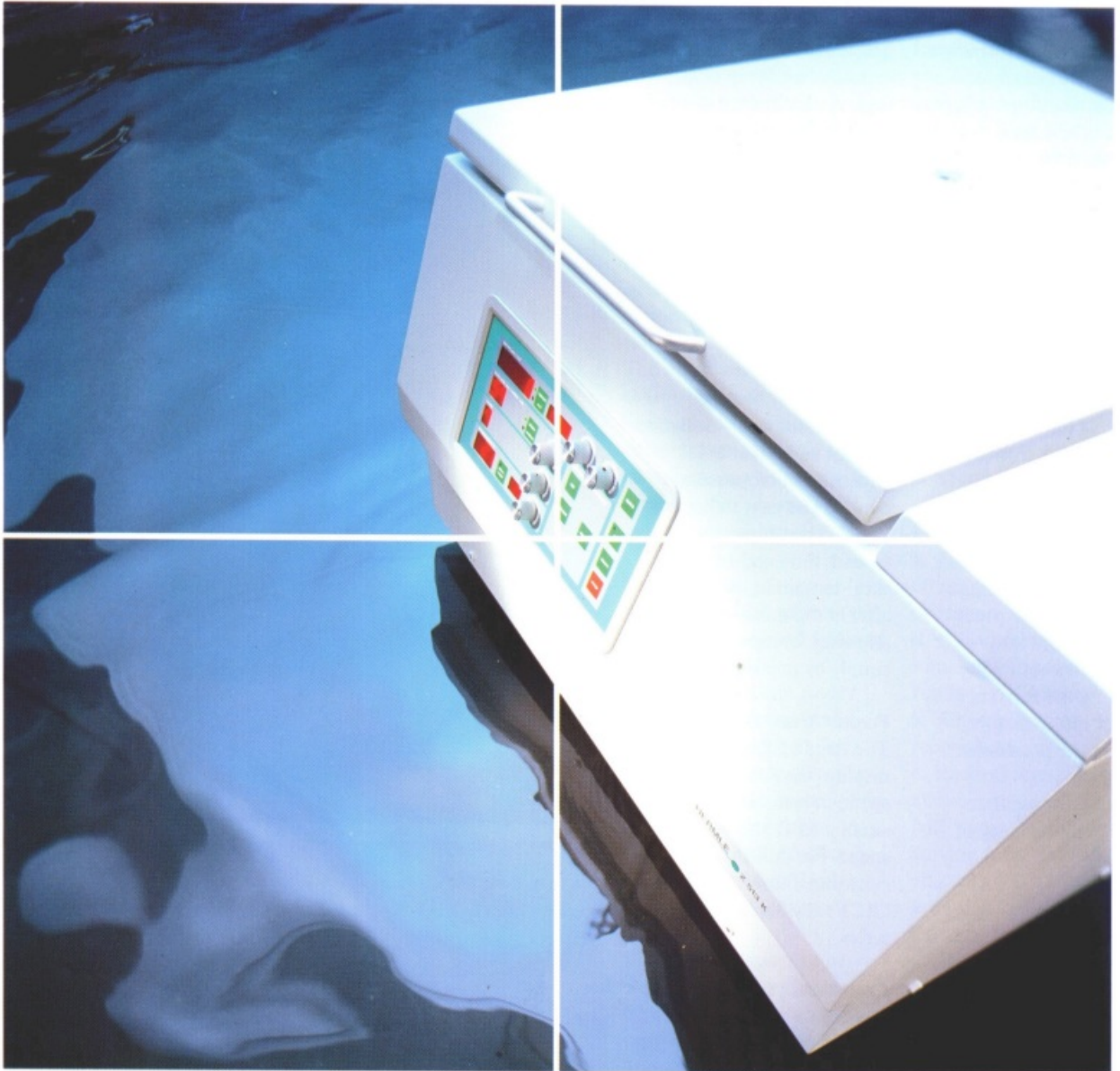


HERMLE

LABORTECHNIK



Universal, Large Volume
Laboratory Centrifuges
Z 513 ■ Z 513 K

Intelligent Centrifuges

For applications requiring high speed performance or the ability to accommodate blood bags or a large variety of different tube sizes, the centrifuges Z 513 and Z 513 K can handle the job.

The operating system of these centrifuges is based on advanced, easy to use, microprocessor technology and automatic rotor recognition.

Flexible and intelligent

The LED on the front panel displays either rotor speed (in rpm) or g-force (RCF). If a speed is selected that exceeds the installed rotor's max. rating, the centrifuge will automatically correct the setting to the rotor's max. speed without terminating the run. This important safety-feature eliminates the possibility of over-speed. This feature for accurate calculation and display of g-force.

Program Memory

For routine works the Z 513 / Z 513 K give you the possibility to program and store 10 complete centrifuge runs. All parameters (speed, rcf ect.) can be stored and recalled at the touch of a button, saving valuable time.

Automatic lid lock

The lid needs only to be set gently when closing the centrifuge. The motor driven lid locking system then finishes the job. This innovative feature adds to the user friendly design.

Z 513

The Z 513 is a universal, high capacity bench top centrifuge. A continuous air flow through the centrifuge housing prevents sample heating and restricts sample temperature from rising over 12 °C, even at max. speed. When the rotor is not running an additional ventilating fan assists in cooling process.

Operation

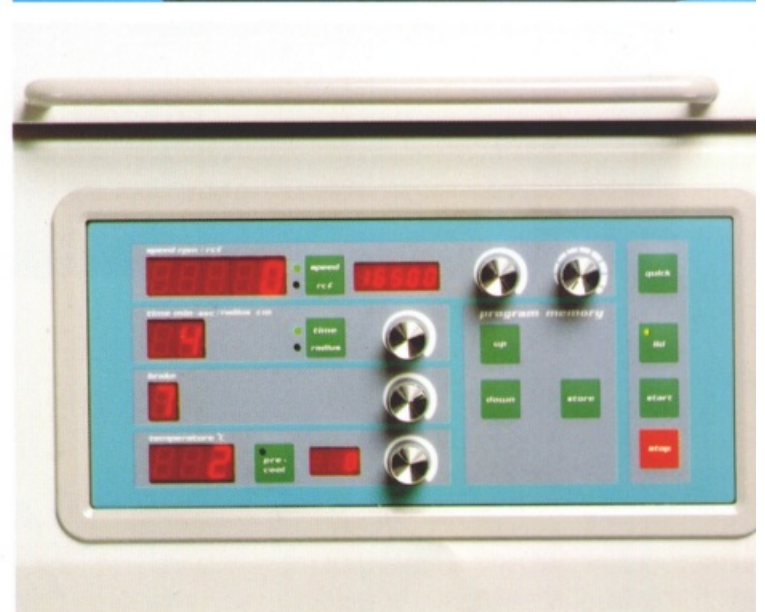
The ergonomically designed control panel combines advanced microprocessor control and easy to adjust knobs. The set parameters (speed, time and temperature) remain in memory after completion of a run, allowing for repetitive runs simply by pressing "start".

Preset / Actual Display

The large LED constantly displays the actual rotor speed in rpm, while the smaller LED shows the set speed. For indication of centrifugal force just press "RCF" key during or before a run.

Coarse and Fine Adjustment Control

Two knobs are provided for coarse and fine adjustment of speed. The knob on the left allows for coarse adjustment 500 rpm increments. The knob on the right allows a more precise adjustment in 10 rpm increments.





Z 513 K

The Z 513 K is a universal, high capacity, refrigerated bench top centrifuge equipped with an efficient and powerful refrigeration system. Irrespective of the installed rotor the power of refrigeration is shown by long time runs on maximum speed. For the cooling system the CFC-free refrigerant R 404a is used. The rotor and rotor chamber can be pre-cooled to the required working temperature prior to a centrifuge run by simply pressing the "pre-cool" key on the control panel.

Versatile Use

A large selection of rotors is available for a broad range of applications:

- Swinging bucket rotor: Accepts four hermetically sealed round buckets for 1000 ml each or rectangular buckets that can accommodate up to 120 x 15 ml tubes. Max. speed: 5000 rpm / 5450 x g.
- Angle rotor 6 x 85 ml: Max. speed: 15.000 rpm / 25.900 x g.
- Safety-Chassis: can be placed on the benchtop or on one of the optional utility carts. Two carts are available, one stands at a comfortable working height, the other fits under the bench for space savings. Both of these wheeled utility carts offer the convenience of mobility and safety.

Accessories

For more information about the utility carts and the entire range of accessories for the centrifuges Z 513 and Z 513 K, please see the separate accessories brochure.

Common Features

Except the refrigeration of the Z 513 K, the features and capabilities of both units are identical. Due to the maintenance-free induction motor, there are no brushes to wear out or to be replaced. The centrifuges are extremely quiet in operation due to the extensive noise insulation. These are reasons that make work directly beside the units as pleasant as possible.

Advantages

- Speed may be selected in 10 rpm and 500 rpm increments
- Time may be set from 1 to 60 min. or continuous operation
- The amount of time remaining to complete the run is also displayed
- Automatic rotor recognition
- Radius correction features allows g-value calculation with compensation for varying tube sizes and adapters
- Braking power can be adjusted to any of ten available intensity levels
- Temperature range from -10 °C up to +40 °C
- Temperature indicator shows preset and actual sample temperature
- Press the "quick" button for short time runs, while the elapsed seconds are displayed on the LED
- Imbalance cutout with indication
- "precool"-programm
- Diagnostics capability integrated into the software
- Electric motor driven lid lock



Centrifuge	Z 513	Z 513 K	
Performance Data			
Max. speed		15.000 rpm	
Max. RCF		25.900 x g	
Max. volume		4 x 1000 ml	
Dimensions			
Unit (W/H/D)	61/46,5/73 cms	79/46,5/73 cms	
Weight	90 kgs	140 kgs	
Voltage	Order Number		
230 V / 50 - 60 Hz	274.00 V01	277.00 V01	
120 V / 50 - 60 Hz	274.00 V02		
230 V / 50 - 60 Hz		277.00 P01	(incl. Swing out rotor + 1000 ml roundbucket, hermetically sealed)
Accessories			
Safety-Chassis			
working-height 70 cms incl. Centrifuge	274.98 V01	277.98 V01	
working-height 110 cms incl. Centrifuge	274.98 V02	277.98 V02	
Rotors	Max. speed	Max. RCF	Order number
Swing out rotor 4 x 750 ml with wind shield	5.000 rpm	5.450 x g	220.70 V06
Swing out rotor 4 x 1.000 ml without wind shield	3.600 rpm	3.376 x g	220.70 V05
Swing out rotor 6 x 500 ml	3.200 rpm	2.690 x g	220.29 V03
Swing out rotor 4 places for conical oil test tubes	2.000 rpm	1.006 x g	220.41 V03
Angle rotor 6 x 85 ml	15.000 rpm	25.900 x g	220.78 V02 / V03*
Angle rotor 8 x 50 ml	15.000 rpm	24.100 x g	220.80 V02 / V03*
Angle rotor 8 x 30 ml	15.000 rpm	23.600 x g	220.76 V02 / V03*
* Hermetically sealed version			
** 120 V version 4.500 rpm. / 4.414 x g			
*** 120 V version 3.000 rpm / 2.334 x g			

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