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Our managing directors: Alexander Hermle (Head of Service), Harald Hermle (Head of Controlling) and Walter Haberkorn (Head of Sales and Marketing).

## "WE SIMPLY LOVE SEPARATING"

#### SEPARATE TO YOUR HEART'S CONTENT.

HERMLE centrifuges have established themselves as indispensable tools for DNA analysis, drug development in the pharmaceutical industry and even standard blood tests at your GP's surgery. We are also well and truly "at home" in the fields of microbiology, environmental technology and food technology.

Our passion is separating, which is why we focus exclusively on building outstanding centrifuges. Our range of standard products now covers a wide range of volumes and speeds, both with and without integral cooling. However, we can also develop custom solutions to meet the needs of your individual assignments.

OUR HEARTS BEAT FASTER IN THE KNOWLEDGE THAT YOU CAN SUCCESSFULLY SEPARATE SUBSTANCES INTO THEIR INDIVIDUAL COMPONENTS – WE ARE ALWAYS FULLY COMMITTED TO ACHIEVING THIS GOAL.

Centrifuges from HERMLE are assembled exclusively in Germany by qualified specialists in the fields of electronics and mechanics. At HERMLE, we attach particular importance to this expert craftsmanship — and to ensuring a positive working atmosphere, optimal workstations and good teamwork.

Did you know that the first centrifuge was invented and built by Wilhelm Lefeldt in Germany, and that it has revolutionised milk processing to this day by enabling automatic separation of the cream from the skimmed milk?

For over 60 years, HERMLE centrifuges have embodied "Made in Germany" quality in applications all over the world. And in incredibly diverse fields – from clinical-chemical investigations in medicine and forensics using our universal centrifuges, to environmental investigations of soil material or the water content of crude oil with our large-volume centrifuges, not to mention the production of vaccines, enzymes or vitamins with our special centrifuges for pharmaceuticals and biotechnology.

## CENTRIFUGES FOR THE LABORATORY

HERMLE MAKES SEPARATING EASY

We have the right centrifuge and the optimal rotor and accessories for every requirement and application. And if our standard products are not ideal for your task, we will work with you to develop new solutions. Furthermore, thanks their appealing design and intuitive control panels, our devices can be easily used by everyone and anyone.

We've also make it easier than ever to change the rotor in our centrifuges. The technology we use here has been available in our cars for many years — when touched, the car unlocks itself, the seat glides into the stored position for the respective driver and the ambient lighting is activated. Centrifuges from HERMLE offer you this same convenience thanks to built—in RFID rotor identification system. The centrifuge automatically detects the inserted rotor and adjusts the volume and acceleration values accordingly. As well as being extremely convenient for the operator, it also reduces operator error and increases the service life of the device.

WE SUPPORT YOU THROUGHOUT THE ENTIRE SERVICE LIFE OF YOUR CENTRIFUGE TO ENSURE TROUBLE-FREE SEPARATING – GUARANTEED

HERMLE is renowned for being a reliable and long-term partner to our customers. While our dealers appreciate our expert help via our hotline, our end customers value our fast delivery times and deep stocks of spare parts — even for older devices. In addition, most of the accessories for our devices can also be used with their successor models.

"WE'VE HAD A SPECIAL APPRE-CIATION FOR HIGH-QUALITY CRAFTSMANSHIP SINCE 1956."

HARALD HERMLE, SHAREHOLDER



## QUALITY IS NO COINCIDENCE

# WE LOVE TO SEPARATE – WHICH IS WHY WE KEEP A CLOSE EYE ON OUR CENTRIFUGES

Carefully selected components and materials, coupled with our employees' sense of responsibility and keen know-how, as well as an internally focused quality management system – this is how we ensure the quality, reliability and safety of our equipment.

Of course, there can be no doubt that all manufacturers of laboratory equipment base their operations on a functional and certified quality management system.

At HERMLE, quality begins with the selection of our employees. Their qualifications naturally play a major role on the one hand. On the other, we endeavour to establish harmonious teams in order to create a positive working atmosphere, in which we can all learn from each other and ensure that mistakes are kept to an absolute minimum. We will therefore retain important core areas such as development and production in Germany, and will carry out the necessary quality and safety checks in-house.

In addition, our corporate culture is based on the principle that everyone is responsible for the quality of their own work. This ensures that we work and act with a constant awareness of both quality and cost. Furthermore, we contribute to our high quality standards by providing permanent and intensive training for our employees.

Careful selection of suppliers, components and materials is also firmly anchored in our quality awareness. Our goal is to ensure that you receive a high-quality device that complies with certified quality and safety standards — and will remain in perfect working order for many years to come.

Naturally, we work in accordance with a highly effective, company–focused quality management system based on ISO 9001 and ISO 13485. This ensures we achieve the defined quality level and guarantees the extreme reliability of our products across the board. In addition, our centrifuges comply with all applicable EC directives.



# THIS IS HOW WE ENSURE PROPER SEPARATION









All core areas of production are housed under one roof: development, assembly and quality control – to ensure proper separation of your substances and samples.

# IF YOU WANT TO KNOW EXACTLY ...

## A CAMPAIGN THAT EMBODIES OUR QUALITY STANDARDS.

You're no doubt asking yourself why on earth we're alluding to Black Forest gateau. This is one of our newly developed campaign motifs. It's our ton-gue-in-cheek way of explaining our passion for separating. The campaign is not only designed to illustrate what our centrifuges do, namely separate substances with outstanding precision, but also how we build them — with commitment to quality and precise results, but always also with a healthy dose of humour. Indeed, this perfectly summarises our daily work at our location in Wehingen, Germany. We firmly believe that a friendly, open work environment simply results in superior products and higher quality.

We constantly strive to improve our centrifuges, including their operation and the handling of the required accessories, and to make the procurement of new devices and spare parts as quick and easy as possible for our dealers and end customers. After all, when you purchase a HERMLE centrifuge you are entitled to expect excellent after-sales service as part of our quality promise.

SO LET US SURPRISE YOU BY SHOWING YOU WHAT ELSE WE CAN SEPARATE (APART FROM A BLACK FOREST GATEAU!).

We've also "declared war" on overly technical, cold and sterile catalogues and product presentations by showing that we have the courage to innovate here also – just as we do when developing our products and responding to your custom requests. For us, "courage to innovate" means producing fresh designs combined with intuitive operation of our devices and accessories.

IF YOU
WANT
TO KNOW
EXACTLY









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## **SELECTION GUID**

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	-																
	Z 130 M	Z 167 M	Z 206 A	Z 207 A	Z 207 H	Z 207 M	Z 216 M	Z 216 MK	Z 306	Z 326 Z 326 K	Z 366 Z 366 K*	Z 446 Z 446 K*	ZK 496	Z 32 HK	Z 36 HK	OLEUM	SIEVA-3
IXED-ANGLE ROTOR	•	•					•			•							
Лах. RCF (xg)	2,000	15,994	4,427	4,445	16,058	17,317	21,379	21,379	18,624	23,542	21,379	24,325	16,022	38,007	65,395		7,825
											*24,325	*26,328					
Max. speed (rpm)	5,500	14,000	6,000	6,800	13,000	13,500	15,000	15,000	14,000	18,000	15,000	16,000	10,500	20,000	30,000		10,000
											*16,000	*16,000					
SWING-OUT ROTOR	•																
Max. RCF (xg)			4,467						3,350	4,080	3,780	4,807	5,203	4,080	2,987	2,213	
Max. speed (rpm)			6,000						4,500	5,000	4,500	5,000	4,600	5,000	4,000	3,000	
REACTION TUBES																	
0.2-2.0ml (Ø 6-11x38mm)	12	18	18	8		24	44	44	30	44	44	44		44	30		
i ml (Ø 16.5 x 69 mm)							12	12	12	12			96				
Spin Column Kits						18	24	24									
BLOOD COLLECTION TUBES																	
.8-5 ml (Ø 13x75 mm)			12	8					28	28	56	84	192	28	40		
1-7 ml (Ø 13 x 100 mm)			12	8					28	28	56	84	192	28	40		
6-10 ml (Ø 16 x 100 mm)		-	12	8					28	28	48	72	152	28	32		
CONICAL TUBES	•																
5 ml (Ø 17 x 120 mm)			12	4					20	20	40	68	96	20	28		
60 ml (Ø 29 x 116 mm)			6						8	10	16	28	40	10	12		
75 ml (Ø 61 x 118 mm)		- - - - - - - -								-	6	6	8		6		
225 ml (Ø 61 x 137 mm)											6	6	8		6		
250 ml (Ø 60 x 159 mm)											3	4	4				
500 ml (Ø 97 x 148 mm)												4	4				
/IALS / BOTTLES																	
5ml (Ø 17x120mm), RB			12	8					30	30	36	72	72	30	36		
50 ml (Ø 29x116 mm), RB			6						6	6	12	28	40	6	12		
00 ml (Ø 44×100 mm), RB		-							4	4	4	12	12	4	4		
250 ml (Ø 62×122 mm), FB											6	6	8		6		
500 ml (Ø 81 x 125 mm), FB												4					
500 ml (Ø 98×114 mm), FB												4	4				
750 ml (Ø 98×152 mm), FB												4	4				
,000 ml (Ø 98 x 172 mm), FB													4				
PCR STRIPS	4 x 8						4 x 8	4 x 8		4 x 8		4 x 8		4 x 8			
HEMATOCRIT CAPILLARIES					24		24										
MTP PLATES 86 x 128 x 15)									6	6	6	24	28	6	6		
00 ml ASTM, conical																4	
00 ml ASTM, pear-shaped																4	

 $<sup>*\</sup> refrigerated\ model\ has\ a\ higher\ speed\ for\ some\ rotors$ 

RB = round bottom, FB = flat bottom, MTP = microtitre plate

## FEATURES AND FUNCTIONS

	Z 130 M	Z 167 M	Z 206 A	Z 207 A	Z 207 H	Z 207 M	Z 216 M	Z 216 MK	Z 306	Z 326	Z 326 K	Z 366	Z 366 K	Z 446	Z 446 K	ZK 496	Z 32 HK	Z 36 HK	OLEUM	SIEVA-3
FEATURES		•	•		•		•	•		•	•		•		•			•		
Brushless induction drive		•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Microprocessor control		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Imbalance switch-off		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Motor driven lid lock							•	•		•	•	•	•	•	•	•	•	•	•	
Automatic RFID rotor identification with overspeed protection									•	•	•	•	•	•	•	•	•	•		
Acoustic signals, e.g. during operation		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Emergency release		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Stainless steel chamber								•	•	•	•	•	•	•	•	•	•	•	•	•
Air cooling	•	•	•	•	•	•	•		•	•		•		•					•	•
CFC-free refrigeration (-20°C to +40°C)								•			•	:	•		•	•	•	•		
Standstill cooling								•			•		•		•	•	•	•		
DISPLAY FUNCTIONS																				
Diagnostic program		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Program memory for 99 programs		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Quick key for short runs		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pre-cooling program								•			•		•		•	•	•	•		
10 acceleration and deceleration profiles, unbraked stop possible		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Display of setpoint and actual value		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Preselection of speed or RCF in increments of 10		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Run-time preselection from 10 s to 99 h 59 min, as well as continuous run function		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Simple operation via central potentiometer			•				•	•	•	•	•	•	•	•	•	•	•	•	•	
Operating panel with touch function		•		•	•	•			:			:								•
LED to indicate the current operating status		•		•	•	•														•
Sleep mode		•		•	•	•	:		:			:								•
Timer function: the centrifuge starts at the pre-set time							•	•	•	•	•	•	•	•	•	•	•	•	•	•



 $\begin{array}{c} \text{SMALL CENTRIFUGES} \\ 8 \times 15 \, \text{ml} \\ Z \, 207 \, A \end{array}$ 

The small centrifuge Z 207 A is ideal for use in medical practices and laboratories that process a small number of samples. It includes a fixed-angle rotor that can hold up to  $8 \times 15$  ml tubes as well as the most common blood-collection tubes. The innovative control panel with touch function is particularly easy to use and unique in this centrifuge class.



#### **TECHNICAL SPECIFICATIONS**

MAX. SPEED	6,800 rpm
MAX. RCF	4,445 xg
MAX. VOLUME	8 x 15 ml RB/4 x 15 ml conical
SPEED RANGE	200 – 6,800 rpm
RUNNING TIME	59min50s/10s increments or $99h59min/1min$ increments
DIMENSIONS (W X H X D)	28 cm x 24 cm x 35 cm
WEIGHT	8 kg
POWER CONSUMPTION	50 W

#### **ORDER NUMBERS**

326.00 P01 - Z 207 A, 100 - 230 V/50 - 60 Hz, incl. 8 x 15 ml Rotor



Information about the control panel can be found on page 46.

#### **SPECIFICATIONS**

- Microprocessor control with LCD display
- · Electromagnetic lid lock
- Quick access to the samples
- · Active imbalance detection and shutdown
- Air cooling
- Short acceleration and deceleration times
- Noise level < 60 dBA at max. speed
- Easy removal of the rotor without tools
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Colour-based visual display of the operating state
- Sleep mode

#### **ENCLOSED ROTOR**

Order number: 221.57 V01



V01 Max. speed: 6,800 rpm
Max. RCF: 4,445 xg
Max. radius: 8.6 cm
Max. Ø: 17 mm

Angle rotor: 8 x 15 ml, Angle: 33°

## SMALL CENTRIFUGES 6 x 50 ml

### Z 206 A

Up to 12 x 15 ml sample tubes (also conical) can be used in the Z 206 A. Adapters are available for smaller tube dimensions and blood collection systems. For larger volumes, a fixed-angle rotor for 6 x 50 ml tubes (conical and round bottom) is also available.

#### **TECHNICAL SPECIFICATIONS**

MAX. SPEED	6,000 rpm
MAX. RCF	4,467 xg
MAX. VOLUME	6 x 50 ml
SPEED RANGE	200-6,000 rpm in 50 rpm increments/10 rcf increments
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	28 cm x 26 cm x 37 cm
WEIGHT	12 kg

#### ORDER NUMBERS

306.00 V01 - Z 206 A, 230 V/50 - 60 Hz/100 W 306.00 V02 - Z 206 A, 120 V/50 - 60 Hz/100 W



Information about the control panel can be found on page 46.



Max. volume: 12 x 15 ml Round bottom and conical Order number: 221.54 V01



Max. volume: 6 x 50 ml Round bottom and conical Order number: 221.55 V01

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBERS	ANGLE
6 x 50 ml	6,000 rpm	4,427 xg	221.55 V01	40°
12 x 15 ml	6,000 rpm	4,427 xg	221.54 V01	32°
18 x 1.5/2.0 ml	6,000 rpm	2,938 xg	220.95 V06	45°
6 x 5.0 ml	4,000 rpm	1,896 xg	220.68 V04	0-90°
4 x 4.0-7.0 ml	6,000 rpm	4,467 xg	221.37 V01	0-77°



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download

**SMALL CENTRIFUGES** 24 x Capillaries

Z 207 H

Due to its compact design, the hematocrit centrifuge Z 207 H can also be used in even the smallest laboratories. It is equipped with a hematocrit rotor for 24 x capillaries. The innovative control panel with touch function is a particular highlight.







Information about the control panel can be found on page 46.

#### TECHNICAL SPECIFICATIONS

MAX. SPEED	13,000 rpm
MAX. RCF	16,058 xg
MAX. VOLUME	24 x capillaries
SPEED RANGE	200 – 13,000 rpm
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	28 cm x 24 cm x 35 cm
WEIGHT	12.5 kg
POWER CONSUMPTION	150 W

#### **ORDER NUMBERS**

331.00 P01 - Z 207 H, 230 V / 50 - 60 Hz, incl. 24 x capillary Rotor 331.00 P02 - Z 207 H, 120 V / 50 - 60 Hz, incl. 24 x capillary Rotor

#### **SPECIFICATIONS**

- · Microprocessor control with LCD display
- · Electromagnetic lid lock
- · Quick access to the samples
- · Active imbalance detection and shutdown
- Air cooling
- Short acceleration and deceleration times
- Noise level < 60 dBA at max. speed
- · Easy removal of the rotor
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Colour-based visual display of the operating state
- Sleep mode

#### ENCLOSED ROTOR INCLUSIVE LID

Order number: 221.60 V01

MAX. SPEED: 13,000 rpm Max. RCF: 16,058 xg Max. Radius: 8.6 cm

Hematocrit rotor for 24 x capillaries

Angle: 90°

#### MICROLITRE CENTRIFUGES 12 x 1.5/2.0 ml

### Z 130 M

Unlike with conventional mini centrifuges, there is no need to replace the rotors with the Z 130 M. The unique COM-BI-Rotor included in the centrifuge is all you need to centrifuge 12 micro tubes and 4 PCR strips simultaneously. With a fixed speed of 5,500 rpm, this centrifuge is ideal for short centrifugation runs.

TECHNICAL SPECIFICATIONS



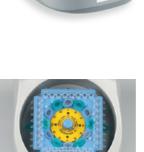
#### MAX. SPEED 5,500 rpm MAX. RCF 2,000 xg 12 x 1.5/2.0 ml tubes MAX. VOLUME 32 x 0.2 ml PCR tubes 4 x PCR strips (8 x 0.2 ml) DIMENSIONS (W X H X D) 14 cm x 11.2 cm x 20 cm WEIGHT 1.3 kg

#### **ORDER NUMBERS**

324.00 V01 - Z 130 M, 230 V/50-60 Hz/40 W 324.00 V02 - Z 130 M, 120 V/50-60 Hz/40 W

#### **SPECIFICATIONS**

- Unique COMBI-Rotor for both tubes and strips
- · Double the capacity of a standard mini centrifuge
- · Starts/stops when the lid is opened/closed
- Compact design
- · Short acceleration and deceleration times
- Low noise level: 52 dBA
- Built in accordance with international safety guidelines, e.g. IEC 61010



COMBI-Rotor



## MICROLITRE CENTRIFUGES 18 x 1.5/2.0 ml

## Z 167 M

The microlitre centrifuge Z 167 M is ideally suited for routine centrifugation of reaction tubes. Equipped with a powerful drive, it accelerates the  $18 \times 1.5 / 2.0 \, \mathrm{ml}$  rotor to around  $16,000 \, \mathrm{xg}$  in a very short time! The innovative control panel with touch function and integrated LED light enables a quick and easy workflow. The LED changes colour depending on the current operating state of the centrifuge, making it easy to see at a glance whether the centrifuge is running, stationary or in sleep mode.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	14,000 rpm
MAX. RCF	15,994 xg
MAX. VOLUME	18 x 1.5/2.0 ml
SPEED RANGE	200 – 14,000 rpm
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	28 cm x 24 cm x 35 cm
WEIGHT	12 kg
POWER CONSUMPTION	130 W



Information about the control panel can be found on page 46.

#### ORDER NUMBERS

332.00 P01 – Z 167 M, 230 V/50 – 60 Hz, incl. 18 x 1.5/2.0 ml Rotor 332.00 P02 – Z 167 M, 120 V/50 – 60 Hz, incl. 18 x 1.5/2.0 ml Rotor

#### **SPECIFICATIONS**

- Microprocessor control with LCD display
- · Electromagnetic lid lock
- · Quick access to the samples
- · Active imbalance detection and shutdown
- Air cooling
- Short acceleration and deceleration times within 14 respectively 16 seconds
- Noise level < 57 dBA at max. speed
- Easy removal of the rotor without tools
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Colour-based visual display of the operating state
- Sleep mode

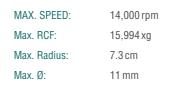
#### **ENCLOSED ROTOR**

Order number: 220.95 V08

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Anglerotor 18 x 1.5/2.0 ml

Angle: 45°





Thanks to its compact design, the microlitre centrifuge Z 207 M can also be used in even the smallest laboratories. You can choose from a 24-place microlitre rotor, either with a snap-on lid or a hermetically sealed lid, as well as a special rotor for spin column kits. The innovative control panel with touch function is a particular highlight.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	13,500 rpm
MAX. RCF	17,317 xg
MAX. VOLUME	24 x 1.5/2.0 ml
SPEED RANGE	200 – 13,500 rpm
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	28 cm x 24 cm x 35 cm
WEIGHT	12.5 kg
POWER CONSUMPTION	170 W

## 9 9 9 9

Information about the control panel can be found on page 46.

#### ORDER NUMBERS

328.00 V01 – Z 207 M, 230 V/50 – 60 Hz 328.00 V02 – Z 207 M, 120 V/50 – 60 Hz

#### **SPECIFICATIONS**

- Microprocessor control with LCD display
- Electromagnetic lid lock
- Pre-adjustment of the rotor type
- Quick access to the samples
- Active imbalance detection and shutdown
- Air cooling
- Short acceleration and deceleration times
- Noise level < 60 dBA at max. speed
- Easy rotor change
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Fast start and stop within 13 seconds
- Colour-based visual display of the operating state
- Sleep mode

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBERS	ANGLE
24 x 1.5/2.0 ml	13,500 rpm	17,317 xg	221.59 V01	45°
24 x 1.5/2.0 ml*	13,500 rpm	17,317 xg	221.59 V02	45°
18 x 2.0 ml Spin Column Kits	13,500 rpm	15,484 xg	221.58 V01	45°

<sup>\*</sup> hermetically sealed

#### **EXAMPLE ROTORS**



Max. volume: 24 x 1.5/2.0 ml Order number: 221.59 V01



Max. volume: 24 x 1.5/2.0 ml Order number: 221.59 V02 Hermetically sealed



Max. volume: 18 x 2.0 ml Spin Column Kits
Order number: 221.58 V01



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download



MICROLITRE CENTRIFUGES 44 x 1.5/2.0 ml

## Z 216 M | Z 216 MK

The Z 216 M and Z 216 MK set new standards in this device class. Up to 44 x 1.5 ml or 2.0 ml reaction tubes can be inserted per run. Their compact design and quiet running characteristics ensure they can be optimally adapted to the respective work environment. The powerful cooling system of the Z 216 MK keeps the samples below 4°C – even during continuous operation at 20,000 xg.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	15,000 rpm					
MAX. RCF	21,631 xg					
MAX. VOLUME	44 x 1.5/2.0 ml					
SPEED RANGE	200 – 15,000 rpm					
TEMPERATURE RANGE Z 216 MK	-20°C to 40°	°C				
RUNNING TIME	59 min 50 s /	10s increments or 99h 59 min / 1 min increments				
DIMENSIONS (W X H X D)	Z 216 M: Z 216 MK:	28 cm x 29 cm x 39 cm 28 cm x 29 cm x 55 cm				
WEIGHT	Z 216 M: Z 216 MK:	17 kg 35 kg				



Information about the control panel

can be found on page 46.

#### ORDER NUMBERS

Z 216 M: 325.00 V01 – Z 216 M, 230 V/50 – 60 Hz/280 W

 $325.00\ V02 - Z\ 216\ M,\ 120\ V/50 - 60\ Hz/280\ W$ 

Z 216 MK: 305.00 V05 - Z 216 MK, 230 V/50 - 60 Hz/560 W

305.00 V06 - Z 216 MK, 120 V/50 - 60 Hz/560 W

#### **SPECIFICATIONS**

- Maintenance-free induction drive
- · Microprocessor control with LCD display
- Motorised lid lock
- · Active imbalance detection and shutdown
- CFC-free refrigeration
- Lowest sample temperature: 4°C at 20,000 xg
- Standstill cooling
- Small footprint
- Rotor lid with snap closure ensures quick access to samples
- Noise level < 60 dBA at 21,379 xg</li>
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Timer function: the centrifuge starts at the pre-set time

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
44 x 1.5/2.0 ml	15,000 rpm	21,127/21,379xg	221.68 V01	32°/55°
30 x 1.5/2.0 ml	13,500 rpm	19,151 xg	221.17 V06	45°
12 x 5 ml	14,500 rpm	19,978 xg	221.35 V03	45°
24 x 1.5/2.0 ml*	15,000 rpm	21,379 xg	220.87 V13	45°
24 x 1.5/2.0 ml	15,000 rpm	21,379 xg	220.87 V14	45°
64 x 0.5 ml	13,500 rpm	14,261/16,298xg	220.92 V07	40°
4 x 8-PCR strips	15,000 rpm	15,343 xg	221.38 V03	45°
24 Capillaries	12,000 rpm	14,970 xg	220.58 V13	90°
24 x 1.5/2.0 ml + 4 x 8-PCR	15,000 rpm	21,631 xg	221.81 V01	45°
24 x 2.0 ml Spin Column Kits	15,000 rpm	21,379 xg	221.75 V01	45°

<sup>\*</sup> hermetically sealed

#### **EXAMPLE ROTORS**

Main rotor



Max. volume: 24 x 1.5/2.0 ml Order number: 220.87 V14



Max. volume: 24 x 1.5/2.0 ml Order number: 220.87 V13 Hermetically sealed



Max. volume: 12 x 5 ml Order number: 221.35 V03



Max. volume: 4 x 8-PCR strips Order number: 221.38 V03



Max. volume: 44 x 1.5/2.0 ml Order number: 221.68 V01



Max. volume: 24 Hematocrit capillaries Order number: 220.58 V13 only Z 216 M

#### Combi-Rotor



Max. volume: 24 x 1.5/2.0 ml, 4 x 8-PCR Order number: 221.81 V01



Max. volume: 24 x 2.0 ml Spin Column Kits Order number: 221.75 V01

UNIVERSAL CENTRIFUGES  $6 \times 50 \text{ ml}$  287 A

The centrifuge Z 287 A is a real allrounder! Provided with eleven different rotors, this unit covers the most common applications. No matter if angle, swing out, plate or hematocrit rotor, you will always find the suitable accessory for your needs. Its appealing design and the innovative control panel with "Touch-operation" function and LED light, which indicates the current operating state, complete the versatility of this model.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED MAX	14.000 rpm
MAX. RCF	16.058 xg
MAX. VOLUME	6 x 50 ml
SPEED RANGE	200 – 14.000 rpm
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	35 cm x 26 cm x 43 cm
WEIGHT GEWICHT	18 kg



Information about the control panel can be found on page 46.

#### ORDER NUMBERS

327.00 V01 - Z 287 A, 230 V / 50 - 60 Hz /170 W 327.00 V02 - Z 287 A, 120 V / 50 - 60 Hz / 170 W

#### **SPECIFICATION**

- Maintenance-free induction drive
- · Microprocessor control with LCD display
- Electromagnetic lid lock
- Automatic radio-frequency rotor identification system (RFID) with over speed protection, immediately upon rotor insert
- Active imbalance detection and shutdown (rotor specific)
- · Wide range of rotors and accessories
- USB interface for software updates via a PC
- Manufactured according to international safety regulations, i.e. IEC 61010
- Acoustic signal during operation with adjustable melody and volume
- Easy rotor change
- · Optimised airflow keeps the samples cool

#### ROTORS

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
4 x 50 ml conical	5.000 rpm	3.633 xg	221.80 V01	0 – 75°
4 x 30 ml universal	5.000 rpm	3.437 xg	221.78 V01	0 – 90°
8 x 10 ml blood tubes	5.000 rpm	3.717 xg	221.79 V01	0 – 90°
2 x 1 MTP	3.800 rpm	1.453 xg	221.77 V01	0 – 90°
6 x 50 ml	6.000 rpm	4.427 xg	221.55 V04	40°
12 x 15 ml	6.000 rpm	4.427 xg	221.54 V04	32°
8 x 15 ml	8.000 rpm	6.153 xg	221.57 V02	33°
24 x 1,5 / 2,0 ml	12.000 rpm	13.683 xg	221.59 V06	45°
24 x 2,0 ml Spin Column Kits	12.000 rpm	13.683 xg	221.75 V03	45°
18 x 1,5 / 2,0 ml	14.000 rpm	15.994 xg	220.95 V09	45°
24 Capillaries	13.000 rpm	16.058 xg	221.60 V03	90°

#### **EXAMPLE ROTORS**



max. volume: 4 x 50 ml conical Order number.: 221.80 V01



max. volume: 6 x 50 ml Order number.: 221.55 V04



max. volume: 8 x 10 blood tubes Order number.: 221.79 V01



max. volume: 12 x 15 ml Order number.: 221.54 V04



max. volume: 2 x 1 microtitre plates
Order number.: 221.77 V01



max. volume: 24 x 1,5/2,0 ml Order number.: 221.59 V06



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download

UNIVERSAL CENTRIFUGES 4 x 145 ml

Z 306

Our small, universal laboratory centrifuge offers a wide range of applications, ranging from clinical laboratory work to research and industrial laboratories. The swing-out rotors can accommodate all standard tubes via appropriate adapters, including blood collection tubes and conical  $15/50\,\mathrm{ml}$  tubes. The wide range of accessories for the Z 306includes rotors for microtitre plates as well as high-speed fixed-angle rotors for reaction tubes or centrifuge tubes up to 50 ml – making this laboratory centrifuge an indispensable part of the daily work routine at smaller hospitals.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	14,000 rpm
MAX. RCF	18,624 xg
MAX. VOLUME	4 x 145 ml
SPEED RANGE	200 – 14,000 rpm
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	35 cm x 33 cm x 47 cm
WEIGHT	30 kg



Information about the control panel can be found on page 46.

#### ORDER NUMBERS

310.00 V01 - Z 306, 230 V/50 - 60 Hz/240 W 310.00 V02 - Z 306, 120 V/50 - 60 Hz/300 W

#### **SPECIFICATIONS**

- Maintenance-free induction drive
- · Microprocessor control with LCD display
- Electromagnetic lid lock
- Automatic radio-frequency rotor identification system (RFID) with over speed protection, immediately upon rotor insertion
- Active imbalance detection and shutdown (rotor-specific)
- Imbalance-tolerant drive system
- · Wide range of rotors and accessories
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Acoustic signal during operation with adjustable melody and volume
- · Easy rotor change
- Noise level < 63 dBA at max. speed
- · Optimised airflow keeps the samples cool
- · Stainless steel chamber
- Timer function: the centrifuge starts at the pre-set time

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
4 x 145 ml	4,500 rpm	3,350 xg	221.12 V20	0 – 90°
4 x 100 ml	4,000 rpm	2,611 xg	220.72 V20	0 – 90°
30 x 15 ml	4,500 rpm	2,830 xg	221.19 V20	35°
6 x 50 ml	6,000 rpm	4,427 xg	221.55 V20	40°
12 x 15 ml	6,000 rpm	4,427 xg	221.54 V20	32°
12 x 5 ml	14,000 rpm	18,624 xg	221.35 V20	45°
30 x 1.5/2.0 ml	12,000 rpm	15,131 xg	221.17 V20	45°
24 x 1.5/2.0 ml	14,000 rpm	18,624 xg	220.87 V21	45°
24 x 1.5/2.0 ml*	14,000 rpm	18,624 xg	220.87 V20	45°
2 x 3 MTP	4,500 rpm	2,716 xg	221.16 V20	0 – 90°
2 x 3 MTP	3,500 rpm	1,424 xg	220.50 V20	0 – 90°

<sup>\*</sup> hermetically sealed

#### **EXAMPLE ROTORS**

Main rotor



Max. volume: 4 x 145 ml Order number: 221.12 V20



Max. volume: 12 x 15 ml Order number: 221.54 V20



Max. volume: 2 x 3 Microtitre plates Order number: 221.16 V20



Max. volume: 30 x 1.5/2.0 ml Order number: 221.17 V20



Max. volume: 6 x 50 ml Order number: 221.55 V20



Max. volume: 12 x 5 ml Order number: 221.35 V20



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download

UNIVERSAL CENTRIFUGES 4 x 145 ml

Z 326 | Z 326 K

Both the tabletop centrifuge Z 326 and the tabletop refrigerated centrifuge Z 326 K are compatible with a wide range of different rotors and can therefore be classified as universal centrifuges. Whether with a swing-out, microlitre or large-volume fixed-angle rotor, the easy rotor replacement makes the separation process fast and efficient. Featuring a space-saving design, the Z 326 K is equipped with a powerful cooling system and delivers outstanding performance with a compact footprint.







Information about the control panel can be found on page 46.

#### TECHNICAL SPECIFICATIONS

MAX. SPEED	18,000 rpm		
MAX. RCF	23,542 xg		
MAX. VOLUME	4 x 145 ml		
SPEED RANGE	200 – 18,000 rpm		
TEMPERATURE RANGE Z 326 K	-20°C to 40°C		
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min incremen		
DIMENSIONS (W X H X D)	Z 326: 40 cm x 36 cm x 48 cm Z 326 K: 40 cm x 36 cm x 70 cm		
WEIGHT	Z 326: 43 kg Z 326 K: 60 kg		
	·		

#### ORDER NUMBERS

Z 326: 312.00 V03 – Z 326, 230 V/50 – 60 Hz/460 W 312.00 V04 – Z 326, 120 V/50 – 60 Hz/480 W Z 326 K: 311.00 V05 – Z 326 K, 230 V/50 – 60 Hz/660 W

311.00 V06 – Z 326 K, 120 V/50 – 60 Hz/660 W

#### **SPECIFICATIONS**

- Maintenance-free induction drive
- · Microprocessor control with LCD display
- Motor driven lid lock
- Automatic radio-frequency rotor identification system (RFID) with over speed protection, immediately upon rotor insertion
- Active imbalance detection and shutdown
- · CFC-free refrigeration
- Wide range of rotors and accessories
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Acoustic signal during operation with adjustable melody and volume
- Easy rotor change
- Noise level < 60 dBA (rotor-dependent)
- Specially designed airflow keeps the samples cool (Z 326)
- · Stainless steel chamber
- Timer function: the centrifuge starts at the pre-set time

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
4 x 145 ml	4,500 rpm	3,350 xg	221.12 V20	0-90°
4 x 100 ml	5,000 rpm	4,080 xg	220.72 V20	0 – 90°
6 x 85 ml	11,000/13,500 rpm	13,932/20,984 xg	220.78 V20	25°
6 x 85 ml	9,000 rpm	10,413 xg	221.18 V20	38°
4 x 85 ml	12,000 rpm	14,809 xg	221.20 V20	30°
30 x 15 ml	4,500 rpm	2,830/2,467 xg	221.19 V20	35°
6 x 50 ml	6,000 rpm	4,427 xg	221.55 V20	40°
6 x 50 ml	12,000 rpm	13,522 xg	221.22 V20	26°
10 x 50 ml conical	7,500 rpm	8,174 xg	221.52 V20	38°
20 x 10 ml	12,000 rpm	15,775 xg	221.28 V20	30°
12 x 15 ml	6,000 rpm	4,427 xg	221.54 V20	32°
12 x 5 ml	14,000/15,000 rpm	18,624/21,379 xg	221.35 V20	45°
44 x 1.5/2.0 ml	15,000 rpm	21,127/21,379 xg	221.68 V20	32°/55°
30 x 1.5/2.0 ml	13,000/14,000 rpm	17,758/20,595 xg	221.17 V20	45°
24 x 1.5/2.0 ml	14,000/15,000 rpm	18,624/21,379 xg	220.87 V21	45°
24 x 1.5/2.0 ml*	14,000/15,000 rpm	18,624/21,379 xg	220.87 V20	45°
12 x 1.5/2.0 ml	18,000 rpm	23,542 xg	221.23 V20	40 °
64 x 0.5 ml	13,500 rpm	14,261/16,298 xg	220.92 V20	40 °
4 x 8-PCR strips	15,000 rpm	15,343 xg	221.38 V20	45°
2 x 3 MTP	4,500 rpm	2,716 xg	221.16 V20	0 – 90°

<sup>\*</sup> hermetically sealed

#### **EXAMPLE ROTORS**

Main rotor



Max. volume: 4 x 145 ml Order number: 221.12 V20



Max. volume: 6 x 85 ml Order number: 221.18 V20



Max. volume: 4 x 100 ml Order number: 220.72 V20



Max. volume: 6 x 50 ml Order number: 221.22 V20



Max. volume: 24 x 1.5/2.0 ml Order number: 220.87 V21



Max. volume: 30 x 15 ml Order number: 221.19 V20



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download



UNIVERSAL CENTRIFUGES 6 x 250 ml

Z 366 | Z 366 K

The tabletop centrifuges Z 366 and Z 366 K set new standards in terms of versatility, running characteristics, user-friendliness and design. A capacity of  $40 \times 15$  ml conical tubes combined with centrifugal accelerations of up to  $24,325 \times 26$  ms are these tabletop devices can be classed as universal high-performance centrifuges.





#### TECHNICAL SPECIFICATIONS

MAX. SPEED	15,000/16,000 rpm		
MAX. RCF	21,379/24,325 xg		
MAX. VOLUME	6 x 250 ml		
SPEED RANGE	200 – 15,000/16,000 rpm		
TEMPERATURE RANGE Z 366 K	-20°C to 40°C		
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increment		
DIMENSIONS (W X H X D)	Z 366: 43 cm x 36 cm x 51 cm Z 366 K: 72 cm x 36 cm x 51 cm		
WEIGHT	Z 366: 52 kg Z 366 K: 77 kg		
	· · · · · · · · · · · · · · · · · · ·		

#### ORDER NUMBERS

Z 366: 301.00 V03 – Z 366, 230 V/50 – 60 Hz/520 W

301.00 V04 - Z 366, 120 V/50 - 60 Hz/520 W Z 366 K: 319.00 V01 - Z 366 K, 230 V/50 - 60 Hz/785 W

319.00 V02 – Z 366 K, 120 V/50 – 60 Hz/785 W



Information about the control panel can be found on page 46.

#### **SPECIFICATIONS**

- Maintenance-free induction drive
- · Microprocessor control with LCD display
- Motor driven lid lock
- Automatic radio-frequency rotor identification system (RFID) with over speed protection, immediately upon rotor insertion
- · Active imbalance detection and shutdown
- · CFC-free refrigeration system
- Wide range of rotors and accessories
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Acoustic signal during operation with adjustable melody and volume
- · Easy rotor change
- Noise level < 63 dBA (rotor-dependent)</li>
- Specially designed airflow keeps the samples cool (Z 366)
- Stainless steel chamber
- Timer function: the centrifuge starts at the pre-set time

#### ROTORS

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
6 x 250 ml	8,000 rpm	10,016 xg	221.21 V20	28°
4 x 250 ml	4,500 rpm	3,780 xg	221.15 V20	0 – 90°
16 x 50 ml conical	4,500 rpm	3,735 xg	221.61 V20	0 – 90°
6 x 85 ml	11,000/13,000 rpm	15,555/21,726 xg	221.18 V20	38°
30 x 15 ml	4,500 rpm	2,830 xg	221.19 V20	35 °
4 x 85 ml	12,000 rpm	14,809 xg	221.20 V20	30°
6 x 50 ml	13,000 rpm	15,869 xg	221.22 V20	26°
20 x 10 ml	12,000 rpm	15,775 xg	221.28 V20	30°
44 x 1.5/2.0 ml	15,000/16,000 rpm	21,379/24,325 xg	221.68 V20	32°/55°
24 x 1.5/2.0 ml	15,000/16,000 rpm	21,379/24,325 xg	220.87 V21	45°
24 x 1.5/2.0 ml*	15,000/16,000 rpm	21,379/24,325 xg	220.87 V20	45°
10 x 50 ml conical	9,000/10,500 rpm	11,771/16,022 xg	221.52 V20	38°
2 x 3 MTP	4,500 rpm	2,716 xg	221.16 V20	0-90°

<sup>\*</sup> hermetically sealed

#### **EXAMPLE ROTORS**

Main rotor



Max. volume: 4 x 250 ml Order number: 221.15 V20



Max. volume: 6 x 250 ml Order number: 221.21 V20



Max. volume: 16 x 50 ml conical Order number: 221.61 V20



Max. volume: 6 x 85 ml Order number: 221.18 V20



Max. volume: 2 x 3 Microtitre plates Order number: 221.16 V20



Max. volume: 10 x 50 ml conical Order number: 221.52 V20



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download

UNIVERSAL CENTRIFUGES 4 x 750 ml

Z 446 | Z 446 K

These compact tabletop centrifuges achieve a throughput of up to  $68 \times 15 \,\mathrm{ml}$  conical tubes at a max. RCF of 3,434 /  $4,346 \times g$ . If higher speeds are required, alternative solutions are available, including fixed-angle rotors with a max. RCF of  $16,022 \times g$  for  $10 \times 50 \,\mathrm{ml}$ .





#### **TECHNICAL SPECIFICATIONS**

MAX. SPEED	16,000/16,000 rpm		
MAX. RCF	24,325/26,328 xg		
MAX. VOLUME	4 x 750 ml		
SPEED RANGE	200 – 16,000 rpm		
TEMPERATURE RANGE Z 446 K	-20°C to 40°C		
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments		
DIMENSIONS (W X H X D)	Z 446: 54 cm x 39 cm x 67 cm Z 446 K: 73 cm x 39 cm x 67 cm		
WEIGHT	Z 446: 79 kg Z 446 K: 111 kg		

#### ORDER NUMBERS

Z 446: 316.00 V01 – Z 446, 230 V/50 – 60 Hz/640 W

316.00 V02 - Z 446, 120 V/50 - 60 Hz/640 W

Z 446 K: 317.00 V01 – Z 446 K, 230 V/50 – 60 Hz/1630 W

317.00 V02 - Z 446 K, 120 V/50 - 60 Hz/1630 W



Information about the control panel can be found on page 46.

#### **SPECIFICATIONS**

- Maintenance-free induction drive
- · Microprocessor control with LCD display
- Motor driven lid lock
- Automatic radio-frequency rotor identification system (RFID) with over speed protection, immediately upon rotor insertion
- · Active imbalance detection and shutdown
- · Wide range of rotors and accessories
- CFC-free refrigeration system
- $\bullet \ \ \text{Manufactured in accordance with international safety guidelines, e.g. IEC 61010}$
- Acoustic signal during operation with adjustable melody and volume
- Noise level < 65 dBA (rotor-dependent)
- Easy rotor change
- Specially designed airflow keeps the samples cool (Z 446)
- Stainless steel chamber
- Timer function: the centrifuge starts at the pre-set time

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
4 x 750 ml*	4,000/4,500 rpm	3,434/4,346 xg	221.36 V20	0 – 90°
4 x 500 ml	4,500 rpm	4,210 xg	221.08 V20	0 – 90°
4 x 500 ml	8,000 rpm	10,374 xg	221.51 V20	24°
6 x 250 ml	8,000 rpm	10,016 xg	221.21 V20	28°
4 x 250 ml	4,500/5,000 rpm	3,894/4,807xg	220.86 V20	0 – 90°
6 x 85 ml	11,000/13,000 rpm	15,555/21,726 xg	221.18 V20	38°
10 x 50 ml conical	10,000/10,500 rpm	14,532/16,022 xg	221.52 V20	38°
4 x 85 ml	15,000/16,000 rpm	23,140/26,328 xg	221.20 V20	30°
6 x 50 ml	13,000 rpm	15,869 xg	221.22 V20	26°
20 x 10 ml	12,000 rpm	15,775 xg	221.28 V20	30°
44 x 1.5/2.0 ml	16,000 rpm	24,038/24,325 xg	221.68 V20	32°/55°
30 x 1.5/2.0 ml	15,000 rpm	23,643 xg	221.17 V20	45°
24 x 1.5/2.0 ml	16,000 rpm	24,325 xg	220.87 V21	45°
24 x 1.5/2.0 ml*	16,000 rpm	24,325 xg	221.87 V20	45°
2 x 3 MTP	4,500 rpm	2,716 xg	221.16 V20	0 – 90°
4 x 8-PCR strips	15,000 rpm	15,343 xg	221.38 V20	45°

<sup>\*</sup> hermetically sealed

#### **EXAMPLE ROTORS**

Main rotor



Max. volume: 4 x 750 ml Order number: 221.36 V20 hermetically sealed



Max. volume: 6 x 85 ml Order number: 221.18 V20



Max. volume: 4 x 500 ml Order number: 221.51 V20



Max. volume: 10 x 50 ml conical Order number: 221.52 V20



Max. volume: 2 x 3 Microtitre plates
Order number: 221.16 V20



Max. volume: 24 x 1.5/2.0 ml Order number: 220.87 V20 | Hermetically sealed



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download

#### LARGE-VOLUME CENTRIFUGES 4 x 1,000 ml

## ZK 496

The refrigerated centrifuges of the ZK 496 series can process large volumes of up to max. 4 x 1,000 ml as well as blood bags. As is typical for HERMLE, a wide range of adapters is available. The units are available in two different working heights: a floor-standing centrifuge and a practical underbench unit. Both models are fitted with castors to ensure they can be easily moved around the lab.



Underbench centrifuge



Floor-standing centrifuge





Information about the control panel can be found on page 46.

#### TECHNICAL SPECIFICATIONS

MAX. SPEED	10,500 rpm		
MAX. RCF	16,022 xg		
MAX. VOLUME	4 x 1,000 ml		
SPEED RANGE	200 – 10,500 rpm		
TEMPERATURE RANGE	-20°C to 40°C		
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments		
DIMENSIONS (W X H X D)	Underbench centrifuge: 62 cm x 70 cm x 69 cm Floor-standing centrifuge: 62 cm x 98 cm x 69 cm		
WEIGHT	Underbench centrifuge: 157 kg Floor-standing centrifuge: 190 kg		
POWER CONSUMPTION	2.3 KW		

#### **ORDER NUMBERS**

Underbench centrifuge: 313.00 V01 – ZK 496, 230 V / 50 – 60 Hz Floor-standing centrifuge: 313.00 V02 - ZK 496, 230 V / 50 - 60 Hz

800.001 Interface including operating software:

#### **SPECIFICATIONS**

- · Maintenance-free induction drive
- · Microprocessor control with LCD display
- Motor driven lid lock
- Automatic radio-frequency rotor identification system (RFID) with over speed protection, immediately upon rotor insertion
- · Active imbalance detection and shutdown (rotor-specific)
- · Wide range of rotors and accessories
- CFC-free refrigeration
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- Acoustic signal during operation with adjustable melody and volume
- · Stainless steel chamber
- Timer function: the centrifuge starts at the pre-set time

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE	
4 x 1,000 ml*	4,600 rpm	5,203 xg	221.65 V20	0 – 90°	
4 x 750 ml*	4,500 rpm	4,346 xg	221.36 V20	0 – 90°	
4 x 500 ml	8,000 rpm	10,374 xg	221.51 V20	24°	
6 x 250 ml	8,000 rpm	10,016 xg	221.21 V20	28°	
10 x 50 ml conical	10,500 rpm	16,022 xg	221.52 V20	38°	

<sup>\*</sup> hermetically sealed

#### **EXAMPLE ROTORS**



Max. volume: 4 x 1,000 ml Order number: 221.65 V20 Hermetically sealed



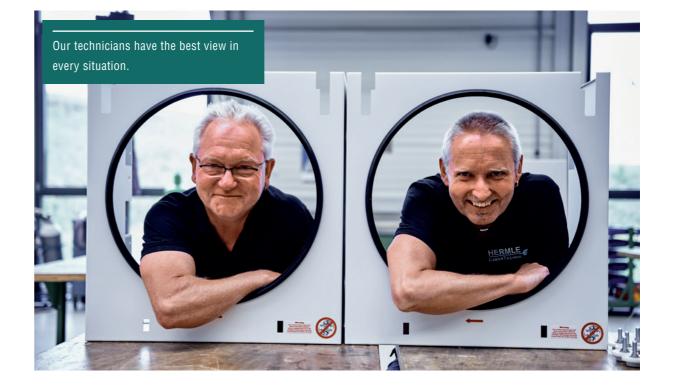
Max. volume: 4 x 500 ml Order number: 221.51 V20



Max. volume: 6 x 250 ml Order number: 221.21 V20



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download





HIGH-SPEED CENTRIFUGES 4 x 145 ml

### Z 32 HK

Thanks to a wide range of accessories, the Z 32 HK high-speed refrigerated centrifuge is suitable for a wide range of applications. Thanks to its small footprint, the Z 32 HK can be used to achieve high centrifugal accelerations directly at the respective workstation – even with larger volumes. A powerful cooling system keeps the sample material cool, even at maximum speeds.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	20,000 rpm
MAX. RCF	38,007 xg
MAX. VOLUME	4 x 145 ml
SPEED RANGE	200 – 20,000 rpm
TEMPERATURE RANGE	-20°C to 40°C
RUNNING TIME	59min50s/10s increments or $99h59min/1min$ increments
DIMENSIONS (W X H X D)	40 cm x 36 cm x 70 cm
WEIGHT	71 kg



Information about the control panel can be found on page 46.

#### ORDER NUMBERS

311.00 V07 - Z 32 HK, 230 V/50 - 60 Hz/1,200 W 311.00 V08 - Z 32 HK, 120 V/50 - 60 Hz/1,200 W



Max. volume: 6 x 85 ml Order number: 220.78 V20



Max. volume: 24 x 1.5/2.0 m Order number: 220.87 V20 Hermetically sealed

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
24 x 1.5/2.0 ml*	20,000 rpm	38,007 xg	220.87 V20	45°
24 x 1.5/2.0 ml	17,000 rpm	27,460 xg	220.87 V21	45°
30 x 1.5/2.0 ml	17,000 rpm	30,368 xg	221.17 V20	45°
44 x 1.5/2.0 ml	15,000 rpm	21,127/21,379 xg	221.68 V20	32°/55°
20 x 10 ml	14,000 rpm	21,472 xg	221.28 V20	30°
6 x 50 ml	16,000 rpm	24,039 xg	221.22 V20	26°
10 x 50 ml conical	9,000 rpm	11,771 xg	221.52 V20	38°
4 x 85 ml	15,000 rpm	23,140 xg	221.20 V20	30°
30 x 15 ml	4,500 rpm	2,830/2,467 xg	221.19 V20	35°
6 x 85 ml	13,500 rpm	20,984 xg	220.78 V20	25°
6 x 85 ml	13,000 rpm	21,726 xg	221.18 V20	38°
4 x 145 ml	4,500 rpm	3,350 xg	221.12 V20	0 – 90°
4 x 100 ml	5,000 rpm	4,080 xg	220.72 V20	0 – 90°
12 x 15 ml	6,000 rpm	4,427 xg	221.54 V20	32°
6 x 50 ml	6,000 rpm	4,427 xg	221.55 V20	40°
2 x 3 MTP	4,500 rpm	2,716 xg	221.16 V20	0 – 90°
4 x 8-PCR strips	15,000 rpm	15,343 xg	221.38 V20	45°

<sup>\*</sup> hermetically sealed

#### HIGH-SPEED CENTRIFUGES 6 x 250 ml

### Z 36 HK

This refrigerated centrifuge is the culmination of HERMLE's many years of experience in producing high-speed, tabletop devices. High speeds and centrifugal accelerations are possible in this centrifuge – combined with large volumes and a wide variety of tubes. A clearly designed control panel enables easy parameter changes.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	30,000 rpm
MAX. RCF	65,395 xg
MAX. VOLUME	6 x 250 ml
SPEED RANGE	200 – 30,000 rpm
TEMPERATURE RANGE	-20°C to 40°C
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	71.5 cm x 42 cm x 51 cm
WEIGHT	91 kg



Information about the control panel can be found on page 46.

#### **ORDER NUMBERS**

302.00 V03 - Z 36 HK, 230 V/50 - 60 Hz/1,600 W 302.00 V04 - Z 36 HK, 120 V/50 - 60 Hz/1,800 W



Max. volume: 6 x 50 ml Order number: 221.22 V20



Max. volume: 12 x 1.5/2.0 ml Order number: 221.23 V20

#### **ROTORS**

MAX. VOLUME	MAX. SPEED	RCF VALUE	ORDER NUMBER	ANGLE
6 x 250 ml	10,000 rpm	15,650 xg	221.21 V20	28°
4 x 250 ml	4,000 rpm	2,987 xg	221.15 V20	0 – 90°
6 x 85 ml	13,000 rpm	21,726 xg	221.18 V20	38°
30 x 15 ml	4,500 rpm	2,830 xg	221.19 V20	35°
4 x 85 ml	20,000 rpm	41,137 xg	221.20 V20	30°
6 x 50 ml	21,000 rpm	41,410 xg	221.22 V20	26°
10 x 50 ml conical	10,500 rpm	16,022 xg	221.52 V20	38°
20 x 10 ml	16,000 rpm	28,045 xg	221.28 V20	30°
30 x 1.5/2.0 ml	20,000 rpm	42,032 xg	221.17 V20	45°
12 x 1.5/2.0 ml	30,000 rpm	65,395 xg	221.23 V20	40°
2 x 3 MTP	4,500 rpm	2,716 xg	221.16 V20	0 – 90°



The respective max. capacities of the rotors are shown in the tables. Naturally, adapters are available for smaller volumes. Detailed information can be found in our individual brochures on our homepage: www.HERMLE-labortechnik.de/download

OIL-TEST CENTRIFUGE 4 x 100 ml

The OLEUM centrifuge is a compact tabletop device that is used for petroleum testing. During this process, the water content in the mineral oil is examined. The OLEUM features a 4-place swing-out rotor that can accommodate conical and pear-shaped ASTM tubes.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	3,000 rpm
MAX. RCF	2,213 xg
MAX. VOLUME	4 x 100 ml
SPEED RANGE	200 – 3,000 rpm
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	56 cm x 41 cm x 64 cm
WEIGHT	72 kg



Information about the control panel can be found on page 46.

#### ORDER NUMBERS

314.00 V03 - OLEUM, 230 V/50 - 60 Hz/950 W

#### **SPECIFICATIONS**

- · Maintenance-free induction motor
- · Microprocessor control with LCD display
- Motor driven lid lock
- · Active imbalance detection and shutdown
- Noise level < 55 dBA at max. speed
- · Acoustic signal at the end of the running time
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010

MAX. SPEED:

Max. Radius:

Max. RCF:

3,000 rpm

2,213 xg

22 cm

- · Stainless steel chamber
- Timer function: the centrifuge starts at the pre-set time

#### ROTORS

Order number: 221.40 V20



Swing-out rotor 4 x 100 ml

Angle: 0 − 90°

## FILTRATION CENTRIFUGE 500 ml SIEVA-3

The SIEVA-3 is a filtration centrifuge with microprocessor control. Via an opening in the lid, the liquid can be filled into the centrifugal basket while the device is running. The solid substances remain stuck in the centrifugal basket, while the liquid can escape through an opening on the right side. The device's transparent lid allows visual monitoring of the centrifugation process. The SIEVA-3 is highly versatile and suitable for diverse applications.



#### TECHNICAL SPECIFICATIONS

MAX. SPEED	10,000 rpm
MAX. RCF	7,825 xg
MAX. VOLUME	500 ml
SPEED RANGE	200 – 10,000 rpm
RUNNING TIME	59 min 50 s / 10 s increments or 99 h 59 min / 1 min increments
DIMENSIONS (W X H X D)	38 cm x 32 cm x 50 cm
WEIGHT	37 kg



Information about the control panel can be found on page 46.

#### **ORDER NUMBERS**

330.00 V01 - SIEVA-3, 230 V/50 - 60 Hz/800 W 330.00 V02 - SIEVA-3, 120 V/50 - 60 Hz/810 W

#### For external temperature control

330.00 V03 - SIEVA-3, 230 V/50 - 60 Hz/800 W 330.00 V04 - SIEVA-3, 120 V/50 - 60 Hz/810 W

#### **SPECIFICATIONS**

- Maintenance-free induction drive
- · Microprocessor control with LCD display
- · Active imbalance detection and shutdown
- Manufactured in accordance with international safety guidelines, e.g. IEC 61010
- · Electromagnetic lid lock
- Transparent device lid for visual monitoring
- · Centrifuge chamber and housing parts made of stainless steel

#### **ROTORS**



Perforated centrifugal basket 500 ml Order number: 221.07 V02



Unperforated centrifugal basket 500 ml Order number: 221.07 V04

#### HERMLE CONTROLLER

### **INFORMATION**

The HERMLE control panel has been designed to meet the needs of laboratory workers and is characterised by extreme ease of use. The splash-proof control panels allow quick and easy operation - even when wearing gloves. The parameters are selected by pressing the corresponding function key. The desired values can then be set using the rotary knob or the control field. The clearly arranged display permanently shows the setpoint and actual value as well as additional information to assist operation. The integrated diagnostic program makes it possible to retrieve error messages and view the number of starts and operating hours of the centrifuge, among other information.

#### **CONTROL PANEL FOR:**

#### **KEY AND DISPLAY FUNCTIONS**



• Z 206 A



- Z 216 M
- Z 306
- Z 326
- Z 446
- Z 366
- OLEUM



- Z 216 MK
- Z 326 K
- Z 446 K
- Z 32 HK
- Z 366 K • Z 36 HK
- ZK 496



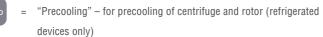
Z 207 M

- Z 167 M
- Z 207 A • SIEVA-3
- Z 207 H

Starts the centrifugation process

- Stops the centrifugation process
- - Opens the lid after the centrifuge has stopped
- - Program key to select the RUNNING TIME
- - = Program key to retrieve stored programs 99 programs can be stored in the program memory
- - = Program key to save 99 runs
- - Quick key for short runs
- - Program key to select the acceleration/deceleration level, 10 levels selectable
- - Program key to select the speed or RCF
- = Program key to select the temperature from -20°C to 40°C (refrigerated devices only)







Rotary knob to adjust the values



Control field to adjust the values

#### DISPLAYFUNCTION

rpm/rcf = Permanent display of setpoint and actual speed/RCF

acc/dec = Display of the acceleration/deceleration level Temperature display for refrigerated appliances

Display of the centrifugation duration





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