

SC LP GAS RESELLER INSTALLATION GUIDELINES NFPA 58 (2020)

This list only provides guidelines for installations. Licensees must be familiar with and comply with all applicable code requirements, as well as state and local laws.

	Description	Code Reference	
LICENSE/PERMITS/ TRAINING			
	License Current and Posted (copy located at remote bulk sites)	Section 40-82-30	Only applicable to actively licensed locations.
	Employee(s) properly permitted	Section 40-82-220 (c)(3)	Only applicable to actively licensed locations.
			Have all appropriate permits been pulled and inspections complete from the authority having jurisdiction in your area (ie. Electrical)?
	Training	NFPA 58 4.4.1	Have all persons who transfer LP Gas been adequately trained per NFPA 58 4.4?
PIPING - LIQUID/ VAPOR - IN or OUT			
	Hydrostatic relief required where liquid trapped (valves and backchecks)	NFPA 58 6.27.3.7	The propane system shall be provided with hydrostatic relief valves in accordance with Section 6.15.
	Properly Sized Excess Flow Valve Required at container and change of pipe size	NFPA 58 5.9.8.1(H)	The connection or line that leads to or from any individual opening shall have a flow capacity greater than the rated flow of the excess-flow valve protecting the opening.
	Piping Secured	NFPA 58 6.11.3.9	Piping systems, including the interconnections of permanently installed containers, shall compensate for expansion, contraction, jarring, vibration and settling.
	Piping Protection	NFPA 58 6.11.3.11	Aboveground piping shall be protected against physical damage by vehicles.
	Corrosion Protection	NFPA 58.6.11.3.12	The portion of aboveground piping in contact with a support or a corrosion-causing substance shall be corrected against corrosion.
	Flex connectors max. 5 ft.	NFPA 58 6.11.6.3	Flexible metallic connectors shall not exceed 5 ft. (1.5 m) in overall length when used with liquid or vapor piping on stationary containers of 2000 gal (7.6 m ³) water capacity or less
	Excess Flow valve required at hose connection	NFPA 58 6.27.3.6	A device that shuts off the flow of gas when flow exceeds the predetermined flow rate shall be installed as close as practical to the point where the dispenser hose connects to the liquid piping.
	Emergency shutoff location and marking	NFPA 58 6.27.3.10	An identified and accessible remote emergency shutoff device for either the internal valve or the emergency shutoff valve required by 6.27.3.8(1) or (2) shall be installed not less than 3 ft. (1 m) or more than 100 ft. (30 m) from the liquid transfer point.
	Emergency Shutoff testing	NFPA 58 6 27.3.11	Emergency shutoff valves and internal valves that are fitted for remote closure as required in this section shall be tested annually for proper operation.
	LP Hose Marked LP 350 psi	NFPA 58 11.7.3.3(A) and 11.7.3.2	Hose shall be designed for a working pressure of 350 psig (2.4MPag) with a safety factor of 5 to 1 and shall be continuously marked with "LP GAS, PROPANE, 350 PSI WORKING PRESSURE", and the manufacturer's name or trademark.
	System and Piping free of leaks	NFPA 58 6.16.1.1	After installation or modification, piping systems (including hose) shall be proven free of leaks at not less than the normal operating pressure.
	Damaged or leaking hose to be replaced	NFPA 58 7.2.4.5	Leaking or damaged hose shall be immediately repaired or removed from service.
	Listed Breakaway for filling vehicles	NFPA 58 6.27.4.2	A listed emergency breakaway device shall be installed and shall comply with UL 567 ... and be designed to retain liquid on both sides of the breakaway point, or other devices affording equivalent protection approved by the AHJ.
	Max 18 ft. dispensing hose length, listed and protection of hose	NFPA 58 6.27.4.1	Hose shall comply with the following (1) Hose length shall not exceed 18 ft. (5.5 m) unless approved by the AHJ (2) All hose shall be listed (3) When not in use, the hose shall be secured to protect the hose from damage.
SEPERATION DISTANCES			
	Point of Transfer	NFPA 58-T.6.7.2.1	See table 6.7.2.1

	Distance for container relief to Building openings	NFPA 58-T.6.4.4.3	
	Distance between containers and Important Buildings	NFPA 58-T.6.4.1.1	
	Separation from Flammable Liquids minimum 20 ft.	NFPA 58 6.5.3.6	The minimum horizontal separation between aboveground LP gas containers and aboveground tanks containing liquids having flash points below 200 degrees F shall be 20 ft.
	Transfer point min. 10 ft. from class 1 dispensing	NFPA 58 6.27.4.3	(1) Conventional systems shall be at least 10 ft. (3.0m) from any dispensing device for Class I or Class II liquids. (2) Low- emission transfer systems in accordance with 6.30.5 shall be at least 5 ft. (2m) from any dispensing device for Class I or Class II liquids.
FIRE PROTECTION			
	Minimum 18 Lb. Fire Extinguisher Required	NFPA 58 6.29.4.2 and 4.7	Each industrial plant, bulk plant, and distributing point shall be provided with at least one portable fire extinguisher in accordance with Section 4.7 having a minimum capacity of 18 lb. (8.2 kg) of dry chemical.
	Fire extinguisher routine inspections	NFPA 10 Section 7.2.4.1.4	Records for manual inspection shall be kept to demonstrate that at least the last 12 monthly inspections have been performed.
	Fire extinguisher protected from elements	NFPA 10 Section 6.1.3.7	Fire extinguishers installed under conditions or in locations where they are subject to physical damage (e.g., from impact, vibration, the environment) shall be protected against such damage.
IGNITION SOURCE CONTROL			
	Combustible materials, weeds and grass not to closer than 10ft of container	NFPA 58 6.5.3.3	Combustible materials shall not accumulate or be stored within 10 ft. (3 m) of a container.
	Container not under power lines >600 volts	NFPA 58 6.5.3.13	LP Gas tanks and any associated appurtenances shall not be located within 6 ft. (1.8 m) of a vertical plane beneath overhead power lines that are over 600 volts nominal.
	Smoking, Sparks and Flame Prohibited and Enforced	NFPA 58 7.2.3.2(B)	Smoking, open flames, portable electric tools, and extension lights capable of igniting LP-Gas shall not be permitted within 25 feet (7.6 m) of the point of transfer while filling operations are in progress.
	No Smoking Posted from all directions of approach	2021 SCFC 310.3	The fire code official is authorized to order the posting of “No Smoking” signs or the international symbol for no smoking in a conspicuous location in each structure or location in which smoking is prohibited. The content, lettering, size, color and location of required “No Smoking” signs shall be approved.
	Electrical equipment per Code	NFPA 58 6.25.2.1	Electrical equipment and wiring installed in unclassified areas shall be in accordance with NFPA 70.
CONTAINER AND CONTAINER			
	Unobstructed relief valves	NFPA 58 6.9.2.3	Pressure relief devices on the following ASME containers shall be so installed that any gas released is vented away from the container upward and unobstructed to the open air (1) Containers of 125 gal (0.5 m3) or more water capacity installed in stationary service (2) Portable storage containers (3) Portable tanks (4) Cargo tanks
	Container pressure relief valve required	NFPA 58 5.9.2.5	ASME containers for LP-Gas shall be equipped with direct spring-loaded pressure relief valves conforming with the applicable requirements of UL 132... or other equivalent pressure relief valve standards.
	Rain Caps On Pressure Relief Valves	NFPA 58 6.9.2.4 & 6.9.2.5	Pressure relief valves shall be protected from the elements with the proper fitting cover.
	Appurtenances at least 250 psi	NFPA 58 5.9.1.3	Container appurtenances shall have a service pressure rating of at least 250 psig
	Relief Valves in vapor space of container	NFPA 58 6.8.1.1	Containers shall be positioned so that the pressure relief valve is in direct communication with the vapor space of the container.
	Container properly painted	NFPA 58 6.8.1.4	Aboveground containers shall be painted.
	Data plate required for tanks.	NFPA 58 5.2.8.3	The markings specified for ASME containers shall be on a stainless steel metal nameplate attached to the container, located to remain visible after the container is installed.
	Dispenser Secure and mounted	NFPA 58 6.27.3.13, 6.8.31(F)	All dispensers either shall be installed on a concrete foundation or shall be part of a complete storage and dispensing unit mounted on a common base and installed in accordance with 6.8.3.1(F).

Remote emergency power shutoff	NFPA 58 6.27.3.18	An identified and readily accessible switch or circuit breaker shall be installed outside at a location not less than 20ft or more than 100ft from the dispensers to shut off the power in the event of a fire, an accident or other emergency.
Emergency shutdown identification	NFPA 58 6.30.4.3 (C)	Emergency remote shutdown stations shall be identified as such by a sign incorporating the words Propane and Emergency Shutoff in block letters not less than 2 in. in height on a background of contrasting color to the letters. The sign shall be visible from the point of transfer.
Liquid withdrawal opening required valves	NFPA 58 6.27.3.9	The container liquid withdrawal opening used with vehicle fuel dispensers and dispensing systems shall be equipped with one of the following:(1) An internal valve fitted for remote closure and automatic shutoff using thermal (fire) actuation. (2) A positive shutoff valve that is located as close to the container as practical in combination with an excess-flow valve installed in the container, plus an emergency shutoff valve that is fitted for remote closure and installed downstream in the line as close as practical to the positive shutoff valve.
MISCELLANEOUS ITEMS		
Traffic protection provided where needed	NFPA 58 6.8.1.2 and 6.27.3.14	LP-Gas containers or systems that are installed within 10 ft. (3 m) of public vehicular thoroughfares shall be provided with a means of vehicular barrier protection.
Interconnected containers	NFPA 58 6.8.1.7	ASME containers that have liquid interconnections shall be installed so that the maximum permitted filling level of each container is at the same elevation.
Protection against tampering	NFPA 58 6.27.3.8 and 6.21.4.2	Protection against trespassing and tampering shall be in accordance with 6.21.4
Canopy open for at-least 50% of sides	NFPA 58 6.27.3.3	Where a vehicle fuel dispenser or dispensing system is installed under a weather shelter or canopy, the area shall be ventilated and shall not be enclosed for more than 50% of its perimeter.
SDS requirements from the IFC	2021 SCFC 5001.5.1, and 5003.5	Where required by the fire code official, an application for permit shall include a Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS). Unless otherwise exempted by the fire code official, hazard identification signs in accordance with NFPA 704 shall be required. Safety Data Sheets should be available.