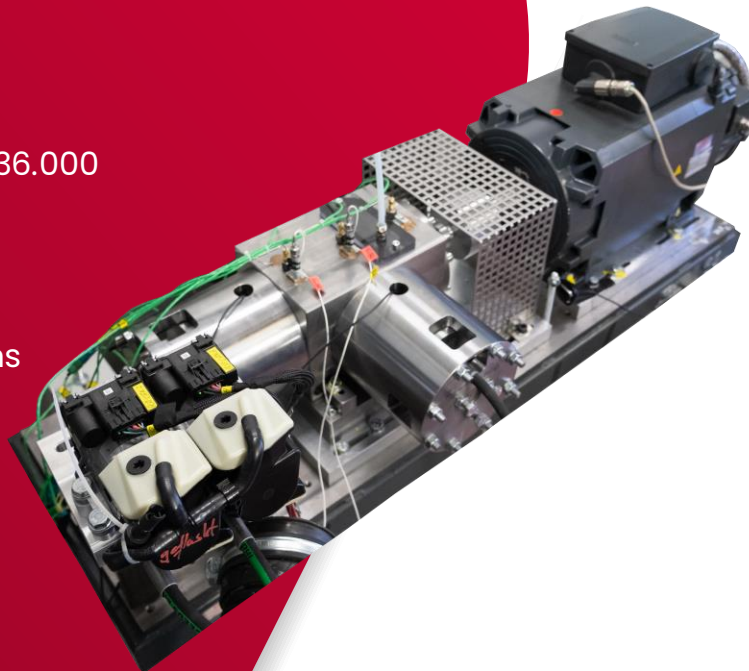


FEV Signature Solutions Hydraulic test bench for bearing testing

Our unique hydraulic test bench solution enables testing your product at its limits

FEV offers

- Automatable 24/7 testing, simultaneous testing of two bearings under high loads and speeds
 - high load, 44kN Axial and 22kN radial, optional > 180kN axial and > 90kN radial
 - high speed, 24.000 rpm, optional up to 36.000 rpm
- Precise dynamic load adjustments
- Testing under extreme temperature conditions (-50°C...180°C)
- For any bearings
- Testing of cooling and lubrication variants



Why FEV

- Extensive experience (14+ projects) in customized bearing testing
- Extreme dynamic forces possible
- Functional and durability bearing tests 24/7 according to customer requirements
- Variation of oil types with investigation on efficiency and temperature behavior enable detailed rating
- Inhouse bridge to simulation department allows development of digital twin

Reference projects

FEV BEARING TEST EXPERIENCE

- Axles
- Electric drive unit (EDU)
- Dual clutch transmission (DCT)

**American
OEM
Ball
Dura test
(A-Sample)**

**German OEM
Ball
Dura test
(A-Sample)**

**FEV concept
Taper roller
Dura test
(Prototype)**

**German OEM
Ball
Dura test
(Prototype)**

**German OEM
Ball
Dura test
(Series
Develop)**

**American
OEM
Roller
Dura test
(Series
Develop)**

**European
OEM
Roller
Function
(B-Sample)**

**German OEM
Taper roller
Dura test
(A-Sample)**

**German OEM
Ball
Dura test
(Series
Development)**

**German OEM
Angular
Roller
Dura test
(A-Sample)**

**Asian OEM
Ball
Function
(B-Sample)**

**German OEM
Roller
Dura test
(Series
Development)**

**European
OEM
Roller
Function
(B-Sample)**

**European
Tier-1
Ball
Dura test
(A-Sample)**



Patents

Test Bench
PIELUCH, MOLL, KATTHÖFER
DE102023133795A1
(application)

FEV's bearing testing services

BALL BEARING TESTING SETS HIGH STANDARDS – FUNCTIONS OVERVIEW



Durability testing up to total damage



Durability testing up to occurrence of damage

Load distribution profiles	Bearing testing under high radial and axial forces, dynamic driving profiles possible
Speed ranges	Test bench is operated by an electro motor with a maximum speed of 36.000 rpm
Monitor parameter	Test bench monitors parameters such as temperature, torque, amount of oil through bearing, pressure, NVH and oil flow
Functional testing	Detailed efficiency and thermodynamic analysis by variation of oil nozzle diameters, nozzle positioning, pressures, oil type variation, oil flow etc.
Durability testing	Durability testing provides information about lifetime behavior, detailed damage detection with NVH order analysis method allows testing up to defined wear

Get in touch with us for further information



[www.fev.com/en/
signature-solutions](http://www.fev.com/en/signature-solutions)