







## **GOOD REASONS TO CHOOSE HETTICH**

# **Experience**



We know centrifuges - Hettich designs, engineers and manufactures centrifugation systems for the full range of blood transfusion applications. From compact hematocrit centrifuges, to floorstanding blood bag centrifuges, Hettich offers complete blood bank centrifugation solutions.

#### Quality



Hettich products are characterised by the highest quality and state-of-the-art technology. Centrifuges and incubators are developed in close cooperation with users from medicine, chemistry, research and industry and are continuously adapted to the latest requirements. Hettich fulfills all applicable EC directives that apply to you. Every work step is subject to strict controls and documentation. The company is ISO 9001, ISO 13485 and ISO 14001 certified. Hettich products are manufactured with care and responsibility, giving them a worldwide reputation for safety and reliability.



A high level of integrated design solutions ensures maximum safety in the laboratory. In the future, we will continue to measure ourselves against the highest quality standards in development and production and continue to comply with the most current global standards and certificates.



#### Seamless product portfolio

Hettich manufactures a complete centrifuge product line ranging from compact tabletop models to high-capacity floorstanding centrifuges, including models for clinical, research, and specialty applications.



Microliter centrifuges

Benchtop centrifuges

Floorstanding centrifuges

Dual centrifuge

Incubators

### THE HETTICH ADVANTAGES

Hettich's optimal sample environment

#### "Even-flow" circulation

Unimpeded air movement maintains a constant "at sample" temperature.

- Higher accuracy of sample temperature
- Reduced precooling and processing cooling times

#### **Dual temperature sensors in the chamber**

Dual temperature sensors provide greater temperature control and more accurate "at sample" temperatures.

#### Hygienic chamber

Centrifuge chamber is made with medical grade stainless steel and rounded edges to maximize hygiene. Without a rotor windshield, users can load samples easily and clean the chamber thoroughly for a hygienic sample environment.

#### **Enhanced safety**

The auto-locking lid securely closes the steel guarded chamber for the safe centrifugation of large-sample volumes.

#### Reproducible acceleration/deceleration

Powerful motor for maximized acceleration to target speed. Quiet, reliable and maintenance free.

#### **Uniform braking**

A variety of braking presets available to ensure centrifuged sample integrity upon completion.

### Documented quality

For greater transparency in the manufacturing process, the HettInfo documentation system records all crucial steps before and during centrifugation. The Scan Module enables fast and unambiguous recording of blood bag and user data, ensuring complete traceability. For more information on how to increase transparency in your facility and simultaneously install safe and lean processes, see page 16.



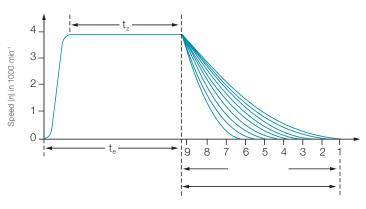




### Best separation results

The braking characteristics of the centrifuge have a decisive influence on the quality of separation achieved, especially at low centrifugation speeds, such as those commonly run in the preparation of platelet concentrate (PC) or platelet rich plasma (PRP).

The regular R-ramps brake the rotor uniformly over the entire down time. Loosely packed sediment may be resuspended during this critical run-down phase. In contrast to this the B-ramps brake the rotor rapidly at first then slowly so that it gently comes to a standstill.



B-ramps enable the carriers to return to a vertical position gently and without vibration before coming to a stop.

As with the R-ramps, a speed can also be entered for the B-ramps at which the brake is disengaged. The rotor then comes to a stop without braking.

#### Model variants

To accommodate the diverse needs of blood centers and stem cell processing centers, Hettich centrifuges are available in a variety of models. Most models have the option of built-in temperature control for sensitive samples. External cooling units and other options are also available for centers that need to reduce heat and noise emissions for GMP/GLP requirements. Speak with your local sales representative to learn which Hettich configuration best fits your application.

#### Air cooled condenser



Standard air-cooled models use an on-board, sealed refrigeration system to maintain desired sample temperature.



#### Water cooled condenser

GMP version for connection to an external cooling circuit or other cooling medium.



#### **External cooling**

GMP, to be connected to an external cooling unit

#### ROTO SILENTA 630 RS

Air cooled condenser	400V 3 <sup>-</sup> +N 50-60 Hz	5005
Air cooled condenser	208-220V +6/-10% 3 <sup>-</sup> +N 50-60 Hz	5005-08
Water cooled condenser	400V 3 <sup>-</sup> +N 50-60 Hz	5005-80
Brine cooling	400V 3 <sup>-</sup> +N 50-60 Hz	5005-60
External cooling system	400V 3 <sup>-</sup> +N 50-60 Hz	5005-90

#### **ROTIXA 500 RS**

Air cooled condenser	230-240V 1 <sup>-</sup> 50 Hz, 220V 1~ 60 Hz	4950
Air cooled condenser	208V 1 <sup>-</sup> , 60 Hz	4950-08
Water cooled condenser	230-240V 1 <sup>-</sup> 50 Hz, 220V 1~ 60 Hz	4950-80
Water cooled condenser	208V 1 <sup>-</sup> , 60 Hz	4950-88

### THE HETTICH ADVANTAGES

#### Extensive accessories

#### Hettliner

The HettLiner is a smart, simple and hygienic accessory that is used to stabilize blood bags during centrifugation. HettLiners reduce the risk of folds and contamination and optimize reproducible product quality. (Cat. No. 4564)



#### **Carriers / inserts**

Hettich offers market-leading whole blood processing adapters with stabilizing bag hooks and convenient carrying handles. Built durable: withstands accidental drops and guarantees significantly longer life cycles than competitive products.



#### **Loading station**

Secure your samples and avoid accidental spillage with the convenient Loading Station for centrifuge inserts. The Hettich Loading Station allows users to confidently hold and manage their samples without the risk of the inserts toppling over. (Cat. No. 4509)



#### **Balancing inserts**

Hettich Balancing Inserts make it quick and easy to counterbalance weight if you are spinning an uneven amount of bags. The freedom to adapt the weight of these inserts will speed up your routine and optimize your results. (Cat. No.: 4584-A, 4587-A, 4589-A)



#### **Balancing weigths**

Hettich Balancing Weights allow users to finely tune rotor weight distribution effortlessly. Weights are easy to clean, and easy to differentiate because of their varying shapes, sizes and colours. (Cat. No. 4566)



#### Longer life cycles

Hettich whole blood processing accessories provide life cycles up to five times longer than that of the competition, giving laboratories a significantly greater return on investment.





#### Hettich worldwide

To get help selecting the perfect choice of equipment, sales support or any general inquiry, please contact our Global Customer Service Team. Select your direct contact person by area or search our contact directory on www.hettichlab.com/contact

Europe, UK, Balkans	sales1@hettichlab.com	+ 49 7461 705 1402
Russia, Ukraine, Belarus, Poland	sales1@hettichlab.com	+ 49 7461 705 1402
Africa	sales2@hettichlab.com	+ 49 7461 705 1403
Middle East	sales2@hettichlab.com	+ 49 7461 705 1403
India, Pakistan	sales3@hettichlab.com	+ 49 7461 705 1404
Asia-Pacific	sales3@hettichlab.com	+ 49 7461 705 1404
North- / South America	sales3@hettichlab.com	+ 49 7461 705 1404

#### Hettich service

Hettich is active in over 90 countries worldwide. Our global network of Hettich subsidiaries and authorized service providers ensure that customer challenges are addressed quickly and efficiently with real-time solutions. In addition to our German headquarters we have branch offices in throughout Europe as well as the USA (North America) and Singapore (ASEAN) to offer fast, local support. You can find an overview of an authorized service provider for your country on our website: www.hettichlab.com/contact

You can reach our service directly through the following email address: service@hettichlab.com

### **ROTO SILENTA 630 RS**

### The heart of your blood bank

The premier ROTO SILENTA 630 RS accommodates up to  $12 \times 750$  ml blood bags or  $6 \times 1$  Liter blood bags per run with optimum sedimentation results. The ROTO SILENTA supports multiple workflows with four or six-place rotor options, a powerful motor, intuitive control panel, robust refrigeration system, and a variety of accessories.



#### Features

- RPM: 50 6,000 min<sup>-1</sup> adjustable in increments of 10
- RCF: 50 6,520 adjustable in increments of 1
- Max. Capacity: 12 x 750 ml bags
- Choice of 2 rotors
- Registered Medical Device
- Easy operation with keypad and control knob
- 89 program memories for more individuality
- 9 acceleration + 19 deceleration stages
- Temperature control from -20 to +40 °C with pre-cooling function

### - Fields of application

- Blood banks and transfusion medicine laboratories
- Hospitals
- Pharmaceutical laboratories
- Food analyzing laboratories
- University / Academic research
- Cell culture laboratories
- Environmental laboratories

#### Technical data

#### ROTO SILENTA 630 RS >)

cooled

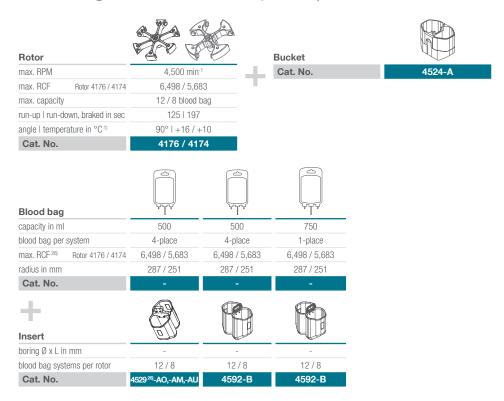
voltage *)	400 V 3 ~ + N	
frequency	50 – 60 Hz	
consumption	9,700 VA	
emission, immunity	EN/IEC 61326-1, class B	
max. capacity	6 x 2,000 ml	
max. RPM	6,000 min <sup>-1</sup>	
max. RCF	6,520	
running time	1 – 999 min: 59 s, ∞ continuous run	
dimensions (WxDxH)	813 x 1,015 x 973 mm	
weight	approx. 355 kg	
temperature control, infinitely variable	from -20 to +40 °C	
Cat. No.	5005	
208 - 220  V + 6  / - 10  % 3- (+N) + PE, with internal transformer	5005-08	
consumption	9,000 VA	
weight	approx. 401 kg	

<sup>\*)</sup> Other voltages on request.

<sup>&</sup>gt;) Other models models on request.

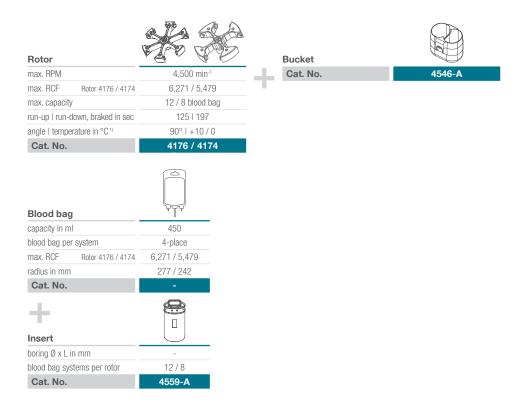


### Swing-out rotor, 6- / 4-place | 4176 / 4174



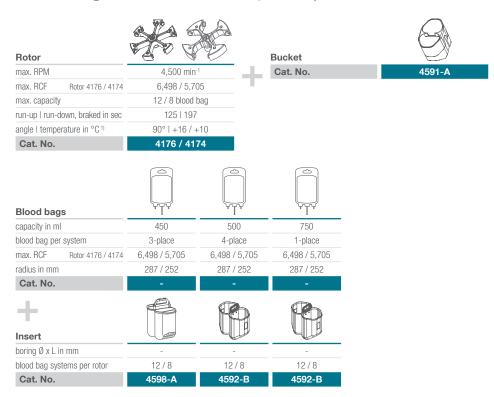


### Swing-out rotor, 6- / 4-place | 4176 / 4174



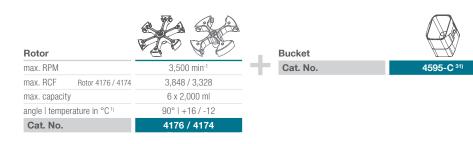
- 1) For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 26) Includes blood bag hanging to prevent erythrocyte accumulation at low speeds. Different hanging heights allow customer-specific adjustments. (4529-AO top, 4529-AM center, 4529-AU bottom). Hanging blood bags may be centrifuged with a maximum RCF of 1,000.

### Swing-out rotor, 6- / 4-place | 4176 / 4174





### Swing-out rotor, 6- / 4-place | 4176 / 4174



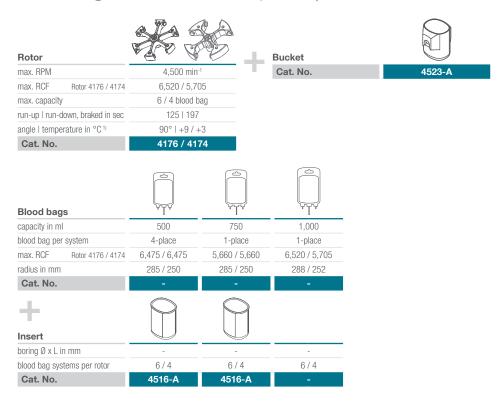


Vessels		
capacity in ml	max. 1,600 35)	2,000
W x D x H in mm	-	150 x 100 x 180
max. RCF Rotor 4176 / 4174	3,821 / 3,328	3,848 / -
radius in mm	279 / 243	281 / -
run-up, in sec	95 / 131	29 / -
run-down, braked in sec	197 / 197	41 / -
Cat. No.	-	0550 <sup>24)</sup>
Insert		
W x D x H in mm	145 x 91 x 146	
vessels per rotor	6 / 4	6 / -
Cat. No.	4596-A	

- For cooled versions: Lowest temperature achievable with precooling and max. speed.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.
   31) Adapter for accommodating sample tubes and blood collection tubes in carrier 4595-C on request.
- Adapter for accommodating sample tubes and blood collection tubes in carrier 4595-C on request.
- 35) Depending on the sample.

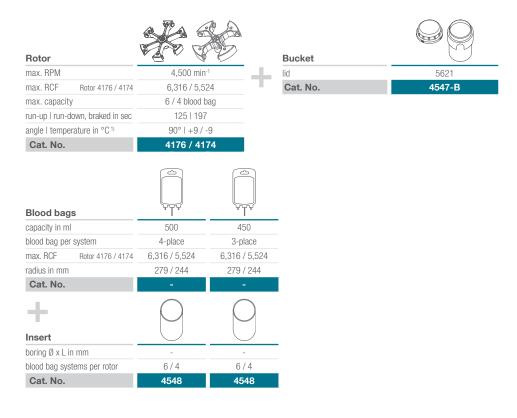


### Swing-out rotor, 6- / 4-place | 4176 / 4174





### Swing-out rotor, 6- / 4-place | 4176 / 4174





<sup>1)</sup> For cooled versions: Lowest temperature achievable with precooling and max. speed.

### **ROTIXA 500 RS**

### Small footprint – high volumes

Its durable components make the ROTIXA 500 RS a reliable unit with a long service life. High sample capacity and maximum RCF of 18,038 make it suitable for  $4\times450-1,000$  ml blood bags. Specially designed buckets keep blood bags upright during centrifugation for improved separation of blood components.

This unit includes refigeration with a temperature range from -20 °C to +40 °C.



#### Features

- RPM: 50 11,500 min<sup>-1</sup> adjustable in increments of 10
- RCF: 50 18,038 adjustable in increments of 1
- max. capacity: 4 x 1,000 ml
- Medical Device according to directive 93/42/EC
- Easy operation with keypad and control knob
- 89 program memories for more individuality
- 19 individual acceleration and deceleration stages

### Fields of application

- Blood centers
- Hospitals
- Hematology laboratories
- Veterinary laboratories
- Clinical laboratories
- Environmental analyzing laboratories
- University / Academic research
- Automobile industry
- Chemical industry
- Dairy industry

### Technical data

#### ROTIXA 500 RS >)

cooled

approx. 225 kg

voltage *)	230 - 240 V 1 ~	220 V 1 ~
frequency	50 Hz	60 Hz
consumption	3,800	0 VA
emission, immunity	EN/IEC 6132	26-1, class B
max. capacity	4 x 1,0	000 ml
max. RPM	11,500	) min <sup>-1</sup>
max. RCF	18,038	
running time	1 — 999 min: 59 s, ∞ continuous run	
dimensions (WxDxH)	650 x 814 x 973 mm	
weight	approx. 219 kg	
noise level	58 dB (A) with rotor 4282	
temperature control, infinitely variable	from -20 to +40 °C	
Cat. No.	4950	
208 - 220  V + 6  / -10 % 3- (+N) + PE, with internal transformator	4950	0-08

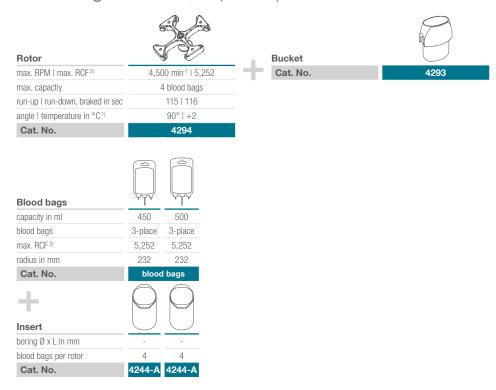
<sup>\*)</sup> Other voltages on request.

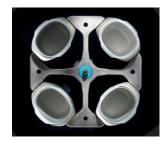
weight

<sup>&</sup>gt;) Other models models on request.

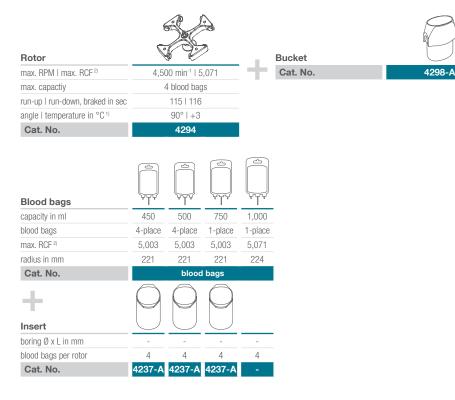


### - Swing-out rotor, 4-place | 4294





### - Swing-out rotor, 4-place | 4294





<sup>1)</sup> Lowest attainable temperature in precooled refrigerated centrifuges at max. speed. Lower temperatures can be attained by reducing the speed.

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.

## **ROTANTA 460 RC | 460 RF**

### The capability of a benchtop without the footprint

This modified version of the standard ROTANTA 460 allows for space saving storage below the bench and frees valuable working space from benchtop units. Both units include refrigeration with a temperature range from -20 °C to +40 °C with pre-cooling function.



ROTANTA 460 RC

ROTANTA 460 RF

### Features

- RPM: 50 15,000 min<sup>-1</sup> adjustable in increments of 10
- RCF: 50 24,400 adjustable in increments of 1
- Available in two versions as a floor-standing unit or under-bench model
- Max. Capacity: 4 x 1,000 ml
- Specially designed buckets for 4 x 450 ml blood bags
- Medical Device according to directive 93/42/EC
- 28 individual acceleration and deceleration stages
- Easy operation with keypad and control knob
- 98 program memories for more individuality

### - Fields of application

- Small blood centers
- Hospitals
- Hematological laboratories
- Veterinary laboratories
- Pharmaceutical laboratories
- Food analayzing laboratories
- University / Academic research
- Oil laboratories
- Chemical industry
- Forensic laboratories

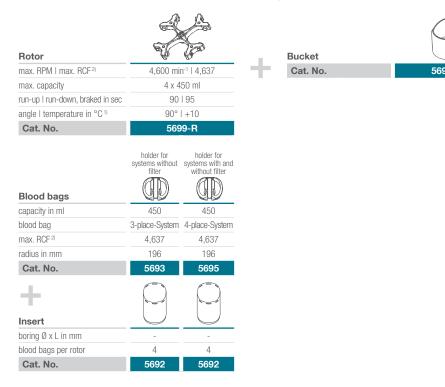
#### Technical data

— recrimear data	ROTANTA 460 RC	ROTANTA 460 RF
	refrigerated	refrigerated
voltage *)	200 – 240 V 1 ~	200 – 240 V 1 ~
frequency	50 Hz	50 Hz
consumption	1,800 VA	2,000 VA
emission, immunity	EN/IEC 61326-1, class B	EN/IEC 61326-1, class B
max. capacity	4 x 1,000 ml	4 x 1,000 ml
max. RPM	15,000 min <sup>-1</sup>	15,000 min <sup>-1</sup>
max. RCF	24,400	24,400
running time	1 – 99 h: 59 min: 59 s, ∞ continuous run, short cycle mode	1 – 99 h: 59 min: 59 s, ∞ continuous run short cycle mode
dimensions (WxDxH)	554 x 697 x 683 mm	554x697x961 mm
weight	approx. 140 kg	approx. 164 kg
noise level	60 dB (A) with rotor 4474	60 dB (A) with rotor 4474
temperature control, infinitely variable	from -20 to +40 °C	from -20 to +40 °C
Cat. No.	5670	5675
100 – 127 V 1 ~ / 60 Hz*)	-	5675-01
emission, immunity	-	FCC class B
weight	-	approx. 174 kg

<sup>\*)</sup> Other voltages on request.

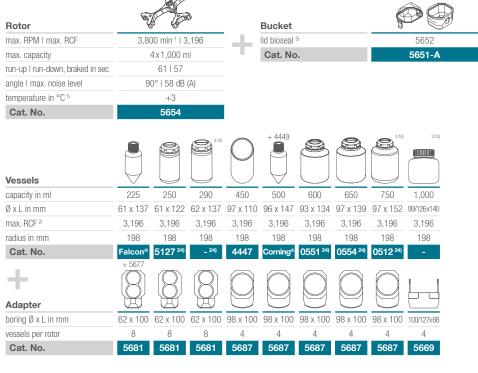


### Swing-out rotor, 4-place | 5699-R





### - Swing-out rotor, 4-place | 5654



- For cooled versions: Lowest temperature
- achievable with precooling and 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.
- 3.10) When using this tubes, bucket 5651-A cannot be closed with lid 5652.
- Tested by TÜV in conformity with DIN EN 61010, section 2 020.
- 24) At temperatures of over +40 °C and / or when not filled to capacity, bottles may warp during centrifugation.

### **ROTOLAVIT II**

### User friendly serology solutions

The next generation of the proven ROTOLAVIT cell washing system facilitates routine tasks in transfusion laboratories. It was developed for cross-matching, antibody search and differentiation, as well as cell washing in TB tests. Its modern touch screen enables the simple and rapid input of up to 24 different programs. The centrifuge has a small footprint and delivers reliable results without the need for costly consumables.



#### Features

- max. RPM: 3,500 min -1
- max. RCF: 1,438
- max. Capacity: 24 x 5 ml
- automatic cell washing system for serological testing
- choice of 2 rotors 12-place or 24-place
- IVD-conform according to directive 98/79/EC
- maximum noise level of ≤ 49 dB (A)
- easy operation with touch screen
- 24 program memories for more individuality7 pre-installed application programs

### - Fields of application

- Blood centers
- Hospitals
- Hematological laboratories
- Clinical laboratories

### Technical data

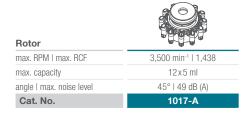
#### **ROTOLAVIT II**

voltage	100 – 240 V 1 ~	
frequency	50 – 60 Hz	
consumption	144 VA	
emission, immunity	EN/IEC 61326-3-2 / FCC CFR47 part 15, ed 2015-04-21 (e-CFR) class B	
max. capacity	24 standard tubes (10 x 75 mm or 12 x 75 mm)	
max. RPM	3,500 min <sup>-1</sup>	
max. RCF	1,438	
radius (both rotors)	105 mm	
dimensions (HxWxD)	330 x 480 x 280 mm	
weight	approx. 24.5 kg	
max. noise level	≤ 49 dB (A)	
Cat. No.	1008-00	
11 – 30 V 1 ~ / DC *)	1008-03	
consumption	144 VA	

The ROTOLAVIT II is not available in all countries.



## - Swing-out rotor, 12-place | 1017-A

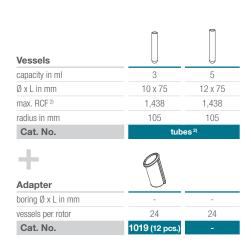


Vessels		
capacity in ml	3	5
Ø x L in mm	10 x 75	12 x 75
max. RCF 2)	1,438	1,438
radius in mm	105	105
Cat. No.	tub	es <sup>2)</sup>
Adapter	9	
boring Ø x L in mm	-	-
vessels per rotor	12	12



### - Swing-out rotor, 24-place | 1018-A







<sup>2)</sup> 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.

# HETTINFO II DOCUMENTATION SYSTEM

 Transparency and traceability in blood banks

HettInfo II documents important work steps before and during centrifugation – this ensures transparency and traceable processes. The documentation system is operated via a touch display, which guides the user step by step through the centrifugation and records all significant process data.

All documented data points are temporarily stored locally and can be exported directly after the centrifugation or at a defined time as a CSV file. The data can be stored on the network or exported to a USB stick. This makes HettInfo II system independent and facilitates further processing into another software system.



 Good reasons to choose HettInfo II:



#### **Touch display**

HettInfo II can be operated simply and easily via the touch display - even with laboratory gloves.



#### **Step-by-step instructions**

With the step-by-step instructions, the enduser always knows exactly what to do next. In the event of incorrect operation or errors, a visual and audible message is issued immediately.



#### **Automatic data export**

Data obtained can be exported after each run or in specific designated times.



#### **Universal data format**

The exported CSV file is easy to process and work independently for greater compatibility with an existing system.

#### PRODUCT VIDEOS

Would you like to learn more about this product? Scan the QR Code to visit our YouTube channel:

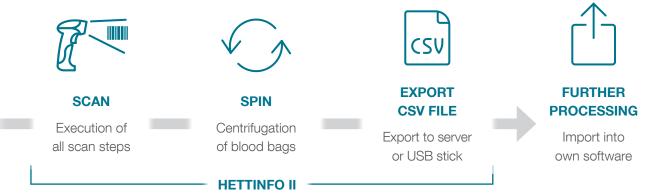
www.youtube.com/hettichlabtechnology





### **DOCUMENTATION PROCESS**

The HettInfo II process at a glance



### **TECHNICAL FEATURES**

 All technical features of HettInfo II

Compatibility	ROTO SILENTA 630 RS, ROTIXA 500 RS	
4.3" touch display	Process status display, error messages, settings	
User	Any number of users possible	
Data logging Scan Module	User ID, blood bag ID, program number	
Run data logging	Centrifuge names, centrifuge data, date, start and end time, temperature, radius, acceleration time, braking time, total running time, RPM, RCF, integral RCF, cycle time, brake deactivation speed, end result	
File format	CSV	
Ports	LAN, USB	
Logbook	Documentation of error messages. Export as text file on USB stick possible.	



### **MODULES**

#### HettInfo II

With HettInfo II you can record running data of your ROTO SILENTA 630 RS or ROTIXA 500 RS centrifuge. To record a complete centrifugation process, we recommend HettInfo II plus Scan Module.



Articles	Includes	Cat. No.
HettInfo II – ROTO SILENTA 630 RS	Firmware, touch display	0955
HettInfo II - ROTIXA 500 RS	Firmware, touch display	0956

#### Scan Module

The barcode scanner included in the Scan Module records all data reliably. The ergonomic holder ensures easy handling and offers secure protection when not in use.

Barcode scanners from the HettInfo I series are compatible with HettInfo II and can still be used.



Articles	Includes	Cat. No.
Scan Module - ROTO SILENTA 630 RS	Barcode scanner, bracket, cable clamps	0959
Scan Module - ROTIXA 500 RS	Barcode scanner, bracket, cable clamps	0960

### Add-on Kit

Articles	Includes	Cat. No.
Add-on Kit for model 5005	Firmware, touch display, front panel	E4378
Add-on Kit for model 5005-80	Firmware, touch display, front panel	E4393
Add-on Kit for model 5005-90	Firmware, touch display, front panel	E4416
Add-on Kit for model 4950	Firmware, touch display, front panel	E4409

<sup>\*</sup> Older models on request.

With the Add-on Kit, ROTO SILENTA 630 RS models from model year 01/2008\* can be upgraded to HettInfo II. To capture a complete centrifugation process, we recommend the Add-on Kit plus Scan Module.







## **DID YOU KNOW ...**

#### our download center?

The download center on our website allows you to access the most up to date documents including catalogs, brochures, data sheets and certificates.

Try it now:

www.hettichlab.com/downloadcenter



Germany

#### our centrifuge packages?

No more searching for the right combination of accessories. Our packages include centrifuge, rotor, buckets and adapters - suitable for your specific application.

Find more information on our website:

www.hettichlab.com



www.hettichlab.com