

# iPUT Tracked Self-Driven Dozer Mining Unit (TDMU)



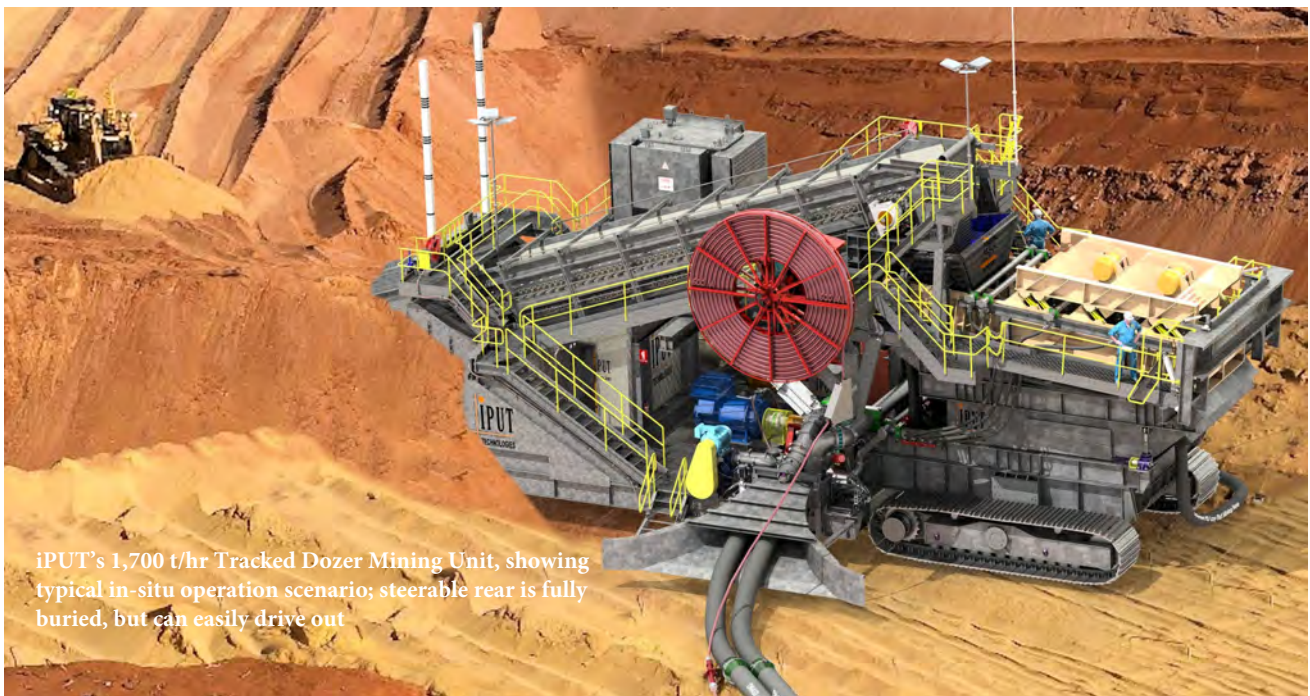
## KEY PERFORMANCE SPECIFICATIONS

**Capacity:** 2,000 t/hr max / 1,700 t/hr design nominal @1.6 bulk density, 2.6 SG ; **Ambient de-rating:** >45 deg C  
**Annual Throughput:** 14 mtpa (assuming 1 short move every 2 days, 1 dayshift maintenance a month and 7 day annual outage)  
**Screening:** GK 2.4m x 8.5m double deck two-mass screen handles rocks to -500 mm; (Grizzly apertures 44 cm x 117 cm, screen at -3.2 mm; -2 mm option)  
**Laden Travel Speed (high / low):** 1 km/hr (on flat) / 0.5 km/hr (on 20 deg incline / tight turning); **Manoeuvrability:** 50m turn radius; +/-5 deg articulation each track individually  
**Tracks:** 1.2m wide x 6.9m long double grouser treads, all hydraulic motor driven ; **Driving:** Remote control, adjustable bias for hose towing;  
**DN450 interchangeable 10m feed & slurry hoses:** up to 2@500m (950m working range from included hose termination anchor skid)  
**Power supply:** 22 or 33 kV x 2.5MVA dual output KNAN transformer, reeled cable fed (450m + plugged extensions) c/w ring main isolator surge protection + lightning protection  
**Off-Grid Travel Power:** Quick-remove free-standing rear platform with integral Atlas CEA 650kVA genset and easy-plug P3 Connector system; permanent fit option  
**Slurry pump:** Warman 16/14 AH, with WEG 1,000 kW 3.3 kV VSD direct drive water cooled motor  
**Unladen mass:** 380t (excl optional 10t FEL hopper)  
**Avg Ground pressure:** <145kPa unladen; <150kPa feed off; <185 kPa normal operation; <105 kPa max laden, sunk to chassis (easily climbs out)  
**Noise Levels:** 60-65 dBA at 10m (less than 45 dBA at 100m) ; no equipment above 85 dBA at 1m in normal operation  
**Feeder drive:** High torque direct drive (no gearbox) Hagglands radial piston hydraulic motor; 0.5m/s at max throughput  
**Feeder bed:** 1,700mm wide (Transmin 2m belt-on-slats conveyor) x 600 mm deep (remotely adjustable up to 250 mm lower to suit weather / local ore characteristics)  
**Sump live volume:** 20 m3; at 15 m3 working volume and 2,000 t/hr providing 23 – 34 seconds residence time for operational range of 45% to 55% w/w concentration slurries  
**Optional Grizzly Excavator Boom:** For lump clay removal / push-through; quick-remove system  
**Optional FEL / Excavator Hopper:** 50 m3 / 80t capacity; 10t mass, 25 mm thick UHMWPE bolted panel lining; chain slings  
**Optional slewing radial discharge conveyor:** 150t/hr; 15m radius (tbc, should trash stream require more than occasional dozer clearance)  
**3,500 t/hr (29mtpa) Configuration:** Comprising a 900 mm feed depth to a 3.6m wide screen; 30m3 sump; 20/18 slurry pump; 1.4MW motor; DN600 hoses; longer steerable tracks  
Using well-proven mining technology, these high throughput mobile dozer traps will dry mine lower head-grade mineral sands resources with a lower \$/t, lower power consumption / greenhouse gas emissions, and higher reliability and availability than any current DMU.

Driving more \$M to annual profits AND increasing total yield from an ore body by several \$10M's over the life of mine.

Get your ore tested at [GK's sophisticated bulk ore screen proving facility](#) and have a bankable pathway to a higher profit mine in weeks.

These machines have been progressively developed via a dedicated R&D program over several years, in close consultation with highly respected senior mine personnel and leading industry power-houses. "A sublime solution to problems that have beset the industry for decades" says one GM Ops. Well suited to continuous extraction of strandlines and especially helpful to chase fingers. [Click here](#) for an example of a block mine plan.



iPUT's 1,700 t/hr Tracked Dozer Mining Unit, showing typical in-situ operation scenario; steerable rear is fully buried, but can easily drive out

Individually driven by high torque hydraulic motors, the TDMU's ground engaging steerable tracks ensure it can negotiate tight terrain to maximise yields from large / complex mineral resources. Rear tracks are centrally mounted, articulated and steerable, with front tracks also articulated. This ensures excellent manoeuvrability and allows the TDMU to handle relatively uneven terrain (side stairs auto-lift up to maintain 600mm chassis clearance). Being tethered at up to a 500m working radius provides the flexibility to continuously recover large blocks or narrow tracts of resource, with quick change-over times to start up the next block / section. And they can climb 20 degree slopes, to simplify pit transitions. Powered by incoming HV via auto-tensioning cable reel, with a quick-remove piggy-backed mobile genset (or fixed if preferred) for travel off-grid. [Click here](#) for comparison with other DMU's and costing info.

A self-levelling (for prolonged spring life) low vibration two-mass screen (explanation at <https://tinyurl.com/GK2mass>), fed full width by a low profile belt-on-slat conveyor ([click here](#) for a 40 sec overview video) will provide automated density controlled slurry transport over long distances, with dozer cab process oversight. A quick-remove hopper is available for FEL or excavator use. Trash is easily dozer cleared and the 300mm ID lay-flat sump overflow hose is a simple one-person task to handle. All controlled from a fully insulated switch room built to cool-room spec with a mine grade air-conditioner for maximum reliability in hot climates.

Constructed in structural modules for easy repair, protected by extreme environment glass plate epoxy (Interzone 954GF), shop tested major subassemblies can be transported around the globe for rapid assembly and commissioning. Local fabrication and assembly of some modules is available for suitable sites. Galvanised Victaulic pipework fittings, long life ceramic, bolted panel main feeder linings and UHMWPE chute linings, with auto-lube bearings used throughout to simplify maintenance. Stair / walkway access to all maintenance points. Comes complete with ground engaging hose termination anchor skid. Maintainability and availability are core engineering design concepts, built in from the ground up by personnel with decades of experience making operational equipment people love to own. You will too.