

Non-metallic Modular Oven

APS Technology offers a unique Non-metallic Oven, designed to test downhole sensors at temperature and in a manner that allows them to operate in an environment conducive to their calibration. All of the metallic components are at the extreme ends of the oven, leaving the test area free of conductive material. The test piece is supported 3 ft above the floor and any conductive rebar, etc. The modular oven is constructed from 6-ft fiberglass sections, which allows its length to be adjusted to fit the size of the tool to be tested. The top sections are light and easily removable to allow access to any part of the tool under test.

A combination of internal and external heater-blowers allows the temperature to be kept uniform during heating and avoid unwanted gradients. A typical MWD/LWD sub can be brought to 347°F (175°C) in less than four hours.

Programmable electronic controllers for each heater allow the temperature and the rate of heating or cooling to be closely regulated. Wire access is provided to allow the item under test to be powered and operating during the heating.

The structure is capable of supporting test pieces weighing up to 4,500 lbs.



18-ft Interior Length Oven

NEW OPTION

The APS Non-metallic Oven has a new option which provides active cooling. This cooling unit allows the test temperature to be cycled more rapidly and accurately, and it also shortens overall test times. The oven can be cooled down from maximum temperature in less than 5 to 7 hours, dependent on test tool mass. This is an improvement of nearly 40%. The cooling ramp is also smoother, which improves data sampling during cool down.

The cooling unit can be added to existing units by an APS technician, or be self installed.



Global perspective. Independent thinking.

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Product Specifications

| | | |
|--|---|--|
| Voltage | 480 volts | |
| Frequency | 60 Hz | |
| Maximum Current Draw (startup) | 37 A | |
| Maximum Current Draw (operating) | 28 A | |
| Maximum Supported Weight | 4,500 lbs. | 2,000 kg |
| Interior Length | 18 ft standard; custom lengths available | 5.49 m standard; custom lengths available |
| Maximum Sub O.D. | 9.75 in. | 248 mm |
| Oven Materials | Non-metallic | |
| Maximum Air Temperature | 420°F | 215°C |
| Typical Operating Temperature | 347°F | 175°C |
| Maximum Operating Temperature | 392°F | 200°C |
| Temperature Rise Time | 77° to 347°F < 4 hours** | 25° to 175°C < 4 hours** |
| Maximum Temperature Difference Between any 2 Sub Points During: | | |
| Heating | 36°F | 20°C |
| Steady state | 9°F | 5°C |
| Temperature Controlled Within | ±1.8°F of set point | ±1°C of set point |
| Accuracy Greater or Equal to | 1.8°F | 1°C |

** ~ 4.5 hours with temperature gradient control during heat-up

| Interior Length (ft) | Footprint (ft) | | Interior Length (m) | Footprint (m) | |
|----------------------|----------------------|---------------------|---------------------|---------------------|--------------------|
| | Exterior Length (ft) | Exterior Width (ft) | | Exterior Length (m) | Exterior Width (m) |
| 6.0 | 14.5 | 5.0 | 1.83 | 4.41 | 1.52 |
| 12.0 | 20.5 | 5.0 | 3.66 | 6.24 | 1.52 |
| 18.0 | 26.5 | 5.0 | 5.49 | 8.06 | 1.52 |
| 24.0 | 32.5 | 5.0 | 7.32 | 9.98 | 1.52 |
| 30.0 | 38.5 | 5.0 | 9.14 | 11.72 | 1.52 |
| 36.0 | 44.5 | 5.0 | 10.97 | 13.55 | 1.52 |

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Specifications subject to change without notice.

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