



Constant climate chamber HPPeco
with Advanced Peltier Technology
AtmoCONTROL software

Model sizes: 110 / 260 / 410 / 750 / 1060
0 °C to +70 °C (without humidity)
+5 °C to +70 °C (with humidity)
Humidity 10 to 90 % rh
optional with LED light module
(sizes 110, 260, 410, 750)

Model sizes: 1400 / 2200
+15 °C to +60 °C (with and without humidity)
Humidity 10 to 80 % rh

CONSTANT CLIMATE CHAMBER HPPeco They are simply unbeatable in energy efficiency. Furthermore, as constant climate chambers HPPeco have a very long, almost maintenance free service life, they are perfectly suited for stability tests, storage in controlled environment and conditioning. The high precision temperature control as well as the active humidification and dehumidification were particularly adapted to the ICH guidelines, option Q1A, for stability tests.



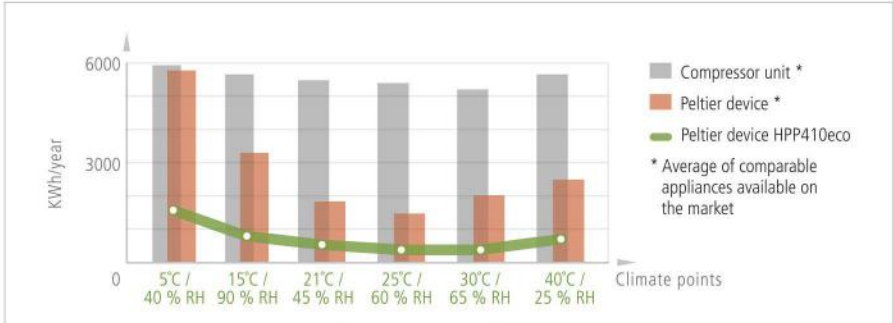


Homogenous and reliable, constant and reproducible

An absolutely homogenous and stable distribution of temperature and humidity is guaranteed even when challenging parameters are given. The new Memmert microdosing pump and the smart control ensures a precise and quick humidification in the interior of the HPPeco.

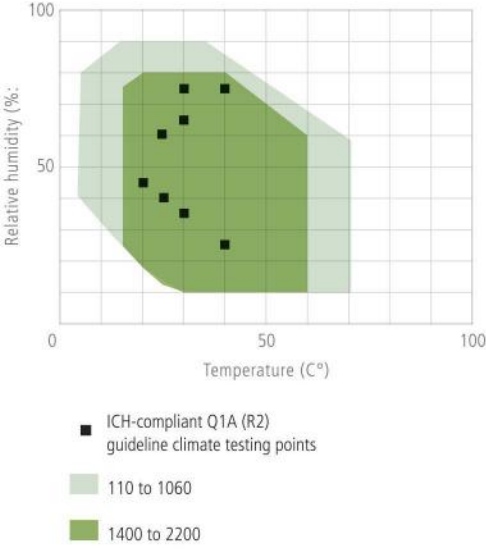
Advanced Peltier Technology

Thanks to the Advanced Peltier Technology, this constant climate chamber works around 90 % more energy efficiently than compressor-cooled devices. The main part of stability testing is performed at temperatures between +20 °C and +30 °C - close to the ambient temperature. The impressive cost effectiveness of the HPPeco with Advanced Peltier Technology can be seen here. Due to its environmentally friendly Peltier elements, the HPPeco has no need for refrigerants and requires no regular maintenance.



LED light modules

Dimmable LED light protects the environment, reduces energy consumption and ensures ideal conditions of growth. Available alternatives: Cold-white light (6,500 K), warm-white light (2,700 K) or cold-white plus warm-white light, dimmable in 1 % steps, for HPP110eco – HPP750eco.



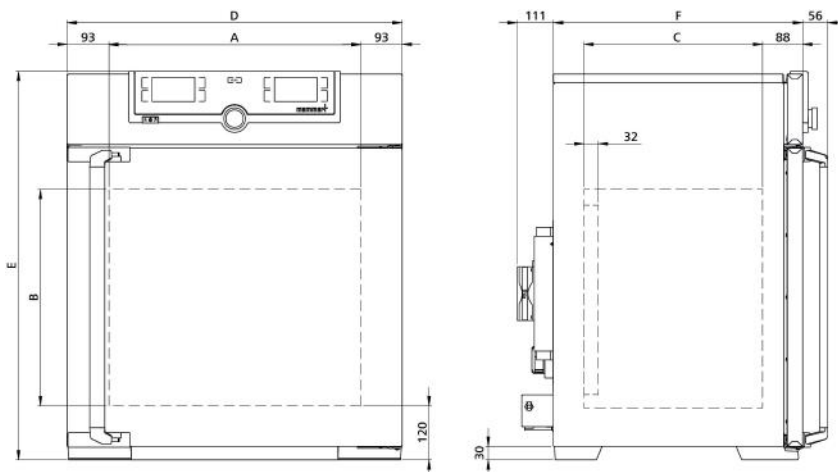
CONSTANT CLIMATE CHAMBERS HPPeco

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, mat. 1.4301 (ASTM 304), deep-drawn
- Housing:** Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour display) with touchscreen
- Double doors:** Outside stainless steel, fully insulated, inside glass (size 1400/2200 stainless steel doors with glass sector, fully heated inner glass panes integrated in the full-sight glass door with 2-point locking – compression door lock). Sizes 750, 1060 and 1400 two leaves, size 2200 three leaves
- Connection:** Mains cable with plug (German type)
- Installation:** 4 feet; sizes 410, 750 and 1060 mounted on lockable castors, 1400 and 2200 mounted on height-adjustable and lockable castors
- Interfaces:**



Model sizes/Description			110	260	410	750	1060	1400	2200	
Stainless steel interior	Volume	approx. l	108	256	384	749	1060	1360	2140	
	Width	(A) mm	560	640		1040		1250	1972	
	Height	(B) mm	480	800	1200		1450			
	Depth (less 32 mm for fan – Peltier)	(C) mm	400	500		600	850	750		
	Max. number of grids/shelves	number	5	9	14		28		42	
	Max. loading per grid/shelf	kg	20			30	20	30		
	Max. loading of chamber	kg	150	200			250		330	
	Max. loading per slide-in drip tray	kg	3	4	8		-			
Max. loading per bottom drip tray	kg	3	4	8		-				
Textured stainless steel exterior	Width	(D) mm	745	824		1224		1435	2157	
	Height (sizes 410, 750, 1060, 1400 and 2200 with castors)	(E) mm	864	1183	1720		1913			
	Depth (without door handle, depth of handle +56 mm)	(F) mm	555	655		755	1005	905		
Standard equipment	Stainless steel grids, electropolished	number	2					4	6	
	Water tank including connection hose (sizes 110 - 750: 2.5 litres, sizes 1060/1400/2200: 10 litres)		●							
	Standard works calibration certificate (measuring point chamber center)		+10, 37 and 30 °C/60 % rh				+25 °C/40 % rh and +40 °C/75 % rh			
Temperature	Working temperature range without light, without humidity	°C	0 (at least 20 below ambient temperature) to +70					+15 (at least 10 below ambient temperature) to +60		
	Working temperature range without light, with humidity	°C	+5 (at least 20 below ambient temperature) to +70					+15 (at least 10 below ambient temperature) to +60		
	Working temperature range with light, without or with humidity	°C	+15 to +40				-			
	Setting temperature range without light, with humidity	°C	+5 to +70					+15 to +60		
	Setting temperature range with light, with humidity	°C	+5 to +70					-		
	Setting temperature range with light, without humidity	°C	0 to +70					-		
	Setting temperature range without light, without humidity	°C	0 to +70					+15 to +60		
Setting accuracy	°C	0.1								
Humidity	Setting range humidity with light	% rh	10 to 85				-			
	Setting range humidity without light	% rh	10 to 90					10 to 80		
	Setting accuracy	% rh	0.5							
Further data	Electrical load at 230 V, 50/60 Hz	approx. W	420	700		1400		2000		
	Electrical load at 115 V, 50/60 Hz	approx. W	420	700		1400		-		
	Peltier elements in the rear	number	1	2	4		6			
Packing data	Net weight	approx. kg	77	122	160	208	260	450	493	
	Gross weight (packed in carton)	approx. kg	102	173	213	279	424	639	730	
	Width	approx. mm	830	930		1330	1370	1560	2300	
	Height	approx. mm	1050	1380	1930	1910	1970	2200		
	Depth	approx. mm	800	930		1050	1300	1190		

Order No. Constant Climate Chambers

HPP110eco
HPP260eco
HPP410eco
HPP750eco
HPP1060eco
HPP1400eco
HPP2200eco

Options	110	260	410	750	1060	1400	2200
Chamber modification for the application of reinforced perforated stainless steel shelves or stainless steel grids (bearing rails mounted in the working chamber) - includes replacement of standard grids by reinforced grids (standard with 1060)		-		K1		-	
Light module cold white 6,500 K: LED light strips arranged on the side walls of the interior, 10 for model 110, 14 for model 260/410/750, programme controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature and humidity; not in combination with F6, F7, D8			T7			-	
Light module cold white 6,500 K + warm white 2,700 K: LED light strips - 10 stripes for model 110, 14 for model 260/410/750 - (6 resp. 8 alternating cold white light strips and 4 resp. 6 warm white light strips) on the side walls of the interior, programme-controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature and humidity; not in combination with F6, F7, D8			T8			-	
Light module warm white 2,700 K: light strips arranged on the side walls of the interior, 10 strips for model 110, 14 for model 260/410/750, programme-controlled dimming from 0 to 100 % (in 1 % steps), ramp programming in combination with temperature and humidity; not in combination with F6, F7, D8			T9			-	
Interior socket, ampacity 230 V/2.2 A, can be switched off with the On/Off switch, cannot be switched individually, moisture tight IP68			R3			-	
Entry port, 23 mm clear diameter, for introducing connections at the side, moisture tight, can be closed by flap and silicone stopper, standard positions (F0 and F2 not for model sizes 110 and 260 with light module; F0 - F3 not for model size 110 with light module)	left centre/centre left centre/top right centre/centre right centre/top		F0 F1 F2 F3			- - - -	
Entry port, 23 mm clear diameter, moisture tight, can be closed by flap and silicone stopper, in special positions (please state location; not in combination with T7, T8, T9)	left right rear		F4 F5 F6			-	
Entry port (silicone), 40 mm clear diameter, moisture tight, can be closed by silicone stopper, at the back (please state location; not in combination with T7, T8, T9)			F7			-	
Entry port (silicone), 40 mm clear diameter, moisture tight, can be closed by silicone stopper, standard position rear (not in combination with T7, T8, T9)				D8			
4 - 20 mA current loop interface	Temperature controller actual value (-10 to +80 °C = 4 - 20 mA)			V3			
Works calibration certificate for one (freely selectable) temperature and humidity value				D00105			
Compressed air dehumidification (efficient dehumidification of the interior by means of compressed air). Standard works calibration certificate (measuring point chamber centre) at +10 °C with 10 % rh			C9			-	
Door with lock and key (safety lock)	One lock Two locks (one each door) Three locks (one each door)		B6 - -			B62 -	- - B63
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)				H6			
Process-dependent programmable door lock	One Two (one each door) Three (one each door)		D4 - -			D42 -	- - D43
Door-open-recognition	One Two (one each door) Three (one each door)		V5 - -			V52 -	- - V53
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)				C3			
MobileALERT for 2 alarm notifications; notification by SMS. temperature and humidity alarm				C4			
Castor frame (2-part), height 140 mm		R9				-	

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

Accessories	110	260	410	750	1060	1400	2200
Holder for water tank (sizes 110 - 750: 2.5 litres, sizes 1060/1400/2200: 10 litres) for mounting on the rear of the appliance. Standard equipment for sizes 410, 750, 1060, 1400 and 2200	B49092		-				
Central water supply with filter cartridges for connection to the domestic water supply. 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). Product information on demand				ZWVR7			
Guarantee extension by 1 year	GA2Q5	GA3Q5		GA4Q5			
USB-Ethernet adapter				E06192			
Ethernet connection cable 5 m for computer interface				E06189			
USB User-ID stick (with User-ID licence): Oven-linked authorisation licence (User-ID-programme) on Memory-stick, prevents undesired manipulation by unauthorised third parties. When reordering please specify serial number				B33170			
Set of height adjustable feet (4 pcs)	B29768		-				
Stacking set (4 pcs) for stacking of appliances of same size	B29744	-					
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), with air slots	B29734	B29738	B42116	B29742		-	
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots	B29735	B29739	B42117	B29743		-	
Subframe, adjustable in height (height 500 mm)	B29749	B29751	-				
Subframe, on castors (height 560 mm)	B29750	-					
Subframe, adjustable in height, height 130 mm, for example for units with fresh air filter	B33661	B33664	-				
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 sensors for daylight and UV-light. Product information on demand	B04713		-				
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)				E48847			
DAkkS calibration for further temperature and humidity values according to method C (DKD-R 5-7)				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 temperature value, incl. temperature distribution survey at Memmert for 27 measuring points (sizes 110 - 1060, 2200) and 26 measuring points (size 1400) to DIN 12880:2007-05. PQ check list as support for validation by customer. 305 € for further temperature values				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 (sizes 110 - 1060, 2200) and 26 measuring points (size 1400) to DIN 12880:2007-05, PQ check list as support for validation by customer. 475 € for further temperature and humidity values				D00136			
IQ/OQ document with device-specific works test data for one free-selectable temperature and humidity value, and measuring of light intensity, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05, PQ check list as support for validation by customer. 605 € for further temperature and humidity values, and measuring of light intensity	D00137		-				
On-site IQ/OQ for a freely selectable temperature and humidity value, including temperature distribution survey for 27 measuring points (sizes 110 - 1060, 2200) and 26 measuring points (size 1400) to DIN 12880: 2007-05 (excluding travel costs, not subject to discount, GER, AT, FR only)				DLQ101			
Extension of DLQ101 by an additional freely selectable temperature and humidity value (not subject to discount)				DLQ101A			
Individual on-site Performance Qualification (PQ)				DLQ200			
Maintenance HPPeco - carrying out and documentation according to Memmert maintenance plan (excluding travel costs, not subject to discount, GER, AT, FR only)				S00314			
Maintenance contract HPPeco - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (excluding travel costs, not subject to discount, GER, AT, FR only)				S00314J			
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 (excluding travel costs, not subject to discount, GER, AT, FR only)				S00207			
Calibration of an additional temperature and humidity value (not subject to discount)				S00216			