



Ammonia Refrigeration FAQs

1. What are the requirements for ammonia refrigeration pressure relief replacement?

A:

[SPS 345.511\(1\)](#) PRESSURE RELIEF VALVE REPLACEMENT. This is a Department rule in addition to the requirements in ANSI/ASHRAE standard 15 section 11.6:

(a) All pressure relief valves for any ammonia mechanical refrigeration system that exists on or after September 1, 2010, shall be replaced in accordance with the manufacturer's recommendations and all of the following, except as provided in par. (b):

1. Each valve shall be replaced within 5 years after the date of installation.
2. Each valve may not be over 2 years old at the time of installation.
3. A record of the valve's installation shall be maintained until the valve is replaced.

(b) This subsection does not apply to relief devices that discharge internally to another part of a closed-loop refrigeration system.

2. What is the requirement for use of a water diffusion tank - Release of the largest relief for one hour or one gallon of water / pound of ammonia?

A: ASHRAE 9.7.8.2 Ammonia Discharge. Ammonia from pressure-relief valves shall be discharged into one or more of the following:

- a.) The atmosphere, per 9.7.8.
- b.) A tank containing one gallon of water for each pound of ammonia that will be released in one hour from the largest relief device connected to the discharge pipe. The water shall be prevented from freezing. The discharge pipe from the pressure-relief device shall distribute ammonia in the bottom of the tank but no lower than 33 feet below the maximum liquid level. The tank shall contain the combined volume of ammonia and water without overflowing.
- c.) Other treatment systems that meet the requirements of the authority having jurisdiction.

Also review of the following code sections: [SPS 345.511\(1\)](#) Pressure Relief Valve Replacement, IMC 1105.8 which sends one to ASHRAE 15, ASHRAE 15, 9.4, 9.5, 9.6 and 9.7 pressure relief section(s), IIAR 5.14.