



**Benchtop
Centrifuges,
non-refrigerated
and refrigerated**

UNIVERSAL 32

The sedimentation of cells, bacteria, yeasts, DNA/RNA and protein precipitates is workaday routine in basic research and R&D laboratories of the pharmaceutical and biotechnical industry. A centrifuge, therefore, simply needs to be "universal".

UNIVERSAL 32 means perfectly smooth running at both high and low speeds, versatile and easily exchangeable accessories and small footprint.

This is why UNIVERSAL 32 centrifuges are requisite in every laboratory.

In the low speed range (max. RCF 4,193) the UNIVERSAL 32/32 R accommodate standard tubes up to a volume of 100 ml, microtitre plates, Falcon® tubes, blood collection tubes and cyto accessories.

Microlitre tubes can be accelerated to a max. RCF of 23,907.

Centrifuge tubes taking higher volumes (up to 85 ml) also profit from the extraordinary motor power of the UNIVERSAL 32/32 R: At an RCF of 9,418 bacteria and yeasts sediment fast and easily.

UNIVERSAL 32 centrifuges in brief

Performance

High RCF

85 ml tubes up to an RCF of 9,418, microlitre tubes up to an RCF of 23,907.

Extremely short run-up and run-down times

also with rotors reaching higher speeds.

Efficient cooling

temperature in the UNIVERSAL 32 R is controllable within a range of -20°C to +40°C.

On option, the UNIVERSAL 32 R is also available in a heating version with temperature control from -20°C to +90°C and a heating/cooling version with temperature control from -20°C to +60°C.

Extensive range of accessories

comprising swing-out rotors, angle rotors, hygienic buckets, and adapters for a large variety of centrifuge tubes.

Technology

Special lid locking device

effortless closing and opening of the lid with one hand.

Ergonomically arranged controls and displays

Viewing port in the lid

3 complete running programmes can be stored and recalled

Safety

Metal housing and lid

Centrifuging chamber of stainless steel

Lid dropping protection

Lid locking and holding during rotor run

Emergency lid lock release

Motor overheating protection

Chamber overheating protection with UNIVERSAL 32 R

Imbalance switch-off

Easily exchangeable rotors

Automatic rotor recognition



Hettich manufactures high quality centrifuges.

All stages from design to end product are continually subjected to strictest controls.

Evidence of conformity with national and international regulations such as IEC 1010-2.2 and EC standards is provided by corresponding certificates.

Of course, Hettich centrifuges are CE marked.

The ISO 9001 certificate accredited to the entire company proves the extreme care and responsibility Hettich puts into the manufacture of centrifuges and their accessories.

Therefore, Hettich centrifuges are known for safety and reliability all over the world.



UNIVERSAL 32 R

refrigerated benchtop centrifuge
dimensions (HxWxD): 300 x 420 x 660 mm
Cat.-No. **1610**

The fully developed up-to-date N control panel meets the requirements of the users and is extremely easy to operate.

Entry of the parameters is fast, precise and convenient with selector keys on the water-protected foil keypad.

The large display is well readable. During centrifugation the actual values of the parameters are indicated.

The parameters remain in the memory even after the centrifuge has been switched off.

Speed RPM: Input in increments of 10.

Relative centrifugal force RCF: Input in increments of 10.

Change-over RPM/RCF: By entering the rotor radius r/mm the centrifuge calculates and indicates speed or RCF.

Running time t: Input in minutes and seconds, max. 99 min, 59 sec.

Run-up/run-down times: Input of acceleration and braking ramps in levels 1 – 9 or unbraked run-down.

Temperature T: With refrigerated models input in increments of 1 °C within a range of -20 °C to +40 °C.

Memory: 3 complete running programmes can be stored and recalled.

Impulse key: For short centrifuging operations. The rotor spins at the preselected speed or RCF as long as the key remains pressed.



UNIVERSAL 32

benchtop centrifuge
dimensions (HxWxD): 300 x 420 x 490 mm
Cat.-No. **1605**



Accessories

High performance and large capacity on very little space

... regarding tubes

- 28 x 15 ml or 4 x 100 ml standard tubes,
- 24 hematocrit capillaries,
- 8 x 15/50 ml Falcon^{® 2)} tubes,
- 4 microtitre plates or 2 culture plates,
- 8 slide carriers for cyto preparations,
- 28 Monovettes^{® 3)} or 20 Vacutainers^{® 2)},
- 6 x 85 ml Nalgene^{® 4)} tubes,
- 30 x 1.5/2.0 ml microlitre tubes.

... regarding rotors

- rotor for hygienic suspensions, max. RCF 2,655,
- rotor for Falcon^{® 2)} tubes, max. RCF 3,857,
- rotor for microtitre or culture plates, max. RCF 2,093,
- rotor for 8 cyto suspensions, max. RCF 2,218,
- angle rotor for 6 x 85 ml Nalgene^{® 4)} tubes, max. RCF 9,418,
- angle rotors for 12 or 30 microlitre tubes of 0.4 - 2.0 ml, max. RCF 23,907.













































<90°



Swing-out rotor, 4-place, n = 4,000 min⁻¹, RCF 2,665

Cat.-No. **1624** without buckets

illustrated with suspensions No.1369

capacity in ml	1.5	2.0	1	3	4
dimensions Ø x L mm	11 x 38	11 x 38	6x45 rhesus	10 x 60	12 x 60
Cat.-No.	2078	0536	-	-	-
 Cat.-No. 1366					
					
Cat.-No.	5277	5277	1357	1327	1326
tubes per rotor	36	36	120	48	
RCF	1,968	1,968	1,950	1,932	
radius in mm	110	110	109	108	
run-up in sec	30				
run-down in sec	 36  380				
temperature °C ¹⁾	- 15				

capacity in ml	5	5	7	9	15	20	45	50	9	15	25	50	
dimensions Ø x L mm	12 x 75	12 x 75	12 x 100	14 x 100	17 x 100	21 x 100	31 x 100	34 x 100	14 x 100	17 x 100	24 x 100	34 x 100	
Cat.-No.	-	-	0578	0500	0507	-	-	0521	0500	0507	0519	0521	
 Cat.-No. 1624													
													
Cat.-No.	1369-91	1372	1369-92	1370	1369	1346	1345	1308	1741	1742	1745	1746	
tubes per rotor	16	68	16	20	16	8	4	4	40	28	8	4	
RCF	2,236	2,164	2,361	2,361	2,361	2,361	2,451	2,325	2,415	2,451			
radius in mm	125	121	132	132	132	132	137	130	135	137			
run-up in sec	30								32				
run-down in sec	 36  380								 37  450				
temperature °C ¹⁾	- 15								- 5				

 braked run-down at level 9
 unbraked run-down

¹⁾ Lowest attainable temperature in the UNIVERSAL 32 R at max. speed.

Adapters for additional tubes on request

Please take care not to exceed the tubes' max. permissible RCF. For glass tubes the max. RCF is 4,000

2) Registered trademark of Becton Dickinson
 3) Registered trademark of Sarstedt
 4) Registered trademark of Nalge Nunc International



**Swing-out rotor, 4-place,
n = 4,000 min⁻¹, RCF 2,665**

Cat.-No. **1624** without buckets

illustrated with buckets No.1381 and hygienic lids No.1382

Hettich rotors are designed for continuous duty and long service life.

Customers' requirements and demands on safety as well as easy handling have been considered.

The automatic rotor recognition system defines the max. speed of each rotor so that it cannot be stressed beyond its design limits.

capacity in ml	1.5	2.0	1	3	6 / 7	9	10	15	25	30	50	50	85	100
dimensions Ø x L mm	11 x 38	11 x 38	6x45 rhesus	10 x 60	12 x 82/100	14 x 100	16 x 80	17 x 100	24 x 100	26 x 95	29 x 107	34 x 100	38 x 106	44 x 100
Cat.-No.	2078	0536	-	-	0501/0578	0500	-	0507	0519	0545	0546	0521	0547	0526
 lid No. 1382 Cat.-No. 1381														
Cat.-No.	1351	1351	1339	1343	1383	1329	1348	1329	1330	4417	4416	1331	1396	0761
tubes per rotor	20	20	108	36	20	16	16	16	4	4	4	4	4	4
RCF	2,451	2,451	2,594	2,630	2,558	2,540	2,522	2,540	2,433	2,451	2,630	2,397	2,612	2,576
radius in mm	137	137	145	147	143	142	141	142	136	137	147	134	146	144
run-up in sec	30													
run-down in sec	36 380													
temperature °C ¹⁾	- 15													

capacity in ml	15	50	12	25	30	50	1.6 - 7	4 - 10	1.1 - 1.4	2.7 - 5	2.6 - 4.9	4 - 8.2	9 - 10	30 ml
dimensions Ø x L mm	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	13x75/100	16x75/100	8 x 66	11 x 66/92	13x65/90	15 x 75/92	16 x 92	44 x 105
Cat.-No.	0509	0513	-	-	-	-	blood collection tubes							0534
 lid No. 1382 Cat.-No. 1381														
Cat.-No.	1347	1384	6311	1363	1365	6318	1383	1348	1457	1383	1383	1459	1329	0765
tubes per rotor	4	4	4	4	4	4	20	16	28	20	20	16	16	4
RCF	2,665	2,665	2,683	2,361	2,683	2,683	2,558	2,522	2,576	2,558	2,558	2,576	2,540	2,558
radius in mm	149	149	150	132	150	150	143	141	144	143	143	144	142	143
run-up in sec	30													
run-down in sec	36 380													
temperature °C ¹⁾	- 15													

A rubber stopper for closing the tube is available with Cat.-No. 0535

braked run-down at level 9 ¹⁾ Lowest attainable temperature in the UNIVERSAL 32 R at max. speed.
 unbraked run-down

Adapters for additional tubes on request

Accessories



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**Swing-out rotor, 8-place,
n = 5,000 min⁻¹, RCF 3,857**

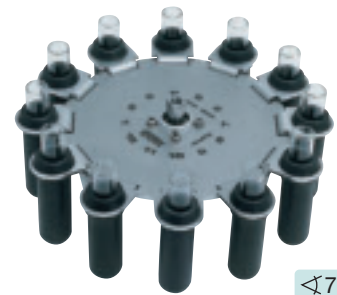
Cat.-No. **1617** with suspensions



∠90°

**Swing-out rotor, 6-place,
n = 4,000 min⁻¹, RCF 2,701**

Cat.-No. **1619** with suspensions

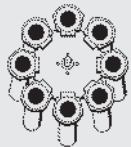

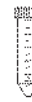











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









**Swing-out rotor, 12-place,
n = 4,500 min⁻¹, RCF 3,396**

Cat.-No. **1628** without suspensions

illustrated with suspensions No. 1621

capacity in ml	15	50
dimensions Ø x L mm	17 x 120	29 x 115
Cat.-No.	0509	0513
 Cat.-No. 1617		
		-
Cat.-No.	1462	-
tubes per rotor	8	
RCF	3,857	
radius in mm	138	
run-up in sec	32	
run-down in sec	 34  350	
temperature °C ¹⁾	- 8	

capacity in ml	15	50
dimensions Ø x L mm	17 x 120	29 x 115
Cat.-No.	0509	0513
 Cat.-No. 1619		
		-
Cat.-No.	1462	-
tubes per rotor	6	
RCF	2,701	
radius in mm	151	
run-up in sec	30	
run-down in sec	 34  250	
temperature °C ¹⁾	- 12	

capacity in ml	5	10	15	1.6-5
dimensions Ø x L mm	12 x 75	17 x 70	17 x 100	13 x 75
Cat.-No.	-	2079	0507	blood collection tube
 Cat.-No. 1628				
				
Cat.-No.	1127	1122	1621	1127
tubes per rotor	12	12	12	12
RCF	2,807	2,853	3,396	2,807
radius in mm	124	126	150	124
run-up in sec	32			
run-down in sec	 34  250			
temperature °C ¹⁾	- 20		- 15	-20




























∠90°

**Swing-out rotor, 8-place,
n = 4,000 min⁻¹, RCF 2,415**

Cat.-No. **1611** without suspensions

illustrated with suspensions No. 1644

capacity in ml	5	10	10	15	2.6-2.9	4-5.5	1.6-5	4-7
dimensions Ø x L mm	12 x 75	17 x 70	13 x 100	17 x 100	13 x 65	15 x 75	13 x 75	13 x 100
Cat.-No.	-	2079	-	0507	blood collection tubes			
 Cat.-No. 1611								
								
Cat.-No.	1131	1132	1643	1644	1131	1132	1131	1643
tubes per rotor	8		8		8		8	
RCF	1,914		2,415		1,914		2,415	
radius in mm	107		135		107		135	
run-up in sec	23		25		23		25	
run-down in sec	 31  100		 32  120		 31  100		32 / 120	
temperature °C ¹⁾	- 20		- 18		- 20		- 18	

 braked run-down at level 9
 unbraked run-down

¹⁾ Lowest attainable temperature in the UNIVERSAL 32 R at max. speed.

Adapters for additional tubes on request



∠45°

**Angle rotor, 12-place,
n = 18,000 min⁻¹, RCF 23,907**

Cat.-No. **1612**



∠35°

**Angle rotor, 12-place,
n = 6,000 min⁻¹, RCF 4,105**

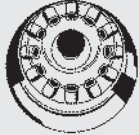










Cat.-No. **1613**




































∠35°



**Angle rotor, 6-place,
n = 9,000 min⁻¹, RCF 9,418**

Cat.-No. **1620 A**

capacity in ml	0.4	0.5	0.8	1.5	2.0
dimensions Ø x L mm	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38
Cat.-No.	-	-	-	2078	0536
 Cat.-No. 1612					
				with high speeds we recommend to use adapter No. 2031	
Cat.-No.	2024	2023	2023	-	-
tubes per rotor	12				
RCF	23,907				
radius in mm	66				
run-up in sec	14				
run-down in sec	 18  280				
temperature °C ¹⁾	- 8				

capacity in ml	5	15	15
dimensions Ø x L mm	12 x 75	17 x 100	17 x 120
Cat.-No.	-	0507	0509
 Cat.-No. 1613		 ³⁾	
			
Cat.-No.	1056	-	-
tubes per rotor	12	12	6
RCF	3,461	4,105	
radius in mm	86	102	
run-up in sec	19		
run-down in sec	 26  580		
temperature °C ¹⁾	- 18		

capacity in ml	1.5	2.0	10	15	30	50	50	85	9 - 10	15	50	50
dimensions Ø x L mm	11 x 38	11 x 38	16 x 80	17 x 100	26 x 95	29 x 107	35 x 105	38 x 106	16 x 92	17 x 120	29 x 115	29 x 115
Cat.-No.	2078	0536	-	0507	0545	0546	0548	0547	blood collection tube	0509	0513	0513
 Cat.-No. 1620 A				 ³⁾								
												
Cat.-No.	1449	1449	1448	1451	1447	1446	1463	-	1451	1466	1454	1646
tubes per rotor	24	24	12	6	6	6	6	6	6	6	3	6
RCF	9,146	9,146	8,784	8,784	8,603	9,056	9,327	9,418	8,784	8,965		
radius in mm	101	101	97	97	95	100	103	104	97	99		
run-up in sec	50											
run-down in sec	 56  1260											
temperature °C ¹⁾	- 6											

 braked run-down at level 9
 unbraked run-down

¹⁾ Lowest attainable temperature in the UNIVERSAL 32 R at max. speed.

²⁾ Adapter set, 6-place, for conical 50 ml tubes with screw cap

Adapters for additional tubes on requests



∠35°

Angle rotor, 12-place,
n = 12,000 min⁻¹, RCF 16,421,
UNIVERSAL 32 R
n = 9,000 min⁻¹, RCF 9,237,
UNIVERSAL 32

Cat.-No. **1615**








Hematocrit rotor, 24-place,
n = 15,000 min⁻¹, RCF 21,382,
UNIVERSAL 32 R
n = 9,000 min⁻¹, RCF 7,697,
UNIVERSAL 32

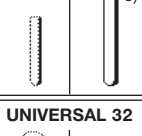




Cat.-No. **1650**





The hematocrit rotor is segmented into 24 chambers, each chamber containing one capillary. In case a capillary breaks, the fragments stay in the chamber and will not affect other capillaries.

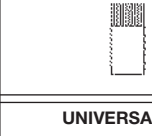



The lid of the rotor is evaluation disc and cover in one.

Advantage: The hematocrit value can be determined fast and conveniently right after centrifugation.

capacity in ml	5	15
dimensions Ø x L mm	12 x 75	17 x 100
Cat.-No.	-	0507
	 ³⁾	 ³⁾
Cat.-No.	1056	-
tubes per rotor	12	12
RCF	13,845	16,421
radius in mm	86	102
run-up in sec	41	
run-down in sec	 46	 780
temperature °C ¹⁾	+ 4	

capacity in ml	5	15
dimensions Ø x L mm	12 x 75	17 x 100
Cat.-No.	-	0507
	 ³⁾	 ³⁾
Cat.-No.	1056	-
tubes per rotor	12	12
RCF	7,788	9,237
radius in mm	86	102
run-up in sec	41	
run-down in sec	 43	 625
temperature °C ¹⁾	-	

	capillaries	capillaries, mylar-coated	capillaries, self-sealing
Cat.-No.	2074	1072	1071
			
Cat.-No.	1650		
	UNIVERSAL 32 R		
	sealing putty		
Cat.-No.	2077	-	
capillaries per rotor	24		
RCF	21,382		
radius in mm	85		
run-up in sec	15		
run-down in sec	 19  185		
temperature °C ¹⁾	-5		






	capillaries	capillaries, mylar-coated	capillaries, self-sealing
Cat.-No.	2074	1072	1071
			
Cat.-No.	1650		
	UNIVERSAL 32		
	sealing putty		
Cat.-No.	2077	-	
capillaries per rotor	24		
RCF	7,697		
radius in mm	85		
run-up in sec	14		
run-down in sec	 18  160		
temperature °C ¹⁾	-		



∠90°

Swing-out rotor, 2-place,
n = 4,000 min⁻¹, RCF 2,093

Cat.-No. **1622** with suspensions

	Microtitre Plate	Culture Plate
		
Cat.-No.	1622	
Cat.-No.	-	
plates per rotor	4	2
RCF	2,093	
radius in mm	117	
run-up in sec	30	
run-down in sec	 36  450	
temperature °C ¹⁾	-12	





Cyto rotor, 6-place

Cat.-No. **1626** without suspensions
 illustrated with suspensions
 No.1660 and lids No. 1661

More information is available
 in a detailed cyto brochure.
 Please ask for it!

Adapters for additional tubes on request

 braked run-down at level 9
 unbraked run-down

¹⁾ Lowest attainable temperature in the UNIVERSAL 32 R at max. speed.

Accessories for UNIVERSAL 32 R only



∠90°

Swing-out rotor, 4-place,
 $n = 4,000 \text{ min}^{-1}$, RCF 1,896

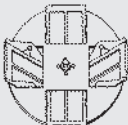





Cat.-No. **1645** without suspensions
 illustrated with suspensions No. 4345














∠45°



Angle rotor, 30-place,
 $n = 14,000 \text{ min}^{-1}$, RCF 21,255

Cat.-No. **1689**
 aerosol-tight ²⁾

	Microtitre Plate	Culture Plate
		
Cat.-No. 1645		
Cat.-No.	4345	
plates per rotor	4	
RCF	1,896	
radius in mm	106	
run-up in sec	44	
run-down in sec	 54  815	
temperature °C ¹⁾	- 18	

capacity in ml	0.4	0.5	0.8	1.5	2.0
dimensions Ø x L mm	6 x 45	8 x 30	8 x 45	11 x 38	11 x 38
Cat.-No.	-	-	-	2078	0536
					
Cat.-No. 1689				with high speeds we recommend to use adapter No. 2031	
Cat.-No.	2024	2023	2023	-	-
tubes per rotor	30				
RCF	21,255				
radius in mm	97				
run-up in sec	27				
run-down in sec	 34  700				
temperature °C ¹⁾	+ 2				

Adapters for additional tubes on request

-  braked run-down at level 99
-  unbraked run-down



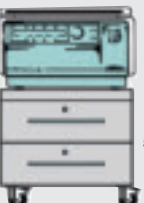



¹⁾ Lowest attainable temperature at max. speed in the refrigerated UNIVERSAL 32 R.

²⁾ In compliance with DIN EN 61010, part 2-020

Save space on the laboratory bench and gain more flexibility ...with trolleys and rolling cabinets for Hettich centrifuges.

All models are of sturdy design and feature large castors and two locks.

Any vibrations of the centrifuge are safely compensated.

<p>low and narrow depth 580 mm</p> <p>Cat.-No. 4308</p>  <p>580</p>	<p>low and narrow, with one drawer depth 650 mm</p> <p>Cat.-No. 4612</p>  <p>550</p>	<p>high and narrow, with two drawers depth 650 mm</p> <p>Cat.-No. 4613</p>  <p>550</p>
<p>low and wide depth 580 mm</p> <p>Cat.-No. 4318</p>  <p>810</p>	<p>low and wide, with one drawer depth 650 mm</p> <p>Cat.-No. 4614</p>  <p>765</p>	<p>high and wide, with two drawers depth 650 mm</p> <p>Cat.-No. 4615</p>  <p>765</p>

Technical Details



UNIVERSAL 32
Benchtop centrifuge, without rotor
Cat.-No. 1605 Cat.-No. 1605-01



UNIVERSAL 32 R
Benchtop centrifuge, refrigerated, without rotor
Cat.-No. 1610 Cat.-No. 1610-01

Power supply*:	220 - 240 V 1~	110 - 127 V 1~	230 - 240 V 1~	110 - 127 V 1~
Frequency:	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	60 Hz
Consumption:	400 VA	450 VA	950 VA	1000 VA
Radio interference:	EN 55011 ISM cl. B	FCC class B	EN 55011 ISM cl. B	FCC class B
Immunity:	EN 61000-6-2	-	EN 61000-6-2	-
Capacity:	4 x 100 ml, swing-out rotor			
Speed/RCF:	n = 18,000 min ⁻¹ / RCF 23,907			
Centrifuging chamber temperature:	controllable from -20 °C to +40 °C			
Running time:	1-99 min, ∞ (continuous run), impulse key (short cycle mode)			
Dimensions (HxWxD):	300 x 420 x 490 mm		300 x 420 x 660 mm	
Weight:	approx . 24 kg		approx . 46 kg	

* other voltages on request

Design

Housing and lid of metal for safety. Panelling finished in a scratch and impact resistant coating. Centrifuging chamber and inner lid of stainless steel. Lid locking, lid holding, and imbalance switch-off are standard.

