



NobleLight®



IR System Reduces Energy Use and Cycle Times For Automotive Interior

An Excelitas infrared system fitted to a purpose-built machine designed by P&D Engineering is significantly reducing energy costs and cycle times in the production of soft-trimmed automotive interior products at KJ Ryan's Coventry facility. The new system has also proven more cost-effective than earlier systems which relied on ceramic heaters.

KJ Ryan specializes in automotive interior trim for both the bespoke market and Tier 1 automotive customers.

Its capabilities range from individual components to complete car interiors, using a combination of modern technology and flexible manufacturing techniques, combined with traditional skills and materials.

Typical trim materials include PVC, soft fabrics and leather for components including armrests, seat back panels, gear shifters and door panel inserts.

A recent project was for a soft-trimmed seat-back component. To produce these, KJ Ryan called on the proven expertise of P&D Engineering, a company with many years of experience working with numerous companies in the automotive supply chain, who designed and built a special purpose wrapping press.

In operation, the adhesive-coated, cut-to-size cover stock and substrate, are loaded into the bottom and top of the press respectively. A heater assembly is then shuttled into the machine and heats both the components, thereby activating the adhesive coating. The heater assembly is withdrawn and the substrate and cover stock, which is also made more pliable by the heat, are pressed together and the cover stock is wrapped and laminated around the former to create the finished product, which is then removed from the press.

In previous machines, the heater assembly used ceramic heaters. However, these were energy-intensive and needed to be replaced at regular intervals. Consequently, for this new press, P&D Engineering replaced the ceramic heaters with twelve fast-response medium-wave infrared emitters from Excelitas. These have reduced energy consumption by 73% and their fast response allows shorter ramp-up times, which has meant that cycle times for the operation are now significantly faster. In addition, overall costs have also been reduced, as the new infrared system has a much longer service life, which also means lower maintenance requirements.

"We are very pleased with the performance of the new press systems," says James Billingham, Project Engineer at KJ Ryan, "In fact, we have now asked P&D to provide two more presses equipped with the infrared heating system."

FEATURES

- Reduced energy consumption
- Quicker ramp-up time

TECHNICAL DATA

- Fast-response medium-wave infrared emitters

