# **TFO Series Forced Air Ovens TFO-1 • TFO-3 • TFO-5**



CASCADE



## Ideal for Industrial, Analytical and General Laboratory Applications

Cascade TEK forced air ovens are recommended for critical scientific research, analytical, and laboratory use. These oven are also suitable for use on the production floor and beyond. Typical applications include aging, curing, drying, baking, pre-heating, conditioning and life cycle testing. Choose from three cabinet sizes, each with forced-air circulation and reserve heating power for quick recovery after door openings.

## **TFO Ovens Features and Benefits**

The TFO Series ovens are engineered for safe, accurate, and uniform performance in demanding laboratory environments.



- Fast ramp-up to 306°C for faster cycle times.
- Temperature range approximately 20°C above ambient to 306°C for multiple applications.
- Watlow PM9 Plus programmable controller with ramp and soak capabilities.
- Integrated Over Temperature Limit with digital set-point (OTL) to provide additional temp limit control.
- Stainless steel interior construction for long life operation, easy cleaning.

- Forced-air circulation to assure maximum temperature uniformity.
- 5 Triple-wall construction to minimize external surface temperature.
- Stainless steel shelves are adjustable on 0.5" (12.7mm) centers to provide flexible inventory options.
- Rear access port, 1.75" diameter (44mm) for independent cables, instrumentation.
- Intake and Exhaust Damper, 3.0" diameter (76 mm), adjustable, with external connection to customer-supplied vent for effluent exhaust if required.

Internationally certified CAN/CSA, UL, EN, IEC 61010, and compliant with CE.



## **High Temperature Performance**

Cascade TEK forced air ovens are available in 110-120V, 50/60Hz or 220-240V, 50/60Hz configurations and achieve temperatures up to 306°C with fast ramp-up and recovery times.

**Heat-Up** Rapid heat-up times to  $306^{\circ}$ C get your product to temperature faster than ever.

**Recovery** After a standard door opening the TFO family has rapid recovery times to setpoint. Optimized air flow and heating elements allow your product to return to temperature setpoint in the shortest time yet.

## **Applications:**

- Aging
- Asphalt Testing
- ASTM, UL, and Life Testing
- Baking, Conditioning, Curing
- Burn-in
- Drying
- Moisture and Stability Testing



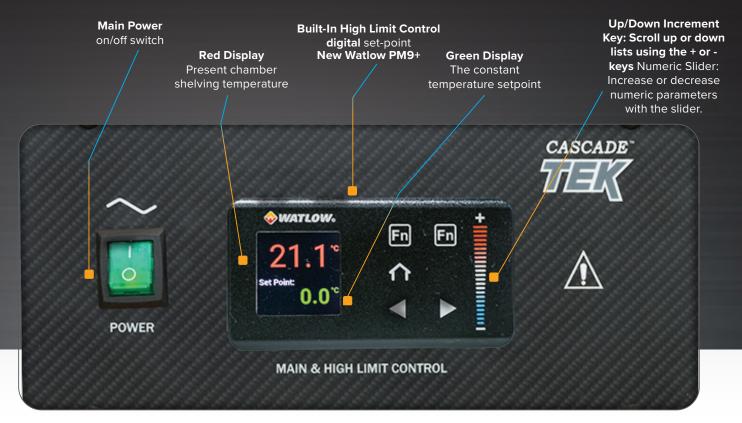


## Control, Timer Program, and Monitoring

The Watlow PM9 Plus PID (proportional, integral, derivative) controller commands proportional power to the heating elements to provide the most accurate and responsive control. The control parameters are matched to the oven size to assure faster response to setpoint without overshoot, and quicker recovery following door openings. The Watlow PM/9 Plus supports custom recipe creation. Each recipe can support full ramp and soak control for custom applications. A total of 4 recipes with up to 40 steps can be used to configure the oven to your process.

## **Integrated Watlow Control Panel**

All controls are centrally located on the main panel including manual power, Watlow PM9 PLUS controller with integrated over-temperature limit and recipe control.



## **TFO Oven Specification Chart**

Interior Volume, Nominal	<b>TFO-1</b> <b>1.4 cu.ft.</b> (39.4 liters)	<b>TFO-3</b> 3 cu.ft. (85.0 liters)	<b>TFO-5</b> 4.9 cu.ft. (138.0 liters)
	307 x 349 x 368 mm	419 x 495 x 412 mm	533 x 494 x 527 mm
Exterior Dimensions W x D x H	<b>22.7" x 23.5" x 31.5"</b>	<b>26.9" x 28.6" x 34.0"</b>	<b>31.4" x 28.1" x 38.8</b> "
	577 x 596 x 800 mm	684 x 727 x 840 mm	798 x 714 x 986 mm

\*Extra standard and reinforced shelves available. See Accessories.

\*Units can be ordered in 230V designations by adding "-2" to the part numbers. TFO-1-2, TFO-3-2, TFO-5-2

## **Customization Options**



Cascade TEK offers a variety of customization options for any application. With our impressive team of experts, Cascade TEK builds solutions to any problem.

Forced air ovens provide the ultimate drying experience. Cascade TEK's forced air ovens are made in the USA.

- Electronically data-log your drying process
- Programmable temperature control & digital overtemp protection
- Additional access ports for feed through and power connections



Ask about reinforced shelves, chart recorders, calibrations, or any other option you require.

Cascade TEK products are built to your process!



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## **TFO Series**



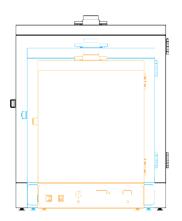
Cascade TEK's TFO Series comes in variety of sizes to fit any application need. Visit cascadetek.com to learn more about the TFO Series!

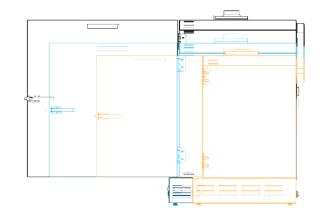


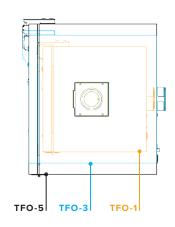
## FRONT

#### **RIGHT SIDE**

TOP







## **TFO Oven Options and Accessories**

	TFO-1	TFO-3	TFO-5
Reverse Door	907-952-0016	907-952-0017	907-952-0018
3" Rear Access Port Upgrade	907-958-0001	907-958-0002	907-958-0003
Caster Platform	N/A	9000597	9000594
Chart Recorder (Single Pen)	6900535	6900535	6900535
Chart Recorder (Dual Pen)	6900008	6900008	6900008
Chart Recorder (Honeywell 3-Channel Paperless)	6900531	6900531	6900531
Extra Shelf, Standard, Max. Weight 50 lbs (22kg); Includes Brackets	9751227	9751228	9751229
Extra Shelf, Reinforced, Max. Weight 75 lbs (34kg); Includes Brackets	907-975-0001	907-975-0002	907-975-0003
485-USB Converter Communication Cable	9900764	9900764	9900764
Calibration of Single Component (NIST Traceable)	9990840	9990840	9990840

Options must be specified when ordering. Contact Cascade TEK for additional custom inquiries.











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Cascade TEK Specifications subject to change without notice. Cascade TEK PN: 0740571 | Made in USA. 4/24