



## Seismic Base Isolation Devices for Structures



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## Seismic Base Isolation Devices for Structures

Seismic protection of buildings and structures can be made possible by increasing the time period of the structure by adding seismic base isolation devices between the super structure and substructure, which primarily filters the earthquake energy and also increases the damping. This seismic base isolation technology is ideal for Lifeline Structures whose functionality is highly essential during and after an earthquake ensuring a seismically safe habitat.

### Technical Features

- The product developed is a Laminated Rubber Bearing (LRB) isolation device with alternating layers of thin rubber layers and steel shims
- CSIR-SERC, through in-house R&D over years has evolved the necessary design methodology for the design of buildings with base isolators made of natural rubber
- CSIR-SERC has developed this product along with Rubber Board, Kerala and tested for seismic loads using the shake table facility
- Ideal for protecting low to medium rise structures against earthquakes
- Durable and environment friendly

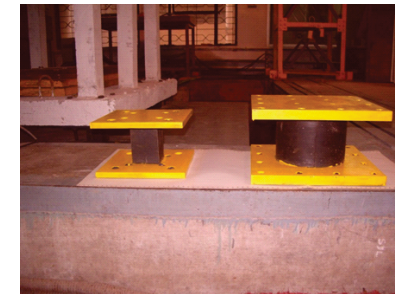
### Advantages

- Ideal for high seismic region and when the existing building is unsafe (seismic upgradation)
- Ideal for earthquakes with high frequency content

- Maximum protection for important non-structural components/elements in the building
- Replaceable and Modular construction
- Indigenous development and production ensures cost economy

### Major Applications

- Lifeline structures like hospitals, schools, etc.
- Structures for strategic sector like nuclear power plants
- Low to medium rise residential multi-storey buildings



*Seismic Base Isolation Devices developed by CSIR-SERC*



*Shake table testing of RCC frame with seismic base isolation devices*