

METRO, MAINLINE & SHUNTERS

Clayton's range of shunting locomotives are becoming the haulage solution of choice.

We offer a new generation of shunters/switchers providing cost-effective solutions: low emissions, low costs and low maintenance.

Alternatively, conversions provide an economical solution to deliver reliability, environmental and performance benefits.

MINING

The most comprehensive range of locomotives available for surface and underground mining applications.

From 1.75 tonnes to 90 tonnes, for both hazardous and non-hazardous locations.

Overhead trolley/pantograph, battery, Diesel or hybrid powered.





DESIGN & BUILD

We offer Design & Build solutions for your project, including tunnel drilling machines, cable handlers, overhauling or upgrading your existing equipment. We can also offer conversions from old Diesel powered units to clean battery.

TUNNELLING & CONSTRUCTION

The innovative LoCo™ tunnelling locomotive, with patent pending features, provides a cost effective solution with its low capital and operating costs, adjustable gauge and high haulage capabilities.

Cheaper than leasing and can be deployed to other sites with different gauges.



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ISO9001:2015 certified



MINING LOCOMOTIVES

Clayton has a long and distinguished history in the manufacture and supply of locomotives into mines around the World. Having developed an unrivalled understanding of the demanding conditions involved, Clayton can propose and produce an appropriate locomotive for any mine... anywhere.

BATTERY

DIESEL

HYBRID

FLAMEPROOF ATEX

OVERHEAD LINE

World-leading Locomotives for Mining

Clayton Equipment's mining locomotives are known throughout the world – justified by their high reliability and long life.

Clayton Equipment still supports operational locomotives built more than 50 years ago.

Locomotive types and options are endless, as each mining activity demands bespoke solutions. At no extra cost, Clayton Equipment can offer this flexibility to provide you with:

- Battery, Diesel, overhead trolley/pantograph or hybrid solutions
- External dimensions to fit inside your restricted spaces or work with existing assets
- Flexible designs to allow the final assembly of the locomotive to be completed underground
- Simple, low cost solutions to full automated, driverless systems





Specifications Table*

* Specification may be subject to change and can be tailored to suit your requirements

| Locomotive Mass | | 1.5–2.0 tonnes | 3.5-4.0 tonnes | 4.5-5.5 tonnes | 6.0–10 tonnes | 12-20 tonnes | 20–30 tonnes | 30-45 tonnes | 45–90 tonnes | |
|--|------------------------------|--|--|--|--|--|---|--|---|--|
| Track | Gauge | From 450 mm to 1,067 mm to suit your application | From 50 | 0 mm to 1,067 mm to suit your ap | plication | From 600 mm to 1,435 mm to suit your application | | | | |
| | Cant | Up to 200 mm | | | | | | | | |
| | Gradient | Up to 1:15 (6.67%) | | | | | | | | |
| | Battery | 80 V _{DC} traction battery, with integral lifting points. Capacity (kWh) to suit the haulage requirement | regral lifting points. Capacity (kWh) to suit the haulage 80 V or 120 V _{DC} traction battery, with ir Capacity (kWh) to suit the haulage | | 120 V _{DC} traction battery, with integral lifting points. Capacity (kWh) to suit the haulage requirement | 320 V _{DC} traction battery, with integral lifting points. Capacity (kWh) to suit the haulage requirement | $320V$ or $564V_{\text{DC}}$ traction battery, with integral lifting points. Capacity (kWh) to suit the haulage requirement | | acity (kWh) to suit the haulage | |
| Power source | Battery/Overhead line hybrid | Not available as standard. Special order only | | | | To suit application | | | | |
| | Overhead line | Not available as standard. Special order only | | | 250 V _{DC} ±10% | 250 V to 750 V _{DC} ±10%, depending on mine infrastructure | | | | |
| | Diesel | Not available as standard. Special order only | | | 55 kW, up to EU Stage V | 97 kW, up to EU Stage V | 180–250 kW, up to EU Stage V | Stage V 390–566 kW, up to EU Stage V 390 kW and above, up to EU Stage V | | |
| Transmission | | Heat treated steel Ø356 mm rail wheels | Heat treated steel Ø457 mm rail wheels | | Heat treated steel Ø610 mm rail wheels | Heat treated steel Ø711 mm rail wheels | Heat treated steel Ø840 mm rail wheels | | | |
| | | Fully enclosed worm reduction gearboxes to both drive axles | | | | Fully enclosed spur and bevel reduction gearboxes to both drive axles | | | | |
| | | Sealed bearings in axle boxes Sealed bearings in axle boxes and maintenance free primary chevron suspension. Dampers and maintenance free secondary suspension (over 45 tonnes) | | | | | | | | |
| Drive options (battery) | | 1 x 5 kW or 1 x 10 kW AC traction motor | 1 x 10 kW AC traction motor | 1 x 10 kW or 1 x 20 kW AC traction motors | 2 x 20 kW or 2 x 30 kW AC traction motors | 1 or 2 x 104 kW SR traction motors | 2 x 104 kW SR traction motors | 2 or 4 x 104 kW SR traction motors | 4 or 6 x 78/104 kW SR or 2 x 250 kW AC traction motors | |
| Drive options (overhead line) | | Not available as standard. Special order only | | 1 x 95 kW SR traction motor (250 V _{DC} only) | 1 or 2 x 95 kW SR traction motors (250 V _{DC} only) | | 1 x 250 kW AC traction motors 750 V _{DC}) | 4 or 6 x 95 kW SR (250 V_{DC} only) or 2 x 250 kW AC traction motors (up to 750 V_{DC}) | | |
| Drive options (Diesel) | | Not a | Not available as standard. Special order only | | Hydraulic drive | Hydraulic, Diesel El | ectric or Powershift | Diesel Electric or Powershift | Diesel Electric | |
| Typical maximum speed | | 6 km/h | 12 km/h | | 12 | 2 km/h 20 km/h | | 20 km/h and above | | |
| Brakes | | Fail safe emergency/parking brake, with gradient hold. Fitted with override for emergency recovery. Either electric, hydraulic or pneumatic depending on rolling stock | | | | | | | | |
| | | Electric service brake through motor control (not Diesel locomotives). Regen into battery and brake resistors (brake resistors only for overhead line) | | | | | | | | |
| Dimensions, (typical) | Length to buffers | To suit application | | | | | | | | |
| | Width | To suit application. Side roller supports to suit dump station (if applicable) | | | | | | | | |
| | Height from rail head | To suit application | | | | | | | | |
| | Ground clearance | 50 mm with standard diameter wheels | 65 mm with standard diameter wheels | | | 100–125 mm with standard diameter wheels, depending on design | | | 100–150 mm with standard diameter wheels, depending on design | |
| Mass, typical | | 1,750 kg to 2,000 kg (final mass adjusted to suit your haulage requirements) | 3,500 kg to 4,000 kg (final mass adjusted to suit your haulage requirements) | 4,500 kg to 5,500 kg (final mass adjusted to suit your haulage requirements) | 6,000 kg to 10,000 kg (final mass adjusted to suit your haulage requirements) | 12,000 kg to 20,000 kg (final mass adjusted to suit your haulage requirements) | 20,000 kg to 30,000 kg (final mass adjusted to suit your haulage requirements) | 30,000 kg to 45,000 kg (final mass adjusted to suit your haulage requirements) | 45,000 kg to 90,000 kg (final mass adjusted to suit your haulage requirements) | |
| Configuration | | 0-4-0 Bo-Bo, Bo-Bo-Bo or | | | | | | | Bo-Bo, Bo-Bo-Bo or Co-Co | |
| Towing/propelling capacity (at μ = 0.25) | | 3–4 kN | 7–8 kN | 9–11 kN | 12–20 kN | 24–39 kN | 39–59 kN | 59–88 kN | 88–177 kN | |
| Coupling | | 3 pocket, link and pin, height to suit rolling stock, fitted both ends. Alternative couplings to match rolling stock available including 3/4" and full size Willison | | | | | | Full size Willison or t | o match rolling stock | |
| Lights | | LED white front and rear red marker lights, both ends, with automatic direction changeover. Optional step and cab interior LED lights. Opt | | | | | acons and strobes | automatic direction changeover | marker lights, both ends, with Step and cab interior LED lights. eacons and strobes | |
| Cab seating | | Driver's seat, side facing Driver's seat, side of | | | or forward facing | forward facing Driver's seat, forward facing with optional second person's seat | | | Bespoke seating configuration to suit operational preferences | |
| Driver controls Safety Noise and vibration | | Drive and electric service brake joystick, HMI with switches for direction control, horn, stop and deadmans, sanding, wash/wipe, gradient brake hold, depending on final specification | | | | | | | | |
| | | Battery capacity meter (battery locomotives only). Engine and Generator HMI (Diesel and hybrid locom | | | | | ybrid locomotives only) | I | | |
| | | Strengthened cab with optional roof, doors and windows | | | | Strengthened cab with roof, with optional doors and windows Strengthened cab, fully enclosed | | | | |
| | | Optional CCTV, rear or both ends, colour monitor in cab CCTV both ends, colour monitor in cab | | | | | | | | |
| | | Emergency stops (not available if only hand applied brake is requested). Overspeed activates failsafe brakes. Battery disconnect isolator with plug and socket | | | | | | | | |
| | | Hand held fire extinguisher, dry powder. Optional automatic fire suppression and Emergency Engine Stop (standard on Diesel locomotives) | | | | | | | | |
| | | CE Marking (EU and UK only). Other compliances as requested | | | | | | | | |
| Noise and vibra | uon | <u> </u> | 75 – 85 dB(A), <2.5 ms-2 | | | | | | | |