The patented Accuflow™ SR & LT Series Multiphase Metering system consists of a vertical pipe section and a horizontal pipe section connected together as shown. Multiphasic fluid (oil, water, gas) enters the vertical pipe tangentially, creating a cyclonic action in the pipe where a majority of the gas is separated and flows upward. The remaining gas is carried under with the liquid stream (oil and water) and enters the horizontal pipe where the gas is completely separated.

Liquid level in the horizontal pipe is controlled at the center of the pipe using a control valve located in the gas flow line. Large gas/liquid interface area, thin gas bearing emulsion layer, and quiescent flow in the horizontal pipe, all contribute to efficient removal of free gas bubbles from the liquid stream.

A conventional liquid meter (coriolis, turbine, etc.) is used to measure liquid flow rate. Water cut measurement can also be obtained using conventional technologies or methods (density differential, microwave, etc.).

Gas flow is also measured using conventional technologies (vortex, turbine, ultrasonic, etc.). After measurement, the gas and liquid streams are recombined and returned to the multiphase flow line.

The LT Series is particularly suitable for space limited areas, such as offshore platforms.
Features
- Simple and compact design
- Entire system made of common steel pipes; no pressure vessels required
- All components are commercially proven technologies
- Very low pressure drop (<3psi)
- Low liquid inventory and fast response

Benefits
- Low equipment cost
- Easy to transport, install & operate
- Very low maintenance
- Accurate measurement
- Handles wide range of flow rates
- Applicable for 0 to 100% water cut
- Applicable for 0 to 100% gas fraction
- Frequent well testing

Anticipated Accuracy
- Liquid flow rate: 1% of reading
- Gas flow rate: 5% of reading
- Water cut in liquid: 2% absolute

Specification
- Footprint: 6’W x 15’L (typical)
- Height: 12’
- Liquid Rate: consult factory
- Gas Rate: consult factory
- ANSI rating: 150#, 300#, 600# and 900#

Compact design suitable for offshore duty
Truck mounted with operator control room for mobile applications
Accuflow SR for group or individual well testing