PARTZSCH

SPEZIALDRÄHTE

LIVE WIRES AT YOUR SERVICE



CHRISTIAN PARTZSCH

» The special wires manufactured with passion and expertise at PARTZSCH Spezialdrähte GmbH are up to meet any challenge. Over many years, we have built up extensive know-how in order to realise individual production requirements for copper wires in a wide range of dimensions and insulation designs. In our work, we benefit from our close collaboration with engineers from the development, design and production departments in electrical engineering.

Our customers in the fields of renewable energies, electromobility, the rail sector and transformer, generator and electric motor manufacturing have been relying on our high-quality special wires for years. We hope you will, too.

We look forward to working with you! «

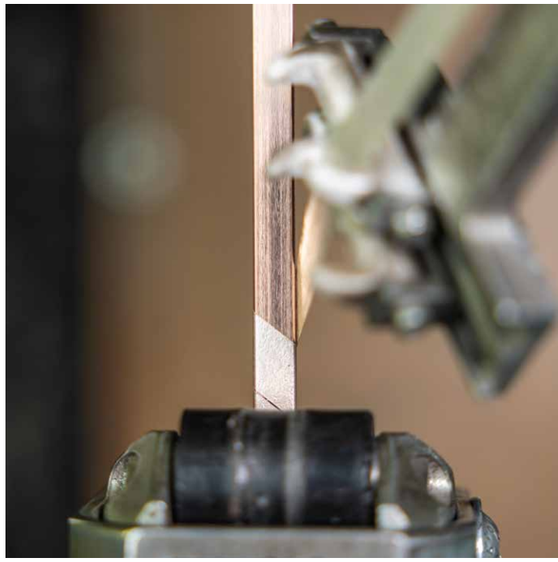


PARTZSCH SPEZIALDRÄHTE

Live wires at your service: Since the 1990s, PARTZSCH Spezialdrähte GmbH has been manufacturing and finishing copper wires, supplying a key component for electrical machines and drive systems. Over the years, we have continuously developed into one of the leading companies in the copper wire processing industry.

Meeting our customers' requirements is our top priority. We manufacture products that fulfil your precise specifications. Continuous quality monitoring – both through our state-of-the-art production facilities and permanent supervision of our testing department – ensures compliance with all required parameters.

Our quality management system is certified according to ISO 9001:2015 and guarantees outstanding production results. Sustainability is equally important to us: the requirements of DIN EN ISO 14001:2015 are fulfilled and externally verified. Individual customer service and the shortest possible delivery times are a matter of course for us.





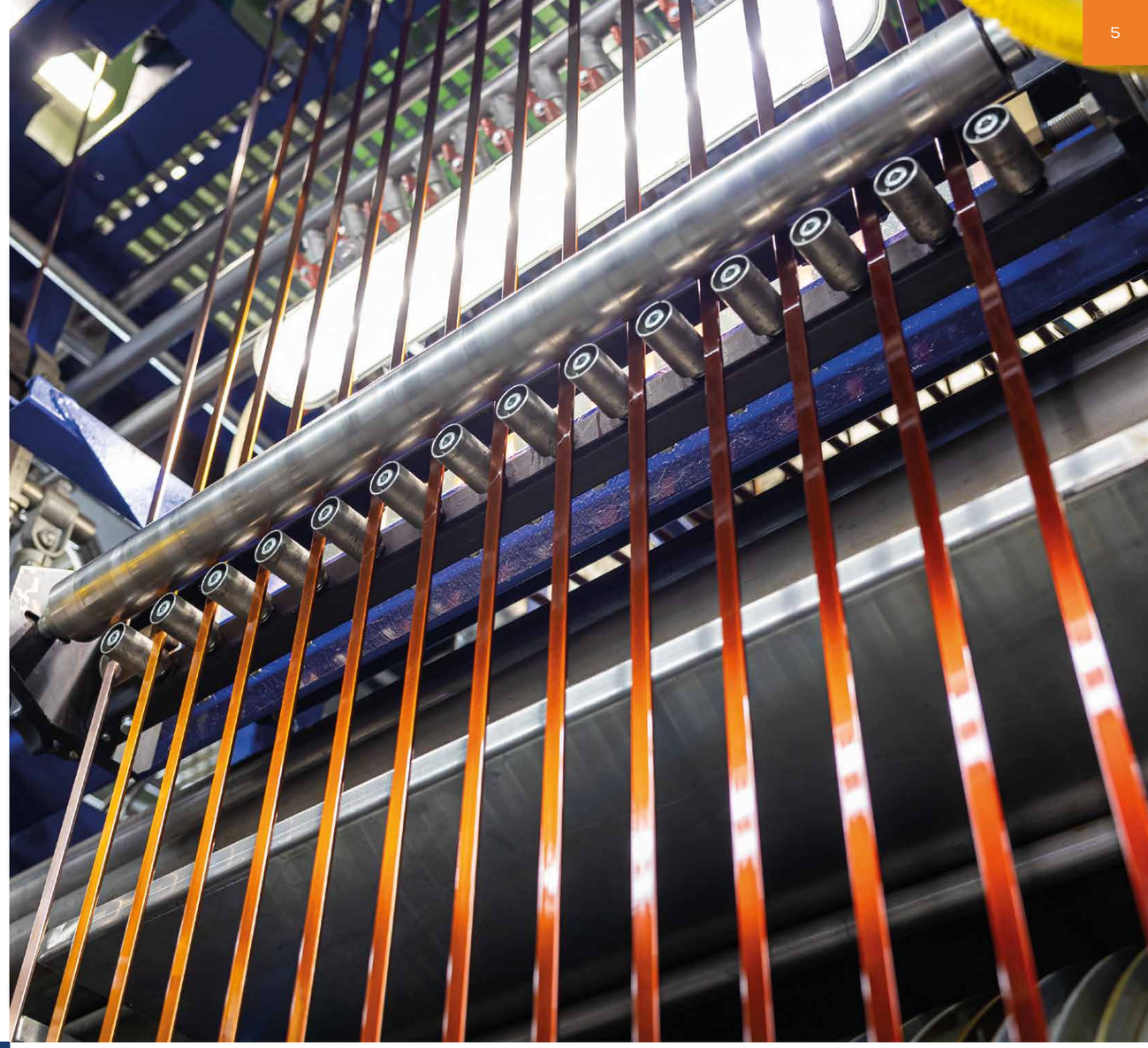
OUR PRODUCTS AND SERVICES

PARTZSCH Spezialdrähte GmbH manufactures approximately 10,000 tonnes of copper wire annually for industrial applications worldwide – in precisely the dimensions, qualities and insulation types required by our customers. Our particular strength lies in the production of rectangular and round copper wires, bare or insulated, for a wide range of applications in generators, transformers, electric motors and other electro-technical components.

Our winding wires are predominantly based on high-conductivity copper (Cu-ETP or Cu-OF), characterised by excellent electrical conductivity, mechanical strength and outstanding workability.

Thanks to cutting-edge production processes and a high vertical range of manufacture, we realise both standard products and customised special solutions.

For use in highly demanding electrical applications, we offer a broad spectrum of insulation materials, including: Polyimide film, Mica, Aramid paper (Nomex®), Glass filament and Temperature-resistant enamels. The resulting winding wires are used worldwide in coils, reactors, traction motors, generator windings and transformers. For reliable downstream processing, we supply our wires on suitable industry-standard spools.





YOUR ADVANTAGES AT A GLANCE

- Many years of experience in wire production
- One of the most modern machinery bases in Europe
- Uncomplicated and flexible order processing
- Fast and on-time deliveries
- Short decision-making paths
- Certified according to ISO 9001:2015
- Highest quality standard – made in Germany
- Part of a successful company group
- Laboratory testing in our qualified in-house laboratory

PRODUCTION AT THE HIGHEST LEVEL

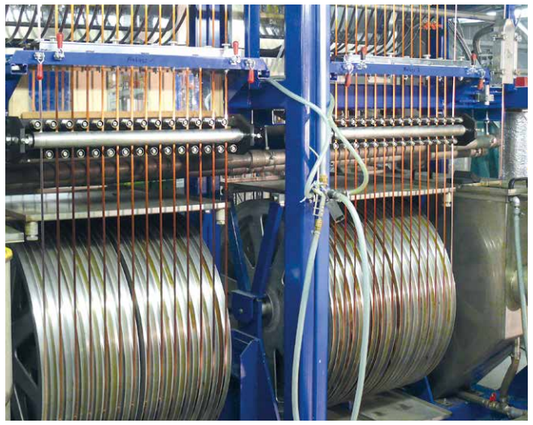
Our bare copper wires are manufactured in our modern production facility in finely coordinated process steps. The outstanding properties of the copper used allow significantly greater deformation without intermediate annealing. To relieve any stress peaks that may nevertheless occur and to achieve the application-specific deformability required, we carry out subsequent heat treatment in our specialised machinery park comprising annealing furnaces and cooling stations. The resulting deformability is also a distinctive quality feature of our copper wires. All wires are manufactured in accordance with DIN standards and correspond as standard to R200 quality. Customer-specific requirements can be realised upon consultation.

OUR COMPREHENSIVE STANDARD PROGRAM

- Manufacturing according to DIN standards
- Rectangular wires: Width 3.35 ... 30.00 mm
  Thickness: 1.00 ... 7.00 mm
- Round wires: Diameter 2.80 ... 11.00 mm
- Customised wire dimensions available upon request









ENAMELLING AND INSULATION

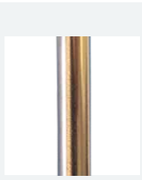
Wire enamelling
Depending on requirements, we apply enamel coatings of various layer thicknesses. We manufacture enamelled rectangular wires with minimal tolerances in widths from 3.35 to 14.00 mm and thicknesses from 1.00 to 6.00 mm.

Wire insulation with various tape types
We insulate rectangular and round wires with a wide range of insulation materials, including polyimide film, mica film, paper and aramid paper.
Paper or film insulation is available for round wires: diameter 0.85 – 6.00 mm and rectangular wires in widths from 3.35 to 25.00 mm and thickness from 1.00 to 7.00 mm.

Wire insulation with glass filament or mixed yarn
Wires exposed to high mechanical stress, vibration, elevated temperatures and temperature fluctuations are primarily braided with yarns resistant to such influences.
For these purposes, we use glass filament and mixed yarns (Daglas) with varying numbers of individual threads, which can be impregnated with epoxy resin or polyester-imide enamel. These specifications allow us to manufacture wires precisely according to your requirements in a wide variety of designs.

SPECIAL WIRES IN ALL VARIANTS

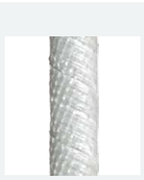
While round wires are frequently used for standard windings where processing convenience is more critical than space requirements. Rectangular wires are often used in high-performance applications such as powerful direct drives or electrical machines requiring high power density and efficiency.



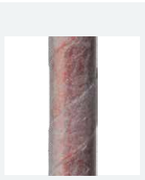
Copper round wire
Bare



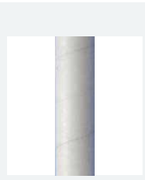
Round wire
Insulated with polyimide sheet



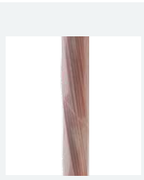
Round wire
Insulated with glass fibre mica tape



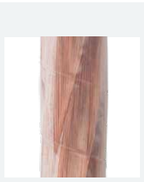
Round wire
Enamelled with mica tape



Round wire
Insulated with Nomex® aramid paper



Stranded copper wire
6 mm²
Insulated with PET film



Stranded copper wire
35 mm²
Insulated with PET film



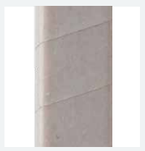
Copper rectangular wire
Bare



Copper rectangular wire
Insulated with 2 layers of polyimide sheet



Copper rectangular wire
Mica-insulated



Copper rectangular wire
Insulated with Nomex® aramid paper



Copper rectangular wire
Enamelled



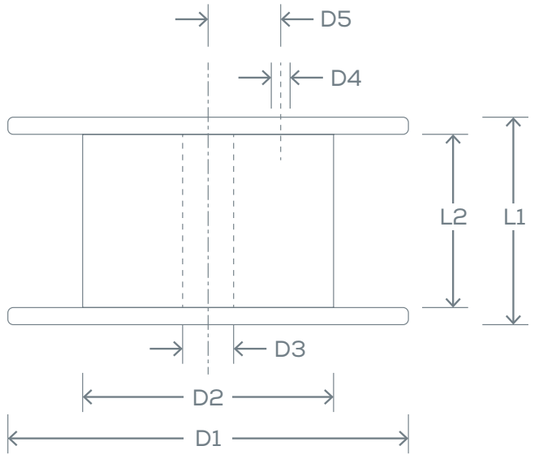
Copper rectangular wire
Enamelled and braided with 1 layer of mixed yarn

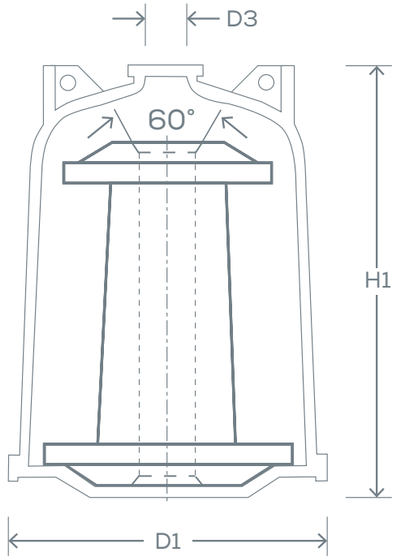
OVERVIEW OF OUR ASSORTMENT OF WIRES

	Bare wires (in mm)	**Rectangular and round wires** insulated with polyimide sheet (in mm) *	**Rectangular and round wires** insulated with mica sheet (in mm) *	**Rectangular and round wires** insulated with paper or aramid paper (in mm) *	**Rectangular and round wires** enamelled (in mm)	**Rectangular wires** insulated with glass filament and/or mixed yarn (in mm) *	**Litz wire** insulated with mica and/or PET sheet
Conductor material	Rectangular wire Round wire	Rectangular wire Round wire	Rectangular wire Round wire	Rectangular wire Round wire	Rectangular wire Round wire	Rectangular wire	Single round wire
Rectangular wire ** acc. to DIN EN Width (W) Thickness (T)	W: 3.35 … 30.00 T: 1.00 … 7.00	W: 3.35 … 16.00 T: 1.00 … 7.00	W: 3.35 … 25.00 T: 1.00 … 7.00	W: 3.35 … 20.00 T: 1.00 … 7.00	W: 3.35 … 14.00 T: 1.00 … 6.00	W: 3.35 … 20.00 T: 1.00 … 5.00	**Single wire** Cross section of litz wire: 6 mm² … 70 mm²
Round wire acc. to DIN EN	Ø: 2.80 … 11.00	Ø: 2.00 … 6.00	Ø: 0.85 … 6.00	Ø: 2.00 … 6.00			
Insulation / design		▪ Polyimide sheet, FEP coated and hot-sealed, also corona resistant (TI 240°C)	▪ Mica with PET-liner (TI 155°C) ▪ Mica with PI-liner (TI 180°C) ▪ Mica with glass fibre liner (TI on request) ▪ Combinations with enamelled wire and/or PET sheet possible ***	▪ Kraft paper ▪ Nomex® (TI 120°C) ▪ Possible in combination with enamelled	▪ Enamel Polyamidimide acc. to DIN EN (TI 220°C)	▪ Combinations with bare, enamelled or polyimide-sheet insulated wires possible (TI 155°C … 180°C) ▪ Glass filament and/or mixed yarn, impregnated	▪ PET sheet ▪ Mica sheet (TI 155°C) ***
Increase		Acc. to the customer's specifications	Acc. to the customer's specifications	Acc. to the customer's specifications	▪ Class 1, 2 and 3 acc. to DIN EN or to the customer's specifications	Acc. to the customer's specifications	Acc. to the customer's specifications
Number of layers / taping		▪ 1 … 2 layers opposite directions	▪ 1 … 4 layers same and opposite directions ***	▪ 1 … 8 layers same and opposite directions ***		▪ 1 … 2 layers opposite directions	▪ 1 … 3 layers same direction ▪ 2 layers opposite direction
Overlap		Steplessly variable, max. 75%	Edge to edge, steplessly variable, max. 75%	Edge to edge, steplessly variable ▪ Rectangular wire max. 80% ▪ Round wire max. 50%			Steplessly variable, min. 30% to max. 80%
Application examples	▪ Conductor material for further insulation ▪ Rotor bars	▪ Traction motors ▪ Special-purpose motors ▪ Motors for high-temperature applications	▪ High- and low-voltage machines ▪ Frequency-converter-proof extraction ▪ Gas motors ▪ Fire resistant cables ▪ Transformers	▪ Transformer windings ▪ Reactors	▪ Motors ▪ Generators ▪ Transformers	▪ Traction motors ▪ Generators ▪ High-voltage motors ▪ Special-purpose motors	▪ HF motors ▪ Reactors ▪ Transformers

* Insulated round wire is not suited for drawing-in technology! ** Feasibility depends on the W/T ratio *** Further variants possible at the customer's specifications

OUR ASSORTMENT OF SPOOLS





Cylindrical spools

Type	Material	D1 (in mm)	D2 (in mm)	D3 (in mm)	D4 (in mm)	D5 (in mm)	L1 (in mm)	L2 (in mm)	Deadweight	Weight
K250	Plastic	250	160	22	13	43	200	160	Approx. 1.5 kg	Approx. 20 kg
K355	Plastic	355	225	35	26	80	200	160	Approx. 3.5 kg	Approx. 40 kg
K500	Plastic	500	320	35	26	80	250	180	Approx. 8 kg	Approx. 100 kg
VM710	Plastic	710	500	55	26	140	250	180	Approx. 15 kg	Approx. 200 kg
VM630	Plastic	630	315	44	26	80	230	180	Approx. 9.5 kg	Approx. 200 kg
VM800	Plastic	800	400	85	26	140	320	250	Approx. 20 kg	Approx. 400 kg
H1150	Wood	1,150	630	80	22	80	340	280	Approx. 52 kg	Approx. 1,000 kg
ND630	Steel	630	355	127	28	140	445	405	Approx. 64 kg	Approx. 350 kg
EGE762	Steel	762	355	127	28	140	550	500	Approx. 107 kg	Approx. 950 kg

Cylindrical barrelled delivery spools acc. to IEC 60264-2, DIN 46399 or 46395 and other customised specifications are possible upon request.

Long spools with container

Type	D1 (in mm)	H1 (in mm)	D3 (in mm)	Deadweight	Weight Cu
A250	315	500	100	4.7 kg	Approx. 45 kg

Long spools acc. to IEC 60264-3 with container acc. to IEC 60264-3-5



MADE
IN
GERMANY

QUALITY IS MANU-FACTURED, NOT SIMPLY MEASURED

Our credo: Quality is manufactured, not simply measured! This is the reason why the most important components for measuring are already installed on our machines. In addition, we perform initial sample and series tests with creation of the appropriate reports.

Customer satisfaction is the objective of our work. On-time delivery of products meeting all quality requirements is therefore one of our primary corporate goals.

Quality defines the thinking and actions of our employees, who actively contribute to continuous improvement across the entire process chain.

ISO 9001:2015 requirements and customer-specific specifications form the basis of our work. Internal audits and monitoring by accredited certification bodies ensure the effectiveness of our quality system – from goods receipt to final dispatch.

Mechanical tests

- Tensile strength
- Elongation at break
- Verification of yield strength
- Spring-back behaviour

Electrical tests

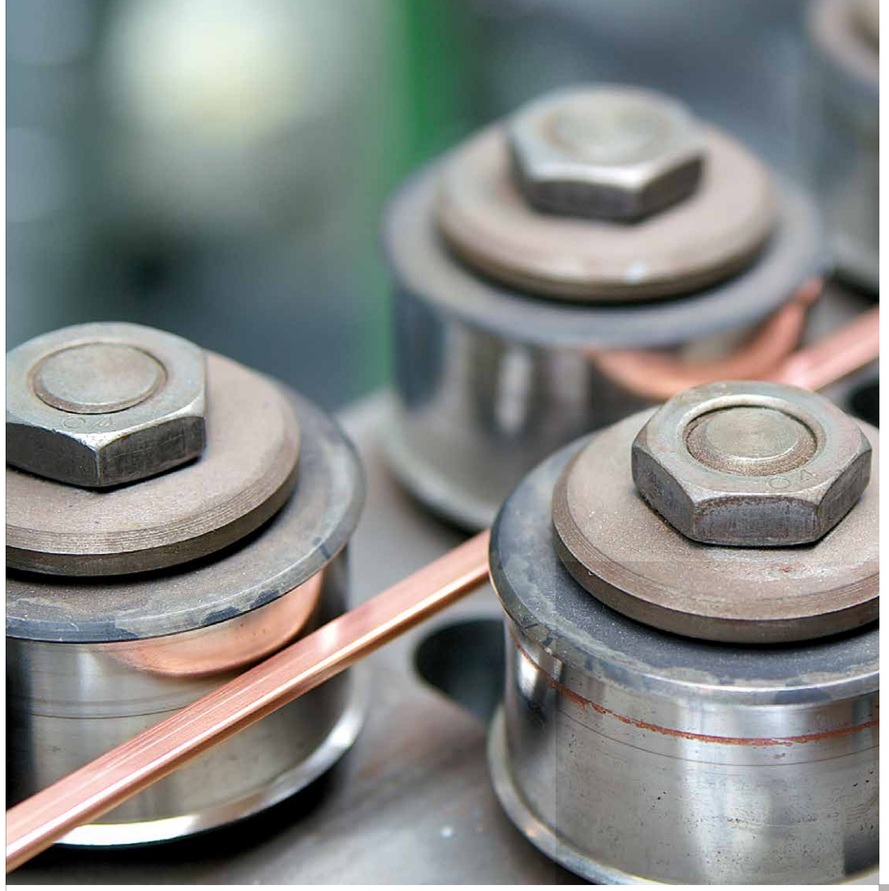
- Breakdown voltage (room temperature and elevated temperature)
- Resistance tests

Profile tests

Ductility and adhesion tests

Additional tests

- Determination of the content of glass and binders
- Behaviour against solvents
- Thermal shock tests
- Determination of the degree of enamelling in the case of enamelled wires
- Tests in A/C chambers
- Special tests upon request



OUR QUALIFICATIONS

- Certified according to ISO 9001:2015
- Environmental management verified according to DIN EN ISO 14001:2015
- Approved »Class A« supplier to numerous renowned companies

OUR MODERN FLEET OF MACHINES

- Rolling, continuous extrusion and drawing lines
- Annealing furnace systems
- Wire enamelling lines
- Insulation systems for rectangular and round wires



Modern high-precision testing equipment ensures that our special wires are manufactured within the narrowest tolerances

EVERYTHING FROM A SINGLE SOURCE – POWER FOR YOUR VISION



We as a member of the PARTZSCH Group can proudly say that the spirit of innovation meets the idea of service, enabling all customer wishes to become reality.

As one of the leading mid-size companies in the electrical engineering branch, the PARTZSCH Group manufactures a broad spectrum of products related to electric motors and generators – from its own range of wires to wind turbine generators.

Our comprehensive expertise and high vertical integration enable us to reliably and efficiently realise even complex and demanding customer projects.

PARTZSCH

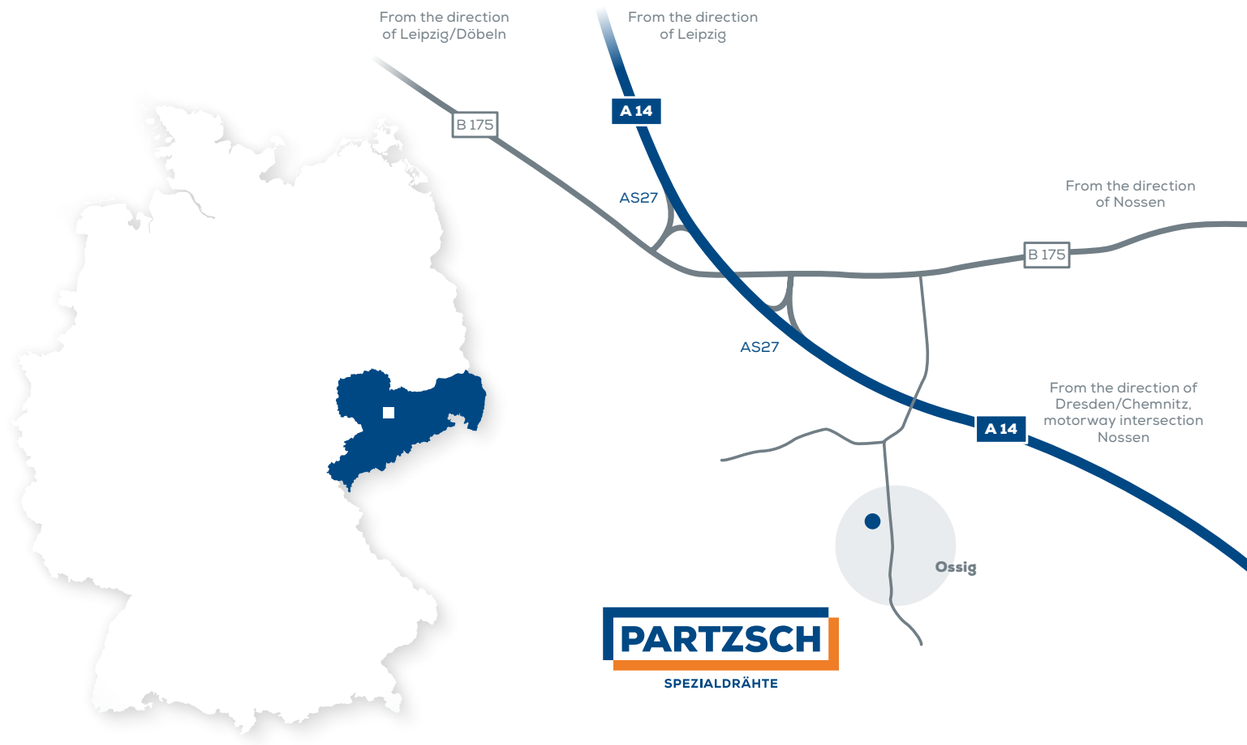
- PARTZSCH ELEKTROMOTOREN
- PARTZSCH WINDGENERATOREN SERVICE
- PAMO REPARATURWERK
- PARTZSCH SPEZIALDRÄHTE

SERVICE MAKES THE DIFFERENCE

Our qualified team will be pleased to develop solutions together with you and tailor them precisely to your product requirements. Contact us – we look forward to hearing from you.

FAST AND FLEXIBLE

Our central location and excellent connection to the A14 motorway enable flexible and fast inbound and outbound deliveries.



oberueber-karger.de 10.2026

PARTZSCH
SPEZIALDRÄHTE

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