



## KRAL Single Line Fuel Metering Systems

### TYPE OF VESSEL

Petroleum Tank Barges

### PRIME MOVERS

EMD 645

### FUEL MEASUREMENT SYSTEMS

#### Kral Single Line Volumeter System

KRAL OME32 Volumeter  
A linear positive displacement meter. It divides a fluid into countable quantities and totalizes those quantities using speed sensors and electronic units.

1" G thread end connection  
Speed Sensor Probe  
Thread Adapter  
BEM 300 Single Line Unit



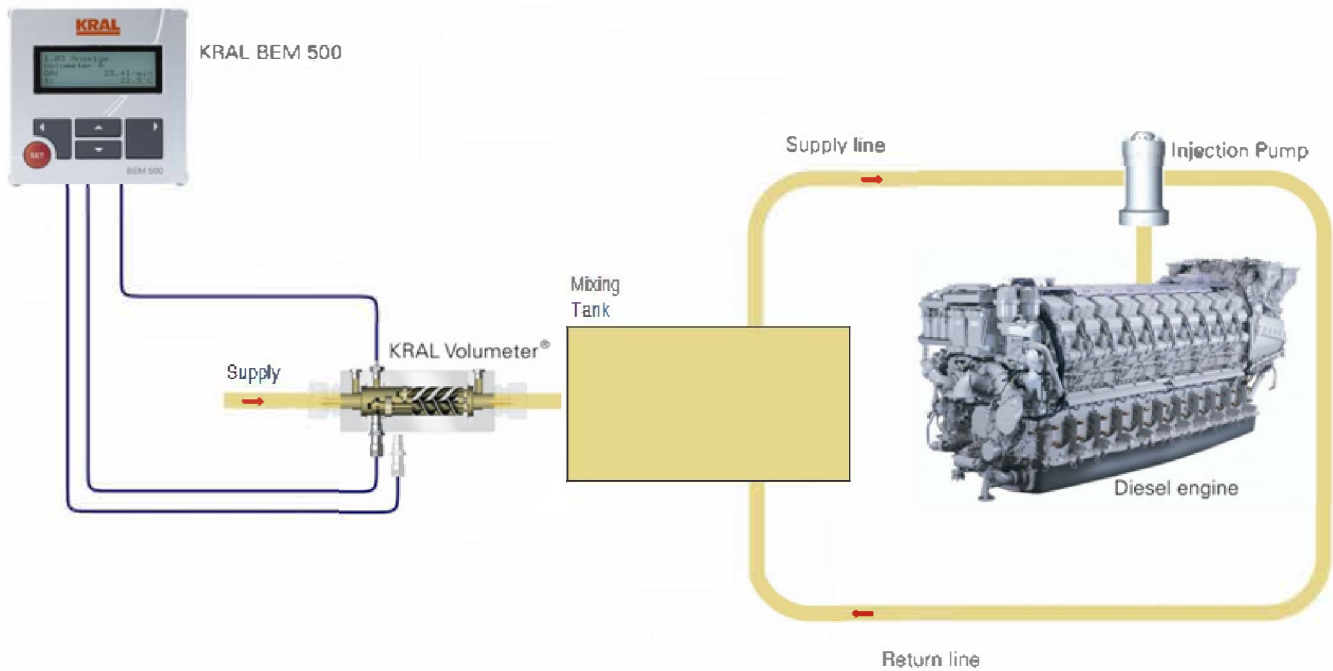
### PROJECT OVERVIEW

GCS supplied Kral Fuel Measuring Systems to measure fuel usage for EMD 645 engines on 35 petroleum tank barges operating on inland waterways.

The KRAL Single Line Volumeters are installed from the fuel holding tanks to the day tanks to provide an accurate reading of how much fuel is burned in a 24 hour period.

The KRAL Day Tank Monitoring Systems consists of a volumeter to measure liquid volume. Using the temperature sensor and density table, the measured values of the KRAL Volumeter can be converted in mass units. The Single Line System yields very accurate flow measurement.

The KRAL Volumeter is a very compact positive displacement meter. The measurement chamber consists of the casing and two screw spindles. The spindles continuously divide the liquid in a precision made closed measuring- chamber – nothing escapes. The precisely measured value is calculated from the known measuring-chamber volume and the spindle rotation speed.



**OME Flowmeters (Volumeters):**

- Flow range: 0.03 to 135 gal/min
- Max. pressure: 600 PSI
- Temperature range: -4 to 257 °F
- Viscosity range: 1 to 1x10<sup>6</sup> cst
- Casing: Anodized aluminum
- Spindles: Nitrated steel 1.7139
- Ball bearings: Bearing steel
- Seals: Viton®

**BEM Electronic Units**

- Matched to KRAL flow meters and their applications and can be installed in the engine room or in remote locations.
- They display the measured fuel consumption in addition to the values recorded at each meter.

Part of the MSHS group of companies, GCS offers comprehensive control system support, from engine and turbine systems integration to turnkey project management for a broad range of marine, power generation and industrial projects. Learn more at [GOVCONSYS.COM](http://GOVCONSYS.COM).

**Corporate**

3101 SW 3rd Avenue  
 Fort Lauderdale, FL 33315  
 Phone: 954-462-7404  
 Toll Free: 877-659-6328  
 Fax: 954-761-8768

**Gulf Coast**

2022 Tamvest Court  
 Mandeville, LA 70448  
 Phone: 985-626-8707  
 Toll Free: 888-GCS-GULF  
 Fax: 985-626-8732

**Mid-Atlantic**

3120 Arizona Avenue  
 Norfolk, VA 23513  
 Phone: 757-852-5808  
 Toll Free: 877-659-6328  
 Fax: 757-852-5809

**Pacific Northwest**

1720 75th Street SW  
 Everett, WA 98203  
 Phone: 425-513-9390  
 Fax: 425-513-9391

