



NanoTornado

Operating instructions for mini centrifuge "NanoTornado"

1. Introduction

You are holding a powerful yet compact device in your hands that has been developed to make your laboratory work more efficient and enjoyable. The NanoTornado combines state-of-the-art technology with intuitive operation, allowing you to concentrate fully on your experiments.

The intelligent speed control automatically adjusts the speed to the requirements of your samples - for optimal results without cumbersome settings. At the same time, several integrated protective functions ensure that your samples, the device and, of course, you are optimally protected at all times.

Experience the next level of centrifugation: fast, precise and reliable. Let yourself be carried away by the power of the NanoTornado and discover how exciting laboratory technology can be!

2. Special features

- Automatic speed stabilization: The speed is adjusted to the load and weight in real time.
- Easy removal of the rotor
- Automatic switch-off: After 2 minutes of continuous operation, the appliance switches back to standby mode.

3. Safety functions

- Operation only with the lid closed
- Protection against rotor blockage and foreign objects
- Temperature protection

4. Operation

Briefly press the control button: Switches between ready for operation and operation.

A green LED indicates that the appliance is ready for operation. The centrifuge is put into operation by briefly pressing the button. The lid must be closed.

If the LED lights up red continuously, the centrifuge is in operation and the rotor is turning. If the LED flashes red once per second, the lid is open. The rotor starts up again as soon as the lid is closed again.

Press the button again briefly to set the centrifuge to the ready state. If the LED flashes five times per second, a rotor blockage has been detected. In this case, the cause should be eliminated and the lid closed again.

If the pink LED flashes five times per second, there is a fault with the power supply unit. The power supply unit should be checked and replaced if necessary.

If the LED flashes yellow five times per second, this indicates overheating. In this case, the appliance cools down automatically and then returns to the ready-to-operate state

5. Safety instructions

- Only use the supplied or a compatible power supply unit (24 V, 1 A).
- Do not overload the rotor and do not insert any foreign objects.
- In the event of errors, follow the LED displays and take appropriate action.
- Do not allow any liquids to enter the appliance.
- Operation only with the lid closed.

6. Troubleshooting

Problem	LED display	Solution
Centrifuge does not start	<ul style="list-style-type: none">• LED is off• LED flashes red 1x/second	<ul style="list-style-type: none">• Check power supply• Close lid• Contact E-Lab
Centrifuge stops unexpectedly	LED flashes red 5x/second	Remove blockage, close cover
Device does not work after switching on	LED flashes pink 5x/second	Check / replace power supply unit
Overheating	LED flashes yellow 5x/second	The appliance cools down automatically.

7. Maintenance

- Clean the rotor regularly.
- Check the appliance regularly for damage.

8. Storage

- Temperature: +5 °C to +35 °C
- Humidity: 20 % to 80 % relative humidity
- Store the device in a dry place.

9. Technical data

- Speed: 6,500 rpm
- Power supply unit: 24 V, 1 A
- Operating temperature: 15 °C to 50 °C
- Humidity: 20 % to 80 %

10. Contact and Support

NanoTornado - performance in a compact format!

If you have any questions, please contact the manufacturer:

IMB-Mainz, Electronics Laboratory, Ackermannweg 4, 55128 Mainz

Tel: +49 6131-39-21563

Email: elab@imb-mainz.de

Thank you for choosing the NanoTornado! We wish you much pleasure and success in your work.