

IBS Engineering Firm Sorowka



Company

- 1992 founded Engineering Firm
- 3–5 Employees
- Place of Business Berlin
- Turnover 2009: 600.000 EUR

Profile

- Gearbox Shifting Robots with various Mechanical Interfaces
 - Gearshift Knob
 - Central Shifting Shaft
 - Seperate Shifting and Gearing Shaft
- Test Bench Controllers
 - Endurance Test and Quality Measuring
 - EOL Test Benches for Double Clutch Transmissions
 - Direct Control of Gearbox Valves / Interface to Gearbox Control Unit
 - Testing of Gearbox Sensors (Temperature, Pressure, Neutral Position)
- Mobile Test Benchs for Double Clutch Transmissions
- Haptic and Component Testing with Force Controlled Industrial Robots (KUKA)

Services

- Conception of Test Strategies and Implementation
- Mechanical and Electric Design
- Conception/Realization of high-end Real-time Test Bench Control Systems
- Software Development and System Integration
- Setting-up Operation and long-term Maintenance

Technologies

- Servo Drives with SERCOS-Interface (BoschRexroth) or Profibus (Siemens)
- Siemens Industrial-PCs
- Force Instrumentation (HBM)
- Realtime Operating System VxWorks, RTAI, Xenomai (Cyclic Tasks with min. 100us Cycle Time)
- Graphical User Interfaces with Application Framework Qt for Windows/Linux, Matlab

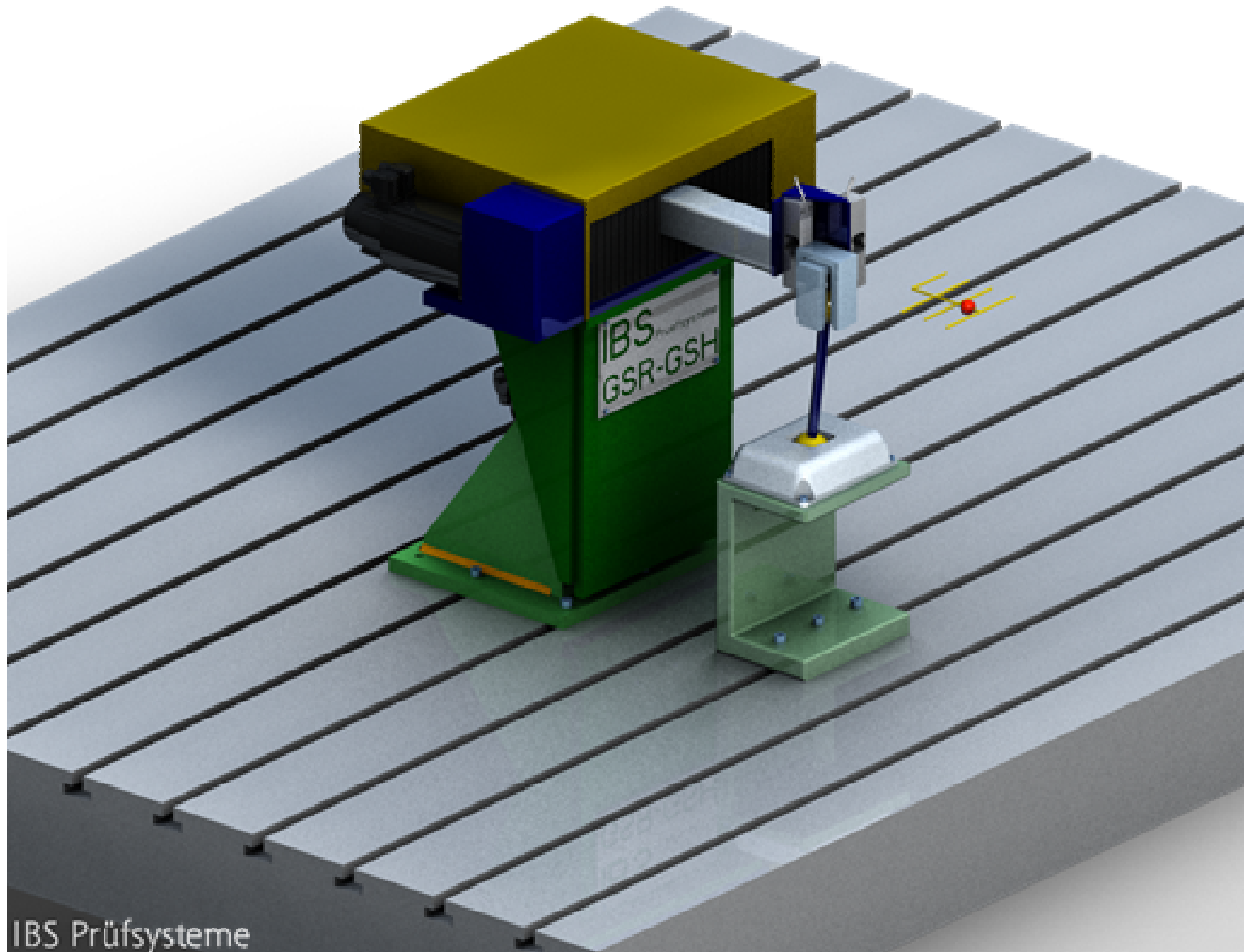
References

- ZF Getriebe Werk Brandenburg
- IPK Fraunhofer Institut für Produktionsanlagen und Konstruktionstechnik Berlin
- INPRO Innovationsgesellschaft für fortgeschrittene Produktionssysteme in der Fahrzeugindustrie mbH Berlin
- Promess Gesellschaft für Montage- und Prüfsysteme mbH Berlin

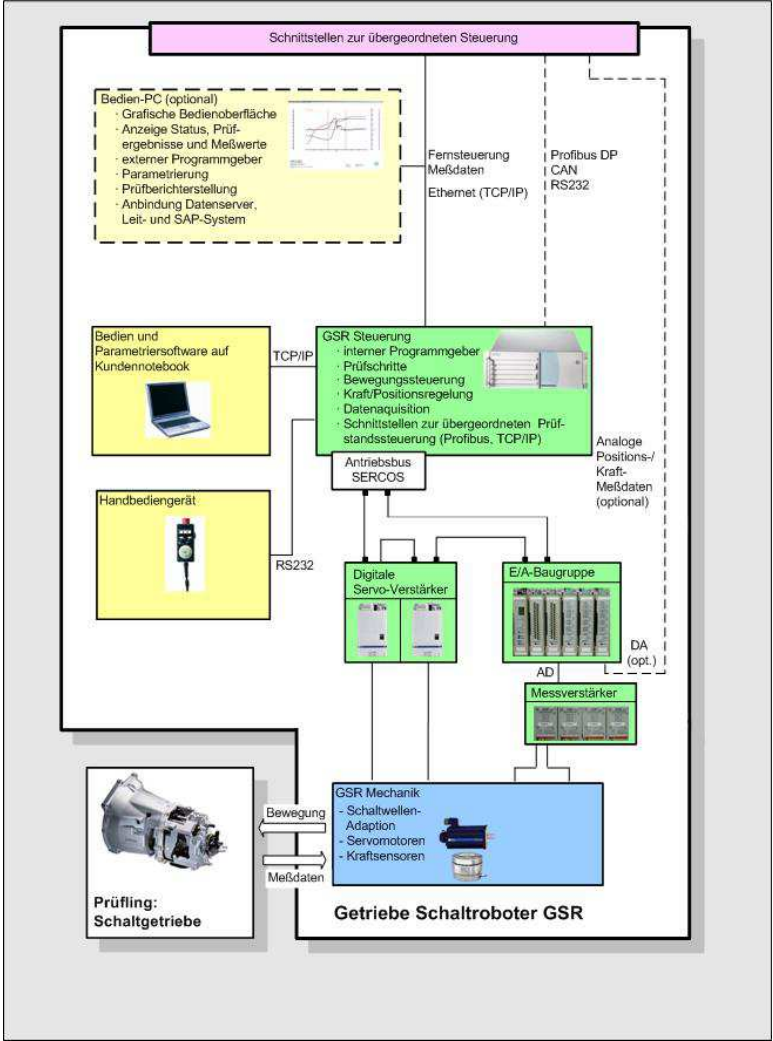
Gearbox Shifting Robot GSR-GSH

- Easy Operation
 - Automatic or Manual Adaption at Gearshift Knob
 - Manual Teach-In or fully automated Teaching of Gear Positions
 - Comfortable Parametrization of Shifting Force, Velocity and further Parameters
 - Interfaces to Superior Control System (RS232, Profibus DP, TCP/IP)
- Mechanics
 - Compact Design with Small Constructed Space
 - High Dynamics by Stationary Servomotors
 - High Positioning Quality by Stiff and Robust Construction
- High Protection of Investment by Use of Standard Components

Gearbox Shifting Robot GSR-GSH



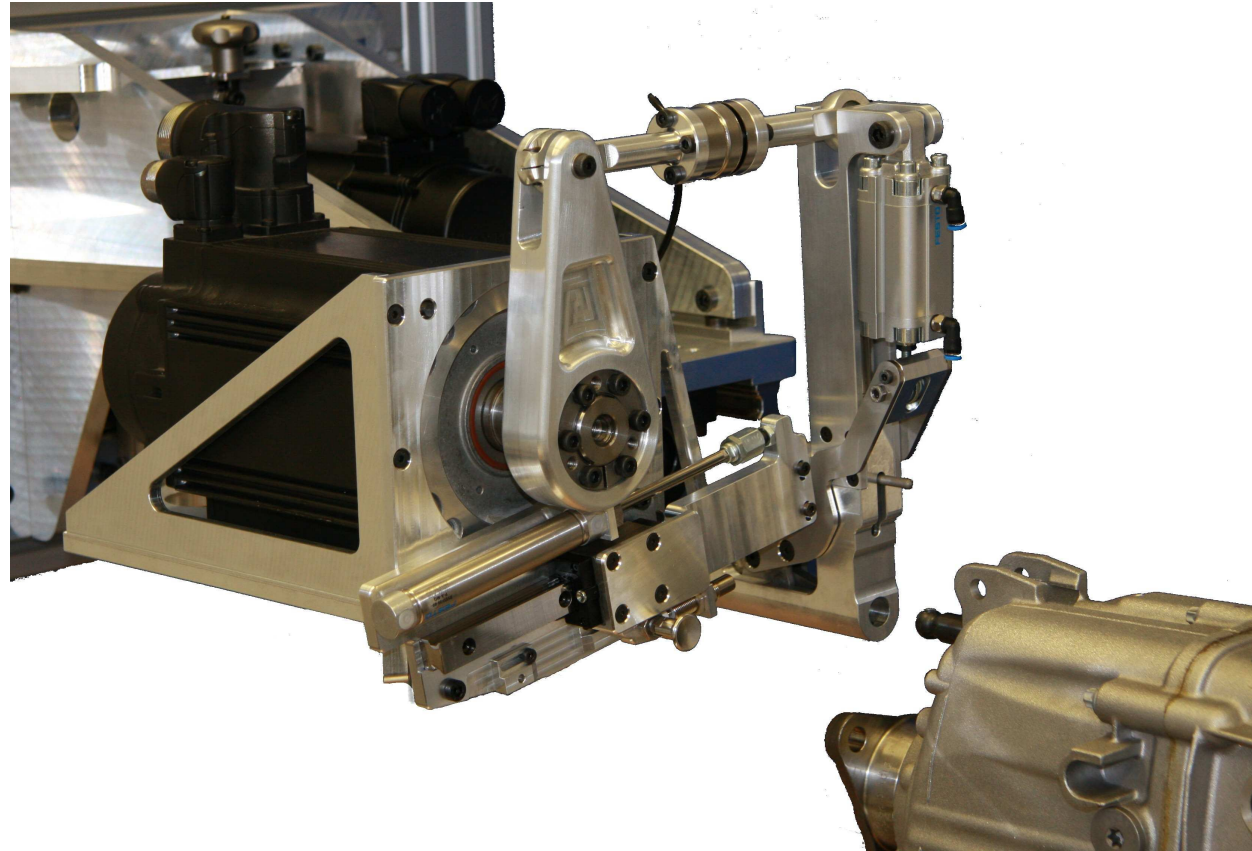
System Overview



Control Cabinet



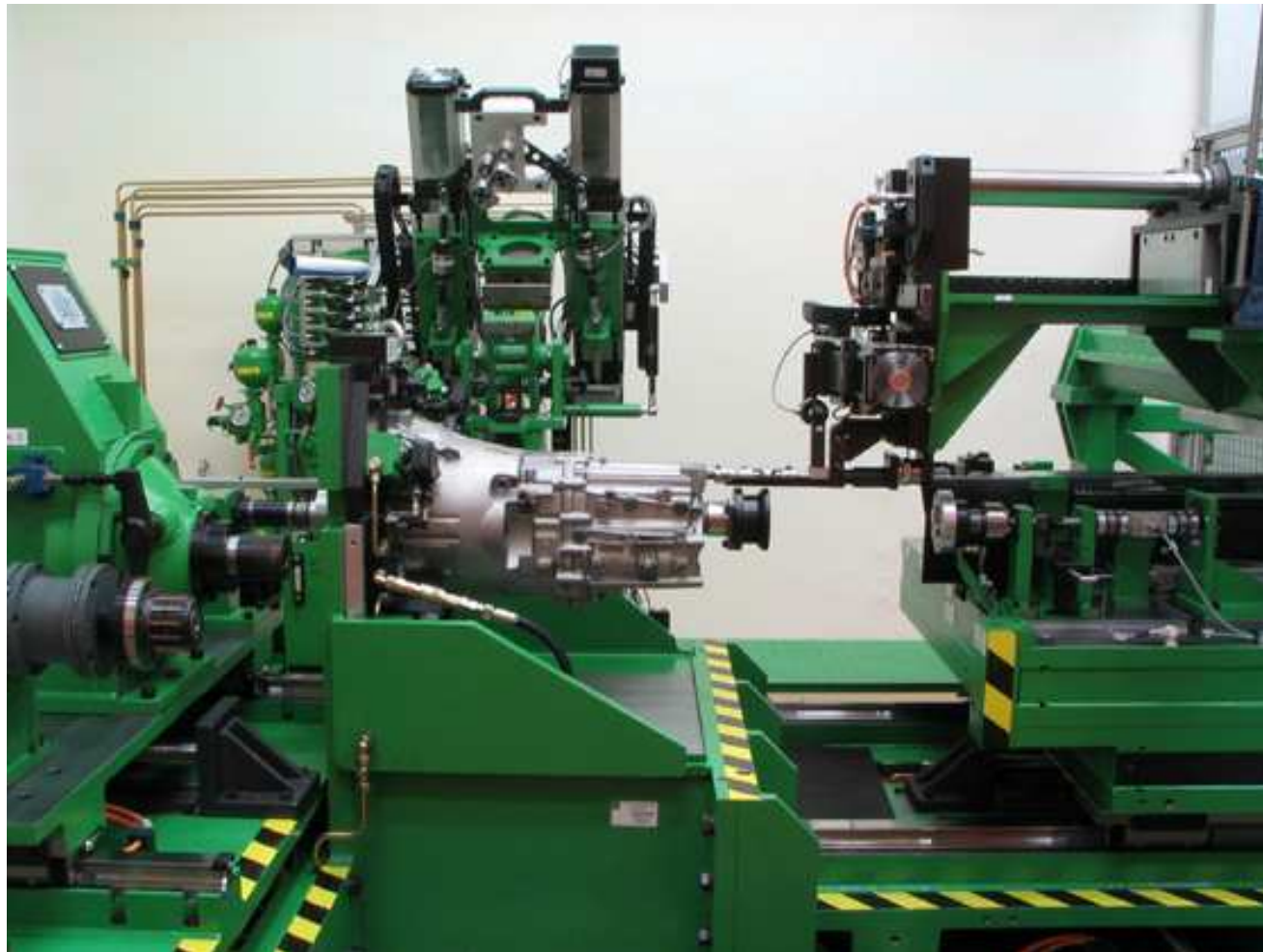
GSR-ZSW Central Shifting Shaft



Endurance Test Bench



Quality Measuring Test Bench



Mobile Test Bench for Double Clutch Transmission



Contact Pattern Test Bench

