

M series: Temperature test chambers with forced convection and individual programming testing

Because of its individual programming options and ability to operate at maximum temperatures up to 300 °C (572 °F), the M series is ideally suited for materials testing and aging tests. The heavy-duty air turbine and a programmable exhaust ventilation flap provide rapid heating-up and ensure that the test temperature is maintained absolutely precise at all levels, with minimal spatial fluctuations; performance as never before.



► Performance features and equipment:

- Electronically controlled APT.line™ preheating chamber technology
- Temperature range of 5 °C (9 °F) above ambient temperature up to 300 °C (572 °F)
- MCS controller with 25 storable programs of 100 sections each for a maximum of 500 program segments
 - User-friendly LCD screen
 - Easy-to-read menu guide
 - Integrated electronic chart recorder
 - Variety of options for the graphic display of process parameters
 - Real-time clock
- Adjustable ramp function via program editor
- Program-controlled ventilation flap
- High air-exchange rate through high-performance fan (+ approx. 280 %)
- Adjustable fan speed (0 to 100 %)
- Rear exhaust duct Ø 50 mm (2 inch) diameter
- Independent adjustable temperature safety device, class 2 (DIN 12880), with optical temperature alarm
- RS 422 interface for communication software APT-COM™ DataControlSystem
- 2 chrome-plated shelves
- BINDER test certificate





	M 53	M 115	M 240	M 400	M 720
▶ Exterior dimensions					
Width (mm/inch)	634 / 25.0	834 / 32.8	1034 / 40.7	1234 / 48.6	1234 / 48.6
Height (inclusive feet/castors) (mm/inch)	779 / 30.7	863 / 34.0	984 / 38.7	1184 / 46.6	1692 / 66.6
Depth (mm/inch)	575 / 22.6	645 / 25.4	745 / 29.3	765 / 30.1	865 / 34.1
Plus door handle (mm/inch)	150 / 5.9	150 / 5.9	150 / 5.9	150 / 5.9	150 / 5.9
Wall clearance rear (mm/inch)	100 / 3.9	100 / 3.9	100 / 3.9	100 / 3.9	100 / 3.9
Wall clearance side (mm/inch)	160 / 6.3	160 / 6.3	160 / 6.3	160 / 6.3	160 / 6.3
Exhaust duct outer-Ø (mm/inch)	52 / 2.1	52 / 2.1	52 / 2.1	52 / 2.1	52 / 2.1
Steam space volume (l/cu.ft.)	77 / 2.7	158 / 5.6	308 / 10.9	498 / 17.6	869 / 30.7
Number of doors	1	1	2	2	2
▶ Interior dimensions					
Width (mm/inch)	400 / 15.8	600 / 23.6	800 / 31.5	1000 / 39.4	1000 / 39.4
Height (mm/inch)	400 / 15.8	480 / 18.9	600 / 23.6	800 / 31.5	1200 / 47.2
Depth (mm/inch)	330 / 13.0	400 / 15.8	500 / 19.7	500 / 19.7	600 / 23.6
Interior volume (mm/inch)	53 / 1.9	115 / 4.1	240 / 8.6	400 / 14.3	720 / 25.7
Shelves, chrome-plated (number standard/max.)	2 / 5	2 / 6	2 / 7	2 / 10	2 / 16
Load per shelf (kg/lbs.)	15 / 33	20 / 44	30 / 66	35 / 77	45 / 99
Permitted total load (kg/lbs.)	40 / 88	50 / 110	70 / 155	90 / 199	120 / 265
Weight of the unit (empty) (kg/lbs.)	61 / 135	89 / 196	131 / 289	173 / 382	203 / 448
▶ Temperature data					
Temperature range, 5 °C/9 °F above ambient up to °C/°F	300 / 572	300 / 572	300 / 572	300 / 572	300 / 572
Temperature variation ¹⁾					
at 70 °C (158 °F) (± °C)	0.5	0.6	0.8	0.7	0.7
at 150 °C (302 °F) (± °C)	1.3	1.5	1.5	1.5	1.9
at 300 °C (572 °F) (± °C)	2.8	2.8	2.8	5	4.6
Temperature fluctuation (± °C)	0.3	0.3	0.3	0.3	0.3
Heating up time ²⁾					
to 70 °C (158 °F) (Min.)	5	5	6	6	7
to 150 °C (302 °F) (Min.)	15	16	19	18	21
to 250 °C (482 °F) (Min.)	35	36	42	44	51 / 44
Recov. time after door was opened for 30 sec. ²⁾					
at 70 °C (158 °F) (Min.)	1	1	1	1	1
at 150 °C (302 °F) (Min.)	3	3	3	3	3
at 300 °C (572 °F) (Min.)	5	5	5	5	5
Air change ³⁾					
at 150 °C (302 °F) (x/h)	192	96	60	54	36
▶ Electrical data					
Housing protection acc. to EN 50529	IP 20	IP 20	IP 20	IP 20	IP 20
Nominal voltage (± 10 %) 50/60 Hz (V)	230 / 115	230 / 115	230 / 208	400 / 208 (3 N)	400 / 208 (3 N)
Nominal power (W)	1200	1600	2700	3400	5000
Energy consumption					
at 70 °C (158 °F) (W)	145	230	370	520	570
at 150 °C (302 °F) (W)	300	544	850	1200	1320
at 300 °C (572 °F) (W)	720	1100	1400	2340	2600

¹⁾ value without window ²⁾ up to 98 % of the set value ³⁾ The air change depends on the inner chamber and ambient temperature and is subject to significant individual variance. The indicated air change rate represents average values for standard equipment. Individual measurement of air change rate in acc. to ASTM D 5374 are optionally available.

All technical data are specified for units with standard equipment at an ambient temperature of 25 °C (77 °F) and a voltage fluctuation of ± 10 %. The temperature data are determined in accordance to factory standard following DIN 12880, part 2 respecting the recommended wall clearances of 10 % of the height, width and depth of the inner chamber. All indications are average values, typical for units produced in series. We reserve the right to alter technical specifications at all times.