

Case study: Anton Paar Flex-Blend Skid with FMQ Flow Control**FOOD**

High-precision mixing, dosing, and carbonating with Flex-Blend: Anton Paar trusts in FMQ for flow measurement

Anton Paar, an Austrian manufacturer of laboratory and process analysis instruments, has gained an excellent global reputation for their exceptional precision, product performance, and quality. In their business division "Process Instrumentation" PI-PES, they go above and beyond by combining their analytical expertise with process engineering to design, plan, and construct modular process systems and customized plants that meet the most stringent demands. For their Flex-Blend mixing systems, they were looking for sensors for flow control and dry run protection that would meet the quality requirements of their own analytical equipment. At Anderson-Negele they found what they were looking for.

The Application

With the Flex-Blend series, Anton Paar offers fully automatic, pre-assembled, plug-and-play systems for high-precision blending, carbonating, and dosing for breweries and the beverage industry. The standard systems are optimized for craft breweries or for industrial production plants and can be integrated easily into existing process lines. For non-standard requirements, the company also designs, produces, and installs customized systems, such as dosing lines for a wide range of flavorings and concentrates for filling applications.

Anton Paar's commitment to delivering the highest quality and precision ensures that the end products meet specifications precisely and sustainably, even with changing recipes, while minimizing product losses. With their extensive expertise and experience in process engineering, the specialists can control the plant design with such precision that the desired target values for mixing ratio, original gravity, alcohol content, or CO₂ content are achieved in a reliable and reproducible quality.

Advantages in the application



- » The sensors meet Anton Paar's high quality standards in terms of function, reliability, configuration, operation and price-performance ratio.
- » The cooperation with Anderson-Negele is based on a highly efficient, service-oriented partnership
- » Markus Staudacher, Department Manager for Process Engineering Solutions: "With the Flex-Blend systems and the associated degree of automation, we are operating at a superior technical level. It is therefore particularly important to be able to rely on the quality of our partners"

Furthermore, Anton Paar's expertise allows for upstream and/or downstream processes to be synchronized and operated, such as buffer tanks, aroma dispensers, degassing, or bottling systems.

The Anderson-Negele Solution

Measuring devices from Anderson-Negele are an integral part of the Flex-Blend systems. An **FMQ flow meter** at the water inlet monitors the amount of water supplied and therefore the mixing ratio, while another one downstream of the mixing module monitors the end product. Despite the different pipe diameters, both sensors are equally compact and perfectly integrated into the modular Flex-Blend. Thanks to the precise flow measurement, Anton Paar can continuously monitor and ensure the end product quality.

An **NVS Mini point level sensor** provides reliable dry-running protection as standard, ensuring reliable, smooth plant operation.

For individual plant designs or for upstream or downstream process plants such as buffer tanks, cooling systems or degassing plants, Anton Paar process engineers also prefer to use Anderson-Negele instrumentation such as **ILM-4 conductivity sensors**, **L3 level sensors**, **NCS or NVS point level switches** or **P41 pressure transmitters**.

The Anton Paar Flex-Blend 3000 / 7000 Series



Application

Mixing, carbonating, dosing of beer, beverages and liquid food products. The mixing, carbonating and dosing ranges are customized according to user requirements.

Capacity

15...700 hl/h (7...200 US gpm)

Sensors in this application

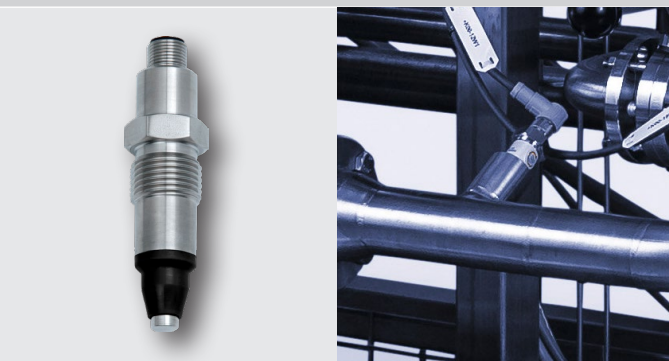
Flow FMQ



Advantages

- Extremely compact, robust and reliable all-rounder
- Measuring range 30...280,000 l/h (8 gal/hr to 80,000 gal/hr) / DN 10...DN 100
- Completely protected against moisture, corrosion and vibrations
- Vacuum-proof, made entirely of stainless steel, for CIP and pigging
- User-friendly display with optical buttons, quick and easy programming without opening the housing
- Always correct measurement even when changing media thanks to automatic signal processing

Point Level Switch NVS Mini



Advantages

- Dead end optimized conductive point level measurement
- Reliable full/empty detection for aqueous, conductive media in metallic tanks and pipes
- Extremely compact, sensor head only 18 mm
- Installation in pipes from DN15 possible