

Bulk Multiphase Flow Meter



Bulk meters are large size Multiphase flow meters with sizes ranging up to 24 Inch with measurement capability of up to 500,000 BPD.

Introduction

[Bulk Meters](#) are large size Multiphase flow meters with sizes ranging up to 24 inch with measurement capability of up to 500,000 BPD. Haimo's Bulk Meters have been in successful operation since 2003, and our 16 Inch Bulk Meter is the largest onshore or offshore installation of its kind in the world, as of the end of 2010. Bulk Meters are particularly used for field allocation measurement, inter-field transfer, etc.

Measurement principle

The basic working principles of the Bulk Meter are the same as of our standard multiphase flow meter. Haimo Bulk Meter utilizes the combination of two technologies: venturi and gamma ray absorption. Venturi measures total flow rate. Single gamma meter measures GVF while another dual gamma meter measures WLR whose accuracy is guaranteed by the patented design of the Haimo inline liquid sampling device. By combining the two measurement techniques, the flow rates of oil, gas and water are computed in real time at production conditions. Flow rates at standard conditions are then computed with the line pressure and temperature through the embedded PVT package. The Bulk Meter can be custom built to meet with customer specifications in terms of pressure rating and sizes.

Performance

Bulk Multiphase Flow Meter			
Measurement Uncertainty (Confidence level=95%)			
GVF	Measurements	< 2MPa	≥2 MPa
0~95 %	Liquid Flow (Rel)	5%	5%
	Gas Flow (Rel)	7%	5%
	WaterCut (Abs)	2%	2%

Features

- High flow rate measurement capability
- Non-intrusive design
- Low pressure loss
- Low power consumption
- No moving parts, low maintenance requirements
- Compact, robust design with small footprint

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<http://www.haimotech.com/Products-and-Services/MPFM/Bulk-Multiphase-Flow-Meter.html>

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