



**2015
NEW FEATURES**

- **DENSITY AND KINEMATIC VISCOSITY**
- **VERY HIGH PRESSURE**

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,**
- **Pharmaceuticals 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**.

2015 NEW

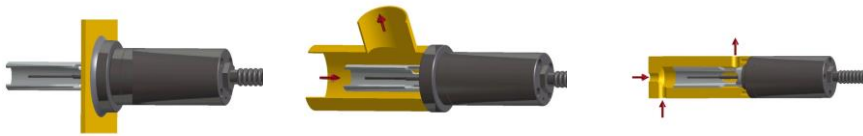
Both dynamic & kinematic viscosities available:

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

Standard Features and Specifications

Viscosity measuring range	<ul style="list-style-type: none"> 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*	<ul style="list-style-type: none"> ±0.2% of reading 	
Viscosity accuracy**	<ul style="list-style-type: none"> ±0.5% of reading 	
Density measuring range	<ul style="list-style-type: none"> Available ranges between 0.6g/cc to 1.6g/cc (only with temperature probe option, 9701 electronics and viscosity up to 500cP) 	2015 NEW
Density precision	<ul style="list-style-type: none"> ±0.005g/cc 	2015 NEW
Density accuracy**	<ul style="list-style-type: none"> ±0.01g/cc 	2015 NEW
Operating temperature	<ul style="list-style-type: none"> 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 	2015 NEW
Working pressure	<ul style="list-style-type: none"> Up to 60bar / 870psi High pressure option up to 1400bar / 20000psi 	2015 NEW
Material	<ul style="list-style-type: none"> Stainless steel 316L Optional alloys: Hastelloy, 316Ti... 	
Coating on vibrating rod	<ul style="list-style-type: none"> PTFE, Amorphous Diamond-Like Carbon, Electropolish 	
Weight	<ul style="list-style-type: none"> Sensor: 2.6kg / 5.7lb 	
Size	<ul style="list-style-type: none"> Length: 238mm / 9 3/8" from sensor body to protection tube Flexible cable length: 3 meters / 118 inches 	
Protection	<ul style="list-style-type: none"> Water-tightness: IP67 / NEMA 6P 	
Ex proof agreement option	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> CE marked (European conformity) 	
Options	<ul style="list-style-type: none"> Included temperature probe: thermowell inserted directly in the product (from -30°C / -20°F to 250°C / 480°F) Sanitary applications: 3A design 	
Accessories	<ul style="list-style-type: none"> Mounting flange (on reactor wall, on pipe angle) Complete elbow mounting (inline) – Ø mini: 32mm / 1 1/4" Measuring chamber - For small pipe diameter – Ø maxi : 1/2" Other on request (immersion tube, etc.) 	

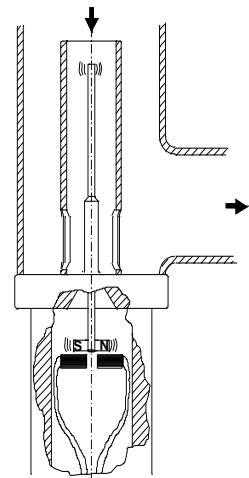
MIVI Process Viscometer

In 1981, Sofraser invented & patented the world's first vibrating viscometer at resonance frequency.

The MIVI's 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.



Quality System



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- * 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

