

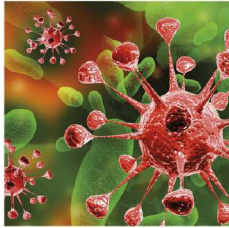
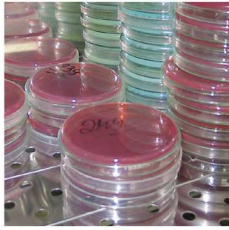


Incubator IN/INm and IF/IFm with SingleDISPLAY  
Incubator INplus/INmplus and IFplus/IFmplus  
with TwinDISPLAY  
Natural convection or forced air circulation  
AtmoCONTROL software

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, medicine, pharmaceuticals 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 with natural convection or with forced air circulation are available.





## As little air circulation as possible in the incubator

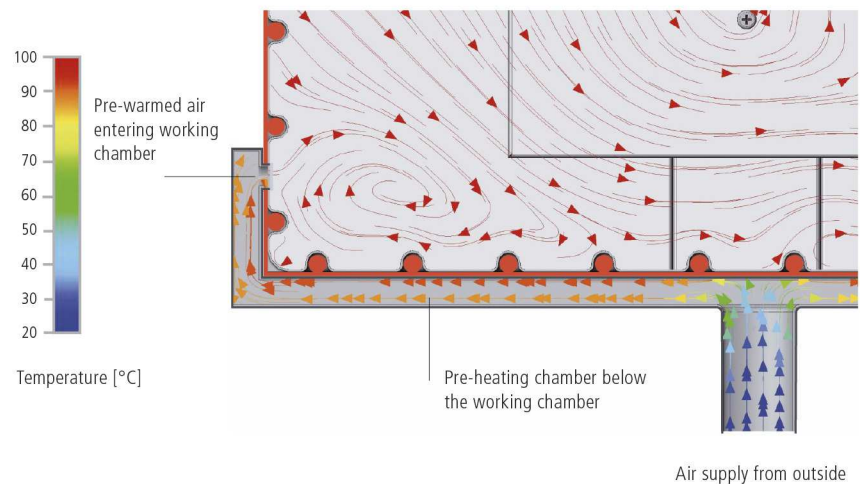
Forced air convection may destroy the protective layer from moist air that is generated during incubation over the samples. This would lead to dehydration of the culture. In a Memmert incubator, the perfect combination of all-round surface heating and temperature control system ensures that incubation 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/INmplus and IFmplus, 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.



### The incubator Im is a medical device:

The incubator Im is a Class I medical device in accordance with the EU directive 93/42/EEC. In accordance with the intended use incubators INmplus and IFmplus may be used for warming of rinsing solutions and infusions as well as of contrast agents. Incubators INm are intended for heating fango, silicate and APS packs for physical therapy and keeping them warm.

## INCUBATORS I

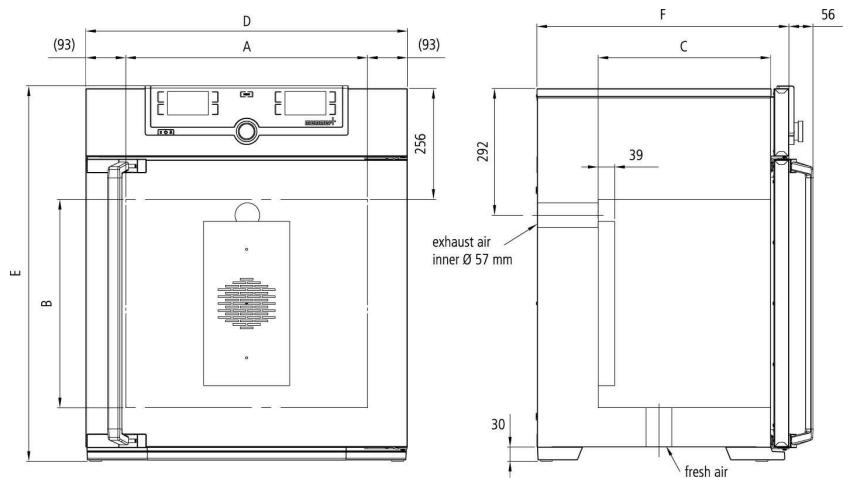
according to DIN 12880:2007-05, EN 61010-1 (IEC 61010-1), EN 61010-2-010

Standard units are safety-approved and bear the test marks:  
(EAC not valid for medical devices)



- 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), door 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/INm/INmplus) 10 (IF/IFplus/IFm/IFmplus) 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

I = Incubator

N = Natural convection

F = Forced convection

m = Medical device

plus = Model with TwinDISPLAY

IN30	IN55	IN75	IN110	IN160	IN260	IN450	IN750
IN30m	IN55m	IN75m	IN110m	IN160m	IN260m	IN450m	IN750m
IN30plus	IN55plus	IN75plus	IN110plus	IN160plus	IN260plus	IN450plus	IN750plus
IN30mplus	IN55mplus	IN75mplus	IN110mplus	IN160mplus	IN260mplus	IN450mplus	IN750mplus
IF30	IF55	IF75	IF110	IF160	IF260	IF450	IF750
IF30m	IF55m	IF75m	IF110m	IF160m	IF260m	IF450m	IF750m
IF30plus	IF55plus	IF75plus	IF110plus	IF160plus	IF260plus	IF450plus	IF750plus
IF30mplus	IF55mplus	IF75mplus	IF110mplus	IF160mplus	IF260mplus	IF450mplus	IF750mplus

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		
Interior socket (can only be ordered with limited temperature range - max. +70 °C), ampacity 230 V/2.2 A, can be switched on/off via tumbler switch in control panel, moisture tight IP68 (requires option A8)						R4		
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; not possible for IF/IFplus/IFm/IFmplus 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 UF/UFplus/UFm/UFmplus size 75)		-				F9		
4 - 20 mA current loop interface (0 to +90 °C = 4 - 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) - price per sensor			V3 V6		
Fan speed monitoring with switching-off the heating and with alarm in case of failure - only for IFplus/IFmplus						V4		
Works calibration certificate for 3 temperatures: +37 °C, +52 °C, +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 (24 V/2 A) with socket, according to NAMUR NE 28 for external monitoring (indicates when setpoint is 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			2 contacts			H72		
Process-dependent programmable door lock (only for units with TwinDISPLAY)						D4		
Door-open-recognition (only for units with TwinDISPLAY)						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						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						H8		
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/IFm/IFmplus). For sizes 30 – 260 castor frame R9 or subframe necessary						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		
Additional 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		
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		
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (may affect the temperature distribution) - 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		
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution) - 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			
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					-			
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. 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. 305 € for further temperature values and validation at customer site on demand (GER, AT, CH only)	D00125						D00127		