

◆ **Multiphase Flow Metering**

Online Multisensor Metering for Oil & Gas Wells

Monitor multiphase production online through an integrated multisensor approach.

— **PRODUCT OVERVIEW**

Multiphase Flow Metering combines differential-pressure, radio-frequency, microwave, pressure, and temperature sensing to estimate total liquid, oil, water, and gas rates together with water cut without a conventional test separator. Flow regime interpretation and reservoir-wellbore-surface analysis connect measurements with operating context for online well testing, production surveillance, and engineering evaluation.



Integrated multisensor metering for well-level phase-flow analysis.

— **CORE CAPABILITIES**

01

Integrated Multi-Source Sensing

Combine differential-pressure, RF, microwave, pressure, temperature and salinity-related inputs in one coordinated measurement system.

02

Flow Regime Interpretation

Recognize stratified, slug, and bubbly flow regimes as operating conditions change.

03

Phase-Rate Estimation

Estimate gas and liquid phase rates and water cut from coupled models and sensor data.

— **HOW IT WORKS**

→ **01 SENSE**

Capture differential-pressure, RF, microwave, pressure, and temperature signals across the nozzle-based measurement system.

→ **02 INTERPRET**

Process changing signals and identify the prevailing multiphase flow regime.

→ **03 ESTIMATE**

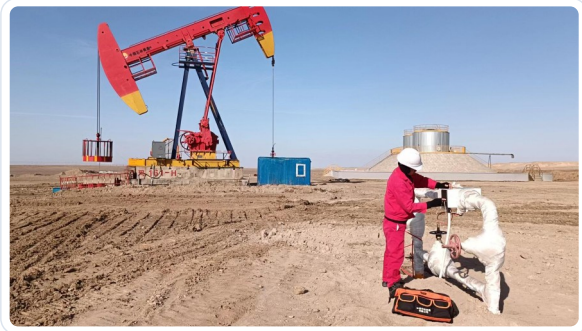
Apply coupled models to estimate phase rates and water cut.

→ **04 DELIVER**

Provide traceable phase-flow estimates for surveillance and engineering analysis.

Application Scenarios

Field and laboratory workflows for online well testing and multiphase measurement.



01

Online Well Testing

Perform online well tests at the wellhead or gathering point, keeping phase-flow estimates connected with pressure, temperature and changing operating conditions for production surveillance and engineering review.



02

Two- and Three-Phase Metering

Apply coordinated differential-pressure, radio-frequency, microwave, pressure and temperature measurements to oil-water and oil-gas-water streams, supporting phase-rate analysis across two- and three-phase metering tasks.



03

Variable Operating Conditions

Follow transitions among stratified, slug and bubbly flow regimes as well conditions change, and relate the measured signals to surveillance, diagnosis and field operating decisions.

CUSTOMER VALUE

● Compact Metering

Bring multisensor measurement into a compact, non-separating arrangement for well-level surveillance.

● Integrated Sensing

Combine complementary sensing routes to interpret phase behavior across changing production conditions.

● Traceable Measurement Data

Connect phase-flow estimates with sensor inputs and operating context for engineering analysis.

Build a traceable well-level measurement foundation for production surveillance and informed field decisions.