



Actuation ranges of ASCE Standard 25-97 for Earthquake Actuated Automatic Gas Shutoff Devices

ACTUATION RANGES OF ASCE STANDARD 25-97

Actuation Requirements

The sensing means of the earthquake actuated automatic gas shutoff device shall actuate the shut-off means within 5 seconds when subjected to horizontal sinusoidal oscillations having:

- a peak acceleration of 0.70 g (6.87 m/s²) with a period of 0.13 second;
- a peak acceleration of 0.40 g (3.43 m/s²) with a period of 0.20 second;
- a peak acceleration of 0.30 g (2.94 m/s²) with a period of 0.40 second; or
- a peak acceleration of 0.25 g (2.45 m/s²) with a period of 1.00 second.

These conditions shall be met for the horizontal axes of the sensing means.

Non-Actuation Requirements

The sensing means of the earthquake actuated automatic gas shutoff device shall not actuate the shut-off means when subjected for 5 seconds to sinusoidal oscillations having:

- a peak acceleration of 0.40 g (3.92 m/s²) with a period of 0.10 second;
- a peak acceleration of 0.20 g (1.97 m/s²) with a period of 0.20 second;
- a peak acceleration of 0.15 g (1.47 m/s²) with a period of 0.40 second; or
- a peak acceleration of 0.10 g (0.98 m/s²) with a period of 1.00 second.

These conditions shall be met for the horizontal and vertical axes of the sensing means.

ASCE Standard 25-97 and California State Standard 12-16-1

ASCE Standard 25-97 is the national standard for seismic gas shutoff valves. It is a voluntary consensus standard that was developed over 5 years by a balanced committee and subjected to a public ballot. It supersedes the previous national standard for these types of devices, ANSI Standard Z21.70 (1981), which was adopted in 1981 by California's Office of the State Architect as California State Standard 12-23-1. ASCE Standard 25-97 was adopted in November 2000 by California's Division of the State Architect, and approved in January 2001 by California's Building Standards Commission, as California State Standard 12-16-1. California State Standard 12-16-1 supersedes California State Standard 12-23-1. All seismic gas shutoff valves sold in California since July 1, 2001, have been required to be certified by California's Division of the State Architect to California State Standard 12-16-1.

For more information about these standards, please contact Carl Strand at:

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