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# ViscoPro 2100

Robust, Accurate, Real-time Viscosity Results

- 🌐 Optimize Your Process with Viscosity Analysis You Can Trust
- 🌐 Insensitive to Outside Environment
- 🌐 Extremely Durable Operation Due to No Mechanical Linkages
- 🌐 Self-cleaning Allows Operation For Years Without Recalibration
- 🌐 Easy to Install Process Viscosity Transmitter

# ViscoPro 2100

## MEETING TODAY'S NEEDS FOR HIGH QUALITY VISCOSITY ANALYSIS

The ViscoPro 2100 by PAC is the next generation viscosity transmitter for the process industry. By incorporating the oscillating piston method, an industry-proven sensor technology, the ViscoPro 2100 is the best choice for applications requiring fast, real-time analysis and reliable data that correlates tightly with laboratory results.

Built using the same robust sensor technology that is installed at more than 10,000 locations worldwide, the ViscoPro 2100 delivers highly reliable, real-time viscosity data. With a small sample size, easy installation, flexible configuration, and minimal maintenance needs, the ViscoPro 2100 is the ideal viscosity transmitter for almost any refinery, petrochemical, or coatings application.

✓ ROBUST TECHNOLOGY ENSURES CONFIDENCE IN VISCOSITY MEASUREMENTS



✓ ACCURATE, REAL-TIME ANALYSIS SUPPORTS CRITICAL DECISION MAKING



✓ EASY TO INSTALL PROCESS VISCOSITY TRANSMITTER

## ROBUST TECHNOLOGY

OUR UNIQUE OSCILLATING PISTON METHOD DELIVERS UNMATCHED BENEFITS

### Insensitive to Outside Environment



The ViscoPro 2100 is insensitive to vibration and flow. The sensor is designed to protect itself from any outside elements.

### Long-Term Calibration



The ViscoPro 2100 is self-cleaning due to the constant piston motion. This makes it possible to run for years without recalibration.

### Extremely Durable



With no mechanical linkages, the ViscoPro 2100 has virtually no downtime.

### Highly Robust

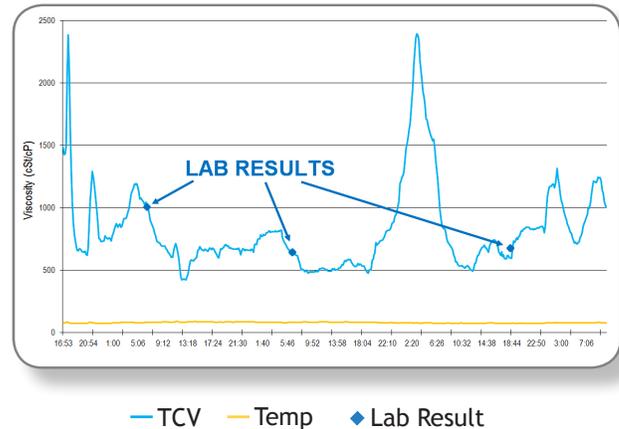


With the ViscoPro 2100, the process can go above or below the viscosity range without any damage to the system. It is also robust enough to handle heavy samples, such as asphalt.

# REAL-TIME ANALYSIS SUPPORTS CRITICAL DECISION MAKING

Repeatability of 0.5% or 1.5% available depending on your requirements

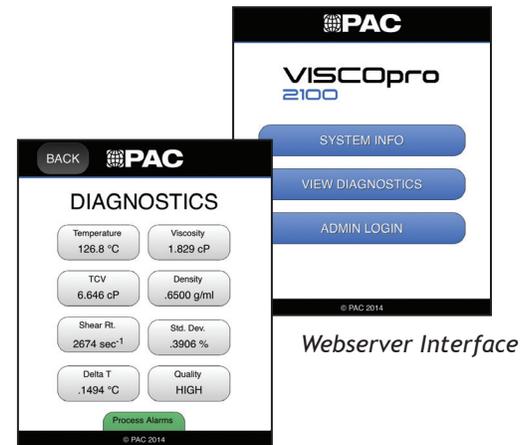
- Correlation to ASTM D7483 and ASTM D445
- Precisely calibrated viscosity ranges in 20:1 spans covering 0.2 to 10,000 cP
- Accurate results for difficult applications, up to 375 °C and up to 2,000 psi
- Diagnostic indication of system performance with alarms if below quality standards via Modbus or system user interface
- Simultaneous temperature measurement of the sample
- Optional temperature-compensated viscosity (TCV) measurements available; TCV relates process measurements to a reference temperature value to estimate the effects of temperature per ASTM D341



## EASY TO INSTALL PROCESS

Flexible System to Fit Your Needs

- Small sample size requirements enable easy installation and also reduces waste
- Optional user-friendly, password-protected field configuration tool for troubleshooting via a wired/wireless webserver
- Offers a wide range of probes, from ¼" NPT to 3" ANSI connections
- Real-time data and diagnostics via Modbus
- Hazardous Area Certifications, including FM, IECEX, and ATEX
- Automatic date and time-coded data logging provides an audit trail tool for troubleshooting via a wired/wireless webserver



## APPLICATION BENEFITS

**COATINGS**  
BIOMEDICAL, OPTICAL, WIRE, AND CANS

For coatings applications, applying the proper film thickness can be the most difficult part of the process. Since film thickness is a function of the amount of solids in the coating fluid, viscosity is an excellent measurement to determine if the thickness is correct. The ViscoPro 2100 has significant benefits for coatings applications:

- Ease of installation due to its compact size
- Small sample volume reduces the amount of waste of expensive coating materials



**REFINERY AND PETROCHEMICAL**  
OIL, LUBRICANT, AND ASPHALT

Viscosity measurements are essential in refinery and petrochemical applications to ensure that end products meet specification. With the ViscoPro 2100, these operations are optimized by providing:

- Accurate real-time data enabling process control
- Results correlate to lab measurements to ensure specifications are met
- A low maintenance transmitter with low cost of operation





## SPECIFICATIONS

Viscosity Range	0.25-10,000 cP, 11 Ranges in 20:1 spans
Repeatability	CV1 1.5% of reading CV2 0.5% of reading
Temperature Sensor	PT100
Input Power	24 VDC, all Models
Display	Embedded bright OLED Display Viscosity, Temperature, Temperature Compensated Viscosity, Quality Indicator
Electronics Ambient Temperature Range	Up to 60°C
Certifications	E1 Models : Safe Area E2 Models: Class 1 Div 1, Group B,C,D Class 1 Zone 1, AEx d IIB+H2 Class 1 Zone 1, Ex d IIB+H2 cFM, FM, Ex, IECeX, and CE
Analog Output	CV1 (2) 4-20mA outputs (500 ohm max loop resistance) CV2 (4) 4-20 mA out
Digital Outputs	CV1 None CV2 RS485 Modbus RTU (Full Duplex)
Maximum Process Temperature rating	LT Models: Up to 190C HT Models: Up to 375C
Maximum Pressure Rating	C1, C2, C3, C4, C5, C6 Up to 1,000 psi C7 up to 200 psi (393-2" ANSI 150#) C8 up to 600 psi (393 DN50 PN40) C9 up to 375 psi (393- 3" ANSI 300#) C10 up to 700 psi (393- 2" ANSI 600#) C11 up to 1,000 psi (2" RTJ 900#)
Dimensions	DIN 3.3" 9(h) x 7.1"(w) x 4" (d), 84mm(h) x 180mm(w) x 100mm (d) Ex (w/o sensor) 4.5"(w) x 4.8"(h) x5.7"(d)
Power	24VDC (15W max.)
Alarm Output	190mA open collector (3V-50VDC)
Weight	DIN 3 lb 1.4kg Ex 4 lb 1.8kg
Wetted Components	Standard 316L/430 Stainless Steel, Other material available upon request
Options	140-0018 DIN Rail mount - Power Supply, 100-240VAC to 24VDC, IDEC 60W Class 1 Div 2 803-2100 ViscoPro 2100 Wireless Router Assembly Kit

Continuing research and development may result in specifications or appearance changes at any time

### ABOUT PAC

PAC develops advanced instrumentation for lab and process applications based on strong **Analytical Expertise** that ensures **Optimal Performance** for our clients. Our analyzers help our clients meet complex industry challenges by providing a low cost of ownership, safe operation, high performance with fast, accurate, and actionable results, high uptime through reliable instrumentation, and compliance with standard methods.

### HEADQUARTERS

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Our solutions are from industry-leading brands: AC Analytical Controls, Advanced Sensors, Alcor, Antek, Herzog, ISL, Cambridge Viscosity, PSPI, and PetroSpec. We are committed to delivering superior and local customer service worldwide with 16 office locations and a network of over 50 distributors. PAC operates as a unit of Roper Technologies, Inc., a diversified technology company and a constituent of S&P 500, Fortune 1000, and Russell 1000 indices.



Contact us for more details.

Visit our website to find the PAC representative closest to you.