



MINDS OF STEEL WITH HEARTS OF GOLD

ABOUT US

Mine Track and Tools has a rich 40 years plus experience in the mining industry. As a company we offer you services and products that are of the highest standards at extremely competitive rates. Our products have been well accepted in the market for the last 30 years and we currently supply major mining groups as well as international customers in the USA, Australia, Ghana, Tanzania, DRC and Canada.

AC Locomotion: MTT Series 22

At a glance:

The Locomotion Drive System 22 incorporates a state-of-the-art AC driven brushless high torque permanent magnet motor. A high-power digital motor controller is fitted within the housing of the motor. This provides very low inductance loops due to the very short cable lengths from controller to motor. Included is an optional 'Emergency Stop/ Park' caliper braking system. This is a failsafe park and emergency braking system which is automatically applied during loss of power conditions. Each motor is controlled via a system allowing for the locomotive to be remotely controlled.



Each Locomotion 22 Drive System consists of the following components:

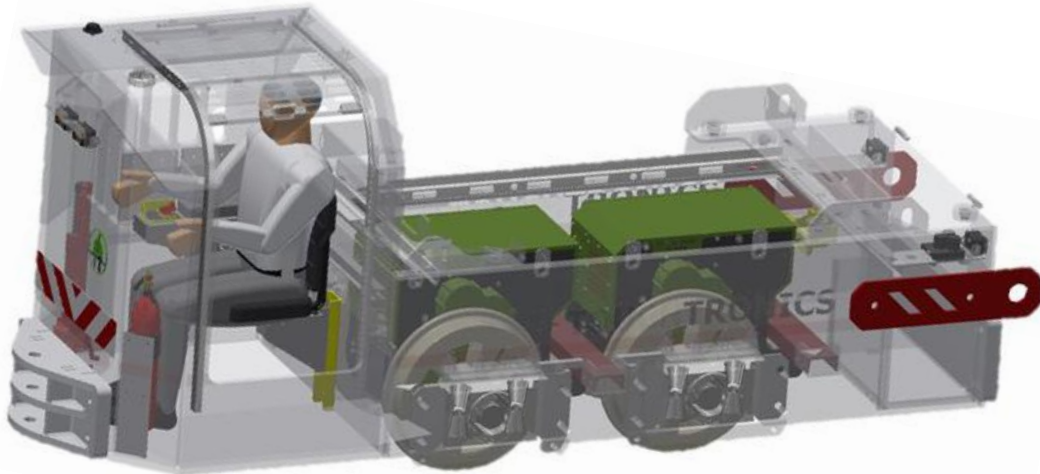
1. AC Driven Permanent Magnet High Torque Motor.
2. 400 Amp 120VDC Digital Motor Controller.
3. Microcontroller Can Bus Interface Module.
4. Optional Emergency/Park Braking System.
5. Mechanical Brake Override.

Specifications

Description	Minimum	Nominal	Maximum
Voltage Rating	76 VDC	120 VDC	144 VDC
Current Rating	-	160 A	400 A (30 Sec)
Wattage	-	18 kW	27 kW
Torque at Pinion	-	190 Nm	430 Nm
Motor RPM	-	-	1300
Pinion Gear RPM	-	-	650
Temperature	- 5 Deg C	-	110 Deg C
IP Rating	-	IP54	

Maintenance

- Modular internal components for easy removal
- Motor can be removed from housing without removing wheel set from locomotive
- Simplified brake pad replacement
- Full motor system diagnostic information available on connected LMS system



Advantages

- Motors work independently (Dual redundancy)
- Motors are speed controlled and not power controlled, reducing wheel slip (Improved safety)
- Motors have Improved efficiency compared to brushed DC motors.
- Regenerative Braking, charges battery during braking (Improved efficiency)
- Built in fail safe spring applied caliper brake per motor (Dual redundancy/improved safety)
- Separate internal controller per motor (Dual redundancy)
- Short inductance loops due to controller close to motor (Improved reliability)
- Majority of wiring internal to motor housing. Only Power and DCU cables connect externally to motor housing (Improved reliability)
- Motor replaceable without removing motor housing from locomotive (Shorter down time)
- Designed for 12 ton locomotive (Future progression)
- CAN based control system, this provides the mechanism to remotely control the locomotive
- Cost effective design

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