

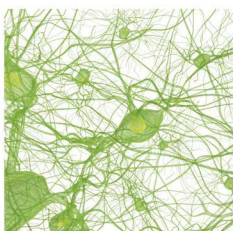


CO₂ Incubator ICO with TwinDISPLAY
AtmoCONTROL software

Model sizes: 50 / 105 / 150 / 240
+18 °C to +50 °C
Humidity 40 to 97 % rh
CO₂ concentration 0 to 20 %
O₂ concentration 1 to 20 %

CO₂ INCUBATOR ICO Safety at all times. When it comes to safety and user friendliness, the highly modern CO₂ incubator ICO is the perfect solution: Thanks to the battery-buffered ControlCOCKPIT, the operating display, logging and CO₂ 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 CO₂, O₂, 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.



CO₂ 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

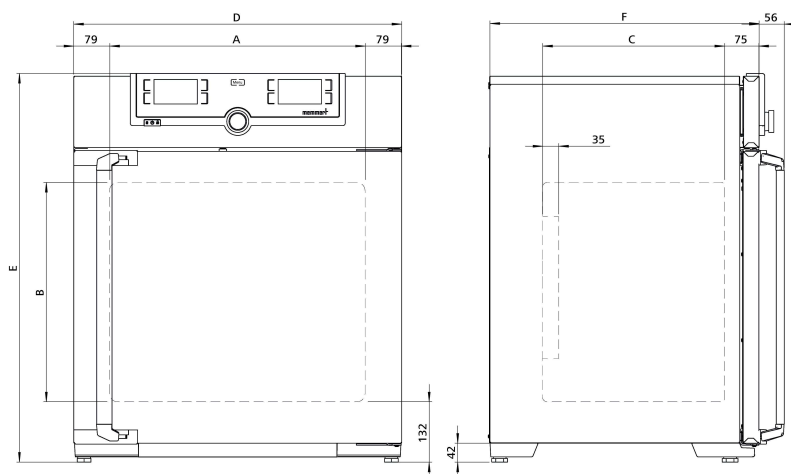
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour display) with touchscreen; fully insulated stainless steel door and heated inner glass door

Automatic sterilisation: Humidity and CO₂ sensor sterilised inside the CO₂ incubator

Connection: Mains cable with plug (German type)

Installation: 4 adjustable feet

Interfaces:



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

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. CO₂ 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; 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 5 and 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			
	Humidity controller, actual value (0 to 100 % rh = 4 - 20 mA) (requires option K7 or K6)		V7			
	CO ₂ controller, actual value (0 to 25 % CO ₂ = 4 - 20 mA)		V9			
	O ₂ controller, actual value (0 to 25 % O ₂ = 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			

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	