

Tension-Free™ Modular Desktop Endurance Testing System v6 Jig for Tension-Free™ U-shape Folding Test DMLHB-FS or DMLHP-FS

*Tension-Free™
U-shape folding test
for planar objects
including Flexible
Displays, OLED
devices, Barrier Film,
Flat Cables, Flexible
Printed Circuits,
Wearables &
automobile
applications

*Conforms to IEC
62715 standard

*Holds the test
sample between a
moving clamp and a
fixed clamp. As the
moving clamp
approaches the fixed
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down and the test
sample undergoes U-
shape folding.



FS

YUASA SYSTEM has been developing Tension-Free™ endurance testing systems since 2012. With our in-house expertise in mechanical, electrical, and software engineering, we have developed accurate testing methods for next generation devices, components, and materials. Tension-Free™ endurance testing reduces product design time by producing more consistent and reliable test data. Samples undergo the desired testing without being subjected to undesired tension introduced by the needs of the test equipment. As desired, our jigs also can operate with tension.

The SMALL desktop motor unit (Linear Reciprocating Unit) that drives the test jigs for U-shape folding, U-shape sliding, rolling-up, and pushing/pulling tests is both reliable and quiet due to its mechanical linkage design and by its use of rugged plastic gears that ensure endurance and low noise. Fully automatic testing is possible because of the disconnection detector and preset counter. The motor/drive unit can be decoupled from the control unit for further layout flexibility using the supplied connecting cable.

This Tension-Free™ U-shape folding test jig enables folding tests without tension for planar objects. This machine can form ideal bending shapes by the elasticity of test pieces or by using the guide plates.

Jig for Tension-Free™ U-shape Folding Test

DMLHB-FS or DMLHP-FS

U-shape folding test for planar objects including Flexible Displays, OLED devices, Barrier Film, Flat Cables, Flexible Printed Circuits, Wearables & automobile applications

*Conforms to IEC 62715 standard

*Holds the test sample between a moving clamp and a fixed clamp. As the moving clamp approaches the fixed clamp they rotate down and the test sample undergoes U-shape folding.

FS	DMLHB-FS	DMLHP-FS
Specifications - Jig	Tension-Free™ U-shape Folding Test Jig with Stretching Capability	
Jig Model Number	DMX-FS	
Sample	Sheet or Linear samples	
Sample thickness	3 mm (0.118") maximum	
Sample width	224 mm (8.82") maximum	
Sample length	56 mm (2.20") minimum (for clamping space)	
Weight - Jig	7.5 kg (16.5 lb)	
Weight - Cover	4 kg (8.8 lb)	
Dimensions (mm)	306mm x 392mm x 290mm (WDH)	
Dimensions (inches)	12.05" x 15.4" x 11.4" (WDH)	
U-shape Folding Mode		
Bending angle	0 - 180°	
Bending radius	0 - 18 mm (0 - 0.709")	
Operating stroke	±30 ~ ±60 mm (±1.18 to ±2.36")	60 ~ 120mm in 0.1mm increments
Operating speed (rec. dist. 80 ~ 120 mm)	10 ~ 90 rec/min	5 ~ 30 rec/min
Operating speed (rec. dist. 60 ~ 80 mm)	10 ~ 90 rec/min	5 ~ 40 rec/min
Stretching Mode		
Operating stroke	0 ~ ±60 mm (0 to ±2.36")	3 ~ 120mm in 0.1mm increments
Operating speed (rec. dist. 80 ~ 120 mm)	10 ~ 90 rec/min	5 ~ 30 rec/min
Operating speed (rec. dist. 3 ~ 80 mm)	10 ~ 90 rec/min	5 ~ 90 rec/min (decreases with rec. dist.)
Specifications - Base Unit	Rotary and Linear Drive	
Machine Model Number	DMLHB	DMLHP
Electrical Power	AC100-240V (50/60 Hz) 100VA	
Motor	DC Brushless Motor	Stepping Motor
Motor Power	DC 24V, 3.5A (maximum), 30W	DC 48V, 1.72A (maximum), 30W
Reciprocating speed	10 ~ 120 rec/min	5 ~ 90 rec/min (maximum)
Reciprocating distance	0 ~ ±60mm	3 ~ 120mm in 0.1mm increments
Reciprocating distance(inches)	0 ~ ±2.362"	0.118 ~ 4.724" in 0.004" increments
Acceleration		4.5 m/s ² (14.8 feet/s ²) (maximum)
Positioning Accuracy		0.15mm (0.006") (by backlash)
Permissible torque/output	400 N	72 N
Output shaft static rated moment		1.3 Nm
Counter	8-digit display (can set the target number)	
Installation Temp Range	+5 ~ +40° C (+41 ~ +104° F)	
Installation Humidity	15 ~ 85% RH (no condensation)	
Dimensions (mm)	396mm x 344mm x 289mm (WDH)	
Dimensions (inches)	15.6" x 13.5" x 11.4" (WDH)	
Weight	about 16.5 kg (36.4 lb)	about 15.2 kg (about 33.5 lb)
Attached units		
System Model Number	DMLHB-FS	DMLHP-FS
Weight (with cover)	about 28.0 kg (62 lb)	about 26.7 kg (59 lb)
Dimensions (mm)	614mm x 463mm x 290mm (WDH)	
Dimensions (inches)	24.2" x 18.2" x 11.4"	

US SERVICES AVAILABLE

Online training
 Technical support
 Installation & set-up
 Maintenance
 Guaranteed Warranty

www.yuasa-system.jp/en

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