

Bell continues to innovate its solid 4x4 ADT platform



In a competitive world where the total cost of machine ownership is more critical than ever, the Bell 4x4 Articulated Dump Truck range is a niche solution that offers the same production as a 6x6 truck at a lower overall cost, while retaining its all-weather suitability and providing higher utilisation compared to conventional rigid haulage solutions.



The 4x4 concept, first mooted eight years ago with the 60-ton Bell B60D, has evolved to the OEM's E-series generation and now incorporates 30-ton and 45-ton models. With the growing popularity of the trucks, the ADT specialist continues to innovate on the strong platform it has created.

Bell Equipment Product Marketing Manager, Nick Kyriacos, said the B45E 4x4 has recently received a new chassis with full suspension and a specifically adapted rock bin to meet the requirements of small and medium-sized mining operations even better. "As with the B60E, two oil/nitrogen shock absorbers now take over the suspension of the twin-tyred drive axle. Together with the standard adaptive 'Comfort Ride' front suspension, the truck offers more driving comfort adding to productivity and even better traction and braking capabilities."

In addition to an anti-slip differential, the rear axle now also offers sensor-based automatic

traction control. The space and travel of the new suspension have been designed to accommodate 21.00R35 twin tyres fitted with snow chains.

"We've also redesigned the bin because it was originally based on the B60E, which is mostly loaded by heavy mining excavators. This made it less practical to load with larger wheel loaders, which are more common in small to medium-sized quarries where these trucks come into their own."

According to Nick the bin was lengthened and given a straight front wall, which along with the longer upper edge of the bin and better fill behaviour, enables faster loading with 3,5 to 6m³ wheel loaders. "Both the maximum tipping height (6 485mm at 55°) and the large ground clearance of the chute (890mm) remain almost unchanged, meaning that the B45E 4x4 can still fit into existing infrastructures, such as crusher housings, better than a 6x6 truck with a longer bin."

The exhaust gas-heated 25m³ bin with a standard width of 4 265 mm (with tailgate: 26m³/4 639 mm) also marks the vehicle width, however, a narrower "Narrow" bin option of the same volume, brings the width of the Bell B45E 4x4 to less than 4m.

The 4x4 range has also benefitted from Bell Equipment's continuously evolving 6x6 ADT range in terms of drive, power, transmission, production and safety features as well as intelligent vehicle control. They feature the same six-cylinder engines from Mercedes Benz, optimised for off-road by MTU, as their 6x6 counterparts.

Commenting on the benefit of the 4x4 trucks, Nick adds: "By removing the third axle we've effectively eliminated tyre scuffing and parasitic losses have been reduced. Not only does this reduce fuel and tyre running costs, to ultimately provide a lower cost per tonne of material moved, but it also reduces the need for haul road maintenance for further cost savings."





The B30E 4x4 recently received an upgrade in the form of a new transmission and chassis configuration, allowing for the fitment of Michelin 875/65R25 E3

tyres, further increasing the productivity potential of the truck. As a result, the B30E 4x4 is an economical solution for bulk handling and has found a niche in tunnelling applications and

confined areas such as stock yards and ready-mix plants with its tight turning circle of 14,6m. Quarrying and smaller mining operations are suited to the larger B45E 4x4 while the B60E is engineered for high productivity in mining under all weather conditions.