# THEMYS



# **ULTRA-HIGH TEMPERATURE CAPABILITY**

to 2400°C with a single furnace

**VARIETY OF ATMOSPHERE CONDITIONS** multiple carrier and reactive gas options

# HIGH ACCURACY & VERSATILE

hang-down symmetrical beam balance specifically designed for TGA applications

 ACCURATE AND SENSITIVE tri-couple DTA technology

### MODULAR ADAPTATIONS

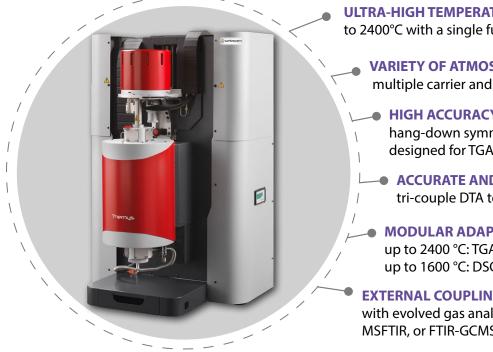
up to 2400 °C: TGA, DTA, TG-DTA, TMA up to 1600 °C: DSC, TG-DSC

#### **EXTERNAL COUPLING CAPABILITY**

with evolved gas analyzers (FTIR, MS, GCMS, MSFTIR, or FTIR-GCMS)

GENERAL		TGA		STA			
					DTA, TG-DTA	DSC, TG-DSC	
Temperature range (°C)			Ambient to 2400			Ambient to 2400	Ambient to 1600
Programmable heating rate (°C/min)			0.01 to 100			0.01 to 100	
Crucible volumes and maximum sample size			55 to 2 500 μl or Height: 20 Diam: 14 mm without crucible			30 to 300 μl	80 to 100 μl
PureGas option		1 carrier gas flow among 3 connected, 1 Mass Flow Controller (MFC)					
	GasBlend option		1 carrier gas flow among 3 connected + 1 auxiliary gas flow, 2 MFC				
Gas flow	MultiGasBlend option		1 carrier gas flow among 3 connected + 1 pure OR blended auxiliary gas from up to 3 of the 5 connected ones, 4 MFC				
	Corrosive gases option		1 carrier gas flow among 3 connected, 1 Mass Flow Controller (MFC) + 1 corrosive gas line without mass flow control				
Vacuum		Primary (< 1 mbar), forced primary (< $5.10^{-2}$ mbar), secondary vacuum options					
	BALANCE		HIGH SENSITIVITY	HIGH VERSATILITY	HIGH CAPACITY		
		Small	+/- 5	+/- 200	+/- 300		
Measuring	j range (mg)	Large	+/- 50	+/- 2 000, AUTO-TARE	+/- 3 000		
Maximum loading capacity (g)		35	35	100			
TGA baseline drift (temperature scanning) <sup>b,c</sup>		30 μg up to 1000 °C 40 μg up to 1600 °C	35 µg up to 1000 °C 50 µg up to 1700 °C	< 100 µg up to 1 700 ℃			
TGA baseline drift precision $(\mu g)^c$			+/- 3	+/- 10	-		
Balance resolution (small range) (µg)			0.00059	0.023	0.03		
DTA/DSC						DTA, TG-DTA	DSC, TG-DSC
Calorimetric precision (%) <sup>c, e</sup>						+/- 2 % <sup>f</sup>	+/- 1 %
Temperature precision (°C) <sup>c, e</sup>						+/- 0.8 °C	+/- 0.4 °C

b. Under helium flow; c. Typical data; d. Pressure dependent; e. Based on metal standard melting; f. If calibrated



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# **MODULAR ADAPTATIONS** up to 2400 °C: TGA, DTA, TG-DTA, TMA up to 1600 °C: DSC, TG-DSC

### **EXTERNAL COUPLING CAPABILITY**

with evolved gas analyzers (FTIR, MS, GCMS, MSFTIR, or FTIR-GCMS)

	GENERAL	TMA version			
Temperatu	ıre range (°C)	Ambient to 2400			
Programm	able heating rate (°C/min)	0.01 to 100			
Maximum	sample size (mm)	Height : 20 Diam : 10			
Gas flow	PureGas option	1 carrier gas flow among 3 connected, 1 Mass Flow Controller (MFC)			
	GasBlend option	1 carrier gas flow among 3 connected + 1 auxiliary gas flow, 2 MFC			
	MultiGasBlend option	1 carrier gas flow among 3 connected + 1 pure OR blended auxiliary gas from up to 3 of the 5 connected ones, 4 MFC			
Vacuum		Primary (< 1 mbar), forced primary (< 5.10 <sup>-2</sup> mbar), secondary vacuum options			
	ТМА				
Resolutio	n (nm)	0.2			
Measurin	g range (mm)	+/- 2			