

## Precision Incubators, Memmert

### BASIC:

with microprocessor PID temperature controller with integral autodiagnostic system for rapid fault identification, 1 high-grade Pt100 sensor DIN Class A in 4-wire-circuit, digital timer to switch off heating (1 min. up to 99 h 59 min), incl. digital LED-display of set and actual temperature as well as residual time; double overtemperature protection - in case of a faulty sensor or the total breakdown of the controller the heating is switched off approx. 3°C above the set temperature and additionally at approx. 10°C above the max. oven temperature by the mechanical temperature limiter TB protection class 1.

### EXCELLENT:

with fuzzy-supported microprocessor PID controller with integral autodiagnostic system for rapid fault identification, 2 high-grade Pt100 sensors DIN Class A in 4-wire circuit, mutually monitoring and taking over the performance, digital 7-day-program timer with real time clock with group function (e.g. weekdays) for one set value or in combination with the integrated digital timer (with residual time) for ramp operating with max. 4 segments: DELAYED ON, HEATING UP, HOLD or HOLD set-temperature-dependent (guaranteeing the hold period), COOLING DOWN - each segment adjustable from 1 min to 999 hours. Integrated long-term documenting (ring store) of all relevant data, GLP-conforming as data logger - 1024 kB as well as serial computer interface RS232 with software „Celsius“. Triple overtemperature protection: in case of overtemperature due to failure, the heating is switched off at approx. 10°C above the set temperature (fixed value), digitally adjustable electronic overtemperature controller, TWW, protection class 3.1, and mechanical temperature limiter, TB, protection class 1, switching the heating off at approx. 10°C above max. oven temperature. Works calibration certificate for one temperature, 37°C (chamber center).

### PERFECT:

adaptive, fuzzy-supported multifunctional digital microprocessor PID-controller and integral autodiagnostic system for rapid fault identification, 2 high-grade Pt100 sensor DIN Class A in 4-wire-circuit, mutually monitoring and taking over the performance, digital 7-day-program timer with real time clock with group function (e.g. weekdays), integrated timer for thermostating profiles of up to 40 ramps, each segment adjustable from 1 min. up to 999 hours (residual time); air flap adjustable in 10% steps, on UF models fan speed adjustable in 10% steps, as well as setpoint dependent operation easily programmable, via set-up) visualizing also all set parameters. Integrated long-term documenting (ring store) of all relevant data, GLP-conforming as data logger - 1024 kB (protected against manipulation); parallel printer interface with real-time clock for all Pcl3-compatible ink-jet printers, serial interface RS232 (upon request - without extra charge - RS485) incl. software „Celsius“ as well as MEMory Card with 32 kB and STERiCard for automatic incubator chamber sterilization cycle (not for sterilizing the load). Multiple overtemperature protection with audible and visual alarm, digitally adjustable electronic protection with audible and visual alarm, digitally adjustable electronic microprocessor overtemperature controller TWW protection class 3.1 - maximum value for overtemperature - minimum value for undertemperature, additionally adjustable auto-safety-function „ASF“ for over-and undertemperature automatically following the set value at a preset tolerance range; audible alarm is activated in case of over- or undertemperature, heating is switched off in case of overtemperature, additional mechanical temperature limiter, TB, protection class 1, switching the heating off at approx. 10°C above max. oven temperature. Work calibration certificate for one temperature, 37°C (chamber center).

### Technical data:

Interior:	stainless steel, material 1.4301 (ASTM 304), reinforced by deep drawn ribbing, easy to clean and protected against drip-water.
Housing (external):	Textured stainless steel, rear zinc-plated steel, (INE/INP 800 mounted on lockable castors.)
Temperature range:	from 30°C (however, at least 5°C above room temperature) up to 70°C.
Temperature deviations:	precision max. $\pm 0,2^{\circ}\text{C}/\text{B}$ , $\pm 0,05^{\circ}\text{C}/\text{E}/\text{P}$ ; uniformity (acc. to DIN) at 37°C max. $\pm 0,6^{\circ}\text{C}$
Electrical supply:	230 V ( $\pm 10\%$ ), 50/60 Hz. Other voltages to special order.

### Available models and sizes:

#### Series INB<sup>1)</sup>

With natural air circulation and electronic PID controller.

Type	Outer W × D × H mm	Inner W × D × H mm	Vol. approx. l	Wght approx. kg	P rating approx. W	Order No.
INB 200	550×400×600	400×250×320	32	28	440	41 26 70200
INB 300	630×400×600	480×250×320	39	30	500	41 26 70300
① INB 400	550×480×680	400×330×400	53	35	800	41 26 70400
INB 500	710×550×760	560×400×480	108	50	900	41 26 70500



### Series INE<sup>1)</sup>

With natural air circulation and electronic PID control with fuzzy support.

Type	Outer W x D x H mm	Inner W x D x H mm	Vol. approx. l	Wght approx. kg	P rating approx. W	Order No.
INE 200	550x400x600	400x250x320	32	28	440	41 26 80200
INE 300	630x400x600	480x250x320	39	30	500	41 26 80300
INE 400	550x480x680	400x330x400	53	35	800	41 26 80400
② INE 500	710x550x760	560x400x480	108	50	900	41 26 80500
INE 600	950x650x920	800x500x640	256	87	1600	41 26 80600
INE 700	1190x650x1080	1040x500x800	416	121	1800	41 26 80700
INE 800	1190x750x1620	1040x600x1200	749	170	2000	41 26 80800

### Series INP<sup>1)</sup>

With natural air circulation and multifunctional PID process controller with fuzzy support.

Type	Outer W x D x H mm	Inner W x D x H mm	Vol. approx. l	Wght approx. kg	P rating approx. W	Order No.
INP 200	550x400x600	400x250x320	32	28	440	41 26 90200
INP 300	630x400x600	480x250x320	39	30	500	41 26 90300
INP 400	550x480x680	400x330x400	53	35	800	41 26 90400
INP 500	710x550x760	560x400x480	108	50	900	41 26 90500
INP 600	950x650x920	800x500x640	256	87	1600	41 26 90600
INP 700	1190x650x1080	1040x500x800	416	121	1800	41 26 90700
③ INP 800	1190x750x1620	1040x600x1200	749	170	2000	41 26 90800

<sup>1)</sup> External dimensions: depth without door handle, depth of door handle 38 mm.  
All Precision Incubators according to DIN 12880:2007-05. Standard models bear the test marks: EMV/VDE/GS/CE/GOST

### Accessories for models BASIC-, EXCELLENT- and PERFECT

#### Stainless steel shelves, perforated

for type	Qty max.	Order No.	for type	Qty max.	Order No.
200	3	41 26 00020	600	7	41 26 00060
300	3	41 26 00030	700	9	41 26 00070
400	4	41 26 00040	800	14	41 26 00080
500	5	41 26 00050			

#### Stainless steel trays, non-perforated, non-tipping, 15 mm rim

for type	Qty max.	Order No.	for type	Qty max.	Order No.
200	3	41 26 10020	600	7	41 26 10060
300	3	41 26 10030	700	9	41 26 10070
400	4	41 26 10040	800	14	41 26 10080
500	5	41 26 10050			

### Special equipment only for models EXCELLENT- and PERFECT

Checklists with works test data for oven as support for validation by customer.

Article	Order No.
<b>IQ checklist</b> with works test data as support for validation by customer.	41 26 11011
<b>OQ checklist (size 200 and 300)</b> with works test data, incl. a selectable temp. distribution measurement for 9 measuring points acc. to DIN 12880:2007-05	10 26 01016
<b>OQ checklist (size 400 up to 800)</b> with works test data, incl. a selectable temp. distribution measurement for 27 measuring points acc. to DIN 12880:2007-05	10 26 01017
<b>USB interface instead of RS232</b>	10 26 01014

### Special equipment only for model PERFECT

Article	Order No.
<b>Celsius FDA-Edition</b> Software conforming to FDA	41 26 11013
④ <b>Oven-related user authorization card</b> prevents undesired manipulation by unauthorized third parties	41 26 11021
<b>Ethernet interface instead of RS232</b> incl. software „Celsius Ethernet Edition“	10 26 01015

Further special equipment for EXCELLENT and PERFECT Class, such as entry ports, Pt100 for external temperature recording, a.s.o. upon request.  
We reserve the right to make changes in technical specifications. Dimensions subject to confirmation.



②



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