Greenhouse Gas Emissions Monitoring
Solutions for regulatory compliance and simplified calculation
“EU Emissions regulation is adding work-time and cost while work force is shrinking and international competition is intensifying”

What if you could.....

Ensure compliance to the EU Emissions regulation & simultaneously improve plant efficiency

• Measure mass flow directly, with highest possible repeatability, turndown and accuracy
• Direct mass measurement of gas enables better control of your air/fuel ratio, optimizes fuel gas usage, and reduces fuel waste
• Measure real-time energy content of gas with specific gravity to improve combustion efficiency and reduce fuel consumption for varying gas composition
• Achieve mass balance in your plant and ensure optimized production, improved throughput and reduced waste
• ISO 17025 accredited flow calibration laboratory to meet regulatory requirements

Improve manufacturing flexibility

• A single meter handles measurement of multiple products and recipes without recalibration reducing the number of equipment and piping required
• Meter is equipped with density measurement to indicate the exact fluid switch over time when handling multiple fluids
• Eliminate pressure and temperature compensation and achieve direct mass measurement to improve process control and flexibility in manufacturing
• Detect rapid gas composition changes with specific gravity meter

Improve plant safety while reducing regulation-driven maintenance, downtime & operations costs

• Almost no maintenance throughout the life time of the meter
• Smart Meter Verification for Micro Motion Coriolis meters drastically reduces meter verification time and alerts the operator of any meter damage; thus providing the easiest way to comply with the regulatory requirement around checking the meter's health
• Smart Meter Verification with host-based software can help document audit trails and produce reports that can be used for audit purposes
• Critical alarms alert you to abnormal process conditions so you can address process upsets early
• Eliminate up to 90% of potential leak points compared to installing a traditional orifice run
• Known Density Verification method for gas density and specific gravity for detection of corrosion, erosion or coating

11,000+ Installations are covered by the EU Emissions Trading Scheme covering almost every industry served by Emerson. The gain in efficiency, time and cost of ownership due to usage of Micro Motion and Rosemount technologies is further amplified with the emission regulations. Industry experts around the region, looking for an effective solution are further increasing their reliance on Emerson.
Custody Transfer / Check Metering / Allocation

- Gain confidence knowing you are getting what you are paying for
- Accurately measure “mass-in” to avoid over-stating or under-stating of calculated emissions

Combustion Control

- Minimize the effect of variations in fuel
- Improve ability to control air to fuel ratio and operate more efficiently
- Reduce NOx through improved combustion control
- Reduce potential safety hazards associated with excess fuel

Mass Balance Diagram

- Provide best possible input to your controller for reactor / process control
- Achieve highest throughput while also maintaining desired quality
- Reduce waste and rework
### Micro Motion Smart Meter Verification

<table>
<thead>
<tr>
<th>Ideal For</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>• Routine verification checks</td>
<td>• Improved availability, quality, safety, health and environment</td>
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<tr>
<td>• Performance checks for custody transfer field proving for regulatory reporting</td>
<td>• No interruption of process measurement, no operator exposure</td>
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<tr>
<td>• Troubleshooting to isolate problems and eliminate flow measurement suspicions</td>
<td>• No special technical training requirements</td>
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<tr>
<td>• Safety checks to determine actual tube structural integrity</td>
<td>• Completes in 90 seconds</td>
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<td>• Tracking erosion or corrosion when it is expected as part of the process</td>
<td>• Tracks configuration against last verified configuration</td>
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<tr>
<td>• Quality check to support required procedures</td>
<td>• Tracks zero against last verified and factory zero and span</td>
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