



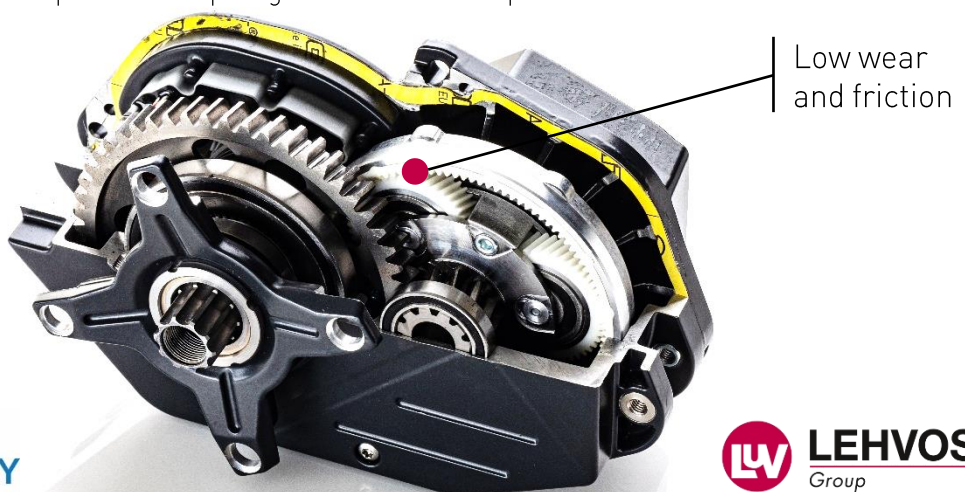
## Perfect fit: High performance tribological compound for high power e-bike motor

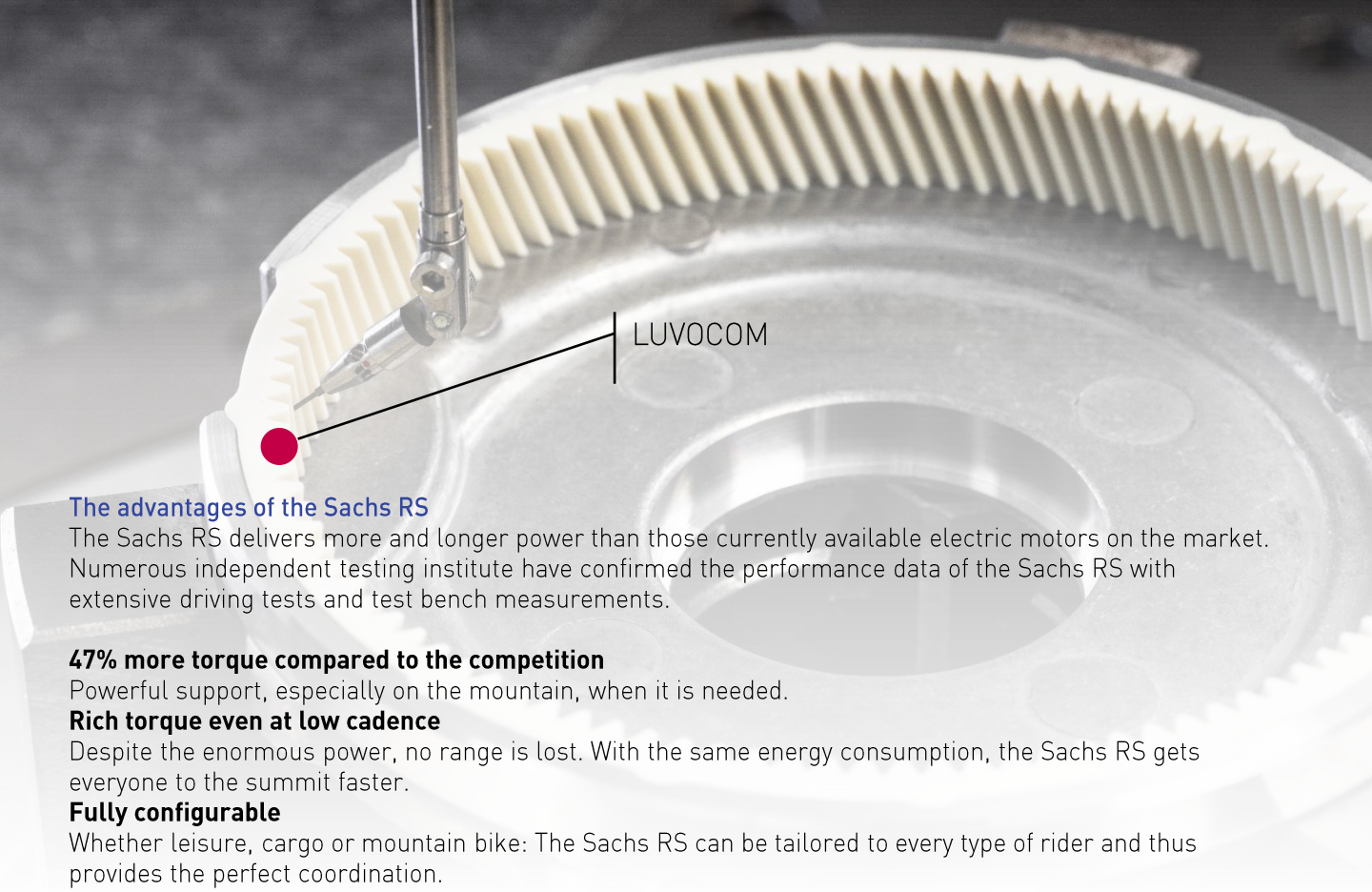
ZF Micro Mobility is a leading manufacturer of electric drive systems for bicycles. Only high-performance materials can be used for the transmission of the very powerful Sachs RS engine. This is used in the middle drive, serves as the main drive and delivers a peak torque of 112Nm. Significant forces and moments act in the load path of the transmission. These must be accommodated by the interlocking gears. In this specific case, a suitable material was sought for the sun gear of the planetary gear.

The requirement profile:

- Favorable intervention conditions
- Lowest possible wear
- Low weight
- Lowest possible manufacturing costs
- Low carbon footprint

The choice fell on a material from the LUVOCOM® product line. This is based on PA66, reinforced with glass fibers and tribologically modified. The material, in combination with the expertise of those involved in the project including the part manufacturer (Podkrižnik) and Biesterfeld Interowa, was able to prevail in this application against metals and other plastics due to its unique range of performance. It was able to score points compared to competing materials in all requirements.





LUVOCOM

### The advantages of the Sachs RS

The Sachs RS delivers more and longer power than those currently available electric motors on the market. Numerous independent testing institute have confirmed the performance data of the Sachs RS with extensive driving tests and test bench measurements.

#### **47% more torque compared to the competition**

Powerful support, especially on the mountain, when it is needed.

#### **Rich torque even at low cadence**

Despite the enormous power, no range is lost. With the same energy consumption, the Sachs RS gets everyone to the summit faster.

#### **Fully configurable**

Whether leisure, cargo or mountain bike: The Sachs RS can be tailored to every type of rider and thus provides the perfect coordination.

#### **Power with endurance**

In driving tests, the Sachs RS achieved extremely high ranges. More kilometers and more meters in altitude mean more fun on sporty tours or more safety in the city.

### About ZF Micro Mobility

Since 2018, the SACHS brand with the addition of Micro Mobility has been back in the bike industry, with a clear focus on e-mobility. ZF MICRO MOBILITY GMBH is a drive system manufacturer and serves OEMs in the bike industry. With innovative products and systems, we offer comprehensive solutions and continue the successful mobility history, which was started in 1895 by Karl Fichtel and Ernst Sachs.

Logical continuation of this success story is now in the hands of ZF Micro Mobility. ZF Group as our 100% shareholder allows us to draw on decades of expertise in the areas of mobility, engineering, supply chain and service. ZF Micro Mobility is characterized by high innovative power, agility, access to global automotive production competencies as well as service know-how.

### About LEHVOSS

The LEHVOSS Group develops, produces and sells special chemical and mineral products worldwide. Founded in 1894 as a trading house in Hamburg, the LEHVOSS Group has built up an international reputation in its 130-year success story and operates production sites in Europe, the USA and Asia.

From the initial idea to the finished product, the Customized Polymer Materials business unit has been setting outstanding records in the industry since 1983. The specialty of the agile unit is the development of specialized materials that show performances well above the usual market standards. The interdisciplinary development team uses a wide range of polymers, reinforcing materials and additives, the latest laboratory and application technology and a huge pool of experience, intuition and passion for the perfect solution.

#### **Europe & Head Office**

Lehmann&Voss&Co. KG  
Alsterufer 19  
20354 Hamburg | Germany  
Phone: +49 40 44 197 250  
Email: info@lehvoss.de

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

#### **North America**

LEHVOSS North America, LCC  
185 South Broad Street  
Pawcatuck, CT 06379 | USA  
Phone: +1 855 681 3226  
Email: info@lehvoss.de

Follow us on:



#### **Asia**

LEHVOSS (Shanghai) Chemical Co., Ltd  
Unit 4805 Maxdo Centre  
8 Xingyi Road, Changning District  
Shanghai 200336 | China  
Phone: +86 21 6278 5186  
Email: info@lehvoss.cn



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Group