

## Fatigue Lab-iCAT

The Fatigue Lab at iCAT has capability of homologation as well as advance R&D for component manufacturers. The facility is Centre of Excellence for Component Fatigue. The centre is able to provide following Testing and R&D capabilities.

- Testing of component level behaviour under cyclic, structural and environmental loads.
- Sub-Systems level endurance against cyclic structural and environmental loads, before its integration in the vehicle.

The facilities of Fatigue lab can be functionally divided in two parts, basic and advance R&D capabilities. NATRiP has established following capabilities for Fatigue Lab at iCAT.

### Basic Fatigue Lab iCAT

<b>Basic Fatigue Lab</b>
<b>Universal Test Benches</b>
<b>Plate benches</b>
<b>5 kN servo-pneumatic</b>
<b>10 kN servo-pneumatic</b>
<b>25kN servo-hydraulic</b>
<b>100kN servo-hydraulic</b>
<b>150kN servo-hydraulic</b>
<b>25/50 kNm servo-hydraulic rotatory</b>
<b>Bench with integrated actuator</b>
<b>Impact test System</b>
<b>Pendulum</b>
<b>Hydraulic Vibration Table</b>
<b>MAST for components</b>
<b>ED Shaker facility</b>
<b>Electrodynamic shakers with climatic chamber</b>

Advance R&D Capabilities of Fatigue Lab iCAT

<b>Complete Vehicle &amp; Sub-Systems Integration</b>
Multipurpose x posters test bench (flexible for 2/3/4/6 posters configuration) Actuators for up to Passenger Cars
Passenger Cars dedicated 4 posters + NVH squeak&rattle
<b>Components &amp; Sub-systems</b>
MAST for components: 6dof + climatic chamber
Dynamic pressure testing benches
Structural + Environmental Fatigue test benches
Thermal shock, dust chambers, salt spray, corrosion, rain spray, infrared.