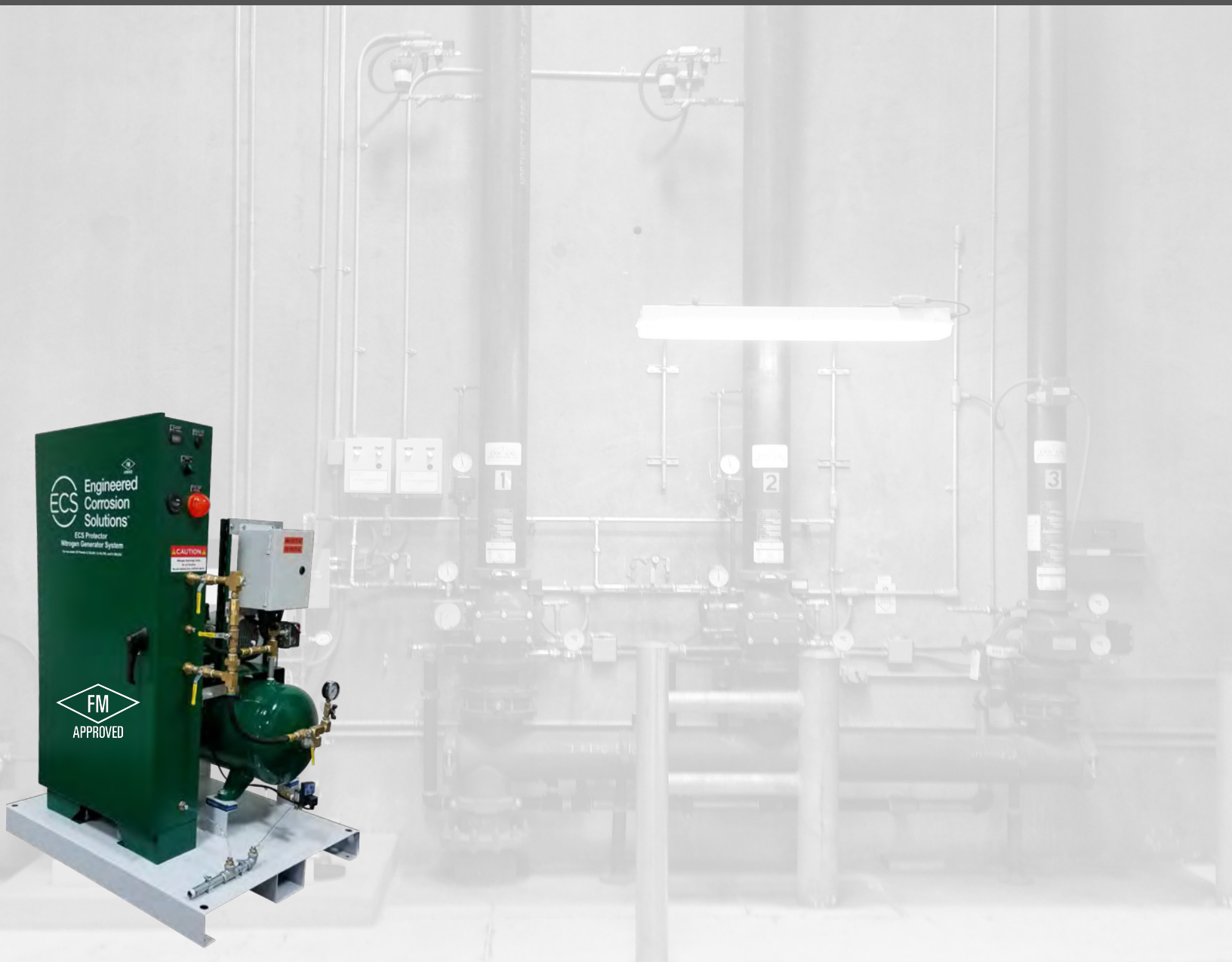


The De Facto Standard in Fire
Sprinkler Corrosion Control™

DRY PIPE
NITROGEN
INERTING

DPNI

ECS Protector Series Nitrogen Generation Systems



ecscorrosion.com

(314) 432-1377

sales@ecscorrosion.com



Engineered
Corrosion
Solutions™

Complete Corrosion Control.

SPECIFYING A NITROGEN GENERATOR

The Right System for your Project

STEP 1: SELECT A NITROGEN GENERATOR

To ensure the nitrogen generator is adequately sized, the following information is **required**:

- 1) The total cumulative size of all dry/preaction sprinkler systems
- 2) The size of the largest single dry/preaction sprinkler system
- 3) The total number of dry/preaction sprinkler systems
- 4) The supervisory pressure of all dry/preaction sprinkler systems

With this information an ECS nitrogen generator can be selected. Small to medium projects can generally be supplied with a pre-engineered nitrogen generator that includes an integral air compressor (PGEN-3/5/10/20). Projects with a larger cumulative sprinkler system capacity should be supplied with an engineered stand-alone nitrogen generator paired with a separate air compressor or house air (PGEN-30/40/50/60).

STEP 2: SELECT A VENT

To facilitate the removal of oxygen, ECS utilizes the patented “fill and purge” breathing process which requires installation of a vent to control gas discharge from the fire sprinkler system. One (1) vent is required on each dry/preaction fire sprinkler riser, with two available options:

- 1) ECS Protector Manual Vent (PAV-D)
- 2) ECS Protector Dry SMART Vent (PSV-D)

The PAV-D is a mechanical device that is closed manually once the system nitrogen concentration has been verified at 98% or greater and represents the most economical approach to oxygen removal. The PSV-D includes an electronic solenoid valve that closes automatically once the desired nitrogen concentration has been reached and is preferred in applications that value automation or minimal human intervention.

STEP 3: SELECT MONITORING EQUIPMENT

Engineered Corrosion Solutions believes that a true corrosion management system should be monitored for performance to ensure that fire sprinkler system piping is properly protected against oxygen corrosion. ECS offers multiple monitoring options to pair with a nitrogen generation system:

- ECS In-Line Corrosion Detector (includes remote test station)
- ECS Protector SMART Gas Analyzer (permanent installation)
- ECS Protector Handheld Gas Analyzer

STEP 4: CONTACT ECS

Contact ECS Monday thru Friday, 8 AM - 5 PM (cst) to have a **project specific quote returned in four (4) business hours or less**. Your project will be reviewed by an ECS engineer to ensure the most cost effective solution is provided.

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THE ECS ADVANTAGE

Cost Effective Technology Leader

ALL PRODUCTS SOLD DIRECT

- No distributor mark-up
- System design and product selection assistance with every project
- Direct support and training from the manufacturer

PATENTED FILL & PURGE BREATHING PROCESS

- Allows all equipment to be installed in the sprinkler riser room
- No remote equipment in critical areas
- Ensures minimal labor time to install and maintain equipment

NO UNNECESSARY EQUIPMENT

- No refrigerated dryers, nitrogen tanks, or extensive gas sampling lines
- Reduces equipment footprint where space is limited
- Minimizes installation labor and coordination with other trades

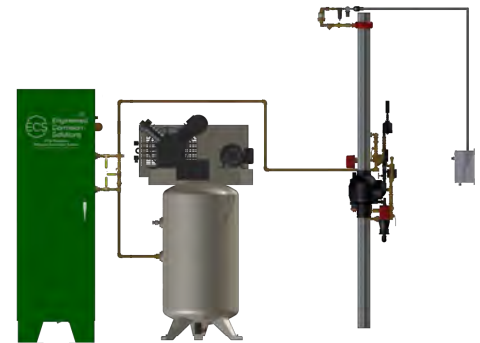
INDUSTRY BEST LEAD TIMES

- 72 hours from purchase order to shipment
- Respond to project demands immediately
- Complete projects on time and under budget

SUPERIOR CUSTOMER SERVICE AND SUPPORT

- Single engineer point of contact for every project
- Replacement parts available for shipment in 24 hours
- Technical support available 24/7

Typical Nitrogen Generator Installation



PGEN-40 with 5 hp oil-lubricated air compressor and SMART vent at riser

MONITORING OUTPUTS INCLUDED WITH EVERY ECS NITROGEN GENERATOR

Providing peace of mind to protect your investment

- Output for system power
- Output for nitrogen generation mode
- Output for air bypass mode
- Output for leak monitoring
- Output for nitrogen supply pressure

NITROGEN GENERATORS

Pre-Engineered Plug and Play Systems

PGEN-3/5

- Up to 675/950 gallons total sprinkler system capacity
- FM Approved
- UL 508A Listed Industrial Control Panel
- Integrated oil-less air compressor
- Wall-mount ready
- Air bypass and leak monitoring alarm signals included
- Equipped with multiple monitoring outputs

Specifications

- Nitrogen Purity: 98%+
- Electrical: 120VAC, 6 amps
- Dimensions: 36" (H) x 24" (W) x 9" (D)



PGEN-10

- Up to 2,000 gallons total sprinkler system capacity
- FM Approved
- UL 508A Listed Industrial Control Panel
- Integrated oil-less air compressor
- Wall-mount ready
- Air bypass and leak monitoring alarm signals included
- Equipped with multiple monitoring outputs

Specifications

- Nitrogen Purity: 98%+
- Electrical: 120VAC, 24amps
- Dimensions: 38" (H) x 29" (W) x 11" (D)

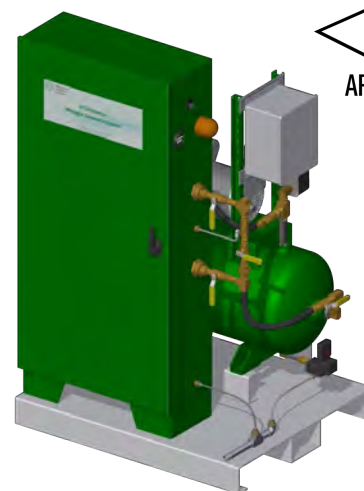


PGEN-20

- Up to 3,200 gallons total sprinkler system capacity
- FM Approved
- UL 508A Listed Industrial Control Panel
- Integrated oil-less air compressor w/ air receiver tank
- All equipment skid-mounted
- Air bypass and leak monitoring alarm signals included
- Equipped with multiple monitoring outputs

Specifications

- Nitrogen Purity: 98%+
- Electrical: 120VAC, 2 amps (generator)
208/480VAC, 3 phase (compressor)
- Dimensions: 57" (H) x 32" (W) x 40" (D)



NITROGEN GENERATORS

Engineered Stand-Alone Systems

PGEN-30

- Up to 6,500 gallons total sprinkler system capacity
- UL 508A Listed Industrial Control Panel
- Paired with oil-less air compressor or house air
- Stand-alone cabinet
- Air bypass and leak monitoring alarm signals included
- Equipped with multiple monitoring outputs

Specifications

- Nitrogen Purity: 98%+
- Electrical: 120VAC, 2 amps
- Dimensions: 53" (H) x 24" (W) x 12" (D)



PGEN-40

- Up to 11,000 gallons total sprinkler system capacity
- FM Approved
- UL 508A Listed Industrial Control Panel
- Paired with 5 hp oil lubricated air compressor
- Stand-alone cabinet
- Air bypass and leak monitoring alarm signals included
- Equipped with multiple monitoring outputs

Specifications

- Nitrogen Purity: 98%+
- Electrical: 120VAC, 2 amps
- Dimensions: 77" (H) x 24" (W) x 12" (D)



PGEN-50/60

- Up to 18,500/22,500 gallons total sprinkler system capacity
- FM Approved
- UL 508A Listed Industrial Control Panel
- Paired with 7.5 or 10 hp oil lubricated air compressor
- Stand-alone cabinet
- Air bypass and leak monitoring alarm signals included
- Equipped with multiple monitoring outputs

Specifications

- Nitrogen Purity: 98%+
- Electrical: 120VAC, 2 amps
- Dimensions: 77" (H) x 24" (W) x 12" (D)



PGEN ACCESSORIES

Venting and Pressure Control Devices

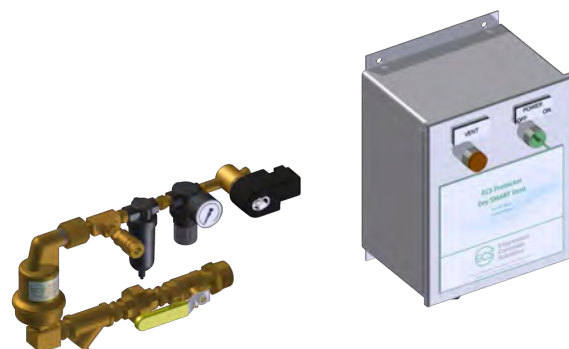
ECS Protector Manual Vent (PAV-D)

- Installed at fire sprinkler riser, no remote installation required
- Facilitates patented “fill and purge” breathing process
- Sprinkler system reaches 98% nitrogen within two (2) weeks
- Pressure regulator prevents system depressurization
- Float valve prevents water discharge
- Requires no plumbing to drain
- No electric required



ECS Protector Dry SMART Vent (PSV-D)

- Installed at fire sprinkler riser, no remote installation required
- Facilitates patented “fill and purge” breathing process
- Automatically closes once 98% nitrogen has been reached
- Pressure regulator prevents system depressurization
- Float valve prevents water discharge
- Requires no plumbing to drain
- Includes control box enclosure, requires 120V power supply



ECS Protector Nitrogen Interface Controller (NIC-1)

- Allows one nitrogen source to supply multiple sprinkler systems operating at different pressures
- Facilitates patented “fill and purge” breathing process when paired with a venting device
- “Plug and Play” performance in self-contained wall mount cabinet
- Includes manual bypass for fast fill option
- Requires 120V power supply



Notes

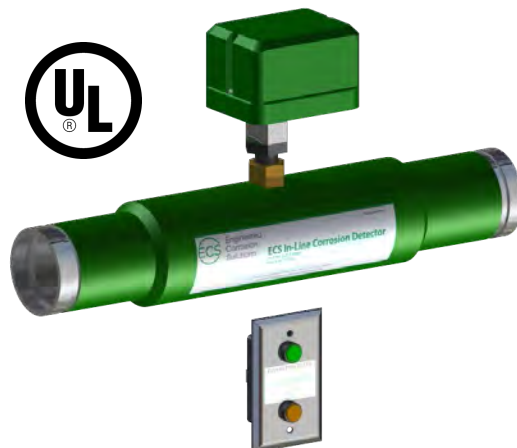
- One (1) venting device required per sprinkler system, vent assembly requires 1/2” connection at riser
- Install Dry SMART Vent control box on wall adjacent to vent assembly installed at riser
- Nitrogen Interface Controller only required for multiple dry/preaction systems supplied from one nitrogen source and operating at different pressures, not required for multiple dry/preaction systems operating at a single maintenance pressure

PGEN ACCESSORIES

Monitoring Devices

ECS In-Line Corrosion Detector (ILD)

- Only device that provides continuous real-time corrosion monitoring of a fire sprinkler system
- UL Listed
- Matches size, schedule, and material of system piping
- Provides 360° surface area to detect internal corrosion
- Thin wall section monitored by UL Listed/FM Approved pressure switch
- Includes remote test station, can be monitored remotely and with fire alarm or building automation systems



ECS Protector SMART Gas Analyzer (SGA-1)

- Provides continuous real-time gas concentration of system
- Multiple signal outputs: contact closure, 0-5V DC, and 4-20mA
- Can be monitored by fire alarm or building management systems
- Includes digital display
- Accepts 24V DC or 120V AC power supply
- Paired with ECS venting device for continuous gas supply



ECS Protector Handheld Gas Analyzer (PHGA-1)

- Handheld battery powered device verifies nitrogen purity
- Measures gas concentration at vent sampling port or nitrogen generator discharge
- Features one button self-calibration



Notes

- Minimum one (1) In-Line Corrosion Detector recommended per nitrogen generator
- In-Line Corrosion Detector typically installed on dry/preaction system mains where trapped water collects
- One (1) SMART Gas Analyzer recommended per nitrogen generator, must be installed adjacent to ECS vent
- Pressure rated gas sample tubing between venting device and gas analyzer provided by ECS

NITROGEN GENERATOR SPECIFICATIONS

ECS Protector Series

	PGEN-3	PGEN-5	PGEN-10	PGEN-20	PGEN-30	PGEN-40	PGEN-50	PGEN-60
Total System Capacity	675 gal	950 gal	2,000 gal	3,200 gal	6,500 gal	11,000 gal	18,500 gal	22,500 gal
Single System Capacity @ 40 psi⁽¹⁾	215 gal	265 gal	560 gal	950 gal	1,150 gal	1,440 gal	2,025 gal	2,900 gal
Single System Capacity @ 20 psi⁽¹⁾	540 gal	590 gal	1,120 gal	1,800 gal	2,300 gal	2,880 gal	4,050 gal	5,800 gal
Air Compressor	Integral Oil-less	Integral Oil-less	Integral Oil-less	Integral Oil-less	Oil Lubricated	Oil Lubricated	Oil Lubricated	Oil Lubricated
Size (H x W x D)	36x24x9	36x24x9	38x29x11	57x32x40	53x24x12 ⁽²⁾	77x24x12 ⁽²⁾	77x24x12 ⁽²⁾	77x24x12 ⁽²⁾
Weight	115 lbs	125 lbs	175 lbs	420 lbs	152 lbs ⁽²⁾	264 lbs ⁽²⁾	300 lbs ⁽²⁾	300 lbs ⁽²⁾
Configuration	Wall Mount	Wall Mount	Wall Mount	Skid Mount	Stand Alone	Stand Alone	Stand Alone	Stand Alone
Electrical	120V	120V	120V	120V/ 460V/3p ⁽³⁾	120V ⁽⁴⁾	120V ⁽⁴⁾	120V ⁽⁴⁾	120V ⁽⁴⁾
Lead Time⁽⁶⁾	72 hrs	72 hrs	72 hrs	72 hrs	72 hrs	72 hrs	72 hrs	72 hrs

Notes

- (1) Single system capacity based on 30 min. fill requirement of largest single sprinkler system; a secondary air compressor with normally closed isolation valve can be used to meet fill requirement for larger individual systems
- (2) Size and weight of nitrogen generator only, does not include separate air compressor
- (3) 120V power supply required for nitrogen generator, 208 or 460V/3 phase power supply required for compressor
- (4) Power requirement for stand alone nitrogen generator only, does not include separate air compressor power requirements, options include: 200V/230V/460V 3 phase
- (5) Lead time refers to time from order receipt to shipment from ECS facility, does not include shipping time
- (6) All nitrogen generators include 1 year manufacturer's warranty per ECS terms and conditions

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