

UTM

UNIVERSAL TESTING MACHINE



MADE IN THAILAND

MT100 Pro Series

The Stealth MT100 Pro Series desktop Universal Testing Machine are designed to test a wide spectrum of materials including metal wire & foil, plastics, rubber, textiles, paper, yarn, packaging, adhesives, ceramics, timber, foods, composites & finished components in tension, compression, flexural or shear . Maximum frame capacities are 100KN In compliance with various international standards, such as ASTM, BS EN, JIS, ISO, IEC, TISI, DIN



Ordering Information



Tech-Quality Co.,Ltd.



Call : +662-3286878



2/13 Sukapiban 2 Rd.,
Pravet,Pravet, Bangkok 10250
Thailand



+662-3286818



www.tech-quality.com



info@tech-quality.com

@techquality





Applications

Metal, Plastic, Rubber, Textile, Synthetic, Wire, Cable, Food, Packaging, Autopart, Spring, AeroSpace, Woods, Composit, Aluminium etc.

Features

1. Panasonic servo motor drive set
2. UK and USA or JAPAN Brand Load cell grade 0.05%
3. 10 Point calibration adjustment
4. High Accuracy Ball Screw
5. Load Resolution 1/500000
6. Force measurement range 0.1% to 100%FS
7. Data sampling rate 1,000 Hz
8. Automatically sample Height measurement
9. Modern extruded profile High-quality load-frame design
10. Load Measuring System EN ISO 7500-1 Class 0.5, ASTM E4
11. Dual-X Axis Graph and multi Graph Display
12. 32-bit A/D converter/ EEPROM Plug
13. Standard Library Test Method
14. Calibration LAB ISO:17025
15. Position control resolution 10nm
16. Position measurement accuracy $\pm 50\mu\text{m}$ or 0.1% of indicate value when position more than 20 mm

Simple to use Test Setup

Limit Testing Break Testing Loop Testing Preload Setup
Elongation Auto Return, Over Load Protection

Muli-control mode

- Constant speed
- Position
- Load Rate
- Constant Stress & Strain
- Multi-step control
- USB Interface

Test Types

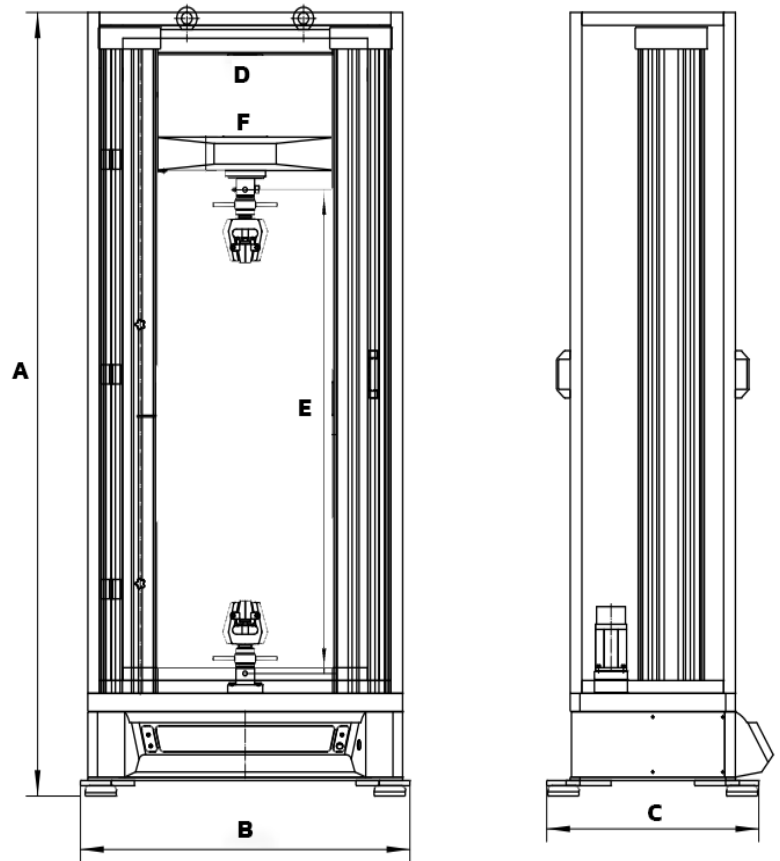
Tensile Testing
Compressive Testing
Flexural Testing / Friction Shear
/ Peeling Insertion /
Extraction Creep/
Relaxation / Cyclic test

Specifications

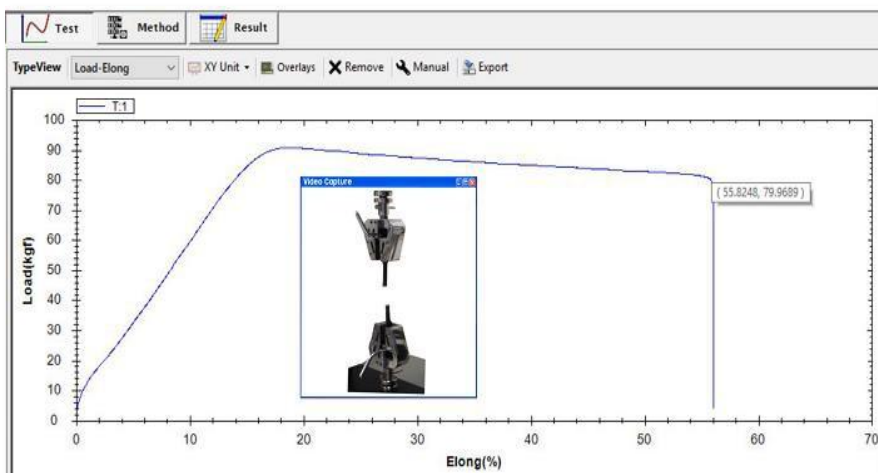
Bench-top frame to apply loads - from 100 KN capacity

Model : Stealth	MT100 Pro
Capacity (KN)	100
Load measurement Accuracy $\pm 0.5\%$ Indicated test force	0.5
Min. Load Resolution	1/10 ⁹
Crosshead Speed (mm/min)	0.0001 - 500
Crosshead Speed Accuracy $\pm 0.1\%$ of reading	0.1
Extension Resolution (μm per encoder count)	0.0003
Crosshead Travel (mm)	1,000
Crosshead Travel Extended (mm)	1,308
Frame rigidity	95 kN/mm
Weight Approx (kg)	680
Load measurement system : EN ISO 7500-1:2015, Class 0.5 ASTM E4	
Plug 'n' Play, automatic identification of BRAVO series load cells	
The Windows® 11 compatible Black Hole Software with USB Interface	
Single phase 200-230VAC 50Hz	
Operating Temperature 5° to 35°C & Humidity 20% to 80% Non-condensing	
Warranty 1 Year	

Dimension



Dimension		mm
A	Machine Height	2000
B	Machine Width	950
C	Machine Depth	660
D	Between Columns	550
E	Crosshead Travel	1000

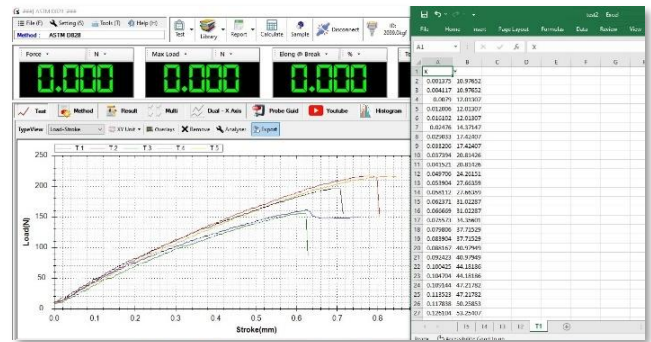


Video and still capture

Video Capture and Synchronization System enables UTM users to view 20 fps video recordings frame by frame. It's a fantastic tool for teaching physical material test for those new to the field, or to help you gain a frame-by-frame understanding of your product strength

Blackhole software

Multi Graph Display



Excel , PDF User design reports Displays



Tech Quality Co.,Ltd

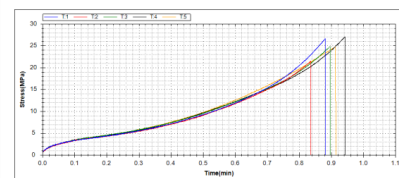
Address : 2/13 Sukapiban 2 Rd.,Pravet , Bangkok 10250 Thailand.

Tel : +662 3286878 (Auto)

Website : www.tech-quality.com

ID LINE : @techquality

No	Date	Time	Sample Name	Max Load	Strength	Elong @ Break	Stress @ Break
T1	15/11/2569	2:12:39 PM	AT4/2	13.3079	26.8156	6.28845	5.1382
T2	15/11/2569	2:12:37 PM	AT4/2	13.7893	25.4727	6.48489	5.8048
T3	15/11/2569	2:20:32 PM	AT4/2	12.3898	25.7986	6.38249	5.6586
T4	15/11/2569	2:28:51 PM	AT4/2	13.5199	27.0389	6.50148	5.9191
T5	15/11/2569	2:31:34 PM	AT4/2	12.3898	24.7986	6.06249	5.4501
Max				13.7893	27.4727	6.50249	6.0898
Min				12.3189	24.0389	6.01249	5.5586
Mean				13.4727	26.8489	6.3489	5.8089
SD				1.0877	2.1853	0.8073	0.9724
COV				8.888	8.888	2.4995	2.4995



☒ Auto Zero before Test
☒ Auto Save after Test Complete
☒ Auto Return to home after Test
☐ Auto Return to Limit after Test

Setting
 Return Speed : 900.0 mm/min
 Load Protect : 80 % 16.00 kgf

Sensor
☐ Stroke ☐ Rub Extensometer ☐ Extensometer

Auto test setup & load protect

Shape
 3 Point Bending

Sample Name
 AT4/2

Number
 M

Unit
 mm

Parameter(mm)
 Width 10.000 Thickness 10.000 ID 0.0 OD 0.0
 Gauge Length 50.000 Diameter 0.0 Span length 50.000

Peel Set
 StartPoint 4.00 EndPoint 25.00 Temperature 25

Area : 100.000 mm

☒ Auto Selete Tab Number :
 Sampling points 100

Sample Information

Displays ToolBox

Variable	Unit	Decimal
Display 1 Force	N	2
Display 2 Max Load	N	3
Display 3 Stress @ Elong	MPa	3
Display 4 Elong @ Break	%	3
Display 5 Strength	MPa	3

Multi Display & Decimal Point

Template Name Maximum Company Name Duality Co.,Ltd

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 Address 2/13 Sukapiban 2 Rd.,Pravet , Bangkok 10250 Thailand.
 Tel +662 3286878 (Auto)
 Website www.tech-quality.com
 ID LINE @techquality

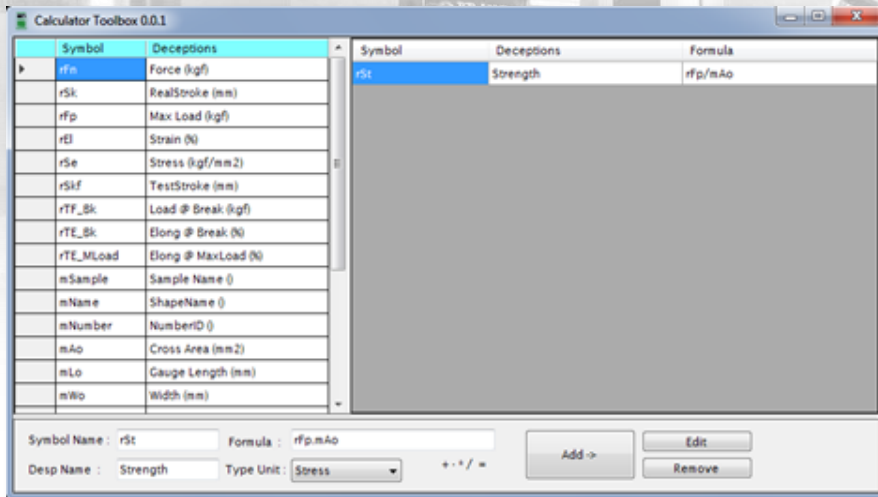
Statistic Reports

Program Toolbox 1.0.0.4

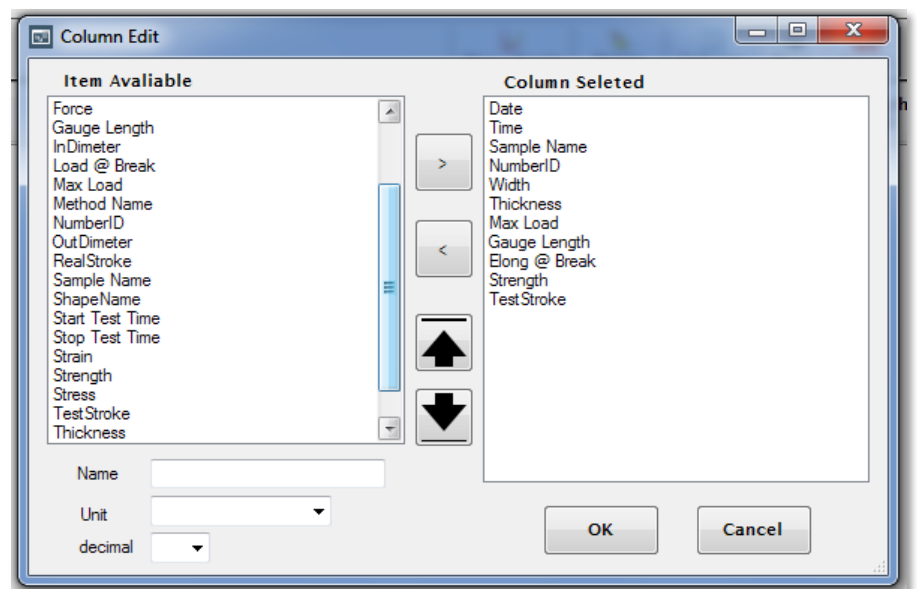
Directions	Speed:Unit	Break Type	Shift	Target
Compress	99mm/min	Load	<=	1.kgf

Step	Direct	Control Break Type	Speed:mm/min	Target:Unit
1	Tensile	PreLoad	1000mm/min	1:N
2	Tensile	Load	50mm/min	15:N
3	Tensile	Stroke	300mm/min	29mm
4	Tensile	Stress	20mm/min	10.kgf/mm2
5	Compress	Load	99mm/min	1.kgf

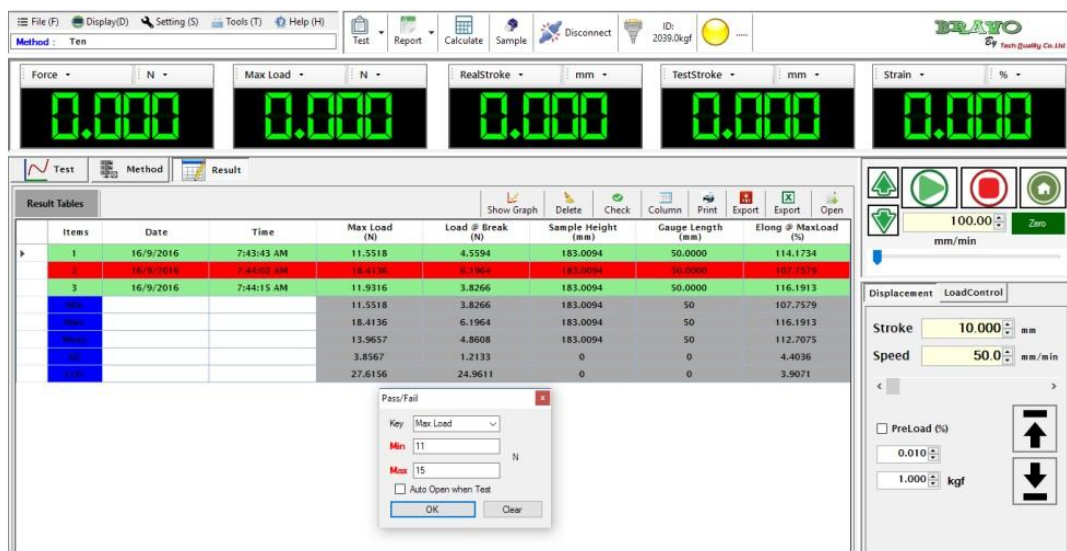
Multi-stage testing with Bravo software



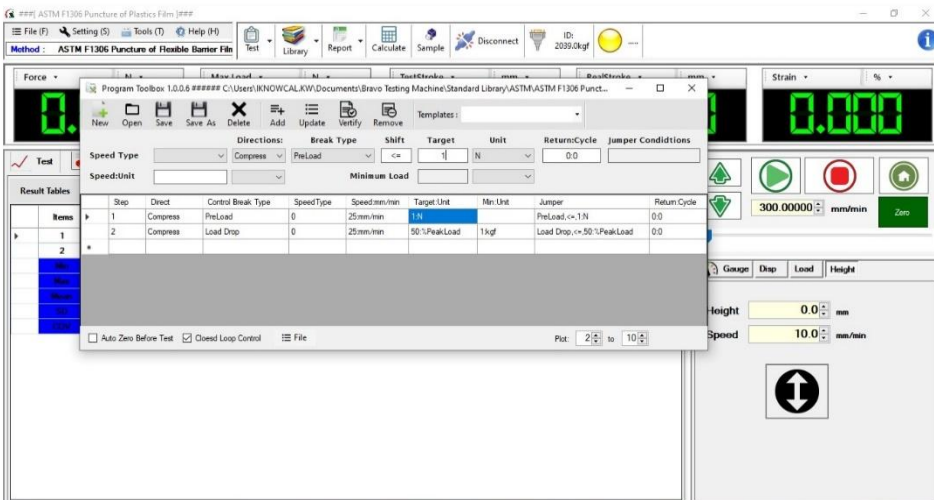
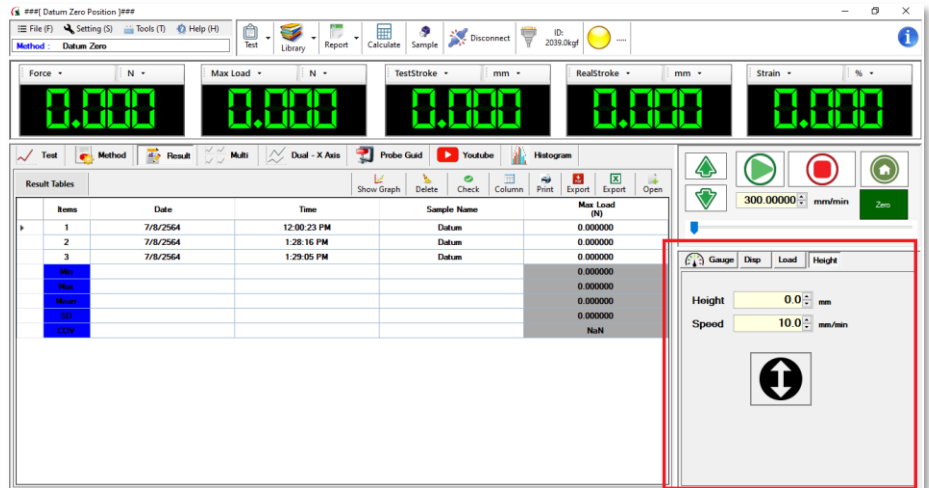
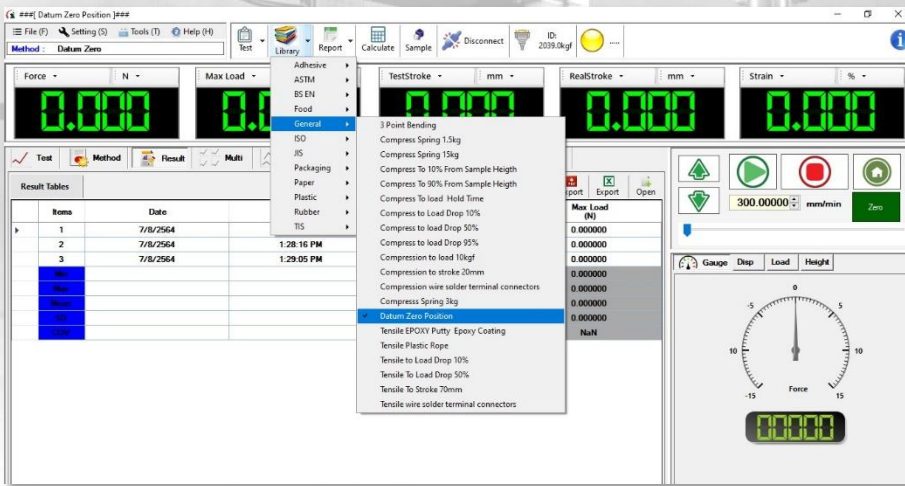
“Formula design by user”



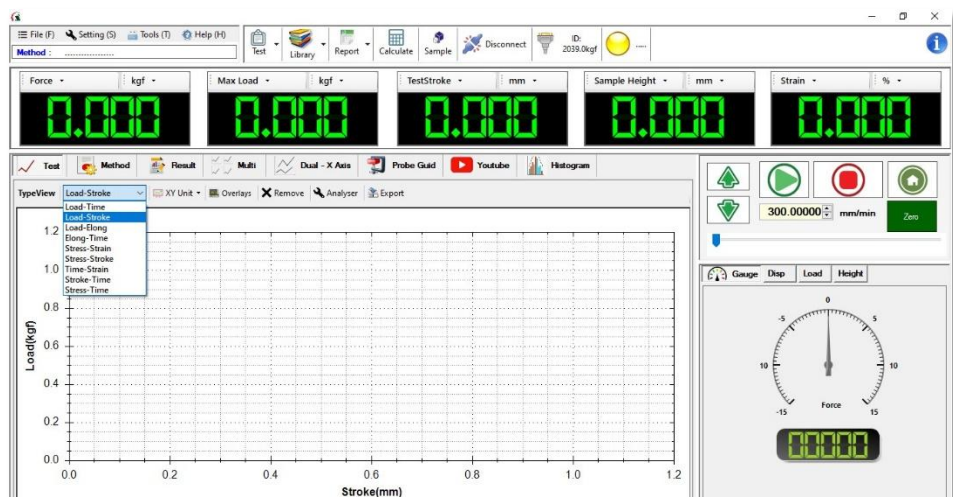
“Selectable result”



“Results can be color-coded for immediate pass/fail recognition”

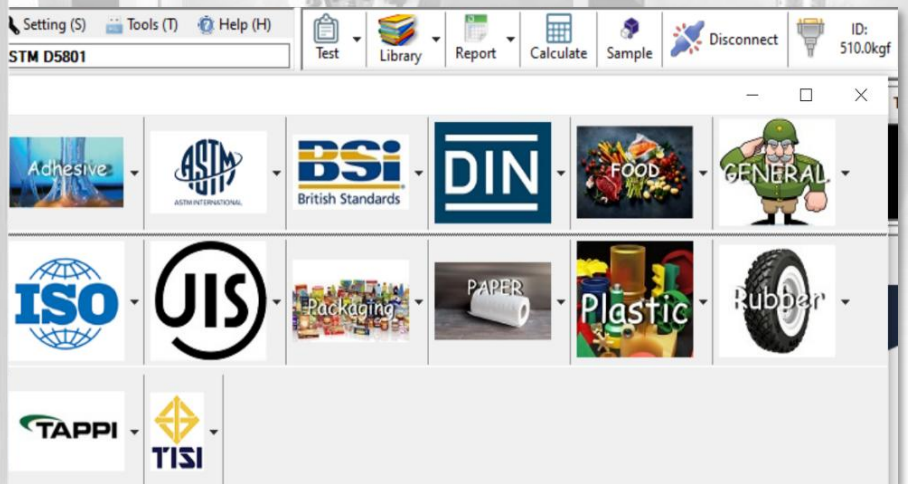


- Force x Length
- Stress x Strain
- Strain x Time



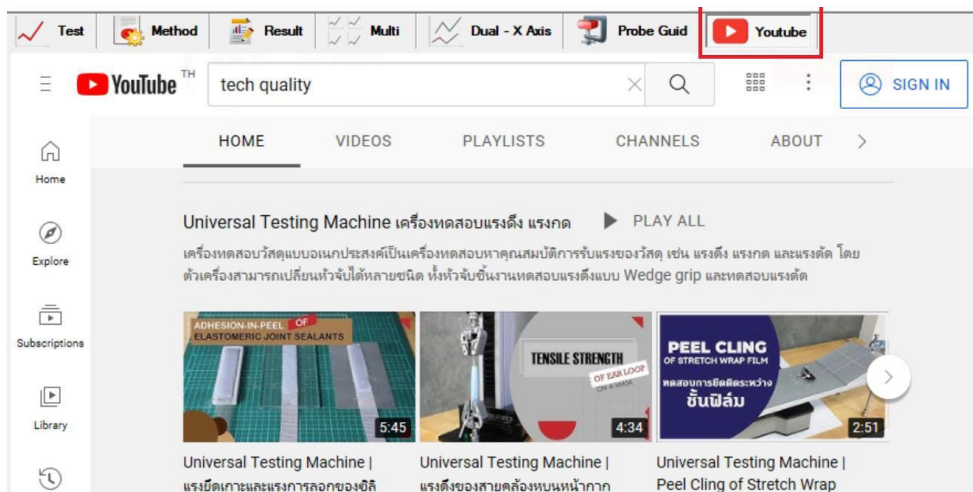


Library



Standard Library

Probe Guide



YouTube Guide

- Modern Aluminum extruded profile High-quality load-frame design

