

## No. 272 Geer Type Oven



### APPLICATION

The Geer type Oven is widely used for evaluating thermal aging of plastics and rubber by the oven method. There are many kinds of thermostatic chamber generally known as the “oven”. Problems have often been encountered in use of these ovens – if these ovens which differ in their mechanisms were used carelessly, the results of testing differ very widely.

TOYO SEIKI’s Geer type Oven has been especially designed and manufactured exclusively for aging tests and not as an ordinary drier or thermostatic chamber. Important factors such as temperature control precision, temperature distribution, temperature recovery after opening the door, air speed inside the oven, air change rate and sealing mechanism of the intermediate chamber, etc. have been fully taken into consideration in designing and constructing this Oven.

### FEATURES

1. Very high temperature control precision through use of digital type PID temperature control system and SCR control.
2. Overshoot protection circuit to assure very accurate thermal history of test sample.
3. Sealing mechanism assures very accurate air change rate.
4. Fully equipped with safety devices to assure safe operation.

## ACCESSORIES



Sample rotating rack



Mesh plate

## OPTIONS



Built-in type air change meter



External type air change meter

## SPECIFICATIONS

### Model 45 (45 cm square oven)

| Model                             | A45A  | A45                         | S45                       |
|-----------------------------------|---|-----------------------------|---------------------------|
| Dimensions of oven                | W45 x D45 x H50cm   |                             |                           |
| Temperature control range         | Room temp. + 20°C ~ 300°C   |                             |                           |
| Temperature distribution accuracy | ~100°C (±1°C), 101~200°C (±2°C), 201~300°C (±3°C)   |                             |                           |
| Inside oven wind speed            | 0.5±0.1m/s (average of 18 points)   |                             |                           |
| Air change rate                   | 3~20 times/h<br>(Mechanically possible up to 60 times/h.<br>However, out of tolerance of temp. distribution and wind speed) |                             |                           |
| Air change rate setting           | Automatic setting   | Manual setting              | Manual setting            |
| Air change meter                  | Equipped<br>(Built-in type)   | Equipped<br>(Built-in type) | Option<br>(External type) |
| Air change rate automatic setting | Automatic   | N/A                         | N/A                       |
| Sample rotating rack              | 8~10rpm   |                             |                           |
| Accessories                       | Sample rotating rack x 1, Mesh plate x 2, Clips x 60  |                             |                           |
| Electrical                        | Three-phase, AC200V, 3.8kVA (Others on request)   |                             |                           |
| Dimensions                        | W1090 x D760 x H1430mm  |                             |                           |
| Net weight                        | Approx. 200kg   |                             |                           |

### Model 60 (60cm square oven)

| Model                             | A60A  | A60                         | S60                       |
|-----------------------------------|---|-----------------------------|---------------------------|
| Dimensions of oven                | W60 x D60 x H60cm   |                             |                           |
| Temperature control range         | Room temp. + 20°C ~ 300°C   |                             |                           |
| Temperature distribution accuracy | ~100°C (±1°C), 101~200°C (±2°C), 201~300°C (±3°C)   |                             |                           |
| Inside oven wind speed            | 0.5±0.1m/s (average of 18 points)   |                             |                           |
| Air change rate                   | 3~20 times/h<br>(Mechanically possible up to 60 times/h.<br>However, out of tolerance of temp. distribution and wind speed) |                             |                           |
| Air change rate setting           | Automatic setting   | Manual setting              | Manual setting            |
| Air change meter                  | Equipped<br>(Built-in type)   | Equipped<br>(Built-in type) | Option<br>(External type) |
| Air change rate automatic setting | Automatic   | N/A                         | N/A                       |
| Sample rotating rack              | 8~10rpm   |                             |                           |
| Accessories                       | Sample rotating rack x 1, Mesh plate x 2, Clips x 60  |                             |                           |
| Electrical                        | Three-phase, AC200V, 4.9kVA (Others on request)   |                             |                           |
| Dimensions                        | W1170 x D920 x H1550mm  |                             |                           |
| Net weight                        | Approx. 290kg   |                             |                           |

## REFERENCE STANDARD

JIS B 7757  
 ISO 188 (JIS K 6257)  
 ISO 4577 (JIS K 7212)  
 etc.

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