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<https://grant.nt-rt.ru> || gtq@nt-rt.ru

Центрифуги и комбинированные вихревые смесители



Centrifuges and Combined Vortex Mixers

Benchtop centrifuges

LMC-3000 low speed centrifuge
LMC-4200R refrigerated benchtop centrifuge

Combined centrifuge/vortex

PCV-2400 fixed speed micro centrifuge/
vortex mixer
PCV-6000 variable speed micro centrifuge/
vortex mixer

High speed microcentrifuge

Microspin 12 high speed centrifuge

All-in-one PCR plate centrifuge/vortex

CVP-2 all-in-one PCR plate
centrifuge/vortex

Centrifuges and combined vortex mixers/ centrifuges

A range of compact, modern benchtop centrifuges for a variety of biomedical, biochemical and life-science applications requiring centrifuging or a combination of centrifuging and vortex mixing or shaking for microtubes and microplates.

General purpose benchtop centrifuge

Combined centrifuges/vortex mixers

High speed microcentrifuge

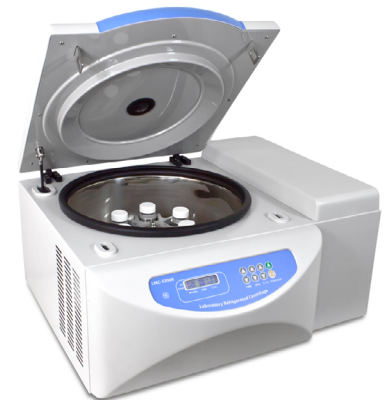
All-in-one PCR plate centrifuge/vortex



PCV-2400



LMC-3000



LMC-4200R



PCV-6000



CVP-2



Microspin 12

LMC-3000

General purpose benchtop centrifuge

Low speed benchtop centrifuge for use with microplates and centrifuge tubes up to 50 ml.

Spin speed: up to 3000rpm for tubes, up to 2000rpm for microplates

Timed operation (1 to 90 minutes), with automatic switch-off

Choice of interchangeable rotors for up to 12 centrifuge tubes or two microplates

'Soft-start' and 'run-down' of the rotor

Set rotor speed in RPM or RCF*

Multiple acceleration and deceleration mode

Low level noise level

Sturdy metal housing and lid, automatic imbalance** switch-off and lid lock when centrifuge is running, providing safe operation in your workplace.

The power and extremely quiet motor has a 'soft start' and 'run-down' function to avoid jolting samples.

Easy set-up of speed and time via 2-line LCD display and simple push buttons showing actual and set speed and time.

Compact design with small footprint - fits neatly into the workspace.



Convenient interchangeable rotor for 6 or 12 tubes of varying sizes or 2 microplates (standard and deep well). Please specify when ordering, sold separately.

* Relative Centrifugal Force.

** Auto 'IMBALANCE' stop and warning diagnostics.

Applications

- Life-sciences - ELISA plate centrifugation, PCR plate centrifugation, analytical applications including biomedical, bio-organic and immunoenzyme analysis
- Environmental - centrifuging of sewage sludge

LMC-4200R

Benchtop centrifuge with refrigeration

Refrigerated benchtop centrifuge with a temperature setting range of -10°C to $+25^{\circ}\text{C}$ and interchangeable rotors for accommodating 10 to 15 ml, or 50 ml centrifuge tubes, 2-9ml vacutainers® or microplates.

Sturdy metal housing and lid, automatic imbalance** switch-off and lid lock when centrifuge is running, providing safe operation in your workplace.

Effective acceleration (run-up up to 15 sec) and deceleration (rundown up to 30 sec).

Efficient chamber refrigeration rate in under 10 minutes.

Easy set-up of speed and time via 2-line LCD display and simple push buttons showing actual and set speed and time.



Product highlights

- Spin speed: up to 4200 rpm for tubes, up to 2000 rpm for microtitre plates
- Temperature setting range -10°C to 25°C
- Timed operation (1 to 90 minutes), with automatic switch-off
- 'Soft-start' and 'run-down' functions
- Choice of interchangeable rotors for up to 12 centrifuge tubes or 2 microplates
- Auto 'IMBALANCE' stop and warning diagnostics
- Low noise level



Convenient interchangeable rotors for 6 or 12 tubes or 2 microplates (standard and deep well). Specify when ordering, sold separately.

The powerful and quiet motor (not more than 65dBA) has a 'soft' start-up and run-down function to avoid jolting of samples.

Compact design with small footprint – fits neatly into the workspace.

Applications

- Life-science – universal applications for all centrifugation requiring a controlled temperature of biomaterial. Temperature control of the 'cold-shelf' is the standard needed for enzymologists and cell biologists ensuring the conditions necessary for reproducibility of the sample preparation stage

Low speed benchtop centrifuges

Technical specifications



		LMC-3000	LMC-4200R
		Benchtop centrifuge	Refrigerated benchtop centrifuge
Dimensions	h x d x w mm	235 x 420 x 495	335 x 580 x 635
Temperature range	°C	+4 to 40* (suitable for use in cold rooms)	-10 to 25
Max RCF (bottom of tube)	g-force	1700	3370
Speed regulation range for centrifuge tubes	rpm	100 to 3000	100 to 4200
	g	1610	3160
Speed regulation range for microtitre plates	rpm	100 to 2000	
	g	560	
Digital time setting		1 - 90 minutes (1 minute increment)	
Speed increment	rpm	100	
Display		2 line x 16 character LCD	
Maximum noise	dBA	59.4	63.7
Power consumption	230V W	120 (1A)	990 (4.3A)
	120V W	110 (0.5A)	
Nominal operating voltage	V	120 or 230 (50-60Hz)	230 (50-60Hz)
Weight	kg	11.8	56




* In a non-condensing atmosphere and maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.+

Low speed benchtop centrifuges

Options and accessories

			LMC-3000	LMC-4200R
R-6		Swing-out rotor for 6 x 50ml conical bottom centrifuge tubes, Dimensions: $\varnothing 29 \times 115\text{mm}$	•	•
R-12-10		Swing-out rotor for 12 x 10 to 15ml round bottom centrifuge tube holders Dimensions: $\varnothing 16 \times 105\text{mm}$	•	•
R-12-15		Angled swing-out rotor for 12 x 15ml tubes, conical bottom centrifuge tubes. Dimensions: $\varnothing 17 \times 120\text{mm}$	•	•
R-2		Swing-out rotor for 2 microplates Dimensions: $128 \times 85.6\text{mm}$ (w x l) Suitable for deepwell plates maximum dimensions: $128 \times 85.6 \times 45\text{mm}$ (w x d x h)	•	•
AP-96		2 adaptors for 96-well semi and non-skirted PCR plates. Made of Ertacetal C. Fully autoclavable	•	•
R-24GC		Swing-out rotor for gel cards for blood group serology testing, 24 card capacity. Dimensions of a gel card: $53 \times 74\text{mm}$	•	•
R-6P		Swing-out rotor for conical bottom centrifuge tube. Plastic buckets (POM Kocetal)	-	•
R-24-10		Swing-out rotor for round bottom centrifuge tube	-	•
AP-384		2 adaptors for 384-well plates - made of Ertacetal® C. Autoclavable	-	•
RR-U		Rack for rotors	-	•

Adapter sets for R-12-10 (pack of 12)

BN-13-75		For vacutainers 2-5ml ($\varnothing 13 \times 75\text{mm}$)	•	•
BN-13-100		For vacutainers 4-8ml ($\varnothing 13 \times 100\text{mm}$)	•	•
BN-16-100		For vacutainers 8-9ml ($\varnothing 16 \times 100\text{mm}$)	•	•

Microspin 12

High-speed microcentrifuge

Compact high-speed microcentrifuge with a built-in rotor for 12 x 1.5/2ml microtubes. Ideal for biomedical laboratories.

Ambient temperature range +4°C to +25°C (suitable to use in cold rooms)

Centrifugation speed: 100-14,500rpm, RCF* 12,400 x g

Fixed angular aluminium rotor accommodates 12 x 1.5/2ml microtubes*

Accommodates 12 x 1.5/2ml microtubes, supplied with adapters for 0.2ml and 0.5ml tubes

Timed operation (1 to 30 minutes), with automatic switch-off

Space saving

Metal protective inserts inside the lid and casing, automatic imbalance switch-off and locking of the lid provide safe operation.

Simple push-buttons and a clear 2-line LCD status display shows actual and set values of time, speed and RFC (g-force).

Constant airflow around the rotor reduces risk of samples overheating during centrifugation.

Quick spin function - now starting from 15 seconds.

Brushless motor with fixed angle rotor provides very quiet performance and accommodates 12 x 1.5/2ml microtubes**.

Equipped with a fixing lid.

Rotor imbalance diagnostics: automatic stop, "imbalance" warning.

Rotor can be removed for cleaning and may be autoclaved (not lid).

Low voltage cord easily fits through door gaskets, allowing use in incubators, refrigerators and workstations. Safe and economical running.



* Relative Centrifugal Force.

** Supplied with a adapters for 0.2ml and 0.5ml tubes.

*** Additional tube adaptors for 0.5ml or 0.2ml microtubes also included as standard.

Applications

- Life-science - multiple applications including extracting of DNA/RNA samples, sedimentation biological components, biochemical and chemical analyses of microsamples.

Microspin 12

Technical specifications



Microspin 12

Mini centrifuge, high speed

Dimensions	h x d x w mm	125 x 240 x 200
Max RCF (bottom of tube)	g-force	12,400
Speed (centrifuge tubes)	rpm	100-14,500
Operation time		15 seconds - 30 minutes
Acceleration time		maximum 20 seconds
Slowdown time		maximum 10 seconds
Capacity		12 x 1.5ml/2ml microtubes
		Adaptors for 12 x 0.5ml microtubes
		Adaptors for 12 x 0.2ml microtubes
Display		2-line x 16 character LCD
Maximum noise	dBA	61.2
External power supply		Input AC 120-230V, 50/60Hz Output DC 12V
Power consumption		60 W (2.5A)
Input voltage	V dc	24
Weight	kg	3.5

CVP-2

All-in-one PCR plate centrifuge/vortex

All-in-one PCR plate centrifuge/vortex mixer that allows for the simultaneous sample preparation of multiple samples at one time. Versatile through being able to hold non, semi and fully skirted PCR plates with no additional accessories required.

The CVP-2 offers three devices in one.

- Centrifuge with vortex mixing
- PCR plate centrifuge
- PCR plate mixer

Centrifugation speed: 300 to 1500rpm

Independent vortex and centrifuge timers with up to 999 cycles

Centrifuge and vortex mixer combined for significant time saving

Adjustable rpm or four programmable presets

Consistently prepare up to 192 samples simultaneously*

Adapter for use with 384-well PCR plates (available separately)



* Can have an adapter for 384 well plates. = AP-384.

Applications

- Life-science - multiple applications including extracting of DNA/RNA samples, sedimentation biological components, biochemical and chemical analyses of microsamples.

CVP-2

Technical specifications



CVP-2

All in one PCR centrifuge/vortex

Dimensions	h x d x w mm	190 x 350 x 285
Centrifuge mixing speed control range	rpm	300 to 1500
Vortex mixing speed control range	rpm	300 to 1200
Speed control increment	rpm	100
G-force/RCF		245
Centrifuge timer with sound alarm		0 to 30 minutes
Vortex timer with sound alarm		0 to 60 seconds
Centrifuge/vortex cycles		1 to 999
Capacity		2 non-, semi or fully skirted microplates
External power supply		Input AC 120-230V, 50/60Hz Output DC 24V
Power consumption		18 W (0.75A)
Input voltage	V dc	24
Weight	kg	6.15

PCR plate types

in relation to available adapters

	No adapter	AP-96 adapter	AP-384 adapter
96-well skirted PCR plate	•		
Piko PCR plates, in frame, 4pcs/frame	•		
96-well semi-skirted PCR plate		•	
96-well non-skirted PCR plate		•	
384-well PCR plate (Eppendorf)			•

Warning! PCR plate height inside an adapter should not be higher than 17mm.

PCV-2400

Combined centrifuge/vortex mixer

Cost-effective, fixed speed, combined micro centrifuge/vortex mixer for combined or independent centrifuge and mixing applications of microtubes and 0.2ml microtube strips in low volume applications.

A safety interlock stops the rotor when the lid is opened to ensure you and your workplace remain safe.

Very simple to operate - use the left-hand button to select continuous or short spin.



Product highlights

- Ambient temperature range +4°C to +40°C (can be used in cold rooms)
- Vortex and spin simultaneously
- Centrifugation speed: fixed at 2800rpm (50Hz) and 3500rpm (60Hz)
- Choice of interchangeable rotors for different microtube sizes/combinations and for 0.2ml strips
- Continuous operation or short spin



The vortex cup emerges through an opening in the closed lid, enabling individual tubes to be mixed even while a full load of tubes is spinning.

The combi-spin is supplied as standard with two interchangeable rotors for 12 x 1.5ml and 12 x 0.5ml + 12 x 0.2 ml

Optional accessory rotors - for 16 and 18 microtubes and for two 8 well 0.2ml strips - allow for quick and easy changes of application.

Applications

- Life-sciences - genetic engineering research (for PCR-diagnostics experiments). Units can be used in microbiological, biochemical, clinical laboratories and industrial biotechnological laboratories

PCV-6000

Combined centrifuge/vortex mixer

Highly versatile and efficient variable-speed combined centrifuge/vortex mixer. Programmed centrifugation and mix operations or independent centrifuging and vortex-mixing of multiple microtubes and 0.2ml strips.

Spin-mix-spin technology can save considerable time by automatically performing a cycling program of sample mixing and spinning 12 tubes at once, when compared with removing the tubes for vortexing after every spin.

Ambient temperature range +4°C to +40°C

Centrifugation speed 6000rpm, 2350 g

Choice of interchangeable rotors for different microtube sizes/combinations and for 0.2ml strips

Vortex mixing modes - soft, medium and hard

A safety interlock stops the rotor when the lid is opened to ensure you and your workplace remain safe.

Low voltage cord easily fits through door gaskets, allowing use in incubators, refrigerators and workstations.

Multi-spin enables consecutive spin and mix phases of multiple tubes - tubes are loaded into the rotor for spinning and remain in position for vortex mixing, saving time and labour. In addition, lower reagent volumes can be used, providing a further saving.



The multi-spin is supplied as standard with two interchangeable rotors for 12 x 1.5ml and 12 x 0.5ml + 12 x 0.2 ml

Optional accessory rotors - for 16 and 18 microtubes and for two 8 well 0.2ml strips - allow for quick and easy changes of application.

Compact design and extremely quiet in operation - fits neatly and unobtrusively into the workspace.

Simple push-buttons and a clear 2-line LCD status display enable accurate and repeatable setting of spin and mix levels and times. Spin and mix phases can be linked in sequences which can be repeated up to 999 times.

Applications

- Life-sciences - genetic engineering research (for PCR-diagnostics experiments). Units can be used in microbiological, biochemical, clinical laboratories and industrial biotechnological laboratories.

PCV series






Technical specifications



		PCV-2400	PCV-6000
Combined centrifuge/vortex mixer			
Dimensions	h x d x w mm	125 x 235 x 190	125 x 235 x 190
Operating temperature	°C	+4°C to +40°C	+4°C to +40°C
Max RCF (bottom of tube)	g-force	500 @ 50Hz 700 @ 60Hz	2350
Speed control range maximum (centrifuge tubes)	rpm	2800 at 50Hz/3500 at 60Hz	6000
Vortex mixing intensity		-	Soft, medium and hard
Spin timer, with automatic switch -off		-	1 second to 30 minutes
Mix timer, with automatic switch-off		-	1 to 20 seconds (1 second increment)
Spin-mix-spin cycle regulation		-	1 to 999 cycles
Number of tubes vortexing		1 individual	Up to 12 simultaneously
Time for completing the spin-mix-spin	12 microtubes	5-6 minutes	1 minute
	100 microtubes	60 minutes	10 minutes
Capacity		12 x 1.5ml microtubes	
		12 x 0.5ml plus 12 x 0.2ml microtubes	
Display		-	2 line x 16 character LCD
Maximum noise	dBA	50	71
External power supply		-	Input AC 120-230V, 50/60Hz Output DC 24V
Power consumption	230V W	30	24
	120V W	30	24
Weight	kg	2.1	2.5

PCV series

Options and accessories

			PCV-2400	PCV-6000
PR2-05		Interchangeable centrifuge rotor for 8 x 1.5/2.0ml plus 8 x 0.5ml microtubes (optional)	•	•
PR2-05-02		Interchangeable centrifuge rotor for 6 x 1.5/2.0ml plus 6 x 0.2ml microtubes (optional)	•	•
PSR-16		Interchangeable centrifuge rotor for 2 x 8-well 0.2ml microtube strips (optional)	•	•
R-15		Replacement rotor for 12 x 1.5ml microtubes (included)	•	•
R-05-02		Replacement rotor for 12 x 0.5ml and 12 x 0.2ml microtubes (included)	•	•

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