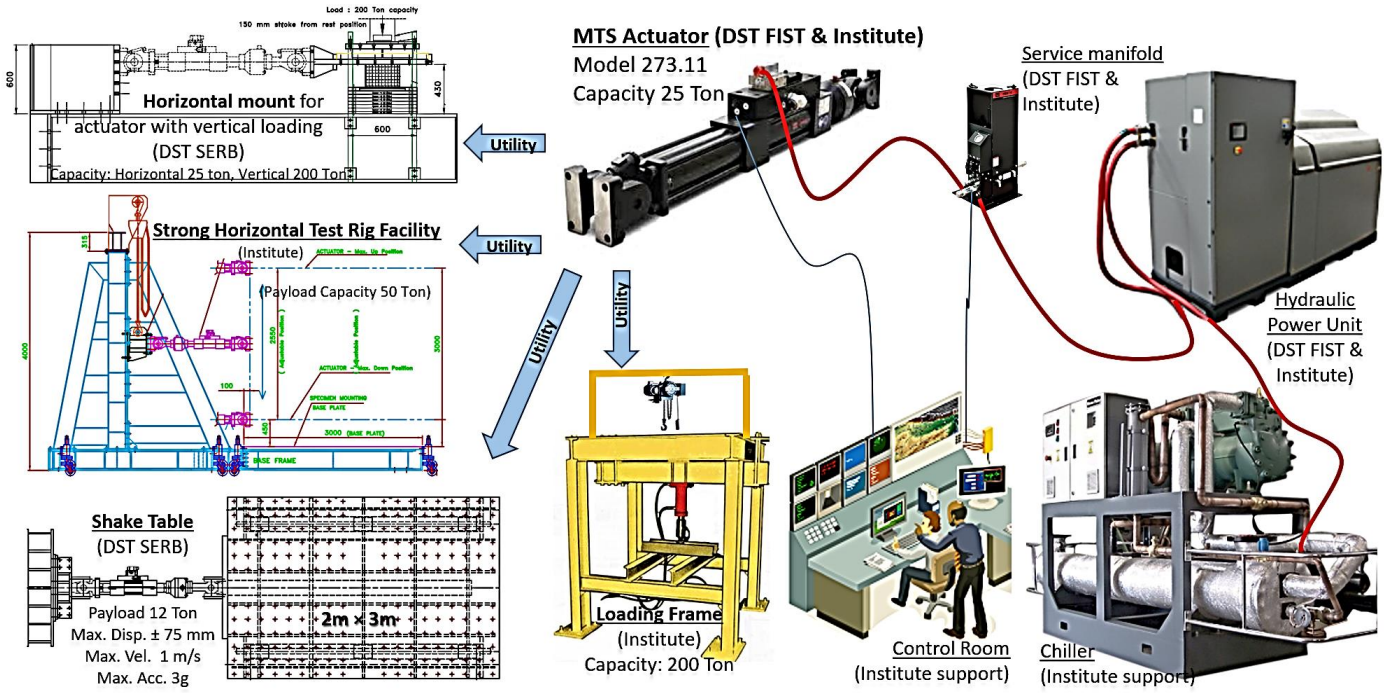
Test Facilities from DST and Institute along with their Utility



Working Principle:

A hydraulic actuator is a device that produces a controlled mechanical motion by converting fluid's pressure energy using control system. The controller provides the control signal to the actuator that hydraulically applies the equivalent signal to the plant to have the desired output in controlled operations. For more details visit: https://electronicscoach.com/hydraulic-actuator.html

Technical Specifications:

Model: MTS 244.31 actuator setup
Capacity: 250 kN
Stroke: ± 75 mm
Frequency: 0.1-100 Hz
Control type: Displacement / Force control
For more details on actuator performance sheet visit:
https://drive.google.com/file/d/1Vm8WWVo64indGt90dm2TQYYlY0c9jScd/view?usp=sharing

Applications:

Hydraulic actuator finds its applications in various fields, viz, Civil Engineering, Mechanical Engineering, Materials, Automotive & Aerospace Engineering, etc. The current actuator along with supporting facilities can assist following test facility (not limited to):

- Static load test on specimen with vertical compression load up to 2000 kN capacity
- Dynamic load test on specimen with vertical load up to 250 kN capacity
- Horizontal static/dynamic load test up to 250 kN capacity on test specimen with payload up to 50 tons
- Simultaneous vertical load (up to 500 kN including specimen weight) & horizontal load (250 kN) test
- Hysteretic behavior test on specimen up to (40×40×40) cm size with horizontal dynamic load (250 kN) and vertical static load (up to 2000 kN)
- Shake table test on various building specimens weighing up to 12 tons with plan dimension up to 3 m × 2 m and height up top 4 m.

Instructions for Users

The equipment operation will be allowed only for professionals with prior experience or those who have received enough training to work with this equipment.

Instructions for Registration

Prior permission must be taken from the In-charge of the equipment and Head of the Department. The mode of operation (viz., control type, displacement/force required, frequency in dynamic testing, number of specimens etc.) and the parameters that have to be recorded have to be mentioned clearly in the registration/requisition form.

I) Internal Users:

Users within BITS Hyderabad can fill form and all the test specimen details must be provided in the requisition form. Users need to be present at the time of experiment on the allotted appointment date/time. If a user wishes to change his/her time slot, an email should be sent well in advance, requesting change in appointment.

II) External Users:

Academic Institutions: One should come in person, a letter from the Guide/HoD on the Institution's Original Letter Head along with the Registration Form stating that the experiment is for research purpose, to qualify for academic concession is a must.

National R & D Lab's: One should come in person, a letter from the Guide/HoD on the Institution's Original Letter Head along with the Registration Form stating that the experiment is for research purpose, to qualify for academic concession is a must.

Industry& Non- Government Agencies: One should come in person, a letter from the Guide/HoD on the Institution's Original Letter Head along with the Registration Form stating that the experiment is for research purpose, to qualify for academic concession is a must.

Testing Charges: As per Institute/ DST norms.

********Facility Management Team************

Name of the In-Charge (s) with designation

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Location of the Equipment:

Advanced structural engineering lab
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Medchel District 500 078,
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