

◆ RFD Class A Cabinet Ovens

For applications that include flammable solvents or excessive solvent removal

RFD Class A ovens are specially designed to meet NFPA 86 requirements for applications that include flammable solvents or large amounts of moisture removal. They include a pressure relief panel, purge timer and exhaust fan.

These ovens feature horizontal recirculating airflow to ensure exceptional temperature uniformity throughout the oven. A high-volume fan circulates air through perforated, 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, stress relieving, aging, and other process-critical applications.



FEATURES AT A GLANCE

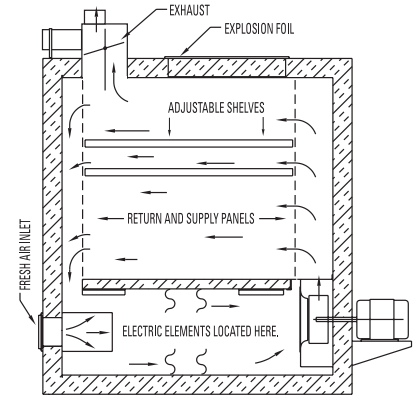
- ◆ Temperatures up to 343°C (650°F)
(Models available with temperatures up to 538°C (1000°F))
- ◆ Class A package meeting NFPA 86 requirements for flammable solvents
- ◆ Three models from 4.2 to 35 cu. ft. (119 to 991 liters)
- ◆ Horizontal recirculating airflow
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export.
- ◆ Aluminized steel interior (RAD1-42/2-19)
(304 stainless steel interior RAD2-35)
- ◆ 5-year heater warranty
- ◆ End of cycle and high-limit indicators
- ◆ Audible and visual high-limit alarm
- ◆ RS485 Modbus communication
PC interface
- ◆ One-inch process port for test wires
- ◆ Disconnect switch
- ◆ UL and C-UL listed open industrial control panel

OPTIONS

- ◆ Despatch unique adjustable louvers
- ◆ Door switch
- ◆ Reinforced floor
- ◆ Stainless steel interior for RFD1-42/2-19
- ◆ Chart recorder
- ◆ CE compliance

RFD		1-42 BENCH	2-19	2-35
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)	19.5 (552)	35 (991)
Overall size (width x depth x height)		46 x 36.5 x 37.5 in. 117 x 92.7 x 95 cm	59.5 x 44 x 93.5 in. 151 x 112 x 238 cm	92 x 47 x 96.5 in. 234 x 119 x 245 cm
Electrical: 60 hertz - three phase *1-42 bench runs on 50/60 hertz - single phase	208 volts	*34.5 amps/6 kW	55.9 amps/18 kW	84 amps/27 kW
	240 volts	*30.8 amps/6 kW	44.5 amps/16 kW	86 amps/32 kW
	480 volts	NA	22.2 amps/16 kW	43 amps/32 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
Exhaust outlet diameter		2.5 in. (6.4 cm)	7 in. (17.8 cm)	7 in. (17.8 cm)
Doors		1	2	2
Approximate net weight		380 lbs (172 kg)	1365 lbs (619kg)	1745 lbs (792 kg)
Approximate shipping weight		510 lbs (231 kg)	1565 lbs (710kg)	1945 lbs (882 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)		12 minutes	16 minutes	12 minutes
Time to temp with no load (40°C to 260°C)		24 minutes	30 minutes	22 minutes
Time to temp with no load (40°C to 343°C)		43 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 +/- 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		30°C (86°F)	30°C (86°F)	30°C (86°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)		23/93 CFM (10.9/43.9 l/s)	54/350 CFM (25.5/165.2 l/s)	216/350 CFM (101.9/165.2 l/s)
Solvent handling capacity at 177°C (350°F) MEK		.025 GPH (.095 l/h)	.06 GPH (.23 l/h)	.24 GPH (.91 l/h)
Forced exhaust HP		1/50 HP	1/3 HP	1/3 HP
Recirculating fan		1/2 HP 425 CFM (200 l/s)	1 HP 1150 CFM (543 l/s)	2 HP 1550 CFM (731 l/s)



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.

**50 hertz electrical is available on all models*



RFD1-42 benchtop oven



SERVICE AND TECHNICAL SUPPORT

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