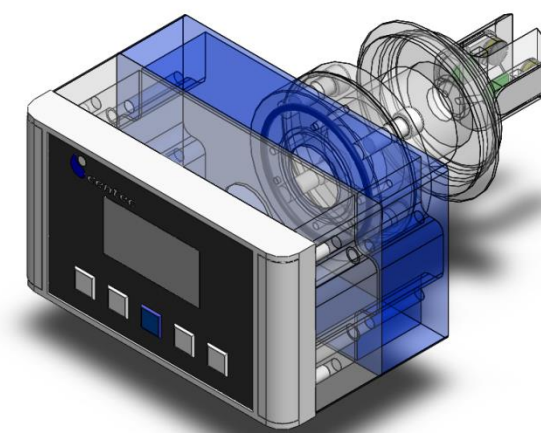


Concentration Measurement of Caustics

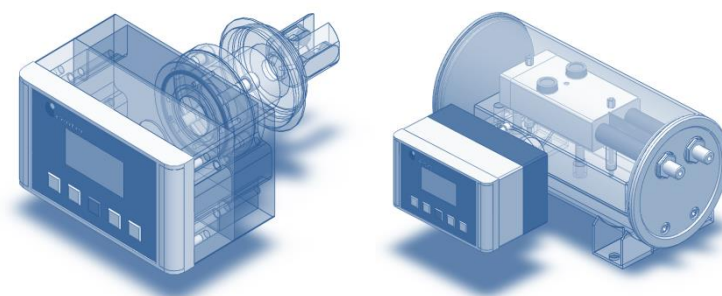
Application Report



Automated
process skids
and high precision
sensors from a
single source.
Centec.

The Centec Group

Centec is a privately owned group of companies. With a focus on the processing industries, we are rapidly growing in the major world markets. We have a global sales and service structure, with our own subsidiaries and a network of qualified distributors. Our international operations include mechanical, electrical and process automation engineering, with skid manufacture and pipework fabrication; as well as our own switch cabinet production. This infrastructure allows efficient logistics, short lead times and strict adherence to delivery deadlines. The quality of our products is excellent, so is the price-performance ratio.



Innovation. Dedication. Centec.

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SONATEC

Application and Measurement Principle

Corrosive caustics are used in various industries. Their concentration needs to be measured with highest precision. Sodium hydroxide (NaOH) is the principal strong base used in paper, textile and chemical industries. It is required for manufacturing soaps, neutralizing acids and refining petrol. In the production of biodiesel, NaOH serves as catalyst. Food and beverage manufacturers apply NaOH, e.g. for chemical peeling of fruits and vegetable. NaOH is a frequently used for Cleaning-in-Place (CIP). Potassium hydroxide (KOH) and NaOH are almost interchangeable, although NaOH is often preferred because of its lower cost.

The speed of a sound pulse between a transmitter and a receiver is measured. The sound pulse is created by piezo-elements and moves perpendicular to the product flow. Based on the correlation between concentration and sound velocity, the concentration of the 2-component liquid is calculated and displayed.



SONATEC
Transmitter Version

- Available as Transmitter Version with Local Display and as a Sensor
- Highly Precise and Fast Determination of the Concentration
- Based on Sound Velocity Measurement
- Applicable for a Huge Number of Liquids in Various Industries
- Short Response Time and Excellent Long-Term Stability
- Hygienic Execution, Full CIP Capability, Maintenance Free
- Outstanding Price-Performance-Ratio

Technical Data SONATEC

Measuring Range	400 - 3.000 m/s
Accuracy	± 0,05 m/s
Repeatability	± 0,01 m/s
Response Time	≤ 1 s
Pressure of Operation	max. 16 bar
Temperature of Operation	- 25 - + 125 °C
Temperature Compensation	Pt1000
Material	1.4404/AISI 316L; 1.4571/AISI 316Ti; Hastelloy C276; Monel 400; Incoloy 825; Tantal; others on request
Connections	Varivent© DN65; Diary DIN11851 DN65; others on request
Input	
Transmitter Version	6 x digital (24 VDC)
Output	
Transmitter Version	3 x digital (24 VDC) & 2 x analog (4 - 20 mA)
Profibus DP	
Transmitter Version	option
Sensor (w/o local display)	standard
Enclosure Rating	IP65
Explosion Protection	
Ex II 2G EEx d IIC T6	option
Power Supply	24 VDC