

# Suggested ordering specification for TherMax 700

Thermo Fisher Scientific, Process Instruments, Newington, USA

## General

The thermogravimetric analysis system is used to study the weight change behavior of chemical compounds, metals and ceramics in various gaseous environments from room temperature to 1700 °C.

## Balance

A digital recording microbalance:

- Capacity of 100 grams
- Weighting range of  $\pm 10$  g with 1  $\mu$ g readability (sensitivity)
- Continuous visual digital microgram display
- Full range zeroing
- Bake-out temperature of 125 °C
- Weighing unit capable of vacuum to  $5 \times 10^{-5}$  torr
- Pressure relief valve
- Corrosion resistant gold anodized beam
- Heat shield
- Fan for cooling
- Preformed extension wires

## Furnace

- Maximum temperature of 1700 °C
- Motorized assembly for easy sample access
- Temperature repeatability to  $\pm 3$  °C
- Heating rates from 0.1 to 100 °C/min
- External furnace
- Visual display of temperature

## Reaction chamber

- Patented corrosive-resistant design
- Alumina reactor tube
- Alumina baffle
- Sample size of 30 mm diameter and a height of 50 mm
- Vacuum to  $5 \times 10^{-5}$  torr (with optional vacuum accessory and pumping system)
- Automatic, programmable gas switching of 4 reaction gases (with optional CRGC)

## Computer and data acquisition

- Pentium 100 MHz personal computer with 32 MB RAM and 1 GB hard drive
- 1.44 MB 3.5" floppy drive, CD-ROM, and VGA/SVGA monitor
- 1 serial RS-232 ports and 1 parallel port
- mouse is required
- Windows NT 4.0 or higher

## Software

- Continuous monitoring and display in real-time of the weight, time and temperature
- Run continuously for as long as there is free hard disk space
- Method defined heating and cooling
- Program as many ramps and isothermal segments as you wish in one run
- Switch gases and control flow rates with the optional Thermo Scientific CHAN switching accessory
- Substitution weighing
- First derivative
- Peak integration on derivative data
- Data smoothing
- Weight percent
- Residue percentage
- Addition and subtraction of one data file from another
- Scaling of data
- Click and drag zooming
- Conversion of data for export to standard spreadsheet
- Annotation on the curve
- Importing ASCII data from other programs
- Log information about the file
- GLP (Good Laboratory Practice) tracking and reporting of data modification on print-outs
- Windows NT 32 bit software
- Written in Microsoft Visual C++ using MFC (Microsoft Foundation Class)
- Designed according to Windows Graphical User Interface Guidelines

- On-line context sensitive help
- Microsoft Office style floating toolbars
- Compatible with Thermo Scientific CHAN DOS TGA data files
- Multiple data windows can be opened

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C211\_14.08.2007

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