

Centrifuge Model Testing Equipment in CERI

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Introduction

Centrifuge modelling is a technique for reproducing a prototype scale structure with physical scale model. CERI's centrifuge machine has a 92.5g-ton capacity, hitting a maximum centrifugal acceleration of 100g at 2.5 m radius. This machine has a shaking table. Large numbers of model tests have been carried out on the centrifuge for more than 30 years.



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Key Technical Specifications

Beam Centrifuge	
Manufacturer	HITACHI
Year established	2019 (1st centrifuge was established in1993)
Radius to base of platform	2.5 m
Capacity	92.5g-ton (0.925ton@100g , max G-level: 100g)
Bucket area	1.1 m x 0.95 m
Major equipment	1D horizontal shaking table (capacity 370kN@50g) 1D horizontal loading equipment (max. 200N) Measuring instruments 48ch

Shaking table

This high-power shaking table was manufactured to simulate huge earthquakes that can occur in Japan. It can reproduce 21 waveforms in total, or the acceleration waveforms used for dynamic analysis in seismic design of road bridges by adding a huge accumulator to the main body of the centrifugal force loading device. This is a removable shaking table, the main body can be used for static model testing.

