

# Cylinder Exchange Rack or Forklift Cylinder Storage

**Disclaimer:** This checklist is not intended to be a definitive or exhaustive listing of all statutes, safety rules, regulations or codes that may be applicable. It is intended as a general guideline for assisting licensees and stakeholders in complying with state statutes, the Commission's safety rules and adopted national and federal codes that are specific to a CYLINDER EXCHANGE RACK (CEXR) or INDUSTRIAL FORKLIFT (INFL) CYLINDER STORAGE installation. The officially published statute, rule or code shall prevail in the event of a conflict with those referenced in the checklist. The checklist may be used to verify compliance prior to placing a facility in service or for routine maintenance audits to ensure continued compliance with applicable safety requirements.

CEXR	INFL	LICENSING REQUIREMENTS	
●		Installation is properly licensed (Category P)	113.081(a)(4)
●		Copy of current license available during regular business hours	9.7(c)
		<b>RESPONSIBILITIES OF LICENSEE PROVIDING CYLINDERS</b>	
●	●	Form 501 submitted to RRC	9.101(b)(1)
●		SOP manual in lieu of operations supervisor	9.17(d)(2)
●		SOP manual provided for display at each Category P outlet	9.17(d)(2)(B)
●		Training for Category P employees at each outlet and record of employees who have received training	9.17(d)(2)(C)
		<b>RESPONSIBILITIES OF CATEGORY P LICENSEE</b>	
●		Each employee involved in Category P activities is knowledgeable about contents and has a signed and dated manual	9.17(d)(3)(A)
●		Each employee involved in Category P activities knows the location of the manual and can show it to inspector	9.17(d)(3)(B)
		<b>DISTANCE REQUIREMENTS</b>	
		<b>STORAGE OUTSIDE OF BUILDINGS</b>	
●	●	5 feet from doorway or opening in a building frequented by the public—two means of egress	8.4.1.1(1)
●	●	10 feet from doorway in a building with one means of egress	8.4.1.1(2)
●	●	20 feet from automotive service station dispenser	8.4.1.1(3)
●	●	Distances may be reduced to zero if exterior walls are rated 2-hour resistance and made of non-combustible materials not provided with eaves over storage	8.4.1.3
●	●	3 feet horizontally from relief valve discharge to opening below. Minimum 5 feet between relief valve and exterior source of ignition.	NOTE ON INSPECTION
	●	Cylinder filled on site—Minimum 3 feet horizontally from relief valve discharge to opening below discharge. 10 feet from relief valve to exterior source of ignition	6.4.4.3
●	●	10 feet between containers and loose or piled combustible material and weeds, long, dry grass	Note CEXR 6.6.3.3
	●	Storage inside building not frequented by public—maximum allowed in location 735 lb water capacity, 300 lb LP-gas capacity. If more than one storage location—same building, same floor, 300 feet separation	8.3.3.1

# Cylinder Exchange Rack or Forklift Cylinder Storage

CEXR	INFL	PROTECTION	
●	●	Cylinders must be located to minimize excessive rise in temperature, physical damage, or tampering	8.2.1.1 9.140(d)
●	●	Lockable ventilated metal locker or rack	8.4.2.1(2) 9.140(d)
●	●	Pressure release valves must communicate with vapor space	8.2.1.2
●	●	Valve protection required—caps or collars—and cylinder outlets' valves must be closed and plugged, or capped	8.2.2
		<b>SIGNAGE</b>	
●	●	NO SMOKING (red letters), white or aluminum background, LP-GAS or PROPANE, FLAMMABLE, all letters minimum 1¼" high	9.140(f)
●		Letters at least 2" high on background of contrasting color, readily visible to the public — 24-hour Emergency Number _____	9.140(f)
●	●	A warning label shall be applied to all cylinders 4.2 lbs to 100 lbs LP-gas capacity and not filled on site. Label shall include information on the potential hazards of LP-gas.	5.2.8.4(1)
		<b>VEHICULAR PROTECTION</b>	
●	●	1. Guard railing, or 2. Guard posts 3" schedule 40 steel pipe, not more than 4 feet apart, anchored in concrete at least 30" below ground and 30" above ground. Effective 2/1/08—for new installations, guard posts shall be installed a minimum of 18" from each storage rack.	9.140(g)(1) 9.140(g)(2)(A)
●	●	If guard posts not anchored in concrete—minimum schedule 40 steel pipe capped on top and attached by welding a minimum. 8" x 8" steel plate at least ½" thick. Must be permanently installed. Effective 2/1/08—for new installations, guard posts must be at least 18" from each storage rack	9.140(g)(2)(b)
●	●	Guard rails or guard posts are not required if: 1) Rack is located a minimum 48" behind a concrete curb or wheel stop that is a minimum. 5" above grade or 2) Rack is located a minimum of 48" behind a concrete curb or wheel stop that is a minimum 4" above grade and a 4" concrete wheel stop is installed at least 12" from the 4" high curb or first 4" high wheel stop	9.140(g)(3) (A) and (B)
●	●	All parking wheel stops and cylinder storage racks in paragraph (3) of this subsection must be secured against displacement.	9.140(h)(4)
●	●	Commission may require additional protection if exceptional circumstances exist	9.140(e)
●	●	No cylinder storage permitted on roofs	8.2.1.5
		<b>CERTIFICATIONS</b>	
●		DOT cylinders with an expired re-qualification date shall not be re-filled until they are re-qualified.	5.2.2.3
	●	Industrial truck/forklift cylinders with an expired re-qualification date shall not be re-filled until they are re-qualified.	11.3.1.5
	●	Cylinder pressure relief valves in industrial truck service (including forklift truck cylinders) must be replaced within 12 years of the date of manufacture of the cylinder and every 10 years thereafter.	11.13.4.4
	●	Pressure relief valve of industrial truck cylinders must be provided with a protective cap.	11.13.2.7
	●	Maintenance	9.204

## Cylinder Exchange Rack or Forklift Cylinder Storage

CEXR	INFL	FIRE EXTINGUISHER	
●	●	Retail cylinder exchange locations shall be provided with at least one portable fire extinguisher in accordance with Section 4.7 having a minimum capacity of 10 lb (4.5 kg) dry chemical on the premises where retail cylinder exchange cabinets are storing more than 720 lb (327 kg) of propane.	8.5.1
●	●	Storage locations, other than those complying with 8.5.1, where the aggregate quantity of propane stored is in excess of 720 lb (327 kg) shall be provided with at least one approved portable fire extinguisher in accordance with Section 4.7 having minimum capacity of 18 lb (8.2 kg) dry chemical.	8.5.2
●	●	The required fire extinguisher shall be located within 50 ft (15 m) travel distance of the propane storage location.	8.5.3