



Superior Energy Systems

AUTOGAS INFRASTRUCTURE SOLUTIONS



Propane Autogas

Propane, referred to as autogas when used in internal combustion engines, is the leading alternative fuel in the nation and the third-most commonly used fuel across the globe, behind gasoline and diesel. Thanks in part to lower total cost of ownership, more and more fleet managers are choosing propane autogas to fuel their fleet. Even when conventional fuel prices are low, a vehicle's additional costs—like fuel, fluids, filters, and repairs—can drain your fleet's budget. Over your vehicle's lifetime, propane autogas is proven to help you save money and clean up the air with notable reductions in emissions. In addition, you'll pick from a wide range of certified OEM and aftermarket options and all vehicles deliver comparable, if not improved, horsepower, torque, and towing capacity when compared to gasoline or diesel fueled models.

Why Superior?

For more than 40 years, we've brought together engineering, manufacturing, construction and safety expertise to focus on operational excellence. We provide the best in turnkey LPG and NGL systems and infrastructure solutions as well as safety and compliance training. We have manufactured more bulk plants and trans-shipment terminals throughout the United States than any other company and have over 950 autogas dispensers located across North America.

Whether you are using propane autogas for your fleet vehicles or for retail sales, our certified dispensers and dispensing systems provide you with the infrastructure solutions you need for safe, secure and simple fueling. From a single fueling dispenser to a complete station installation, we can customize a package specifically for you, helping you choose the right refueling option based on fleet size, routes, budget, and facility space. And because propane autogas infrastructure is scalable, it can easily grow to meet your fleet's needs. We can also help coordinate the conversion or purchase of your vehicles, ensuring a seamless transition to autogas.





PRO-Vend 1000/1500

The PRO-Vend 1000/1500 is our best-selling dispenser and the foundation platform for all PRO-Vend propane autogas dispensers. The unit comes with everything you need to get started, including easy-to-read and use MID:COM display panel and electronics, and can connect to any external fuel management system available today. It meets the guidelines set forth in UL Standard 495 and the CSA Canadian Standard, making it the right choice for states and jurisdictions with those requirements.

Upgrades/Options:

- Additional tank and skid packages
- High-pressure pumping systems
- Hose retractor
- PRO-Vend 1500 (dual hose) shown at left
- Third-party fuel management system connections
- PRO-Vend 2000 upgrade kit

Unit Certifications:

- National Type Evaluation Program (NTEP) certified by the National Conference of Weights and Measures
- Measurement Canada approved to Weights and Measures Act, article 193
- Approved to UL Standard 495
- Approved to Canadian Standard CAN1-12.4





PRO-Vend 2000/2500

The PRO-Vend 2000/2500 is our most advanced dispenser. The state-of-the-art unit is a fully integrated, customizable web-based propane autogas fuel dispenser that operates from a built-in, Windows-based PC. The unit tracks key data like driver and vehicle identification, vehicle mileage, and gallons pumped for a virtually unlimited number of vehicles, drivers and customers.

You can create customizable reports without the need to purchase and install separate technology. The self-contained touch screen system features a built-in, high resolution fueling video monitor, ideal for driver training and friendly fueling reminders. Fueling is as easy as swiping a key fob or entering a credit card or access number into the touch screen and picking up the zero-emission fuel nozzle.

Software Features:

- User selectable predefined prompts up to 32 digits in length or create customized—up to four (4) messages—such as driver ID, vehicle ID, odometer
- HID proximity key-fob reader
- Adjustable programming parameters through cloud based system in real time
- View pump transactions in real time
- User four (4) digit pins are generated by the system for secure access to only authorized users
- Software updates are provided automatically to all pumps in the system through cloud based or directly to your VPN

Benefits:

- Internal embedded Windows 7 with Intel ATOM Dual Core Processor
- Internal memory allows tracking of unlimited number of proximity fobs or cards.

- No on-site configuration required; system is shipped with current software and pre-programmed to customer needs.
- Transaction data is stored on the cloud in real time and in the event of a communication failure, data is stored in the system PC. When communication is reestablished, data is sent to the cloud automatically.
- Menu configurations and upgrades take place through the cloud.

Unit Certifications:

- National Type Evaluation Program (NTEP) certified by the National Conference of Weights and Measures
- Measurement Canada approved to Weights and Measures Act, article 193
- Approved to UL Standard 495
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Upgrades/Options:

- Transaction receipt printer
- Additional key fobs
- Credit card reader
- Additional tank and skid packages
- High-pressure pumping systems
- Hose retractor
- PRO-Vend 2500 (dual hose)
- Training videos



PRO-Vend 3000

The easy-to-use PRO-Vend 3000 is ideal for fleets that don't require fuel tracking or monitoring. The unit includes a mechanical temperature compensated meter, rather than a mass flow meter. Starting at an affordable base price, the unit offers a variety of upgrades to fit your specifications, such as tank skid or pump package.



PRO-Vend 3000-P

The PRO-Vend 3000-P is a portable propane autogas dispensing station designed for easy towing and temporary set up anywhere you need fueling. It's an ideal short-term fueling solution for events, expos and more.

The completely self-contained system includes an on-board propane-fueled generator to fuel up to six gallons per minute, a low- or no-emission fuel pump nozzle and a 500- or 1,000-gallon storage container. The system offers on-board vehicle protection and meets all NFPA codes and standards. Leasing options are available.





PRO-Vend 4000

The PRO-Vend 4000 is equipped with everything you need to easily refill DOT propane cylinders. The unit includes a beam scale, temperature compensated mechanical meter and weatherproof enclosure. Starting at an affordable base price, the unit offers a variety of upgrades to fit your specifications, such as tank skid or pump package. ScaleTec adds automatic filling and stop control to the PRO-VEND 4000. The unit is equipped with a fiber optic transmitter and receiver. Easily convert any beam scale to an electronic, automatic shutoff scale system with ScaleTec.

ScaleTec

Prevent overfill easily with the following steps:

- Attach the hose to the cylinder.
- Set the scale set point.
- Disconnect the hose after the system shuts off.
The scale beam moves while the cylinder is filling.
- Once the cylinder reaches its maximum permitted filling level, the scale beam breaks the beam of light and automatically stops the filling process.



PRO-Vend FMC (Fuel Management Control)

The PRO-Vend FMC is a separate fuel management pedestal, equipped to pair with existing fuel dispensers. It features card and key fob capabilities designed to track all driver, fuel and vehicle information and is able to grow with your fleet. The system is shipped complete with all up to date software, requiring only connections to power, hose authorization wire and pulse input. All communication is provided through a cloud based system using the included cell modem.

Features

- User selectable predefined prompts up to 32 digits in length or create customized—up to four (4) messages—such as driver ID, vehicle ID, odometer
- HID proximity key-fob reader
- Optional credit card reader
- Adjustable programming parameters through cloud based system in real time
- View pump transactions in real time
- User four (4) digit pins are generated by the system for secure access to only authorized users
- Software updates are provided automatically to all pumps in the system through cloud based or directly to your VPN

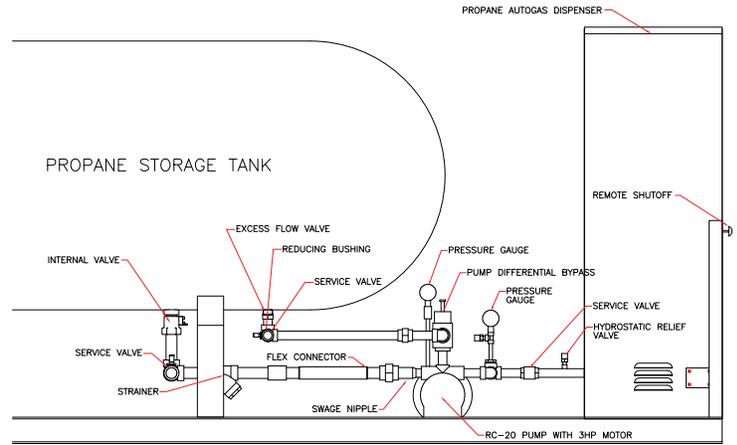
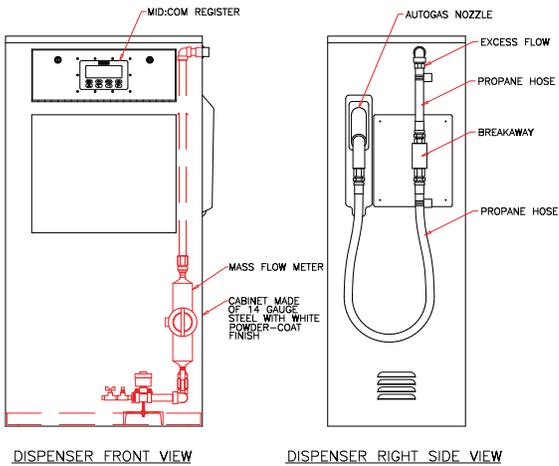
Benefits

- FMC internal embedded Windows 7 with Intel ATOM Dual Core Processor
- 1 GB memory allows tracking of unlimited number of proximity fobs or cards.
- No on-site configuration required; system is shipped with current software and pre-programmed to customer needs.
- Transaction data is stored on the cloud in real time and in the event of a communication failure, data is stored in the system PC. When communication is reestablished, data is sent to the cloud automatically.
- Menu configurations and upgrades take place through the cloud.
- Standard powder coated aluminum pedestal; cabinet meets Americans with Disabilities Act requirements.

Technical Specifications

- Standard memory allows tracking of unlimited number of proximity fobs or cards on the internal PC and on the cloud in real time
- Cabinet dimensions: 30 inches H x 4' 11" inches W x 21 inches D (76.19 x 149.92 x 53.34)
- Power Requirements: 115 VAC, 50/60Hz, 200 watts maximum
- Display: LCD VGA 6.5 inches





Complete Dispensing Systems

In addition to dispensers, we custom design and manufacture complete propane autogas dispensing systems which include one or multiple dispensers, skid mounted tanks of various sizes and all of the necessary components needed to begin fueling.

Tanks

Tanks manufactured for its intended purpose

- All connections close to the cabinet
- Cuts down on distances and potential leak points
- Container filling connections purposely located on opposite end of the container away from the point of transfer

Internal valve

- Threaded directly into the container
- Provides means for mechanical, thermal and remote emergency closure
- Incorporates excess flow technology
- Fusible element not to exceed 250°F
- Pneumatic or cable operated

Service valve

- Located in several places within the piping system to isolate or provide backup containment of the product

MID:COM Register

- Boot incorporates a switch that automatically shuts off pump and completes the transaction when nozzle is hung up
- Lockout timer will shut off pump if no fuel flow in 30 seconds

Piping and Strainer

- Schedule 80 (A106 piping)
- Forged carbon steel fittings (2000 WOG)
- Strainer—Keeps foreign material out of the product going to the pump

Flex Connector

- Protects the piping system from the effects of vibration and possible settling
- Stainless steel braided

Pump Differential Bypass

- Protects the pump from effects of overpressure
- Allows adjustment to create differential pressure
- The heart of the pumping system

Excess Flow Valve

- Protects container from unintentional release should downstream line break
- Slugs by differential pressure or GPM flowing
- Even if valve sheers off, the operator would remain in the container
- Note—additional positive shutoff valve

Hoses

- Manufactured for intended service
- 350 psig WP; 1750 psig burst
- Perforated (will not burst)
- Pressure tested by manufacturer at 120% of WP
- Tagged by manufacturer
- Must be marked appropriately
- NFPA 58 requirement
- Available length of up to 18 feet
- Breakaway valve separates at approximately 80 pounds force



Below ground tank installation

Remote Shutoff Locations

- Remote emergency shutoff required at least 3 feet from point of transfer
- Provides mechanical means of closure
- Additional electrical disconnect required at building not less than 20' nor more than 100' from the cabinet
- Both propane and electrical shutoff locations required to be readily visible from point of transfer by appropriate signage
- Provides protection for cabinet and piping system should vehicle pull away

Nozzles

Gas Guard—Low emission

- Less than 4cc
- 1¾" ACME

Staubli—Ultra low emission

- Less than 1cc
- Euro connection

Hydrostatic relief valve

- Protects liquid system and piping from the effects of overpressure due to liquid expansion
- Installed anywhere in piping where liquid may be trapped between two positive shutoff valves



Above ground vertical tank installation



Above ground horizontal tank installation

Upgrades and Options

Nozzles:

Gas Guard—Low emission

- Less than 4cc
- 1¾" ACME



Staubli—Ultra low emission

- Less than 1cc
- Euro connection



Filters:

Donaldson particulate or carbon filters (upgrade)
SES now recommends the Donaldson Clean LPG Filter be added to every dispensing system we sell. Propane (LPG) can become contaminated as it travels from the refinery, through pipelines, to bulk storage and finally to your on-site storage tank. The Donaldson filter is highly efficient and removes 99% of harmful particulates 0.5 micron and larger.



Upgrades:

- High differential pumps/motor
- Hose retractor
- Hose protector
- Station canopy
- Station awning
- Pneumatic solenoid valve for emergency shutdown

Service and Training

Preventative maintenance is the key to keeping your autogas dispensers and station equipment operating efficiently. To avoid costly downtime and repairs, we offer service plans which include annual on-site visits and thorough inspection of your refueling equipment. We are also available, by phone and email, to help diagnose and resolve any problems you may be experiencing. We offer various training programs, including onsite start up and training for your fleet.



Warranty and Guarantee

SES warrants that the equipment and apparatus furnished under the contract shall be free from all defects in materials, design and workmanship under normal use and conditions of service required by, specified in, or which may be reasonably inferred from the specifications.

SES warrants only goods of its own manufacture. For accessories included with the items manufactured by SES, or sold extra with or alone by SES, SES will assign to the PURCHASER all warranties and guarantees given to SES by the manufacturers of these accessories. SES does not guarantee any of these warranties.

SES shall repair, replace or otherwise make good, without cost to the PURCHASER, all equipment and apparatus, or any part thereof manufactured by SES or any of the work performed by SES with its own forces, which under normal and proper use, proves defective within one (1) year from date of acceptance of the completed work by the PURCHASER. SES's obligation under this warranty is limited to furnishing a new part for the one found defective, or repairing the defective part, F.O.B., point of origin, without charge for the defective part or component to the PURCHASER. PURCHASER will provide labor to remove the defective part and install the replacement part.

SES does not warranty secondhand material. SES shall not be responsible for deterioration of any part or parts of the equipment due to corrosion, erosion, or any other causes regardless of when such deterioration occurs.

External coatings applied by SES fall under a special warranty. This applies to all types of plastic coatings, including coal tar epoxy, air cured epoxy and other, or any special

external painting or coating. Due to SES's lack of control of the quality of the coating material employed, as well as the end use of the equipment or the service in which the equipment is placed, SES guarantees only to apply the coatings in accordance with the coating manufacturer's recommendations or according to the PURCHASER'S specifications regarding application. Any application specifications by the customer which may be more stringent than those normally employed or recommended by the manufacturer will be subject to extra charge. This warranty of coatings covers application only.

SUPERIOR ENERGY SYSTEMS, LTD. SHALL NOT BE LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES CAUSED BY DEFECTIVE EQUIPMENT, SUCH AS, BUT NOT LIMITED TO LOSS OF PRODUCTION, LOSS OF ANTICIPATED SAVINGS, LOSS OF ANTICIPATED PROFITS, LOSS BY REASON OF SHUTDOWN, NONOPERATION OR INCREASED EXPENSE OF OPERATION OF OTHER EQUIPMENT, OR INCIDENTAL DAMAGES TO PERSONS OR PROPERTY OR ANY OTHER LOSS OR DAMAGE OF ANY NATURE, ARISING FROM ANY CAUSE WHATSOEVER.

It is understood that SES makes no warranty except as expressly stipulated herein and SES's liability is limited as above set forth.

No representative of SES has the authority to make any representation, promise, or other agreement except as stated herein.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



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