



MO-36



Inside of MO-36



MOA-6

GILSON ROLLING THIN FILM OVEN ASTM D2872; AASHTO T 240; CALIFORNIA 346

- Quick 8 minute temperature time to recovery after loading samples, meets ASTM and AASHTO requirements
- Easy to remove bottom tray allows for quick change of elements or spill clean-up
- High-temperature silicone compression fit gaskets securely grip RTFO Bottles
- Double-walled stainless steel oven maintains temperature to 215°C ± 1°C (419°F ± 1.8°F)
- Platinum Resistance Temperature Detector (RTD) ± 0.1°C from 0°-215°C, (± 0.18°F from 0°-419°F)

The new Gilson Rolling Thin Film Oven by ATS features advanced design, solid construction and reliable accuracy. Precision components are paired with basic controls to insure accurate, repeatable results and straightforward operation. Set-up and operational procedures are fast and easy with minimal training required. A built-in timer controls test times. Precision temperature control is easily programmed for test temperature of 163°C (325°F), with maximum temperature rated up to 215°C (419°F). The exclusive Gilson MO-36 is CE marked and Made in the USA, meeting all test method specifications and exceeding requirements for recovery time, a requirement other manufacturers have been unable to meet.

Temperature is precisely controlled to ±0.1°C with a built-in NIST Traceable Platinum RTD temperature sensor, assuring an overall temperature uniformity of ±1°C, and safe, mercury-free operation. Time from ambient to 163°C (325°F) set point is 20 minutes, and full heat recovery is 5 to 8 minutes after loading of specimens. A thermal shutdown switch provides over-temperature protection at 250°C. Operating airflow of 0-5,000 mL/m is indicated on the included

flow meter with a range of 200 to 14,000 ml per minute. A source of clean, dry compressed air is required for operation. Soft, high-temperature silicone compression gaskets in the rotating carousel grip RTFO Bottles securely, yet allow quick and easy insertion and removal with no scratching. Cleaning and access for maintenance of the elements is easy with the removable tray at the bottom of the case.

The rugged double-wall stainless steel case is features leveling legs for convenient bench-top operation. A set of eight serial numbered RTFO Sample Bottles is included. Additional Gilson serial-numbered bottles are ordered as MOA-6. The MOA-5 Bottle Scraper is optionally available, and is shaped to fit RTFO bottles for quickly removing testing residue. Other optional accessories include special stainless steel MOA-3 Oven Tongs with synthetic gripper pads for easy handling of hot bottles, and the stainless steel MOA-10 Cooling Rack, meeting ASTM requirements to hold nine specimen bottles. Electrical requirements: 230V-50/60 Hz, single phase, 15 amps, 3500 watts. **Product Dimensions:** 37.25x28.75x36in (946x730x914mm) WxDxH.

GILSON ROLLING THIN FILM OVEN

Gilson Rolling Thin Film Oven, 230V-50/60Hz.....MO-36

Accessories

RTFO Sample Bottle, Serial-Numbered.....MOA-6
 RTFO Bottle Cooling Rack.....MOA-10
 RTFO Bottle Scraper.....MOA-5
 RTFO Oven Tongs.....MOA-3





MO-38



Close-up of touch screen



MOA-6

ATS ROLLING THIN FILM OVEN ASTM D2872; AASHTO T 240; CALIFORNIA 346

The RTFO Touch Rolling Thin Film Oven by ATS is a new benchmark in the simulation of short-term aging of asphalt binder materials. A 6in (152mm) full color touch-screen controller and built-in computer precisely control customizable parameters and collect temperature and airflow data during operation. Guided menus with intuitive user interface allow quick set up of all test and performance parameters without the need for extensive training and a built-in timer allows time and date settings for automatic preheat. The MO-38 meets or exceeds ASTM, AASHTO, and California test methods, and its unique design allows custom-setting of parameters by the user for special applications.

The Platinum RTD temperature sensor is NIST traceable and precisely controls temperatures to $\pm 0.1^{\circ}\text{C}$ and oven uniformity to $\pm 1^{\circ}\text{C}$. Heating time to set-point is 20 minutes, and full temperature recovery is 8 minutes or less after specimens are loaded. The thermal shutdown switch offers 250°C over-temperature protection. Maximum rated temperature is 215°C (419°F). An NIST traceable digital flow meter displays air flow from 0-5,000 ml/m to accuracy of $\pm 0.8\%$. An analog air meter displays air pressure from 0 to 100psi (6.9bar). A source of clean, dry compressed air is required for operation. Set up to an available internet connection allows remote monitoring and control off-site. The completely redesigned carousel system quickly secures bottles with a gentle push; no scratching or fragile hardware to break. Soft, high-temperature silicone compression gaskets grip RTFO Bottles securely while allowing easy insertion and removal. Cleaning and access for maintenance of the elements is easy with the removable tray at the bottom of the case. The bench top MO-38 features double-wall stainless steel case construction equipped with leveling legs.

Special stainless steel tongs with synthetic gripper pads are available for easy handling of hot bottles. Eight RTFO bottles are included with the MO-38. Additional Gilson RTFO serial numbered specimen bottles are ordered as MOA-6. Other accessories include the stainless steel MOA-10 Cooling Rack, designed to ASTM requirements to hold nine specimen bottles, and the MOA-5 Bottle Scraper, shaped to exactly fit RTFO bottles for removing the interior film. Electrical requirements: 230v AC 50/60 Hz, single phase, 15 amps, 3500 watts. **Product Dimensions:** 37.25x28.75x36in (946x730x914mm) WxDxH.

ATS ROLLING THIN FILM OVEN

ATS Rolling Thin Film Oven, 230V, 50/60Hz MO-38

Accessories

RTFO Sample Bottle, Serial-Numbered..... MOA-6
 RTFO Bottle Cooling Rack..... MOA-10
 RTFO Bottle Scraper..... MOA-5
 RTFO Oven Tongs..... MOA-3

GILSON RTFO SAMPLE BOTTLE ASTM D2872; AASHTO T 240; CALIFORNIA 346

Glass Sample Bottles for asphalt Rolling Thin Film Ovens (RTFO's) are made in the USA exclusively for Gilson to meet test method specifications. Each MOA-6 bottle is individually hand-blown using Pyrex® brand borosilicate glass and has a unique serial number etched in for traceability. Having additional bottles on hand increases sample preparation efficiency and reduces clean-up time. Order eight bottles for a complete set.

GILSON ROLLING THIN FILM OVEN

RTFO Sample Bottle, Serial-Numbered..... MOA-6



Rolling Thin Film Ovens (RTFO's) measure the effect of heat and air on a moving film of hotmix asphalt binder to simulate short-term aging during production, handling, and paving operations. A controlled flow of heated air is directed into the openings of horizontal glass bottles as they rotate on a carousel rack. Specimen characteristics are measured before and after conditioning to determine values.

