

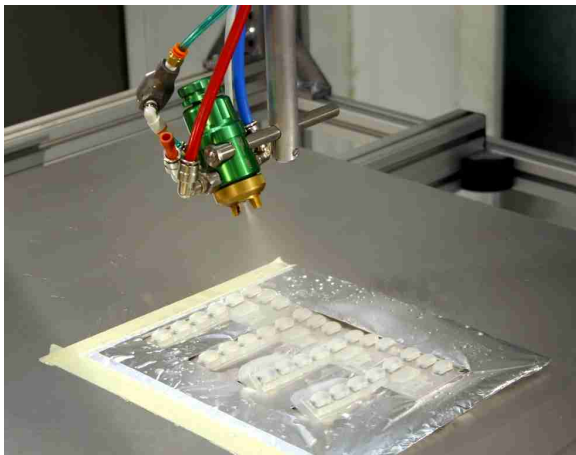


Sometimes, the world is flat.

New Horizontal Panel Painter Better Simulates Flat Line Processes

Most panel painting machines are designed with the same perspective. Vertical. That's a sensible approach for a number of reasons; the test panels are less prone to dirt and contamination, spray guns like horizontal orientation and many spray booths use cross-draft design to provide convenient airflow.

But while this arrangement mimics many paint processes, a number of other applications such as wood flooring and car hoods are usually coated on flat lines. So developing coatings and spray applications in a vertical orientation just doesn't make sense when trying to replicate the process in the lab. Technicians quickly find out that gravity matters, and paint just doesn't behave the same way when sprayed vertically



as it does horizontally. The forces acting on tiny paint droplets along with air currents in the paint booth often end up having unintended effects. What looks good in the lab may not look the same on the production line. One of the largest manufacturers of industrial and automotive coatings had exactly that concern; to make the lab process as close to reality as possible.

They tapped Cleveland, Ohio based Artomation when they needed a laboratory panel painter that would simulate flat line processes for their customers. Artomation already possessed the panel painting technology from their well established PanelPro line of multi-axis panel painting machines. The trick was just to flip things on their ear – and develop the PanelPro Horizontal.

PanelPro machines are used by many paint formulators and their raw material providers because they allow coating suppliers to create standards and reference panels for production benchmarking. Depending on the applications sometimes dozens of the same panel are needed for all sorts of durability and weatherability testing. These tests require each panel to have the exact same film build – a task impossible without an

automated system. The same holds true for color reference panels where even a few tenths of a mil of film build can alter the paint's appearance.

These new generations of machine allow lab technicians to dial in a recipe using simple, intuitive, Windows-based software. The recipe can then be stored and recalled at will to reproduce the exact same spray conditions. Not only does the software control the precise motion of the machine by permitting standard or customized spray paths to be programmed, but the software can control spray gun features such as fan pattern or atomization air, electrostatics, or bell speed at the same time. This enables recipes to be developed which have the greatest degree of uniformity possible.

The PanelPro-H combined these powerful attributes: precise motion along with powerful control software in a horizontal package for flat applications.

What makes PanelPro-H so ideal is that it provides a user-friendly mechanical and electronic control design on a machine



which can be tuned to accurately simulate real-world line conditions in the lab. "The PanelPro-H machine has the same Windows based control architecture as our other machines" says Artomation engineer Chuck Greene. "This software allows the customer to create a trajectory and spray profile that mimics what will happen in production. We've been doing this for years now in the vertical world. But for our customers who paint horizontally this provides a solution for them as well."

Right side up, or turned on edge, the latest developments in special effects pigments and more stringent test requirements have raised the bar for panel painting. Not only do formulators and raw material suppliers need to prepare more panels than ever (hundreds of each formula), but they need to do so with increasingly tight tolerance and for new coatings with more sensitive pigments where even small variations in the process can be noticeable. New machines like PanelPro are now available to make that chore less demanding on the time, resources, and budget of coating test labs. With affordable, computer controlled, servo drive panel painting machines provide a welcome solution to an otherwise daunting task.

The PanelPRO-H machine specifications and video clip can be viewed on the Artomation website at www.artomation.com