

nitrogen generation for food & beverage processing



"We are so impressed with the operation and performance of the nano GEN2 units and we are looking to add more modular units (banks) next year."

-a major peanut & snack foods packager in North Carolina

A major peanut & snack foods packager in Eastern North Carolina needed to reduce their nitrogen gas costs so, they turned to nano-purification solutions and their local authorized nano distributor for assistance.

nano worked alongside their distributor with the end customer to design a PSA N₂ system which reduced nitrogen gas costs from \$0.52/100 ft³ down to less than \$0.10/100 ft³. Dual GEN2-12130 units produce an impressive 7,840 ft³/hr of nitrogen gas.

The GEN2 Series expandable design allows customer to simply add modular units as their production increases. The integrated energy efficient ecomode function eliminates the costly compressed air requirement during periods of low or no production.



products & processes include:

coffee

fruits & vegetables

cheese

potato chips

nuts

nano-purification solutions llc
charlotte, north carolina
united states

nano-purification solutions
st. catharines, ontario
canada

nano-purification solutions ltd
gateshead, tyne and wear
united kingdom

tel: 704.897.2182
fax: 704.897.2183
email: support@n-psi.com

behind the numbers... return on investment (ROI)

In today's competitive business climate companies are searching for significant operating cost savings. This customer was spending an astonishing \$238K/year in N2 gas with their gas provider; however, they were able to reduce operating cost to less than \$40K/year with a nano N2 system (includes operating & maintenance costs). The result? A seven year savings of \$1.4M and a payback of LESS THAN 1 YEAR! This substantial cost savings is a powerful message to any plant supervisor, financial manager and business owner and will often open the door for further discussions. Contact a nano representative for a quick and simple ROI analysis.

ROI investment summary			
cost per ccf			
financial analysis	delivered gas	\$0.52	per ccf
	generated on-site	\$0.07	per ccf
	operational costs per year		
	delivered gas	\$238,085.12	per year
	generated on-site	\$33,239.09	per year
	savings by self generating N2		
	generated on-site vs. delivered	\$0.45	per 100 ft ³
	generated on-site vs. delivered	\$204,846.03	per year
	7 year total savings	\$1,433,922.21	
	ROI	8	months

modified atmospheric packaging (MAP)



We've all left a bag of chips open or milk out of the refrigerator too long...the result is decay. The oxygen in ambient air (~21%) causes food decay called oxidation. The injection of nitrogen and removal of oxygen significantly slows down the process of decay by inhibiting processes of oxidation and the growth of microbes.

Modified Atmospheric Packaging (MAP) machines are equipped with injection nozzles which introduce nitrogen gas into each container or bag as it is filled with food product. The benefits of packaging food with nitrogen gas include extended freshness, shelf life and shipping range.