



Company's Profile

The name -Tittel Feingerätetechnik- stands for a company with long term experiences in the production of high-grade products for pneumatic, control and regulating engineering, drives, car engineering, medical engineering, electrical engineering and instrument engineering.

For more than 60 years, Frauenstein is a location where demanding products of precision engineering are being made. By the denationalization in 1992 the company took a dynamical development to a leading subcontractor of precision engineering products with excellent delivery reliability.

In average, 40 employees feel highly dedicated to this claim. Their initiative and experience have basically contributed to the high reputation the company enjoys by its customers.

Only by continuous modernization and expansion of the machining park we succeeded in matching our customers growing demands.

The manufacturing with materials like **steel**, **stainless steel**, **aluminium**, **brass**, **copper-special-alloys** and **titan** takes place in the following fields:

Turning

- **Machines**

- CNC-Precision turning lathe (*Spinner: SB-MC, SB-CNC, PD400*)
 - diameter for bar-handling max. 32 mm
 - diameter for chucking max. 125 mm
 - machining with sub-spindle and driven tools
 - tolerance zone IT 6
- CNC-Precision turning lathe (*Schaublin: 42S, Miyano: BNJ 42SY*)
 - diameter for bar handling max. 42 mm
 - diameter for chucking max. 160 mm
 - machining with sub-spindle and driven tools
 - tolerance zone IT 6

- CNC-plain turning lathes (*Traub: TNL12, TNL 16G, Tornos: DECO 2000/10; Star: SR10J, SR20R, ECAS32T*)
 - diameter for bar-handling max. 32 mm
 - thread whirling-, transverse drilling- and milling operations possible
 - back-working on sub-spindle
 - tolerance zone IT 6
- Plain turning lathes (*e.g. Tornos*)
 - diameters: 2-16 mm
 - tolerance zone IT 7

lot sizes: 50 parts - 100.000 parts

Milling

- **Machines**

- CNC-Milling machining centres (*Traub: TVC200, UNITECH: CSK500*)
 - travel moving: xyz 400 x 300 x 400 mm
 - tool-magazine with 16 stations
- CNC- Milling Machining Centre (*Alzmetall: BAZ 15*)
 - travel moving: xyz 600 x 400 x 600 mm
 - 4.-5. axis
 - tool-magazine with 24 stations
 - high-pressure coolant supply through spindle
 - 350 cm³/min milling power with St60

lot sizes: 1 part – 5.000 parts

Toothing, Roll-Forming and Rolling

- **Machines**

- CNC Gear hobbing- and worm milling machine (*Köpfer: MZ120*)
 - For straight and helical gear wheels up to module 1,0 and worms up to module 1,5
 - max. outside diameter 50 mm
- Gear hobbing machine (*Mikron: 102.05*)
 - for straight and helical gear wheels and worms to module 2,0
 - max. outside diameter 120 mm
- Gear hobbing machine to module 1,0
 - for straight gearwheels and worms with involute and cycloidal gearing

lot sizes: 1 part – 10.000 parts

- Profile rolling machines (*Thommen: PR07*)
 - Rolling force up to 70 kN
 - Thread rolling up to 20 mm diameter and 2 mm pitch
 - Knurl-rolling to divisino 0,3 - 1 mm

- Burnishing machines
 - For the fine-precision of the cones of shoots
 - Diameter range 1.. 4 mm

lot sizes: 100 parts – 10.000 parts

Aftertreatment of work pieces

- Systems
 - Closed hydrocarbon cleaning system (*Dürr: Minio85C*)
 - Flood-cleaning
 - Steam-degreasing
 - Spray-flood cleaning system with aqueous solution (*Mafac: SF64.40*)
 - Vibratory finishing

Measuring Equipment

- Devices
 - Optical tactile coordinate measuring system (*Fa. Werth: ScopeCheck 400*)
 - Measuring projector (*Fa. Werth: Optimus 300*)
 - Measuring system for small gauge lengths (*Fa. Feinmess Suhl: KLM*)
 - Roughness measuring device
 - Measuring microscopes
 - Various mechanical and electronic measuring instruments

Prototype Building

- Mashines
 - Turning-, drilling- milling-, and grinding machines
 - Engraving machine

Scientific construction, prototype production and manufacture of various devices can be realized.

Assembly

Assembly of mechanical and electromechanical devices and device-units by specialised and many years experienced staff. Assembly line as individual assembly can be achieved.

Cooperation of external services

Based on strategic partnerships with experienced suppliers we cooperate in:

- Surface Treatment
 - electroplated zinc, nickel, silver and gold; anodising; hard coat; chromating; blackening; phosphating; etc.
- Heat Treatment
 - case hardening; induction hardening; coat; nitrate; nitrocarburizing; carbonitriding; etc.)
- Centerless Grinding

We provide:

- high flexibility
- precise observance of delivery obligations
- take in charge for small series
- strict observance of all quality requirements
- EDP supported production-planning-system
- EN ISO 9001:2000 certified quality-management system
(TÜV Reg.-Nr. 12 100 22365 TMS)