



Coffee Break Training - Fire Protection Series

Portable Extinguishers: Minimum Hydrostatic Test Pressures for Extinguishers

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Learning Objective: The student shall be able to identify the minimum hydrostatic test pressure required for portable fire extinguishers.

Other than rudimentary hand-pump devices, most portable fire extinguishers employ some sort of internal or cartridge-applied pressure to discharge the fire extinguishing agent. To minimize the risks associated with catastrophic container failures, high- and low-pressure portable extinguishers must be periodically pressure tested.

High pressure containers are those cylinders (and cartridges) containing nitrogen, compressed air, carbon dioxide (CO₂), or other gases at a pressure higher than 500 pounds per square inch (psi) (3,447 kilopascals (kPa)) at 70 °F (21 °C).

Low pressure containers are those cylinders containing fire-extinguishing agent (medium), nitrogen, compressed air, or other compressed gases at a service pressure of 500 psi (3,447 kPa) or lower at 70 °F.



According to the service tag, this stored pressure portable fire extinguisher was pressure tested to 200 psi (1,379 kPa).

Cylinders and cartridges bearing Department of Transportation (DOT) or Transport Canada (TC) markings shall be retested in accordance with the appropriate DOT or TC regulations.

Minimum Hydrostatic Test Pressures

High Pressure Cylinders	Minimum Test Pressure
DOT 3A, 3AA, or 3AL cylinders used as CO ₂ extinguishers or nitrogen cylinders, argon cylinders, or CO ₂ cylinders that are used with wheeled extinguishers	5/3 the service pressure stamped into the cylinder
CO ₂ fire extinguishers having cylinder specification Interstate Commerce Commission 3	3,000 psi (20.68 megapascals (MPa))

Low Pressure Cylinders	Minimum Test Pressure
Stored-pressure fire extinguishers shall be hydrostatically tested	The pressure specified on the extinguisher nameplate*
Cartridge- or cylinder-operated dry chemical and dry powder types	The original factory test pressure shown on the nameplate or shell

* Where pressure is not specified on the extinguisher nameplate, the extinguisher shall be tested at the factory test pressure, not to exceed three times the extinguisher service pressure.

The hydrostatic testing of high-pressure cylinders and cartridges must be in accordance with the procedures of TC, DOT, and Compressed Gas Association C-1, *Methods of Hydrostatic Testing of Compressed Gas Cylinders*.

For additional information, refer to National Fire Protection Association 10, *Standard for Portable Fire Extinguishers*.



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