

The Autonomous DriveMod Tugger

MODEL
MT-160



YOUR MOTREC TUGGERS COULD BE DRIVING THEMSELVES.

Cyngn brings autonomy to our Tugger, transforming it into an autonomous vehicle that can automate hauling workflows like transferring goods and delivering supplies. DriveMod, Cyngn’s AI-powered technology, enables intelligent, real-time decisions, delivering materials to the right place at the right time – automatically.

With 360° visibility for unmatched safety and 12,000+ pounds of towing capacity, this autonomous upgrade by Cyngn outperforms human drivers, ensuring faster and more efficient material handling throughout your entire facility.

With Cyngn’s Technology, Our Tuggers:



Safely navigate sites without the need for special infrastructure.



Autonomously haul and tow thousands of pounds of goods.



Batch execute missions based on a variety of flexible, customizable options.



Switch between autonomous and manual modes to let a human driver take over.



Follow existing rules of the road and safety protocols.



Collect real-time performance metrics to reveal opportunities for optimization.

Key Benefits

360° perception and multiple safety redundancies prevent accidents and keep people safe. **1**

64% reduction in human labor costs when using the DriveMod Fleet vs. a forklift. **2**

33% increase in efficiency when using the DriveMod Fleet vs. a pallet jack. **3**

4X faster than a forklift driver. **4**



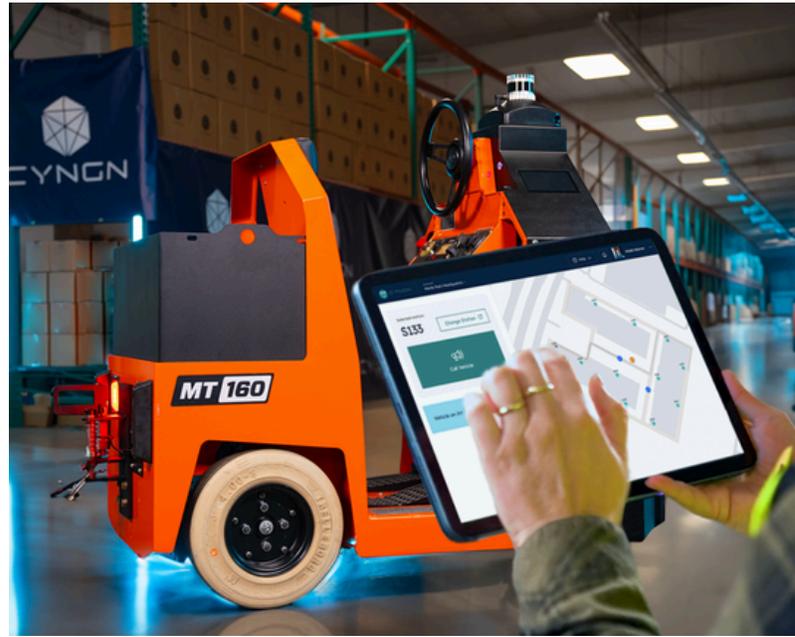
EAGLE-EYE VISIBILITY

The DriveMod Tugger is equipped with Cyngn Insight, Cyngn's autonomous FMS, enabling you to manage, monitor, and control your self-driving vehicles. The bundled suite of analytics tools also surfaces opportunities to optimize your operation.

For example, you will get a complete view of where your tuggers are and how they are being used. And you'll be able to leverage data to plan and deploy new or existing missions that will help you get more done.

Track Key Metrics:

- Location
- Battery
- Current Mission
- Network Status
- Metrics
- KPIs and Productivity



24/7, 360° AWARENESS TO KEEP YOUR PEOPLE SAFE

The DriveMod Tugger comes equipped with redundant sensing and communication mechanisms to ensure greater safety.

A COMPLETE SAFETY SUITE

- 1 Lidars bring **complete 360° vision** to the vehicle by continuously monitoring the area for obstacles and obstructions.
- 2 The Decision Engine interprets what the lidars see to **make decisions 3x faster than a human driver**.
- 3 Virtual Bumper, the **collision avoidance system**, offers an extra layer of safety by essentially doubling the number of systems responsible for safety.
- 4 The Autonomous Tuggers have LED lighting and audio cues to communicate the vehicle's status and intent to the workers in the area.

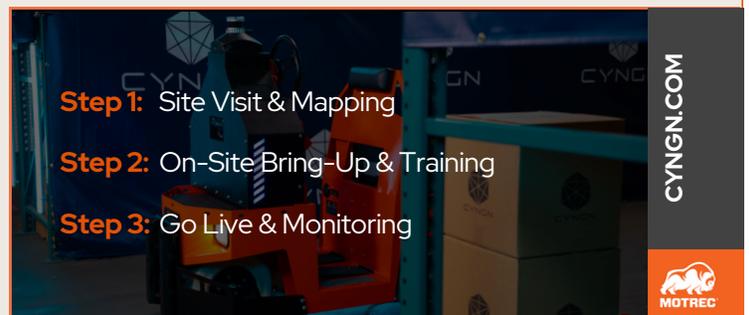


SEAMLESS INTEGRATION

Cyngn customizes AV deployments to meet your needs.

Together, Cyngn and Motrec ensure a streamlined integration process so that we can have you up and running with an autonomous vehicle deployment in a matter of days.

Contact Cyngn to learn more.



Our vehicles drive themselves so your team can focus on everything else.

cyngn.com/autonomous-tugger

TECHNICAL SPECS: MOTREC MT-160

Vehicle Information		Chassis	
Dimensions	65" L x 30" W x 55" H	Body	All-steel unibody construction
Deck Dimensions	18" L x 30" W	Steering	Automotive steering wheel
Weight	1,250 ± 100 lbs depending on options	Brakes	Self-adjusting H.D. drum brake, regenerative braking, electromagnetic parking brake
		Wheels	4.8x8 LRC pneumatic tires
Performance		Energy System	
Autonomous Speed (Max)	4.5 mph	Battery Voltage	48V
Manual Speed (Max)	6 mph	Battery Runtime*	8 hours
Towing Capacity (Max)	12,000 lbs.	Charge Time (Lithium)	2.5-4 hrs.
Load Capacity (Max)	500 lbs.	Charge Time (Standard)	8-10 hrs.
Turning Radius	54"		
Minimum Aisle Width	55"		
Slope (Max)	3°		
		<i>*Runtimes are based on manufacturer recommendations. Times may vary based on speed and load weight</i>	
Safety Features		Sensor Suite	
Emergency Stop		360° 3D LiDAR	
Virtual Bumper (collision avoidance system)		RGB Camera	
LED Visual Communication System		TOF Camera	
Audio Cues			
Automation Interface		Connectivity	
Human-Machine Interface		802.11 Wifi	
		Ethernet Port for Data Offload	
Additional Features			
Auto-Unhitch Capability			
Blue Spotlight			

