

# Grace

## INSTRUMENT

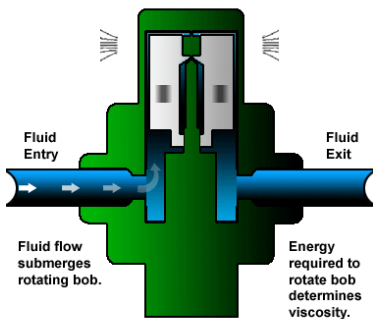
Scientific Innovations. Industrial Solutions.

### M3900 IN-LINE VISCOMETER

- Compliant with API 13 and API 39.
- Viscosity measurement unaffected by fluid flow.
- Computer-controlled speed, viscosity measurement, and calibration.
- Multiple data export formats.
- Easy to operate and calibrate.
- Unique and durable design with fast cleaning and simple maintenance.



Magnetic field causes magnet inside bob to rotate.

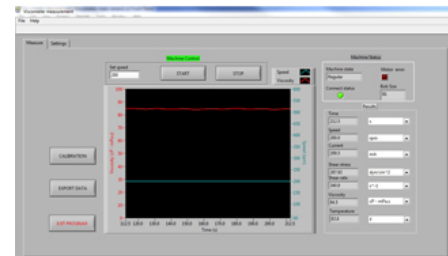


No dynamic seal - the bob is the only moving part!

M3900 2-D Model Showing No Dynamic Seal



M3900 Control Box



M3900 PC Software

## PRODUCT DESCRIPTION

### *Single Rotating Element Submerged in Test Fluid Without Dynamic Seal*

Unique patented design ensures reliability of test results over a longer period of time than any competing model can provide without the use of any dynamic seal. The only moving component in contact with test fluid is the rotating bob.

### *Easy Cleaning and Maintenance*

Access to all internal components is accomplished by a one-action dismount, providing fast access for maintenance and cleaning to maximize machine performance and minimize maintenance time.

### *Dependable, Powerful Viscosity Measurement System*

Designed to measure fluid viscosity as it flows in a pipe system, or as it is stored in a reservoir, the *Grace Instrument M3900 In-Line Viscometer* is a

Looking for more? Many other sizes, configurations, finishes, and custom specifications are available! Contact Grace Instrument today for details:

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dependable and powerful viscosity measurement system.

Its simple, streamlined structure is easy to operate and allows for long periods of low maintenance operation, during which time the unit is in constant service. Stainless-steel construction ensures the *M3900* will provide years of functionality.

When maintenance is required, the *M3900*'s patented design provides quick access, making maintenance easy and efficient. The device is intended for use with a wide variety of fluids, with a special emphasis on fracturing fluid and drilling mud.

### Comparison Between *Grace M3900* and Leading Competitor

No.	Feature	Grace M3900	Competitor's In-Line Viscometer
1	Compliant with API 13 and API 39	Yes	No
2	API Testing Speeds: 3 to 600 rpm (Continuous)	Yes	No
3	Viscosity Measurement Unaffected by Fluid Flow	Yes	No
4	Patented design without dynamic seal enables minimum maintenance and instant repair. M3900 has patented magnetic drive motor for more accurate readings, and therefore no dynamic seal, so it is much easier to clean.	Yes	No
5	Minimum Viscosity Reading of 5 cP	Yes	No
6	Thick Wall Pressure Rating up to 1,000 psi	Yes	No
7	Has Analog or Modbus Output	Yes	No
8	Includes Control Panel with LCD Viscosity Reading	Yes	No

## SPECIFICATIONS

<b>U.S. Patent No.</b>	8,850,874
<b>Viscosity Range</b>	5 cP to 1,000 cP
<b>Pressure Range:</b>	Atmospheric to 1,000 psi
<b>Speed Range:</b>	3 to 600 rpm (Continuous)
<b>Output:</b>	RS-232 or RS-485 Modbus (0 to 10V DC Analog Optional)
<b>Voltage:</b>	Varies per unit. Either 110-120V AC or 220V-240V AC (not both).*
	*Please check electrical labeling on your unit to verify which voltage configuration applies.
<b>Frequency:</b>	50-60 Hz
<b>Power:</b>	500 W
<b>Dimensions:</b>	4.5" W x 5" D x 12" H
<b>Weight:</b>	15 lbs. (25 lbs. with Base)