

ENHANCING MANUFACTURING EFFICIENCY WITH CUSTOM JIGS AND FIXTURES



Overview:

KAJUL, a Midlands-based firm specialising in tool and component engineering and development, recently undertook a significant project to supply custom jigs and fixtures for a local manufacturing business. With expertise in Computer Aided Design (CAD) and Project Management, the team at Kajul was well-equipped to take on this challenge.

The Challenge:

The client, a local manufacturing business, sought to enhance its efficiency by implementing a purpose-built robotic welding assembly line in a new facility. To achieve this goal, they required a wide range of custom jigs and fixtures tailored to their specific manufacturing processes.

The Solution:

KAJUL leveraged their experience and expertise to design and manufacture a variety of jigs and fixtures perfectly suited to the client's needs. Understanding the distinction between jigs and fixtures, the team ensured that each component served its intended purpose effectively.

- **Jigs:** These were designed to hold and locate the work pieces while guiding the tools, thus improving consistency in the welding process.
- **Fixtures:** Designed to securely hold and locate the work pieces without guiding the tools, ensuring their precise positioning during welding.

The Results:

The implementation of custom jigs and fixtures provided several significant benefits to the client:

Increased Productivity: By streamlining the manufacturing process and optimising work piece positioning, the custom jigs and fixtures contributed to a notable increase in productivity.

Improved Quality at Volume: With precise work piece positioning and consistent welding parameters facilitated by the jigs and fixtures, the client achieved higher quality outputs even at high production volumes.

Reduced Rejects: The enhanced precision and repeatability offered by the custom jigs and fixtures led to a reduction in rejects, minimizing material wastage and rework costs.

Compliance with Supply Chain KPIs:

Particularly crucial in sectors like automotive manufacturing, the custom solutions ensured compliance with stringent Key Performance Indicators (KPIs) set by the supply chain.

According to Darren Laker, General Manager of Kajul, “Our expertise lies in manufacturing assembly and inspection fixtures. These solutions enable our clients to achieve precision in their manufacturing processes, ensuring both efficiency and quality. Assembly fixtures facilitate seamless component integration, while inspection fixtures guarantee precise positioning and adherence to tolerances.”

Conclusion:

The successful collaboration between Kajul and the local manufacturing business exemplifies

the importance of custom jigs and fixtures in enhancing efficiency, quality, and compliance in modern manufacturing environments. By leveraging their expertise in design and engineering, Kajul continues to drive innovation and excellence in the industry.

About Kajul

KAJUL is a Midlands-based design development company that specialises in delivering innovative, cost-efficient engineering solutions to meet your specific requirements.

With experience across all sectors and industries, we have the capability, expertise and problem-solving ability to address design engineering and engineering challenges for those clients looking to outsource engineering development.

With a strong understanding of manufacturing processes and working with the latest technologies, we can produce accurate tooling or prototypes of the highest quality on time and within budget.

Taking a consultative and collaborative approach, we will listen to your needs and work as your partner to deliver exactly the solution you require.

