W	1000	1500	2000	2000
	Working-temperature range Standard sterilisation programme: 60 minutes at 180 °C (without removing the sensors)		°C	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 (to DIN 12880:2007-05)		K	+/- 0.1			
	Temperature variation in chamber at +37 °C (to DIN 12880:2007-05)		K	+/- 0.3			
	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		% rh	40 to 97 and rh-Off			
	Setting accuracy humidity		% rh	0.5			
	Digital electronic CO$_2$ control with dual beam NDIR system, with auto-diagnostic system and acoustic fault indication, barometric pressure compensation			□	□	□	□
	Adjustment 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			
	Adjustment range O$_2$		% O$_2$	1 to 20			
	Setting accuracy O$_2$		% O$_2$	0.1			
Standard accessories	Stainless steel water dish			1	1	1	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$_2$ and 90 % rh (requires option K7); standard equipment for units with active humidity control				□		
	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				□		

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. cm	73	80	80	84
	Height	approx. cm	95	103	125	136
	Depth	approx. cm	64	80	80	90
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 continuously regulated		C2		
Two gas connections with quick release connectors for automatic switch-over of gas cylinders		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 distilled water (from an external tank) by a self-priming pump; integral bacteria block by generating hotsteam, dehumidifying via sterile filter		K7		
Control of oxygen concentration by N$_2$ inlet; adjustment range 1 % up to 20 % O$_2$; setting accuracy 0.1 %. (requires option K7)		T6		
Peltier cooling unit enables a working temperature of 37 °C even at higher ambient temperatures of up to 35 °C (available as of the fourth quarter of 2016)		K5		
Capacitive humidity sensor for measuring and displaying the relative humidity		K6		
Entry port (silicone), 40 mm clear diameter, for introducing connections, 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		
Inner door with partitioned glass doors (available as of the fourth quarter of 2016)	–	K4		
4 – 20 mA current loop interface Temperature controller, actual value (0 to +70 °C ≙ 4 to 20 mA) Humidity controller, actual value (0 – 100 % rh ≙ 4 – 20 mA) CO$_2$ controller, actual value (0 – 25 % CO$_2$ ≙ 4 – 20 mA) O$_2$ controller, actual value (0 – 25 % O$_2$ ≙ 4 – 20 mA)		V3 V7 V9 V1		
Works calibration certificate for 5 %, 7 % and 10 % CO$_2$ (measured at +37 °C) special works calibration certificates upon request		D00106		
Start-up of ICO incubators and brief training (D, A, CH only), through Memmert service		K9		

Accessories	50	105	150	240
Additional perforated stainless steel shelf	E35160	E37418		E35158
Additional water dish	B38737	B38000		
Subframe (622 mm high) adjustable in height	B33504	B33505		B33506
Subframe (130 mm high)	B33507	B33508		B33509
HEPA-filter for chamber (filter class E11) according to EN 1822, packed in sterile condition, incl. fixing unit		B38739		
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		
CO$_2$ connection set, hose with coupling and clamp		B03881		
Central water supply, with filter cartridges for connection to the domestic water supply, only in combination with option K7. Product information on demand		ZWVR6		
Central water supply, without filter cartridges for connection to the domestic water supply (only for demineralised water in accordance with VDE 0510/DIN EN 50272), only in combination with option K7. Product information on demand		ZWVR7		
Guarantee extension by 1 year		GA3Q5		
Celltron benchtop shaker (accessories upon request)	–	E06724		

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Aug-2016

CO_2 Incubator INCOmed
"Celsius" standard software

Model sizes: 108 / 153 / 246
+20 °C to +50 °C
Humidity 88 to 97 % rh
CO_2 content 0 up to 10 %
Humidity 40 to 97 % rh (humidity module)
CO_2 content 0 up to 20 % (CO_2 module)
O_2 content between 1 and 20 % (O_2 module)

CO_2 INCUBATOR INCOmed For cell cultivation and especially for in-vitro fertilisation, the precision and reliability of CO_2 incubators are of crucial importance. During cultivation, the slightest deviation in the CO_2 atmosphere, temperature or humidity can influence cell development. For this reason, Memmert has subjected its CO_2 incubators to a comprehensive evaluation process for their recognition as medical devices. All models INCOmed are classified as medical products of class IIa. The interior chamber including all installations and sensors can be sterilised at +160 °C in a 4-hour programme.
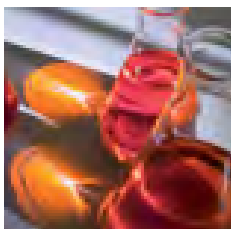
Customised models for every application

8 additional modules for every application

Put together your own customised INCOmed! *

- **COMFORT MODULE:** Two gas connections with quick release connectors, automatic switch-over between gas cylinders

- **HYGIENE MODULE:** Electropolished, seamless laser-welded chamber

- **COMMUNICATION MODULE:** USB interface, "Celsius" standard software for protocol logging, ring memory, printer interface

- **CO_2 MODULE:** Extended CO_2 range from 0 to 20 %

- **O_2 MODULE:** Control of oxygen concentration by introducing nitrogen, adjustment range from 1 % to 20 % O_2

- **PREMIUM MODULE:** Includes comfort, hygiene, communication and CO_2 module

- **HUMIDITY MODULE:** Active microprocessor humidification and dehumidification control (40 – 97 % rh)

- **IVF-MODULE:** Patented, consisting of 8 slide-in units, a total of 24 special racks with indentations for 24 Petri dishes resp. 48 Petri dishes, 4 racks for 3 special media tubes each

* combination of comfort module or Premium module and O_2 module not possible

IVF module for model INCO108med

In order to keep vaporisation, condensation and recovery times at a minimum during in-vitro ferti-lisation, the Petri dishes are cultivated in separate slide-in units. The slide-in units in the optional IVF module can be pulled out easily and with low vibration and are equipped with a pull-out lock.

Homogeneity in the chamber

Heating the working chamber from all six sides along with the electronic humidity control system and turbulence-free ventilation is decisive for temperature and humidity distribution. An aluminium thermal conduction layer supports homogeneity in the chamber and serves as a heat accumulator if there is a temporary power failure.

Short recovery times thanks to active humidity control

The INCOmed standard model features a humidity limiting system to reduce water tray generated maximum relative humidity inside the chamber from 97 % down to 88 %. To achieve an increase in usable volume, optimum hygiene and short recovery times after opening the door, the optional humidity module, an active humidification system with an adjustment range of 40 % to 97 % rh can be integrated, introducing sterile hot steam into the air stream.

CO$_2$ INCUBATORS INCOmed

with automatic sterilisation (with all interior fittings incl. humidity and CO$_2$ sensor sterilised inside the CO$_2$ incubator!)
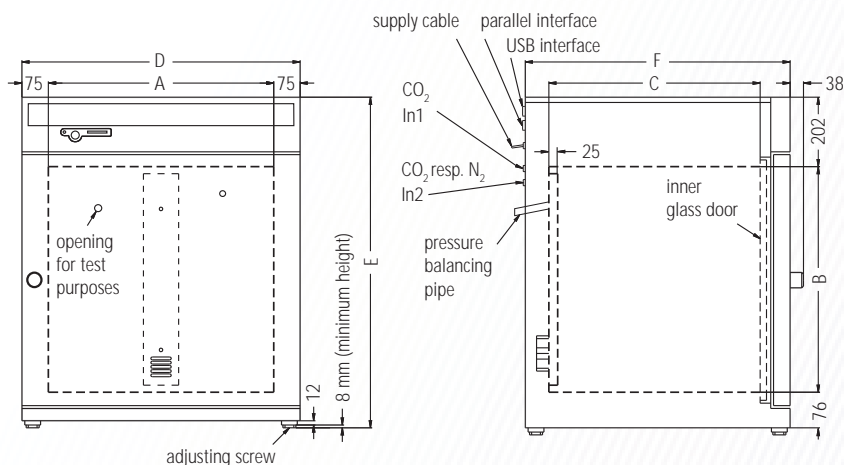
according to DIN 12880:2007-05, EN 61010-1 (IEC 61010-1), 61010-2-010

CE PG
0197

Standard equipment

Interior:	Stainless steel, material 1.4301 (ASTM 304), deep-drawn
Internals:	Perforated stainless steel shelves (size 108: 2, sizes 153/246: 3); stainless steel water dishes (sizes 108/153: 1 full width, size 246: 2 half width)
Housing:	Textured stainless steel, rear zinc-plated steel, aesthetic functional glass-stainless steel operating panel with multifunction display and input module; fully insulated heated stainless steel door and inner glass door
Connection:	Mains cable with plug (German type)
Installation:	4 adjustable feet
Interfaces:	Optional with Communication resp. Premium module

printer interface   USB   optional   Ethernet
                                            LAN

Model sizes/Description				108	153	246
Stainless steel interior	Volume		approx. l	108	153	246
	Width	(A)	mm	560	480	640
	Height	(B)	mm	480	640	640
	Depth (less 25 mm for fan)	(C)	mm	400	500	600
	Provision for grids or shelves half width / full width		number	– / 4	– / 6	2 x 6 / 6
Stainless steel exterior	Width	(D)	mm	710	630	790
	Height (variable through adjustable feet)	(E)	mm	778	938	938
	Depth (without door handle, depth of door handle 38 mm)	(F)	mm	550	650	750
	Fully insulated, heated stainless steel door				□	
	Extra internal glass door				□	
Ventilation	Uniform atmosphere and temperature distribution through enclosed non-turbulent ventilation system, fully covered by the sterilisation process				□	
Temperature	Electronic microprocessor temperature controller with Pt100 and auto-diagnostic system				□	
	Temperature sensors Pt100 Class A in 4-wire circuit for uninterrupted operation on failure of one Pt100 with warning indication				double	
	Temperature range (during sterilisation the temperature is fixed at +160 °C – set value)		°C		+20 (at least 8 above ambient) to +50	
	Temperature fluctuations with time (to DIN 12880:2007-05)		K		≤ ± 0.1	
	Temperature variation in chamber at +37 °C (to DIN 12880:2007-05)		K		≤ ± 0.3	
Sterilisation	STERICard for automatic chamber sterilisation cycle 4 h at +160 °C (not for sterilising the load)				□	
CO$_2$	Digital electronic CO$_2$ control with autozero, NDIR system, with auto-diagnostic system and acoustic fault indication, barometric pressure compensation				□	
	Setting accuracy / Adjustment range		% CO$_2$		0.1 / 0 to 10	
Humidity	Capacitive humidity sensor (sterilisable)				□	
	Standard water dishes		number		1	2
	Adjustable humidity limit control (88 – 97 %) incl. digital indication and auto-diagnostic system with visual and acoustic fault indication (air supply via sterile filter) ensures rapid reaching of set humidity and short recovery times while avoiding condensate formation				□	
Monitor	Microprocessor temperature monitor acting as overtemperature protection (protection class 3.1), with Pt100 incorporating fault diagnostics with visual and audible alarm				□	
	Digital over- and undertemperature monitor				□	
	Temperature monitoring band automatically linked to the setpoint (ASF)				□	
	Relay for reliable heating cut-off in case of fault				□	
	Mechanical temperature limiter (TB)				□	
	Audible alarm: Over- and undertemperature, over-CO$_2$ and empty gas cylinder, open door, underhumidity and empty water tank (with optional Humidity module)				□	

Model sizes/Description			108	153	246
Timer functions	Real-time/weekly programmer with group function (e.g. Monday – Friday)			□	
Setup	Calibration (no separate PC required), Temperature: 3-point calibration on controller, CO$_2$: 3-point calibration at 5 %, 7 % and 10 %, Auto-zero-function of NDIR CO$_2$-sensor after every sterilisation and cyclically every 24 h, Humidity: 2-point calibration at 20 % and 90 %			□	
	Setting of language for dialogue and display DE / EN / ES / FR / IT			□	
Further data	Electrical load at 230 V, 50/60 Hz	approx. W	1000	1500	2000
Standard accessories	Perforated stainless steel shelves (full width)	number	2	3	
	Stainless steel water dishes, 40 mm high	number	1 (full width)		2 (half width)
	Works calibration certificate (measuring point chamber centre at +37 °C)			□	
Packing data	Net weight/Gross weight (packed in carton)	approx. kg	70/95	80/106	110/132
	Width/Height/Depth	approx. cm	83/105/80	83/130/80	93/114/93
Order No. CO$_2$ Incubators			**INC108med**	**INC153med**	**INC246med**

Options	108	153	246
Comfort module: two gas connections with quick release connectors, automatic switch-over of gas cylinders		T1	
Hygiene module: electropolished interior, seamlessly welded by laser		T2	
Communication module: USB and printer interface, "Celsius" standard software for protocol logging, ring memory		T3	
CO$_2$ module: extended CO$_2$ range from 0 to 20 %		T4	
Premium module: includes Comfort, Hygiene, Communication and CO$_2$ module		T5	
Humidity module: 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; recommended for applications with set O$_2$ values of less than 10 %. Humidity supply with distilled water (from an external tank) by a self-priming pump (standard humidity limit control and water dishes are omitted)		K7	
O$_2$ module: control of oxygen concentration by N$_2$ inlet; adjustment range 1 % up to 20 % O$_2$; setting accuracy 0.1 %. (Combination of comfort module or Premium module and O$_2$ module not possible). For applications with a set O$_2$-value of less than 10 %, the humidity module is highly recommended		T6	
IVF-module: patented, consisting of 8 slide-in units, a total of 24 special racks with indentations for 24 Petri dishes (60 mm diam.) resp. 48 Petri dishes (35 mm diam.), 4 racks with indentations for 3 special media tubes each; racks with indentations for 4-well dishes on demand; only for INCO108med with the options T3, K7 and F7; works calibration certificate (measuring point chamber centre) at +37 °C, 5 %, 6 % and 7 % CO$_2$ as well as 90 % rh; 5 % O$_2$ for IVF unit equipped with option T6	C1		–
Entry port (silicone), 40 mm clear diameter, for introducing connections, moisture tight, can be closed by silicone stopper, at the back, either centre right or centre left (please, state location)		F7	
4-part partitioning of interior with 4-part gas baffle (replacement of 3 full-width shelves by 6 half-width shelves)	–		K4
Voltage 115 V, 50/60 Hz		X2	
Door hinged on the left		B8	
Stacking version for 2 units of equal size (bottom unit modification)		G3	
Potential-free contact (24 V/2 A) with socket to NAMUR NE 28 for external monitoring (setpoint temperature / CO$_2$ reached)		H5	
Works calibration certificate for 5 %, 7 % and 10 % CO$_2$ (measured at +37 °C)		D00106	
Start-up of INCOmed incubators and brief training (D, A, CH only), through Memmert service		K9	

Accessories	108	153	246
Additional perforated stainless steel shelf, full width	B00325	B00321	B03813
Additional perforated stainless steel shelf, half width	–		B02742
Additional stainless steel grid, full width	E20165	E20166	E29766
Additional water dish (half width model 246)	B02787	B02784	B02786
Subframe (622 mm high)	B02792	B02732	B02793
Subframe (130 mm high for 2 stacked incubators)	B02794	B02740	B02795
HEPA-filter for chamber according to EN 1822, packed in sterile condition, incl. fixing unit		B04459	
STERICard (additional or as replacement) for automatic chamber sterilisation cycle (not for sterilising load)		E04337	
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 for O$_2$ module		E06162	
CO$_2$ connection set, hose with coupling and clamp		B03881	
Central water supply, with filter cartridges for connection to the domestic water supply, only in combination with humidity module. Product information on demand		ZWVR6	
Central water supply, without filter cartridges for connection to the domestic water supply (only for demineralised water in accordance with VDE 0510/DIN EN 50272), only in combination with humidity module. Product information on demand		ZWVR7	
Guarantee extension by 1 year		GA2Q5	
Celltron benchtop shaker (accessories upon request)		E06724	

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Aug-2016

Compressor-cooled incubator ICP
with TwinDISPLAY
AtmoCONTROL software

Model size: 55
0 °C to +60 °C
Model sizes: 110 / 260 / 450 / 750
-12 °C to +60 °C

COMPRESSOR-COOLED INCUBATOR ICP Ideal at temperatures around zero and below! If rapid and precise alternation between heating up and cooling down times in ramp operation is required, cooled incubators with compressor cooling prove to be in peak form – yet still work extraordinarily quiet. Due to the finely adjusted control technology, temperatures exactly reach the set point values without energy-intensive bursts of power.

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.
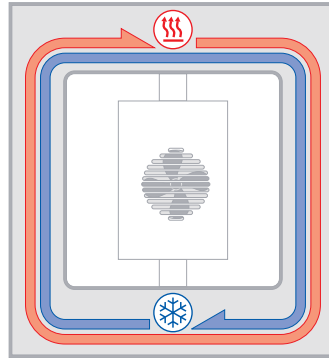
ICP air jacket temperature control system

Integrated energy saving function

The cooling unit works extremely energy-efficiently, as there is no continuous heating against cooling. An intelligent DEFROST function enables defrosting as required.
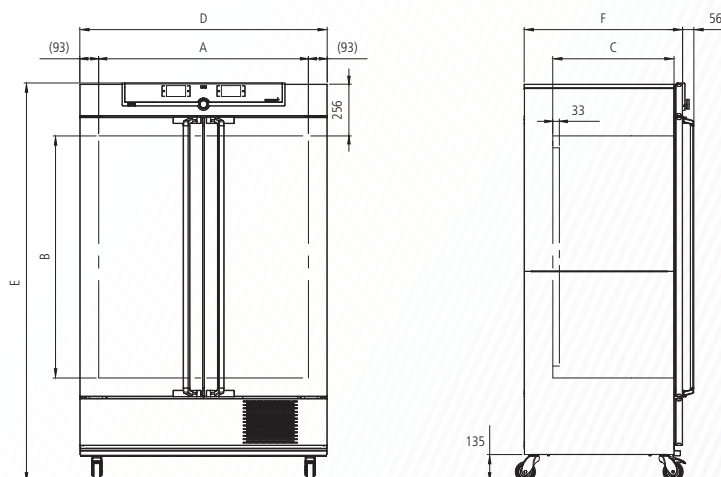
COMPRESSOR-COOLED INCUBATORS ICP

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

CE ®

Standard equipment

Interior:	Stainless steel, material 1.4301 (ASTM 304)
Internals:	Stainless steel grids (size 55: 1 grid, sizes 110 to 750: 2 grids)
Housing:	Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour display) with touchscreen; 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				55	110	260	450	750
Stainless steel interior	Volume		approx. l	53	108	256	449	749
	Width	(A)	mm	400	560	640	1040	1040
	Height	(B)	mm	400	480	800	720	1200
	Depth (less 33 mm for fan)	(C)	mm	330	400	500	600	600
	Stainless steel grids (standard equipment)		number	1	2			
	Max. number of grids/shelves		number	4	5	9	8	14
	Max. loading per grid/shelf		kg		20		30	
	Max. loading of chamber		kg	80	150	200		
Textured stainless steel exterior	Width	(D)	mm	585	745	824	1224	1224
	Height (with castors)	(E)	mm	1153	1233	1552	1613	1950
	Depth (without door handle), door handle + 56 mm	(F)	mm	514	584	684	784	784
Further data	Electrical load at 230/115 V, 50/60 Hz		approx. W	1200				
	Working-temperature range (not suitable for long-term storing at sub-zero temperatures. During permanent operation, the glass door may ice over)		°C	-12 to +60 (ICP 55 0 to +60)				
	Setting temperature range		°C	-12 to +60 (ICP 55 -5 to +60)				
	Setting accuracy		°C	0.1				
Packing data	Net weight		approx. kg	89	113	157	217	249
	Gross weight (packed in carton)		approx. kg	111	141	214	282	319
	Width		approx. cm	76	88	93	133	133
	Height		approx. cm	133	141	176	170	215
	Depth		approx. cm	68	81	93	105	105
Order No. Compressor-Cooled Incubators				**ICP55**	**ICP110**	**ICP260**	**ICP450**	**ICP750**

Options	55	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 2 standard grids by 2 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, standard positions left centre/centre left centre top right centre top			F0 F1 F3		
right centre top (– for 55)	–			F3	
Entry port (silicone), 40 mm clear diameter, for introducing connections, moisture tight, can be closed by silicone stopper, at the back (please, state location)			F7		
4 – 20 mA current loop interface (-20 to +70 °C ≙ 4 to 20 mA) Temperature controller, actual value Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 3 TwinDISPLAY)			V3 V6		
Fan speed monitoring with switching off the heating and with alarm in case of failure			V4		
Works calibration certificate for 3 temperatures: 0 °C, +37 °C, +60 °C Standard works calibration certificate (measuring point chamber centre) at +10 °C and +37 °C			D00130		

Accessories	55	110	260	450	750
Stainless steel grid (standard equipment)	E20164	E20165	E28891	E20182	
Additional reinforced stainless steel grid, 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	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	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	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	

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

Apr-2016

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 %

Compressor technology

Peltier technology
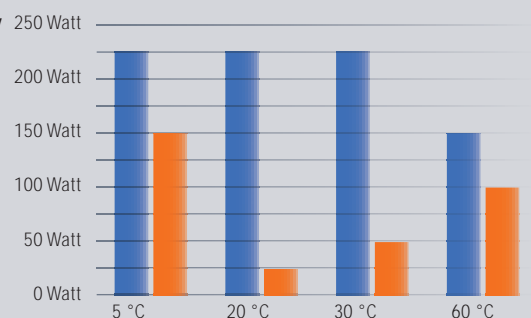
PELTIER-COOLED INCUBATORS IPP

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

CE PG

Standard equipment

Interior:	Stainless steel, material 1.4301 (ASTM 304), deep-drawn
Internals:	Stainless steel grids (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)
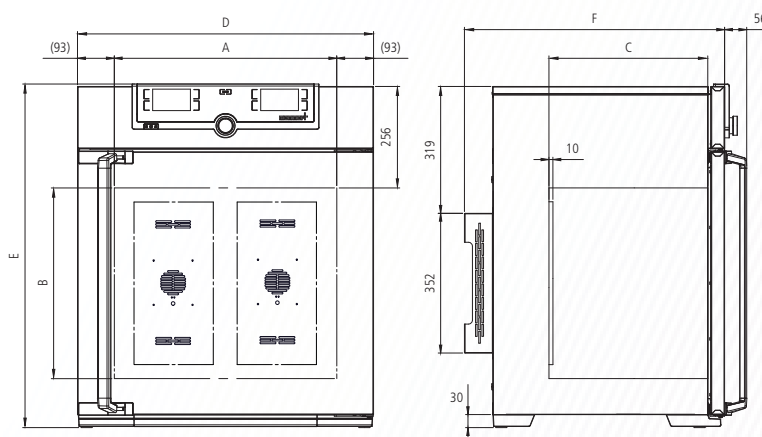
Number of Peltier elements in the rear:
Sizes 30 to 55: 1
Size 110: 2
Size 260: 3
Size 750: 6

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 (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	°C		0 (at least 20 below ambient temperature) to +70				
	Working-temperature range with light	°C		+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 (standard equipment)	E28884	E20164	E20165	E28891	E20182
Additional reinforced stainless steel grid, 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

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

Aug-2016

Cooled storage incubator IPS
with SingleDISPLAY
AtmoCONTROL software

Model sizes: 260 / 750
+14 °C to +45 °C

COOLED STORAGE INCUBATOR IPS Save energy and reduce the strain on the climate at the same time! If microbiological cultures, BOB5 samples, drinks containers or cosmetics need to be stored over a long period at constant temperatures, cooled storage incubators IPS with energy-efficient Peltier technology are the perfect choice: absolute reliability, precision, durability and eco-friendliness.
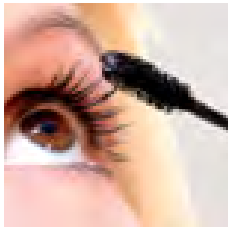
Considerable potential for savings in acquisition and operating costs

Temperature changes are not always necessary for long-term storage or incubating. So why design heating, cooling and controlling systems for rapid heating up and cooling down times? The performance of the IPS was tailor-made for permanent operation at constant temperatures close to room temperature. The advantage: Acquisition costs and operating costs are considerably reduced in comparison to conventional cooled incubators with compressor technology, as well as to a large Peltier-cooled incubator.
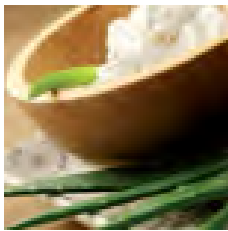
Ideal for high ambient temperatures

Thanks to Peltier elements integrated for cooling the working chamber, the chamber load won't break into sweat even at high ambient temperatures. Constant and precise incubation at room temperature is guaranteed.

Low in vibration and durable for absolutely safe long-term storage

Like the cooled incubator IPP, the IPS offers all the advantages of Peltier technology to the user. Its interior chamber that is completely insulated from the environment minimises the risk of drying out of the samples. It is practically noise-free and not only reduces stress on the chamber load but also soothes the nerves of employees thanks to its quiet operation.
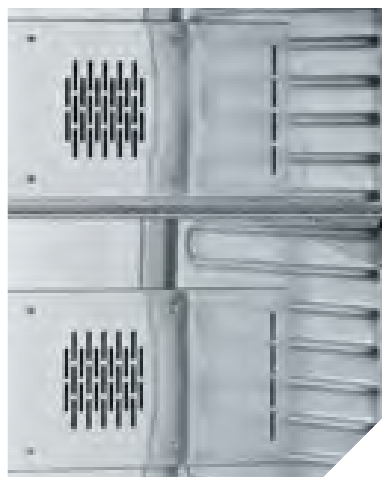
Glimpse into a Memmert storage incubator:
Peltier elements guarantee perfect climate inside the chamber.

COOLED STORAGE INCUBATORS IPS

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

CE ⓇG

Standard equipment

Interior:	Stainless steel, material 1.4301 (ASTM 304), deep-drawn
Internals:	2 stainless steel grids
Housing:	Textured stainless steel, rear zinc-plated steel, intuitively operated SingleDISPLAY (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
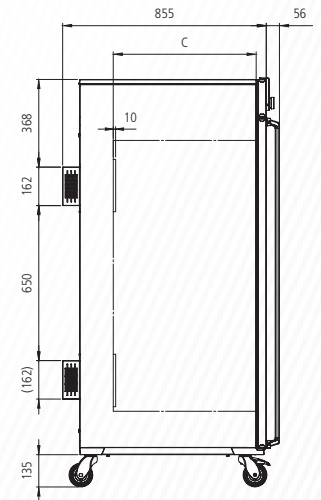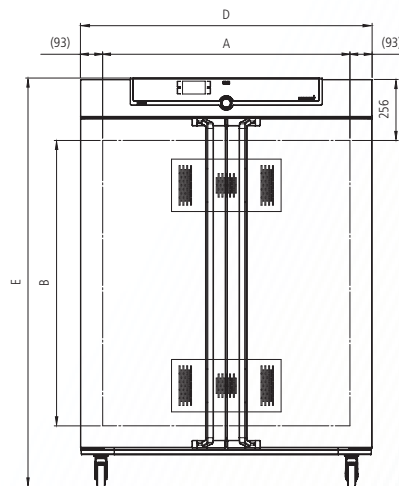
Model sizes/Description				260	750
Stainless steel interior	Volume		approx. l	256	749
	Width	(A)	mm	640	1040
	Height	(B)	mm	800	1200
	Depth (less 10 mm for fan – Peltier)	(C)	mm	500	600
	Stainless steel grids (standard equipment)		number	2	
	Max. number of grids/shelves		number	9	14
	Max. loading per grid/shelf		kg	20	30
	Max. loading of chamber		kg	300	
Textured stainless steel exterior	Width	(D)	mm	824	1224
	Height (size 750 with castors)	(E)	mm	1186	1726
	Depth (without door handle), door handle + 56 mm	(F)	mm	774	874
Further data	Electrical load at 230/115 V, 50/60 Hz		approx. W	550	
	Working-temperature range/Setting temperature range		°C	+14 to +45	
	Setting accuracy		°C	0.1	
Packing data	Net weight		approx. kg	113	230
	Gross weight (packed in carton)		approx. kg	164	301
	Width		approx. cm	93	133
	Height		approx. cm	138	191
	Depth		approx. cm	93	105
Order No. Cooled storage Incubators				**IPS260**	**IPS750**

Options		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
Interior socket, ampacity 230 V/2.2A, 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	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, in special positions (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 (0 to +70 °C ≙ 4 – 20 mA)	Temperature controller, actual value	V3	
	Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (SingleDISPLAY)	V6	
Works calibration certificate for a freely selectable temperature value Standard works calibration certificate (measuring point chamber centre) at +18 °C and +25 °C		D00131	

Accessories	260	750
Stainless steel grid (standard equipment)	E28891	E20182
Additional reinforced stainless steel grid, max. loading 60 kg; size 750 with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	E29766	B32190
Perforated stainless steel shelf	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	E29726	E02075
Max. loading per slide-in drip tray (kg)	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	B29722	B04362
Max. loading per bottom drip tray (kg)	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	GA2Q5	

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

Apr-2016

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.
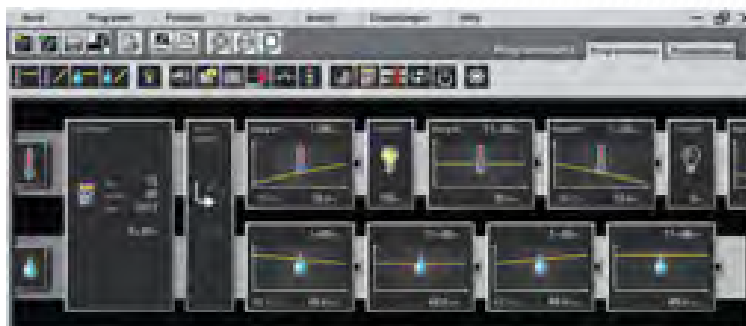
Programme functions
SingleDISPLAY and TwinDISPLAY

- 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, ICO, ICP, IPP, IPS, HPP, ICH

Options for models Modelle U, UF TS, UNpa, S, I, ICO, ICP, IPP, IPS, HPP, ICH	30	55	75	110	160	260	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 ICO)					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 ICO: 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 ICO) 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 ICO				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 ICO, 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 ICO				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 ICO				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 and models UF TS) Temperatures: +60, +70, +80, +95, +100, +120, +160, +180, +200, +220 or +250 °C (Please, indicate upon ordering)					A8							–		
Castor frame (2-part), height 140 mm (not for models UF TS, ICP, ICH, ICH L, ICH C, ICO)				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, ICO, ICP, IPP, IPS, HPP, ICH

Accessories for models U, UF TS, UNpa, S, I ICO, ICP, IPP, IPS, HPP, ICH	30	55	75	110	160	260	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)								B33172						
Set of height adjustable feet (4 pcs) not available for ICP, ICH, ICH L, ICH C – standard on models ICO			B29768						–			B29768		
Stacking set (4 pcs) for stacking of appliances of same size (not for models 160, 260, 450, 750, 1060, ICH110, ICH110L, ICH110C, ICO150, ICO240)			B29744						–			B29744		–
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 – technical clarification required	B29728	B29730	B29732	B29734	B29736	B29738	B29740	B29742				–		
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots – technical clarification required; for models UF TS see page 11 of oven brochure; not for models ICO	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); not for models ICO and UF TS	B29745	B29747	B29747	B29749	B29749	B29751	B29753					–		
Subframe, on castors (size 30 to 75: height 660 mm, size 110 to 160: height 560 mm); not for models ICO and UF TS	B29746	B29748		B29750					–					
Subframe, adjustable in height, height 130 mm, for example for units with fresh air filter; not for models ICO 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 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 list 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 ICO, on models ICO a free-selectable humidity value is only possible with option K7). Validation at customer site on demand	–			D38897	–	D38897	–	D38897	–				D38897	
IQ/OQ document list 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 (models ICO). 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.　　　　　Aug-2016

SPECIAL EQUIPMENT FOR MODELS VO, VOcool, INCOmed, HCP, TTC, CTC

Options for models VO, VOcool, INCOmed, HCP, TTC, CTC	200	400	500	108	153	246	256
Interface Ethernet instead of USB including software				W4			
RS232 interface instead of USB				W6			
Computer interface RS485 (for networking a max. of 16 ovens) instead of RS232				V2			
Door with lock (safety lock, not available for VO, VOcool, TTC/CTC)				B6			
Flexible Pt100 for positioning in chamber or in load with socket, 4-pin, according to NAMUR NE 28, for external temperature recording (load temperature); for VO and VOcool on demand				H4			
Additional 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 multifunction display, recorded in the integral ring store, and can be documented via the "Celsius" software or on an attached printer. (Not available for VO, VOcool, TTC and CTC)				H8			
Potential-free contact (24 V/2 A) with socket, according to NAMUR NE 28 for external monitoring (indicates when setpoint is reached)				H5			
Potential-free contact (24 V/2 A), with socket, according to NAMUR NE 28 for combination error message (e.g. supply failure, sensor fault, fuse)				H6			
Potential-free contact (24 V/2 A), with socket, according to NAMUR NE 28, triple, for signal generation, controlled by programme segment for a total of 3 freely selected functions to be activated (e.g. acoustic and visual signals, exhaust motors, fans, stirrers etc.). Not available for VO, VOcool				H7			
MobileALERT, notification by SMS in case of any error or alarm of the device. Requires option H6 "floating contact for alarm"				C3			

Accessories for models VO, VOcool, INCOmed, HCP, TTC, CTC	200	400	500	108	153	246	256
USB connection cable for computer interface				E03643			
Parallel/USB converter cable with integrated power supply unit to connect HP printers with USB interface to MEMMERT units				E05300			
Documentation package consisting of parallel USB converter cable including PCL3-compatible HP colour inkjet printer with USB interface (HP OfficeJet 6000 or successor) for direct connection of printer to Memmert unit				B04432			
Temperature profile write/read unit for programming via PC, for writing to and reading from the chip card, up to 40 ramps				E05284			
Additional chip card, blank, formatted (32 kB MEMoryCard XL for a maximum of 40 ramps). Not available for INCOmed models				E04004			
Oven-linked authorisation card (User-ID-Card) prevents undesired manipulation by unauthorised third parties. When reordering please specify serial number				E04159			
Software conforming to FDA "Celsius 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				E05019			
Integration per additional unit (up to max.15 units) into an already existent FDA-software licence (E05019)				FDAQ4			
IQ check list with device-specific works test data as support for validation by customer				D00103			
OQ check list 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 as support for validation by customer. Validation at customer site on demand				D00104			
OQ check list with device-specific works test data for one free-selectable temperature value, incl. temperature distribution survey at Memmert for 5 measuring points to DIN 12880:2007-05 as support for validation by customer valid for one thermoshelf; ditto for further thermoshelves VO on demand (VO and VOcool only). Validation at customer site on demand				D00117			
OQ check list with device-specific works test data for one free-selectable humidity and temperature value, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05 as support for validation by customer (models HCP and CTC). Validation at customer site on demand				D00104			
OQ check list 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 as support for validation by customer (models INCOmed). Validation at customer site on demand				D00104			
External measuring instrument with sensors for daylight and UV-light, with additional measuring head for temperature and humidity. Product information on demand (models INCOmed and HCP)				B04714			
Holder for Petri dishes round (only for model INCO108med with IVF module)		–		E37026		–	
Holder for Petri dished square (only for model INCO108med with IVF module)		–		E37308		–	
Holder for test tube (only for model INCO108med with IVF module)		–		E37069		–	
Magnetic foil, can be labeled with a non-permanent board marker (only for model INCO108med with IVF module)		–		E36651		–	

MODEL VARIANTS

SingleDISPLAY ControlCOCKPIT with one TFT display	TwinDISPLAY ControlCOCKPIT with two **TFT displays**
AVAILABLE APPLIANCES **UN / UF / IN / IF / SN / SF / IPP / IPS**	**AVAILABLE APPLIANCES** **UNplus / UFplus / UF TS / UNpa / INplus / IFplus / SNplus / SFplus ICO / 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

memmert

Experts in Thermostatics

HEATING AND DRYING OVENS

UNIVERSAL OVEN U

PASS-THROUGH OVEN UF TS

PARAFFIN OVEN UNpa

STERILISER S

VACUUM OVEN VO

COOLED VACUUM OVEN VOcool

INCUBATORS

INCUBATOR I

CO_2 INCUBATOR ICO

CO_2 INCUBATOR INCOmed

COMPRESSOR-COOLED INCUBATOR ICP

PELTIER-COOLED INCUBATOR IPP

COOLED STORAGE INCUBATOR IPS

CLIMATE CHAMBERS

CONSTANT CLIMATE CHAMBER HPP

HUMIDITY CHAMBER HCP

CLIMATE CHAMBER ICH

ENVIRONMENTAL TEST CHAMBER CTC/TTC

WATERBATHS / OILBATHS

WATERBATH W

OILBATH O

YOUR MEMMERT PARTNER