

# DynoMiner Trident®

Technical  
Information



## Description

The DynoMiner Trident truck is a Mobile Processing Unit (MPU) with an elevating work platform (EWP) designed to load gassed emulsion into blastholes in underground metalliferous mines. The design supports underground blasting applications including the ability to charge production areas (uphole and downhole) and development headings with string loading in perimeter holes.

The MPU consists of a purpose-built EMT100 cab-chassis fitted with a two person EWP and explosives processing unit. The 4,000mm wheelbase chassis is all wheel drive and four wheel steer. The operator's cabin has approved ROPS and FOPS structures built in. The design is optimised to maximise carrying capacity while maintaining high ground clearance and low overall height (2,900mm). The processing unit has a PLC controlled pumping system and draws from a 5.8 tonne tank. The discharge rates are optimised for 38mm to 140mm diameter blastholes.

The raw materials carried in the bins are as follows:

- TITAN® 7000 emulsion
- Gassing chemicals
- Water

## Properties

### Products and Densities

The DynoMiner Trident truck is specifically designed to deliver Dyno Nobel's TITAN 7000 range of water resistant pumpable bulk emulsion explosives. Densities are optimally controlled from 0.8g/cc to 1.25g/cc.

Products are pumped into the uphole using a high pressure pump and hose-pusher system using Dyno Nobel's retract and gassing system technology.

### Safety Systems

Low pressure, high pressure and high temperature detection are provided on the discharge of the product pump. On detection of low pressure, high pressure or high temperature during normal running, the pumps are stopped immediately and an indication light on the control panel warns the operator. All product run parameters are monitored by the control system.

An emergency stop is provided at the main panel in the cab and at the control station in the EWP. Complete backup of EWP controls is provided.

Engine bay automated fire deluge system is fitted as standard. The unit is equipped with mining standard sealed brakes.

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## Control Systems

A complete control system is provided in the EWP and contains all safety shutdowns, indicator lights and flow and rate indicators. It is supplemented by a backup panel in the cab of the truck.

Reduced wiring is achieved through use of programmable switching and CAN-bus systems. It is supplemented by a backup panel in the cab of the truck. Product kilograms per hole are recorded.



## Vehicle History

The DynoMiner Trident truck has been developed over a number of years of product experience in both Australia and overseas. The current standard has been established as a benchmark design within Dyno Nobel's global operations.

It allows access to lower drives and the twin steer enables it to manoeuvre around tighter corners. With the CAT C6.6 engine it can operate on 1:5 inclines, and has sealed Hydro-flex suspension and sealed brakes.

The units are directly supported under DNAP's SAP based maintenance planning, scheduling and controlling systems.

## System Advantages

- The ability to charge in all areas:
  - Production uphole
  - Production downhole
  - Development headings
  - String loading in perimeter holes
- The ability to load different densities controllably
- Densities are available from 0.8g/ml to 1.25g/ml
- One person operation
- Improved brow control
- Minimise back-break and rehabilitation

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