

# Driving the motor market

## Company Profile

SycoTec produces complex, fine mechanical components in small and medium-sized series, offering utmost precision and highest quality.

The company has been supplying sophisticated products, drives and components for almost 50 years.

## Further Information

Website: [www.sycotec.eu](http://www.sycotec.eu)

The medical and dental markets require precise operation for complex procedures. An accurate and wide-ranging drive system is just one product that can improve performance.

**T**he motors market is shrinking – literally. As demand for miniaturisation of components and products expands, device manufacturers must ensure they keep up with the market. Decreasing the size of drive systems while enhancing performance and increasing lifespan are critical factors in keeping abreast of overall developments in this area.

With its head office in Leutkirch im Allgäu, Germany, SycoTec GmbH & CO KG is an OEM with expertise in development, production, assembly and final inspections. It does not market its own brands. Following a company reorganisation, SycoTec now has three business areas: drive systems, the dental/medical market and components.

The company currently employs 370 staff, manufacturing quality products for machine tools, precision engineering, optics, medical and dental devices. Core fields of expertise include drive solutions for special applications such as blood pump motors, surgical motors and special motors for veterinary and dental practice.

### Speed and power

Achievements include the development of a new, compact and powerful SycoDrill brushless DC micro motor for endodontics and preparation, which has already been successfully marketed in the US as an OEM product. The micro motor portfolio boasts a wide rotation range of 100–40,000rpm and torque of up to 7Ncm. It can be sterilised at temperatures of up to 135°C in a steam autoclave and has an above-average lifespan.

These are just some of its outstanding features.

A wide range of experience gained in SycoTec's business area, 'high-speed motors for industrial applications = drive system' has been used in the development and manufacture of the SycoDrill motor, in terms of bearing design and precision balancing.

The results have already impressed many surgical experts with low noise levels and smooth mechanical performance even at full torque, minimal operating temperatures and minimal weight. At the same time, the product offers high precision, guaranteed fatigue-free operation and ergonomic handling.

### Dental and drives

Another important field for SycoTec is the maintenance of dental handpieces, contra-angle pieces and turbines, using cleaning and lubricating equipment.

Up to three handpieces, contra-angle pieces and turbines can be cleaned at once. The number of instruments being used is automatically detected by the



The SycoDrill is quiet and precise in all surgical environments.

device and the programme can be started with the push of a button.

It takes approximately 45 seconds to clean and oil the instruments, which can then be sterilised. An OEM product is already available for this purpose. SycoTec also produces SycoLab – a hand milling set for the dental industry with a powerful, fanless drive and a knee or table control unit. This has an operating rotation speed of up to 50,000rpm, 7Ncm, a frequency of 833Hz and power output of 150W.

The dental range is completed by dental extraction systems such as the SycoVac mono single-user extraction system or the SycoVac multi multiple-user extraction system with a fine dust extraction rate of 99.995% (<2µm).

The drive systems division offers motor spindles, micro-motors and control units and inverters for high-speed industrial applications. Offering custom-made solutions for small and medium-sized series, with high flexibility, quality and precision, SycoTec prides itself on reliable customer service. ●