SCHARPEGGE

Quality – tooth by tooth.

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Hello and welcome!

Hans Scharpegge GmbH has been manufacturing **gearwheels, gear rims, pinions and pinion shafts** for a variety of application areas since 1961. We supply top-quality products to customers all over the world.

Meanwhile the third generation of family members is now carrying on the continuous process of development which began with the foundation of the company. We pursue a corporate strategy which attaches particular importance to high quality, flexibility and the requirements of our customers. Our first priority is not only the product, but a perfect and reliable overall solution. For this reason, our range of services includes comprehensive advice from the very beginning.

To give you an impression of our company, we have compiled all important and relevant information for you here.

We would welcome the opportunity to submit an offer to meet your specific requirements. For further questions or exchange of ideas please do not hesitate to contact us at any time.

We hope you enjoy studying our information

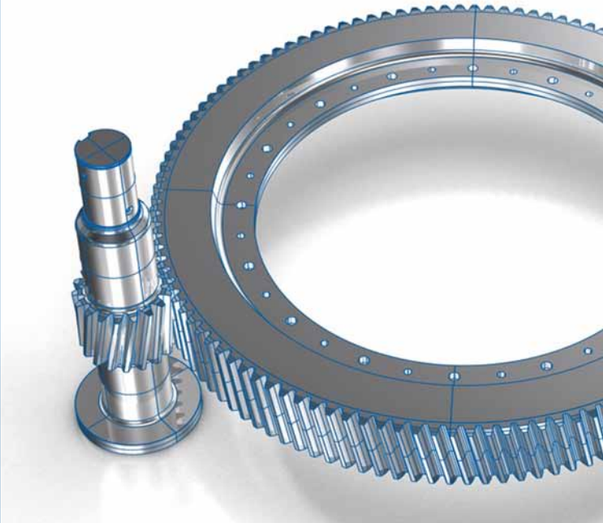
Katharina Scharpegge
Managing Director

Dagmar Scharpegge
Managing Director

Scharpegge manufactures products for numerous industries, these include

Marine propulsion
Large diesel engines
Industrial machines
Offshore technology
Wind power plants
High pressure pumps
Construction machines
Forging machines and presses
Rolling mill equipment
Sugar industries
Machine tools
Equipment for iron and steel works
Packing machines

for customers all over the world.



Gear wheels and gear rims

In addition to precision manufacturing to your specifications and data, we are at your disposal at any time to support you with our experience and knowledge and to assist you with product design.
We produce gear wheels and gear rims for you with the following parameters:

- **Tooth flank grinding** external diameter Ø 100 mm to Ø 2.700 mm / max. tooth height 1.000 mm according to DIN 3960 from module 2 to module 36 and according to DIN 5480 from module 2.5 to module 10
- **Tooth milling** external diameter Ø 100 mm to Ø 4.000 mm / max. tooth height 1.000 mm
- **Turning** up to an external diameter of Ø 2.200 mm / max. turning height 1.500 mm
- **Drilling** up to a hole circle of Ø 4.000 mm / max. unit weight 15 t
- **Internal cylindrical grinding** up to an external diameter of Ø 2.030 mm / max. grinding depth 1.000 mm

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Pinions and pinion shafts

Highest product quality is a key component of our company philosophy. Our products meet the specified requirements and conform to the highest standards. Supporting certification can be supplied at any time.
We offer you the following pinions and pinion shafts:

- **Tooth flank grinding** external diameter Ø 80 mm to Ø 1.000 mm / max. tooth length 1.000 mm and max. overall length 3.500 mm / according to DIN 3960 from module 2 to module 36 and according to DIN 5480 from module 2.5 to module 10
- **Tooth milling** external diameter Ø 80 mm to Ø 1.500 mm / max. tooth length 1.000 mm and max. overall length 3.500 mm
- **Turning** max. external diameter Ø 850 mm / max. overall length 4.000 mm
- **Drilling** max. drilling depth 1.000 mm
- **External cylindrical grinding** max. external diameter Ø 720 mm and max. overall length 2.700 mm / max. unit weight 5 t

Special modules and special gear tooth systems

Special modules and special gear tooth systems require the appropriate technology and know-how – we provide both to meet your requirements.

We have invested in a seven-axis processing centre with a single-tooth production capability, which enables us to produce any module and any pressure angle to customer specification. It is also able to manufacture special tooth systems, such as double helical gears without gaps.

If you require any special modules or tooth systems, contact us. We will be pleased to meet your specific requirements.

Step by step to the finished product

To ensure that we can provide you with a high level of quality and flexibility, the majority of our manufacturing steps are performed in-house.

We offer the following manufacturing steps as a complete production process or we can be contracted to perform them as individual operations:

- Tooth milling
- Tooth flank grinding
- Turning operations
- External and internal cylindrical grinding
- Drilling work

To perform the appropriate

- Heat treatment
- Surface treatment

of gear parts, we have partner companies who have been working with us for many years. The result of this cooperation is not left to chance. It is precisely defined, perfectly coordinated and firmly established on the basis of the large number of parts already processed.

Technical advice and calculation

Perfect planning for perfect solutions

We always regard our products as part of a complete solution. It only becomes a perfect solution, however, if every detail is taken into account during planning.

For this reason, we offer you our support long before the production stage – with all our knowledge, state-of-the-art technology and years of experience.

We will be happy to cooperate with you in developing the best solution for your drive unit and will also support you in the technical calculation and design of gear components.

System units

A complete solution from one source

The most reliable option for your project: We will develop a complete solution for you as a system unit.

We will procure and produce flanges, bolts, screws and hubs for you. We will also screw together, partially assemble, mount or shrink-fit these parts on request.

We offer you reliability in meeting delivery dates and a high degree of flexibility, while also meeting our high quality standards.

Dimensioning and reconstruction of individual items

No plan? No problem!

Even without technical drawings or plans, we can reconstruct existing products.

Using state-of-the-art measurement technology, we require no more than a sample of the original workpiece.
We will do the rest.

In the process, of course, we also improve the product in the interests of high quality and efficient production.

Tested and approved

For us, top-quality products are not an empty promise, but are definite and reproducible.
We produce from quality class 4 upwards according to DIN 3961/63 and use the following test methods:

Measurement of tooth geometry
Tooth geometry is measured on a CNC gear measuring machine from Höfler. This machine enables us to measure both internal and external toothing to a max. external diameter of Ø 2,600 mm. Larger parts can be measured directly on the tooth flank grinding machines.

Measurement of form and positional tolerances
Form and positional tolerances as well as the cylinders and drill holes of the workpieces are measured by means of a measuring arm, which ensures very high reliability and measurement accuracy.

Ultrasonic, surface, crack and grind burn inspection
The ultrasonic inspection is performed in-house by qualified inspectors using a USLT 2000 flaw detector. Our inspectors are qualified to ASTM test level 2.
The surface hardness test is carried out with the aid of a Wolpert Dyna Tester and a Krautkrämer MIC 10 hardness tester.
While the workpieces are undergoing a crack inspection in the form of a magnetic particle inspection, the grind burn inspection is carried out using a Rollscan 200 Barkhausen tester.

Analysis of mechanical properties
For the analysis of mechanical properties (tensile strength, yield strength, elongation, notch impact energy), we work with an independent test laboratory.

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