

◆ **RAF Series Furnace**

Proven reliability in demanding high temperature applications

Despatch RAF furnaces feature horizontal recirculating airflow with adjustable louvers to ensure exceptional temperature uniformity throughout the furnace. These high-performance furnaces deliver temperatures up to 538°C (1000°F) and are great for such processes as annealing, aging, stress relieving and other process critical applications.

The RAF is available in cabinet and benchtop models. The cabinet furnace is suited for volume production while the benchtop model, with its small footprint, is ideal for high temperature process development in a laboratory.

Standard digital controls regulate temperatures within tight tolerances and provide 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. 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.



FEATURES AT A GLANCE

- ◆ Temperatures up to 538°C (1000°F)
- ◆ 3 models - 4.2, 19 & 35 cu. ft. (117, 552 & 991 liters) capacity
- ◆ Horizontal recirculating airflow
- ◆ Despatch unique adjustable louvers on RAF2-19 and RAF 2-35 models
- ◆ Horizontal recirculating airflow
- ◆ Digital control with 3/4" (1.9cm) LED display
- ◆ RS485 Modbus communication PC interface
- ◆ Audible and visual high-limit alarm
- ◆ 304 stainless steel interior
- ◆ Disconnect switch on main control panel
- ◆ 5 year heater warranty
- ◆ End-of-cycle and high-limit indicators
- ◆ UL/C-UL listed open industrial control panel

OPTIONS

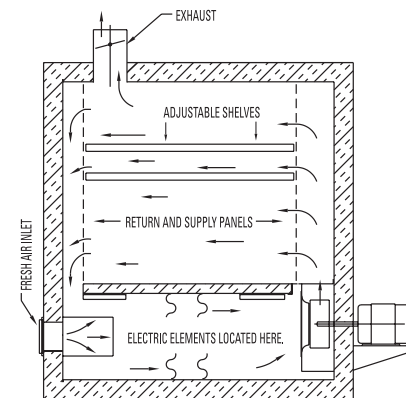
- ◆ Protocol 3™ control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Chart recorder
- ◆ Access ports for test wires
- ◆ CE compliant

RAF		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 120.7 x 76 x 106.7 cm
Capacity in cubic feet (liters)		4.2 (119)	19.5 (552)	35 (991)
Overall size (width x depth x height)		50 x 31 x 48 in 127 x 79 x 122 cm	78 x 42 x 78 in 198 x 107 x 198 cm	97 x 50 x 83 in 245 x 127 x 211 cm
Electrical	480V three phase	60 Hz, 16.6 Amps, 12kW	60 Hz, 39.7 Amps, 30kW	60 Hz, 65.1 Amps, 50kW
	240V single phase	60 Hz, 54.9 Amps, 12kW	NA	NA
Number of shelves provided		2	2	2
Maximum number of shelves		8 on 2 in (5.1cm) centers	12 on 3 in (7.6cm) centers	14 on 3 in (7.6cm) 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 diameter		3 in (7.6 cm)	7 in (17.8cm)	7 in (17.8cm)
Doors		1	2	2
Approximate net weight		400 lbs (349 kg)	1,595 lbs (723 kg)	1,870 lbs (848 kg)
Approximate domestic shipping weight (export adds weight)		480 (218 kg)	1,770 lbs (803 kg)	2,045 lbs (928kg)
Insulation thickness		5 in (15.2cm)	6 in (15.2cm)	6 in (15.2cm)
FUNCTIONAL SPECIFICATIONS				
Time to temp with no load (40°C to 204°C)		15 minutes	20 minutes	20 minutes
Time to temp with no load (40°C to 538°C)		53 minutes	75 minutes	55 minutes
Temperature Uniformity		± 2.3°C at 204°C ± 3.9°C at 371°C ± 5.6°C at 538°C	± 2.3°C at 204°C ± 3.9°C at 371°C ± 5.6°C at 538°C	± 2.3°C at 204°C ± 3.9°C at 371°C ± 5.6°C at 538°C
Minimum operating temp		40°C (104°F)	40°C (104°F)	40°C (104°F)
Maximum temperature		538°C (1000°F)	538°C (1000°F)	538°C (1000°F)
Control Stability		±0.5°C	±0.5°C	±0.5°C
Repeatability		±0.5°C	±0.5°C	±0.5°C
Maximum load capacity		200 lbs (91 kg)	850 lbs (386 kg)	850 lbs (386 kg)
Maximum shelf capacity		30 lbs (13.6 kg)	100 lbs (45.4 kg)	300 lbs (136 kg)
Exhaust capacity (minimum/maximum)		Adjustable to 12 CFM (5.6 l/s)	Adjustable to 27 CFM (12.7 l/s)	Adjustable to 110 CFM (52 l/s)
Recirculating fan		1/2 HP 550 CFM (260 l/s)	1 HP 1150 CFM (543 l/s)	3 HP 2500 CFM (1180 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. Specifications are subject to change without notice. If the existing specifications differ from yours, ask about our customizing capabilities.

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

Δ represents the change in ambient temperature



RAF front view cross section showing airflow pattern.



RAF2-35 with optional pneumatic lift door

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