

EMULSION CHARGING VEHICLES AND PUMPING UNITS

- MEMU
- UNDERGROUND CHARGING
- TUNNELING



bowas



Bohlen Handel
GmbH Essen



A new name in charging vehicles and pumping units, with many years of proven performance in international markets.

The offered types of vehicles and pump modules have proven their safety and reliability during decades of service on the field and are constantly being developed further.

Thereby we field equipment with decades of experience at the latest technological top level.

Contact us for more information. With our experienced experts and partners, we will be able to propose solutions for your specific requirements.

Mobile Explosives Manufacturing Units – MEMU

- MEMUS with explosive capacity up to 16 tons
- Different chassis possible
- Customizable tank dimensions
- Standard loading distance is 40-60 meters
- Proven technology – developed with years of field experience
- Fully integrated safety features
- We offer regular checking and maintenance support



Mobile Emulsion Manufacturing Units (MEMU)

MEMU - Features

- System is completely MEMU certified
 - System adaptable to most chassis from all suppliers; current available standard is built on SCANIA.
 - Key Components (such as pumps) customizable to match individual requirements.
 - From two up to four components (matrix, AN prills, aluminum powder, pre-oiling)
 - Adjustable production rate: to up to 300 kg/min (standard 100kg/min)
 - Capacity: up to 18tons due to new design
 - Repumpable (RP) or Site mixed System (SMS)
 - Loading distance 20-80 meters, (others on demand),
 - Hose diameter from 0,5 inch to 2 inch.
- Dosing of all relevant product components is monitored and controlled by electronic instruments such as mass-flow meters.
- Hand-picked choice of materials for the complete equipment based on experience and special considerations in order to ensure long lasting and reliable durability!
- (f.i. stainless steel and special plastic components such as PP HD and PEEK)
- Arctic version: Optional complete Isolation of vessels and hatches ensures workability in any environment of -40°C to +50°C (Aluminum Emulsion tank can be supplied for Scandinavia)
- Safety Systems as per MEMU / ADR
 - Mechanical and electronic safety control for pressure and temperature
 - Automatic fire extinguishing system (ANSUL)
 - Redundant design of all relevant control systems
 - Rupture discs
- User friendly features
 - Easy access to relevant equipment and instruments
 - High pressure cleaner included
 - „Self-cleaning“ tank-shape
 - Closed and secured stowage and control elements
 - Design concept allows quick replacement of relevant components for on-site repairs.
 - Network / Internet access to all control and monitoring systems



Underground charging vehicles

Underground Charging Vehicles - Features

- All vehicles can be adjusted completely to suit individual requirements
 - Heavy duty chassis design and size customizable
 - Key components such as Engine, axis, gearbox can vary according to logistical requirement.
 - System can be operated with electric or hydraulic drive.
- Compact design can be adjusted and built for special applications (f.i. railway mounted system)
- Pumping Unit can be supplied and operated as stand-alone system (f.i. tunneling)
- One or two lines with standard loading capacity of 50-70 kg/min. Higher capacity on request.
- Different gassing systems to meet all site conditions and regulation requirements.
 - Pumping and sensitizing of all kinds of emulsion (viscosity up to 400.000 mPas)
 - Horizontal pumping up to 100 meters (longer hose possible)
 - Vertical borehole charging up to 60 meters (higher distances on demand)
 - Inner hose diameter standard 1 inch.
- Build-in special encoder measures unreeled hose length and borehole depth.
 - (enables borehole loading by depth control)
- Camera system allows 360° surround view
- Battery independent, heavy duty remote control
- Safety Systems - integrated and optional
 - Mechanical and electronic safety control for pressure and temperature
 - Automatic fire extinguishing system (ANSUL)
 - Redundant design of all relevant control systems
 - Rupture discs
 - FOPS 60kJ operator cells
 - Pressure cabin for operator
 - Aircondition and cleaning system
 - gas sensor and alarm

Special Pusher features:

- more than 60m vertical pumping
- Pullback
- Controlled partial borehole loading for smooth blasting
- Automatic Loading





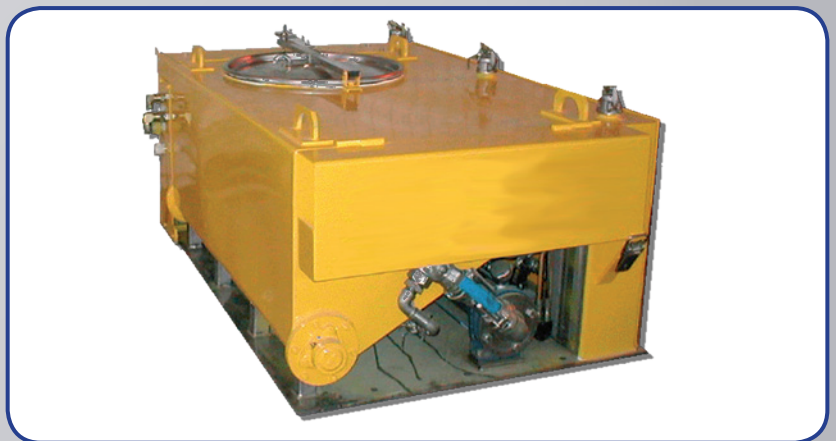
Underground Charging vehicles

- Range of vehicles available with various pre determined options
- fully customizable to fit all requirements
- Fully integrated safety features for vehicle and pumping unit
- FOPS 60KJ operator cells
- Durable, heavy duty equipment proven under most challenging conditions



Pumping modules

- Pumping modules from 450 kg to any required and feasible size possible
- One or two lines. Standard loading capacity 50-70 Kg/min per line. Higher capacity available on request
- Integrated active and passive safety features
- Mountable on civil vehicles for tunneling or various platforms



- Emulsion explosives plants
- Containerized emulsion plants
- Shock tube extrusion and non-electric detonators assembly
- Detonating cord manufacturing plants
- Booster filling
- High explosives production plants (PETN, HMX, RDX)
- Raw materials supply for production