SOFRASER
Pioneering viscometry since 1972

MIVI

PROCESS VISCOMETER

TYPICAL APPLICATION FIELDS

- Chemical: polymers, plastics, resins, gels
- Printing and coating: inks, paints, lacquers, varnishes
- Food and beverage: milk, cheese, juices, sauces
- Refineries: diesel, gasoline, heavy fuel, bitumen,
- Pharmaceutics and cosmetics: gels capsules, shampoos

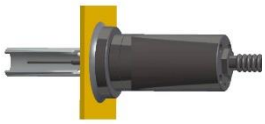
Whatever your industry, we understand and develop solutions for many applications. For a personalized approach, contact us at **instruments@sofraser.com**

THE PROVEN, 30-YEAR SENSOR IN PROCESS VISCOSITY MEASUREMENT

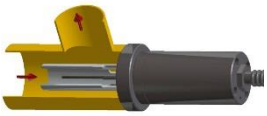
Sofraser's MIVI sensor is the expert viscometer on the market and is used in every process application and quality control condition. Reliable viscosity measurement in every fluid provides complete satisfaction to thousands of users worldwide. The versatile Sofraser MIVI sensor has many options making it the ideal industry instrument.

- **Improved process operations: Reliable**, **repeatable** and continuous measurements combined with superior quality result in permanent **production efficiency** and increased **profitability**.
- **Both dynamic & kinematic viscosities available:** With density measurement also available with the same sensor, **kinematic viscosity** can easily be calculated.
- **One sensor, myriad choices:** The MIVI sensor is used in standard and sanitary process conditions as well as harsh environments like dust, high temperature, high pressure and hazardous areas. Its measuring range easily adapts to different viscosities; up to 10mPa.s, it can provide high sensitivity capabilities at 0.01mPa.s. Multiple mounting options (inline, online, on reactor, measuring chamber) allow for flawless installation.
- **Simple and long-lasting**: The MIVI sensor guarantees a rapid return on investment because it is **easy to install** and is **easy to use**. With non-wearing parts, the MIVI requires almost **no maintenance**.
- **Matched with electronics:** The MIVI sensor matched with state-of-the-art display, data processing, and adjustable outputs capabilities electronic device, easily handles all process and quality control needs.

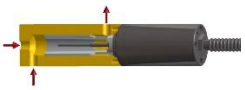
Mountings:



On reactor wall



On pipe angle



Measuring chamber

MIVI PROCESS VISCOMETER

STANDARD FEATURES AND SPECIFICATIONS

Viscosity measuring range	• Any range from 0.1 – 10mPa.s to 1 000 – 1 000 000mPa.s • High sensitivity option : from 0.01 – 10mPa.s (more on request)
Viscosity precision*	• ±0.2% of reading
Viscosity accuracy**	• ±0.5% of reading
Density measuring range	• Available ranges between 0.6g/cc to 1.6g/cc (only with temperature probe option, 9701 electronics and viscosity up to 500cP)
Density precision	• ±0.005g/cc
Density accuracy**	• ±0.01g/cc
Operating temperature	• 0 to 200°C / 32 to 390°F • High temperature option up to 300°C / 570°F • Low temperature option down to -55°C / -67°F
Working pressure	• Up to 60bar / 870psi • High pressure option up to 1400bar / 20000psi
Material	• Stainless steel 316L • Optional alloys: Hastelloy, 316Ti...
Coating on vibrating rod	• PTFE, Amorphous Diamond-Like Carbon, Electropolish
Weight	• Sensor: 2.6kg / 5.7lb
Size	• Length: 238mm / 9 ⅜" from sensor body to protection tube • Flexible cable length: 3 meters / 118 inches
Protection	• Water-tightness: IP67 / NEMA 6P
Ex proof agreement option	• ATEX Ex-proof agreement option • ATEX Ex dIIC T1...T6 (gas) zone 1 • ATEX Ex tD A21 IP67 T75°C ... T300°C (dust) • FM Class I, Division 1, Groups A,B,C,D, T4A • Japan (JIS), South Korea (KGS)
Regulatory	• CE marked (European conformity)
Options	• Included temperature probe: thermowell inserted directly in the product (from -30°C / -20°F to 250°C / 480°F) • Sanitary applications: 3A design
Accessories	• Mounting flange (on reactor wall, on pipe angle) • Complete elbow mounting (inline) – Ø mini: 32mm / 1 ¼" • Measuring chamber - For small pipe diameter – Ø maxi : 1/2" • Other on request (immersion tube, etc.)

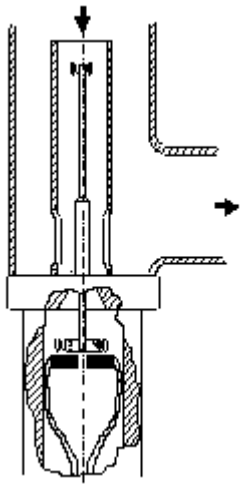
- * From 10% to 90% of the full scale range. Depends on electronic resolution
- ** From 10% to 90% of the full scale range. Depends on calibration options

In 1981, Sofraser invented & patented the world's first vibrating viscometer at resonance frequency also called tuning-type.

The vibration amplitude varies according to the viscosity of the product in which the rod is immersed.

The active part of the sensor, a vibrating rod held in oscillation at resonance frequency, is driven by constant electrical power.

Sofraser remains unsurpassed regarding process reliability and accuracy.



CE

FM APPROVED

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