# Linear Swell Meter LSM 2100

## **Description**

The Fann Linear Swell Meter (LSM) is an instrument that engineers and scientists use to study and test shale stability reactivity. The LSM 2100 includes an automatic four-head measuring system, compactor, and software. Its maximum operating temperature is 180°F (82°C).



# **Application**

Shale instability causes drilling problems, such as stuck pipe, tight hole, washout, and sloughing. With the Linear Swell Meter, mud engineers can predict and prevent shale problems. LSM tests measure shale hydration or dehydration of reconstituted or intact shale core exposed to drilling fluid. The LSM software plots a graph of the percentage of swelling versus swelling time (minutes). Another test that is often used in conjunction with the LSM test is the Capillary SuctionTime (CST) test, which is also used to study shale reactivity. Both tests yield results that engineers rely on to design mud systems that minimize drilling risks and costs associated with shale.

# Compactor

The two-cell hydraulic compactor complements the Linear Swell Meter. The Compactor creates shale core plugs for testing on the LSM. Approximately 10,000 psig (68,940 kPa) constant pressure is applied for 1.5 hours.





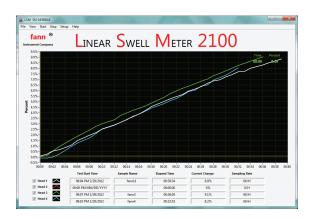
#### LSM 2100 Features

- Automated electronic measuring system
- Four measuring heads per LSM unit for testing samples simultaneously
- USB port for easy connection to your computer with or without network
- Configured for connecting multiple LSM units (4 max) to one computer
- Software setup for Microsoft Windows®
- Maximum operating temperature 180°F (82°C)



### **Software Features**

- Automatically logs data in real-time as a graph and text file (.csv or .txt)
- Continuously updates data files
- Allows simultaneous graphical views of real-time and old data
- Collects data from up to four LSMs (16 measuring heads)
- Permits individual control of measuring heads to start or stop tests individually at any time or in any sequence
- Sends automated email notifications set to time of day, % swell, or slope
- Automatically resumes test after an unexpected shutdown or power failure



# **Ordering Information**

Part No.	Description
102123383	Linear Swell Meter System (includes Four-Place Measuring Head, Compactor & Software)
102527580	Linear Swell Meter without Compactor
102100513	Additional Four-Place Measuring Head
209745	Compactor Unit (Two Head)
205722	Transformer for 230 Volt operation

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