

Guardrail testing

Handrails are constructive elements that delimitate areas with slopes or unevenness, where one can potentially fall. To prevent these types of risks, the performance and constructive characteristics of handrails must concur with the place they are to be placed at. Additionally, they must guarantee safety when used under both normal and exceptional conditions.



Conformity requirements for handrails according to CTE

In Spain, the Technical Building Code (CTE SUA 1 3.2) defines the dimensional and strength specifications for guardrails, since their level of strength and stiffness can vary. The Technical Code (CTE DB SE-AE) establishes the following classifications to identify the minimum level of resistance to horizontal forces they must each meet according to their use:

- **3.0 kN/ml:** For crowded areas (concert halls, stadiums, etc.)
- **1.6 kN/ml:** For un-obstructed areas such as lobbies of public buildings, administrative buildings, hotels; exhibition rooms in museums, etc.; gymnasiums; car parks; and walkable roofs accessible only to private individuals
- **0.8 kN/ml:** All other categories

Other relevant standards

There are other standards that provide specifications for product characteristics:

- Impact resistance
- Dimensions
- Design characteristics

By knowing the specifications, the prescriber can make the right decisions when selecting his product.

Our handrail tests

We offer a wide range of tests and solutions aimed at **handrail specification** and **verifying compliance** with the **Spanish Technical Building Code**:

- Dimensional characteristics
- Horizontal static test to the inside
- Horizontal static test to the outside
- Vertical static test
- Soft-body dynamic test
- Hard body dynamic test
- Safety test

In addition to evaluating the performance of the handrail, we recommend that manufacturers, constructors and site management pay special attention to the type and number of anchors and the support used on site, verifying their compatibility with the system.

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