

# Universal Centrifuges

| Z 327

| Z 327 K



**HERMLE**  
LABORTECHNIK

4 x 200 ml

# Z 327

# Z 327 K



Z 327



Z 327 K

## Specifications

- Maintenance-free induction drive
- Microprocessor with large LCD display
- Motor driven lid lock
- Automatic radio-frequency rotor identification system (RFID) with over speed protection, immediately upon rotor insertion
- Active imbalance identification and cut-off (rotor specific)
- CFC-free refrigeration system (Z 327 K)
- A large variety of rotors and accessories
- Audible signal at the end of each run with several melody options
- Noise level under 63 dBA at max. speed
- Manufactured according to international safety regulations, i.e. IEC 61010
- Rotor exchange is easy to handle
- Optimized airflow system keeps the samples cool (Z 327)
- Stainless steel chamber

Both the table top centrifuge Z 327 and the refrigerated table top centrifuge Z 327 K offer a wide assortment of rotor options, making them ideal for a wide variety of research applications. Rotor exchange between swing out, micro, or high volume angled rotors is very simple and can take place in a matter of seconds. The Z 327 K includes the refrigeration system on the back side of the unit, optimized for the lab bench at only 40 cm width.

## Technical data

max. speed:	18,000 rpm
max. RCF:	23,542 xg
max. volume:	4 x 200 ml
Speed range:	200 – 18,000 rpm
Temperature range	
Z 327 K:	-20°C bis 40°C
Running time:	59 min 50 s / 10 s increments
	99 h 59 min / 1 min increments
Dimensions	
Z 327:	40 cm x 36 cm x 48 cm (WxHxD)
Z 327 K:	40 cm x 36 cm x 70 cm (WxHxD)
Weight	
Z 327 / Z 327 K:	43 kg / 60 kg
Power input:	
Z 327 / Z 327 K:	460 W / 660 W
Order No.:	
Z 327:	315.00 V01-Z 327, 230V / 50-60Hz
	315.00 V02-Z 327, 120V / 50-60Hz
Z 327 K:	337.00 V01-Z 327 K, 230V / 50-60Hz
	337.00 V02-Z 327 K, 120V / 50-60Hz



Z 327 K

## Distinct Control Panel

- Simple one handed Touch-Operation
- Easy to program with gloves on
- Splash proof digital display
- Permanent indication of Preset and Actual Values
- Selection of speed in both rpm and g-force, with increments of 10
- 10 acceleration and 10 deceleration rates, Possibility of unbraked deceleration
- Preselection of the temperature from - 20°C to 40°C with 1°C increments (Z 327 K)
- Indication of the sample temperature (Z 327 K)
- Pre-cooling program option (Z 327 K)
- Standstill cooling (Z 327 K)
- Pre-selection of running time from 10 s to 99 h 59 min or continuous
- Storage of up to 99 runs incl. rotor type
- Quick-key for short runs
- Diagnostic program
- Timer: the centrifuge starts at the preselected time

# Accessories Z 327 and Z 327 K

## Rotor/Bucket

Order No.:  
221.71 V20

Swing out rotor 4 place  
Angle: 0-90°

605.100  
Bucket for Adapter

605.102  
Lid for Bucket | hermetically sealed



## Adapter

Acceleration in s: 21/102  
Deceleration in s: 12/387  
max. speed: 5,000 rpm  
RCF-Value: 4,136 xg  
max. radius: 14.8 cm  
Temp. at max. speed: 6°C

Volume

Tubes Ø in mm

Length min./max. (mm)  
Tubes per Rotor  
Radius Correction (cm)  
Order No. Adapter

200 ml bottle 56	200 ml conical 56	100 ml RB Glass 40	85 ml RB/OR 38	50 ml RB Glass 34
112	120	95/115	95/108	95/118
4	4	4	4	4
0.0	0.0	0.2	0.2	0.2
without	705.100	705.101	705.102	705.103

Volume  
Tubes Ø in mm

Length min./max. (mm)  
Tubes per rotor  
Radius Correction (cm)  
Order No. Adapter

50 ml RB/OR 29	50 ml conical 29	50 ml skirted 29	25/30 ml Universal 25	25/30 ml RB/OR 25	15 ml conical 17	15 ml conical 17	15 ml RB 17	5/7 ml RB 13	5 ml conical 17	1.5/2.0 ml micro 11	6-10 ml Vakut. <sup>®</sup> 16	1.8-7 ml Vakut. <sup>®</sup> 13	50 ml conical 29
95/103	116	116	95/105	90/110	120	120	60/107	65/100	60/70	40	100	75/100	116
4	4	4	4	4	16	12	28	32	20	32	28	32	8
0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.2	0.2	0.1	0.1	0.2	0.2	0.0
705.104	705.105	705.106	705.107	705.108	705.109*	705.110	705.111	705.112	705.113	705.114	705.111	705.112	605.103

\*only without bucket lid

Order No.:  
221.12 V20

Swing out rotor 4 place  
Angle: 0-90°



Acceleration in s: 12/93  
Deceleration in s: 12/226  
max. speed: 4,500 rpm  
RCF-Value: 3,350 xg  
max. radius: 14.8 cm  
Temp. at max. speed: -2°C

Volume

Tubes Ø in mm

Length min./max. (mm)  
Tubes per rotor  
Radius Correction (cm)  
Order No. Adapter

145 ml Nalgene <sup>®</sup> 50	100 ml RB Glass 44	85 ml RB/OR 38	50 ml RB Glass 34	50 ml RB Glass 29	50 ml conical 29
100	90/108	90/108	92/118	90/118	116
4	4	4	4	4	4
1.0	1.0	0.8	0.7	0.7	0.3
626.017	626.000	626.001	626.008	626.009	626.002

Volume  
Tubes Ø in mm

Length min./max. (mm)  
Tubes per rotor  
Radius Correction (cm)  
Order No. Adapter

50 ml Rim 29	30 ml Universal 25	25 ml RB Glass 25	15 ml conical 17	15 ml RB 17	5/7 ml RB Glass 13	1.5/2.0 ml micro 11	4.5 ml Sarstedt <sup>®</sup> 12	5/7 ml 13	6-10 ml Vakut. <sup>®</sup> 16	1.8-7 ml Vakut. <sup>®</sup> 13
116	95/105	95/110	120	90/108	75/100	40	75/100	65/80	90/108	75/100
4	4	4	8	28	36	40	36	28	28	28
0.6	1.1	0.5	0.0	0.4	1.3	5.5	0.9	3.3	0.4	0.7
626.010	626.011	626.012	626.003	626.004	626.005	626.014	626.007	626.015	626.004	626.006

Order No.:  
221.16 V20

Swing out rotor 2x3 Microtitreplates  
Angle: 0-90°



Acceleration in s: 22/155  
Deceleration in s: 16/518  
max. speed: 4,500 rpm  
RCF-Value: 2,716 xg  
max. radius: 12.0 cm  
max. loading height: 63 mm  
max. loading weight: 310 g  
Temp. at max. speed: -5°C

Order No.:  
706.000

Tube rack  
48 x 1.5 ml (2.0 ml)  
Tubes

Order No.:  
221.19 V20

Angle rotor 30 x 15 ml Glass  
or 20 x 15 ml conical  
Angle: 35°



Acceleration in s: 17/114  
Deceleration in s: 11/632  
max. speed: 4,500 rpm  
RCF-Value: 2,830/2,467 xg  
max. radius: 12.5/10.9 cm  
max. Ø: 17 mm  
Temp. at max. speed: -7°C

Order No.:  
without  
without  
701.011  
701.012  
701.015  
701.018

Adapter	Ø [mm]	Length [min/max.]:
1 x 15 ml Glass	17.0	95/115
1 x 15 ml conical	17.0	120
1 x 7 ml	13.5	95/115
1 x 5 ml (RIA)	13.5	70/90
1 x 1.5/2.0 ml	11	40
1 x 4.5-10 ml Sarstedt <sup>®</sup>	11-16	90/92

# Accessories Z 327 and Z 327 K

## Rotor/Bucket

Order No.:  
221.54 V20



Angle rotor 12x15 ml  
Angle: 32°

## Adapter

Acceleration in s: 18/103  
Deceleration in s: 12/356  
max. speed: 6,000 rpm  
RCF-Value: 4,427 xg  
max. radius: 11.0 cm  
max. Ø: 17 mm

Temp. at max. speed: -9°C

Volume

15 ml  
conical



17  
120  
without

15 ml



17  
105/120  
without

4-7 ml  
Vakut.®



13  
100  
701.011

1.8-5 ml  
Vakut.®



13  
75  
701.012

1.5/2.0 ml



11  
40  
701.015

6-10 ml  
Sarstedt®/  
Vakut.®



16  
92/107  
701.018

Tubes Ø in mm  
Length min./max. in mm  
Order No. Adapter

Order No.:  
221.55 V20



Angle rotor 6x50 ml  
Angle: 40°

Acceleration in s: 15/102  
Deceleration in s: 11/486  
max. speed: 6,000 rpm  
RCF-Value: 4,427 xg  
max. radius: 11.0 cm  
max. Ø: 29 mm

Temp. at max. speed: -6°C

Volume

50 ml  
conical



29  
116  
without

50 ml  
RB/OR



29  
100/120  
without

30 ml



25  
92/95  
708.019

16 ml



18  
100/105  
708.003

15 ml  
conical



17  
120  
708.030

15 ml  
RB



17  
97/120  
708.030

Tubes Ø in mm  
Length min./max. in mm  
Order No. Adapter

Order No.:  
220.78 V21



Angle rotor 6x85 ml  
Angle: 25°

Acceleration in s: 65/399  
Deceleration in s: 38/988  
Acceleration in s: 98/495  
Deceleration in s: 47/1,068  
max. speed: 11,000 rpm  
max. speed: 13,500 rpm  
RCF-Value: 13,932 xg  
RCF-Value: 20,984 xg  
max. radius: 10.3 cm  
max. Ø: 38 mm

Temp. at max. speed: 15°C

Order No.:

without

707.003

707.004

707.002

707.015

707.000

707.001

707.014

Adapter

1 x 85 ml

1 x 50 ml

1 x 50 ml conical

1 x 30 ml

1 x 16 ml

2 x 15 ml

1 x 15 ml

1 x 15 ml conical

Ø [mm]

38

29

29

25

18

17

17

17

Length [min./max.]:

113

105

116

90/103

103/110

95/100

103/110

120

Order No.:  
221.18 V21



Angle rotor 6x85 ml  
Angle: 38°

Acceleration in s: 62/412  
Deceleration in s: 34/1,310  
max. speed: 9,000 rpm  
RCF-Value: 10,413 xg  
max. radius: 11.5 cm  
max. Ø: 38 mm

Temp. at max. speed: 1°C

Order No.:

without

707.003

707.004

707.002

707.015

707.000

707.001

707.014

Adapter

1 x 85 ml

1 x 50 ml

1 x 50 ml conical

1 x 30 ml

1 x 16 ml

2 x 15 ml

1 x 15 ml

1 x 15 ml conical

Ø [mm]

38

29

29

25

18

17

17

17

Length [min./max.]:

113

105

116

90/103

103/110

95/100

103/110

120

Order No.:  
221.20 V20



Angle rotor 4x85 ml  
Angle: 30°

Acceleration in s: 68/307  
Deceleration in s: 34/1,102  
max. speed: 12,000 rpm  
RCF-Value: 14,809 xg  
max. radius: 9.2 cm  
max. Ø: 38 mm

Temp. at max. speed: 3°C

Order No.:

without

707.003

707.004

707.002

707.015

707.000

707.001

707.014

Adapter

1 x 85 ml

1 x 50 ml

1 x 50 ml conical\*

1 x 30 ml

1 x 16 ml

2 x 15 ml

1 x 15 ml

1 x 15 ml conical\*

\*only without rotor lid

Ø [mm]

38

29

29

25

18

17

17

17

Length [min./max.]:

113

105

116

90/103

103/110

95/100

103/110

120

Order No.:  
221.22 V21



Angle rotor 6x50 ml  
Angle: 26°

Acceleration in s: 44/358  
Deceleration in s: 26/772  
max. speed: 12,000 rpm  
RCF-Value: 13,522 xg  
max. radius: 8.4 cm  
max. Ø: 29 mm

Temp. at max. speed: 4°C

Order No.:

without

708.019

708.003

708.004

708.017

Adapter

1 x 50 ml round

1 x 30 ml

1 x 16 ml

1 x 15 ml

1 x 15 ml conical\*

\*only without rotor lid

Ø [mm]

29

25

18

17

17

Length [min./max.]:

95/115

92/95

100/105

100/105




120



# Accessories Z 327 and Z 327 K

Rotor/Bucket		Adapter				
<div>Order No.: 221.28 V21</div> <div></div> <div>Angle rotor 20x10 ml Angle: 30°</div>	<div>Acceleration in s: 54/357 Deceleration in s: 29/842 max. speed: 12,000 rpm RCF-Value: 15,775 xg max. radius: 9.8 cm max. Ø: 16 mm Temp. at max. speed: 4°C</div>	<div>Order No.: without</div>	<div>Adapter 1 x 10 ml</div>	<div>Ø [mm] 16</div>	<div>Length [min./max.]: 80</div>	
<div>Order No.: 221.17 V21</div> <div></div> <div>Angle rotor 30x1.5/2.0 ml Angle: 45°</div>	<div>Acceleration in s: 31/189 Deceleration in s: 20/504 Acceleration in s: 35/205 Deceleration in s: 22/465 max. speed: 13,000 rpm max. speed: 14,000 rpm RCF-Value: 17,758 xg RCF-Value: 20,595 xg max. radius: 9.4 cm max. Ø: 11 mm Temp. at max. speed: 6°C</div>	<div>Order No.: without without 704.005 704.004</div>	<div>Adapter 1 x 2.0 ml 1 x 1.5 ml 1 x 0.5 ml 1 x 0.4/0.2 ml PCR</div>	<div>Ø [mm] 11 11 8 6</div>	<div>Length [min./max.]: 40 40 45 45</div>	
<div>Order No.: 220.87 V22</div> <div></div> <div>PPS-Lid Angle rotor 24x1.5/2.0 ml Angle: 45°   hermetically sealed</div>	<div>Acceleration in s: 25/222 Deceleration in s: 17/261 max. speed: 15,000 rpm RCF-Value: 21,379 xg max. radius: 8.5 cm max. Ø: 11 mm Temp. at max. speed: 3°C</div>	<div>Order No.: without without 704.005 704.004</div>	<div>Adapter 1 x 2.0 ml 1 x 1.5 ml 1 x 0.5 ml 1 x 0.4/0.2 ml PCR</div>	<div>Ø [mm] 11 11 8 6</div>	<div>Length [min./max.]: 40 40 45 45</div>	
<div>Order No.: 220.87 V20</div> <div></div> <div>Alu-Lid Angle rotor 24x1.5/2.0 ml Angle: 45°   hermetically sealed</div>	<div>Acceleration in s: 26/222 Deceleration in s: 17/267 max. speed: 15,000 rpm RCF-Value: 21,379 xg max. radius: 8.5 cm max. Ø: 11 mm Temp. at max. speed: 4°C</div>	<div>Order No.: without without 704.005 704.004</div>	<div>Adapter 1 x 2.0 ml 1 x 1.5 ml 1 x 0.5 ml 1 x 0.4/0.2 ml PCR</div>	<div>Ø [mm] 11 11 8 6</div>	<div>Length [min./max.]: 40 40 45 45</div>	
<div>Order No.: 221.23 V20</div> <div></div> <div>Angle rotor 12x1.5/2.0 ml Angle: 40°</div>	<div>Acceleration in s: 25/232 Deceleration in s: 20/308 max. speed: 18,000 rpm RCF-Value: 23,542 xg max. radius: 6.5 cm max. Ø: 11 mm Temp. at max. speed: -2°C</div>	<div>Order No.: 704.004  704.005  704.011</div>	<div>0.4 ml Tubes (Ø6 x 45 mm) Adapter Kid (6 Pieces)  0.5 ml Tubes (Ø8 x 32 mm) Adapter Kid (6 Pieces)  1.5 ml Adapter for full performance. (necessary from 16,000 xg) (6 Pieces)</div>			
<div>Order No.: 221.68 V20</div> <div></div> <div>Angle rotor 44x1.5/2.0 ml Angle: 32°/55°</div>	<div>Acceleration in s: 31/256 Deceleration in s: 21/441 max. speed: 15,000 rpm RCF-Value: 21,379 xg max. radius: 8.5 cm max. Ø: 11 mm Temp. at max. speed: 3°C</div>	<div>Order No.: without without 704.005 704.004</div>	<div>Adapter 1 x 2.0 ml 1 x 1.5 ml 1 x 0.5 ml 1 x 0.4/0.2 ml PCR</div>	<div>Ø [mm] 11 11 8 6</div>	<div>Length [min./max.]: 40 40 45 45</div>	

# Accessories Z 327 and Z 327 K

Rotor/Bucket		Adapter			
<div>Order No.:</div> <div>221.38 V20</div> <div></div> <div>Angle rotor 4x8-place PCR Stripes</div> <div>Angle: 45°</div>	<div>Acceleration in s: 14/126</div> <div>Deceleration in s: 15/154</div> <div>max. speed: 15,000 rpm</div> <div>RCF-Value: 15,343 xg</div> <div>max. radius: 6.1 cm</div> <div>max. Ø: 6 mm</div> <div>Temp. at max. speed: 2°C</div>				
<div>Order No.:</div> <div>221.35 V20</div> <div></div> <div>Angle rotor 12x 5 ml Tubes</div> <div>Angle: 45°</div>	<div>Acceleration in s: 24/206</div> <div>Deceleration in s: 20/436</div> <div>Acceleration in s: 26/220</div> <div>Deceleration in s: 21/420</div> <div>max. speed: 14,000 rpm</div> <div>max. speed: 15,000 rpm</div> <div>RCF-Value: 18,624 xg</div> <div>RCF-Value: 21,379 xg</div> <div>max. radius: 8.5 cm</div> <div>max. Ø: 17 mm</div> <div>Temp. at max. speed: 2°C</div>	<div>Order No.:</div> <div>without</div> <div>701.015</div> <div>701.016</div> <div>701.017</div>	<div>Adapter</div> <div>1 x 5.0 ml conical</div> <div>1 x 1.5/2.0 ml</div> <div>1 x 1.0 ml Cryo, flat</div> <div>1 x 1.8 ml Cryo, round</div>	<div>Ø [mm]</div> <div>17</div> <div>11</div> <div>12.6</div> <div>12.6</div>	<div>Length [min./max.]:</div> <div>60</div> <div>40</div> <div>41</div> <div>48</div>
<div>Order No.:</div> <div>221.52 V20</div> <div></div> <div>Angle rotor 10x50 ml conical</div> <div>Angle: 38°</div>	<div>Acceleration in s: 59/374</div> <div>Deceleration in s: 35/1.698</div> <div>max. speed: 7,500 rpm</div> <div>RCF-Value: 8,141 xg</div> <div>max. radius: 13 cm</div> <div>max. Ø: 29 mm</div> <div>Temp. at max. speed: 0°C</div>	<div>Order No.:</div> <div>708.050</div> <div>701.011*</div> <div>701.012*</div> <div>701.015*</div> <div>708.051</div>	<div>Adapter</div> <div>1 x 15 ml RB</div> <div>1 x 7 ml</div> <div>1 x 5 ml</div> <div>1 x 1.5/2.0 ml</div> <div>1 x 15 ml conical</div>	<div>Ø [mm]</div> <div>17</div> <div>13.5</div> <div>13.5</div> <div>11</div> <div>17</div>	<div>Length [min./max.]:</div> <div>97/123</div> <div>95/115</div> <div>70/90</div> <div>42</div> <div>120</div>
		<div>*only possible with adapter 708.050</div>			

\*only possible with adapter 708.050



The intuitive control panel makes it easy for anyone to operate Hermle Centrifuges straight away.

## ■ The Perfect Fit



### Easy Handling:

- The ergonomic control panel is very user-friendly and enables a smooth and swift operation process.
- There is no need to remove surgical gloves, during operation.
- Strictly a HERMLE application, you can store up to 99 different programs.
- Make yourself comfortable; operate this model from your laptop or computer. Our multi-functional software, „H-Control“, allows you to control the centrifuge independently and save your protocols (this function has to be ordered separately).
- For re-assurance that your samples are finished, an acoustic signal will sound when the centrifugation is complete (this function can be deactivated).

### Safety:

- The Z 327 and Z 327 K have an automatic imbalance shut off system
- There is over speed protection incorporated for each rotor.
- You can only start the models when the centrifuge lid is closed.
- In case of operation malfunction, an error code will appear on the display; this helps to indicate the reason for the malfunction and to eliminate it.
- Its' stable and firm design, made of massive steel, ensures excellent mechanical protection.
- The buckets of the swing out rotor 221.71 V20 are hermetically sealable.

### Efficient and Versatile:

- Due to the wide range of adapter and rotor options, models Z 327 and Z 327 K can hold all common tubes and bottles, up to 200 ml.
- Due to the easy rotor exchange, you can switch between different kinds of rotors like swing-out, microlitre, micro-titre or big volume fixed angle rotors.
- Despite the high capacity, the design of these devices is compact and space saving, even the Z 327 K with its powerful refrigeration system.
- Profit from our „pre-cooling“ function, cool down the rotor rapidly to your desired temperature. For this, the centrifuge automatically determines the necessary speed for each individual rotor (only Z 327 K).

## ■ More from HERMLE - a wide range of options



Universal Centrifuge Z 366 K

max. speed 16,000 rpm  
max. volume 6 x 250 ml



Compact Centrifuge Z 207 A

max. speed 6,800 rpm  
max. volume 8 x 15 ml

■ For more Information, please visit our website [www.hermle-labortechnik.de](http://www.hermle-labortechnik.de)

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