

Tunnel Boring Machine

Tunnel boring machines bore through soft soils, gravel, and rock. They are used for constructing utility, rail, highway, and metro system tunnels.



ADDITIONAL IMAGES



Overview

Earth Pressure Balance Tunnel Boring Machine

This Earth Pressure Balance (EPB) Tunnel Boring Machine is engineered for safe and efficient excavation across diverse geological conditions, including soft soils, gravel, cobble, and weathered rock. By utilizing excavated material as a support medium within the excavation chamber, the machine effectively balances pressure to prevent ground settlement. It is an ideal solution for urban infrastructure projects such as metropolitan metro systems, utility tunnels, and rail networks.

Technical Capabilities



A large-diameter TBM designed for complex underground infrastructure projects.

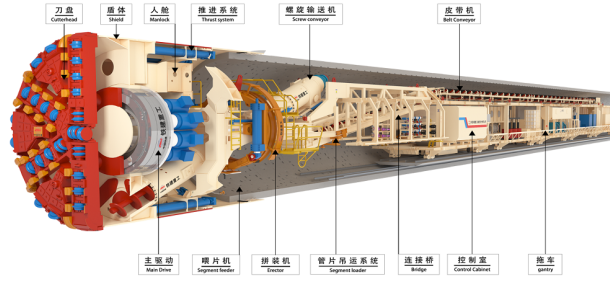
Suitable Ground Conditions

Clay • Sandy Soil • Composite Ground • Weathered Rock • Hard Rock

Diameter Range

Small (3-5m), Normal (5-8m), Large (>8m)

Key Components

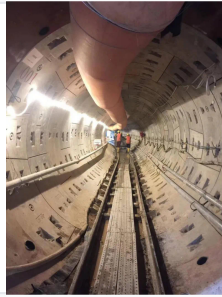


Structural breakdown of the EPB TBM, including the cutterhead, shield, and muck removal systems.

Key Components

- Cutterhead with cutting tools
- Shield for ground support
- Thrust system for forward propulsion
- Screw conveyor for muck removal
- Segment erector for tunnel lining
- PLC system for real-time monitoring

Operational Metrics



TBM operating within a finished segment-lined tunnel section.

Operational Highlights

3 m

Min Diameter

8 m+

Max Diameter

Project References

Project Diameter Examples

Application	Diameter
Instructional TBM	3180
Instructional TBM	3600
Sewage/Cable Tunnel	3730
Water Transfer Project	4030
EH Tunnel Project	5450
Metro Tunnels	6250