

APPLICATION STORY

“LOOKS GOOD ON LIPS”

New Lipstick production line equipped with Ogura PHT Permanent Magnet Clutches

Allied Automation, an innovative company from Ireland, has developed a new Lipstick production machine. The formulations and production processes used in the manufacture of lipsticks play a key role in the strength of the final product. The new lipstick production line can produce up to 3600 units per hour.

Allied Automation has chosen the Ogura PHT 1.2D unit to guarantee a consistent and reproducible slip during the wind-up process.

The critical part of this manufacturing process is the high speed tube wind up. To accomplish this the base lipstick (in the primary tube) is held in place. A secondary tube, with an internal auger, sits on top of this tube of lipstick. A set of three jaws then clamp the base tubes and wind the auger into the lipstick. This winding process turns at approximately 200 RPM. The Ogura PHT 1.2D is set to approximately 1 pound inch of torque. As the base with

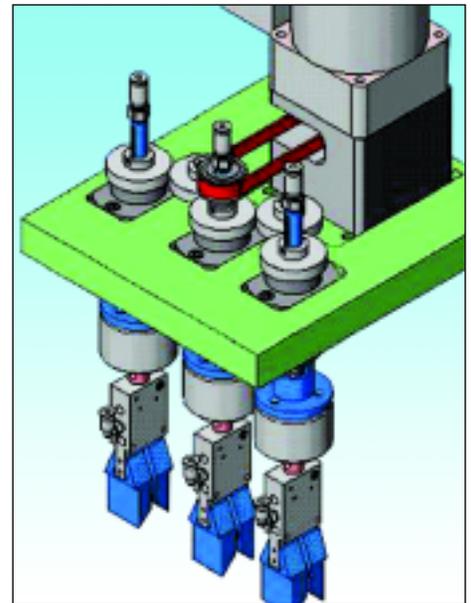
the auger is wound into the lipstick, it bottoms out. At that point the Ogura PHT permanent magnet clutch slips and goes into its torque limiting mode. Too much torque and the lipstick auger would be stripped inside the lipstick. Too little torque and the lipstick would not sit all the way in the tube.



Since the Ogura PHT clutches transmit this slip torque magnetically, instead of via friction, high volume accuracy is achieved tube after tube.

In the final process the tubes are picked up three at a time and go into an indexing table which rounds off the end of each lipstick.

Allied Automation has chosen the Ogura PHT 1.2D unit to guarantee a consistent and reproducible slip during the wind-up process. This is because the PHT clutch/brakes operate on a hysteresis (magnetic) principle. This allows torque to be transmitted without frictional contact so the units are virtually wear free. No external



Three Head Lipstick Winder

electrical connection is required; therefore, units function independently from power fluctuation. Another major benefit is that each unit can be adjusted within its given torque range, this allows the user to fine tune the torque to meet their requirements.

Since there is no frictional contact no wear particles are produced, keeping the machine, lipstick, and more importantly, lips everywhere looking pure.



Ogura PHT 1.2D Clutch