

ANOTHER
DIMENSION



ROTINA 420/420R
Benchtop Centrifuges
classic/cooled

Hettich
ZENTRIFUGEN

Developed for large volumes, yet not overly large in size. High performance when it counts, yet cost-effective and fair to your budget. The ROTINA 420 centrifuges offer these benefits and more.

The new, compact benchtop centrifuges are conceived for high sample throughput as well as for high sample volumes. With a maximum capacity of 4 x 600 ml, 140 blood collection tubes or 16 microtitre plates they are ideal for applications in clinical chemistry, in biotechnology and in life science research facilities.



ROTINA 420 classic

Cat. No. 4701

PERFORMANCE

- High capacity
 - max. 4 x 600 ml
- High RCF
 - up to 16,504 for 94 ml tubes
 - up to 12,007 for 250 ml bottles
 - up to 24,400 for reaction tubes



DESIGN

- Metal housing
- Stainless steel centrifuging chamber
- Viewing port in the lid

USER-FRIENDLINESS

- Automatic lid locking
- Ergonomic control and information panel
- Easy rotor changing
- 99 program storage spaces

COOLING (ROTINA 420 R)

- Infinitely variable adjustment from -20 °C to +40 °C (or -4 °F to +104 °F)
- Stand-by cooling

SAFETY

- Lid locking and holding
- Emergency lid lock release
- Lid dropping protection
- Automatic rotor recognition
- Imbalance switch-off
- Motor overheating protection
- Chamber overheating protection (ROTINA 420 R)

OPTIONS

The following are available as options, the ROTINA 420 R

- with connection for nitrogen flushing
Cat. No. **4706-20**
for centrifugation of reactive substances or substances which are unstable in aerial oxygen. As required, a monitoring control system should be available to measure oxygen concentration.
- as heating/cooling version up to +90 °C (or +194 °F)
Cat. No. **4706-50**
for applications calling for temperatures over +40 °C.

OPERATION AND CONTROL

The advanced C control panel significantly facilitates the daily laboratory routine.

Parameter selection is done via the use of symbol keys. Values are set with the control knob, and recorded by pressing the Start key.

9 braking and acceleration ramps, unbraked run-down, or a cut-off speed can be selected. Ramp 9 represents the shortest braking and acceleration time.

98 program memory positions are available. Additional program position "PREC" (PRE-COOLING) is reserved for the pre-cooling program.

The temperature in the ROTINA 420 R refrigerated centrifuge can be set in either Celsius (°C) or Fahrenheit (°F) degrees.


The temperature range is between -20 °C and +40 °C or between -4 °F and +104 °F, in the heating/cooling versions between -20 °C and +90 °C or between -4 °F and +194 °F.

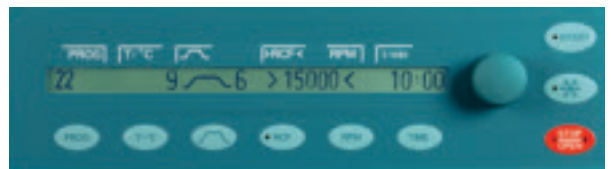
DIGITAL DISPLAY AND CONTROL PANEL

KEYBOARD

START	Start centrifugation run / short centrifuging runs / save entries and changes Start pre-cooling program PREC
STOP OPEN	Manually end centrifugation run / Open lid

PARAMETER INPUT

PROG	Input / recall program number 98 programs can be stored
T/°C	Input temperature in increments of 1 from -20 °C to +40 °C or -4 °F to +104 °F (ROTINA 420 R)
	Input of acceleration levels 1 – 9 Input of braking levels 1 – 9 Input brake force cut-off
RCF	Input relative centrifugal force (RCF) in increments of 1 Enter centrifuging radius (RAD) in mm
RPM	Input speed in increments of 10
TIME	Input length of centrifugation (max. 99 h : 59 min : 59 sec) or continuous operation



ROTINA 420 R control panel



ROTINA 420 R cooled

Cat. No. 4706

ROTORS AND ACCESSORIES

Swing-out rotor, 4-place



↻ 90°

n = 4,500 min⁻¹
max. RCF 4,166

illustrated with carriers 4750 and lids 4751
with bio-containment⁴⁾

Cat. No. (without carriers) **4723**

capacity in ml	1.5	2.0	3	4	4	5	6	7	10	15	25	50	75	85	100	100	
Ø x L in mm	11x38		10x60	10x88	12x60	12x75	12x82	12x100	17x70	17x100	24x100	34x100	35x105	38x106	40x115	44x100	
Cat. No.	2078	0536	-			0553²⁾	0501²⁾	0578²⁾	2079	0518²⁾	0519²⁾	0521²⁾	0548	0549	0523²⁾	0526²⁾	
lid with bio-containment ⁴⁾ Cat. No. 4751																	
carrier Cat. No. 4750																	
Cat. No.	4773	4761				4762				4763	4764	4765	4766			4767	
boring Ø x L in mm	11.2x38		11.2x54			13.4x55			17.5x62		26.5x69		36x77		42x76.5		46x76.5
tubes per rotor	96		140			104			72		28		16		12		8
max. RCF ²⁾	4,030												4,007				
radius in mm	178												177				
run-up in sec	40																
run-down in sec	☐ 40 ☐ 550																
temperature in °C ¹⁾	+2																

capacity in ml	250	1.1-1.4	2.6-2.9	2.7-3	4-5.5	4.5-5	4.9	7.5-8.2	9-10	1.6-5	4-7	4-7	8	8.5-10	15	50
Ø x L in mm	65x115	8x66	13x65	11x66	15x75	11x92	13x90	15x92	16x92	13x75	13x100	16x75	16x125	16x100	17x120	29x115
Cat. No.	0530²⁾	blood collection / urine tubes													0509	0513
lid with bio-containment ⁴⁾ Cat. No. 4751																
carrier Cat. No. 4750																
Cat. No.	4768	4761	4775	4763	4761	4762	4763	4775	4762				4763	4769	4770	
boring Ø x L in mm	66x103	11.2x54	13.7x54	17.5x62	11.2x54	13.4x55	17.5x62	13.7x54	13.4x55				17.5x62	17x84	30x82.5	
tubes per rotor	4	140	84	72	140	104	72	84	104				72	52	20	
max. RCF ²⁾	3,985	4,030										4,166		4,143		
radius in mm	176	178										184		183		
run-up in sec	40															
run-down in sec	☐ 40 ☐ 550															
temperature in °C ¹⁾	+2															

¹⁾ Lowest attainable temperature in precooled refrigerated centrifuges at max. speed.

²⁾ Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote ²⁾ is 4,000.

³⁾ When using these tubes, carrier 4750 cannot be closed with lid 4751.

⁴⁾ Tested by the TÜV in conformity with DIN EN 61010, section 2-020.

ROTORS AND ACCESSORIES



illustrated with carriers 4750 and lids 4751
with bio-containment⁴⁾

Swing-out rotor 4723

capacity in ml	12	25	30	50	10	30	50	85	94	175	175	200	225	250	400	400	600	
Ø x L in mm	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	38 x 102	61 x 118	62 x 144	60 x 130	61 x 137	61 x 122	81 x 136	84 x 134	93 x 134	
Cat. No.	-						0545	0546	0547	0538 ⁷⁾	Falcon®	Nalgene®	Nunc®	Falcon®	5127	-	-	0551
lid with bio-containment ⁴⁾ Cat. No. 4751																		
carrier Cat. No. 4750																		
Cat. No.	4774	4764	4770 ⁵⁾	4763	4764	4770 ⁵⁾	4766	4776	4776	4776	4776	4776	4776	4771	4772	4772	4772	-
boring Ø x L in mm	17.2 x 82.5	26.5 x 69	30 x 82.5	17.5 x 62	26.5 x 69	30 x 82.5	42 x 76.5	61 x 105	61 x 105	61 x 105	61.5 x 110	61 x 105	62 x 100	62 x 100	85 x 100	85 x 100	94 x 99	
tubes per rotor	60	28	20	72	28	20	12	4										
max. RCF ²⁾	4,143	4,030	4,143	4,030		4,143	4,007	4,166										
radius in mm	183	178	183	178		183	177	184										
run-up in sec	40																	
run-down in sec	☐ 40 ○ 550																	
temperature in °C ¹⁾	+2																	

D x W x H in mm	86 x 128 x 15	86 x 128 x 17.5	86 x 128 x 22	86 x 128 x 44.5	86 x 128 x 46	59 x 84 x 11	82 x 124 x 20	-
capacity in ml	-							0.2
Cat. No.	Microtitre plate		Culture plate	Deep Well plate	Micronic System	Microtest plate (Terasaki)	PCR plate, 96-well	PCR strips
carrier Cat. No. 4752								
Cat. No.	-						1469	
boring Ø x L in mm	-							
plates per rotor	16	16	12	4	4	8	4	48 x 8
max. RCF ²⁾	3,600							
radius in mm	159							
run-up in sec	40							
run-down in sec	☐ 40 ○ 550							
temperature in °C ¹⁾	+2							

1) Lowest attainable temperature in precooled refrigerated centrifuges at max. speed.

2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.

3) When using these tubes, carrier 4750 resp. 5091 cannot be closed with lid 4751 resp. 5095.

4) Tested by the TÜV in conformity with DIN EN 61010, section 2-020.