

10 Reasons to Consider Coriolis Meters over Mechanical Flow Meters on Truck Loading Installations

Oil storage & refinery terminals are the 'banks' and 'cash registers' in the hydrocarbon supply chain. It is essential to the bottom line of any terminal to accurately measure and control all product transfers coming in and out. Mechanical technologies (PD & Turbine) are widely accepted on truck loading installations and answer the application needs, but also have critical limitations that can impede top quartile performance.











Challenges for truck loading operations include:

- **Safety:** Ensure continuous safety in operations
- **Availability:** Consistently maintain and manage throughput and utilization, reducing downtime and increasing availability
- **Production:** Ensure consistent product quality and quantity, and minimize operating and maintenance costs



How can these challenges be solved? Utilize Micro Motion Coriolis technology.

Top 10 Reasons to Install Coriolis Flow Meters for Truck Loading Applications

-  **1. Superior Flow Measurement**
 - Highest possible flow rate accuracy up to 0.05%
 - Incredible stability during many years
-  **2. Quality Control with Density Measurement**
 - Up to 0.2kg/m³ density accuracy
 - Online control of blending proportions and contamination detection
-  **3. Entrained Gas Mitigation**
 - Detect system leaks and problems
 - Mitigate for intermittent upsets
-  **4. Wider Turndown**
 - Avoid any need for dynamic meter factors
 - Handle additive injections
-  **5. Simple Installation**
 - Flexible and compact for easy conversion of mechanical meters
 - Turnkey loading solutions modules
-  **6. Phenomenal Reliability**
 - Maintenance free technology, no spare parts
 - End traffic jams due to bays being shut down
-  **7. Predictive Maintenance**
 - Online health status, automatic or on demand, on site or remotely, without loading interruption
 - Reduced safety risk during reactive maintenance operation
-  **8. One Meter for Multi-Products Loading Operation**
 - Just calibrated on water
 - Unaffected by changing fluid properties, flow rates, & process conditions
-  **9. Easy Calibration and Proving**
 - Expect no drift over time
 - Prove only once to get the single Meter Factor for the entire flow range
-  **10. Experience and Field Support**
 - 40 years of experience & successful reference
 - Free audit for truck loading upgrade

These 10 reasons will help terminal operators to improve their truck loading installations in compliance with Custody Transfer standards and regulations. The simple step of choosing Micro Motion Coriolis technology will accelerate the implementation of IIoT strategies and provide quick profitable ROI.



Micro Motion Coriolis ELITE CMF & F-Series Sensors

Highest Accuracy on liquid mass flow, volume flow and density measurements OIML/MID approved, Part & system certificates



Micro Motion Model 5700 Transmitters

Intuitive design & interface including basic flow computer functionalities for truck loading: Preset, Volume, Batch control, Ticket printing, Volume & density conversion



Smart Meter Verification

Diagnostic tool for preventive maintenance. Confirms accuracy of measurement and integrity of intelligent flow meters. Ultimate confidence in your measurement.

Attribute	PD	Turbine	Coriolis
Industry Acceptance	●	●	●
Metrological Performance	◐	◐	●
On Line Density	○	○	●
Turndown	◐	◐	●
Long Term Stability	◐	◐	●
Ease of Prove	◐	◐	●
Multi-products, High Viscosity, High Temperature	○	○	●
Spacing, Weight	●	●	◐
Capital Cost	●	●	◐
Operating Cost	○	○	●
Wearing Parts	○	◐	●
Pulsation/Turbulence	○	○	◐
Sand and Debris	○	○	●
Coating, Build up	○	○	●
Pressure Loss	◐	◐	◐
Entrained Air Damage	○	○	●
Entrained Air Error	○	○	●
Health & Process Diagnostics	○	○	●
Auto Verification & Remote Maintenance	○	○	●

Flow Metering Technology Attributes Summary and Comparison

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Truck Loading Rack with ELITE Coriolis Flow Meter

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