

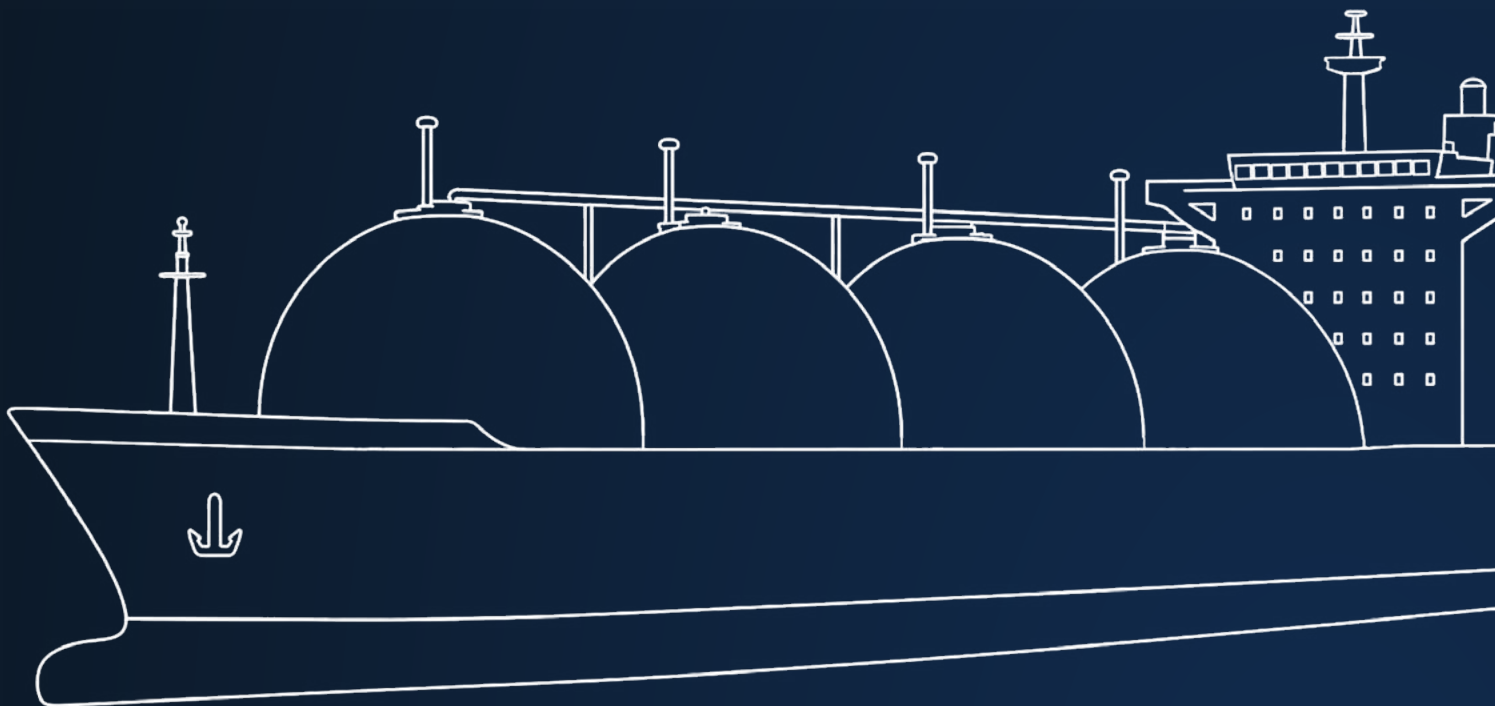
VAF Flowmeters.

Reliable flow measurement for marine and industrial applications

Rooted in Dutch maritime engineering. Maritime expertise since 1960.

VAF flowmeters are developed for demanding marine and industrial operating conditions. Built on practical engineering experience, the portfolio supports reliable measurement data, long service life and practical system integration.

From fuel consumption monitoring to fuel transfer and advanced flow measurement, VAF offers a complete flowmeter portfolio for applications where accuracy, reliability and operational continuity are essential.



One VAF flowmeter portfolio

Every fuel or liquid system is different. Flow rate, liquid type, installation space, operating conditions, signal requirements and automation interfaces all influence the correct flowmeter selection.

The VAF flowmeter portfolio supports a wide range of marine and industrial applications. From compact low flow consumers to high capacity fuel transfer systems and advanced mass flow applications, VAF offers product lines for different operating conditions and integration requirements.

Product lines

Product line	Main role
AQ-Rate	Coriolis mass flowmeters for advanced applications
FuelFlow	Positive displacement flowmeters for fuel consumption monitoring
ProFlow	Positive displacement flowmeters for standard fuel and oil applications
LoFlow®	Compact positive displacement flowmeters for low flow applications
MidFlow® / HiFlow®	Positive displacement flowmeters for medium and high capacity applications

Two measurement technologies

Technology	Used for	Explanation
Coriolis mass flow technology	AQ-Rate	Direct mass flow measurement for advanced applications and changing fuel characteristics.
Positive displacement technology	FuelFlow, ProFlow, LoFlow® and MidFlow® / HiFlow®	VAF sliding vane measuring principle for robust and repeatable liquid measurement.

From measurement to integration

VAF flowmeters can be used as standalone instruments or as part of a wider measurement chain. Depending on the selected configuration, data can be made available to local indicators, flow computers, control systems, vessel automation systems or digital reporting platforms.

Proven positive displacement technology

VAF positive displacement flowmeters use a sliding vane measuring principle. As liquid passes through the meter, defined measuring chambers are formed and transferred through the meter body.

This principle provides repeatable measurement and is well suited for fuel, oil and other suitable liquid applications in demanding marine and industrial environments.

How positive displacement measurement works

In a positive displacement flowmeter, the liquid is divided into a sequence of fixed measuring chambers. Each passing chamber represents a defined quantity of liquid.

In VAF sliding vane flowmeters, the rotor and sliding vanes form these chambers inside the meter body. As liquid flows through the meter, the rotor movement is proportional to the liquid passing through the instrument.

This movement can be shown on a local counter or converted into pulse signals for remote read-out, flow computers, automation systems or reporting platforms.

Positive displacement product lines

Product line	Main application
FuelFlow	Fuel consumption monitoring
ProFlow	Standard fuel and oil applications
LoFlow®	Compact low flow applications
MidFlow® / HiFlow®	Medium and high capacity applications

Key characteristics



Proven mechanical measuring principle



Robust construction



Suitable for fuel and oil like liquids



Practical for newbuild and retrofit projects



Good repeatability



Suitable for local readout or system integration

Why sliding vane?

The sliding vane principle is a practical and proven measuring principle for fuel and oil applications. It offers reliable performance in systems where robust mechanical design, repeatable measurement and serviceability are important.

AQ-Rate

Coriolis mass flowmeters for advanced applications

AQ-Rate is the VAF product line for Coriolis mass flow measurement. It is designed for applications where direct mass flow data, high accuracy and advanced system integration are required.

AQ-Rate is positioned as the mass flowmeter product line within the complete VAF flowmeter portfolio. It is suitable where direct mass flow measurement, changing fuel characteristics or advanced monitoring requirements are key selection factors.

How Coriolis mass flow measurement works

In a Coriolis flowmeter, the measuring tube is excited into a controlled vibration. When liquid flows through the vibrating tube, the moving mass of the liquid causes a small phase shift or twist in the tube movement.

The sensor electronics measure this effect and convert it directly into mass flow. Because the measurement is based on the mass moving through the tube, it is suitable for applications with changing fuel characteristics and advanced monitoring requirements.

The measuring tube has no moving mechanical parts in contact with the liquid, supporting low maintenance and stable measurement performance.

Typical applications



Advanced fuel monitoring



Fuel transfer



Bunkering



**Applications with changing
fuel characteristics**



Direct mass flow measurement



**System integration with automation
or reporting platforms**

Basic options

Selection item	Options
Technology	Coriolis mass flow measurement
Series	6000 HP and 7000 UHP
Sizes	DN 15 to DN 50 for 6000 HP, DN 15 to DN 200 for 7000 UHP
Flange types	DIN / JIS
Transmitter design	Integral, remote or optional Ex d
Outputs	Pulse output, 4 to 20 mA, Modbus RTU RS485

Key benefits

 Direct mass flow measurement

 Suitable for advanced fuel and liquid applications

 No moving parts in the measuring tube

 Integral or remote transmitter option

 Ex d transmitter option for hazardous areas

 Modern outputs for automation and reporting



FuelFlow

Positive displacement flowmeters for fuel consumption monitoring

FuelFlow is the VAF product line for fuel consumption flowmeter applications. Like the other VAF positive displacement product lines, FuelFlow is based on the sliding vane measuring principle.

FuelFlow meters are configured for reliable fuel consumption monitoring on main engines, auxiliary engines, boilers and other fuel consumers. Depending on the application, they can be connected to displays, flow computers, automation systems or reporting platforms.

Typical applications



Main engine fuel consumption monitoring



Fuel monitoring for newbuild projects



Auxiliary engine fuel consumption monitoring



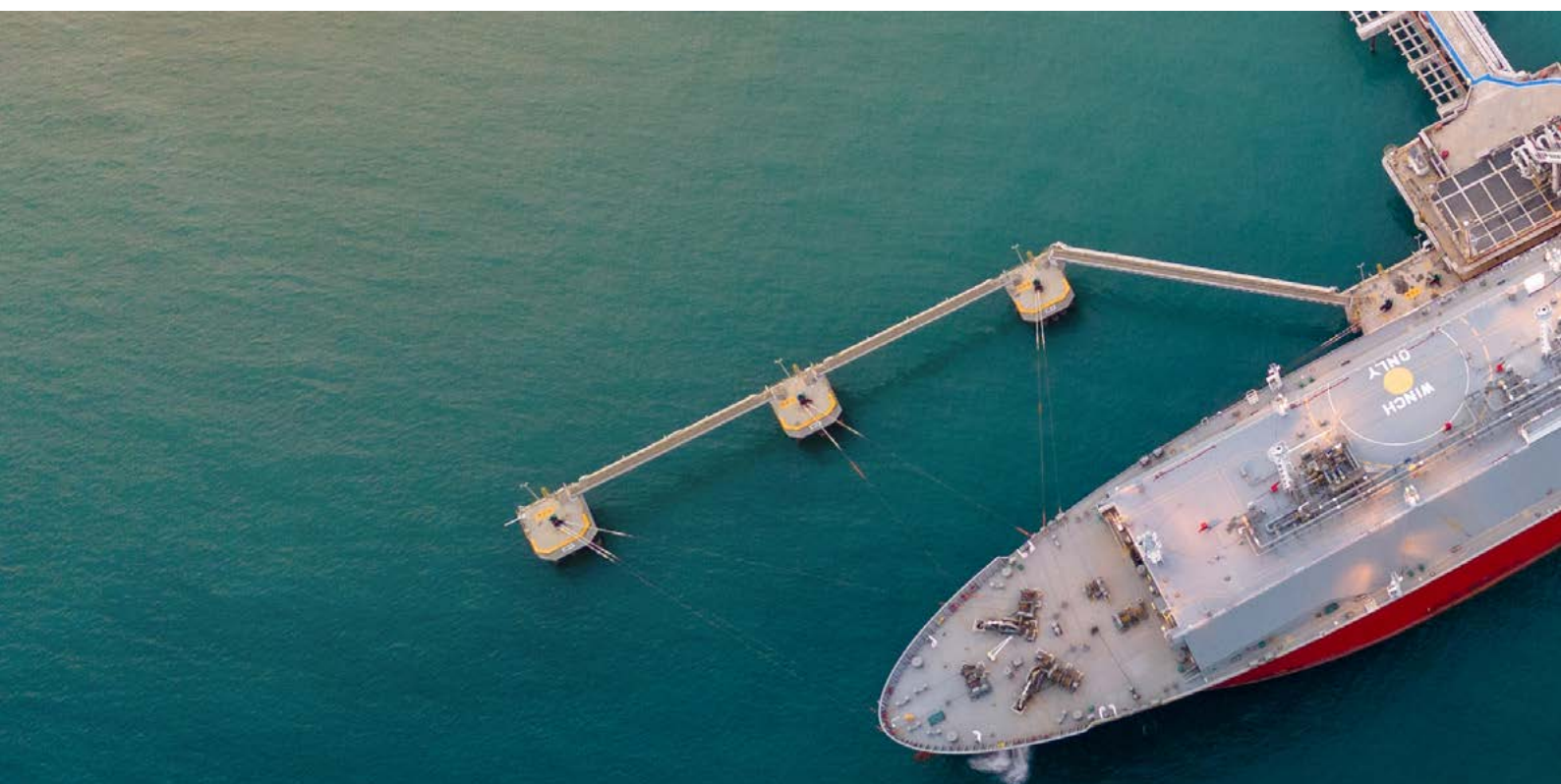
Retrofit fuel consumption measurement



Boiler fuel systems



Connection to vessel automation or reporting systems



Basic options

Selection item	Options
Technology	Positive displacement, sliding vane measuring principle
Typical sizes	Typically DN 15 to DN 50, depending on configuration
Connections	Flanged execution
Flange types	DIN, ANSI RF and JIS, depending on meter configuration
Sensor options	PT2 or PTtwin pulse sensor configuration where required
System options	FCM2, PEM4, SPU-3 or vessel automation interface

Key benefits



Dedicated product line for fuel consumption monitoring



Suitable for display, automation and digital integration



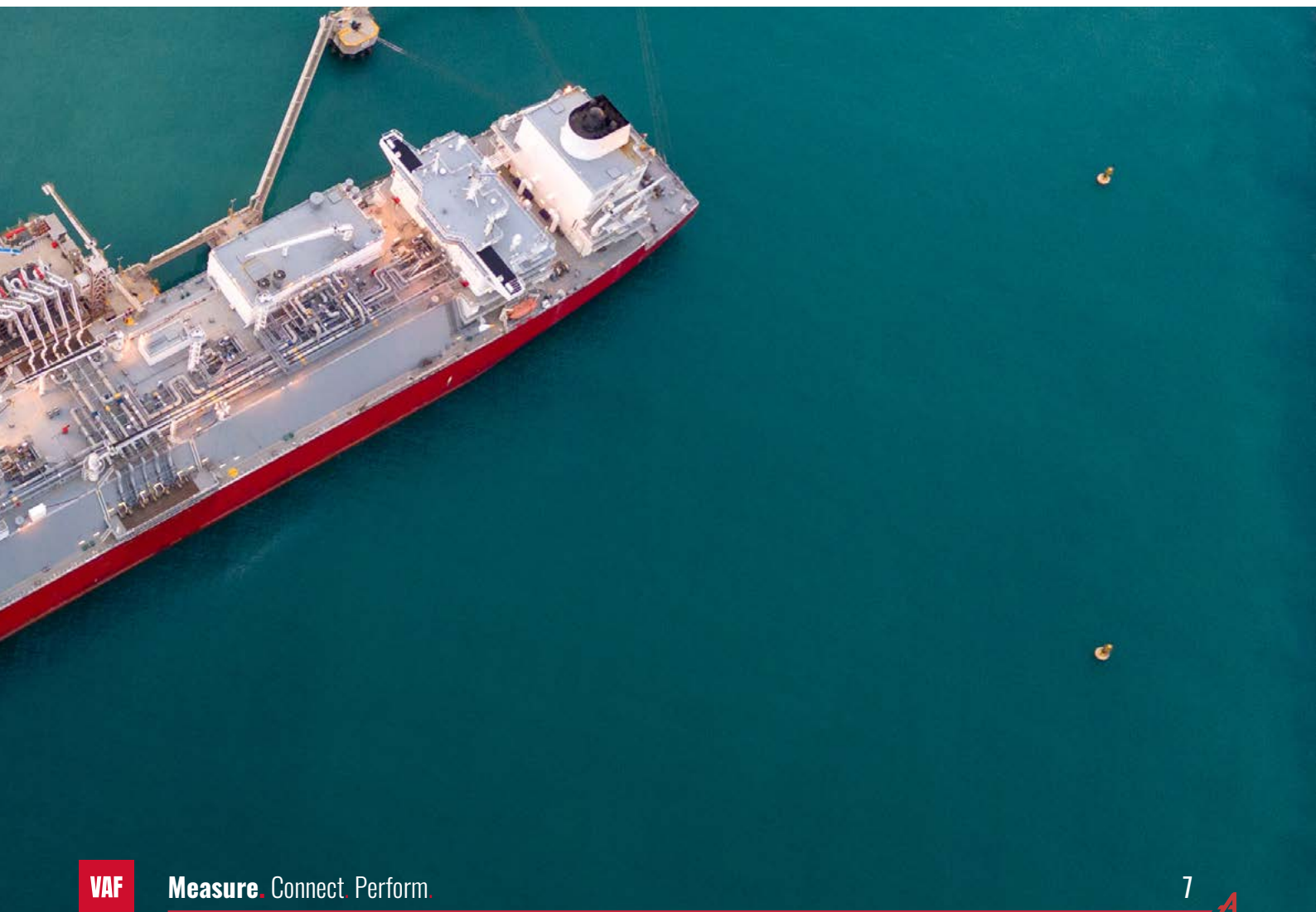
Proven positive displacement technology



Configurable for newbuild and retrofit projects



Reliable fuel data for monitoring and reporting



ProFlow

Positive displacement flowmeters for standard fuel and oil applications

ProFlow is the practical positive displacement solution for standard fuel and oil applications where robust construction, repeatability and easy integration are required.

Based on VAF's sliding vane measuring principle, ProFlow meters are suitable for a wide range of fuel, lubricating oil and other oil like liquid applications.

Typical applications



Fuel oil systems



Standard fuel systems



Lubricating oil systems



Retrofit replacements



Oil burners

Basic options

DN 15 to DN 50 · Flanged execution · DIN, ANSI RF and JIS flanges · Built on totaliser · Optional pulse output · Signal processing instrumentation

Key benefits



Proven positive displacement technology



Built on totaliser concept



Sliding vane measuring principle



Optional pulse output for remote readout or integration



Robust mechanical construction



Practical solution for standard fuel and oil applications

LoFlow®

Compact positive displacement flowmeters for low flow applications

LoFlow® is intended for compact low flow liquid applications where reliable measurement is required in limited installation space. Based on the same positive displacement technology and sliding vane measuring principle, LoFlow® covers the lower part of the VAF flowmeter range.

Typical applications



Low flow consumers



Dosing



Auxiliary systems



Compact fuel applications



Boilers

Basic options

DN 10 to DN 25 · Threaded, pipe coupling or flanged execution · DIN, ANSI and JIS flanges
· Steel or stainless steel · Local counter or pulse transmitter

Measure. Connect. Perform.

Turning data into confident decisions.

MidFlow® / HiFlow®

Positive displacement flowmeters for medium and high capacity applications

MidFlow® and HiFlow® extend the VAF positive displacement range to larger flow rates in marine and industrial liquid systems.

Based on the sliding vane measuring principle, these meters are suitable for larger flow rates where robust construction and reliable measurement are required.

Typical applications



Main engine systems



Bunkering



Large auxiliary systems



Industrial liquid applications



Fuel transfer



High capacity fuel and oil systems

Basic options

Selection item	Options
Technology	Positive displacement, sliding vane measuring principle
Sizes	DN 25 to DN 300
Connections	Flanged execution
Flange types	DIN PN, ANSI RF and JIS options depending on execution
Materials	Ductile iron, steel or stainless steel
Readout / signals	Counters, pulse transmitters, flow computers or control system connection

Measure. Connect. Perform.
Turning data into confident decisions.

Key benefits



Positive displacement technology for larger flow rates



Available with different material options



Robust construction for demanding environments



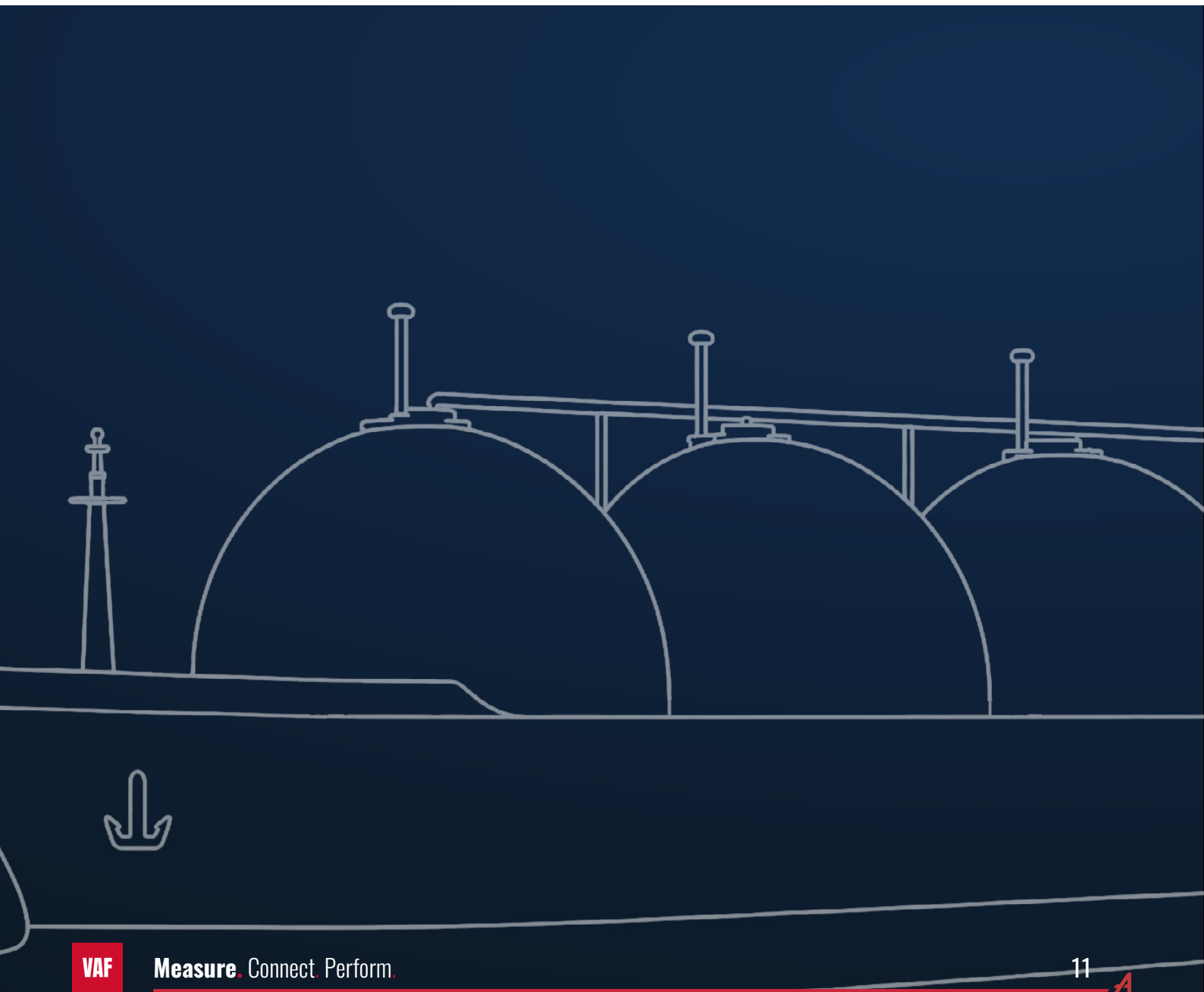
Suitable for local readout and system integration



Suitable for marine and industrial systems

Built for integration

Across the VAF flowmeter portfolio, measured data can be made available for local indication, pulse outputs, flow computers, automation systems or reporting platforms. This makes VAF flowmeters suitable not only as individual instruments, but also as part of integrated fuel monitoring and performance systems.



Get in touch With our experts.

Have a question or want to learn more about VAF? Our team is ready to help. Get in touch using the contact details below.

VAF headquarters

Address

Vierlinghstraat 24
3316 EL Dordrecht
The Netherlands

Contact

Tel: +31 (0)78 6183100
Sales: sales@vaf.nl
Service: service@vaf.nl
Web: www.vaf.nl

VAF South-Korea

Address

147 Yanghwa-ro
Mapo-gu, Seoul
Republic of Korea

Contact

Tel: +82 10 5328 0842
E-mail: sko@vaf.nl
Web: www.vaf.nl/ko

The VAF logo consists of the letters "VAF" in white, bold, sans-serif font, centered within a solid red square.

Measure. Connect. Perform.

PB-GEN-004-EN-0926

