

## Impact and Durability Test rig

This test ensures us about the toughness of the PU Bump stopper as material's toughness is a factor of its ability to absorb energy during plastic deformation. This setup is designed to carry out durability test of PU bump stopper used in automobile applications. Facility of impact durability test is also provided by changing stroke to 60mm. In short Impact Testing of metals is performed to determine the impact resistance or toughness of materials by calculating the amount of energy absorbed during fracture.



### ➤ Features:

- Total setup is mounted on a strong and sturdy fabricated frame structure made out of M.S square tubes and plates.
  - a. Overall size: 0.8m x 0.6m x 1.5m height.
- The stroking mechanism comprises of:
  - a. 5 HP eared motor with 120RPM output speed provided with VFD.
  - b. Intermediate bearing block with eccentric one side and geared motor coupling on other side.
  - c. Eccentric mechanism with manual adjusting screw and locking arrangement.
  - d. Range: 0 – 30mm (Total stroke up to 60mm) for bump stopper impact and durability test.
  - e. Range: 0 – 90mm (total stroke to 180mm) for Dust cover durability test.

- f. Connecting rod with hard chrome shaft and linear bearings to transmit motion to test component.

➤ **For Bump Stopper Testing:**

- a. Two jaw chucks for holding the stroking fixtures for the test component with central guide rod.
- b. Top plate supported in tow hard chrome plated rods.
- c. Bottom moving plate fitted to eccentric mechanism provided with two linear bearing guides for proper vertical movement.

➤ **For Dust Cover Durability Testing:**

- a. Adjustment in eccentric mechanism for setting stroke up to 175mm.
  - b. Two guide bars for uniform movement with test component bottom clamping arrangement.
  - c. Adjustable top plate with top clamping fixture for test component.
- Electrical control panel.
    - a. M.S control panel duly powder coated.
    - b. Digital speed frequency indicator - Range: 0 – 120 RPM or 2 Hz.
    - c. Digital cycle counter - Range: 6 digits adjustable.
  - Other electrical accessories such as Contactors, MCCB, Push buttons, indicators lamps etc.

➤ **Product Parameters:**

Overall size	0.8meter x 0.5meter x 0.8meter height
Electrical Power Supply	415V, 50Hz,6Kw
Pneumatic Air Supply	4-6 bar
Capacity	500 Kg