

# Датчики уровня серии Veeder-Root

## Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Ноябрьск (3496)41-32-12  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Саранск (8342)22-96-24  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35

Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(727)345-47-04

Беларусь +375-257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: [gcr@nt-rt.ru](mailto:gcr@nt-rt.ru) || сайт: <https://gilbarco.nt-rt.ru/>

# Mag-XL Tall Tank Monitoring System

## Features and Benefits

- > Digital magnetostrictive measurement technology
- > Consistently accurate fuel level monitoring
- > Temperature compensated volumes
- > Automatic delivery detection
- > User programmable in-tank alarms
- > Water detection option
- > Multi-point fuel temperature sensing
- > Flexible, lightweight construction for easy installation and transportation

## Advantages

- > Proven quality and reliability from Veeder-Root, the market leader in fuel level measurement systems
- > Simple to install, no stilling well or crane hire
- > Low cost transportation
- > Just one tank entry required for Level, Temperature & Water measurement, no need for additional sensor entry points
- > Avoids the Health and Safety risk associated with climbing tall tanks to manually dip
- > One monitoring system for above and below ground tanks
- > Serial connectivity to other on-site devices for improved data management
- > Volt-free relay outputs allow control of external overfill alarms or other devices

## Flexible and Easy Installation

Light and easy to handle



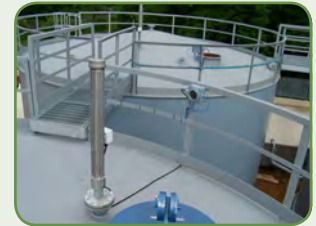
Coiled for easy delivery



2" to 4" entry



Simple installation

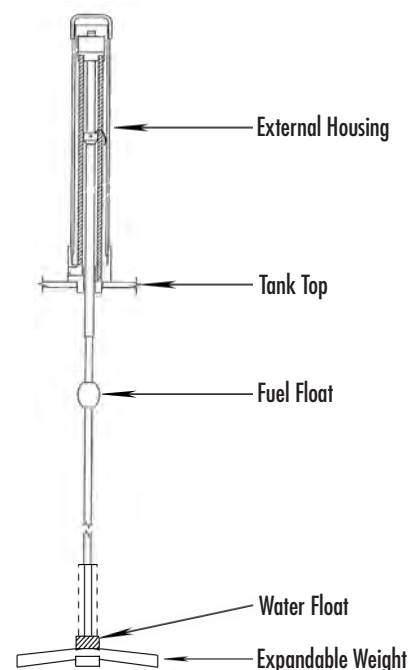


## Alternative Installation Methods

Mag-XL probes are produced in two versions, Top Mounted and Bottom Fixed.

- > Top Mounted probes are suspended from the top of the tank via a simple Adjustable Tank Adaptor. An integrated Weight Kit keeps the probe vertically oriented in the tank. The minimum fuel and water level reported varies, subject to probe length.
- > Bottom Fixed probes are held under tension vertically between an Expandable Weight Kit that rests on the tank bottom, and an External Housing at the top of the tank. An internal spring mechanism maintains the correct tension on the probe to absorb tank height changes due to temperature or distortion. Bottom Fixed probes allow fuel and water levels to be reported from a lower level than Top Mounted versions.

Bottom Fixed Mag-XL



## Technical Specifications

### Material construction (excluding external components not exposed to tank environment)

- > Mag-XL probes: flexible Polyvinylidene Fluoride (PVDF)
- > Weight Kits and Tank Adaptors: stainless steel (AISI 304 or 316)

Specification & technical data	Mag-XL Top Mounted	Mag-XL Bottom Fixed
Linearity	±0.01% of probe span	
Operating temperature	-40 to +70°C (Mag-XL Probes) -25 to +55°C (XLi Converter)	
Storage temperature	-40 to +60°C (XLi Converter)	
Temperature sensors	5, distributed over length of probe	
Tank entry requirements	2" BSP minimum	100mm minimum ID opening, reduced to 2" NPT for External Housing
Minimum water detection level (indicative)	180 - 560mm (2" entry) 110 - 430mm (≥3" entry)	140mm
Minimum fuel level reading (indicative)	As above (no Water Detect, 2" only) As above + 100mm (with Water Detect)	280 - 325mm (with Water Detect)
Part numbers	889111-xxx (no Water Detect) 889112-xxx (Water Detect)	889211-xxx (no Water Detect) 889212-xxx (Water Detect)
Packaging (typical per probe)*	1.2m x 1.2m x 0.3m	1.2m x 1.6m x 0.3m

\* Note - Top Mounted probes with an Insertion Length of ≤191" (889X1X-032 and below) cannot be coiled and will ship in rigid tubes.

## Certification

Component	Approvals & Certification
Mag-XL Digital Magnetostrictive Probes	NEMKO 09 ATEX 1072X
XLi Converter CPU	Sira 09ATEX2097X IECEX SIR 09.0045X
XLi Converter Assembly	Sira 09ATEX1112

## TLS Tank Gauge Console System - Specifications

TLS Tank Gauge Console System - Specifications	
Maximum measurable liquid height	TLS 2: 9.9m TLS-3xx & TLS-450: 16.6m
Maximum volume capability	TLS 2 & TLS-3xx: 984,100 litres TLS-450: 7 digit volume reporting
Probe maximum capacity per TLS Console	TLS 2: 6 TLS-300: 2, 4 or 8 depending on TLS-300 Console type TLS-350R & TLS-350 Plus: 16 TLS-450: 32

# Technical Specifications

The TLS4 series is available in a choice of 3 options depending on your requirements



Feature / Console	TLS-450+	TLS-450+ & TLS-XB*	TLS4	TLS4 & TLS-XB**	TLS4B
System Capacities***					
IS Inputs	64	256	12	32	6
In-Tank Probes	64	64	12	32	6
Output Relays	21	32	2	23	2
External Inputs low voltage	16	64	1	17	1
External Inputs high voltage	20	32	✗	20	✗
Interface					
LCD Colour Touch Screen	8.0" WVGA		7" WVGA		7" WVGA
Inventory Control					
Hourly Reconciliation Monitoring (HRM) (Optional)	✓		✓		✓
Business Inventory Reconciliation (Optional)	✓		✓		✓
TSL Timed Sudden Loss (Optional)	✓		✓		✓
Tank Calibration					
AccuChart™ (Optional)	✓		✓		✓
In-Tank Leak Test					
0.38 LPH Volumetric Tank Tightness Testing	✓		✓		Optional
0.76 LPH Volumetric Tank Tightness Testing	✓		✓		Optional
Continuous Statistical Leak Detection (CSLD)	Optional		Optional		✗
Line Leak Detection					
Digital Pressurised Line Leak Detection (DPLLD)	Optional		✗		✗
Data Communications					
RS-232 / 485 Configurable Ports	✗		2		2
RS-232	5		✗		✗
RS-485	3		✗		✗
Ethernet TCP/IP	3		3		1
External USB 2.0	2		2		2
Optional FSF Capability	✓		✓		✓
System Capabilities					
Up to 3 years Data Storage	✓		✓		✓
Email Notification on Time or Event	✓		✓		✓
On Board HELP, Context Sensitive	✓		✓		✓
Web Enabled (access via web browser)	✓		✓		✓

\*TLS-450PLUS can be connected to a maximum of three TLS-XB expansion boxes.

\*\*TLS4 can be connected to a maximum of one TLS-XB expansion box.

\*\*\*TLS-450PLUS and TLS-XB inputs are designated by number of USM (universal sensor modules) and UIOM (universal input/output module). The TLS-450PLUS and each TLS-XB can accommodate a maximum of four modules in total. Each USM has 16 universal inputs and each UIOM has 5 output relays, 5 high voltage inputs and 4 low voltage inputs.

**Reliable  
Solutions**



**Wireless  
Technology**

## TLS-RF Wireless System

Reliable Wireless Technology

### Automated tank monitoring without site disruption

Whether your need is for continuous inventory management, certified tank testing or leak sensor monitoring, Veeder-Root's TLS-RF Wireless System can provide a cost effective solution when the disruption of breaking up the site to install field wiring is not viable.

TLS-RF solves many of the problems associated with retrofitting automated tank gauging or upgrading existing systems. It's quick and easy to install and designed to work with any Veeder-Root Automatic Tank Gauge. Due to the high cost of site disruption, operators wanting to retrofit their sites with an ATG system often postpone installation until such time as other redevelopment work is scheduled. Now there is no longer any need to wait, and the benefits of automated monitoring can be enjoyed straight away.

### Proven performance in underground storage tanks

The retail petrol station environment, where ATG probes operate in underground storage tanks, is a challenging one for wireless data communications. Site operators require tank information at any time throughout the

day or night, and leak monitoring must operate continually to be effective. TLS-RF was developed through a rigorous test program to ensure that tank monitoring and inventory data is consistently available on demand, around the clock.

Test sites with the Veeder-Root Wireless System were carefully selected to represent a broad range of operating profiles, including severe weather conditions and difficult site configurations. RF data was collected daily, which together with surveillance of some sites enabled common causes of data gaps to be identified. Extensive data evaluation and design enhancements have produced a best in class product, robust and reliable enough for continuous monitoring.

### TLS-RF Wireless

The TLS-RF System utilises industrial grade radios using the European license-free 869 MHz frequencies, enabling both Mag Probes and Mag Sump Sensors to communicate with any TLS Console already capable of interfacing with Magnetostrictive Probes or Sensors. Transmitters and battery housings, located in the tank or sump chamber, transmit directly to other system components. There is no requirement to modify the

access chamber lid or forecourt surface. Receivers and repeaters are placed at above ground locations and transmit the signals they receive to the TLS-RF Console Interface Box. The Console Interface Box then converts the radio signal into TLS compatible data.

### Approvals

- > ATEX (DEMKO 06 ATEX 137478X)
- > R&TTE compliant (ETSI-EN 300-220 Part 3)

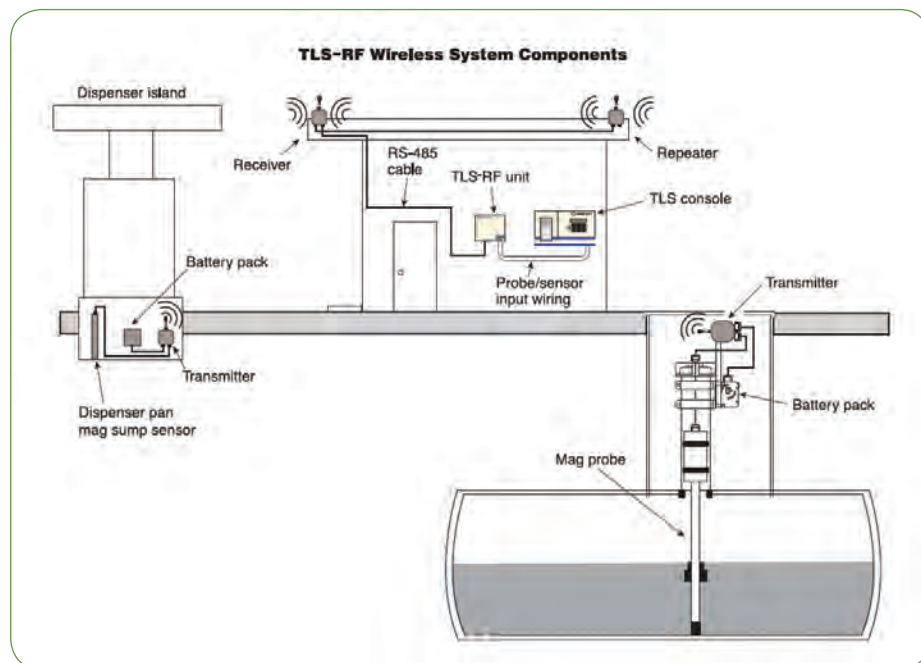
### Features and Benefits

Inventory control and sensor monitoring without breaking up the site:

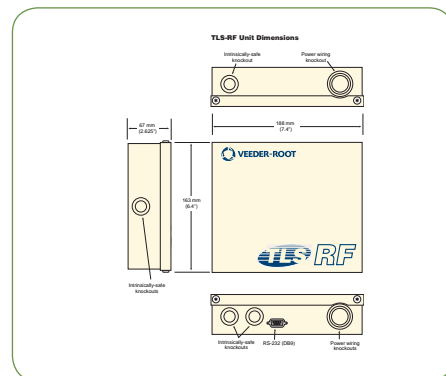
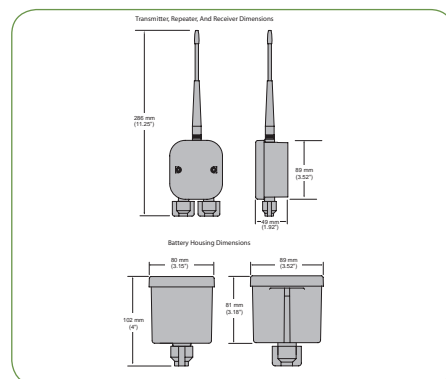
- > Easy installation
- > Full TLS functionality\*
- > Battery life up to two years
- > NEMA 6 equivalent external components
- > Compatible with standard TLS consoles

\* Continuous inventory monitoring, Certified SLD (Static) & CSLD (Continuous) Leak Detection for single tanks and Mag Sump Sensor monitoring, where ambient interference is not a factor.

# TLS-RF Wireless System



These specifications are for guidance only and Gilbarco Veeder-Root reserves the right to change, without notice, these specifications in accordance with its policy of continued product improvements.



## Gilbarco Veeder-Root Products – behind every successful forecourt

Gilbarco Veeder-Root is the largest supplier in the world representing the leading brands of solutions and technologies that provides convenience, control and environmental integrity to retail fuelling and adjacent markets. Gilbarco Veeder-Root is the only manufacturer that can provide all your fuel forecourt solutions.



### Pumps and Dispensers

Designed to be at the core of retail forecourt solutions centering on quality and innovation, Gilbarco Veeder-Root's broad portfolio of pumps and dispensers are proven to deliver profitability for our customers today and tomorrow.



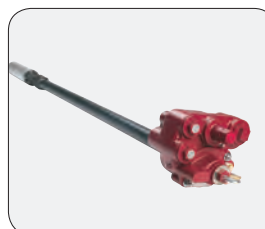
### Automatic Tank Gauging

Innovative tank monitoring and loss detection to automate wet stock management, environmental control and risk management across the network and allow centralised data management to optimise operational profitability.



### Payment

Secure and flexible payment solutions to create new business at the pump.



### Submersible Pumps

The most efficient way to pump fuel on a forecourt; consistent flow rates, no vapour lock and minimal maintenance.



### Automation

Solutions that drive efficiencies, prevent fraud, improve customer experiences and increase profitability.



## По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Ноябрьск (3496)41-32-12  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Саранск (8342)22-96-24  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35

Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(727)345-47-04

Беларусь +375-257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: [gcr@nt-rt.ru](mailto:gcr@nt-rt.ru) || сайт: <https://gilbarco.nt-rt.ru/>