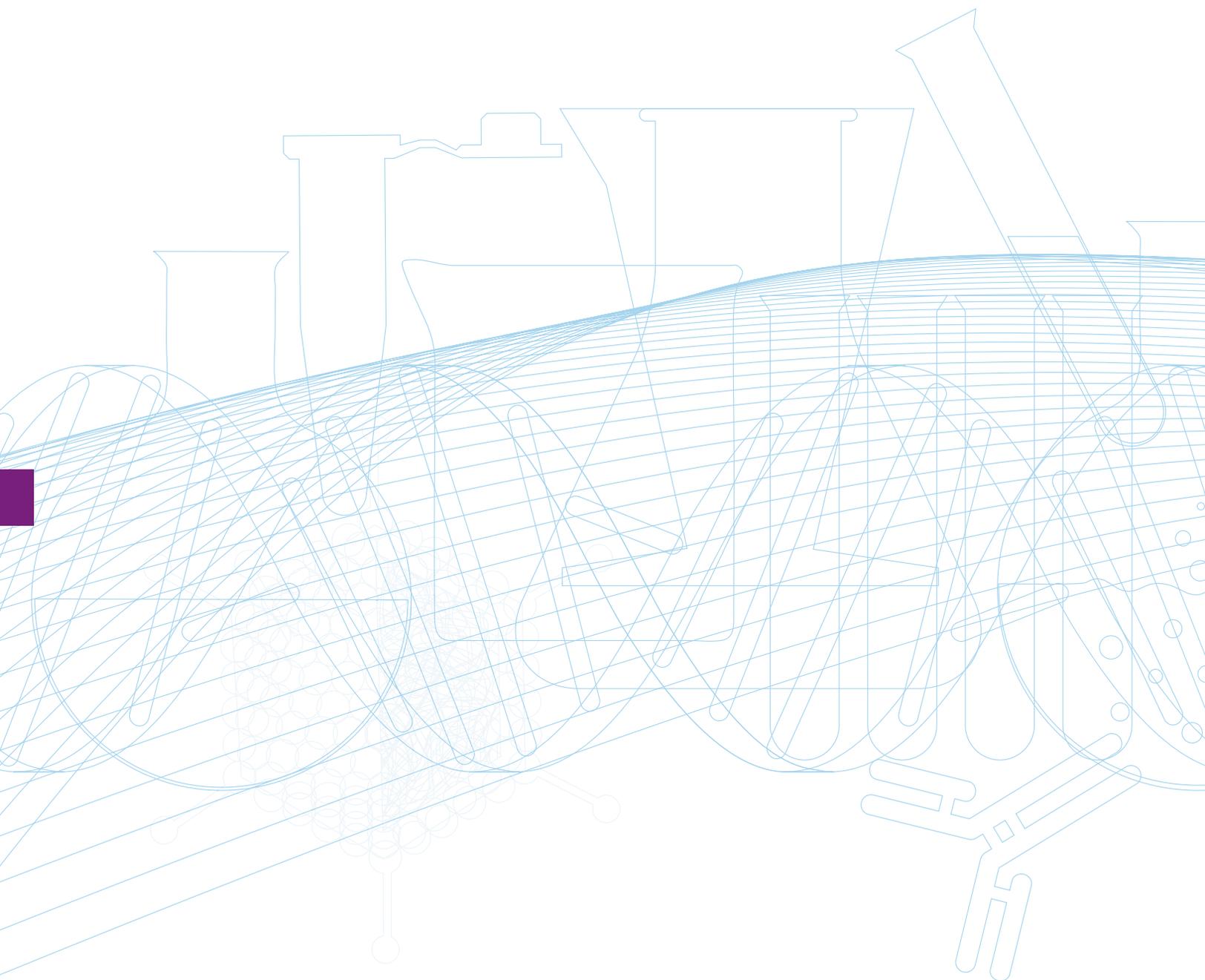


# 14 Centrifuges



# Centrifuges

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

- General purpose low speed centrifuges
- Combined centrifuges/vortex mixers

LMC-3000



PCV-3000



PCV-2400

## Centrifuges » LMC-3000 general purpose centrifuge

# LMC-3000 general purpose centrifuge for scientific applications

Low speed benchtop centrifuge with interchangeable rotors for accommodating centrifuge tubes (10 to 15 ml or 50 ml) or microplates.

- Spin speed: up to 3000 rpm for tubes, up to 2000 rpm for microtitre plates
- Timed operation (1 to 30 minutes), with automatic switch-off
- 'Soft-start' and 'run-down' functions
- Choice of interchangeable rotors for up to 12 centrifuge tubes or 2 microplates



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

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

LMC-3000 general purpose centrifuge fitted with R-2 rotor

Convenient interchangeable rotor for 6 or 12 tubes or 2 microplates (standard and deep well). Specify when ordering

The powerful and extremely quiet motor has a 'soft' start-up and run-down function to avoid jolting of samples

Compact design with small footprint – fits neatly into the workspace

Suitable for a wide range of analytical applications including biomedical, bio-organic and immunoenzyme analysis.

## Accessory rotors for LMC-3000



**R-2** – interchangeable centrifuge rotor for 2 microplates (standard and deep well)



**R-6** – interchangeable centrifuge rotor for 6 x 50 ml tubes with caps and conical ends



**R-12-10** – interchangeable centrifuge rotor for 12 x 10 to 15 ml tubes, rounded ends, no caps



**R-12-15** – interchangeable centrifuge rotor for 12 x 15 ml tubes with caps and conical ends

## PCV-3000 Multi-spin™ 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 0.2 ml strips.

With tubes positioned in the rotor throughout the operation, Multi-spin™ can complete programmed spin-mix-spin sequences in significantly less time compared to individual instruments, typically 4 minutes for 100 tubes compared to 35 minutes with individual instruments – a dramatic time and cost saving. In addition, spinning samples before and after mixing allows lower reagent volumes to be used. Because of its powerful G force and accurate control of spin and mix parameters, the Multi-spin™ can be used with volumes as low as 5 µL.

- **Centrifugation speed: up to 3500 rpm**
- **Timed spin operation: 1 second to 99 minutes, with automatic switch-off**
- **Timed vortex mixing: 1 to 20 seconds, with automatic switch-off**
- **Three adjustable vortex intensities**
- **Choice of interchangeable rotors for different microtube sizes/combinations and for 0.2 ml strips**

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

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 labor. In addition, lower reagent volumes can be used, providing a further saving

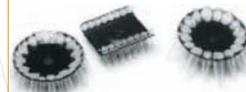
Simple push-buttons and a clear 2-line LCD status display enable accurate and repeatable setting of spin and mix levels and times. Spin and mix phases can be linked in sequences which can be repeated up to 999 times

Low voltage cord easily fits through incubator door gaskets

Multi-spin™ PCV-3000 fitted with optional PR2-05-02 rotor

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

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



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



Suitable for spin-mix-spin applications in many fields, including clinical and hospital PCR laboratories, biochemical clinical laboratories and immunology departments. Multi-spin aids the sample preparation process for many procedures including PCR, gel electrophoresis and enzyme reactions, and is ideal for laboratories processing multiple tubes. Other specific applications include immunoprecipitations; cell permeabilization by chelating or hydrophobic agents for reaction *in situ*; low solubility drug testing; cell washing from culture media after fermentation.

## PCV-2400 Combi-spin™ combined centrifuge/vortex mixer

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

Tubes are loaded into the rotor for simultaneous spinning, then removed for individual mixing in the vortex cup located at the top of the central shaft. In spin-mix-spin applications, the Combi-spin™ can be used with reagent volumes down to approximately 50 µL, representing an overall saving in time, labor and material.

- **Centrifugation speed: fixed at 2800 rpm**
- **Continuous operation or short spin**
- **Choice of interchangeable rotors for different microtube sizes/combinations and for 0.2 ml strips**



Combi-spin™ aids the sample preparation process for many procedures including PCR, gel electrophoresis and enzyme reactions, and is particularly suitable for low volume applications. Other specific applications include immunoprecipitations; cell permeabilization by chelating or hydrophobic agents for reaction *in situ*; low solubility drug testing; cell washing from culture media after fermentation.

### Accessory rotors for Multi-spin™ PCV-3000 and Combi-spin™ PCV-2400



**PR2-05** – interchangeable centrifuge rotor for 8 x 1.5/2.0 ml plus 8 x 0.5 ml microtubes

**PR2-05-02** – interchangeable centrifuge rotor for 6 x 1.5/2.0 ml plus 6 x 0.5 ml plus 6 x 0.2 ml microtubes



**PSR-16** – interchangeable centrifuge rotor for 2 x 8 well 0.2 ml microtube strips

## Centrifuges » Models and specifications

Centrifuges – models and specifications				
<ul style="list-style-type: none"> <li>● = standard</li> <li>● = optional</li> </ul>	General purpose	Combined centrifuge/vortex mixer		
	LMC-3000	PCV-2400	PCV-3000	
	low speed	combi-spin, fixed speed	multi-spin, variable speed	
	 h: 235 mm d: 400 mm w: 470 mm	 h: 115 mm d: 180 mm w: 225 mm	 h: 115 mm d: 180 mm w: 225 mm	
Max RCF (bottom of tube) g-force	g	–	700	800
Speed (centrifuge tubes)	rpm	100 to 3000	2800	1000 to 3500
Speed (microtiter plates)	rpm	100 to 2000	–	–
Operation		continuous or timed	continuous up to 60 mins or short spins	continuous or timed
Spin timer, with automatic switch-off		1 to 90 mins	–	1 sec to 99 mins
Mix timer, with automatic switch-off		–	–	1 to 20
Vortex mixing intensity	3-stage adjustment	–	–	soft, medium, hard
Cycle regulation		–	–	1 to 999
Capacity	12 x 1.5/2.0 ml microtubes	–	●	●
	12 x 0.5 ml plus 12 x 0.2 ml microtubes	–	●	●
	2 x microtiter plates	●	–	–
Display		2 line x 16 character LCD	–	2 line x 16 character LCD
Input voltage	V dc	–	–	12
	V ac	120 or 230 (50-60 Hz)	120 or 230 (50-60 Hz)	–
External power supply		–	–	●
Ambient temperature range	°C	–	4 to 40	–
Accessories				
	RCF from the middle/bottom of the centrifuge tube			
<b>R-6</b> interchangeable centrifuge rotor for 6 x 50 ml tubes, with cap, conical end	1100 x g / 1700 x g	●	–	–
<b>R-12-10</b> interchangeable centrifuge rotor for 12 x 10 to 15 ml tubes, rounded ends, no caps	1200 x g / 1700 x g	●	–	–
<b>R-12-15</b> interchangeable centrifuge rotor for 12 x 15 ml tubes, with cap, conical end	1150 x g / 1700 x g	●	–	–
<b>R-2</b> interchangeable centrifuge rotor for 2 microtitre plates	560 x g	●	–	–
<b>PR2-05</b> interchangeable centrifuge rotor for 8 x 1.5/ 2.0 ml plus 8 x 0.5 ml microtubes		–	●	●
<b>PR2-05-02</b> interchangeable centrifuge rotor for 6 x 1.5/ 2.0 ml plus 6 x 0.5 ml plus 6 x 0.2 ml microtubes		–	●	●
<b>PSR-16</b> interchangeable centrifuge rotor for 2 x 8-well 0.2 ml microtube strips		–	●	●