



Clayton Equipment Ltd
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FROM HUMBLE BEGINNINGS TO A GLOBAL REPUTATION

CLAYTON EXPERIENCE DEVELOPED SINCE 1931

Founded in 1931, Clayton Equipment made an immediate impact building an enviable reputation for engineering and design. By the mid-1940s, the company had expanded sufficiently to acquire premises in Hatton, Derbyshire to manufacture locomotives and a wide variety of industrial equipment for the UK and growing export markets.

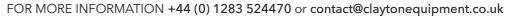
Clayton ownership changed several times over the years, including Rolls Royce, enabling the company to establish a reputation as a market leader in rail haulage.

In March 2005, Clayton once again became an independent company and immediately entered a period of considerable success which led to a move in 2006 to a new, modern site at Burton Upon Trent. This remains our headquarters today and comprises a manufacturing facility, complete with multi-gauge test track, and offices. We have a highly experienced design, engineering and production team working to the highest European and World standards.

The achievements and manufacturing excellence of the company were formally recognised in 2012 by a royal visit.

Clayton has customers in more than 60 Countries, indicated by the yellow areas on the map.













CLAYTON QUALITY & AFTER-SALES SERVICE

QUALITY STANDARDS

Clayton is committed to the highest levels of quality and customer satisfaction and conforms to international standard ISO9001:2015 and CE marking requirements.

WARRANTY

The standard warranty is 14 months ex-works delivery or 12 months from entering service whichever is the sooner, with extended warranty available. The final drive transmission and frame fabrication elements come with 18-month and 5-year warranties respectively.

AFTER-SALES SERVICE

Front-line after-sales service is provided by local "in Country" agents supported by Clayton headquarters in the UK where a comprehensive range of spare parts are held in stock.

COMMISSIONING & TRAINING

Commissioning & training by a Clayton engineer is available to take place at the customer site. Training is also available at Clayton HQ.











CLAYTON BATTERY AND HYBRID LOCOMOTIVES

Clayton Equipment, making journeys cleaner and greener by cutting CO2 emissions with our Zero emission locomotives. Clayton has the most comprehensive world-leading range of battery and hybrid locomotives on the market, available from 1.75 to 150 tonnes. With numerous motor, controller and locomotive design options, we can manufacture a machine ideal for your application.

Features & Benefits:

- Batteries using the latest technology enabling long range haulage
- Zero emissions, maximum CO2 reduction
- Low noise, increasingly important near residential areas & for 24/7 operations
- Lowest operational & maintenance costs
- Highest availability in service
- Regenerative braking, resulting in reduced brake wear & reduced charging times
- Option of on-board hybrid or depot-based battery charging
- Remote control option to enable operation from trackside
- Multiple working option two locomotives operated by one driver from a single cabin

Plug-in mode:

- 100% fuel saving
- Zero emissions
- Typically, over 600 tonnes CO2 reduction per year compared to older shunters

Self-charging hybrid mode compared to old shunters like an 08

- Up to 40% fuel saving
- 54% reduction in CO2 and 97% reduction in NOx
- 91% reduction in Hydrocarbons (HC) and 99% reduction in Particle Matter (PM)









CLAYTON DIESEL LOCOMOTIVES

Clayton manufactures diesel locomotives designed for use above and below ground from 4 to 150 tonnes. Our machines utilise many of the latest technological innovations to ensure efficiency and minimise emission levels in accordance with our commitment to sustainability. We offer various engine, transmission and exhaust purification options, as well as numerous supplementary features providing the perfect locomotive for your application.

Features & Benefits:

- Highest quality components optimising locomotive reliability & reducing maintenance
- "Best in class" engines & transmissions optimising reliability & fuel economy
- Reduced emissions using the cleanest diesel engines up to EU Stage V & EPA Tier 4f
- Reduced carbon footprint
- Remote control option to enable operation from trackside
- Full automation available
- Tandem working option two locomotives operated by one driver from a single cabin
- Safest locomotives through many decades of experience









CLAYTON TROLLEY & TROLLEY/BATTERY HYBRID LOCOMOTIVES

Traditionally used for mining applications, a trolley locomotive generally operates from an overhead conductor. They can also be powered by a traction battery for parts of the operation where the overhead power ends. Clayton has the most comprehensive range of trolley locomotives available on the market ranging from 4 to 150 tonnes.

Features & Benefits:

- Pantograph or trolley pole
- Hybrid locomotives available powered by overhead wire & traction battery
- Highest quality components optimising locomotive reliability
- Using the best parts reduces maintenance costs
- Remote control option to enable operation from trackside
- Full automation available
- Tandem working option two locomotives operated by one driver from a single cabin
- Safest locomotives through many decades of experience







CLAYTON LOCOMOTIVES MINING, TUNNELLING & SURFACE



















CLAYTON LOCOMOTIVES MINING, TUNNELLING & SURFACE

MINING

Having developed over the decades an unrivalled understanding of the demanding conditions underground, we can propose and produce an appropriate locomotive for any mine with any conditions.... anywhere....

- Battery, Diesel, overhead trolley/pantograph or hybrid locomotives
- Dimensions to fit restricted spaces
- Simple, low-cost solutions to fully automated driverless systems



TUNNELLING

We have adapted locomotive design to satisfy an environment in which minimal downtime and lower costs are critical to success. The design enables locomotives to be deployed on tunnelling projects on different sites with varying track gauges during their lifetime.

- Locomotives with quick gauge adjustment without any specialised tools or facilities
- Simplified operator controls to reduce maintenance & training costs
- Off-the-shelf components to minimise spare part costs & improve availability



SURFACE

Our offering of larger battery, diesel and diesel-electric locomotives up to a mass of 150 tonnes are market-leading products for use in depot shunting and haulage applications. You provide us with some basic haulage data requirements and we can offer an appropriate locomotive.

- Battery locomotives that can operate on 3rd and 4th rail traction
- Battery, diesel & battery-diesel hybrid locomotives
- High haulage capabilities of up to 2,500 tonnes





SHUNTING LOCOMOTIVES COST-EFFECTIVE TO BUY NEW OR CONVERT DIESEL TO BATTERY

Shunters are the workhorses of rail depots and manufacturing facilities. Some are 60 years old, have high emissions levels and are increasingly unreliable, labour intensive and expensive to operate.

Clayton offers a new generation of cost-effective shunter haulage solutions:

- 2-axle locomotives up to 45 tonnes
- 4-axle Bo-Bo locomotives up to 90 tonnes
- 6-axle Co-Co locomotives up to 150 tonnes
- Diesel to Battery Conversions
- Hybrid locomotives up to 150 tonnes

New & converted shunter features & benefits:

- Zero emissions using battery
- Reduced emissions with the cleanest diesel engines up to EU Stage V & EPA Tier 4f
- Reduced carbon footprint & improved waste disposal
- Reduced noise
- Improved safety & driver comfort
- Increased reliability & reduced maintenance costs
- Increased availability of off-the-shelf spare parts
- On-board and depot-based battery charging options
- Multiple power delivery options with increased haulage capability
- Remote control option providing safe, one-person operation
- Single driver tandem working to provide double the haulage capacity

Battery/Diesel Hybrid Locomotives enable:

- 24/7 operation due to on-board battery charging
- Highly reduced maintenance costs

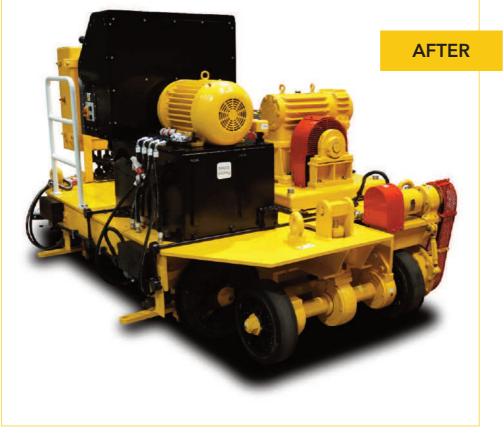








The powered trolley required stripping, repairing and an upgrade of the electrics and hydraulics systems in order to extend the lifetime and improve the reliability of this safety-critical asset.



CLAYTON BESPOKE, REFURBISHMENT, OVERHAUL & REPAIR

Our strong engineering and manufacturing capabilities provide the skills required for bespoke products and the refurbishment, overhaul and repair of other manufacturers' products.

This maintenance vehicle (pictured right) required a complete overhaul including a strip-down, new improved transmission, latest low-emissions diesel engine and new electrics, hydraulics and pneumatics.



The drilling equipment (pictured right) provided a laser-guided solution for precision drilling in a 50km tunnel. Such equipment may be used for a time-critical construction project requiring the automation or semi-automation of drilling on any structure.



This cable-hauled man-rider (pictured right) for use in a mine needed a complete overhaul including a strip-down, new electrics, hydraulics and pneumatics systems as well as improved safety features and a passenger compartment redesign.





CLAYTON DESIGN & BUILD CAPABILITY A KEY CONTRIBUTION TO AN ENERGY PROJECT IN THE CHANNEL TUNNEL

Balfour Beatty

Balfour Beatty, a member of a consortium with Prysmian Group, was awarded a circa €219 million contract to install an electricity cable in the Channel Tunnel. The project was conceived with a view to enhance the United Kingdom and France's energy capacity and security, helping the two countries to meet their current and future energy needs.

Balfour Beatty contracted Clayton to design and build the Construction Train. The project included the use of precision lasers to ensure the accurate drilling of holes, and subsequent mounting of supports brackets, along the 50km tunnel. It also included raising a monorail section onto the brackets.

The design comprised 24 modules, combining to form a 500m long platform. There were 12 drill rig modules and 12 monorail handler modules, each installed onto a flatbed wagon. The drill rig module design included an extending upper deck allowing the drilling team to work safely on the Channel Tunnel wall.

The key points for our success in securing this contract were:

- High quality proven design, engineering & manufacturing capability
- Ability to supply within the requested timescale
- Flexibility to provide a bespoke design to suit the customer

The project provides a clear example of the engineering and manufacturing capability of Clayton Equipment in a major project of national importance.









CLAYTON LOCOMOTIVES AT THE FOREFRONT OF EUROPE'S LARGEST CONSTRUCTION PROJECT



The Mayor of London made the first station to station journey from Custom House to Canary Wharf on board one of the seven Clayton 40 tonne, low emission, diesel locomotives being used on the 118km Crossrail project on the London Underground. This was a landmark moment for the project by reaching the 75% complete milestone.

The Clayton locomotives have been used to run trains for the installation of track, cable management systems, cross passage doors, ventilation, walkways, drainage, fire mains and lighting.

The key points for our success in securing this contract were:

- High quality, reliable locomotives
- Short lead time
- Low emissions
- Bespoke design to suit the customer

This case provides a good example of Clayton Equipment playing a significant role in a major infrastructure project.





