

A close-up photograph of laboratory equipment, specifically a centrifuge rotor and several test tubes. The rotor is black with a white cap and has the number '1' and 'ortoalresa' printed on it. The test tubes are silver and have 'ortoalresa' and 'Ns 220759/05' printed on them. The background is blurred, showing more of the equipment.

orto alresa

About centrifugation

General applications | Series DIGTOR 22



DIGTOR 22



Benchtop centrifuge with large capacity and high performance. With a wide range of accessories to process tubes from 750 ml. to 0,2 ml. in more than 12 rotors, both angle fixed and swing out. It has more than 50 different sets of adaptors, giving it great versatility. This equipment is the culmination of the merger of high capacity and high speed equipment, resulting in a routine use centrifuge with specific characteristics of superior level models. Its colour TFT touch screen offers performance that permits, in addition to controlling the equipment by operational parameters, the possibility of exporting data for analysis and timer programmed operation.

The autonomy provided by this equipment enables the user to optimise working time in the lab, by automation of cycles and modes of operation. These features also ensure process traceability and that no parameter is uncontrolled.

Features

- TFT color touch screen, visible from more than 3 m.:
- Shows RPM and RCF, time, acceleration/deceleration values (PCBS) and unbalance location system (ULS).
- Speed programming in 10 RPM/10 xg steps.
- Real RCF values on screen based on accessories configuration.
- Count up/down from “0” or at “set RPM/RCF” for reproducible tests.
- Timer from 1 sec. to 99 hours programmable in 1 sec. steps and hold position.
- PCBS: Progressive controlled acceleration and braking system up to 175 selectable ramps that prevents sample homogenization after separation.
- ULS: Unbalance location system indicating on the screen the number of the bucket which produces the unbalance switch off.
- Start delay: To program the time at which the cycle is to begin.
- Linked program: Permits the linking of up to 8 consecutive programmes without the need of user intervention.
- 100 programmable memories, with protection under password.
- Several acoustic and visual messages showing the situation of the device to the user.

Easy to use

- Microprocessor controlled. Connectivity.
- Induction motor maintenance free (brushless).
- Rotors and adapters list in memory.
- Noise level: below 60 dB.
- Start, stop, open lid and short spin with adjustable speed buttons.
- Possibility to block or modify the speed during the cycle.
- Automatic lid opening, programmable.
- Last values remain in memory.
- Automatic rotor recognition. Over-speed protection.



Max. Capacity
4 x 750 ml



Max. Speed
21.948 xg / 14.300 RPM



Screen Type
TFT



Version
Ventilated



EU Directives: 2011/65/EU, 2012/19/EU, 2014/30/EU, 2014/35/EU, 98/79/EC.
Standards: EN 61010-1, EN 61010-2-101, EN 61010-2-020, EN 61326-2-6, EN 61326-1.

Safety

- Lid provided with security systems:
 - Automatic lid lock system, motorized with double lock.
 - Emergency lid-lock release.
 - Locking and protection against opening along the run.
 - Lid dropping protection.
 - Port in the lid for calibration and operation checking.
- Unbalance detection and switch off.
- Protection safety ring between the centrifugation chamber and the housing.
- Chamber of centrifugation in stainless steel (easy cleaning).
- Rotors can be removed with the lid closed. Hermetic lids.
- Rotors and adapters autoclavable, easy to install by the user.
- Forced ventilation to reduce temperature increasing.
- Automatic disconnection for energy saving up to 8 h., with deactivation option.

Versions

	Dimensions (mm) (w x d x h)				Net Weight (Kg)	Voltage (V)	Frequency (Hz)	Consumption (W)
CE 228	530	640	400		71	220-230	50-60	1020
CE 229	530	640	400		71	110-120	50-60	1020





DIGTOR 22 R



The largest of our refrigerated benchtop centrifuges that offers the maximum performance. With an ergonomic design that enables easy loading of the rotor, as well as traceability of the position of the samples for easy identification of the charge balance. It has a wide range of accessories that offer capacity for tubes of 750 ml., microplates, microtubes and a great number of positions for the more common use tubes of 15 ml. conical, 50 ml. conical, 15 ml., 10 ml., and 5 ml.

Its colour TFT touch screen offers performance that enables, in addition to controlling the equipment by operational parameters, the possibility of exporting data for analysis and timer programmed operation. The autonomy that this equipment gives to the user reduces the work time, by automating the cycles and work modes, ensuring the process traceability. It has a refrigeration system that enables it to maintain the minimum temperature of the chamber below 4°C regardless of the type of rotor and the speed selected.

Features

- TFT color touch screen, visible from more than 3 m.:
- Shows RPM and RCF, time, temperature, acceleration/deceleration values (PCBS) and unbalance location system (ULS).
 - Speed programming in 10 RPM/10 xg steps.
 - Real RCF values on screen based on accessories configuration.
 - Count up/down from “0” or at “set RPM/RCF” for reproducible tests.
 - Timer from 1 sec to 99 hours programmable in 1 sec. steps and hold position.
 - PCBS: Progressive controlled acceleration and braking system up to 175 selectable ramps that prevents sample homogenization after separation.
 - ULS: Unbalance location system indicating on the screen the number of the bucket which produces the unbalance switch off.
 - Start delay: To program the time at which the cycle is to begin.
 - Linked program: Permits the linking of up to 8 consecutive programmes without the need of user intervention.
 - 100 programmable memories, with protection under password.
 - Several acoustic and visual messages showing the situation of the device to the user.

Easy to use

- Microprocessor controlled. Connectivity.
- Induction motor maintenance free (brushless).
- Rotors and adapters list in memory.
- Noise level: below 60 dB.
- Start, stop, open lid and short spin with adjustable speed buttons.
- Possibility to block or modify the speed during the cycle.
- Last values remain in memory.
- Automatic rotor recognition. Over-speed protection.



Max. Capacity
4 x 750 ml

Max. Speed
21.948 xg / 14.300 RPM

Screen Type
TFT

Version
✓ Refrigerated

EU Directives: 2011/65/EU, 2012/19/EU, 2014/30/EU, 2014/35/EU, 98/79/EC.
Regulation n°: (EC) 1005/2009, (EU) 517/2014.
Standards: EN 61010-1, EN 61010-2-101, EN 61010-2-020, EN 61326-2-6, EN 61326-1.

Safety

- Lid provided with security systems:
 - Automatic lid lock system, motorized with double lock.
 - Emergency lid-lock release.
 - Locking and protection against opening along the run.
 - Lid dropping protection.
 - Port in the lid for calibration and operation checking.
- Unbalance detection and switch off.
- Protection safety ring between the centrifugation chamber and the housing.
- Chamber of centrifugation in stainless steel (easy cleaning).
- Rotors can be removed with the lid closed. Hermetic lids.
- Rotors and adapters autoclavable, easy to install by the user.
- Automatic disconnection for energy saving up to 8 h.

Refrigeration

- Maintains the refrigeration after the centrifugation process.
- Precooling program with rotor spinning and selectable temperature.
- Guarantees 4 °C at maximum RPM.
- Temperature range from -20°C (-4°F) to 40°C (104°F) in 1°C/1°F steps. Programmable in °C o °F.
- Temperature sensor inside the chamber.
- Gas R 449A HFO (CFC free).

Versions






	Dimensions (mm) (w x d x h)			Net Weight (Kg)	Voltage (V)	Frequency (Hz)	Consumption (W)
CE 234	720	780	400	113	220-230	50	1450
CE 235	720	780	400	113	110-120	60	1450

Accessories centrifuge Digtor 22
- Rolling table (pag. 8)
- Rotors & adapters

MICROTITER PLATES											
		 RT 279 (6)	 RT 278	 RT 299	 RT 277 (1)(4)	 RT 284 (4)	 RT 297 (4)(5)	 RT 283 (1)(2)(4)(5)			
ROTOR		SWING OUT	SWING OUT	SWING OUT	SWING OUT	SWING OUT	SWING OUT	SWING OUT			
Max. capacity		104 x 5 ml.	4 x 250 ml.	6 x 250 ml.	4 x 750 ml.	12/8/4 microtiter	10/6/2/2 microtiter	4 blood bags			
RPM Max.		3.800	4.200	2.500	3.700	3.700	4.500	3.700			
Radius (mm)		160	202	212	204	182 (3)	166	204			
RCF Max. (xg)		2.583	3.984	1.481	3.122	2.786	3.758	3.122			
Min. temp. at max. speed (°C)		0	1	-5	0	-4	4	0			
SAMPLE VOLUME	Dim (mm) approx.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	ADAPTERS Tubes Ref.	
750 ml.	ø96 x 130	- -	- -	- -	4 RE 434	- -	- -	- -	4 RE 434	4 RE 434	
500 ml.	ø90 x 120	- -	- -	- -	4 RE 310	- -	- -	- -	4 RE 310	4 RE 310	
250 ml.	ø60 x 135	- -	4 RE 449	6 RE 530	4 RE 330	- -	- -	- -	4 RE 330	4 RE 330	
100 ml.	ø48 x 100	- -	4 RE 327	6 RE 558	4 RE 409	- -	- -	- -	4 RE 409	4 RE 409	
85 ml. (hs) / 80 ml. (hs)	ø38 x 112	- -	4 RE 498	6 RE 559	12 RE 500	- -	- -	- -	12 RE 500	12 RE 500	
80 ml.	ø44 x 100	- -	4 RE 422	6 RE 560	8 RE 352	- -	- -	- -	8 RE 352	8 RE 352	
50 ml.	ø34 x 100	- -	4 RE 334	6 RE 561	16 RE 317	- -	- -	- -	16 RE 317	16 RE 317	
50 ml. conical	ø29 x 117	- -	4 RE 340	6 RE562	20 RE 472	- -	- -	- -	20 RE 472	20 RE 472	
30 ml. / 30 ml. (hs)	ø25 x 98	- -	12 RE 312	18 RE 563	24 RE 322	- -	- -	- -	24 RE 322	24 RE 322	
25 ml. conical	ø29 x 83	- -	4 RE 612	6 RE 616	20 RE 614	- -	- -	- -	20 RE 614	20 RE 614	
15 ml.	ø16 x 100	- -	28 RE 376	42 RE 564	72 RE 348	- -	- -	- -	72 RE 348	72 RE 348	
15 ml. conical	ø17 x 122	- -	20 RE 321	30 RE 565	52 RE 347	- -	- -	- -	52 RE 347	52 RE 347	
15 ml. blood sample	ø16 x 132	- -	28 RE 376	42 RE 564	32 RE 441	- -	- -	- -	32 RE 441	32 RE 441	
10 ml.	ø13 x 100	104 RE 309	40 RE 343	60 RE 566	100 RE 354	- -	- -	- -	100 RE 354	100 RE 354	
10 ml. blood sample	ø16 x 107	- -	28 RE 376	42 RE 564	72 RE 348	- -	- -	- -	72 RE 348	72 RE 348	
7/10 ml. blood sample	ø13 x 107	104 RE 309	28 RE 324	42 RE 567	72 RE 349	- -	- -	- -	72 RE 349	72 RE 349	
5 ml.	ø13 x 75	104 -	40 RE 343	60 RE 566	100 RE 354	- -	- -	- -	100 RE 354	100 RE 354	
5 ml. blood sample	ø13 x 82	104 -	28 RE 324	42 RE 567	72 RE 349	- -	- -	- -	72 RE 349	72 RE 349	
10 x 100 mm	ø10 x 100	- -	52 RE 346	78 RE 568	144 RE 315	- -	- -	- -	144 RE 315	144 RE 315	
Microtubes 1,5-2 ml.	ø11x42	- -	24 RE 440	36 RE 569	72 RE 426	144 RE 460	72 RE 401	72 RE 426	72 RE 426	72 RE 426	
Microtubes 0,5-0,6 ml.	ø8x30	- -	24 RE 523	36 RE 570	72 RE 466	144 RE 584	72 RE 580	72 RE 466	72 RE 466	72 RE 466	
Microtubes 0,2-0,4 ml.	ø6x45	- -	24 RE 458	36 RE 571	72 RE 524	144 RE 585	72 RE 581	72 RE 524	72 RE 524	72 RE 524	
Microtiter plates	128x86x15/21/45	- -	- -	- -	12/8/4 RE 307	12/8/4 -	10/6/2 -	12/8/4 RE 307	12/8/4 RE 307	12/8/4 RE 307	
Microtiter plates (h:80 mm)	128x86x80	- -	- -	- -	- -	- -	2 -	- -	- -	- -	

(1) This rotor can be supplied with hermetic lids (RE 356)
(2) This rotor can fit adapters for blood bags (RE 308)
(3) Medium radius on bucket.

(4) Allows different configurations depending on the microplates height.
(5) Only available for refrigerated models.
(6) Available **RT 301** for 104 x 7/10 ml. bs and 10 ml.

		HIGH SPEED									
		 RT 280	 RT 281	 RT 282	 RT 287	 RT 292					
ROTOR		ANGLE FIXED 45 °	ANGLE FIXED 45 °	ANGLE FIXED 30 °	ANGLE FIXED 45 °	ANGLE FIXED 30 °					
Max. capacity		8 x 50 ml.	4 x 100 ml.	4 x 250 ml.	30 x 1,5-2 ml.	6 x 85 ml					
RPM Max.		6.000	5.600	4.700	14.300	9.000					
Radius (mm)		149	138	153	96	112					
RCF Max. (xg)		5.997	4.838	3.779	21.948	10.142					
Min. temp. at max. speed (°C)		0	-1	-4	-1	1					
SAMPLE VOLUME	Dim (mm) approx.	ADAPTERS Tubes Ref.		ADAPTERS Tubes Ref.		ADAPTERS Tubes Ref.		ADAPTERS Tubes Ref.		ADAPTERS Tubes Ref.	
750 ml.	ø96 x 130	-	-	-	-	-	-	-	-	-	
500 ml.	ø90 x 120	-	-	-	-	-	-	-	-	-	
250 ml.	ø60 x 135	-	-	-	-	4	RE 449	-	-	-	-
100 ml.	ø48 x 100	-	-	4	RE 446	4	RE 327	-	-	-	-
85 ml. (hs) / 80 ml. (hs)	ø38 x 112	-	-	4	RE 380	4	RE 498	-	-	6	-
80 ml.	ø44 x 100	-	-	4	RE 338	4	RE 422	-	-	-	-
50 ml.	ø34 x 100	8	RE 448	4	RE 335	4	RE 334	-	-	6	RE 490
50 ml. conical	ø29 x 117	8	RE 375	4	RE 341	4	RE 340	-	-	6	RE 483
30 ml. / 30 ml. (hs)	ø25 x 98	8	RE 370	4	RE 332	12	RE 312	-	-	6	RE 493
25 ml. conical	ø 29 x 83	8	RE 599	4	RE 597	4	RE 612	-	-	6	RE 600
15 ml.	ø16 x 100	8	RE 369	16	RE 316	28	RE 376	-	-	18	RE 485
15 ml. conical	ø17 x 122	8	RE 369	4	RE 339	20	RE 321	-	-	6	RE 484
15 ml. blood sample	ø16 x 132	8	RE 369	-	-	28	RE 376	-	-	-	-
10 ml.	ø13 x 100	24	RE 366	20	RE 320	40	RE 343	-	-	30	RE 497
10 ml. blood sample	ø16 x 107	8	RE 369	16	RE 316	28	RE 376	-	-	18	RE 485
7/10 ml. blood sample	ø13 x 107	8	RE 373	20	RE 320	28	RE 324	-	-	18	RE 503
5 ml.	ø13 x 75	24	RE 366	20	RE 320	40	RE 343	-	-	30	RE 501
5 ml. blood sample	ø13 x 82	8	RE 373	20	RE 320	28	RE 324	-	-	18	RE 492
10 x 100 mm	ø10 x 100	24	RE 367	36	RE 326	52	RE 346	-	-	-	-
Microtubes 1,5-2 ml.	ø11x42	24	RE 465	20	RE 408	24	RE 440	30	-	24	RE 494
Microtubes 0,5-0,6 ml.	ø8x30	24	RE 535	20	RE 519	24	RE 523	30	RE 428	24	RE 495
Microtubes 0,2-0,4 ml.	ø6x45	24	RE 526	20	RE 473	24	RE 458	30	RE 427	24	RE 496
Microtiter plates	128x86x15/21/45	-	-	-	-	-	-	-	-	-	-
Microtiter plates (h:80 mm)	128x86x80	-	-	-	-	-	-	-	-	-	-

ROLLING TABLE

Centrifuges accessories

With the aim of offering an alternative to those laboratories that need to increase their equipment, but do not have enough space, we have designed these rolling tables for our centrifuges.

This accessory allows the equipment to be positioned and moved easily thanks to its four 360° rotating wheels. Once the rolling table is located, and before starting to work with the centrifuge, the wheels can be fixed with the brake system that will prevent involuntary displacement during the centrifugation process. The robust design supports the weight of the equipment and prevents vibration transfer.

We offer two types of tables, one with height to locate the equipment at the same height as if they were on the laboratory table and another, that enables you to place your centrifuge under the table of your laboratory, saving even more space.

A solution for each type of need.

References

	Dimensions (mm) (w x d x h)			Net weight (kg)	Centrifuge model
CP 007	560	590	580	65	Biocen 22 R, Bioprocen 22 R, Digicen 22 R, Consul 22 and Digtor 22
CP 008	440	500	690	65	Unicen 21 and Digicen 22
CP 009	750	730	350	70	Consul 22 R, Digtor 22 R and Dilitcen 22 R - to place under table
CP 010	750	730	580	90	Consul 22 R, Digtor 22 R and Dilitcen 22 R





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About centrifugation

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