

KEM Process Industry



Application Spotlight

Foam conditioning and pump monitoring

TRICOR ENSURES QUALITY STANDARDS IN CRITICAL SUPPLY SYSTEMS

Technical Data

Medium:	blowing agent
Temperature:	+20 °C up to +40 °C [+68 °F up to +104 °F]
Pressure:	220 bar [3,190 psi]
Measuring range:	20 - 30 kg/h
Viscosity:	low
Density at 20 °C:	0.5 - 1 kg/l

Application

In an extruder, plasticized styrene polymer is precisely mixed by heating with a blowing agent mixture and additives. This mixture passes through a calming zone where it is cooled and then extruded through a die to form foam sheets.

The blowing agents for the foam, which are fed to the extruder via high-pressure pumps, are exposed to different pressure loads. At the same time, the dosed quantities must continuously guarantee the quality standard required for the end product.

Solution

A TCM Coriolis mass flow meter of the TRICOR CLASSIC series monitors the actual flow in a pump system. Its basic function is to verify the actual flow compared to the required flow based on the pump speed per minute (rpm).

If the material supply tank falls below a threshold value, the pump continues to run. It does not detect that the tank is running empty and tries to suck off material. Adding our flow meter provides direct feedback on how much material is coming from the pump. It immediately indicates when a critical stage occurs in a supply system.

Advantages

- Mass based measurement result, independent of density and viscosity
- Measuring accuracy up to 0.1% of reading (depending on measuring range dynamics)
- Reproducibility better 0.05%
- No moving parts: low maintenance
- No inlet/outlet flow conditioning required
- Mechanical design robust against external disturbances (e.g. vibrations)
- High-resolution output up to 10,000 Hz
- Well-balanced price-performance ratio



Certificates:

- Pressure Equipment Directive 97/23/EC, 2014/68/EU
- HP0 - Certification
- Explosion protection according to 2014/34/EU
- CSA/UL - Certification
- Accreditation according to ISO 17025



Coriolis Mass Flow Meter
(TRICOR CLASSIC Series)