

ECOTAN: efficiency made simple

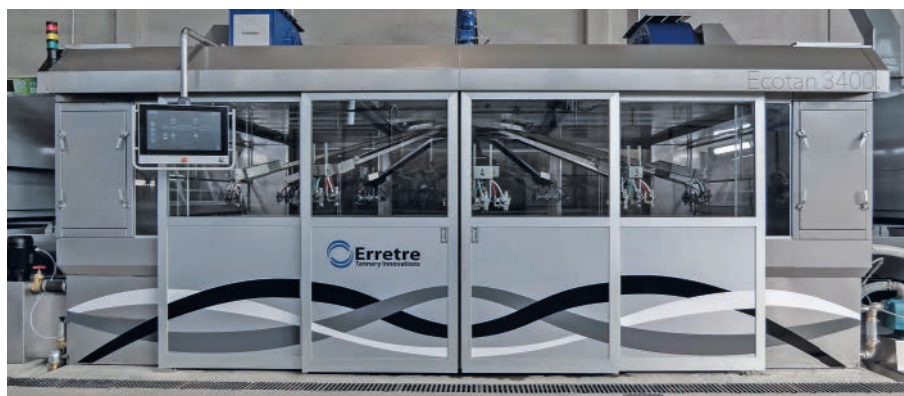
Ecotan is Erretre's new option for automated spray machines. A spray booth that achieves excellent results, designed to take into account the finer details but also the bigger picture with regards the most important requirements of leather finish coating operations.

Due to the design and build, Erretre's Ecotan is a spray booth which claims to be better for the environment and for human handling ergonomics. The spray booth's scrubbing action is based on the principle of intercepting the pollutants at their source to improve efficiency and reducing waste. To accomplish this, the air scrubbing process is now done at the bottom of the booth itself, this way being closer to the spray-guns. The air flow in the new booth is in the same directional path as that of the spray from the guns, therefore allowing for a better separation of the overspray, which also improves the transfer of the finish onto the leather and producing savings on finishing chemicals.

The size of the spray booth is considerably reduced as no external piping is necessary to connect to an external scrubber, which allows for improved floor space distribution. An added benefit to this is that without the external piping, accumulation of impurities within them is avoided.

When compared to traditional spray booths, air consumption is reduced by 50% suggesting a considerable energy saving and a reduction of the discharged pollutants. The air quality readings measured with the Ecotan booth show a threefold improvement compared to Erretre's Ecospray booth and 10 times better than the European Union limits. With such low emission values, it is even possible to consider the partial recirculation of the treated air or the installation of further specific treatments regarding VOCs where the air must be completely free of dust. The environmental impact of the Ecotan booth, when considering the three times improvement factor and half the airflow, the new spray booth is therefore six times better than a traditional booth and scrubber.

The air quality improvement means obvious savings in water volume and operator time for booth cleaning. Additionally, the booth washing operations are automated, reducing to a



minimum the need for manual cleaning, freeing operators to perform other essential tasks.

The Ecotan booth still conserves the key features of the Ecospray units such as large, easy to open doors for easy cleaning and a clear view of the interior of the booth. The large rotary diameter of the carousel allows more uniform coating with a variable number of spray arms, up to a total of 24.

All operations are easily controlled from a 20" touchscreen with a redesigned intuitive graphic interface which allows the actioning of personalised automatic operation sequences such as colour changes, spray-gun adjustments and programmed maintenance. The operation and control of the spray booth can be easily integrated with other central equipment and process control units, enabling access to collected data for assessing financial costs including finish chemicals, water and energy

consumption.

With the automation of the spray-booth operations, the collected data can be easily linked to other management software such as MES. The historical data of the machine's processes can also be accessed directly by the technicians at the machine if required.

Every spraying line is equipped with the NER model dryer, consisting of modules which are independent from each other allowing the creation of drying profiles where both the temperature and the air speed are controlled. Utilising temperature and humidity probes inside the drying tunnel, and by also measuring leather temperature, the dryers can self-regulate to adjust for varying ambient conditions. A hybrid version is also available combining hot air circulation and infrared heating for optimal drying and reduced energy consumption with savings of over 30%. 