

# The SynFlex Group

We make the world go around



# Resource of Power

## Moving more together



Do you realize that you quite probably encounter our products on a daily basis or at least benefit from them indirectly?

Our products are in large part behind the scenes, yet they make your daily life noticeably easier.





The SynFlex Group makes products for the inside, the so-called electrical insulation system (EIS), of state-of-the-art electrical motors, transformers and generators. We deliver the basis for the megatrends of the electrical industry - such as the production of renewable energies, intelligent and distributed electrical grids, as well as the major field of e-mobility.

The SynFlex Group facilitates the implementation of your products with customer-driven and intelligent system solutions.

Common Goal – Joint Progress:  
The Resource of Power.



# Three strong companies

This is who we are



SHWire sets worldwide standards through product and process innovations. The product portfolio includes round and flat wires, enamelled and braided, made of copper or aluminium. With a capacity exceeding 50,000 tons, state-of-the-art machinery, and an in-house developed quality control system SHWire operates the most modern and largest individual location in Europe.



The core competence of SynFlex lies in the development, manufacturing and distribution of conducting and insulating products for the electrical insulation systems of electrical motors, transformers and generators. Thanks to process and product innovations, SynFlex is a recognized quality leader, setting standards in the electrical industry.



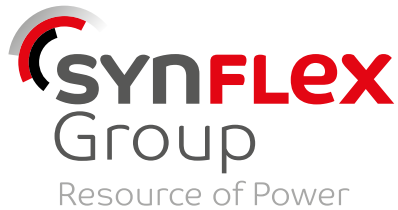
IsoTek is the specialist on all aspects of transformer engineering, with innovative development expertise in the field of electrical insulation. IsoTek's strength involves catering to special requirements with customer-driven solutions and defining and manufacturing precisely the right product for the application.





# Moving more together

## Synergy ex works



Harnessing synergies! Under the roof of the SynFlex Group, we bring the trusted brands SynFlex, SHWire and IsoTek closer together and can effectively harness synergies in systems

development and consulting, laboratory services and logistics.

In doing so, we attain the highest level of industry-specific system expertise, along with a holistic, long-term approach in terms of how we think and act, in addition to offering the reliability of a family-run business, for the widest array of market and customer needs.



### SynServ Advisory & Services

- Know-how providers and solution providers for all logistical challenges
- Fully-integrated IT systems landscape for digital requirements of our customers
- Individual customer consultation by qualified product management
- Product and process quality assured through defined standards and norms:  
IATF, ISO14001-2004, ISO9001:2008, ISO 50001-2011, OHSAS 18001:2007
- Risk minimization through professional copper trading



### SynLab® Laboratory services according to UL and IEC standards

- first testing laboratory in Europe for FTA, CCT for long and short-term tests according to UL 1446
- Laboratory services for internal, as well as individual customer chemical, thermic, mechanical and electric tests
- Production accompanied by quality controls and technical first-level support



### SynFlex International

- More than 650 employees in 13 locations in Europe, Asia and Turkey
- Consistent product quality and standards without barriers



 **SYNflex**  
Group

 **SYNflex**

 **ISOTEK**

 **SHWire**

# The quality market leader

With premium enameled copper and aluminum wires



## From cigars to enameled copper wire

Tradition and change are hallmarks of the company SHWire, Schwering & Hasse Elektrodraht GmbH. Founded in 1858 as a cigar manufacturer, the company took up parallel production of enameled copper wire at the end of the Second World War. For the 5th generation owner-managed family enterprise, change means letting go of traditional business segments such as the manufacturing of tobacco goods, when there are no more opportunities. Through the parallel buildup of two lines of business, however, the company was able to successfully shape this transformation process.

For this reason, manufacturing continues to be done exclusively at the production plant in Lügde, which has been repeatedly fortified throughout the years through acquisitions and integration of competitors, along with investments in the tens of millions. This also involves the topic of digitalization, which is being promoted in alignment with the reference structure of 'Industry 4.0'.

Over 50,000 tons of production capacity

50 Mio. produced kilometers per year

Largest and most modern single location in Europe

100% data traceability

Centralized production, monitoring and control system

Patented SHWire quality monitoring far above the industry standard

Comprehensive laboratory and development capacities

Partner in the top cluster Industry 4.0

## The complete SHWire range

### SHSold® Series

SHSold® V155  
SHSold® V180  
SHSold® V180 Glide

### SHTherm® Series

SHTherm® V180  
SHTherm® 200  
SHTherm® 210  
SHTherm® 210 Glide  
SHTherm® 210 TE  
SHTherm® 210 Alu  
SHTherm® 220  
SHTherm® 220 Glide  
SHTherm® 210 Flat  
SHTherm® 220 Flat  
SHTherm® 210 Flat Alu

### SHBond® Series

SHBond® WD 210  
SHBond® WD 210 Glide  
SHBond® WD 210 Alu

### SHBare® Series

SHBare®  
SHBare® Flat

### SynFlex Group

SynLab®  
Laboratory Services & UL Services acc. to 1446  
  
SynServ  
Consulting & Services  
  
SynFlex International  
SynFlex Scandinavia  
SynFlex Austria  
SynFlex Poland  
SynFlex Italy  
SynFlex France  
SynFlex Turkey  
SynFlex China





# The system provider

## With integrated products and services



### Innovative system provider with an international presence

In order to provide customers a full range of complementary products for manufacturing electrical motors, transformers and generators, SynFlex Elektro GmbH was established in 1963. Originally strictly a trader of enameled copper wires, SynFlex evolved into a producer and fabricator of various electrical insulation materials. In addition to high product availability, SynFlex excels in customer care, thanks to its distribution strength, flanked by experienced product management.

As the first laboratory in Europe for short and long-term tests, SynFlex provides efficient and effective testing and certification of electrical insulation systems according to the Third Party Test Data Program by UL.

The objective is to supply the customer a perfect total package of products and services.

**50,000 standard and customer-specific products**

**Automated and digitised logistic processes world wide**

**High-profile national and international presence through a comprehensive sales network**

**Production and logistics locations in Europe, Asia and Turkey**

**First test lab in Europe for the EIS with tests according to UL 1446**

**Proprietary UL systems of classes 130, 155, 180 °C**

### The complete SynFlex range

#### SynFlex Winding

**SHWire**  
Premium Winding Wires

**SynWire**  
Winding Wires

**SynWire WW**  
Litz & Special Wires

**SynShield®**  
Copper- & Aluminium Foils

#### SynFlex Insulate

**SynTherm®**  
Insulating Materials

**SynTape®**  
Electrical Adhesive Tapes

**SynSleeve**  
Electrical Insulating Sleeving

**SynChem**  
Resins & Varnishes

**SynPrep**  
Stamped & Shaped Components

**SynWrap**  
Wrapping Tapes

#### SynFlex Connect & Equip

**SynCon®**  
Connecting Cables & Transformer Terminals

**SynTemp®**  
Temperature Monitoring

**SynProf**  
FRP Profiles

**SynParts**  
Special Components & Accessories

#### SynFlex Group

**SynLab®**  
Laboratory Services & UL Services acc. to 1446

**SynServ**  
Consulting & Services

**SynFlex International**  
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SynFlex Turkey  
SynFlex China





# The flexible specialist

For complete solutions in the construction of transformers



## More than just products – solutions

With more than 25 years of experience, IsoTek produces individual complete solutions for electrical insulation in the construction of transformers.

An absolute strength of the company is to identify, assess and individually solve customer problems. In doing so, the company excels in its high flexibility and speed of handling. Examples for this include the barrier-free core cooling insulation, the purely mechanically wound clackband, which enables adhesive-free and thus lower-risk transformer construction, right down to customer-specific transformer kits.

For all these products, there is a focus on achieving high application reliability and high-quality specifications. The latter is guaranteed through comprehensive quality control and quality measures.

**More than 25 years of practical experience**

**Sophisticated complete solutions delivered directly to the manufacturing line**

**Ready-to-use KITs for the construction of transformers**

**Precise solutions such as the clackband or high-voltage-resistant shaped parts**

**Insulating materials for electrical and thermotechnology**

**Modern technologies for efficient manufacturing**

**Well-rehearsed process routines for perfect results**

## The complete IsoTek range

### IsoTherm Program

Foils  
PFP  
VPV  
DMD  
TFT  
NPN  
NKN  
SynTherm® APA  
SynTherm® AHA  
SynTherm® YT

### IsoBoard Program

Pressboard  
Aramid Board  
CeQuin Board  
Laminated Wood  
Glass fibre reinforced laminate  
Epoxy Resin Sheets  
Polyester Resin Sheets

### IsoCool Program

Pill Carpet  
GFK Profile Mats  
PSP Profile Mats  
Clack Band glued  
Clack Band joined

### IsoComp Program

Cylinder  
Strips  
Spacers  
Moulded Parts  
Crepe Paper Tubes  
Crepe Paper Tubes, MA  
CNC Milled Parts  
Slot Closure  
Slot Liner  
3D Stamped Parts  
Stamped Parts

### IsoKit Program

Customized Ready-to-use Solutions

### SynFlex Group

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# Our culture and values

## Always a team

### Our values determine our actions.

Our common company values have been formulated in cooperation with all our employees, values we live by and put into practice daily. A healthy capital structure, qualified employees, a customer-driven company policy and manufacturing plants according to the state-of-the-art, all contribute towards safeguarding our future. The company

policy is consistently geared towards further developing all customer- and market-relevant parameters and, wherever possible, anticipating future requirements. This occurs through a continuous process of constant optimization of our delivery capability in all functional areas of the company.

### Independent

We are a forward-thinking and dependable family-owned company, which places the highest value in its independence.

### Trustworthy

We approach our employees, business partners and the public at large with honesty and a sense of responsibility.

### Innovative

We strive for more. We work single-mindedly, continuously and tenaciously on the improvement of our processes and products.

### Long-term

We develop and produce the best quality products as the most innovative company in the electrical industry.





# Our corporate responsibility

## Dedicated to the region

### Citizens lending a helping hand

The aim of the foundation is to make a financial, personal and non-material contribution towards facilitating the quality of life in the community.

The Schwering & Hasse Foundation takes on an active role on behalf of Lügde and Pyrmondt residents in the tradition of the founding family, as an expression of solidarity for the company's 160-year existence at its location in Lügde and Bad Pyrmondt.



Based on our diverse activities: soccer team for young people, preparation of young people for their future careers, support of volunteer fire departments for youngsters









# Always nearby

## Operating globally, acting locally

The network of the SynFlex Group guarantees you consistent quality of the service and products, goods availability and professional advisory. We have production and logistics capacities at every location in Europe, Asia and Turkey. Thanks to our extensive sales network, we are also active in countries where we do not have a location, and we can provide individual advice there.

### **SynFlex Scandinavia**

With our location in Copenhagen, we deliver to all of Scandinavia and parts of the Baltic countries.

### **SynFlex France**

With our location in Paris, we supply France, the southern countries of Spain and Portugal, as well as North Africa.

### **SynFlex Italy**

With our location in Bologna, we deliver to customers in Italy and to neighboring countries in the Eastern Mediterranean region.

### **SynFlex Austria**

Our location in Vienna covers not only the Austrian market but also the entire Southern and Eastern European region from the Czech Republic and Bulgaria to the Ukraine.

### **SynFlex Poland**

With our location in Warsaw, we deliver to customers in Poland, the southern Baltic countries, all the way to Belarus.

### **SynFlex Turkey**

With our location in Istanbul, we supply customers in Turkey. At the same time, this location serves as a gateway to the Caucasus and the Middle East.

### **SynFlex China**

With our location in Shanghai, we serve the vast Chinese market, along with all neighboring countries in Central, South and Eastern Asia.







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The Resource of Power.



#### Insulation Systems



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Elektro GmbH

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[www.synflex.com](http://www.synflex.com)

#### Magnet Wires



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[www.sh-wire.de](http://www.sh-wire.de)

#### Electric Insulation



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