



Multi-purpose drilling rigs

Ground Engineering

Mustang multi-purpose drill rigs

Our Mustang range of rigs are suitable for all types of civil engineering applications, e.g.

- ground reinforcement
- micro piling
- under pinning
- grouting
- jet grouting
- geotechnical surveys
- mineral exploration
- anchoring
- water well drilling



MUSTANG A-32 CBWW

Ground Engineering

Mustang multi-purpose drill rigs for DTH, Rotary, Top Hammer/ Drifter and Core drilling

Range:

- 32 - Skid / C / CB / CNS / R*
- 52 - C / CB / R*
- 66 - C / CB / CBT / R*

*C	= Crawler
CB	= Crawler / Boom
CBT	= Crawler / Boom / Turnbatle
CNS	= Crawler Narrow Space
R	= Lorry



MUSTANG S-52 CDB



Overburden drilling systems

Ground Engineering

The Dual Energy Percussion System (DEPS)

The combination of top hammer drifter and down-the-hole hammer gives

- simplified and fast drilling in blocky formations
- deeper hole depths
- straighter injection holes
- less wear of equipment
- improved drilling economy

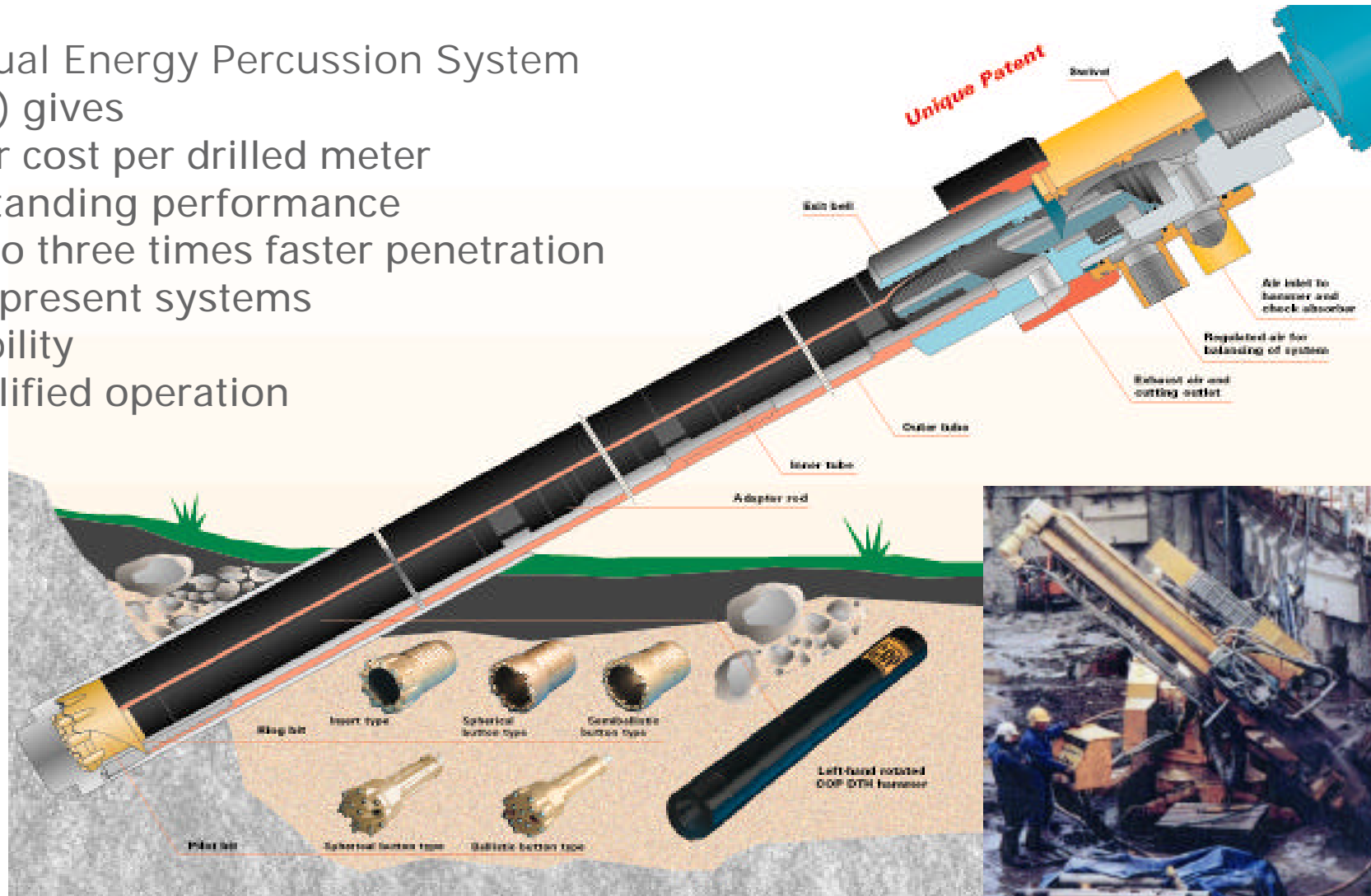


Mustang rig equipped with DEPS 133

Ground Engineering

The Dual Energy Percussion System (DEPS) gives

- lower cost per drilled meter
- outstanding performance
- two to three times faster penetration than present systems
- flexibility
- simplified operation



Ground Engineering

In-the-Hole equipment

ODEX G2 is widely used by water well drillers and contractors for high performance and efficiency in overburden drilling operations.

Dimensions for down-the-hole drilling:

ODEX 90 for 3" hammers

ODEX 115 for 3" and 4" hammers

ODEX 140 for 4" and 5" hammers

ODEX 165 for 5" and 6" hammers

ODEX 190 for 6" and 8" hammers

ODEC 240 for 8" hammers



ODEX G2



Grouting equipment

Ground Engineering

Grouting Equipment

Grouting is the process of injecting under pressure a fluid material into rock, soil or artificial constructions in order to stabilize, strengthen and seal the structure.

The Grouting Equipment consists of

- mixer
- agitator
- pump
- recorder and
- packer



Unigrout grouting platform

Ground Engineering

Grout Plants

Some typical application areas are:

- dams
- tunnels
- foundation work
- construction work

UNIGROUT is a complete grouting equipment ready for immediate use. It is available in stationary as well as in mobile versions.



UNIGROUT 800-100 EWB

Ground Engineering

Grouting Equipment

Atlas Copco can offer

- mixers - CEMIX
- agitators - CEMAG
- grout pumps - PUMPAC, ZB, ZM, SPC
- recorders - LOGAC
- packers - TOP, IPAC
- grout plants - UNIGROUT



Customized Grout Plant

Ground Engineering

Mixers and Agitators

High speed colloidal grout mixers;
CEMIX 03-series

Standard volume:
100, 200 and 400 l.

Agitator with inclined shaft and offset
blades;
CEMAG 02-series.

Standard volumes:
200, 400, 800 and 1600 l.



CEMAG agitator



CEMIX mixer

Ground Engineering

Grout Pumps

ZB-series; electric, hydraulic, pneumatic, single or double acting cylinder with ball valves.

Max capacity 200 l/min

Max pressure 140 bar

ZME -series; electric, progressive cavity pumps.

Max capacity 220 l/min

Max pressure 12 bar

SPC 90 A ; pneumatic grout pump.

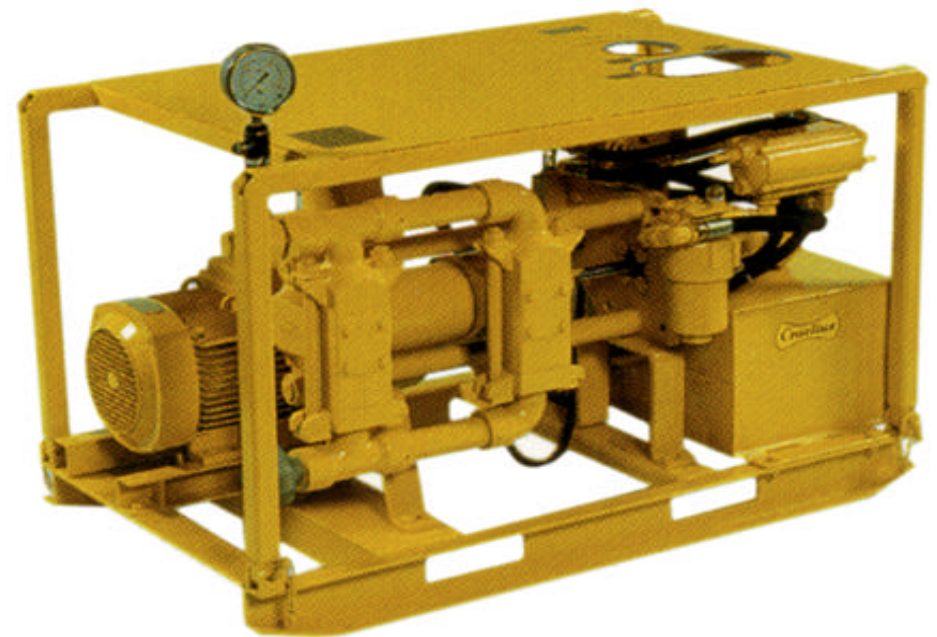
Max capacity 16 l/min

Max pressure 90 bar

PUMPAC ; electric, hydraulic, double acting, user friendly.

Max capacity 235 l/min

Max pressure 100 bar



ZBE pump

Ground Engineering

PUMPAC

- Self cleaning fluid end
- Modularised parts for easy maintenance
- Only one 46 mm wrench for servicing
- Independent and stepless variable pressure and flow



*PUMPAC
- the pump system for the 21st century*

Ground Engineering

LOGAC

The LOGAC 4000 system is a computer based recording system for sampling and storing of data during grouting operations.

The logged parameters are

- flow
- pressure
- volume
- time and real time.

This reliable and simple system is designed for field operation. The logged data is stored on a PC card.



The LOGAC recording system

Ground Engineering

Packers

For efficient sealing in grouting operations and for water loss tests.

Type Expansion range;

- Top packers from 35-40 mm up to 85-90 mm with mechanical expanding rubber sleeve
- IPAC for 35-350 mm



Packers