



BLANKETING / PURGING



Blanketing

Nitrogen blanketing is widely used in many industries to prevent fires, explosion, or degradation of products during their production, storage, and transport. Nitrogen is usually the best option. It can be used in a variety of situations including in tanks that are storing chemicals or hydrocarbons. The nitrogen will help reduce your oxygen content in your storage tanks or containers to a safe level. The nitrogen produced by our nitrogen generators acts as a buffer gas that then protects what you are storing in your tanks. In addition, the nitrogen will help produce a longer life cycle for your product as well as reduce hazards associated with storing chemicals, and even increase the life cycle of your equipment. While the purity levels of our gas blanketing nitrogen generator is typically between 95% and 99%.



Purging

Nitrogen purging is an industry standard technique for the replacement of a hazardous or undesirable atmosphere with an inert dry atmosphere. Nitrogen can be used for a range of similar applications such as line or tank purging, drying, line clearing, pigging or pressure transferring. Below are some examples of purging systems.

Pressure-hold-vacuum method

This method is commonly used when the vessel being purged only has one opening or in batch operations like purging ethylene oxide sterilizers. Nitrogen is used to pressurize a vessel or line, it mixes with and dilutes the contents and then the diluted mixture is vented to emission control units. This process is repeated until the vessel is sufficiently purged. The ending concentration for each cycle is proportional to the starting concentration and the high and low pressure in the cycle.

Dilution purging and drying

Nitrogen can continuously enter the vessel, dilute the mixture and exhaust through an exit preferably opposite the entrance. The geometry of the vessel and orientation of entry and exit points are important factors in the effectiveness of dilution purging. Drying follows a similar process but allows for removal of residual materials.

Displacement purging and pigging

Nitrogen can be used to purge out a pipe run. A "pig," a bullet shaped object, can also be pushed through the line using nitrogen gas pressure in order to purge the contents.

Pressure transfer of liquids

A vessel's headspace can be pressurized with nitrogen to transfer liquids without the use of a pump. This can be advantageous when pumping the material is difficult due to space constraints or when the material, such as corrosives, can cause pump issues.

