Version 1-11/2025

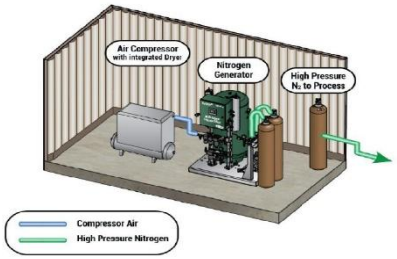
QUICK-START GUIDE

N_2GEN High Pressure Cylinder Fill (HPCF)

Contact South-Tek Support at: support@southteksystems911.zendesk.com to schedule your Virtual Start-up, which will cover the steps below.

A: General Arrangement

Compressor with dryer plumbed with .5" hose to N2 generator. High Pressure Cylinders filled for end process.



B: Important Considerations

1. The equipment is designed to be operated indoors.
2. Compressor and N_2 generator must have adequate room for ventilation.
3. The compressed air must be clean and dry to prevent damage to components and molecular sieve and must be rated to always maintain 110 PSI.
4. This system can fill CGA-580 or CGA-680 HP Cylinders to 2200 psi (CGA-580) or 3000 PSI (CGA-680) depending on model. Check PSI rating on cylinder.
5. Personal Protective Equipment should be worn when operating. Eye protection and hearing protection.

C: Connecting the cylinders

1. Secure HP cylinders to fill stand (chain, strap or other).
2. Connect HP Flex lines to cylinders and tighten.
3. Open cylinder valve and corresponding ball valve (make sure any lead not in use is closed).
4. Close exhaust ball valve.

D: Starting the System

1. All equipment is set in place, secured to pad, and connected to power.
2. All piping and electrical connections have been made and are secure.
3. Cylinder(s) attached to stand and secured.
4. Fill lines connected and secured.

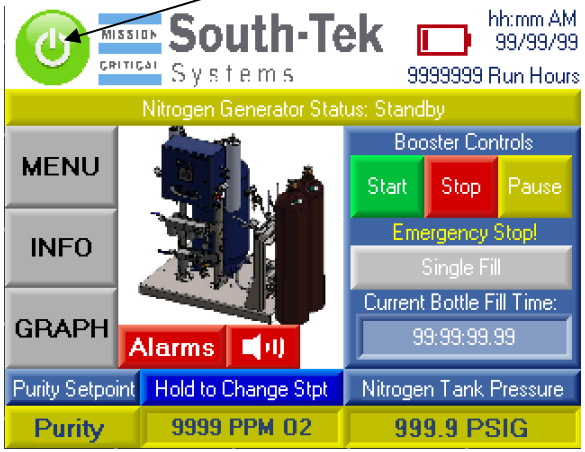
E: Air Compressor Start-Up

1. Verify proper voltage and rotation.
2. Pressurize storage tank and lines up to generator and check for leaks.
3. Ensure pressure settings are adequate.
4. Check dryer condensate drain line (plumb to suitable catch).
5. Ready for operation.

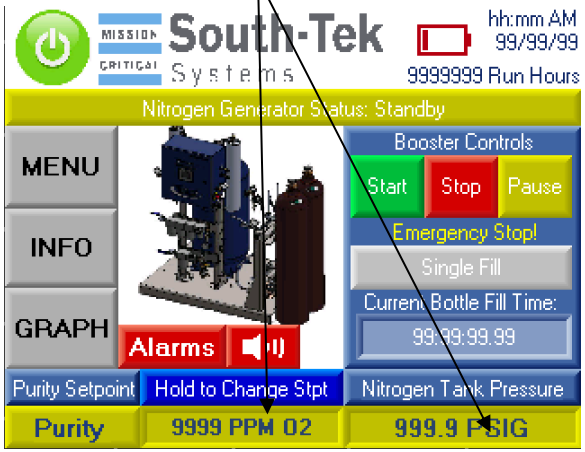
F: Nitrogen Generator Start-up

1. Make sure all connections are tight,
2. Verify voltage (ensure line is terminated at fuse block)
3. Inlet pressure at inlet regulator must be 110 PSI.
4. Toggle to run mode and pressurize N_2 storage tank.
5. Start cylinder fill (N_2 tank pressure must be 89 PSI before booster will start).
6. Fill cylinder until N_2 tank purity is 0.10% or better on N_2 tank purity display. Stop filling, then dump cylinder and start filling again with specified 0.10% purity.

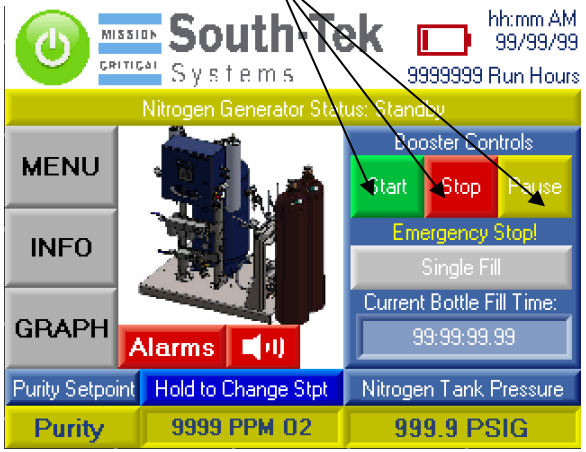
1. **Using the control panel:**
Powering the unit
User password: **6557**



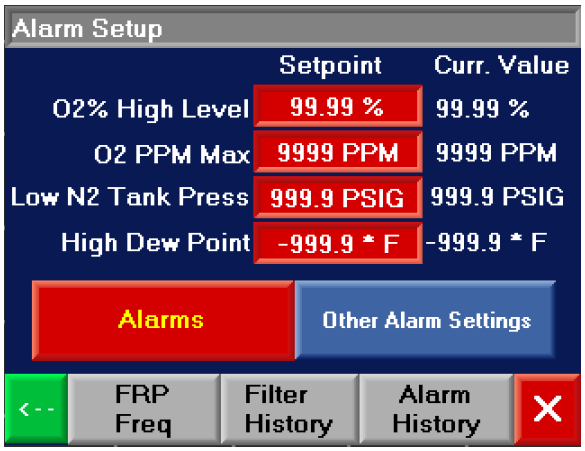
2. **Using the control pane:**
Monitoring N_2 tank purity and N_2 tank pressure



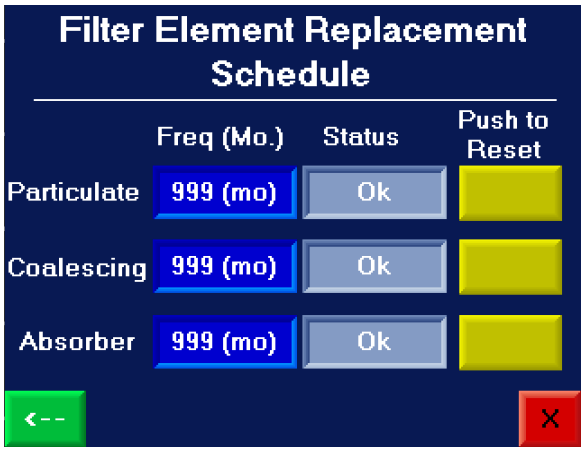
3. **Using the control panel:**
Booster control: Start, Stop, Pause (Must be at operating pressure between 89-81 PSI)



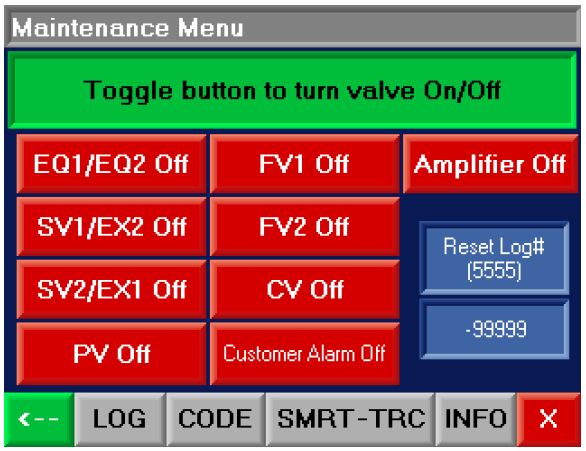
4. **Using the control panel:** Alarms can be set to desired setpoints. Setpoints can be changed in Alarms/Filter Parameters



5. **Using the control panel:** In Alarms/Filters, click FRP Freq: Reset Filter Element Replacement Schedule upon start-up and after filter change. Hold "push to reset."



6. **Using the control panel:**
Maintenance Menu can be used to toggle valves on and off for troubleshooting.



H: Preventative Maintenance

HPCF Maintenance Schedule	Daily	Weekly	Monthly	6 Months	1 Year	5 Years	500-1000 hrs
Alarm Check	I						
Leak Check	I						
Filter Drains			I				
Filters				R			
Muffler/Muffler Element Change					R		
CMS Top Up					I/R		
O_2 Analyzer Verification/Calibration					I	R	
Booster							R
Valve					I	R	
Solenoid					I	R	

I: How to Change Filters

1. Valve off supply air (ball valve before filtration).
2. Drain pressure using the service valve (mini wedge valve) at the end of filter bank (ensure gauge reads zero).
3. Grip and push up on filter bowl and rotate clockwise 1/4 turn and remove.
4. Clean out bowls, if necessary, inspect float for functionality, replace filters and reinstall reverse of disassembly.
5. Reset filter maintenance reminder in PLC (see section G5).
6. Return service valve (mini wedge valve) back to closed position. Return air into ball valve to open position.

J: Where to get Filters and Repair Parts

Technical Support Contact:

- Phone: (910) 415-1880
- Email: support@southteksystems911.zendesk.com