

DensiCheck Tx

In-line liquid concentration & density transmitter

DensiCheck TX is an economic answer to the problem of monitoring liquid concentration and density in a wide variety of applications.

Available as an in-line transmitter in both Non-invasive and invasive formats.

DensiCheck TX provides a continuous output of concentration to enable processes to be optimised.

The result - reduced rework, improved quality and lower costs.



DensiCheck TX is being used in many different industries to measure the concentration of numerous different liquids including:

- Acetic Acid
- Beer
- Ethanol
- Glycol
- Hydrogen Peroxide
- Nitric Acid
- Sodium Hydroxide
- Sucrose
- Acetone
- Calcium Chloride
- Ethylene Chloride
- Hydrofluoric Acid
- Isopropyl Alcohol
- Phosphoric Acid
- Soft Drinks
- Sulphuric Acid
- Ammonium Hydroxide
- Chromic Acid
- Ferric Chloride
- Hydrogen Chloride
- Methanol
- Sodium Chloride
- Spirits
- Wort

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Features

DensiCheck TX's many features include:

- Non-invasive and invasive process connections
- Zero drift and no-recalibration
- High accuracy and repeatability
- Hazardous area approval
- No moving parts

Benefits

DensiCheck TX simplifies liquid concentration measurement bringing countless benefits of ownership such as:

- Lower installation and maintenance costs
- High reliability
- Low ownership costs
- Increased process efficiency
- Improved quality monitoring
- Rapid payback of investment

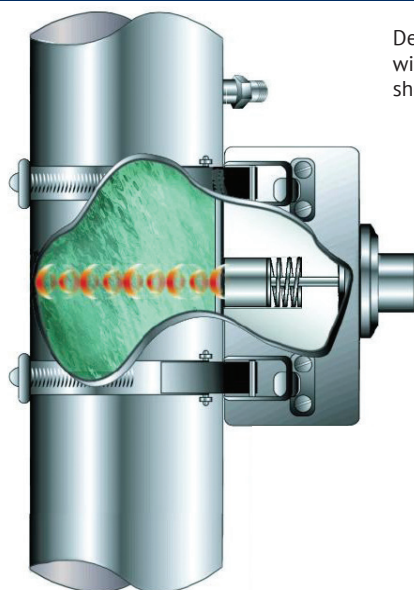
Working Principle

DensiCheck TX uses the established principal that sound velocity in a liquid is related to its concentration. Ultrasound pulses are transmitted through the liquid and reflected to their source. The time of transmission is measured using advanced highspeed electronics, and the variation is converted by the on-board microprocessor to a signal representing the liquid concentration. Temperature is automatically compensated for by an integral sensor, and the resulting value of transmitted via an analogue or digital signal to a suitable display or host controller.

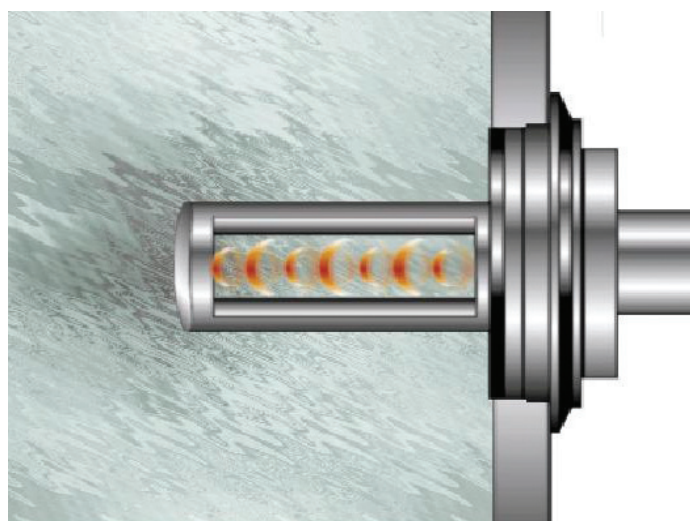
Mode of Operation

DensiCheck TX is designed to hold a single pre-loaded calibration for measuring one liquid type at a single process point. For multi-line or multi-product applications, DensiCheck TX can be combined with a separate Display/Control unit to form a DensiCheck 2000 System capable of monitoring up to four lines with 32 different calibrations.

Sensor Options



DensiCheck TX can be supplied with a non-invasive transducer as shown below.



There are also intrusive options with integral temperature sensor.

Specifications

GENERAL

Rating	IP65
Accuracy	Typically +/- 0.1%
Repeatability	+/- 0.01 m/s, +/- 0.02°C
Response Time	< 1 second
Update	Every 2 seconds
Stability	No drift
Calibrations	One
Supply	24V DC, 250 mA
Output	One active 4..20 mA Maximum -Loop resistance 500 Ω Non-isolated Two digital for hi/lo alarm
Input	One digital for flow indication

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ULTRASONIC TRANSDUCER

Rating	EExm II T ₄
Temperature	-10 to +110°C (continuous) (14° to 230°F) 150°C (5 min intermittently) (302°F)

PROCESS CONNECTIONS

DensiCheck TX can be supplied with various process connections, including:

- Non-invasive strap-on / Min. dia 50mm (2")
- Varivent - Probe depth 63 mm
- Tri-clamp (2 1/2") - Probe depth 81mm
- Flanged (2 1/2") - Probe depth 133 mm
- DIN 50 - Probe depth 63 mm

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