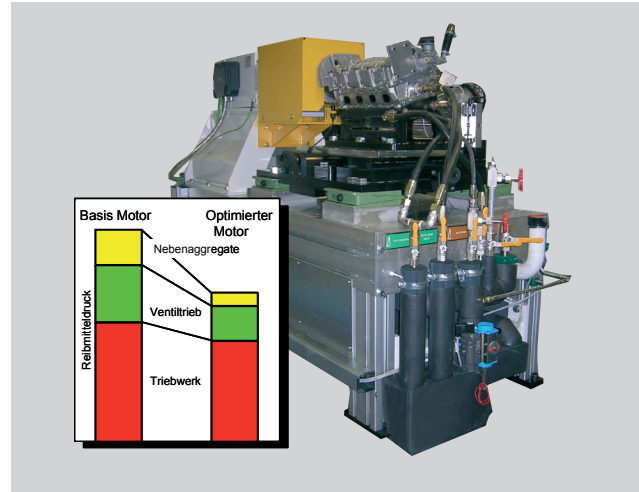


FEV FRICTION TEST CELL - Test Bench for Friction Investigations

» TEST BENCH FOR FRICTION INVESTIGATIONS



Friction investigations on combustion engines and their components are gaining increasing importance in terms of the fuel economy improvements required to reduce CO₂ emissions. Friction test benches at FEV Europe GmbH fulfill all of the requirements that must be met for precise investigation into friction. Depending on the measurement task, various test bench types are available that can be equipped with a diverse set of test bench components that are specially developed for either full engine or component-level friction investigations.

The motored engines or engine components are driven by means of asynchronous machines with high-precision torque measurement. An extremely rigid machine frame prevents cross influences on the torque measurement and thus ensures constantly high measurement accuracy. These friction test benches have stood the test of time in FEV's own test field.

Media conditioning systems that have been further developed for use in friction test benches are implemented to allow adherence to very tight boundary conditions for oil and coolant, allowing fulfillment of even the most precise requirements. Temperature control for oil is possible in a range of 20 ... 150 °C and for coolant in a range of 20 ... 120 °C. Temperature control accuracy is better than $< \pm 0.5$ °C. By means of an additional cooling unit, cold start investigations can additionally be performed at temperatures as low as -30 °C.

The test bench is controlled and regulated by FEV's proprietary FEV MORPHEE automation system.

Your Benefits

- > Stable test boundary conditions ensure high repeatability and shorten test run times
- > Optimized for high-precision torque measurement
- > Large range of applications – for both full engines and engine components
- > Sturdy, high-quality and low-maintenance equipment, tried and tested over many years in FEV's own test field

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FEV Friction Test Benches

Drive	
Asynchronous machine	Power sized to the needs of the unit under test
Torque measurement	Torque measurement flange with temperature compensation Measurement range sized to the needs of the unit under test
Fields of application	
Investigation possibilities	<ul style="list-style-type: none"> > Full engine > Valve train > Transmission > Engine components driven via crankshaft (Strip method) <p>Friction Analysis - Distribution of Friction Losses (Si-Engines) <i>According Strip Measurements (open Gas Room)</i></p>
Special measuring technology / special systems	
PIFFO - special measuring technology	
FEVIS combustion analysis technology	
Conditioning systems Oil FEV LubCon Cooling water: FEV CoolCon	