



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

The ROTANTA 46 line offers extra class laboratory centrifuges that meet an extremely wide range of demands.

They stand out for high capacity, versatility and performance.

Their state-of-the-art technology and high safety standard provide for smooth running in laboratory routine.

Working with a ROTANTA 46 type of centrifuge is taking a step into the future. For sample processing in robotic workstations a robotic version of the ROTANTA 46 is available.

ROTANTA 46 centrifuges accommodate microlitre tubes, microtitre

plates as well as centrifuge tubes and containers up to bottles of a volume of 750 ml.

This is why a ROTANTA 46 is the centrifuge of choice when high sample throughput and versatility are in demand.

The ROTANTA 46 benchtop centrifuges are suited for routine centrifuging tasks in clinical laboratories and laboratory centres as well as for basic research in R&D laboratories of the pharmaceutical and biotechnological industry.

ROTANTA 46/46R centrifuges in brief

Performance

High RCF, max. 10,310 with the refrigerated models in an angle rotor, max. 4,754 in a swing-out rotor.

Extremely short run-up and run-down times.

Efficient cooling in the ROTANTA 46 R and 46 RS centrifuges.

Technology

Frequency-controlled drive, only maintenance required according to UVV regulations.

At option:
Standard "N" control panel or extended "S" control panel for storing 89 complete running programmes.

Safety

Centrifuging chamber of stainless steel

Panelling finished in scratch and impact resistant coating

Lid locking and holding

Lid dropping protection

Emergency lid lock release

Automatic rotor recognition

Imbalance switch-off

Viewing port in the lid

Motor overheating protection

Chamber overheating protection in the ROTANTA 46 R and 46 RS centrifuges



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.

Extra strong performance!

Large capacity:

Up to 4 x 250 ml or 160 x 5 ml blood collection tubes in the buckets No. 4412 and up to 4 x 750 ml in the buckets No. 4413 accommodated by rotor No. 4444.

Up to 6 x 250 ml or 120 x 5 ml blood collection tubes in the suspensions No. 5091 accommodated by rotor No. 4446.

High speed:

Max. RCF 10,310 in angle rotor No. 4445 in the refrigerated ROTANTA 46 R and 46 RS centrifuges, max. RCF 4,754 in a swing-out rotor.

Efficient cooling:

Temperature in the ROTANTA 46 R and ROTANTA 46 RS is steplessly controllable within a range of -20 °C to +40 °C.



ROTANTA 46 RS
benchtop centrifuge,
refrigerated

Dimensions:
HxWxD 410 x 815 x 690 mm

Cat.-No. **4811**



ROTANTA 46
benchtop centrifuge

Dimensions:
HxWxD 410 x 590 x 690 mm

Cat.-No. **4805**

"N" CONTROL PANEL

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

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

Water-protected foil keypad:

Exact, fast and easy entry of the parameters with selector keys.

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 will calculate and indicate speed or RCF.

Impulse key:

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

Running time t /min:

Input in minutes, max. 99min.

Run-up / Run-down time:

Input of acceleration and braking ramps in levels 1 - 9. Level 9 always represents the shortest possible run-up or run-down time. 0=unbraked run-down.



Temperature T /°C:

Input in increments of 1°C within a range of -20°C to +40°C with ROTANTA 46 R centrifuges.

3 complete running programmes

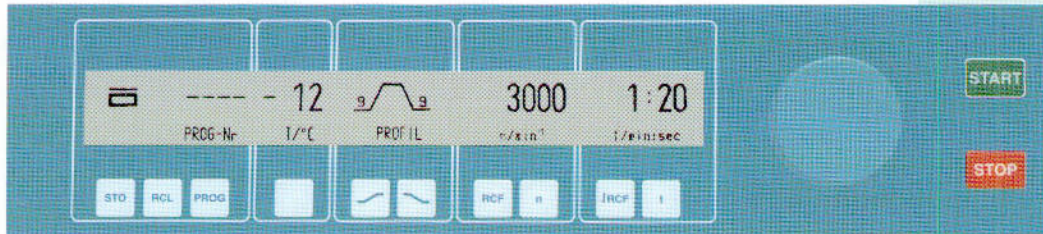
can be stored and recalled with their programme number. They remain in the memory even after the centrifuge has been switched off.



Cat.-No. 4810

The controls and displays of the ROTANTA 46 S and 46 RS centrifuges are arranged according to ergonomical aspects.

Entry of the parameters is exact, fast and easy with selector keys on the water-protected foil keypad and an adjusting knob.



Programming with
effortless ease

Speed RPM:

Input in increments of 10.

Relative centrifugal force RCF:

Input in increments of 1.

Radius r/mm:

Needs to be entered when speed or RCF have to be determined.

Running time t:

Input in minutes and seconds, max. 999 min.

Run-up/Run-down time:

Input of acceleration and braking ramps in levels 1 - 9, or time-controlled in minutes and seconds. 0=unbraked run-down.

Deceleration with brake force cut-off:

Input of the cut-off speed in RPM.

Integral of the centrifugal acceleration

provides continuous information on the accumulated RCF the samples are exposed to during centrifugation.

Temperature T/°C:

With the ROTANTA 46 RS input in increments of 1°C within a range of -20°C to +40°C.

Up to 89 complete running programmes can be memorized and recalled with their storing number. They remain in the memory even after the centrifuge has been switched off.

Whether entering single parameters or chaining complete running programmes, the clearly arranged display with its selector keys and adjusting knob provides extreme user-friendliness.

For special routine or scientific applications the ROTANTA 46 S line of centrifuges can be fitted with the following optional equipment:

Centrifuging data report

With the Hettich data report system HETTINFO up to 29 centrifuges can be controlled by a single PC.

An optical cable connects the centrifuge to a BUS system. Protocols of selected centrifuging data and barcode readers can be produced via a PC with an RS 232 interface.

Key-operated switch

for locking and protecting programmes.

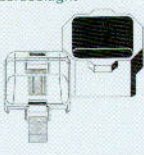












Second independent tachometer system

for calibrating the speed measuring instrument as required by quality management systems.

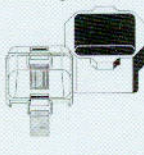












Chaining of programmes

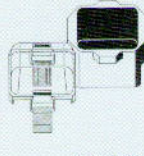




allows to programme the centrifuge to run different programmes in succession.

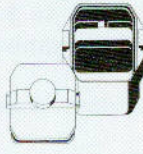



Accessories

capacity	1.5/2.0	1.5/2.0	6	7	15	25	50	50	100	100	250	250	Two-stage frame for cyto-preparation
dimensions Ø x L mm	-	-	12 x 82	12 x 100	17 x 100	24 x 100	34 x 100	34 x 100	40 x 115	44 x 100	65 x 115	61 x 130	
Cat.-No.	2078*	2078*	-	-	-	-	-	-	-	-	-	5127	Please ask for our brochure "The Unique Hettich-Cyto-System"
lid No. 4414 aerosolight  Cat.-No. 4412													
Cat.-No.	5281	5257	5227	5247	5248	5242	5243	5261	5249	5262	5263	6319/5263	5280
tubes per rotor	128	320	160	160	96	40	16	24	8	8	4	4	16
RCF	4,075	3,260/4,369	4,324	4,302	4,302	4,302	4,302	4,279	4,256	4,256	4,211	4,392	2,988/4,211
radius in mm	180	144/193	191	190				189	188	188	186	194	132/186
run-up time in s	60												
run-down time in s	☐ 70 ☐ 1260												
temperature °C ¹⁾	6												

* Cat.-No. for 1.5 ml microlitre tubes.

capacity	1.1 - 1.4	2.7 - 3	2.6 - 2.9	4 - 5.5	4.5 - 5	4.9	7.5 - 8.2	9 - 10	1.6 - 5	4 - 7	4 - 7	8.5 - 10
dimensions Ø x L mm	8.5 x 66	11.5 x 66	13 x 65	15.3 x 75	11.5 x 92	13 x 90	15.3 x 92	16.5 x 92	13 x 75	13 x 100	16 x 75	16 x 100
Cat.-No.	Sarstedt								Vacutainer			
lid No. 4414 aerosolight  Cat.-No. 4412												
Cat.-No.	5267	5227	5268	5264	5247	5268	5248	5258	5268	6301	5264	5248
tubes per rotor	160	160	96	96	160	96	96	88	96	96	96	96
RCF	4,279	4,324	4,369	4,324	4,302	4,369	4,302	4,302	4,369	4,302	4,324	4,302
radius in mm	189	191	193	191	190	193	190	190	193	190	191	190
run-up time in s	60											
run-down time in s	☐ 70 ☐ 1260											
temperature °C ¹⁾	6											

capacity	15	15	50	50
dimensions Ø x L mm	17 x 120	17 x 120	29 x 115	29 x 115
Cat.-No.	Falcon			
lid No. 4414 aerosolight  Cat.-No. 4412				
Cat.-No.	4459	6306	5259	5269
tubes per rotor	52	56	16	24
RCF	4,460	4,460	4,392	4,460
radius in mm	197	197	194	197
run-up time in s	60			
run-down time in s	☐ 70 ☐ 1260			
temperature °C ¹⁾	6			

	Microtitre Plate	Micronic System	Culture Plate
Cat.-No.			
aerosolight  Cat.-No. 4428			
Cat.-No.	4429	4429	4431
plates per rotor	16	4	8
RCF	3,849	3,849	3,736
radius in mm	170	170	165
run-up time in s	75		
run-down time in s	☐ 72 ☐ 1338		
temperature °C ¹⁾	6		

☐ braked run-down at level 9 ☐ unbraked run-down
1) Lowest attainable temperature at max. speed in ROTANTA 46R/46RS

Please take care not to exceed the tubes' max. permissible RCF!



Swing-out rotor, $\angle 90^\circ$,
6-place, $n = 4,000 \text{ min}^{-1}$,
RCF 3,631

Cat.-No. **4446** without buckets

illustrated with buckets No. 5091 and
transparent lid No. 5095

capacity ml	1.5/2.0	1.5/2.0	6	7	15	25	50	100	100
dimensions $\varnothing \times L$ mm	-	-	12 x 82	12 x 100	17 x 100	24 x 100	34 x 100	40 x 115	44 x 100
Cat.-No.	2078*	2078*	0501	0578	0507	0519	0521	0523	0526
lid No. 5095									
Cat.-No. 5091									
Cat.-No.	5257	5281	5227	5247	5248	5242	5243	5249	5262
tubes per rotor	240	96	120	120	72	30	12	6	6
RCF	2,504/3,381	3,148	3,327	3,309	3,309	3,309	3,309	3,291	3,291
radius in mm	140/189	176	186	185	185	185	185	184	184
run-up time in s	44								
run-down time in s	<input type="checkbox"/> 56 <input type="checkbox"/> 435								
temperature °C °	-2								

* Cat.-No. for 1.5 ml microlitre tubes.

capacity ml	1.1 - 1.4	2.7 - 3	2.6 - 4.9	4 - 5.5	4.5 - 5	7.5 - 8.2	9 - 10	1.6 - 5	4 - 7	4 - 7	8.5 - 10	15	50	Two-stage frame for cyto- preparations		
dimensions $\varnothing \times L$ mm	8.5 x 66	11.5 x 66	13x65/90	15.3 x 75	11.5 x 92	15.3 x 92	16.5 x 92	13 x 75	13 x 100	16 x 75	16 x 100	17 x 120	29 x 115			
Cat.-No.	Sarstedt												Vacutainer		Falcon	
lid No. 5095																
Cat.-No. 5091																
Cat.-No.	5267	5227	5268	5264	5247	5248	5258	5268	6301	5264	5248	6306	5259	5280		
tubes per rotor	120	120	72	72	120	72	66	72	72	72	72	42	12	12		
RCF	3,291	3,327	3,363	3,327	3,309	3,309	3,309	3,363	3,309	3,327	3,309	3,452	3,381	2,272/3,238		
radius in mm	184	186	188	186	185	185	185	188	185	186	185	193	189	127/181		
run-up time in s	44															
run-down time in s	<input type="checkbox"/> 56 <input type="checkbox"/> 435															
temperature °C °	-2															

Please ask for our brochure "The Unique Hettich-Cyto-System"

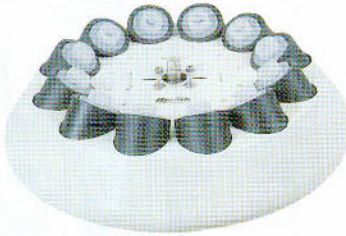
Swing-out rotor,
 $\angle 90^\circ$, 6-place,
 $n = 4,000 \text{ min}^{-1}$,
RCF 3,631

Cat.-No. **4446**
without buckets

capacity ml	6	7	15	25	50	100	100	250	250	15	50	
dimensions $\varnothing \times L$ mm	12 x 82	12 x 100	17 x 100	24 x 100	34 x 100	40 x 115	44 x 100	65 x 115	62 x 135	17 x 120	29 x 115	
Cat.-No.	0501	0578	0507	0519	0521	0523	0526	0530	5127	Falcon		
lid No. 5093, aerosoltight												
Cat.-No. 5092												
Cat.-No.	5128	5120	5121	5122	5124	5126	5125	1057	6319	5129	5123	
tubes per rotor	72	72	42	24	6	6	6	6	6	42	12	
RCF	3,542	3,542	3,542	3,434	3,506	3,488	3,488	3,488	3,631	3,631	3,631	
radius in mm	198	198	198	192	196	195	195	195	203	203	203	
run-up time in s	44											
run-down time in s	<input type="checkbox"/> 56 <input type="checkbox"/> 720											
temperature °C °	-2											

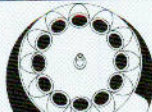

















braked run-down at level 9 unbraked run-down
1) Lowest attainable temperature at max. speed in ROTANTA 46R/46RS

Please take care not to exceed
the tubes' max. permissible RCF!



Angle rotor, 12-place
ROTANTA 46 R/46 RS
 n = 7,500 min⁻¹, RCF 10,060
ROTANTA 46/46 S
 n = 6,000 min⁻¹, RCF 6,439

Cat.-No. **4450**


capacity ml	1.5/2.0	10	15	30	50	85	15	50	9 - 10
dimensions Ø x L mm	-	16 x 80	17 x 100	26 x 95	29 x 107	38 x 101	17 x 120	29 x 115	16.5 x 92
Cat.-No.	2078*	-	-	0545	0546	0547	Falcon		Sarstedt
 n = 7,500 min ⁻¹ n = 6,000 min ⁻¹ Cat.-No. 4450									
									
Cat.-No.	1449	1448	1451	1447	1446	-	1464	1454	1451
tubes per rotor	48	24	12	12	12	12	12	12	12
RCF refrigerated	9,620	9,620	9,620	9,500	9,750	10,060	9,620	9,750	9,620
RCF non-refrig.	6,160	6,160	6,160	6,077	6,238	6,439	6,160	6,238	6,160
radius in mm	153	153	153	151	155	160	153	155	153
run-up time in s	69								
run-down time in s	<input type="checkbox"/> 52 <input type="checkbox"/> 1620								
temperature °C 1)	4								










* Cat.-No for 1.5 ml microlitre tubes



Angle rotor, 6-place
ROTANTA 46 R/46 RS
 n = 7,500 min⁻¹, RCF 10,310
ROTANTA 46/46 S
 n = 6,000 min⁻¹, RCF 6,600

Cat.-No. **4445**

capacity ml	250
dimensions Ø x L mm	61 x 130
Cat.-No.	5127
 n = 7,500 min ⁻¹ n = 6,000 min ⁻¹ Cat.-No. 4445	
Cat.-No.	-
tubes per rotor	6
RCF refrigerated	10,310
RCF non-refrig.	6,600
radius in mm	164
run-up time in s	66
run-down/s <input type="checkbox"/> / <input type="checkbox"/>	70/1215
temperature °C 1)	4

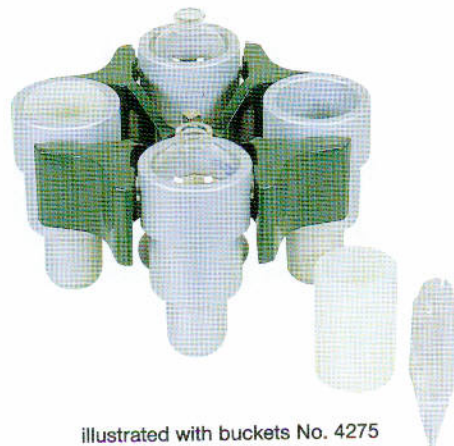
capacity ml	50	100	100	100
dimensions Ø x L mm	45 x 130	58 x 161	44 x 168	37 x 200
Cat.-No.	-	0528	-	0531
 n = 4,000 min ⁻¹ Cat.-No. 4275				
				
Cat.-No.	4278	0771	4277	4276
tubes per rotor	4	4	4	4
RCF 1)	3,936	3,936	3,864	3,864
radius in mm	220	220	216	216
run-up time in s	22			
run-down time in s	<input type="checkbox"/> 29 <input type="checkbox"/> 180			
temperature °C 1)	-13			

braked run-down at level 9
 unbraked run-down

- 1) Lowest attainable temperature at max. speed in ROTANTA 46R/46RS.
- 2) Please take care not to exceed the max. RCF of 700 for ASTM tubes recommended by the manufacturer.

Swing-out rotor, $\approx 45^\circ$,
 4-place,
 for ASTM tubes,
 n = 4,000 min⁻¹,
 RCF 3,936

Cat.-No. **4474** without buckets



illustrated with buckets No. 4275

Hettich agents all over the world offer advice and support.

If you wish to have one of our representatives visit you, please call the nearest local office or our head office in Tuttlingen, +49(0)7461/705-201

Please take care not to exceed the tubes' max. permissible RCF!

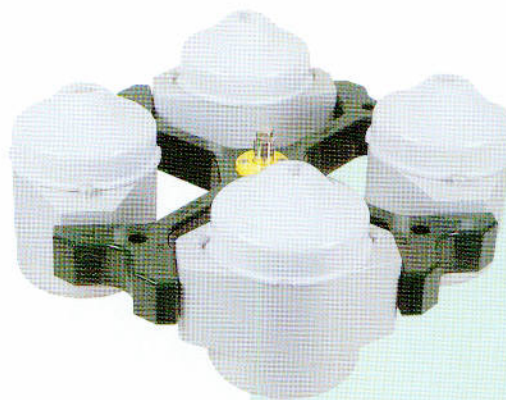


Swing-out rotor, $\sphericalangle 90^\circ$, 4-place, $n = 4,500 \text{ min}^{-1}$, RCF 4,754

Cat.-No. **4444** without buckets

illustrated with buckets No. 4412 and aerosoltight, transparent lid No. 4414

capacity ml	500	500
dimensions $\varnothing \times L$ mm	-	-
Cat.-No.	-	-
lid No. 4455	blood bag system triple, quadruple	blood bag system single, double
Cat.-No. 4413		
Cat.-No.	4413	4452
qty. per rotor	4	4
RCF	4,754	4,686
radius in mm	210	207
run-up time in s	73	
run-down time in s	<input checked="" type="checkbox"/> 71	<input type="checkbox"/> 1630
temperature $^\circ\text{C}$ ¹⁾	3	



Swing-out rotor, $\sphericalangle 90^\circ$, 4-place, $n = 4,500 \text{ min}^{-1}$, RCF 4,754

Cat.-No. **4444** without buckets

illustrated with buckets No. 4413 and lid No. 4455

capacity ml	2.7 - 5	9 - 10	4 - 10	4 - 7	250	15	50
dimensions $\varnothing \times L$ mm	11.5x66/92	16.5 x 92	16.5x75/92	13 x 100	60 x 172	17 x 120	29 x 115
Cat.-No.	Sarstedt		Vacutainer	Corning	Falcon		
lid No. 4455					without lid No. 4455		
Cat.-No. 4413							
Cat.-No.	4433	4436	4434	4435	4454	4437	4441
tubes per rotor	120	76	76	84	4	48	20
RCF	4,211	3,917	4,256	4,211	4,754	4,460	4,460
radius in mm	186	173	188	186	210	197	197
run-up time in s	73						
run-down time in s	<input checked="" type="checkbox"/> 71 <input type="checkbox"/> 1630						
temperature $^\circ\text{C}$ ¹⁾	3						

capacity ml	1.5/2.0	7	15	25	50	100	100	250	450	750
dimensions $\varnothing \times L$ mm	-	12 x 100	17 x 100	24 x 100	34 x 100	44 x 100	58 x 161	61 x 130	69.5 x 159	97 x 136
Cat.-No.	2078*	-	-	-	-	-	-	5127	4457	4456
lid No. 4455								without lid Nr. 4455	without lid Nr. 4455	
Cat.-No. 4413										
Cat.-No.	4432	4433	4436	4438	4439	4442	4458	4443	4453	4451
tubes per rotor	168	120	76	28	16	8	4	4	4	4
RCF	3,147/4,234	4,211	3,917	4,211	4,166	4,120	4,618	4,573	4,754	4,596
radius in mm	139/187	186	173	186	184	182	204	202	210	203
run-up time in s	73									
run-down time in s	<input checked="" type="checkbox"/> 71 <input type="checkbox"/> 1630									
temperature $^\circ\text{C}$ ¹⁾	3									

* Cat.-No. for 1.5 ml microlitre tubes

braked run-down at level 9 unbraked run-down
1) Lowest attainable temperature at max. speed in ROTANTA 46R/46RS



illustrated with buckets No. 5092 and aerosoltight, transparent lid No. 5093

Please take care not to exceed the tubes' max. permissible RCF!



ROTANTA 46
Benchtop centrifuge, without rotor
Cat.-No. 4805 Cat.-No. 4805 - 01

ROTANTA 46 S *
Benchtop centrifuge, without rotor
Cat.-No. 4806 Cat.-No. 4806 - 01

ROTANTA 46 R
Benchtop centrifuge, refrigerated, without rotor
Cat.-No. 4810 Cat.-No. 4810 - 01

ROTANTA 46 RS *
Benchtop centrifuge, refrigerated, without rotor
Cat.-No. 4811 Cat.-No. 4811 - 01

ROTANTA 46 RC
Underbench centrifuge, refrigerated, without rotor
Cat.-No. 4812 Cat.-No. 4812 - 01

ROTANTA 46 RSC *
Underbench centrifuge, refrigerated, without rotor
Cat.-No. 4813 Cat.-No. 4813 - 01

** Power supply:	208 - 240 V 1~	110 - 127 V 1~	220 - 240 V 1~	110 - 127 V 1~
Frequency:	50 - 60 Hz	50 - 60 Hz	50 Hz	60 Hz
Consumption:	1.4 kVA	1.2 kVA	1.8 kVA	2.0 kVA
Radio interference:	EN 55011 ISM cl. B	FCC class A	EN 55011 ISM cl. B	FCC class A
Immunity:	EN 50082	EN 50082	EN 50082	EN 50082
Capacity:	4 x 750 ml, swing-out		4 x 750 ml, swing-out	
Speed/RCF:	n = 6,000 min ⁻¹ / RCF 6,600		n = 7,500 min ⁻¹ / RCF 10,310	
Centrifuging chamber temperature:			controllable from -20 °C to +40 °C	
Running time:	1-99 min. resp. 1-999 min. ("S"), ∞ (continuous run), impulse key (short cycle mode)		1-99 min. resp. 1-999 min. ("S"), ∞ (continuous run), impulse key (short cycle mode)	
Dimensions (H x W x D):	410 x 580 x 690 mm		410 x 815 x 690 mm	635 x 580 x 690 mm ¹⁾
Weight:	approx. 65 kg		approx. 95 kg	approx. 110 kg ¹⁾

* Centrifuges with the extended "S" control panel offer many more options. Please turn to page 5 of this catalogue. ** Other voltages on request
1) Underbench centrifuge

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

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