



IP65 Valve Manifold

Industrial Automation

creative solutions :
designed & delivered

Established in 1990, Steelman Engineering has built an unrivalled reputation on innovative design, responsive customer service and superior craftsmanship.

We have over 10 years hands-on experience in Industrial Automation. Our portfolio of services and products have benefited many industry sectors and improved production throughout the UK. We provide solutions in the following fields:

- **Components:-**
Cylinders, valves, air treatment units, fittings and all accessories
- **Control panels:-**
Specification and build, pneumatic and plc based
- **Full System:-**
Specification, supply and build

Our solutions are bespoke and as unique as your company. We carry out on-site consultations to identify and understand your needs. For our standard range of products, please request a copy of our full colour brochure.

Our experience varies throughout many industry sectors addressing production requirements within the following market sectors:

- Aeronautical
- Automotive
- Food
- IT Manufacture
- Metal Fabrication
- Pharmaceutical
- Tobacco
- Wood Working





Aston Martin DB9



Cold Cure Fixture for Aston Martin DB9

Logical Innovation.

Many companies have benefited from our solutions. We have specified, supplied and installed systems to facilitate:

1. The production of the Aston Martin DB9 chassis.
2. The installation of manufacturing cells for nacelle assembly at Bombardier Shorts PLC.
3. The assembly and welding of jigs at Uni-trunk.
4. The introduction of assembly conveyors at TK ECC.



Filter Regulator



Bosch Cylinder



Flow Control



Cylinder



Zeus Valve



Brauer Clamp



Shock Absorber

Aston Martin DB9 Fixture for Chassis

Problem:

For the manufacture of the Aston Martin DB9, a custom designed jig was required to clamp panels in a precise position until the bonding process of the panels to the car was completed.

The concept not only had to be efficient but also extremely safe as technicians work on the car during the defined bonding process.

Solution:

Steelman Engineering created an innovative design concept and proposed a unique system encompassing a plc control panel, pneumatics and vacuum

system for installation. The vacuum system holds all relevant components on the jig until the part assembled chassis is inserted. Pneumatic cylinders then clamp the chassis in a precise position. They also transfer, hold and press the panels onto the sub-assembly. The system will automatically release after a pre-set period has elapsed. The proposal met with all of the chassis production process requirements. Approval of the proposed system was rapidly awarded and manufacture and installation deadlines were stringently met.

Steelman Engineering has been subsequently asked to submit design proposals for 5 further jigs as an integral element of the complete automation of the new production line.

Bombardier Shorts

Problem:

A two-piece jig for assembly work on nacelle has to be clamped at 4 precise points simultaneously with a force of 800kg. If any of the 4 cylinders release prior to the work being completed, thousands of pounds worth of damage would result.

Solution:

After a period of consultation with Bombardier Shorts, Steelman Engineering proposed a pneumatic system incorporating swing clamp cylinders and control system to provide the required clamping force without hindering access. The serious issue of the cylinders releasing due to a failure in the

air supply was overcome by utilising a pressure sensitive lock-out valve as a security measure.

The result of the initial success has led to the commissioning and successful installation of four additional systems.



Control Panel

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