

# Dual Range Mobile MPFM

Well testing equipment for repeatable, highly accurate measurements and reduced field development costs

## Applications

- Exploration, appraisal, and production well testing
- Well cleanup optimization
- Production and fiscal allocation
- Production trending
- Artificial lift system optimization
- Flow measurements in slugs, foams, emulsions, and heavy oil

## Benefits

- Improved fluid characterization services
- Enhanced response time
- Reduced field development costs
- Improved well diagnostic and early detection of water entry and gas coning
- Eliminated test lines and test separators
- Enhanced installation and operation safety
- Reduced gas flaring and eliminated fluid disposal

## Features

- Repeatable, highly accurate measurements
- Exceptional dynamic response
- No need for separation and flow calibration
- High-frequency data acquisition
- Archived database and automatic reports

## How it cuts on costs...

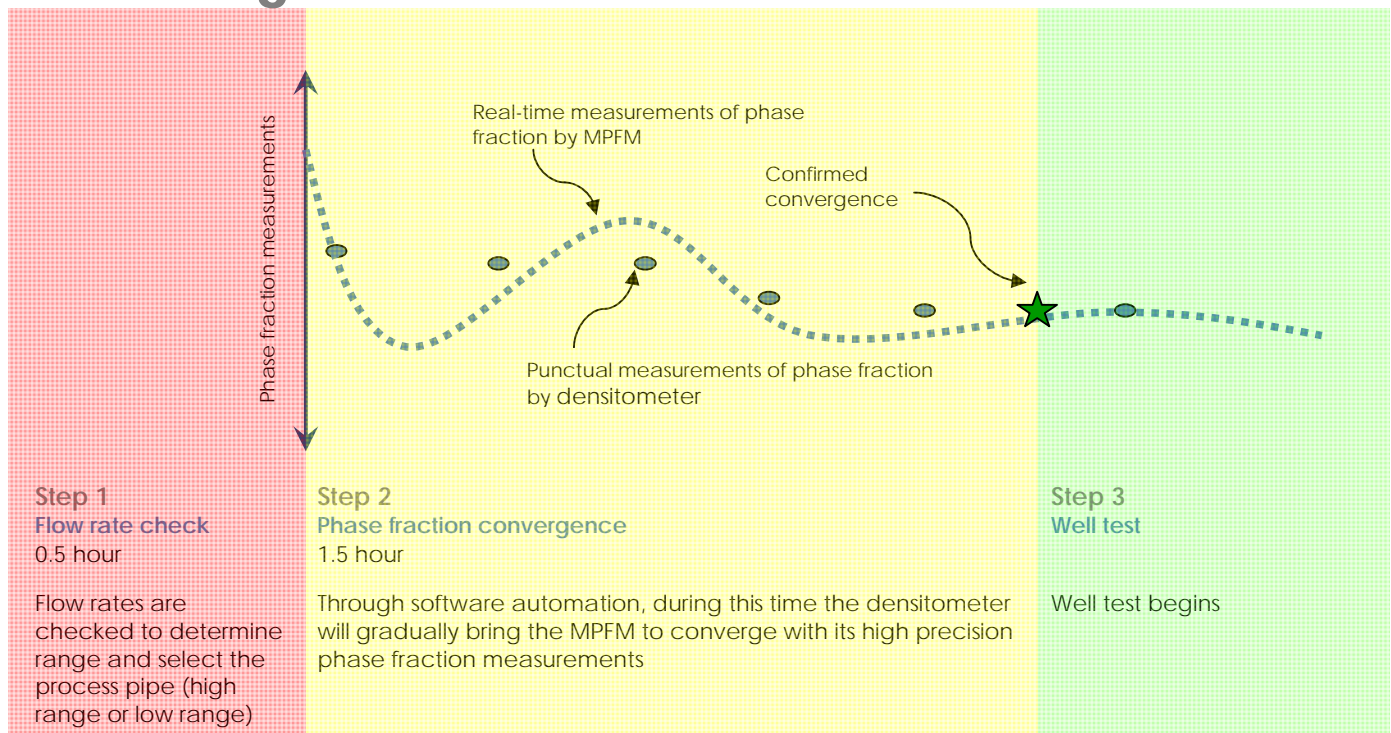
1. The first mobile MPFM to be completely **free of PVT data and of costly fluid sampling**. It operates with no outside information whatsoever and it is self learning.
2. A **100** ratio of maximum to minimum liquids flow rate allows you to test the widest array Well cleanup optimization.
3. Needs only a **small crew** to operate.

The Dual Range mobile MPFM is the ideal mobile testing unit with the unsurpassed versatility and range. Because the **MDseries** technology relies on sensors that are compact and easily configured in a variety of ways, a skid mounted Dual Range Mobile MPFM has been designed to provide unparalleled testing capacity achieving in one unit a ratio of maximum to minimum flow rate of **100**.

The uniqueness of this completely self sufficient unit resides in its ability to test any well accurately, recording the gas, oil and water flow rates, water cut and GVF and achieving a complete well diagnostic **without** the use of dedicated PVT data or any other *a priori* information on the well. The technology functions with built-in redundancy. It combines two parallel real-time measuring MPFM with pipes of different diameters to handle low and high flow range wells, together with a new generation densitometer, capable of providing punctual measurements of water cut and GVF with laboratory grade accuracies. The unit is designed to combine two separate path of measuring phase fractions, thus allowing the test operators to verify, control and optimize accuracy while on site, and to ensure the reliability of test reports.



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Fast and easy set-up, testing begins within 2 hours...

<b>Typical Specifications</b> (the unit can be designed to your requirements)	
Orifice plate diameter, mm [in]	100, 50 [4, 2]
Service	H <sub>2</sub> S (wetted parts)
Max. working pressure, MPa [psi]	34 [5000]
Temperature rating, °C [°F]	-20 to 150 [-4 to 302]
Ambient working, °C [°F]	-20 to 85 [-4 to 185]
Ambient storage, °C [°F]	-40 to 85 [-40 to 185]
Water/liquid ratio, %	0 to 100
Gas volume fraction, %	0 to 100
Liquid viscosity at line conditions, Pa.s [cP]	0.0001 to 2 [0.1 to 2,000]
Flow range	
Liquid flow rate m <sup>3</sup> /d [BPD]	70 to 6,800 [500 to 50,000]
Gas flow rate MMm <sup>3</sup> /d [MMSCF/D]	(refer to measuring envelope)
Repeatability (total mass rate at line conditions)	Better than ±1%
Resolution (total mass rate at line conditions)	Better than ±0.1%
Dimensions (W x D x H), m [ft]	0.9 x 1.9 x 1.2 [3 x 6.2 x 4]
Weight, kg [lbm]	500 [1,100]
Power consumption, W	Less than 100
Hazardous area classification	ATEX EEx de II B T4 IP 66

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Customized data delivery through the FlowMaster software...



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