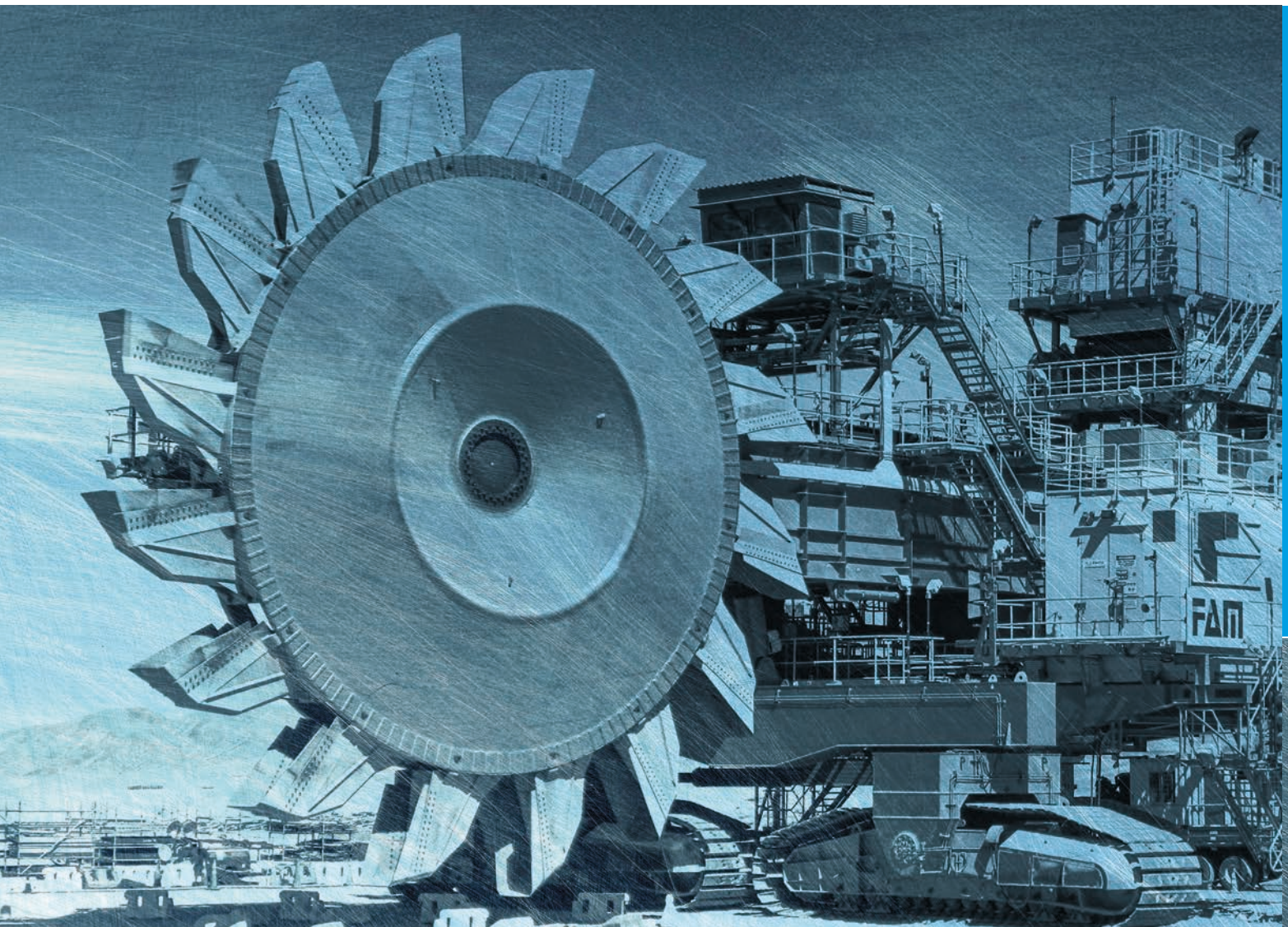




# OPENCAST MINING SOLUTIONS FOR THE GLOBAL MINING



# FAM MINERALS & MINING - MEMBER OF BEUMER GROUP

FAM Minerals & Mining GmbH, as part of the BEUMER Group, is a globally active company headquartered in Germany with a long history as a manufacturer of conveying systems dating back to the 19th century. As one of the leading suppliers, FAM Minerals & Mining GmbH offers machines along the complete transport chain for bulk materials. From extraction, conveying, loading and storage to the processing of various raw materials, FAM Minerals & Mining GmbH offers efficient solutions for different industries. FAM as part of the BEUMER Group combines many years of know-how in series and individual production and offers high-quality engineering as well as extensive service.

## SYSTEMS YOU CAN BUILD ON

Mined raw materials travel along extensive transport routes. Ores, raw salt feeds, waste rock and overburden pass through various steps from mine to mill (mining, material transfers, comminution, mineral processing, hydrometallurgy, filtration and tailings disposal). Our systems ensure smooth, economical and environmentally friendly processing at each stage of materials handling.

## BEUMER GROUP – MADE DIFFERENT

A long-term perspective based on quality, sustainability and innovation: for over 80 years our privately-owned, family-run business has developed tailor-made system solutions for conveying, loading, palletizing and packaging technologies as well as sortation and distribution systems.

All systems fulfill the most demanding specifications, by using the best material and latest technology. With our research and development efforts we can guarantee that our solutions will fit your requirements now and in the future.

## CORE COMPETENCIES

- › CONSULTING
- › PROJECT MANAGEMENT
- › ENGINEERING
- › ERECTION
- › COMMISSIONING
- › QUALITY MANAGEMENT
- › MAINTENANCE
- › OPERATION
- › AUTOMATION
- › DIGITALIZATION
- › MODERNIZATION
- › TRAINING
- › AFTER SALES SERVICE

# OPENCAST MINING TECHNOLOGY – MACHINES FOR GLOBAL MINING



- OPENCAST MINING EQUIPMENT
- › Bucket Wheel Excavators
  - › Belt Wagons
  - › Spreaders
  - › In-Pit Crushing Systems
  - › Mass Distributors
  - › Cable Reel Cars
  - › Crawler-Mounted Conveyor Bridges

In the area of opencast mining technology, FAM offers an impressive selection of various machines and systems, such as bucket wheel reclaimers for extraction of mineral resources like lignite, hard coal, overburden, marl, etc.

Opencast mining is a mining technique of extracting minerals from the near-surface layer of earth, these raw materials can be then used for further processing, for example, in production of metals or building materials. Our product portfolio ranges from mining equipment (e.g., excavators) to crushers, belt conveyors and subsequent stacking technology.

LEARN MORE:



Bucket wheel excavator SR800P9, leached copper ore 9650 m³/h, 14500 t/h, Chile



Transfer conveyor on crawlers BW1200.22/28R, bridging length 50 m, marl 2300 t/h, 1600 m³/h, USA



In-pit crushing plant, overburden 5250 t/h, Uzbekistan



Spreader ST3500.40, compact-type, leached copper ore 3500 t/h, 1950 m³/h, Chile



Conveyor bridge on crawlers MSB1000.9, leached gold ore 1000 t/h, Chile

## BUCKET WHEEL EXCAVATORS

- › FAM bucket wheel excavators are continuous mining machines for overburden, brown coal or hard coal, marl and other mineral resources, which can be extracted by means of specially designed buckets. Our machines are able to efficiently extract raw materials from deposits of different sizes.
- › In most cases, conveying equipment is integrated into the excavating system to enable the transportation of the material obtained.

## BELT WAGONS

- › FAM designed belt wagons are standalone machines built on crawlers which serve to transport and discharge the overburden or minerals. In opencast mining these machines are very important links for continuous excavating, transporting and discharging activities especially when mining and dumping areas are spread apart over significant distances.
- › The belt wagons help save on overall investments and operating costs which otherwise would be substantially higher due to the need to acquire larger main equipment.

## IN-PIT CRUSHING SYSTEMS

- › FAM in-pit crushing plants are used to reduce the size of hard materials for their further transport by conveyors. The crushed overburden is delivered onto the belt conveyor of the crusher's discharge boom which transfers it further to the mobile conveyor bridge.

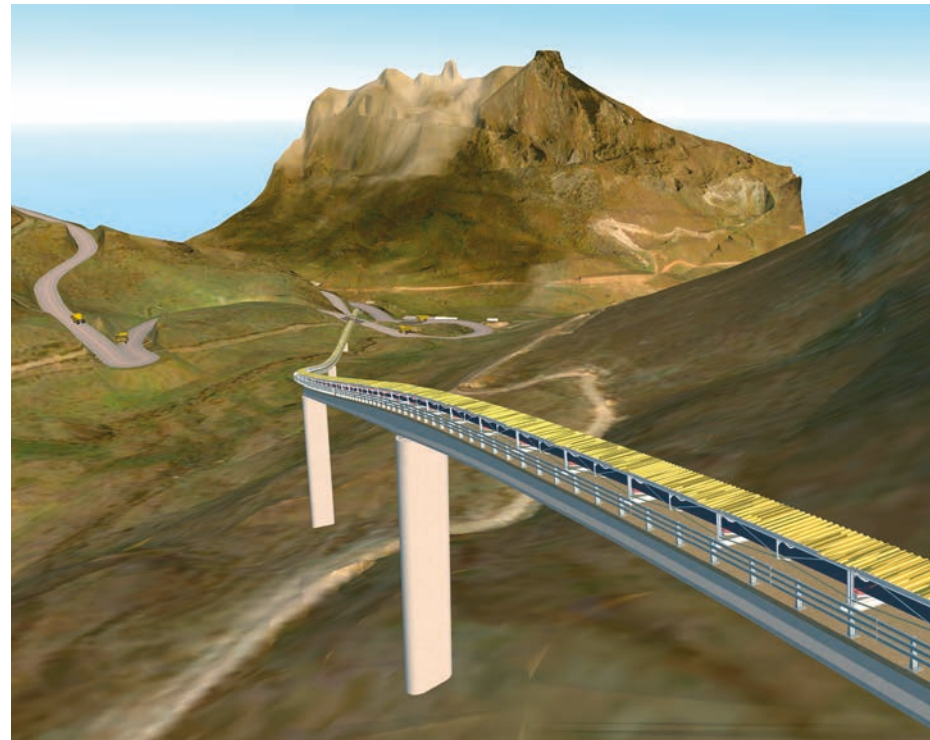
## CRAWLER-MOUNTED SPREADERS

- › FAM spreaders mounted on crawlers are utilized in opencast mines for the last step in the continuous dumping process.
- › The FAM assortment includes slewable spreaders mounted on crawlers in two-piece design with a spreading part and an intermediate conveyor, one-piece design with a feed bridge for conveying capacities of up to 20.000 m³/h and a direct disposal spreader with an oversized discharge boom of up to 196 m for direct tilting of the overburden.

## CRAWLER-MOUNTED CONVEYOR BRIDGES

- › FAM crawler-mounted conveyor bridges were specifically designed for a continuous dynamic operation to streamline the technological process of piling the ore, reclaiming leached stockpiles and creating new ore stockpiles space-efficiently and in a timely manner.

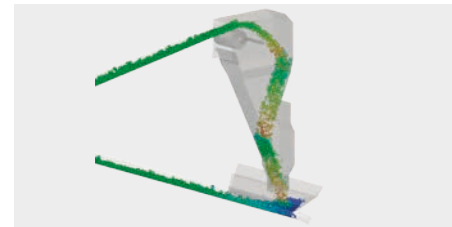
# WE ARE YOUR PARTNER – FROM PLANNING TO OPERATION



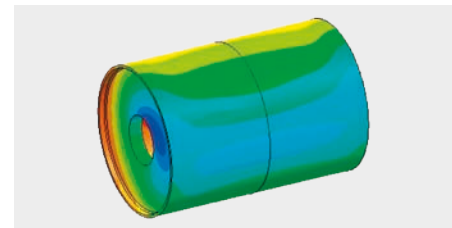
3D planning and animation



3D Drone Mapping



DEM



FEM

We will move mountains together. Depending on your requirements, we can partner with you during the entire life cycle of your systems, starting from day one of your project, with feasibility studies and 3D planning. Minimal data input is sufficient to achieve extensive 3D visualization during the early design phase. As soon as detailed results are required, we will consider the exact parameters for your project.

## WE CREATE THE BIG PICTURE

- › 3D planning and animation using state-of-the-art software
- › Quick design changes
- › Support during approval processes
- › Quick determination of cut and fill volumes
- › Minimal data input necessary

## ALWAYS UP TO DATA (3D DRONE MAPPING)

- › Topography & concept from one single source
- › Easy capturing of the actual environment and potential obstacles
- › Safe surveying method (no need to be physically present in the area)
- › Time-saving and precise planning based on up-to-date topography
- › Reduces project lead time

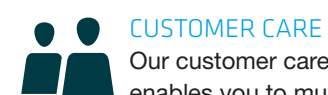
## CONNECTED SYSTEMS (IOT/BIG DATA)

- › Interactive monthly reports to visualize the system performance, KPIs and scheduled service intervals
- › Notification features to receive failure messages, service intervals reminders and status updates
- › Continuous data analysis to optimize the entire system

## DOWN TO THE LAST DETAIL:

We leave nothing to chance. We use proven methods like DEM and FEM in order to guarantee minimal failure rates and long durability of our machines, ensuring compliance with the highest quality standards.

# SIMPLY WORLD-CLASS CUSTOMER SUPPORT



## CUSTOMER CARE

Our customer care programme enables you to multiple service options, such as maintenance and repair on site through our field service engineers or regular safety checks according to statutory rights. If hardware replacements are needed, our comprehensive warranty service ensures you are always covered.



## MODERNISATION

We are constantly developing new ways to upgrade our software and hardware to extend a system's lifetime, lower energy costs and increase efficiency. We will keep you informed of all relevant upgrade opportunities, based on an understanding of your business and system needs.



## TRAINING AND QUALIFICATION

We offer standard and tailored customer training programmes to make sure your teams are fully qualified to operate your systems. With hands-on guidance, conducted either on-site or at BEUMER Group locations, your teams can maintain optimal operational performance.



## SPARE PARTS LOGISTICS

We guarantee spare part replacements around the world through our local companies. As a BEUMER Group customer, you will have your own individual contact to assist you with technical inquiries, warranty issues or repair orders and to secure that your order is delivered on time.



## HOTLINE SUPPORT

Our hotline support is manned 24/7 by highly trained, multi-skilled engineers who all have at least four years of direct field experience. Most cases are solved remotely, however, should the problem require more specialised attention, a BEUMER Group engineer will be quickly sent out.



## RESIDENTIAL SERVICE

With our residential service, we are on-site every day to take complete responsibility for your system uptime, performance and operational efficiency. We can take care of all maintenance and management, including system improvements, contingency plans, specialist advice and repairs.

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BEUMER reserves the right to make modifications  
that serve technical progress.



*Products and technologies with the BEUMER label „made different“ are characterized by enhanced sustainability. It is based on their economic, ecological and social performance evaluated by the BEUMER Sustainability Index (BSI).*