

## ◆ RA and RF Cabinet Ovens

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



The RA/RF reach-in ovens feature horizontal recirculating airflow to ensure exceptional temperature uniformity throughout the oven. A high-volume fan circulates air through perforated, stainless steel walls 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, sterilizing, aging, and other process-critical applications.

For applications that include flammable solvents or large amounts of moisture removal we offer the RF series. These Class A ovens are specially designed to meet NFPA 86 requirements. They include a pressure relief panel, purge timer and exhaust fan.

### FEATURES AT A GLANCE

- ◆ Temperatures up to 343°C (650°F)  
*(RFF model available with max. temp. of 537°C (1000°F))*
- ◆ Four models from 4.2 to 35 cu. ft. (119 to 991 liters)
- ◆ Horizontal recirculating airflow
- ◆ Protocol Plus™ microprocessor with real time clock and optional PC interface
- ◆ Multiple temperature operations are controlled by up to eight programs, with eight ramp and soak segments in each program.
- ◆ 304 stainless steel interior
- ◆ 5-year heater warranty
- ◆ End of cycle and high-limit control
- ◆ UL and C-UL listed open industrial control panel

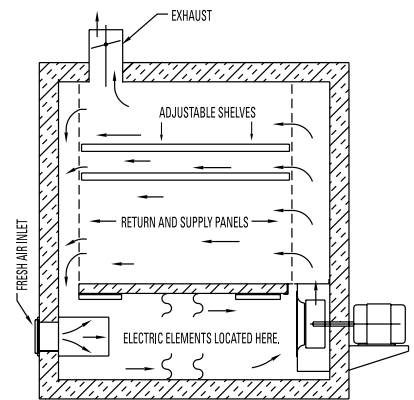
### OPTIONS:

- ◆ Despatch unique adjustable louvers
- ◆ PC interface for remote input, monitoring and recording (RS485/422/232)
- ◆ Chart recorder
- ◆ Audible alarm
- ◆ Access ports for test wires
- ◆ CE compliant

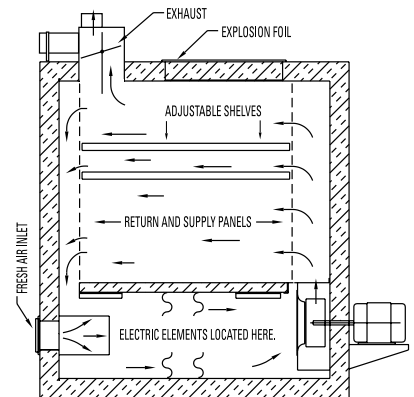


RAD/RFD		1-42 Bench	2-13	2-19	2-35
<b>PHYSICAL SPECIFICATIONS</b>					
Chamber size (width x depth x height)		20 x 18 x 20 in. 51 x 46 x 51 cm	24.5 x 25 x 37 in. 62 x 64 x 94 cm	36.5 x 25 x 37 in. 93 x 64 x 94 cm	47.5 x 30 x 42 in. 121 x 76 x 107 cm
Capacity in cubic feet (liters)		4.2 (117)	13 (368)	19.5 (552)	35 (991)
Overall size (width x depth x height) RAD		46 x 31.5 x 37.5 in. 117 x 80 x 95 cm	66 x 42 x 74 in. 167 x 107 x 188 cm	78 x 42 x 74 in. 198 x 107 x 188 cm	90.5 x 47 x 79 in. 230 x 119 x 201 cm
Overall size (width x depth x height) RFD		46 x 36.5 x 37.5 in. 117 x 92.7 x 95 cm	66 x 42 x 91.5 in. 167 x 107 x 232 cm	78 x 42 x 91.5 in. 198 x 107 x 232 cm	90.5 x 47 x 96.5 in. 230 x 119 x 245 cm
Electrical: 60 hertz - three phase	208 volts RAD	*33.7 amps/6 kW	37.7 amps/12 kW	37.7 amps/12 kW	59 amps/18 kW
*1-42 bench runs on 50/60 hertz - single phase  50 hertz electrical is available on all models	208 volts RFD	*34.5 amps/6 kW	55.9 amps/18 kW	55.9 amps/18 kW	84 amps/27 kW
	240 volts RAD	*30 amps/6 kW	33.2 amps/12 kW	33.2 amps/12 kW	47.5 amps/16 kW
	240 volts RFD	*30.8 amps/6 kW	44.5 amps/16 kW	44.5 amps/16 kW	86 amps/32 kW
	480 volts RAD	NA	16.6 amps/12 kW	16.6 amps/12 kW	23.7 amps/16 kW
	480 volts RFD	NA	22.2 amps/16 kW	22.2 amps/16 kW	43 amps/32 kW
Number of shelves provided		2	2	2	2
Maximum number of shelves		8 on 2 in. centers	12 on 3 in. centers	12 on 3 in. centers	14 on 3 in. centers
Exhaust outlet diameter		2.5 in. (6.4 cm)	7 in. ( 17.8 cm)	7 in. ( 17.8 cm)	7 in. ( 17.8 cm)
Doors		1	1	1 (2 optional)	2
Approximate net weight RAD		350 lbs (159 kg)	1160 lbs (526 kg)	1450 lbs (658 kg)	1700 lbs (771 kg)
Approximate net weight RFD		380 lbs (172 kg)	1205 lbs (547 kg)	1495 lbs (678 kg)	1745 lbs (792 kg)
Approximate shipping weight RAD		480 lbs (218 kg)	1330 lbs (603 kg)	1625 lbs (737 kg)	1875 lbs (850 kg)
Approximate shipping weight RFD		510 lbs (231 kg)	1405 lbs (637 kg)	1695 lbs (769 kg)	1945 lbs (882 kg)
Insulation thickness		4 in. (10.2 cm)	6 in. (12.7 cm)	6 in. (12.7 cm)	6 in. (12.7 cm)

<b>FUNCTIONAL SPECIFICATIONS</b>					
Time to temp with no load (40°C to 177°C) RAD		10 minutes	16 minutes	17 minutes	16 minutes
Time to temp with no load (40°C to 177°C) RFD		12 minutes	15 minutes	16 minutes	12 minutes
Time to temp with no load (40°C to 260°C) RAD		20 minutes	30 minutes	32 minutes	28 minutes
Time to temp with no load (40°C to 260°C) RFD		24 minutes	28 minutes	30 minutes	22 minutes
Time to temp with no load (40°C to 343°C) RAD		38 minutes	48 minutes	50 minutes	50 minutes
Time to temp with no load (40°C to 343°C) RFD		43 minutes	45 minutes	48 minutes	36 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 (+/- 4°F at 350°F) +/- 2.8°C at 260°C (+/- 6°F at 500°F) +/- 3.7°C at 343°C (+/- 7.5°F at 650°F)		
Minimum operating temp above ambient RAD		20°C (36°F)	11°C (20°F)	11°C (20°F)	11°C (20°F)
Minimum operating temp above ambient RFD		10°C (18°F)	8.3°C (15°F)	8.3°C (15°F)	8.3°C (15°F)
Control stability		+/- 0.5°C/5°CΔ on all models (Δ represents the change in ambient temperature. )			
Repeatability		+/- 0.5°C	+/- 0.5°C	+/- 0.5°C	+/- 0.5°C
Maximum load capacity		91 kg (200 lbs.)	386 kg (850 lbs.)	386 kg (850 lbs.)	567 kg (1250 lbs.)
Maximum shelf capacity		13.6 kg (30 lbs.)	45.4 kg (100 lbs.)	45.4 kg (100 lbs.)	45.4 kg (100 lbs.)
Exhaust capacity RAD		Adj. to 12 CFM (5.6 lps)	Adj. to 27 CFM (12.7 lps)	Adj. to 27 CFM (12.7 lps)	Adj. to 110 CFM (51.9 lps)
Exhaust capacity RFD (minimum/maximum)		23/93 CFM (10.9/43.9 lps)	54/350 CFM (25.5/165.2 lps)	54/350 CFM (25.5/165.2 lps)	216/350 CFM (101.9/165.2 lps)
RFD solvent handling capacity at 177°C (350°F)		.025 GPH (.095 LPH)	.06 GPH (.23 LPH)	.06 GPH (.23 LPH)	.24 GPH (.91 LPH)
RFD forced exhaust HP		1/50 HP	1/3 HP	1/3 HP	1/3 HP
Recirculating fan		1/2 HP 425 CFM (200 lps)	1 HP 1150 CFM (543 lps)	1 HP 1150 CFM (543 lps)	2 HP 1550 CFM (731 lps)



RAD front view cross section showing airflow pattern.



RFD front view cross section showing airflow pattern.

Notes: Uniformity figures are based on a nine-point test conducted in an empty oven after stabilization period. Uniformity can vary slightly depending on unit and operating conditions. 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.

## SERVICE AND TECHNICAL SUPPORT

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international service/main: 1-952-469-8230  
service fax: 1-952-469-8193

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