

# AC500 Calorimeter

ASTM/DIN-approved, the robust AC500 from LECO quickly determines gross calorific content.



## Unique Design

The AC500 Iso-peribol Calorimeter features an integral water-measuring and combustion vessel-filling station simplifying sample preparation. This stand-alone benchtop unit has a fully integrated circulation system, making it compact, as well as simple to operate. No additional heaters or coolers are required. A Windows®-based operating system uses an electronic thermometer with an accuracy of 0.0001°C to measure the temperature every six seconds. The AC500 also features the unique ability to constantly monitor temperature in both the outer jacket and the calorimeter proper, making two-channel correction possible.

## A High Level of Performance

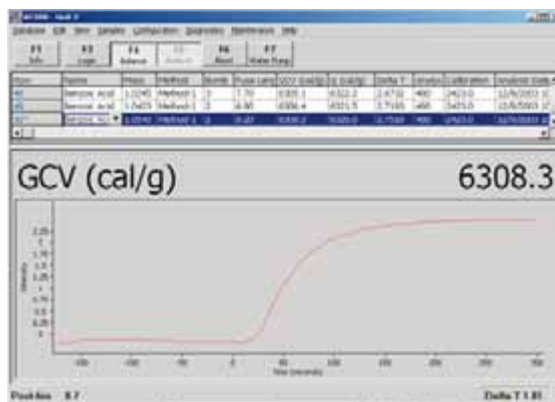
The AC500 achieves high precision across a wide range of sample sizes and ambient conditions. Results may be obtained using a choice of three modes: the traditional Regnault-Pfaundler = 20 minutes, Precision = 8 minutes, or Predictive = 4.5 to 7.5 minutes.



Combustion vessel design makes pre-/post-handling of samples trouble-free.



Optional string-ignition combustion vessel provides a seamless analysis without fuse wire connections.

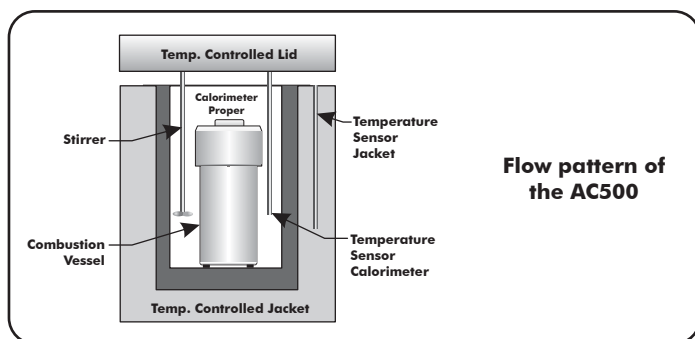


LECO's AC500 Windows®-based software supports compliance to strict FDA regulations (21 CFR Part 11), and can control up to four separate calorimeters through a single PC.

**LECO**®  
Delivering the Right Results

## Specifications

<b>Method</b>	Isoperibol
<b>Range</b>	
Joules/Charge	14000 <sup>†</sup> to 35000 <sup>††</sup>
Calories/Charge	3300 <sup>†</sup> to 8300 <sup>††</sup>
BTU/Charge	13 <sup>†</sup> to 33 <sup>††</sup>
	(6000 <sup>†</sup> to 15000 <sup>††</sup> BTU/lb for a 1 gram sample)
<b>Precision</b>	≤0.05% RSD*
<b>Resolution</b>	1 BTU/lb; 0.1 Cal/g; 0.001 MJ/kg; 0.1 Kcal/100 g
<b>Analysis Time</b>	
Regnault-Pfaundler:	20 minutes
Precision Mode:	8 minutes
Predictive Mode:	4.5 to 7.5 minutes
<b>Corrections</b>	Acid or % nitrogen, fuse wire, sulfur, moisture, spike weight, ash, and hydrogen
<b>Temperature Measuring Resolution</b>	0.0001°C
<b>Gas Requirements</b>	Oxygen 450 psi (31.0 bar) max; 99.99% purity
<b>Electrical Requirements</b>	115/230 V~ (±10%; at max load), 50/60 Hz, single phase, 3.2/1.6 A, 1,300 BTU/hr
<b>Water Requirements</b>	Distilled water only, approximately 16 liters full capacity
<b>Required Work Space**</b>	32 in. W x 31 in. D x 26 in. H
<b>Benchtop</b>	(81.3 cm x 78.8 cm x 66 cm)



\*Based on analysis of benzoic acid at 1 gram.

\*\*Includes instrument dimensions and recommended access area; does not include PC requirements.

<sup>†</sup>Lower values can be measured by spiking samples that are not completely combusting.

<sup>††</sup>This is the combustion vessel safety limit. Do NOT exceed this limit. Exceeding this limit could result in vessel failure causing death, serious personal injury, and/or property damage.

## Part Numbers

AC500NC	.....Instrument with PC tower, Windows®-based software, 15-inch flat panel monitor; no vessel
AC500WC	.....Instrument with PC tower, Windows®-based software, 15-inch flat panel monitor, wire igniter, and vessel
AC500TC	.....Instrument with PC tower, Windows®-based software, 15-inch flat panel monitor, string igniter, and vessel
621-245	.....String Ignition Kit
601-480-110	.....Printer Kit
751-300-100	.....Balance
608-816	.....Balance Interface

Specifications and part numbers may change. Consult LECO for latest information.

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