Introduction

Dear Customer,

Thank you for deciding on our Spin Coater. You have chosen a high quality product to simplify your preparatory tasks in the laboratory. Due to its sophisticated technology, the Spin Coater, a tool for producing a film of substances for the investigation of many physical problems, is in great demand.

Your Spin Coater has been built using the most modern production technology and confirms to all German and European regulations and guidelines. In order to maintain the working condition of the device, we urge the user to consult the user manual.

Intended use

The intended use of the device is to produce thin and ultra thin layers through Spin Coating by way of radial centrifugal coating of test substances on a rapidly rotating sample carrier.

Using the device for any purposes other than that stated could be dangerous and lead to a short-circuit, fire, etc. The device may not be opened, altered or adapted in any way.

Included in delivery

The delivery will include: the Spin Coater with a standard rotating table, a wall power supply specific for the country of use, a vacuum hose with quick coupling and this users manual.

Safety Instructions

Damage caused by disregarding the instructions in this manual invalidate the guarantee. We accept no liability for any damage as a result of misuse.

We assume no liability for personal injury or damage to property caused be improper operation or by negligenting the safety instructions.
For safety and licencing reasons, adaptation or alterations to the device are not authorised. The exception being the changing of rotating tables when the device is approved and delivered by us.

The Spin Coater must be supervised when in use and unplugged when not in use.

In order to avoid the excessive movement of test substances the device must **only be run with the protection cap in place**. The user must also wear suitable **eye protection** (closed glasses/goggles) and **body protection** (lab coat).

This device is not a toy and should be kept away from children.

The Spin Coater is only intended for indoor use.

Ensure that all safety at work guidelines and regulations are followed when using the device with explosive, flammable, toxic, allergenic or other dangerous substances.

Under no circumstances must a damaged, faulty or altered device be used and must be sent to the dealer or manufacturer for investigation and repair. This also includes the mains cable, the rotating table and other specific equipment.

Maintenance Advice

Within the Spin Coater and the mains cable are no parts that may be maintained by the user.

Surplus coating material will be collected in the PTFE cap and the stainless steel tray. Both parts are to be cleaned when necessary to avoid the substance spilling into the working parts of the device.

Only use the device with the mains adapter supplied.

To avoid the suction of coating material into the drive mechanism please use chucks, which are preferably covered completely by the samples. In this way one can also maximize the holding force.

Please operate the device only with the provided power supply unit!

Environmental Notice

Disposal of unusable devices is to be done according to the correct manner or to be sent to the manufacturer for disposal.

Please make your contribution to protecting our environment!

Guarantee and Service Conditions

We deliver a fully functional Spin Coater with a guarantee of two years. Within this time period, faults will be repaired or the product exchanged at the discretion of the manufacturer. An extension of the guarantee after this even is not possible. Damage caused by improper use of the device or use of aggressive samples and coating substances is not covered under the guarantee.

Should there be no qualified information as to the dangerousness of the test substance used on the device, a repair cannot take place.

Thin film fabrication

There are two ways to prepare thin films:

1. Apply a small amount of coating substance on a substrate and start the device at the preset speed.

2. Apply the coating material on the substrate while the motor is running.

With both procedures, the substrate should rotate until the coating substance has dried.

Important!

To prevent the coating substance from entering the vacuum area, please ensure that the chucks are covered as much as possible by the substrate. This also maximizes holding forces.

Spin Coater SCR Operation

Place the spin coater onto a solid and level surface. Make sure the supply voltage matches the operating voltage of your power adapter. Plug the power adapter into a power socket. Connect the low-voltage output of the power adapter with the corresponding connector on the back of the spin coater. The active display and a multi-color LED will show that the device is ready for use. It is blue during the switching-on-routine and when the entered values are either exceeded or not reached, red when the motor is stopped, and green when the motor is running.

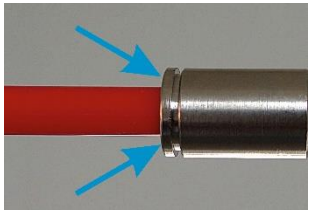
By turning the operating knob <u>while the motor is running</u>, the speed can be set to values between 5 and 200 rps. The desired speed is stored in non-volatile memory when the encoder button is pressed and is shown as preset value on the display. The display is dimmed during stand-by operation.

After starting the spin coater, the engine accelerates quickly - depending on the mass of the chuck/sample combination - until the preset speed is reached. During this process, an upward pointing arrow is swiftly shown on the display. The engine speed is regulated to +/- 1 rps through the controller.

After the STOP command, the engine slows down until it halts. This process depends on the inertial force of the combination rotor/chuck/sample and cannot be influenced electronically.

The samples are fixed by vacuum suction. To do this, a vacuum pump can be connected to the spin coater through a quick coupler on the back of the device. Its flow rate should be approx. 7l/min. A connection hose is included in the shipment. The pump is available as accessory.

Both the pump and spin coater use the same power adapter, a mix-up will therefore cause no harm.



Press down on the locking ring to release the vacuum hose from the quick coupler.

Accessories

Ask your distributor for additional chucks in various diameters up to 70 mm. We also supply customized chucks, e. g. with O-rings or fitted silicone mats for very small samples. To exchange the chucks, simply pull them off the motor shaft.