

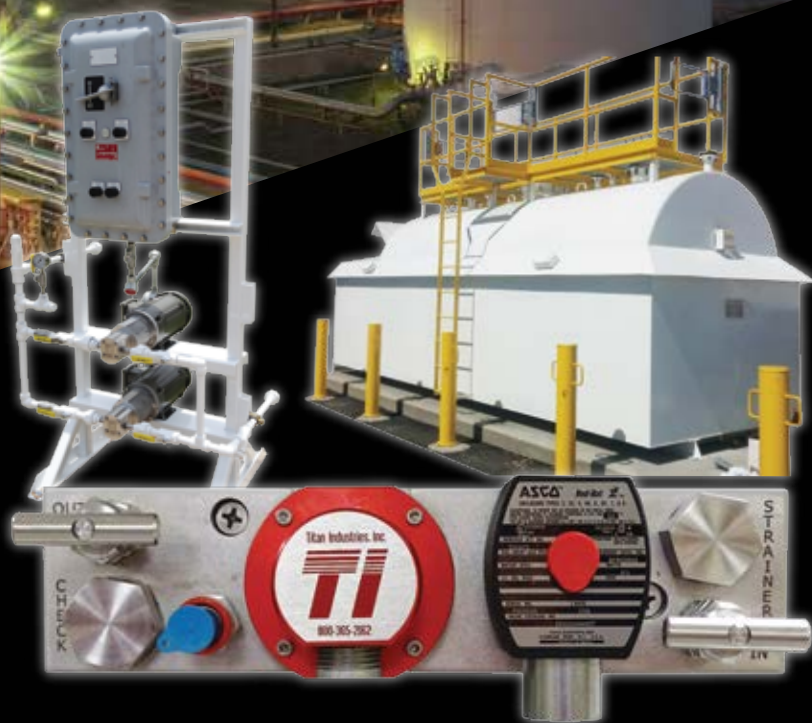


***Titan Industries, Inc.***

*Innovative Technologies, Global Solutions*

## **Titan Product Catalog**

- Sales • Service
- Parts • Installation



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# *Titan Industries, Inc.*

## *Innovative Technologies, Global Solutions*

Titan Industries, Inc. specializes in on-site service and installation in bulk fuel terminals and pipeline applications. From Additive Systems and tanks to VRU installations to the largest Butane Blending system currently in the United States, Titan has a full range of products to meet terminal and communication needs. Titan Industries offers a wide variety of chemical additive injection equipment including:

- Full line of Chemical Additive Injectors
- Tote Tank Assemblies
- Standard & Custom Fabricated Tanks
- Oval Gear Meters and Turbine Flowmeters
- Dye Injection Systems
- Pump Skid Assemblies
- Full line of Pumps and Motors
- Wireless Radios



Titan Industries fabricates all products at the corporate facility in Spring, TX; therefore, customers are always given the best cost savings and quality. This also allows custom designs to be made to fit the customer's specific needs and applications.



Titan Industries is committed to continuing its role as the world leader in providing innovative, high quality and cost effective solutions to our valued customers—worldwide. It is our goal to be the best. Professional and knowledgeable personnel, innovative products and unique services provide the foundation for achieving our goal.

## Precision Chemical Injectors

**Monoblock**  
(page 4)



**ProPac Infinity™**  
(page 12)



**ICM iMPACT™**  
(page 14)



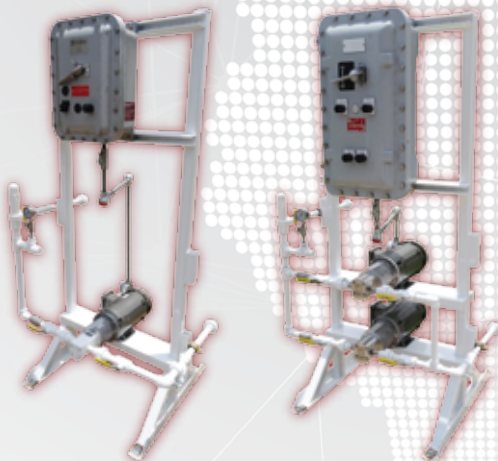
**Red Dye Flush Block**  
(page 28)



**SafTPac®**  
(page 6)

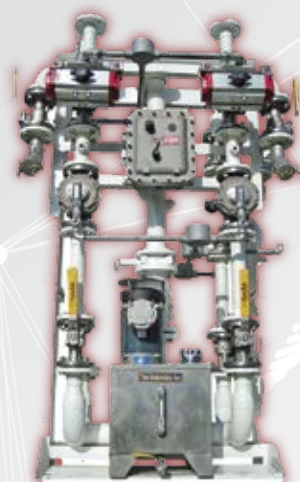


## Stand Alone Pump Skids



**Single and Dual Pump Skids** (page 18)

## Ethanol and BioDiesel Blenders





## Tank Packages

- Including dual pump skid, sight gauge, t-vent, thief hatch and pressure vacuum vent
- Other options include: clock gauge, fill line, oval gear meter, emergency over fill alarm, horn, strobe light, ladder access and OSHA approved platform



**Tank with 110% Spill Pan**



**Tank with Dome Containment**



**Trailer Injection System**



**Stackable SS Tote Tank**



**Horizontal Tank w/Rain Shield**



**Insulated Tank w/OSHA Platform and Stairs**



**Turbine Flowmeter**  
(1/2"-4")



**Oval Gear Meter**  
(1/8"-3")



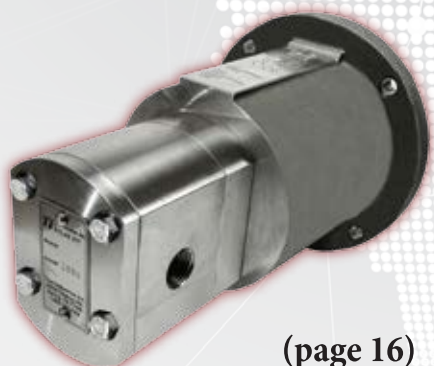
**Titan Oval Gear Meter**



**Turbine Flowmeter**  
(2"-20" pipeline)

## Flowmeters

### Titan Atlas™ Pump



(page 16)

### Dual Pulse Output Sensor



XP2-Titan™



# Titan MonoBlock



Titan Industries Inc., the industry leader in innovative technology, has done it again. Introducing the Titan MonoBlock. Titan has taken a popular industry standard to the next level. Servicing the Titan MonoBlock becomes easier than ever with access to both the check valve and strainer from the front of the block. Downtime is minimized, with no more working around, over or through conduit or other fittings. Simply loosen the cap, service either the check valve or strainer and you're back online in a matter of minutes.

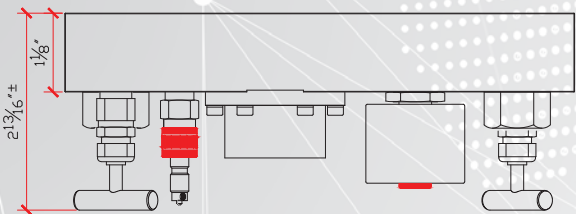
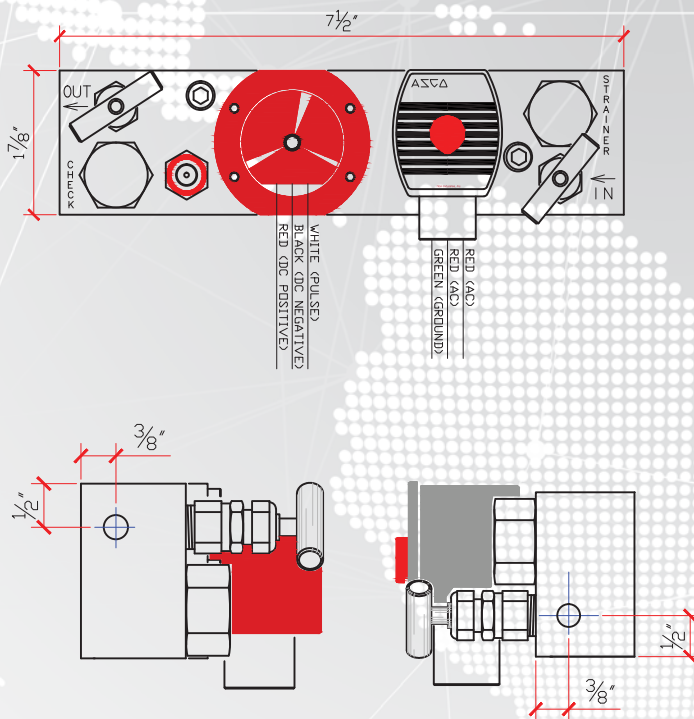
The Titan MonoBlock is designed for use with PLC's, Electronic Presets, TAS systems or smart injectors. The Titan Monoblock also handles every application at your facility from Red Dye to Glycol. Coupled with our industry accepted Titan ProPac3 Batch Controller, you have a rock solid, stand-alone system to take your facility to the next level.





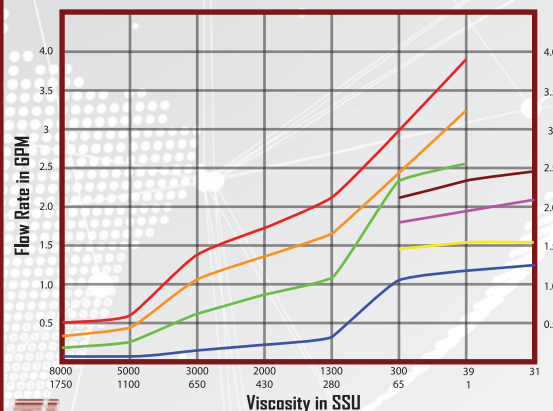
# Specifications

- 304 Stainless Steel machined metering injection control block
- ASCO Explosion proof solenoid (Class 1, Div. 1, Group A, B, C, & D) provided with either Teflon or ChemRez seat. 120 VAC or 240 VAC voltages available.
- Sensor is a Hall-Effect type, 3-wire sensor accepting 5-30 VDC, and is approved for hazardous area locations.
- Stainless Steel gear set with nominal 5200 PPG rated up to 750 PSIG
- Stainless Steel gear housing plate with easy access to gear set
- Flow Rate: Up to 2 gal/min
- Max Viscosity: 300 cst
- 3/8" NPT inlet and outlet connections
- Strainer body machined into block
- Strainer has 100 mesh screen with easy removal and cleaning
- Check valve machined into block and oriented for positive shut off
- Designed for use with PLC's, Electronic presets, TAS systems or smart injectors
- Inlet and Outlet needle valves for isolation
- Available unmounted as a bare block, or in multiple configurations pre-wired and pre-mounted



Titan Monoblock  
Injector Testing Results\*

20 psi 1.4 bar    27 psi 1.8 bar  
36 psi 2.4 bar    44 psi 3.0 bar  
50 psi 3.4 bar    75 psi 5.1 bar  
100 psi 6.8 bar



\*Tests are based on 15 injections per minute\*





Titan Industries has designed and patented quality additive injection systems for over 20 years. The Titan SafTPac® and the Titan SafTCal® are the safest injectors ever made. Titan's newest products are both easy to operate and very safe for the user.

The Titan SafTPac® is a new safe touch injector designed with safety in mind by Titan Industries. It has a built-in calibration feature that allows the operator to calibrate the injector without having to touch the liquid additive or breathe any additive vapors. The calibrated cylinder displays an accurate measurement of chemical additive. With the Titan SafTPac®, there is no loss of additive because all of the liquid is in a closed loop, which eliminates spills or exposure when properly installed. The spring-loaded cylinder returns the additive to either the additive tank during operation of the additive system or additive line when the return ball valve is opened.

Both the Titan SafTPac® and the Titan SafTCal® can eliminate exposure to harmful vapors and additive liquids by the user during calibration. The standard Titan SafTPac® comes with a 100 mL cylinder with an optional 350 mL cylinder available.





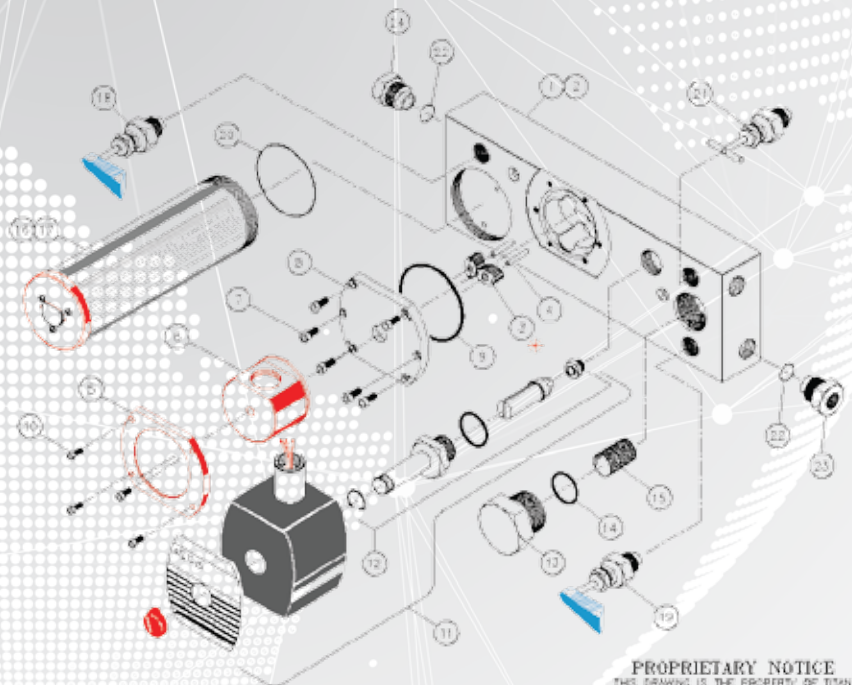
# Specifications

- 304 Stainless Steel machined calibration block
- 3/8" NPT inlet and outlet connections
- Designed for use with PLC's, Electronic presets, TAS systems or smart injectors
- Available unmounted as a bare block or pre-mounted on a rack
- Dimensions: 9.75"L x 3"W x 5.9"H
- Flow Sensor: 5 to 24 VDC
- Weight: 10 lbs
- Max Operating Pressure: 700 PSI for 100cc/350cc
- Inlet/Outlet: 3/8"
- Flow Rate: Up to 2.5 gal/min
- Solenoid Voltages: 110 VAC/220 VAC
- Typical K-factor: 2600 pulses/gallon

## Optional Accessories

- Calibration cylinder available in 100cc and 350cc configurations as well as cylinder delete.
- Thermal Relief Bypass Kit
- Dual Pulse Output Sensor

ITEM	REQD.	P/N	DESCRIPTION
1	1	INU-3180	INJECTOR BLOCK, 100 c/c
2	1	INU-3181	INJECTOR BLOCK, 350 c/c
3	2	MTR-5101	OVAL GEAR SS-316
4	2	INU-TI-MONO-10	DOWELL PINS
5	1	INU-TI-MONO-27	MOUNTING RING (RED)
6	1	INU-TI-MONO-28	MONOBLOCK 5190 SENSOR (RED)
7	8	INU-TI-MONO-08	SCREW SS-316
8	1	INU-TI-MONO-25	METER COVER FOR SENSOR
9	1	INU-TI-MONO-04	TEFLON O RING
10	4	N/A	SENSOR MOUNTING SCREWS
11	1	INU-TI-MONO-11	ASCO VALVE ASSEMBLY
12	1		ASCO REBUILD KIT
13	1	INU-TI-MONO-13	GAP, LARGE
14	1	INU-TI-MONO-14	TEFLON O RING
15	1	INU-TI-MONO-15	STRAINER
16	1	INU-3188	CALIBRATION CYLINDER, 100
17	1	INU-3181	CALIBRATION CYLINDER, 350
18	1		3 WAY NEEDLE VALVE
19	1		2 WAY NEEDLE VALVE
20	1		TEFLON O RING
21	1		NEEDLE VALVE
22	2		TEFLON O RING
23	1		RETURN OUTLET RETAINER
24	1		OUTLET O-RING VALVE RETAINER



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For customers who have existing injectors but would like to take advantage of the same safe touch technology of the Titan SaFTPac®, the Titan SaFTCal® is available. The Titan SaFTCal® is a product that can be attached to existing injectors in order to enable use of the safe touch calibration technology. When installed properly, the Titan SaFTCal® calibrations unit has a built-in calibration cylinder that provides extremely accurate, repeatable calibrations.

Both the Titan SaFTPac® and the Titan SaFTCal® can eliminate exposure to harmful vapors and additive liquids by the user during calibration. The standard Titan SaFTCal® unit comes with a 100 mL cylinder with an optional 350 mL cylinder available.





- ## Optional Accessories

- 
- This exploded view diagram illustrates the assembly of a 100W LED light fixture. The components are numbered as follows:
- 1**: LED strip light
  - 2**: LED strip light mounting bracket
  - 3**: LED strip light mounting bracket
  - 4**: LED strip light mounting bracket
  - 5**: LED strip light mounting bracket
  - 6**: LED strip light mounting bracket
  - 7**: LED strip light mounting bracket
  - 8**: LED strip light mounting bracket
  - 9**: LED strip light mounting bracket
  - 10**: LED strip light mounting bracket

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# Precision Block 250/375



Introducing the Titan Precision Blocks 250 and 375. Designed for use with PLC's, electronic presets, TAS systems or smart injectors. The Titan Precision RB handles every application at your facility from Red Dye to Glycol. When coupled with our industry accepted Titan ProPac3 Batch Controller, or the system you currently have in place, you have a rock solid, stand-alone system to take your facility to the next level. Engineering design concepts are always being considered and implemented keeping Titan Industries in front of the competition.





# Specifications

- Sensor is a Hall-Effect type, 3 wire sensor accepting 5-30 VDC and is approved for hazardous area locations.
- Stainless Steel gear set with nominal 2600 PPG rated up to 400 PSIG
- Stainless Steel gear housing plate with easy access to gear set
- Flow Rate: Up to 2 gal/min
- 304 Stainless Steel machined metering injection control block
- ASCO Explosion proof solenoid (Class 1, Div. 1, Group A, B, C, & D) 120 VAC with Teflon seat standard (ChemRez, 24 VDC, and 240 VAC options available)
- 3/8" NPT inlet and outlet connections
- Strainer body machined into block
- Strainer has 100 mesh screen with easy removal and cleaning
- Inlet and Outlet needle valves for isolation
- Check valve machined into block and oriented for positive shut off
- Designed for use with PLC's, Electronic presets, TAS systems or smart injectors
- Available unmounted as a bare block, or in multiple configurations pre-wired and pre-mounted.

## Optional Accessories

- Calibration Kit
- Thermal Relief Bypass Kit
- Dual Pulse Output Sensor



# Titan ProPac Infinity™



In 1989, Titan Industries introduced the first PAC-3 injector and then in 1994 the Titan ProPac3 was created. Since that time, the ProPac3 has enjoyed a reputation as the most accurate and reliable additive injector in the world. The ProPac Infinity™ injector is the latest addition to the PAC-3 family. Titan engineers totally redesigned the Infinity™ electronics, incorporating additional features that make the ProPac Infinity™ injector easier to install, program and use; all while incorporating the most flexible platform currently available.

The Titan ProPac Infinity™ additive injector is a single point injector specifically designed to batch inject liquid chemical additives at petroleum product terminals. The ProPac Infinity™ incorporates patented hardware and software designed to accurately inject additive, thereby, insuring the additive/product ratio is always maintained within customer specifications. The ProPac Infinity™, when properly integrated into a users control system, can inject within 0.5% accuracy, thereby, attaining an excellent additive/product ratio. The injector includes features that will provide the highest level of EPA regulatory compliance.

The ProPac Infinity™ can be re-purposed to fill almost any additive injection role from standard batch injection, to ethanol and biodiesel blending.







# Specifications

- Configurable Alarms
- Pump Start
- Up to 3 programmable treat rates
- 120/240 VAC jumper configurable power options
- Fully configurable AC/DC inputs
- 2 120/240 VAC solenoid outputs
- 4 Dry contact outputs to easily integrate the ProPac Infinity™ into any existing automation system
- Head unit installed with a cable allowing the unit to be removed from the enclosure without powering down to make installation and troubleshooting a snap.
- Integrated IR receiver for use with hand-held remote

## Optional Accessories

- Calibration Kit
- Thermal Relief Bypass Kit
- Titan Monoblock or SafTPac® injectors
- Titan SafTCal®
- IR Remote

Designed for use with:

The Titan Monoblock



The Titan SafTPac®

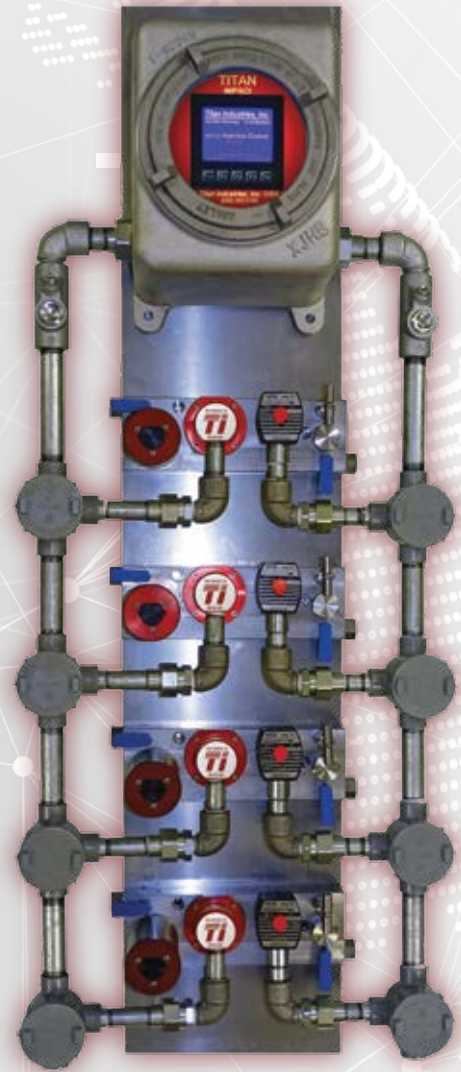




Titan Industries continues to push the envelope of injection system design with the Titan ICM series iMPACT™. Designed to run up to 4 additive injectors, the iMPACT™ provides a state-of-the-art touchscreen LCD interface with the latest in communication options including MODBus, Ethernet and optional cellular communications. An available hand-held IR remote allows ease of access if removing the explosion proof enclosure housing is not an option.

Keeping tabs on your system has never been easier with configurable email and SMS messaging options. Daily load information, reports and alarm summaries can be sent to key personnel to keep everyone in the loop. Also, operations personnel are able to receive instant notifications via SMS messaging if a flow problem occurs. This feature is designed to maximize uptime 24 hours a day, 7 days a week, even without on-site monitoring or for unmanned locations. When required, the unit can output directly to a printer to provide load documentation. Additionally, the unit keeps an on-board data log of every load and alarm in a Microsoft Excel viewable file for record keeping purposes.

Though designed as one of the most robust units available, the iMPACT™ is prepared for the worst at all times. In the event of a hardware failure, all load data, settings, etc. is kept on removable storage media, so commissioning a replacement unit takes seconds and requires almost no input from the operator. Simply move the media card from the failed unit into a new unit, import the settings and let the iMPACT™ take care of the rest.







# Specifications

- Modular design for easy install, and upgrade.
- 120/240 VAC
- 24VDC Auxiliary power output
- Each injector has dedicated Product Pulse input, Permissive/Flow Switch input, Alarm Output and Pump Start Output.
- Inputs are configured using optically isolated solid state relays to protect the iMPACT™ and allow easy replacement.
- Outputs are dry contact relays to isolate the iMPACT™ power system from other systems, while allowing the flexibility to work with any existing system's requirements.
- Head unit installed with a cable allowing the unit to be removed from the enclosure without powering the unit down to make installation and troubleshooting a snap.

## Optional Accessories

- IR Remote
- Dual Pulse Output Sensor
- Available with Titan Monoblock or Titan SaftPac®
- Titan AutoCal System—for automated calibration of each injector on the fly

**Designed for use with:**

**The Titan Monoblock**

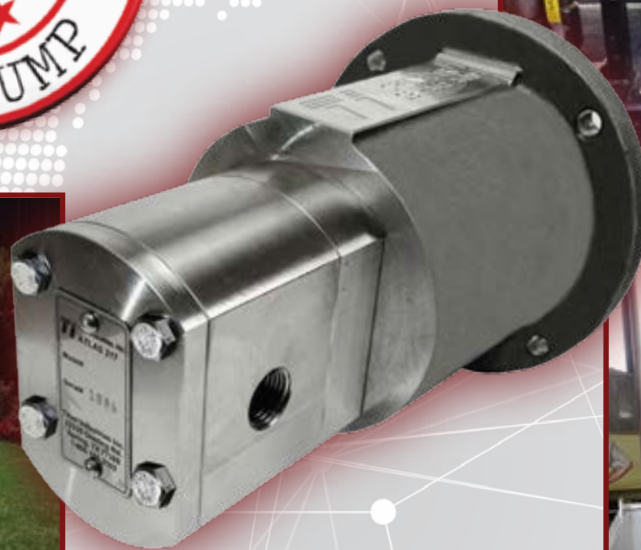


**The Titan SaftPac®**





# Titan Atlas™ Stainless Steel Additive Pump



**Titan has engineered the most reliable Red Dye pump on the market today.**

Our Atlas™ Pump Series was specifically designed with Red Dye in mind. The Atlas™ is constructed of stainless steel components that resists corrosion from Red Dye and other harsh additives. These pumps are built for hassel-free service on all of your aggressive additives.

Available in 2 Gallons Per Minute or 7 Gallons Per Minute, Titan has an Atlas™ for the job. Stop having to constantly replace inferior pumps and contact our Titan Sales Team today!

**Atlas™ pumps have become the standard in numerous terminals across the country!**

**MAKE THE SWITCH!**





# Specifications

## Titan Atlas™ 217 Pump Performance Data Sheet

### Construction:

- **Body:** 316 Stainless Steel
- **Shaft:** Hardened 17-4 PH Stainless Steel
- **Housing:** 316 Stainless Steel
- **Bearings:** Carbon Graphite
- **Mag Drive w/neodymium inner and outer magnets rated for 9 ft.lbs of torque**
- **Gears/Shfts:** 17-PH Stainless Steel (Heat treated to HH1150)
- **O-Rings:** Viton Seals
- **1/2" FNPT**

### Drive Requirements:

- **Speed, rated:** 1750 rpm
- **Pump Speed, minimum (rpm):** 1425 rpm
- **Pump Speed, maximum (rpm):** 1800 rpm
- **Motor requires 56c mounting face**

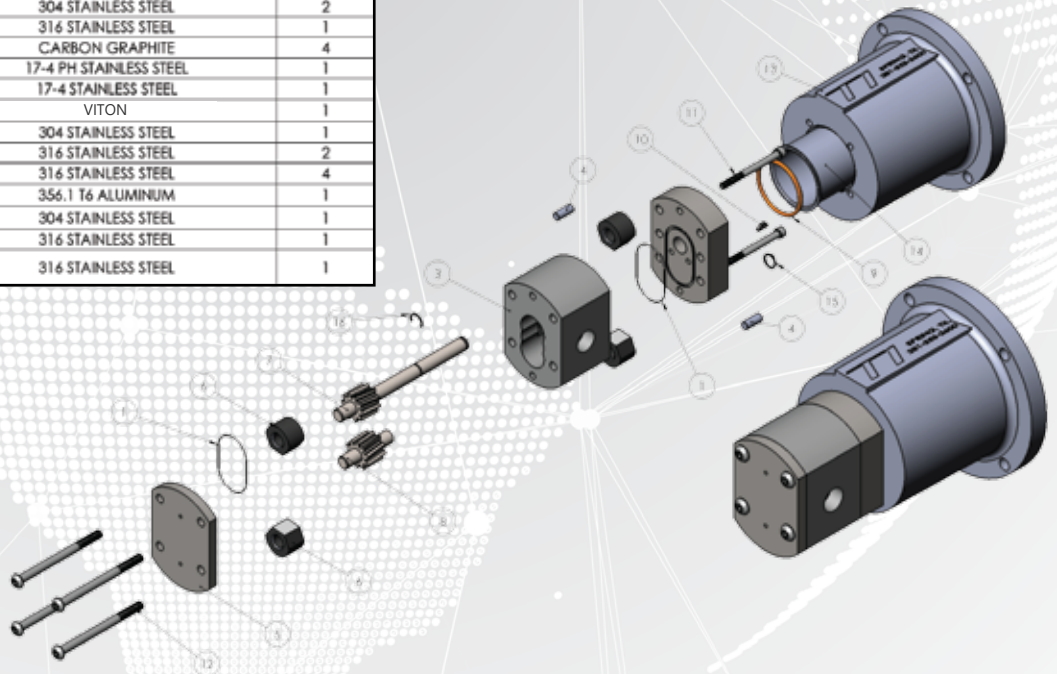
### Operational Data:

- **Rated Discharge Pressure:** 0-200 psi
- **Maximum Allowable Unsustained Working Pressure:** 600 psi
- **Flooded Suction required**
- **Mag Drive Decouple Pressure:** 600 psi
- **Nominal Flow:** 2 gpm

### Features:

- Heavy duty stainless steel gear pumps for optimum chemical capability
- Back pull-out design for easy maintenance without disturbing piping
- One-piece "D" style bushings eliminate the need for wearplates and provide positive alignment and gear support
- Capable of operating at nominal speeds
- No integral relief valve available, external relief recommended

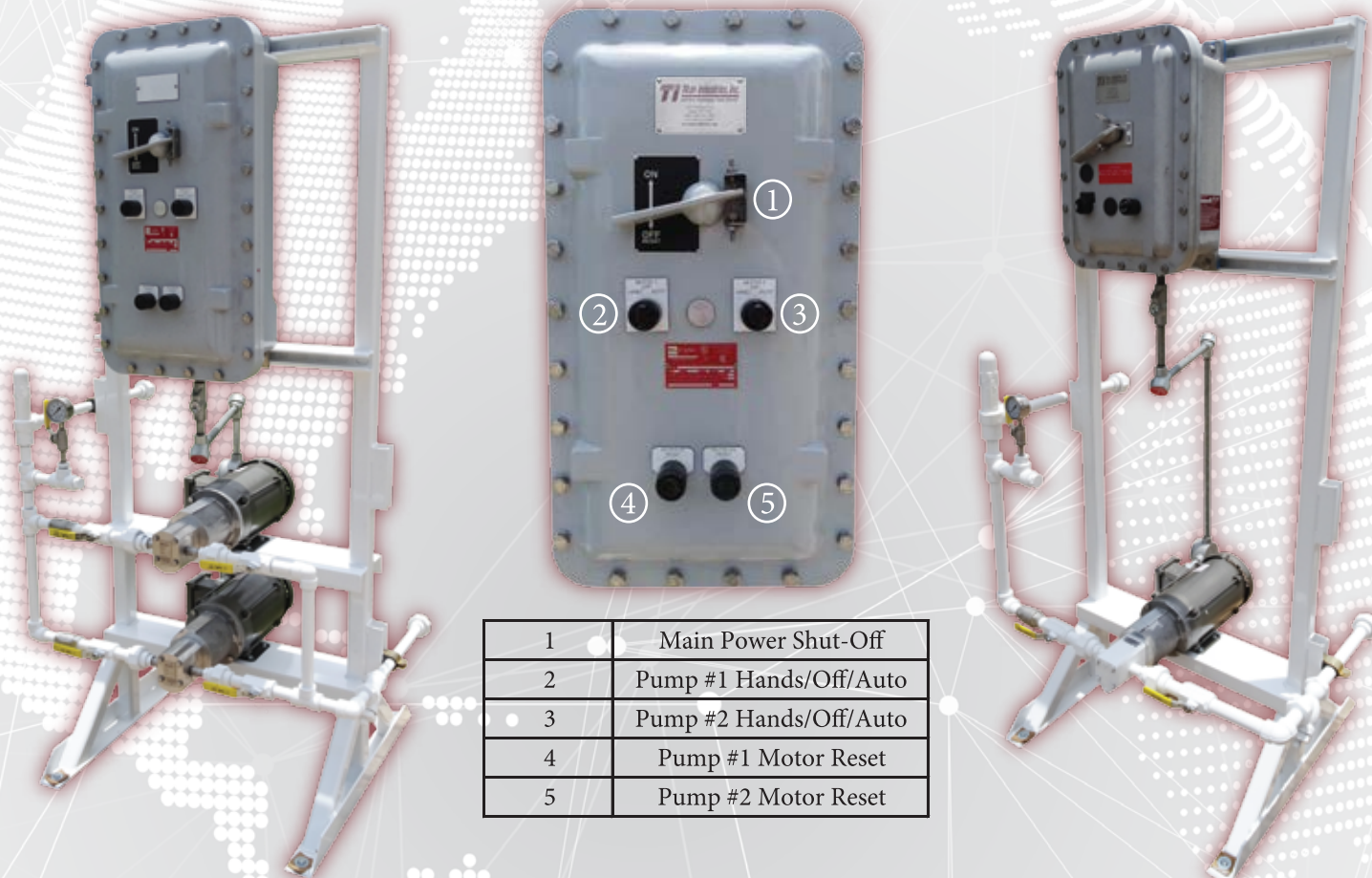
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ADAPTER PLATE O-RING	VITON	2
2	ATLAS ADAPTER PLATE	316 STAINLESS STEEL	1
3	ATLAS 2GPM GEAR HOUSING	316 STAINLESS STEEL	1
4	ATLAS PUMP ALIGNMENT PIN	304 STAINLESS STEEL	2
5	ATLAS PUMP CAP	316 STAINLESS STEEL	1
6	ATLAS PUMP BUSHING	CARBON GRAPHITE	4
7	ATLAS 2GPM LONG GEARS	17-4 PH STAINLESS STEEL	1
8	ATLAS 2GPM SHORT GEARS	17-4 PH STAINLESS STEEL	1
9	BARRIER CUP O-RING	VITON	1
10	WOODRUFF KEY	304 STAINLESS STEEL	1
11	2-3/4" SOCKET CAP SCREW	316 STAINLESS STEEL	2
12	4" BUTTON HEAD SCREW	316 STAINLESS STEEL	4
13	PUMP BRACKET	356,1 T6 ALUMINUM	1
14	PUMP BARRIER CUP	304 STAINLESS STEEL	1
15	RETAINING RING	316 STAINLESS STEEL	1
16	LOW CLEARANCE RETAINING RING	316 STAINLESS STEEL	1



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# Pump Skid Assemblies



1	Main Power Shut-Off
2	Pump #1 Hands/Off/Auto
3	Pump #2 Hands/Off/Auto
4	Pump #1 Motor Reset
5	Pump #2 Motor Reset

## Mechanical Components

- Freestanding steel rack with over & under channel base & vertical rack. Rack is painted white—galvanized is available.
- Pump, motors, and explosion-proof electrical enclosure are all mounted to the pump rack.
- Threaded inlet, outlet, and pump isolation carbon steel ball valves.
- Threaded inlet strainer with carbon steel body & 40-mesh stainless steel basket.
- Threaded outlet check valve with stainless steel body.
- Threaded liquid filled stainless steel pressure gauge with isolation ball valve.
- Connections made of stainless steel tubing and carbon steel piping.





# Specifications

## Electrical Components

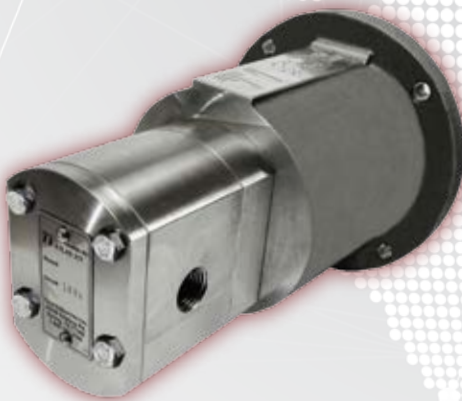
- Explosion-proof electrical enclosure with circuit breaker, dual motor starter, Hand-Off-Auto switch, A/B selector switch and reset buttons.
- All interconnecting conduit and wiring.

## Additional Options

- Each pump start will alternate between Pump A & Pump B
- Switch to alternate pumps if one fails
- Time delay shut-off
- Pressure switch – signal low pump pressure.
- Stainless Steel piping & component upgrade for low maintenance and corrosion.

## Replacement Parts Available

Titan stocks our Atlas® Stainless Steel Pump, as well as Baldor Motors, Viking 510 and Viking 519 pumps in order to provide immediate service and solutions to our customers.





# Titan Mobile Additive Trailers



Titan Additive Trailers are fully-contained mobile additive systems that can be integrated into an existing preset system, such as those supplied by Accuload or Multiload. It can also be configured as a 100% stand-alone unit with the ability to program injections per compartment. Our additive trailers are completely equipped with Titan injectors, additive tanks and pump skids.

## Features

- Flexible additive tank options - 4 tank sizes available (120g, 350g, 550g & 1000g)
- 110% containment pan included standard
- Flexible pump options - single or dual pumps - 480v, 220v, 110v, 1 phase or 3 phase
- Optional Generator available
- Pump starter panel with HOA
- Easily operated programmable controller
- Titan Monoblock Injector -- up to 2gpm
- 25' injector hose reel with quick disconnect
- Toolbox storage
- Leveling jacks

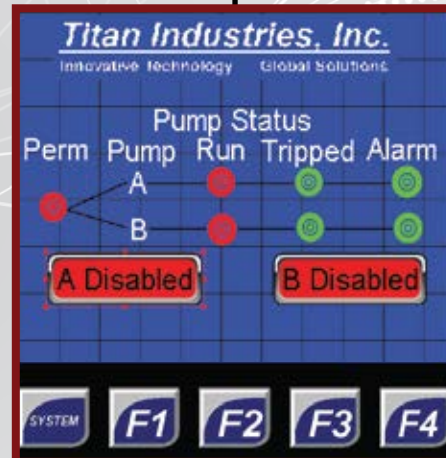






# Titan Pump Sequencer

Titan's Pump Sequencer is an automatic control system, designed to alternate each pump on new start up.



The main display shows which pump is active and the status of the starter. If starter is tripped an alarm will be set, the pump will be disabled and the alarm will be set until operator takes the appropriate action.

If Pump A is set to come on but continues to fail for longer than thirty seconds, the sequencer will alternate to Pump B. The defective pump will be taken out of rotation and an alarm will be triggered. To reset the tripped pump and alarm, press the red "A Disabled" button on the main screen. The red "A Disabled" button will then turn to a green "A Enabled" icon.

\*All permissives, status, alarms and Enable/Disable are set for Modbus communications. The pump permissive and alarm outputs can be wired to external input/outputs.





# Titan WatchDog™ AutoCal System



The Titan WatchDog™ initiates calibration sequences automatically for each load and provides corrected K-factor data. Additionally, if the measured K-Factor deviates from load to load by more than a determined amount (typically 3%), the Titan WatchDog™ will trigger the alarm. Notification can come in many forms including: contact closure (light, strobe, or horn), email notification, and/or SMS Text messaging. The alarm relay can tie into any centralized control system and provide remote alarming within your existing platform.

Daily time stamped data report entries are generated for each injector and loading arm to include: observed K-factor for each load, quantity of injections, quantity of additive injected, alarm events, totalized daily additive usage, and daily average K-factors. The Titan WatchDog™ system is a fully integrated self-monitoring injection system that will keep you constantly informed of your usage and suggest changes that need to be made, if any, to keep your overage and shortage to a bare minimum, saving you time and money.



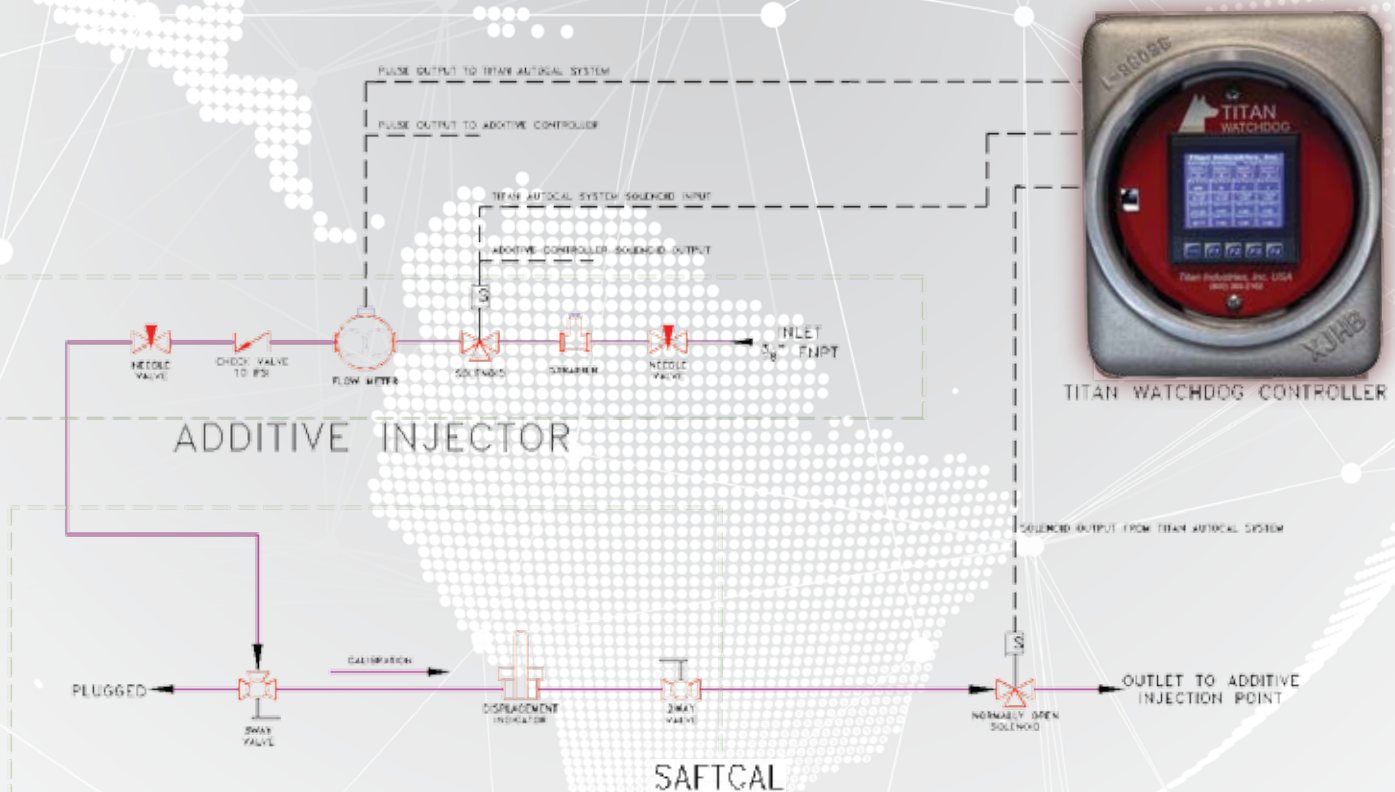


# Specifications

- Base unit: Accepts up to 4 injection points, others added through our point expansion modules
- Display: 3.5" color touch screen
- Power: 90-240 VAC
- Inputs: 4 injector pulses
- Outputs: 4 Alarm Dry Contacts
- Communication: Ethernet-IP, Modbus RS-232/RS-485
- USB Storage: Used for data export
- Micro-SD: Holds vital programming for fast recovery

## Requirements

- Titan WatchDog™ can only be used in conjunction with Titan SaftPac® injector or any other injector when coupled with a SaftCal® calibration cylinder.



# WatchDog™ Reporting



Titan WatchDog™ Report					
ABC Terminal Anytown, USA Date: 1/01/2018					
Generic Additive					
Meter Number	Number Loads	Month KFactor	Daily Avg KFactor	Additive Usage	Product Loaded
1-1	5	3004.7588	3008.0789	1.749	20920
1-3	1	2772.3467	2788.9475	0.044	400
Daily Total: 6				1.793	21320
				Monthly Total:	72.886 21320
				Monthly Injection Rate:	0.08130/1000 Gallons
Name Brand					
Meter Number	Number Loads	Month KFactor	Daily Avg KFactor	Additive Usage	Product Loaded
1-1	10	2791.5012	2788.9473	19.8236	239880
1-3	5	2801.7173	2788.9745	3.3895	35120
Daily Total: 6				23.2130	275000
				Monthly Total:	820.647 9559182
				Monthly Injection Rate:	0.08585/1000 Gallons

“The WatchDog™ report is easy to read and self-explanatory. The accuracy of the entire system is great. We’ve closed our additive overage/shortage and haven’t had any of our past problems since the system was installed. In all, the WatchDog™ is a very good system.”

Sr. Terminal Operator  
Louisiana, U.S.





# Titan Oval Gear Flowmeter



The Titan Oval Gear Flowmeter is specifically designed for precise measurement for low volumes of additives, lube oils, fuels, etc. They have found extensive use in fuel oil applications where consumption control is required, as well as metering lubricating oil for machinery and equipment. The wetted parts are all stainless steel for extended life and are compatible with most harsh chemicals in the industry. The two rotating magnetic impellers are detected by a non-intrusive Hall Effect Sensor, which sends a DC pulse signal to the receiving controller. A K-factor converts the pulses to engineering units for remote data collection and digital display.

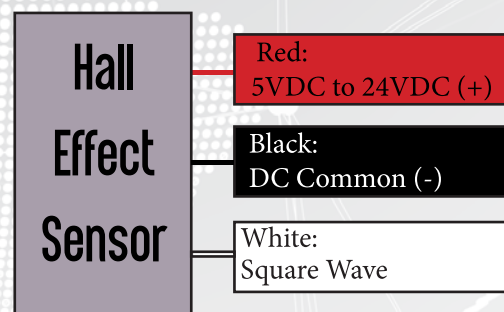
Meter Size	Max Pressure	Max Viscosity	Max Temp	Flow Range	Port Inlet/Outlet	Mount Plate	Size
1/4"	400 PSI	350 cSt	250°F 121°C	Up to 0.3 GPM	1/4" NPT K factor 5500	3/4" NPT	5/8" X 7/16"
3/8"	400 PSI	350 cSt	250°F 121°C	Up to 3 GPM	3/8" NPT K factor: 2700	3/4" NPT	2-3/4" X 1-3/4"
1/2"	400 PSI	350 cSt	250°F 121°C	Up to 10 GPM	1/2" NPT K factor: 700	3/4" NPT	3-1/4" X 1-13/16"

## Hall Effect Sensor

**Supply Voltage:** 5Vdc to 24Vdc

**Supply Current:** 10mA

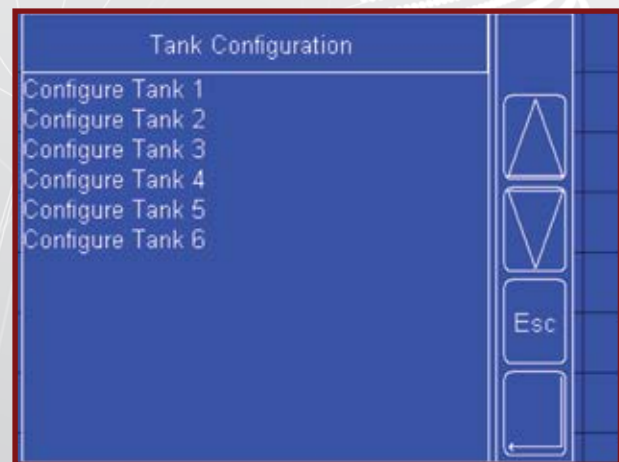
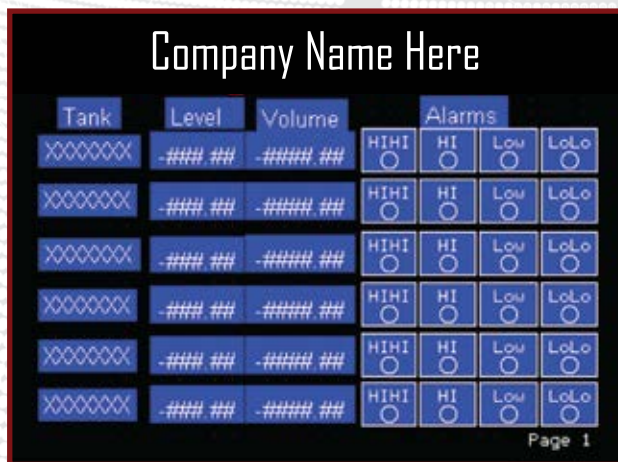
**Operating Freq:** 0 to 20KHz



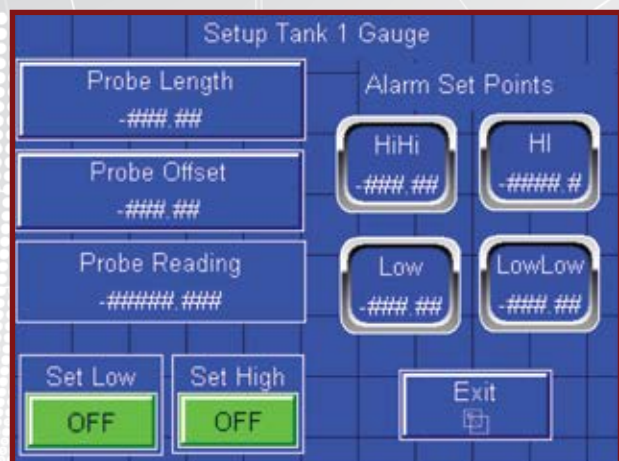
# Titan Tank Gauge System



Titan Industries has created the most reliable, most accurate tank gauging system on the market.



Titan's Tank Gauge System is designed to provide continuous liquid level measurement in bulk storage applications. Our system gives operators the ability to monitor the liquid levels of up to six different tanks, all from one PLC. Each desired tank has a stainless steel stem that is installed, equipped with magnetostrictive (MS) level sensors and a float that allows the operator to set low and high points for the tank. Each tank is controlled and monitored by a central PLC, giving the operator the ability to name and configure each tank according to type and dimensions. Using MS technology, Titan's tank gauge system will read tank levels, volume and will also alarm the operator if levels are too high or low.







# Magnetostrictive Liquid Level Sensors

## Operational Description

The MS series magnetostrictive level sensors are continuous measurement devices based on proven magnetostrictive technology. They are accurate, reliable and easy to install and maintain.

The sensor is comprised of a magnetostrictive waveguide inside a stainless steel stem. A current pulse is applied to the waveguide and creates a magnetic field along the length of the wire. This interacts with the magnetic field from the float and creates a torsion vibration in the waveguide that is detected by a sensing coil in the head of the sensor. Microprocessor based electronics measures the elapsed time between the current pulse and the torsion vibration and determines with precision the location of the float.

The MS series sensors are used in a wide variety of liquid level measuring applications. They perform well independent of physical and chemical changes in the fluids including foaming, conductivity, dielectric constant, pressure, vacuum, temperature, vapors and condensation

A variety of mounting options and floats are available to fit virtually any application with both standard and sanitary finishes.



## Features

- Lengths from 1 to 20 feet (0.3 to 6.096 m)
- One tenth-inch resolution
- Ease of installation
- Reliable
- Wide variety of mounting options
- Pre-programmed at the factory or programmable via computer interface using APG RST series communication modules and Windows compatible software.

## Optional Outputs

- 3 Wire
  - 4-20 mA
  - 4-20 mA with 2 NPN outputs
  - 0-2.5 Vdc/0-5 Vdc
- 2 Wire Loop Powered
  - 4-20 mA





# Titan Flush Block™



Are you missing a marketing opportunity by not offering “dyed” low sulfur diesel? Are you concerned about the potential of dye contamination in you taxable fuels? We have solved this problem. You can eliminate the risk of dye contamination to the low sulfur line by installing a Titan Flush Block™. The Flush Block is designed so that you can offer both dyed and un-dyed fuels through the same load arm.

You no longer have to accept downgraded or non-compliant diesel fuel. The field tested Titan Flush Block™ from Titan Industries provides an economical and effective method for eliminating red dye contamination. The unique fluid channel design removes all potential contamination risks, effectively eliminating the need for elaborate by-pass systems, redundant pressure relief valves and isolated red dye arms. The Flush Block is easy to install and is available as an “add-on” to existing piston panels, electronic injectors and PLC systems.



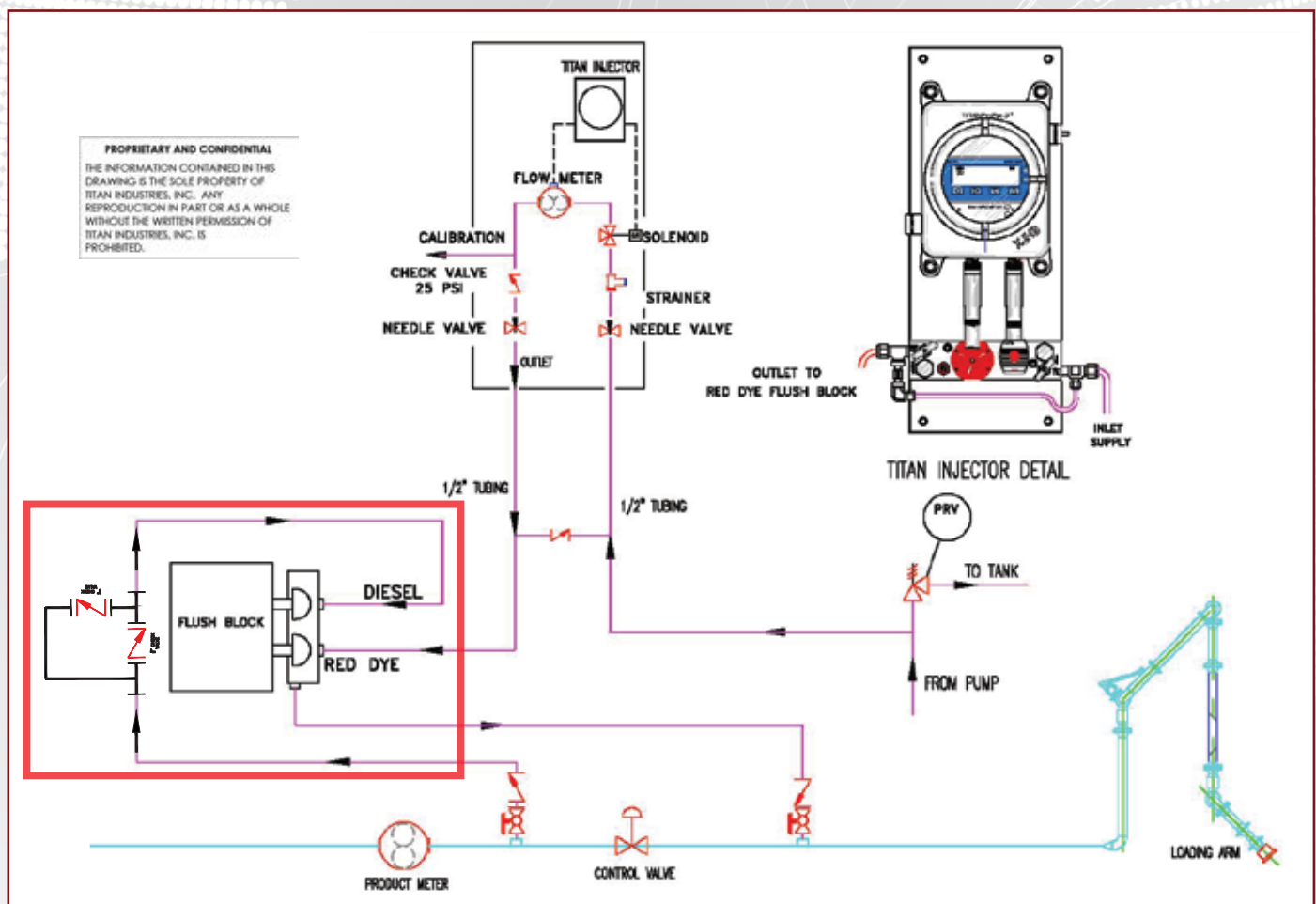


# Specifications

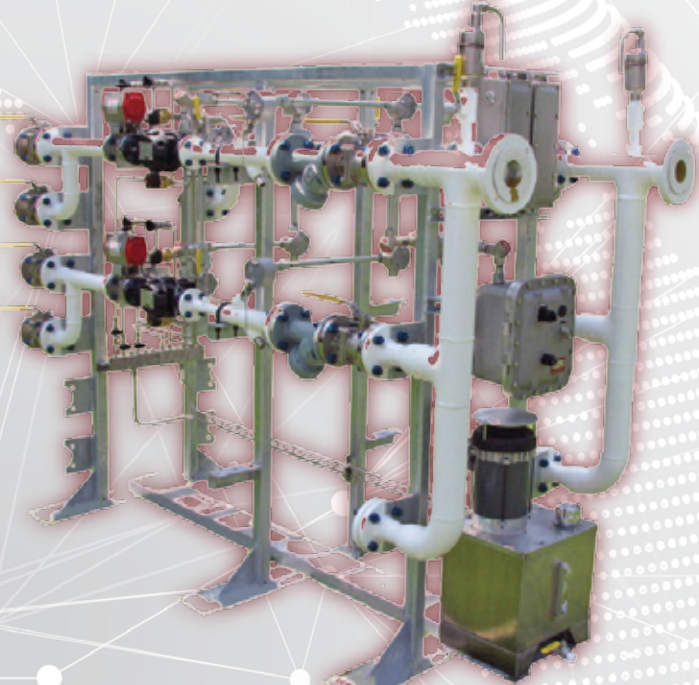
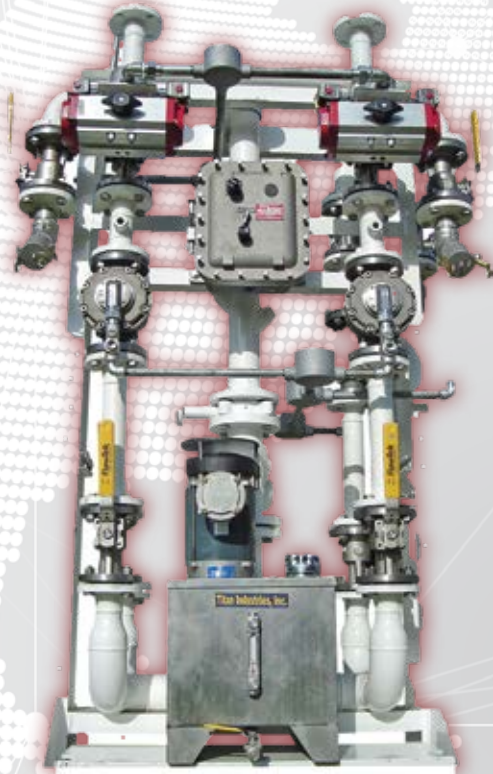
- 304 Stainless Steel machined injection control block
- Parker Explosion proof Class 1, Div. 1, Group A, B, C, & D, solenoid 120 VAC machined into block with Teflon seat. (24 VDC and 240 VAC options available)
- 1/4" NPT inlet and outlet connections
- Designed for use with PLC's, Electronic presets, TAS systems or smart injectors

## Optional Accessories

- Thermal Relief Bypass Kit



# Titan Ethanol and Biodiesel Blenders

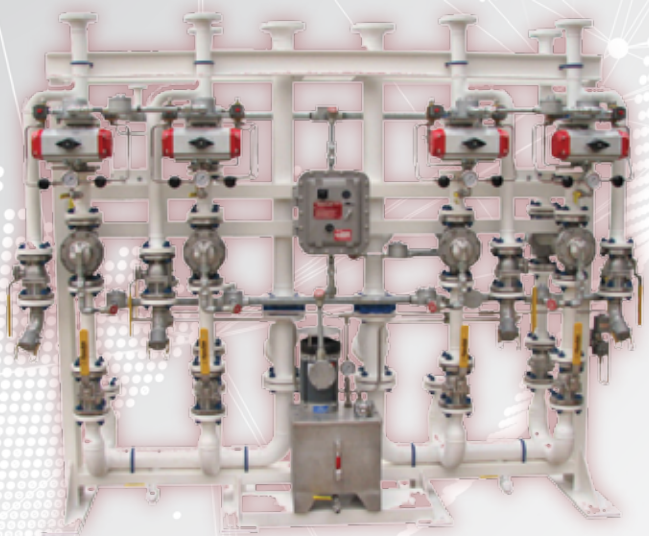
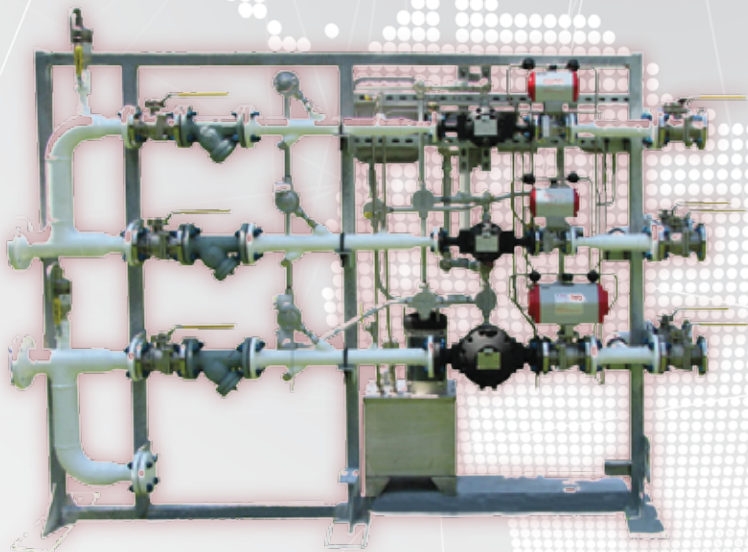
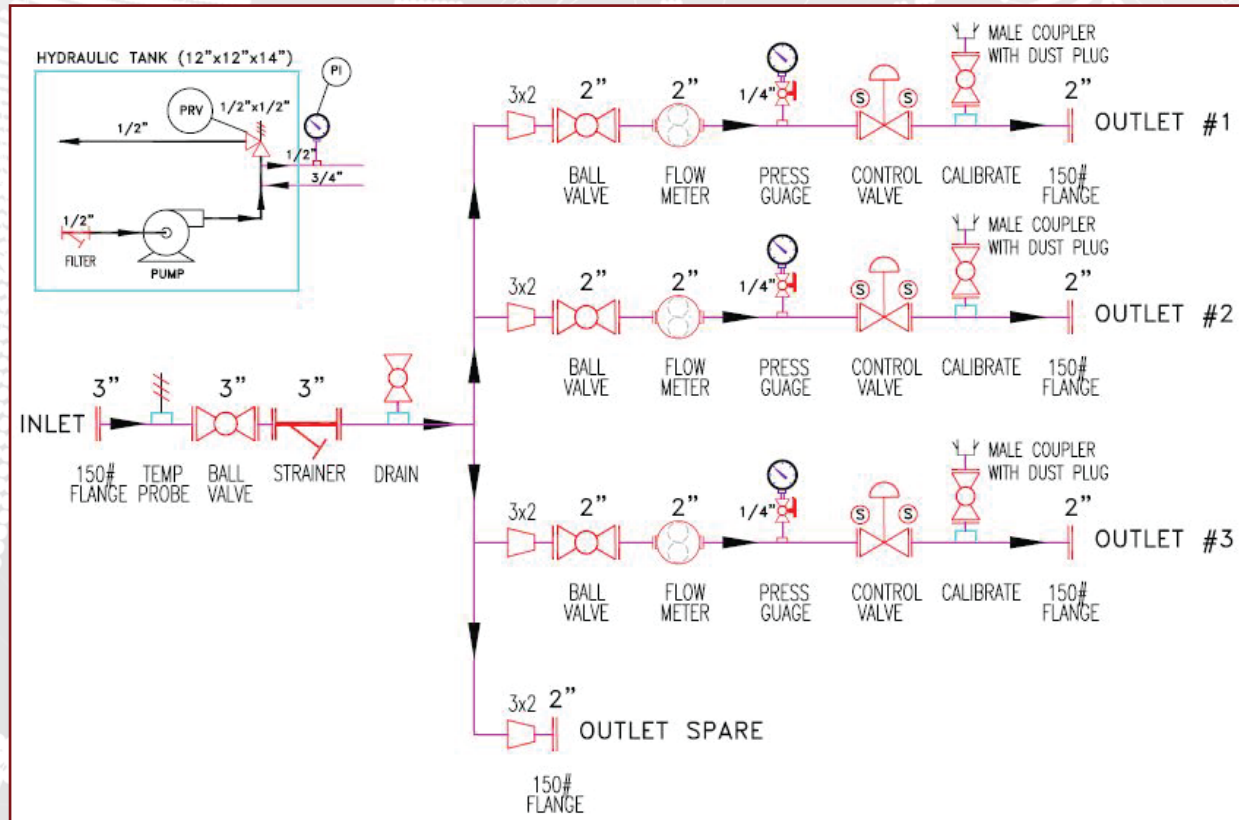


- Specifically used for blending ethanol or biodiesel to provide real time in-line mixing.
- Controlled by 2 solenoids, which operate the hydraulic control valve to allow exact amounts required.
- Available in Horizontal or Vertical
- Available in 1 inch, 2 inch and other custom sizes
- Comes standard with 3 streams and 1 spare outlet for future use
- Other custom designs available: e.g.
- 2 inlets, 4 outlets
- 2 inlets, 8 outlets
- 1 outlet for Biodiesel, the other for Ethanol
- Electrical wiring is all pre-wired and terminated on 2 explosion proof enclosures located on the sides of the blender skid.





# Blender P. & I.D.





# Titan Installation Services



**Butane blending Install–Beaumont, TX**



**4K Tank w/ Dual Pump Skid Install - Corpus Christi, TX**

Titan Industries specializes in on-site service and installation in bulk fuel terminals and pipeline applications. From additive systems and tanks to VRU installations to the largest butane blending system currently in the U.S., Titan has specially trained technicians ready to handle all of your installation and construction needs.



**Additive Injector Install– Hammond, Indiana**



**VRU Install–Hearne, TX**





# Features



## **Titan Industries has everything needed to install:**

- Additive Systems
- Additive Tanks
- Product Pumps
- LACT Systems
- Ethanol and Butane Offload Systems
- Fuel Terminal Lane Additions
- Office Buildings
- Metering Skids
- Vapor Recovery Units
- Tank Level Transmitters
- Cat Walks and Platform Cable Trays
- Control Rooms



## **Titan Industries has everything needed for the calibration, service, maintenance and repair of:**

- Every brand of Additive Injection System currently on the market
- Additive Pump Systems

## **Titan Industries also provides:**

- PSSR Services
- PQOT Services

## **Features:**

- Professional service and install technicians highly trained to work in fuel terminals and pipeline applications.
- Our install technicians carry TWIC cards, CDLs, welding certifications and a variety of other certifications.
- Technicians arrive fully equipped with mobile shops that carry almost every piece of equipment necessary to take on the most challenging installs.
- Our technicians specialize in electrical, civil and mechanical disciplines which allow Titan Industries to offer full turnkey installations from engineering and CAD design to commissioning and startup.







## Mobile Chemical Generation and Testing Laboratories

Titan Industries is proud to provide our customers with full turnkey skid engineering and fabrication services. We are prepared to rise to any manufacturing challenge you may have. From CAD design and engineering to fully functional equipment, Titan fabricators can solve any problem.







# Features

## Titan Industries has fabricators ready to build:

- Additive Tank Skids
- Product Pump Skids
- LACT Systems
- Ethanol and Butane Offload Skids
- Office/Laboratory Trailers
- Metering Skids
- Vapor Recovery Units
- Cat Walks and Platforms
- Cable Tray and Pipe Supports
- Control Centers



## Services

- Design consultation
- Skid Painting and Powder Coating
- Pipe Fitting
- Stainless Steel Tubing Welding and Installation
- Shipping Logistics and Delivery
- Electrical Panel design and custom control wiring

Titan Industries specializes in electrical, civil and mechanical design and manufacturing which allows us to fully turnkey systems and skids from engineering and CAD design to commissioning and startup.







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