TGM800 Thermogravimetric Moisture

Specification Sheet

	1.5 in ⌀ Crucible	2.4 in ⌀ Crucible
Sample Mass	1 g (nominal)	3 g (nominal)
Number of Samples	16 (+1 reference)	10 (+1 reference)
Precision	0.02% RSD (1 sigma, 1 g inert sample)	
Balance	Resolution 0.0001 g	
Oven Temperature	Ambient (minimum)	
Temperature Control	50 °C to 150 °C Accuracy: 2% of set point or ±2 °C; whichever is greater Stability: 2% of set point or ±2 °C; whichever is greater	
Maximum Ramp Rate	25 °C/minute (ambient to 104 °C)	
Gas Requirements	Compressed Air (oil and water free) or Nitrogen 99.5% @ 35 psi (2.4 bar) ±10%	
Gas Flow Rate	0 to 5 Lpm	
Ventilation	Optional, passive connection for a 1 inch duct is acceptable for lengths no greater than 10 feet (3 meters)	
Environmental Conditions	Temp: 15 to 35 °C (59 to 95 °F) Rel. Humidity: 20 to 80%, non-condensing Avoid installation locations with excess drafts, vibrations, and/or traffic	
Sound Pressure Level	65 dBa (max reading at operator's level per IEC/EN 61010-1)	
Electrical Power	115/230 V (+10% at max load), 50/60 Hz, Single Phase; 10/5 A; 1,500 Btu/hr*	
Display	10.1 in (diagonal), color LCD glass capacitive touch-screen	
Dimensions**	15.25 in W x 29 in D x 16 in H (39 cm x 74 cm x 41 cm)	
Weight (approximate)	75 lb (34 kg)	

Part Numbers	
TGM-800C	TGM800 with touch-screen display, software, and PC

**Steady-state operation with an oven temp of 130 °C.*
***Allow for a 3 in (7.5 cm) minimum access area around the side of the instrument; space not required behind the instrument.*

Delivering the Right Results

Theory of Operation

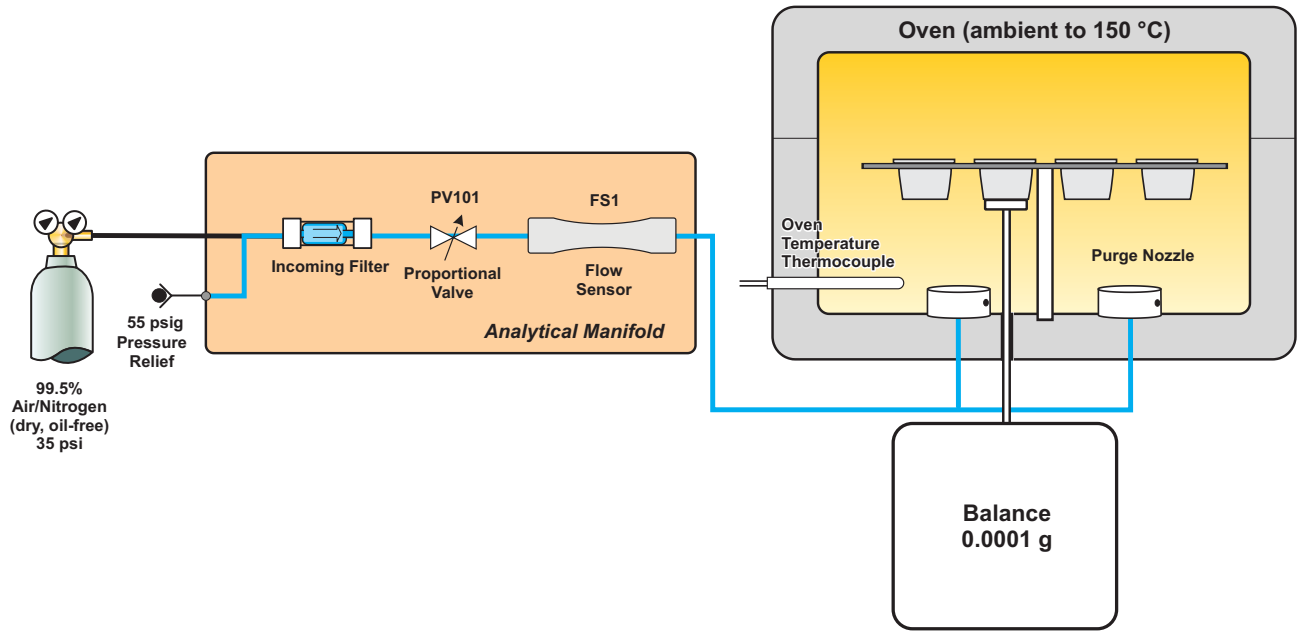
The TGM800 is a thermogravimetric analyzer designed to directly determine moisture content of materials using a loss-on-drying technique. Mass loss of the sample is measured as a function of the oven temperature while controlling the atmosphere and ventilation rate. The instrument consists of a computer, an integrated four place balance, and a multiple sample oven that allows up to 16 samples to be analyzed simultaneously.

After an analysis method has been selected, empty aluminum foil crucibles are loaded into the oven carousel. The analysis method controls the carousel, oven, atmosphere ventilation, and balance operation. On completion of crucible tare, each crucible is presented to the operator for sample loading. The initial sample mass is measured and stored automatically. Once all the samples have been loaded, the analysis starts with the oven temperature ramping to the set point, the beginning of ventilation, and the sequential collection of the individual sample masses. Crucibles are automatically indexed to the position above and lowered onto the balance pedestal where the sample mass is recorded. The mass loss of each sample is monitored, and the oven temperature and atmosphere ventilation rate is controlled according to the selected analysis method. Method analysis length can be programed to a fixed time or be dependent on the sample mass constancy. The moisture result is calculated as a percent mass loss for each sample and reported at the end of the analysis.

The instrument contains an intuitive touchscreen interface that enables complete access to analysis control, method settings, diagnostics, sample reporting, and more in a highly organized and immersive environment. Analysis methods can be tailored to satisfy most moisture applications with editable oven temperature, temperature ramp rate, atmosphere, and ventilation rate. The software also provides on-screen plotting of sample mass loss and temperature, as well as storing and managing all of the data and quantitative calculations.

The TGM800 maximizes lab efficiency, productivity, and analytical performance with a sample batch capacity up to 16 samples with sequential sample mass measurements occurring throughout the analysis process.

Flow Diagram



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