

Double Edge Shaving Blade Coater



The **Compact Coater** is an Industrial Coating system based on **Magnetron Sputtering Technology** designed for Sputter deposition of films of low thickness on cutting edges of Double Edge Shaving Blades. Basic coatings offered are Cr (Chromium) followed by CrN (Chromium Nitride). Platinum sputter coating or DLC (Diamond Like Carbon) coating facility can be provided on request.

A Pulsed Plasma based Argon Etching Facility is incorporated prior to the Sputter Deposition for sputter cleaning of contaminants and better adhesion of Cr/CrN layers.

Entire process execution including sputter cleaning and Cr/CrN bi-layer deposition on both edges is automated operation with PLC-PC base. User friendly SCADA software assists in operation of equipment along with Recipe programming, alarm management and trends.

The Coater is designed to coat 90000 Double Edge or 120000 Single Edge razor blades per batch in a typical coating cycle for Cr/CrN deposition.

MAIN FEATURES:

- ALL SS 304 CONSTRUCTION OF VACUUM CHAMBER, VALVES AND VACUUM PLUMBING
- ALL VITON® 'O' RINGS AND GASKETS
- UNIQUE DESIGN OF MILMAN MAKE MAGNETRON SPUTTERING CATHODE ASSEMBLIES WITH RARE EARTH MAGNETS AND DC/PULSED DC COMPATIBILITY
- TWO INDEPENDENT MAGNETRON CATHODES FOR DEPOSITION OF CHROMIUM AND CHROMIUM NITRIDE LAYERS
- ISOLATED SUBSTRATE HOLDER WITH BIASING FACILITY AS WELL AS 180 DEGREE ROTATION FOR COATING OF BOTH EDGES
- CLOSED LOOP PRESSURE CONTROL ELECTRONICS FOR PRECISE PRESSURE CONTROL DURING SPUTTERING
- CRYOPUMPING SYSTEM TO PROVIDE FAST INITIAL PUMP DOWN, CLEAN VACUUM AND GOOD THROTTLING FOR PROCESS PRESSURE CONTROL*

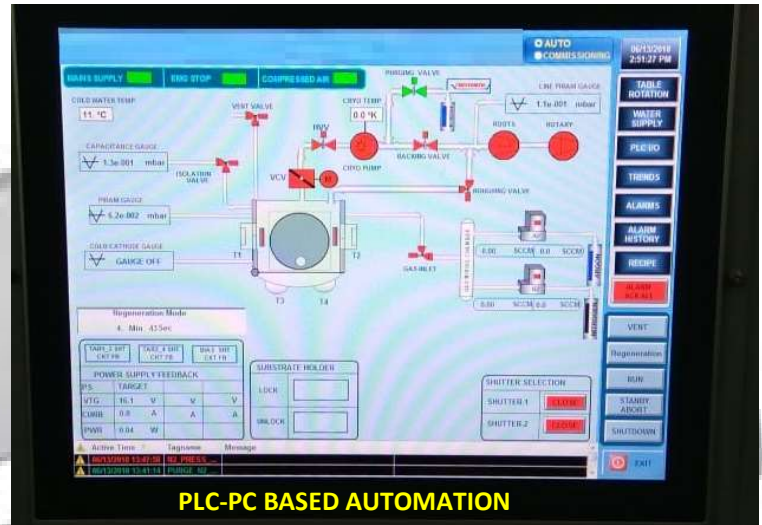
* The blades are handled in the form of stacks throughout the wet pre-cleaning process and are likely to release huge quantity of moisture during pump to base operation prolonging the cycle time. Cryopump inherently has very high pumping capacity for moisture and is strongly preferred option as high vacuum pump.



- COMPLETE PLC-PC BASED AUTOMATION WITH RECIPE PROGRAMMING FACILITY, AND MAINTENANCE MANAGEMENT.
- PRECISION MASS FLOW CONTROLLERS FOR REPEATABLE GAS CHEMISTRY AND PROCESS CONSISTENCY
- USE OF CE CERTIFIED CRITICAL ELECTRICAL PARTS
- LOW DOWN TIME AND HIGH RELIABILITY



Substrate Table: Table is dedicatedly designed to have 30 stations. Each station holds 3000 numbers of 0.1 mm thick double edge razor blades. The blades can be easily stacked together on the rigid stainless steel support thus exposing sharp edges of the razor blades to be coated to vapour sources. The total loading capacity therefore is 90000 for double edge and 120000 for single edge blades.



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