



- A** Lid
- B** Rotor
- C** "Open" Button
- D** Speed Adjustment
- E** "Start/Stop" Button
- F** Emergency Release Lever (Bottom of unit)
- G** Time Adjustment
- H** Power Button
- I** LCD Display
- J** Power Jack

Includes:

- 56-place Microtube/PCR Strip rotor
- 24 volt, 4 amp AC power adapter
- Hex wrench for rotor removal

Introduction

Sample size requirements in clinics are becoming smaller, and microtubes are becoming more popular for spinning blood and urine. Additionally, DNA processing in laboratories is more common, and Polymerase Chain Reaction techniques require PCR strips to be spun at high g-forces to collect the DNA pellet. New for 2017, the Zip-IQ MT/PCR centrifuge will spin blood and urine samples in 0.5ml to 2.0ml microtubes. Plus it can spin DNA samples in four PCR strips. The maintenance-free brushless motor spins up to 8,500rpm, producing 4,850g's for very fast results in 3 minutes or less. The digital controls allow speed and time to be adjusted with the touch of a finger and will show real-time speed and time remaining. The the auto-brake will slow it down quickly and smoothly and open the lid once the rotor has stopped. This centrifuge is powerful, yet small, quiet, and affordable... The Zip-IQ MT/PCR centrifuge is the smart choice for any clinic or laboratory.

Warranty

LW Scientific instruments have a one (1) year limited warranty. This warranty is not valid on normal wear and tear, cosmetic damages caused by chemicals, solvents, and/or cleaning solutions, as well as acts of God.

Please register your product online at: www.LWScientific.com/warranty_form.

Important: Warranty information must be completed within 30 days of purchase.

Installation and Setup

- 1 Remove the centrifuge from the shipping container and inspect for any possible shipping damage. If the centrifuge appears to be damaged, please contact LW Scientific, Inc. or your distributor immediately.
- 2 Read the instruction manual in full before operating. Store the operation instructions in a safe place, easily accessible by the trained staff that will be operating the centrifuge.
- 3 Place the centrifuge on a sturdy, level surface. Using the emergency release lever underneath the centrifuge, open the lid. Verify that there are no loose objects or packing material in the tube chamber. **DO NOT LOAD TUBES AT THIS TIME.**
- 4 Verify that the rotor is secure on the motor shaft by pulling upward with your hand. If it needs to be secured, tighten the set screw under the rotor.
- 5 Close the lid, ensuring that it clicks and locks.
- 6 Plug the power adapter into the rear of the unit, and plug the cord into an outlet. Press the **POWER** button to turn the unit on. The LCD display should light up.
- 7 **Test the unit:** Set the time for 3 minutes, and set the speed for 2,000 rpm. Press the **START/STOP** button. The unit should come up to speed with no vibration and a smooth and quiet sound. Next, set the speed for 8,500 rpm and run again. If there are unusual vibrations or sounds, stop the unit and contact LW Scientific, Inc. or your distributor immediately.

Loading and Operation

- 1 **Spin only balanced loads.** Ensure that tubes of similar size and equal weight are placed opposite each other. Use a water-filled tube as a balance tube if necessary. Proper balancing will improve sample separation and extend the life of the centrifuge. Spinning out of balance loads may break test tubes or damage the centrifuge.
- 2 Microtubes and PCR strips are intended to hang by their caps in the centrifuge rotor. Be sure to use good quality tubes that will withstand forces up to 4,850g.
- 3 Set the speed and time as follows, or defer to clinical protocols if different:

Blood	8,500rpm	3 minutes
Urine	2,500rpm	5 minutes
PCR Strips	Refer to PCR protocols	
- 4 Press the **START/STOP** button to run the cycle. The unit will stop on its own, beep, and open the lid upon completion.

Care, Maintenance, and Troubleshooting

The Zip-IQ is designed to be maintenance-free. With proper care, this centrifuge will provide years of service. However, if repairs should be needed, please contact LW Scientific, Inc.

- 1** Use only quality microtubes that are rated for the g-forces utilized. Lower-quality tubes may fracture and allow contents to leak out of tube.
- 2** Never force a tube into the rotor. The rotor was designed to hold the most common sized microtubes.
- 3** Clean with common laboratory disinfectants regularly. Do not allow moisture to seep into the centrifuge and do not immerse the electrical components in any liquid during the cleaning process.
- 4** Because of safety issues with high g-forces in a centrifuge, it is recommended that rotors be inspected monthly for wear and fatigue. If there is any indication of wear, the rotor should be removed from service. Contact LW Scientific for return instructions so the rotor can be evaluated by a technician for repair or replacement. After 2 years of service, it is recommended that rotors be returned to LW Scientific for inspection or replacement.

Following these procedures will ensure safety of lab personnel as well as extend the life of the centrifuge.

Specifications

Speed range:	500-8500rpm
Maximum RCF:	4,850g
Max. Volume:	12, 0.5-0.9ml microtubes 12, 1.0-2.0ml microtubes 4, 8-place PCR strips
Input Voltage:	100-240VAC; 50-60 Hz
Output Voltage:	24V DC, 4 amps
dBA:	72.5 dBA +/- 3 dBA @ 12"
Timer:	15 sec - 99 min
Display:	LCD Digital
Height:	6.2" (158 mm)
Depth:	10.6" (270 mm)
Width:	10.6" (270 mm)
Weight:	9.9 lbs (4.5 kg)

Boxed Dimensions:	
Height:	8.75" (203.2mm)
Length:	11" (279.4mm)
Width:	15" (381mm)
Weight:	12.25 lbs (5.56kg)

G-Force Chart

Speed (rpm)	Microtubes (5.5cm radius)	PCR strips (6.0cm radius)	
500	15g	17g	
1000	61g	67g	
1500	138g	151g	
2000	246g	268g	
2500	384g	419g	Microtube Urine Speed - 5 minutes
3000	553g	604g	
3500	753g	822g	
4000	984g	1073g	
4500	1245g	1358g	
5000	1537g	1677g	
5500	1860g	2029g	
6000	2214g	2415g	
6500	2598g	2834g	
7000	3013g	3287g	
7500	3459g	3773g	
8000	3935g	4293g	
8500	4450g	4850g	Microtube Blood (serum) Speed - 3 minutes