

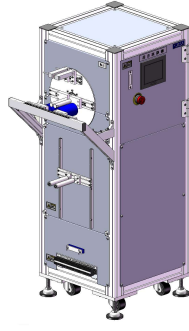
Floor Standing Endurance Testing Systems Jigs and Machines for Bending Tests of Linear Samples

Bending test for linear objects including Cables (Electric Wires, Optical Fibers), Harnesses, Cable Guides, Tubes, Wires, Fibers, Wearables & automobile applications

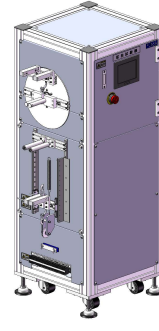
All of these test machines are floor standing units. The motor drive units are the same. The jigs are different ranging from a basic test machine to machines with Tension-Free™ technology and a jig capable of testing up to 12 linear samples at a time.



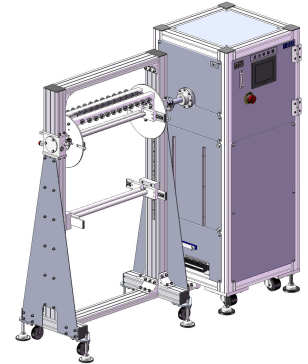
TC111L-P300



TC111L-FB



TC111L-TFB



TC111L-MB

Floor Standing Linear Bending Testers for Cables, Harnesses, Wires

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.

YUASA offers several jigs and machines for bending tests of linear samples suitable for Cable, Harness, and Wire endurance testing. Each of these models are large floor standing machines capable of doing the heaviest bending jobs. The motor drive unit is the same for the machines, the differences are the functions of the different jigs. The P300 is the basic test machine and offers the tightest bending, down to a radius of 2.5 mm or 0.1 inches. The FB cannot bend as tightly as the P300 and results in a different sample failure mechanism, a wide area break rather than a point break because of concentrated fatigue. The TFB™ uses our Tension-Free technology. The MB can handle up to 12 linear samples at a time.

Floor Standing Endurance Testing Systems

Jigs and Machines for Bending Tests of Linear Samples

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	TC111L-P300	TC111L-FB	TC111L-TFB	TC111L-MB
			Tension-Free	
Specifications - Jig	Bending Test Jig	Bending Test Jig	Bending Test Jig	Bending Test Jig
Jig Model Number	X-P300	X-R30 + X-P300	X-P300-TFB	X-MB
Sample	Linear and Planar	Linear and Planar	Linear and Planar	Linear and Planar
Sample thickness	60mm (2.36") maximum	60mm (2.36") maximum	60mm (2.36") maximum	60mm (2.36") maximum
Sample width	70mm (2.76") maximum	70mm (2.76") maximum	70mm (2.76") maximum	500mm (19.7") maximum
Number of Samples				12 linear samples maximum
Bending radius	2.5mm~100mm (0.098"~3.94")	5mm~80mm (0.197"~3.15")	5mm~50mm (0.197"~1.97")	10mm~50mm (0.394"~1.97")
Bending angle	0° ~ ±180°	0° ~ ±180°	0° ~ ±180°	0° ~ ±180°
Included Bend Rollers	10mm (0.394")		10mm (0.394")	10mm (0.394")
Operating speed	5~90 rec/min	5~90 rec/min	5~90 rec/min	5~60 rec/min
Torque	16 N m (11.8 ft lb)	16 N m (11.8 ft lb)	16 N m (11.8 ft lb)	16 N m (11.8 ft lb)
Weight - Swing Plate	2.4 kg (5.3 lb)	1.9 kg (4.2 lb)	2.4 kg (5.3 lb)	
Weight - Swing Checker	0.5 kg (1.1 lb)	0.5 kg (1.1 lb)		
Weight - Other jigs		2.5 kg (5.5 lb)	9.0 kg (19.8 lb)	60 kg (132 lb)
Dimensions (mm) (WDH)	500mm x 680mm x 1345mm	500mm x 708mm x 1345mm	500mm x 671mm x 1345mm	500mm x 1450mm x 1345mm
Dimensions (inch) (WDH)	19.7" x 26.8" x 53.0"	19.7" x 27.9" x 53.0"	19.7" x 26.4" x 53.0"	19.7" x 57.1" x 53.0"
Specifications - Base Unit				
Machine Model Number	TC111L	TC111L	TC111L	TC111L
Motor	Induction gearmotor, 3 Phases, 400W	Induction gearmotor, 3 Phases, 400W	Induction gearmotor, 3 Phases, 400W	Induction gearmotor, 3 Phases, 400W
Motor gear ratio	1:40	1:40	1:40	1:40
Counter	8 digit display	8 digit display	8 digit display	8 digit display
Operating angle	0° ~ ±180° bend (0° ~ ±270° oscillation)	0° ~ ±180° bend (0° ~ ±270° oscillation)	0° ~ ±180° bend (0° ~ ±270° oscillation)	0° ~ ±180° bend (0° ~ ±270° oscillation)
Operating speed	5~90 rec/min	5~90 rec/min	5~90 rec/min	5~90 rec/min
Installation Temp range	+5 ~ +40° C (+41 ~ +104° F)	+5 ~ +40° C (+41 ~ +104° F)	+5 ~ +40° C (+41 ~ +104° F)	+5 ~ +40° C (+41 ~ +104° F)
Installation Humidity	15 ~ 85% RH (no condensation)	15 ~ 85% RH (no condensation)	15 ~ 85% RH (no condensation)	15 ~ 85% RH (no condensation)
Power supply	AC 200V, 3 Phase, 50/60Hz, 5A, 1kVA	AC 200V, 3 Phase, 50/60Hz, 5A, 1kVA	AC 200V, 3 Phase, 50/60Hz, 5A, 1kVA	AC 200V, 3 Phase, 50/60Hz, 5A, 1kVA
Weight - Test Machine	170 kg (375 lb)	170 kg (375 lb)	170 kg (375 lb)	170 kg (375 lb)
Dimensions (mm) (WDH)	520mm x 680mm x 1345mm	520mm x 680mm x 1345mm	520mm x 680mm x 1345mm	520mm x 680mm x 1345mm
Dimensions (inch) (WDH)	20.5" x 26.8" x 53.0"	20.5" x 26.8" x 53.0"	20.5" x 26.8" x 53.0"	20.5" x 26.8" x 53.0"
Attached units				
System Model Number	TC111L-P300	TC111L-FB	TC111L-TFB	TC111L-MB
Weight	173 kg (381 lb)	175 kg (386 lb)	181.5 kg (400 lb)	230 kg (507 lb)
Dimensions (mm) (WDH)	500mm x 680mm x 1345mm	500mm x 708mm x 1345mm	500mm x 671mm x 1345mm	500mm x 1450mm x 1345mm
Dimensions (inch) (WDH)	19.7" x 26.8" x 53.0"	19.7" x 27.9" x 53.0"	19.7" x 26.4" x 53.0"	19.7" x 57.1" x 53.0"

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For further information please email: info@yuasa-system.jp