

Automation | Valves | Measurement | Process Control

SPARTAN CONTROLS RAILVUE™ RAIL LOADING SYSTEM

Accurate and reliable rail terminal loading/ unloading applications for transporting crude oil, NGL and other hydrocarbons



The Spartan Controls RailVue[™] rail loading system is designed to accurately manage, measure, record, and report loading transactions at rail terminals or transfer points, in compliance with local regulatory compliance and industry standards.

With 30+ years of experience in supplying fluid transport solutions, Spartan Controls has created unique solutions for rail and truck terminals. From transloading solutions for initial smaller sites, to large unit train loading/unloading projects that will assist in moving the product to market, the RailVue[™] solution can be customized to meet and exceed your needs.

Spartan Control's fluid transport solutions are based on best-in-class technologies and state-of-the art user interfaces purpose-built to handle truck and rail terminal applications across the hydrocarbon spectrum (heavy oil to liquefied natural gas).





HOW IT WORKS

The TMS Server Transfer Management System for the rail terminal is designed to automatically measure quantities of the fluids being loaded on to the rail tank car and is in compliance with API RP 3000. The system also determines gross and net volumes of oil and produced water, and compensates these volumes for temperature and pressure per API Chapter 11.1 (2004) calculations. It provides an unlimited audit trail for all transfer transaction measurements, and provides electronic files for retrieval by the Customer's networked production accounting system while integrating seamlessly into the Customer's data historian.

The RailVue[™] system is designed to monitor the loading of multiple rail transfer points from small to large rail loading facilities. Designed specifically for rail loading applications, the RailVue[™] System performs all of the related functions and tasks required by Customers including accurate measurement of water cuts, density and volume determination, industry compliance calculations, real time data management, system control and more. The RailVue[™] system has an extensible architecture platform capable of supporting multiple panels at site, interfacing to sophisticated rail logistics system, and fully integrating with corporate enterprise systems. After the rail cars are finished loading the product, the system prints out an 8½ x 11 full page ticket and stores the detailed information into a transaction scan file, as well as the summary of the transaction into a local database.

KEY FEATURES & BENEFITS

The RailVue[™] system contains a number of features consistent with Spartan's TruckVue[™] platform and more:

- Compliant with:
 - AER Directive 17
 - API Chapters 5.6, 11, 12, 21
- Local operator interface
- Water cut measurement calculation
- Intuitive user interface

- Superior measurement capabilities
- Custody transfer approved
- Handles a wide variety of fluids (NGL, light to heavy crude oil, bitumen, and produced water)

	Generic Rail		Company		Rail Carlnsulation	generic logo
(Operator	Transfer Point Available		Rail Slot 1 Transfer Point Available	Operator	Description	Welcome To Generic Rail
					Non-insulated Rail Car	Operator Facility Administrator Source Location 01-02-003-04 W5M Product Heavy Oil
9 3 8 7 6 5 ⁴	0.00	0.00	Rail Slot 2	4	Insulated Rail Car Thermal Jacket Insulated Rail Car	Product Heavy Oil Rail Car Identifier TEST000001 Insulation Type Thermal Jacket Insulated R
Jul 14 2020	Pump Off Mass (kg)	Emulsion Mass (kg)	Transfer Point Available	Demo Mode	Thermal Jacket Insulated Rall Car	Ambient Temp. 0 Empty Mass 36559.5
	0.000	0.000	Rail Slot 3			Tank Limit Mass 129727.4 Tank Limit Vol. 97.6
Driver	Pump Off Volume	Emulsion Volume	Transfer Point Available	Recent		Route Limit Mass 121562.8 Heel Height 0
Bulletins	(m ³)	(m³) 0.0		Expand O Details		Heel Volume 0 Heel Density 0 Volume Preset 0
→ Next	Oil Flow Rate	Oil Density	Rail Slot 4 Transfer Point Available	(i) Help	powered by Spartan Controls Ltd	Load Mass Prese 0 software by WinWare Inc.
	(m³/hr@15°C)	(kg/m³@15°C)			powereu by operan controls chu.	software by virtiware inc.
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ZŌ	Water Cut (%@15°C)	Water Volume (m³@15°C)		ZŌ	! @ # \$ % \ & * ()	
90	0.00	0.00	Rail Slot 6 Transfer Point Available	. ∡x	! @ # \$ % \ & * ()	+ 7 8 9
	Control Valve (%)	Temperature (°C)			Q W E R T Y U I O	P 4 5 6
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	(sec)	(m³/hr@15°C)			Refresh Space Insert	Clear Del
Image: System Solution Image: System Solution Image: System Solution Image: System Solution						

The RailVue[™] application goes beyond the traditional TruckVue[™] platform by providing additional features which relate specifically to rail-based transfer solutions.

- Up to 16 transfer points per panel, and up to
 16 panels per site
- Compliant with rail car loading standards, and conforms to API RP 3000 Classifying and Loading of Crude Oil into Rail Tank Cars, First Edition September 2014
- Web interface to external rail logistics software
- AEI railcar scanning

- Railcar ID on tickets for accounting purposes
- Optional on-board FloBoss S600+ Flow Computer providing master meter proving functionality
- Additional screens to account for additional requirements related to rail loading (i.e. tare weight, tank volume capacity, railcar weight capacity, railcar tank type, railcar heel height)

The RailVue[™] system is designed to deliver superior audit trail, data entry, diagnostic, maintenance, and measurement capabilities. These pillars are built on the application's numerous built-in features including measurement device diagnostics, calibration, verification and auditing. Device monitoring (ground permissives, plant and transfer point ESD, tank levels), annunciator generation (alarm signals, horns, beacons), and controller activities (valve sequencing, pump activation and VFD control, valve throttling) are all easily supported. Data management is distributed, robust and reliable — and allows for easy operational data manipulation, transaction reporting, ticket printing and electronic storage, post transfer data analysis and transfer data trending.

Service and Support

Spartan Controls offers unparalleled service and support capabilities for the RailVue[™] system. Our factory-trained technicians will assist with all commissioning and start-up of the system, from the touchscreen display to the measurement end devices represented by Spartan Controls – all with a single point of contact.

Spartan Controls offers a Preventative Maintenance Agreement (PMA) program that strives to provide the best support and service



throughout the lifecycle of the RailVue[™] system. Enrollment to this program provides the site preferred access to customer support, software hot fixes, upgrades, and Spartan's hot spare inventory. PMA also grants members access to request for software re-configurations, providing flexibility for the system to accommodate for any changes to site requirements. Through scheduled site visits, factory-trained technicians can help optimize system performance and extend the life cycle of the hardware by identifying problems early that may affect future system performance or ongoing measurement uncertainty.

All RailVue[™] system components provided by Spartan Controls are supported and warrantied for 18 months from date of shipment, or 12 months from installation. Should you experience a problem with your system, help is just one phone call away, 7 days a week, 24 hours a day, courtesy of our 24/7 program.

Call us or request a quote online 24/7

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