



HELIFLU™ TZN CUS

Main Applications

Oil production Allocation
FSO, FPSO Metering
Tanker Offloading
Storage Management
Pipeline Measurement

TZN CUS Definition

The TZN CUS flowmeter is designed to provide high accuracy measurement of liquids from refined products to heavy crude oils. Its advanced geometry and robust construction allows the TZN CUS flowmeter to be used under the most severe process conditions including lines flowing DRA, wax, fibers, chalk, The unique two-blade monoblock impeller and patented bearing design make the difference.

The Unique Turbine Metering Solution for Custody Transfer Measurement of heavy liquids with DRA, wax, fibers, chalk, ...

*CHEMICALS KILL YOUR REVENUES :
Our patented solution protects them*



Key Customer Advantages

- Reduction of low reporting issues due to meter factor shifts
- Measurement of multiple products without recalibration
- Custody transfer accuracy
- Linearity suitable for multi-products measurement
- Low energy consumption
- Low cost of ownership



FAURE HERMAN
Mastering the Flow

IDEX
LIQUID CONTROLS GROUP



**HELIFLU™
TZN CUS**

Available in stainless steel or in carbon steel, the HELIFLU™ TZN CUS flowmeters offer an accuracy better than +/- 0.15% and repeatability (+/- 0.02%), making them the clear choice for custody transfer measurement.



MEASUREMENT OF LIQUIDS WITH WAX, FIBERS, CHALK, DRAG REDUCING AGENT (DRA),...

Liquids may be mixed with DRA, and may contain wax, fibers, chalk, ... Most metering solutions are affected by the presence of such components impacting the performance and increasing operation costs of the custody transfer metering stations. **The unique design of the TZN CUS eliminates those issues.**

DRA

In order to reduce bottlenecks and increase through-

put, DRA is injected into many high viscosity applications. DRA is a long polymer string fluid that acts as a lubricant. Despite its effectiveness in increasing throughput, DRA causes severe issues in turbine meter performance by adhering to the rotor and fouling the bearings. **The FAURE HERMAN turbine is the only turbine meter that is immune to these effects as demonstrated in several field trials at key installations.**

OUR PATENTED SOLUTION

Cartridge Design vs Standard Unit

Key differences :

- . a new Swept Wing Rotor
- . a new Bearing Design (new Thrust System and new Shaft System)

These two enhancements eliminate any negative effects of DRA on performance of the metering solution.

Swept Wing Rotor

The innovative design of the helical rotor is the key to the TZN CUS performance. Modifying the leading edge of the helical rotor prevents these components from adhering to the rotor wing and the new patented «anti-fouling» bearing eliminates DRA, wax, fibers fouling on the rotor shaft.

SPECIFICATIONS

Environment	
Ambient temperature range	-50 to +80°C (-58 to +176°F)
Process temperature range	-50 to +180°C (-58 to +356°F)
Storage temperature	-50 to +60°C (-58 to +140°F)
Climatic protection	IP 66
Safety	
Ex ia version (with coil &/or preamp.)	Compatible with installation in Zones 1 & 2 Group II G
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Mechanical	
Meter Size	3 to 18"
Flange rating	Standard ANSI 150 to ANSI 2500
Meter body & flange material	Carbon steel, stainless steel
Rotor material	Titanium
Bearings	Tungsten carbide
Performances	
Viscosity range	0.1 to 350 cSt (higher upon request)
Accuracy	Up to +/- 0.15% of measured value
Repeatability	+/- 0.02%
Turndown	Up to 10:1
Flowrate	7 to 5500 m³/h (44 to 34,600 bph)
Specifications	
Electrical	ATEX (94/09/EC) compliant / IECEx (Ex d) certified
Pressure	PED (97/23/EC) compliant
Environment	EMC (2004/108/EC) compliant
Metrology	OIML R117-1 / MID 2004/22/EC (class 0.3) and other national approvals (upon request)



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