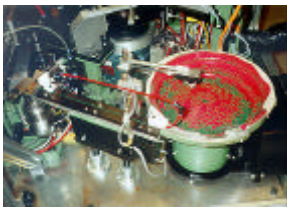
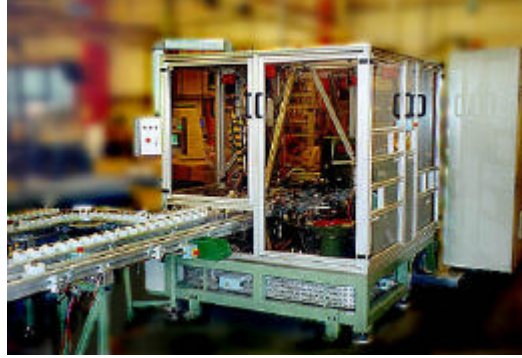


production line automation

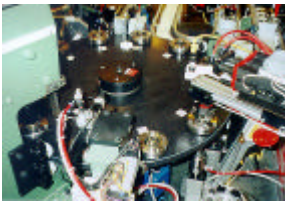
TQC have performed a number of integrated production line automated projects resulting in reduced labour and increased quality of product.

The method by which TQC has succeeded in this area is by utilising existing technology modules and integrating proprietary equipment into the automated production system.



Although a modular design approach has been used throughout, the configuration of the equipment has been of a bespoke nature.

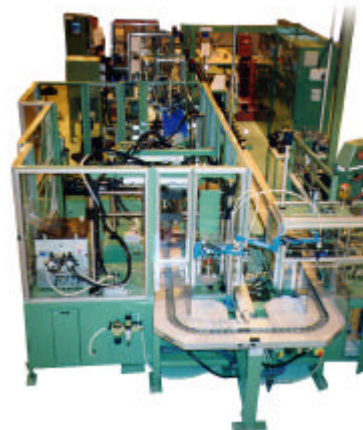
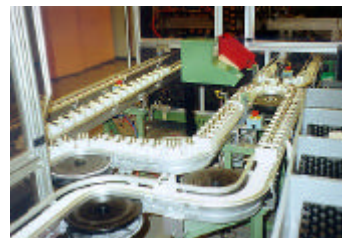
Many of the systems supplied have an integrated control system incorporating both PLC and PC control. As a result of the combination of controllers, sophisticated statistical process control has been included for real time monitoring of the production process and final function testing.



In addition to 100% product validation and test, full MIS facilities for production recording have been included in many systems supplied. TQC's integrated in-house expertise covering all aspects of design, manufacture and assembly in the areas of mechanical, electrical and control, providing a professional and experienced service to our clients.

The range of equipment and operations include the following:

- Component handling via hoppers, magazines and bowl feeders.
- Component handling via pick and place units.
- Component transportation via conveyors, pallets and platens.
- Vision systems using cameras and image processing software.
- Blow feed screw driving systems.
- Process welding, heat treatment, drying and curing processes.
- Component washing and cleaning processes.
- Hydro-pneumatic crimping, swaging, piercing and staking.
- Rotary indexing assembly machines.
- Integrated gauging, weighing, testing, and measurement stations.
- Gluing, gas and liquid filling/charging stations.
- Component marking and labelling.
- Automatic component setting and adjustment.



The above equipment as separate modular machines requiring operator interaction can be provided. Alternatively, the equipment can be supplied as part of an automatic or semi automatic assembly line.

