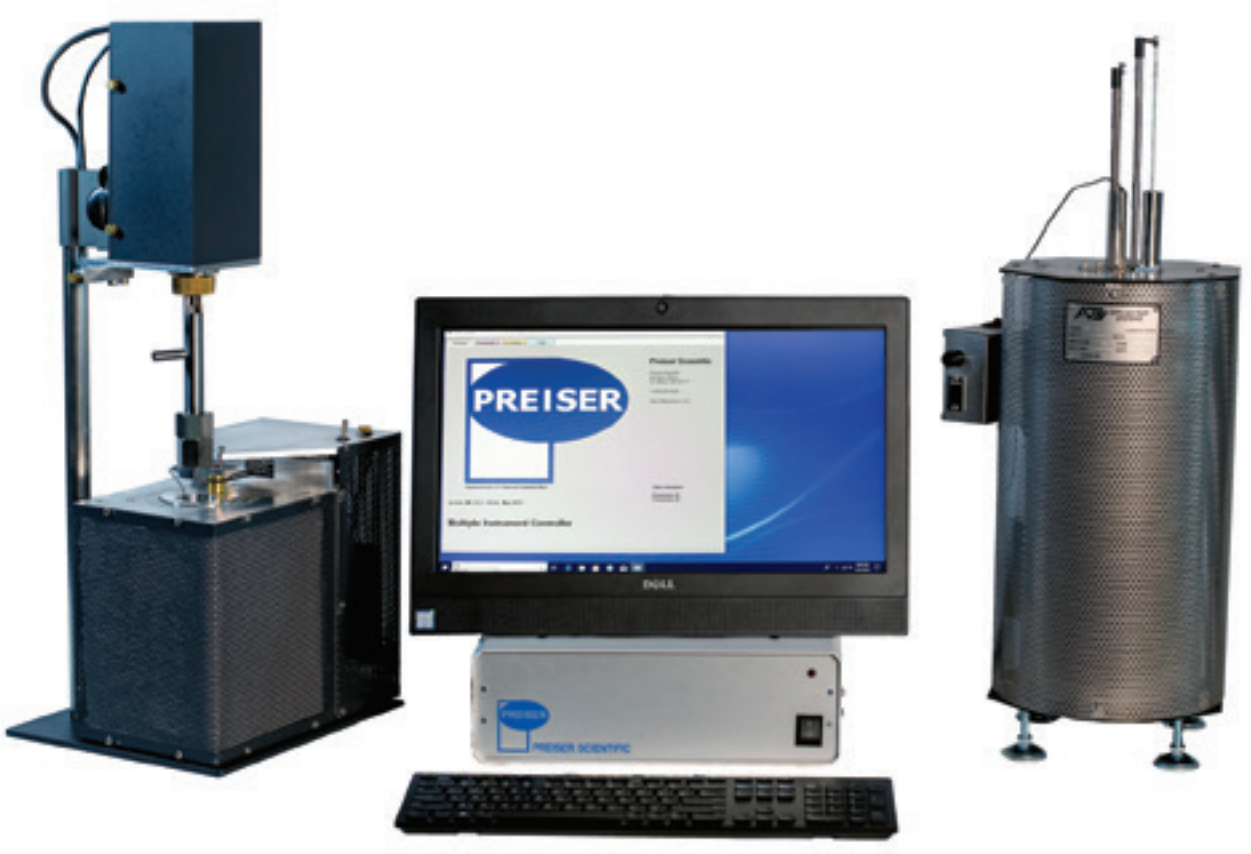
PREISER SCIENTIFIC

ISO 9001 Certified

Worldwide Leader in Coking Coal Analysis



Gieseler Plastometer

(pictured with Dilatometer system expansion)

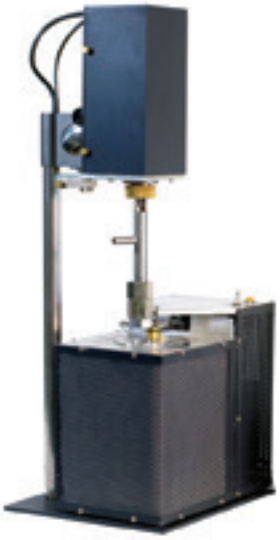
Preiser Scientific, Inc.
94 Oliver Street
St. Albans, WV 25177

+1.304.727.2902
preiser@preiser.com
www.preiser.com

Plastometer

Preiser Plastometer with Head Unit and Solder Pot

The market-leading Plastometer is used to determine the fluidity of coking coal. The Plastometer represents a completely new instrument design incorporating Preiser Scientific's Multiple Interface Control (MIC) software running on the latest Windows all-in-one PC platform. The Plastometer head unit and solder pot are outfitted with advanced component mounting. The instrument interface box is equipped to allow single, double, triple or quadruple instrument operation for a mix of desired Dilatometer and/or Plastometer instrument types which can be specified at the time of purchase or added at a later date.





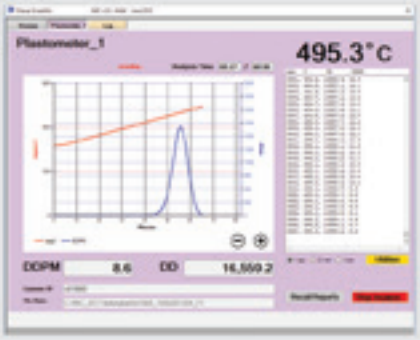
More Data, Better Results

The Plastometer generates the most data available; users depend on data to gain actionable insights and obtain better laboratory results.



Graphical Interface

Learn quickly and manage lab tests with advanced graphical software tools. Auto-scale with zoom in - zoom out; variable run-time data display.



Cost-Effective Expansion

You can easily integrate and grow your systems. Drive down per test expense with cost-effective expansion.



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More Data, Better Results

The Plastometer design at Preiser Scientific incorporates a 1000 division per revolution optical encoder that provides 4000 pulses per rotation of the disk. Internally, this highly accurate rotation information is scaled to conform with the 100 dial divisions per revolution as specified by the ASTM and ISO standards. Given the ability to measure +/- 0.025 dial divisions, the instrument can closely track low DDPM coals with minimal instrument introduced error.



The Preiser Gieseler Plastometer couples the finer resolution dial division measurements with a 1 second data sampling rate yielding finer detailed plots and reduces reported temperature uncertainty to under 0.1 of a degree. The run-time data display option allows the traditional 1 minute reporting, 6 second update reporting as well as the fine resolution 1 second update reporting. More data means improved critical point detection which translates into better laboratory results.

Earlier generation instruments using dedicated digital control hardware, incorporated a 1 minute timer and simply counted the number of dial divisions (pulses). At the end of each minute, the results would be printed and the timer and pulse counter would be reset. Typically 60 to 90 sample points were collected for each test.

Internally, all samples are collected and analyzed at the maximum dial division resolution and maximum sample rate. The maximum fluidity of the Preiser Gieseler Plastometer is detected with a 1 second accuracy. DDPM is then calculated about this point following the prescribed "1 min time period" using a first difference method. This allows identification of true fluidity peaks.

The instrument suggested measurements conform to current ASTM and ISO standards and provide a convenient starting point for lab managers as they interpret the graphical and numerical test results.

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Graphical Interface

Variable Run-Time Display

- Increased data display resolution via selectable timing buttons of 1 second, 0.1 minute and 1 minute increments (see below)
- Improved critical point detection



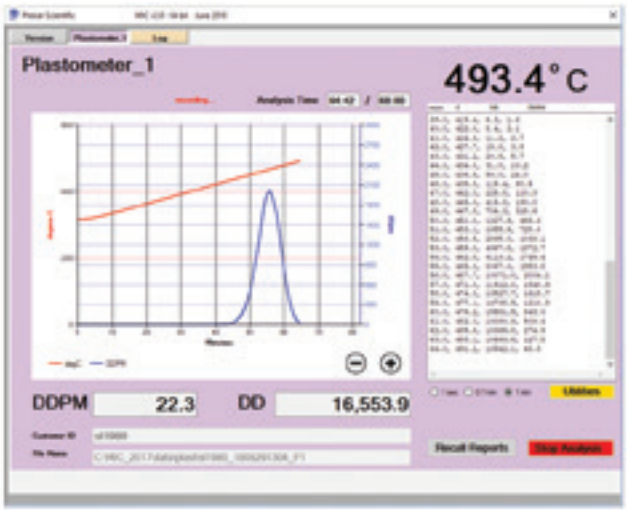
Timing increment of 1 second selected to show data per second

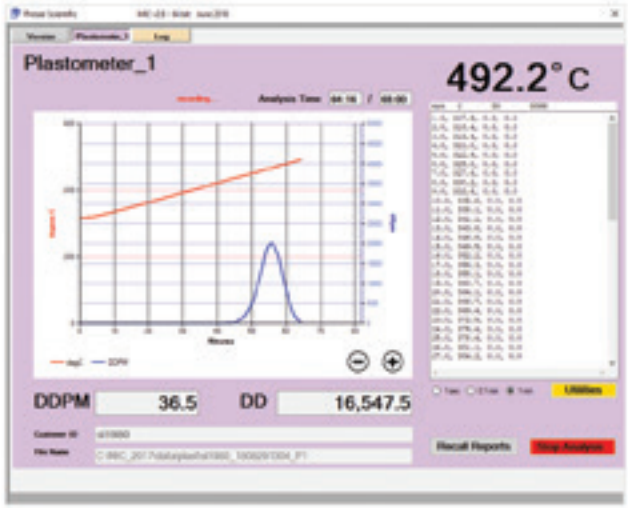


Timing increment of 1 minute selected to show data per minute

Variable Display Setting

- Zoom In (+): For better plot review of low fluidity samples
- Zoom Out (-): To reduce plot display clipping of high fluidity samples

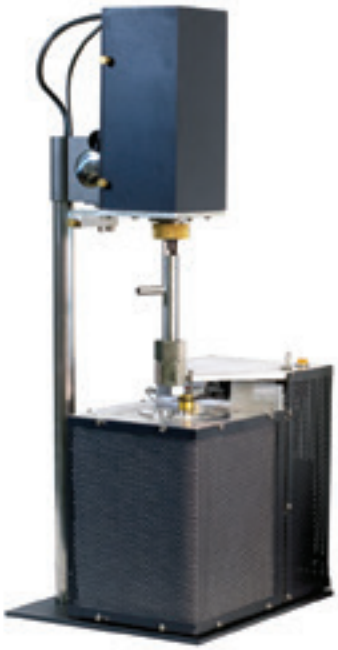




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Cost-Effective Expansion





+



Plastometer

+



Plastometer

Basic system interface box is equipped to accept a second, third or fourth Plastometer and/or Dilatometer expansion kit in the desired mix to be an effective means of cutting the cost per test. The choice of when and how to grow is yours with unmatched expansion capabilities.

Dilatometer

A dilatometer is used to determine the expansion and contraction characteristics of coal. Preiser Scientific has taken this instrument to the next level also with Multiple Interface Control (MIC) software running on the latest Windows all-in-one PC platform. The Dilatometer furnace retains the market leading proven assemblies outfitted with advanced component mounting.

+



Dilatometer

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94 Oliver Street
St. Albans, WV 25177

+1.304.727.2902
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Plastometer and Dilatometer

Specifications and Ordering Information

Plastometer System

Instrument Compliant with ASTM D 2639 and ISO 10329.

- Working temperature: 260 to 600 °C
- Temp. rise rate set: 0.5 to 9.9 °C/min
- Head Motor speed: 1500 rev/min (50Hz)
  1800 rev/min (60Hz)
- Hysteresis brake Torque range: 3 to 56 inch·grams
- Stirrer bath built into Solder Pot furnace
- Temperature display in °C
- Fluidity display: 0.1 to 150,000 D.D.P.M.(50Hz)
  0.1 to 180,000 D.D.P.M.(60Hz)
- Displayed fluidity resolution: 0.1 D.D.P.M.
- Default data print interval: 60 sec
- Customer has the option to display data in 1 sec, 6 sec or 60 sec intervals
- Results displayed/printed in PDF format. Results include data and graph
- Windows 10 compatible printer needed to print reports – customer supplied
- System diagnostics: continuous diagnostic analysis of unit(s) with daily log file
- USB connected computer with software and interface will be supplied
- Power supply: 240 v / 8 amps

The system includes the following:

- Single solder bath furnace
- Plastometer head
- Solder bath base with head post
- All-In-One PC (Windows 10) with software
- USB connected interface box
- Ethernet Communication
- Plastometer tool kit
- Plastometer Consumable parts kit consists of 2 complete crucibles assemblies
- Coal sample loading device and sample preparation device

Catalog Numbers:

Z91-3400-01 - Single Plastometer System
Z91-3400-02 - Plastometer Expansion Kit

Dilatometer System

Instrument Compliant with ISO 349, ISO 23873, ASTM D5515, DIN 51739

- Working temperature: 250 to 600 °C
- Temp. rise rate set :0.5 to 9.9 °C/min
- LVDT Type Displacement Transducers
- Dilation display:-50% to 300%
- Dilation Resolution: 0.1%
- Temperature display °C
- Data print interval: 60 sec
- Data can be user selected to be displayed on the screen in 1 sec, 6 sec or 60 sec intervals
- Single Aluminium bronze block furnace for two retorts
- Double displacement transducer system
- 8 points calibration of the LVDTs
- Results displayed/printed in PDF format. Results include data and graph
- System diagnostics: continuous diagnostic analysis of unit(s) with daily log file
- USB connected computer with software and interface will be supplied
- Power supply : 240v / 10 amps

The system includes the following:

- Single dilatometer furnace
- Dual LVDT for recording of movement
- All-In-One PC (Windows 10) with software
- USB connected interface box
- Ethernet Communication
- Dilatometer tool kit
- Dilatometer Consumable parts kit consists of 2 complete retort assemblies
- Coal sample loading device and sample preparation device

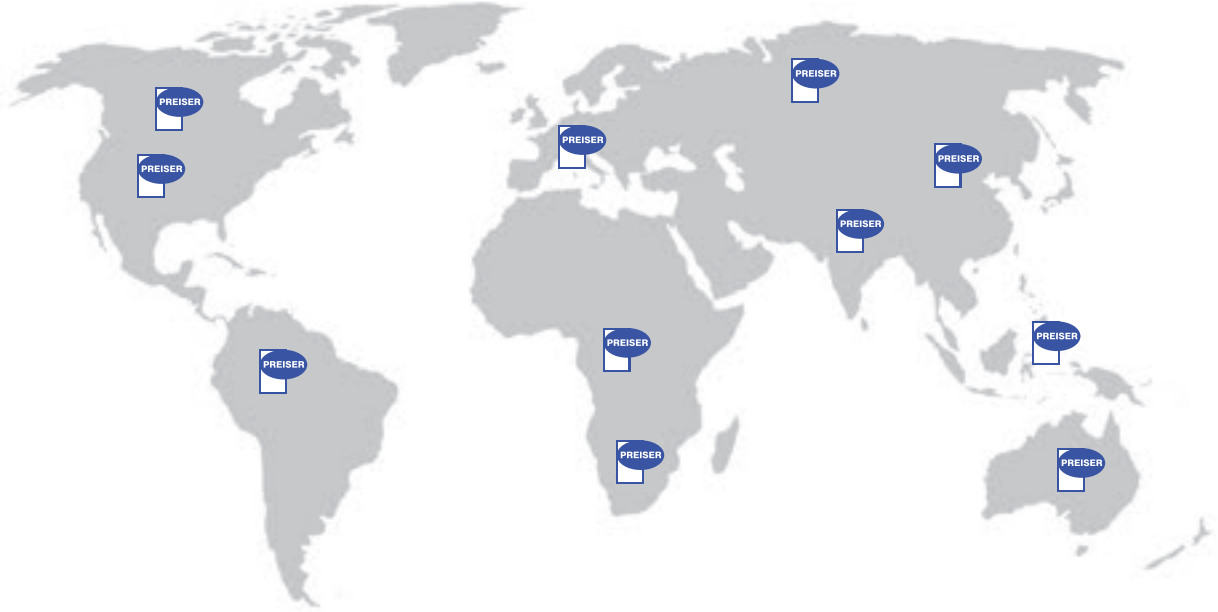
Catalog Numbers:

Z91-3410-01 - Single Dilatometer System
Z91-3410-02 - Dilatometer Expansion Kit

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Preparation

Coal Sample Crusher



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Separation

Rotary Sample Divider



Coal Sample Riffle



Analysis

Coal Ash Fusion System



Hardgrove Grindability Index Apparatus



About Preiser Scientific, Inc.

Preiser Scientific was established in 1924 and has continuously provided technical products and services to research, industrial, quality control, teaching, medical, education, environmental and government laboratories ever since. Offices are located in Louisville, Kentucky; Nitro, West Virginia; St. Albans, West Virginia; and Beijing, China.

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