



BULK METER SERVICES LTD Counting Everything Around The World



# **TIMELINE**

#### 1963 | BRIAN BIGWOOD JOINS VR

Brian Bigwood joins Veeder-Root as a model maker where over the next nineteen years he gains full knowledge of liquid measurement equipment. Veeder-Root later make the decision to close all factories outside of America.



#### 1992 | BULK METER SERVICES LTD

Carl Bigwood (current MD) joins his father running the business. In response to an increasing demand for calibration, maintenance and repair, Bulk Meter Services Ltd is established in 1994 as the service division of the company.



#### 2020 | PRESENT DAY

BMS now employ engineers nationwide and are a familiar name in most industries holding liquid stock. Going above and beyond for our customers has meant we are renowned for quality and service.



#### 1982 | BMS IS FORMED

Brian & John Izzard set up their own business to distribute Veeder-Root products and so was formed Bigwood Mechanical Services. After working out of Brian's' home, BMS moved to their first premises in Gatwick.



#### **2004 | CHANGE OF PREMISES**

BMS move to current premises in Ashford, Kent to accommodate business expansion offering nationwide coverage. The new facility provides offices with dedicated workshop and warehouse facilities.





# **APPLICATIONS**

The BMS Group offer a comprehensive range of specialist products; mechanical, electrical and environmental services, nationwide, 24/7, that help businesses, both large and small, maintain accurate inventory control in compliance with current safety and legislative requirements.

We are committed to provide full original equipment genuine spare parts (we currently hold in excess of 10,000 spare parts), consumables and service support for the equipment we supply.

Collaboration is the foundation on which we build our business. We listen to our clients in order to understand their unique challenges and then develop solutions designed to help manage operating expenses and boost overall return on investment throughout the life of our products. Our Core Values are: Integrity, Teamwork, Performance & Learning.



**Refined Fuels** 



**Bio Fuels** 



**Aviation** 



Oils & Lubricants



Chemicals



AdBlue & Additives



Marine



Rail



**Military** 

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# **SERVICE**

# Experts in the supply, installation and maintenance of complete systems

### **Maintenance & Calibration**

Comprehensive all brand Flow Meter maintenance, both reactive and planned; Calibration services to suit many industries using various weights and measures approved methods to ensure the complete flow measurement system is functioning to its best accuracy. All of our equipment is fully certified and traceable to approved testing bodies.





# **Project & Facilities Management**

Our skills lie in the management of complete "turnkey" engineering projects, within the exacting compliance and regulatory environments of the bulk liquid industry; Static, Mobile and Containerised Metering Modules. We offer full planned customer/site specific maintenance programs to minimise unplanned downtime.

# **Tank Gauging & Services**

BMS are OFTEC registered and offer supply, installation and maintenance (internal and external inspections) of tanks. We also offer a range of Tank Gauging Systems, Tank and Bund Cleaning, Fuel Testing and Polishing, Valve & Interceptor Services, Environmental Inspections & Non-Destructive Testing.





### **Aviation**

Both commercial and defence, specific services including Meter Calibration, Electronic Meter Registration Supply & Installation, Fuel Hose Pressure Testing, Pressure Gauge Calibration, DP Gauge Testing, Filter Element Inspection & Replacement, Primary & Secondary Pressure Control Testing and Hose End Coupling Servicing.



# **SERVICE**

### **Training Clinics**

At BMS we believe regular training ensures you get the most out of your equipment and also that it is operated and maintained efficiently and safely. We therefore offer a range of tailored training courses that best suit your specific requirements, either on or off site.





# **Electrical & Pipework Services**

The BMS Group offer customers a range of Electrical Equipment Supply and Inspection Services. Our CompEx certified technicians allow us to work safely in hazardous areas. Similarly we can provide a range of pipework services; including leak detection, expansion of existing systems, inspection and repairs.

## **Military & Defence Services**

We provide a range of mechanical and electrical services, asset management, civil engineering, tank and fuel services to support the Defence sector. This includes Planned Preventive Maintenance (PPM), Reactive service and repair, installation works and project management. We have a dedicated team of specialist technicians, who hold the required site permits, the appropriate security clearances and training to work on military sites.







# **FLOW METERS**



#### **TCS 682 Piston Series**

Due to its exceptional accuracy, it was originally called the "Miracle Meter" when it was first designed in the 1930s. Since then there has been significant enhancements, it now offers improved performance and reliability while being both smaller and lighter. In applications that operate at lower flow rates but require both high accuracy and repeatability, there is no better meter than the 682.

Flow: 0.76 to 189 LPM; 250:1 Turndown Ratio

Linear Accuracy: Capable of ± 0.1% over flow range

Repeatability: Capable of 0.01% over the entire range of flow

Maximum Pressure: 10.5 BAR Viscosity: Up to 55,000 CPS Temperature: - 40°C to 71°C



# **TCS 700 Rotary Series**

The 700 features tri-rotor design that improves accuracy by minimising pressure loss. With no metal to metal contact within the measuring chamber, the 700 reduces internal wear to ensure long term accuracy and extend time between calibrations. It is available in a wide variety of materials of construction with sizes from 1.5" to 6".

Flow: 27 LPM to 3,785 LPM; Bi-directional

Linear Accuracy: Capable of ± 0.15% over flow range

Repeatability: Capable of 0.02% over the entire range of flow

Maximum Pressure: 10.5 BAR (19 BAR upon request)

Viscosity: Up to 325,000 CPS Temperature: - 40°C to 71°C

#### **Accessories**



Air Eliminators & Strainers



Pulse Transmitters



Valves



Electronic Flow Computers

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# COMMON FLOW METER TYPES

Positive Displacement Flow Meters, also known as PD Meters, are volumetric flow measurement instruments that work on the principle of a fixed volume of fluid, gas, or liquid, causing a known mechanical displacement in order to mechanically move a counter (totalizer) and / or generate a pulse output

There are many types of positive displacement flow meters including; rotary vane, reciprocating piston, oscillating or rotary piston, bi-rotor types (spur gear, oval gear, and helical gear) and nutating disc.

#### **Piston Meter**

These are also known as oscillating piston flow meters; they are one of the most tried and tested flow meter designs; these meters are mainly of single or multiple-piston types. Other types available are double acting pistons and rotary pistons. Piston Meters are highly accurate across a wide range of liquids and are ideal for use in small batch metering applications.



## **Rotary Vane Meter**



Normally these meter types comprise of two or more rotating impellers, paddles or vanes, which "trap" pockets of fluid between the rotating components within a high precision chamber. The Rotary Meter precision design lends itself to applications requiring high accuracy and wide rangeability, such as custody transfer or batch metering.

#### **Oval Gear Meter**

The Oval Gear Flow Meter comprises of two elliptically shaped gears which rotate within a housing of specified geometry. The rotation of the gears provides either an output signal or mechanical drive. Oval Gear Meters offer low pressure loss, providing an ideal solution for high viscosity, high pressure applications in which a high degree of accuracy is required.



# **Nutating Disc Meter**



The Nutating Disc is a very popular PD Flow Meter providing high levels of repeatable accuracy. As the name suggests, the principal of this meter is based on a disc that wobbles or "nutates" as liquid passes through the displacement chamber. Nutating Disc Meters are ideally suited for use in low pressure applications with medium viscosity liquids.

### **Turbine Meter**

A Turbine Flow Meter consists of a bladed turbine rotor spinning within a chamber at a rate proportional to the velocity of the liquid passing through. This provides an output signal which in turn can be used to drive a locally mounted electronic display or remote mounted instrumentation. Turbine Meters are ideally suited for use with clean low viscosity liquids.



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Mass Meters

Working on the Coriolis Principal, Mass Flow Meters sense vibration as liquid passes through internally mounted single or dual tube assemblies. This provides a measure proportional to mass flow, independent of density or viscosity. These meters are extremely versatile, capable of passing low volume particulate matter and also providing measurement of both temperature and density.



# **VEEDER-ROOT**



# Electronic Register

The EMR is Veeder-Root's electronic meter register, which provides the latest technology around a robust and user-friendly system, delivering unprecedented value for customers worldwide. The EMR accurately and reliably captures and stores transactions which improves the accuracy, security and accountability of metering systems and liquid inventory.



# Mechanical Register

This rugged, precise mechanical meter register is designed for all kinds of liquid inventory and delivery operations. It totalises and displays high-speed deliveries and transactions in large, easy-to-read digits. Easy to fit, easy to use, robust, and features a highly visible display. Can be fitted with many recording options; such as preset, printer and a pulse transmitter.



# Automatic TLS4 Tank Gauge



Veeder-Root's powerful TLS4 automatic tank gauge helps keep your sites running and profitable! The TLS4 combines precision performance with scalability, sophistication, customisation and ease of use to deliver proven results. It delivers accurate, crucial information, including: AccuChart, Continuous Statistical Leak Detection (CSLD), Data Logger and Temperature Compensated

# Automatic TLS450 Tank Gauge



The TLS-450 provides comprehensive fuel site data for state-ofthe-art fuel asset management. It merges industry leading algorithms with optimal security, real-time notifications as well as universal, 24/7 access no matter where you're located. Benefits of this product include: logistics visibility, remote software download, customised alarms, enhanced performance & data protection.



# MEGGITT

## **MEGGITT**

### **Bottom Loading**

Our 3 and 4 inch bottom loading couplers are renowned for their quality and durability. Within the bottom loading range are API adapters, pilot valves and jet level sensors. They are all designed in accordance with API RP1004.



#### **Control Valves**

One of the most commonly used products in the UK is the 4 inch inline pressure controller, it has excellent stability at all flow rates, accurate pressure control and low hysteresis. We can also provide solutions from 3" to 6" as well as spring set and rate of flow limiter valves.

# **Hydrant Couplers & Valves**

Our range of hydrant couplers and valves all feature robust

design for long life as well as high stability so you can be sure it won't let you down. Our hydrant pit valves are compatible with all hydrant couplers that conform to El and API recommendations, we also have a range of control and shut off valves.



#### **Industrial Products**

Our industrial couplings are designed for use wherever it is necessary to connect and disconnect hoses and pipelines under pressure, quickly and without spillage. Used primarily in the petroleum, chemical and brewing industries where reliability and safety are of prime concern. We also supply versions suitable for offshore applications.

## **Underwing Nozzles**

Our underwing nozzles range from light to heavy duty applications and are all compatible with a number of Meggitt swivels and HECV's. Also within the range is the famous HU3000/HU4000 series still trusted today by the UK Military along with the lightweight F145 refuelling nozzle.



# **Smart Engineering For**

**Extreme Environments** 

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# **PUMPTRONICS**



# **C** Series



C-Series Commercial pumps and dispensers provide the ultimate in commercial fuelling equipment for heavy duty environments where speed of fuelling and reliability is vital. The C-Series Commercial range provides a robust, accurate and visually attractive fuelling solution and is used in large fleet garages, truck stops, marinas or small airfields.

# Zeon



Zeon is Pumptronics entry level solution for those looking to install a hard-working, reliable pump. Though designed to offer an economically priced approach to fuelling, quality has not been compromised in any way. The Zeon range is manufactured using the same technology and stainless steel chassis as the C Series.

# Accessories



Nozzles



**Breakaways** 



**Strainers** 



Guards

# **JIGSAW**





# Fuel Management System

The Jigsaw Fuel Management system features MID approved web based real time reporting, a fully featured user interface, alpha numeric keyboard and a four line LCD backlit display. Automated nozzle technology provides automatic authorisation and odometer reading, allowing full control of fleet fuelling operation and real time alarms by SMS messaging for fuel theft or system misuse.







# **MEGGITT**

























"Our vision is to become the premier supplier of Liquid Measurement Products & Services and to be a company that our customers want to deal with, not a company they feel they have to deal with"

#### **Mission Statement & Core Values**

We have work because our customers value our high-quality products & services.

We deliver superior customer experiences through our products and our actions. Everything we do builds on a strong understanding that the customer is the most important visitor to our company, they are the purpose of our work. The quality and reliability of the products & services we deliver to our customers are paramount.

We focus outward on the customer, not inward. We make it easy for customers to do business with us, by listening, anticipating, and responding to their needs.

We know our products and can explain them to customers. We focus on fundamental execution. We are accountable and we follow through with a sense of urgency. We know that having the highest ethical and customer driven standards is a competitive advantage for our company.

We know teamwork enables us to serve our customers better and faster. We embrace diversity and personal development not only because it's the right thing to do, but also because it's smart business.

We are driven not by ego but by accomplishments. We keep our commitments to each other and our customers. Our word is our contract. We respect and trust one another, communicating openly, candidly and directly since any other way is unfair and a waste of time. We voice our opinion and exercise constructive dissent and then rally around the agreed-upon action with our full support. Any one of us can deliver a view or idea to anyone else, and listen to and value another's view regardless of title or level. Ideas live and die on their own merits rather than where they were invented.

Everything we do is built on the strong foundation of our company values.

We work 24x7 because our customers depend on us 24x7. We know our best was good for today. Tomorrow we'll do better. We believe integrity is at the core of who we are. It establishes the trust that is critical to the relationships we have.

We are committed to do the right thing and follow sound business practices in dealing with our customers, suppliers, and competitors. Our competitors are not enemies; they are challengers who drive us to improve. We are good corporate citizens and share our success with the community to make the world in which we work better than it was yesterday.

We recognise that we are a small company, but we do not think like a small company.

With the above attitude, we become more agile and responsive than larger companies. We learn to see crisis and change as opportunities, not threats. We run to a crisis, not away. Change energises us. We work hard, take action and take personal accountability for getting things done. Our actions produce measurable results.

INTEGRITY RESPECT PERFORMANCE EXCELLENCE ACCOUNTABILITY



We are the first name in Wet Stock Management, the proud distributors for Total Control Systems, Gilbarco Veeder-Root, Meggitt & OCV. We have decades of experience in Supply, Service, Maintenance & Calibration.

# **ABOUT US**

We are a liquid management & services company with over 100 years of combined expertise. We listen to our clients to understand their unique challenges and then develop solutions designed to help manage operating expenses and boost overall return on investment.

# WHY CHOOSE US?

- ✓ Engineers located across the UK
- Exceptional customer support
- ✓ Training can be provided on products
- Tailored solutions for each application









