

Alpine Bolter Miner ABM 25

The new Alpine Bolter Miner ABM 25 is designed for rapid entry roadway development.

It is basically a widehead continuous miner incorporating special design features for coal cutting and loading.

The outstanding feature of the ABM 25 is its proven ability to simultaneously cut and bolt and so dramatically lift development rates. It is the first such production machine, available to coal miners anywhere in the world.

VOEST-ALPINE's emphasis has been on integration of well proven technology into one machine which gives better advance rates. All of our experience as a leading mining machine manufacturer has been put into this innovative concept.

Bolting rigs are an integrated part of the ABM 25, and up to four roof bolters and two rib bolters can be fitted. Roof bolters are mounted tiltable to the stationary frame of the machine. Bolts can be installed within 2.299 m of the face.



Technical data ABM 25*

General:

Total weight	97 tons
Total installed power	546 kW
Overall length	approx. 11000 mm
Cutting width in operation	5200 mm
Cutting height, max.	3500 mm
Cutting height, min.	2900 mm
Machine overall tramming height	2700 mm
Machine overall tramming width	4800 mm
Max. width over crawler tracks	2896 mm
Machine ground pressure	22 N/m ²
Ground clearance	310 mm

Cutting System:

Shape of profile	rectangular
Drum width	5200 mm
Drum extension, hydraulically operated	2x200 mm
Drum diameter	1150 mm
Cutting speed	1.5 m/sec
Sumping speed, variable	20-50 mm/sec
Max. vertical cutting (shearing) force	300 kN
Cutter motor, installed power	270 kW
Sumping aid (longitudinal slide)	1000 mm

Bolting System:

Distance roof support to face	2299 mm
Distance drill rig: face (center)	1490 mm
Distance between center bolts	900 mm
No. of bolts/W.strap	2-8
Bolt length (single pass)	2100 or 2400 mm
Rib bolting	left and right
Bolt type	chemical
Drilling method	rotating

Support Canopy:

Total force supplied to the roof	2 x 200 kN
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Loading System:

Loading device	spinners
Loading capacity	25 t/min
Loading width	4270-5200 mm
Loader motor, installed power	2 x 36 kW
Retraction facilities	2 x 465 mm

Conveying System:

Conveyor width	760 mm
Chain speed	2.1 m/s
Conveyor capacity	25 t/min
Conveyor overhang	3000 mm
Installed power	2 x 36 kW

Tramming System:

Tramming speed, variable	3.5/7.0/17.0 m/min
Track pulling force	2 x 400 kN
Width of track chain	570 mm

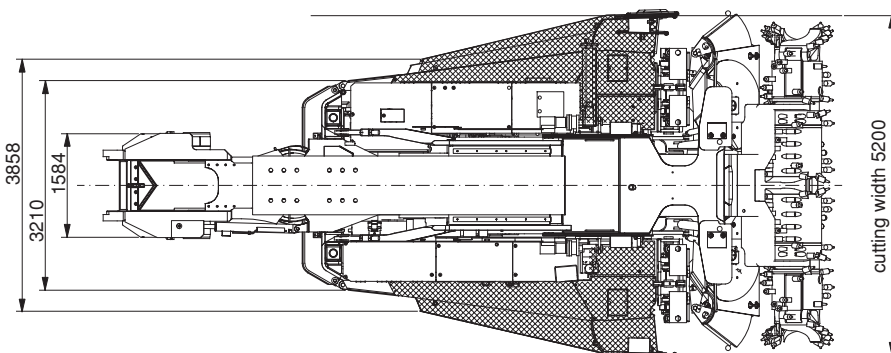
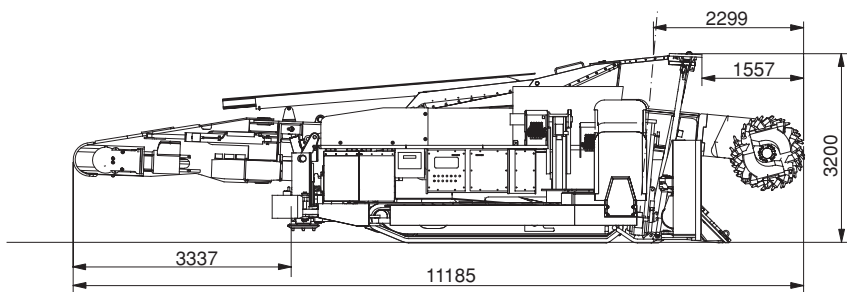
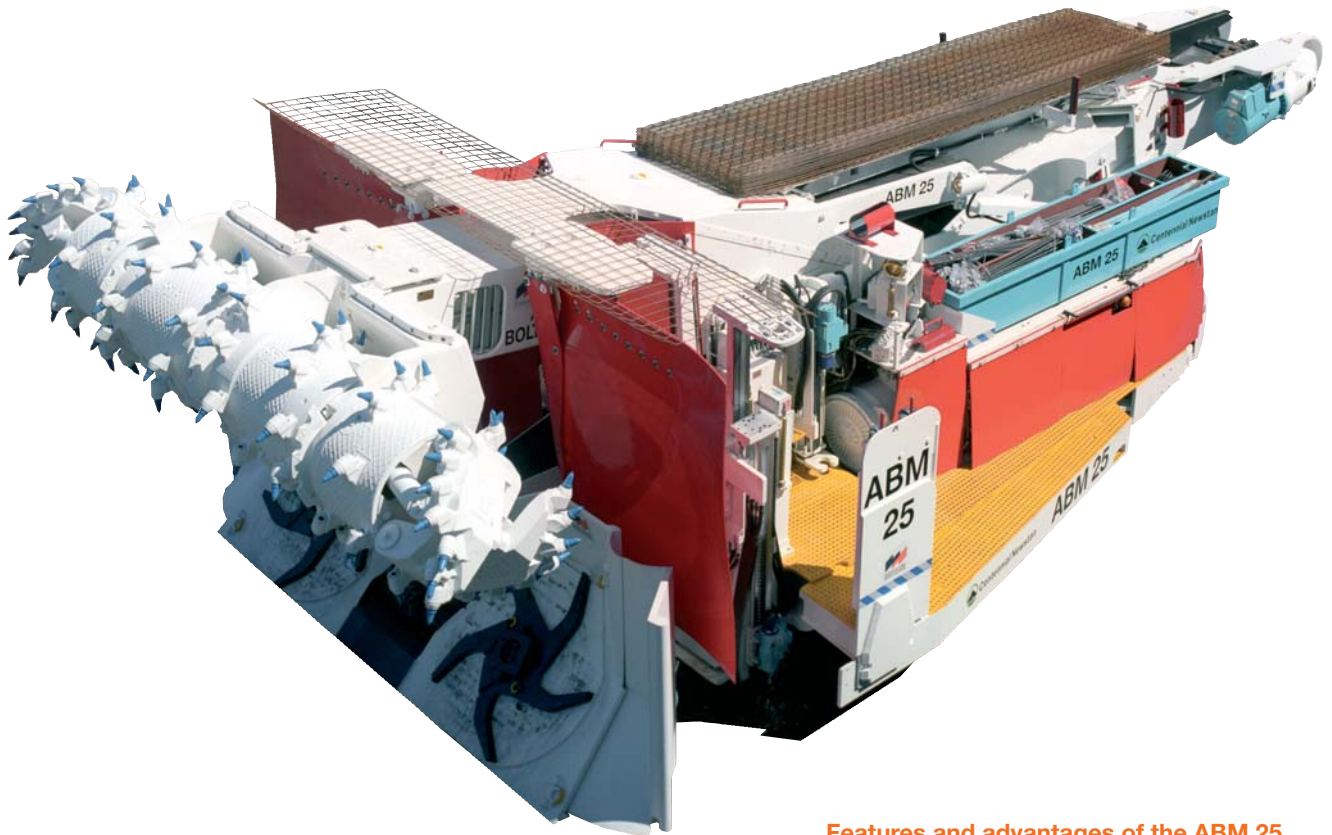
Hydraulic System:

Hydraulic motor, installed power	132 kW
Maximum pressure	250 bar
Tank capacity	450 l

Electric System:

Voltage	1000 V
Frequency	50 Hz
Radio Remote Control	standard

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Features and advantages of the ABM 25

- Optimized platform size for operator safety and ergonomics.
- Integrated rib protection provides operator safety.
- Data logging with integrated reporting.
- AS 4240 compliant.
- Faster development due to simultaneous cutting and bolting.
- Support canopy behind the cutter drum provides operator safety and stability.
- Low pick tip speed reduces dust generation.
- High pressure water sprays.
- Ventilation at the face, removes gas and dust.
- Sump in by slide frame, so no crawler movement or floor destruction.
- Capacity for four roof bolters and two rib bolters.
- Bolt installation close to face, single pass length 2.4 m.
- PLC control interlocks all machine functions, including sump and shear control.
- Electronic level and cutting height control.
- Health monitoring.
- Fully radio remote controlled, with display.
- In outburst conditions, can be operated with aid of video monitors at safe position.