



experience has no substitute

Continuous Miner CM2 Series





CM2H-45

CM2H-36

Eickhoff Bergbautechnik GmbH – the Mining Equipment Division –

Eickhoff Bergbautechnik GmbH, located in Bochum Germany, is a manufacturer of underground coal mining equipment for the global mining industry. The portfolio comprises a full range of shearer loaders for long-wall mining operations as well as various versions of Continuous Miners for room and pillar mining operations.

Eickhoff Bergbautechnik GmbH is part of the Eickhoff Group of Companies. Besides being well placed in the mining business, the Eickhoff Group has also been recognized for its high quality industrial gearing products, wind turbine gearboxes and highly specialized cast steel products since 1864.

Eickhoff Continuous Miner CM2-Series

Eickhoff mining machinery is well known for its reliable and robust design. Based on more than a century of experience in manufacturing mining equipment, gearboxes and steel castings, our Continuous Miners have proven their outstanding capabilities in some of the toughest conditions in coal mining.

The machine's concept has been steadily refined, in close cooperation with Eickhoff's customers, to meet the highest expectations in terms of safety, productivity and maintainability. Eickhoff Continuous Miners are designed for operation in challenging mining conditions and can be easily adapted to meet specific customers' requirements.



The Crew - The Machine - The Outcome

Customer Service

Eickhoff is present in all major coal mining regions around the globe. Its subsidiaries and dealerships are sales, service and distribution hubs close to the customers. This ensures quick spare parts delivery and therefore high machine availabilities. Eickhoff's dedicated and committed staff supports their customers whenever required.



The Support - People and Parts

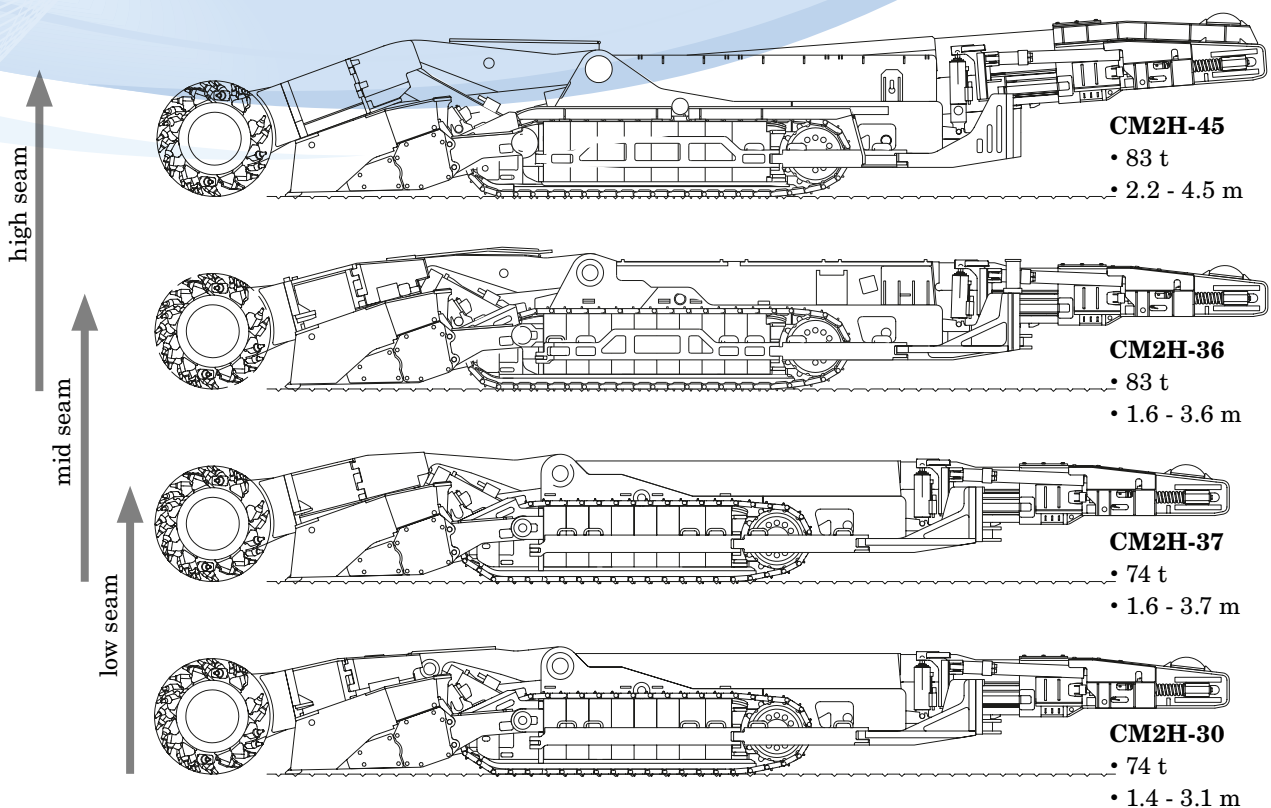


CM2H-37



CM2H-30

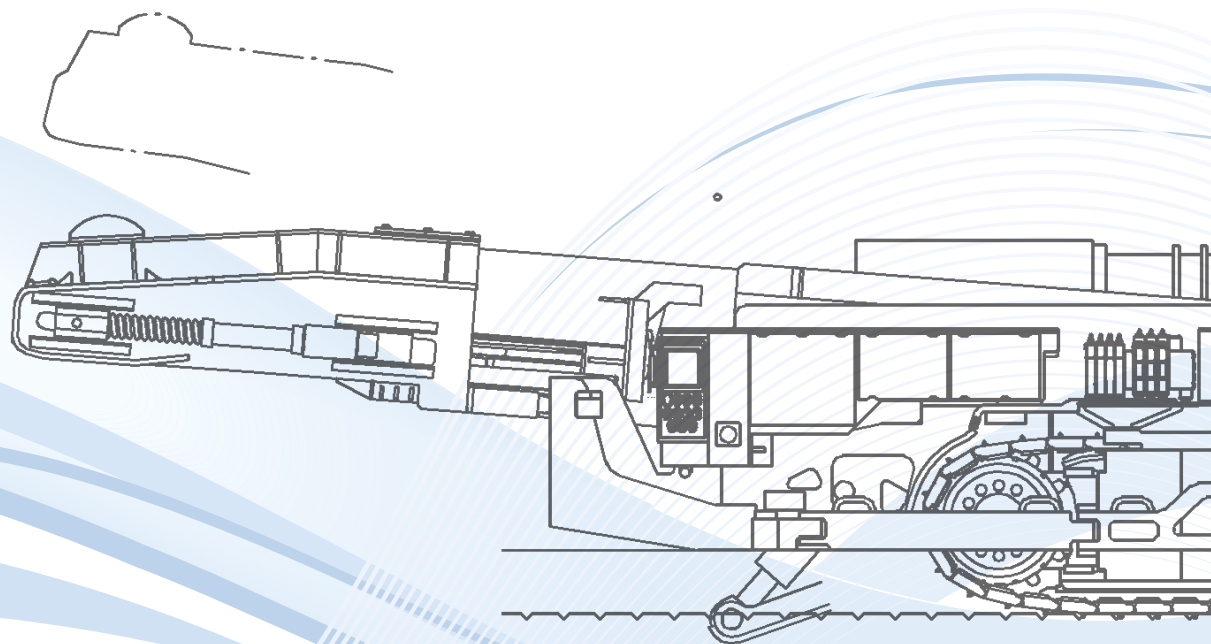
Interchangeability of Components



Interchangeability of Components

Four different types of Eickhoff Continuous Miners are available for cutting face heights from 1.4 m up to 4.5 m. All machine types share a large number of components that allow for interchangeability and optimized stock management. The variations

in design and structure mainly affect the cutter boom and the main frame which are adapted to different cutting conditions.



Cutter Gearboxes

The cutter gearbox concept is based on separate, but interconnected LH and RH units to deliver the full installed motor power to the cutting drums. The two units ensure simple and cost effective maintenance at the face. Either of the gearboxes can be changed independently should the need arise.

Cutter Drums

The optimum ratio between drum size and RPM ensures a slow bit tip speed, thus greatly keeping fines and dust levels down to a minimum.

Conveyor and CLAs

The combination of effective CLAs (Centrifugal Loading Arms) plus a wide foot-shaft-driven chain conveyor guarantees unrestricted sumping and shearing as well as short cycle times. Customers have the option of either a straight or kinked conveyor subject to whichever will best suit their transport equipment and mining conditions.

Traction System

The hydraulically powered Continuous Miners have a low ground pressure and combine high tramming speeds with maximum thrust. This sophisticated hydraulic traction system has significant advantages in wet and



Cutter Gearboxes



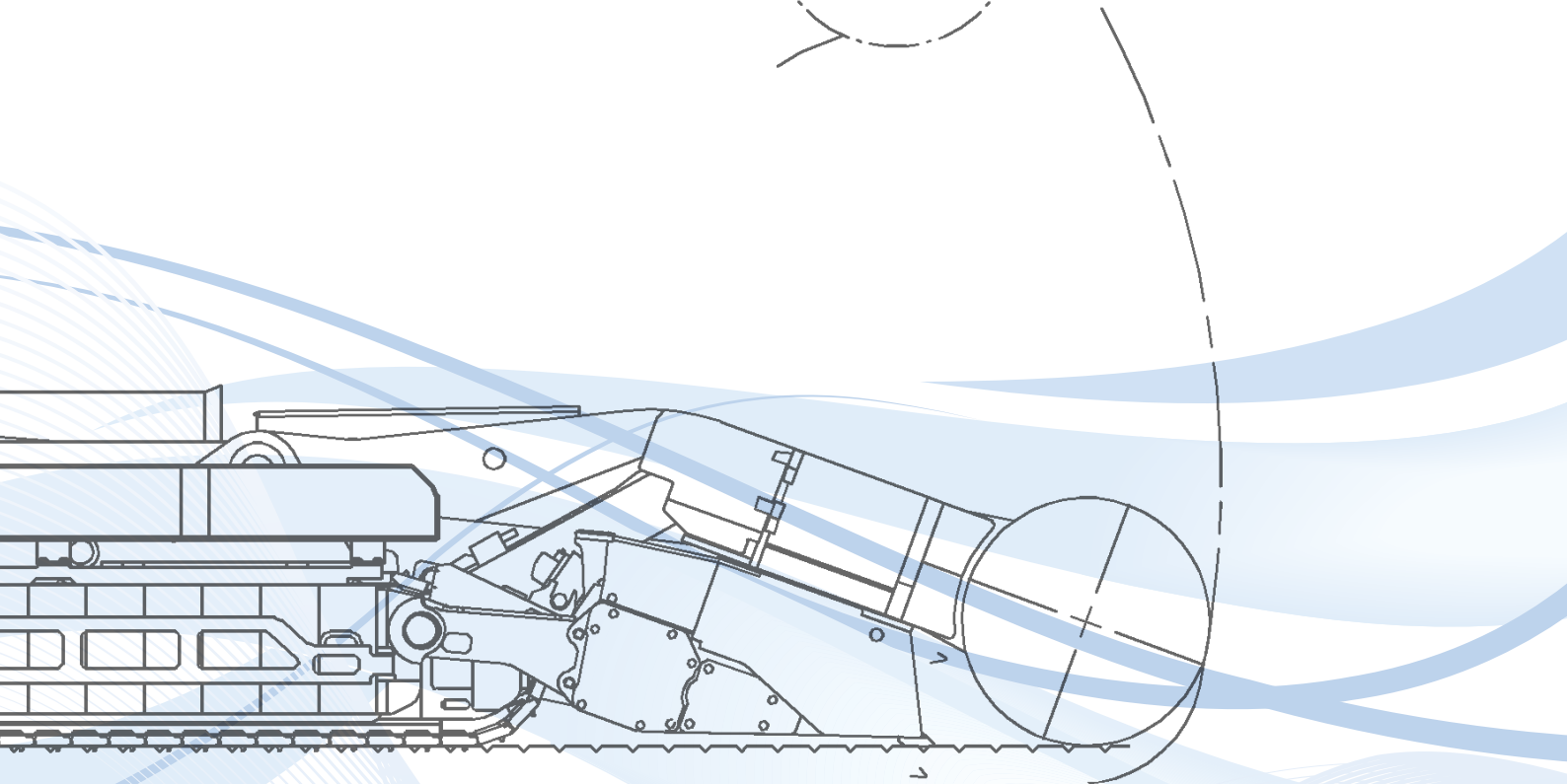
Conveyor and CLAs



Cutter Drums



Traction System



muddy floor conditions. It is highly valued by Eickhoff's customers because of its low life cycle costs, ease of maintainability and outstanding performance in difficult mining conditions such as steep inclines.

Hydraulic System

Proportional sumping and shearing is achieved by control loops monitoring the cutter motor currents occurring during the cutting cycle. Even though the traction motors are hydraulically driven, the entire hydraulic circuit only contains a mere 600 liters of hydraulic oil. The machines have the ability to continue tramming without cooling water for extended periods.

Remote Control and Drivers Cab

The light weight radio remote control is carried in front of the body using shoulder straps. The ergonomically designed buttons and levers enhance operator control of the machine and allow for long periods of operation without getting tired.

Depending on customers' requirements and/or national legislation for operator positioning, the Continuous Miner can optionally be equipped with an onboard cabin protecting the driver's seat. In this case the radio remote control is connected via cable to the machine avoiding the need for additional stationary control panel. This additional feature is widely used in roadway development applications.



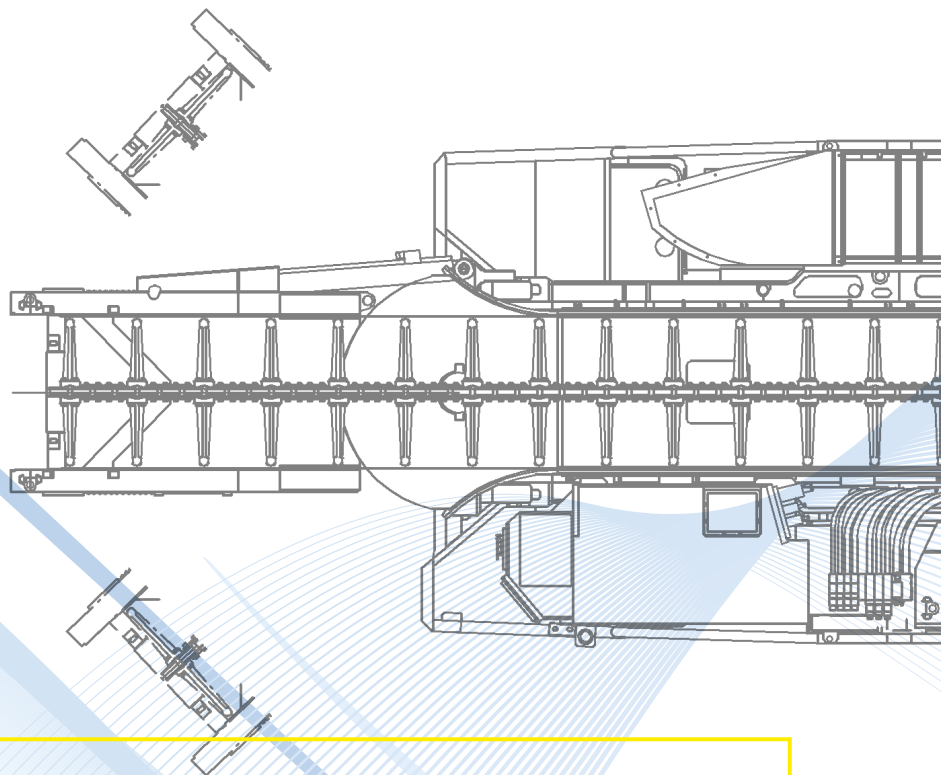
Hydraulic Traction Motor



Radio Remote Control

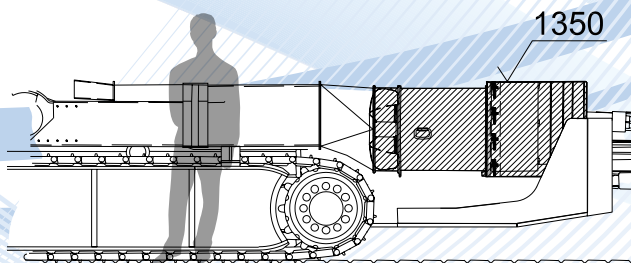


Proximity Detection System



Scrubber, Methane System and PDS

Depending on customers' requirements, all major makes of dust scrubbers, methane detection systems and proximity detection systems can be fitted onto the Continuous Miners. Naturally such systems will comply to the relevant local safety regulations and standards.



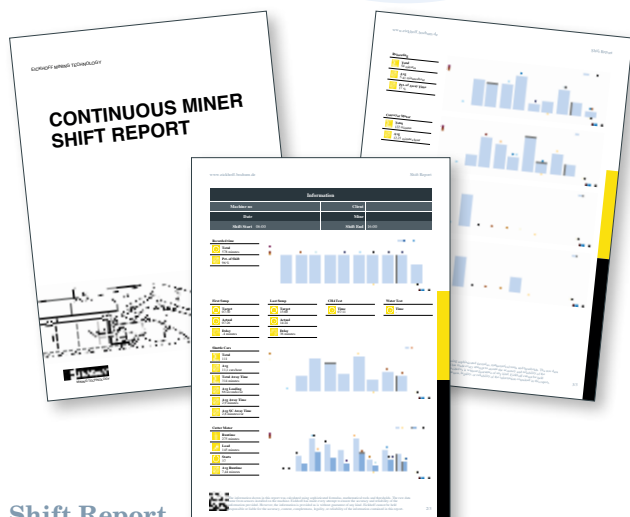
Scrubber System

Electrical System

The unique electrical design concept makes a transformer unnecessary. All electrical components for machine operation and monitoring are placed in a single flame-proof enclosure in an elevated position, well above mud and water, with easy access for maintenance and trouble shooting.

An IPC and several microprocessor controlled motor protection devices reduce the number of electrical components to a minimum while increasing machine availability. Comprehensive data logging and transmission of relevant operational data to the surface give mine engineers the opportunity to optimize their production processes.

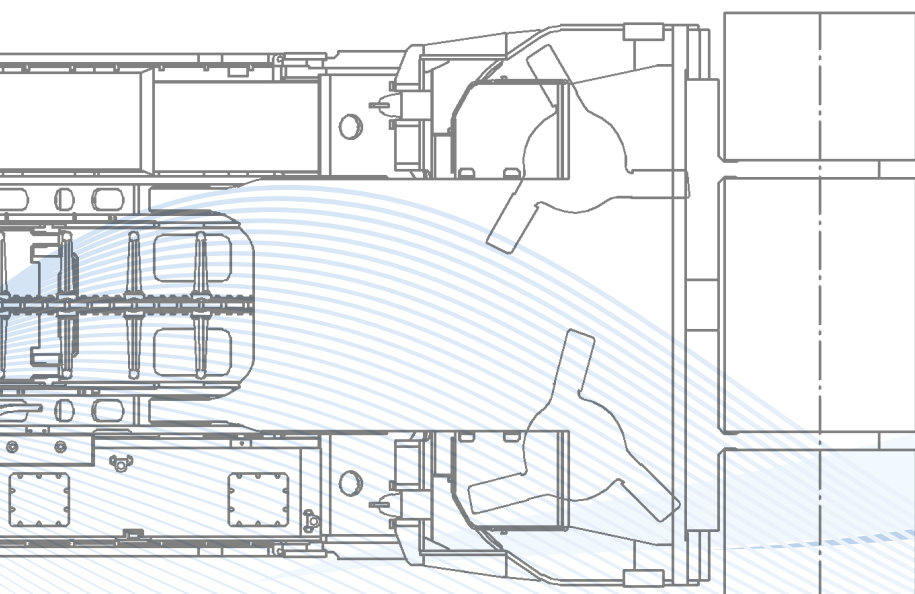
A color display is provided on the machine to show operational parameters and machine condition, assisting service and repair personnel with quick fault finding.



Shift Report



On Board IPC



CM2H-30						CM2H-37	CM2H-36	CM2H-45
Machine weight	tonnes	74			83			
Ground pressure	kPa	200						
Crawler chain width	mm	560						
Tramming speed	m/min	intermediate: 8, fast: up to 25						
Chassis width	m	3.17						
Minimum tramming height	mm	1325	1430	1480	1650			
Min. cutting height*	m	1.4	1.6	1.6	2.2			
Cutting width	m	3.65						
Max. cutting height	m	3.1	3.7	3.6	4.5			
Sumping speed	m/min	0-3						
Loading rate	t/min	30						
Drum diameter	m	1.2						
Drum speed	rpm	48						
Bit tip speed	m/s	3.0						
CLA speed	rpm	49						
Supply voltage	V	1000 / 1140						
Cutting power, electric drive	kW	2x 180						
Spinner and conveyor power electric drive	kW	2x 45						
Hydraulic traction power	kW	2x 60			2x 75			
Pump power, electric drive	kW	125 / 140			160			
Scrubber power	kW	Hydraulic or electric scrubber motor with up to 45 kW						
Total installed power	kW	620 / 635			655			

* depending on undulation of the seam



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