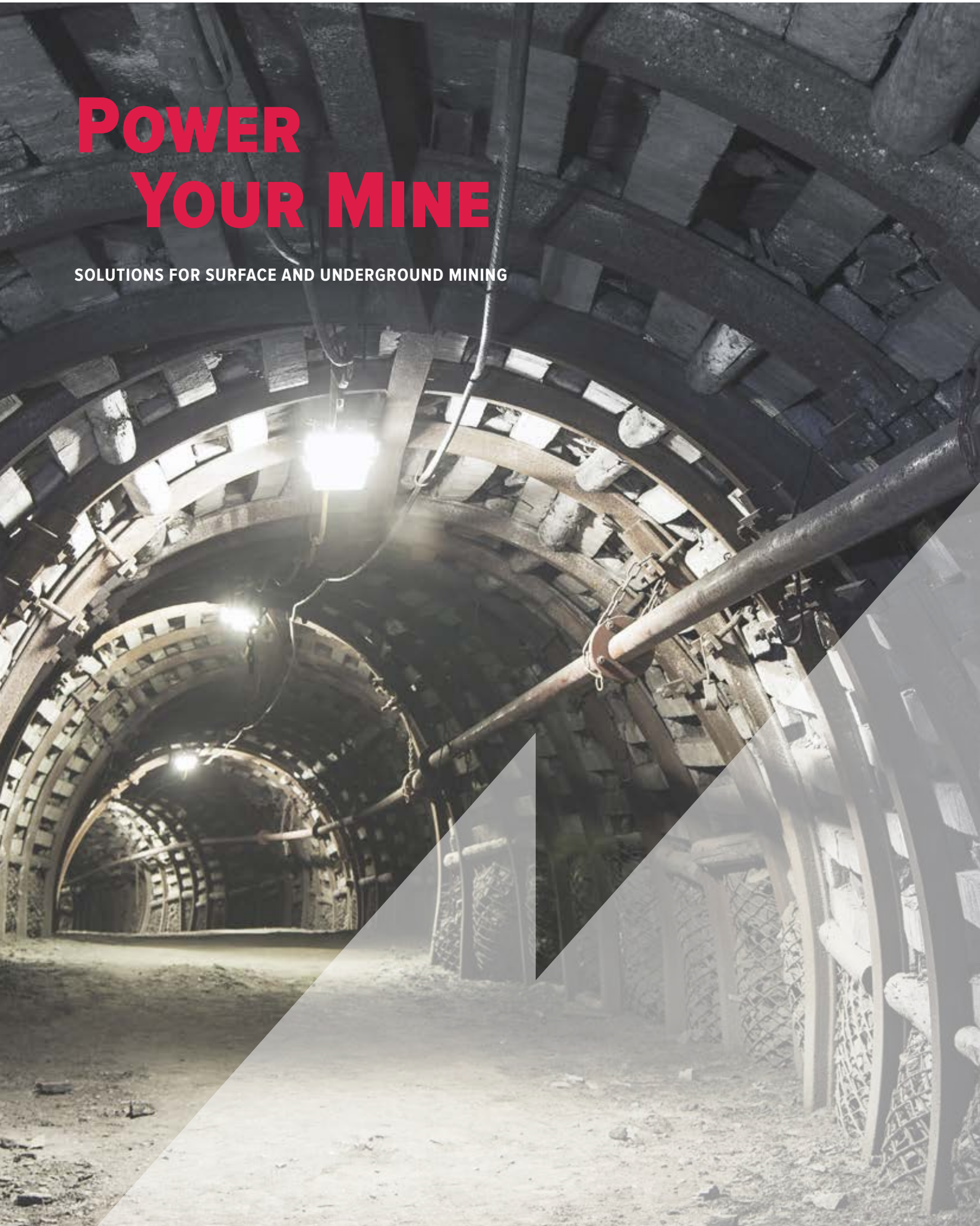


POWER YOUR MINE

SOLUTIONS FOR SURFACE AND UNDERGROUND MINING



Power Your Mine

Safe power distribution above and below ground

In few industries do tools and materials take such a heavy beating as in mining. Top-quality products are a must for withstanding the typically harsh conditions, both above and below ground.

Constant exposure to dirt, dust and moisture is the rule rather than the exception. This calls for solutions that are designed to last. To consistently deliver them, at MENNEKES we thoroughly test every product in our own labs. We know that when the going gets rough, miners need to be able to depend on their equipment 100%.

Besides the quality of industrial plugs and sockets, ease of use is also essential for safe, efficient work. This starts with dependable connections. Solutions from MENNEKES make sure that everything works smoothly.

It doesn't matter whether you're engaged in extracting salt, potash, lignite or whatever—the quality of our products sets standards across the board. Custom solutions to meet special requirements are also an important part of our business. You can count on the experts of the MENNEKES sales team for sound technical advice and capable support –worldwide!



PowerTOP® Xtra
plugs and connectors



AMAXX® receptacle
combinations



EverBOX®
mobile distributors



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1. Plugs and sockets for Everyday Use

Lots of connectors are used in every mining operation. They need to constantly withstand dirt, dust, water and considerable mechanical stresses, especially underground. High quality and long life are therefore essential, since every downtime caused by loss of power can quickly incur huge costs. MENNEKES supplies both mobile plug-and-socket solutions and wall mounted receptacles that are optimally designed and built to withstand the brutal conditions typical of the mining industry.

For example, our inlets and the 63 A and 125 A plugs and connectors of the PowerTOP® Xtra family boast highly heat-resistant contact carrier and nickel-plated contacts. This ensures dependable connections and high resistance, also in aggressive atmospheres.

Our wall-mount receptacles with DUO interlock also deliver outstanding user-friendliness in a robust enclosure. The contact screws can all be reached from the front, and they can only be inserted or removed when there is no power.

Our plugs and sockets are also available with IP 44 and IP 67 protection ratings. All 63 A and 125 A connectors and receptacles feature X-CONTACT®, the new MENNEKES sleeve technology that reduces the effort required for insertion and withdrawal by up to 50%.

1

PowerTOP® Xtra in 63 A and 125 A

- Rubberized non-slip grip zones
- Frame terminals
- Highly heat-resistant contact carrier
- Nickel-plated contacts
- IP 67 protection class

2

DUO wall mounted receptacle

- Switched; mechanical interlock
- Padlockable
- Detent lug holds bayonet ring in place when opening for effortless closure
- Foamed enclosure seals for added safety: silicone-, CFC- and halogen-free

X-CONTACT®

- Up to 50% less effort for insertion and withdrawal
- Even the 125 A model can be operated by one person
- Safer handling and contact closure
- Wear-resistant
- Self-cleaning



1

PowerTOP® Xtra



2

DUO wall mounted receptacle

2. Plugs and sockets for Special Requirements

MENNEKES also has a heavy-duty series for nominal currents up to 200 A, 250 A and 400 A and nominal voltages up to 1,000 V. In these high-current versions the contacts are silver-plated for superior electrical conductivity and corrosion protection. In the 250 A and 400 A versions, damaged contact parts can be replaced from the front, so there's no need to disconnect the line.

The enclosures of wall mounted receptacles take a particularly great beating in mining, so their materials have to be robust. MENNEKES employs AMELAN, a highly chemical-resistant plastic, for products used in highly aggressive environments.

The DUO wall mounted receptacle made of AMELAN for up to 500 V is therefore especially apt for underground use. Its standard features include highly heat-resistant, nickel-plated contacts, which add to its service life in mining applications.

3

High-current plugs and connectors

- 200-400 A
- Contacts with protective coating
- Robust quality and long life
- Highly reliable
- Wall Receptacles with mechanical or electrical locking

4

DUO AMELAN wall mounted receptacle

- X-CONTACT®
- Highly resistant to chemicals
- Highly heat-resistant contact carriers and nickel-plated contacts
- Mechanically disengageable lock

AMELAN is resistant to (among others):

- Caustic soda
- Motor oils
- Caustic potash
- Diesel oil
- Gasoline
- Aqueous ammonia



3

High-current plugs and connectors



4

DUO AMELAN wall mounted receptacles

3. Receptacle combinations: From professionals for professionals!

Where tunnels and shafts meet, more than isolated wall receptacles are needed. For these key locations, MENNEKES offers an ideal range of receptacle combinations including both standard and custom-configured products. Its standard features include highly heat-resistant, nickel-plated contacts, which add to its service life in mining applications. Robust and easy to install—this makes AMAXX® a success all the way down the line!

AMAXX® combinations already have a highly robust plastic enclosure as a standard feature. For mining applications requiring enhanced resistance to aggressive environments, the AMAXX® enclosures made of AMELAN are the best choice.

AMAXX® is prewired and ready to connect, and every unit is individually tested for electrical safety and quality in compliance with IEC 61439. A certificate is issued as proof of quality for every AMAXX® combination.

For especially cramped areas with limited space on the ground and walls, MENNEKES has the ideal solutions: the DELTA-BOX. An included hook can be used to suspend this compact combination of CEE and SCHUKO® receptacles directly over where work is being done. This way no one can trip over the DELTA-BOX in narrow tunnels, and it's also exposed to less dirt and water.

1

AMAXX® receptacle combination

- Protection classes IP 44 and IP 67
- Prewired for fast connection
- Hinged to the side
- Fusing behind a transparent cover
- Tested acc. to IEC 61439
- Customer-specific versions

2

DELTA-BOX

- For hanging
- Internal strain relief and hanging hook
- Protection classes IP 44, IP 67 and IP 68
- Flexibly configurable



1

AMAXX® receptacle combination



2

DELTA-BOX

4. Receptacle combinations: Mobile and sturdy!

In mining, mobile applications are often essential for ensuring flexible work. MENNEKES provides a variety of mobile distribution solutions to meet these requirements.

The mobile EverGUM combination unit, for example, is compact and made of a highly shock-resistant material. It excels with high dielectric strength and resistance to leakage current and is highly recommended for mobile use in heavily soiled and moist environments.

The EverBOX® is even more versatile. It can be used for currents between 16 and 125 A, and the sturdy frame reliably protects Receptacles and installed equipment. The fusing with easily accessible protective devices is in plain sight behind see-through covers.

AMAXX® receptacle combinations are naturally also available as easy-to-carry versions for reliable on-site distribution.

3

EverGUM receptacle combination

- Raised to keep water out
- Robust and shock-resistant
- High dielectric strength and resistance to leakage current
- Yellow warning color
- Available with or without feeder cable

4

EverBOX®

- Receptacles and installed devices protected by sturdy frame
- Integrated grips for easy handling
- Supports up to 125 A

5

AMAXX® receptacle combination

- AMAXX® receptacle combination
- Available with or without feeder cable
- Variable components



3

EverGUM mobile receptacle combination



4

EverBOX® mobile distributor



5

AMAXX® receptacle combination



5. In Use Worldwide

Greatly appreciated everywhere!

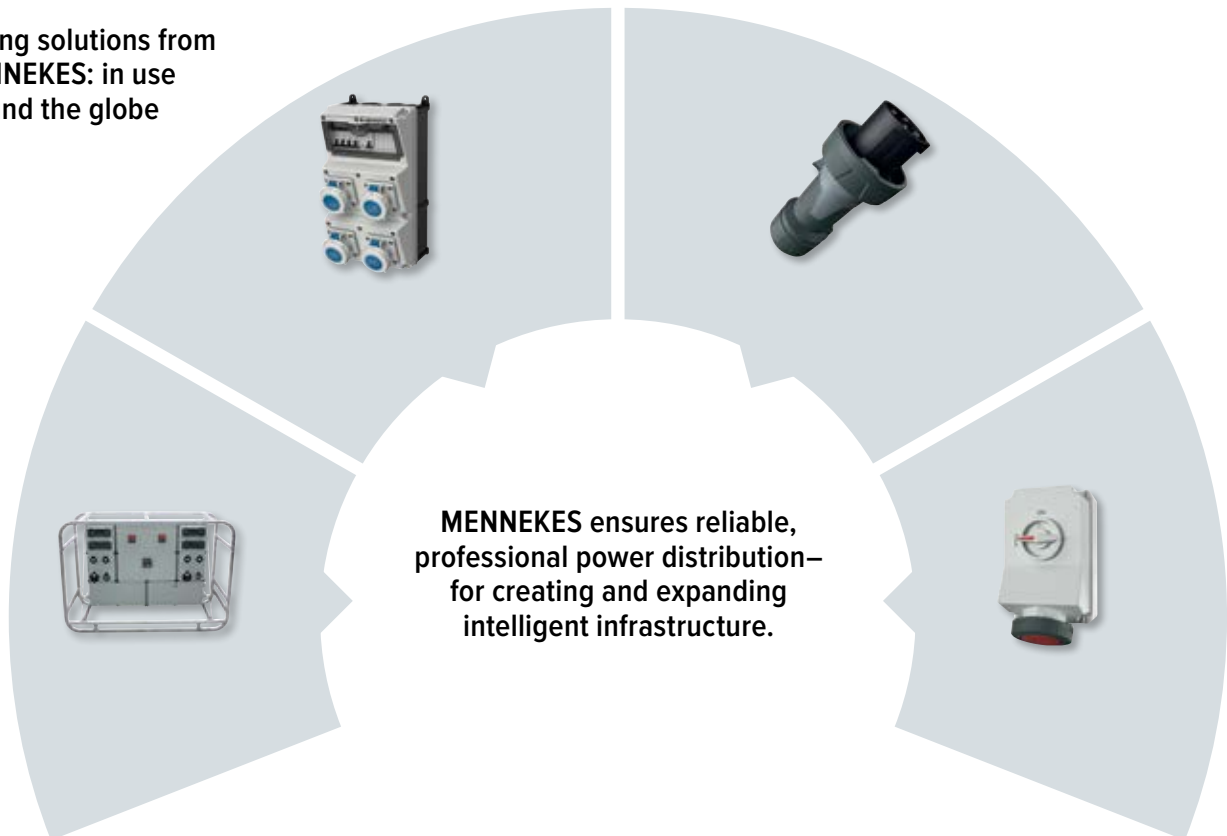
High-quality MENNEKES products are used daily in countless mining operations around the globe, both above ground and underground. Their best credentials are a large number of reference projects carried out with satisfied customers in countries worldwide. Add to this the countless possible uses for our large range of flexibly combinable products, backed by our passion for developing customer-specific solutions and supplying any number of units starting with one—worldwide.

References:

- Copper Mines
- Gold Mines
- Silver Mines
- Salt mines
- Potash mining
- Lignite
- Hard coal
- Zinc mines
- Tin mines

To learn more about our worldwide references, visit www.MENNEKES.com!

**Mining solutions from
MENNEKES: in use
around the globe**





My Power Connection Made in Germany.

Founded in 1935 in Kirchhundem (Sauerland), MENNEKES has actively accompanied the fast-paced entry of electricity into all industry sectors right up until the present day, and has influenced the industry with products and solutions for industrial plugs and sockets. And not only in Germany. With a workforce of 1,100, today the family-owned company has an international presence and is one of the leading providers in the electrical industry. MENNEKES products for industrial plugs and sockets, and electric mobility, are used in over 90 countries. Where high currents have to be transferred safely and economically, our customers and partners can always rely on MENNEKES.

And the EU too has gone for the highest quality: in 2014, type 2 charging couplers by MENNEKES were declared the standard by the European Parliament in the EU. A pioneering milestone. But we have been making more than plugs for the world for a very long time. We think holistically and create powerful connections that enable people to handle energy more innovatively and to distribute and manage it more intelligently. And because we like to think about things from the user's point of view when we are developing our products and solutions, we also communicate our performance promise from the customer's perspective:

MENNEKES – MY POWER CONNECTION.



Innovative power combined.

At MENNEKES we set ourselves the goal a long time ago of creating innovative connections between industry and infrastructure, between energy and electric mobility. Our range comprises more than 15,000 different industrial plugs and sockets, and electric mobility solutions in a variety of versions and designs. It doesn't matter whether it's a series or an individual special development, the MENNEKES brand stands for something extra right from the start – for an intelligent, sustainable solution combined with the highest quality, reliability and safety.

Intelligent e-mobility charging solutions for:

- companies
- private households
- fleet operators
- cities
- hotels
- shops and restaurants
- multi-story car parks
- landlords

Reliable plugs and sockets for:

- industrial plants
- mining
- chemical and petrochemical industries
- railway and transport companies
- shipyards
- food industry
- trade fairs and exhibitions
- data centres
- trade
- production industry



Management
System
ISO 9001:2015
ISO 14001:2015
ISO 50001:2011

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