



AMERICAN PETROLEUM INSTITUTE

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# API Standard 520, Part 1

## Sizing, Selection, and Installation of Pressure-relieving Devices

### Part I—Sizing and Selection

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This standard applies to the sizing and selection of pressure-relief devices used in refineries, chemical facilities, and related industries for equipment that has a maximum allowable working pressure (MAWP) of 15 psig (103 kPag) or greater. The pressure-relief devices covered in this standard are intended to protect unfired pressure vessels and related equipment against overpressure from operating and fire contingencies.

This standard includes basic definitions and information about the operational characteristics and applications of various pressure-relief devices. It also includes sizing procedures and methods based on steady state flow of Newtonian fluids.

Pressure-relief devices protect a vessel against overpressure only; they do not protect against structural failure when the vessel is exposed to extremely high temperatures such as during a fire. See API 521 for information about appropriate ways of reducing pressure and restricting heat input.

Atmospheric and low-pressure storage tanks covered in API 2000 and pressure vessels used for the transportation of products in bulk or shipping containers are not within the scope of this standard.

The rules for overpressure protection of fired vessels are provided in ASME BPVC, Section I and are not within the scope of this standard.

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