

◆ RAD Industrial Cabinet Ovens

Proven reliability in demanding applications, such as curing, drying and aging



Despatch RAD cabinet ovens feature horizontal recirculating airflow to ensure exceptional temperature uniformity throughout the oven. A high-volume fan circulates air through walls with adjustable louvers to create a constant horizontal airflow across all sections of the oven. The result is proven reliability in demanding production and laboratory applications, such as curing, drying, stress relieving, aging, and other process-critical applications.

The standard digital controls regulate temperatures within tight tolerances and provides high limit protection. For more advanced control choose the optional Protocol 3™ microprocessor-based temperature and hi-limit controller with large LCD display and real time clock for auto start capability. The LCD display shows temperature readings along with clear, detailed information on oven status. The data-logging functionality enables reporting and analyzing and data files can be exported via the controller's USB port. Modbus RS485 communications are included for easy data access.



Shown with optional Protocol 3 controller

FEATURES AT A GLANCE

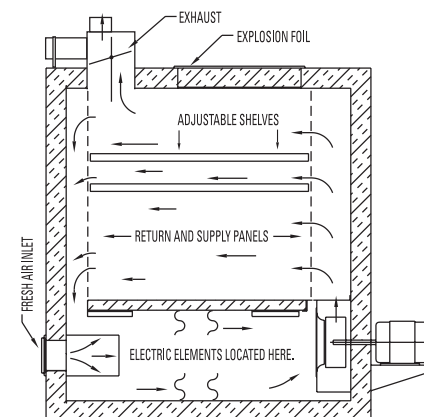
- ◆ Temperatures up to 343°C (650°F) (Models available with temperatures up to 538°C (1000°F))
- ◆ Horizontal recirculating airflow
- ◆ Adjustable louvers
- ◆ Digital control with 3/4" (1.9cm) LED display
- ◆ High limit over-temperature protection
- ◆ Aluminized steel interior
- ◆ 5-year heater warranty
- ◆ End of cycle and high-limit indicators
- ◆ Audible and visual high-limit alarm
- ◆ RS485 Modbus communication PC interface
- ◆ 1" process port for test wires and disconnect switch
- ◆ UL and C-UL listed open industrial control panel

OPTIONS

- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Stainless steel interior
- ◆ Door switch
- ◆ Reinforced floor
- ◆ Chart recorder
- ◆ CE compliance

		RAD1-42	RAD2-19	RAD2-35
PHYSICAL SPECIFICATIONS				
Chamber size (width x depth x height)		20 x 18 x 20 in. 51 x 46 x 51 cm	36.5 x 25 x 37 in. 93 x 64 x 94 cm	47.5 x 30 x 42 in. 121 x 76 x 107 cm
Capacity in cubic feet (liters)		4.2 (119)	19 (552)	35 (991)
Overall size (width x depth x height)		46 x 31.5 x 37.5 in. 119 x 80 x 95 cm	79.5 x 44 x 77 in. 202 x 112 x 196 cm	92.5 x 49 x 82.1 in. 235 x 124 x 208.5 cm
Electrical: <i>RAD1-42:</i> <i>50/60 hertz - single phase</i> <i>RAD2-19 and RAD2-35:</i> <i>60 hertz - three phase (FLA)</i>	208 volts	33.7 amps/6 kW	40.2 amps/12 kW	51.3 amps/16 kW
	240 volts	30 amps/6 kW	35.5 amps/12 kW	45.1 amps/16 kW
	480 volts	NA	17.7 amps/12 kW	22.5 amps/16 kW
Number of shelves provided		2	2	2
Maximum number of shelves		9 on 2 in. centers	12 on 3 in. centers	14 on 3 in. centers
Shelf dimensions (width x depth)		19.6 x 17.75 in. 50 x 45 cm	37.6 x 24.5 in. 95.5 x 62.2 cm	48.6 x 29.5 in. 123.4 x 75 cm
Exhaust outlet		2.5 in. (6.4 cm)	7 in. (17.8 cm)	7 in. diameter (17.8 cm diameter)
Doors		1	2	2
Approximate net weight		380 lbs (172 kg)	1320 lbs (599 kg)	1700 lbs (771 kg)
Approximate domestic shipping weight (export adds weight)		656 lbs (298 kg)	1878 lbs (852 kg)	1875 lbs (850 kg)
Insulation thickness		4 in. (10.2 cm)	6 in. (12.7 cm)	6 in. (12.7 cm)
FUNCTIONAL SPECIFICATIONS				
Time to temp with no load (40°C to 177°C)		10 minutes	17 minutes	16 minutes
Time to temp with no load (40°C to 260°C)		20 minutes	32 minutes	28 minutes
Time to temp with no load (40°C to 343°C)		38 minutes	50 minutes	50 minutes
Temperature uniformity		+/- 2.3°C at 177°C +/- 3.4°C at 260°C +/- 4.2°C at 343°C	+/- 2°C at 177°C +/- 2.8°C at 260°C +/- 3.7°C at 343°C	+/- 2°C at 177°C +/- 2.8°C at 260°C +/- 3.7°C at 343°C
Minimum operating temp		40°C (104°F)	40°C (104°F)	40°C (104°F)
Maximum operating temp		343°C (650°F)	343°C (650°F)	343°C (650°F)
Control stability		+/- 0.5°C on all models		
Repeatability		+/- 0.5°C	+/- 0.5°C	+/- 0.5°C
Maximum load capacity		200 lbs. (91 kg)	850 lbs. (386 kg)	1250 lbs. (567 kg)
Maximum shelf capacity		30 lbs (13.6 kg)	100 lbs. (45.4 kg)	100 lbs. (45.4 kg)
Exhaust capacity (minimum/maximum)		Adj. to 12 CFM (5.6 l/s)	Adj. to 27 CFM (12.7 l/s)	Adj. to 110 CFM (51.9 l/s)
Solvent handling capacity at 177°C (350°F) MEK		NA	NA	NA
Forced exhaust HP		NA	NA	NA
Recirculating fan		1/2 HP 425 CFM (200 l/s)	2 HP 1550 CFM (731 l/s)	2 HP 1550 CFM (731 l/s)

Notes: Design uniformity figures are based on a nine-point test conducted in an empty oven after stabilization period. Minimum operating temperature and cooling times are based on 20°C ambient temperature measured at the fresh air inlet with the fresh air and exhaust dampers fully open. Specifications are subject to change without notice. If the existing specifications differ from yours, ask about our customizing capabilities.



RFD front view cross section showing airflow pattern.



RFD Class A oven

Specially designed to meet NFPA 86 requirements for applications that include flammable solvents or large amounts of moisture removal. Includes a pressure relief panel, purge timer and exhaust fan.

RAD models are not to be used with flammable solvents, materials or containers. If your process involves flammable solvents please inquire about our RFD models.

SERVICE AND TECHNICAL SUPPORT

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