



Roller Coater Wash-Dryer

A mechanical device available optionally on new Gemata Topstar roller coating machines and also lends itself to be retrofitted to such existing machines.



Thoroughly cleaning up a roller coater engraved cylinder at the end of a shift or between colour changes, apart from being essential, is laborious and needs to be carried out with care. Generally a coating line operator will do this taking quiet time during which there is no production. Gemata's newly developed device for its machines, once switched on will do the job including drying of the cylinder all on its own, leaving the operator free to carry out other tasks until the machine is ready for work. When retrofitting, Gemata supplies the device in kit form which includes a new geared motor required to drive the engraved cylinder.

This automatic washing device, known as the "roller coater wash-drier" consists of separate cleaning and drying units operating in a set sequence. The working cycle is programmable on the touch screen of the machine. The two units are mounted on a carrier which has an alternating movement running parallel to the engraved cylinder. The carrier is mounted on a linear guide with ball circulation driven by a gear motor with belt drive.

The cleaning unit incorporates two nozzles; a high pressure pump feeds each nozzle with water at 20 bar pressure. The nozzles spray the washing water onto the surface of the engraved cylinder. The lengthwise alternating travel of the cleaning unit which, because of its purposely shaped casing, removes the water laden with the chemicals trapped between the cylinder and the doctor blade during the lengthwise travel of the cleaning unit.

The drying device consists of a suction port supported close to the engraved cylinder. Suction is created by a vacuum generator fuelled by the compressed air supply piped to the machine.

The full automatic operation cycle takes 8 – 10 minutes and consists of three phases:

- First phase - one complete cycle (to and fro from one side to the other of the engraved cylinder) to remove the chemicals remaining between the cylinder and the doctor blade.
- Second phase - actual washing phase in two complete cycles.
- Third and final phase - drying in one complete cycle.

All cycles can be modified and programmed for optimum settings by the operator by means of the machine's touch screen. During the operation of the three phases the operator is available for other tasks such as the preparation of the chemicals required for the next production lot.

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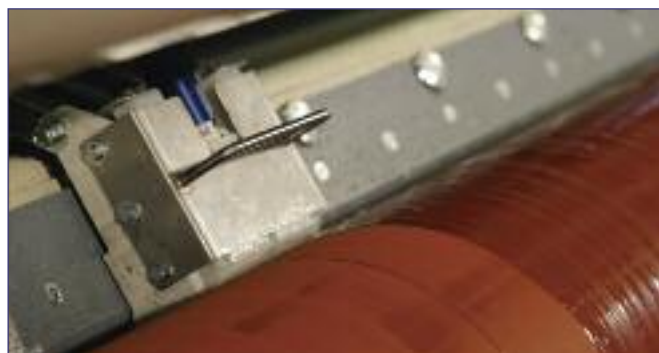
Cleaning device at rest – ready for the washing cycle



Cleaning device has commenced the cycle



*Cleaning device completing second cycle.
Wastewater/Chemicals mixture is seen behind the device*



Drying device in operation