Anexa 10. Centrifugă de laborator (24 tuburi)

Parametri ceruti	Parametri oferiti, Hettich Rotorfix 32A
Centrifugă de laborator (24 tuburi) Cod 150920 Descriere Centrifugele de laborator sunt destinate pentru a centrifuga sîngele. Parametrul Specificația Viteza de rotație Minimală, rpm reglabilă Maximală, rpm ≥ 3500 Setări setarea vitezei Capacitatea Tipul tuburilor tuburi de 10 - 15 ml Numărul de tuburi 24 unitati Timer Gama de timp 0 - ≥60 min Incrementarea ≤1 min Securitatea Blocarea capacului în timpul lucrului da Indicatori Indicarori vizual și acustic da Debalansare da Pornire/oprire da Capac deschis da Display Digital da Nivelul de zgomot ≤ 65 dB da Fereastra, orificiu sau alt acces, necesar pentru efectuarea procedurii de verificare periodica, conform normelor si standartelor in viguare da	Centrifugă de laborator (24 tuburi) Cod 150920 Descriere Centrifugele de laborator sunt destinate pentru a centrifuga sîngele. Parametrul Specificația Viteza de rotație Minimală, rpm reglabilă Maximală, rpm 6000 maximal, 4000 rpm cu rotorul 1418 Setări setarea vitezei Capacitatea Tipul tuburilor tuburi de 10 - 15 ml Numărul de tuburi 24 unitati Timer Gama de timp 0 - 99 min Increment 1 min Securitatea Blocarea capacului în timpul lucrului da Indicatori Indicarori vizual și acustic da Debalansare da Pornire/oprire da Capac deschis da Display Digital da Nivelul de zgomot 52 dB da Fereastra, orificiu sau alt acces, necesar pentru efectuarea procedurii de verificare periodica, conform normelor si standartelor in viguare da Configuratie: Rotorfix 32A Rotor 1418 6 adaptoare 1467(fiecare cu 4 locuri)

Digitally signed by Ceaicovschi Tudor
Date: 2021.09.30 17:16:16 EEST
Reason: MoldSign Signature
Location: Moldova

Certificate

mdc medical device certification GmbH
certifies that

Andreas Hettich GmbH & Co. KG
Föhrenstrasse 12
78532 Tuttlingen
Germany

for the scope

design, development, manufacturing, distribution and servicing of laboratory centrifuges, centrifuges for separation of blood components for transfusion purposes and microbiological incubators.

has introduced and applies a

Quality Management System

The mdc audit has proven that this quality management system meets all requirements of the following standard

EN ISO 13485

Medical devices – Quality management systems – Requirements for regulatory purposes

EN ISO 13485:2016 + AC:2016 - ISO 13485:2016

Valid from	2020-04-01
Valid until	2023-03-31
Registration no.	D1459300001
Report no.	P19-01336-156285
Stuttgart	2020-03-26

Head of Certification Body

medical device certification mdc

DAkkS Deutsche Akkreditierungsstelle D-ZM-16002-06-00

mdc medical device certification GmbH
Kriegerstraße 6
D-70191 Stuttgart, Germany
Phone: +49-(0)711-253597-0
Fax: +49-(0)711-253597-10
Internet: http://www.mdc-ce.de

For electronic publication only

CERTIFICATE

This is to certify that the company

Andreas Hettich GmbH & Co.KG

Föhrenstraße 12
78532 Tuttlingen
Germany

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope of certificate and applicable country-specific requirements:
Design and development, Manufacturing, Distribution and Servicing of laboratory centrifuges, centrifuges for separation of blood components for transfusion purposes, microbiological incubators
-AUS (a), BRA, CND, JPN, USA (a,b,c,d)

Through an audit, documented in a report, performed by DQS Medizinprodukte GmbH, it was verified that the management system fulfills the requirements of the following standard:

ISO 13485 : 2016 (MDSAP Audit Model Edition 2)

including country-specific requirements as shown in the scope
(full references are listed in the annex)

Certificate registration no.	546262 MDSAP16
Certificate unique ID	170761874
Effective date	2020-03-26
Expiry date	2023-03-25
Frankfurt am Main	2020-03-26

MDSAP
MEDICAL DEVICE SINGLE AUDIT PROGRAM

DQS Medizinprodukte GmbH

Sigrid Uhlemann
Managing Director

Szymon Kurdyn
Product Manager

August-Schanz-Straße 21, 60433 Frankfurt am Main,
Tel. +49 (0) 69 95427-300, medical.devices@dqs-med.de
DQS Medizinprodukte GmbH is recognized under the Medical Devices Single Audit Program.
Visit https://www.mydqs.com/en/customers/customer-database.html to validate this certificate.

413.01.001 Version 2.0

Annex to certificate
Certificate registration No.: 546262 MDSAP16
Certificate unique ID: 170761874
Effective date: 2020-03-26

Andreas Hettich GmbH & Co.KG

Föhrenstraße 12
78532 Tuttlingen
Germany

Audited site	DUNS No., site scope and country-specific requirements
Andreas Hettich GmbH & Co.KG Föhrenstraße 12 78532 Tuttlingen Germany	Design and development, Manufacturing, Distribution and Servicing of laboratory centrifuges, centrifuges for separation of blood components for transfusion purposes, microbiological incubators **AUS (a), BRA, CND, JPN, USA (a,b,c,d)** **DUNS No.: 316403245**

Annex to certificate
Certificate registration No.: 546262 MDSAP16
Certificate unique ID: 170761874
Effective date: 2020-03-26

Andreas Hettich GmbH & Co.KG

Föhrenstraße 12
78532 Tuttlingen
Germany

Full references of country-specific requirements of MDSAP participating Regulatory Authorities

Abbreviation	Jurisdiction	Reference
AUS	Australia	(a) Therapeutic Goods (Medical Devices) Regulations 2002, Schedule 3, Part 1 – Full Quality Assurance Procedure (b) Therapeutic Goods (Medical Devices) Regulations 2002, Schedule 3, Part 4 – Production Quality Assurance Procedure
BRA	Brazil	RDC ANVISA n. 16/2013 RDC ANVISA n. 23/2012 RDC ANVISA n. 67/2009
CND	Canada	Medical Device Regulations SOR/98-282, Part 1
JPN	Japan	MHLW Ministerial Ordinance No. 169 (2004) as amended by MHLW Ordinance No. 128 (2014), Articles 4 to 68 Japan PMD Act (as applicable)
USA	United States	(a) 21 CFR Part 803 (b) 21 CFR Part 806 (c) 21 CFR Part 807 (d) 21 CFR Part 820 (e) 21 CFR Part 821

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CUSTOMER INFORMATION

TRANSITION PHASE - MDR 2017/745 AND IVDR 2017/746

Tuttlingen, 09.04.2020

Dear valued Customer,

Andreas Hettich GmbH & Co. KG as legal manufacturer is required to comply with EU Medical Device Regulation 2017/745 and EU In-Vitro Diagnostic Medical Device Regulation 2017/746 for the following medical devices / in vitro diagnostic medical devices:

Medical Devices	ROTO SILENTA 630 RS, ROTIXA 500 RS, ROTANTA 460; ROTANTA 460R, ROTANTA 460RC; ROTANTA 460RF
IVD Medical Devices	EBA 200; EBA 200S, EBA 270, EBA 280; EBA 280S, MIKRO 220; MIKRO 220R, UNIVERSAL 320; UNIVERSAL 320R, MIKRO 185, MIKRO 200; MIKRO 200R, ROTOFIX 32A, ROTINA 380; ROTINA 380R, ROTINA 420; ROTINA 420R, HAEMATOKRIT 200; HETTCUBE ff.

We started already our transition phase in the beginning of 2019 and are currently under implementation of the new requirements.

Our current EN ISO 13485:2016 Certificate, MDSAP Certificate and CE-Certificate MDD 93/42/EEC Annex II remains valid until the end of the transition phase for our in vitro diagnostic devices under IVDR 2017/746 until **26.05.2022** and for our medical devices under MDR 2017/745 until **26.05.2024**.

We will publish the successful transition of our product portfolio on our web page as soon as available.

Mit freundlichen Grüßen / Best regards,
Andreas Hettich GmbH & Co. KG

i.A.

Christian von der Grün
Head of Regulatory & Quality Affairs

ALLG000104

EC Certificate

mdc medical device certification GmbH
Notified Body 0483
herewith certifies that

Andreas Hettich GmbH & Co. KG
Föhrenstrasse 12
78532 Tuttlingen
Germany

for the scope

centrifuges for separation of
blood components for transfusion purposes

has introduced and applies a

Quality System

for the design, manufacture and final inspection.

The mdc audit has proven that this quality system
meets all requirements according to

Annex II – excluding Section 4
of the Council Directive 93/42/EEC

of 14 June 1993 concerning medical devices.

The surveillance will be held as specified in Annex II, Section 5.

Valid from	2020-04-01
Valid until	2024-05-26
Registration no.	D1459300002
Report no.	P19-01336-156290
Stuttgart	2020-03-26

Head of Certification Body

medical device certification mdc

Benannt durch/Designated by
Zentralstelle der Länder für Gesundheitsschutz bei Arzneimitteln und Medizinprodukten
www.zlg.de
ZLG-BS-246.10.06

mdc medical device certification GmbH
Kriegerstraße 6
D-70191 Stuttgart, Germany
Phone: +49-(0)711-253597-0
Fax: +49-(0)711-253597-10
Internet: http://www.mdc-ce.de

For electronic publication only

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

Andreas Hettich GmbH & Co. KG

Föhrenstr. 12
78532 Tuttlingen
Germany

has established and applies
a Quality Management System for

Development, production and distribution of laboratory equipment, accessories, spare parts with the associated services.

An audit was performed, Order No. **707111087**.

Proof has been furnished that the requirements according to

ISO 9001:2015

are fulfilled.

The certificate is valid from **2021-06-10** until **2024-06-09**.

Certificate Registration No.: **12 100 59604 TMS**.

Head of Certification Body
Munich, 2021-05-27

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

MS/01-01/2019

BENCHTOP CENTRIFUGE

ROTOFIX 32 A

RUGGED AND INDISPENSABLE

For decades, the ROTOFIX 32 A has set the standard in daily lab routine thanks to its versatility and solid construction. The benchtop centrifuge spins sample volumes up to 6 x 94 ml, 40 blood collection tubes or 8 x 50 ml conical tubes with a simple user interface. Hettich's cytology rotors are compatible with most existing funnel/slide systems and have bio-containment lids.

HIGHLIGHTS

- RPM: 500 - 6,000 min $^{-1}$
  Adjustable in increments of 100
- max. RCF: 4,226
- max. capacity: 4 x 100 ml / 6 x 94 ml
- choice of 9 rotors
- easy operation with keypad
- 2 individual deceleration stages

FEATURES

- metal housing and lid
- viewing port in the lid
- one-hand lid lock
- lid dropping protection
- emergency lid lock release
- stainless steel chamber
- automatic rotor recognition
- brushless drive
- error display
- imbalance monitoring and switch-off
- control panel with actual values of all parameters
- auditory message after completion of the centrifugation run

TECHNICAL DATA

	ROTOFIX 32 A
voltage *)	208 – 240 V 1 ~
frequency	50 – 60 Hz
consumption	300 VA
emission, immunity	EN/IEC 61326-1, class B
max. capacity	4 x 100 ml / 6 x 94 ml
max. RPM	6,000 min^{-1}
max. RCF	4,226
running time	1–99 min, ∞ continuous run, short cycle mode (impulse button)
dimesions (W x D x H)	366 x 430 x 257 mm
weight	approx. 23 kg
noise level	52 dB (A) with rotor 1628
Cat. No.	**1206**
100 – 127 V 1 ~ / 50 – 60 Hz *)	1206-01
emission, immunity	FCC class B

*) Other voltages on request.

AVAILABLE ROTORS

SWING-OUT ROTORS	angle	max. RPM	max. capacity	Cat. No.	page
 swing-out rotor, 4-place	90°	4,000 min^{-1}	4 x 100 ml	**1624**	3
 swing-out rotor, 4-place	90°	4,000 min^{-1}	4 x 100 ml	**1324**	6
 swing-out rotor, 6-place	90°	4,000 min^{-1}	6 x 50 ml	**1619**	8
 swing-out rotor, 8-place	45°	4,000 min^{-1}	8 x 50 ml	**1617**	8
 swing-out rotor, 8-place	90°	4,000 min^{-1}	8 x 15 ml	**1611**	9
 swing-out rotor, 12-place	55° / 60° / 80°	4,000 min^{-1}	12 x 15 ml	**1628**	9
ANGLE ROTORS					
 angle rotor, 8-place	45°	4,000 min^{-1}	8 x 50 ml	**1418**	10
 angle rotor, 6-place	35°	6,000 min^{-1}	6 x 94 ml	**1620A**	11
 angle rotor, 12-place	35°	6,000 min^{-1}	12 x 15 ml	**1613**	12

SWING-OUT ROTOR, 4-PLACE | 1624

Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,451
max. capacity	4 x 50 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	90° I 55 dB (A)
Cat. No.	**1624**

Vessels												
capacity in ml	5	5	6	7	9	9	15	15	20	25	45	50
Ø x L in mm	12 x 75	12 x 75	12 x 82	12 x 100	14 x 100	14 x 100	17 x 100	17 x 100	21 x 100	24 x 100	31 x 100	34 x 100
max. RCF [2]	2,057	2,164	2,308	2,308	2,308	2,415	2,308	2,451	2,361	2,451	2,361	2,451
radius in mm	115	121	129	129	129	135	129	137	132	137	132	137
Cat. No.	**tubes [2]**											
+ Carrier	with decanting aid		with decanting aid	with decanting aid		+ 0701						
boring Ø x L in mm	12.5x64.4	13.5 x 65	12.5x71.5	12.5x71.5	14.6 x 74	14.6 x 78	17.6x71.5	17.6 x 78	21.5 x 74	26 x 78	32 x 74	35 x 78
vessels per rotor	16	68	16	16	20	40	16	28	8	8	4	4
Cat. No.	**1369-91**	**1372**	**1369-92**	**1369-92**	**1370**	**1741**	**1369**	**1742**	**1346**	**1745**	**1345**	**1746**

Vessels														
capacity in ml	1.1 – 1.4	2.6 – 3.4	4 – 5.5	4.9	1.6 – 5	4 – 7	1.6 – 5	4 – 7	4 – 7	4 – 7	4 – 7	8.5 – 10	30	1 – 8
Ø x L in mm	8 x 66	13 x 65	15 x 75	13 x 90	13 x 75	16 x 75	13 x 75	16 x 75	13 x 100	13 x 100	13 x 100	16 x 100	26 x 95	simple / multiple
max. RCF [2]	2,415	2,325	2,325	2,451	2,129	2,361	2,325	2,325	2,361	2,361	2,451	2,451	2,451	1,646
radius in mm	135	130	130	137	119	132	130	130	132	132	137	137	137	92
Cat. No.	**blood collection / urine vessels**												**-**	**cyto chambers**
+ Carrier	+ 0701	+ 0716	+ 0716		+ 0768 [16]		+ 0716	+ 0716	+ 1058					
boring Ø x L in mm	14.6 x 78	17.6 x 78	17.6 x 78	14.6 x 78	14.6 x 78	17.6x71.5	17.6 x 78	17.6 x 78	17.6x71.5	14.6 x 74	13.5 x 78	17.6x71.5	26 x 78	-
vessels per rotor	40	28	28	40	40	16	28	28	16	20	28	16	8	4
Cat. No.	**1741**	**1742**	**1742**	**1741**	**1741**	**1369 [4]**	**1742**	**1742**	**1369 [4]**	**1370 [4]**	**1739**	**1369 [4]**	**1745**	**1660**

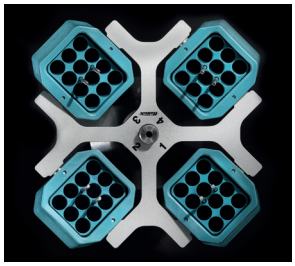
CYTO Cyto system available for this model.
More information on page 178

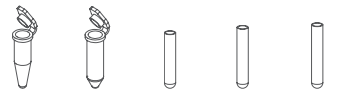
2) Please note that the RCF values indicated refer only to rotor performance. The max. permissible RCF of tubes used should be verified with the individual manufacturers. The max. RCF for glass tubes annotated with footnote 2) is 4,000.
4) Please remove the spacer.
16) Packed in units of 10 pieces.
20) Vacutainers made of glass may not be used.

SWING-OUT ROTOR, 4-PLACE | 1624

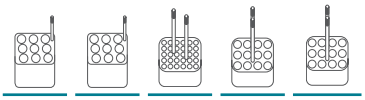
Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 1,968
max. capacity	48 x 4 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	90° I 56 dB (A)
Cat. No.	**1624**

Bucket	
Cat. No.	**1366**





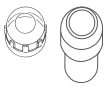
Vessels					
capacity in ml	1.5	2.0	1	3	4
Ø x L in mm	11 x 38	11 x 38	6 x 45	10 x 60	12 x 60
max. RCF [2]	1,968	1,968	1,950	1,932	1,932
radius in mm	110	110	109	108	108
Cat. No.	**microliter tubes**		**Rhesus**	**tubes [2]**	



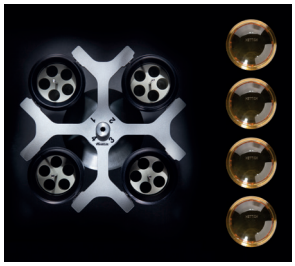
Adapter					
boring Ø x L in mm	11.5 x 38	11.5 x 38	6.5 x 23	10.5 x 23	12.5 x 44
vessels per rotor	36	36	120	48	48
Cat. No.	**5277**	**5277**	**1357**	**1327**	**1326**

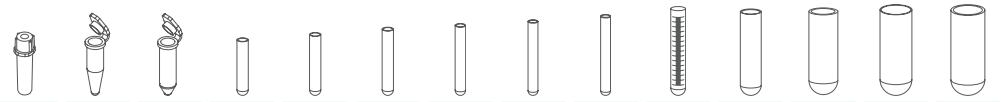
SWING-OUT ROTOR, 4-PLACE | 1624

Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,665
max. capacity	4 x 100 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	90° I 55 dB (A)
Cat. No.	**1624**

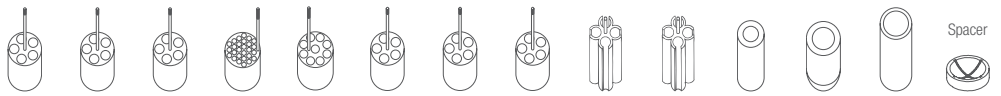


Bucket	
Lid bioseal [5]	1492
Cat. No.	**1481**





Vessels														
capacity in ml	0,5	1,5	2,0	1	3	5	6	7	9	15	25	50	94	100
Ø x L in mm	10.7 x 36	11 x 38	11 x 38	6 x 45	10 x 60	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	38 x 102	44 x 100
max. RCF [2]	2,379	2,451	2,451	2,594	2,630	2,558	2,558	2,558	2,540	2,540	2,433	2,415	2,612	2,558
radius in mm	133	137	137	145	147	143	143	143	142	142	136	135	146	143
Cat. No.	**Pediatric**	**microtubes**		**Rhesus**	**tubes [2]**									



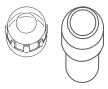
Adapter														
boring Ø x L in mm	11.2 x 38	11.2 x 38	11.2 x 38	6.5 x 34	10.5 x 43	13.4 x 48	13.4 x 48	13.4 x 48	17.6 x 91	17.6 x 91	25.2 x 87	35.2 x 87	38.5 x 92	45.9 x 98
vessels per rotor	20	20	20	108	36	20	20	20	16	16	4	4	4	4
Cat. No.	**1351**	**1351**	**1351**	**1339**	**1343**	**1383**	**1383**	**1383**	**1329**	**1329**	**1330**	**1331**	**1396**	**0761**

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.

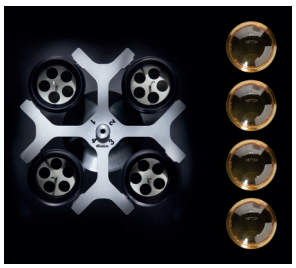
5) Tested by TÜV in conformity with DIN EN 61010, section 2 - 020.

SWING-OUT ROTOR, 4-PLACE | 1624

Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,665
max. capacity	4 x 100 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	90° I 55 dB (A)
Cat. No.	**1624**



Bucket	
Lid bioseal [5]	1492
Cat. No.	**1481**



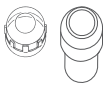
Vessels															
capacity in ml	1.1–1.4	2.7–5	2.6–4.9	4–8.5	9–10	10	1.6 – 7	4 – 10	5	15	50	12	25	30	50
Ø x L in mm	8 x 66	11x66/92	13x65/90	15x75/92	16 x 92	15 x 102	13x75/100	16x75/100	17 x 59	17 x 120	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115
max. RCF [2]	2,576	2,558	2,558	2,576	2,540	2,665	2,558	2,522	2,665	2,665	2,665	2,665	2,343	2,665	2,665
radius in mm	144	143	143	144	142	149	143	141	149	149	149	149	131	149	149
Cat. No.	**blood collection / urine vessels**								**-**	**tubes with screw cap**					
Adapter															
boring Ø x L in mm	9 x 49	13.4 x 48	13.4 x 48	15.6 x 47	17.6 x 91	17.6 x 91	13.4 x 48	16.5 x 56	17 x 45	17 x 90	30 x 90	17 x 80	26 x 72	26 x 80	29.5 x 80
vessels per rotor	28	20	20	16	16	16	20	16	12	4	4	4	4	4	4
Cat. No.	**1457**	**1383**	**1383**	**1459**	**1329**	**1329** [4]	**1383**	**1348**	**6341**	**1347**	**1384**	**6311**	**1363**	**1365**	**6318**

Vessels					chrome bath tubes
capacity in ml	10	30	50	85	30
Ø x L in mm	16 x 80	26 x 95	29 x 107	38 x 106	44 x 105
max. RCF [2]	2,522	2,451	2,630	2,612	2,540
radius in mm	141	137	147	146	142
Cat. No.	**tubes with screw cap**				**0534** [6]
Adapter					Spacer
boring Ø x L in mm	16.5 x 56	26 x 83	29 x 93	38.5 x 92	45.9 x 98
vessels per rotor	16	4	4	4	4
Cat. No.	**1348**	**4417**	**4416**	**1396**	**0765**

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, bucket 1490 cannot be closed with lid 1492.
4) Please remove spacer.
5) Tested by TÜV in conformity with DIN EN 61010, section 2 - 020.
6) A rubber stopper for closing the tube for agitating or mixing is available under Cat. No. 0535. The tube may not be centrifuged with the stopper.

SWING-OUT ROTOR, 4-PLACE | 1324

Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,630
max. capacity	4 x 100 ml
run-up I run-down, braked in sec	27 I 30
angle I max. noise level	90° I 55 dB (A)
Cat. No.	**1324**



Bucket	
Lid bioseal [5]	1492
Cat. No.	**1490**

Vessels															
capacity in ml	0.5	1.5	2.0	1	3	4	5	6	7	9	15	25	50	94	100
Ø x L in mm	10.7 x 36	11 x 38	11 x 38	6 x 45	10 x 60	10 x 88	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	24 x 100	34 x 100	38 x 102	44 x 100
max. RCF [2]	2,343	2,415	2,415	2,558	2,594	2,594	2,522	2,522	2,522	2,504	2,504	2,397	2,379	2,576	2,522
radius in mm	131	135	135	143	145	145	141	141	141	140	140	134	133	144	141
Cat. No.	**Pediatric**	**microliter tubes**		**Rhesus**	**tubes [2]**										

Adapter															
boring Ø x L in mm	11.2 x 38	11.2 x 38	11.2 x 38	6.5 x 34	10.5 x 43	10.5 x 43	13.4 x 48	13.4 x 48	13.4 x 48	17.6 x 91	17.6 x 91	25.2 x 87	35.2 x 87	38.5 x 92	45.9 x 100.5
vessels per rotor	20	20	20	108	36	36	20	20	20	16	16	4	4	4	4
Cat. No.	**1351**	**1351**	**1351**	**1339**	**1343**	**1343**	**1383**	**1383**	**1383**	**1329**	**1329**	**1330**	**1331**	**1396**	**0761**

Vessels														
capacity in ml	1.1 – 1.4	2.6 – 3.4	4.9	2.7 – 3	4.5 – 5	4 – 5.5	7.5 – 8.5	9 – 10	10	1.6 – 5	4 – 7	4 – 7	8.5 – 10	5	15
Ø x L in mm	8 x 66	13 x 65	13 x 90	11 x 66	11 x 92	15 x 75	15 x 92	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75	16 x 100	17 x 59	17 x 120
max. RCF [2]	2,540	2,522	2,522	2,522	2,522	2,540	2,540	2,504	2,630	2,522	2,522	2,486	2,486	2,630	2,630
radius in mm	142	141	141	141	141	142	142	140	147	141	141	139	139	147	147
Cat. No.	**blood collection / urine vessels**													**-**	**-**

Adapter															
boring Ø x L in mm	9 x 47	13.4 x 48	13.4 x 48	13.4 x 48	13.4 x 48	15.6 x 47	15.6 x 47	17.6 x 91	17.6 x 91	13.4 x 48	13.4 x 48	16.5 x 56	16.5 x 56	17 x 45	17 x 90
vessels per rotor	28	20	20	20	20	16	16	16	16	20	20	16	16	12	4
Cat. No.	**1457**	**1383**	**1383**	**1383**	**1383**	**1459**	**1459**	**1329**	**1329 [4]**	**1383**	**1383**	**1348**	**1348**	**6341**	**1347**

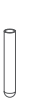
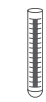
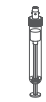
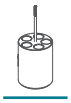
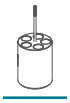
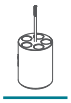
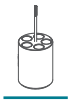
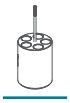
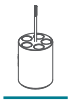
Vessels												
capacity in ml	15 [3]	30	50	12	25	30	50	10	30	50	85	30 (chrome bath tube)
Ø x L in mm	17 x 120	25 x 110	29 x 115	17 x 100	25 x 90	25 x 110	29 x 115	16 x 80	26 x 95	29 x 107	38 x 106	44 x 105
max. RCF [2]	2,630	2,630	2,630	2,630	2,308	2,630	2,630	2,486	2,415	2,594	2,576	2,504
radius in mm	147	147	147	147	129	147	147	139	135	145	144	140
Cat. No.	**tubes with screw cap**											**0534 [6]**

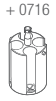
Adapter												
boring Ø x L in mm	17 x 107	26 x 80	30 x 90	17 x 80	26 x 72	26 x 80	29.5 x 80	16.5 x 56	26 x 83	29 x 93	38.5 x 92	45.9 x 100.5 (Spacer)
vessels per rotor	12	4	4	4	4	4	4	16	4	4	4	4
Cat. No.	**1356**	**1365**	**1384**	**6311**	**1363**	**1365**	**6318**	**1348**	**4417**	**4416**	**1396**	**0765**

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, bucket 1490 cannot be closed with lid 1492.
4) Please remove spacer.
5) Tested by TÜV in conformity with DIN EN 61010, section 2 - 020.
6) A rubber stopper for closing the tube for agitating or mixing is available under Cat. No. 0535. The tube may not be centrifuged with the stopper.

SWING-OUT ROTOR, 4-PLACE | 1324

Rotor		+	Bucket	
max. RPM I max. RCF	4,000 min^{-1} I 2,612		Cat. No.	1398
max. capacity	4 x 50 ml			
run-up I run-down, braked in sec	27 I 30			
angle	90° I 56 dB (A)			
Cat. No.	1324			

Vessels															
capacity in ml	5	6	7	9	15	2.6–3.4	2.7–3	4–5.5	4.5–5	4.9	9 – 10	10	1.6 – 5	4 – 7	4 – 7
Ø x L in mm	12 x 75	12 x 82	12 x 100	14 x 100	17 x 100	13 x 65	11 x 66	15 x 75	11 x 92	13 x 90	16 x 92	15 x 102	13 x 75	13 x 100	16 x 75
max. RCF [2]	2,486	2,486	2,486	2,522	2,522	2,486	2,486	2,272	2,486	2,486	2,522	2,522	2,486	2,486	2,397
radius in mm	139	139	139	141	141	139	139	127	139	139	141	141	139	139	134
Cat. No.	tubes [2]					blood collection / urine vessels									
+ Adapter								+ 0716 							+ 0716 
boring Ø x L in mm	13.4 x 57.5	13.4 x 57.5	13.4 x 57.5	17.5 x 81	17.5 x 81	13.4 x 57.5	13.4 x 57.5	17.5 x 81	13.4 x 57.5	13.4 x 57.5	17.5 x 81	17.5 x 81	13.4 x 57.5	13.4 x 57.5	17.5 x 81
vessels per rotor	20	20	20	16	16	20	20	16	20	20	16	16	20	20	16
Cat. No.	1486	1486	1486	1482A	1482A	1486	1486	1482A	1486	1486	1482A	1482A	1486	1486	1482A

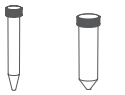
Vessels						
capacity in ml	8.5 – 10	12	15	50	12	50
Ø x L in mm	16 x 100	17 x 102	17 x 120	29 x 115	17 x 100	29 x 115
max. RCF [2]	2,397	2,451	2,612	2,576	2,522	2,576
radius in mm	134	137	146	144	141	144
Cat. No.	blood collection / urine vessels		tubes with screw cap			
+ Adapter	+ 0716 					
boring Ø x L in mm	17.5 x 81	17.5 x 74	17 x 100	30 x 98	17.5 x 81	30 x 98
vessels per rotor	16	12	16	4	16	4
Cat. No.	1482A	1487	1483A	1484	1482A	1484 [4]

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.

4) Please remove spacer.

SWING-OUT ROTOR, 6-PLACE | 1619

Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,701
max. capacity	6 x 50 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	90° I 54 dB (A)
Cat. No.	**1619**



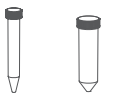
Vessels		
capacity in ml	15	50
Ø x L in mm	17 x 120	29 x 115
max. RCF [2]	2,701	2,701
radius in mm	151	151
Cat. No.	**tubes with screw cap**	

+

Adapter		
boring Ø x L in mm	17 x 84	30 x 87.5
vessels per rotor	6	6
Cat. No.	**1462-A**	**-**

SWING-OUT ROTOR, 8-PLACE | 1617

Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,469
max. capacity	8 x 50 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	45° I 53 dB (A)
Cat. No.	**1617**



Vessels		
capacity in ml	15	50
Ø x L in mm	17 x 120	29 x 115
max. RCF [2]	2,469	2,469
radius in mm	138	138
Cat. No.	**tubes with screw cap**	

+

Adapter		
boring Ø x L in mm	17 x 84	30 x 94.5
vessels per rotor	8	8
Cat. No.	**1462-A**	**-**

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.

SWING-OUT ROTOR, 8-PLACE | 1611

Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,415
max. capacity	8 x 15 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	90° I 53 dB (A)
Cat. No.	**1611**

Vessels														
capacity in ml	5	6	7	10	15	2.6–3.4	2.7–3	4–5.5	4.5–5	7.5 – 8.5	1.6 – 5	4 – 7	4 – 7	8.5 – 10
Ø x L in mm	12x75	12x82	12x100	13x100	17x100	13x65	11x66	15x75	11x92	15x92	13x75	13x100	16x75	16x100
max. RCF [2]	1,914	1,914	2,415	2,415	2,415	1,914	1,914	1,914	2,415	2,415	1,914	2,415	1,914	2,415
radius in mm	107	107	135	135	135	107	107	107	135	135	107	135	107	135
Cat. No.	**tubes [2]**					**blood collection / urine vessels**								

Bucket														
boring Ø x L in mm	13x53	13x53	13.2x81	13.2x81	17.5x81	13 x 53	13 x 53	17.5 x 53	13.2 x 81	17.5 x 81	13 x 53	13.2 x 81	17.5 x 53	17.5 x 81
vessels per rotor	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Cat. No.	**1131-A**	**1131-A**	**1643**	**1643**	**1644**	**1131-A**	**1131-A**	**1132-A**	**1643**	**1644**	**1131-A**	**1643**	**1132-A**	**1644**

SWING-OUT ROTOR, 12-PLACE | 1628

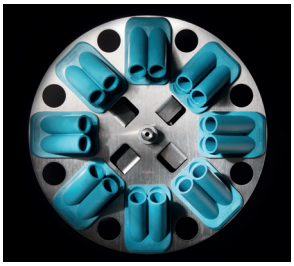
Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,683
max. capacity	12 x 15 ml
run-up I run-down, braked in sec	22 I 25
angle I max. noise level	55° / 60° / 80° I 52 dB (A)
Cat. No.	**1628**

Vessels									
capacity in ml	5	15	2.6–3.4	2.7–3	4–5.5	7.5 – 8.5	1.6 – 5	4 – 7	8.5 – 10
Ø x L in mm	12x75	17x100	13x65	11x66	15x75	15x92	13x75	16x75	16x100
max. RCF [2]	2,236	2,683	2,236	2,236	2,254	2,683	2,236	2,254	2,683
radius in mm	125	150	125	125	126	150	125	126	150
Cat. No.	**tubes [2]**		**blood collection / urine vessels**						

Bucket									
boring Ø x L in mm	13.2x53	17.5x79	13.2x53	13.2x53	17.5x53	17.5x79	13.2x53	17.5x53	17.5x79
vessels per rotor	12	12	12	12	12	12	12	12	12
Cat. No.	**1127-A**	**1621**	**1127-A**	**1127-A**	**1122**	**1621**	**1127-A**	**1122**	**1621**

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.

ANGLE ROTOR, 8-PLACE | 1418



Rotor	
max. RPM I max. RCF	4,000 min^{-1} I 2,612
max. capacity	8 x 50 ml
run-up I run-down, braked in sec	36 I 43
angle I max. noise level	45° I 53 dB (A)
Cat. No.	**1418**

Vessels															
capacity in ml	5	15	1.1 – 1.4	2.6 – 3.4	2.7 – 3	9 – 10	1.6 – 5	4 – 7	8.5 – 10	12	15	50	12	50	50
Ø x L in mm	12 x 75	17 x 100	8 x 66	13 x 65	11 x 66	16 x 92	13 x 75	13 x 100	16 x 100	17 x 102	17 x 120	29 x 115	17 x 100	29 x 115	29 x 107
max. RCF [2]	2,182	2,540	2,182	2,182	2,182	2,540	2,182	2,612	2,540	2,540	2,594	2,486	2,540	2,486	2,486
radius in mm	122	142	122	122	122	142	122	146	142	142	145	139	142	139	139
Cat. No.	**tubes [2]**		**blood collection / urine vessels**								**tubes with screw cap**				
+	+ 1054-A	+ 0716	+ 1054-A	+ 1054-A	+ 1054-A	+ 0716	+ 1054-A		+ 0716	+ 0716	+ E2109	+ E2110-A	+ 0716		
Carrier															
boring Ø x L in mm	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	17.4 x 91	30.2 x 92	17.4 x 91	30.2 x 92	30.2 x 92
vessels per rotor	32	32	32	32	32	32	32	32	32	32	32	8	32	8	8
Cat. No.	**1467**	**1467**	**1467**	**1467**	**1467**	**1467**	**1467**	**1467**	**1467**	**1467**	**1467**	**1468**	**1467**	**1468**	**1468**

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.

ANGLE ROTOR, 6-PLACE | 1620A

Rotor	
max. RPM I max. RCF	6,000 min^{-1} I 4,226
max. capacity	6 x 94 ml
run-up I run-down, braked in sec	19 I 22
angle I max. noise level	35° I 53 dB (A)
Cat. No.	**1620A**

Vessels															
capacity in ml	0.5	1.5	2.0	3	15	50	94	7.5 – 8.5	9 – 10	10	8.5 – 10	5	15	50	50
Ø x L in mm	10.7 x 36	11 x 38	11 x 38	10 x 60	17 x 100	34 x 100	38 x 102	15 x 92	16 x 92	15 x 102	16 x 100	17 x 59	17 x 120	29 x 115	29 x 115
max. RCF [2]	4,105	4,105	4,105	4,105	3,904	4,146	4,226	3,904	3,904	3,904	3,904	3,824	3,985	3,985	3,985
radius in mm	102	102	102	102	97	103	105	97	97	97	97	95	99	99	99
Cat. No.	**Pediatric**	**microliter tubes**			**tubes [2]**			**blood collection / urine vessels**				**-**	**tubes with screw cap**		

Adapter															
boring Ø x L in mm	11.4 x 39	11.4 x 39	11.4 x 39	11.4 x 39	17.5 x 92	35 x 89	38.6 x 90.2	17.5 x 92	17.5 x 92	17.5 x 92	17.5 x 92	17 x 51	17 x 106	29.8 x 97	-
vessels per rotor	24	24	24	24	6	6	6	6	6	6	6	6	6	6	6
Cat. No.	**1449**	**1449**	**1449**	**1449**	**1451**	**1463**	**-**	**1451**	**1451**	**1451**	**1451**	**1476**	**1466**	**1454**	**1646 [8]**

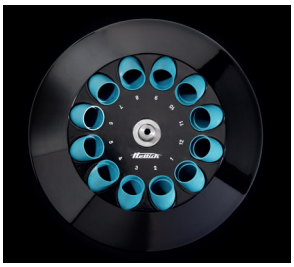
Vessels				
capacity in ml	10	30	50	85
Ø x L in mm	16 x 80	26 x 95	29 x 107	38 x 106
max. RCF [2]	3,904	3,824	4,025	4,226
radius in mm	97	95	100	105
Cat. No.	**tubes with screw cap**			

Adapter				
boring Ø x L in mm	16.5 x 74	26 x 85	29 x 92	38.6 x 90.2
vessels per rotor	12	6	6	6
Cat. No.	**1448**	**1447**	**1446**	**-**

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.

8) Adapter (Set), 6-place: for conical 50 ml tubes with screw cap.

ANGLE ROTOR, 12-PLACE | 1613



Rotor	
max. RPM I max. RCF	6,000 min^{-1} I 4,146
max. capacity	12 x 15 ml
run-up I run-down, braked in sec	13 I 15
angle I max. noise level	35° I 55 dB (A)
Cat. No.	**1613**

Vessels													
capacity in ml	0.5	4	5	6	15	1.1–1.4	2.6–3.4	2.7–3	4.5–5	4.9	7.5 – 8.5	9 – 10	10
Ø x L in mm	10.7 x 36	10 x 88	12 x 75	12 x 82	17 x 100	8 x 66	13 x 65	11 x 66	11 x 92	13 x 90	15 x 92	16 x 92	15 x 102
max. RCF [2]	2,777	3,502	3,300	3,300	4,146	3,300	3,300	3,300	4,146	4,146	4,146	4,146	4,146
radius in mm	69	87	82	82	103	82	82	82	103	103	103	103	103
Cat. No.	**Pediatric**	**tubes [2]**				**blood collection / urine vessels**							
Adapter													
boring Ø x L in mm	11 x 35	11.5 x 67.5	13.5 x 60	13.5 x 60	17.7 x 88	13.5 x 60	13.5 x 60	13.5 x 60	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88	17.7 x 88
vessels per rotor	12	12	12	12	12	12	12	12	12	12	12	12	12
Cat. No.	**2 x 1063-6 (6 pcs.)**	**6305**	**1054-A**	**1054-A**	**-**	**1054-A**	**1054-A**	**1054-A**	**-**	**-**	**-**	**-**	**-**

Vessels						
capacity in ml	1.6 – 5	4 – 7	8	8.5 – 10	5	15
Ø x L in mm	13 x 75	13 x 100	16 x 125	16 x 100	17 x 59	17 x 120
max. RCF [2]	3,300	4,146	4,146	4,146	3,180	4,146
radius in mm	82	103	103	103	79	103
Cat. No.	**blood collection / urine vessels**				**-**	**-**
Adapter						
boring Ø x L in mm	13.5 x 60	13.5 x 79	17.7 x 88	17.7 x 88	17 x 25	17.7 x 88
vessels per rotor	12	12	6	12	12	6
Cat. No.	**1054-A**	**1058**	**-**	**-**	**1064**	**-**

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.

CERTIFICATIONS / REGISTRATIONS

Product certification:

Product registration:

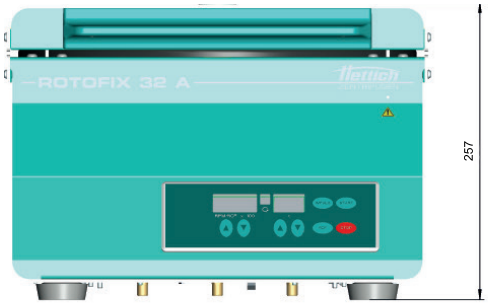
Company certifications:

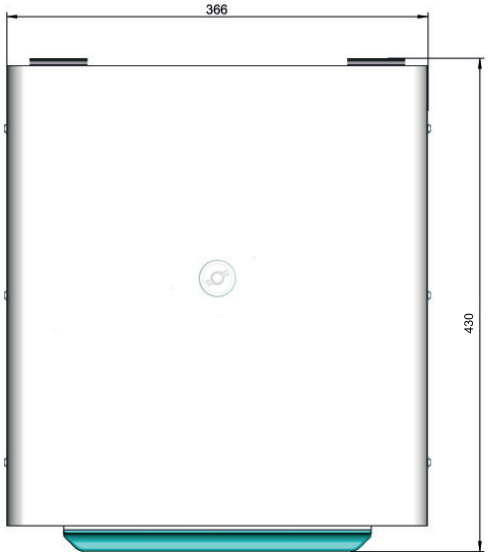
DOWNLOADS

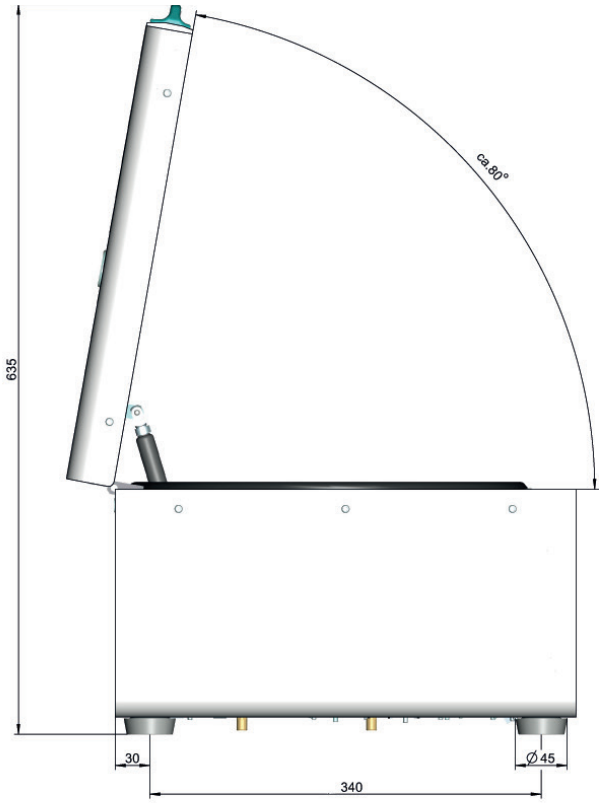
Operating manual – ROTOFIX 32 A

General Catalog

DIMENSIONS







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