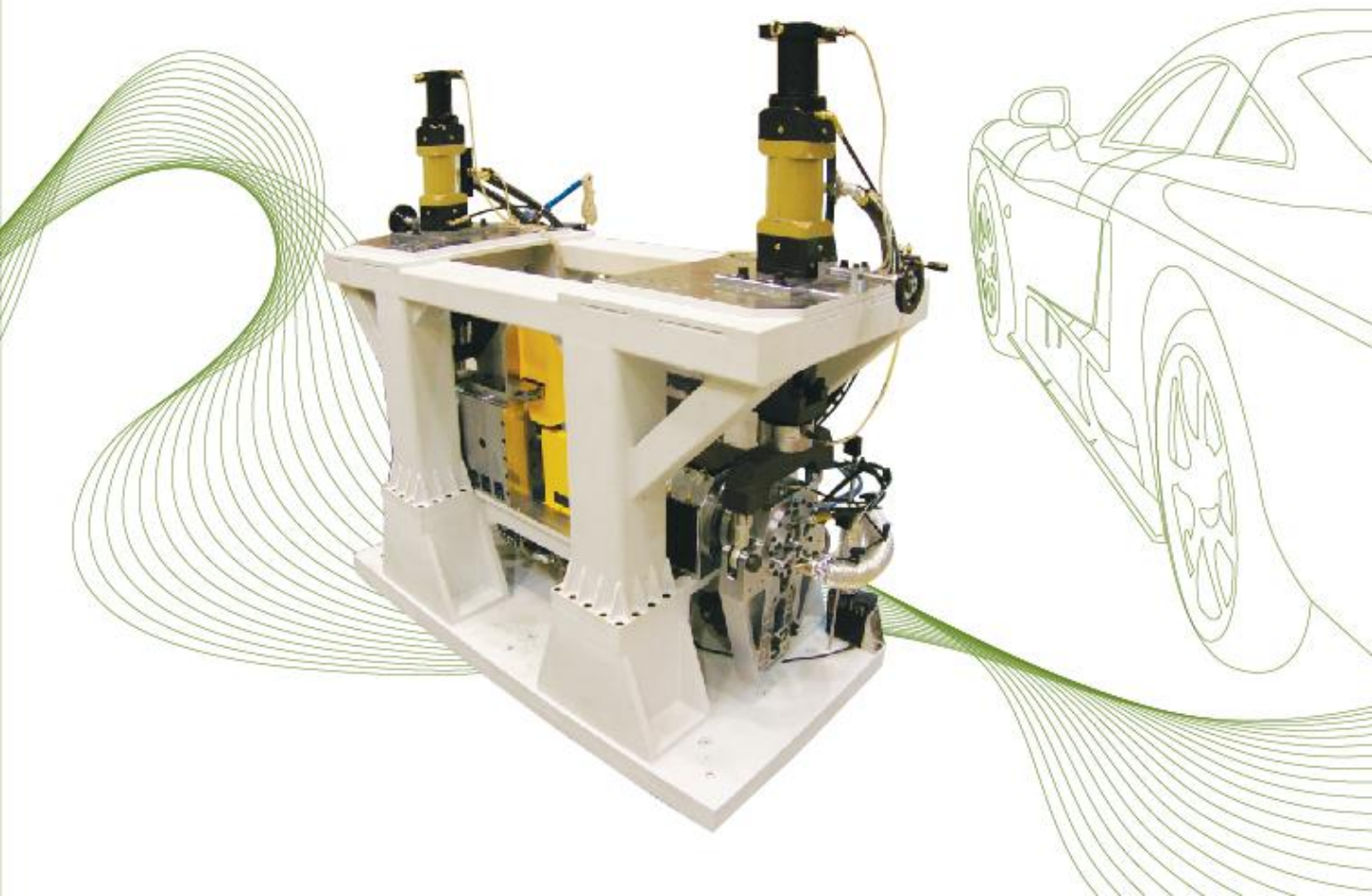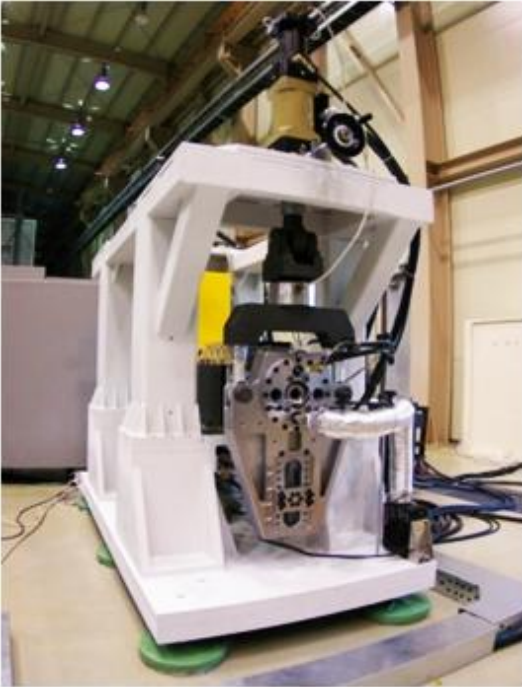# Wheel Hub Bearing Service Life Testing System

Wheel Hub Bearing Service Life Simulation System is for automotive wheel bearing's performance test. This system is not only for the rigidity test but durability test and road load simulation test as well. Also, this system is designed to be satisfied with major auto makers in the world.

System design

Wheel Bearing Service Life Simulation System is designed for the high load, endurance, and service life test of two specimens at once of the vehicle wheel bearing by controlling the magnitude of the cornering forces and radial forces under heating and cooling conditions.

This system is capable of superior simulation and block cycle test, especially service life test of BMW and AK cycle test of Volkswagen, is accredited by BMW company. The innovative design of the test frame provides reliable service for all types of tests and lab environments.

For the rotational move, 15kw servo motor is used for a precise control against various speed changes and high rigid fixtures enable to do the rigidity test, high speed high load test with reliable test results.

Also, using various accessories, user is able to make a proper environment for the wheel bearing test and gets reliable results.

This system's stable performance and high quality brings good review from the customers.
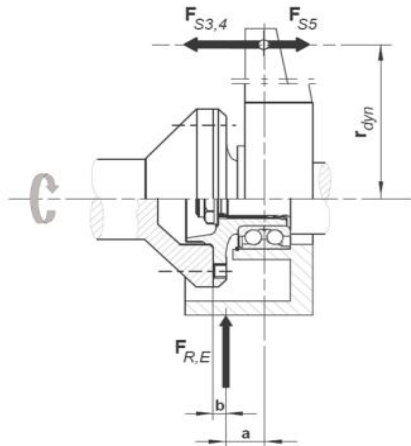
Specifications

Motor Module	Capacity	15kW, 1500rpm
	Speed	Spindle up to 2140rpm
Lateral Actuating System	Force Rating	25kN
	Displacement	±75mm
	Offset	250 ~ 400mm from spindle center
Radial Actuating System	Force Rating	40kN
	Displacement	±75mm
	Offset	80 ~ 180mm from spindle center
Temperature Device	Heating Device	max 600℃
	Cooling Device	Cool Air max 1MPa
Sensor	Load Cell	25kN, 50kN
	Accelerometer	±50g
	LVDT	±10mm
	Thermometer	K type, Surface Contacting

All the components used in this system such as actuators, hydraulic power unit, service manifold have a good review from the customers for the preciseness and durability.

Control system & software

Deneb series controller which is a multi axial digital controller(controls up to 8 axes) is used and basically it has 1KHz of control loop and it communicates with sensors in real time. Also, LAN is used for the server communication.
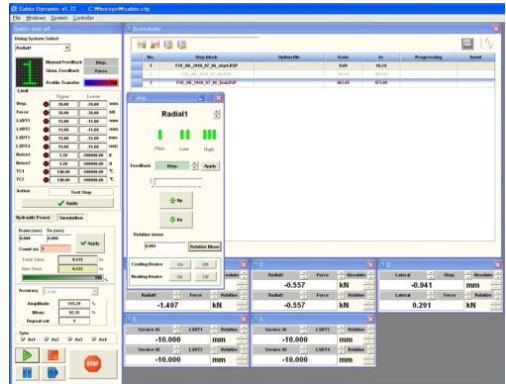
For the control software, Sabio series is used. This Sabio series has a specialized pre and post processor for the wheel bearing test so that any type of load and various parameters for the wheel bearing's performance can be read.