

## **Intelligent VICE DRIVE with sensorless torque evaluation**



**for engineering, special machine construction**

### **Technology field**

MCR technology

### **Anforderungen an das Projekt**

The **project objective** was to develop an intelligent electric vice drive consisting of a motor and a display unit each to enable more ergonomic working at machine tools.

The display unit allows easy configuration and visualizes the clamping force and the force gradients of the clamping process. The motor unit determines the applied clamping force with high precision and without sensors. Torque up to 40 Nm, controls a BLDC motor, monitors operating conditions and communicates with the display unit.

### **Facts/Highlights**

- Compact, maintenance-free BLDC drive with integrated control
- Protection against over current and over temperature
- Precise, Hall-based position sensor directly on the motor control
- Parameter transfer, control commands and software update via digital interface

### **Services of KNESTEL**

Potential analysis, target price estimation, project management, specifications, project planning, development of software and hardware, electrical and mechanical design, EMC test, prototyping, series production

### **Possible Applications**

- Convenient assembly aids
- Exact torques required

**About KNESTEL:** Knestel has been developing and producing customized electronic and mechatronic special solutions in the fields of motor and machine control, frequency converters, image processing, MCR technology, software development, radio, bus systems and gas analysis for 40 years. We support our customers from the idea to the finished implementation. Individual solutions and concepts - technically up to date. Our production - electronics manufacturing, device and switch cabinet construction, Production of subassemblies, assembly and mechanical processing - is equipped with the latest technology.