Cambridge Viscosity®

The Technology Leader in Viscosity™

苏州泰恩机电设备有限公司

www.viscoking.com

VISCOpro 8000™

Multi-channel Control at Your Fingertips

多通道粘度控制系统，尽在指尖掌控

VISCOpro 8000

Multi-channel Control at Your Fingertips

The more complex your process environment, the more critical and challenging it becomes to monitor and control the quality of the fluids running through your lines.

To maximize reliability and operator productivity, the solution would be the ability to get real-time information on multiple channels from a single location. But is it possible?

The VISCOpro 8000 multi-channel viscometer system allows you to control as many as 12 in-line or in-tank viscosity measurement sensors from a single location, accurately and with total ease. The intuitive touch-screen system provides a wealth of information within two clicks, including real-time readings on temperature, viscosity, and temperature-compensated viscosity (TCV). The VISCOpro 8000 comes complete with a menu-driven display and viscosity proportional/integral control.

Leveraging the capabilities of the VISCOpro 1600 viscometer and compatible with a wide range of high-quality Cambridge Viscosity sensors, the VISCOpro 8000 has all the functionality and flexibility you need. You can toggle between monitor-only and control capabilities, collect, store, and transfer data to ensure quality and share critical information.

VISCOpro 8000 Features

- Data monitoring/collection/storage and transfer Graphs up to 25 hours of viscosity, temperature, and control data in real time
- The remote operator interface features allows for the sensors to be installed/mounted away from electronics/display
- Automatic date and timecoded data logging stores captured data for future analysis
- Automatic self-cleaning feature
- User choice of readout in centipoises, cSt, or SSU
- All Cambridge Viscosity sensors and transmitters are field tested

Key features and benefits

The industry standard for accuracy, efficiency, and ease of use, the VISCOpro 8000 has a lot to offer. Its numerous features and benefits include:

Security and alerts

The VISCOpro 8000 features a supervisory level configuration. This lock-out function can be used to prohibit unauthorized people from viewing line status and changing factory/user settings. When levels reach configured thresholds, alarms are triggered to alert operators so they can quickly take appropriate action.

Ease of use

No programming is needed – Cambridge Viscosity has done it all for you so that once installed, it is immediately working for you. The VISCOpro 8000 can be set to monitor anywhere from two to 12 channels, measuring viscosity in centipoises, cSt, or SSU. Detailed information is available at the touch of a button.

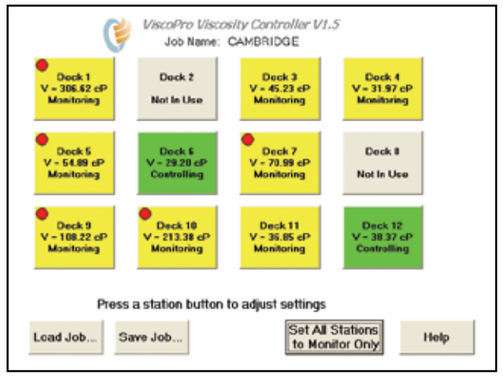
Multiple formats and parameters

The VISCOpro 8000 supports SCADA (Supervisory Control and Data Acquisition) formats, and measures a range of critical fluid attributes, including temperature, viscosity, and temperature-compensated viscosity (TCV).

Data capture, store, and transfer

The VISCOpro 8000 captures a wide range of data points in real time, which you can easily store on a memory card and transfer to a graphing application for reporting and analysis. You can isolate data collected from individual sensors, or analyze all your process lines systemically.

VISCOpro8000 Monitor and Control Menus



OVERVIEW SCREEN

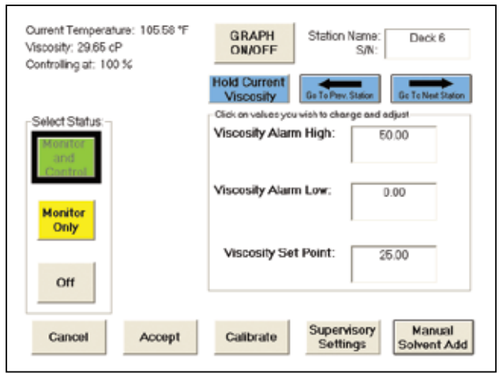
Status of each line/deck, viscosity readings and mode of operation on each.

Loads settings from a job file.

Saves current settings (i.e. deck names, control setpoints, viscosity alarm levels) to a job file.

Set all the decks to 'Monitor Only' mode.

Help Button. No more searching for operators manuals.



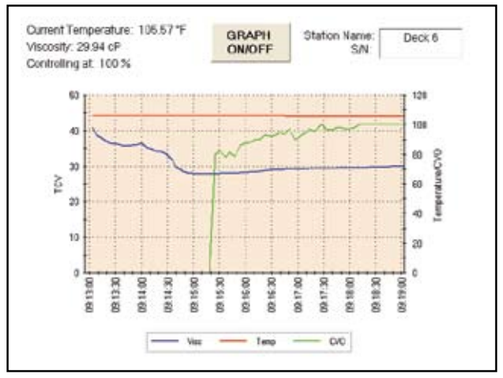
CONFIGURATION SCREEN

Current temperature, viscosity reading. When in 'Control Mode' this field shows the rate of solvent addition in percent.

Current operating mode can be changed .

The viscosity alarm high will automatically change to the viscosity setpoint plus the Alarm Band value.

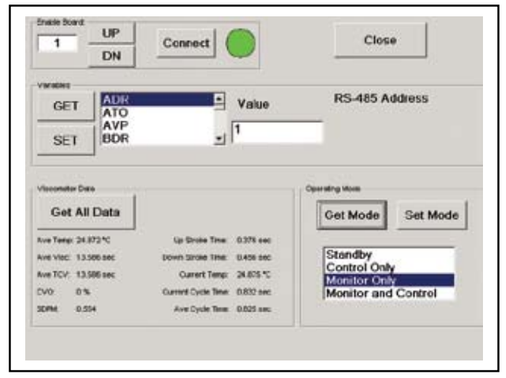
Deck name - can be changed by touching the screen display. An onscreen keyboard will appear to accept the user input.



GRAPHING SCREEN

Shows the current Temperature, Viscosity and control percentage of each individual line/station.

Touch on graph for options and graph configurations.



SUPERVISOR SCREEN

Change settings button on supervisor screen enables a overview of Diagnostics /Factory settings for each line/station allowing changes to operating modes and setting variables.

Compatible Viscosity Sensors

Compatible In-Line Sensors

301
Ideal where threaded connections are desired, the 301 sensor mates directly to a tee or pipe with standard 1.25″ NPT ends. Recommended for line sizes < 2″.

311
Appropriate for most applications, the 311 sensor has a quick-disconnect flange for fast, tool-less removal. Recommended for line sizes < 2″.

372
The 372 sensor installs directly into small-diameter process lines using 1/4″ NPT fittings. Available with removable jacket.

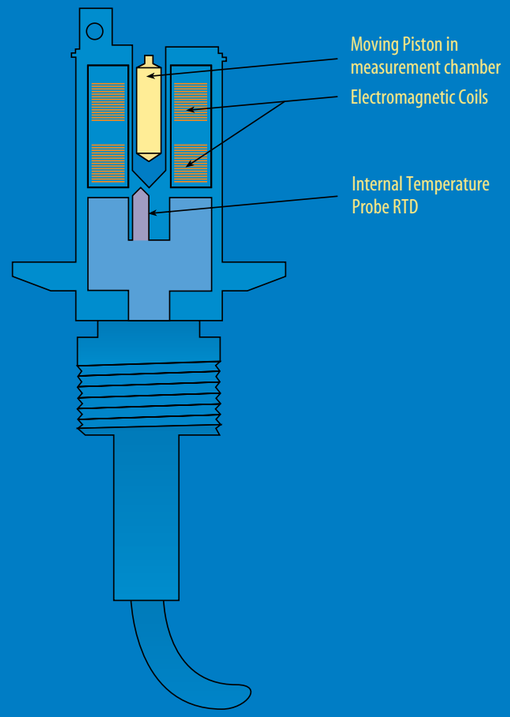
392
Designed with a rugged, four-bolt stainless steel flange, the 392 sensor fits easily to any pipe line size over 1.5″.

Compatible In-Tank Sensors

321
The 321 sensor can be fitted to any pipe configuration without welding. The sensor's head is attached to its stem at a 90-degree angle.

322
Typically used in permanent in-tank mounted applications, the 322 sensor's head it attached to its stem at a 45-degree angle.

Viscosity Measurement Technology



VISCOpro System Specification Comparison

	ViscoPro1600	ViscoPro2000	**ViscoPro8000**
Measurement Principle:	Electromagnetic	Electromagnetic	**Electromagnetic**
Repeatability:	± .8% Reading	± .8% Reading	**± .8% Reading**
Viscosity Range:	0.2-20,000cP	0.2-20,000cP	**0.2-20,000cP**
Max Pressure Ratings:	1,000 psi	1,000 psi	**1,000 psi**
Self Clean/Recovery:	Automatic	Automatic	**Automatic**
Continuous Analysis:	Yes	Yes w/logging	**Yes w/graphing**
Viscosity Units:	cP; cSt; cup sec; SSU	cP; cSt; cup sec; SSU User Selectable	**User Selectable**
Temp: °C or °F:	°C or °F Factory Set	°C or °F Selectable	**User Selectable**
Sensor Temperature Range:	-40°C to 190°C	-40°C to 190°C	**-40°C to 190°C**
Analog Outputs:	4-20mA (2)	4-20mA (4)	**4-20mA (1) User Selectable**
Digital Communications:	RS485	RS485/RS232	**RS232, TCP/IP**
Input power:	12VDC	100-240 VAC/12-36 VDC	**100-240 VAC**
Remote Trouble:	Yes	Yes	**Yes**
Temperature Compensated Viscosity: (TCV)	No	Available	**Available**
Profibus, Modbus Compatible:	Yes, Optional	Yes, Optional	**Yes, Optional**
Temp/Viscosity Control:	No	PI	**PI**
Alarm Output:	Yes	Yes	**Yes**
Screen:	LCD Optional	Menu Driven LCD PC Optional	**Touchscreen-Multichannel**
FM, CE, ATEX Class 1, Div 1, Group C&D	Standard	Optional	**Optional**

技术规格参数

Power input:	100-240 VAC, 12 VDC, 24 VDC, 12 W
Outputs:	4 4-20mA; 1 RS232 (standard)/RS485 (optional)/Modbus (optional); 1 5V-TTL alarm; 1 on-off port for alarm or control
Accuracy:	+/- 1.0% of full scale (correlates to ASTM D445)
Repeatability:	0.8%
Ranges:	0.2-20,000cP (0.2-2cP, 0.25-5cP, 0.5-10cP, 1-20cP, 2.5-50cP, 5-100cP, 10-200cP, 25-500cP, 50-1,000cP, 100-2,000cP, 250-5,000cP, 500-10,000cP, 1,000-20,000cP)
Wetted Components:	316L/430 Stainless Steel
Maximum Temperature:	190°C (sensor); 60°C (display electronics)
Maximum Operating Pressure:	1000 psi (70.3 bar)
Temperature Sensor Type:	4 wire Platinum RTD
Certifications:	FM, 3A, CE, ATEX – EExdIIC, [EEx d IIC T4, -20C<Ta<95C (For SPL Models), EEx d IIC T2, -20C<Ta<190C (For SPL Models)] Factory Mutual - Class 1 Div.1, Group C, D:T3 NEMA4, IP-66
Power Rating:	90W (+19.5W per channel); 375°C for HTL Sensors
Touchsceen:	QVGA widescreen display w/ high energy backlight for wide angle viewing Resistive touchscreen interface
Enclosure:	NEMA 12 specifications

The Technology Leader in Viscosity℠

With more than 8,000 installations worldwide, Cambridge Viscosity is the proven leader in viscosity management technology. Founded in 1984 as Cambridge Applied Systems, the company offers a full range of real time in-line, in-vessel, pilot plant and lab viscometers. Users of its products include Fortune 500 companies and their equivalents throughout North America, Asia, Europe and South America.

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