ONE SYSTEM
MORE GAINS

UNDERGROUND RAIL HAULAGE
AUTOMATED MINING SYSTEM

BOMBARDIER
the evolution of mobility

schalke

NMT
THREE EXPERTS MOVE MORE FOR LESS

Accomplishing more together – our complete system for underground rail transport is a shining example of concentrating expertise and benefitting from synergies.

The efficient movement of freight 24 hours a day, 365 days a year is essential to a modern and productive resource industry.

Specifically designed for industrial and mining applications, Bombardier Transportation, Schalke and Nordic Minesteel Technologies joint solution optimises and maximises the rapid transport of raw materials to enable fully automated, continuous, efficient productivity.

Bombardier Transportation
A global leader for signalling systems, Bombardier Transportation delivers INTERFLO®, a fully automated train control solution that increases efficiency, capacity and safety on rail routes in the most innovative and cost effective way.

Schalker Eisenhütte Maschinenfabrik (SCHALKE)
As a specialist for safe, reliable, high performance traction units, Schalke provides a range of mining locomotives from 10 to 130 tonnes, as well as service and shunting locomotives.

Nordic Minesteel Technologies (NMT)
NMT specialises in the continuous loading and unloading of rail transportation vehicles. NMT supply mine cars and freight vehicles as well as loading and unloading stations for the system.

*Trademark(s) of Bombardier Inc. or its subsidiaries.
The collaboration has resulted in a complete system that is unique worldwide with two core advantages: a high degree of automation and robustness.

**Automated operation ensures:**
- Achieving maximum capacity and movement of ore via moving block functionality and integration with loading and unloading systems
- Fuel savings of up to 15% and minimised wear and tear
- Reduced maintenance costs compared to conventional signalling systems
- Less wayside equipment reduces installation and maintenance costs as well as lowering the risk of theft and vandalism
- Driverless operation to decrease incidents and inefficiencies through human error

**Robustness for real 24-hour production**
All of the system’s components are designed to withstand up to 30 years of continuous operation. The system enables constant, automatic, round-the-clock operation at high speed and maximum capacity.

**Benefits:**
- Utmost reliability
- Short downtimes
- Low operating and maintenance costs
REFERENCES

All over the world we have customers using the broad portfolio which the three experts cover:

- Signalling and train automation systems
- Mining, service and shunting locomotives
- Cars, loading and unloading station, chutes, steel work, gallery stages

OUR CUSTOMERS

Australia
Glencore, Mount Isa, GFM expansion
Western Mining Co., Olympic Dam Mine

Canada
Alamos Gold, Young Davidson Mine
Barrick Gold, Hemlo Mine
Compass Minerals Canada, Goderich Mine
DMC, Jansen Mine
Glencore, Onaping and Craig Mine
Goldcorp, Porcupine and Red Lake Gold Mines
HudBay, Trout lake and 777 Mine
Morton Salt Inc., Ojibway Mine
Niobec
Sifto Canada, Goderich Mine
Vale, Birchtree Mine and Thomson Mine

Chile
Codelco, Esmeralda Mine and Teniente 8 Mine

Germany
RAG, Blumenthal / Haard Mine and
Lohberg Osterfeld Mine, Ruhrkohle
Solvay Chemicals, Plant Rail Network

Ghana
AngolaGold Ashanti, Obuasi Mine

Indonesia
PT Freeport, Grasberg Mine, Big Gossan,
DOZ and DMLZ

Kazakhstan
Uzen – Bolashak
Customers using the broad portfolio which the three experts cover:

• Signalling and train automation systems
• Shunting locomotives
• Loading station, chutes, galloway stages

Mexico
Panamerican, La Colorada Expansion Project
Peñoles, la Ciénega Mine and Fresnillo Mine

Mongolia
Oyu Tolgoi, Hugo North Mine

Peru
Compañía Minera Milpo, El Porvenir Mine

Russia
Yakovlevsky Iron Ore Mine, Belgorod Region

Spain
Astur Gold, Salave

South Africa
Anglo American Platinum, Bafokeng Rasimone Mine

Sweden
LKAB, Kiruna Mine
Malmbanan
Renstrom and Petiknas Mines
Västerdalsbanan

Switzerland
Rhätische Bahn, rail network in the canton of Graubünden

Turkey
Çayeli Bakır, Çayeli Mine

USA
Cargill Lansing
Compass Minerals, Cote Blanche
Detroit Salt
Stillwater Mining Company, East Boulder Mine
Intrepid Potash, East Mine
Hecla Mining, Lucky Friday Mine
Freeport-McMoRan, Henderson Mine
SUCCESS IS A MATTER OF TEAMWORK