

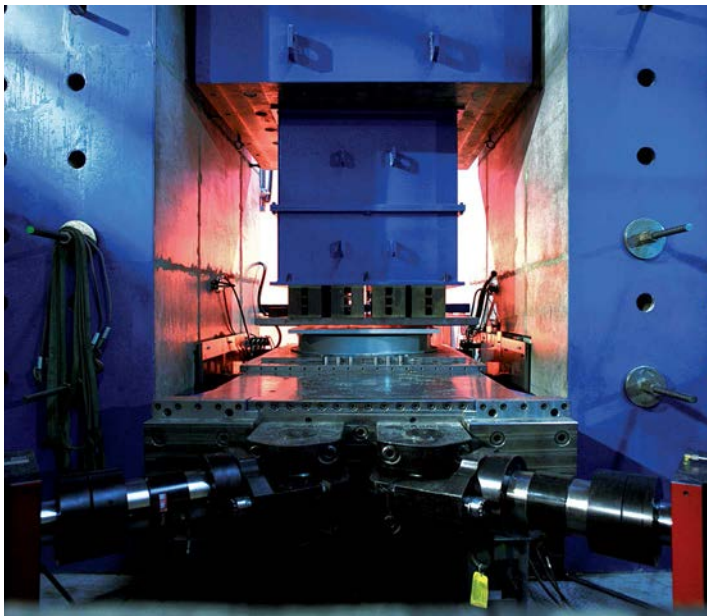


## Qualification tests on structural bearings and anti-seismic devices

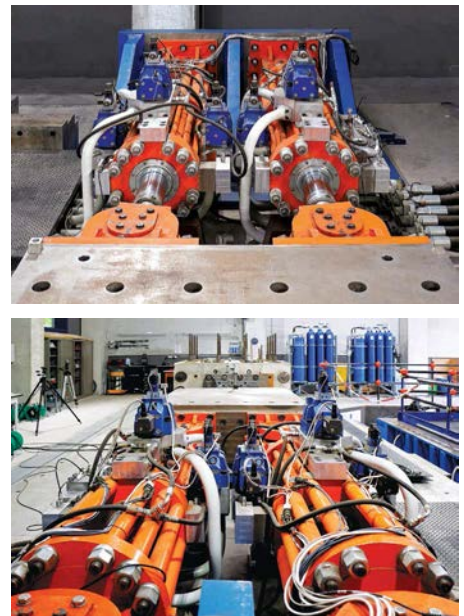
Since 2007, the EUCENTRE Foundation has been carrying out tests on structural bearings and anti-seismic devices (isolators and dampers).

EUCENTRE laboratories have several test facilities including:

- A Bearing Testing System (BTS) dedicated to the experimental characterization of structural bearings (elastomeric, POT and spherical bearings) and seismic isolation devices (elastomeric isolators and curved surface sliders);
- A Damper Testing System (DTS) dedicated to the experimental characterization of shock transmission units, displacement dependent devices and velocity dependent devices (fluid viscous dampers and fluid spring dampers).



Bearing Testing System (BTS)



Damper Testing System (DTS)

The EUCENTRE Foundation built a strong experience testing more than 3000 isolators, 1500 structural bearings and 200 dampers.

Test protocols are performed according to the main international standards (EN1337 - Structural Bearings, EN15129 - Antiseismic Devices e AASHTO) or to customized experimental research and development campaigns developed according to Customer's needs.

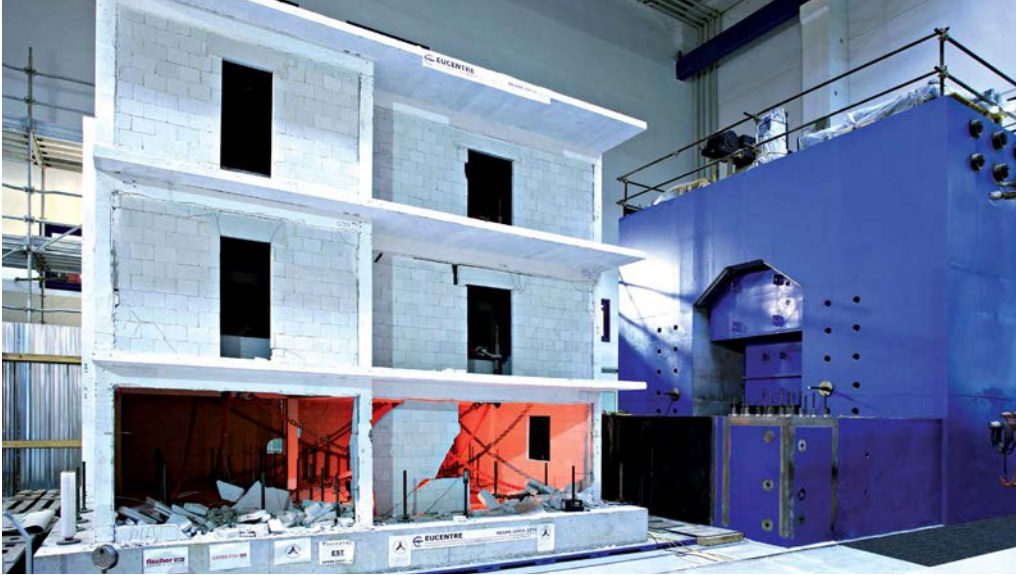
The laboratory accreditation according to ISO/IEC 17025 standard (<https://www.eucentre.it/certifications-and-accreditations/?lang=en>) allows operating with the highest quality standards adopting internationally recognized procedures.

### The Founders



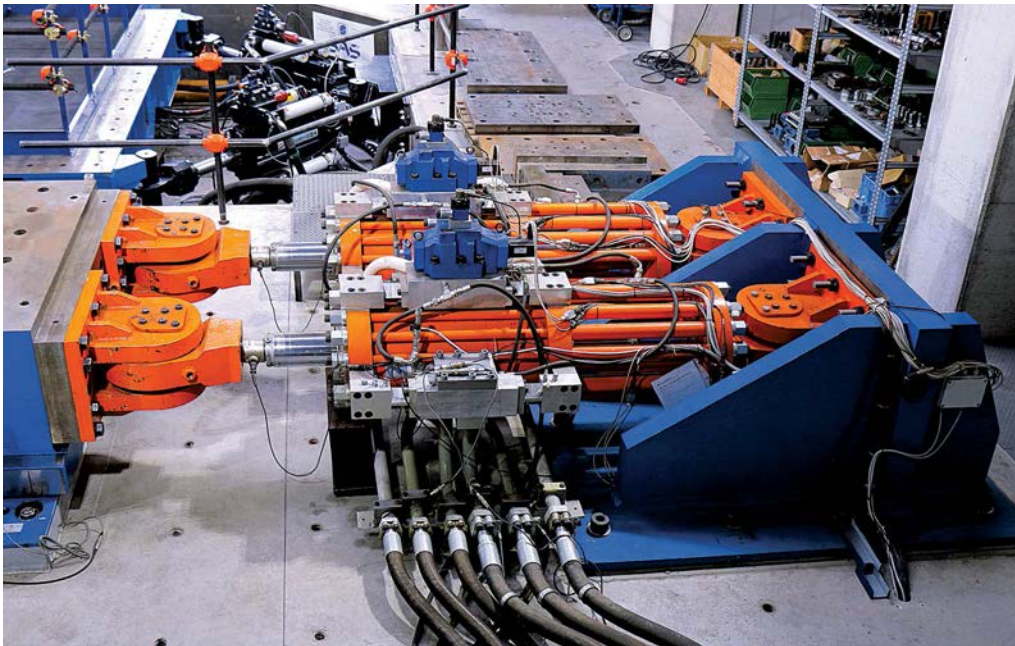
### Bearing Testing System - (BTS)

Platen dimensions.....	1.6 m x 4.4 m
Maximum displacement.....	Long. $\pm 495$ mm, Transv. $\pm 265$ mm, Vert. $\pm 75$ mm
Maximum velocity.....	Long. 2200 mm/s, Transv. 600 mm/s, Vert. 250 mm/s
Maximum acceleration.....	$\pm 1.8$ g
Maximum flow rate.....	11000 + 16000 l/min
Maximum static force.....	Long. 1900 kN, Transv. 1000 kN, Vert. 40000 $\pm$ 10000 kN
Maximum dynamic force.....	Long. 1700 kN, Transv. 750 kN, Vert. 40000 $\pm$ 10000 kN
Inertia mass.....	~ 22.1 t
Maximum overturning moment.....	20000 kNm
Operative frequency range.....	0-20 Hz



### Damper Testing System - (DTS)

Maximum length of the specimen.....	8000 mm
Maximum diameter of the specimen.....	1200 mm
Maximum displacement.....	$\pm 250$ mm
Maximum velocity.....	1100 mm/s
Maximum flow rate.....	3000 l/min
Maximum dynamic force.....	4400 kN



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**EUCENTRE FOUNDATION** | European Centre for Training and Research in Earthquake Engineering

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