ZED AXIS

AUTOMOTIVE ENGINEERING & MANUFACTURING SOLUTIONS

Design • CNC Manufacturing • Fabrication • Assembly

Zedaxis Engineering Solutions Pvt. Ltd.

ABOUT US

At Zedaxis, we deliver precision engineering and manufacturing solutions for the automotive industry, supporting OEMs, Tier suppliers, and industrial partners across the UK and beyond.

From concept development and CAD design to CNC machining, fabrication, and assembly support, we provide end-to-end engineering solutions built for accuracy, repeatability, and production efficiency.

Our capabilities include precision-machined components, structural fabrication, jigs & fixtures, prototype development, and manufacturing support for a wide range of automotive applications.

With integrated design and manufacturing workflows, we help clients reduce lead times, improve manufacturability, and ensure reliable project execution from prototype to production.

VISION

To deliver simple design and reliable manufacturing, every time.

MISSION

Simplifying complex engineering challenges.

VALUES

Quality First
We are ISO 9001:2015 certified, ensuring every output meets international quality standards.

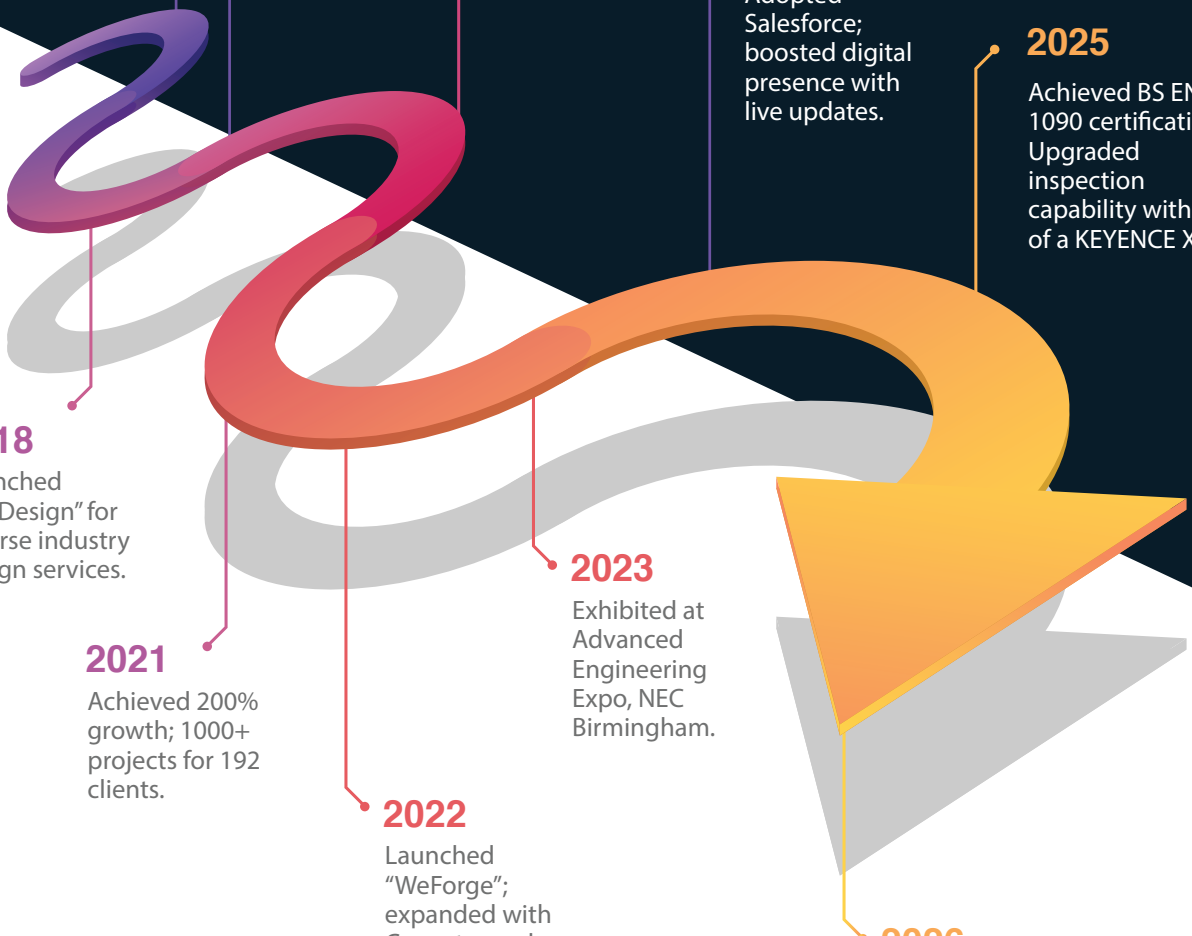
Integrated Workflow
Everything is synced from design to delivery, powered by Salesforce. It's how we stay fast, focused, and flawlessly connected.

Sustainability-Driven
Sustainability is a journey, and we're taking real steps to reduce our footprint and build a better future.

People-Focused
We invest in the next generation of engineers, and we're committed to diversity, equal opportunity, and fair labour practices in both India and the UK.



OUR JOURNEY



2017
Started in Wolverhampton; expanded with India Factory setup.

2018
Launched "WeDesign" for diverse industry design services.

2019
Added in-house manufacturing and design validation capabilities.

2020
Exhibited at Middle East Rail Expo in Dubai.

2021
Achieved 200% growth; 1000+ projects for 192 clients.

2022
Launched "WeForge"; expanded with Coventry and India factories.

2023
Exhibited at Advanced Engineering Expo, NEC Birmingham.

2024
Adopted Salesforce; boosted digital presence with live updates.

2025
Achieved BS EN 1090 certification Upgraded inspection capability with the addition of a KEYENCE XM-5000.

2026
Initiated AS9100 certification programme, aligning quality systems and manufacturing processes to meet aerospace and high-reliability engineering standards.

ENGINEERING DESIGN FOR AUTOMOTIVE SYSTEMS

At Zedaxis, every automotive solution begins with precision engineering. We develop production-focused designs that improve manufacturability, assembly efficiency, and long-term performance across automotive applications.

From concept development to detailed engineering, our team supports prototype and production requirements with accurate CAD models, technical drawings, and assembly-focused design solutions.

2D & 3D CAD DESIGN

We create accurate and detailed engineering models using industry-standard software:

AutoCAD · SOLIDWORKS · ptc · AUTODESK INVENTOR

Whether you need a complete design from scratch or modifications to existing drawings, our team ensures it meets manufacturability and compliance standards.

SIMULATION & STRENGTH ANALYSIS

We validate design performance using industry-standard tools like SolidWorks Simulation and Ansys for:



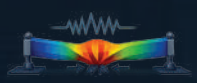
Structural



Thermal



Fluid dynamics



Modal, buckling, and fatigue analyses

This helps ensure your product functions reliably under real-world conditions before production.

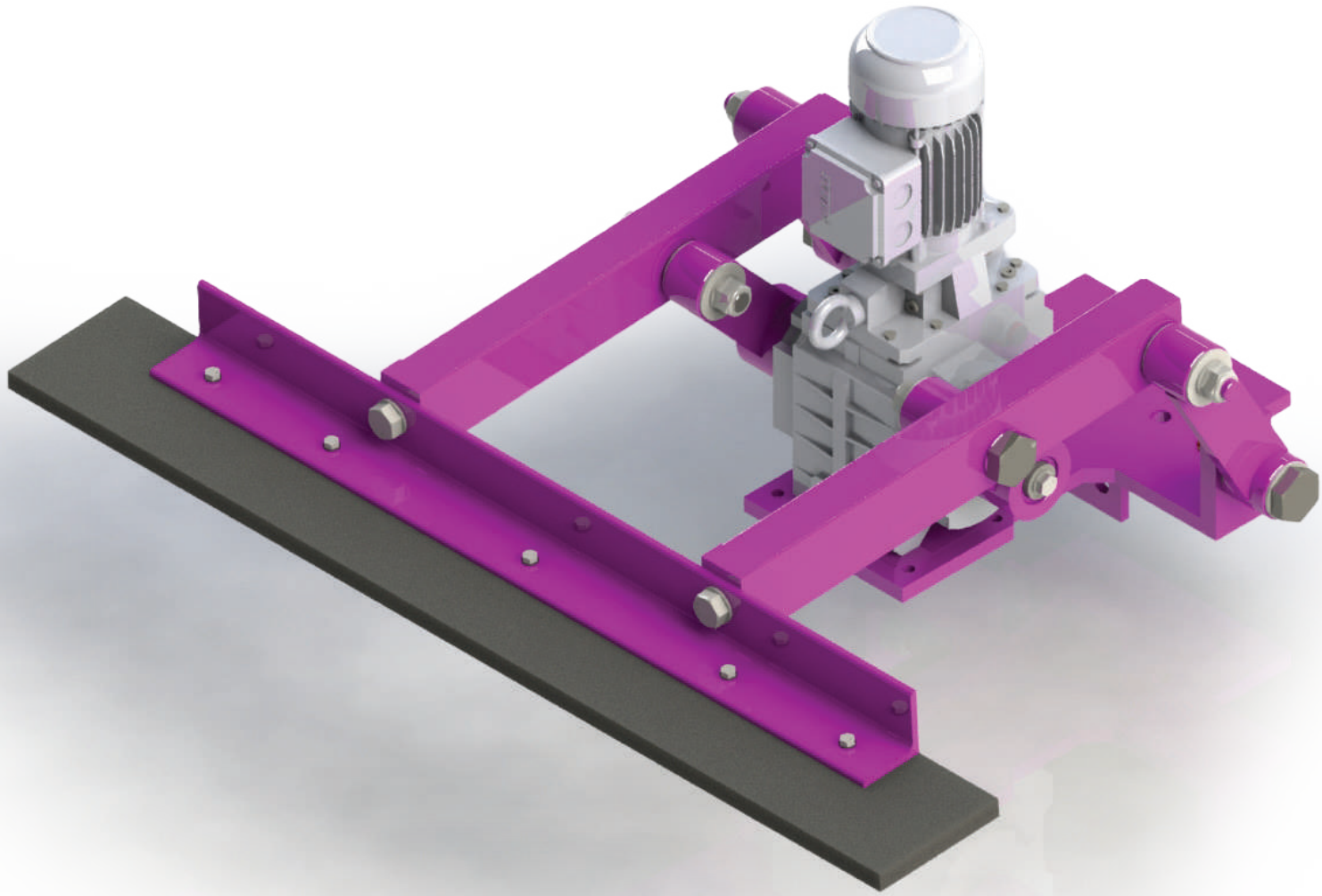
AUTOMOTIVE ENGINEERING & DESIGN

Zedaxis provides engineering design support for automotive and industrial applications, working closely with OEMs, Tier suppliers, and manufacturing partners to develop reliable, production-ready engineering solutions.

Our design team understands automotive manufacturing requirements, including dimensional accuracy, tolerance control, manufacturability, structural integrity, and efficient assembly to ensure every component performs reliably throughout its service life.

OUR DESIGN CAPABILITIES INCLUDE:

- Component and assembly design
- Design-for-Manufacture (DFM)
- Reverse engineering of automotive PARTS
- Manufacturing drawings with revisioN CONTROL
- Fixture and tooling design
- Structural and mounting system design



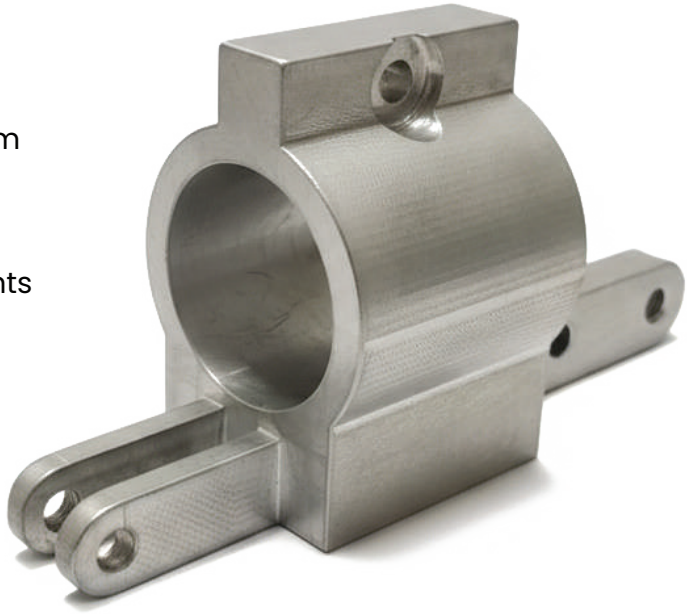
PRECISION CNC MACHINING

Zedaxis manufactures precision-machined automotive components with a strong focus on accuracy, repeatability, and production efficiency.
From prototype quantities to batch production, our machining capability supports a wide range of automotive and industrial applications.

CNC TURNING & MILLING

Machining capabilities:

- CNC turning up to Ø1000 mm
- Milling travel up to 1270 × 508 × 635 mm
- 3-axis and 4-axis machining
- Drilling, tapping, boring, and pocketing
- Precision turned and milled components



Materials:

- Mild Steel
- Stainless Steel
- Aluminium
- Brass & Copper alloys
- Engineering plastics

COMPONENTS WE MANUFACTURE

- Shafts & spindles
- Bushes & sleeves
- Housings & flanges
- Mounting brackets
- Precision interfaces
- Prototype automotive components





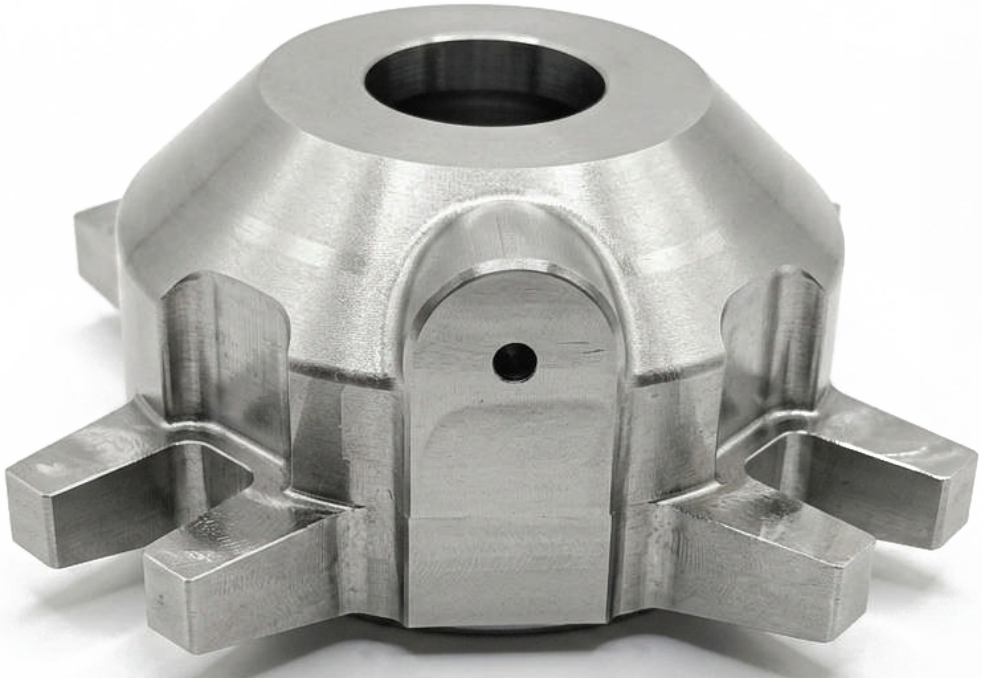
PRECISION COMPONENTS

Representative turned, milled and engineered components manufactured to customer drawings.











JIGS, FIXTURES & TOOLING

We design and manufacture precision fixtures and tooling systems that improve manufacturing accuracy, repeatability, and assembly efficiency. Our fixture solutions are developed to support machining, welding, inspection, and assembly operations across automotive production environments.

FIXTURE CAPABILITIES

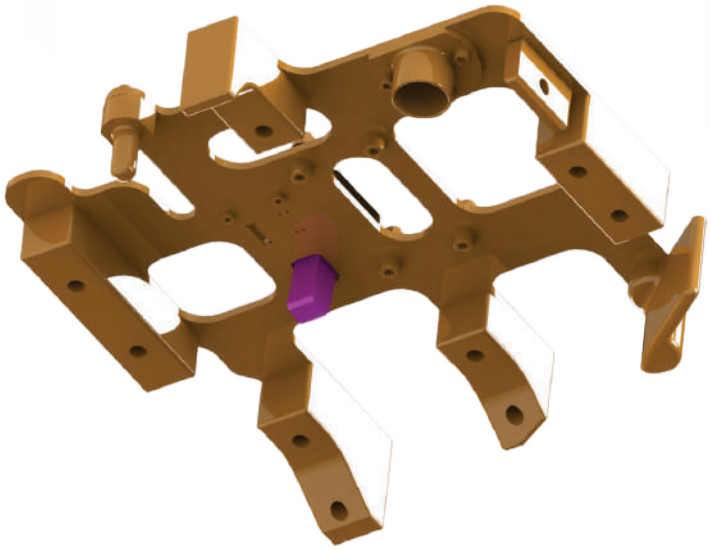
- Welding fixtures
- Machining fixtures
- Inspection fixtures
- Assembly fixtures
- Drill jigs
- Custom production tooling



ENGINEERED FOR PRODUCTION

Our fixture systems are designed to:

- Improve positional accuracy
- Reduce setup time
- Increase repeatability
- Minimize operator error
- Improve manufacturing efficiency



STRUCTURAL FABRICATION & WELDING

(CERTIFIED BS EN1090)

Zedaxis delivers fabricated automotive structures and assemblies designed for durability, fitment accuracy, and production consistency.

From support brackets to welded structural assemblies, our fabrication capability supports both prototype and production-level requirements.

FABRICATION CAPABILITIES

- MIG & Laser welding
- Structural fabrication
- Sheet metal assemblies
- Mounting structures
- Fabricated support systems
- Welded automotive assemblies

BUILT FOR PERFORMANCE

- Accurate fit-up during assembly
- Consistent fabrication quality
- Reliable structural integrity
- Production-ready assemblies
- Installation and integration support



QUALITY & INSPECTION

Quality is embedded into every stage of our manufacturing process — from material verification to final inspection.

We ensure every component meets defined tolerances, dimensional requirements, and manufacturing specifications before delivery.

INSPECTION CAPABILITIES

- Dimensional inspection
- Vernier & micrometer inspection
- Height gauge verification
- Surface finish inspection
- Assembly fitment checks
- In-process and final inspection

PORTABLE CMM INSPECTION

Using advanced portable metrology systems (Keyence XM-5000), we support:

- High-accuracy dimensional verification
- Alignment and positional checks
- Inspection of fabricated structures
- Repeatable inspection reporting



PROJECT DOCUMENTATION & ENGINEERING SUPPORT

Zedaxis provides structured engineering documentation to support manufacturing, inspection, assembly, and project execution across automotive and industrial applications.

Our documentation process ensures accurate communication between design, manufacturing, and quality teams — reducing production risks and improving overall efficiency.

CORE DOCUMENTATION SUPPORT

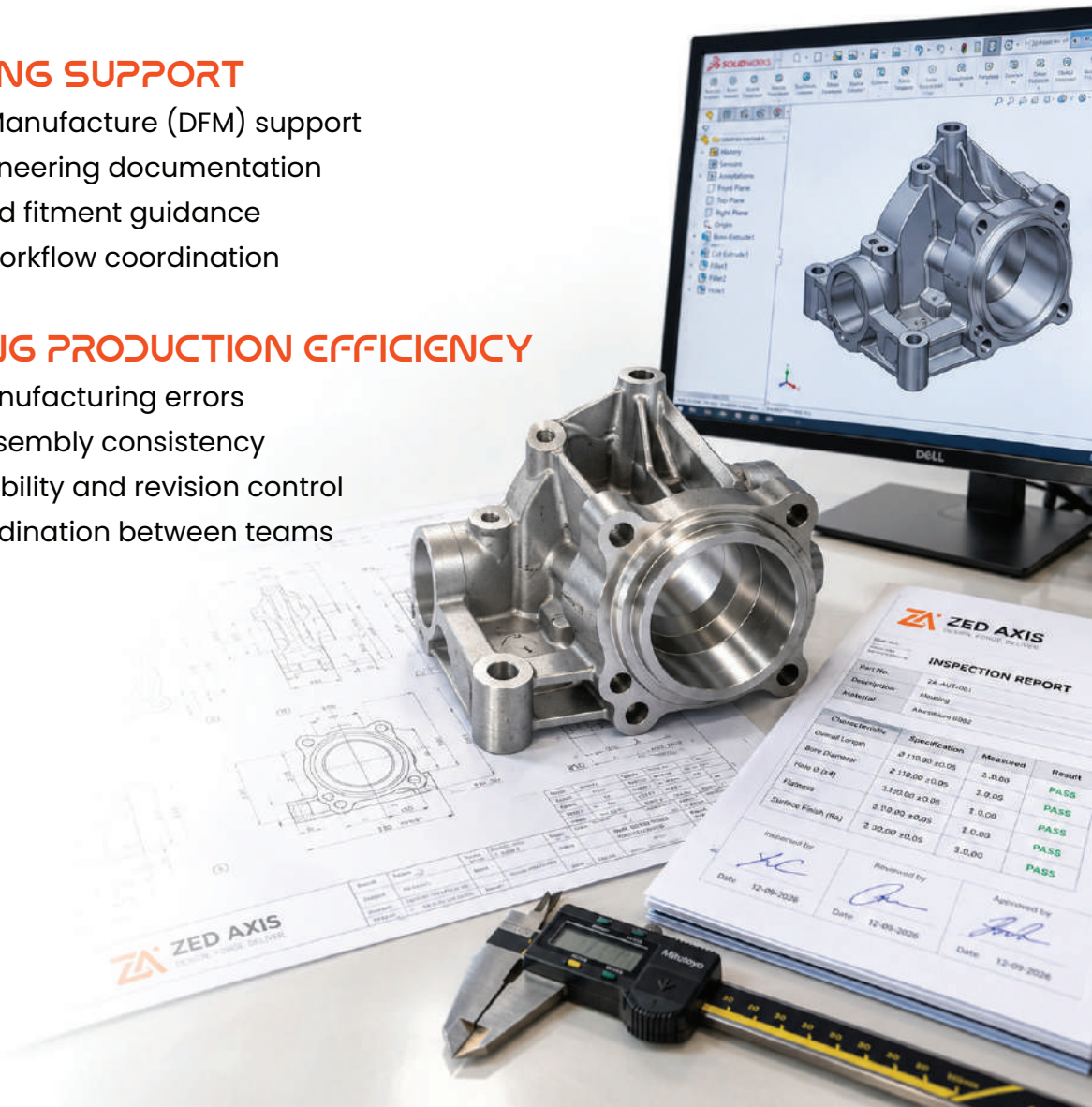
- General Arrangement (GA) drawings
- Manufacturing and assembly drawings
- Revision-controlled documentation
- Inspection and quality reports
- Process and manufacturing records

ENGINEERING SUPPORT

- Design-for-Manufacture (DFM) support
- Reverse engineering documentation
- Assembly and fitment guidance
- Production workflow coordination

SUPPORTING PRODUCTION EFFICIENCY

- Reduced manufacturing errors
- Improved assembly consistency
- Better traceability and revision control
- Efficient coordination between teams



QUALITY & COMPLIANCE

Zedaxis operates under internationally recognized quality and fabrication standards, ensuring every project meets strict engineering, manufacturing, and compliance requirements.

Our systems are designed to support automotive, industrial and high-reliability engineering projects, with a strong focus on consistency, traceability, and continuous improvement.

CERTIFICATIONS

ISO 9001:2015

Quality Management System
Ensuring consistent processes, controlled documentation, and continuous improvement across all operations.

BS EN 1090

Structural Fabrication Compliance
Certified fabrication processes for load-bearing steel structures used in infrastructure and industrial applications.

AS9100 (In Progress)

Advanced Quality Standard
Currently implementing AS9100 quality systems to further strengthen process control, traceability, and high-reliability engineering standards.

QUALITY SYSTEMS

- Controlled manufacturing processes
- Revision-controlled documentation
- Material traceability
- In-process and final inspection
- Inspection reports and quality records
- Calibration-controlled measurement systems

BUILT FOR RELIABLE PRODUCTION

- Consistent manufacturing quality
- Reduced production deviations
- Improved repeatability
- Reliable dimensional accuracy

CASE STUDY

CASE STUDY 1 :

THE 24-HOUR SHAFT REPAIR-RESTORED TO SERVICE CONDITION

THE CHALLENGE

A critical shaft was received with significant wear and surface damage around the working section. With the component required urgently, replacing the complete shaft would have resulted in additional downtime and lead time. The requirement was to restore the damaged component and return it to service as quickly as possible.



THE SOLUTION:

- Assessed the existing shaft and identified the damaged/worn areas
- Reworked the affected section to restore the functional geometry
- Precision machined the shaft to achieve the required fit and finish
- Restored key features including the shaft diameter, thread and keyway area
- Completed final dimensional and visual inspection
- Prioritised the job through production for an emergency turnaround



THE OUTCOME:

- Shaft successfully refurbished rather than replaced
- Worn and damaged surfaces restored
- Critical functional features recovered
- Reduced equipment downtime for the customer
- Complete repair delivered within 24 hours

24-HOUR TURNAROUND

FROM WORN TO WORKSHOP-READY

CASE STUDY 2 :

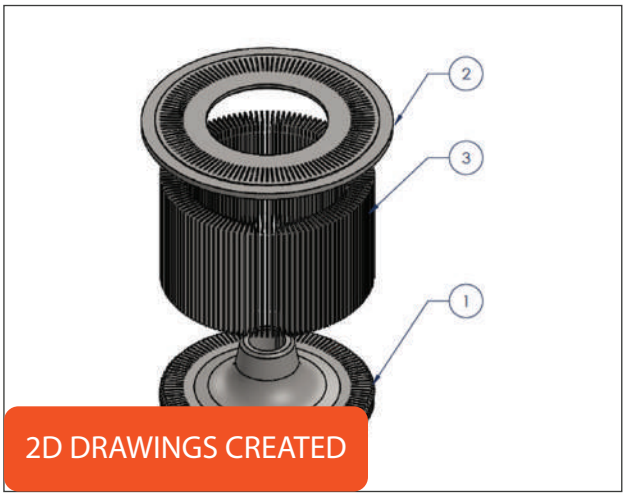
CLASSIFIER WHEEL - REVERSE ENGINEERED AND MANUFACTURED

FROM EXISTING SAMPLE TO FINAL PRODUCT



THE CHALLENGE

The client provided an old and worn classifier wheel with no usable drawings. The component had three key parts - top plate, bottom plate and multiple fins - with critical requirements for even spacing, precise welding and machining. Maintaining dimensional accuracy and allowing proper welding fillet material while ensuring balance and overall precision made this a complex job.



THE SOLUTION:

- Detailed measurement of the existing part using CMM and metrology tools
- Created complete 2D drawings and 3D model through reverse engineering
- Designed top plate, bottom plate and fins with correct welding allowances and fillet space
- Manufactured individual components
- Precision welding of fins with even spacing
- Final machining to achieve required dimensions and surface finish
- Full dimensional inspection and validation



THE OUTCOME:

- Accurate reverse engineering and design
- Successfully manufactured with precise welding and machining
- Component meets all dimensional and functional requirements
- Delivered a high-quality final product for the client

OUR GLOBAL PRESENCE AND CLIENTS



AMCO GIFFEN

GRANTA
ACHIEVE WITH AUTOMATION

HAYLEY 247
DEXIS

Pharma
PackagingSystems

Environment Agency

ATWELL
INTERNATIONAL

DCE DIGITAL CONCEPTS ENGINEERING

Stannah

AEY
AE YATES GROUP

ACCU
Building Tomorrow

R3E

Varlowe
Industrial Services

millboard
Live.Life.Outside.

Ministry of Defence

ARBIL



LET'S DISCUSS YOUR NEXT AUTOMOTIVE PROJECT

From precision machining and fixture systems to fabrication and assembly support, Zedaxis delivers reliable engineering and manufacturing solutions for automotive and industrial applications.

Design • CNC Manufacturing • Fabrication • Assembly • Installation

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Precision Engineering for Automotive Systems