UNICO PowerSpin™ Centrifuge Selection Guide

C806 

C822 

C8604 

CMH30 

C881M 

This guide should help you choose the right UNICO centrifuge for your specific needs.

Speed (RPM) vs. g-Force (RCF):

The most important factor when choosing a centrifuge is the g-Force, or RCF, not the speed. The RCF determines the ability of a centrifuge to separate the specimen. Most specimens must be spun within a specific RCF range in order to properly prep the sample for testing and analysis. The guide below will help you select a model based on RCF, RPM, # of tubes, specimens and other attributes.

CLIA, Calibration and speed checking:

Your lab or practice may be subject to CLIA regulations if what you do is considered to be "moderately complex", or "highly complex". CLIA, (Clinical Laboratory Improvement Amendment of 1988); may dictate that your centrifuges need to be "Calibrated" every 6 months. CLIA inspectors may visit your facility to make sure you are maintaining your equipment and following protocols; and that your equipment is capable of performing the protocols properly, etc.

Calibration involves using a tachometer to check the speed of your centrifuge for accuracy. CLIA inspectors will "pass" a centrifuge that operates within plus or minus 100 RPM of the actual setting. If for example, your centrifuge is set to spin at 3,400 RPM; CLIA will pass it if it is anywhere between 3,300 and 3,500 RPM; as long as your protocol calls for spinning in that range as well. To check your centrifuge you can purchase a UNICO tachometer, item # C800-75.

Urine Sample Centrifugation:

A note of caution if you spin Urine specimens: If you have a fixed speed centrifuge, chances are very good it is set the RCF and speed for spinning blood samples only. Urine specimens must be spun at a greatly reduced RCF in order to properly prep the sample. If your facility is subject to CLIA and you spin urine samples in a blood centrifuge, the CLIA inspector may not allow the centrifuge to pass inspection. You will be asked to either stop spinning urine samples, or acquire a centrifuge capable of spinning at the correct RCF for separating urine samples.

If you would like to speak with an application specialist to help you select the right centrifuge for your applications, please contact us at: 800-588-9776, or 732-274-1155, or info@unicosci.com; ask for tech support for centrifuges.

Digital Photo-Tachometer

- RPMs instantly display on large LCD screen
- Standard adhesive reflective tape included
- Highly accurate scientific tool, includes case

Item No.	Description
C800-75	Photo-Tachometer

Page	Model	SKU	Number of Tubes	Tube Capacity	Specimens Blood	Specimens Fecal	Specimens Urine	Microhematocrit	DNA Protein	Speed	Rotor	Maximum RPM	Maximum RCF (g)
4	FX	**C806**	6	2-15 ml	Yes	No	No	With Adapters	No	Fixed	Fixed	3400	1320
4	FX	**C808**	8	2-15 ml	Yes	No	No	With Adapters	No	Fixed	Fixed	3400	1320
4	LX	**C856**	6	2-15 ml	Yes	Yes	Yes	With Adapters	No	Variable	Fixed	300-4,000	Up to 1,828
4	LX	**C858**	8	2-15 ml	Yes	Yes	Yes	With Adapters	No	Variable	Fixed	300-4,000	Up to 1,828
5	PX	**C826**	6	2-15 ml	Yes	No	No	With Adapters	No	Fixed	Fixed	3,500	1,640
5	PX	**C828**	8	2-15 ml	Yes	No	No	With Adapters	No	Fixed	Fixed	3,500	1,640
5	HX	**C822**	6	2-15 ml	Yes	No	No	With Adapters	No	Fixed	Horizontal	3,400	1,680
6	MX	**C8624**	24	2-15 ml	Yes	Yes	Yes	With Adapters	No	Variable	Fixed	1,000-3,400	1,750
6	MX	**C8606**	6	2-15 ml	Yes	Yes	Yes	With Adapters	No	Variable	Horizontal	1,000-3,400	1,796
6	MX	**C8660**	4	60 ml	60 mL	No	No	No	No	Variable	Fixed	1,000-3,400	1,750
7	MX	**C8604**	4	2-50 ml	Yes	Yes	Yes	With Adapters	No	Variable	Horizontal	1,000-3,400	1,796
7	CMH	**CMH30**	24	Capillary	MH	No	No	Yes	No	Fixed	Horizontal	12,000	14,075
8	BX	**C881**	6	2-12 ml	Yes	Yes	Yes	With Adapters	No	Variable	Fixed	5,000	2,570
8	BX	**C882**	24	Capillary	MH	No	No	Yes	No	Variable	Horizontal	11,000	13,250
8	BX	**C883**	24	0.5-3 ml	Yes	No	No	No	Yes	Variable	Fixed	13,000	15,495

How to calculate RCF:
RCF = Relative Centrifugal Force (also known as "G-Force")

Centrifuge RCF Calculation: RCF = 1.12 x R(mm) x Krpm x Krpm
where R: Centrifuge rotor radius (mm)
and Krpm: Centrifuge speed in thousands

Example: If rotor radius is 102mm, speed is 3.4Krpm (3400rpm),
then RCF = 1.12 x 102 x 3.4 x 3.4 = 1320g