

JOHNSONVILLE SAUSAGE



Company:

Johnsonville Sausage, located in Sheboygan Falls, WI, is the No. 1 seller of sausage in the United States and is also available in about 30 additional countries. The company has been using LN₂ for freezing for 6 years and prefers this method because it prevents the sausages from sticking together.

Design Challenges:

Johnsonville was using a standard bulk tank for liquid nitrogen supply to its freezer. With a high demand for the best quality and product consistency, the company was in need of a system to optimize the supply of liquid nitrogen. This short-fall is inherent in the use of a standard bulk tank for this application because it is designed for gas use.

Solution:

Johnsonville sought out new technology to store and supply their freezer with a more consistent flow of liquid nitrogen. The new ChillZilla® features a dynamic pressure builder, which maintains a constant delivery of liquid nitrogen from a full tank all the way down to the refill point. In addition, the ChillZilla utilizes a vacuum jacketed withdrawal to reduce losses and ice-balls associated with un-insulated pipe connections. Finally, the system allows for automatic reconditioning of the liquid during off hours ensuring the customer has full control over the liquid conditions.

CHILLZILLA® LN₂ SUPPLY
FOR FOOD FREEZING

CASE STUDY #13



ChillZilla® 11,000 gal. with high flow 40 gpm vaporizer and 2" VIP withdrawal

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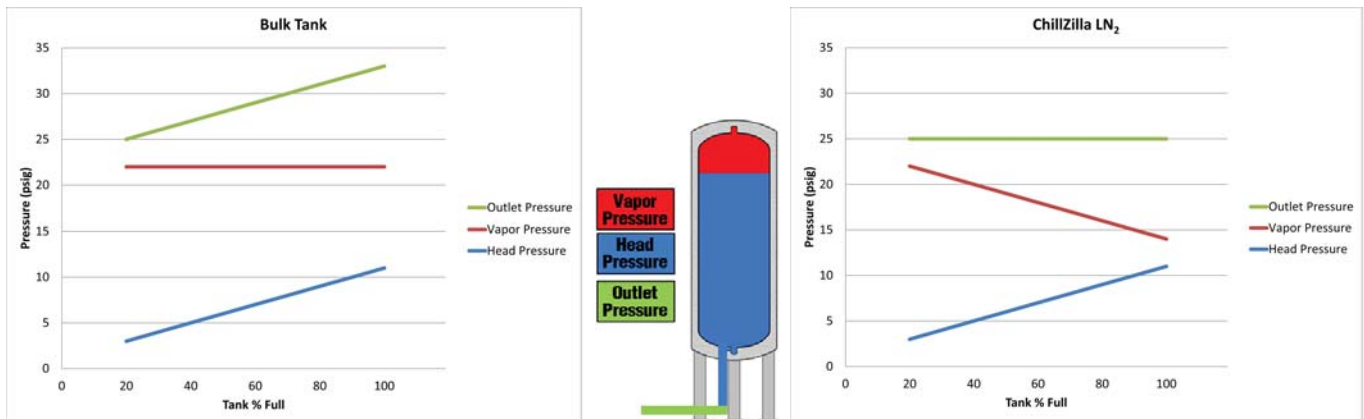


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Results:

The ChillZilla® is the only system available today designed for a liquid use application that automatically controls product delivery pressure with the least amount of losses. Thus, ensuring a consistent delivery of quality liquid no matter what level the contents are inside the tank. The following graphs compare the supply pressures of a standard bulk tank with the new ChillZilla utilizing the dynamic pressure builder. Note how the outlet pressure is stable on the ChillZilla LN₂ throughout the tank liquid level.



Outcome:

Johnsonville was looking to have control over the outlet pressure of the tank.

With the dynamic pressure builder and vent control, the ChillZilla supplies the freezer with a constant 25 psig pressure at the tank outlet no matter what level the tank is at.

Johnsonville was looking for new technology to help store liquid for their freezer.

The ChillZilla provides a vacuum jacketed liquid withdrawal and automatic product reconditioning function, in addition to the dynamic pressure builder to give this storage the most advanced control system on the market.

Johnsonville was looking to lower their storage pressure.

With the ChillZilla, Johnsonville was able to decrease their supply pressure to 25 psig, thus greatly decreasing their storage/saturation pressure for better freezing energy with less fogging at the freezer. Protecting the liquid from unwanted heat and low pressure drop in the 2" VIP withdrawal line may have also contributed to this reduction.

The ChillZilla LN₂ contains all the features and benefits that the customer was looking for to replace their older tank. See Chart literature P/N 15085676 for more information.