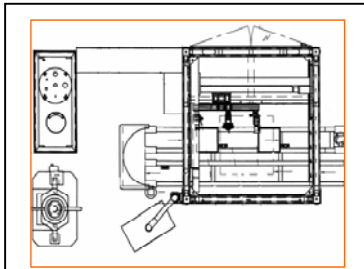


TRW Automotive working in partnership with BARTEC.

Eight projects in the last five years.

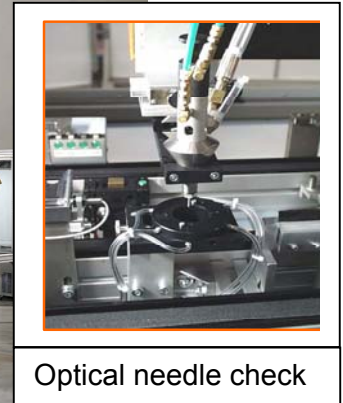
Sealing, bonding and assembly electronic control units



System Layout



The BARTEC 560C cell in the automated production line



Optical needle check

BARTEC Dispensing Systems

BARTEC Dispensing Systems specialise in the design and manufacture of standalone machines and fully automated production systems for mixing and dispensing liquid resins such as epoxy, polyurethane and silicone. Applications include potting, encapsulation, bonding, sealing and foaming mainly of electronic components and assemblies for the

TRW Automotive Birmingham

TRW Automotive manufactures Electronic Control Modules for Vehicle Dynamics Applications e.g. Chassis and Powertrain controls.

Partnership:

In the last five years BARTEC have completed seven projects working with TRW and the eighth project is currently in progress. These particular projects involved sealing and bonding.

Process and equipment:

BARTEC equipment is used in automated production lines to dispense one component silicones for sealing and also to mix and dispense two component thermally conductive silicones for bonding. These materials are applied in the form of beads and layers to

areas on the products within one BARTEC 560 C dispensing machine.



Within the same BARTEC 560 machine an integrated laser sensor checks the height of the dispensed materials. The system is programmed to handle a range of product variants and after the dispensing and height check process the products are transported on palletised conveyors to the next station e.g. a BARTEC assembly station where the lid and housing are automatically pressed together at a controlled force. The products are then transported through thermal curing systems.

correct ratio but also applied to each product variant with precision and the process must be under very tight control in order to guarantee the quality of the products produced.

Why BARTEC:

Robust reliable equipment with a high level of process control is a prerequisite and BARTEC offer from high quality standalone machines through to fully integrated production lines.

However TRW need more than a machine builder. In order to reduce costs and reduce the time to market TRW need to work with a specialist partner from the very early stages of each project.

BARTEC are an ideal partner offering:

- Input into product design.
- Material search & selection.
- Sample production.
- Production simulation in the laboratory.
- Rental equipment for pre-series production.
- Conceptual design for the final production system.
- Installation, training and commissioning.
- After sales support for the life of the product.