

HERMLE

LABORTECHNIK



Microlitre Centrifuges

Microlitre Centrifuges for all applications

If your daily requirements include centrifugation of microlitre tubes, we have a centrifuge for you.

All models are equipped with a brushless motor, offer an easy to use control system and are designed for easy cleaning.



Z 160 M

All that a microlitre centrifuge needs:

- short acceleration and deceleration times
- low sample heating during the run
- continuously adjustable speed and "Quick"-key
- the 18-place-rotor can be autoclaved and is designed for 1,5 ml or 2,0 ml reaction tubes, no matter, if the tubes have a snap cover or a screw cap
- for smaller volumes we offer suitable adapters

Z 233 M-2

A high performance microlitre centrifuge, offering a full range of features:

- digital display of time, rpm and RCF
- two acceleration and deceleration profiles
- "Quick"-key incl. digital display of running time in seconds
- 6 different rotors available, up to a capacity of 44 x 1,5 ml / 2,0 ml
- aerosol tight rotor



Z 233 MK-2

Equipment description as Z 233 M-2

- with CFC-free refrigeration
- temperature range from -10°C to +40°C
- because of the small dimensions and arrangement of the refrigeration system, the Z 233 MK-2 only needs a little more space than the non-refrigerated centrifuge
- extremely short pre-cooling time (from room temperature to 4°C in less than 10 min.)
- aerosol tight rotor



Strip Tube Rotor

For faster and easier sample processing. The strip tubes are compatible with 8-channel pipettes.

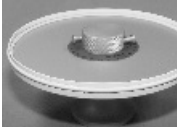
- 4 strips of 8 x 1,5 ml tubes
- incl. adapters to hold 4 strips 8 x 0,2 ml (PCR)



Features / Technical Data

Features	Z 160 M	Z 233 M-2	Z 233 MK-2
Maintenance-free brushless motor	✓	✓	✓
Imbalance switch-off	✓	✓	✓
Automatic lid lock	✓	✓	✓
Microprocessor-control		✓	✓
Digital display for		✓	✓
• speed		✓	✓
• RCF		✓	✓
• running time		✓	✓
• temperature			✓
Pre-selection by turning knobs	✓	✓	✓
“Quick“-key for short runs	✓	✓	✓
Display of running time in seconds		✓	✓
Pre-selection of running time	1 to 30 min. continuous run	1 to 60 min. continuous run in 1 min. increments	1 to 60 min. continuous run in 1 min. increments
2 acceleration/deceleration profiles		✓	✓
Speed range	1.000 to 14.000 rpm	250 to 15.000 rpm	250 to 15.000 rpm
Noise level	56 dB/A	57 dB/A	57 dB/A
CFC-free refrigeration system			✓
Temperature range			-10°C to +40°C in 1°C increments
Stand still cooling			✓

Technical Data	Z 160 M	Z 233 M-2	Z 233 MK-2
Output data			
Speed max.	14.000 rpm	15.000 rpm	15.000 rpm
RCF max.	15.994 x g	21380 x g	21380 x g
Volume max.	18 x 1,5 / 2,0 ml	44 x 1,5 / 2,0 ml	6 x 30 ml
Dimensions			
Unit (L/H/W)	200 x 180 x 220	280 x 260 x 370	320 x 290 x 540
Package (L/H/W)	300 x 290 x 280	480 x 380 x 350	650 x 450 x 500
Weight in kg			
Unit	6	16	39
Unit incl. packaging	6,5	17	43
Voltages	Order No.		
230 V / 50-60 Hz	290.00 P01	282.00 V30	281.00 V04
120 V / 50-60 Hz	290.00 P02	282.00 V31	281.00 V05
100 V / 50-60 Hz	290.00 P03	282.00 V32	281.00 V06

Rotors		Units	Z 160 M	Z 233 M-2	Z 233 MK-2	Accessories
						Order No.:
	18 x 1,5 ml / 2,0 ml Order No.: 220.95 V01 *	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:	10 9 14.000 15.994 7,3 -/-	9/20 9/20 14.000 15.994 7,3 -/-	9/20 9/20 14.000 15.994 7,3 -6°C/-10°C	704.004 Set of adapters (12 pcs.) for 0,4 ml and 0,2 ml PCR tubes Ø 6 mm 704.005 Set of adapters (12 pcs.) for 0,5 ml tubes Ø 8 mm
	30 x 1,5 ml / 2,0 ml Order No.: 221.17 V02 hermetically sealed	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:		35/45 21/35 14.000 20598 9,4 -/-	35/45 21/35 14.000 20598 9,4 5°C	704.004 Set of adapters (12 pcs.) for 0,4 ml and 0,2 ml PCR tubes Ø 6 mm 704.005 Set of adapters (12 pcs.) for 0,5 ml tubes Ø 8 mm
	24 x 1,5 ml / 2,0 ml Order No.: 220.87 V05 hermetically sealed Order No.: 220.87 V06	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:		15/26 15/28 15.000 21.380 8,5 -/-	15/26 15/28 15.000 21.380 8,5 -2°C/-7°C	704.004 Set of adapters (12 pcs.) for 0,4 ml and 0,2 ml PCR tubes Ø 6 mm 704.005 Set of adapters (12 pcs.) for 0,5 ml tubes Ø 8 mm
	44 x 1,5 ml / 2,0 ml Order No.: 220.88 V02	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:		17/25 19/34 14.000 18.400 8,4 -/-	17/25 19/34 14.000 18.400 8,4 +3°C/-5°C	704.004 Set of adapters (12 pcs.) for 0,4 ml and 0,2 ml PCR tubes Ø 6 mm 704.005 Set of adapters (12 pcs.) for 0,5 ml tubes Ø 8 mm
	64 x 0,4 ml Order No.: 220.92 V03	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:		17/25 19/34 14.000 17.960 8,2 -/-	17/25 19/34 14.000 17.960 8,2 +3°C/-5°C	
	24 x Capillaries Order No.: 220.58 V08	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:		24 32 12.000 14.811 9,2 -/-		620.000 Reading device 620.001 Reading graph
	4 x 8 1,5 ml / 2,0 ml and 0,2 ml PCR-Strips Order No.: 221.09 V01	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:		17/25 19/34 14.000 15.339 7,0 -/-	17/25 19/34 14.000 15.339 7,0 +3°C/-5°C	
	6 x 30 ml Order No.: 221.10 V01	Acceleration in sec.: Deceleration (min./max.): Speed max. (rpm): RCF-value (x g): Centrifugal radius (cm): Temperature at n-max.:			58/106 40/85 12.000 15938 9,9 4°C	

* Z 160 M Order No.: 220.95 V04