



SMO Large Series

SHEL LAB Mechanical Convection Laboratory Ovens

SMO14-2 • SMO28-2



Ideal for Industrial, Analytical and General Laboratory Applications

SHEL LAB SMO Series laboratory ovens are recommended for critical scientific, analytical, and laboratory research. Choose from two cabinet sizes, each with forced-air circulation and reserve heating power for quick recovery after door openings.

SMO Series Features and Benefits

The SMO Series ovens are engineered for safe, accurate, and uniform performance in demanding laboratory environments.



 Made in USA

- Fast ramp-up to 260°C for faster cycle times.
- Temperature range approximately 20°C above ambient to 260°C for multiple applications.
- 1 Advanced PID temperature control system for sensitive response.
- 2 Built-in digital timer for automatic operation following manual start.
- 3 Independent overtemperature setpoint and operational control override for additional safety.
- 4 Stainless steel interior construction for long life operation, easy cleaning.
- 5 Forced-air circulation to assure maximum temperature uniformity.
- 6 Double-wall construction to minimize external surface temperature.
- 7 Stainless steel shelves are adjustable on 0.5" (12.7 mm) centers to provide flexible inventory options.
- 8 Added docking collars to intake and exhaust ports to allow ducting to be attached for venting exhaust out of the workspace.
- Internationally certified CAN/CSA, UL, EN, IEC 61010, and compliant with CE.

High Temperature Performance

SHEL LAB SMO Series ovens achieve temperatures up to 260°C with fast ramp-up and recovery times.

Heat-Up Rapid heat-up times to 260°C. Published heat-up performance is based on a standard cabinet under controlled testing at a 22 ± 3°C ambient temperature, line voltage ±10% of specified voltage.

Recovery Upper vents are closed when recovery times following door openings are tested. Published recovery performance is based on a standard cabinet under controlled testing at a 22 ± 3°C ambient temperature, line voltage ±10% of specified voltage.

Applications:

- Aging
- Asphalt Testing
- ASTM, UL and Life Testing
- Baking, Conditioning, Curing
- Burn-in
- Drying
- Curing
- Moisture and Stability Testing



SMO28-2



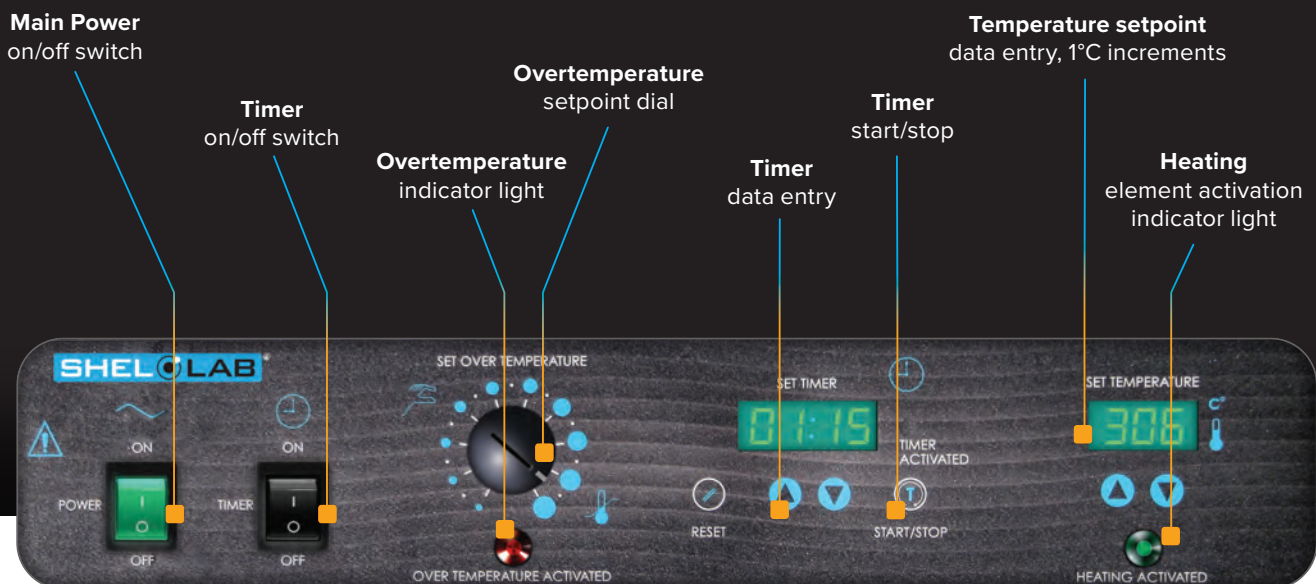
SMO14-2

Control, Timer Program and Monitoring

The advanced loop PID (proportional, integral, derivative) controller commands proportional power to the heating element to provide the most accurate and responsive control. This controller was chosen to assure faster response to setpoint without overshoot, and quicker recovery following door openings. The on-board timer permits programmed dwell cycles with automatic shut-off for custom applications. Indicator lights are included for visual status feedback on critical functions.

Integrated Control Panel

All controls are centrally located on the main panel including manual power and timer on/off switches, independent overtemperature control, digital temperature and timer setpoint adjustments, and indicator lights for all functions.



SMO Series Oven Specification Chart

	SMO14-2	SMO28-2
Interior Volume, Nominal	14.6 cu.ft. (413 liters)	27.6 cu.ft. (781 liters)
Interior Dimensions W x D x H	30.8" x 24.8" x 31.0" 782 x 630 x 788 mm	30.8" x 25.0" x 61.0" 782 x 635 x 1575mm
Exterior Dimensions W x D x H	39.1" x 34.0" x 48.0" 953 x 864 x 1219mm	39.1" x 35.0" x 78.3" 953 x 889 x 1989 mm
Interior Construction	430 series stainless steel	430 series stainless steel
Exterior Construction	Painted Cold Roll Steel	Painted Cold Roll Steel
Shelves (See Accessories)*	3 standard, 8 total	6 standard, 16 total
Maximum Weight Per Shelf*	75 lb / 34 kg	75 lb / 34 kg
Permitted Total Load	225 lb / 102 kg	450 lb / 204 kg

*Extra standard and reinforced shelves available. See Accessories.



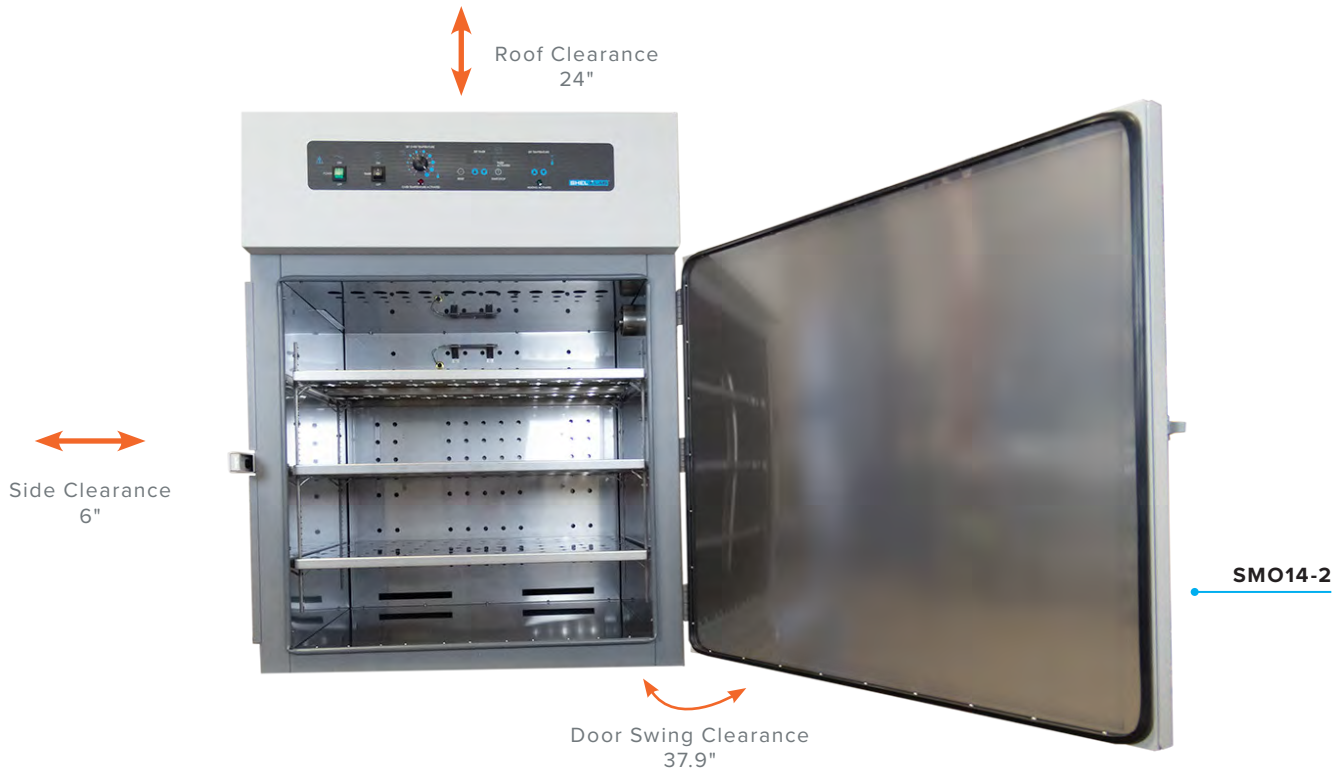
SMO Series Oven Selection Chart

Order Model Number, Voltage Specific	SMO14-2	SMO28-2
Electrical, 50/60Hz, AC, 1Ø		
Voltage	230V	230V
Temperature Range 15°C above ambient to 260°C		
Temperature Uniformity		
At 80°C	1.5°C	1.5°C
At 150°C	3.0°C	3.0°C
At 260°C	7.0°C	7.0°C
Ventilation		
Air Changes Per Hr at Max	175	85
Max CFM	42	39.4

DIN 12880 Compliance

SHEL LAB SMO Series ovens are designed to meet or exceed the performance criteria established through DIN 12880:2007:05 and ASTM E145-94 (Reapproved 2006.) These criteria set common standards for laboratory oven performance in heat-up, temperature uniformity and door-open recovery time. Confirmation of temporal and spatial performance is achieved by testing with multi-point temperature probes strategically positioned throughout the oven chamber interior, including center point positions where stability, equilibrium and setpoint control are required.

Note: DIN 12880 is an international standard for measuring the performance of electrical laboratory ovens and incubators based on Deutsches Institut Fur Normung E.V. (German National Standard), 05/01/2007.



Site Preparation and Installation Guides

	SMO14-2	SMO28-2
Door Swing Clearance (Nominal)	37.9" (963 mm)	37.9" (963 mm)
Wall Clearance, Sides	6" (152 mm)	6" (152 mm)
Wall Clearance, Rear	12" (305 mm)	12" (305 mm)
Wall Clearance, Roof	24" (610mm)	24" (610 mm)
Net Weight Empty (with Standard Shelves)	280 lb (127.3 kg)	390 lb (177.3 kg)
Shipping Weight	361 lb (164 kg)	513 lb (233 kg)

SMO Oven Options and Accessories

	SMO14-2	SMO28-2
Caster Platform	9000596	9000596
Shelf with Clips	9751244	9751244
Sliding Shelf Option Includes 1 Shelf, 2 Slides	9751368	9751368

Options must be specified when ordering. Contact SHEL LAB for additional information.



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