

# EXPERIENCE HAS NO SUBSTITUTE



**150  
YEARS OF  
EXPERIENCE.**

**99%  
AVAILABILITY.**

**9  
MILLION TONS  
PER YEAR.**

**1  
MACHINE.**





## HIGHER PRO- DUCTIVITY WITH EICKHOFF MACHINES

Whether at one of the world's most productive mines in Australia, whether in the cold winters in the Russian region of Workuta or whether with the worldwide biggest shearer loader in Inner Mongolia – Eickhoff mining machines are at the forefront. Eickhoff shearer loaders and continuous miners steadily set new standards as regards to quality and innovation.



Extremely reliable: Eickhoff shearer loaders deliver production records also thanks to their low downtimes.





## WELL AHEAD IN UNDERGROUND MINING

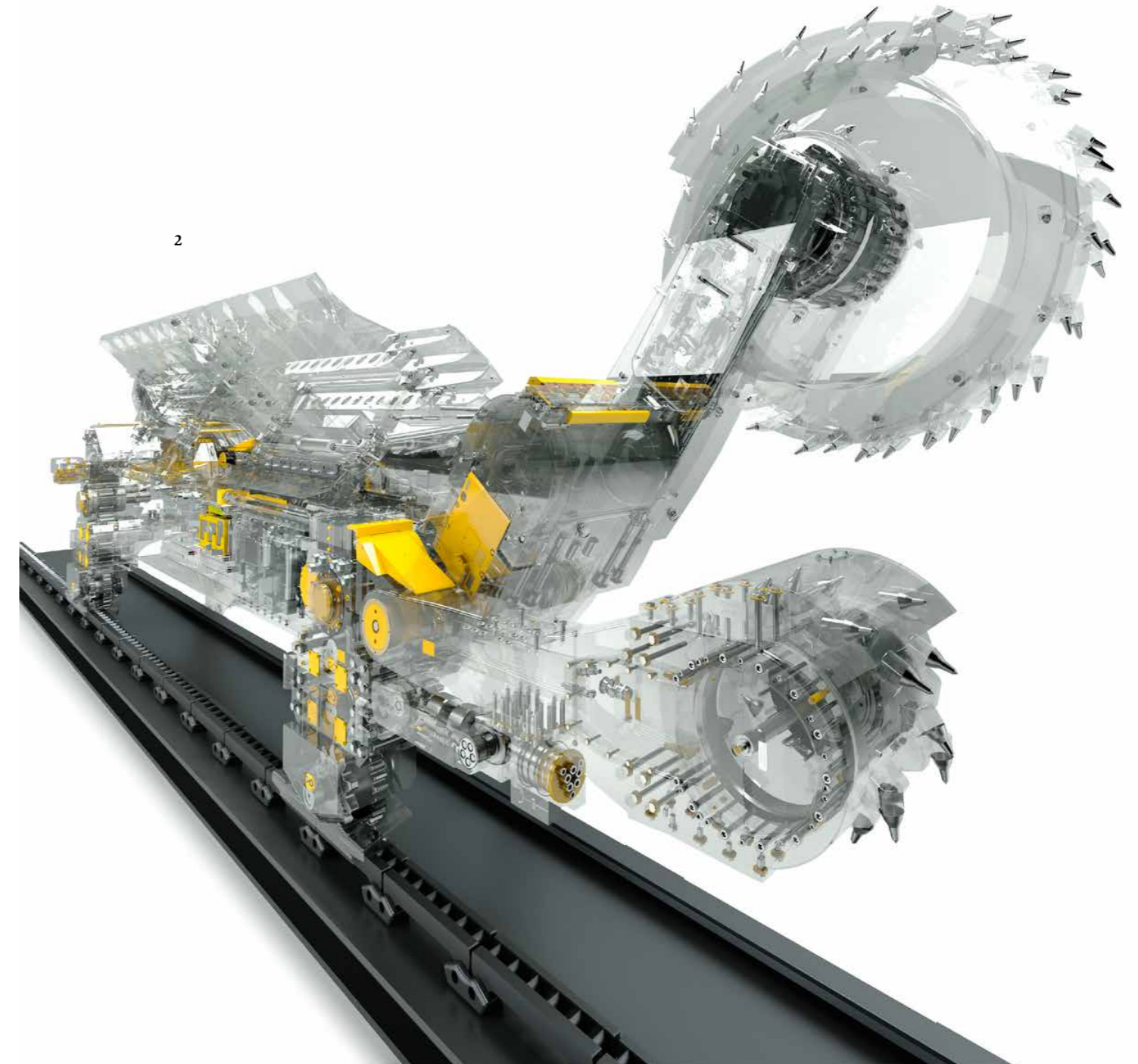
Eickhoff and the mining industry are inextricably linked. Components for underground use were among the first products of the company – and when Europe's first bar coal cutter was put into operation as a complete Eickhoff system as early as in 1914, a virtually unique success story started in underground mining. So it did not take long until Eickhoff coal mining machines were exported to all parts of the world, with an initial bulk order coming in from Russia in 1926. And it was in the middle of the 70's that Eickhoff was the first Western supplier to be approved for mining equipment in China.

From the very beginning, the Eickhoff engineers have dedicated their extensive experience and deep passion to the development of better and better machines with ever-increasing efficiency and reliability. By doing so, the limits of feasibility are often being redefined as is the case with the maximum cutting height of the shearer loaders: In 2001, the commissioning in South Africa and China of two shearer loaders designed for a cutting height of 5.5 m, was a world record. The year 2007 saw the initial operation of the Eickhoff SL 1000 – with a cutting height of as much as 6 m. Meanwhile, a shearer loader for 7.2 m is operating at Bulianta Colliery in China which is, of course, another world premiere. And very soon the Eickhoff SL 1000 for a cutting height of 8.6 m will be put into operation – yet another world record!

Eickhoff underground mining machines are known for their robust and reliable design and excel by their quality in day-to-day operation.

They are more powerful, offer higher availability rates and have a significantly longer life than competing products. All that translates into production records. Shangwan Colliery in China, for instance, recorded a monthly production rate of over one million tons of coal as early as in 2003. An Eickhoff machine is also a record holder in Australia: Here again, an SL 750 shearer loader produced an output rate of more than one million tons of coal at Oaky North Colliery.

Apart from high reliability it is the continuous innovations which contribute to the non-stop setting of new production records and make the Eickhoff shearer loaders more and more efficient. The EiComatik system, for example, originally controlled the shearer loader speed in relation to the cutter motor load. EiControl initiated the start of automated cutting. And EiCotrack, by the way, is an Eickhoff-invented chainless haulage system for shearer loaders which is meanwhile international standard and comes in multiple versions and designs. These further developments have been, and are, regular award winners.



1 Slim, compact and extremely powerful:  
The Eickhoff SL 750

2 The world's biggest shearer loader:  
The Eickhoff SL 1000



## CUSTOMER PROXIMITY OUT OF PASSION

Uncompromisingly, promptly and directly – we maintain a service network of more than 200 specialists to ensure optimal service for your shearer loader or continuous miner. This highly qualified and globally active team provides you, among other things, with the following services:

If you require service support, our engineering service staff is ready to consult you directly, extensively and competently. They furthermore devise service concepts for optimizing the availability of your machines using means such as production data reporting or condition monitoring systems for preventive maintenance and early damage detection. This obviously also encompasses the life cycle management and consideration of the spare parts inventories.

We are there for you on site, from commissioning through to training and troubleshooting. And also when

it comes to repairs on the surface of the mine, you can count on our experienced service staff to support you with their high-grade repair services in order to achieve optimal availability even for used and overhauled machines.

We perform repairs to your component parts and/or complete machines at our service workshop in Bochum and at several sites of our subsidiaries.

A wide variety of further services, including the periodic major overhauling of your machines, round off our portfolio.

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2



1 Worldwide on site:  
Eickhoff team providing  
customer service

2 Well distributed:  
Eickhoff on five continents



**THE EICKHOFF  
MODULAR  
PRINCIPLE OF  
DESIGN:  
TAILORED  
PRODUCTS FOR  
EVERY SEAM  
THICKNESS**



10

11

**Eickhoff shearer loader SL 1000**  
The „most gigantic one“

**Eickhoff shearer loader SL 900**  
Eickhoff's „most versatile one“

**Eickhoff shearer loader SL 750**  
Eickhoff's „fastest one“

**Eickhoff shearer loader SL 300**  
The compact „bundle of power“

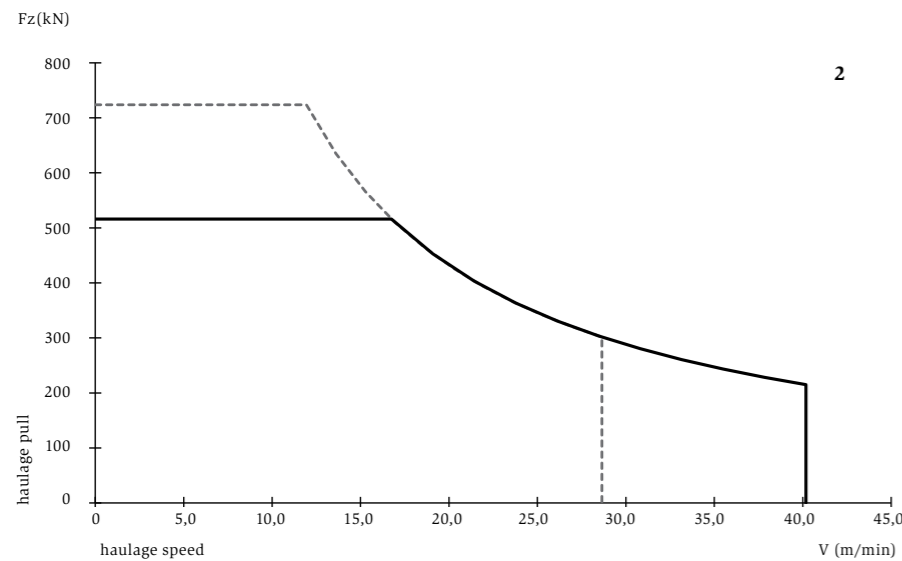


# EICKHOFF SHEARER LOADER SL 300

Highest power density in the smallest of space: The Eickhoff SL 300 has been firmly established in the international market for over 20 years now. Designed as a mining machine for thin to medium-thick seams, it was upgraded time and time again with the latest innovations over the years. Its original cutter motor power was 2x220 kW, combined with 2x35 kW DC haulages. Thanks to its consistent further development, its power could meanwhile be increased to 2x480 kW for the cutter motors and to 2x90 kW for the AC haulage motors.

The great thing here is that even though the total installed power has been more than doubled since its early days, the original machine concept providing for compactness in size has been maintained. This was made possible by implementing state-of-the-art production techniques into the Eickhoff gearboxes and by using the meanwhile available, more efficient, smaller electrical components specifically designed for underground use. The Eickhoff SL 300 is in operation worldwide and consistently achieves production rates of 600,000 tons a month.

- The compact 'bundle of power' from Eickhoff
- For thin to medium-thick seam mining
- With a slim machine body and high cutting power



## Technical details



**Cutting range**  
1.6 – 4.0 m



**Total weight**  
40 – 55 tons



**Voltage/frequency**  
3,300 V/50 Hz



**Length**  
12,100 – 13,100 mm



**Total installed power**  
1,158 kW



**Width**  
2,500 – 3,300 mm



**Cutter drum speed**  
46 – 56 rpm



**Height**  
1,100 – 1,950 mm



**Max. haulage speed**  
40 m/min

1 The Eickhoff SL 300

2 Haulage pull/speed diagram:  
Power combined with speed



# EICKHOFF SHEARER LOADER SL 500

One of the outstanding examples of German engineering: The Eickhoff SL 500 has been a steady peak performer in the international hard coal mining industry for nearly two decades. Introduced to the mining world in 1994, the SL 500 was originally designed with a total installed power of 1,130 kW. Nowadays, it comes with an impressive 2,015 kW and is thus ideally suited also for today's most demanding underground conditions. Owing to its constantly high availability, the Eickhoff SL 500 has earned a worldwide reputation as a 'real workhorse'.

- The legendary 'workhorse' from Eickhoff
- For medium-thick to thick seam mining
- With the characteristic underframe concept and high profitability

Monthly production rates of one million tons of coal are nothing unusual for this shearer loader. Its remarkably high reliability continues to make it the number one choice for energy giants in China and Russia. Operators value the characteristic Eickhoff underframe concept while investors appreciate its high profitability. In this way the Eickhoff SL 500 has set the standards for modern high-performance mining for 20 years already.

## Technical details



**Cutting range**  
2.5 – 6.0 m



**Total weight**  
80 – 120 tons



**Voltage/frequency**  
3,300 V/50 Hz



**Length**  
11,900 – 14,000 mm



**Total installed power**  
2,015 kW



**Width**  
3,000 – 3,500 mm



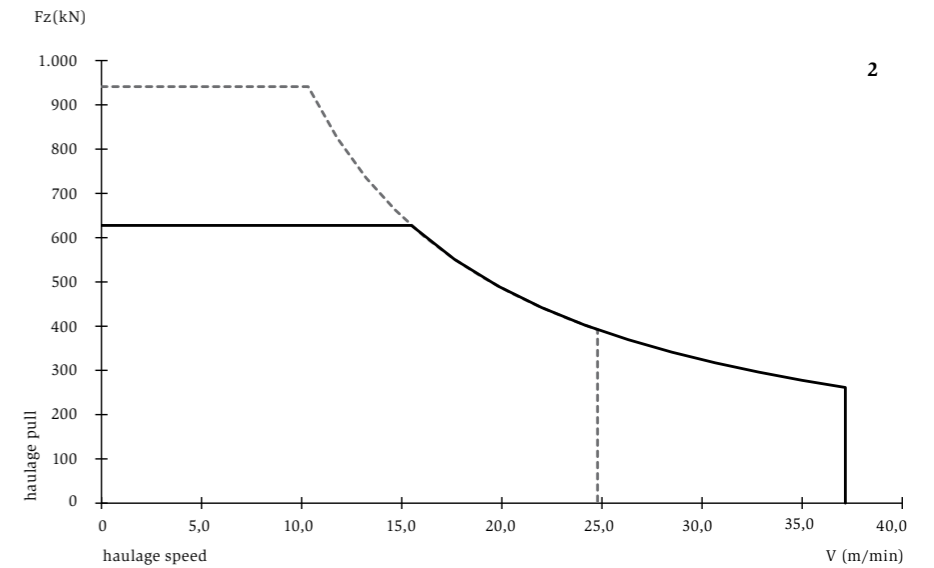
**Cutter drum speed**  
23 – 32 rpm



**Height**  
2,000 – 2,700 mm



**Max. haulage speed**  
37 m/min



1 The Eickhoff SL 500

2 Haulage pull/speed diagram:  
Power combined with speed

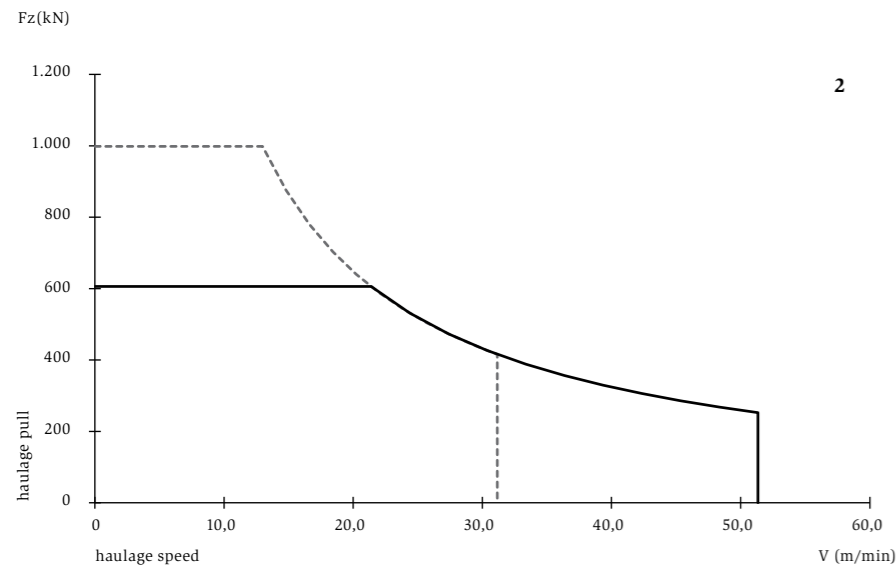


# EICKHOFF SHEARER LOADER SL 750

„Breeding refinement“, made by Eickhoff: Here, the power of the SL 500 and the compactness of the SL 300 are united in one machine. This is how the Eickhoff SL 750 was born – a machine with a body just slightly larger than that known from the SL 300 and with an installed power which could formerly only be realized on bigger shearer loaders.

The Eickhoff SL 750, having been put into operation in US high-performance longwall systems for the first time in 2006, received a throughout positive feedback on its use. And also the subsequent worldwide installation of further machines of this type fulfilled all expectations by far. According to the unanimous opinion of the customers, higher production rates are achieved more economically when using the Eickhoff SL 750 shearer loader.

- The „fastest“ one from Eickhoff
- For thin to medium-thick seam mining



## Technical details



**Cutting range**  
1.8 – 4.8 m



**Total weight**  
70 – 80 tons



**Voltage/frequency**  
3,300 V/50 Hz



**Length**  
13,900 – 14,900 mm



**Total installed power**  
1,894 kW



**Width**  
2,700 – 3,400 mm



**Cutter drum speed**  
32 – 50 rpm



**Height**  
1,250 – 2,050 mm



**Max. haulage speed**  
51 m/min

1 The Eickhoff SL 750

2 Haulage pull/speed diagram:  
Power combined with speed





# EICKHOFF SHEARER LOADER SL 900

The next leap in evolution: With the new SL 900 shearer loader, Eickhoff increases the production rates up to the absolute maximum. This high-performance mining machine combines the compact dimensions of the SL 750 with the staggering power of the SL 1000. Thanks to the implementation of state-of-the-art design and production techniques, a machine with impressive properties could be developed and constructed. As a result, the Eickhoff SL 900 excels by high flexibility in varying seam thicknesses ranging from 2.4 to 6.0 m – and all that along with an installed total power of more than 2,500 kW.

- The ,most versatile one‘ from Eickhoff
- For a wide range of seam thicknesses

The Eickhoff SL 900 thus covers a wide spectrum of cutting ranges while the excellent power reserves provide enormous potential for increased production rates.

## Technical details



**Cutting range**  
2.4 – 6.0 m



**Total weight**  
90 – 130 tons



**Voltage/frequency**  
3,300 V/50 Hz



**Length**  
15,200 – 15,900 mm



**Total installed power**  
2,554 kW



**Width**  
3,100 – 3,600 mm



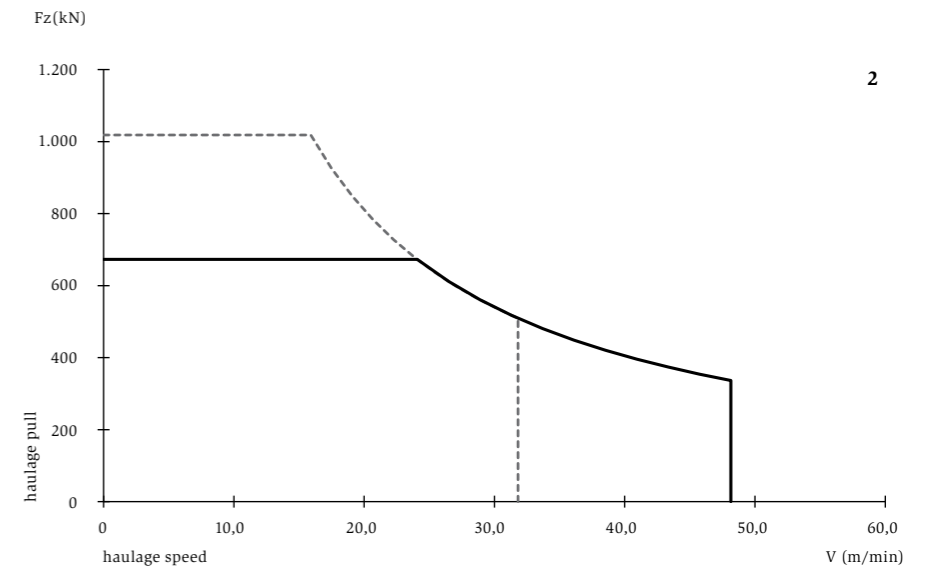
**Cutter drum speed**  
29 – 41 rpm



**Height**  
1,850 – 2,700 mm



**Max. haulage speed**  
48 m/min



1 The Eickhoff SL 900

2 Haulage pull/speed diagram:  
Power combined with speed



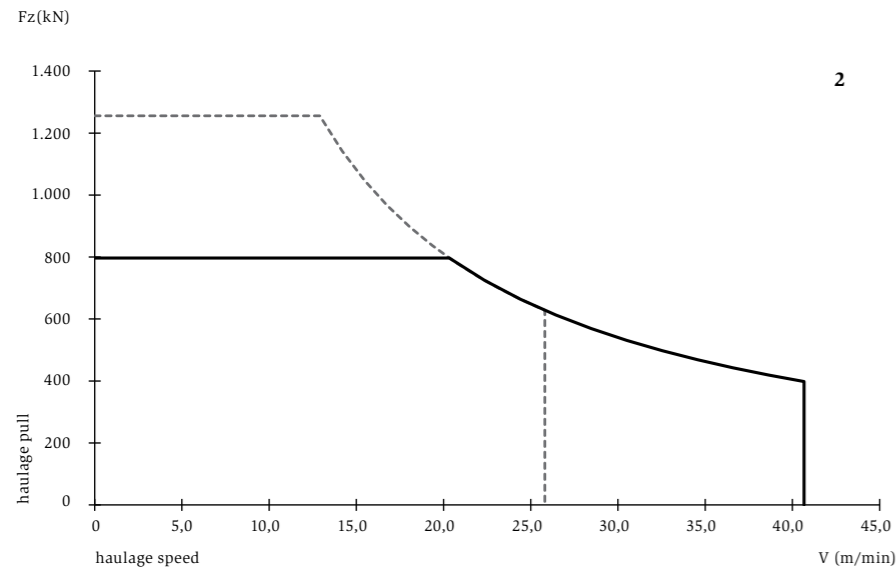
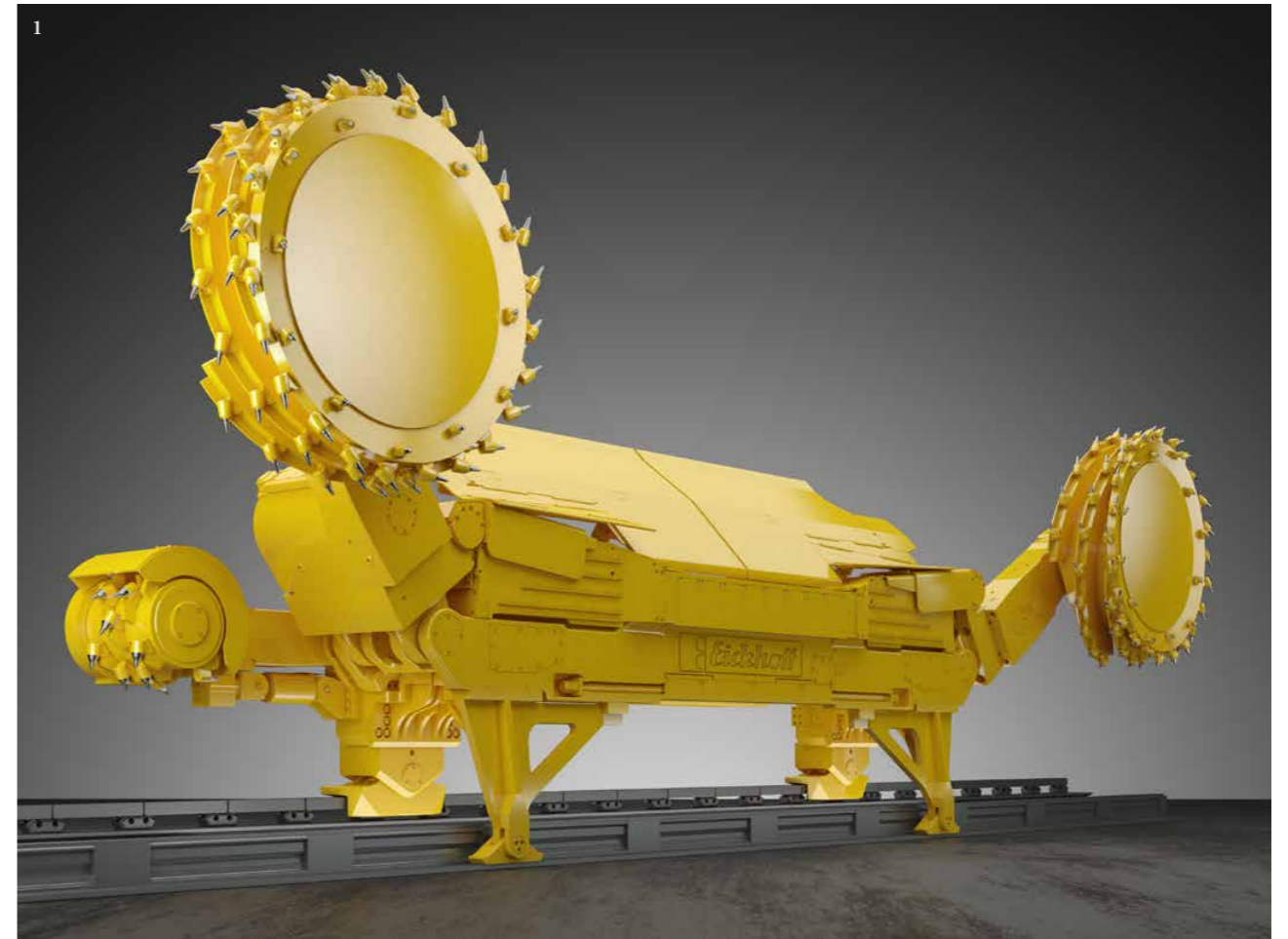
# EICKHOFF SHEARER LOADER SL 1000

A class of its own: Equipped with a total installed power of 2,800 kW, the Eickhoff SL 1000 is specifically designed to achieve peak production rates at seam thicknesses of up to 8.6 m. But also customers with seams as thin as 3.0 m can profit from the modular design of the SL 1000 given that the machine with its exceptional cutting power can be installed in thinner seams as well by just changing a few minor components. Furthermore, the maximum tunnel clearance underneath the machine body leaves enough space for even the biggest coal lumps to pass smoothly.

The Eickhoff SL 1000 was presented to the world market early in 2007 and put into initial operation by Shenhua Energy, a Chinese coal company.

The customer's many years of experience with the Eickhoff SL 500 operating under harsh cutting conditions were implemented into the development of the SL 1000 for ultra-thick seam mining. The result: The most powerful shearer loader of the world!

- The ,most gigantic one' from Eickhoff
- The world's most powerful shearer
- For mining seam thicknesses of up to 8.6 m



## Technical details



**Cutting range**  
3.0 – 8.6 m



**Total weight**  
110 – 215 tons



**Voltage/frequency**  
3,300 V/50 Hz



**Length**  
15,200 – 17,300 mm



**Total installed power**  
2,800 kW



**Width**  
3,400 – 4,100 mm



**Cutter drum speed**  
29 – 41 rpm



**Height**  
2,500 – 4,150 mm



**Max. haulage speed**  
41 m/min

1 The Eickhoff SL 1000

2 Haulage pull/speed diagram:  
Power combined with speed

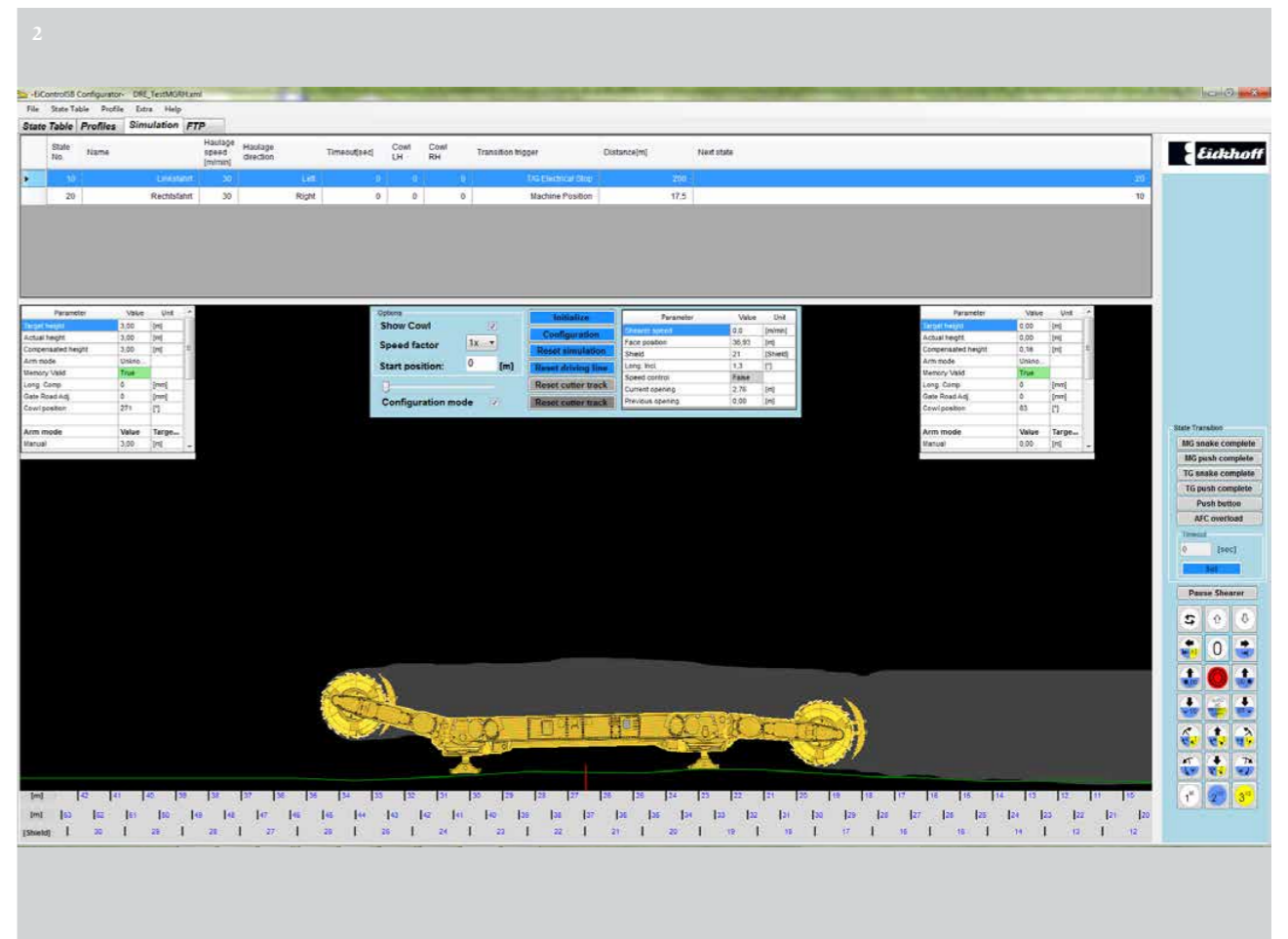


# INNOVATIVE TECHNOLOGY WITH SMART SENSORS

Power meets safety: The newly developed Eickhoff EiControlPlus shearer loader automation concept is the first system to make the idea of automated longwall operation come true. The human operator can completely focus on the monitoring functions in a safe and unencumbered environment. To this end the machine is equipped with sensors which are capable of ,seeing', ,hearing' and ,feeling' – a genuine revolution. The Eickhoff EiControlPlus system is considered as the ,smartest' shearer loader automation concept worldwide.

One essential feature of the system is the powerful and transparent communication structure between the machine and the mine control centre via which all relevant information is transferred online through redundant and compatible communication paths. This unique holistic approach to shearer loader automation delivers the user considerable advantages in terms of sustainable extraction of raw material, and of hard coal in particular.

The Eickhoff EiControlPlus system is therefore at the forefront of a development which will enable fully autonomous mining systems in the future. The operators will then be relieved from the active control tasks in the highly stressful surroundings of the machine and can focus, from the mine control centre, on monitoring and optimization of the system.



1 Power meets safety:  
The Eickhoff shearer loader automation system EiControlPlus

2 Screenshot of the EiControl SB configurator





## THE PERFECT SOLUTION FOR DIFFICULT MINING CONDITIONS

**Eickhoff continuous miners** are not only used for the extraction of hard coal but also show their superiority in potash and rock salt mining operations under extreme conditions. Hydraulic or electrical heavy-duty drives and the legendary Eickhoff robustness help make this possible.

Continuous miner in operation:  
Cutting efficiency and high  
production rates even under difficult  
conditions



# CONTINUOUS MINERS

Also the Eickhoff continuous miner portfolio sets itself high standards: Customers from the mining industry expect a functioning technology without compromise – and Eickhoff Mining Technology supplies the appropriate mining machines for the most demanding coal and potash mining applications all around the globe.

The name of Eickhoff is synonymous with reliability cast in steel – designed, tested and manufactured in Bochum. From the software, castings and weldments via the heavy-duty gearboxes through to the characteristic honey-yellow paint – the proportion of in-house manufacturing of our continuous miners is worldwide second to none in this product segment.







The benefits for the mine operators and users are obvious – utmost control over manufacturing processes, shortest routes to decision-making and individual machines perfectly tailored to the specific customer requirements. The many years of experience of the Eickhoff Group in the manufacture of high-performance machines for the underground mining industry were fully implemented into the development of the continuous miners. This results in products which consistently give utmost performance – cut by cut.

In order to ensure all-time reliable and cost-effective underground production, roof bolters and drillers, hydraulic and electrical traction systems as well as leading-edge control concepts are among the many advantages of the Eickhoff continuous miners – convincing machines with unstoppable power.

- For coal, potash and rock salt mining
- For a wide range of varying seam thicknesses
- Available with electrical or hydraulic traction systems
- Offers great flexibility with a compact and modular design



## Technical details

	 Cutting height	 Machine weight	 Machine body, W x H	 Cutting width	 Drum diameter	 Ground pressure
<b>CM2H-30</b>	1.4–3.0 m	74 tons	3.05x1.20 m	3.50–3.65 m	1.2 m	200 kPa
<b>CM2H-37</b>	1.6–3.7 m	74 tons	3.05x1.20 m	3.50–3.65 m	1.2 m	200 kPa
<b>CM2H-38</b>	1.8–3.8 m	82 tons	3.05x1.30–1.50 m	3.50–3.65 m	1.2 m	200 kPa
<b>CM2H-45</b>	2.2–4.5 m	82 tons	3.05x1.30–1.50 m	3.50–3.65 m	1.2 m	200 kPa

1 Eickhoff CM2H-30P – for potash mining

2 Eickhoff CM2H-37 – for coal mining



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