

ZT-100

WATERCUT METERS



Oil & Gas



ZT100 Watercut Meter

RELIABILITY

The ZelenTech ZT-100 Watercut Meter is designed around reliable capacitance technology. We have added decades of knowledge and experience to overcome problems normally associated with capacitance probes. The ZT-100's built in logic will compensate for the vast temperature effects in the dielectric constant of the water while recognising the much smaller effects on the dielectric constant of the oil. The ZT-100 is a loop powered Intrinsic Safe device with HART Interface. All setup can be done from a remote location using a dedicated PC interface.

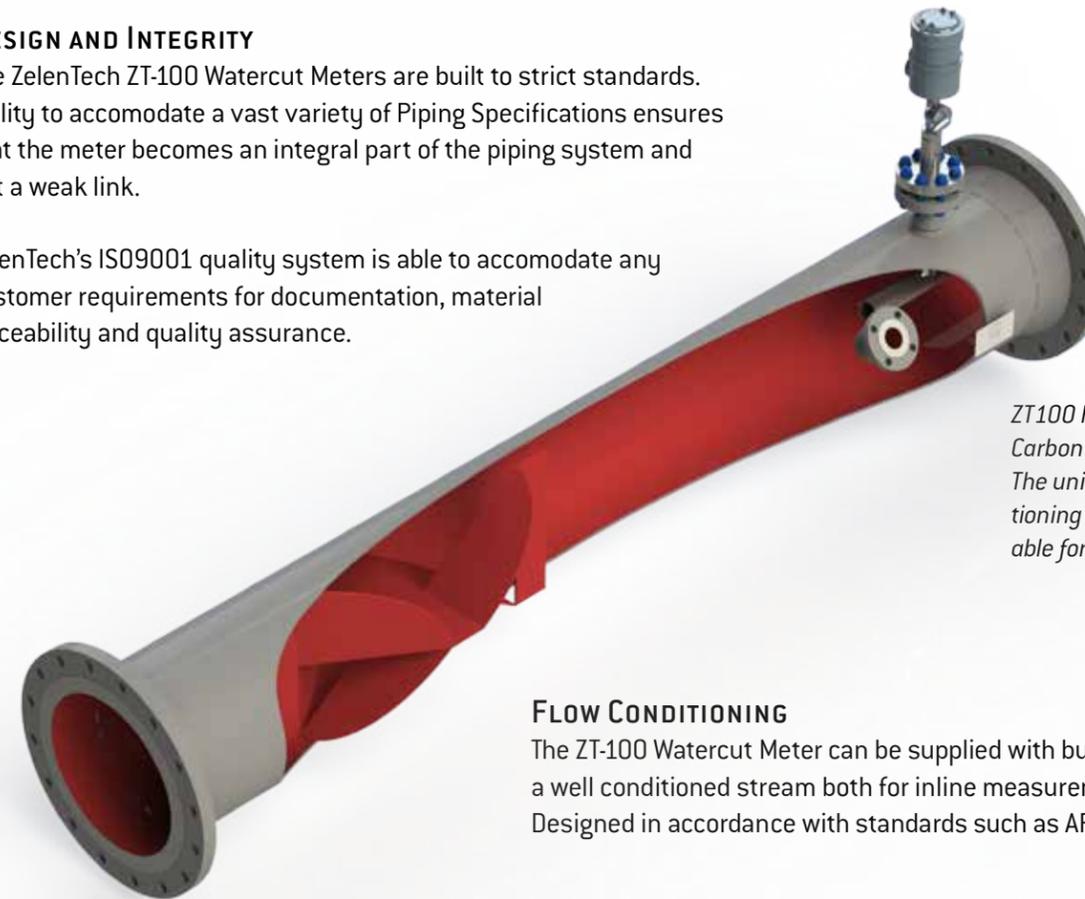
DESIGN AND INTEGRITY

The ZelenTech ZT-100 Watercut Meters are built to strict standards. Ability to accommodate a vast variety of Piping Specifications ensures that the meter becomes an integral part of the piping system and not a weak link.

ZelenTech's ISO9001 quality system is able to accommodate any customer requirements for documentation, material traceability and quality assurance.



ZT100 S-Series
SS316L 2" 600# ANSI



ZT100 F-Series 16" 150# Epoxy Painted Carbon Steel with EExd Enclosure. The unit is fitted with built in flow conditioning Static Mixer and a spare port suitable for automated sampling systems.

FLOW CONDITIONING

The ZT-100 Watercut Meter can be supplied with built in Static Mixer providing a well conditioned stream both for inline measurement and sampling. Designed in accordance with standards such as API 8.2 and ISO 3171.

FLEXIBILITY

S-Series: All 316L models from 1 to 3 inch
F-Series: 4 inch to 32 inch Iso Kinetic
I-Series: Insertion models for 8 to 48 inch.
Installation in bypass/fast loops or direct inline
0-25% Low Range or Full Cut 0-100%
ATEX or FM/UL Explosion Proof
Standard or customized

APPLICATIONS

PIPELINES

- Monitor transfer of petroleum products



DEHYDRATION EQUIPMENT

- Enhance equipment efficiencies, by monitoring the process and indicate water content before and after desalters

STORAGE AND TREATING FACILITIES

- Interface detection during de-watering of storage tanks
- Early detection of undesirable conditions



LACT (Lease Automatic Custody Transfer) Units

- Detect and provide relay contact closure that can be used to reroute oil that has excess water content



ACCURACY

Stream conditioning is the key to high accuracy watercut metering. The effects of an unconditioned 2-phase stream renders the reading of any high accuracy meter very questionable. The stream through the sensor, be it direct or via a by-pass, must be representative of the full flow. Our engineers will take a look at your complete setup and provide advice and guidance so that the sensor will get a representative flow.

The ZT100, correctly installed with proper stream conditioning, can be expected to achieve the following accuracy:

- +/- 0.05% up to 5% water cut
- +/- 0.1% from 5% to 10% water cut
- +/- 0.2% from 10% to 25% water cut

(Note: In controlled lab setup with known amount of water the accuracy can be proven as low as 0.01%)

Close correlation between lab and an online meter, no matter the working principles of the meter, can only be achieved once the stream is properly conditioned and the comparing sample is taken at the same spot. Requirements of standards such as ISO3171 or API 8.2 must be followed to achieve correlation.



SPECIFICATION

RESPONSE TIME: 1 sec	SENSITIVITY: 30ppm (Low Range model)	REPEATABILITY: 0.01%
OUTPUT: 4-20mA with HART Protocol	POWER SUPPLY: 24VDC (Loop Powered)	POWER CONSUMPTION: 0.66W
TEMPERATURE (MEDIA): +150°C (+300°F)	TEMPERATURE (AMBIENT): +60°C	INGRESS PROTECTION: IP66
RANGE: 0-25% or 0-100%	PRESSURE: Up to Class 1500#	SIZES: From 1" to 48"
PROTECTION: Flame Proof / Explosion Proof EXD:		
Class 1, Div 1 Dual Chamber Exd Housing		ATEX Ex d IIC T6÷T4 - Ex tD A21 IP 66/67 T85°C ÷ T135°C



Why ZelenTech?

The ZelenTech ZT100 Watercut Monitor is designed to provide reliable results in environments from the North Sea to Sahara. Offering unmatched flexibility for material, size, features and configurations the ZT100 can be integrated into almost every oil carrying system.



*ZT100 F-Series
ATEX-version*



*ZelenTech I-Series
Insertion model.
Class 1, Div 1 EXD*



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