

§ 169.561

³One pump may be driven off a propulsion unit and one pump may be used as a bilge pump. Pumps must be located in separate spaces.

(b) Fire pump capacity must be in accordance with the following:

Vessel length	Minimum capacity
Less than 90 ft	5.5 m ³ /hr (25 gpm).
90 feet but less than 120 ft	11.0 m ³ /hr (50 gpm).
Greater than 120 ft	14.3 m ³ /hr (66.6 gpm).

(c) Each fire pump must be fitted with a pressure gage on the discharge side of the pump.

(d) Each vessel must have a hand operated portable fire pump having a capacity of at least 1.1 m³/hr (5 gpm). This pump must be equipped with suction and discharge hose suitable for use in firefighting.

§ 169.561 Firemain.

(a) Each vessel required to be provided with a power-driven fire pump must also be provided with a fire main, hydrants, hoses and nozzles.

(b) Fire hydrants must be of sufficient number and located so that any part of the vessel may be reached with an effective stream of water from a single length of hose.

(c) All piping, valves, and fittings must be in accordance with good marine practice and suitable for the purpose intended.

§ 169.563 Firehose.

(a) One length of firehose must be provided for each fire hydrant required.

(b) Vessels less than 90 feet in length must have commercial firehose or equivalent of not over 1½ inch diameter or garden hose of not less than 5⁄8 inch nominal inside diameter. If garden hose is used, it must be of a good commercial grade constructed of an inner rubber tube, plies of braided cotton reinforcement and an outer rubber cover, or of equivalent material, and must be fitted with a commercial garden hose nozzle of good grade bronze or equivalent metal.

(c) Vessels of 90 feet or greater must have lined commercial firehose that conform to Underwriters' Laboratories, Inc. Standard 19 or Federal Specification ZZ-H-451. The firehose must be fitted with a combination nozzle approved under § 162.027 of this chapter.

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(d) Each length of firehose must be a single piece 50 feet long.

(e) Firehose must be connected to the hydrants at all times, except that, on open decks where no protection is afforded to the hose, it may be temporarily removed from the hydrant in heavy weather and stowed in an accessible nearby location.

§ 169.564 Fixed extinguishing system, general.

(a) A fixed carbon dioxide, Halon 1301, or clean agent extinguishing system must be installed to protect the following spaces:

(1) Any vessel machinery or fuel tank space, except where the space is so open to the atmosphere as to make the use of a fixed system ineffective;

(2) Any paint or oil room, or similar hazardous space; and

(3) Any galley stove area on a vessel greater than 90 feet in length and certificated for exposed or partially protected water service.

(b) Each fixed extinguishing system must be of an approved carbon dioxide, Halon 1301, halogenated, or clean agent type and installed to the satisfaction of the Officer in Charge, Marine Inspection.

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§ 169.565 Fixed carbon dioxide system.

(a) The number of pounds of carbon dioxide required for each space protected must be equal to the gross volume of the space divided by the appropriate factor in Table 169.565(a).

TABLE 169.565(a)

Gross volume of compartment, cubic feet		Factor
Over—	Not over—	
0	500	15
500	1,600	16
1,600	4,500	18
4,500	20

(b) A separate supply of carbon dioxide is not required for each space protected. The total available supply must be sufficient for the space requiring the greatest amount.

(c) *Controls.* (1) Each control and valve for the operation of the system must be outside the spaces protected and accessible at all times.

(2) Each branch line must be fitted with an approved shutoff valve. Each valve must be kept closed at all times except to operate the particular system.

(3) The arrangements must be such that the entire charge to any space can be introduced into the space by the operation of one valve selecting the space, and one control for releasing the required amount of fire extinguishing agent. The release control must be of an approved type and located adjacent to the branch line shutoff valve.

(4) Complete but simple instructions for the operation of the system must be located in a conspicuous place at or near the releasing control device.

(5) Each control valve to branch lines must be labeled to indicate the space served.

(d) *Piping.* (1) The pipe and fittings for the extinguishing systems must be in accordance with the system manufacturer's approved design manual.

(2) Each pipe, valve, and fitting of ferrous materials must be galvanized.

(3) Each dead-end line must extend at least 2 inches beyond the last orifice and must be closed with cap or plug.

(4) Each pipe, valve, and fitting must be securely supported and, where necessary, protected against injury.

(5) Drains and dirt traps must be fitted where necessary to prevent accumulation of dirt or moisture. Each drain and dirt trap must be located in accessible locations but not in accommodation spaces.

(e) *Discharge outlets.* (1) The area of discharge outlets shall be as specified in the manufacturer's approved design manual.

(2) The discharge of the required amount of carbon dioxide must be complete within two minutes.

(f) *Cylinders.* (1) Each cylinder must be securely fastened and supported, and where necessary protected against injury. Cylinders must be located outside the space protected.

(2) Each cylinder must be mounted in an upright position or inclined not more than 30° from the vertical, except that cylinders which are fitted with flexible or bent siphon tubes may be inclined not more than 80° from the vertical.

(3) Each cylinder used for storing extinguishing agent must be approved and marked in accordance with Department of Transportation regulations.

(4) Each cylinder must be mounted so it is readily accessible and capable of easy removal for recharging and inspection. Cylinders must be capable of being weighed in place.

(5) Where subject to moisture, cylinders must be installed so that a space of at least 2 inches is provided between the flooring and the bottom of the cylinders.

(6) Each cylinder storage area must be properly ventilated and the temperature inside must not exceed 130 °F.

(g) Provision must be made by means of plugs, covers, dampers, etc., to prevent the admission of air into the space protected.

(h) Systems must be fitted with a delayed discharge and an alarm bell arranged so the alarm sounds for at least twenty seconds before the carbon dioxide is released into the space.

§ 169.567 Portable extinguishers.

(a) The minimum number of portable fire extinguishers required on each vessel is determined by the Officer in Charge, Marine Inspection, in accordance with Table 169.567(a) and other provisions of this subpart.

TABLE 169.567(a)

Space protected	Total number extinguishers required	Type extinguishers permitted		Coast Guard classification
		Medium	Minimum size	
Living space and open boats.	1 per 1000 cu. ft. of space.	Halon 1211 of 1301	2½ pounds.	B-I.
		Foam	1¼ gallons	
		Carbon dioxide	4 pounds	
		Dry chemical	2 pounds.	
Propulsion machinery space with fixed CO ₂ or halon system.	1	Foam	1¼ gallons.	