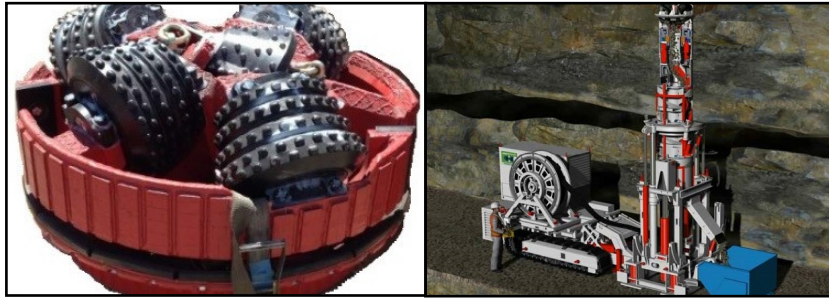


MVM 1100



Safer - Smarter - Faster

- Designed for 1.1m diameter holes up to 30m
- Safer method of drilling boxholes
- Standard 1000V jumbo box for electrical connection
- Cutterhead design adjustable to rock conditions
- Hydraulic drive
- Modular design for flexible set up options
- Crawler mounted transportation system
- No concrete pads required
- Dust suppression
- Small annulus between drill string and

The Mancala Group

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Technical Specifications

In underground mines a large number of small diameter slot holes need to be excavated. Mancala, in association with Herrenknecht AG, has developed new boxhole technology based on the field-proven pipe jacking method which will facilitate this work.

This innovative technology increases work safety significantly and increases production rates resulting in enormous time savings compared to conventional drill and blast operations or other existing technologies. The MVM1100 can drill 1.1m diameter slots of up to 30m in length. In addition a 1.5m diameter boxhole machine capable of drilling a 60m slot length has been developed and commissioned.

Vertical Miner	
Slot hole diameter	1,100mm
Inclination (from vertical)	up to + - 30°
Max. slot hole length:	30m
Height of cross section:	Min. 4.1m Max. 4.6m
Width of cross section:	Min. 4.1m
Machine dimensions: (l/w/h)	7.2m/2.5m/3.3m
Total weight:	37t
Modular design: cable and hose reel unit, transport system and power unit can be uncoupled for more flexibility in space-limited jobsites. The machine is transported by a diesel powered hydraulic crawler unit.	

Jacking Frame	
THRUST SYSTEM	
Push force:	approx. 2,000kN
Pull force:	approx. 300kN
The thrust system transfers the thrust forces (push and pull) via the thrust pipe to the boxhole boring unit.	
The gripping unit stabilises the jacking frame and braces itself against the roof and the floor.	

Cable and Hose Reel Unit	
Dimensions: (l/w/h)	2.2m/1.5m/2.3m
Total weight:	approx. 2,700kg
Divert type:	hydraulic
Cable and hoses length	40mx
The energy chain, a connection between the power unit and the boxhole boring unit, provides the hydraulic and water supply to the machine.	

Boxhole Boring Unit	
CUTTERHEAD	
Type:	Adjustable to rock conditions
Drive type:	hydraulic
Type of cooling system:	water cooled
Rotational speed:	0-34RPM
Nominal torque (max.):	40kNm (48Nm)x
The cutterhead rotates independently at the top of the drill pipe column.	
Rotational speed and torque are adjustable via the control system.	

Thrust Pipe	
Diameter:	1,065mm
Length:	1,000mm
Weight:	710kgx
Thrust pipes are added at the bottom of the pipe column as the hole advances.	
Mechanical connection of thrust pipes enables push and pull of the pipe string.	
Cuttings pass down inside the pipe string into a collection box for easy handling and disposal.	

Power Unit	
Container dimensions: (l/w/h)	3.0m/1.2m/1.8m
Total weight:	approx. 3,500kg
Type of cooling system:	air cooled
Type of control system:	electric (PLC)
Drive:	electric
Installed power:	160kW
Frequency:	50Hz
Oil tank capacity:	600L
The power unit provides hydraulic power to operate the jacking frame and the boxhole boring unit.	

The Mancala Group

- **SAFETY:** Striving to achieve zero harm
- **QUALITY:** Taking pride in what we make and do; on time, on budget and to specification
- **INTEGRITY:** Doing what we say we will do with honesty and respect
- **INNOVATION:** Revolutionising processes and applying technology to achieve better outcomes for all stakeholders
- **PEOPLE:** Recognising people as our greatest asset and encourage personal excellence