

# Ovens

## Standard and Custom



Precise, efficient, and reliable ovens for testing, laboratory,  
and industrial processes made to your specifications.

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## Laboratory and Industrial Ovens from ATS

Since 1965, Applied Test Systems (ATS) has manufactured standard and custom ovens for a wide range of testing, laboratory, and industrial processes.

Ovens performing materials testing are designed to mount on testing frames manufactured by ATS and other companies. Ovens may be used during any of the following tests: tension, compression, sheer, flexure, creep/stress rupture, stress relaxation, constant stress, and adhesive/sealant testing.

Manufacturing and laboratory process ovens may be used for applications such as annealing, baking, bonding, curing, drying, pre-heating, heat treating, stress relieving, and many other reactions.

ATS offers two standard series of ovens that are available in box and split box construction. All ovens have a stainless steel external shell and are constructed in standard and custom sizes to meet special customer requirements. Custom mounting arrangements can also be designed to meet your testing needs.

Outstanding design features include quality insulation, recirculating air and plenum system, continuous door hinge, resilient seal, quick acting latch closure, and a stainless steel shell.

Oven accessories can be ordered separately or with an oven. Some of these accessories include mounting brackets, cooling apparatus, temperature controllers, retorts, view ports, and portable dollies.

In addition to ovens, ATS manufactures a complete line of laboratory testing machines and accessories, including universal testing machines, creep/stress-rupture test frames, convection ovens/cryogenic cooling chambers, pressure testing systems, asphalt testing equipment, and sealant testers. As well as parts including grips, fixtures, load train components, extensometers, ultrasonic reference standards, and more. Choose ATS for all of your materials testing needs, the equipment delivered to your facility will meet all of your expectations.

# Series 3700 Standard Ovens

The Series 3710 Box and the Series 3720 Split Box Ovens have a stainless steel internal liner and stainless steel external shell, so the oven is both durable and easy to clean. The temperature range for this series is from -155°C to 425°C (-250°F to 800°F).

## Features:

- Built-to-order to your specific requirements
- Stainless steel shell and liner
- Replaceable heating elements
- A double plenum feature is added for superior temperature uniformity
- “CE” marked units available
- Available options and accessories include thermocouples, viewports, gas ports, internal light, hand ports, explosion port, mounting, cooling and more (see page 6)



## Product Specifications:

Optional Powers available: 115 VAC, 1 ph, 50/60 Hz and 230 VAC, 1ph, 50/60 Hz

\*Only available in 230 VAC, 1 ph., 50/60 Hz power

| Standard View Port<br>Dimensions (in)  | Standard Load<br>Train Port Sizes<br>(in) | Dimensions (in) |    |    |          |    |        | Watts |
|--|---|-----------------|----|----|----------|----|--------|-------|
|  |   | Internal        |    |    | External |    |        |       |
|  |   | W               | D  | H  | W        | D  | H      |       |
| 2 W x 6 H                              | 1/2 in *                                  | 6               | 6  | 15 | 11 1/2   | 23 | 20 1/2 | 760   |
| 3 W x 6 H                              | 15/16 in *                                | 8               | 8  | 15 | 13 1/2   | 25 | 20 1/2 | 900   |
| 4 W x 6 H                              | 1 7/8 in *                                | 8               | 8  | 21 | 13 1/2   | 25 | 26 1/2 | 1350  |
| Other sizes<br>available on<br>request | 3 1/8 in *                                | 10              | 10 | 18 | 15 1/2   | 30 | 23 1/2 | 2200  |
|  | 4 1/8 in *                                | 10              | 10 | 21 | 15 1/2   | 30 | 26 1/2 | 2200  |
|  | 4 7/8 *                                   | 10              | 10 | 24 | 15 1/2   | 30 | 29 1/2 | 2200  |
|  | Other sizes<br>available on<br>request    | 10              | 10 | 26 | 15 1/2   | 30 | 31 1/2 | 2200  |
|  |   | 12              | 12 | 20 | 17 1/2   | 32 | 25 1/2 | 2200  |
|  |   | 14              | 14 | 22 | 19 1/2   | 34 | 27 1/2 | 3400* |
|  |   | 14              | 14 | 24 | 19 1/2   | 34 | 29 1/2 | 3400* |
|  |   | 14              | 14 | 26 | 19 1/2   | 34 | 31 1/2 | 4400* |
|  |   | 16              | 16 | 24 | 21 1/2   | 36 | 29 1/2 | 4400* |
|  |   | 18              | 18 | 26 | 23 1/2   | 38 | 31 1/2 | 5600* |
|  |   | 20              | 20 | 28 | 25 1/2   | 40 | 33 1/2 | 6600* |

# Series 3700HT High-Temperature Ovens

The Series 3710 High-Temperature (HT) Box and 3720 High Temperature Split Box Ovens have a stainless steel internal liner and stainless steel external shell. They also feature twice the insulation for the higher temperature range of -185°C to 620°C (-300°F to 1150°F).

## Features:

- Built-to-order to your specific requirements
- Stainless steel shell and liner
- Twice the insulation as the Standard 3700 Ovens
- Higher power requirements than the Standard 3700 Series
- Replaceable heating elements
- A double plenum feature is added for superior temperature uniformity
- “CE” marked units available
- Available options and accessories include thermocouples, viewports, gas ports, internal light, hand ports, explosion port, mounting, cooling and more (see page 6)



## Product Specifications:

Optional Powers available: 115 VAC, 1 ph, 50/60 Hz and 230 VAC, 1ph, 50/60 Hz

\*Only available in 230 VAC, 1 ph., 50/60 Hz power

| Standard View Port<br>Dimensions (in)  | Standard Load Train<br>Port Sizes (in) | Dimensions (in) |    |    |          |        |    | Watts |
|--|--|-----------------|----|----|----------|--------|----|-------|
|  |  | Internal        |    |    | External |        |    |       |
|  |  | W               | D  | H  | W        | D      | H  |       |
| 2 W x 6 H                              | 1/2 in *                               | 6               | 6  | 15 | 14       | 27 1/2 | 23 | 1200  |
| 3 W x 6 H                              | 15/16 in *                             | 8               | 8  | 15 | 16       | 30     | 23 | 1200  |
| 4 W x 6 H                              | 1 7/8 in *                             | 8               | 8  | 22 | 16       | 30     | 30 | 2200  |
| Other sizes<br>available on<br>request | 3 1/8 in *                             | 10              | 10 | 18 | 18       | 32 1/2 | 26 | 2200  |
|  | 4 1/8 in *                             | 10              | 10 | 21 | 18       | 32 1/2 | 29 | 3400  |
|  | 4 7/8 *                                | 10              | 10 | 26 | 18       | 32 1/2 | 34 | 3400  |
|  | Other sizes<br>available on<br>request | 12              | 12 | 20 | 20       | 35 1/2 | 38 | 3400  |
|  |  | 14              | 14 | 22 | 22       | 37 1/2 | 30 | 4400* |
|  |  | 16              | 16 | 24 | 24       | 39     | 32 | 5600* |
|  |  | 18              | 18 | 26 | 26       | 42 1/2 | 34 | 6600* |
|  |  | 20              | 20 | 28 | 28       | 44 1/2 | 36 | 7800* |



# Series 3700 Oven Accessories

- **Thermocouple Assemblies**

- **Ports**

- View ports
- Load train ports
- Gas ports
- Explosion ports
- Hand access ports

- **Inserts**

- Load train port inserts
- Removable plugs

- **Rear Protection Cover**

Comes standard with all ovens.

- **Special Door Hinges**

- Removable
- Offset

- **Door Switch**

Cuts off power to the elements, solenoid, and blower motor when door is opened.

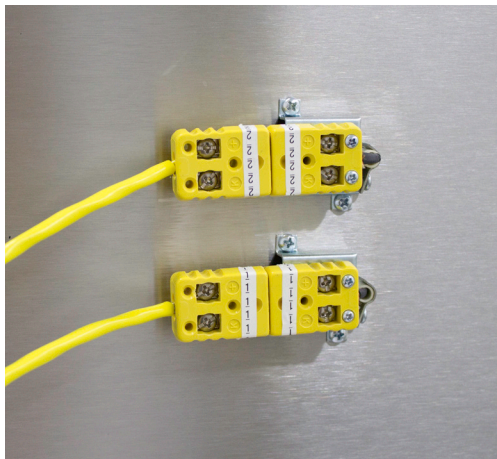
- **Cooling Accessories**

- Liquid Nitrogen (N<sub>2</sub>) assembly with service to -155°C (-250°F)
- Liquid Carbon Dioxide (CO<sub>2</sub>) assembly with service to -57°C (-70°F)
- Solenoid valve, Cryogenic service
- Explosion Proof Motor

- **Internal Light Assembly**

- **Various Mounting Arrangements (see page 7)**

- **Temperature Controllers**



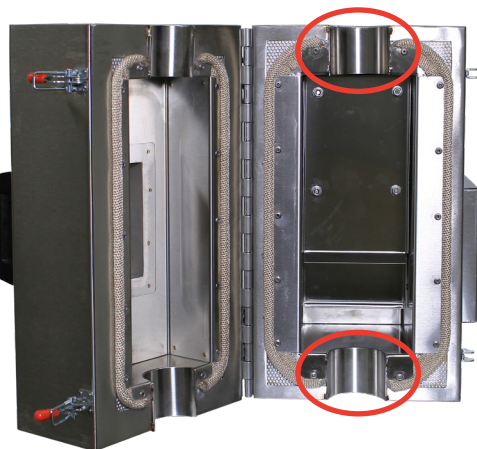
**Thermocouple Assembly**



**Handle and Latches**



**Solenoid Valve, Cryogenic service**



**Load Train Port**



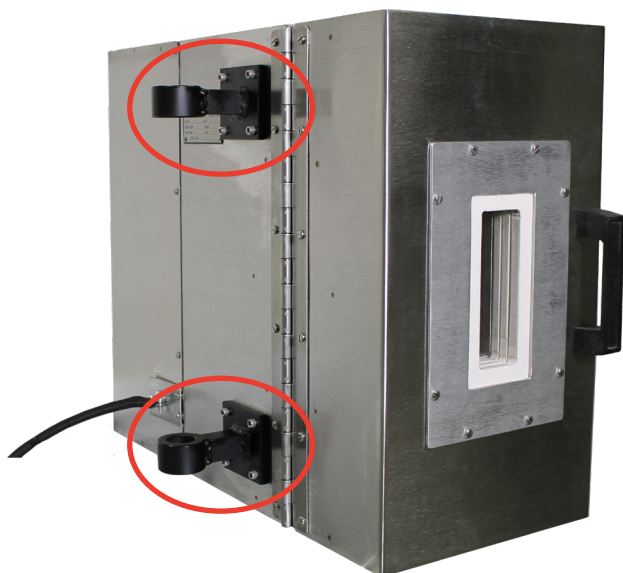
**Load Train Port Insert**



**Internal Light**

# Oven Mounting

ATS ovens may be used in a laboratory or mounted onto a materials testing machine for various testing applications. We offer a variety of mounting options to meet your laboratory needs.



## Stationary Column Mount

Mounting brackets attach the oven to the columns of a test machine.



## Stationary Base Mount

This arrangement uses mounting brackets to attach the oven onto the base of a test machine.



## Column or Base Mount Slide Assembly

Mounting brackets attach the oven to the columns or base of a test machine. The slide assembly allows the oven to slide out of position when necessary.

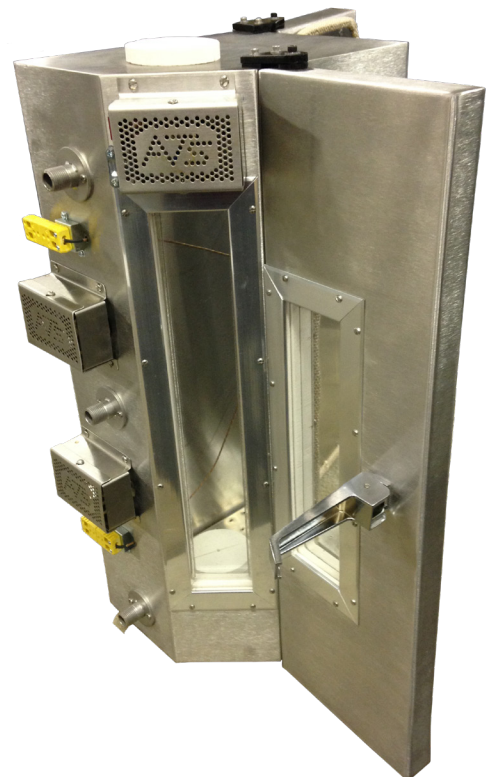
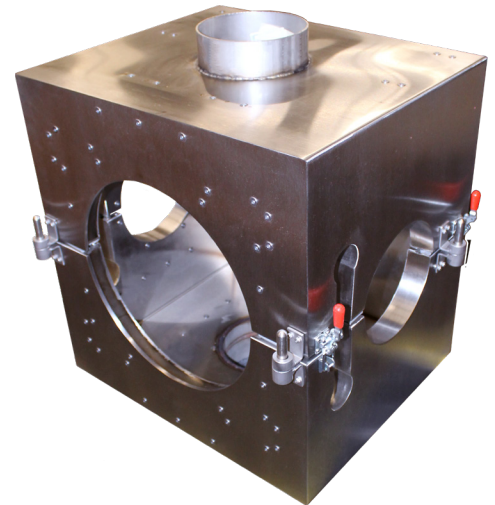


## Portable Dolly

Ovens can be mounted to the lift of an ATS portable dolly. Manual and hydraulic lifts are available for vertical adjustment.



# Custom Oven Examples





# Other ATS Products

- Asphalt/Bitumen Testing Equipment
- Biomedical Testing Machines
- Calibration Test Blocks
- Creep/Stress Rupture Testing
- Environmental Chambers
- Heating Elements
- Lab Furnaces
- Ovens
- Pressure Testing Systems
- Sealant Testing
- Testing Accessories
- Universal Testing Machines



**Creep/Stress Rupture Tester**



**Asphalt/Bitumen Testing Line**



**Sealant Testing Line**



**Universal Testing Machines**