

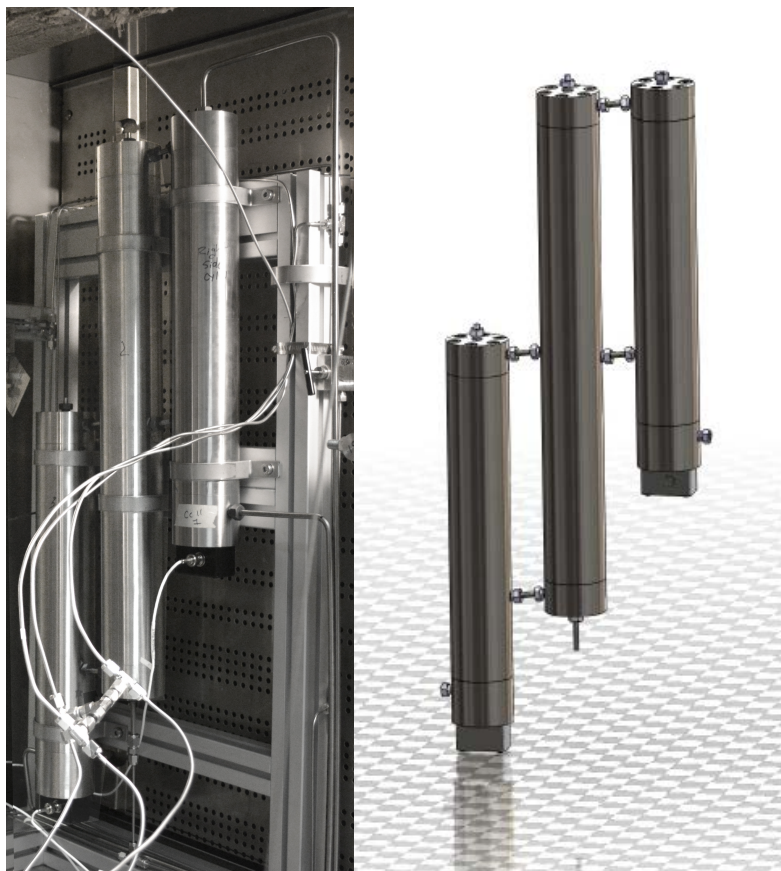
M9103 accurately measures 2 fluids and gas

The Grace Instrument M9103 3-Phase Separator measures the level of two fluids in a gravity-based 2-phase high-pressure separator. It provides output signals (serial ASCII characters) proportional to either absolute level or relative to a user-selected set-point. The M9103 functions by separating water, oil, and gas from well effluent using three connected high pressure vessels. As an ultrasonic signal travels through the sample fluid inside the vessel, a data acquisition system measures ultrasonic energy. A small amount of the transmitted energy is reflected back to the ultrasonic transducer where it is recorded and saved to a computer system.

The custom Grace Software (included) allows the user to monitor and receive data through a PC interface. The robust, high-quality design of the separator requires little to no maintenance, making M9103 a perfect choice for those in the oilfield production or petroleum industry. The M9103 3-Phase Separator also operates automatically, without the use of manual threshold adjustments. Fluid volumes can be calculated accurately, while raw waveform data may be plotted and easily exported for future use.

Operational Features

- *Control System measures ultrasonic pulse through transducer transmission.*
- *Ultrasonic energy is transmitted inside vessel can be easily recorded with PC interface.*
- *Unit accurately measures fluid volume and raw waveform data.*
- *Highly reliable form of ultrasonic 3-phase separation*
- *Easily monitor output signal through custom Grace software.*
- *Separates two fluids and a gas through a gravity-based high pressure separator.*



Specifications:

Temperature Range:	59 - 302°F (15 - 150°C)
Working Pressure:	10,000 psi maximum
Hysteresis:	0.3 ml
Bandwidth:	0.05 Hz
Fittings:	1/4 inch AE SpeedBite W
Housing:	Hastelloy C-276 or Titanium
Transducer Construction:	Plastics and Epoxy
Bore Diameter:	1 in. (25.4 mm)
Bore Length:	15.15 in. (384.81 mm)
Req. Vertical Positioning:	+/- 2.5° from true vertical
Sample Fluids:	Reservoir oil and brine
Total Fluid Volume:	390 ml
Change of Water Volume:	200 ml maximum
Change of Oil Volume:	200 ml maximum
Typical Volume Resolution:	0.08 ml (25.4 mm bores, water-paraffin)
Trace Length:	125,000 maximum
Sampling Frequency:	Up to 30 Hz
Power Supply:	120/240V VAC
Weight:	2.2 lbs. (27 kg)