



Pioneering  
high voltage.



For more than 100 years, HSP has stood for excellent quality and impressive customized high-voltage bushings. Today HSP produces condenser bushings for energy applications at its new Troisdorf site using state-of-the-art manufacturing and testing facilities.

Backed by consistent specialization and the highest standards of quality, HSP products have been used in numerous applications, including:

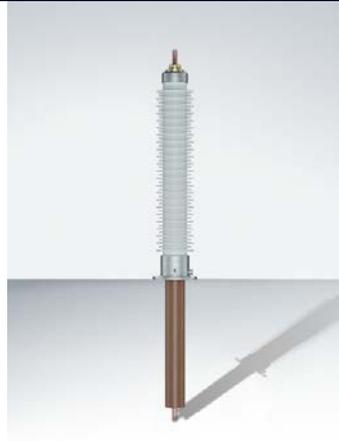
- Transformer bushings
- Switchgear bushings
- Generator bushings
- HVDC bushings

**The HSP Product Spectrum**  
Our quality equals your success

## Transformer bushings



STARIP®+



STARIP®-Si+



SETFt

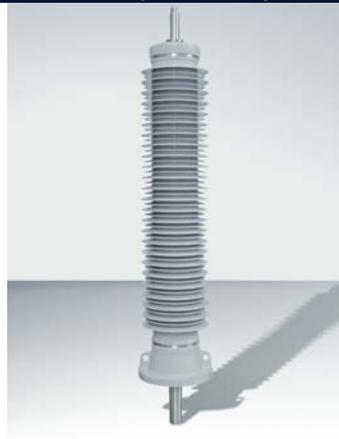


EKTO

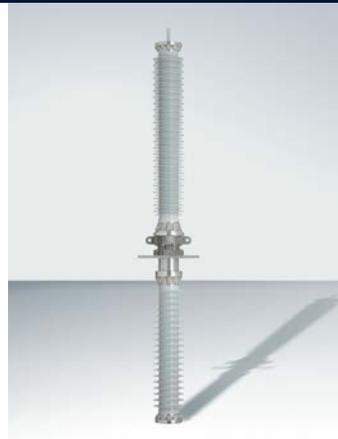
## Switchgear bushings



EKGft



SGF



SEW

## Transformer bushings

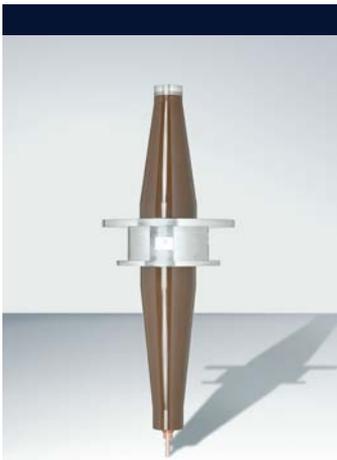
HSP transformer bushings are designed to be connected to oil-insulated power transformers and operate with the following environmental media: outdoors, cable junction box-oil and SF<sub>6</sub> switchgears. Our product spectrum includes transformer outdoor bushings with condenser grading and a solid active component made of resin-impregnated paper of these types:

- **STARIP®+/STARIP®-Si+** for rated voltages of 24 to 245 kV and rated currents up to 2500 A as a standard series
- **ETFt/SETFt** for rated voltages of 24 to 800 kV and rated currents up to 6000 A as well as transformer oil bushings of this type
- **EKTO** for rated voltages of 36 to 800 kV and rated currents up to 4000 A as well as special transformer gas bushings of this type
- **EKTG** for rated voltages of 52 to 800 kV and rated currents up to 4000 A.

## Switchgear bushings

HSP offers custom bushings with optimum voltage distribution for gas-insulated and air-insulated switchgear, even when there are fast voltage changes. Their solid active component is made of resin-impregnated paper.

- The unpressurized **EKGft/SEKGft** features condenser grading and is designed for rated voltages of 73 to 550 kV and rated currents up to 4000 A.
- Type **SGF** operates with switchgear gas as insulation and is designed for rated voltages of 73 to 550 kV and rated currents up to 4000 A.
- We supply **EW/SEW** wall bushings for rated voltages of 52 to 800 kV and rated currents up to 4000 A.



EKTG

#### Generator bushings



EMH



EMI

#### HVDC bushings



GSETFt

## Generator bushings

HSP bushings for generators or electric machines are suitable for internal spaces and are resistant to generator cooling gases. The EMH and EMI/EKMI types are designed for rated voltages of 12 to 36 kV and rated currents of up to 36 kA and operate with a solid active component made of resin-impregnated paper. They differ in terms of the type of cooling:

- EMH with controlled air cooling from the machine side,
- EMI/EKMI with natural cooling, controlled gas cooling or liquid cooling.

## HVDC bushings

We offer special HVDC bushings for high-voltage direct-current transmission systems, which can be connected to HVDC transformers, inductors or air-insulated system parts. They are calculated and designed in accordance with individual requirements. The bushings are provided with dry insulation or gas insulation.

In addition to standardized products, we also offer our customers individualized custom products. We manufacture these custom products using state-of-the-art production methods, most of which we have developed ourselves, and test them in our fully equipped, internationally accredited test facility.

Published by and copyright © 2022:  
**HSP Hochspannungsgeräte GmbH**  
Camp-Spich-Str. 18  
53842 Troisdorf-Spich  
Germany  
Tel.: +49 (0) 22 41/25 26-0  
Fax: +49 (0) 22 41/25 26-116  
E-mail: [contact@hspkoeln.de](mailto:contact@hspkoeln.de)

All rights reserved.  
Brands and trademarks used in  
this document are the property of  
HSP Hochspannungsgeräte GmbH.

[www.hspkoeln.de](http://www.hspkoeln.de)

Subject to change without prior notice.  
The information in this document contains  
general descriptions and technical options  
available, which may not apply in all cases.  
The required technical options should there  
fore be specified in the contract.