Fluid Power
and Electronic
Additive Injection
World Leader Since 1982
the Next Generation of additive injection

VISION
Digital Additive Injection

VISION is the digital additive injection system from Hammonds taking additive injection to a new level of accuracy, dependability and ease of operation. The all electric powered system utilizes AC or DC current available on any vehicle or fixed installation. Paced by the patent-pending V-Meter®, the VISION system takes signals either directly from the meter or load computer and provides real time, continuous, pulse free, wild stream blending of additives throughout the entire flow range of any fueling truck or hydrant system. State-of-the-art touch screen controls make setting and operating the system as simple as a picture and menu driven task that requires no special training. A fully integrated PLC collects an array of custom data relative to each fuel transaction and stores information for continuous or on-demand retrieval. Fail-safe system monitoring reports customer data, fuel flow rate, additive rate and ratio and additive tank level throughout each fueling operation. Alarms, including automatic interruption of fuel delivery, guarantee every gallon of fuel is delivered on spec, every time, complete with an audit trail to verify performance. The VISION is fully compatible with FuelMaster® integrated fuel management systems and is transparent with new future Air Force automated fuel truck multi-additive systems.

VISION INJECTOR SYSTEMS AVAILABLE TO DELIVER 1, 2, 3 OR 4 ADDITIVES

Access your additive delivery data from your cell phone!

Call a Hammonds Technical Specialist today to find out more about these amazing new digital systems

(281) 999-2900
FOR LOW-FLOW DELIVERIES
MODEL 150
Our smallest fluid powered system allows for installation where limited space is a factor. The Model 150 offers the ability to inject single or dual additives at low flow rates (7 to 75 gallons per minute). Ideal applications include self-fueling cabinets, home heating oil delivery trucks, low-flow aviation fuel delivery trucks and the Model 150 can easily be adapted for use in water treatment. The Model 150 offers users the ability to provide required additive packages at lower fuel flow rates.

REFUELER AND HYDRANT INJECTOR
MODEL 600
Our most popular fluid powered system, the Model 600 injector offers single or multiple additive injection at flow rates typically found in aviation refuelers, hydrant systems, heating oil delivery trucks and water treatment vehicles. The unique positive displacement drive responds precisely to changes in product volume even at very low flow rates. Like all Hammonds injection systems, the Model 600 dispenses precise quantities of additive at a continuous rate, eliminating the "slugging" effect typically found in meter-pulsed injectors. The additive is injected just ahead of the driver, providing complete, consistent additive mixing.

REFUELER AND HYDRANT INJECTOR
MODEL 800
The Model 800 follows in the proud tradition of all Hammonds positive displacement fluid motors. Operating in flow conditions up to 700 GPM, the Model 800 offers precision injection of additives and is perfect for use in exchange terminals, high volume delivery vehicles and waste water treatment plants. With the available horsepower delivered by this unit, a variable speed gearbox may be added to drive balanced diaphragm pumps capable of reaching injection point line pressures of up to 350 psi.

CUSTOM SPEC INJECTORS
MODEL 1000 - 2400
Building on the success of our positive displacement fluid powered injection system, Hammonds introduces custom engineered systems.

Members of the Hammonds family of positive displacement fluid motors, our custom built systems are designed by our engineering staff, to your specifications. They are simply put, larger versions of the popular model 800.

Operating in flow conditions up to 14,000 barrels per hour (10,000 gpm), these systems offer precision injection of additives in bulk terminals and pipeline applications. With the available horsepower delivered with this type of unit, injection is easily possible at pressures up to 100 PSI and at volumes from .5 to 4,000 PPM.

THE INDUSTRY LEADER IN ADDITIVE INJECTION FOR OVER 30 YEARS!
PORTABLE HYDRANT CART

AC CART

The AC portable additive system provides precise ratio injection of biocides, anti-icing, and anti-static compounds. Designed specifically for high rate, large volume transfers, these systems handle typical airline and temporary terminal fueling operations with single-point connections.

Although a 55 gallon drum capacity is standard, the AC cart can be ordered with additive storage sufficient to treat multiple transfers of 20,000 to 30,000 gallons. Operation is automatic with nothing to turn on and off or adjust and they can be equipped with your choice of hose adapters.

PORTABLE HYDRANT CART

HC CART

Sometimes an existing refueler or hydrant system is not the ideal point for injecting additives. Permanently installing an injector may limit the user’s ability to offer flexibility in his additive program. The Hammonds HC portable cart is the answer.

This system can inject up to two additives at any point in your product handling system. Between transport and storage, storage and hydrant system, hydrant system and refueler, or refueler and aircraft, the HC portable injector provides unlimited capability. The standard unit is equipped as shown in the specifications. Optional hose connections can be matched to fit your exact application.

MULTIPLE ADDITIVE TACTICAL DEPLOYMENT SKID

MODEL TPI-4T-4A-1

Although suitable for other applications, the TPI-4T-4A-1 is designed specifically to produce military specification JP-8 jet fuel from commercial Jet A by injecting FSII, CI and SDA additives. Each additive is delivered continuously and is blended evenly at ratios from 4-2,500 PPM by volume. Like all Hammonds fluid powered injectors, the TPI-4T-4A-1 requires no outside power, product meters, or control of any kind and with a sturdy steel frame, has been designed to withstand the harsh conditions in which the military must sometimes operate. The TPI-4T-4A-1 is the single U.S. standard for tactical fuel treatment.

TURBINE POWERED INJECTORS/GENERATORS

MODEL 4T THRU 12T • MODEL 4L THRU 6L

Turbine systems can handle nominal flow rates from 200-8,000 GPM. Utilizing a dual output shaft gear box, the turbines are capable of driving up to four individual injector heads. This combination can inject one additive at a very high injection rate or up to four individual additives at smaller rates. This modular design allows your Hammonds Turbine system to grow as your requirement for additional additives increases.

The Turbine systems can also be used to drive a generator to provide power to locations where electric power is not available. Electric fuel trucks, electronic meter registers, electronic “dead-man” controls, battery chargers; power is available anywhere fuel is flowing with a Hammonds turbine-powered generator.
Hammonds Fluid Powered Injectors—If the fuel is flowing, the injector’s going!

A Bulk Injection Monitoring System or “BIMS” provides the features of complete system performance monitoring, operational audit and alarms to all Hammonds fluid powered additive systems.

- Collects data from fuel or product meters providing “real-time” feedback of flow of fuel/product and additives
- Reads out in ounces, gallons per minute (liters) or in PPM (parts per million)
- Hammonds fluid motor is calibrated to provide fuel flow measurement
- System is set to operate under specific performance parameters. If the system fails to stay within the given parameters, alarms and alerts will report any deviation.
- Alarms and alerts come as lights, horns, alerts, or digital communication to operators.
- Communicates with system via cellphone, wired or wireless, or ethernet.

A BIMS system uses Hammonds exclusive touch screen that provides a continuous graphic depiction of each component in the system.

The Hammonds Touch Screen:
- Allows instant access to current performance
- Historical detail of every transaction
- System maintenance history and engineering instruction
- Password protects all sensitive data
- Touch screen is rated for all types of climates and weather conditions

The Hammonds Systems do not require external power:
- The World Standard for Additive Injection and Blending without electricity, air or a product meter.

BIMS utilizes SOLAR POWER or the POWER GENERATED FROM THE FLOW OF FUEL IN THE LINE. No other power source is necessary.

Bulk Injection Monitoring Systems BIMS
- Can be added to an existing Hammonds fluid powered unit
- Installed for less than electric systems with expensive meters
- Simple bolt-in install with a custom spool piece provided by Hammonds to your spec

POWER OUTAGES DON’T AFFECT THE HAMMONDS SYSTEMS! Flow of fuel is the only power source needed.
The Biobor Family of Fuel Additives

**BIOBOR JF**
- The Worldwide Standard Since 1965 kills microorganisms in hydrocarbons which cause fuel tank contamination.

**BIOBOR EB**
- Ethanol Buster...the Biobor® answer that eliminates the harmful effects of ethanol in gasoline and increases engine efficiency and mileage.

**BIOBOR MD**
- The best prescription for marine diesel fuel enhances fuel performance, adds fuel lubricity and prevents gelled diesel fuel.

**BIOBOR HUM-BUG**
- The “Original” cost-efficient test to detect microbial fuel contamination which can cause fuel tank corrosion and the clogging of vital fuel system components, signaling its time to treat with BioborJF®.

**LubriBor®**
- The super-concentrated lubricity agent for low sulfur fuels which lowers maintenance costs and improves engine efficiency.

www.biobor.com

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