

SPIN COATER 1000 SERIES LOW COST TABLE TOP MODEL



MAIN FEATURES

- IDEAL FOR LABORATORY USE
- AVAILABLE IN RANGE OF 6000 RPM
- STAINLESS STEEL BOWL (TEFLON COATED*) WITH DRAIN CONNECTIONS
- DIRECT DIGITAL SPEED INDICATION
- UNIQUE MILMAN DESIGN VACUUM SEAL SHAFT WITH SPILL BAFFLE
- INTEGRATED VACUUM RELEASE SWITCH FOR EASY SUBSTRATE HANDLING
- CUSTOM BUILT PMDC SERVOMOTOR WITH CONTINUOUS SOLID STATE SPEED CONTROLLER
- USER FRIENDLY TIMER FOR SPIN TIME CONTROL
- DIRECT VACUUM LEVEL INDICATION AT CHUCK
- A WIDE RANGE OF ACCESSORIES LIKE VACUUM INTERLOCK, ZERO SPEED SWITCH, FOOT SWITCH OPERATION ETC.

* Optional



SPIN COATING UNIT 1000S from MILMAN is state of the art spin coater specially designed to coat thin films of photoresists, sol-gels, paints, polyimides, anti-reflectives and other liquids on substrate sizes upto 4" x 4". The basic Spin Coating model consists of a minimum configuration to which special accessories can be ordered according to the end user application.



1. **Bowl And Cover:**

Spinner is provided with an easily removable SS Bowl of 150mm ID electropolished from inside. Larger sized and Teflon coated bowls are also available on request.

2. **Vacuum Chuck:**

A standard vacuum chuck to handle substrates upto 2" x 2" is provided with the spinner. Chucks are made either in SS or Hard anodized Aluminium. Special purpose chucks can be ordered per substrate type and size.

3. **Integrated Vacuum Release Switch:**

A specially designed vacuum release switch with a simple toggle type lock can be used to connect vacuum to chuck and release the substrates in two positions respectively. A foot operated chuck release solenoid switch can also be provided optionally (See Accessories)

4. **Direct Vacuum Indicator:**

A Bourden type gauge indicates the vacuum directly at the chuck (in mm of

Hg). This helps the user to detect any vacuum leakages at the chuck or in the vacuum plumbing lines.

5. **Timer:**

A quartz-based timer with dial indicator is provided for setting of spin cycle time.

6. **Digital RPM Indicator:**

A digital rpm indicator with a large LED display indicates the speed of the chuck in 100's of RPM.

7. **Speed Set:**

The spinner is provided with the completely solid state continuous variable speed controllers. The speed can be set by a 10 turn potentiometer provided on the front panel to vary the speed from 100-6000RPM

8. **Interlocks:**

Various safety interlocks have been provided for operator safety. However, these have to be ordered separately depending on the volume of use of the spinner.

* OPTIONAL SEE ACCESSORIES



ACCESSORIES

1. Vacuum Switch Interlock with Electromagnetic Brake (E.M. Brake) for safety during Vacuum breakdown:

This is a specially designed assembly wherein the vacuum at the chuck is continuously monitored by a diaphragm based vacuum switch. Response time of this vacuum switch is around 10-100 milli secs.

In the normal course of application, if the vacuum at the chuck is sufficient (to hold the substrate) the vacuum switch is ON and brake to the chuck is in released condition. However, in case of lowering of vacuum of the chuck due to any leak the vacuum switch switches OFF, simultaneously operating the EM Brake, which stops the chuck instantaneously (within 100 millisecs.). This avoids flying OFF of the substrates due to lower vacuum or leakages at the chuck during the spinning. A detailed schematic of this arrangement is given below.

2. Zero Speed Switch and Door Interlock for operator safety

A zero speed switch is provided to avoid release of substrate before the chuck comes to a halt. In this arrangement the speed is continuously sensed and when chuck stops spinning, the switch operates. In spin coaters with Solenoid operated vacuum release [see 4 below] this zero speed facility enables release of substrate from chuck.

3. Foot Operated Switch for Spin start

The spin start operation can be initiated by the foot switch. This is provided for ease of operation, as the operator's hands are busy in placing and flooding liquid on the substrates.

4. Solenoid Operated Vacuum Release Switch with Footswitch

Spinner is provided with a vacuum release valve on the top plate to couple and uncouple vacuum at the chuck. This operation also can be accomplished by a solenoid switch, which is electrically operated and foot switch activated.

5. Acrylic Cover with door interlock and N₂ Purge facility

The acrylic cover is provided, for the whole top plate assembly so as to protect the operator from inhaling of the harmful vapours of liquid which is being spin coated. A nozzle is also provided for nitrogen purging. This provides complete safety to the operator.

6. Vacuum pump

The Spin Coater is provided with a completely oil free diaphragm pump.

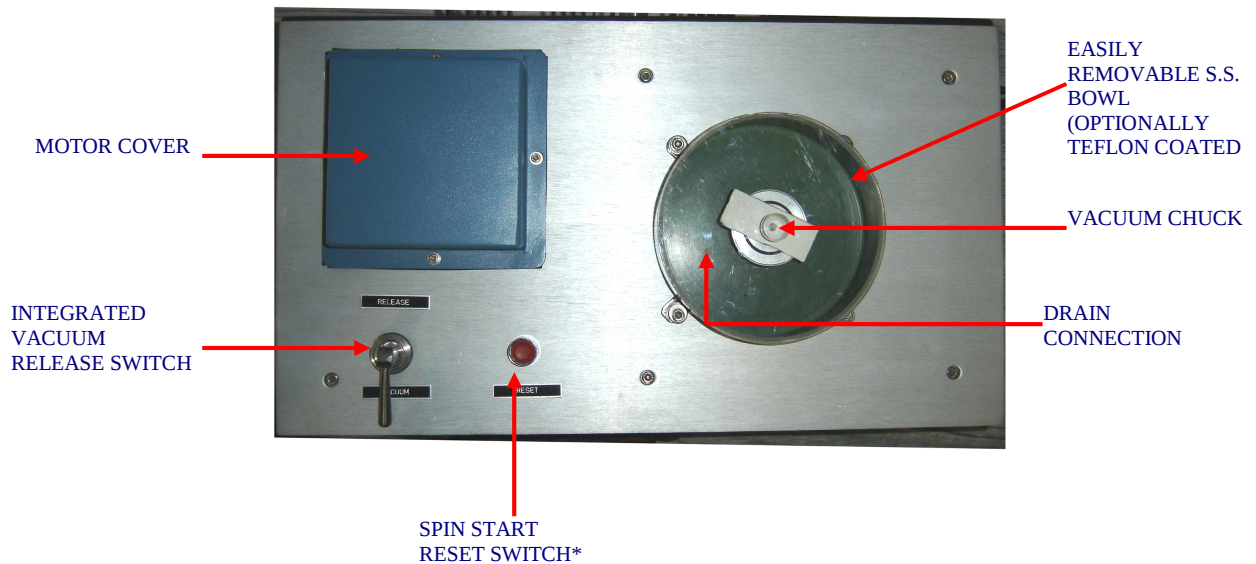
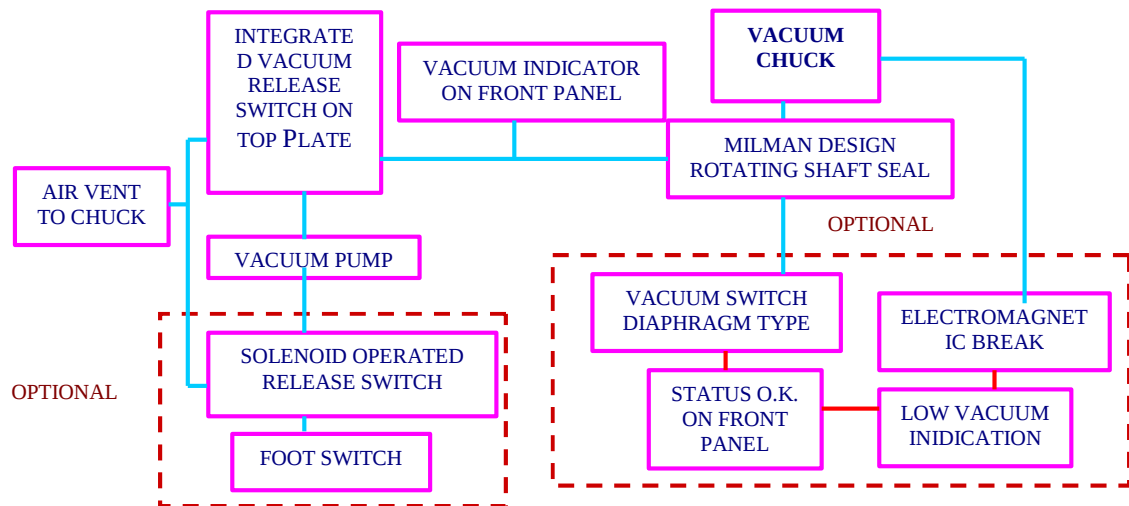
7. Hot Plate

Hotplate suitable for maximum 6" substrate is provided

8. Auto Liquid Dispenser

Auto dispensing unit for dispensing a pre determined amount of photoresist (liquid) to be spin coated can also be provided as an extra feature.





NOTE: MILMAN HAS THE RIGHT TO CHANGE ANY SPECIFICATIONS WITHOUT ANY NOTIFICATIONS.

