

# Tank Gauging Applications

## The MTG Multi-function Tank Gauge Functions Include:

### Product Inventory to Custody Transfer Accuracy

Volume & Mass meets API MPMS 3.6 Hybrid Method and API MPMS 16.2 Hydrostatic Method. Bottom referenced, innage measurement. Tank bottom / roof reference movement / indicator.

**Product Quality** by measurement of Temperature, Density, and Water over the entire tank Height. Thus, the ability to determine the value of the Inventory. Shows the TOTAL WATER over the entire liquid height by strata; including Entrained Water, Emulsified Water, and Free Water. Shows if the Product Density is homogeneous or stratified over the entire liquid height by strata. Shows Multi-point spot temperature over the entire liquid height for operational needs or average temperature by strata for inventory use.

### Overfill and Rupture Protection / Prevention

(Exceeds API 2350 5th Edition requirements)  
In addition to Critical High (CH), AOPS or MOPS, High-High (HH), and Maximum Working Level (MW), the (MOP 3006, MTG 3018, HTP 3055) system provides Over Pressure, Minimum Working Level, and Vacuum. Standalone Overfill and Rupture or within a redundant configuration with a tank gauge.

**Vapor Monitoring** of emissions parameters; monitoring of gas blanket; monitoring of Pressure Relief Vents (PRV's); etc. Requires Ambient sensor on a cone roof or geodesic dome tank. The use of an Ambient Sensor provides ambient pressure, temperature, and density.

### Leak Detection

Unauthorized Product Movement, Improper Line-ups (Product Contamination), & Theft of Product

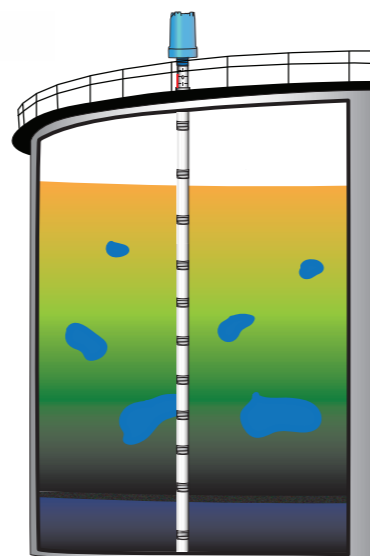
### Yield Analysis

on transfers to / from tanks in comparison with meters. To / from includes any metered segment between tank, tank and pipelines, ships, barges, rail tank cars, loading racks, bottling line, or process units.

Volume, Mass, Level, Multi-point spot temperature, Average temperature, Multi-strata density, Average density, Total water (Free, Emulsified & Entrained), Vapor (Pressure, Temperature & Density), Ambient (Pressure, Temperature & Density), Flow rate (Volume & Mass), and Tank Bottom / Roof Movement Indicator.

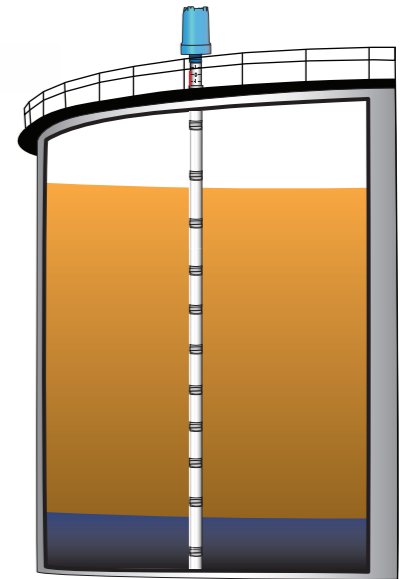
## Crude Oil

- Accurate Inventory quantity and quality
- Water location for settling, removal, and optimization
- Identification of product characteristics for Benchmark Crude
- In tank blending or mixing



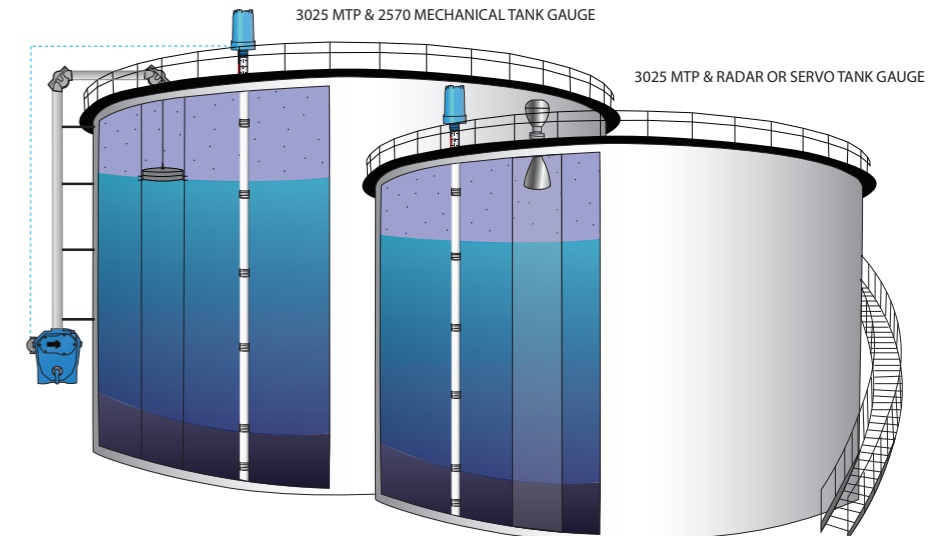
## Clean Product

- Accurate Inventory quantity and quality
- Real-time measurement of "Sample Parameters" (Density & Water) in multiple strata
  - Tank Top – Middle – Bottom (API 8.1 Sampling)
  - Insures quality of Gasoline, Diesel, and Jet fuel (API 1543 and API 1640)

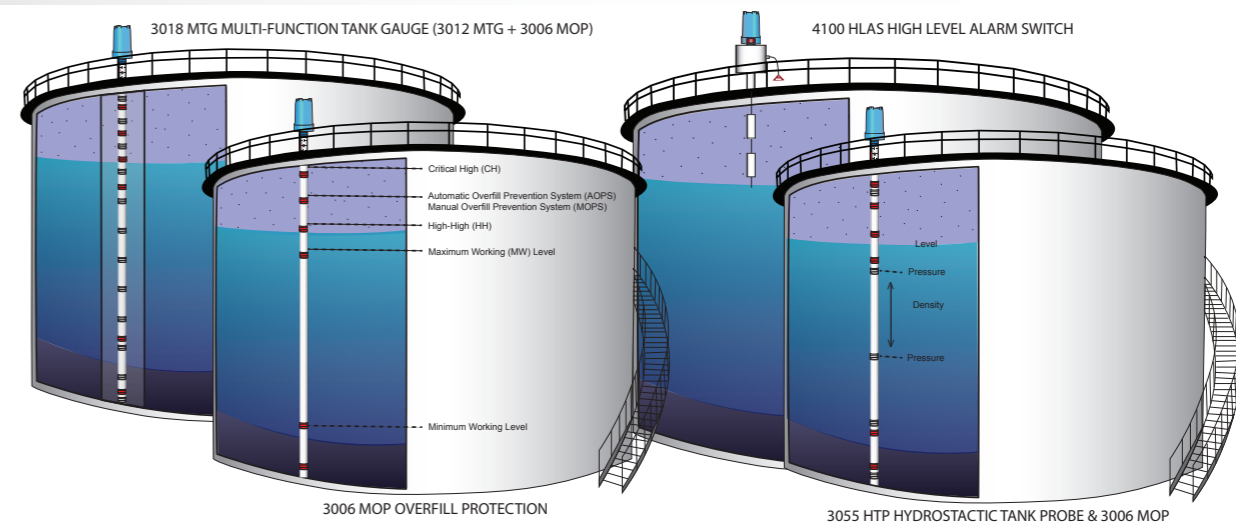


## Improved Accuracy of Hybrid Systems

- MTP 3025 "Multi-function Tank Probe provides Multi-point temperature, Multi-strata density, and Total water.
- Improves measurement of Hybrid Systems using Radar, Servo, Magnetostrictive, and Mechanical Tank Gauge Systems for level.



## Overfill Protection



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