N₂-Blast®

FPS Series
Nitrogen Generators

INTRODUCING THE N₂-BLAST® - CORROSION INHIBITING SYSTEM. DESIGNED AND MANUFACTURED BY SOUTH-TEK SYSTEMS, THE LEADER IN NITROGEN GENERATION TECHNOLOGY.

Ensures Integrity of the FPS
The integrity of a Dry or Preaction Fire Protection System (FPS) can be compromised due to corrosion, freeze-ups or ice plugs in the sprinkler piping. Hydrotesting a Fire Protection System leaves residual water in the sprinkler piping, which becomes a key ingredient in corrosion, leading to freeze-ups and ice blockages.
The N₂-Blast® - Corrosion Inhibiting System produces 98%+ pure Nitrogen on demand and introduces it to the Dry or Preaction Fire Protection System. In doing so, Oxygen and moisture are displaced from the piping through the AutoPurge System™.
The N₂-Blast® - Nitrogen Generation System effectively inhibits Electrochemical, Galvanic and Microbiologically Influenced Corrosion (MIC), as well as freeze-ups and ice plugs.

The Technology
South-Tek Systems utilizes Membrane or Pressure Swing Adsorption (PSA) technology in the N₂-Blast® - Corrosion Inhibiting Systems in order to efficiently separate Nitrogen molecules from the air we breathe.
Membrane technology, used in our smaller applications, has a simple air flow design, is wall-mounted and easy to service. PSA technology is more cost effective and energy efficient in larger Fire Protection Systems, those requiring more Nitrogen to compensate for the NFPA “acceptable leak rate”.
The N₂-Blast® - Corrosion Inhibiting System comprises the following:
• N₂-Blast® - Nitrogen Generator
• BlastOff™ - Leak Detection System
• Air compressor
• Nitrogen receiver tank
• N₂-Blast® - AutoPurge System
• Quick-Check™ - Nitrogen Purity Sensor

Simple Design.
Our technology is utilized worldwide to protect life safety systems. That’s why we designed our Nitrogen Generators with minimal circuitry and moving parts, limiting failure points and maximizing life expectancy.

Simple Installation.
The N₂-Blast® provides Nitrogen directly to the Air Maintenance Device (AMD).

BlastOff™ - Leak Detection System
Unless the leak rate is catastrophic, the supervisory low pressure alarm on the FPS will not activate. Minor leaks cause the air compressor and N₂-Blast® to run excessively in order to maintain supervisory pressure. The unnecessary additional run-time decreases the lifespan of the equipment. The Patent Pending BlastOff™ - Leak Detection System is designed to detect significant leaks before they compromise the FPS and the Nitrogen Generation System. It has an internal audible alarm and dry contact for wiring into the Building Monitoring System (BMS) and will also alarm if the air compressor or the N₂-Blast® is not working properly.
FPS-250 “Type 1” Nitrogen Generator
- Handles up to **250 gallons** of FPS sprinkler pipe capacity
- Fully automatic with pressure switch
- Pre-filters and pressure regulator
- Control panel with gauges, hourmeter and power switch
- **32”H x 16”W x 11”D & 56 lbs.**

FPS-750 “Type 1” Nitrogen Generator
- Handles up to **750 gallons** of FPS sprinkler pipe capacity
  - Fully automatic with pressure switch
  - Pre-filters and pressure regulator
  - Control panel with gauges, hourmeter and power switch
  - **32”H x 16”W x 11”D & 75 lbs.**

FPS-1750 “Type 2” Nitrogen Generator
- Handles up to **1,750 gallons** of FPS sprinkler pipe capacity
- Fully automatic with pressure switch
- Pre-filters and pressure regulator
- Control panel with gauges, hourmeter and power switch
- **42”H x 14”W x 10”D & 80 lbs.**

FPS-3000 “Type 2” Nitrogen Generator
- Handles up to **3,000 gallons** of FPS sprinkler pipe capacity
  - Fully automatic with pressure switch
  - Pre-filters and pressure regulator
  - Control panel with gauges, hourmeter and power switch
  - **42”H x 14”W x 10”D & 81 lbs.**

FPS-6000 “Type 2” Nitrogen Generator
- Handles up to **6,000 gallons** of FPS sprinkler pipe capacity
- Fully automatic with pressure switch
- Pre-filters and pressure regulator
- Control panel with gauges, hourmeter and power switch
- **42”H x 14”W x 10”D & 85 lbs.**
“Type 1” Installation

N₂-Blast® Sizing
• Add the gallons of each zone to get the total FPS capacity and size system accordingly

“Type 1” Nitrogen Generators
• These systems are complete with integrated air compressors
• A separate, basic air compressor is needed in order to fill the largest zone to pressure within 30 minutes (per NFPA 13 requirements)

Nitrogen Storage Tank
• “Type 1” & “Type 2” Nitrogen Generation Systems include a 28 gallon Nitrogen receiver tank (14”dia x 47”H)
• “Type 3” Nitrogen Generation Systems include a 80 gallon Nitrogen receiver tank (24”dia x 67”H)

Electrical Requirements
• “Type 1” Nitrogen Generators: 120V/60Hz/1Phase, 20 AMP
• “Type 2” & “Type 3” Nitrogen Generators: 120V/60Hz/1Phase, 8 AMP

BlastOff™ - Leak Detection System (Patent Pending)
• Provided exclusively within every N₂-Blast® - Nitrogen Generation System
• Alarms when the N₂-Blast® senses a significant leak in FPS piping, which causes the air compressor and N₂-Blast® to run excessively
• Alarms if the air compressor or N₂-Blast® are not working properly
• Built within the N₂-Blast® cabinet and includes dry contact for signal out to BMS
• Ensures energy efficiency

FPS-12000 “Type 3” Nitrogen Generator
• Handles up to 12,000 gallons of FPS sprinkler pipe capacity
• Fully automatic with pressure switch
• Pre-filters and pressure regulator
• Control panel with gauges, hourmeter and power switch
  •60”H x 26”W x 24”D & 590 lbs.

FPS-18000 “Type 3” Nitrogen Generator
• Handles up to 18,000 gallons of FPS sprinkler pipe capacity
• Fully automatic with pressure switch
• Pre-filters and pressure regulator
• Control panel with gauges, hourmeter and power switch
  •60”H x 26”W x 24”D & 610 lbs.
**STS NF-C-2-J Air Compressor**
- 1 hp piston, oil-lubricated with after-cool package
- 30 gallon accumulator tank with pneumatic auto-drain
- Added filtration package to ensure clean, dry, oil-free air
- Compressed air flow output of 3.8 SCFM at 125 PSI
- Fills up to 575 gallons within 30 minutes (0-40 PSI)
- Complete with refrigerated dryer package

**STS NF-C-3-J Air Compressor**
- 2 hp piston, oil-lubricated with after-cool package
- 30 gallon accumulator tank with pneumatic auto-drain
- Added filtration package to ensure clean, dry, oil-free air
- Compressed air flow output of 7.6 SCFM at 125 PSI
- Fills up to 900 gallons within 30 minutes (0-40 PSI)
- Complete with refrigerated dryer package

**STS NF-C-4-CH Air Compressor**
- 3 hp piston, oil-lubricated with 60 gal. accumulator tank
- After-cooler, plus added filtration to ensure clean air
- Pneumatic auto-drain off of the air receiver tank
- Compressed air flow output of 10.9 SCFM at 175 PSI
- Fills up to 1,100 gallons within 30 minutes (0-40 PSI)
- Complete with refrigerated dryer package

**STS NF-C-5-CH Air Compressor**
- 5 hp piston, oil-lubricated with 80 gal. accumulator tank
- After-cooler, plus added filtration to ensure clean air
  - Pneumatic auto-drain off of the air receiver tank
- Compressed air flow output of 17.3 SCFM at 175 PSI
- Fills up to 1,600 gallons within 30 minutes (0-40 PSI)
- Complete with refrigerated dryer package

**STS NF-C-6-CH Air Compressor**
- 7.5 hp piston, oil-lubricated with 80 gal. accumulator tank
- After-cooler, plus added filtration to ensure clean air
  - Pneumatic auto-drain off of the air receiver tank
- Compressed air flow output of 23.5 SCFM at 175 PSI
- Fills up to 3,100 gallons within 30 minutes (0-40 PSI)
- Complete with refrigerated dryer package

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Note: *Cold Climate Package* available for regions in which sprinkler piping is consistently exposed to 15°F or less conditions.
QUALITY ACCESSORIES

OUR ACCESSORIES HELP YOU CUSTOMIZE THE NITROGEN GENERATION SYSTEM TO EXACTLY MATCH YOUR SPECIFIC OPERATING REQUIREMENTS.

N₂-Blast® - AutoPurge System™

Efficient Nitrogen Supervision
High purity Nitrogen must be equally distributed throughout the entire FPS piping system in order to effectively inhibit corrosion. The Patent Pending AutoPurge System™ provides a low volume, constant purge of Nitrogen within each FPS system. The rate in which gas is evacuated from the FPS is within NFPA guidelines and allows breathing to occur. The AutoPurge System™ also assists in drying out the residual water from a hydrotest. Computational Fluid Dynamics modeling proves that this is the most effective way to ensure that high purity Nitrogen reaches all branches within the FPS. Install one AutoPurge System™ per zone at a high point on a remote section of the FPS.

Quick-Check™ - PowerSaver Manifold

Reduced Energy Consumption
The Quick-Check™ - PowerSaver Manifold option brings all of South-Tek’s Patent Pending features together into one location. Each AutoPurge System™ is routed with 1/4” tubing into the PowerSaver Manifold. The PowerSaver Manifold monitors Nitrogen purity within each Zone during a “sampling phase”, once per day. During the sampling phase, only one AutoPurge System™ will flow through the Quick-Check™ - Nitrogen Purity Sensor at a time. At the end of the sampling phase, the PowerSaver Manifold stores the achieved Nitrogen purity into memory and displays the results on its screen. If the Zone’s purity meets specification, then the Zone will remain off (not purging) until the next sampling phase. If purity does not meet specification, the Zone will remain in the open position and continue its purge until the next sampling phase (Nitrogen Generator provides the Zone with more Nitrogen until purity specification is met).

Quick-Check™ - Nitrogen Purity Sensors

Portable Nitrogen Purity Sensor
Hand-held, battery operated and easily connects to the AutoPurge System™. Designed so that preventative maintenance personnel can obtain a quick, periodic, visual display of Nitrogen levels in the FPS.

Fixed Mount Nitrogen Purity Sensor
Attaches to the outlet of the AutoPurge System™. It has an integrated Nitrogen level alarm relay and dry contact to provide Nitrogen purity information to the supervisory circuit on the Building Monitoring System.

Quality Accessories

Our accessories help you customize the nitrogen generation system to exactly match your specific operating requirements.
**Quick-Check™ - PowerSaver Manifold**
- Samples Nitrogen purity content within each Zone
- Deactivates *AutoPurge System™* as Nitrogen purity set point is achieved
- Maintenance mode periodically monitors purity content in each Zone
- Customized to monitor any number of Zones
- Wall mountable and complete with PLC and modules
- Analog 0-10V, 4-20mA signal out to BMS when purity is achieved
- Electrical: 110V/60Hz/1Ph, 8 AMP

**Quick-Check™ - Portable Nitrogen Purity Sensor**
- Battery operated, hand-held Nitrogen analyzer verifies that desired Nitrogen purity is achieved within all zones
- Attaches to quick connection on each *AutoPurge System™*

**Quick-Check™ - Fixed Mount Nitrogen Purity Sensor**
- Mountable (1/4” NPT) Nitrogen analyzer verifies that desired Nitrogen purity is achieved within all zones
- Adjustable timer allows for periodic sampling
- Integrates with Building Monitoring System
- Electrical: 110V/60Hz/1Ph, 8 AMP

**Remote Access Option: Quick-Check™ - Fixed Mount Nitrogen Purity Sensor / PowerSaver Manifold**
- Equipped with 2gb micro SD card for data extraction
- Ethernet communication module included for remote access within the network
- Includes remote access software
- Status reports sent via email if purity does not meet specification
# N₂-BLAST® SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>FPS-250</th>
<th>FPS-750</th>
<th>FPS-1750</th>
<th>FPS-3000</th>
<th>FPS-6000</th>
<th>FPS-12000</th>
<th>FPS-18000</th>
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<tbody>
<tr>
<td><strong>Maximum FPS Capacity (Gallons)</strong></td>
<td>250</td>
<td>750</td>
<td>1,750</td>
<td>3,000</td>
<td>6,000</td>
<td>12,000</td>
<td>18,000</td>
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<tr>
<td><strong>Dimensions (H x W x D)</strong></td>
<td>32&quot;x16&quot;x11&quot;</td>
<td>32&quot;x16&quot;x11&quot;</td>
<td>42&quot;x14&quot;x10&quot;</td>
<td>42&quot;x14&quot;x10&quot;</td>
<td>42&quot;x14&quot;x10&quot;</td>
<td>60&quot;x26&quot;x24&quot;</td>
<td>60&quot;x26&quot;x24&quot;</td>
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<tr>
<td><strong>Weight</strong></td>
<td>56 lbs.</td>
<td>75 lbs.</td>
<td>80 lbs.</td>
<td>81 lbs.</td>
<td>85 lbs.</td>
<td>590 lbs.</td>
<td>610 lbs.</td>
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<tr>
<td><strong>Mount¹</strong></td>
<td>Wall</td>
<td>Wall</td>
<td>Wall</td>
<td>Wall</td>
<td>Wall</td>
<td>Skid</td>
<td>Skid</td>
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<tr>
<td><strong>Electrical</strong></td>
<td>120V/60Hz/1Phase</td>
<td>120V/60Hz/1Phase</td>
<td>120V/60Hz/1Phase</td>
<td>120V/60Hz/1Phase</td>
<td>120V/60Hz/1Phase</td>
<td>120V/60Hz/1Phase</td>
<td>120V/60Hz/1Phase</td>
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<tr>
<td><strong>Amperage</strong></td>
<td>20</td>
<td>20</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
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<tr>
<td><strong>Compressed Air SCFM Required</strong></td>
<td>Integrated²</td>
<td>Integrated²</td>
<td>3.2</td>
<td>6.0</td>
<td>13.0</td>
<td>15.0</td>
<td>23.0</td>
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<tr>
<td><strong>Air Compressor Min. Working Pressure Required</strong></td>
<td>Integrated²</td>
<td>Integrated²</td>
<td>125 PSI</td>
<td>125 PSI</td>
<td>125 PSI</td>
<td>125 PSI</td>
<td>125 PSI</td>
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<tr>
<td><strong>Maintenance</strong></td>
<td>Annual (Filter)</td>
<td>Annual (Filter)</td>
<td>Annual (Filter)</td>
<td>Annual (Filter)</td>
<td>Annual (Filter)</td>
<td>Annual (Filter)</td>
<td>Annual (Filter)</td>
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<tr>
<td><strong>Lead Time</strong></td>
<td>1-2 Weeks</td>
<td>1-2 Weeks</td>
<td>1-2 Weeks</td>
<td>1-2 Weeks</td>
<td>1-2 Weeks</td>
<td>4-6 Weeks</td>
<td>4-6 Weeks</td>
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<tr>
<td><strong>Warranty</strong></td>
<td>2 Years³</td>
<td>2 Years³</td>
<td>2 Years³</td>
<td>2 Years³</td>
<td>2 Years³</td>
<td>2 Years³</td>
<td>2 Years³</td>
</tr>
</tbody>
</table>

¹Wall mount can be provided with floor stand.

²The FPS-250 and FPS-750 systems are complete with integrated air compressors. A separate, basic air compressor is needed in order to fill largest zone to pressure within 30 minutes (per NFPA 13 requirements).

³Per South-Tek Systems Terms & Conditions.
# AIR COMPRESSOR SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>STS-NF-C-2-J</th>
<th>STS-NF-C-3-J</th>
<th>STS-NF-C-4-CH</th>
<th>STS-NF-C-5-CH</th>
<th>STS-NF-C-6-CH</th>
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<tbody>
<tr>
<td><strong>Horsepower</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>SCFM</strong></td>
<td>3.8</td>
<td>7.6</td>
<td>10.9</td>
<td>17.3</td>
<td>23.5</td>
</tr>
<tr>
<td><strong>Min. Working Pressure</strong></td>
<td>125 PSI</td>
<td>125 PSI</td>
<td>125 PSI</td>
<td>125 PSI</td>
<td>125 PSI</td>
</tr>
<tr>
<td><strong>Zone Capacity Filled w/in 30 Min. (40 PSI)</strong></td>
<td>575 Gallons</td>
<td>900 Gallons</td>
<td>1,100 Gallons</td>
<td>1,600 Gallons</td>
<td>2,100 Gallons</td>
</tr>
<tr>
<td><strong>Air Compressor Dimensions (W x L x H)</strong></td>
<td>22” x 37” x 30”</td>
<td>20” x 39” x 34”</td>
<td>24” x 31” x 76”</td>
<td>24” x 33” x 77”</td>
<td>24” x 33” x 77”</td>
</tr>
<tr>
<td><strong>Air Compressor Weight</strong></td>
<td>250 lbs.</td>
<td>280 lbs.</td>
<td>425 lbs.</td>
<td>565 lbs.</td>
<td>545 lbs.</td>
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<tr>
<td><strong>Air Compressor Electric (One Phase)</strong></td>
<td>120-208-230V/60Hz</td>
<td>120-208-230V/60Hz</td>
<td>208-230-460VAC/60Hz</td>
<td>208-230-460VAC/60Hz</td>
<td>208-230-460VAC/60Hz</td>
</tr>
<tr>
<td><strong>Air Compressor Electric (Three Phase)</strong></td>
<td>208-230-460V/60Hz</td>
<td>208-230-460V/60Hz</td>
<td>208-230-460VAC/60Hz</td>
<td>208-230-460VAC/60Hz</td>
<td>208-230-460VAC/60Hz</td>
</tr>
<tr>
<td><strong>Refrigerated Dryer Dimensions (W x L x H)</strong></td>
<td>13” x 13” x 15”</td>
<td>13” x 13” x 15”</td>
<td>11” x 16” x 14”</td>
<td>21” x 18” x 26”</td>
<td>21” x 18” x 26”</td>
</tr>
<tr>
<td><strong>Refrigerated Dryer Weight</strong></td>
<td>64 lbs.</td>
<td>64 lbs.</td>
<td>69 lbs.</td>
<td>86 lbs.</td>
<td>86 lbs.</td>
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<tr>
<td><strong>Refrigerated Dryer Electric</strong></td>
<td>115VAC/60Hz/1Ph</td>
<td>115VAC/60Hz/1Ph</td>
<td>115VAC/60Hz/1Ph</td>
<td>115VAC/60Hz/1Ph</td>
<td>115VAC/60Hz/1Ph</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 Year&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1 Year&lt;sup&gt;1&lt;/sup&gt;</td>
<td>5 Years&lt;sup&gt;1&lt;/sup&gt;</td>
<td>5 Years&lt;sup&gt;1&lt;/sup&gt;</td>
<td>5 Years&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>1</sup>Per Air Compressor Manufacturer’s Terms & Conditions.
WARRANTIES

WE DESIGN BEST-IN-CLASS, DEPENDABLE NITROGEN GENERATORS. IT ONLY SEEMS RIGHT TO OFFER A WARRANTY TO MATCH.

NITROGEN GENERATORS

N2-Blast® - FPS Series
South-Tek Systems warrants to the purchaser that all Nitrogen generators and other products manufactured by South-Tek Systems shall be free of defects in material and workmanship for a period of two (2) years from the date of shipment to the purchaser (per South-Tek Systems’ Terms & Conditions). The South-Tek Systems warranty only applies to products manufactured by South-Tek Systems.

AIR COMPRESSORS

STS-NF-C-2-J & 3-J
The STS-NF-C-2-J and STS-NF-C-3-J Air Compressors are warranted for one (1) year from date of purchase. The manufacturer will repair, without charge, any defects due to faulty materials or workmanship. This warranty does not apply to accessories or damage caused where repairs have been made or attempted by others. This warranty gives you specific legal rights and you may have other rights which vary in certain states or provinces.

AIR COMPRESSORS

STS-NF-C-4-CH, 5-CH & 6-CH
Each new assembled STS-NF-C-4-CH, 5-CH and 6-CH has a five (5) year warranty on the air receiver, pump and motor only, against defects in materials or workmanship under normal use and service, from the date of installation or sixty-six (66) months from the date of shipment by the manufacturer, whichever may occur first. The five-year extended warranty covers parts and labor and is prorated as follows:
• Year One - 100% coverage
• Year Two - 90% coverage
• Year Three - 80% coverage
• Year Four - 70% coverage
• Year Five - 60% coverage
Head valves are warranted for Year One only. The manufacturer makes no warranty on components and/or accessories furnished to the manufacturer by third parties.