Multiphase Metering

Acquisition of real-time well data without the need for phase separation or flowline pressure drop.

**Designed for:**
- Production well testing
- Improved well clean up performance
- E & A well testing

**Features & Benefits:**
- Real time data
- Compact small footprint design
- No mixer or phase separation required
- High accuracy and repeatability
- Design pressures up to 10,000 psig
- Extensive flow range
- Unrestricted through bore
- Zero flaring in production applications
- Insignificant hydrocarbon inventory
- Minimal installation requirements
- Elimination of potential process problems; foaming, hydrates, etc
- Data captured at wellhead conditions with almost no pressure drop
- Fast response to dynamic well conditions
- Suitable for remote operations

The above graph is only indicative and each application should be checked on a case by case basis.
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Technical Specification:

- **Flow Meter**: Roxar MPFM 1900VI
- **Pressure rating**: 10,000 psig
- **Temperature Rating**: 392°F
- **Size**: 4’8” (l) x 4’3” (w) x 7’5” (h)
  
  1,424mm x 1,300mm x 2,261mm
- **Weight**: 3,520 lbs (1,600kg)
- **Gamma Ray Source**: Caesium 137, less than 7.5 µ sieverts per hour on any accessible surface
- **Power Requirements**: 180-264 V AC; 47-63 Hz; 50 watts
  (Can be supplied by solar or wind power)
- **Hazardous Area Classification**: Suitable for use in Zone 1 (i.e. E Ex-ia IIC T4)
- **GVF Operating Range**: 0 - 100%
- **Water Cut Operating Range**: 0 - 100%
- **Flow Regimes**: All vertical flow regimes (i.e. annular, slug, churn, bubbly and single phase)

Typical Measurement Uncertainty:

<table>
<thead>
<tr>
<th>Gas Void Fraction,%</th>
<th>Gas Rate % (relative)</th>
<th>Liquid Rate % (relative)</th>
<th>Water in Liquid Ratio % (absolute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 30</td>
<td>-</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>30 - 60</td>
<td>6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>60 - 80</td>
<td>6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>80 - 90</td>
<td>8</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>90 - 96</td>
<td>10</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>96 - 98</td>
<td>12</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>98 - 100</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>

Certification:

Certification by Det Norske Veritas

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MultiphaseMetering 301007_v1