



Vacuum Equipment - Coatings - Optics

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VU Roll1600 Coating Machine



Fully automated VU "Roll1600" roll coating machine is intended for polymer film one side Al metallization. Uncoated stripes over the whole film length may be also obtained. Al coating is deposited by resistive evaporation. Base drum is cooled down to prevent polymer film overheating during deposition and heated up before chamber venting to prevent moisture condensation. Linear polymer film speed may vary for deposition of different thickness Al coating.



Specifications

Vacuum chamber dimensions, mm	Ø1600x(1200-1500)
Number of diffusion pumps, pcs	4
Total pumping speed, l/s	28 000
Number of pipping systems for vacuum chamber roughing, pcs	2
Roughing total pumping speed, l/s	1200
Number of pumping systems for diffusion pumps backing, pcs	2
Diffusion pumps backing pumping speed, l/s	300
Ultimate vacuum, Pa, no more than	6×10^{-3}
Total leakage in vacuum chamber, m³Pa/s	10^{-2}
Pumping time (without roll) to 10^{-2} Pa, min, no more than	30
Polymer roll dimensions, mm, no more than	Ø500x1200-1500
Polymer film thickness, µm	30-300
Number of resistive evaporators, pcs	11-13
Base drum cooling temperature, °C, no more than	-20
Base drum heating temperature, °C, no less than	25
Base drum cooling time, min	15
Base drum heating time, min	6
Polymer film speed, m/s	1-10
Metallization thickness non-uniformity, %, no more than	5
Process control	Automated, OMRON controller
Cooling water consumption, l/s	6.6
Machine overall dimensions, mm	8640x2780x2605
Weight, kg	18 000
Occupied area, m²	60
Power, kW, no more than	200

The coating machines and their components design and specifications are shown for reference; the real design and specifications may vary to meet customer requirements.

