Alpine Hard Rock Miner **AHM 105 ICUTROC**

The ALPINE HARD ROCK MINER AHM 105 is a roadheader of the heavy weight class and designed for rapid roadway development to cut hard and abrasive rock. Therefore this roadheader can exceed limits of the operational range as given for other roadheaders, but it is nevertheless also faced with the ultimate limits set by the machine rock interaction under extreme conditions. The AHM105 is electrically powered.

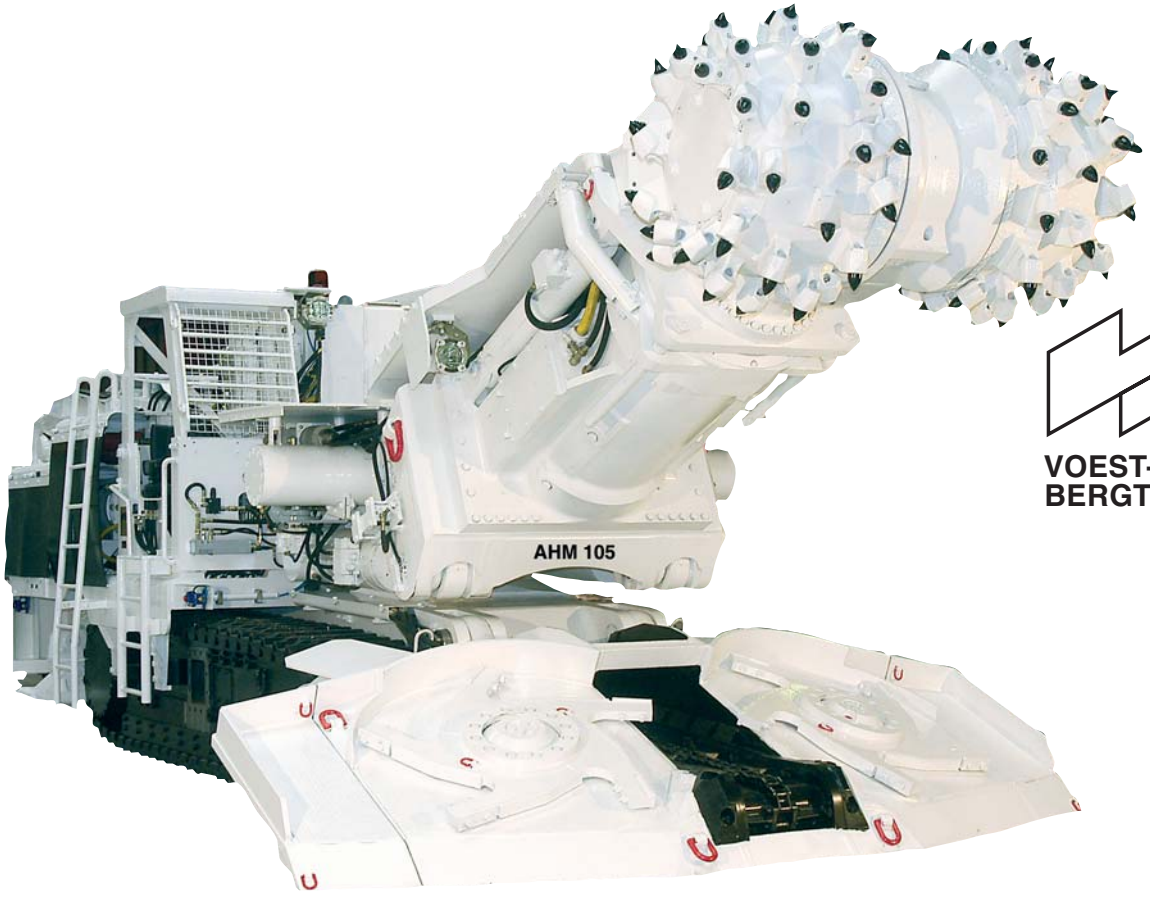
Technical data AHM 105*

Main dimensions	
Total weight	115 t
Total length	17200 mm
Height over canopy	3200 mm
Width over loading table	3550 mm
Width over crawler tracks	2600 mm
Width of crawler tracks	720 mm
Ground pressure	0.20 MPa
Electrical system	
Potential	1000 V / 50 Hz
Total installed electric motor power	555 kW
Cutter motor	300 kW
Hydraulic power pack motor	150 kW
Loader motors	2 x 36 kW
Swivel belt conveyor motors	2 x 11 kW
High pressure water pump	11 kW
Power demand	
via transformer	1200 kVA
via generator set	1500 kVA

Conveying system	
Double chain conveyor motor (hydraulic)	90 kW
Chain speed	max 0.8 m / s
Width of conveyor	600 mm
Capacity of conveyor	max 300 m^3 / h

Cutting profile	telescope extended	telescope retracted
Area	47 m^2	40 m^2
Height	5.8 m	5.3 m
Width	8.5 m	7.7 m
Undercut	0.48 m	0.25 m

Negotiable gradients	
Without machine support	+/- 20 gon
With machine support	+/- 35 gon
Speed of cutter head	1.4 m / s
Tramming speed	0 – 15 m / min



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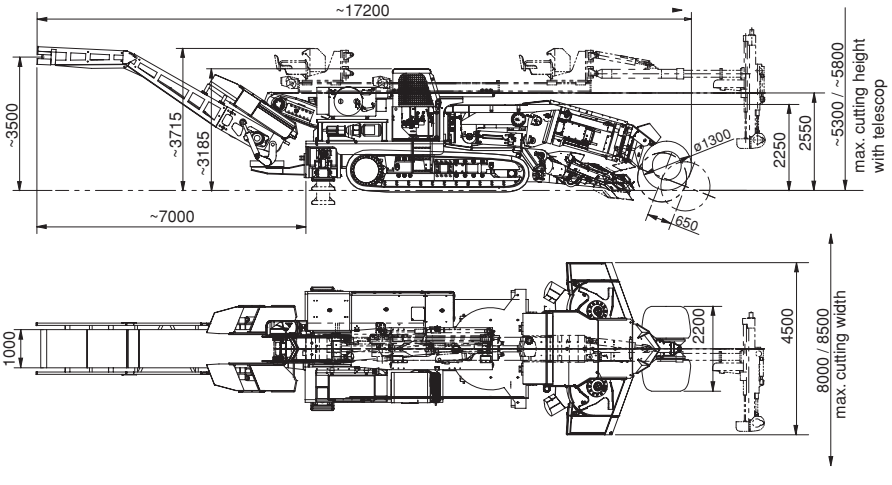

ALPINE HARD ROCK MINER AHM105, features which are not available on other development machines

- Integrated high pressure pick flushing system. VOEST-ALPINE has a number of roadheaders operating with this system over years.
- Low rotation speed of the cutter head and high installed power to reduce dust development to a minimum.
- Low ground pressure of crawler tracks.
- No movements of crawler chains during sumping the cutter unit (therefore no destruction of floor in soft conditions).
- Fully automated greasing system for low service requirements.

These limits are predominantly defined by the available cutting tools (picks) with regard to

- Their resistance against shock load at extremely high rock strength (resulting in breakage of the tungsten-carbide tips).
- Their resistance against abrasive wear when encountering rock with high content of hard minerals. The emphasis is an integration of well proven technology into a machine which gives a maximum advance rate at lower cost per m^3.