

6200 Automatic Isoperibol Calorimeter

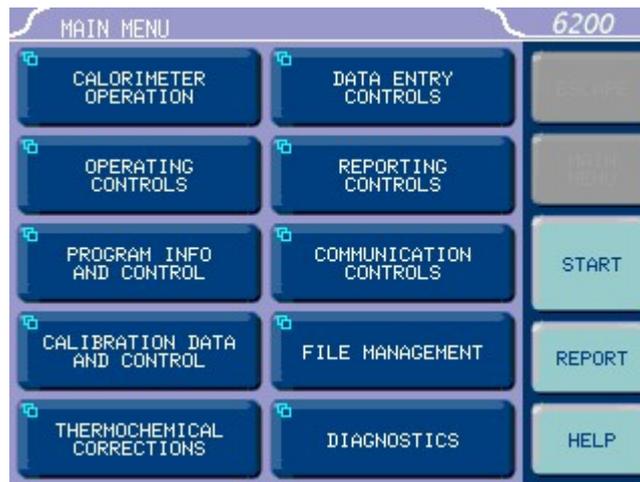


6200 Calorimeter with 1108 Oxygen Bomb, Bucket and 1757 Printer

Model 6200 is a microprocessor controlled, isoperibol oxygen bomb calorimeter which is widely used for both routine and occasional calorific tests. It uses the time-tested Parr 1108 oxygen bomb and oval bucket in a compact calorimeter, producing reliable results with good repeatability, but differing from the 1271 and 6300 Models in that the bomb and bucket both must be removed from the calorimeter and refilled manually for each test, thereby requiring more of the operator's time than the automatic and semi-automatic models.

All sensors, controls and jacketing in the 6200 Calorimeter are built into a single, compact cabinet to provide a self-contained operating unit consisting of:

- A temperature-controlled water jacket with a built-in circulating system and an electric heater.
- An 1108 oxygen bomb with an oval bucket which fits into the insulating water jacket.
- A built-in semi-automatic system for charging the bomb with oxygen.
- A high precision electronic thermometer.
- A bright, color, touch screen display for data entry and operation control.
- Special communication ports for printer, computer and network (LAN) connections.
- Removable compact flash memory card slot for simple program updates and test report archiving.



Touch Screen

Precise Electronic Thermometry

Temperatures are measured with a high precision electronic thermometer using a specially designed thermistor sensor sealed in a stainless steel probe which is fixed in the calorimeter cover. Measurements are taken with 0.0001° resolution over a 20° to 40°C working range, with all readings shown in Celsius.

Effective Thermal Jacketing

Outstanding thermal jacketing is provided by a circulating water system driven by a built-in, high capacity pump which maintains a continuous forced flow around the sides and bottom of the bucket chamber and through the cover as well. The jacket temperature is held constant for isoperibol operation and no water additions or waiting periods are required at the end of a run. A sealed immersion heater and a built-in heat exchanger, both operated by the calorimeter controller, provide precise jacket temperature control.

A Reliable Oxygen Bomb

The Parr 1108 Oxygen Bomb furnished with the calorimeter will safely burn samples liberating up to 8000 calories per charge, using oxygen charging pressures up to 40 atm. An alternate 1108CL bomb with superior resistance to chlorine and halogen acids is recommended for tests involving waste material and chlorinated samples.

A Built-In Oxygen Filling System

To speed and simplify the bomb filling operation, the 6200 Calorimeter has a semi-automatic system for charging the bomb with oxygen. Oxygen from a 1A commercial cylinder is connected to a microprocessor controlled solenoid installed in the calorimeter. To fill the bomb, the operator simply slips the filling hose connector onto the bomb inlet valve and pushes the touch screen to start the filling sequence. Filling then proceeds automatically at a controlled rate to a pre-set pressure. Built-in safety provisions will prevent an accidental overcharge.

Automatic Standardization

The 6200 Calorimeter will automatically generate its energy equivalent (EE) value from a series of standardization tests, calculating a mean value from either (a) all standardization tests, or (b) from the last 10 operator designated tests for each

bomb/bucket combination. The user can enter the maximum standard deviation he will accept and the calorimeter will advise him if his tests fail to meet this criteria. Energy equivalent values for up to four bomb/bucket combinations can be stored in the computer.

Many User Options

Although specific procedures are recommended, various options are available to the user:

- Program parameters can be adjusted to accommodate unusual sample sizes and precision requirements.
- The calorimeter can be programmed to accommodate any titrant concentrations selected by the user.
- Calorific values can be reported in any of several measurement units.
- The calorimeter program can be adjusted to compensate for the subtle differences in the way acid correction values are handled in ASTM, BS, DIN and ISO methods.
- Program controls can be protected from inadvertent changes.
- A bomb usage tally can be maintained to notify the user when each bomb should be serviced.

Multiple Language Options

Parr Model 6200 can be set to provide the programming options, operating menus, reports and error messages in the following choice of languages: English, French, and German.

Automatic Data Transfer

The calorimeter is equipped with RS232C communication ports for reporting to a printer and receiving sample weights from an analytical balance. Transferring results to a laboratory computer is accomplished using an Ethernet connection using standard network protocols.

Compatible Modular Design

The 6200 Calorimeter is fully compatible with existing 1108 Parr Bombs and closed-circuit water handling systems making it easy to fit the instrument into an existing laboratory set-up. A modular design, with the controller electronics assembled in a removable chassis, simplifies maintenance.

Accessories for the 6200 Calorimeter



1757 Printer

1757 Printer

Operating results and operator messages are displayed clearly on the touch screen for review and action. Many users who connect their calorimeter to a computer will choose to print their results from their computer and will not need a dedicated printer for their calorimeter. For users who prefer to have a dedicated printer at the calorimeter, Parr offers the compact model 1757 Printer. The printer port can be configured to work with many other printers with serial communications that the user may choose. The 1757 printer is a compact, dot matrix printer setup for 40-character/line reports. It is the default printer for the 6200 calorimeter. It is housed in a separate 5.5 inches wide, 9 inches deep and 7 inches high. It operates from its own power supply.

6510 Water Handling System

For users who wish to operate their 6200 Calorimeter on a closed loop system, the 6510 Water Handling System incorporates a precision pipette for measuring and delivering the water for the calorimeter bucket at the same fixed temperature for each test. This water handling system incorporates a built-in, compact, solid-state water chiller. As a result, no external water chiller is required. It also provides cooling water to the jacket of the 6200 calorimeter, if required.

1563 Water Handling System

The 1563 Water Handling System is designed to work with a separate water cooler. The Parr 1552 Cooler is recommended for this purpose. The 1563 Water Handling System incorporates a precision pipette for measuring and delivering the water for the calorimeter bucket at the same fixed temperature for each test. This unit is capable of supporting and supplying temperature controlled water for up to two calorimeters.

Extra Bomb and Bucket

An extra A391DD Calorimetric Bucket and 1108 Oxygen Bomb will greatly improve the throughput of the 6200 Calorimeter as they permit the next test to be prepared in advance.

Ordering Guide

6200EF Isoperibol Oxygen Bomb Calorimeter w/1108 Oxygen Bomb for 230V

6200CLEF Isoperibol Oxygen Bomb Calorimeter with 1108CL Oxygen Bomb for Chlorine Service for 230V

466M 1563A Water Handling System Op Inst: Must be a Member to Open.

468M Using an 1109 Oxygen Bomb Op Instr: Must be a Member to Open.

1108 Oxygen Bomb Instructions 205M: Must be a Member to Open.

[New A416A5 Oxygen Bomb Head 376M](#)

[Sales Literature - 6200 Calorimeter](#)

471M 1107 Semimicro Oxygen Bomb Op Inst: Must be a Member to Open.

442M Operating Instructions 6200 Calorimeter: Must be a Member to Open.

Calorimeter, Model 6200, Automatic Isoperibol, Removable Bomb

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