



# EXCELLENT POWER TRANSMISSION

## INDUCTIVE COMPONENTS FOR INDUSTRIAL APPLICATIONS

With decades of experience in designing the electromagnetic, thermal and mechanical properties of medium-frequency inductive components, STS is a competent partner for national and international customers in the world of industry. Our transformers and inductors are used for switching frequencies of 5 kHz and above, including in Si and SiC topologies. Here, reducing skin and proximity losses plays a key role in the component design process.

We use modern core and insulation materials to create inductors with a high power density. This makes it easier to mechanically integrate the transformers and inductors into the switch-mode power supply.

By precisely adjusting the inductance curve  $L(I)$ , the magnetic circuit can be made best use of. This enables, for example, high crest factors to be achieved without having to make the core material larger than necessary.

Thanks to our own modular core geometries and a wide range of winding materials, we can develop and manufacture transformers and inductors tailored to the requirements of our industrial customers in next to no time.

**150**QUALIFIED  
EMPLOYEES**15**% RESEARCH &  
DEVELOPMENT**1973**MEDIUM FREQUENCY –  
RIGHT FROM THE START**100**% MADE IN  
GERMANY



## HIGH-CURRENT-TRANSFORMERS

**Key Data:**  
P = 90 kW | F = 10 – 50 kHz

**Dimensions:**  
260 x 110 x 130 mm  
(L x W x H)

**Weight:**  
9.5 kg

**Specials:**  
Cooling systems for inductive components play a key role when designing an optimised custom-specific component. Efficient cooling systems range from water cooling solutions (direct or indirect) and contact cooling to forced air cooling or convection.

**Key Data:**  
P = 1.5 kW | F = 62.5 kHz

**Dimensions:**  
82 x 60 x 72 mm  
(L x W x H)

**Weight:**  
0.5 kg

**Specials:**  
Using air/solid insulation, the STS high-voltage transformer galvanically insulates a 400 V mains supply to 3.5 kV. Furthermore, the partial discharge free insulation system, supports a long lifetime.



## HIGH-VOLTAGE-TRANSFORMERS



## DC-INDUCTORS

**Key Data:**  
L = 350  $\mu$ H | I = 150 Adc |  
I Ripple = 60 App |  
F = 12–20 kHz

**Dimensions:**  
215 x 135 x 275 mm  
(L x W x H)

**Weight:**  
13 kg

**Specials:**  
Single-layer coil design (aluminium or copper) for resulting low winding capacity and good electromagnetic compatibility (EMI). Distributed air gap in magnetic circuit (ferrite) to reduce any additional copper losses.

**Key Data:**  
L = 500  $\mu$ H | I = 90 Adc |  
I Ripple = 35 App |  
F = 16 kHz

**Dimensions:**  
250 x 230 x 120 mm  
(L x W x H)

**Weight:**  
12 kg

**Specials:**  
Space-saving, real 3-phase MF inductor with high overload capacity (crest factor of 2.5) thanks to the ability to precisely adjust the L(I) inductance curve.



## SINE-WAVE-INDUCTORS



## AC-INDUCTORS

**Key Data:**  
L = 3 x 68  $\mu$ H | I = 640 Arms |  
380 App @ 9 kHz

**Dimensions:**  
350 x 230 x 250 mm  
(L x W x H)

**Weight:**  
70 kg

**Specials:**  
High power density inductor due to indirect watercooling in combination with a P.D. free insulation system up to 2.4 kV (Q < 50 pC). High crest factor due to optimized L(I) shape.

