

Automotive Plastics – Front Bumper Assembly and Press Machine

TQC have produced a suite of equipment for the semi-automatic assembly of a complex front bumper assembly

Main Machine Features:

- Fabricated Frame
- Laser cut tooling
- Light curtain operator access
- HMI with graphical operator / maintenance prompts
- Barcode driven assembly sequence
- Automated pressing of parts with sensing.
- Part clamping, only released for passed parts
- Integrated X-Rite colour sensing

Two additional benches supplied for sub assembly operations that are carried out prior to the main assembly



The machine tooling provides location for the main painted front bumper mouldings to which the operator adds a number of trim pieces.

A barcode drives the assembly process for each part with the machine HMI indicating the required items for the operator to fit.

Painted mouldings are automatically colour sensed using an X-rite system.

The operator manually loads all indicated parts onto the bumper, ensuring that clips are properly aligned before the machine fully completes the assembly automatically by pressing home the individual components.

The main bumper moulding is automatically clamped into the tooling and is only released once all the components have been assembled correctly.

