



CONTRIVE
ENGINEERING SOLUTIONS



Transportation & Mobility

 sales@contrive-engineering.co.uk

Note: Photos are attached to support our work, but they are not the ones that are finally mounted in order to preserve the rights of our clients.



<https://contrive-engineering.co.uk>

ABOUT COMPANY

Contrive Engineering, through our partnerships and collaborations, aims to be a preferred supplier for the transportation and mobility sector. We serve manufacturers and suppliers in the United Kingdom and worldwide. Our focus is on providing engineering solutions, project management, and supporting clients throughout the product lifecycle.

We are aware that this is a highly competitive sector, but we are confident that our experience and expertise in design, system definition, and integration, as well as production line support and supply chain management, collectively amounting to decades, can bring added value to their projects.



Trains EMU Commuter and Regional Train

We can provide flexible teams of experienced engineers as and when required by the client. All our team members are highly trained and well qualified, and they can work remotely or on-site.



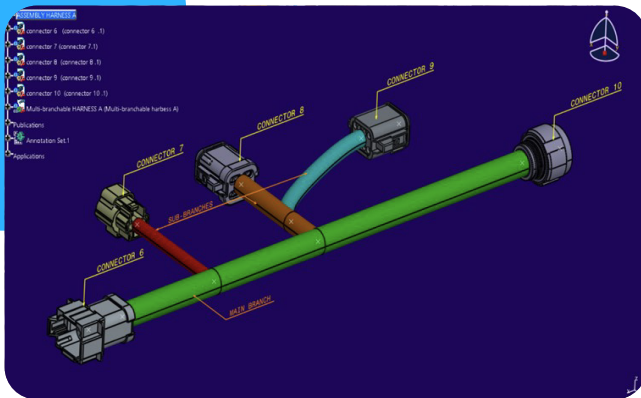


EADS CASA on Deepwater Program: Arrival in the USA of the second CN-235 for the US Coast Guard

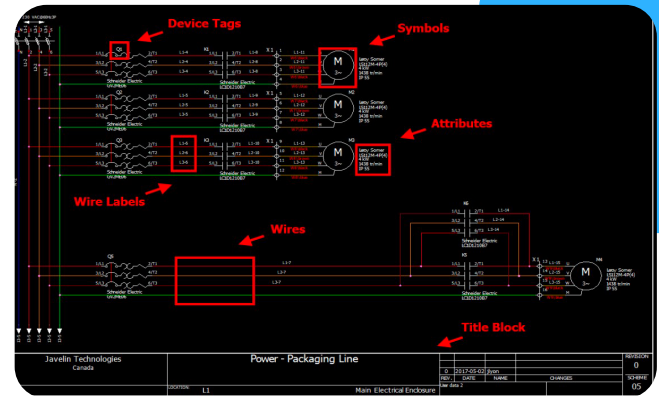
OUR MISSION

Aircraft installation drawing schematics, wiring diagrams, and manufacturing drawings for cable on the CN-235 version Deep Water, using CATIA V4 modules and E3D electrical.

General Electrical Aviation, located in Chatterton, near Bristol, works on Boeing distribution board systems. It is a privilege to collaborate with GE Aviation to check, rework, and update Boeing systems for the X767 family, serving their customers. Using Mentor Capital and Excel, we verify wiring diagrams from GE Aviation Mexico.



Flattened Harness Catia V5



Simulation Schematic



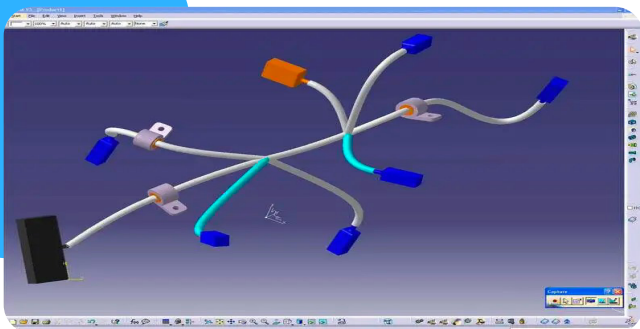
Festival_Aéreo_de_Vigo_2010 (CASA/IPTN CN-235)

Control units for the C-295 version BR02 schematics were developed using See XP Design. Control units and graphical instructions for manufacturing were created in CATIA V5 by the Military Transport Aircraft Division.

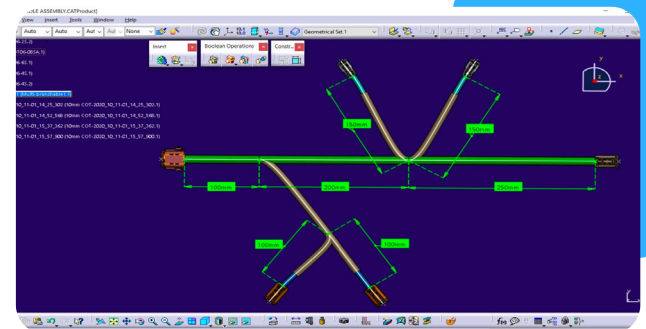


Multiple Versions of the C295 by Ckamaleao on <https://forums.x-plane.org/>

Project Management for Airbus Operation for the A310 aircraft upgrade. A330 Electrical Project, routing, and electrical processes. Verification of manufacturing harness drawings, boom, wiring diagrams, and installation drawings.



Harness 3D Routing Catia V5



Flattened Harness Installation Catia V5



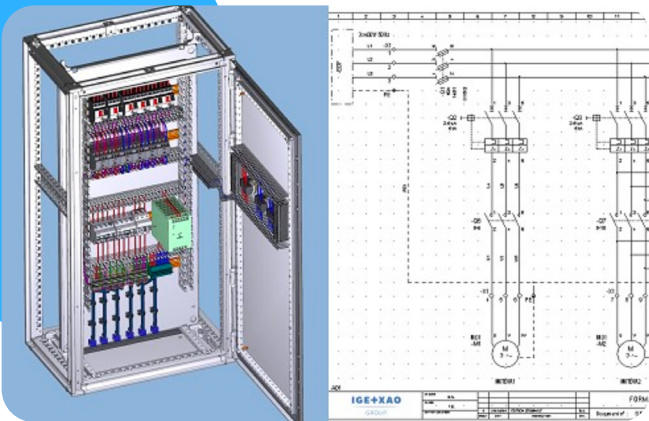
Multiple Versions of the C295 by Ckamaleao on <https://forums.x-plane.org/>



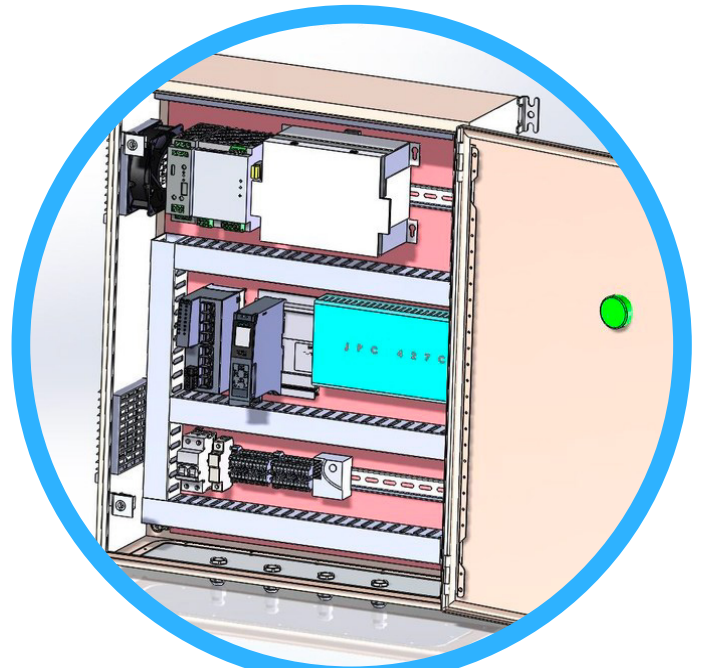
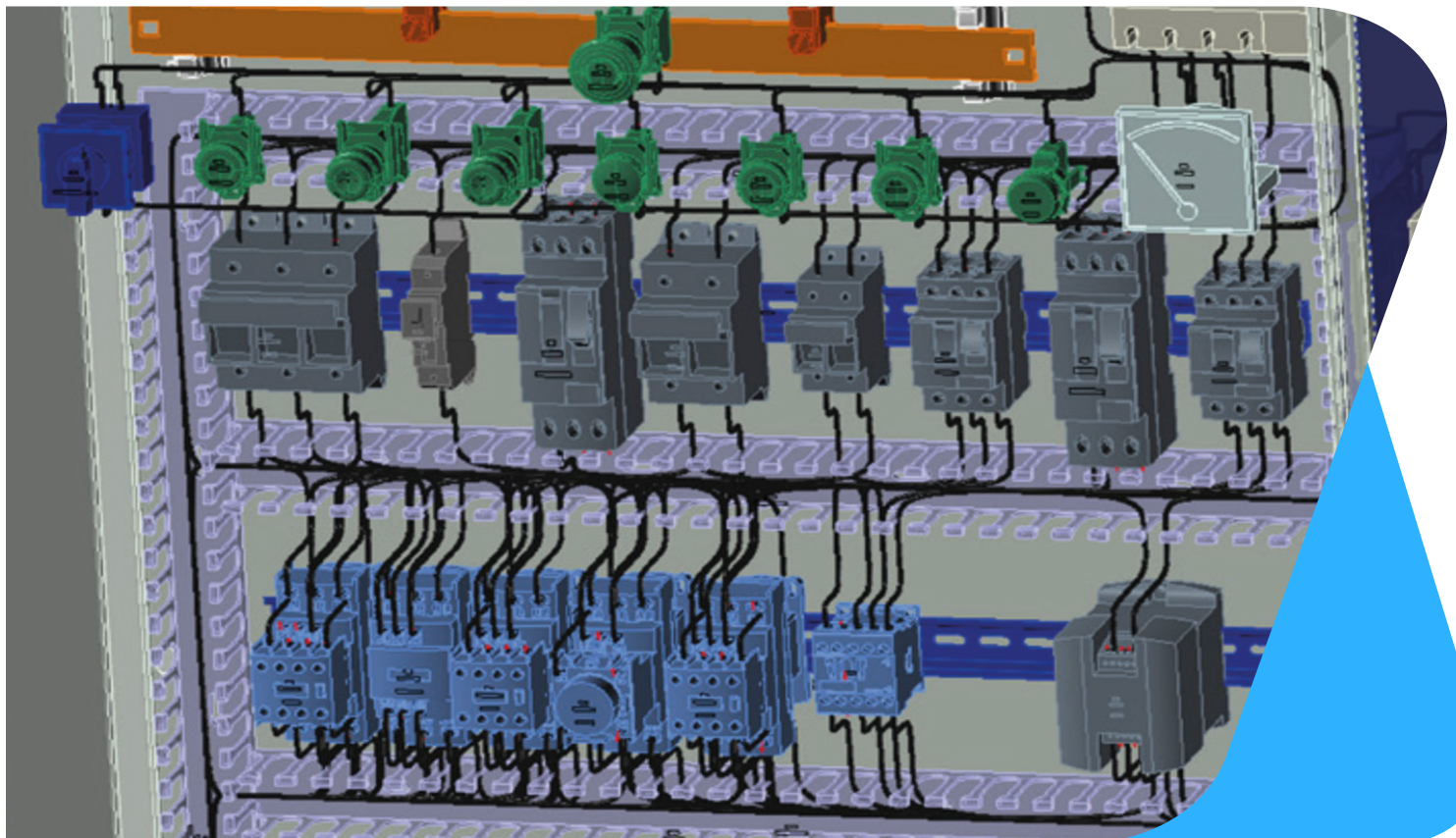
Instrumental panel simulation by Ckamaleao on <https://forums.x-plane.org/> (Instrumental)



Multiple versions of the C295 by ckamaleao on <https://forums.x-plane.org/>

**Simulation Rack Avionic Catia V5**

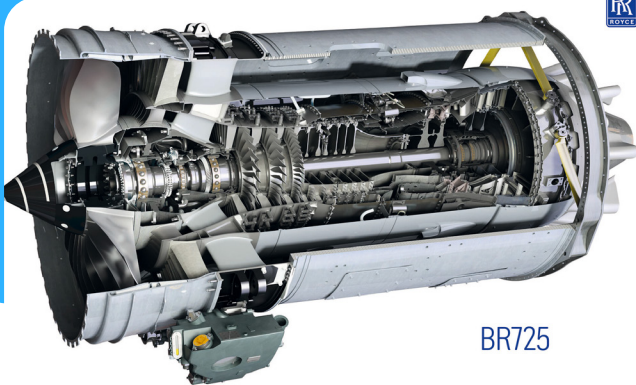
Systems engineering electrical design for FSTA A-330 MRTT and RSAF A-330 MRTT. Our mission includes the Avionics Rack and Power Distribution Rack.

**Simulation Fuse Panel with Catia V5****Airbus A330 Multi Role Tanker Transport (MRTT)****3D Panel Catia V 5**

Our mission is electrical design systems engineering. We develop electrical diagrams from the theoretical diagrams supplied by Rolls Royce for the BR725 project and create Vesys software for Rolls Royce.

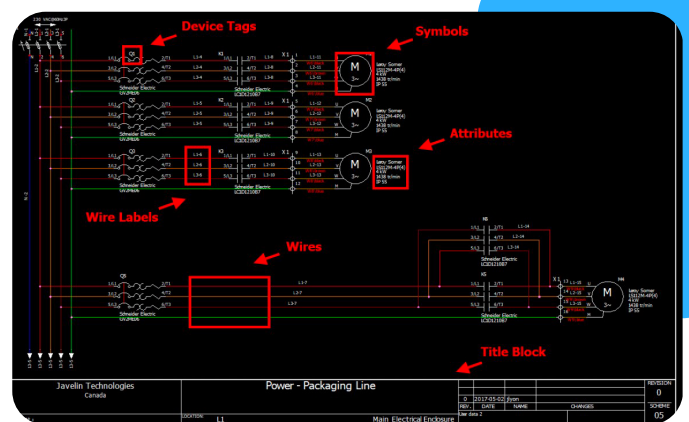


BR725 in the Aircraft by Rolls Royce Images



BR725

BR725 Turbo Propulsion Engine Rolls Royce in ITP Spain by Rolls Royce Images



Wiring Diagrams Simulation



BR725 in the Aircraft by Rolls Royce Images

Electrical support in the final assembly line involves checking electrical power distribution (harnesses) for NH90 and Tiger helicopters in Albacete. This includes auditing and approving harnesses for launch dates, as well as inspecting harnesses supplied by the vendor. We manage quality notifications (QNs) for NH90 and Tiger using the SAP module. Additionally, we design and develop new offers or modifications for the helicopters, focusing on mechanical and electrical changes, using CATIA V4 and V5 for electrical design.



NH90 by Airbus



Tiger by Theatrum Belli



Tiger by Airbus

PRODUCT SUPPORT ENGINEERING



Conceptual design, style, and specifications



Systems engineering



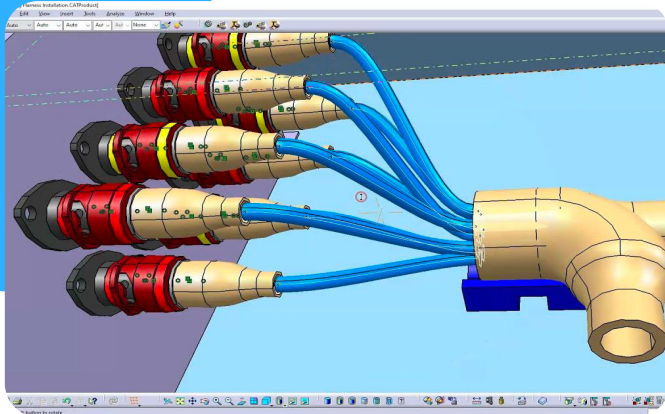
Mechanical and electrical installations

2D drawing and documentation

Harnesses and 3D installations

Test design

Includes engineering activities for defining and developing products. These encompass R&D, design, and product definition for automobiles, airplanes, trains, and more, until production drafts are fully defined. This includes design conceptualisation, engineering, and sizing details.



Simulation Harness 3D Catia V5



Example of Distribution Board



Tractor by Contrive Engineering Visiting a Certamen in Coventry

OUR STRUCTURE

We are continually adding skilled personnel with the knowledge and experience to develop specific high-demand projects in the industrial, commercial, and institutional sectors.

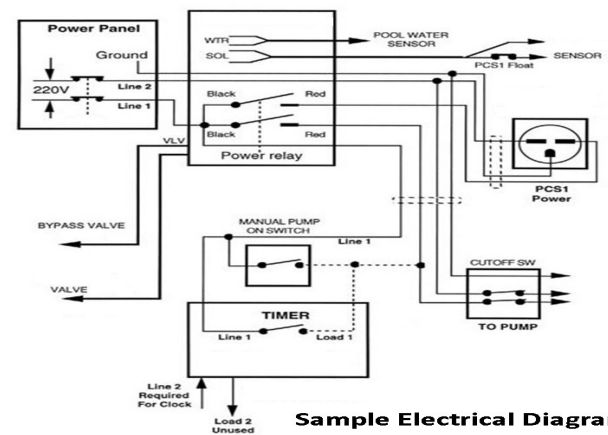
We integrated several systems in vehicles while acting as Electrical Integration Engineer Consultants. Contrive Engineering produced electrical diagrams based on theoretical diagrams supplied by the customer, JLR, for a 100% electric vehicle with a powerful motor for the new models of the L460 (Land Rover), L538 (Land Rover), and X391 (Jaguar) platforms.



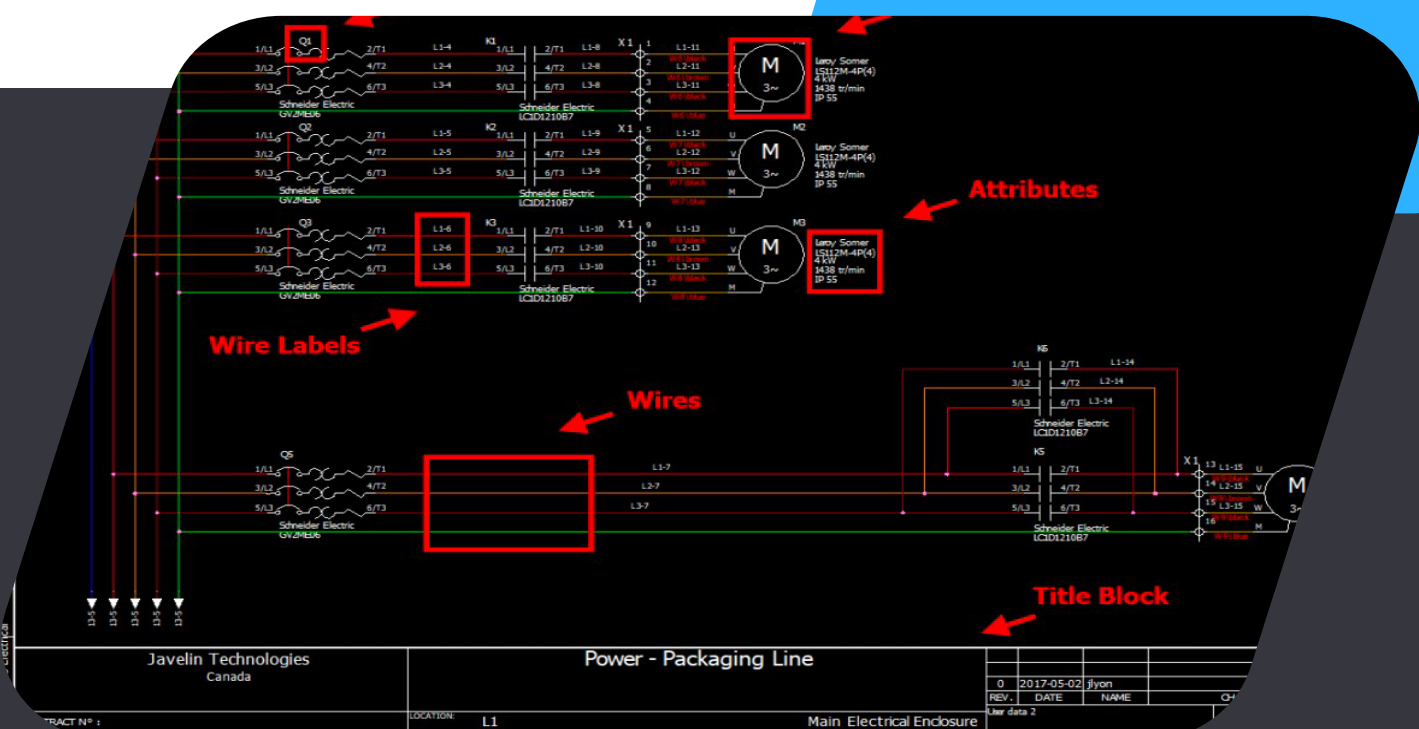
L460-2024 Range-Rover by Land Rover



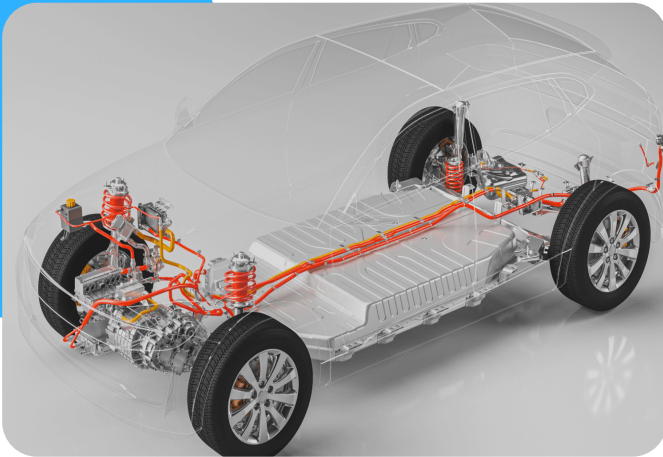
L460-2022-Range by driving.co.uk



Sample Electrical Diagram



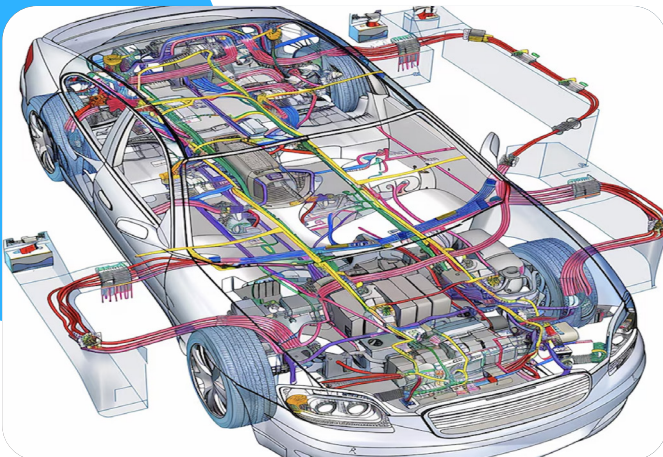
Simulation Schematic, Wiring Diagrams with Catia V4 Electrical Module and See XP



L536 by Autocar



L460-2022 by Land Rover



Harness 3D X391 by Jaguar



L 536 by Autocar



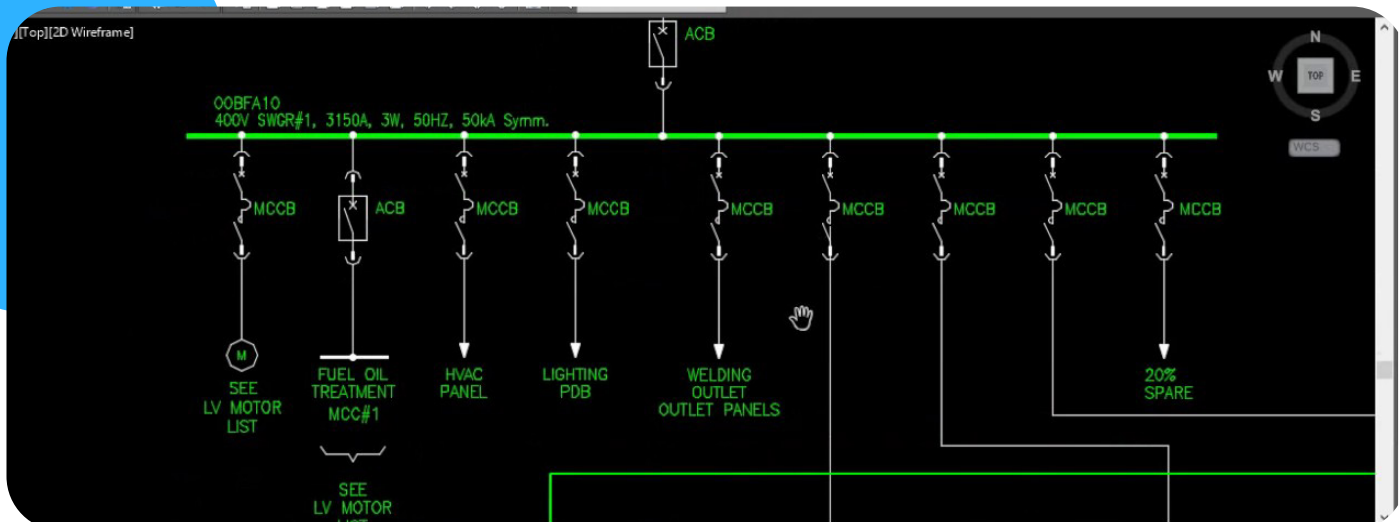
X391 Prototype by Jaguar

We collaborate closely with clients to deliver high-quality, engineering services and innovative technical solutions tailored to meet their specific needs and requirements.

Along with planning, tool design, assembly support, engineering work, testing, and improvements, we have plenty of experience in running production, post production, and after sales support.



New Electric Vehicle for Wright Bus. (Double Deck Hydrogen Propulsion)



Single line Diagram- Reverse Engineering

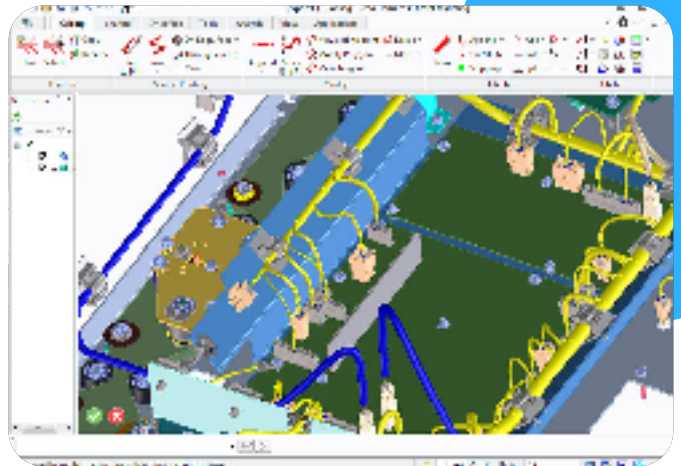


New Vehicle Electrical for Wright Bus. (Double Deck Hydrogen Propulsion)

OUR BEGINNINGS

Along with Caterpillar, we started to offer external consultancy services for the development of the new Caterpillar compacts. Compact Wheel Loader.

Onboarded to work on electrical designs as part of a new compact wheel loader project by Caterpillar. Met tight timescales while maintaining the highest quality standards. Deployed CREO 4.0 Harness 3D and Teamcenter 11.



Simulation 3D Harness Installation with CREO V6

Elaboration Electrical Design Harnesses for CAT 910,914,920 Wheel Loaders.

Integration by several systems in the vehicle. Cabinet.
Hydraulic valves system electrical.

Work Lighting.

Engine Bay lights.

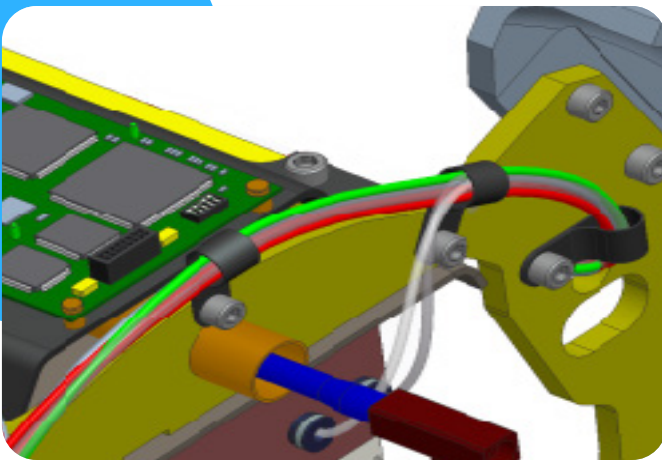
Chassis Harness design.

Cabin and Panel Instrumentation Harnesses.

Electronic Signal for bucket or worktools.

Electrical Engineer Systems Design: (CREO 4.0 Harness 3D and Teamcenter 11).

Design Review.DCCs, check the prototype, panel control.



Simulation Harness 3D with CREO



Caterpillar Compacts. Compact Wheel Loader CAT 910,914,920

Recognised by management for delivery of excellent electrical wire harness design for a new compact wheel loader, incorporating chassis, cabin/panel and engine compartment. Successfully integrated several electrical systems into the vehicle in collaboration with an international work team (China, India, USA, UK).



Visit the Construction Machinery Trade Fair in 2022 by Contrive Engineering



Caterpillar Compacts. Compact Wheel Loader CAT 910

Instrumental role in design reviews and detailed audits of the different prototypes and commissioning; giving the business surety around standards. Communicated and reported on own designs during attendance at meetings and delivery of presentations to management and clients.



Track loader by Caterpillar

Ascod = Pizarro V-COAV (Advanced Observation Vehicle for UK Army).

Led a team of 3-5 people and coordinated technicians and craftspeople.

CREO, WINDCHILL

Harness design in the vehicle plus schematic.

Bill of material.

We understand this is a competitive field, but we are confident in our skills and experience in design, structural calculations, system integration, testing, production support, and supply chain management.



GFELS Ascod UT30 MKII by General Dynamic Systems Santa Barbara Sistemas



Interior ASCOD Spain



GFELS Ascod by General Dynamic Systems Santa Barbara Sistemas



GFELS Ascod by General Dynamic Electrical System GDELS Santa Barbara Sistemas

Contrive Engineering Services

Our aim is to become a preferred supplier for transport sector manufacturers in the United Kingdom, providing solutions for vehicles, project management, and to facilitate the work of our clients throughout the product life cycle.

PATENTES TALGO (August 2010– December 2011)

TASKS PERFORMED: Electrical Engineer Systems Design:

Report supervision and modification requests.

Electrical Schemes by several projects of Talgo.



Talgo 350

PATENTES TALGO (January 2001– August 2003)

TASKS PERFORMED: Electrical Engineer Systems Design:

Handled the setup, supervision, and creation of electrical plans for high-speed trains based on technical details. Coordinated and combined systems like breakers, water, tread, and air conditioning into the electrical plans. Oversaw reports and changes to offers. Managed tenders and followed up with suppliers. Created the 'I' form in Schemelect V 6.15 for modular projects. Helped staff and supported the purchasing department with offer preparation.



Certamen Railway 2022 by Contrive Engineering



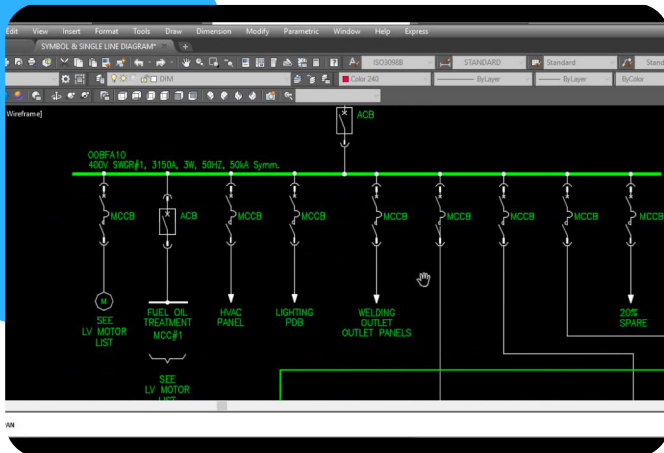
Talgo 350

OUR CHALLENGE

Ex HMS Quorn was brought into the covered dry dock at Appledore in August 2022. The M55 regeneration project involves rebuilding the ship with new main engines, generators, and propulsion gear, as well as refurbishing the accommodation, hull, ancillary systems, electrical systems, and painting. The Thales Sonar 2193 and M-Cube CMS will be fitted before she is handed over to the Lithuanian Navy.



Panoramic Harland & Wolff overhead cranes



Single Line Diagram Simulation with AutoCAD



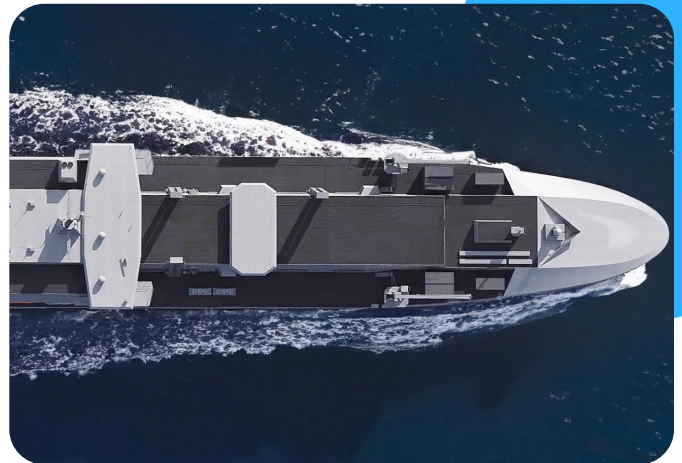
Switchboard



Ex-HMS-Quorn-M-55-minehunter-Lithuania-Appledore

KEY RESPONSIBILITIES

Our support services in the full design of the Power distribution services have a few key responsibilities that ensure the optimal performance of power distribution systems. Our main task was to design and supervise the installation of power distribution systems across the ship.



Harland-and-Wolf by Navy look out

We analysed load requirements and calculated energy demand for each circuit. We also conducted system simulations to predict performance in different scenarios and identify potential issues before they arise.



Panoramic Harland & Wolff Overhead Cranes and Ship



Vessels Berthed in a Port



Lithuanian MCMV



Vessel in Port



Panoramic Vessel



Aircraft Carrier L61 by Antonio Garcia

**"International, multinational, multi-cultural
for land, sea and air"**



Need help? Contact us and
we'll get back to you shortly!

Transportation & Mobility

Contact Us

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