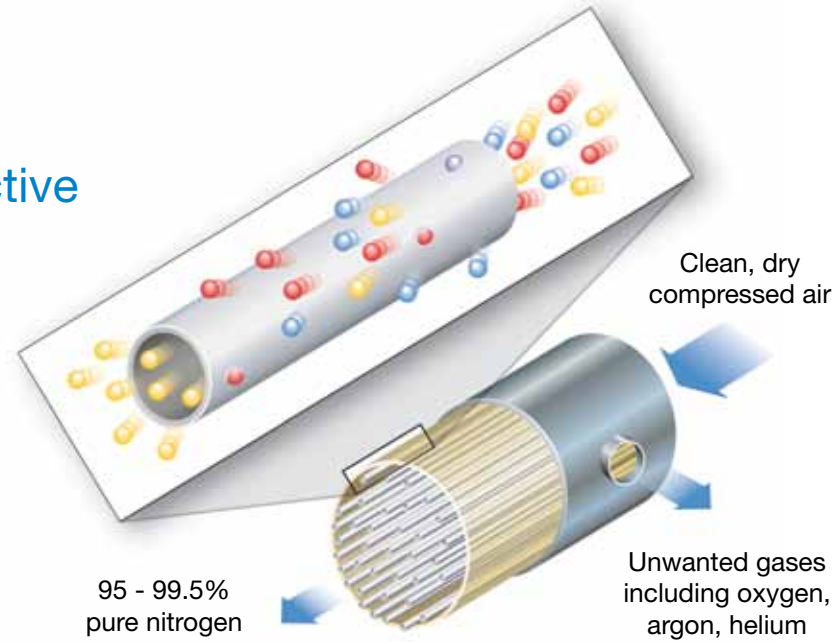
Nitrogen Generation System

and Nitrogen Booster

Easily produce a cost-effective and continuous nitrogen gas supply



Operation of numerous Nordson® adhesive dispensing systems can be enhanced by use of nitrogen gas. The family of foaming systems uses the nitrogen gas to create the closed cell foam that both improves the physical properties and reduces the volume, and the expense, of adhesives and sealants. Additionally, nitrogen gas can be used with nearly any Nordson tank melter or extruder to create a nitrogen blanket to promote the use of reactive materials while simplifying their use and protecting the integrity of their adhesive properties.

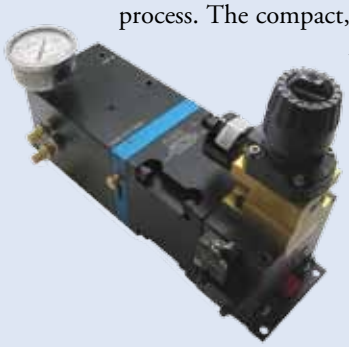
However, easily maintaining a readily-available, economical source of nitrogen gas has been challenging. Traditionally, nitrogen gas supply has used high-pressure cylinders. These cylinders can be cumbersome to deal with, need to be changed out regularly, and can be expensive to replace or refill. And, the high-pressure aspect mandates special storage and handling that involves extensive training be administered and maintained. Inventory must be retained and replenished/re-ordered on a regular basis with the risk of running out and halting production if cylinders are depleted or experience faults or defects. And, changing out cylinders involves stopping production, directly impacting operational efficiencies and product quality and scrap.

The Nordson nitrogen generation system assures continuous, in-line nitrogen gas availability and eliminates variability of price fluctuations. The compact system can be positioned close to the point of application and feeds directly into the manufacturing process. There is no wasted nitrogen as you produce only what is needed and there is no residual gas as can be left unused in cylinders.

The self-contained, wall-mount system is easily installed and maintained with no electrical connection or moving parts. Dual-stage filtering removes debris and moisture from supply air. A special membrane technology then vents unwanted gases and allows the nitrogen gas to pass at a 95 to 99.5% purity level.

Nitrogen Booster

Some Nordson foaming systems need a booster to raise the nitrogen gas pressure. The Nordson nitrogen booster connects directly to the nitrogen generation system to seamlessly achieve the pressure to optimize the material foaming process. The compact, lightweight booster can be mounted virtually anywhere between the generator and the foaming system and offers easy operation and monitoring.



Nordson

Nitrogen Generation System and Nitrogen Booster

Set-up and operation are simple:

1. Using ¼" tubing connect a regulated, clean, compressed air supply to the input fitting on the generator.
2. If low pressure nitrogen is needed:
   a. Using ¼" tubing connect generator outlet directly to device requiring inert gas. Adjust incoming air pressure to the desired nitrogen pressure (add 10 psi nominal additional air pressure to allow for system pressure drop).
3. If high pressure nitrogen is needed:
   a. Using ¼" tubing connect the nitrogen generator outlet to "GAS IN" port of booster pump.
   b. Using high pressure pneumatic hose connect the "GAS OUT" port of the booster pump to the device requiring inert gas.
   c. Connect compressed air supply to the "AIR IN" port of the booster pump.
   d. Adjust the regulator located on the booster pump to a value equal to desired nitrogen pressure divided by 20 (incoming air pressure is "boosted" by a factor of 20 by this pump).
4. Verify that filter status indicates no service is required.

The system is now ready for use.

Generator Specifications

Nitrogen Purity	95.0-99.5%
Maximum Pressure	7 bar (100 psi)
Maximum Flow Rate (per hour)	137 liters
Atmospheric Dewpoint	-50° C (-58° F)
Recommended Ambient Temperature	20° C (68° F)
Maximum Pressure Drop (@99% N_2 purity, 125 psig)	10 psig
Maximum Inlet Air Temperature	43° C (110° F)
Dimensions (L x H x D)	473 x 361.5 x 150 mm (18.62 x 14.23 x 5.91 in.)
Weight (approx)	9.5 kg (21 lb)

Booster Specifications

Maximum Pressure	138 bar (2000 psi)
Dimensions (L x H x D)	307 x 274 x 174 mm (12.1 x 9.4 x 6.8 in.)
Weight (approx)	11 kg (24 lb)
Designation	CE

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