THE MATRASUR RTM CONCEPT

This low pressure, semi-automatic, cyclical production process for the manufacture of parts using composite materials utilizes the combination of MATRASUR Composites vast experience and the very latest technology.

The new RTM CONCEPT from MATRASUR is a unique production line package which embodies advanced technologies to guarantee quality, optimise throughput, maximise control of the RTM operation, allow precise costings to be produced and ensure compliance with increasing environmental constraints. Utilising its considerable expertise in the composites industry, MATRASUR tailors the RTM CONCEPT to suit individual production requirements by linking together proven control, production and handling techniques as a complete co-ordinated system. Each system is thoroughly tested under production conditions prior to installation, eliminating the need for time-consuming production trials, avoiding teething problems and ensuring cost-effectiveness from day one. With the RTM CONCEPT, companies no longer need to carry out their own research and development – MATRASUR undertakes this on behalf of customers and delivers a proven RTM solution backed-up with a complete technical support and maintenance programme.

Automatic gun
It is fixed in place on the male mould. Injection and cleaning are automatic.

Advanced technology mould sealing
Mould closing and injection under vacuum.

Digital display
Controls, monitors and displays consumption of raw materials at all times (in kg/ltm, kg/minute and kg/day).

Mould rotation
Ensures the mould is always closest to the extraction system, thus providing operator safety. Baffles separate Gelcoat solvent from pigment to eliminate filter blockage.

Needleless gun
Impossible for resin or Gelcoat flow to be out of phase with that of the catalyst when starting or stopping spraying. Provides greater precision.

Air assist nozzle
Eliminates porosity in the Gelcoat during rapid curing, due to the very low spray pressure.

Catalyst detector
If the catalyst percentage varies from its setting the gun is automatically shut off and flushed.

Injection equipment
Low pressure, double-acting, positive displacement pump which provides a constant flow. Pneumatic motor with specially hardened hydraulic cylinder to withstand filler abrasion.

Multi-colour Gelcoater
Colour changing without material loss, flushing or stopping production.

Heater
Variable temperature control heater with display is situated close to the spray-gun and ensures year-round continuity of Gelcoat viscosity and optimises product surface finish quality.

Mould temperature control
Reduces gel times and optimises production cycles regardless of factory temperature.

Mould flexibility
In the case of moderate production rates the system can operate using only one male and female mould.

Special resin tank
Filling, mixing and degassing is under vacuum and fillers are kept in suspension prior to pressurised dispensing.

Control cabinet
The automatic system controls all of the operations. A manual override allows fine tuning and adjustment of the process.