xrf scientific

THERMOGRAVIMETRIC ANALYSIS

XRTGA 1100







Features

30 Sample Positions
for high throughput

1100°C Max Temperature
for demanding applications

Powerful Software
instrument and desktop software

Applications
minerals, materials, organic matter and more

BUILT FOR THROUGHPUT AUTOMATED TGA

XRTGA 1100

Large Capacity
30 sample positions plus 1 reference position

Powerful Software
Fully integrated PC with easy-to-use instrument software. Desktop software for analysing results



Temp Range
Ambient to 1100° C. Accuracy +/- 1° C

Safe Design
Cool to touch, integrated ventilation, over-temp protection

Overview

Built with industrial users and large-scale scientific facilities in mind, the XRF Scientific automated macro thermogravimetric analyser (TGA) is a high-throughput solution for a wide range of thermal analysis applications. Our TGA system is based on 30 years' experience developing precise heating and weighing solutions for applications across the full spectrum of science and industry.

Thermogravimetry sets the standard for thermal decomposition testing for parameters as varied as moisture, volatiles, ash, fixed-carbon, and Loss on Ignition (LOI) content. Our TGA analyser leverages proprietary heating and weighing systems to continuously monitor sample mass changes over time as a function of temperature. User-defined thermal programs can be easily established using an intuitive touchscreen interface, enabling customers to establish different thermogravimetric profiles depending on their materials/phenomena of interest.

Our brand-new TGA adds value to high-throughput workflows with an increased sample capacity and greater temperature capabilities without a significant uptick in cost.

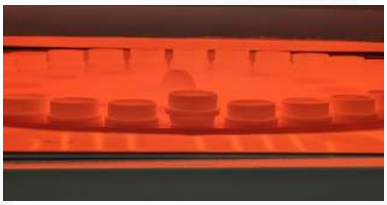
XRTGA 1100

FEATURES



Superior Weighing Stability

Engineered to maintain measurement integrity and stability: the xrTGA1100 ensures consistent and reliable measurements through a stable thermally isolated balance – providing unmatched stability in the most demanding thermal environments.



Fast Heating and Cooling Cycles

We understand your laboratory processing time is valuable and you want the results fast. Innovative design features ensure heating and cooling cycle times are quick and accurate, with noticeable improvements over other machines available on the market.



Analysis Software

The xrTGA software include a comprehensive set of relevant tools available for parameter settings, diagnostics, real-time data analysis as well as data processing. Analysis software can be accessed on the instrument directly or via a Windows desktop version. Features of the software include LIMS communication, remote access and convenient data export CSV, XML, Excel®.



Robust and Safe Design

We have applied decades of knowledge in furnace safety into the TGA. The instrument meets stringent CE standards for external touch temperatures and required safety features. The TGA is built to withstand the harshest laboratory environments, with maximum uptime requirements.



Atmosphere Control

Integrated software-controlled gas switching for experiments requiring inert or reactive atmospheres.

APPLICATIONS

Application Types

- Minerals: iron ore mining / steel production, coal, bauxite
- Food: flours, pasta, chocolate
- Construction materials: cement, limestone/lime
- Materials: plastics, alumina, gypsum, agricultural materials, ceramics, pharmaceutical materials

Standardised Methods

- Moisture and ash determination in flour – AOAC 925.10 & AOAC 923.03
- Ash content in thermoplastics – ASTM D5630-94
- Loss on ignition in solid combustion residues – D7348-08
- Loss on mass in alumina – AS 2879.1-2000
- Loss on ignition in cement – ISO 29581-2:2010 / ASTM C 114
- Moisture and loss on ignition in iron ore – ISO 3087:2011 and ISO/TR 18230:2015
- Various AOAC, ASTM, ISO and DIN methods
- And more ...

ACCESSORIES

Item	Product Ordering Code
Crucible 16ml Al2O3	5100201
Lid Al2O3 to suit Crucible code 5100201	5100202
Platinum Crucible 15ml, Pt, 15g	5100205
Platinum Crucible Liner, Pt, 8g	5100206
Crucible 30 position tray	5100207
Stainless steel tongs for removing lids	5100208

XRTGA 1100

SPECIFICATIONS

Capacity	30 sample positions plus 1 reference position
Sample weight capacity	0.1 – 10g
Weighing precision	± 1%
Resolution	0.1mg
Temperature range	Room temperature to 1100°C
Temperature accuracy	±1°C
Temperature precision	± 1°C at 105°C and ± 2°C at all other ranges
Heating rate	1°C/min to 55°C/min
Furnace cooling	Forced air and multi-height lid opening for faster cool down
Gas flow rate	0l/min up to 40l/min
Power requirements	230 V, 50/60 Hz, max. 32 A
Dimensions (W x D x H)	850 x 755 x 675mm H 1100mm with open lid
Weight	165kg
Safety and certification	CE marking Operator safety hand switch points for lid closing Integrated ventilation system Over temperature protection safety circuit

We reserve the right to change the design or specification of our products without notice. Some of the information contained in this brochure is general in nature and customers should check that it is applicable to their individual circumstances.