

CAESA-LAB ECONOMIC BENCH OVENS

FEATURING

- Large Bench or Portable Capacity
- All Encompassing Circular Air Flow
- ER Model Programmable PID Control
- 80 lb Capacity shelves
- Rapid Run-Up And Recovery
- Proven Reliability
- Full 18 Month Factory Warranty



MODEL 21-350



MODEL 31-350

7 AND 10 FT³
300°F (150°C)
450°F (235°C)
550°F (288°C)



MODEL 21-350ER

TIME TESTED

These bench series ovens have been the workhorse in the industry for over 35 years. Now these time tested bench ovens are even better. A redesigned chamber and air flow distribution system, improved cabinet insulation and an optional PID microprocessor temperature controller (ER MODELS) make the bench series ovens an easy choice for heating applications everywhere.

APPLICATION

Developed for the industrial lab, these rugged general purpose ovens are perfect for: preheating, thermal testing, shelf-batch processing, part

drying, curing, baking, evaporating or dehydrating various media, soils or aggregate and many other applications. All models feature large work spaces and excellent portability. They can be moved to the job, or stacked on one another to conserve floor space. Wherever thermal processing is needed, the bench series ovens bring year after year of trouble-free service and performance.

DESIGNED STANDARDS

A virtual non-contact exterior to interior cabinet design and high density industrial thermal fiber insulation greatly reduce thermal conductive transfer. That means greater energy efficiency and lower

exterior wall temperatures. Refinements in the air plenums and mixing chamber deliver an evenly heated horizontal circular flow of air for rapid heat to part transfer. A reliable quick-sensing hydraulic thermostat balances good temperature stability with recovery performance. Heavy duty chrome plated wire shelves can support 80 lbs. and can be spaced on 1.5" centers to provide up to 56 square feet of shelf surface (31-350). Cabinet exteriors are finished in our exclusive Q-Lab "high-tech" bronze polyester. Large high impact thermal-plastic door handles always remain cool to the touch. See our complete list of options and accessories.

Bench Ovens

GENERAL SPECIFICATIONS	MODEL 21-250	MODEL 21-350	MODEL 31-350	MODEL 51-550
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INTERIOR DIMENSIONS INCHES W x H x D (CM) W x H x D	25.5x20x24 64x50x60	25.5x20x24 64x50x60	25.5x30x24 64x76x60	25.5x20x22.5 64x50x57
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EXTERIOR DIMENSIONS INCHES W x H x D (CM) W x H x D	33x24x35.5 83x60x90	33x24x35.5 83x60x90	33x34x35.5 83x86x90	33x24x35.5 83x60x90
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CAPACITY CUBIC FEET (LITERS)	7 198	7 198	10.6 300	6.60 186
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TEMPERATURE MAXIMUM FAHRENHEIT CENTIGRADE	300 150	450 232	450 232	550 287
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SHELVES (1-1/2" CENTERS) MAXIMUM PER UNIT MAXIMUM POUNDS / SHELF	11 80	11 80	17 80	11 80
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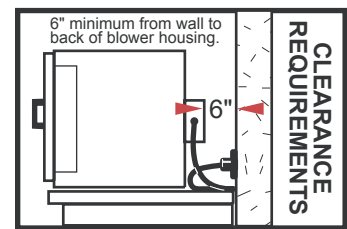
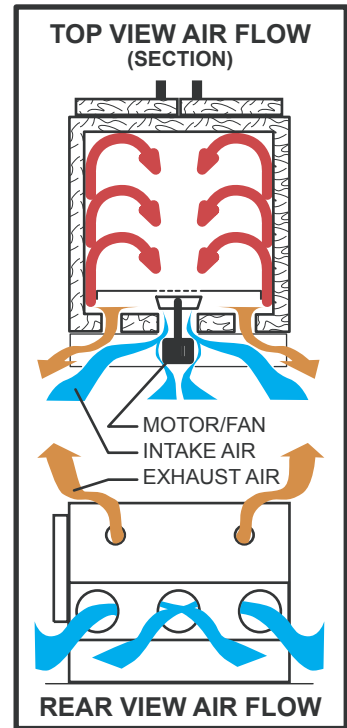
ELECTRICAL VOLTS/AMPS WATTS PLUG/NEMA	120/8.75 1050 5-15P*	120/16 1920 5-20P*	120/16 1920 5-20P*	230/12.5 2850 6-20P
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WEIGHT SHIPPING STAND ALONE	185 165	185 165	225 200	195 170
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* 230 Volt optional on models 21 & 31



MODEL 21-350ER shown with optional window and chamber light & 10" "swing-out" circular chart recorder



PERFORMANCE CHARACTERISTICS*	MODEL 21-250/ER	MODEL 21-350/ER	MODEL 31-350/ER	MODEL 51-550/ER
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CONTROL SENSITIVITY @ 100C @ 200C	+/- 1.0 / 0.2 °C NA	+/- 1.5 / 0.3 °C +/- 1.5 / 0.5 °C	+/- 2.0 / 0.5 °C +/- 2.0 / 0.5 °C	+/- 1.5 / 0.5 °C +/- 3.0 / 0.5 °C
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UNIFORMITY @ 100C @ 200C	+/- 2.5 / 2.0 °C NA	+/- 2.5 / 2.0 °C +/- 3.5 / 4.0 °C	+/- 3.0 / 2.0 °C +/- 4.0 / 3.0 °C	+/- 3.5 / 2.5 °C +/- 5.5 / 4.5 °C
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TIME TO TEMPERATURE AMBIENT TO 100C AMBIENT TO MAX	15 Min. / 16 Min. 36 Min. / 38 Min.	8 Min. / 9 Min. 30 Min. / 32 Min.	9 Min. / 10 Min. 35 Min. / 38 Min.	3 Min. / 6 Min. 40 Min. / 45 Min.
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RECOVERY @ 150C DOOR OPEN 15 SEC. DOOR OPEN 30 SEC.	4 Min. / 5 Min. 5 Min. / 6 Min.	2 Min. / 3 Min. 3 Min. / 4 Min.	3 Min. / 4 Min. 4 Min. / 5 Min.	1 Min. / 2 Min. 2 Min. / 3 Min.
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REPEATABILITY @ 150C (SET POINT DRIFT)**	+/- 2.0 / 0.5 °C	+/- 1.0 / 0.5 °C	+/- 1.5 / 0.5 °C	+/- 2.0 / 0.75 °C
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AIR CHANGES MAX / HOUR @150C WITH NO LOAD	8 to 12	8 to 12	8 to 12	8 to 12
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MAX CHAMBER AIR VELOCITY	7 ft/sec.	7 ft/sec.	7 ft/sec.	7 ft/sec.
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ENERGY EFFICIENCY @ 150C % DUTY CYCLE RUN COST / HOUR @ \$0.22/KWH	80% \$0.18	45% \$0.20	55% \$0.20	30% \$0.19
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* PERFORMANCE CHARACTERISTICS FOR STANDARD VOLTAGE MODELS, ALTERNATE VOLTAGE MODELS MAY VARY. ALL TESTS CONDUCTED UNDER CONTROLLED LABORATORY CONDITIONS.

** REPEATABILITY OR SET POINT DRIFT MEASURED FOR 24 HRS. WITH CONTROLLED LAB AMBIENT TEMPERATURES NOT VARYING MORE THAN 2 DEGREES C & SUPPLY VOLTAGE BY NOT MORE THAN 2%.