

弘達儀器股份有限公司
HUNG TA INSTRUMENT CO., LTD.

品質、技術、服務

Material Testing Machine



C COMPANY PROFILE

品管儀器的先驅

弘達自1975年9月成立以來，一直秉持著誠意、技術、服務的經營理念，專業於品管儀器的開發與研究。

鑑於「品質管理」是國際性產品的必然趨勢，弘達汲汲於鑽營電腦輔助機械設計及電子計測製造中心，30餘年以來，終於成功開發了將近 1000 種各類的試驗儀器。

弘達研製的試驗機適用之工業包括：橡膠、塑膠、鞋業、造紙包裝業、機械五金業、建材業、汽車零件業、電線電纜業。適用產品如：自行車、摩托車、球拍、球棒、高爾夫球桿、建築五金材料、鋼筋混凝土、橋樑、電線光纖、電纜、紡織、染整，作材料物性檢驗及環境試驗。

弘達也總代理國外數家知名品牌之品管儀器。弘達獲得度量衡國家檢校體系檢校實驗室認可。(力校正實驗室編號：0002)，並可對外校正及檢驗，使產品之精度、技術獲得更高的信賴與肯定。

HUNG TA INSTRUMENT CO., LTD., a pioneer in manufacturing quality control instruments, was established in September 1975. Our CAD-CAM and R&D center is fully equipped to ensure products of advanced technology, state of art knowhow in order to meet our company's strict policy of reliability, tenacity of purpose and good after sales service.

In order to comply with world wide requirement of quality control management, our R&D department has spared no effort in developing up to 200 types of various reliable testing instruments.

Our range of testing equipments are suitable for quality control of products of various fields, including rubber, plastic, shoe manufacturing, paper and pulp industries, machinery and hardware, construction industries, automobile parts, electrical wire and cable. They meet the needs of testing products like automobile, motorcycle, rackets, clubs, hardware items, reinforced concrete, bridge, optical fiber, cable, textile, dyeing and finishing, as well as environmental test equipments.

We also represent a number of reputable quality control equipments manufactured by renown American and European producers.

We are proud to be the only Taiwanese manufacturer approved by the Economic Department of National Calibration and Service Division of Taiwan as an laboratory for inspection and calibration (calibration cert. No.0002). Furthermore, we issue certificates recognized by the government.



· 本公司保有變更設計及外觀色彩的權利，如有更改不另行通知。
· NOTE: The specifications and color of painting are subject to change without prior notice.



合作產品 Joint Product



力校正實驗室及檢測實驗室
The force calibration laboratory & inspection laboratory



電腦軟體及機械設計中心
Computer aided design center



電子計測系統製造中心
Electronic measuring system
manufacturing center



展示測試中心
Show room & testing center



展示測試中心
Show room & testing center



- ▲ 度量衡國家檢校體系力校正實驗室證書及容量0 ~ 2000KN 符合ISO GUIDE 17025
- ▲ Force calibration laboratory approved by CNLA, ISO GUIDE 17025

- 通過 ISO-9001 國際品質認證，證書號碼 Q10161
- Quality Management System accredited by ISO-9001 with the Certification No. Q10161



HT-8756P 電腦式硫化試驗機
Computer Type Disk Rheometer



HT-2101 電腦伺服油壓萬能材料試驗機 (開口式)
Computer-Control Servo Hydraulic
Universal Testing Machine (Openfront-Jaw)



HT-2402 電腦伺服控制材料試驗機
Computer Servo Control Materials
Testing Systems



HT-9770 自動化靜砝碼原級力量標準機
High Precision Automatic Dead
Weight Primary Force Calibrator
(50 KN ~ 2000 KN)

← 2000 KN



← 50 KN

H T-9770 HIGH PRECISION AUTOMATIC DEAD WEIGHT PRIMARY FORCE CALIBRATOR

HUNG TA materials testing machine, the most trustable and precise inspection equipment

VARIOUS CALIBRATORS ENSURING PRECISE MEASUREMENTS

- 200,000kgf (2,000kN) Automatic Superposed Type High Precision Load Cell Calibrator
- 500,00kgf (500kN) Automatic Superposed Type High Precision Load Cell Calibrator
- 5,000kgf (50kN) High Precision Automatic Dead Weight Primary Force Calibrator
- 500kgf(5kN) High Precision Automatic Dead Weight Primary Force Calibrator
- High precision load cell calibrator, range 0-200,000kgf

HT-2102 Series Features

1 HIGH STIFFNESS FRAME STRUCTURE

FCD55 high strength casting material with durable steel structure, state-of-the-art and high stability.

2 HIGH QUALITY DRIVING PERFORMANCE

High efficiency precision screws. It results in stable driving and low noise by using reducing motor (from Europe) and high strength belt (from Japan). Process of manufacture under strict ISO operation control, ensuring crosshead moving center and horizontal level to be accurate and stable, thus generates high testing accuracy.

3 HIGH PRECISION SENSOR

Adopts high precision load cell with high sensitivity, error of repeatability less than 0.01%. 2Tons and above adopts low profile load cell, with stable sensitivity and high accuracy, safety factor 150%.

4 STANDARDIZATION & MODULARIZATION

Adopts standardization & modularization for gripping joints, easy and quick replacement.

5 HIGH TECH EQUIPMENT

Super powerful function SOC display controller, available to alone control, display and save data and graph, with resolution 1/20,000. Available to expand output for 4 sets of load cell or displacement transducer. Connect with computer with only one cable. Setting and display by conversational type. Speed control can be of fine-tuning.



HT-9770 High Precision Automatic Dead Weight Primary Force Calibrator

6 HIGH LEVEL SUPER INTELLIGENCE FUNCTION

- Smart type operation software
- Super powerful control function
- Excellent interfacing
- Easy setting of modularization
- Automatic inspecting function
- Fruitful and efficient equipment

7 HIGH SAFETY DESIGN

- Limit over-travel control setting
- Emergency stop safety protection

8 HIGH EFFICIENCY

Servo motor features high torque, low noise & high frequency positioning function. It matches high intelligent control software control system, making the combination of perfect and super powerful control function, meeting various testing requirements.

C OMPUTER SYSTEM

Super Powerful program, with superior control functions

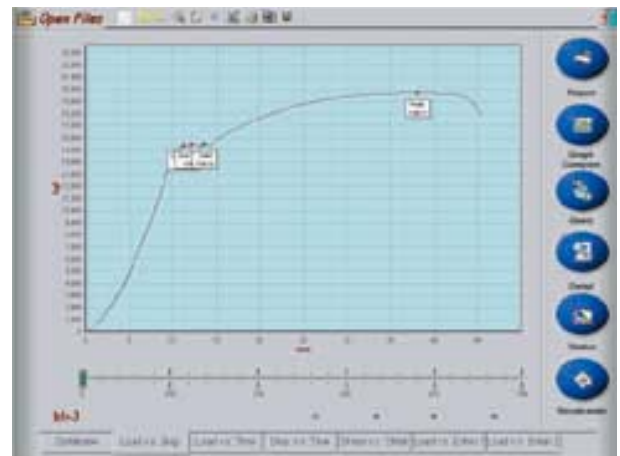
SUPER POWERFUL CONTROL FUNCTIONS

- Basic control mode includes fixed velocity, fixed displacement, constant load speed control, constant stress speed control and constant strain speed control
- Switching of control mode can be set freely, including displacement \geq , displacement \leq , load \leq , yield point, break point, stress \geq , stress \leq , strain \geq , strain \leq .
- Available to set cyclic mode, cycle times, and continue the next control mode when preset cycle time is up
- Tensile and compression control mode setting
- Database management for control modes, available to edit or set repeatedly.
- Control mode covers all international testing standards, including GB, CNS, ASTM, ISO, DIN, JIS...etc.
- Available to perform low frequency cyclic control tests (limited cycles).

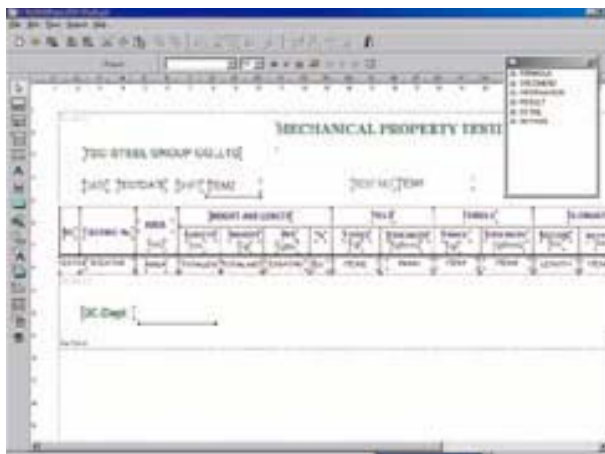
Main menu



Test graph



Report editor



Formula editor

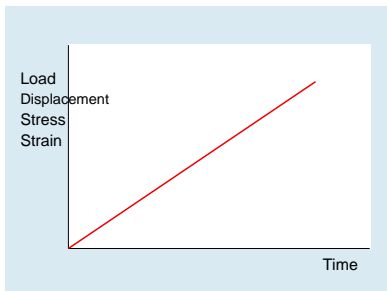


COMPUTER SYSTEM

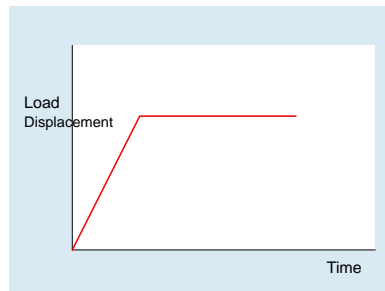
Super Powerful program, with superior control functions

PROGRAM CONTROL FUNCTIONS

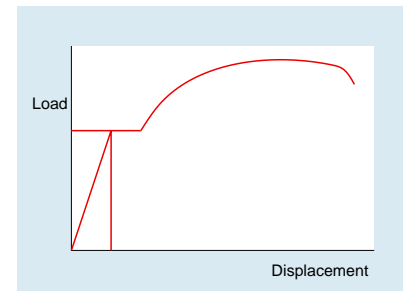
▶▶ Standard control modes



▶ No.1

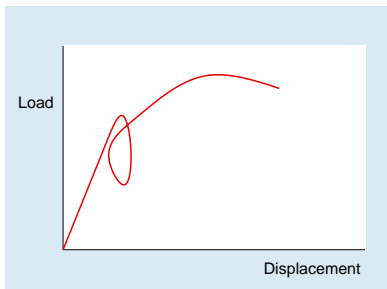


▶ No.2

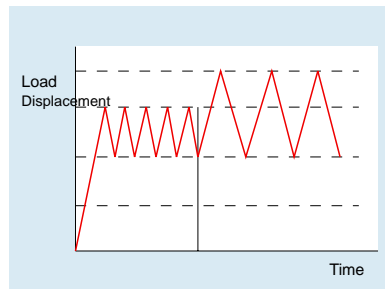


▶ No.3

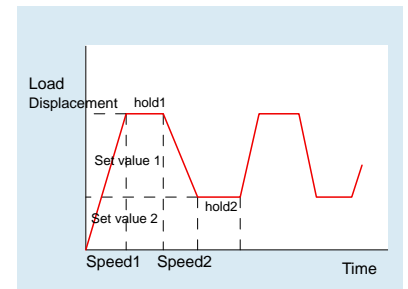
▶▶ Special control modes (for HT-2101AP, HT-2101BP only) (optional upon extra costs)



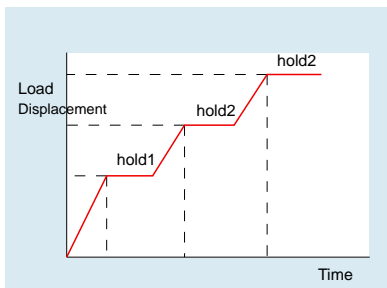
▶ No.4



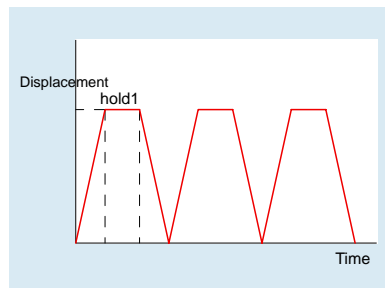
▶ No.5



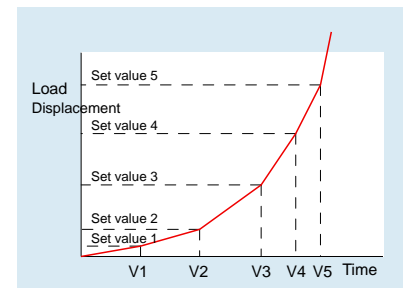
▶ No.6



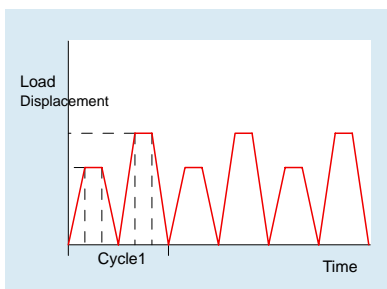
▶ No.7



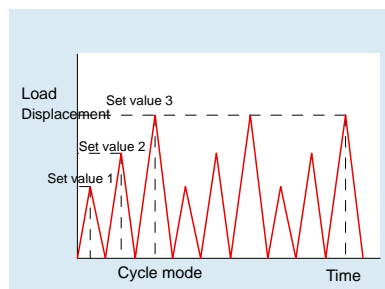
▶ No.8



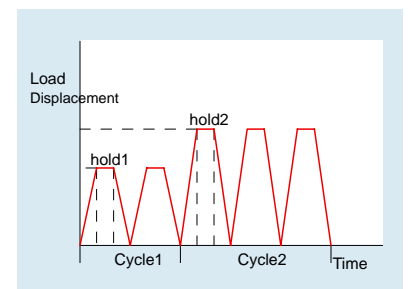
▶ No.9



▶ No.10



▶ No.11



▶ No.12

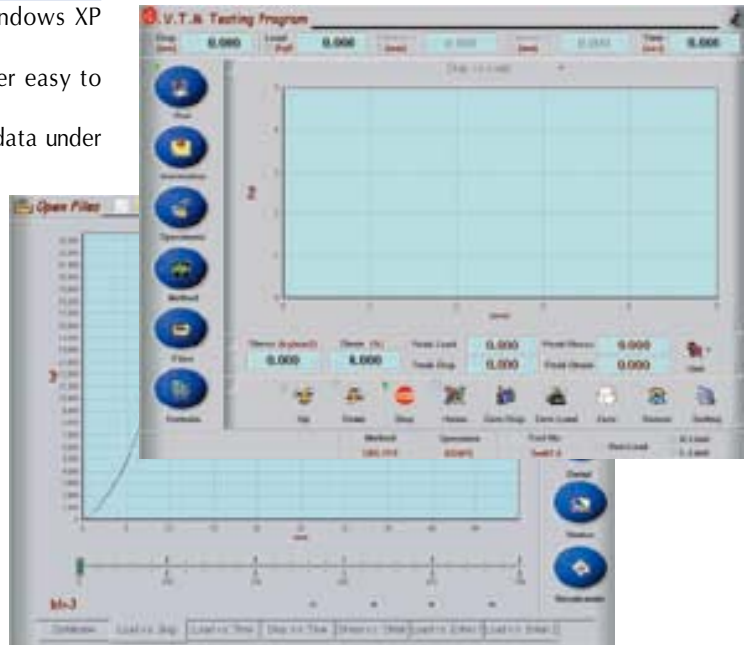
COMPUTER SYSTEM

Super Powerful program, with superior control functions

HIGH INTELLIGENCE COMPUTER SYSTEM

- Chinese-English 32 bit Windows 2000 or Windows XP operating system, high safety and stability.
- Operation interface by icons, which makes user easy to learn.
- Test standards, specimen information and test data under database management, with high expandability.
- On-line graph switch-and-display, control testing dynamics, with high testing integrity. Test graphs include Load-Displacement, Load-Time, Displacement-Time, Stress-Strain, and optional Load-Extensometer & Load-lateral extensometer.
- Formula opens for free editing, with clear formula parameters, easy to understand and learn. Including all normal testing for different industries like metal, rubber, footwear, peeling...etc.
- Test standards can set load sampling, displacement sampling, interval setting and yield point interval setting.
- Re-calculation analysis can change specimen information, various parameters and formula change calculating.

Excellent interface



Easy setting for modularization

HT-2010 MICRO COMPUTER U.T.M. INDICATOR

Powerful function SOC Indicator & Controller

HT-2010 U.T.M INDICATOR



- ▶ Large LCD display screen, with blue screen and back-light function, display is clear and easy to read in darkness
- ▶ Easily selectable Chinese or English menus
- ▶ Load unit available to switch among N, kN, g, kg, ton, lb
Displacement unit available to switch among mm, cm, inch
- ▶ A panel key directly controls the UP/DOWN function of crosshead, and is available to preset test speed at low/middle/high
- ▶ With 28 function and numerical keys, test function and display is used by conversational method, easy and convenient
- ▶ A rotating knob for direct fine tuning control of the UP/DOWN function of crosshead, and available to preset test speeds at low/middle/high

HT-2010 MICRO COMPUTER U.T.M. INDICATOR

Powerful function SOC Indicator & Controller

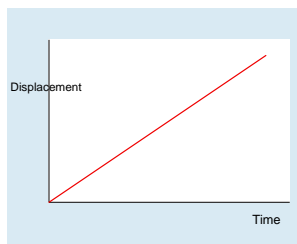
FUNCTIONS

- Only one connecting cable between the controller and the computer, safe and convenient
- Easily selectable Chinese or English menus
- Control mode through closed-loop fuzzy control, with wide application
- With four standard control mode:
 1. Fixed displacement control
 2. Fixed speed control
 3. Fixed load control
 4. Fixed load speed control
- A panel key directly controls the UP/DOWN function of crosshead, and is available to preset test speed at low/middle/high
- A rotating knob for direct fine tuning control of the UP/DOWN function of crosshead, and available to preset test speeds at low/middle/high
- A HOME key to return the crosshead back to original position from anywhere
- Displays the actual status of the tester
- Displays the values of load and displacement with the computer simultaneously
- 28 function and numerical keys, test function and display is used by conversational method
- Can be used for performing tensile testing, compression...etc.
- Can be extended up to 4 channels for load cell (optional)
- Load signal amplification 1,2,5,10 through auto range function
- With independent channel for HT-8160 (optional)
- Load unit available to switch among N, kN, g, kg, ton, lb; displacement unit available to switch among mm, cm, inch
- Available to auto shift to fixed position control function after test
- With overload protection function in order to prevent load cell from overloading
- Can display or search the test data of each test
- Can output the test data to printer for a hard copy. And the report can calculate stress value and elongation rate

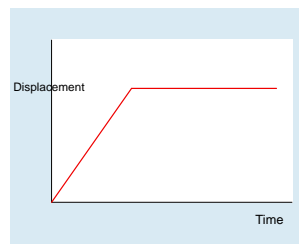
HARDWARE SPECIFICATIONS

- Load cell available to extend to 4 channels (350ohm), signal input range of load cell $2 \sim 4\text{mv/v}$
- A/D converting resolution 16bit, A/D converting speed 25us
- D/A converting resolution 16bit
- Encoder transfer circuit resolution is 4 times better
- Input power available to switch to 110/220V

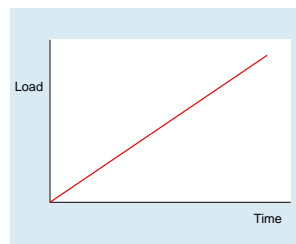
CONTROL MODES



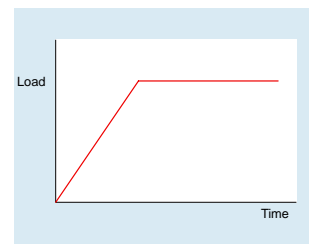
► D2



► D3

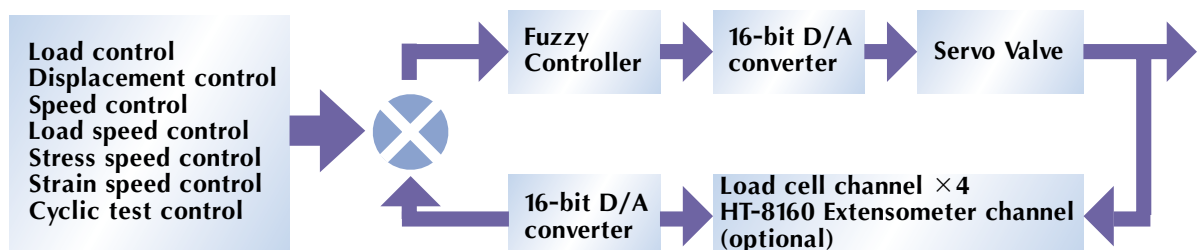


► D4



► D5

CONTROL FUNCTION BLOCK DIAGRAM



H T-2102A SERIES, HT-9102 (BENCH TOP TYPE) COMPUTER SERVO CONTROL MATERIAL TESTING MACHINE, SOC SERVO CONTROL MATERIAL TESTING MACHINE

HT-2102AP COMPUTER SERVO CONTROL MATERIAL TESTING MACHINE (BENCH TOP TYPE)



HT-2102AI SOC SERVO CONTROL MATERIAL TESTING MACHINE (BENCH TOP TYPE)



HT-9102 COMPUTER SERVO CONTROL MATERIAL TESTING MACHINE (BENCH TOP TYPE)



H T-2102B SERIES, HT-9102 (FLOOR STANDING TYPE) COMPUTER SERVO CONTROL MATERIAL TESTING MACHINE, SOC SERVO CONTROL MATERIAL TESTING MACHINE

HT-2102BP COMPUTER SERVO CONTROL MATERIAL TESTING MACHINE (FLOOR STANDING TYPE)



HT-2102BI SOC SERVO CONTROL MATERIAL TESTING MACHINE (FLOOR STANDING TYPE)



HT-9102 COMPUTER SERVO CONTROL MATERIAL TESTING MACHINE (FLOOR STANDING TYPE)



H T-2102A, HT-2102B, HT-9102 SERIES

COMPUTER SERVO CONTROL MATERIAL TESTING MACHINE, SOC SERVO CONTROL MATERIAL TESTING MACHINE

HT-2102B SERIES, HT-9102 (FLOOR STANDING TYPE) SPECIFICATIONS

Capacity	KGF	2000	5000	10000	20000
	KN	20	50	100	200
Unit	Load	N, kN, g, kg, ton, lb			
	Displacement	mm, cm, inch			
Load resolution		1/20,000			
Load accuracy		± 1% (± 0.5% optional)			
Load amplification		× 1, × 2, × 5, × 10 Auto range (× 20 and above optional)			
Testing width (mm)		560 (800 optional)			
Crosshead travel (mm)		980 (1480 optional)			
Testing stroke		Crosshead travel minus upper/lower grips and gripping length			
Test speed range (mm/min)		0.5~500 or 0.2~200			0.2~200
Maximum force at full speed (kgf)		1000	2000	2000	2000
Maximum speed at full load (mm/min)		100	100	50	50
Speed accuracy		± 0.5% servo control			
Displacement resolution (mm)		0.001			
Driving method		AC servo motor			
Power	Specifications	3Ø : 220VAC ; 50/60Hz (380/415V optional)			
	Capacity	2000Kgf/20kN	5000Kgf/50kN	10000Kgf/100kN	20000Kgf/200kN
Dimensions (cm)	Consumption	2KVA	3KVA	5KVA	10KVA
	Frame	130 × 60 × 213	154 × 60 × 213	130 × 60 × 263	154 × 60 × 263
Weight (kg)	Control box	Computer type 120 × 60 × 74, Micro-Computer type 66 × 60 × 74			
		Frame 800, Control box 100			Frame 1200, Control box 100
Standard accessories		Tensile grips × 1 set, necessary tools × 1 set, operational manual × 1 copy, certificate of calibration × 1 copy,			

HT-2102A SERIES, HT-9102 (BENCH TOP TYPE) SPECIFICATIONS

Capacity	KGF	10	20	50	100	200	500	1000
	KN	0.1	0.2	0.5	1	2	5	10
Unit	Load	N, kN, g, kg, ton, lb						
	Displacement	mm, cm, inch						
Load resolution		1/20,000						
Load accuracy		± 0.5%						
Load amplification		× 1, × 2, × 5, × 10 Auto range (× 20 and above optional)						
Testing width (mm)		380 (560 optional)						
Crosshead travel (mm)		1100 (1600 optional)						
Testing stroke		Crosshead travel minus upper / lower grips and gripping length						
Test speed range (mm/min)		0.5~500 (0.001~1000 optional)						
Speed accuracy		± 0.5%						
Displacement resolution (mm)		0.001						
Driving method		AC servo motor / Servo driver						
Power	Specifications	1Ø : 220VAC ; 50/60Hz						
	consumption	0.5KVA for capacity 10~200kgf , 1KVA for capacity 500~1000kgf						
Dimensions (cm)	Frame (cm)	80 × 70 × 217						
	Control box (cm)	120 × 60 × 74						
Weight (kg)		Frame 300, Control box 100						
Standard accessories		Tensile grips × 1 set, necessary tools × 1 set, operational manual × 1 copy, certificate of calibration × 1 copy						

H T-9535SA, HT-9635A, HT-9635S, HT-8335PD MICRO-COMPUTER INDICATOR

HT-9535SA MICRO-COMPUTER FORCE INDICATOR

- Thin file control keypad
- LCD screen, dot matrix 16 characters per row, character size 0.5 × 10, with clear back-light function
- Load cell input end 16-bit converting capability, resolution up to 1/20,000
- Selection of display value: N, kN, kg, lb
- With manual load sampling function
- With auto stop function upon sample fails
- With overload protection setup
- Available to output test data to printer
- Both peak and break force can be displayed simultaneously on indicator
- 110/220V available to switch off
- Signal input range: 2mv/v ~ 4mv/v
- 16-bit A/D converting capability, converting speed 25 us

HT-9535SA



HT-9635A, HT-9635S MICRO-COMPUTER FORCE & DISPLACEMENT INDICATOR

- Thin file control keypad
- LCD screen, dot matrix type, 2 rows 40 characters, with clear back-light function
- With 20 numeric & function keys, conversational type test conditions to setup & display
- Both peak and break value of force and elongation can be displayed simultaneously on indicator
- Load signal amplification 1, 2, 5, 10 through auto range function
- Available to conduct the tests of tensile, compression, relaxation...etc.
- Available to calculate the value of stress and elongation
- Unit available to switch among kg-mm;kg-cm;kn-m;n-mm;lb-m
- With constant load function
- With functions of manual load sampling, auto displacement sampling and auto load sampling
- With auto stop function upon sample fails
- With overload protection setup
- Available to display or search the test data of each test
- Available to delete unsatisfactory test data
- Available to output test data to printer
- 110/220V available to switch off
- Signal input range: 2mv/v ~ 4mv/v
- 16-bit A/D converting capability, converting speed 25 us

HT-9635A



HT-9635S



HT-8335PD



HT-8335PD FORCE INDICATOR

- Available to display current force, peak force
- Resolution: 1/10,000
- Switch among KG/LB, TEN/COM & BREAK/OFF

H T-8503, HT-8503A

COMPUTER TYPE TENSILE TESTING MACHINE, MICRO-COMPUTER TENSILE TESTING MACHINE

HT-8503 COMPUTER TYPE TENSILE TESTING MACHINE



HT-8503A MICRO-COMPUTER TENSILE TESTING MACHINE



HT-8503, HT-8503A SPECIFICATIONS

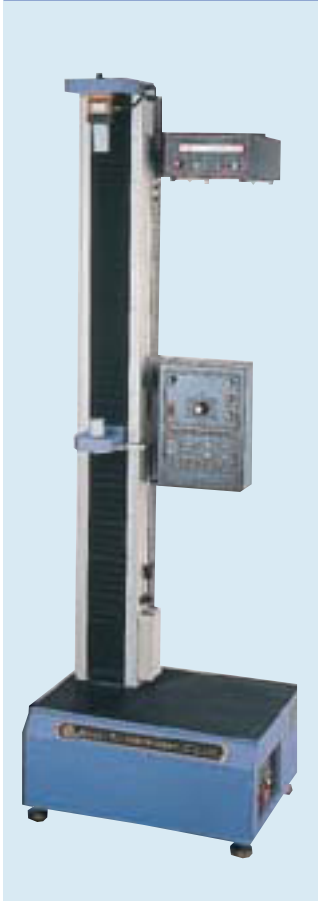
Capacity	KN	10	20	50	100	200
	Ton	1	2	5	10	20
Unit	Load	N, kN, g, kg, ton, lb				
	Displacement	mm, cm, inch				
Load resolution		1/20,000				
Load accuracy		± 1%				
Load amplification		× 1, × 2, × 5, × 10 Auto range				
Testing width	(mm)	560 (800 optional)				
Crosshead travel	(mm)	980 (1480 optional)				
Testing stroke		Crosshead travel minus upper/lower grips and gripping length				
Test speed range	(mm/min)	6~200 or 30~500				6~200
Maximum force at full speed	(kgf)	1000	1000	2000	2000	2000
Maximum speed at full load	(mm/min)	100	100	100	50	50
Speed options (mm/min)	Push keys	six options				
	Knob	Precise VR speed adjustment				
Driving motor		Quantity-directive control servo type AC motor				
Power	Specifications	3Ø, 220VAC, 50/60Hz (380/415V optional)				
	Capacity	2000kgf/20kN	5000kgf/50kN	10000kgf/100kN	20000kgf/200kN	
	Consumption	2KVA	3KVA	5KVA	10KVA	
Dimensions (cm)	Frame	130×60×213	154×60×213	130×60×263	154×60×263	
	Control box	Computer type 120×60×74, Micro-Computer type 66×60×74				
Weight (Kg)		Frame 800, Control box 100			Frame 1200, Control box 100	
Standard accessories		Tensile grips × 1 set, necessary tools × 1 set, operational manual × 1 copy, certificate of calibration × 1 copy				



T-9111, HT-9112, HT-8311C

ECONOMICAL TYPE TENSILE TESTING MACHINE

HT-9111 ECONOMIC TYPE
TENSILE TESTING MACHINE



HT-9112 ECONOMICAL TYPE
TENSILE TESTING MACHINE



HT-8311C ECONOMIC TYPE
TENSILE TESTING MACHINE



SPECIFICATIONS

Model No.		HT-9111	HT-9112	HT-8311C
Capacity	KGF	5, 10, 20, 50, 100, 200, 500		
	KN	0.05, 0.1, 0.2, 0.5, 1, 2, 5		
Load resolution		1/20000		
Load accuracy		±1%		
Load amplification		×1, ×2, ×5, ×10 Auto range		
Test stroke (Excluding grips) (mm)		1200		
Test speed range (mm/min)		20~500, VR knob adjustment		200/300/500 or 100/200/300
Speed accuracy		±1%		
Displacement resolution (mm)		Manual ruler	0.005	Manual ruler
Driving method		DC motor		AC motor
Digital readout		HT-8335PD	HT-9635S	HT-9535SA
Power		1Ø : 220VAC : 50/60Hz : 3A		1Ø : 220VAC : 50/60 Hz : 3A
Dimensions (cm)	Frame	55×40×176		55×40×160
	Control box	-		
Weight (Kg)		86		95
Standard accessories		Tensile grips × 1 set, Operational manual × 1 copy, certificate of calibration × 1 copy		



Models	HT-8747A	HT-8747B	HT-8747C	HT-8747D
Measurement of test force	Rt ~ +200°C	-30~ +200°C	-50~ +200°C	+30°C~ +800°C
Inside dimensions (WxDxH)	<input type="checkbox"/> standard type: 30x30x60 cm <input type="checkbox"/> special type: 30x45x60 cm			∅21x25 cm
outside dimensions (WxDxH)	standard	48x82x82 cm	48x100x90 cm	48x120x90 cm
	special	48x100x82 cm	48x100x105 cm	48x120x135 cm
Method of heat-up or cool-down	Electric heating	Electric heating & refrigerant with compressor		Electric heating
Temperature control method	PID automatic temperature controller with digital temperature indicator			
Applied models	Suitable for HT-2402, HT-9102, HT-2102 type series tensile testers			
Power supply	1 phase 220 V			



HT-8747 A / B / C Type Thermostat testing chamber
HT-2402 / HT-2102 / HT-9102 / HT-8503
For capacities less than 20kN, it is suitable for special (wider) type 560 mm only



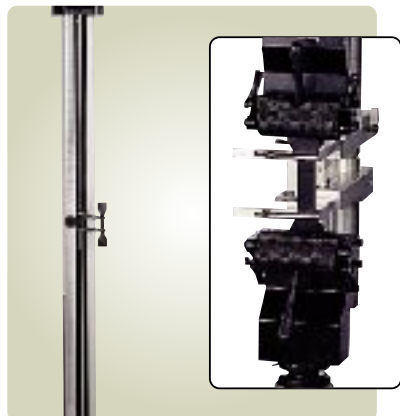
HT-8160 Two extensometer can be selected together with HT-8747 series chambers, but cannot be used at the same time.



HT-8474D Type Thermostat testing chamber

Two-point extensometer series (Suitable for models HT-2402, HT-2101, HT-9501)

Models	HT-8160A	HT-8160B	HT-9160A	HT-9160B	HT-9160C	HT-9160D	HT-9161
Gauge length (mm)	20~40		50	50	100	25	50
Travel (mm)	0~800		25	5	25	5	25
Resolution (mm)	0.02		0.001				0.001
Application	Rubber, plastic, PE board, fabric, webbing, textile	PE film, latex, PVC tubing industry	Suitable for measuring elongation for metal, or non-metal materials with lower deformation, suitable for working circumstance Rt ~50°C				



HT-8160

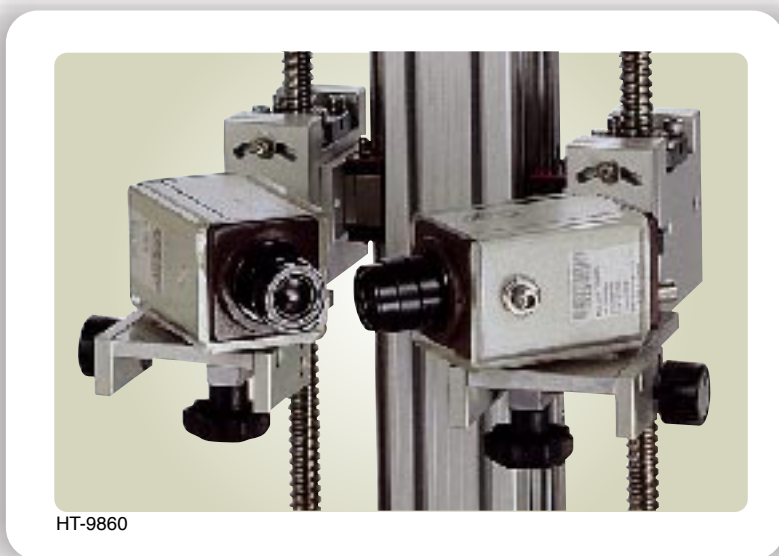


HT-9160

Model	HT-9860 video extensometer
Resolution (mm)	0.025
Measuring range (mm)	Max 2000
Measuring method	computer-aided image recognition and automatic tracking marking points control & measurement
Quantity	2 pcs
Driving method	Step motor
Driving media	Ball screw x 2 pcs
Method of transmission	LAN
Computer system	PIII 850MHz or above, VGA card, AGP 32MB, TNT or above, Windows 2000 Professional



HT-9161 made in USA



HT-9860



Hydraulic series and pneumatic series grips are optional, with excellent and convenient features for operation.

Models	SF-014D	SF-004	SF-051	SF-063	SF-066	SF-301	
capacity (kN)	250	100	50	20	10	5	
clamping range (mm)	round	Ø6~Ø13, Ø13~Ø26, Ø26~Ø38	Ø6~Ø13, Ø13~Ø22	Ø6~Ø13	Ø6~Ø13	Ø5~Ø13	Ø0.5~Ø4
	flat	0~25 wide 50	0~14 wide 45	0~8 wide 45	0~8 wide 30	0~8 wide 30	0~4 wide 8
weight (kg)	30	12	8	5	3	2	



SF-014D



SF-004



SF-051



SF-063

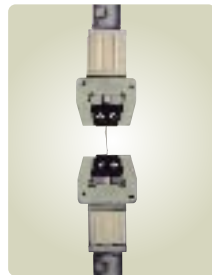
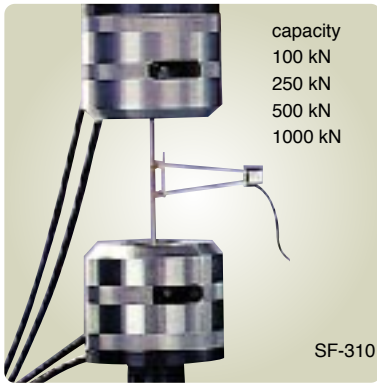


SF-066



SF-301

Model	SF-310				SF-134	SF-082	SF-116	SF-609B
driving method	hydraulic grips				pneumatic tensile grips			
capacity (kN)	1000	500	250	100	10	0.5 / 2	1	0.5
clamping range (mm)	round	Ø10~25, Ø25~40	Ø10~25, Ø25~40	Ø5~15, Ø15~30	Ø5~15	Ø5~13		within Ø2
	flat	0~15 / 15~30 width 100	0~15 / 15~30 width 76	0~15 / 15~30 width 76	0~15 width 50	0~8 width 30	0~6 width	0~6 width



SF-134



SF-082



SF-116



SF-609B

SF-082: jaw: 1"x1", 1"x3" / 1"x2", 1"x3" / 1"x3", 1"x3" (select one)
SF-116: jaw: 1"x1", 1"x3" / 1"x2", 1"x3" (select one)

Models	SF-046	SF-089C	SF-158	SF-003B	SF-093	SF-147
application	Fixtures for bolt/nut shape	Tensile grips for cloth strip	Spool flat closed clamp	Type tensile grips	Series tensile grips	Wedge clamps self closing grips
	Bolts/nuts & mooring	Webbing & straps	Ropes & cable	Fabric, textile & leather	Rubber & plastic	Tensile tests for finished products
capacity (kN)	50 / 300 / 600	5 / 50 / 100	2 / 10	1 / 5	1	1
clamping range (mm)	50 kN: M4-M10 300 kN: M6-M16 600 kN: M6-M36	5 kN: 0-25 50 kN: 0-50 100 kN: 0-100	2 kN: Ø6 10 kN: Ø12	16	8x50	10x6 10x25



SF-046



SF-089C



SF-158



SF-003B



SF-093



SF-147

Compression testing fixtures series

Compression platens for metal, rubber, timbering and cement

Models	SF-156A	SF-156B	SF-156C	
Platen size (mm)	Ø75	Ø120	Ø160	
Models	SF-156D	SF-156E	SF-156F	SF-201
Platen size (mm)	Ø220	Ø280	Ø300	150x300

Special sizes are available upon request



SF-156

Ball-seat compression platen for concrete cylinders

Models	SF-122A	SF-122B	
Platen size (mm)	Ø75	Ø102	
Models	SF-122C	SF-122D	SF-122E
Platen size (mm)	Ø154	Ø204	Ø278

Special sizes are available upon request



SF-122A

Bending test fixtures for metal, china/ceramic, tile, concrete cylinder, timber, and so on.

Central loading (3-point) bending fixtures

Models	SF-002A series	SF-155A series
Maximum load (kN)	10~100	300
Loading Radius (mm)	R2, R5, R1/8 (optional)	R15
Supporting Radius (mm)	R2, R5, R1/8 (optional)	R15
Width (mm)	50 (110~600 optional)	120
Supporting distance (mm)	20~80 / 20~200 / 20~600	30~400

Special sizes are available upon request



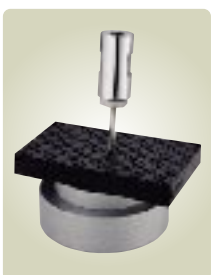
SF-002A



SF-155A

Models	SF-087A	SF-139A	SF-081	SF-102	SF-100	SF-148
	puncture fixtures for safety shoes	plywood shearing fixture	90° Peeling fixtures	adhesion grips for ceramics	Lunging fixtures	Plunger fixtures

A variety of clamping apparatus choices to meet diverse experimental requirements



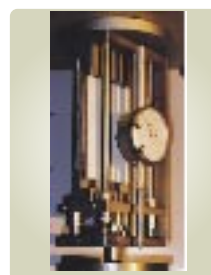
SF-087A



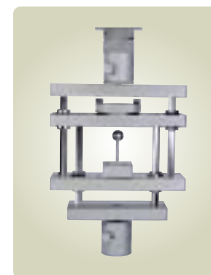
SF-139A



SF-081



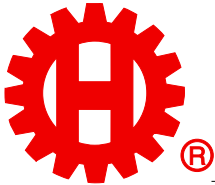
SF-102



SF-100



SF-148



品質、技術、服務

弘達儀器股份有限公司

HUNG TA INSTRUMENT CO., LTD.

工廠：臺灣省台中市407工業區11路17號

TEL: 04-23590108 (代表)

FAX: 04-23593110, 23588599, 23591149

E-mail: info@hungta.com

<http://www.hungta.com>

分公司：台北市110忠孝東路五段71巷17號

TEL: 02-27467770

FAX: 02-27686430

分公司：高雄市807三民區金山路305號

TEL: 07-3429618-9

FAX: 07-3427499

REGIONAL AGENT:

HUNG TA INSTRUMENT CO., LTD.

FACTORY & HEADQUARTERS

NO. 17 11TH ROAD INDUSTRIAL PARK 407

TAICHUNG, TAIWAN

TEL: 886-4-23590108 FAX: 886-4-23593110, 23588599, 23591149

E-mail: info@hungta.com

<http://www.hungta.com>

THAILAND OFFICE :

TEL: 66-2-2113170, 2125878-9

FAX: 66-2-6755515

MALAYSIA OFFICE:

TEL: 606-7636031 FAX: 606-7637692

INDONESIA AGENT:

TEL: 62-21-6324602 FAX: 62-21-6324603

HONG KONG OFFICE:

TEL: 852-25673019 FAX: 852-28861398

廣州公司：

TEL: 020-83330510 FAX: 020-83339518

東莞公司：

TEL: 0769-2654468 FAX: 0769-2654498

上海公司：

TEL: 021-56954466 FAX: 021-56377170

廈門公司：

TEL: 0592-5800710 FAX: 0592-5800713