

JISC

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Automatic Urethane Foam Tester



UFT series

AUTOMATIC URETHANE FOAM TESTER

Realizing high accuracy and smart urethane foam measurement. This unit meets various test standards such as JIS K6400-2 and JASO B408.

The UFT series uses three load cells. It is resistant to load eccentricity and can detect loads with high accuracy. The progress of the test can be confirmed by displaying the graph, and a series of measurements from judgement to statistical processing can be performed on the main unit. The contents of the condition are set once and stored in the tester main body. During re-testing it is not necessary to set the condition again, the test can be simply started.



※Thermo-hygrometer is optional.

Automatic Urethane Foam Tester

UFT-5KN / UFT-2KN

Moulded parts can be measured as per condition



Three-point load cells are resistant to load eccentricity, so moulded parts such as car seats can be measured as they are. The sample table size is 1000×700mm, and various samples can be set.

Various test specification

The condition list

Hardness test	JIS K6400-2 A / B / C / D
Compressed stress Test	JIS K6400-2 A-1 / A-2
Deflection test	JIS K6400-2 B
Constant load test	
Micro displacement spring rate test	
Stress relaxation test	
Compressive load test	
Multi-step test	

The condition can be set only by selecting the type of test from the test specifications list. The condition contents can be changed from the default value to suit the needs.

Easy-to-understand pickup settings

1	Initial thickness	I.T.							
2	Nth Hardness	Pos.1	1						
3	Nth Hardness	Pos.2	2						
4	Nth Hardness	Pos.3	3						
5									
6									
7									
8									

Urethane		Initial thickness	Pre. Length	Pre. Load	N th Load
		Nth Hardness	N th thickness	Nth Stress	Deflection Coefficient
		Hysteresis loss rate	Compressive stress	Max Displacement Elasticity	Stress Relax. Rate
		Pre. Time (Load)	Pre. Time (Distance)	Pre. Load (Time)	Pre. Distance (Time)
		Max Load	Max Load Distance	Load Designation Spring Rate	Preload After Rest Time

When selecting a pick-up item, an image and description will be display to support pick-up settings.

Flexible condition setting screen

K6400-2 HARD-B		Urethane		Hardness test K6400-2 HARD-B		Reference Specifications Setting	
Load Unit	N	kN	kgf	lbf			
Load Limit	5000			N			
Test Action	ABS.	DEF.			Pre. COMP. Rate	100	70 %
Move Speed	1000			mm/min	1st time COMP. Rate	100	25 %
Load Auto Zero	YES	NO			2nd time COMP. Rate	100	40 %
Auto print	YES	NO			3rd time COMP. Rate	100	65 %
Set position				mm	4th time		
Esc Position				mm	5th time		
Jig Height				mm	I.T. Load	5	N
Temperature	22.4			°C	I.T. Speed	100	mm/min
Humidity	45			%	Pre.Comp. Times	3	Times
Jig Size	31400			mm ²	Rest Time		Sec
No. of samples				Times	I.T. Load Again	YES	NO
Interval time				sec	X Scale	0	~ 100 mm
					Y scale	0	~ 5000 N
					Superimpose	YES	NO
Sampling Rate (Presec) mm 500 200 100 50 20 10 5 2 1							

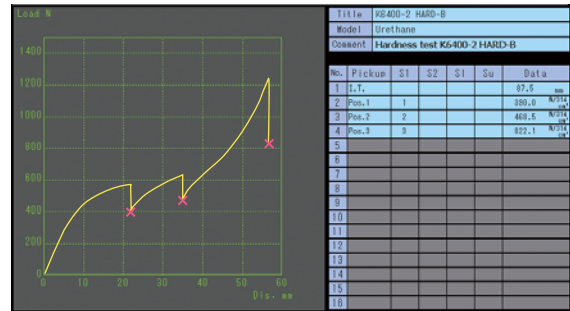
"Number of times", "%", and "rest time" can be specified, and it is possible to cope with the user's own hardness test standard and the deflection amount test standard under a constant load.

Condition Setting and Test Results Graph

■ Hardness test K6400-2 HARD-B

Test K6400-2 HARD-B					
Retrieve Specifications Setting					
	Action	Speed	Spec. Value	Unit	Hold Time
Pre.	COMP. Ratio	100	70	%	
1st time	COMP. Ratio	100	25	%	30
2nd time	COMP. Ratio	100	40	%	30
3rd time	COMP. Ratio	100	65	%	30
4th time					
5th time					

Select "Hardness Test K6400-2 HARD-B" from the test specification list to set the condition.

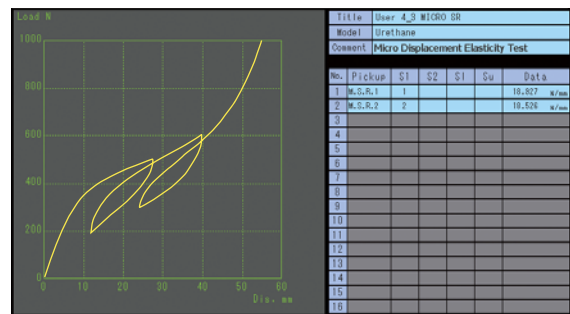


The test results are displayed graphically. The pickup is also displayed and the measurement results can be checked.

■ Micro displacement spring rate test

Micro Displacement Elasticity Test					
Retrieve Specifications Setting					
	Action	Speed	Spec. Value	Unit	Hold Time
Pre.	COMP. Ratio	50	75	%	
1st time	Load	50	500	N	
2nd time	Load	50	200	N	
3rd time	Load	50	600	N	
4th time	Load	50	300	N	
5th time	COMP. Ratio	50	75	%	

The setting of complicated conditions is completed only by selecting the contents from the test specification list. The figure above shows the requirements for "Micro displacement Spring Rate".



In the micro displacement spring rate test, the inclination between points b and e and the inclination between point d & f are picked up by defaults.

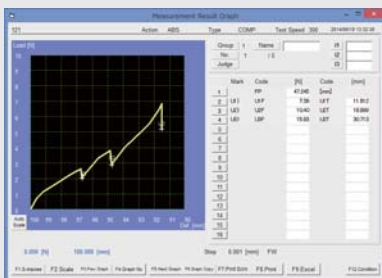
Optional PC software

MXR-01

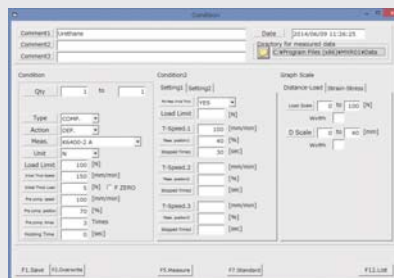
Full use of urethane tester function by connecting to PC software

Various tests of urethane foam conforming to JIS standards, including hardness tests, can be measured. The test can be started simply by selecting a preset test condition. Various pickup data can also be set. In addition, measurement results can be exported to Microsoft Excel and stored in CSV files. Statistical control can be performed using Cp, Cpk and histogram.

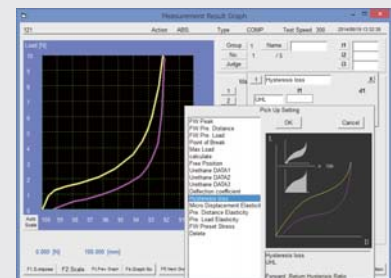
■ Measurement result graph screen



■ Measurement Conditions Setting Window



■ Pickup screen



Model	UFT-5KN / UFT-2KN				UFT-D-5KN	
Load capacity	5kN / 2kN				Mounted load cell (Main body structure : 5kN)	
Load cell	Three-point calculation method				Adaptive load cell 10N to 5kN 0.5 to 3.0mV/V Able to register up to 5 channels of Load cell.	
Range switching	Automatic switching of 2 range				Automatic switching of 2 range (1/10 range & 1/1 range of load cell capacity)	
	5kN		2kN		Not more than 1/10 of the load cell capacity → 1/100,000 of the capacity resolution Up to 1/10 or more of the load cell capacity → 1/10,000 of the capacity resolution Example: 10N loadcell = 0.0001N or 0.001N for 100N load cell 5 kN load cell = 0.005N up to 500N, for more than 500N is 0.05N.	
Load range [N]	500	5000	200	2000		
Load resolution [N]	0.1	1	0.01	0.1		
Load accuracy	Within 0.5% of the indicated value				Within 1% of the indicated value	
Unit selection	N, kN (Selection of kgf and lbf for overseas specifications)				mN, N, kN (Selection of kgf, gf and lbf for overseas specifications)	
Length resolution	0.1mm or 0.01mm (Switchable)				0.01mm	
Maximum stroke	450mm				500mm	
Test speed	1~1000mm/min					
Crosshead control	Control by precision ball screws and AC servo motor					
Specimen table	W1000×D700				W600×D600	
Pressure plate	Φ200 ※Standard accessory. Φ50 ※Option.					
Movement by Move key	High speed: speed 600 mm/min inching 1 mm medium speed: speed 60 mm/min inching 0.1 mm low speed: speed 6 mm/min inches					
Protective stop function	Stop by up / down limit switch / Stop by up / down soft limit function / Stop by STOP key and emergency stop button / Stop overload					
Display	Color LCDs	LED backlight and LCD with touch panel (resistive film type)	Fluorescent display	W115×H29 mm		
	Backlight lifespan	70,000h	View number of pixel	256×64 Dotted		
	External dimensions	W199.5×H147.4mm				
	Display-area	W170.4×H127.8mm				
	View number of pixel	800×600ドット				
Printer	Built-in printer	Thermal transfer type dot printer Print density 8 dots/mm Effective print width of 72mm Print speed 80mm/sec			External printer (optional)	
Interface	ANALOG OUTPUT	FORCE (load) , DISTANCE (displacement)				RS232C : COM1⇒PC COM2⇒PRINTER etc. I/O Port : Photocoupler isolation input/output + common, input 8 points, output 8 points
	USB(PC)	Used to connect to a PC				
	USB	Three side ports USB (keyboard, mouse, memory, USB-compatible caliper) connectable				
	COM	Used for connection to external devices				
	I/O Port	Photocoupler isolation input/output +common input 8 points, output 8 points The function of the interface depends on the test program				
Power supply voltage	AC100~120V / AC200~240V				300VA	
Maximum power consumption	300VA				300VA	
Dimension	W1125×D740×H1876				W1000×D550×H1750 (Include the control panel)	
Weight	About 350 kg				About 240 kg	
PC software	MXR-01 (Urethane Test Modes) ※Option You need a separate PC to use the MXR-01. Urethane testing is possible to work only with the main unit.				MXR-01 (Urethane Test Modes) ※Standard accessories. You need a separate PC to use the MXR-01. Urethane testing is not possible to work with the main unit alone.	

Measurement methods that meet user specifications can also be used.
Please feel free to ask us.

UFT-D models for testing planar-cut urethanes

Automatic Urethane Foam Tester

UFT-D-5KN

General-purpose load tester: HIT, table for polyurethane foam, set model of polyurethane foam test combining pressure plate and PC software

Urethane foam can be measured with a PC-soft MXR-01.
It can also be used as a general-purpose load tester.

※ Photographic pedestals are optional.



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●製造販売元

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