

## Gas Shutoff Devices

There are three types of gas shutoff devices. These are manual shutoff valves, earthquake sensitive automatic shutoff valves, and excess flow automatic gas shutoff valves. The DSA certification program deals with the latter two types of gas shutoff devices.

The following comparison table is adopted (with modifications) from the *SB 1992 (Perata) Final Report Seismic Gas Shutoff Devices Excess Flow Gas Shutoff Devices* published by the California Housing and Community Development on May 1, 2004. The original source of information comes from the California Seismic Safety Commission's report, *Improving Natural Gas Safety in Earthquakes*.

<b>Types</b>	<b>Manual Shutoff Valve by Utilities</b>	<b>Earthquake Sensitive Automatic Shutoff Valves</b>	<b>Excess Flow Automatic gas shutoff Valves (see Note 1 below)</b>
Installed by	Utility Companies	Owners ( <a href="#">See Important Limitations</a> ) <sup>2</sup>	Owners ( <a href="#">See Important Limitations</a> ) <sup>2</sup>
Basis of Operation	Owners with proper wrenches can shut off gas in emergencies	Senses shaking in a residential building that is above a design level of shaking and automatically shuts off gas.	Senses gas flows that are above a design trigger flow rate and automatically restricts gas flow downstream to a substantially low level as required by the state adopted standard.
Benefits	All gas services already have valves installed by utility companies.  Operation guidance is provided in many public information documents such as the phone book	Activated only in cases when residential building shaking may be sufficient to cause damage to the gas system.  Someone does not need to be present to ensure shutoff.	Activated only in cases when excess gas flows downstream of the device, as in gas leaks.  Someone does not need to be present to ensure shutoff.  Can reset automatically once the downstream leakage is eliminated.

Drawbacks	Only effective if someone is present, knows the valve location, has access to the valve, and has a wrench suitable to close the valve.	<p>Can actuate even if damage and hazards do not exist.</p> <p>Requires manual reset.</p> <p>Aftershocks can cause the device to activate after service has been restored.</p> <p>May activate from shaking not related to earthquakes.</p>	<p>Will not shutoff gas if leakage is below the design triggering flow rate, even if a slow leak exists.</p> <p>May not completely shutoff gas flow. A small residual flow is required for the excessive flow automatic shutoff valve to reset itself automatically.</p> <p>May not activate if occupant changes gas systems downstream without modifying the device.</p>
-----------	--	---	---

**NOTES:**

1. Excess Flow Type: A device actuated by a predetermined gas flow rate to shut off or limit the flow of gas to the downstream system (see Definitions, CSA U. S. Requirements for Excess Flow Valves No. 3-92, Revised 1-6-2000)
2. **Important Limitations** of DSA Gas Valve Certification:
  - DSA certification is for the valve only and does not include the installation and inspection after installation.
  - DSA certification does not replace any requirements adopted by local building departments. The installation of gas valves is under the jurisdiction of the local building departments. Building permits may be required by local building departments. Please contact your local building department if you have any questions about installation.
  - DSA certification does not address other plumbing/piping, mechanical, or building code requirements and issues. The installation and the piping systems containing the gas valves must meet the requirements specified by the local building departments and the manufacturers.