



The rail industry driven by David Brown.



David Brown

Africa +27 11 748 0000

Australia +61 2 4283 0300

China +86 21 6334 3322

Europe +33 3 89 37 01 13

Thailand +66 38 459044

United Kingdom +44 (0)1484 465500

Sister Companies. Cone Drive & Benzlers

Central & South America +1 231 946 8410

North America +1 888 994 2663

Scandinavia +46 42 18 68 00



THIS IS ENGINEERING AROUND YOU: THE NAME DAVID BROWN HAS BEEN AN INTEGRAL PART OF THE RAIL INDUSTRY FOR NEARLY 150 YEARS. EVERYTHING WE PRODUCE IS DRIVEN BY YOUR NEEDS, WHICH IS WHY WE IMMERSE OURSELVES IN THE DEMANDS YOU FACE, BECAUSE WE'VE LEARNED THAT THE BEST WAY TO SOLVE A PROBLEM IS TO LOOK AT IT FROM EVERY POSSIBLE ANGLE. THIS IS ENGINEERING AROUND YOU.

DAVID BROWN WORKING AT THE HEART OF THE INDUSTRY

David Brown has accumulated a long history of close alignments with major OEMs and rail operators, which has given us a superior understanding of the challenges that the global rail sector faces. As a consequence of our global expertise in rail gearbox design, testing, manufacture and aftersales, our dedicated team can provide fast, effective and reliable solutions – whatever the problem.

David Brown's global rail capability stems from the fusion of four leading rail transmission brands:

David Brown
GEC/Alstom Gears
Hygate Transmission
Maag Italia.



WORLDWIDE EXPERIENCE & EXPERTISE

David Brown has accumulated vast experience during our long history in the rail industry, working with a range of global OEMs on a wide variety of projects. The knowledge and experience gained from these projects enables us to provide rail solutions that are perfectly tailored to our customers' requirements.

David Brown's long history in the rail industry has seen 14,000 gearboxes and 11,500 couplings along with over one billion hours of service, all engineered and supplied to our high quality standards. Our specialist knowledge in the rail gearbox field, has led to David Brown working with renowned global companies including:

Alstom (including Fiat Ferroviaria)
Ansaldo Breda
Bombardier (including Adtranz)
Daewoo
Firema
Hanjin

Hyundai
Koros
Mitsubishi
Zhuzhou Electrical
Plus legacy UK companies and rail operators worldwide.



- Engineering around you, David Brown solutions are tailored to your needs
- Experts in global supply chain management
- Experience in supplying global customers
- Delivery of excellent customer service – always.

SERVICE THAT YOU CAN COUNT ON: DAVID BROWN IS DEDICATED TO MEETING OUR RAIL CUSTOMERS' NEEDS BY PROVIDING A SERVICE THAT OPERATES ON A GLOBAL BASIS. DAVID BROWN HAS THE KNOWLEDGE AND EXPERIENCE TO GET YOUR RAIL NETWORK BACK ON TRACK ANYTIME, ANYWHERE IN THE WORLD.



CURRENT PRODUCT OFFERINGS

David Brown has supplied products to a number of rail applications, notably main line locomotives, electrical multiple units (EMU), metro and light rail systems. David Brown's expertise in gears, transmissions, testing and Finite Element Analysis (FEA) as well as full in-house design capabilities allow us to provide safe and reliable solutions, optimised for lifetime performance and ongoing maintainability.

TRAM / LIGHT RAIL VEHICLES (LRV)

David Brown offer highly integrated, bespoke tram drive solutions that incorporate the need for compact and reliable, safety critical components. In addition, we have the capability to provide innovative designs for tram and light rail vehicles, including space saving low floor designs and differential units for tight radii.

Tram/LRV transmissions incorporate interfaces for motor, braking and primary suspension; this increases the support for the motor shaft and allows the unit to be integrated into the application's infrastructure. David Brown Tram/LRV solutions are designed with lifetime performance in mind; it's the ultimate in fit and forget technology.

METRO

David Brown has supplied gearboxes for a wide variety of subway and above ground light rail applications for global rail networks, including the London Underground; UK and Metro Catania; Italy.

David Brown offer full service solutions for metro systems, including couplings, torque links and transmissions. The low speed and frequent stops, which characterise the Metro's duty cycle, ensure the need for highly reliable, safety critical gear systems.

We have extensive gearbox design, test and manufacturing capabilities, driven by your need for dependable, safety conscious technologies. Our commitment to investing in and developing our test facilities allows us to provide full service, in-house test capabilities such as Finite Element Analysis.

ELECTRICAL MULTIPLE UNITS (EMU)

Over the past 20 years, David Brown has supplied a wide variety of EMU units for inner city applications. Our EMU transmissions are robust, highly reliable systems and are successfully serving rail networks in Australia, Chile, China and Malaysia.

Our split gear case designs featured on both Metro and EMU transmissions allow for speedier serviceability and maintenance, reducing downtime and minimising costs.

COUPLINGS

David Brown offer a full range of specifically designed spring type and non spring type couplings for all rail applications. David Brown couplings accommodate relative axial and lateral movement between the transmission and bogie mounted motor, allowing the gearbox more flexibility when held in the bogie frame. Our couplings can be incorporated in a transmission package or bought as separate units.

- Highly integrated, bespoke solutions
- Innovative designs for Tram/LRV, Metro, and EMU units
- Solutions designed for lifetime performance
- Extremely reliable safety critical gear systems.

- Over 20 years experience supplying customers in the rail sector
- David Brown transmissions are successfully serving global rail networks
- Split gear case design gives faster serviceability and maintenance
- David Brown expertise reduces downtime and minimises cost.



RAIL CAPABILITIES

David Brown has global capabilities in the design, test and manufacture of rail transmissions. We also provide a unique aftersales program, incorporating the ability to service, repair and upgrade any gearbox. David Brown's dedicated rail team will always provide fast, effective and reliable solutions to ensure costs and downtime are kept to a minimum.

DESIGN

David Brown has extensive design capabilities and experience, meaning all our designs are optimised for reliable, lifetime performance and ongoing maintainability. David Brown's expertise in gears and transmissions, as well as our full in-house design capabilities allow us to provide safe, dependable solutions, tailored to your specific needs. Our focus on bespoke solutions that exactly match a specific rail application's needs allows us to provide solutions that you can fit and forget.

LOAD TESTING

As a result of continuous investment in high quality personnel and research systems, David Brown has a number of well established test facilities. New designs can be prototyped and type tested to ensure you get the right gearbox for your specific application. David Brown will never accept failure as an option and this is why our test procedures are comprehensive, we are experts in safety critical components, perfect for applications that demand ultimate passenger safety.

MANUFACTURE

State of the art in-house manufacturing capabilities allow David Brown to provide strong and robust engineering solutions. We understand your manufacturing needs and that's why we continue to develop and invest in new manufacturing techniques to increase our capabilities and provide better service for you, our customer. Our continued emphasis and support of metallurgy, heat treatment and a high quality, worldwide supply chain give David Brown the expertise needed to be a major global supplier to the rail industry.

- Extensive design experience and capabilities
- Optimised designs for reliable, lifetime performance
- All gears designed to the latest quality standards
- Exhaustive testing ensures exact gearbox – application fit.

AFTERSALES

David Brown is committed to supplying quality products born from intense levels of engineering capability. Through working so closely with our rail customers we continue to provide expert levels of service and support even after the gearbox is enabled.

David Brown understand your manufacturing needs and that's why we continue to develop and invest in new processes to increase our capabilities and provide better service for you, our customer. We provide support from the beginning and beyond, working to the highest standards and giving ultimate control and traceability of parts. Through partnerships with our global suppliers, David Brown is able

to provide authentic, original parts to ensure continued product integrity. David Brown has a lifetime of experience in supporting end users in service, whether it's the supply of parts or complete overhaul service projects – we have a solid reputation for understanding and resolving service issues.

Services Offered

- On-Site Services
- Repairs, Overhauls and Upgrades
- Service and Repair
- Strategic Spares Management
- Support of Retrofit and Upgrade Programmes

- David Brown excel in critical areas of the production process
- State of the art manufacturing capabilities provide robust engineering solutions
- Experts in metallurgy and heat treatment
- Support provided from the beginning and beyond.



GLOBAL AFTERMARKET SUPPORT

David Brown has knowledge and experience in the rail industry that only a company with our heritage can demonstrate. We have supplied rail products to a number of global end users; from the London Underground in the UK to the Melbourne Hillside EMU in Australia.



- Global network of support centres
- Service engineers on hand 24 hours a day, 7 days a week
- In-depth service, repair and upgrade procedures.

SERVING RAIL NETWORKS AROUND THE GLOBE

- **Australia**
 - Melbourne Hillside EMU
 - Sydney Metropolitan, Tangara
- **Chile**
 - Merval EMU, Valparaiso
- **China**
 - New 2009 JV gives David Brown new access to Metro, High speed EMU opportunities within China and the rest of the world
- **Denmark**
 - O.T.U - Oresund Train Unit
- **France**
 - Strasbourg Eurotram
- **Iran**
 - Tehran Metro
- **Italy**
 - Milan Eurotram
 - Metro Catania
 - Rome Tram
 - Turin Tram
 - Pistoia Tram
 - Trenitalia Loco
- **Malaysia**
 - KTMB EMU
- **South Africa**
 - South African Rail
- **South Korea**
 - Seoul Metro Line 3, 6, 7, 8
 - Taegye Line 1
 - Incheon Line 1
 - Pusan Line 2
- **Sweden**
 - R.I.O/REGINA EMU
 - O.T.U - Oresund Train Unit
- **UK**
 - London underground
 - Juniper Gatwick, Scotrail and SW trains EMU
 - Manchester Tram Network

- David Brown has supplied rail networks in Australia, Chile and Italy through Alstom
- Through Bombardier, David Brown is involved in the Eurotram network in Italy and France
- 2009 New David Brown joint venture, gives access to Metro and High speed EMU opportunities within China and the rest of the world.