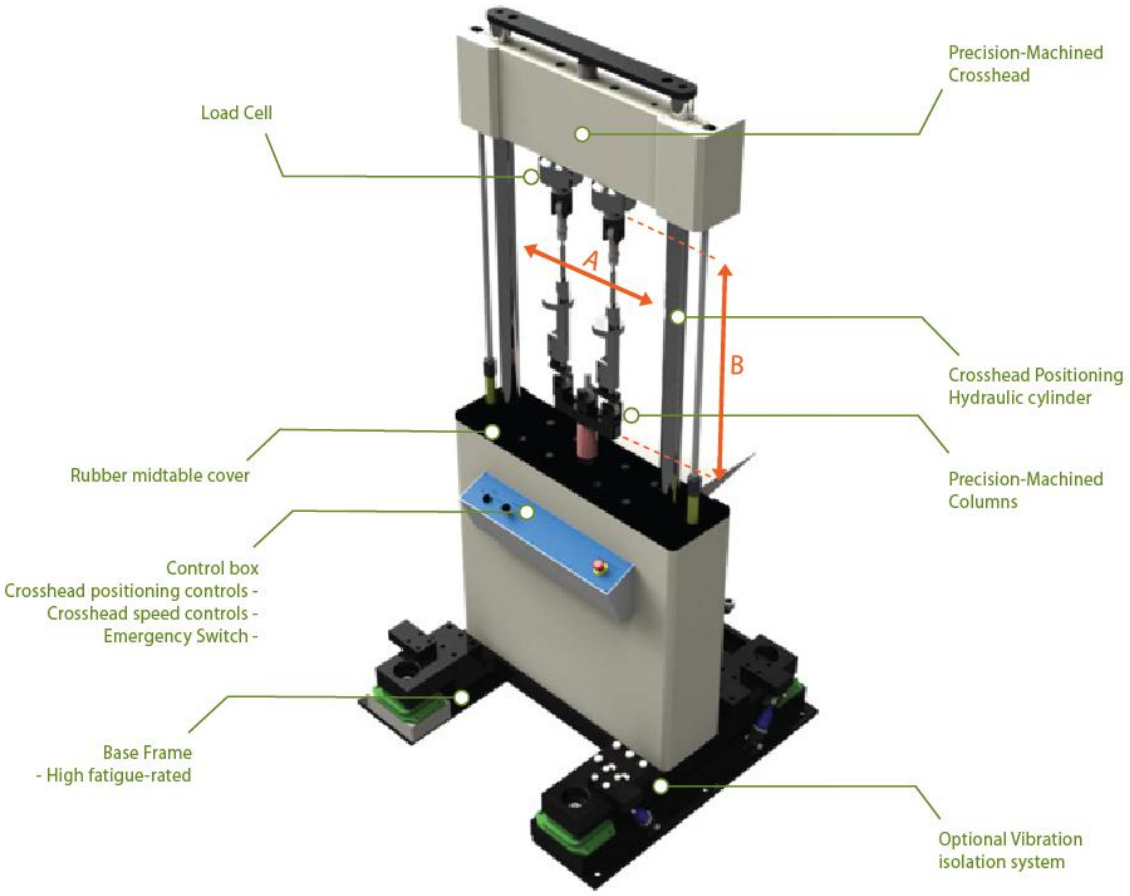
Shock Absorber Testing System

KNR's high performance Shock Absorber Testing System enables the user to test damper and shock absorber under various speed ranges. Especially according to the test characteristics such as performance or durability test, the system components are different. For the performance test, the test performs three cycles in a certain speed range and analyze the specimen's performance with the data and for the durability test, the continuous test is possible under a certain speed range.

Also, the shock absorber testing system requires high speed and stable movement of the actuator so that KNR's Intima series which is a hydrostatic bearing type is used and high speed type frame gives more stable test conditions. Moreover, upon request of the user, a chamber for the temperature and humidity can be installed and acceleration and a temperature of the noise specimen can also be measured by adding additional sensors.



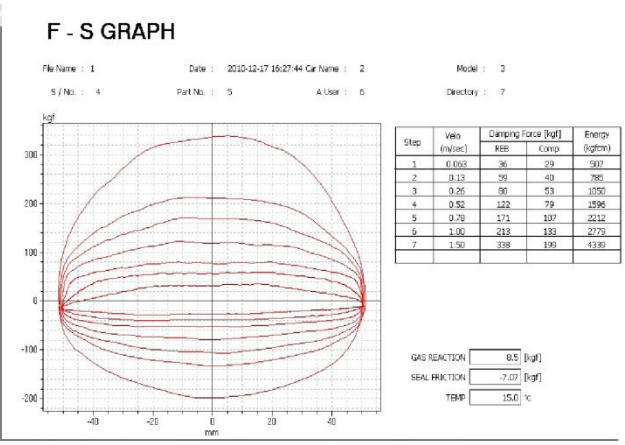
Performance Test System

Component	Specifications	
Linear Actuating System	Force Rating	25kN
	Displacement	±150mm
	Servo Valve	2X63lpm
	max. Velocity	3m/s
Main Frame	Size (W X D X H)	1100 X 500 X 2570mm
	Working Height (B)	1035mm
	Column Distance (A)	600mm
	Cross Head Stroke	950mm
	max. Specimen Distance	1100mm
Hydraulic Power Supply	Flow Rate	20lpm at 21MPa
Specimen	No. of Specimen	1 EA

Durability Test System

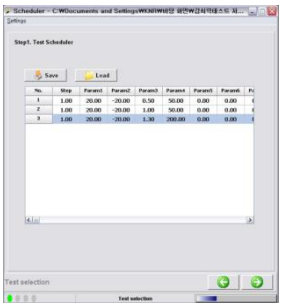
Component	Specifications	
Linear Actuating System	Force Rating	30kN
	Displacement	±150mm
	Servo Valve	4X63lpm
	max. Velocity	3m/s
Main Frame	Size (W X D X H)	1390 X 1310 X 2935mm
	Working Height (B)	1318mm
	Column Distance (A)	830 mm
	Cross Head Stroke	950mm
	max. Specimen Distance	1100mm
Hydraulic Power Supply	Flow Rate	230lpm at 21MPa
Specimen	No. of Specimen	2 EA

Sabio-D Wizard



KNR provides Sabio-D Wizard control software which is dedicated for the shock absorber test. Sabio-D wizard enables the test easier using each step to input each test condition. Step 1 is a scheduler which enables the user to save and call the list of the test and step 2 sets the limit feature to stop the system under abnormal conditions and step 3 operates the actuator manually and has a zero setting feature for sensor signal for the load and displacement. In step 4, the user can save the data and start or stop the test and monitor the data through the right side monitor.

Step 1.



Scheduler

Step 2.

Limit Set

Step 3.

Set Zero & Jog

Step 4.

Data Save & Test

The test data can be analyzed by a post-processing software and print out the test data using various graphs such as time-displacement graph, damping force-displacement graph, damping force-velocity graph, and damping force-temperature graph.