



Thermogravimetric Analyzer TGA Thermochain

General Information

ELTRA's TGA Thermochain is a thermogravimetric analyzer which automatically determines parameters such as moisture, volatiles or ash content. Temperature, surrounding atmosphere and end condition (such as constant weight or measurement time) can be freely selected by the user. The samples are automatically introduced to and removed from the furnace. The TGA Thermochain is designed for use in laboratories with a high sample throughput where many samples are analyzed for one parameter.



The TGA Thermochain measures a maximum of 20 samples of up to 5 g simultaneously. Once the sample is analyzed, a gripper removes the crucible and picks up another sample from the loader and introduces it into the furnace.

Application Examples

coal, coke, food, limestone, plastics

Product Advantages

- high sample throughput thanks to Autoloader with 36 positions
- simultaneous measurement of 20 samples
- rapid analysis thanks to constant temperature without heating-up and cooling-down times
- flexible measurement conditions (temperature up to 1,000 °C, carrier gas)
- end conditions include time and constant weight

Features

Measured elements	ash content, moisture, volatiles
Samples	inorganic, organic, synthetic
Field of application	agriculture, biology, chemistry / plastics, coal / power plant, construction materials, environment / recycling, food, geology / mining, glass / ceramics, medicine / pharmaceuticals
Furnace	resistance heated ceramic furnace, programmable in 1 °C steps from 50 °C up to 1000 °C
Detection method	balance
Max. number of samples	20 crucibles (furnace) + 36 crucibles (Autoloader)
Balance resolution	0.0001 g
Balance precision	0.02 % RSD
Gas required	depends on application: oxygen 99.9 % pure (2 - 4 bar) and/or nitrogen 99.9 % pure (2 - 4 bar) and air 99.5



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	% (5 - 6 bar)
Power requirements	230 V, 50/60 Hz, max. 32 A
Dimensions (W x H x D)	75 x 90 x 68 cm 110 x 90 x 68 cm (with receptacle)
Weight	~ 80 kg
Required equipment	externe Absaugung (ø 100 mm; Gebläse mit 4m ³ /min), monitor, PC

Function Principle

To analyze a sample with the TGA Thermochain a parameter combination of temperature, flushing gas and end condition is defined.

The Thermochain then sets the defined parameters and introduces the first 20 samples to the furnace for analysis under consistent conditions.

In the meantime, the loader can be equipped with another 36 samples. The analysis of a sample is finished when the end condition (e. g. time or constant weight) is achieved and the crucible with the analyzed sample is dropped into a collecting vessel. The empty position in the furnace's carousel is now filled with another sample from the loader which is analyzed under the same conditions. Thus a continuous throughput is guaranteed.

Order data

ELTRA TGA Thermochain

(Please order PC, monitor separately)

88100-3501	TGA Thermochain with loader
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PC, Monitor

71015	Computer with dual core processor, 300 GB HDD, 4 GB RAM, Windows operating system, DVD-ROM, keyboard, mouse
71016	Monitor, TFT
71002	Printer

Accessories

26063	Ceramic crucible
26053	Ceramic lid
88600-0002	Balance (resolution 0.0001 g)
72070	Oxygen regulator
72080	Nitrogen regulator
71090	Voltage Stabilizer 5 KVA



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11830	Compressed air tube 5 m, 4x1
71010	Brush
23111	Spatula

Spare and Wear Parts

26276	Crucible tray
26285	Balance pedestal
26063	Ceramic crucible
26053	Ceramic lid
26288	Wind shield for balance