

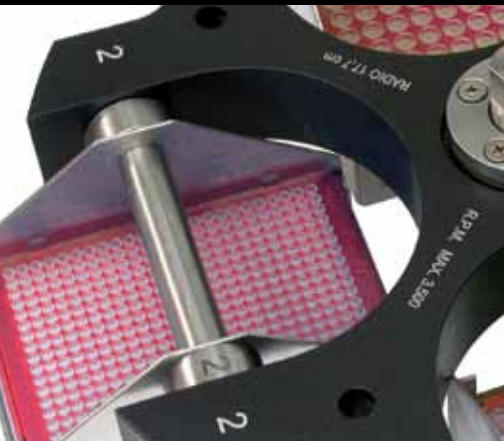
# orto alresa

Centrifuges and laboratory products

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General applications: Centrifuges: Floor standing

## Series MAGNUS 21

# MAGNUS 21



High capacity on a underfloor centrifuge which offer to their users several advantages, up to now only available on devices dedicated to research.

The **TFT touch screen** simplify the parameter selection; main values appear only in one screen as time, RPM, RCF, acceleration and braking.

The operator menu allows other values adjustment as open lid once the rotor stops, locking RPM/RCF along the run, selection of time from 0 or at set RPM/RCF

Along centrifugation it showed on screen a graphic indicating its status as well as the stage of centrifugation, time to end of process, with graphi and values easily seeable from long distances, increasing the operator autonomy.

The **Magnus 21** can spin up to 4 x 750 ml, 4 blood bags, 72 tubes of 15 ml, 20 tubes of 50 ml conical and 52 tubes of 15 ml conical, rotor for microplates, microtubes, as well as a wide set of adapters for each one.

## User friendliness

- TFT touch screen easy to read and values selection (RPM on steps of 100, RCF on steps of 10xg), time, temperature (1°C steps), acceleration/deceleration (1 second steps).
- The screen which indicates the status can be seen from more than 3 m.
- Rotor and adapters list on memory.
- Real values on screen of RCF based on accessories configuration.
- Timer count up/down, from 0 or at "set RPM/RCF" for test reproducibility.
- Short spin key with speed adjustable.
- Progressive acceleration and braking selectable by operator up to 175 ramps.
- Program data protection through password selectable.
- Automatic open lid (only non-refrigerated).
- Automatic rotor recognition.
- Automatic lid latch lock.
- Microprocessor controlled.
- Option: free or locked adjustment of RPM/RCF along the run.

## Features

- Induction motor maintenance free.
- High capacity: Max. Volume 4 x 750 ml.
- High speed, up to 20.804 xg/14.300 RPM.
- Quiet: noise level < 60 dB.
- 16 memories for programs.

## Safety

- Lid locking and holding.
- Imbalance switch off.
- Lid dropping protection.
- Manual overriding.
- Chamber of centrifugation in stainless steel.
- Viewing and calibration prot in the lid.
- Several messages keep the operator informed about the device situation.
- Guard ring between the chamber of centrifugation and the housing.
- Forced ventilation which reduces the temperature increase (only non-refrigerated).

**EU Directives:** 98/79/EC, 2006/95/EC, 2004/108/EC, 2011/65/EU, 2012/19/EU

**Standards:** EN 61010-1, EN 61010-2-020, EN 61326-1.

## Versions

Code	Dimensions (mm)(w x d x h)			Net weight (Kg)	Voltage (V)	Frecuency (Hz)	Consumption (W)
CE 128	540	650	930	113	220-240	50-60	980
CE 130	540	650	930	113	110-120	50-60	980

# MAGNUS 21R



Centrifuges: Floor standing: Series Magnus 21

High capacity on a underfloor centrifuge which offer to their users several advantages, up to now only available on devices dedicated to research. The **TFT touch screen** simplifies the parameter selection; main values appear only in one screen as time, RPM, RCF, acceleration and braking.

The operator menu allows other values adjustment as open lid once the rotor stops, locking RPM/RCF along the run, selection of time from 0 or at set RPM/RCF

Along centrifugation it showed on screen a graphic indicating its status as well as the stage of centrifugation, time to end of process.

The devices included on series **Magnus 21R** are highly functionals, they can spin up to 4 x 750 ml, 4 blood bags, 72 tubes of 15 ml, 20 tubes of 50 ml conical and 52 tubes of 15 ml conical, rotor for microplates, microtubes, as well as a wide set of adapters for each one.

**Devoted to centrifugation.**

## User friendliness

- TFT touch screen easy to read and values selection (RPM on steps of 100, RCF on steps of 10xg), time, temperature (1°C steps), acceleration/deceleration (1 second steps).
- The screen which indicates the status can be seen from more than 3 m.
- Rotor and adapters list on memory.
- Real values on screen of RCF based on accessories configuration.
- Timer count up/down, from 0 or at "set RPM/RCF" for test reproducibility.
- Short spin key with speed adjustable.
- Progressive acceleration and braking selectable by operator up to 175 ramps.
- Program data protection through password selectable.
- Automatic rotor recognition.
- Automatic lid latch lock.
- Microprocessor controlled.
- Option: free or locked adjustment of RPM/RCF along the run.

## Features

- Induction motor maintenance free
- High capacity: Max. Volume 4 x 750 ml.
- High Speed, up to 20.804 xg/14.300 RPM.
- Quiet: noise level < 60 dB.
- 15 memories + pre-cooling program.

## Safety

- Lid locking and holding.
- Imbalance switch off.
- Lid dropping protection.
- Manual overriding.
- Chamber of centrifugation in stainless steel.
- Viewing and calibration prot in the lid.
- Several messages keep the operator informed about the device situation.
- Guard ring between the chamber of centrifugation and the housing.

## Cooling

- Precooling program with rotor spinning and temperature selectable by operator.
- 4°C at least at max speed with any rotor.
- Range of temperature -20°C (-4 °F) to 40°C (104 °F)
- Scale Celsius or Fahrenheit.
- Temperature sensor inside the chamber.
- Gas R 404A HFC.

**EU Directives:** 98/79/EC, 2006/95/EC, 2004/108/EC, 2011/65/EU, 2012/19/EU

**Regulation:** 1005/2009 & 842/2006

**Standards:** EN 61010-1, EN 61010-2-020, EN 61326-1.

## Versions

Code	Dimensions (mm)(w x d x h)			Net weight (Kg)	Voltage (V)	Frecuency (Hz)	Consumption (W)	Z max Advisable(Hz)
CE 129	540	650	930	145	220-240	50-60	1500	<  0.446
CE 131	540	650	930	145	110-120	50-60	1500	<  0.446

## Accessories

### Centrifuges Series Magnus 21

													
ROTOR		SWING OUT	SWING OUT	SWING OUT	ANGLE FIXED 30 °	ANGLE FIXED 45 °	ANGLE FIXED 45 °	ANGLE FIXED 30 °					
Max. capacity		104 x 5 ml.	4 x 250 ml.	4 x 750 ml.	6 x 85 ml	8 x 50 ml.	4 x 100 ml.	4 x 250 ml.					
RPM		3.800	4.200	3.700	9.000	6.000	5.600	4.700					
Radius(mm)		185	202	204	112	149	138	153					
RCF Max. (xg)		2.987	3.984	3.122	10.142	5.997	4.838	3.779					
Min. temp. max speed (°C)		0	1	0	1	0	-1	-4					
SAMPLE VOLUME	Dim (mm) approx.	ADAPTERS		ADAPTERS		ADAPTERS		ADAPTERS		ADAPTERS		ADAPTERS	
		Tubes	Ref.	Tubes	Ref.	Tubes	Ref.	Tubes	Ref.	Tubes	Ref.	Tubes	Ref.
750 ml.	ø96 x 130	-	-	-	-	4	RE 434	-	-	-	-	-	-
500 ml.	ø90 x 120	-	-	-	-	4	RE 310	-	-	-	-	-	-
250 ml.	ø61 x 129	-	-	4	RE 449	4	RE 330	-	-	-	-	4	RE 449
100 ml.	ø48 x 95	-	-	4	RE 327	4	RE 409	-	-	-	-	4	RE 327
85 ml.	ø38 x 112	-	-	4	RE 498	12	RE 500	6	-	-	-	4	RE 502
50 ml.	ø35 x 100	-	-	4	RE 334	16	RE 317	6	RE 490	8	RE 448	4	RE 335
50 ml. conical	ø29 x 117	-	-	4	RE 340	20	RE 472	6	RE 483	8	RE 375	4	RE 341
30 ml.	ø25 x 96	-	-	12	RE 312	24	RE 322	6	RE 493	8	RE 370	4	RE 332
15 ml.	ø16 x 100	-	-	28	RE 376	72	RE 348	18	RE 485	8	RE 369	16	RE 316
15 ml. conical	ø17 x 122	-	-	20	RE 321	52	RE 347	6	RE 484	8	RE 369	4	RE 339
15 ml. blood sample	ø16 x 132	-	-	28	RE 376	32	RE 441	-	-	8	RE 369	-	-
10 ml.	ø13 x 100	104	RE 309	40	RE 343	84	RE 354	30	RE 497	24	RE 366	20	RE 320
10 ml. blood sample	ø16 x 107	-	-	28	RE 376	72	RE 348	18	RE 485	8	RE 369	16	RE 316
7/10 ml. blood sample	ø13 x 107	104	RE 309	28	RE 324	72	RE 349	18	RE 503	8	RE 373	20	RE 320
5 ml.	ø13 x 75	104	RE 388	40	RE 343	84	RE 354	30	RE 501	24	RE 366	20	RE 320
5 ml. blood sample	ø13 x 82	104	RE 388	28	RE 324	72	RE 349	18	RE 492	8	RE 373	20	RE 320
10 x 100 mm	ø10 x 100	-	-	52	RE 346	144	RE 315	-	-	24	RE 367	36	RE 326
Microtiter	ø128x86x15	-	-	-	-	12	RE 307	-	-	-	-	-	-
Microtubes 1,5-2 ml.	ø11x39	-	-	24	RE 440	72	RE 426	24	RE 494	24	RE 465	20	RE 408
Microtubes 0,5-0,6 ml.	ø8x30	-	-	-	-	-	-	24	RE 495	-	-	-	-
Microtubes 0,2-0,4 ml.	ø6x45	-	-	-	-	-	-	24	RE 496	-	-	-	-

(1) Available lids for that buckets (RE 356) | (2) This rotor can fit adapters for blood bags (RE 308). | (3) Medium radius on bucket.

		RT 206		RT 201 (1) (2)		RT 202	
							
ROTOR		ANGLE FIXED 45°		SWING OUT		SWING OUT	
Max. capacity		30 x 1,5-2 ml.		4 blood bags		12 Microtiter plates	
RPM		14.300		3.700		3.700	
Radius(mm)		96		204		182 (3)	
RCF Max. (xg)		21.948		3.122		2.786	
Min. temp. max speed (°C)		-1		0		-4	
SAMPLE VOLUME	Dim (mm) approx.	ADAPTERS		ADAPTERS		ADAPTERS	
		Tubes	Ref.	Tubes	Ref.	Tubes	Ref.
750 ml.	ø96 x 130	-	-	4	RE 434	-	-
500 ml.	ø90 x 120	-	-	4	RE 310	-	-
250 ml.	ø61 x 129	-	-	4	RE 330	-	-
100 ml.	ø48 x 95	-	-	4	RE 409	-	-
85 ml.	ø38 x 112	-	-	12	RE 500	-	-
50 ml.	ø35 x 100	-	-	16	RE 317	-	-
50 ml. conical	ø29 x 117	-	-	20	RE 472	-	-
30 ml.	ø25 x 96	-	-	24	RE 322	-	-
15 ml.	ø16 x 100	-	-	72	RE 348	-	-
15 ml. conical	ø17 x 122	-	-	52	RE 347	-	-
15 ml. blood sample	ø16 x 132	-	-	32	RE 441	-	-
10 ml.	ø13 x 100	-	-	84	RE 354	-	-
10 ml. blood sample	ø16 x 107	-	-	72	RE 348	-	-
7/10 ml. blood sample	ø13 x 107	-	-	72	RE 349	-	-
5 ml.	ø13 x 75	-	-	84	RE 354	-	-
5 ml. blood sample	ø13 x 82	-	-	72	RE 349	-	-
10 x 100 mm	ø10 x 100	-	-	144	RE 315	-	-
Microtiter	ø128x86x15	-	-	12	RE 307	12	-
Microtubes 1,5-2 ml.	ø11x39	30	-	72	RE 426	144	RE 460
Microtubes 0,5-0,6 ml.	ø8x30	30	RE 428	-	-	-	-
Microtubes 0,2-0,4 ml.	ø6x45	30	RE 427	-	-	-	-



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About centrifugation

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