TVS

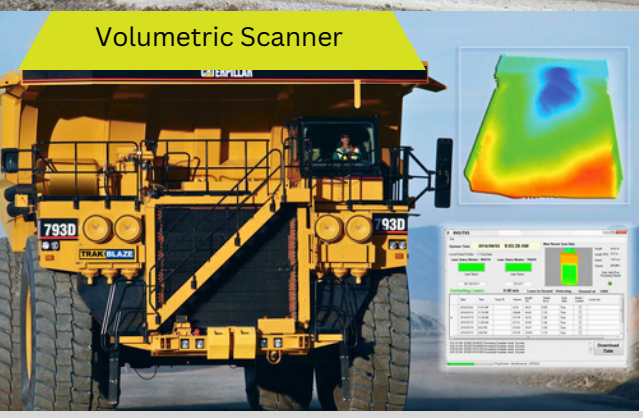
Mining/Haul Truck Volumetric Scanner

Maximising Profits & Payloads

Realtime Volumetric Scanning System for Mine Haul Trucks

TVS is a non-contact volumetric measurement scanning system designed to measure loads of bulk loose solids & minerals in mining trucks.

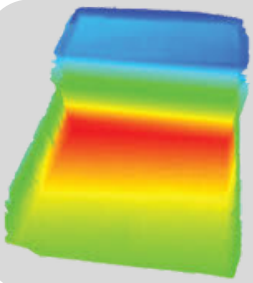
The TVS software has been developed specifically to allow direct acquisition of data from the intergrated laser scan head allowing for real-time monitoring of payloads.



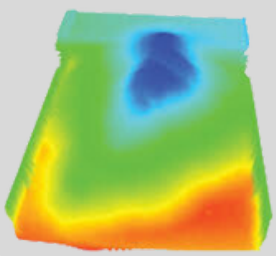
Trucks are scanned as they pass slowly beneath an elevated Scan Head, which houses two high-precision distance lasers, commonly known as laser scanners. As a vehicle moves through the scanning area, the laser scanners capture thousands of distance measurements per second, creating a detailed data profile in real-time.

As a truck passes beneath the laser scanners, the system captures distance data and generates a detailed 3D model or "surface profile" within the software.

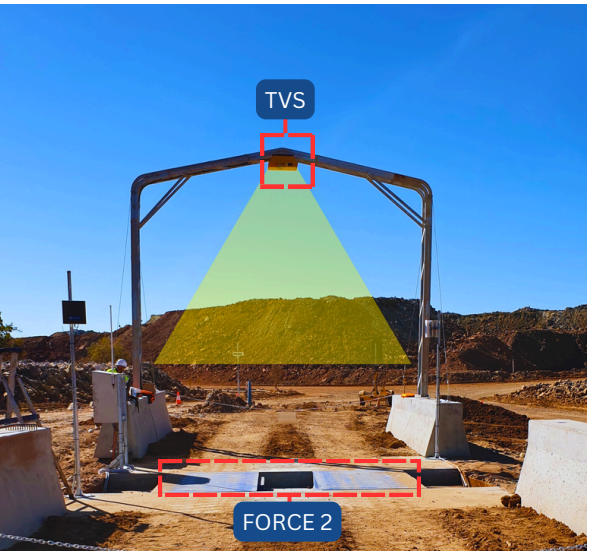
To establish a baseline, the vehicle is first scanned while empty, and this profile is stored in the system database as the zero reference. When the truck is scanned with a load, the software compares the new profile against the recorded empty profile. By precisely aligning the two profiles, the system calculates the load volume based on the differences detected.



Empty Mining Haul Truck Scan



Loaded Mining Haul Truck Scan



Data Interface Options:

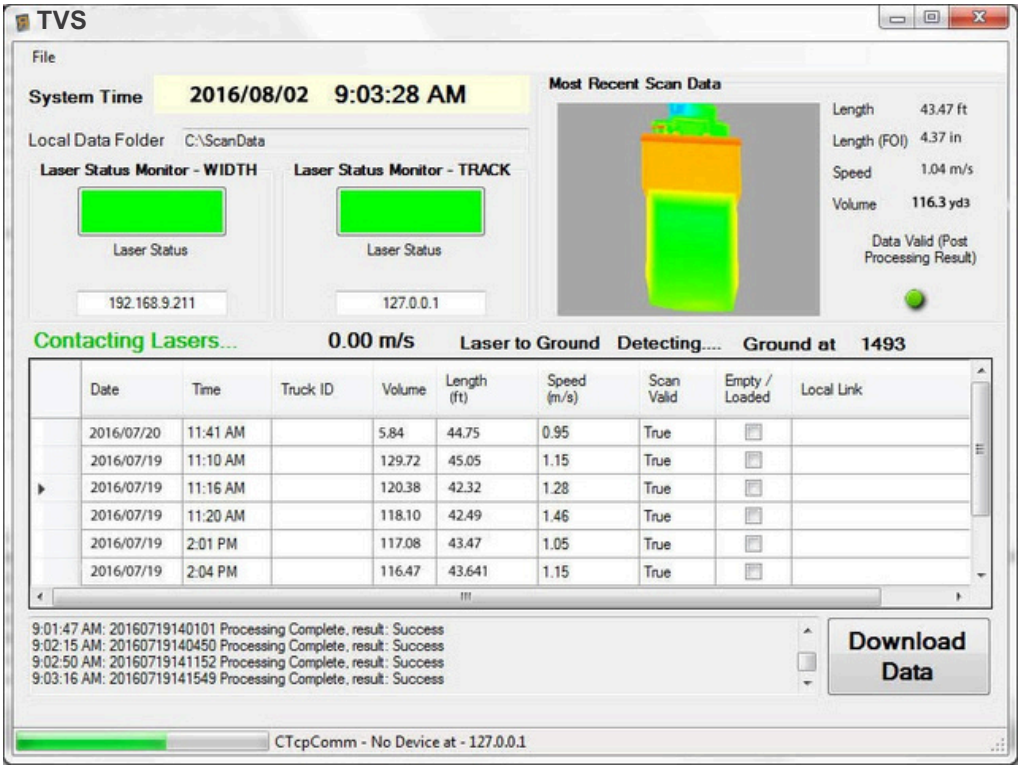
Data Interfaces	SQL Server, MODBUS (TCP)
Data Fields	Volume (m3), Speed (m/s), Length (cm), Width (cm)
3D Output	X3D Compliant, 3D model for every scan
Auto Rating	Software automatically determines the validity of scan data and rate a scan as 'Good' or 'Bad'.
Laser Status	Laser contamination status is monitored via the touch screen interface (Good, Contamination Warning, Contamination Error).

Note: Subject to change without notice. Images are for illustration purposes only.
Accuracies may vary based on site conditions and vehicle operation.

Software

The TVS processing software provides near real-time outputs to the industrial data network through a responsive design using multi-threaded technology, with calculations of production critical parameters in less than 10 seconds!

The software processes: Date & time, Vehicle ID (optional), Volume, Length (m/ft), Speed (m/s), Scan validity, Empty/loaded.



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