



On the lookout for excellence with spray booths

With a solid history of roller-coating machines, Gemata has been producing machinery for leather finishing since 1972. With recent innovations, such as finishing lines complete with spray-booth and drying-tunnels fitted with heat-recovery and energy-saving systems, the Spraystar-Evo is the company's latest offering. A positive initial market reaction to the Spraystar-Evo has made the company optimistic about achieving similar results as those obtained with its roller-coating machines.

The new Spraystar Evo spray booth from Gemata was designed in the wake of the requirement for lowering the environmental impact of leather production. The name Evo evokes the “evolution” of the Spraystar. This spray booth was already well known all over the world for its structural and technical features in terms of green finishing. Further improvements have drastically reduced the environmental impact and the operational running costs of the technology, while keeping the focus on quality and cutting yields. One of the most valued features is deionisation of the atomised air for the spray guns, which increases the deposit of finish on the leather by up to 40%. The deionised atomised air neutralises the sprayed product, thus making its expulsion from the nozzle linear.

A reduction in the release of emissions and particulates into the atmosphere is a main concern in the spraying operation. Already highly efficient scrubbers have been upgraded by adding an electronic system for their control and monitoring. This improvement ensures an immediate

service in case of malfunctioning and avoids fume emissions above legislative limits. The system supervises instances of either unexpected malfunctioning and scheduled maintenance operations.

Through experience gained from the development of lines for the automotive industry and by the use of machines such as the Starclean dedusting model, Gemata has achieved an evolution in its spraying lines.

The spray booth has been reconfigured with complete coverage of its upper side and in order to control the airflow inside the booth; ventilators controlled by differential gauges have been installed. The pressure inside the spray booth is kept higher than on the outside, thus the positive pressure avoids any contamination coming from any surrounding dust.

In the string conveyor system, the chemical build-up is removed by a rotating brush cleaning device, while for the chicken wire conveyor, the build-up can be manually peeled off quite simply. Further cleaning of the viewing windows over the conveyors is also made easier by their ability to slide



them out from the machine avoiding the need for operators to enter the booth.

The main structure of the booth has also been redesigned. Whereas previously the distribution shaft was internal to the booth, it is now located outside, leaving the inside free from mechanical parts to avoid issues with leakage, dirt deposits and other contaminants that could damage the surface of the

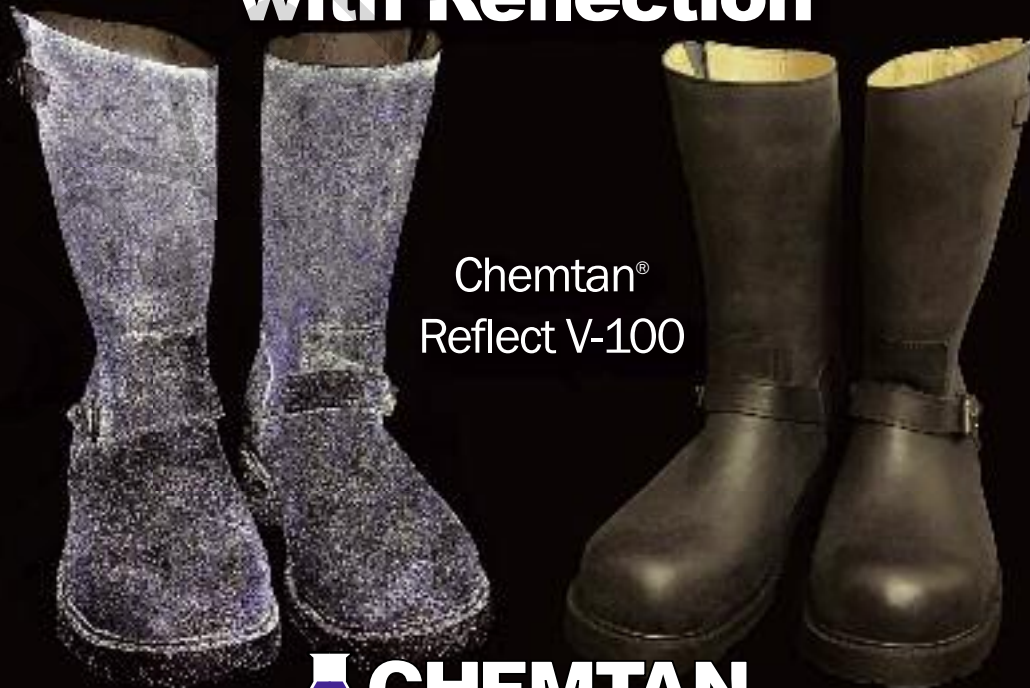
leather. This external arrangement also makes for a sturdy platform from where the operatives can stand alongside the machine. This innovation allows for safer working practice when servicing the moving parts.

The octagonal shape of the booth remains unchanged as it prevents the stagnation of fumes in the corners. This configuration gives a 10% reduction in air volume to be exhausted as compared to more traditional rectangular models.

Faster market demand along with requests for small lots of finished leather led Gemata to develop new systems to shorten washing and colour-change operations. The fast washing system allows the complete washing of the paint circuit in just a few seconds and the automated colour change system operates at a similar speed. The system automatically unloads the 'in use' paint, washes the spray guns and loads the new paint for the next batch, all under the control of an industrial digital computer without the need or presence of an operator.

Specific software and hardware installed on the Spraystar-Evo allow it to connect to local networks or the internet. A connection to a local network allows for input data such as recipes, details of the leather batch, instructions and processing settings, as well as the receipt of data relevant to the working process. The internet connection allows for connection with Gemata to rectify any issues by means of remote assistance or for the remote updating of the software. ☺

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