

iPUT Pushed Skid Dozer Mining Unit (DMU)

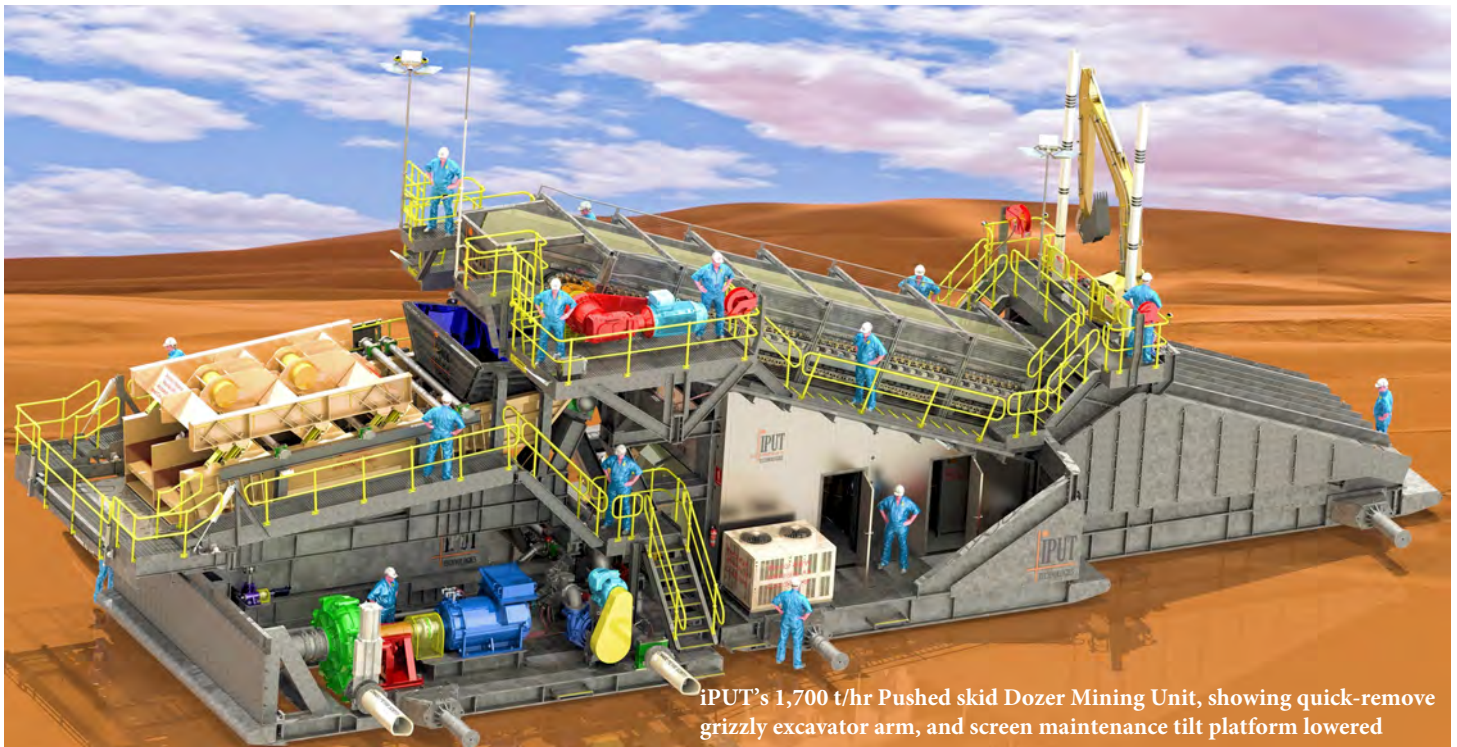


KEY PERFORMANCE SPECIFICATIONS

- 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:** 13 mtpa (assuming 1 move every week, 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)
- Incoming Power:** Ausproof safety plugged incoming 22 or 33 kV cable to ring main isolator surge protection, c/w lightning protection
- Power Transformers:** 1.6MVA 12-pulse 1,750V and 750kVA 415V robust (dragline spec) dry type transformers in a dual switchroom with Rinnai 45kW mine spec a/c
- Slurry pump:** Warman 16/14 AH, with WEG 1,000 kW 3.3 kV VSD direct drive water cooled motor
- Unladen mass:** Screen Skid: 124t ; Feeder Skid: 177t ; (add 5t for optional grizzly boom and 10t for optional hopper)
- Unladen avg ground pressure:** <28 kPa (feeder) ; <32 kPa (screen) (increases slightly with optional equip)
- 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:** SEW bevel helical gearmotor with dedicated oil cooler and 185kW VSD drive; 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

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. These economical dozer pushed skid mounted dozer traps will RELIABLY out-perform any other DMU of their type. The very low feeder entry point increases average pushed t/m of dozer travel and reduces fuel consumption.



iPUT's 1,700 t/hr Pushed skid Dozer Mining Unit, showing quick-remove grizzly excavator arm, and screen maintenance tilt platform lowered

A two-skid configuration, easily aligned via a simple guide system to solidly slam the skids into place, and a pinned connector to keep it together in operation, or to perform a flat terrain move of both units simultaneously. Skids slide on 20mm Bisalloy 400 alloy steel plates, with all galvanising cavities sealed / filled with expanding polyurethane. To relocate the DMU, it is as simple as unplugging the cables and hoses between the skids (dual plugged for simple maintenance of connectors), slide the security pins out of the considerably oversized engagement teeth holes, disconnect the slurry and water lines, then move the skids to their new location. The screen skid can tolerate up to 400mm out of level, and the feeder skid similar, so setting up is a breeze.

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. Including extremely robust resin cored dry transformers, as preferred for draglines and other large mobile equipment.

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, or fully containerised and 'stick-built' for difficult access sites. 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. 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.