KUNZ

WE ARE

THE HIGH CURRENT COMPANY.

COMPONENTS FOR HIGH CURRENT SYSTEMS
MADE FROM COPPER AND ALUMINUM

THE HIGH CURRENT COMPANY:

GLOBAL QUALITY LEADER FROM GERMANY

Gebr. Kunz GmbH has been around since 1922. From the very beginning, our success has been built on a promise of quality—a standard we still hold ourselves to with every product and every step of our process. Since the 1960s, our core business has been centered on designing and manufacturing premium components for high current systems. The name KUNZ has been standing for flexible, innovative, and long-lasting complete solutions for connection technology ever since.

With our skilled team of over 50 professionals, we are your classic mid-sized company. But when it comes to expertly managing high currents, we are a global leader.

As a worldwide technology and quality leader in welding current-carrying components made from copper and aluminum, we are proud to meet the highest expectations.

We rise to these expectations with a proven combination of traditional craftsmanship and innovative technology.

Our commitment to quality also means we deliver "Made in Germany" without compromise: Every high-performance high current component is produced exclusively in Germany, honoring the heritage of German engineering and craftsmanship.

"FROM MAXDORF TO THE WORLD":

Under this motto, we provide our customers in Germany and around the globe with top-quality components and assemblies.

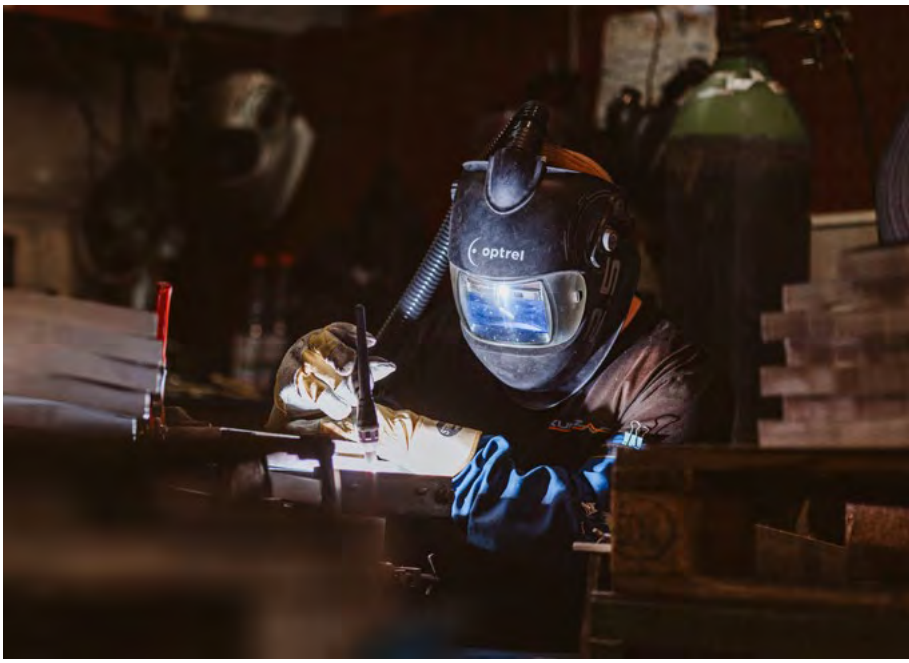
CUSTOMER VALUE

HOW CAN WE HELP YOU?

We bring our expertise, craftsmanship, and state-of-the-art equipment—you bring your needs. We design and manufacture all components and assemblies required for your business success in the high current sector. Throughout the process, we work closely with you, following your specific requirements and ensuring a customer-focused, cost-effective approach.

As a long-standing partner to many companies at home and abroad, we offer streamlined workflows, reliable process chains and dependable timelines—thanks to our multi-shift operation, even when time is of the essence.

Our services include results-oriented consulting, creating production drawings, precision manufacturing, just-in-time delivery and on-site assembly. Whether you need a prototype, a small batch or large-scale production, our commitment to quality covers every product and process. With Kunz, you can count on certified excellence.



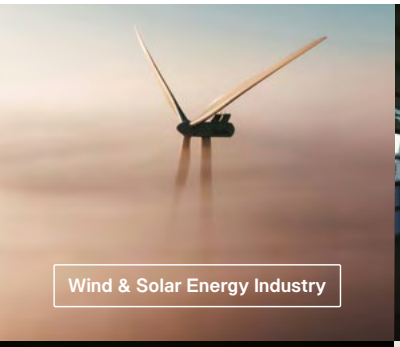
OUR CERTIFICATIONS

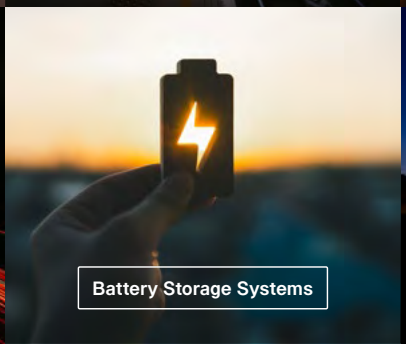
DIN EN ISO 9001:2015 Quality Management

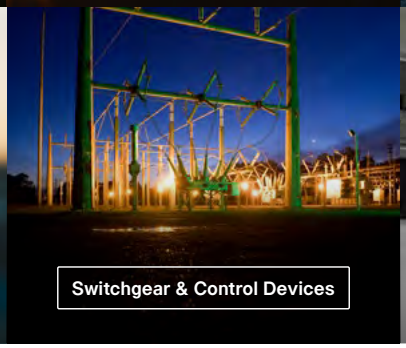
DIN EN ISO 3834-3 Welding Specialists

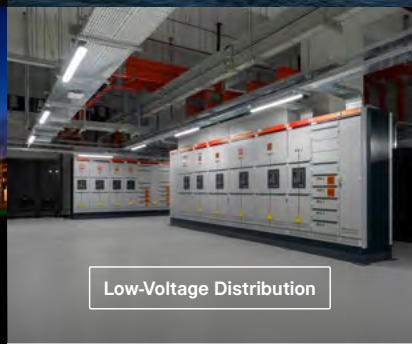
EN 15085-2 CL2 Welding of Rolling Stock

OUR CORE INDUSTRIES









OUR PRODUCT & SERVICE PORTFOLIO

AT A GLANCE

We offer a complete range of **custom high current connection solutions**, including:

01 EXPANSION CONNECTORS

Pressure-Welded Copper Expansion Connectors (**GKKP**)

Inert-Gas-Welded Copper Expansion Connectors (**GKKS**)

Inert-Gas-Welded Aluminum Expansion Connectors (**GKAS**)

Highly-Flexible Copper Expansion Connectors (**GKKH**)

Pressure-Riveted Copper Expansion Connectors (**GKKN**)

02 BUSBARS

03 TURNED, MILLED AND WELDED ITEMS

04 CUSTOM COMPONENTS

05 LAMINATED BUSBARS

06 GROUNDING STRAPS

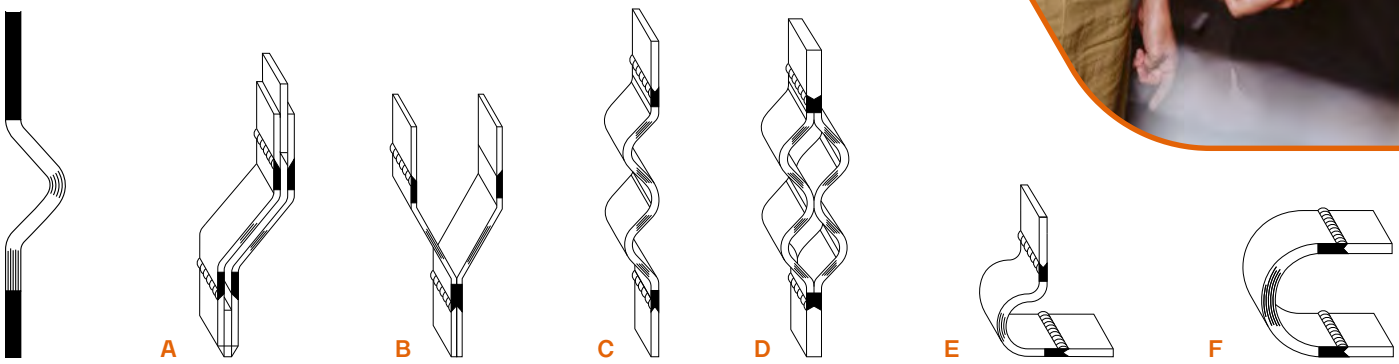
07 SERVICES

EXPANSION CONNECTORS

Expansion Connectors are widely used in high current electrical systems. They link key high current components—like switches, transformers, and rectifiers—to rigid busbars. Their role is to absorb changes in length, dampen vibrations, and cushion switching surges. To meet different application needs, a range of manufacturing technologies is available. The following pages provide more details on these options.

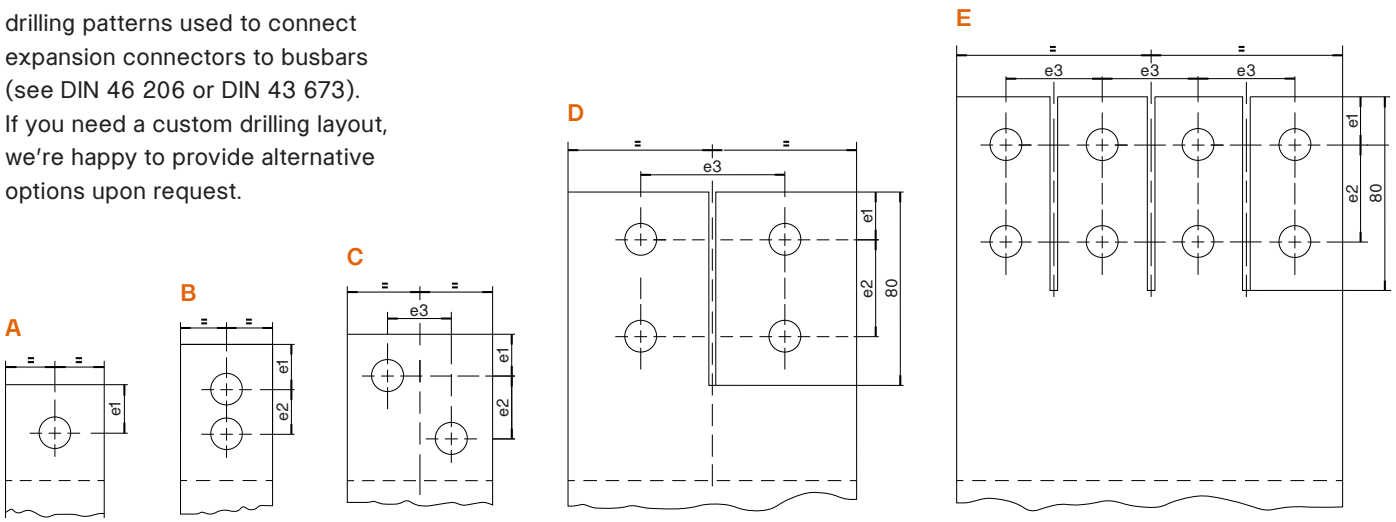
SAMPLE SHAPES FOR EXPANSION CONNECTORS

Here you see illustrated samples of expansion straps in various shapes. Custom shapes are available upon request.



DRILLING PATTERNS

These are Illustrations of standard drilling patterns used to connect expansion connectors to busbars (see DIN 46 206 or DIN 43 673). If you need a custom drilling layout, we're happy to provide alternative options upon request.



All drill holes D = 14 mm.
The drill holes in the expansion straps are suitable for longitudinal, angled, or T-connections; slots are available upon request for the appropriate thickness.

Shape	A	B	B	B	C	C	D	D	D	E	E	E
Width	40	40	50	60	50	60	80	100	120	160	200	240
e1	20	20	20	20	14	17	20	20	20	20	20	20
e2	–	40	40	40	22	26	40	40	40	40	40	40
e3	–	–	–	–	22	26	40	50	60	40	50	60

GKKP

PRESSURE-WELDED COPPER EXPANSION CONNECTORS

Our pressure-welded copper expansion connectors are made entirely from highly conductive copper foils, which are welded under pressure and high heat at the connecting ends to form a solid, compact copper block.

The press-welding process creates a metallurgically uniform bond without any additional materials, delivering top electrical conductivity and outstanding mechanical strength. These pressure-welded connections are maintenance-free and known for their long service life and high operational reliability.

→ **We produce pressure-welded copper expansion connectors in various shapes and sizes. Below, you see samples from recent projects.**

AT A GLANCE:

According to DIN 46 276

Material: Foils made from Cu-HCP

Foil Thickness: 0.05 – 0.5 mm, optional with cover plates

Contact Surfaces: bare, tinned, silver-plated or nickel-plated

Drill Holes: as per DIN 43 673 or customized to your requirements

Scan the QR code to get additional technical details for this product group.

GKKS

INERT-GAS-WELDED COPPER EXPANSION CONNECTORS

Inert-gas-welded copper expansion connectors are crafted from highly conductive copper foils, with solid flat copper welded to each end under a protective gas.

The shielding gas prevents oxidation, resulting in clean, sturdy welds with impressive mechanical strength. By combining multiple foil packs and flat copper pieces, you gain more flexibility in connection design compared to connectors made purely by pressure welding.

→ **We produce inert-gas-welded copper expansion connectors in various shapes and sizes. Below, you see samples from recent projects.**

AT A GLANCE:

According to DIN 46 276

Material: Foils made from Cu-HCP, connection ends made from flat material (Cu-ETP, Cu-HCP, or Cu-OF)

Foil Thickness: 0.1 – 0.5 mm

Contact Surfaces: bare, tinned, silver-plated, or nickel-plated

Drill Holes: according to DIN 43 673 or custom-made to your specifications

Terminal shapes can be freely selected

Scan the QR code to get additional technical details for this product group.

GKAS

INERT-GAS-WELDED ALUMINUM EXPANSION CONNECTORS

Our inert-gas-welded aluminum expansion straps are made from highly conductive aluminum foils, with solid flat aluminum ends welded on using protective gas.

The inert-gas prevents oxidation, ensuring clean, strong welds with outstanding mechanical strength. GKAS-type expansion connectors offer a range of benefits, including high current capacity, corrosion resistance, and a lightweight design with excellent durability.

→ **We produce inert-gas-welded aluminum expansion connectors in various shapes and sizes. Below, you see samples from recent projects.**

AT A GLANCE:

According to DIN 46 276

Material: Foils: EN AW 1050 or EN AW 1350; terminal ends made from flat stock (EN AW 6060, EN AW 6082, or EN AW 6101)

Foil Thickness: 0.2 – 1.0 mm

Drill Holes: according to DIN 43 673 or customized to your specifications

Terminal end shape can be freely selected

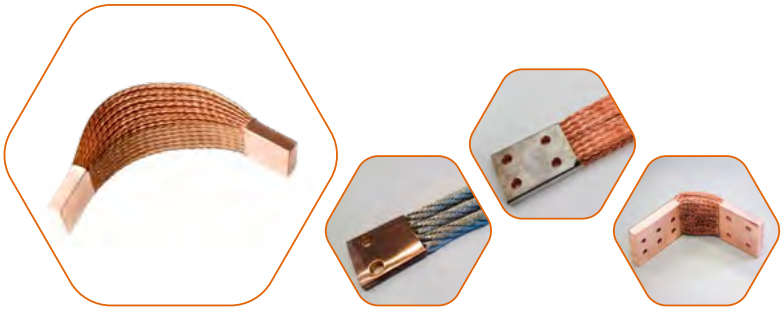
Scan the QR code to get additional technical details for this product group.

GKKH

HIGHLY-FLEXIBLE COPPER EXPANSION CONNECTORS

Highly-flexible copper expansion connectors are made from ultra-pure electrolytic copper braid, with the ends compressed onto copper tubes under precise pressure. The fine copper strands create a braid structure that offers exceptional flexibility while maintaining high current capacity.

→ **We produce highly-flexible copper expansion connectors in various shapes and sizes. Below, you see samples from recent projects.**



AT A GLANCE:

According to DIN 46 276

Material: Highly flexible copper braid available as flat or round wire, with contact sleeves made from copper tubing

Single wire diameter: typically 0.1 or 0.2 mm
(other diameters available upon request)

Drill Holes: according to DIN 43 673 or custom specifications

Contact sleeves and braid can be supplied bare or tinned

Scan the QR code to get additional technical details for this product group.

GKKN

PRESSURE-RIVETED COPPER EXPANSION CONNECTORS

Pressure-riveted copper expansion connectors are made entirely from high-strength copper foils. At the connection points, the foils are joined and compressed with copper plates using rivets. The combination of highly conductive copper foils and precise riveting ensures secure, durable connections with outstanding mechanical stability—perfect for use in high current systems subject to either static or dynamic loads.

→ **We produce pressure-riveted copper expansion connectors in various shapes and sizes. Below, you see samples from recent projects.**

AT A GLANCE:

According to DIN 46 276

Material: Foils made from Cu-HCP, cover plates and rivets made from Cu-ETP

Foil Thickness: 0.1 – 0.5 mm with cover plates

Drill Holes: according to DIN 43 673 or custom specifications

Scan the QR code to get additional technical details for this product group.

BUSBARS

Our copper and aluminum busbars and busbar systems form the backbone of modern high current installations. They deliver maximum current capacity, minimal losses, and top-level operational safety—even under the toughest thermal and mechanical conditions.

Thanks to precision manufacturing, premium materials and smart system design, our products ensure reliable, low-loss power transmission while making the best use of available space.

We facilitate the designs, calculations and technical construction plans for your customized busbar setup and provide professional on-site installation.

→ **We produce busbars in various shapes and sizes. Below, you see samples from recent projects.**

AT A GLANCE:

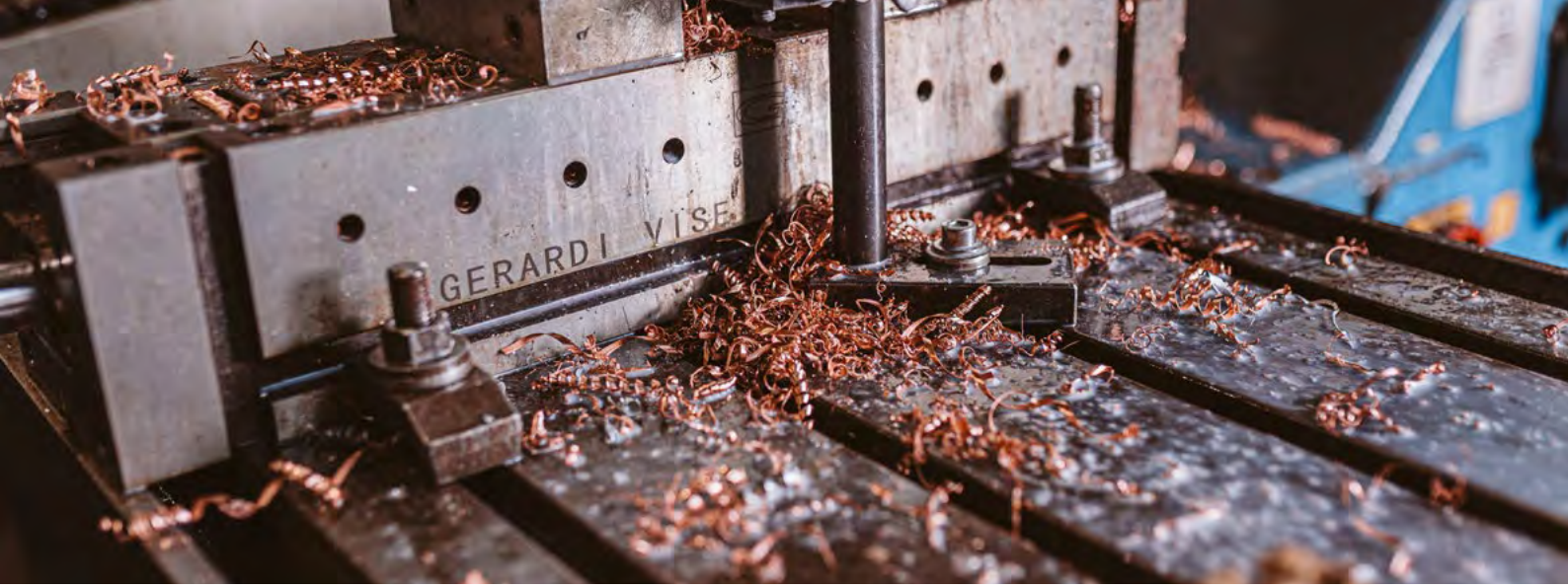
Available with air or water cooling

MATERIALS

Copper: Cu-ETP, Cu-HCP or Cu-OF

Aluminum: EN AW 1050A, EN AW 6060, EN AW 6082 or EN AW 6101

Scan the QR code to get additional technical details for this product group.



TURNED, MILLED AND WELDED ITEMS

We don't just manufacture busbars and flexible connectors—we also produce current-carrying turned, milled, and welded parts. By combining precise machining with the joining of highly conductive materials, we create components tailored exactly to your requirements and specifications.

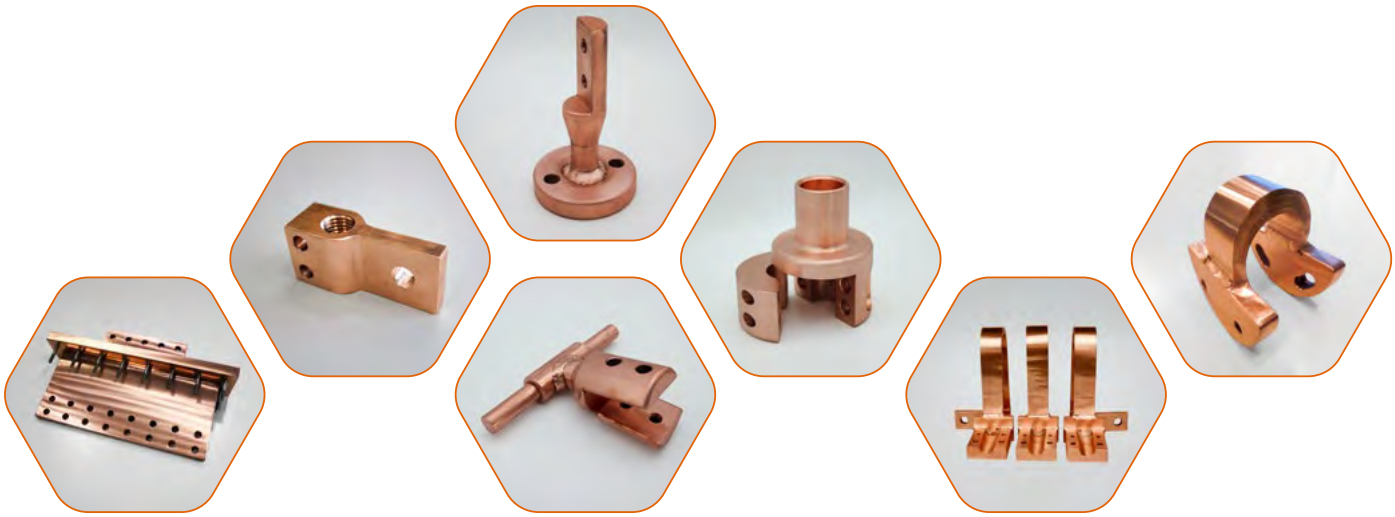
Whether you need connection tabs or low-voltage bushings for transformers, there are virtually no limits to the geometry of your components. Just reach out to us!

→ **We produce turned, milled and welded items in various shapes and sizes. Below, you see samples from recent projects.**

AT A GLANCE:

MATERIALS

Copper:	Cu-ETP, Cu-HCP or Cu-OF
Aluminum:	EN AW 6060, EN AW 6082 or EN AW 6101
Brass:	e.g., CuZn39Pb2



CUSTOM COMPONENTS

For over 40 years, we've been manufacturing components for high current systems. Our product range includes converters (both rectifiers and inverters), smoothing reactors, transductors, and similar solutions for currents reaching up to 100,000 amps.

→ **We produce custom components in various shapes and sizes. Below, you see samples from recent projects.**

APPLICATION AREAS:

Electrolysis processes for producing

- Chlorine
- Zinc
- Manganese
- Aluminum
- Copper
- and other areas within the raw materials industry, such as smelting.

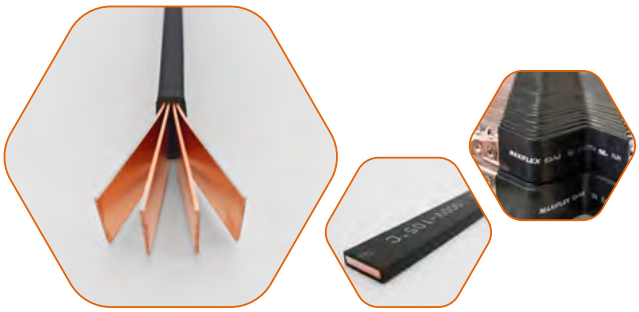
Scan the QR code to get additional technical details for this product group.

LAMINATED BUSBARS

Standard length: 2,000 mm (-0/+5) – other sizes available upon request
Lamella thickness: 0.5 mm / 0.8 mm / 1.0 mm –
additional sizes available on request
Number of lamellae: 1 to 12 pcs.
Busbar width: 9 mm to 100 mm

Premium black PVC insulation
Self-extinguishing per UL V0

Wall thickness: at least 1.65 mm
Elongation: > 200 %
Tensile strength: > 15 N/mm²
Insulation sheath breakdown voltage: > 20 kV/mm
Operating voltage: 1.000 V AC / 1.500 V DC
Operating temperature: from -40 °C to 105 °C
(not for dynamic load)



GK-EKK / GK-EKZ / GK-EZZ

GROUNDING STRAPS

Flat braid grounding straps are ideal for constructing high-frequency grounding systems, such as in switchgear construction. They impose lower impedances than traditional round ground cables.

AT A GLANCE:

Single wire Cu-ETP UNI EN 13602, diameter 0.20 mm (special wire available upon request)

Plain or tinned copper strands

Contact surfaces in plain or tinned copper

Standard cross-section
from 6 mm² up to 75 mm²

Custom solutions available upon request

Current carrying capacity
according to IEC 439

Scan the QR code to get additional technical details for this product group.

SERVICES

WE COVER ALL YOUR NEEDS

Craftsmanship and technological expertise for producing high-performance high current components are our core strengths. But our customer service goes much further: from project planning, assembly and repair, all the way to our reliable support, we're here to meet your needs at every step of the process.

CONSULTING, PROJECT PLANNING AND FINANCING

- ✓ Design for Manufacture
- ✓ Creation of manufacturing drawings
- ✓ Financing

ASSEMBLY

- ✓ Assembly of modules at our facility
- ✓ On-site installation of busbars and rail systems

SHIPPING

- ✓ Customized packaging tailored to your needs
- ✓ Worldwide shipping
- ✓ Just-in-time delivery

REPAIR

- ✓ Manufacturing of spare parts
- ✓ Repair and modification of existing components and assemblies (retrofit)
- ✓ Nondestructive material testing
- ✓ Surface coating (electroplated or chemical)

SUPPORT

- ✓ Technical support (feasibility studies, cross-section calculations, cost optimization)
- ✓ Extended warranty

FROM
MAXDORF
TO THE WORLD

General Notice:

The measurements and technical data listed in this catalog have been determined with the utmost care, and the illustrations reflect the status at the time of printing. However, we expressly reserve the right to make technical changes as well as modifications to dimensions, shapes, and colors.

All information provided, especially values for possible current loads, are non-binding guidelines.
Any assignment of conductor cross-sections to current ratings according to national or international standards or regulations remains unaffected.

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