

## ELECTRONIC UNIVERSAL TESTING MACHINES (ADVANCED TYPE)



## SPECIFICATION FOR LIGHT-SENSING INTERACTIVE SYSTEM

Equipment status	Light strip color	Light strip behavior
Power on	yellow	steady on
Standby (servo OFF)	yellow	bidirectional running lights
Standby (servo ON)	blue	steady on
Standby (servo ON)>60s	blue	breathing light
Alarm (limit, overload, etc.)	red	steady on
Upward	green	upward running lights
Downward	green	downward running lights
Load holding	green	steady on

- According to GB/T, ISO, ASTM etc.
- For testing and researching the mechanical properties such as tension, compression, bending, shear and peeling of metals, non-metals and composite materials
- With a high-rigidity frame structure to achieve low-vibration and precise loading
- With powerful operation and analysis software
- With touchscreen and button integrated control box

## SPECIFICATION

Part No.	UTM-GB10K-U	UTM-GB50K-U	UTM-GB100K-U	UTM-GB300K-U
Max. test force*	10kN	50kN	100kN	300kN
Type of testing machine*	bench-top single-space	bench-top single-space	floor-standing single-space	
Accuracy class	0.5 class			
Accuracy of test force	±0.5%			
Range of test force	0.4%~100%FS			
Resolution of test force	1/600000FS			
Accuracy of crossbeam displacement	±0.2% or ±.000394" (whichever is larger)			
Resolution of crossbeam displacement	.4431µin	.3937µin	.3740µin	.2638µin
Minimum test speed	1.97µin/min			
Maximum test speed	78.74in/min	35.43in/min	33.46in/min	23.62in/min
Maximum return speed	94.49in/min	59.06in/min	47.24in/min	47.24in/min
Accuracy of crossbeam speed	.00197in/min~100%FS, ±0.2% of the set value			
Resolution of deformation	1/600000FS			
Accuracy of strain measurement	superior to the requirements of standards such as:GB/T 228, ISO 6892-1, ASTM E8, and ASTM E21			
Frequency of data sampling*	1200Hz			
Frequency of control loop*	1200Hz			
Stiffness	50kN/mm	180kN/mm	270kN/mm	380kN/mm
Vertical test space*	42.91"	39.37"	53.15"	47.24"
Effective test width	16.54"	16.54"	23.62"	23.62"
Protection function	force overload protection, limit protection, anti-collision protection, voltage overload protection			
Power supply	AC 110V 60Hz, 1kW	AC 110V 60Hz, 1.5kW	AC 480V, 3Ø 60Hz, 2kW	AC 480V, 3Ø 60Hz, 4.6kW
Dimension (L×W×H)	66.93×30.31×25.20"	66.93×30.31×25.20"	100.39×46.26×27.95"	100.39×46.26×27.95"
Net weight	683.43lb	881.85lb	2204.62lb	2866.01lb

\*Can be customized according to test requirements



UTM-GB300K-U



UTM-GB600K-U



workbench (optional)

#### SPECIFICATION

Part No.	UTM-GB600K-U	UTM-GB1000K-U	UTM-GB2000K-U
<b>Max. test force</b>	600kN	1000kN	2000kN
<b>Type of testing machine*</b>	floor-standing, single-space		
<b>Accuracy class</b>	0.5 class		
<b>Accuracy of test force</b>	±0.5%		
<b>Range of test force</b>	0.4%~100%FS		
<b>Resolution of test force</b>	1/600000FS		
<b>Accuracy of crossbeam displacement</b>	±0.2% or ±.000394" (whichever is larger)		
<b>Resolution of crossbeam displacement</b>	.4331μin		
<b>Minimum test speed</b>	19.69μin/min		
<b>Maximum test speed</b>	12.99in/min	11.81in/min	12.80in/min
<b>Maximum return speed</b>	19.69in/min	15.75in/min	15.75in/min
<b>Accuracy of crossbeam speed</b>	.00197"/min~100%FS, ±0.2% of the set value		
<b>Resolution of deformation</b>	1/600000FS		
<b>Accuracy of strain measurement</b>	superior to the requirements of standards such as GB/T 228, ISO 6892-1, ASTM E8, and ASTM E21		
<b>Frequency of data sampling*</b>	1200Hz		
<b>Frequency of control loop*</b>	1200Hz		
<b>Stiffness</b>	900kN/mm	1330kN/mm	1643kN/mm
<b>Vertical test space*</b>	29.53"	23.62"	31.50"
	including hydraulic horizontal-thrust fixture		
<b>Effective test width</b>	29.53"	35.04"	45.28"
<b>Protection function</b>	force overload protection, limit protection, anti-collision protection, voltage overload protection		
<b>Power supply</b>	AC 480V, 3Ø 60Hz, 7kW	AC 480V, 3Ø 60Hz, 11kW	AC 480V, 3Ø 60Hz, 22kW
<b>Dimension (L×W×H)</b>	56.30×33.46×108.66"	61.81×39.37×122.05"	72.52×45.28×149.72"
<b>Net weight</b>	7716.18lb	13668.66lb	33069.34lb

\*Can be customized according to test requirements

**SPECIFICATION OF ELECTRONIC FIXTURE (INCLUDED)**

Part No.	UTM-GB10K-U	UTM-GB50K-U	UTM-GB100K-U	UTM-GB300K-U
Compression fixture	max. force	20kN	100kN	100kN
	diameter	3.94" DIA	3.94" DIA	5.91" DIA
	operating temperature	room temperature		
Wedge** fixture	max. force	20kN	50kN	100kN
	type of fixture	mechanical fixture		
	operating temperature	room temperature		
clamping range of flat jaw	0~.24" .24~.47"	0~.28" .28~.55" .55~.83"	0~.28" .28~.55" .55~.83"	0~.32" .32~.63" .63~.95" .95~1.26"
	clamping range of V-jaw	.16~.35" DIA .35~.55" DIA .55~.75" DIA	.16~.35" DIA .35~.55" DIA .55~.75" DIA	.16~.35" DIA .35~.63" DIA .63~.91" DIA .91~1.18" DIA

Part No.	UTM-GB600K-U	UTM-GB1000K-U	UTM-GB2000K-U
Compression fixture	max. force	600kN	1000kN
	operating temperature	room temperature	
Wedge** fixture	max. force	600kN	1000kN
	type of fixture	hydraulic flat-push fixture	
	operating temperature	room temperature	
clamping range of flat jaw	.08~2.36"	.08~2.36"	.08~3.15"
	clamping range of V-jaw	.39~.79" DIA .79~1.77" DIA	.59~1.18" DIA 1.18~2.36" DIA
			.59~1.57" DIA 1.57~3.94" DIA

\*\* High-hardness jaw clamps can be customized

**SPECIFICATION OF ELECTRONIC EXTENSOMETER (OPTIONAL)**

Part No.	Accuracy of deformation	Gauge length	Deformation
UTM-G-EX12D5-5	±0.5%	12.5mm	5mm
UTM-G-EX15-5		15mm	5mm
UTM-G-EX20-10		20mm	10mm
UTM-G-EX25-5		25mm	5mm
UTM-G-EX25-10		25mm	10mm
UTM-G-EX25-12D5		25mm	12.5mm
UTM-G-EX50-5		50mm	5mm
UTM-G-EX50-10		50mm	10mm
UTM-G-EX50-25		50mm	25mm
UTM-G-EX75-25		75mm	25mm
UTM-G-EX100-5		100mm	5mm
UTM-G-EX100-10		100mm	10mm
UTM-G-EX100-25		100mm	25mm
UTM-G-EX200-10		200mm	10mm
UTM-G-EX200-20		200mm	20mm
UTM-G-EX220-20		220mm	20mm
UTM-G-EX250-10		250mm	10mm
UTM-G-EX250-25		250mm	25mm
UTM-G-EX500-10		500mm	10mm
UTM-G-EX500-25		500mm	25mm
UTM-G-EX600-10		600mm	10mm



#### SPECIFICATION OF LARGE DEFORMATION EXTENSOMETER (OPTIONAL)

Part No.	UTM-G-EX100L
Range of deformation	10~850mm
Accuracy of deformation	±0.5%
Resolution of deformation	7.8μm
Gauge length	10mm, 15mm, 20mm, 25mm, 50mm, 75mm, 100mm (adjustable)
Accuracy of gauge length	±0.25mm (room temperature)
Type of knife edge	flat blade edge, rubber roller blade edge
Range of clamp	thickness≤20mm, width≤30mm
Range of clamping force	1.01~5.28lbf
Length of measure arm	142~165mm
Net weight	11.02lb



large deformation extensometer (optional)

#### SPECIFICATION OF AUTOMATIC EXTENSOMETER (OPTIONAL)

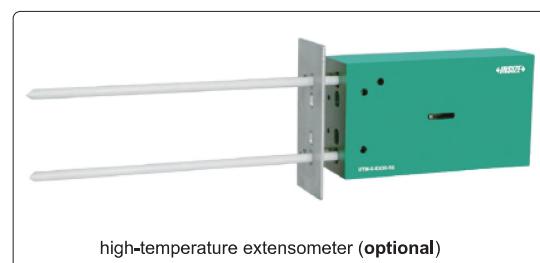
Part No.	UTM-G-EX350A	UTM-G-EX450A
Length of clamping arm	350mm	450mm
Range of deformation	0~80mm	0~100mm
Accuracy of deformation	<0.0015mm (deformation: 0~0.3mm) <0.5% (deformation: 0.3~100mm)	
Resolution of deformation	0.5μm	
Range of gauge length	20~250mm	
Accuracy of gauge length	±0.5%	
Type of knife edge	flat blade edge, arc blade edge	
Range of clamp	flat: 0.2~40mm, circular: Ø2~Ø40mm	



automatic extensometer (optional)

#### SPECIFICATION OF HIGH-TEMPERATURE EXTENSOMETER (OPTIONAL)

Part No.	UTM-G-EX50-5H
Range of deformation	0~5mm
Accuracy of deformation	±0.5%
Resolution of deformation	0.01μm
Gauge length	25mm, 50mm (adjustable)
Sensitivity	2mV/V
Linearity	<0.15%FS
Type of knife edge	flat blade edge
Clamping force	.45lbf
Test temperature	room temperature~2192°F
Net weight	2.09lb



high-temperature extensometer (optional)

#### SPECIFICATION OF HIGH-TEMPERATURE FURNACE (OPTIONAL)

Part No.	UTM-G-FU1200-U
Internal structure	three-segment electric heating elements with segmented control
Range of temperature control	392°F~2192°F
Temperature fluctuation	±37.4°F (392°F~1652°F) ±39.2°F (1652°F~2192°F)
Temperature gradient	≤37.4°F (392°F~1652°F) ≤39.2°F (1652°F~2192°F)
Effective temperature uniformity	5.91"
Furnace heating wire	resistance wire: .0315~.0472" DIA KANTHAL-A1
Service life of high-temperature furnace	operating time>10000 hours (<2192°F)
Heating power	3.2kW
Power supply	AC 480V, 3Ø, 60Hz



high-temperature furnace (optional)



video extensometer (optional)

#### STANDARD DELIVERY

Main unit	1 pc
Control box	1 pc
Measuring software	1 pc
Computer	1 pc
Printer	1 pc
Compression fixture	1 set
Tensile fixture	1 set



pneumatic parallel-push fixture (optional)

#### OPTIONAL ACCESSORY

Fixture	bending fixture, shear fixture, pneumatic fixture, hydraulic fixture, other fixtures (customized)
Electronic extensometer	UTM-G-EX series (customizable)
Large deformation extensometer	UTM-G-EX100L (customizable)
Automatic extensometer	UTM-G-EX350A (customizable)
High-temperature extensometer	UTM-G-EX450A (customizable)
High-temperature furnace	UTM-G-FU1200-U (customizable)
Video extensometer	UTM-M series
Security door	UTM-G-SD2
Workbench	UTM-G-W2