

Carbon brushes



 **Mack**

Carbon brushes • Carbon brush holders

Create a reliable future.

For over 65 years.

We are a supplier of current transmission solutions specializing in carbon brushes and carbon brush holders. Listening to our customers is one of our specialities; as your development partner with expert know-how we deliver exactly what is needed. Fast, reliable and at a fair price.

Because we build our own tools and manufacture almost all components in-house we are your ideal partner; from small quantities all the way to average and large series. We implement special designs gladly and efficiently.

Your advantages at MACK

- Friendly and competent contact partners
- Extensive program for immediate delivery
- Easy implementation of your individual special requests
- Small and large series production
- Development partners with expert know-how
- Excellent quality and reliability
- Company own machinery with a high vertical range of manufacture
- Company own tool and mould making

Our products –

As diverse as your ideas.



Carbon brush holders

Leg brush holders with fixed or self-aligning brushes as well as a variety of brush-holders with different kinds of clamps offer a broad range of products for the transmission of sensitive data culminating in products that are under high constant use. Each available installation situation can be optimized, e.g. by special plastic types, with bend legs or divided clamps. We offer our tubular brush holders with different kinds of connections, they consist of drawn brass or brass sheet. Depending on their usage, they can be equipped with different insulation materials.

- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipring systems
- Flange brush holders
- Brush rockers

Current transmission systems

You can profit from our experience in new constructions and the revision of existing linear or radial current transmission systems. Our own tool making and injection moulding facility enable us to quickly and easily implement individual solutions and change requests.

- Current collectors
- Small slipring systems
- Sliprings
- Plane grinding rings



Terminal boards

We use different moulding materials in the production of our terminal boards. In our assortment of round or oblong holes, different measurements and bolt sizes you will find a suitable terminal board including the joining materials.

Copper compound parts

We offer fixed, individually formed copper rails or flexible round and flat healds in single- and multiple layered versions to suit your needs; naturally they are also available with different insulations, insulation classes and surfaces.



Carbon brushes

Please find out more about our capabilities and products on the following pages.



Carbon brushes by MACK.

Quality and just-in-time production – made in Germany.

Why MACK?

MACK is your partner when it comes to **high-quality carbon brushes**. Allow yourself to be **convinced of our know-how** and enjoy the resulting **advantages**:



We have more than 65 years of experience in the field of carbon brush production.

With our expert knowledge, our superbly qualified employees and a state-of-the-art machine park, we guarantee consistently high levels of quality. Hence, many of our customers have been relying on our reliable and durable products and our service for many decades.



We produce within 24 hours!

Sometimes, time is of the essence and a component is required yesterday already. No problem! Due to our slender structures and direct communication paths, as well as the comprehensive product range we stock, we can guarantee an immediate delivery, often within 24 hours.



We start production at a quantity of 1!

You are in need of a very specific carbon brush and only one set thereof? We can also produce the smallest volumes for you – at fair prices.



Customers from the following industries trust in MACK as a reliable partner for carbon brushes:

- Repair and maintenance
- Electric machine and plant engineering
- Wind energy
- Crane technology
- Port and cargo handling
- Shipping
- Medical engineering
- Storage technology, etc.

Brush grades matching any application.

Brush grades and applications

Carbon graphite grades

Applications:

machines with high circumferential speeds, well-suited for turbo generators, small and medium-size engines (approx. 30 kW), low-power engines, universal engines, vehicle alternators

Characteristics:

made of different types of graphite. Light grinding effect due to mineral components. Abrasion of burnt spots on the collector at low circumferential speed and low brush sparking.

Electrographite carbon grades

Applications:

direct current engines of any power, three-phase commutator machines, alternating current engines, traction engines, reactive power machines, abrasive rings, welding converters, universal engines, etc.

Characteristics:

made of pre-heated and reinforced carbon material. High temperatures during the production process cause the carbon to be converted to electrographite, which is largely free of impurities. Electrographite carbon grades are characterised by their high electrical and thermal resilience and very good sliding characteristics. Outstanding commutation characteristics, high short-circuit safety, and arc erosion resistance.

Carbon graphite grades

Resin-bonded

Applications:

small and medium-size generators up to 30 kW, auxiliary brushes for cross field excitation, three-phase commutator engines, variable-speed engines, repulsion engine, frequency converters, universal engines.

Characteristics:

enhancement of the graphitic carbon materials. High resistance, high contact voltage, and high ratio of cross resistance and longitudinal resistance. This has advantageous effects on attenuating the commutation currents.

Copper graphite grades

Applications:

grounding, direct current low-voltage machines, vehicle starters, slip rings, synchronised asynchronous engines, current transmission, conductor lines, collectors, etc.

Characteristics:

mixture of graphite types and metal powder. Significantly higher conductivity and lower contact resistance. The electrical resilience is significantly higher than that of carbon graphite brushes.

Silver graphite grades

Applications:

transfer of measuring and control currents (data transmission), shaft grounding, low-power engines with low voltage, tachometer generators, contacts

Characteristics: mixture of graphite and silver powder, pressed and sintered. When compared to copper graphite, even lower resistance and higher conductivity.

Characteristics:

mixture of graphite and silver powder, pressed and sintered. When compared to copper graphite, even lower resistance and higher conductivity.

Order your carbon brushes online – quickly and conveniently

Visit www.mack-kohlebuersten.de/order and configure your individual carbon brushes in a few steps. On the following pages, you will see a selection of the most common basic shapes, terminals, and additional options. When configuring your carbon brush online, you can select these by simply clicking them.



Scan code and easily order online!

Complete your carbon brush order in 3 steps:

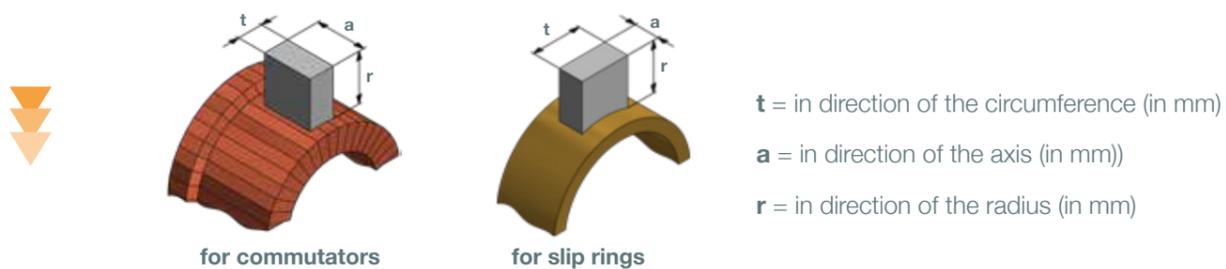
1. Information on existing data and armature voltage

Please provide us with the labels contained on the carbon brush (if applicable), as well as the armature voltage (U_n) of the engine.



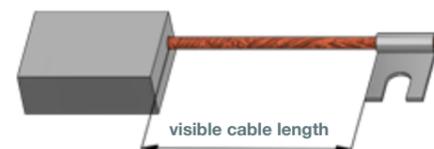
2. Determination of the dimensions

Determine the dimensions of the carbon brushes required based on the diagrams (sequence t x a x r) and differentiate between commutator or slip ring applications.



3. Information on the cable length

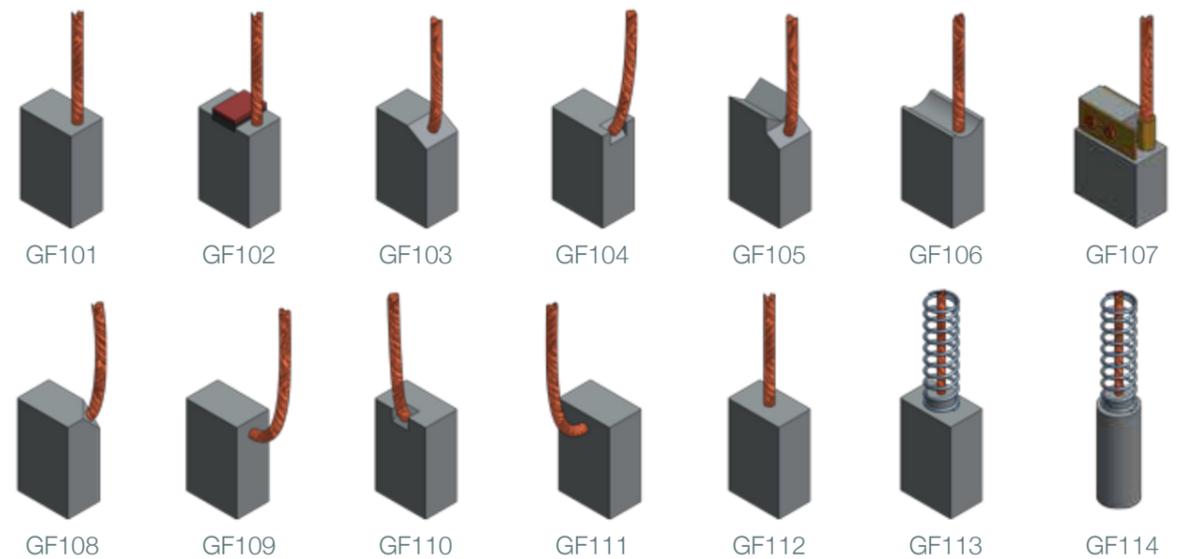
In the case of one or several connection cables, the visible cable length must be provided. Optionally, you can select whether the cable should be insulated or not.



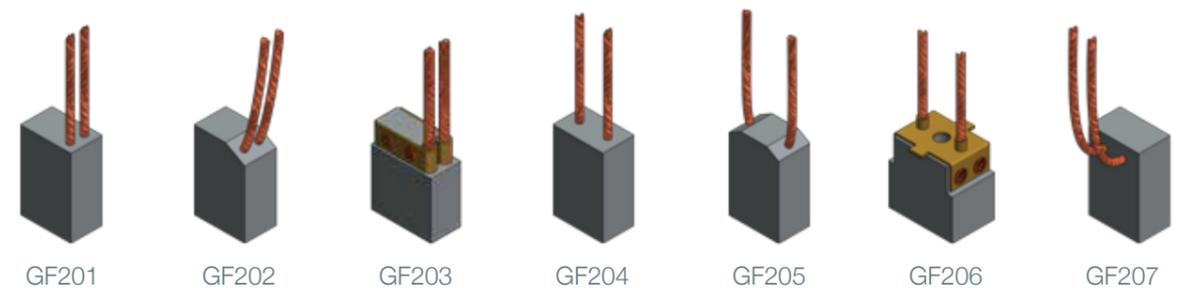
without cable



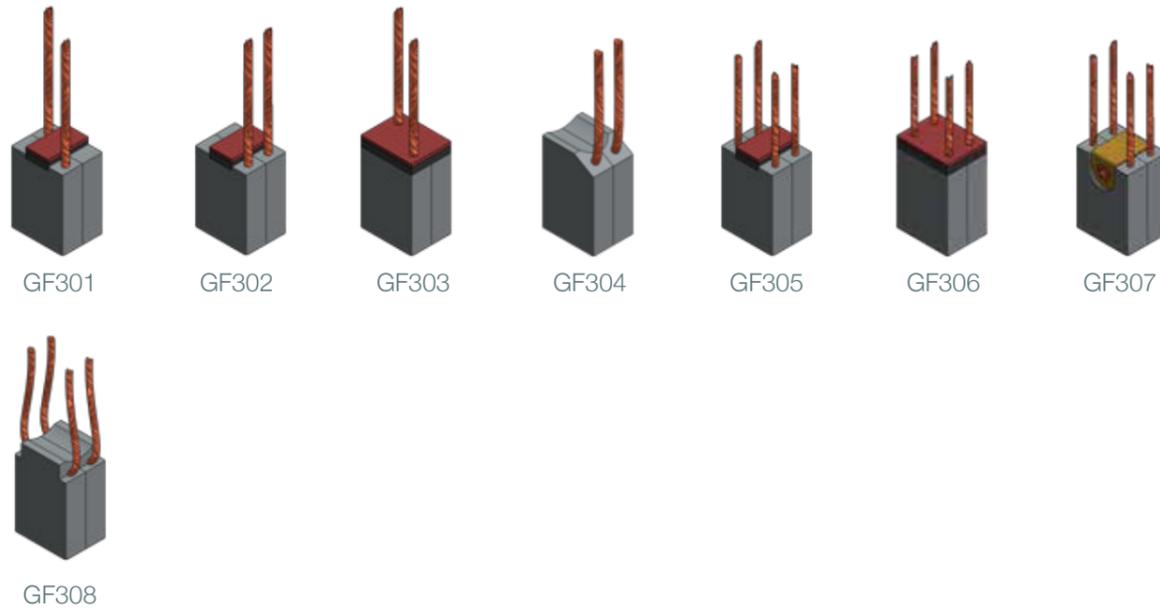
with 1 cable



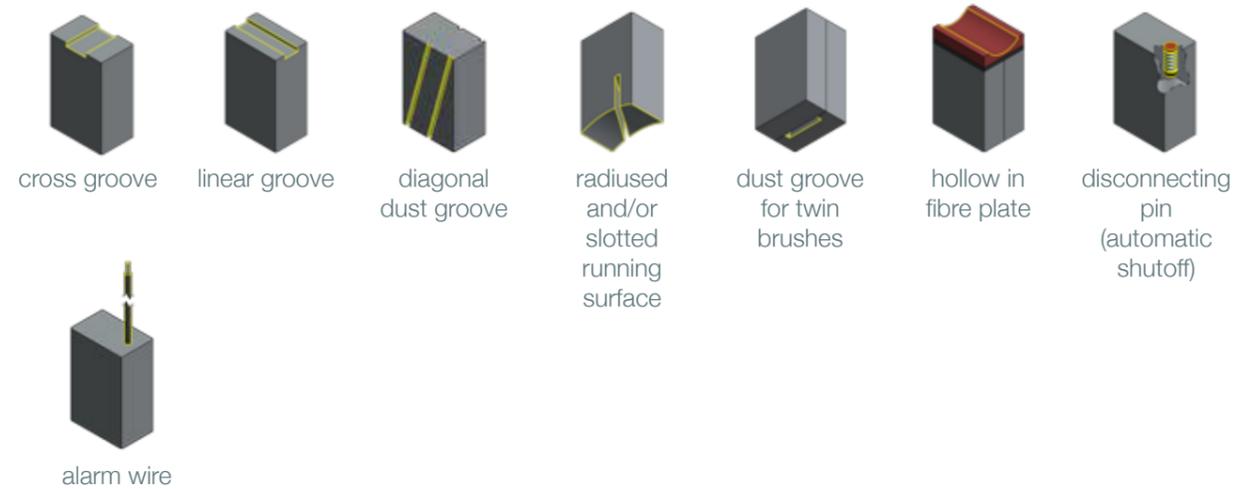
with 2 cables



twin brushes



additional options



cable lugs + push-in sleeves



plates



terminals



Cable end

terminals with latch plate



other terminals



You have further questions or require technical support?

Please get in touch with us. Our expert staff will be happy to give you advice and support.

+49 64 01 21 06 09-0 info@mack-kohlebuersten.de



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Josef Mack GmbH & Co. KG

Giessener Strasse 49
D-35305 Grünberg

Phone +49 64 01 21 06 09-0
Fax +49 64 01 49 10

info@mack-kohlebuersten.de
www.mack-kohlebuersten.de



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