



Tensião

Specifications



Product group specifications**Tensífo****Force measurement**

Maximum load	210 g
Resolution	10 μ g
Measurement rate	50 Hz
Adjustment	fully automated
Adjustment weight	internal weight
Locking mechanism	automatic

Sample stage

Travel distance	120 mm
Simple platform	optional
Thermostated jacket	optional: 50 mm, 70 mm
Vessel for inverse CMC	optional: cone-shaped vessel
Integrated sample stage	yes

Drive

Resolution	16 nm
Travel speed	0.1 to 800 mm/min
Type of motor	brushless DC servo motor

Optical height sensor

Resolution	0.05 μ m
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Software

ADVANCE	surface tension (SFT)/interfacial tension (IFT)
	contact angle/surface free energy
	critical micelle concentration (CMC)
	liquid density
	solid density
	special purpose
	adhesion analysis
	sedimentation/penetration

Measurement specifications**Tensífo****Du Noüy ring**

Results	surface tension (SFT)/interfacial tension (IFT)/critical micelle concentration (CMC)
Range	1 to 2000 mN/m
Resolution	0.001 mN/m
Correction methods	Harkins-Jordan, Huh-Mason, Zuidema-Waters, linear correction, no correction

Rod method

Results	SFT/IFT/CMC
Range	1 to 2000 mN/m
Resolution	0.02 mN/m

Measurement specifications**Tensífo****Wilhelmy contact angle**

Minimum fiber diameter	20 μm
Results	contact angle
Range	0 to 180°
Resolution	0.01°
Type	advancing, receding

Wilhelmy plate

Result(s)	SFT/IFT/CMC
Range	1 to 2000 mN/m
Resolution	0.002 mN/m

Washburn

Result	contact angle (CA)
Range	0 to 90°
Resolution	0.01°
Type	advancing

Surface free energy of solids

Result	surface free energy
Models	equation of state, Zisman, Fowkes, Wu, Owens-Wendt-Rabel-Kaelble, extended Fowkes, acid-base theory

Liquid density

Range	1 to 2200 kg/m ³
Resolution	0.1 kg/m ³
Precision	± 3 kg/m ³

Solid density

Range	1000 to 20000 kg/m ³
Resolution	1 kg/m ³
Precision	± 3 kg/m ³

Sedimentation

Result	graph: mass vs. time
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Penetration

Result	graph: mass vs. time
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General specifications

Tensífo

Temperature control

Types	a. liquid (-10 to 130 °C)	b. electrical (50 to 300 °C)	c. Peltier -15 to 135 °C
Range		-15 to 300 °C	

Temperature measurement

Range	-60 to 450 °C
Resolution	0.01 °C
Precision	±0.05 °C
Accuracy	±0.5 °C
Internal sensor	sample stage
External sensor	optional: sample vessel ¹⁾

Housing and peripherals

Built-in and software-controlled ionizer	optional
Built-in bubble level	optional (electronic bubble level)
Glass windshield doors	yes
Stainless steel measuring compartment	yes
Control pad	yes
Touch panel	integrated color IPS display (1024 x 600 pixel, size 7")

Environment

Operating temperature	15 to 30 °C
Humidity	> 30% without condensation

Instrument dimensions

Footprint	290 mm × 360 mm (W × D)
Height	560 mm
Weight (without accessories)	29 kg

Power supply

Voltage	100 to 240 VAC
Power consumption	40 W
Frequency	47 to 63 Hz

Interfaces

PC	USB 3.0
Auxiliary	CAN / CANopen
Thermostat	optional (quick lock fittings)
Inert gas	optional

