

PORTABLE CHARGING UNIT (PCU)TM

Model PP-4

Product description

BME's Portable Charging Unit (PCUTM) represents the forefront of pumpable emulsion technology available for use in narrow reef mining operations. BME's PCUTM is designed in house for the delivery of BME's range of MegapumpTM emulsion formulations, increasing the safety of daily blasting practices through their UN 5.1 classification. The PCUTM is a positive displacement pump designed to work with BME's patented 'Closed Emulsion SystemTM'. The system eliminates waste while simultaneously delivering a predetermined mass of double salt emulsion and sensitising agent to each blasthole, sensitising the emulsion as it enters the blasthole. The PCUTM is manufactured for rough underground conditions but is also light and compact enough to be carried and operated by mining personnel.



Application

BME's PCUTM is designed primarily for use in the confined narrow reef mining environment, but is compatible with BME's mechanised emulsion systems for confined blasting practices. In order to optimize the use of the PCUTM in confined environments the PCUTM can be operated by a single operator minimising labour requirements.

Features

- Portable and light weight
- Intrinsically safe design
- Simple and fail-safe pump control mechanism
- Pre-set mass of explosive per blasthole
- Reduced charging time
- Low energy consumption
- Simplified logistics through UN 5.1 classification
- Low operating and maintenance costs
- Short lead time for manufacture

Design specifications

| | |
|------------------------------------|-------------------|
| Remote pump activation | |
| Pre-set mass of explosive per hole | 820 g |
| Emulsion flow rate | 20 kg/min |
| Charging hose length – min | 2.5m (1.5 + 1) |
| Charging hose length – max | 5.5m (1.5 + 4) |
| PCU dimensions: | |
| – Length | 700 mm |
| – Width | 420 mm |
| – Height | 290 mm |
| Dry weight | 14 kg |
| Drive systems | Air/Hydropower |
| Power requirements | < 0.4 Kw |
| Minimum operating pressure | 3.2 Bar (320 Kpa) |
| Maximum operating pressure | 8.0 Bar (800 Kpa) |
| Compressed air requirements | < 36 L/min |

Special features

Supply of emulsion to the PCUTM is maintained through the use of BME's patented 'Closed Emulsion SystemTM'. The patented automatic valve system in the re-useable emulsion bag prevents spillage, contamination of emulsion and maximises the service interval of the PCUTM.

Safety features

- Intrinsically Safe Pump Technology
 - Safe in instances of dry running
 - Safe in instances of dead heading
- Bursting Disk Pressure
- Failsafe Control System