

Hammonds®

Fluid*power*

AdditiveInjection



Over **12,000** Systems Installed—WORLDWIDE—

- Even, accurate **blending**
- **Low to high flow** units available
- **Custom** built to suit
- Sturdy rugged construction, **built to last**
- Inject **single or multiple additives**
- **Fixed, portable or multiple injection point** units available

INNOVATION—pure and simple®
www.hammondscos.com



pushing ahead in innovative and dynamic areas of product engineering and design



A word about...



Additive Injection Systems

Beginning in 1982, Hammonds Technical Services, Inc. has been an engineering and equipment company with the **reputation of being a leader and innovator** in the development of fluid-powered additive injection systems, which have given Hammonds a solid reputation in **providing value-added, safe fuel** for multiple industries the world over.

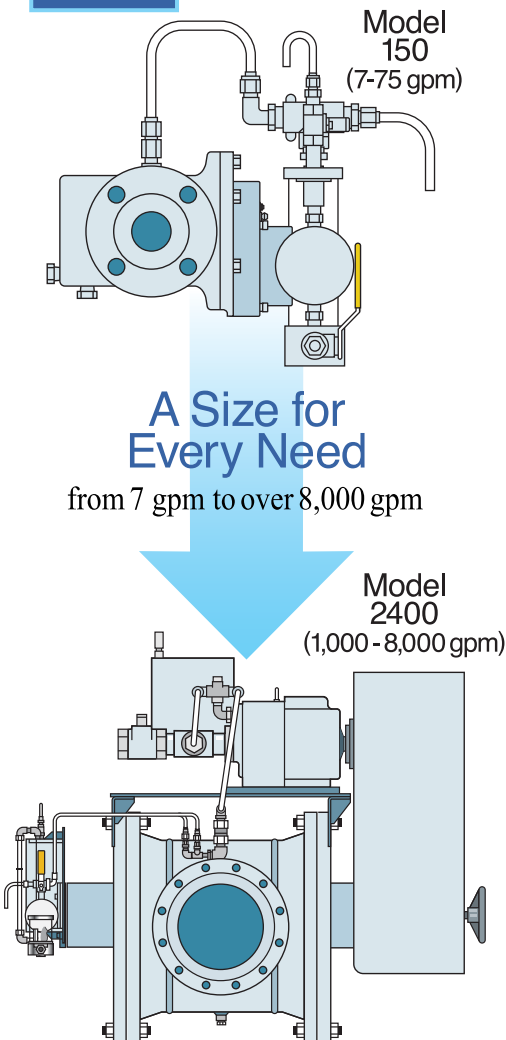
With the **U.S. Navy** as an early customer, Hammonds was able to demonstrate an innovative and inventive approach to the manufacturer of **fluid-powered additive injectors**.

In 1986, a customer engaged Hammonds to build a smaller, portable additive injector capable of injecting multiple additives. The Hammonds concept and design was so successful that it resulted in a unit that **operated without power, meters or controls**, and functioned as a passive part of the fuel delivery system using the energy from the flow of fuel to inject and blend the additive and fuel. The unit provided **advantages far beyond any competitive products**. The Fluid Powered systems provide a superior blend of on-spec fuel and additive.

Today, Hammonds Technical Services, Inc. continues to enjoy a position of leadership having a customer list including **all branches of the U.S. military, Chevron/Texaco, BP, ExxonMobil, Fina, Delta Airlines, United Airlines, Boeing, CSX Railroad, Crowley Maritime, Shell Oil** and many more.

(please visit our website for a more complete list)

Hammonds ability to service **so many different industrial applications** is due in part to the already existing range of stock injector units (from 7 gpm units to over 8,000 gpm ability) coupled with **the ability to provide custom spec units** to fit any situation as the need arises.



Fluidpower

The flow of fuel is the only power source necessary.

injection systems designed and engineered for a variety of industrial needs—worldwide

A word about...INDUSTRIAL APPLICATIONS

—for—

Additive Injection Systems

AGRICULTURAL

Additives to keep diesel fuel sterile and safe for operation of tractors, combines, any kind of diesel farm equipment. Also keeps the on-site stored fuel safe from naturally occurring microbial growth, which contaminates diesel fuel and can cause severe problems in diesel engines.

AVIATION

From crop dusters, private business jets and helicopters to large commercial carriers, all need safe and dependable fuel provided by additive injection. Incidentally, the additive used to sterilize jet fuel also provides lubrication for vital engine parts.

AVIATION REFUELERS

By placing a Hammonds Injection System on an aircraft refueling truck, an aircraft can be refueled with value-added, perfectly blended to spec fuel ensuring a safer flight. The lubricating qualities of some additives can also provide for the lubrication of vital engine parts.

BULK FUEL STORAGE

A Hammonds Injection system can eliminate the problem of microbial growth in stored fuel and create a value-added fuel source. Our premiere additive, **Biobor®JF** maintains fuel quality and with regular maintenance treatments eliminates the problem altogether.

CONSTRUCTION

Additive injectors on construction sites protect the construction equipment and also the fuel that is stored on-site for the operation of this equipment. Fuel utilizing additives can cut fuel costs, eliminate downtime and extend the life of the vehicle treated.

FRACKING SITES

Hammonds Additive Injection Systems keeps diesel-powered fracking trucks operational with little or no downtime. The added bonus of fuel lubricity in our **Biobor®JF** additive keeps vital engine parts lubricated and provides more protection for these expensive pieces of equipment.

HELICOPTERS

Hammonds Fuel Additives and Injection Systems can aid in keeping helicopters flight-ready. Additives can provide a clean, safe fuel and along with the benefits of lubrication of vital engine parts, will enable a longer life span for the engine with less overall downtime.

MILITARY

The U.S. Air Force, Army, Border Patrol, Coast Guard, Marines and Navy all depend on Hammonds Additive Injection Systems to keep their jet aircraft, helicopters and diesel equipment at peak performance levels. Hammonds has even developed injectors on heavy-duty skids or carts that can be utilized in difficult terrain or remote combat areas.

MARINE

From personal pleasure boats to commercial work boats, from rig-boats to ocean going freighters and oil tankers, Hammonds Injection Systems provide value-added safe fuel which provides protection and reliability in all types of marine vessels.

RAILROADS

Hammonds Additive Injection systems can provide a safe and contaminate-free fuel source to keep railroad engines operational at all times with the added bonus of fuel-lubricated vital engine parts. Helps keep railroad engines in service and on schedule for many years to come.

STAND-BY POWER

Where there is a power outage or equipment failure, Hammonds Injection Systems can keep stand-by power generators online in critical areas such as hospitals, energy providers, or any industry where operations must continue 24/7. Hammonds Injectors can also help keep stored diesel fuel safe and free from microbial growth.

TERMINAL INJECTION

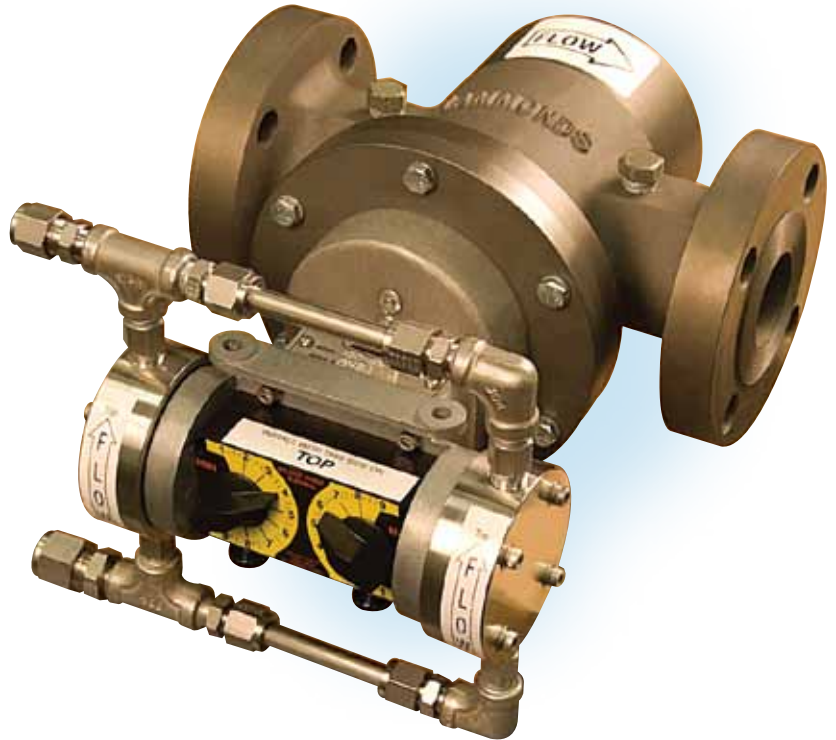
Our Injection Systems can provide the ability to service multiple customers by offering selective injection of as many as 4 different additives. Fluid-powered injection provides even, consistent blending of each customer's additive allowing the terminal to provide custom-blended fuels to more customers at a fraction of the cost of high-priced electronic systems.

Fluidpower MODEL 150

For low-flow deliveries...

The **MODEL 150** offers the ability to inject single or dual additives at lower flow rates (**7 to 75 gallons per minute**). Ideal applications include self-fueling cabinets, home heating oil delivery trucks, dye injection and low-flow aviation fuel delivery trucks.

- No power or meter required
- Proportionate to flow injection
- Even and accurate blending
- Responds accurately to low flow rate changes
- Can inject up to (2) additives at different injection ratios simultaneously
- Installs easily in small spaces
- 1½" 150# RF connection standard
- **7-75 GPM**

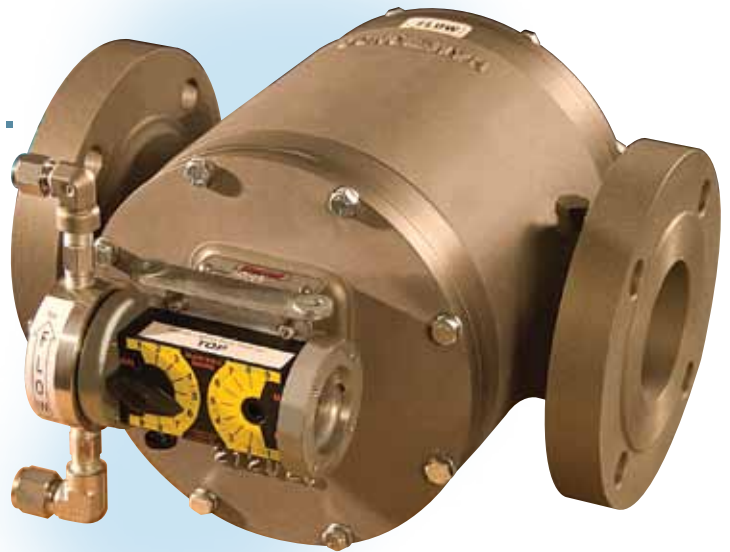


Fluidpower MODEL 600

Refueler and Hydrant Injector...

The **MODEL 600** is our most popular unit and offers single or multiple additive injection at flow rates (**20 to 250 gallons per minute**) typically found in aviation refuelers, hydrant systems, heating oil delivery trucks, dye injection and bulk receipt injection.

- No power or meter required
- Proportionate to flow injection
- Even and accurate blending
- Responds accurately to low flow rate changes
- Can inject up to (4) additives at different injection ratios simultaneously
- Installs easily in small spaces
- 3" 150# RF connection standard
- **20-250 GPM**



Since 1981 and over 12,000 injectors makes you
pretty confident.

Fluidpower ^{MODEL} 800

Refueler and Hydrant Injector...

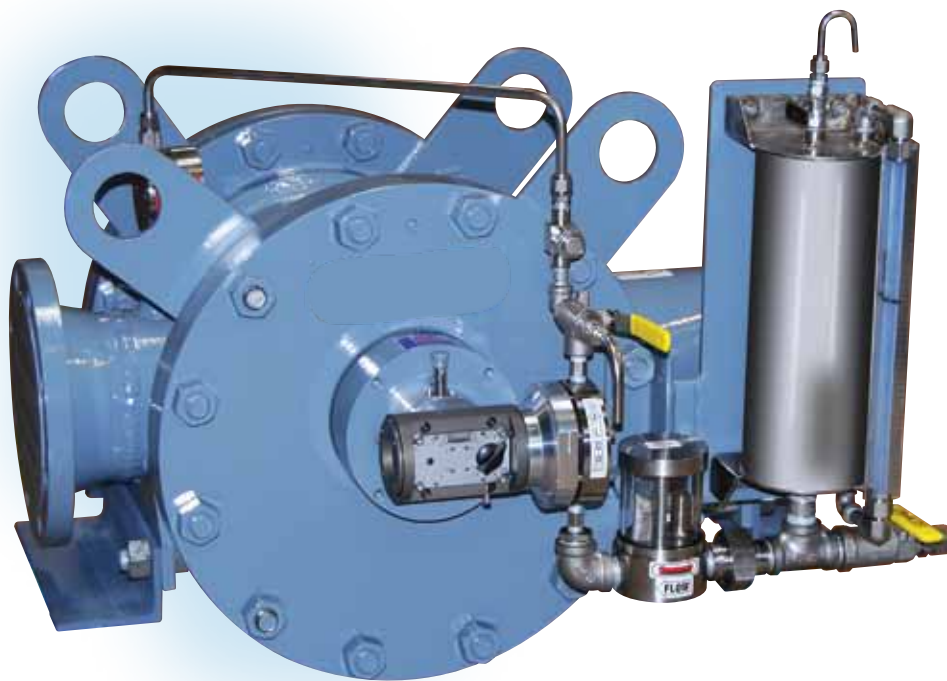
The **MODEL 800** offers precision injection of additives meeting the requirements of delivery terminals, high-volume delivery (**75 to 700 gallons per minute**) vehicles and truck loading racks. Self contained and requires no product meters or pulsers.

- Precision blending across a broad product flow range
- Proportionate to flow injection
- Simple, economical installation
- Passive, automatic operation
- Can inject up to (4) additives at different injection ratios simultaneously
- 4" 150# RF connection standard
- **75-700 GPM**



Fluidpower ^{MODEL} 1000

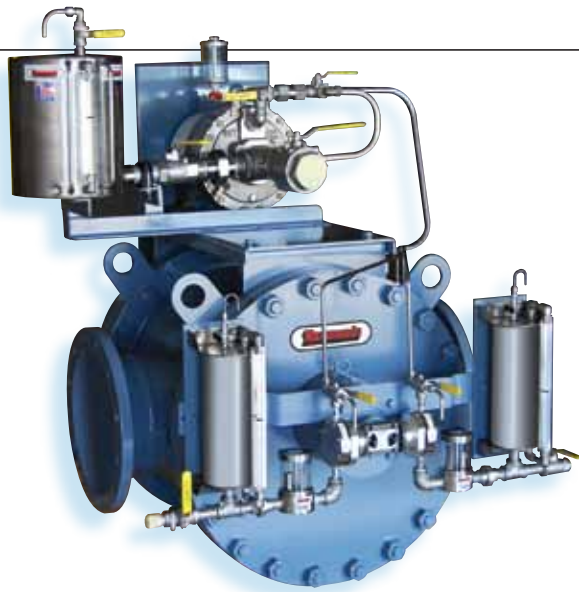
Terminal and Pipeline Injector...



The **MODEL 1000** is simply a larger version of our very popular series Model 600 or 800. It meets the requirements of delivery terminals, and high-volume delivery vehicles. It offers precise and accurate blending every time.

- Even and accurate blending
- Proportionate to flow injection
- No power or meter required
- Handles injection point pressure to 300 psi
- Can inject up to (4) additives at different injection ratios simultaneously
- 6" 150# RF connection standard
- **100-1100 GPM**

—INNOVATION— pure and simple



Fluidpower

Terminal and Pipeline Injectors

These Models can deliver up to 4 additives. They offer precision injection of additives meeting the requirements of delivery terminals, high volume delivery vehicles and refineries. As with all fluidpower units, **no outside power source is necessary**. The flow of the fuel provides all the necessary energy to run the additive injection process. As with all Hammonds systems, they can be custom-built and installed to meet the particular needs of our clients. They are a **completely self-contained unit** that offers totally unassisted injection. Product meters and pulsers are not required allowing a simple and economical installation that provides the customer with repeated precision blending of their additive time after time.

CONSTRUCTION MATERIALS

- Carbon Steel fabrication or optional: stainless steel
- Metering Pump: All wetted parts 300 series stainless steel
- Elastomers: Aflas®, Viton®, and Teflon®; other elastomers available upon request
- Mechanical Seal: Carbon on Ceramic, optional Tungsten on Carbon

SPECIFICATIONS

- Proportionate to flow injection
- Flooded suction required
- Number of Additives: 1 Standard, up to 4 optional
- 8" to 12" 150# RF Flanges connection standard (other connections available, consult factory for details)
- Injection Ratios: 0-4000 ppm depending upon application
- Product Temperature Range: -40°F to 120°F (-40°C to +50°C)
- Maximum product line pressure: 150 psi. Higher pressures available with upgraded HP Housing and Seals
- Product Viscosities: up to 10,000 SSU
- Fuels, Oils, Additives and Liquid Gases
- Duty Cycle: Intermittent to continuous

Model 1400 300-1500 GPM	Model 1600 500-2000 GPM	Model 2000 600-4000 GPM	Model 2400 1000-8000 GPM
8" Flanges	10" Flanges	10" Flanges	12" Flanges



Fluidpower

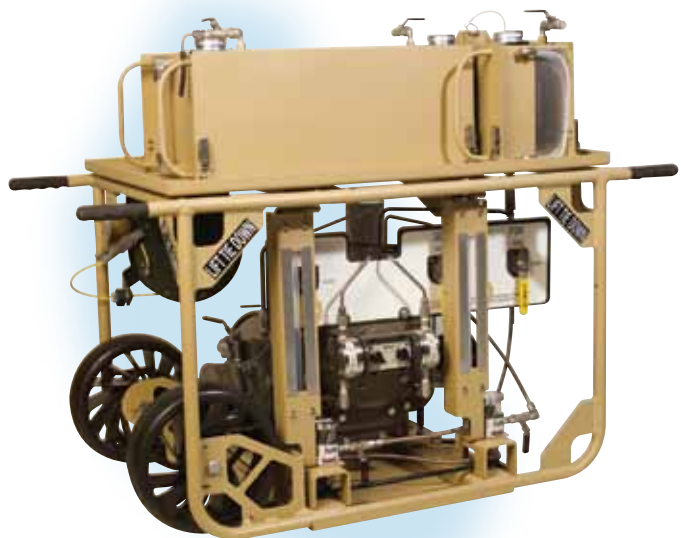
Custom Skids and Injection Systems

What about a **self-contained skid** with custom accessories? Hammonds can provide you with a skid that will handle whatever requirements you need to get the job done. Talk to us about your specific requirements and our engineers can help you assemble a skid that will meet all your job requirements. From our **smallest Model 150 to the largest Model 2400**, we can integrate the options and accessories you need to make your fueling system truly unique.

- Proportionate to flow injection
- Fixed or mobile skid installations
- DOT compliant trailers
- Weather enclosure panels
- Stainless steel additive tanks
- Hose reels
- Pressure control valves
- Product meter and additives meter integration
- Data communication provisions to your specification
- Custom epoxy paint, CARC and Powdercoating to your specification

Fluidpower ^{MODEL} TPI-3T-3A-HF

Additive Injection Skid



OPTIONAL ITEMS—

- Side Enclosure Panels
- Inlet/Outlet Adaptor
- FSII Refractometer—Conductivity Test Kit
- Field Test Kit
- Assorted Soft and Hard Covers

The answer to the Militaries' call for a light-weight unit, 232 pounds dry weight.

Although suitable for other applications, the **TPI-3T-3A-HF** is designed to **produce military specification JP-8 jet fuel** by injecting FSII, CI and SDA additives. Each additive is delivered continuously and is blended evenly and proportionately across the entire product flow range. Like all Hammonds fluid powered injectors, the **TPI-3T-3A-HF** requires no outside power, product meters, or control of any kind. The **TPI-3T-3A-HF** is a smaller, lighter system that is able to be carried into service when required. Like the larger **TPI-4T-4A** and **TPI-4T-4A-1** tactical skid systems, the **TPI-3T-3A-HF** uses an industry standard **Model 600** fluid motor, used in the commercial market to treat commercial jet fuel for the past 30 years. Lightweight, rugged and dependable, the **TPI-3T-3A-HF** allows fueling flexibility in the smallest package possible.

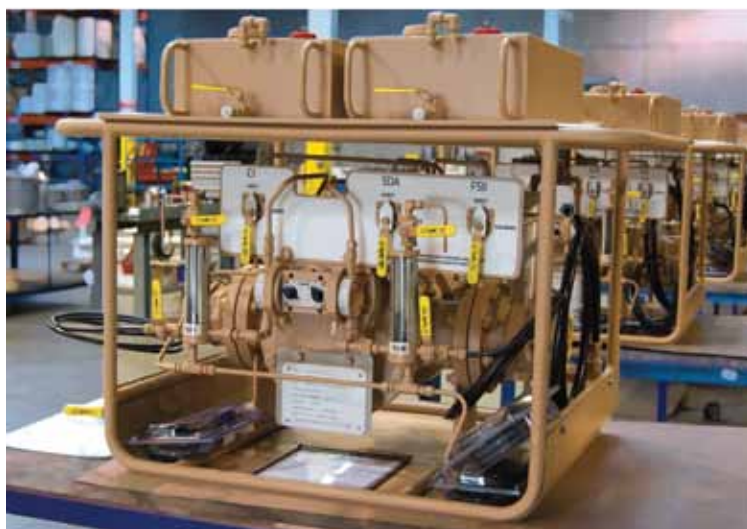
- Proportionate to flow injection
- Model 600 fluid motor
- Can inject 3 additives simultaneously
- Products handled: oils, fuels, chemicals.
- Selective injection for each additive
- Modular design allows for a 4th additive pump if required
- Suction Calibration Gauges with integrated suction strainers for each additive
- Stainless steel additive tanks, FSII-10 gallon; CI-2 gallon; SDA-2gallon
- The Model 600 - COTS for parts availability and service worldwide
- **20-350 GPM**

Fluidpower ^{MODEL} 4T-4A Additive Injection Skid

The **4T-4A** utilizes Hammonds proven additive injection systems to **produce military specification JP-8 jet fuel** by injecting FSII, CI/LI and SDA additives into commercially available Jet A fuel. Each additive is delivered **continuously** and is **blended evenly** at ratios from 1-2500 ppm.

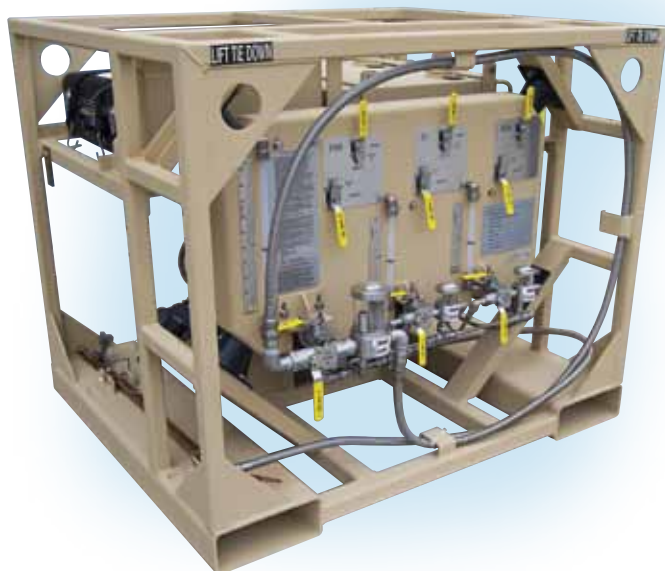
- Proportionate to flow injection
- Model 800-2L-1P7-1P7 Additive Injection System
- Lightweight 1" round tube frame for easy portability
- 4" Cam-Lock product connections
- Proportionately blends FSII, CI and SDA to make JP-8 from commercially available Jet-A fuel (MIL-T-83133)
- 6 gallon stainless steel additive tank for CI
- 6 gallon stainless steel additive tank for SDA
- Siphon assembly and hose for remote connections of 55 gallon drum for FSII
- Combination Suction Calibration Gauges/Sight Flow Indicators for easy field calibration and adjustments
- Dry weight: 342 lbs.
- Mobile cart base available as an option
- **75-700 GPM**

Ask a Hammonds Rep about the commercial capabilities of the 4T-4A and the TPI-4T-4A-1 units.



TALK ABOUT TOUGH! The Hammonds **4T-4A** and **TPI-4T-4A-1** Additive Injection Systems are designed to be deployed via military aircraft into remote and often dangerous, rough conditions. The units are built to withstand the punishment of these conditions and to provide our aircraft with safe, quick and dependable additive injection under extremely difficult conditions.

Additive Injection Skid



- Separate Sample Probe assembly
- Spare parts for 2 years of service
- Complete tool set for field service
- B-2 Refractometer test kit for FSII concentration
- **75-750 GPM**

Fluidpower ^{MODEL} TPI-4T-4A-1

The **TPI-4T-4A-1** picks up where the 4T-4A leaves off. This system, while providing the same product flow and additive delivery characteristics, goes one step further in terms of rugged dependability. The frame is heavier and **stronger** to survive **deployment from an aircraft**. The complete injection system is **shock mounted** with extra accessories provided to **enable delivery of additized fuel** in the most remote locations. Comes complete with on-board CI and SDA tanks, custom tool kit, emergency spares, sampling segment and field refractometer for verifying FSII levels.

- Proportionate to flow injection
- Heavy-duty 2" square tube frame
- 4" Cam-Lock product connections
- Proportionately blends FSII, CI and SDA to make JP-8 from commercially available Jet-A fuel (MIL-T-83133)
- Shock-mounted system for extreme deployment conditions
- 6 gallon stainless steel additive tank for CI
- 6 gallon stainless steel additive tank for SDA
- Hose assembly and hose for remote connections of 55 gallon drum for FSII
- Separate Suction Calibration Gauges and Sight Flow Indicators for each additive for easy field calibration and adjustments

Additive Injection Skid



Fluidpower ^{MODEL} TPI-6T-6A-1

The **Model 6T-6A-1** is a **high volume version** of the famous 4T-4A JP-8 tactical injector. Designed to meet the performance requirements of the **U.S. Air Force's FORCE systems**, the **6T-6A-1** delivers JP-8 additive specifications to fuel flow rates in 6" lines at **continuous flows of 1,000 GPM** in forward military environments. Just like the 4T-4A, this larger system comes complete with on-board CI and SDA tanks, custom tool kit, emergency spares, sampling segment and field refractometer for verifying FSII levels.

- Ratio adjustments for each additive
- Proportionate to flow injection
- Prime and purge valve provides a clean system after shut down.
- Calibration gauges allow adjustment without contact with fuel or additive
- 10-gallon tanks for any chemical additive
- Custom product connections
- Accurate additive dosage and thorough and accurate blending
- Easily transportable
- Sturdy, solid construction
- **100-1,100 GPM**

Fluidpower

MODEL
SPI

Single-Point Injector for Smaller, Corporate Aviation

Weights
Only
43 lbs.
(as shown)

Includes
Pelican® Case
for Easy and
Secure Storage



The SPI is ideal for...
Additive maintenance and **Treatment of fuel** from
remote locations with questionable fuel quality.

The **SPI Single-Point injector** brings precision blended fuel to the end of your fueling hose, anywhere, anytime. This **suitcase-sized portable device** can be connected to any aircraft with a standard single-point fueling receptacle providing the **same accurate, automatic blending** of additives as permanently installed truck and cabinet systems. Additives such as **Biobor®JF** or **Prist®** require continuous injection and complete blending in order to achieve maximum benefits. The SPI uses the **same proven fluid-powered technology** as our famous Model 600 refueler-mounted injectors. When additive is required, the injector is attached to the aircraft and the fueling hose attached to the injector inlet. **Injection is automatic** as fuel passes through the injector's fluid-powered motor. **Small corporate aircraft, helicopters, small military or practically any user** can now custom-blend their fuel in order to insure complete dispersion of **biocides (Biobor®JF), icing inhibitor (Prist®) and thermal stability additives +100 (Turboline®)** with a totally portable, lightweight unit.

- Single additive injection
- Proportionate to flow injection
- **SPI 300 35-150 GPM**
- **Not recommended for use in high flow commercial applications**

***NOTE: This is designed for smaller, corporate aircraft and/or helicopter fueling.**

Fluidpower

MODEL
PHC2

Portable Hand Cart



Photo shows optional
items not included
in standard package.

The PHC2 Cart is ideal for...
small, low-volume fueling operations
that **can't justify fixed systems.**

The **PHC2 Portable Hand Cart** is designed to support either single-point or over-wing fueling and includes a Hammonds **Fluid-Powered injector**, additive storage, a hose leading from the injector to the aircraft and the appropriate fueling nozzle. A hose from a refueler, fueling cabinet or fuel farm connects to the inlet of the cart and fuel is delivered to the aircraft through the hose and nozzle mounted on the cart. **Fast, spill-proof connection** is insured by a dry break fuel hose connection into the cart. The **lightweight walk-along cart** stores everything required and is handled easily by one person. Since the flow of fuel powers and controls the injector, there is **no need for external power**, batteries or air, and the system is passive providing for automatic operation anytime fuel passes through the system. The PHC2 Portable Hand Cart is **ideal for small, low-volume fueling operations** that can't justify fixed systems or those operators that need to treat their fuel with biocides such as **Biobor®JF** or any other additive.

- Single additive injection
- Proportionate to flow injection
- **PHC2-150 7-75 GPM**
- **PHC2-600 20-250 GPM**
- **PHC2-800 75-700 GPM** (coming Aug.2020)

Fluidpower

MODEL
HC

Portable Hydrant 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 four additives** at any point in your fuel delivery 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. Single point or overwing connections can be matched to fit your exact application.

- Inject up to 4 additives simultaneously
- Proportionate to flow injection
- Unique Fluid-Powered Injection
- Product meters or pulsers not required
- Even and accurate blending
- Hammonds Model 600 fluid motor
- 10 gallon additive storage tank
- Injection ratios: 0-4,000 PPM (depending on application)
- 10' x 2" aviation fueling hose

**Boeing, Airbus
Gulfstream,
Dassault
APPROVED**

- Model 150..... **7-75 GPM**
- Model 600..... **20-250 GPM**
- Model 800..... **75-700 GPM**

The HC Cart is ideal for...
Corporate and Commercial Maintenance operators injecting additives required during **periodic maintenance operations** or for **continuous daily treatment**



Fluidpower

MODEL
AC

Portable Hydrant Cart



**Boeing and
Airbus
APPROVED**

The AC Cart is ideal for...
high rate, large volume injection of additives typically associated with **Airline Refueling**

The **AC portable additive system** provides **precise ratio injection** of biocides, FSII (Fuel System Icing Inhibitor), corrosion inhibitors and anti-static compounds. Designed specifically for **high rate, large volume transfers**, these systems handle typical airline fueling operations. Although a 55 gallon drum capacity is standard, the AC cart can be ordered with **additive storage up to 110 gallons**, sufficient to treat multiple large volume transfers. **Operation is automatic** with nothing to turn on and off or adjust. A single point connection from the hydrant vehicle into the cart, and the cart single point fueling nozzle into the aircraft is all that is required. Single and dual hose arrangements are available.

- Inject up to 4 additives simultaneously
- Proportionate to flow injection
- Unique fluid-powered injection
- Product meters or pulsars not required
- Even and accurate blend
- Precise injection ratios
- 55 gallon drum carriage
- Parking brake
- Injection ratios: 0-4,000 PPM (depending on application)
- 15' x 2.5" Aviation fueling hose (custom lengths available)
- Model 600..... **20-250 GPM**
- Model 800..... **75-700 GPM**
- Model 1000.... **100-1100 GPM**

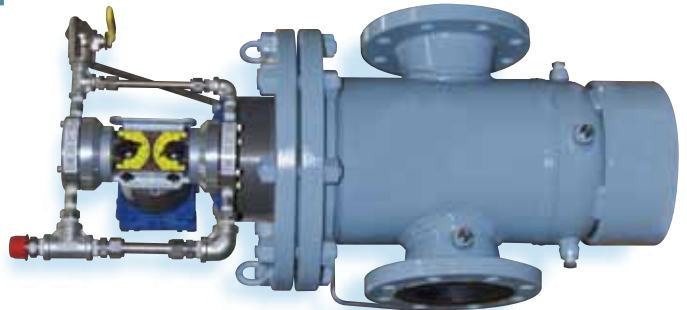
Fluidpower

MODEL 4T

Terminal and Hydrant Injector

The **4T Series** system offers single or multiple additive injection at flow rates typically found in fuel delivery terminals and transport trailer fill stands. The **unique turbine-powered fluid motor** is designed to inject precisely for applications that operate with a constant flow rate. Like all Hammonds injection systems, the **4T dispenses precise quantities of additive** at an almost 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 blending.**

- Unique Fluid-powered Turbine injection
- Product meters or pulsers not required
- Even and accurate blending
- 4” Hammonds “T” turbine drive
- All carbon steel housing
- Heavy duty gear reducer
- **200-750 GPM**



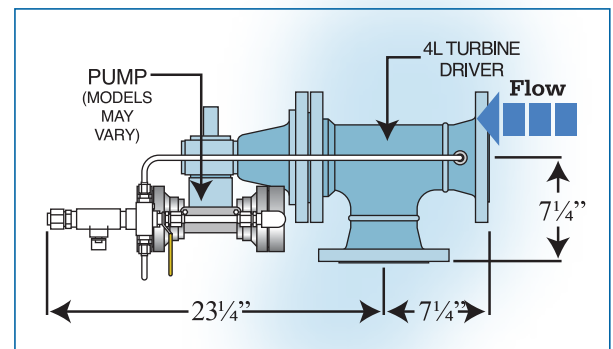
Fluidpower

MODEL 4L

Terminal and Hydrant Injector

The **4L Series** system offers the same single or multiple additive injection as our Model 4T at flow rates typically found in fuel delivery terminals and transport trailer fill stands. The **unique “L” turbine arrangement allows installation into an existing short radius elbow** in the system piping. Like all Hammonds injection systems, the **4L dispenses precise quantities of additive** at an almost 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 blending.**

- Unique Fluid-powered Turbine injection
- Product meters or pulsers not required
- Even and accurate blending
- 4” Hammonds “T” turbine drive
- All carbon steel housing
- Heavy duty gear reducer
- **200-750 GPM**



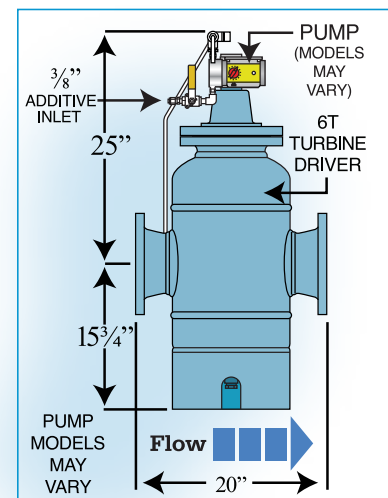
Fluidpower

MODEL 6T

Terminal and Hydrant Injector

The **6T Series** system offers single or multiple additive injection at flow rates typically found in fuel delivery terminals and transport trailer fill stands. The **unique turbine-powered fluid motor** is designed to inject precisely for higher volume applications that operate with a constant flow rate. Like all Hammonds injection systems, the **6T dispenses precise quantities of additive** at an almost 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 blending.**

- Product meters or pulsers not required
- Even and accurate blending
- Number of Additives:
 - 1 Standard; up to 4 optional
- 6” 150# connection standard
- Injection Ratios: 0-4000 ppm depending upon application
- Product Viscosities: up to 10,000 ssu
- Fuels, Oils, Additives and Liquid Gases
- **400-1,200 GPM**



Fluidpower ^{MODEL} 8T

Terminal and Pipeline Injector

The **8T Series** system offers single or multiple additive injection at flow rates typically found in fuel delivery terminals and transport trailer fill stands. The **unique turbine-powered fluid motor** is designed to inject precisely for applications that operate with a constant flow rate. Like all Hammonds injection systems, the **8T dispenses precise quantities of additive** at an almost 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 blending**.

- Unique Fluid-powered Turbine injection
- Product meters or pulsers not required
- Even and accurate blending
- 8” Hammonds “T” turbine drive
- All carbon steel housing
- Heavy duty gear reducer
- **500-2000 GPM**



Fluidpower ^{MODEL} 10T

Terminal and Pipeline Injector

The **10T Series** system offers single or multiple additive injection at flow rates typically found in fuel delivery terminals and transport trailer fill stands. The **unique turbine-powered fluid motor** is designed to inject precisely for applications that operate with a constant flow rate. Like all Hammonds injection systems, the **10T dispenses precise quantities of additive** at an almost 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 blending**.

- Unique Fluid-powered Turbine injection
- Product meters or pulsers not required
- Even and accurate blending
- 10” Hammonds “T” turbine drive
- All carbon steel housing
- Heavy duty gear reducer
- **700-4,000 GPM**



Fluidpower ^{MODEL} 12T

Terminal and Pipeline Injector

The **12T Series** system offers single or multiple additive injection at flow rates typically found in fuel delivery terminals and transport trailer fill stands. The **unique turbine-powered fluid motor** is designed to inject precisely for applications that operate with a constant flow rate. Like all Hammonds injection systems, the **12T dispenses precise quantities of additive** at an almost 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 blending**.

- Unique Fluid-powered Turbine injection
- Product meters or pulsers not required
- Even and accurate blending
- 12” Hammonds “T” turbine drive
- All carbon steel housing
- Heavy duty gear reducer
- **1,500-7,000 GPM**



RP-1 Remote Operating Panel

**Puts control
close to the
operator**



Allows controls to be mounted convenient to the operator.

- Provides visual indication of system operation.
- Selective injection provides options for your customer.

INNOVATION—pure and simple®

Stainless Steel Additive Tanks

**Custom
sizes
up to 200
gallons.**

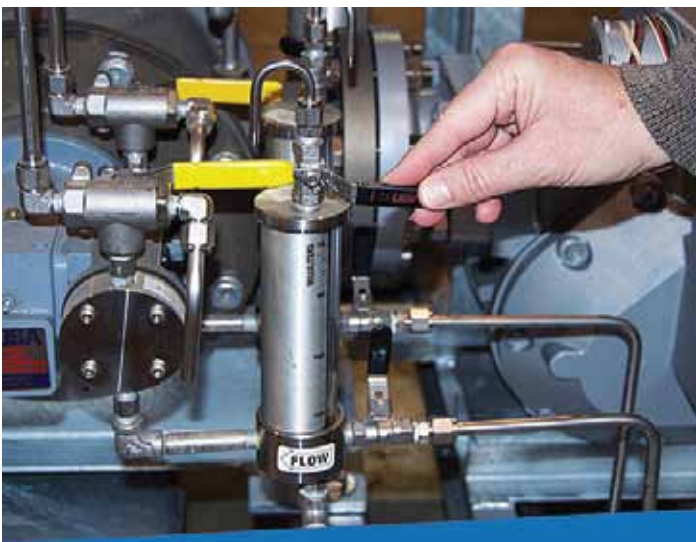


AVAILABLE SIZES... ✓ 3 Gallon ✓ 10 Gallon
✓ 6 Gallon ✓ 15 Gallon

- Includes side and bottom mounting provisions.
- Vented to atmosphere with desiccant dryer included.

Over 12,000 Systems Installed—WORLDWIDE—

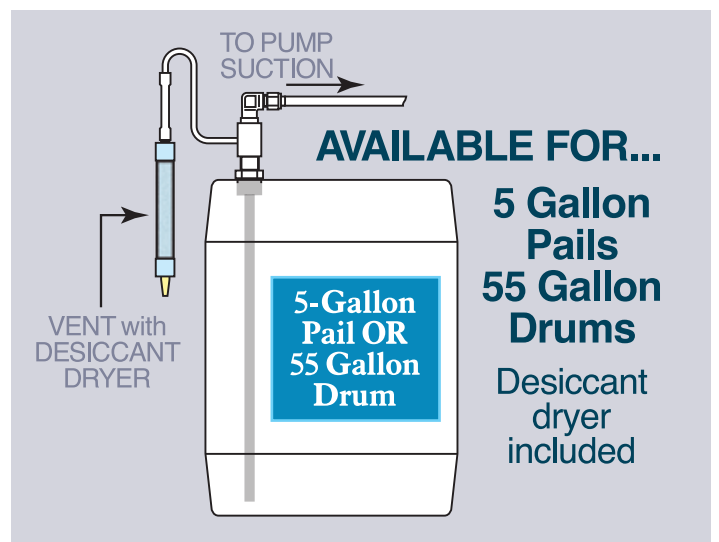
Suction Calibration Gauges



Accurate proof of Additive Injection
Calibrate without touching the additive.

- Functions as a Sight Flow Indicator with filter during normal operation.
- Multiple sizes available for any application.
- Monitor the additive injection process

Siphon Tube Assemblies



If you have any questions or need additional information about Hammonds parts or products, please call...

(800) 582-4224

A Hammonds representative is ready to help you.

- Standard or High Volume available
- Custom lengths available for use in various containers

—HOW ABOUT A—

“Quick Quote”

Six simple questions is all we need to get started...

1 Product to be treated?

☐ Jet Fuel

☐ Gasoline

☐ Diesel Fuel

☐ Other _____

2 Product Flow Range? _____ to _____
(minimum flow rate) (maximum flow rate)

Choose flow rate measurement: ☐ GPM ☐ LPM ☐ BBL/HR

3 What is your injection line pressure? _____

4 Additive to be injected?

☐ FSII

☐ CI

☐ SDA

☐ Biobor®JF

☐ Other _____

5 Volume of additive injected? _____
(% by volume —or— PPM)

6 Application? ☐ Fuel Truck ☐ Fuel Farm ☐ Cart Mounted
☐ Other _____

That's all it takes in most cases to get a quote and join over
12,000 WORLDWIDE loyal customers.

There are **3 ways** to request a quote...

1. Go online @ **www.hammondscos.com** and fill out our online RFQ.
2. Send an email with information to **sales@hammondscos.com**.
3. Call us @ **(800) 582-4224** and talk to one of our sales reps.

Hammonds®

INNOVATION—pure and simple

CLIENT LIST

A partial list of companies using
Hammonds Injection Systems...

Airbus	Caltex AU	IMP Aerospace and Defense	Samsung Chemicals
Air Canada	Canadian Pacific Railroad	IMTT Epic, LLC	Saudi Aramco
Air National Guard	Cayman Airways	Jet Blue Airlines	Shell
Amoco Canada Petroleum	Chevron Texaco	Kinder Morgan	Shell Aviation
Amtrac	CITGO Petroleum	Koch Refining	Sinopec
Anadarko Petroleum	Conoco Phillips	Lufthansa	Total
Anheuser Busch	CSX Transportation	Mansfield Oil	Texaco Refining
Bahrain National Oil	Crowley Marine	Marathon Petroleum	Union Pacific
BC Ferries	Delta Airlines	Nalco	United Airlines
Beechcraft	Dominion Midstream	Nustar Energy	U.S. Air Force
BNSF	Emirates Airlines	Penzoil Products	U.S. Army
Boeing	Exxon companies...	Phillips 66	U.S. Border Patrol
Bombardier	ExxonMobil	P&O Ferries	U.S. Coast Guard
British Airways	ExxonMobil-Mexico	Pratt & Whitney	U.S. Marines
British Royal Airforce	Enbridge Energy	Rolls Royce	U.S. Navy
Buckeye Partners	General Electric	Royal Dutch Airforce	Valero Refining
	Gulfstream	Royal Dutch Shell	



Fluidpower

3-YEAR WARRANTY

Since 1982 and over 12,000 injectors makes you
pretty confident,

...so confident, that Hammonds is offering the first bumper-to-bumper, flange-to-flange, **all inclusive 3-year warranty** for fluid powered additive systems. All you have to do is operate **any Hammonds fluid-powered system** within advertised limits, perform the recommended yearly maintenance, and you're covered...**completely covered.**

But here's the best news. Even your old Hammonds fluid powered system, including the first one we ever delivered, can be qualified for this new warranty. Allow our factory-trained personnel to remanufacture your system to "**zero-time**" specifications. Your old unit, regardless of age will be certified with a 3-year warranty, extendible for life.

The industry's best warranty.

**See our website for listing of systems covered.*



Additive Injection Systems

INDUSTRIAL APPLICATIONS



AVIATION REFUELERS



MILITARY JETS



RAILROADS



AVIATION



BULK STORAGE



PIPELINES



WORKBOATS



REFINERIES



FRACKING TRUCKS



HELICOPTERS



OCEAN SHIPPING



OFF ROAD PROJECTS



STAND-BY POWER



TRUCKING FLEETS



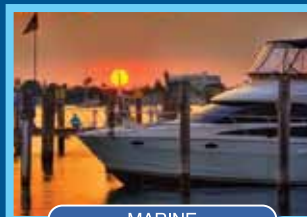
MILITARY HELICOPTERS



CONSTRUCTION



AGRICULTURAL



MARINE

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www.hammondscos.com