# Details of the Companies available for the Excursion

### 1. Terrot GmbH:

- o **Industry**: Textile Machinery
- Description: Terrot is a leading manufacturer of circular knitting machines used in the textile industry worldwide. Their machines are utilized for producing fine knit fabrics for fashion, home textiles, and technical textiles.
- Location: Chemnitz, Germany

www.terrot.de

### 2. Starrag Group:

- o **Industry**: Mechanical Engineering
- Description: Starrag is a global technology leader in high-precision machine tools for CNC milling, turning, drilling, and grinding. They provide solutions for various industries such as aerospace, energy, transportation, and more.
- Location: Chemnitz, Germany

www.starrag.com

### 3. Volkswagen Group Services GmbH:

- o **Industry**: Automotive and Services
- Description: Volkswagen Group Services offers a wide range of services along the automotive value chain, including technical services, logistics, and commercial services. They support the Volkswagen Group in implementing innovation and efficiency strategies.
- Location: Wolfsburg, Germany

www.volkswagen-groupservices.com

### 4. Niles-Simmons Industrieanlagen GmbH:

- Industry: Machine Tools and Precision Technologies
- Description: Niles-Simmons specializes in customized machine tools and highprecision technologies. They provide tailored solutions for complex machining tasks, ensuring high reliability, precision, and quality. Their modular machine designs offer maximum flexibility to meet various customer-specific requirements.
- **Location:** Chemnitz, Germany

### **Terrot GmbH**



new textile horizons.

EVER WONDERED HOW A JERSEY THAT MAKES HISTORY ON THE FOOTBALL FIELD IS CREATED? For instance, Cristiano Ronaldo's jersey at the 2016 European Championship was knitted on a Terrot machine. Pretty cool, right?

We are Terrot – a company with over 160 years of experience in the textile industry. But outdated? Not at all. In Chemnitz, around 130 people work on incredibly smart circular knitting machines that are used worldwide. Our technology is found in everything from fashion and sportswear to underwear and swimwear, home textiles, automotive fabrics, and technical textiles.

Terrot machines are used in over 120 countries, whether for major labels or innovative newcomers. With more than 50 international representatives, we ensure everything runs smoothly.

WHAT SETS US APART? A passion for technology, a drive for innovation, and a strong team spirit. Joining us means engaging in exciting projects, working with modern technologies, and having real opportunities for growth - here, it's not just yarn that's moving, but also career.

DISCOVER TERROT - THE TECHNOLOGY BEHIND YOUR FAVORITE STYLES:

ONE OF THE TOP 3 WORLDWIDE: We are among the top three manufacturers of electronically and mechanically controlled circular knitting machines - that's high-tech "Made in Germany".



#### 250 MACHINES PER YEAR - AND MORE:

We not only deliver machines but also provide service, technical support, and customized solutions for the textile industry of tomorrow.

#### GLOBALLY IN DEMAND - LOCALLY ROOTED:

Whether in Turkey, India, or South America - our circular knitting machines are used worldwide. Our international customers rely on German quality and sustainable durability.

INNOVATION IS IN OUR DNA: Whether it's product development, digitalization, or smart applications - at Terrot, everything revolves around progress. Research and development are not extras for us, but standards.

A LOCATION WITH A FUTURE: Our headquarters in Chemnitz (Saxony) is not only our home but also a true hotspot for high-tech, industry, and creative minds.

ON A SUCCESSFUL PATH SINCE 1862: What started as a pioneer in mechanical engineering is now a global player. With over 160 years of experience, Terrot is one of the most traditional companies in the textile machinery industry and still remains at the cutting edge.

PART OF SANTONI FAMILY: Since 2023, we have been part of the international Santoni ecosystem - which means concentrated innovative power, knowledge exchange, and state-of-theart technology under one roof.

### **Starrag Group**

StarragTornos is a global technology leader in manufacturing high-precision machine tools for milling, turning, boring and grinding workpieces of metallic, composite and ceramic materials with appr. 2.000 employees at several locations in Europe, Asia and the USA.



The corporate group is headquartered in Rorschach, Switzerland and operates manufacturing plants in Switzerland, Germany, France and the UK, as well as sales and service companies in several other important customer countries.

Our customers include the leading companies in the Aerospace, Energy, Transportation and Industrial industries. Customers are e.g. Airbus, Boeing, Bosch, Fendt, Skoda and Rolls-Royce.

Around 400 employees work in our plant in Chemnitz. We currently have 25 trainees participating at apprenticeship programs. In summer, 10 new apprentices will join us for starting their apprenticeship.

We train these professions: industrial mechanics, cutting machine operators, mechatronics, industrial clerks and warehouse logistics specialists.

The training lasts 3 or 3,5 years and takes place on three difference learning sites: at school, at our external training center and at our company.

During your visit, you will take a tour of our assembly halls and learn interesting facts about the history of Starrag. Furthermore, you will get to know some technical facts about our fascinating machine centers.

You are more than welcome to ask all the questions related to our company.

Furthermore, you can find us on Instagram: https://www.instagram.com/starraggroup/





VOLKSWAGEN GROUP TECHNOLOGY

Group Components
Welcome to the Volkswagen engine
plant Chemnitz

Engine plant Chemnitz

Work area **213.000 m<sup>2</sup>** 

ca. 720.000
Engines

Capacity
3.600 - 4.000 Motors/days

ca. 1.850

Employees incl. trainees

# Our products



### Components

# **Engines**









cylinder head cylinder crankcase crankshaft

connecting rod









1.0l R3 EVO2

1.5l R4 EVO2

EU7

WIR GESTALTEN ZUKUNFT!

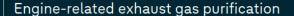
raceway coating

tubes

valve train module

# Our latest product

The new EA 211 1,01/1,5 TSI EVO2 engine



Consists of a catalytic converter and a gasoline particulate filter directly on the engine, which filters more fine dust from the exhaust gases, just like a diesel engine.

#### Miller firing process

Optimized valve timing that lowers the exhaust gas temperature and reduces the tendency to knock.

VTG-ATL (exhaust gas turbocharger with variable turbine geometry)

Previously used in gasoline engines in high-performance sports, 100% of the exhaust gas flow is always routed through the turbine and not partially bypassed as before.

Use of APS (atmospheric plasma spraying)

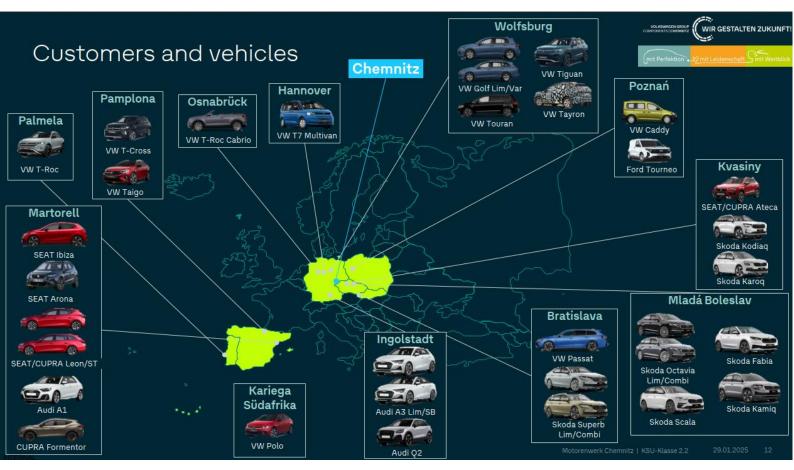
The cylinder liner of the ZKG is coated and not lined with a heavier gray cast iron bushing.



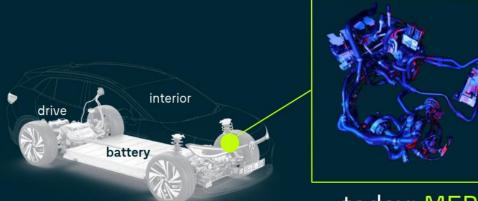
These innovations result in optimisation to the currently strictest emission standard

Euro 6d-ISC-FCM





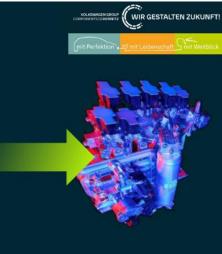
# Our SSP future: thermal management



today: MEB

Optimized thermal management is essential for BEV:

- 1. Efficient air conditioning of the interior
- 2. Temperature control of components (drive, PWR...)
- 3. Temperature control of the battery for fast charging and range requirements



tomorrow: SSP

lighter more robust more efficiently

# NILES-SIMMONS BRAND OF THE NSH GROUP

## FROM RAW STEEL TO GLOBAL IMPACT



## Where Tradition Meets Technology

Founded in 1833, NILES-SIMMONS has a long history of precision engineering — with roots in the United States and a strong base in Chemnitz, Germany. Today, we are part of the NSH Group, an international alliance of technology companies operating under the name NILES-SIMMONS-HEGENSCHEIDT GmbH. With nearly 400 employees in Chemnitz and more than 1,400 across the NSH Group worldwide, we develop state-of-the-art manufacturing solutions that shape industries and drive innovation.





# We Keep the World Moving

Our machines make movement possible – literally. Whether in trains, planes, trucks, subways or wind turbines: more than one billion people move every day thanks to parts produced on our systems. We supply precision manufacturing technology to leading sectors such as aerospace, automotive, the railway industry, general engineering, and tool and die manufacturing.

# Precision Engineering for Big Challenges

From raw metal to high-precision components – our machines shape, drill, mill and measure with maximum accuracy. Whether it's a turbine shaft, a train axle, or a gearbox part: our CNC systems create the critical components that keep the world turning. Highly automated. Digitally controlled. Globally trusted.

