

# Why does the Wisconsin Boiler and Pressure Vessel Code, SPS 341, regulate air compressors?

By Industry Services Division Boiler and Pressure Vessels Program

Almost everyone forms a definite picture in their mind when they hear the term “air compressor.” They probably think of a steel tank of some shape and dimension, with an electric motor, and an air pump mounted on top of the tank.

To better understand the requirements of the Wisconsin Boiler Code, SPS 341, pertaining to air compressors, we need to have some common terminology. If a person wanted to purchase an “air compressor” at a hardware or home supply store, they would certainly be offered the equipment described above, consisting of three separate mechanical devices; the motor, the pump, and the storage tank.

First, there is an electric motor, used to provide power to the device that pumps air to high pressure. This pumping device is the only part of the unit that is properly called an “air compressor.” The compressor delivers high-pressure air to the third and final part of the mechanical assembly, the air storage tank; commonly called a pressure vessel. Because the pressure vessel receives pressurized air, this is the only part of the device described above that is regulated SPS 341.

SPS 341 regulates pressure vessels when the pressure vessel's volume capacity is 90 gallons (12 cubic feet) or larger, and the air pressure is 15 pounds per square inch or higher. A typical pressure vessel of this size would be 24 inches in diameter and 48 inches long.

In industrial settings, it is common practice to mount very large air compressors in a separate location from the pressure vessels. One large compressor may even provide pressurized air to more than one pressure vessel.

Wisconsin government regulates the installation, operation, repair and alteration of pressure vessels of this size and design pressure due to the potential safety hazards. Complacency and lack of maintenance can cause the best piece of industrial equipment to develop safety hazards. Problem areas can develop as a result of corrosion and metal fatigue due. Safety and Buildings Division inspectors routinely inspect for indications of potential failure. Even a small pressure vessel has the potential to cause serious injury and great property damage if it should rupture while under pressure.

Call Brock McHenry at (262)524-3950, if you have any questions or need further information.