

# COLOR MEASUREMENT

CROSS HATCH ADHESION TESTER, STANDARD COLOR BOX, UV LAMP TESTER, VERTICAL ANTI-YELLOWING

เครื่องทดสอบเก็บยึดกับสี, แฟ่นสำหรับทดสอบการยึดเกาะสี, ตู้เก็บสี, เครื่องทดสอบแสงUV, เครื่องเร่งจำล่องแสง

แฟ่นสำหรับทดสอบการยึดเกาะสี



MODEL: BGD 502



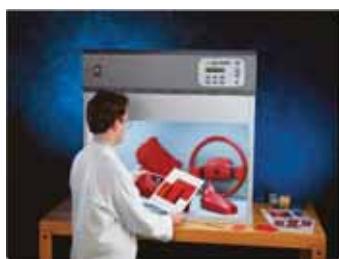
## Cross Hatch Adhesion Tester

Model	Cross Hatch Cutter	Spacing	Coating
BGD 502/2	11 Blades	1 mm	0-60 µm
BGD 502/3	6 Blades	1 mm	0-60 µm
BGD 502/4	11 Blades	2 mm	60-120 µm
BGD 502/5	6 Blades	2 mm	60-120 µm
BGD 502/6	6 Blades	3 mm	120-250 µm
Price	13,500.-		

Standard Colour Box

ตู้เก็บสี

MODEL: SP-60( 4 Lights), SP-65 (5 Lights), SP-66(6 Lights), SP-120



Model	Equipment	Size(CM)	Cavity	Price
SP-60 (4 Lights)	D65X2, TL84X2, UVX1, FX4	71W x 40.5D x 57H	68W x 38D x 36H	39,000.-
SP-65 (5 Lights)	D65X2, TL84X2, CWF2, UVX1, FX4	71W x 40.5D x 57H	68W x 38D x 36H	42,000.-
SP-66 (6 Lights)	D65X2, TL84X2, CWF2, TL83X2, UVX1, FX4	71W x 40.5D x 57H	68W x 38D x 36H	45,000.-
SP-120 (6 Lights)	D65X2, TL84X2, CWF2, TL83X2, UVX1, FX6	131W x 61D x 80H	128W x 59D x 60H	49,000.-

## UV LAMP TESTER



สอบถาม สายด่วน 082-1288881, 081-7731860  
หรือ OFFICE 02-9744354-6

Purpose:

Vertical anti-yellowing aging test machine placed in container to export, Due to effects of solar radiation and the colour of the shoes easy to change. Discoloration metersimulate the environment of sun radiation and thus determine the anti-yellowing capacity of material in the sunlight radiation. It is a good reference for making shoes and choosing the raw materials. General the testing time is three hours in this machine, it is equal to 3 months in container. The machine uses the German-made UV bulbs as lamp and control the inside temperature, provides more accurate and more detailed reference for industry.



PRICE: 185,000.-

## VERTICAL ANTI-YELLOWING เครื่องเร่งจำล่องแสง

Model	SPHY-764A
Usage	Shoe Dielectric Resistance Tester
Light	Silulate Solar Radiation
Specimen pan	Rotation
Color	Sliver
Counter	LCD
Dimension	68x31x41cm

# COLOR MEASUREMENT

MULTI-PURPOSE DRY FILM MEASURING INSTRUMENT, ROLLING WHEEL WET FILM,  
PENCIL HARDNESS TESTER, RUB RESISTANCE TEST, LEATHER RUBBING COLOR FASTNESS TESTER

เครื่องทดสอบเก็บกับสี, เครื่องวัดความหนาสีบนพลาสติก, เครื่องทดสอบการบุดขัดของพิวสี, ลูกกลิ้งวัดความหนาสีแบบเปียก



เครื่องทดสอบการขัดดูสีพิมพ์, เครื่องทดสอบความทนทานการขัดดูผ้าหนัง

## เครื่องวัดความหนาสีบนพลาสติก Multi-Purpose Dry Film Measuring Instrument P.I.G.

Thickness Cutting	No.1 Coating thickness between 20-2000um (0.8-70 mils)
	No.2 Coating thickness between 10-2000um (0.4-40 mils)
	No.3 Coating thickness between 2-200um (0.08-8 mils)
Special Cutters	Special Cutting A : Coating thickness between 0-100um (0-4 mils)
also available	Special Cutting B : Coating thickness between 0-300um (0-120 mils)
Microscope	X50 magnification
Price	<b>28,000.-</b>

## Rolling Wheel Wet Film Thickness Gauges ลูกกลิ้งวัดความหนาสีแบบเปียก



Main Technical Parameters		
Dimensions	50 Φ ×15 H mm@2mm path	
Weight	approx.177g	
Ordering Information		
BGD 532/1	0-100μm	( @5μm )
BGD 532/2	0-200μm	( @10μm )
BGD 532/3	0-500μm	( @50μm )
BGD 532/4	0-1,000μm	( @100 μm )
Price	<b>8,500.-</b>	

## Pencil Hardness Tester

เครื่องทดสอบการบุดขัดของพิวสี



### ASTM D3363, ISO 15184, GB/T 6739

1 Set of Pencils 12 Pencil  
-4B-3B-2B-B-HB-H-2H-3H-4H-5H-6H

Specification	Price
BGD506-1	500g <b>14,500.-</b>
BGD506-2	750 g <b>14,500.-</b>
BGD506-3	1000 g <b>14,500.-</b>
BGD506-4	765g <b>14,500.-</b>

## Mitsubishi Pencil MODEL TC-3



### Specification

1 SET of 17 Pencil  
- 6B -5B -4B -2B -3B -B -HB -F -H  
-2H -3H -4H -5H -6H -7H -8H -9H

**Price 5,500.-**

## Leather Rubbing Color Fastness Tester

เครื่องทดสอบความทนทานการขัดดูผ้าหนัง

## RUB RESISTANCE TEST

เครื่องทดสอบความทนทานการขัดดู



### Model YM-571

เครื่องทดสอบการขัดดูสีน้ำเงิน  
Will be placed in the friction slip of paper machine, pressure b clamp, with dry and wet rubbing cloth friction after staining or discoloration was evaluated with grey cloth or friction specimen sample card. Test for colour fastness to dry and wet friction of textile printing and dyeing

Model	YM - 571
Friction Type	Electronic
Friction range	□ 104 mm ± 3 mm □
Friction rate	□ 60/ m □
Friction force	□ 9N □
Friction probe	□ 16 mm round copper

**Price: 65,000.-**

## Electronic Crockmeter



## MODEL: SPHY-759



**Price: 185,000.-**

MODEL	SPHY-759
Specimen	120x20mm
Wool flet	15 x 15 mm
Counter	Six LCD liquid crystal display
Motor	AC micro-motor
Dimension	30.5x43x47.5cm
Testing block size	15x15mm

# COLORIMETER

เครื่องเปรียบเทียบสี



**CS10**

The Colorimeter with Price-Performance  
lowest Price



**CS200**

Price-Performance Ratio



**CS210**

Camera for sample view



**CS220**

Powder,colloids measuring



**CS260**

The color reader

Put the instrument evenly on a flat object, and measure multiple spots for average.



Transparent baseboard  
test hole



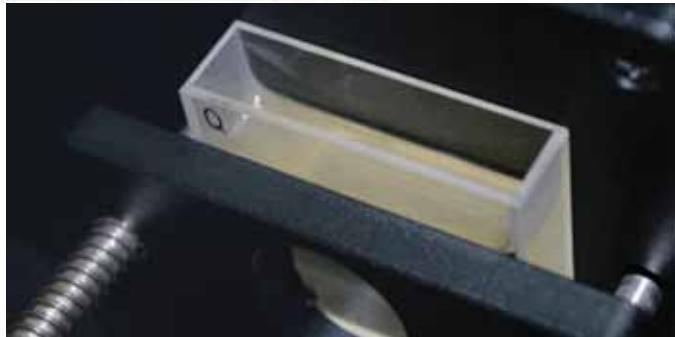
White board



Hohlraum

Model	CS-10	CS-200	CS-210	CS-220	CS-260
Illumination system	8/d (8°/diffused illumination), Specular component included (SCI)		SCE	SCI	
Display modes	Colorimetric values: L x a x b, L x C x h, ΔE x ab, XYZ, relative RGB values: Color difference values: (L x a x b), Δ(L x C x h):	Colorimetric values: L x a x b, L x C x h, ΔE x ab, XYZ, relative RGB values: Color difference values: (L x a x b), Δ(L x C x h): Whiteness values : hunter whiteness,ganz whiteness Yellowness value: YI			
Measuring Caliber		About 8 mm			
Measuring Conditions		CIE 10° Standard Observer; CIE D65 Light Source			
Measuring range		L x : 1-100VA			
Repeatability	Standard Deviation within Δ Ex ab x , 0.1 (condition: measure the white calibration board 30 times for average)	Standard Deviation within D Ex ab x , 0.8 (condition: measure the white calibration board 30 times for average)			
Storage	10 Sets of standard samples: up to 100 under each standard sample	100 Sets of standard samples: up to 100 under each standard sample			
Measuring time		About 0.5 seconds			
Measuring light source		LED			
Power source		Four AA 1.5V Alkaline battery or nickel-metal hydride batteries; Exclusive DC5V adapter			
port		USB 2.0 printer			
weight		550 g			
Size		77 x 86 x 210 mm T			
Other function	The Colorimeter with lowest price	Price-Performance ratio	Camera for sample view	Powder, colloids Measuring	The color reader
Price	<b>39,000.-</b>	<b>49,000.-</b>	<b>55,000.-</b>	<b>60,000.-</b>	<b>65,000.-</b>

## Tabletop Spectrophotometer CS-810



Model	Tabletop Spectrophotometer CS-810
Illumination	d/0 (Diffused lighting, 0 degrees observe angle) SCS optical engine (light splitting and integration system),(confrm to CIE No.15, ISO7724/1, ASTM E1164, DIN 5033 Teil7, JIS Z8722 Condition C Standards)
Size of integrating sphere	Φ40 mm, Alvan diffused reflection surface coating
Illumination Light source	CLEDs (entire wavelength balanced LED light source)
Sensor	dual light path sensor array
Wavelength range	400-700 nm
Wavelength interval	10 nm
Half spectral width	5 nm
Reflectivity range	0-200%
Reflectivity Resolution	0.01%
Observation angle	2°/10°
Measurement light source	A,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,DLF,NBF,TL83,TL84
Price	<b>290,000.-</b>

# SPECTROPHOTO METER เครื่องวัดเฉดสี

## MODEL: CS-SERIES

เครื่องวัดเฉดสีพง



Spectrophotometer for Powder Coating Color Measurement

Type	CS-580	CS-600	CS-610	CS-650	CS-660
Illumination	d/8(Diffused lighting, 8 degrees observe angle),SCI (specular reflection included) /SCE(specular reflection excluded)				
Size of integrating sphere	Φ40 mm .Alvan diffused reflection surface coating				
Illumination Light source	CLEDs (entire wavelength balanced LED light source)	Halogen Lamp	CLEDs		
Wavelength Range	400 - 700 mm	360 - 740 mm	400 - 700 mm		
Wavelength Interval	10 mm				
Half Spectral	5 mm				
Reflectivity Resolution	0.0001				
Measurement light source	A,C,D50,D55,D65,D75,F1 - F12,DLF,TL83,TL84,NBF,U30,CWF				
Repeatability	ΔE*ab<=0.03(After calibration, Standard deviation of 30 measurements on test white board, 5 second)	ΔE*ab <=0.02, Maximum: 0.04	ΔE*ab<= 0.015, Maximum: 0.03		
Price	139,000.-	159,000.-	179,000.-	220,000.-	290,000.-

## CS-820 Tabletop Spectrophotometer



Compatible for solid and liquid color measurement, has multiple measuring calibers High intensity pulse xenon light Dual light path spectral analysis technology Has both SCI and SCE measurement modes Extra large display screen for easier measurement and settings Supporting color management software Has both reflection and transmission measurement Adjustable UV light source Four measurement calibers, maximum is 25.4mm

Specifications	Model CS-820
Repeatability	ΔE*ab 0.015, Maximum 0.03
Inter-instrument agreement	ΔE*ab ≤ 0.2 (BCRA color charts II, average of 12 charts
Spectral Range	360 mm - 740 mm
Reflectivity range	0% to 200%
Resolution	0.0001
Color difference formula	ΔE*ab, ΔE*CH, ΔE*uv, ΔE*cmc(2:1), ΔE*cmc(1:1) ΔE*00, eab(Hunter), 555, Color classification
Price	650,000.-

## MODEL: NR-110



Model	NR-110
Measurement End-face	Large stable end-face and small area concave-convex end face
Color space	CIEL *a*b*C*h* CIEL*a*b*
Color difference formula	Δ E*ab Δ L*a*b* Δ E*C*h*
Illuminating/ Viewing geometry	8° /d
Measuring aperture	ø4mm
Light source	D65
Repeatability	Standard deviation within Δ E*ab 0.08 Average of 30 measurements of standard white plate
Price	59,000.-

## NH-SERIES



Model	NH-300	NH-310
Illuminating/ Viewing geometry	8/d	
Measuring aperture	ø8mm	ø8mm/ø4mm
Color space	CIEL *a*b*C*h* CIEL*a*b* CIEXYZ	CIEXYZ CIERGB CIEL *u*v* CIEL*C*h Yellowness and whiteness color fastness
Color difference formula	Δ E*ab Δ L*a*b* Δ E*C*h*	Δ E*ab Δ L*a*b* Δ E*C*h* ΔECIE94 Δehunter
Light source	D65	D65 D50A
Price	69,000.-	89,000.-

## Model NS-800

Illumination/observation system	45/0 method (45 ring-shaped illumination, vertical viewing), Comply with CIE No.15 , GB/T 3978
Integrating sphere Size	Φ58mm
Light Source	combined LED sources
Sensor	Silicon photodiode array
Wavelength range / interval	400~700nm / 10 nm
Reflectance range	0~200%
Measuring Aperture	Φ8mm
Color Space	CIE LAB,XYZ,Yxy,LCh,CIE LUV
Color difference Formula	ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*00
Price	115,000.-

## NS-800



## MODEL: NR-200

Model	NR-200
Measuring aperture	ø8mm
Illuminating/ Viewing geometry	8/d
Color space	CIEL *a*b*C*h* CIEL*a*b* CIEXYZ
Color difference formula	Δ E*ab Δ L*a*b* Δ E*C*h*
Storage	100pcs standards 20000pcs samples
Price	49,000.-

# Melt Flow Tester, Automatic Keyboard, Digital Wire Torsion Tester

เครื่องทดสอบอัตราการหลอมไหล, เครื่องทดสอบคีย์บอร์ด, เครื่องทดสอบการบิดตัวโลหะ

## Melt Flow Tester เครื่องทดสอบการหลอมไหล

SP-XRL400 SERIES



XNR-400D



New update

Rheological measurements  
Multiweight Melt Index

Model	XNR-400
Temperature working range	120°C to 450 °C
Temperature accuracy	± 0,1 °C
Piston displacement accuracy	0,02 mm
Piston displacement resolution	0,005 mm
weights	0.325 / 1.2 / 2.16 / 3.8 / 5 / 10 / 21.6 Kg
Electric supply	220 V – 50 Hz
Air supply	0.8 to 1 Mpa
Dimensions	400 x 260 x 720 mm (height)

PRICE: 1,850,000.-

## เครื่องทดสอบการบิดตัวโลหะ: Digital Wire Torsion Tester



New update

Model	NJS-5X
Test range	Φ0.5~Φ7 mm
Mobile guide full parallelism within	< 0.2 mm
Maximum distance of two chuck	300 - 500 mm
Rotation Speed	30, 60r/min
Jaw stiffness	55 - 65 HRC
Weight tolerange	±0.5%
Testing machine operating noise	<70 dB
Operating Voltage	AC 380V±10% 50Hz

PRICE: 290,000.-



SP-XRL-400A      SP-XRL-400B  
Melt flow rate / Melt volume rate

Model	SP-XRL-400A	SP-XRL-400B	SP-XRL-400C	SP-XRL-400D
Temperature Control	PID			
Cutting material	Auto			
Measuring	Auto			
Load/Unload	Manual		Fast	
Result	LCD	LCD, Print Report	LCD	LCD, Print Report
Price	165,000.-	185,000.-	225,000.-	240,000.-

## AUTOMATIC KEY BOARD

### เครื่องทดสอบแรงกดดีเย็บอร์ด



TEC3D SERIES

สอบถาม ฝ่ายต่อไปนี้ 082-1288881, 081-7731860 หรือ OFFICE 02-9744354-6

# Roundness Cylindricity Measuring Machine, Sharp Edge Tester

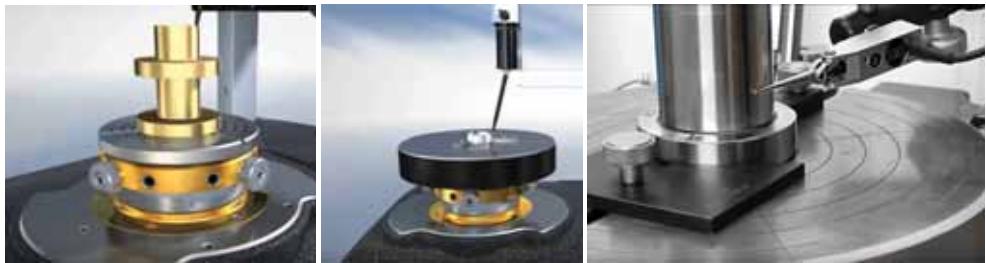
## Salt Spray Tester, Camshaft Measurement

เครื่องทดสอบความกลม, เครื่องทดสอบความคม, เครื่องทดสอบไออกล์อ, เครื่องทดสอบเพลาลูกเบี้ยว

### เครื่องทดสอบความกลม

#### Roundness – Cylindricity Measuring Machine

เครื่องทดสอบความกลม ของวัสดุ ที่ผลิตขึ้นเพื่อต้องการ ตรวจสอบ ความกลม หรือการเยื้องศูนย์ ดังๆ



Model	RC30H	RC60H	RC35	RC65		
Radial Accuracy of spindle	$\pm(0.025 + 5H/10000) \mu\text{m}$	$\pm(0.0125+5H/10000) \mu\text{m}$	$\pm(0.035+5H/10000) \mu\text{m}$	$\pm(0.020+3H/10000) \mu\text{m}$		
Axial Accuracy of spindle	$\pm(0.03+5x/10000) \mu\text{m}$	$\pm(0.03+4/10000) \mu\text{m}$	$\pm(0.03+6x/10000) \mu\text{m}$	$\pm(0.02+4x/10000) \mu\text{m}$		
dia of work plate and load capacity	$\phi 150 \text{ mm} (\text{Extendable})$		$\phi 220 \text{ mm} (\text{Extendable})$			
Load Capacity	20 kg		40kg			
Measured Max. dia	250 mm (Extendable)					
Price	สอบถามราค้าได้ที่ สายด่วน 082-1288881, 081-7731860 หรือ OFFICE 02-9744354-6					

### Sharp Edge Tester

เครื่องทดสอบความคม, อุปกรณ์ทดสอบความคม



### MODEL: SET-50



Materials that cannot be tested:

- Fabric and metallic string or thread
- Non-durable plastics such as forks and spoons
- Paper and paper products

Materials that can be tested:

- Metal
- Glass
- Some plastics

**PRICE: 32,000.-**

Model	SPQ-150	SPQ-250	SPQ-750	SPQ-1000
Test Room (WxLxH)	600 x 450 x 400 mm	900 x 600 x 450 mm	1200 x 850 x 500 mm	1600 x 1000 x 600 mm
Lite	108 ml	243 ml	510 ml	960 ml
Machine Size (WxLxH)	1130 x 630 x 1070 mm	1460 x 910 x 1280 mm	2200 x 1200 x 1450 mm	2600 x 1450 x 1600 mm
Lab temperature	NSS.ACSS 35°C 1 °C/CASS 50°C 1°C			
Humidity	85% ~ 98% RH			
Temperature range	$\pm 0.5^\circ\text{C}$			
Salt Spray Subside	1.0~2.0 ml / 80 cm 2/h			
Power Supply	AC220V 10A	AC220V 15A	AC220V 20A	AC220V 30A
Price	<b>160,000.-</b>	<b>195,000.-</b>	<b>270,000.-</b>	<b>385,000.-</b>

### SALT SPRAY TESTER

เครื่องทดสอบไออกล์อ



### Camshaft Measurement

#### เครื่องทดสอบเพลาลูกเบี้ยว

เครื่องวัดเพลาลูกเบี้ยว, เครื่องทดสอบเพลาลูกเบี้ยว

Model	911-36"	911-60" / 90"	911-24"
Part Length	0~915 mm	0~1524 / 2286 mm	0~610 mm
Swing Diameter	$\phi 228 \text{ mm}$		$\phi 190 \text{ mm}$

สอบถาม สายด่วน 082-1288881, 081-7731860 หรือ OFFICE 02-9744354-6

# VIBRATION METER

เครื่องทดสอบการสั่นสะเทือน

New Update!!



## MINI VIBRATION METER 3D

Model	AV-160D
Vibration Sensor	3-Axis Piezoelectric Accelerometer
Axial Vibration	Any One Axis of X,Y,Z or 3 Axes of Xyz
Accuracy	±5%+2 Digits
Analogue Output	AC Output 0~2.0V Peak Full Scale (Load Resistance)
Power Supply	4X1.5vaaa (Um-4) Battery
Price	<b>39,000.-</b>

The 3D Vibration Tester Applied to the periodic motion measurements to detect moving mechanical imbalances and misaligned. Designed for on-site measuring various mechanical vibration, for quality control, running time and prior equipment maintenance data. Selection of high-performance accelerometers to achieve accurate, replicable measurement It has a bearing condition measurement function

## VM6310



MODEL	VM6310
Velocity	0.1 - 200 mm /s (10Hz to 1 KHz)
Accuracy	Less 5%
Auto Power off	
Max Hold	
Price	<b>14,000.-</b>

## VM6320



MODEL	VM6320
Velocity	0.1 - 200 mm2 /s
Accuracy	Less 5%
Acceleration	0.1 - 200 mm / s
Displacement	0.001 - 2.0 mm
Auto Power off	
Max Hold	
Price	<b>16,000.-</b>

## MODEL:VIBCHECK



Model	Vibcheck
Display	3 1/2 digit LCD
Measuring Ranges	Vibration : Velocity 0-50mm/s True RMS Acceleration 0-20g Basic : Volts
Frequency Range	10Hz-1kHz (velocity) 10Hz-10kHz (acceleration)
Accuracy	Vibration : +- 0.1mm/s (+-0.1g) Bias : 5%
Price	<b>49,000.-</b>

MODEL	STV300
Range (Metric)	Acceleration 0.1~205.6 m /s (peak) Velocity 0.1~400.0 m/s (RMS) Displacement 0.001 ~ 9.0 mm/s (peak-peak)
Range (Imperial)	Acceleration 0.01~22.00m/s (peak) Velocity 0.01~15.75mm/s (RMS) Displacement 0.1~356.3mm (peak-peak)
Frequency range	Acceleration 10Hz~200Hz, 10Hz~500Hz 10Hz~1KHz, 10Hz~10KHz Velocity 10Hz~1KHz Displacement 10Hz~500Hz
resolution	0.25Hz
Data memory	100x80 pieces of data and 100 spectrums
Price	<b>49,000.-</b>

## Portable Vibration STV300



**MODEL  
VM-6370**

Model	VM6370
Display	4 Digit LCD backlit
Velocity	0.01-400.0 mis2
Displacement	0.001-4.000mm
Accueleration	0.1-400.0m/s2
Frequency range	10Hz to 10kHz
Accuracy	5% of reading+2 digits
Max Hold	
Price	<b>21,000.-</b>



**AR63A**

MODEL	AR63A
Velocity	0.1 - 1999.9 m/s
Acceleration	0.1 - 199.9 m / s2
Displacement	0.001 - 1.999 mm
Different vibration frequency selection	
Price	<b>39,000.-</b>

MODEL	AR63B
Velocity	0.1 - 1999.9 m/s
Acceleration	0.1 - 199.9 m / s2
Displacement	0.001 - 1.999 mm
LCD Display	3.5 digits Display
Different vibration frequency selection	
Environ Temperature display function	
Price	<b>39,000.-</b>



## VIBRATION METER MODEL:MK-21

Model	MK-21
Measuring Range	ACC : 0.0-20.0m/s2 (Lo) 0-200m/s2 (Hi) ACC : 0.0-20.0m/s2 (Lo) 0-200m/s2 (Hi)
VEL : 0-200um (Lo) 0-19900um	
Diagnostic Mode	Clases I, II, III and IV, for machine from less than 15KW
Linearity	<+-2% F.S. of each range
Price	<b>89,000.-</b>

# COMPACT VIBRATION GENERATOR

เครื่องสร้างการสั่นสะเทือน

## VIBRATION PEN



TV-200



TV-260

Model	TV200	TV260
Parameter	RMS of vibration velocity (mm/s)	Acceleration, Velocity, Displacement
Testing range	Velocity: 0.1mm/s~ 199.9mm/s Velocity: 0.1mm/s-199.9 mm/s(RMS) Displacement: 0.001mm-1.999 mm (peak-peak)	Acceleration:0.1m/s <sup>2</sup> Velocity: 0.1mm/s-199.9 mm/s(RMS) Displacement: 0.001mm-1.999 mm (peak-peak)
Accuracy		±5% ± 2digits
Display		3 1/2 digits LCD
Operating temperature		0°C ~ 40°C
Humidity		<85%
Price	22,000.-	25,000.-

## COMPACT VIBRATION

สินค้าใหม่



MODEL: 9514-AB/SD

Vibration generation that provides the flexibility to comply with various applications while its essential parts are standardized, the most suited configuration can be realized for various application such as heavy load, through hole, heat-proof, etc. And its greater flexibility makes it possible to comply with the examination of the rattle noise. Combining with various peripheral equipment can meet many requirement.

เครื่องสร้างสั่นสะเทือนสำหรับโปรดักส์ชันงานขนาดเล็ก

Model	9514-AB/SD
Exciting Force [N] (kgf)	500 (51.0)
Frequency Range [Hz]	5 to 5,000
Maximum Acceleration (G)	42.5
Maximum Displacement [mm]	25
Maximum Payload [Kg]	12
Armature Mass [Kg]	1.2

สอบถาม สายด่วน 082-1288881, 081-7731860

## F Series Vibration Testing System

The standard F series vibration testing system has been sold for over 40 years. This system can generate the exciting force from 1.3 kN to 60 kN over the broad range of frequency and have high durability to perform various vibration tests.



Model	F-1K/15	F-6K/30	F-60K/60
Sine	kno-p	1.3	6
Random	kNm/s	1.3	6
Shock	kNo-p	2.6	15
Frequency Range	Hz	to 5,000	to 2,300
Max. Acceleration	m/s <sup>2</sup>	1000	706
Max. Velocity	m/s <sup>2</sup>	1.4	1.8
Max. Displacement	mmp-p	15	30
Max. payload	kg	30	200

สอบถาม สายด่วน 082-1288881, 081-7731860 หรือ OFFICE 02-9744354-6

## VIBRATION TESTER

สินค้าใหม่!!

HD-A521-1



This Machine is used to test the anti-vibration capabilities of large pieces of furniture, household appliances, office furniture and other large objects, as well as the simulated transport vibration test of the packaged products, to assess the degree of vibration-resistance.

Model	HD-A521-1
Max. Test Load	200 KG
Frequency Range	50-300 cycles/ min adjustable
Amplitude Range	25.4 mm P-P(1 inch)
Control Panel	Programmable Logic controller + Touch Screen
Test Duration	Timer to pre-set the test time up to 99.99 hours
Vibration Mode	reciprocating
Machine Size ( LxWxH )	1170 × 1372 × 1615 mm
Work table size ( LxW )	1800×1200
Fence Height	1200 mm
Price	390,000.-

# GLOSS METER

เครื่องทดสอบความเงา

CS-SERIES สินค้าใหม่



MODEL	CS-300	CS-380
Test Angle	60°	20°, 60°, 85°
Test light spot(mm)	60° : 9*15	60° : 9*15
Test range	0-1000GU	60° : 0-1000GU
	85° : 0-160GU	85° : 0-160GU
Repeatability	100-2000GU:0.2%GU	100-2000GU:0.2%GU
Accuracy	Conform to JJG 696 standard for class one gloss meters	
Price:	<b>49,000.-</b>	<b>65,000.-</b>

สินค้าใหม่

GLOSS CHECKER  
**IG-SERIES**

IG-320



IG-331

แบรนด์คุณภาพ จากญี่ปุ่น

MODEL	IG-331	IG-320
Optical system	60° measurement: Incident angle 60° Reception angle 60° 20° measurement: Incident angle 20° Reception angle 20°	Incident angle 60° Reception angle 60°
Measuring area	60° measurement: 3 x 6 mm oval 20° measurement: 3 x 4 mm oval	12 mm x 6 mm oval
Measuring range	0-100	0-100.0
Display range	0-199 (resolution: 1)	0-199 (resolution: 0.1)
Reproducibility	±5% F.S. ±1 digit	±0.5% F.S. ±1 digit
Price:	<b>49,000.-</b>	<b>69,000.-</b>

สินค้าขาดดิ



Price: 16,500.-



Price: 21,000.-

MODEL	ETB-0686
Measure Range	0-200 GU
Digital Display	LCD
Accuracy	± 1.2 GU
Angle	60 degree
Measuring Window size	16 x 32 mm

MODEL	ETB-0833
Measure Range	0-200 GU
Digital Display	LCD
Accuracy	± 1.2 GU
Angle	20/ 60/ 85 degree



Model: STM-1150  
Price: 45,000.-



สำหรับขั้นบานเล็ก

MODEL	STM-1150
Measure Range	0-1000 GU
Deviation	± 1.5 GU
Digital Display	LCD
Measuring Area	9 X 11 mm
Memory	1000
Angle	60 degree
Software with USB Included	



สินค้า  
ขาดดิ  
Model: STM-1100  
Price: 85,000.-

MODEL	STM-1100
Measure Range	0-199.9 / 200 -2000 GU
Digital Display	LCD
Deviation	± 1.5 GU
Measuring Area	9 X 10 / 9 X 19 / 5 X 39 mm
Angle	20/60/58 degree
Software with USB included	

# SURFACE ROUNDNESS

เครื่องทดสอบความเรียบดูดแบบพกพา

New Update!  
SRT-300



\*\*Free Software Control

Main feature

- Electromechanical integration design, small volume, light weight, easy to use;
- Using DSP chip to control and data processing, high speed, low power consumption;
- 128 x 64 LED dot matrix display, digital / graphic display; highlight no perspective;
- Intuitive and rich display information, can display all the parameters and graphics;
- Compatible with ISO, DIN, ANSI, JIS national standards;



New Update!  
PRSR-110

Wireless On Mobile



Model	TR200
Roughness Parameters	Ra, Rz, Ry, Rq, Rt, Rq, Rmax, Rm, R3z, S, Sm, Sk, Tp
Measuring System	Metric $\mu\text{m}$ , Imperial $\mu\text{inch}$
Range	Ra, Rq: 0.01 - 40 $\mu\text{m}$ Rz, Ry, Rp, Rt, R3z: 0.02 - 160 $\mu\text{m}$ Sm, S: 2 - 4000 $\mu\text{m}$ tp: 1 - 100% (%Ry)
Display Resolution	0.001 $\mu\text{m}$ / 0.04 $\mu\text{inch}$
Display	LCD 128 x 64 dot-matrix, with backlight
Price	85,000.-



TR-200



MODEL  
SRT-6210

Model	SRT-6210
Display	4 digits, 10 mm LCD, with blue backlight
Parameters	Ra, Rz, Rq, Rt
Measuring range	Ra, Rq 0.005 - 16.00 $\mu\text{m}$ Rz, Rt 0.020 - 160.0 $\mu\text{m}$
Accuracy	$\leq \pm 10\%$
Repeatability	$\leq 6\%$
Resolution	0.001 $\mu\text{m}$ $\geq$ 100 $\mu\text{m}$
Price	42,000.-



MODEL  
AR-132B

Model	SRT-300
Testing Parameters	Ra, Rz, Rq, Rt, Rp, Rv, R3z, R3y, RzJIS, Rsk, Rku, Rsm, Rmr, Rx
Measuring range (um)	Ra: 0.005 - 16.000 Rz: 0.02 - 160.00
Sample length (mm)	0.25, 0.80, 2.50
Evaluation length (mm)	(1 - 5) L
Maximum drive stroke	17.5 mm / 0.7 inch
Indication error	$\pm(7-10)\%$
Indication accuracy	0.001
Variability	< 6%
Data Storage	100 groups
Price	59,000.-

MODEL  
AR-132B

Model	AR-132B
Measuring Range	Ra , Rq : 0.005 ~ 16.00 um / 0.020 ~ 629.9 uinch Rz , Rt : 0.020 ~ 160.0 um / 0.078 ~ 6299 uinch
Accuracy	Not more than $\pm 10\%$
Fluctuation of display value	Not more than 6%
Resolution	0.001 $\mu\text{m}$ , 0.01 $\mu\text{m}$ , 0.1 $\mu\text{m}$
Price	45,000.-

Model	AR-132C
Measuring Range	Ra: 0.05 - 10.00 um / 1.000 - 400.0 uinch Rz: 0.020 - 100.0 um / 0.780 - 4000 uinch
Accuracy	Not more than $\pm 15\%$
Fluctuation of Display	Not more than 10%
Resolution	0.001 $\mu\text{m}$ > 100 um
Price	32,000.-



PTS-103 PTS-104

ในรุ่น PTS104 นั้นมี ช่องต่อที่สามารถเชื่อมต่อเข้ากับคอมพิวเตอร์ เพื่อปรับปรุงค่าได้อีกด้วย

Model	PTS103	PTS104
Measuring Range	Ra: 0.05 $\mu\text{m}$ ~ 6.3 $\mu\text{m}$ /1 $\mu\text{m}$ ~ 250 $\mu\text{m}$ Rz: 0.2 $\mu\text{m}$ ~ 50.0 $\mu\text{m}$ /8 $\mu\text{m}$ ~ 999 $\mu\text{m}$ Ry/Rmax: 0.2 $\mu\text{m}$ ~ 25 $\mu\text{m}$ / 8 $\mu\text{m}$ ~ 999 $\mu\text{m}$	
Resolution	0.01 $\mu\text{m}$ /1 $\mu\text{m}$	
Display	3 - digits LCD	
Price	49,000.-	55,000.-



MODEL: IS14131

แผ่นทดสอบความเรียบ

แผ่นดังตัวอย่างค่าความเรียบ คุณภาพสูง สำหรับตรวจสอบเทียบความเรียบดูด

Model	IS14131 SURFACE ROUGHNESS COMPARATOR	
2P cs flat lapping	2.4 $\mu\text{m}$	0.1 , 0.05 $\mu\text{m}$
4 pcs external grinding	8, 16, 32, 63 $\mu\text{m}$	0.2 , 0.4 , 0.8 , 1.6 $\mu\text{m}$
6 pcs plain grinding	2 , 4 , 8 , 16 , 32 , 63 $\mu\text{m}$	0.05 , 0.1 , 0.2 , 0.4 , 0.8 , 1.6 $\mu\text{m}$
6 pcs horizontal milling	16 , 32 , 63 , 125 , 250 , 500 $\mu\text{m}$	0.4 , 0.8 , 1.6 , 3.2 , 6.3 , 12.5 $\mu\text{m}$
6pcs vertical milling	16 , 32 , 63 , 125 , 250 , 500 $\mu\text{m}$	0.4 , 0.8 , 1.6 , 3.2 , 6.3 , 12.5 $\mu\text{m}$
6pcs turing	16, 32, 63, 125, 250, 500 $\mu\text{m}$	0.4 , 0.8 , 1.6 , 3.2 , 6.3 , 12.5 $\mu\text{m}$
Price	12,500.-	

# SURFACE ROUNDNESS TESTER

เครื่องทดสอบความเรียบผิวแบบตั้งโต๊ะ

High Precision Roughness Tester DR300



New  
Update

**Price: 135,000.-**

Model	DR300
Measuring Range Z-axis , X-axis	Z-axis 160 µm , X-axis 17.5 mm
Resolution Z-axis	0.01 µm/± 20 µm 0.02 µm/± 40 µm 0.04 µm/± 80 µm
Measuring Item Parameters	Ra Rz == Ry (JIS) Rq R1 == Rmax Rq Rv R3z R3y Rz(JIS) Rs Rsk Rku Rsm Rmr Rpc, Rk, Rpk, Rvk, Mrl, Mr2
Filter	RC, PC-RC, Gauss, D-P
Dimension	158 x 63.5 x 46 mm

SURFACE ROUGHNESS TESTER MODEL: SRT-400C



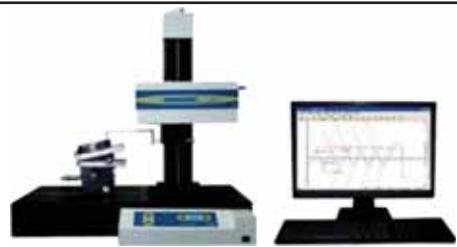
SRT-400C roughness tester is widely used in metrological departments of industries of autos, tools, bearings, patterns and optics for measuring roughness of precision parts. The drive box is equipped with a straight-line guide of high accuracy traveling up to 60mm. The displacement of the transducer moving along the guide collected with a precision grating system. The transducer is operated with eight keys on the control box or the buttons on the windows interface. It is used to measure the form and roughness of profiles of precision parts, in addition to roughness, by fitting least-square line of nominal form, a variety of form parameters can be measured, such as radius, angle, straightness, convexity, vertical and horizontal distance and distances between points, circle and slots. It is compliant with China Standard GB/T3505-2000, GB/T10610-1998 and ISO5436, ISO11562

Specifications	Model : SRT-400C
Evaluation parameters	Ra,Rz,Rt,Rs,RSm,Rmax,Rp,Rq,D,Pt, Lr,Ln,RSK,RΔq,Δa,λq,λa,R3t,Rt1,Rt2,Rt3,R t4,Rt5,Rmr(Tp) chart
Roughness range	More than Ra 0.01-20um
Sampling length	L: 0.08, 0.25, 0.8, 2.5mm
Evaluation length	Ln : 1L,2L,3L,4L,5L or selectable
Sampling points	10000 points
Resolution	0.001µm
Indication error	±5%
Repetition error	±3%
Max.specimen height	300mm
Sensor, Applications	Planar,incline,cylinder,circular and spherical parts, grooves and bores
Probe type	standard type : height<12mm, small hole : 5mm, probe D : 2um, force : 0.004N
X,Y image magnification	Auto mode
Price	<b>590,000.-</b>



SURFACE ROUGHNESS TESTER MODEL: SRT-2207

Specifications	Model SRT-2207
Measuring principle	stylus contact method, inductive (vertical);
	linear scale (horizontal)
Measuring range	400um (vertical), 100mm(horizontal)
resolution	0.6nm (vertical), 7um (horizontal)
Cut-off length	0.08, 0.25, 0.8, 2.5, 8mm
Assessment length	N x cut-off, N=1, 2, 3, 4, 5
Filter type	Gaussian, 2RC, PC, un-filtered
Parameters	Ra, Rc, Rp, Rv, Rz, Rq, Rsm, Rt, Rsk, Rku, Rdq, Rmr, Wa, Wc, Wp, Wv, Wz, Wq, Wsm, Wt, Wsk, Wku, Wdq, Qmr, Pa, Pc, Pp, Pv, Pz, Pq, Psm, Pt, Psk, Pku, Pdq, Pmr
Price	<b>1,390,000.-</b>



Contour & Roughness Tester

Specifications	Model SRT-500C
Measuring range	X:100mm, Z:10mm, X:120/150mm, Z:20mm
Measuring function	element; point, line, peak, valley, crossing point, center line
Sensor range	10mm; 20mm (option)
Range-resolution rate	65536:1
Max.specimen height	X:100, Z:370mm X:120mm, Z:370mm (optional)
Probe type	Standard type : height<12mm, small hole : 4mm, probe D : 2um, force : 0.004N, angle 60
Resolution	0.001µm
parameters	Ra, Rz, Rt, Rs, RSm, Rmax, Rp, Rq, D, Rt, Lr, Ln, RSK, RΔq, Δa, λq, λa, R3, R3t, Rt, Rt2, Rt3, Rt4, R15, Rmr (Tp) chart.
Price	<b>850,000.-</b>

# THICKNESS METER

เครื่องวัดความหนาโลหะ



PosiTector  
UTG SERIES



สินค้า ใหม่

	PosiTector UTG	Corrosion	Multiple Echo
Order Code	UTG C1	UTG C3	UTG M1
Included Body	Standard	Advanced	Standard
Included Probe	UTG C		UTG M
Probe Type	5 MHz Dual Element	5 MHz Contact	
Thru-Paint Capability	no	yes	
Range Single Echo	0.040" to 5.000" 1.00 to 125.00 mm		0.100" to 5.000" 2.50 to 125.00 mm
Range Multiple Echo	NA		0.100" to 2.500" 2.50 to 60.00 mm
Resolution	0.001" 0.01 mm		0.001" 0.01 mm
Accuracy	±0.001" ±0.03 mm		±0.001" ±0.03 mm
Price	59,000.-	79,000.-	85,000.-
			110,000.-

สินค้าขายดี



TM 210 Plus



TM 8818

MODEL	TM 210 PLUS
Display	128X64 LCD
Range	0.75 mm ~ 300.0 mm
Accuracy	±(0.5% +0.02 mm)
Memory	500
Price	18,500.-

MODEL	TM8818
Display	4 Digit LCD
Range	0.9~400mm (45#steel)
Accuracy	±(0.5%n+0.1)
Resolution	0.01/0.1mm
Price	19,000.-

MODEL	TG110-DL
Dimensions (W x H x D)	3.00in. x 4.90in. x 1.25in. (76mm x 99mm x 32mm)
Display	128 x 64 pixels, 1.96in. x 1.25in. (50mm x 32mm)
Resolution	0.001in. (0.025mm)
Memory	50,000 readings, 30 character
Price	65,000.-



Made in USA

MODEL	TI-45N	TI-45NB	TI-45NC
Range	1.00~199.99 mm	0.40~15.00 mm	0.50~19.00 mm
Tolerance resolution	±0.05 mm or ±0.2%rdg	±0.05 mm	±0.03 mm
Probe	Φ13.0 mm	Φ13.0 mm	Φ7.5 mm
Display	4 2/1 - digit LCD Display, High with push button illumination		
Resolution		0.01 mm	
Price	55,000.-	ส่วนลด	ส่วนลด



Made in Japan



High-Precision

MODEL	High-Precision
range	1.5mm to 18mm; 0.059in-0.709in in I-E mode 0.25mm to 10mm; 0.012in-0.394in in E-E mode
resolution	H < 0.4in : 0.0001in/ 0.001in/ 0.01in or 0.001mm/ 0.01mm/ 0.1mm H≥0.4in : 0.001in/ 0.01in or 0.01mm/ 0.1mm
Display	128x64 dot-matrix LCD screen
Price	59,000.-



MODEL	TM230D	TM250D
RANGE	0.8mm – 250mm Depending of the probes	
	3mm – 18mm Depnding of the probes	
DISPLAY	0.1mm or 0.01inch	0.1mm/0.01mm or 0.01inch/0.001inch
TOLERANCE	± 0.1mm in steel	± 0.025mm in steel
VELOCITY	1000-9999 m/s (0.0393-0.3936 inch/μs)	
DISPLAY TYPE	4 digital LCD with advanced backlight	
MEMORY	500 Test Values	
POWER	2 pcs. 1.5v AA Batteries	
OUTSIDE	149mm×73mm×32mm	
PRICE	35,000.-	39,000.-

TM 230D

TM 250D



TM 250D

TM 250D

# ULTRASONIC TESTBLOCK, WALL THICKNESS

ក៉ែវនិកលក្ខណៈអារ៉ាប់គ្រីងកត់សែរការពាណិជ្ជកម្មខ្លួន, គ្រីងវិដការពាណិជ្ជកម្មខ្លួន

ក៉ែវនិកលក្ខណៈអារ៉ាប់គ្រីងកត់សែរការពាណិជ្ជកម្មខ្លួន



MODEL	S-5 PIPE MM
Description	MM,1018 steel
5step pipe	2.5mm/5mm/10mm/15mm/20mm
length:	100mm
Price	<b>9,000.-</b>

MODEL	S-10 MM-1
Description	MM,1018 steel
10step	1mm/2mm/3mm/4mm/5mm/6mm/7mm/8mm/9mm/10mm
Size:	200 X 20mm
Price	<b>9,500.-</b>

MODEL	S-6 MM-2
Description	MM,1018 steel
4step	2.5mm/5mm/10mm/15mm/20mm/25mm
Size:	120x20mm
Price	<b>8,500.-</b>



MODEL	S-6 MM-1
Description	MM,1018 steel
6step	1mm/3mm/5mm/10mm/15mm/20mm
Size:	120x20mm
Price	<b>9,500.-</b>

MODEL	S-5 INCH
Description	MM,1018 steel
5step	0.100"0.200"0.300"0.400"0.500"
Size:	4" X 0.8"
Price	<b>8,500.-</b>

MODEL	S-5 MM
Description	MM,1018 steel
5step	5mm/10mm/15mm/20mm/25mm
Size:	100X20mm
Price	<b>8,500.-</b>

MODEL	S-4 MM
Description	MM, 1018 steel
4step	3mm/5mm/10mm/15mm/25mm
Size:	80 X 20mm
Price	<b>8,000.-</b>



MODEL : V2 **Price: 9,500.-**

### Description

- V2 TEST BLOCK STEEL
- THICKNESS: 20mm / 25mm
- STAINLESS STEEL 20mm / 25mm
- INCLUDED MAKER CERTIFICATION AND ABS PLASTIC CASE
- MATERIAL AVAILABLE FOR ALUMINUM 25mm



MODEL	S-4 INCH-2
Description	INCH,1018 steel
4step	0.250"0.500"0.750"1.000"
Size:	3.15" X 0.8"
Price	<b>8,000.-</b>

MODEL	S-4 INCH-1
Description	INCH,1018 steel
4step	0.100"0.200"0.400"0.600"
Size:	3.15" X 0.7"
Price	<b>8,000.-</b>

## Wall Thickness

គ្រីងវិដការពាណិជ្ជកម្មខ្លួន



Free Software

MODEL	FH-7200-4	FH-7200-10
Range	0-1.5 mm with 1.5 mm Ball	0-2.5 mm with 2.5 mm Ball
Data Memory	100000 Values	100000 Values
Interfaces	Irda 1.0	Irda 1.0
	Free Software	
Price	<b>290,000.-</b>	<b>320,000.-</b>

# TORQUE TESTER

เครื่องวัดอัตราแรงบิด

Electronic Torque Wrench

FREE: Calibration Certificate of USA



DTW-SERIES	DTW-265I	DTW-1200I	DTW-100F	DTW-250F	DTW-625F
Range	26.5 - 265 lbf-in	120 - 1195 lbf-in	10 - 100 lbf-ft	25 - 250 lbf-ft	62.5 - 625 lbf-ft
Drive	1/4"	3/8"	1/2"	1/2"	3/4"
Price	<b>18,500.-</b>	<b>18,500.-</b>	<b>18,500.-</b>	<b>18,500.-</b>	<b>39,000.-</b>



## TSD-SERIES

Model	TSD-50	TSD-400
Measuring Range	0.45 - 4.50 lb-in 5.0 - 50.0 cN-M 0.50 - 5.00 kg-cm	3.50 - 35.00 lb-in 40.0 - 400.0 cN-M 4.00 - 40.00 kg-cm
Resolution	0.01 lb-in 0.1 cN-M 0.01 kg-cm	0.01 lb-in 0.1 cN-M 0.01 kg-cm
Price	<b>23,500.-</b>	<b>23,500.-</b>

FREE: Calibration Certificate of USA

## TTQC-SERIES

FREE: Calibration Certificate NIST Traceable Calibration with data

### Features

Bidirectional accuracy of  $\pm 1\%$  of indicated reading

Eight (8) selectable engineering units: Oz.in., Lb.in., Lb.ft., Nm, cNm, KgfCm, gfCm, KgfM

3 modes of operation: Track, Peak and 1st Peak

Rugged Aluminum Housing

NiMH rechargeable batteries provide 8-10 hours continuous use

Includes NIST-Traceable Calibration Certificate



Model	Range	Drive Size	Run-Down Fixture	Price
TT-QC-100z-1/4	10 - 100 ozf-in	1/4"	Included	<b>59,000.-</b>
TT-QC-200z-1/4	20 - 200 ozf-in	1/4"	Included	<b>59,000.-</b>
TT-QC-10i-1/4	1 - 10 lbf-in	1/4"	Included	<b>59,000.-</b>
TT-QC-25i-1/4	2.5 - 25 lbf-in	1/4"	Included	<b>59,000.-</b>
TT-QC-50i-1/4	5 - 50 lbf-in	1/4"	Included	<b>59,000.-</b>
TT-QC-100i-1/4	10 - 100 lbf-in	1/4"	Included	<b>59,000.-</b>
TT-QC-150i-1/4	15 - 150 lbf-in	1/4"	Included	<b>59,000.-</b>
TT-QC-250i-3/8	25 - 250 lbf-in	3/8"	Included	<b>59,000.-</b>
TT-QC-500i-3/8	50 - 500 lbf-in	3/8"	Included	<b>59,000.-</b>
TT-QC-750i-3/8	75 - 750 lbf-in	3/8"	Included	<b>65,000.-</b>
TT-QC-1000i-3/8	100 - 1000 lbf-in	3/8"	Included	<b>65,000.-</b>
TT-QC-100f-1/2	10 - 100 lbf-ft	1/2"	Optional	<b>65,000.-</b>
TT-QC-150f-1/2	15 - 150 lbf-ft	1/2"	Optional	<b>65,000.-</b>
TT-QC-250f-1/2	25 - 250 lbf-ft	1/2"	Optional	<b>65,000.-</b>
TT-QC-500f-3/4	50 - 500 lbf-ft	3/4"	Optional	<b>65,000.-</b>
TT-QC-750f-3/4	75 - 750 lbf-ft	3/4"	Optional	<b>65,000.-</b>

# TORQUE METER

## เครื่องทดสอบแรงบิดฟ้าหวด

Model	FMT-5	FMT-50	FMT-220	FMT-550	FMT-2200
Accuracy	CW/CCW ±0.5% or ± 3 Digits				
Socket Intuition Affinity (Female)	1/4"	3/8"	1/2"	3/4"	1"
Max. Torque	5 Nm	50 Nm	220 Nm	550 Nm	2200 Nm
Torque Measuring Range	0.05-5.000	0.5-50.000	2.2-220.00	5.5-550.00	22-2200.0
Operation Mode	Peak Hold/ Track				
Unit Selection	N-m,in-lb, ft-lb,kg-cm			N-m,ft-lb	
Data Memory	50	50	50	50	50
Operation Temperature	10°C -60°C				
Storage Temperature	20°C - 70°C				
Ulite Test	10000 time				
PC Connectivity	USB Cable Supported				



### FMT SERIES

ติดต่อสอบถาม สายด่วน 082-1288881, 081-7731860 หรือ OFFICE 02-9744354-6

Model	TNP-2	TNP-5	TNP-10
Measuring units	Nm, Ncm, Kgcm, Lbln		
Measuring Range	0-2.000 Nm	0-5.00 Nm	0.10.00 Nm
	0-200.0 Ncm	0-500.0 Ncm	0-1000 Ncm
	0-20.39 Kgcm	0-50.99 Kgcm	0-1020 Kgcm
	0-17.70 Lbln	0-44.25 Lbln	0.885 Lbln
Overload Protection/ Percentage overload	Yes/150%		
Sample diameter range	† 10-190 mm (0.39" - 7.48")		
Overload Display	Display "OVR" at sub Display of LCD, blinking LED		
Display	Main	4-Digit LCD Display Character Height 12 mm	
	Sub	3-Digit Display Character Height 7 mm	
	Comparator	HI, GO, LO, LED	
Accuracy	± 0.5% F.S.		
Price	69,000.-	69,000.-	69,000.-

### TNP-SERIES

USB interface



Model	DTX2-15B	DTX2-40B	DTX2-85
Capacity Ldf-in	15 (0.01 Ldf-in)	40 (0.1 Ldf-in)	85 (0.1 Ldf-in)
Capacity Kgf-cm	20.00 (0.1 Kgf-cm)	50.00 (0.01 Kgf-cm)	100.0 Kgf-cm (0.1 Kgf-cm)
Capacity N-cm	200.0 (0.1N-cm)	500.0 (0.1N-cm)	1000 N-cm (1N-cm)
Accuracy	± 5%		
Memory	1000		
Price	79,000.-	79,000.-	79,000.-

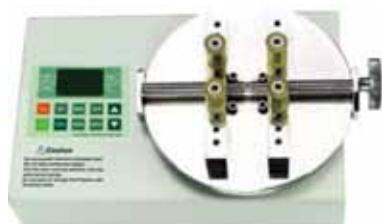


### DTX2-SERIES

### DB-SERIES

Calibration Certificate of GERMANY

Model	DB-1	DB-2	DB-5	DB-10	DB-20
Measurement Range	1.0000 N.m	2.000 N.m	5.00 N.m	10.00 N.m	20.0 N.m
Division	0.0005 Nm	0.001 N.m	0.002 N.m	0.05 N.m	0.1 N.m
Net Weight	12 Kg				
Gross Weight	15 Kg				
Accuracy	± 0.5%				
Memory	1000 Values				
Price	59,000.-	59,000.-	59,000.-	59,000.-	59,000.-



# BELT TENSION

เครื่องทดสอบแรงตึงของสายพาน

เครื่องทดสอบแรงตึงสายพาน

BELT TENSION GAUGE BTG-2



**NEW  
UPDATE**

Model	BTG-2
Part Number	95506-00091
Applicable Belts	V Belts Especially M, A, B V Ribbed Belts 3 rib, 4 rib, 5 rib
Price	35,000.-

BELT TENSION METER (DUCATI)



**MODEL  
BTM-TTC**

Model	BTM-TTC
Units	Hz (Frequency)
Display	Backlit LCD
Resolution	3 Hz
Accuracy	1.5 Hz
Price	43,000.-

Contact/ Non-Contact Tachometers

CDT-2000HD



**BTM-400**



Model	BTM-400 Plus
Units	N. Lb, Hz
Measuring Range	10-400 Hz, Standard 3-800 Hz, Optional
Free span length, Max	30ft (10m)
Belt Density, Max	10 kg/m
Price	45,000.-

Model	CDT-2000HD
Non-Contact	1-99999
Contact	1-99999
Accuracy	0.02%
Resolution	0.01 RPM
Price	25,000.-

*Calibration Certificate of USA*  
**Made in Germany**



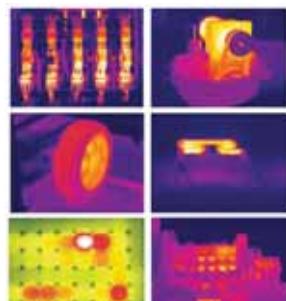
## Thermal Imaging Camera

เครื่องทดสอบอุณหภูมิความร้อน



### Product Description

- 2-Meter drop resistance
- 1.3 million pixel ccd image
- Various temperature Measurement functions
- JPEG Storage with Voice Annotation
- High cost-effective



Item	SP-3	SP-7
Detector	Detector Type	Uncooled FPA microbolometer
Characteristics	Array Size/Format	160x120      384x288
	Field of view/min focus distance	250x190/0.1 m
	Spatial Resolutions (IFOV)	2.72 mrad      1.36 mrad
	Thermal Sensitivity	≤0.06°C@30°C      ≤0.05°C@30°C
	Frame Rate	50/60 Hz
	Focus	Manual
	Spectral Range	8-14 μm
	Built-in Visible Light	Yes
Image Display	LCD Display	2.7" TFT Color LCD, 640x480
	Image adjustment	Auto/manual gain and brightness
	Temperature Range	-20°C~+350 °C (can expand to 650 °C)      -20°C~+650 °C
	Accuracy	±2°C or ±2% of reading, whichever is greater
	Measurement Correction	Automatic /manual
	Measurement Mode	Up to 4 movable spots. Up to 3 movable areas (maximum, minimum and average temperature). Up to 3 movable lines. Line profile. Isotherms. Temperature difference. Alarm (voice,color)
Image Storage	Storage Card	2G SD card, max 16
Price	95,000.-	210,000.-

# DUROMETER, TABLET HARDNESS TESTER

เครื่องวัดความแข็งยางและพลาสติก, เครื่องวัดความแข็งเม็ดยา

## Durometer แบบเข็ม



### Shore A

Price : 6,500.-

### Shore C

Price : 7,500.-

### Shore D

Price : 8,500.-

#### Specification

- High Resolution
- Test Range : 0-100
- Available test range: 10-90 HA, HC, HD
- Dimension: 115x60x25 mm
- Stroke: 2.5 mm

## Digital Durometer แบบดิจิตอล



### Shore A

Price: 13,500.-



### Shore C

Price: 13,500.-



### Shore D

Price: 13,500.-

#### Specification

- High Resolution
- Test Range : 0-100 HA, HC, HD
- Available test range: 10-90 HA, HC, HD
- Dimension: 115x60x25 mm
- Stroke: 2.5 mm
- Tip Dimension: 0.79 mm



#### Specification

- Match to SHORE A and C durometer
- Manual operation easy and stable to operate
- Dimension: 100\*212\*250 mm

\*\* ราคาเฉพาะ Stand  
Price: 19,500.-

## Tablet Hardness Tester

เครื่องทดสอบความแข็งเม็ดยา

### MODEL : YD-1

#### Technical Parameters

- Hardness range : (2-199.9) N
- Hardness accuracy : Max.\*( $\pm 0.05\%$ )
- Moving distance of probe : 20mm
- Power : 220V/50Hz/10W or 110V/60Hz/10W



Price: 49,000.-

### MODEL: YD-2

#### Technical Parameters

- Hardness range : (2-199.9) N
- Hardness accuracy : Max.\*( $\pm 0.05\%$ )
- Moving distance of probe : 3-40mm
- Test period : >20 S/P
- Max number in each group 100P
- Power : 220V/50Hz/60W or 110V/60Hz/10W



Price: 89,000.-

### MODEL: YD-3

#### Technical Parameters

- Hardness range : (2-199.9) N
- Hardness accuracy : Max.\*( $\pm 0.05\%$ )
- Moving distance of probe : 3-40mm
- Max number in each group 100P
- Power : 220V/50Hz/10W or 110V/60Hz/60W



Price: 69,000.-

#### Descriptions

- Corporate standard (Tablet hardness tester) Q/12XQ0186-2005

## Durometer Test Stand

#### Specification

- Match to SHORE D durometer
- Height adjustment : 0-200 mm
- Clearance : 0-300 mm (Standard)
- Dimension: 100\*212\*250 mm



\*\* ราคาเฉพาะ Stand  
Price: 22,500.-

# FRUIT PENETRO METER

เครื่องวัดความแข็งผลไม้



## Fruit Penetrometer

- Test soft fruit, Please use GY-2, such as banana, strawberry
- If you want to test apple, pear, please use GY-1,
- And if test hard fruit, please use GY-3, such as hard apple, cantaloupe

Model	GY-1	GY-2	GY-3	
Range	2 - 15 kg /cm2	0.5 - 4 kg /cm2	0.5 - 12 kg /cm2	1-24 kg /cm2
Head Diameter	3.5 mm	3.5 mm	8 mm	11 mm
Resolution	0.1	0.02	0.1	0.2
Stroke			10 mm	
Dimension			140 x 60 x 30	
Weight			0.5 kg	
Price	9,000.-	9,000.-	9,000.-	9,000.-

## Digital Fruit Penetrometer



Model	GY-4
Load limit	20 kgs
Load Resolution	0.01 kg
Accuracy	0.50%
Unit	N, kg, lb
Interface	RS-232-USB
Power Supply	Input 110 - 240 V 50-60 Hz 200mA Output- 4V 500 mA
High Precision sensor	
Working	5 C -35 C
Transpoting	15% - 80% RH
Dimension	L245 mm "W55 mm"
Price	19,500.-

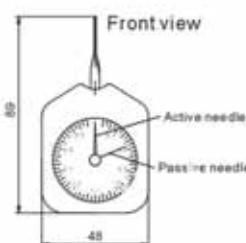


## GYT-Stand for Fruit Pennetrometer

ใช้สำหรับ ยึดติดกับ เครื่องวัดความแข็งผลไม้ ได้ทั้งแบบ Digital และ แบบเข็ม เพื่อให้มีความเที่ยงตรง มากยิ่งขึ้นแทน สำหรับ เครื่องวัดความแข็งผลไม้ เครื่องทดสอบความแข็งของผลไม้ เพื่อตรวจสุขภาพ ความสุกของผลไม้

สอบถามราคาได้ที่

สายด่วน 082-1288881, 081-7731860 หรือ OFFICE 02-9744354-6



## TENSION GAUGE MODEL HTD SERIES

Our range of Dial tension meter (gram gauge) provide a simple, quick and easy way of measuring force from 2 to 500 gram force. It measures in both directions clockwise and counter clockwise. Available in four size : HTD, HTD, HTD-Z, HTD-Z. Available with flat or round tips and with N or g unit.

Model	HTD-10	HTD-30	HTD-50	HTD-100	HTD-150	HTD-300	HTD-500
Capacity	10 g	30 g	50 g	100 g	150 g	300 g	500 g
Resolution	0.2 g	0.5 g	1 g	2 g	2.5 g	5 g	10 g
Calibration	2 - 10 - 2 g	6 - 30 6 g	10 - 50 - 10 g	20 - 100 - 20 g	30 - 150 - 30 g	60 - 300 - 60 g	100 - 500 - 100 g
Net weight				65 g			
Gross weight				140 g			
Accuracy				± % of full scale			
Price				6,500.-			

# WEB STER / BARCOL IMPRESSOR

เครื่องวัดความแข็งอลูมิเนียมแบบพกพาและเครื่องวัดความแข็งอลูมิเนียมแบบจ่อแสดงผลดิจิตอล

เครื่องวัดความแข็งอลูมิเนียม แบบพกพา

## Webster W Series



Model: W20



Model: W20 A



Model: W20 B

Model	W-20	W-20 A	W-20 B	W-B 75	W-B 75D	W-BB 75	W-B 75 B	W-B 92
Application Range	Aluminum alloy			Brass		Copper		Stainless Steel trips, Thin cold-rolled Steel trips
Hardness Range	25 110HRE 58 131HV			63 105HRF		18 100HRE		50 92HRB
Specimen	0.4 - 6 inner	0.4 - 13 inner	0.4 - 8 inner	0.4 - 6 inner	0.4 - 8 inner	0.4 - 6 inner	0.4 - 8 inner	0.4 - 6 inner
Dimension (mm)	> 10	> 10	> 6	> 10	> 6	> 10	> 6	> 10
Price	39,000.-	45,000.-	45,000.-	43,000.-	48,000.-	48,000.-	48,000.-	43,000.-

เครื่องวัดความแข็งอลูมิเนียมแบบจ่อแสดงผลดิจิตอล

## Digital Display Barcol Impressor



MODEL: HM-934-1

HM-934-1 PLUS

Model	HM-934-1	HM-934-1 PLUS
Range	0 ~ 100Hba, Amount to 25~ 135 HBW	
Resolution	0.1 Hba	
Indication Error	81~88HBa ±1 Hba	42~48 Hba ±2 Hba
Repeatability Error	81~88 Hba ± 1.5 Hba	42~48 Hba ±2.5 HBa
Operating Condition	Temperature: 0.50°C	Humidity: <80% RH
Brinell Hardness		Yes
Vickers Hardness		Yes
Rockwell Hardness		Yes
Price	25,000.-	29,000.-

### Standard Accessories :

- Main Unit
- 2 Pins
- 2 Standard Blocks
- Pin Length Calibration Block
- Screw Driver
- Spanner
- Carrying Case
- Operation Manual

### Applications:

- Aluminum
- Aluminum Alloys
- Soft Metals
- Composite Materials
- Glass Steel

### Optional Accessories:

- Bluetooth data out put with software

# PORATBLE HARDNESS TESTER

เครื่องทดสอบความแข็งโลหะ, อลูมิเนียม, ทองเหลือง ชนิดพกพา

## THL 280 PLUS



Support  
Price: 9,000.-

Model	THL 280 PLUS
Hardness Scale	HL, HB, HRB, HRC, HRA, HV, HS
Memory	48~600 groups (impact times: 32~1)
Measuring range	HLD(170~960) See below table 1 and table 2
Accuracy	±4HLD (760±30HLD)
Price	45,000.-

สินค้า  
ใหม่

MODEL: SH21

Made in Japan



Brand : SONOARD

สอบถามราคา

Model	SH-21
Measuring Range	HRC 10 -70, HV 50 - 999, HS 20 -99.9, HB 85 - 550
	Digital Display with EL Black Light
Maximum	Average
Memory	2000 Pieces



MODEL: THL-370



LEED HARDNESS  
Brand STAR TECH  
Made in Taiwan

Model	HM6561
Hardness Scales	HB, HRC, HV, HB, HS, HL
Display	LCD With back light
Memory	250 Groups
Price	35,000.-

Model	THL - 370
Measuring range	HLD ( 170 ~ 960 ) HLD
Measuring direction	360 drgree.
Hardness Scale	HL,HB,HRB,HRC,HRA,HV,HS
Memory	600 groups max
Display	3 inch screen
Price	42,000.-



## COMBINED HARDNESS TESTER



Combined  
Hardness Tester  
NOVOTEST T-UD2  
Price: 150,000.-



Combined  
Hardness Tester  
NOVOTEST T-UD3

Specification		NOVOTEST T-UD2
UCI probe types		1kgf (10N) 2.2 lbf, 5kgf (50N) 11lbf, 10kgf (98N)
Leeb probe types		D, DC, DL, C, D+15, E, G
Indenter		Diamond Indenter (UCI), Hardened ball (Leeb)
Measuring direction		Any direction 360°
Data storage		Limited only by the memory card
Measurement range	Rockwell, HRC	20 - 70
	Brinell, HB	90 - 450
	Vickers, HV	230 - 940
temporary resistance (tensile strength), MPa		370 - 1740
Measuring accuracy		HV+ / - 3%; HRC+ / - 1.5%; HB+ / - 3%;
Hardness scale		HRC, HB, HV, MPa
Materials		UCI probe - pre-calibrated for steel.
		Leeb probe - pre-calibrated for steel, alloy, steel, cast iron, stainless steel, aluminum, bronze, brass, copper.
		Additional custom materials for calibration.

Specification		NOVOTEST T-UD3
UCI probe types		1 kgf (10N) 2.2 lbf, 5 kgf (50N) 11 lbf, 10 kgf (98N) 22 lbf
Leeb probe types		D, DC, DL, C, D+15, E, G
Measuring range		HV: 230~940; HRC: 20~70; HB: 90~650. Tensile strength, MPa 370~1740
Measuring accuracy		HV: ±3%HV; HRC: ±1.5%HRC; HB: ±3%HB
Indenter		Diamond Indenter (UCI), Hardened ball (Leeb)
Measuring direction		Any direction 360°
Data storage		Limited only by the memory card
Communication		Upload data to PC and export as a spreadsheet (USB cable and software included)
Hardness scale		HRC, HB, HV, HRB, HS, HL, MPa
Materials		Ultrasonic (UCI) probe - pre-calibrated for steel.
		Dynamic (Leeb) pre-calibrated for steel, alloy steel, cast iron, stainless steel, aluminum, bronze, brass, copper.
		Additional custom materials for calibration.