No. 124 CABTYRE CABLE IMPACT TESTER

No.124

JIS-C3005

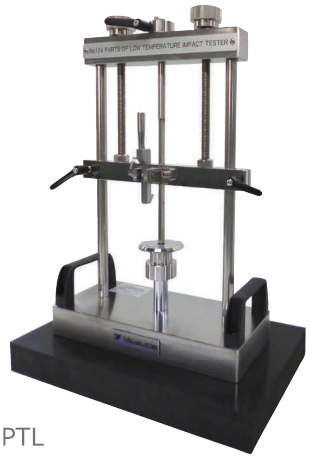
FEATURE

This tester is used to conduct impact tests on rubber and plastic electric insulated wires. The operator is to check the number of disconnections of the wires, cracks, and breakage of insulating materials and sheath when the test specimen is impacted by a prescript load, which is dropped from a prescript height.

SPECIFICATION

Weight	Initial 3 kg to Max. 40 kg
Striker Edge	Top R10 mm, Top Angle 90°, W120 mm
Falling Height	300 to 1,300 mm (Pitch 100 mm)
Falling Device	Lever-Operated (Option: Solenoid Coil)
Repeated Impact Prevention Device	Ratchet-Operated
Option	Electric Hoisting Device
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W820 × D550 × H2,000 mm/ 150 kg

No. 124-PTL CABLE IMPACT TESTER



No.124-PTL

JIS-C3660-1-4, C8282-1, IEC-60811-1-4, 60884-1,
JIS-C6821, C6851, C6861, IEC-60794(Optical Fiber)

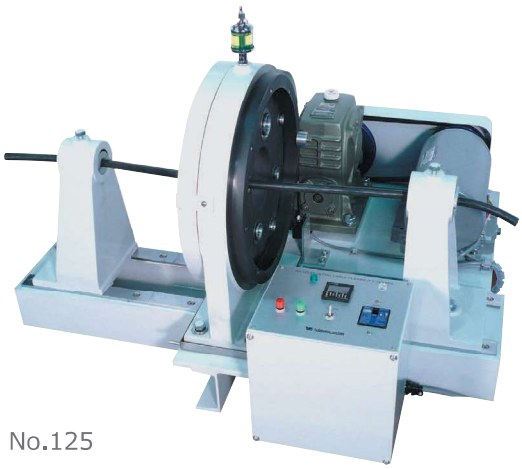
FEATURE

This tester is used to conduct impact tests on insulated or sheathed wires in a low temperature chamber. It is also used to conduct the test on electrical parts such as a plug or socket. The sample will be visually checked whether there are cracks on the insulated / sheathed wire.

SPECIFICATION

Weight	Select from 100 g, 200 g, 300 g, 400 g, 500 g, 600 g, 750 g, 1,000 g, 1,250 g, 1,500 g, 2,000 g
Impactor	Impact Surface R300 mm, φ20 mm, 100 g
Falling Height	100 mm
Release Mechanism	Lever Release
Dimensions/ Weight (Approx.)	W340 × D185 × 480 mm/ 23 kg

No. 125 CABTYRE CABLE FLEXING TESTER



No.125

JIS-C3005

FEATURE

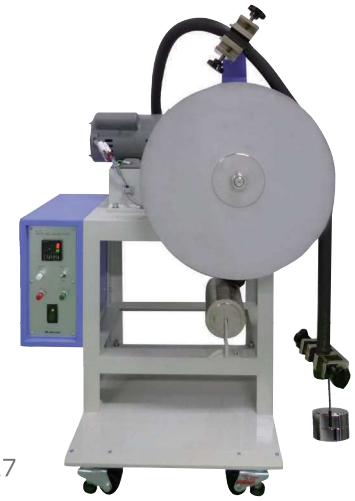
This tester is used for conducting flexing tests on rubber and plastic insulated electric wires. The operator is to thread the test specimen through the rotator-hole and fix both ends of the test specimen. After the test specimen has been continuously rotated 200 times at a prescript rotating speed, the operator is to check the number of disconnections of the wires, cracks, and breakage at the fixed points.

SPECIFICATION

Roter-Hole Distance	Method A: 100 mm, Method B: 150 mm
Roter-Chuck Distance	Method A: 300 mm, Method B: 200 mm
Rotation Speed	20 rpm
Counter	6 Digits Preset Counter
Power Source	AC 100 V, 1-Phase, 15 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W1,000 × D770 × H700 mm/ 150 kg

*Power source, dimensions, weight may differ by specifications.

No. 127 CABTYRE CABLE ABRASION TESTER



No.127

JIS-C3005

FEATURE

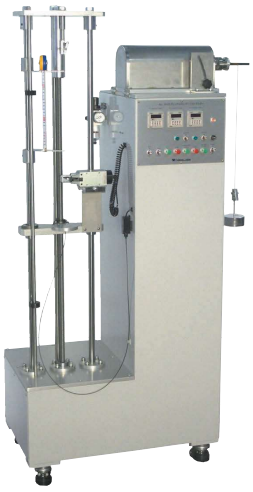
This tester is used to conduct abrading tests on rubber and plastic insulated electric wires. One end of the test specimen is to be attached 300 mm above the abrading drum and the other end is attached to a prescript load. The operator is to see if the insulated material inside the coated material will be exposed due to abrasion.

SPECIFICATION

Abrasion Wheel	φ350 mm, W50 mm Material: CS Grade: #36
Wheel Rotation Speed	60 rpm
Weight	Initial 1 kg to Max. 10 kg
Counter	6 Digits Preset Counter
Power Source	AC 100 V, 1-Phase, 10 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W630 × D450 × H900 mm/ 70 kg

No. 161 SPRING ELONGATION TESTER

No.161
Option: Safety Cover



No.161
Option: Automatic Specimen Cutting Device

JIS-(C3003), C3216-3, IEC-60851-3

FEATURE

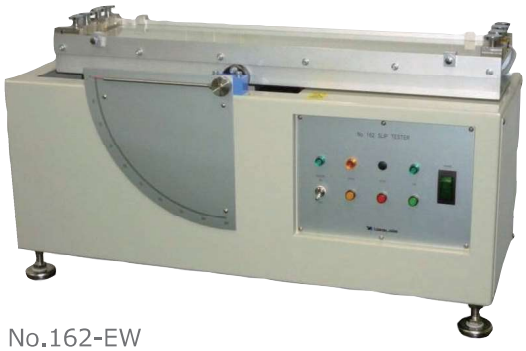
This tester is used to evaluate the softness of enamel wire according to the spring elongation method. One end of the testing coil is to be rolled onto the mandrel and the other end is attached to a weight which is placed on a supporting platform. The platform will then drop at a constant speed and when 1 minute has passed after the weight had separated from the supporting platform, the operator is to detach the weight and leave the testing coil for another minute. The length difference of the coil before and after the test is to be noted as the spring elongation value.

SPECIFICATION

Specimen	L1.2 m, Conductor Diameter φ0.25 to φ1.6 mm
Mandrel Rotation Speed	50 rpm
Mandrel Diameter	φ2.5 to φ16 mm (Conductor Diameterφ × 10)
Weight	(Specimen Cross Section × 700) g
Holder Stroke	Max. 780 mm
Holder Speed	50 mm/s
Timer	60 sec Count
Option	Automatic Specimen Cutting Device, Safety Cover
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W490 × D500 × H1,500 mm/ 70 kg

*Power source, dimensions, weight may differ by specifications.

No. 162-EW SLIP TESTER (FOR ENAMELED WIRE)



No.162-EW

FEATURE

■ No.162-EW SLIP TESTER (FOR ENAMELED WIRE)

This tester is used to measure the Inclination Angle(Static Friction Coefficient) of which the test specimen on enameled wire starts sliding. 2 specimens parallel to one another are fixed onto the Sled and Inclination Board. Tension is then applied to the 2 specimens on the board, and the Sled is set on the Board, so as each specimen is crossed when the Angle is 0˚. The Angle of which the Mass starts sliding while the Board is inclined at a certain speed is measured and the Static Friction Coefficient are calculated as $tan\theta$ from the measured Angle.

■ No.162-EWD SLIP TESTER (FOR ENAMELED WIRE) (DIGITAL)

This tester is the automated version of the SLIP TESTER (FOR ENAMELED WIRE). From measurement of Inclination Angle to the calculation of Static Friction Coefficient can automatically be conducted.

SPECIFICATION

Model	No.162-EW	No.162-EWD
Sled	W120 mm, L120 mm, Mass 500 g	
Inclination Angle	0 to 90˚ (Scale 0.2˚)	
Inclination Speed	0.5 ˚/s	
Option	Changeable Inclination Speed Spec	
Power Source	AC 100 V, 1-Phase, 3 A, 50/60 Hz (Motorized)	AC 100 V, 1-Phase, 5 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W750 × D270 × H425 mm/ 30 kg	W750 × D270 × H425 mm/ 30 kg

No. 163 ENAMELED WIRE STIFFNESS TESTER

No.163 (Manual)

No.163 (Motorized)

JIS-(C3003), C3216-3, IEC-60851-3

FEATURE

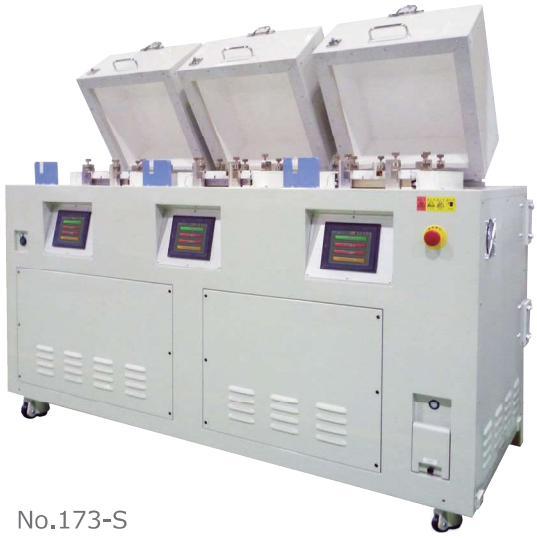
This tester is used for evaluating the softness of enameled wire according to the spring back method. The operator is to roll the coil onto the mandrel 3 times, and after fixing one end of the coil and slowly releasing the other end, the operator is to read how much the coil rolled back.

SPECIFICATION

Specimen	1 m, Conductor Diameter φ0.25 to φ1.6 mm
Mandrel Rotation Speed	5 to 10 rpm (Manual or Motorized)
Mandrel Diameter	φ19 mm, φ48 mm and φ82 mm
Weight	57 g, 115 g, 455 g
Scale	0 to 120
Counter	4 Digits Preset Counter (Only for Motorized)
Accessories	Foot Switch (Only for Motorized)
Power Source	AC 100 V, 1-Phase, 3 A, 50/60 Hz (Motorized Model)
Dimensions/ Weight (Approx.)	W480 × D285 × H250 mm/ 10 kg (Motorized Model)

*Power source, dimensions, weight may differ by specifications.

No. 173-S ENAMELED WIRE STIFFENING POINT TESTER



No.173-S

C3216-6: 2011

FEATURE

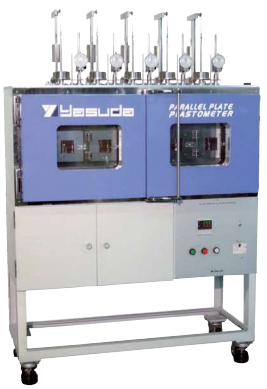
This tester is used for evaluating the stiffening resistance of enamel wire according to the cross method.
Two straight wire specimen are placed in a cross on an electric heater. A specified weightload is applied onto the specimens' cross point using a ceramic piston or metal ball, and the stiffening point is measured.

SPECIFICATION

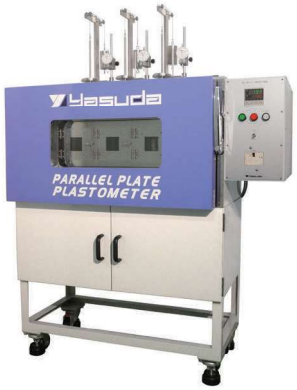
Specimen	Round wire, Flat wire
Hangings	Max. 12 Hangings (4 Hangings × 3 ch)
Temperature Range	Max. 400 ˚C
Heating Rate	2 ˚C/min
Test Load	Initial Load 100 g to Max. Load 2,600 g
Transformer	Voltage: 100 ± 10 V, Short Circuit Current: 5 ± 1 mA (Max. Ampair: 50 mA)
Data Processing	Desktop PC (OS: Windows 10) PC Rack, Printer, Software included
Safety Device	Leakage Breaker, Overheat Detection, Insulated Safety Cover (Pinch Prevention)
Power Source	Main Body: AC 200 V, 1-Phase, 50 A, 50/60 Hz For PC: AC 100 V, 1-Phase, 15 A or less, 50/60 Hz
Dimensions/ Weight (Approx.)	W1,800 × D750 × H2,000 mm/ 550 kg

No. 185 PARALLEL PLATE PLASTOMETER

No. 185-AUTO PARALLEL PLATE PLASTOMETER (AUTOMATIC)



No.185 (5 Stations)



No.185 (3 Stations)

No.185-AUTO (5 Stations)

No.185-AUTO (3 Stations)

JIS-C3005, C3307, K6723, ASTM-D621

FEATURE

■ No.185 PARALLEL PLATE PLASTOMETER

This tester is for conducting heat deformation tests on rubber and plastic electric insulated wires. Placing the test specimen between parallel plates and applying a prescript load while heating the test specimen for 30 minutes, the operator is to measure the reduction rate in thickness of the test specimen before and after the test has been conducted.

■ No.185-AUTO PARALLEL PLATE PLASTOMETER (AUTOMATIC)

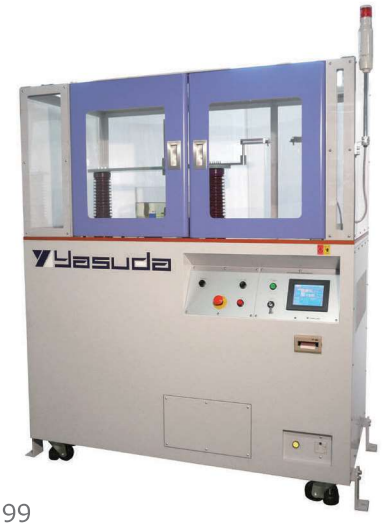
This is the automatic version of the PARALLEL PLATE PLASTOMETER. The operator can set the pre-heating time and the testing time via touch panel, and the tester will load, unload, and display / print the test data automatically.

SPECIFICATION

Model	No.185	No.185-AUTO
Stations	1, 3, or 5 Stations (3 kinds)	3 or 5 Stations (2 kinds)
Test Load	Max. 20 N (Dead Weight)	
Displacement Measurement	Dial Gauge: Scale 1/100 mm, Stroke Max. 10 mm (Option: Digital type)	Differencial Transducer: Scale 1/100 mm, Stroke Max. 20 mm TouchPanel Display, Mini Printer
Temperature Range	Max. 200 ˚C	
Parallel Plate	φ40 mm (Option: φ3/4" or φ3/8" for UL)	
Accessories	Metal Rod (R5 mm)	
Option	Software, Oven Light	
Power Source	AC 200 V, 1-Phase, 15 to 30 A, 50/60 Hz	
Dimensions/ Weight (Approx.)	Differs by Specifications.	Differs by Specifications.

*Power source, dimensions, weight may differ by specifications.

No. 199 VOLT-ENDURANCE AND DESTRUCTION TESTER



No.199
Option: Mini Printer

JIS-C2110, JIS-(C3003), C3216-5, IEC-60851-5

FEATURE

This tester is used for evaluating the dielectric strength (volt endurance / volt destruction) of solid electric insulated material. By exchanging the electrodes, the tester can also be used for board, sheet, textile, film, tape, tube, varnish, and paint. Recent applications also include insulating film in lithium-ion batteries. After setting the specimen between the two electrodes, voltage is applied mid-air or in-bath until the specimen insulation destructs. The results are evaluated either by the insulation strength or destruction voltage level. The tester is capable of testing both short-time tests and step-by-step tests. The tester can also be used for enamel coatings using the twistpair method by exchanging the electrodes.

SPECIFICATION

Capacity	0.5 to 10 kVA
Maximum Output Voltage	AC 5 to 100 kV
Specimen	L500 mm (Twisting L120 mm). φ0.05 to φ3.2 mm
Standard Equipments	A-Meter, V-Meter, Volt-Slider, Programmed Voltage Raising Device, Breakdown Current Regulator
Option	Timer, Mini Printer, Software
Safety Device	Safety Cover with Interlock Attached, Earth-Leakage Breaker, Upper Voltage Limit, Emergency Stop SW., Warning Indicator & Buzzer
Electrode	Selected by Specimen
Power Source	AC 200 V, 1-Phase, 15 to 30 A, 50/60 Hz
Dimensions/ Weight (Approx.)	Differs by Specifications.

No. 199-T TWISTING DEVICE (FOR VOLT-ENDURANCE AND DESTRUCTION TEST)

No.199-T (1 Hanging)

No.199-T (5 Hangings)

JIS-(C3003), C3216-5, IEC-60851-5

FEATURE

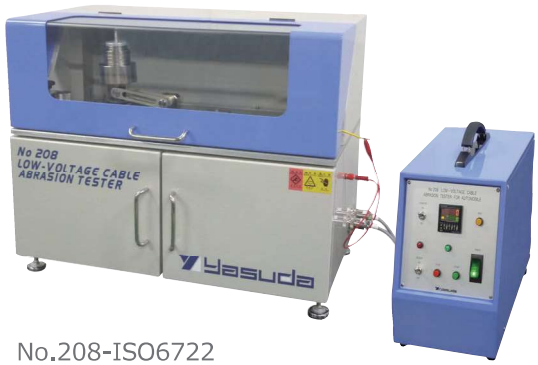
This device is used for enabling the twistpair method for enamel insulation testing, particularly for the No.199 VOLT-ENDURANCE AND DESTRUCTION TESTER. The test specimen is folded in half, attached to the chucks of the device, and twisted at the set tension for twistpair method testing. The No.199 VOLT-ENDURANCE AND DESTRUCTION TESTER can be used for testing the specimen created with this device.

SPECIFICATION

Hangings	1 Hanging	5 Hangings
Operation	Manual	Electric (5-Station-Linked)
Test Load	Please Specify *Differs by Wire Diameter	
Twisting Speed	-	60 twists/min
Safety Device	-	Interlock Switch, Safety Cover, Leakage Breaker, Emergency Stop Switch
Accessories	Weight 39 N, Spanner, Round Spirit Level	-
Power Source	-	AC 100 V, 1-Phase, 15 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W250 × D250 × H750mm/ 16 kg	Differs by Specifications.

*Power source, dimensions, weight may differ by specifications.

No. 208 LOW-VOLTAGE CABLE ABRASION TESTER FOR AUTOMOBILE



No.208-ISO6722
Option: Safety Cover

JIS-C3406, JASO, ISO-6722

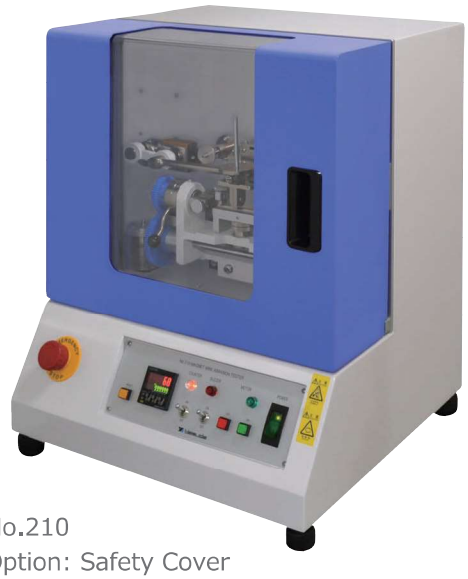
FEATURE

This tester is used for evaluating the abrasion resistance of low voltage cables for automobiles according to the abrading tape method. The test specimen is set so that it touches the abrading tape, and is then abraded with the abrading tape at a prescript speed. The abrasion resistance value that is acquired by this method is the length abraded before the electric conductor touches the abrading tape.

SPECIFICATION

Model	No.208 (JIS)	No.208-JASO	No.208-ISO6722
Specimen	L900 mm	L1 m	
Test Load	Top R114 mm, Initial 450 g, 1,350 g, 1,900 g	Top R114 mm, Initial 0.63 ± 0.05 N, Additional Weight 50 g to 1,500 g	
Electrode	φ7 mm	φ6.9 mm	
Abrasive Tape	Material A, Grit #180, Conductive Pitch 150 mm, Conduction W10 mm		Material A, Grit #180, Conductive Pitch 75 mm, Conduction W10 mm
Tape Speed	1,500 mm/min	1,500 ± 75 mm/min	
Specimen Rotating Angle	-	0˚, 90˚, 180˚, 270˚	
Counter	6 Digits Preset Counter		
Accessories	Abrasive Tape: 5 pcs		
Option	Safety Cover		
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz		
Dimensions/ Weight (Approx.)	Main Body: W610 × D290 × H410 mm/ 25 kg Control Box: W230 × D310 × H260 mm/ 5 kg W620 × D300 × H500 mm/ 70 kg (LT)		

No. 210 MAGNET WIRE ABRASION TESTER



No.210
Option: Safety Cover

NEMA-C9.5, JASO, ISO-6722

FEATURE

■ No.210 MAGNET WIRE ABRASION TESTER

This tester is used for evaluating the abrasion resistance of enamel wire according to the blade reciprocating method. Abrading the enamel wire back and forth with a constant load, the operator is to check the number of reciprocation until conduction occurs. By rotating the test specimen, a single test specimen can be tested 3 to 4 times.

■ No.210-ISO6722 WIRE ABRASION TESTER

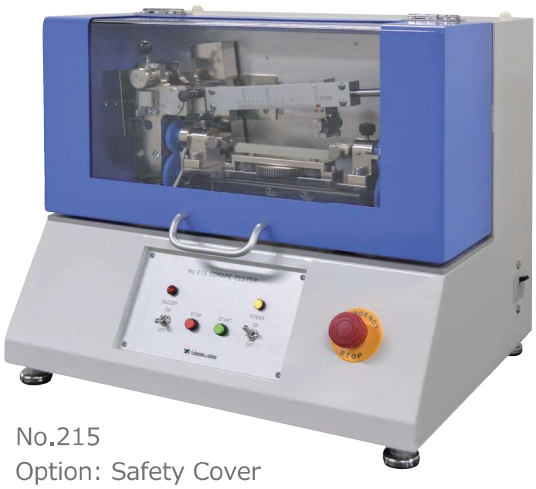
This version is compatible with specimens with a cross-section under 6 mm^2.

SPECIFICATION

Model	No.210 (NEMA)	No.210-ISO6722 (JASO, ISO)
Abrading Distance	10 mm	15.5 ± 1 mm (Displacement of Needle 20 ± 1 mm)
Abrading Speed	60 times/min	55 ± 5 times/min
Specimen Clamp	-	Distance 71 mm (Left-Right 35.5 mm from Abrasive Center)
Test Load	Initial 2 N to Max. 10 N	Initial 2 N to Max. 10 N (Standard: 7 ± 0.05 N)
Abrading Blade	φ0.4 mm	φ0.45 ± 0.01 mm
Counter	6 Digits Preset Counter	
Specimen Rotating Angle	0˚, 120˚, 240˚	0˚, 90˚, 180˚, 270˚
Option	Safety Cover	
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz	
Dimensions/ Weight (Approx.)	W480 × D450 × H575 mm/ 34 kg	

*Power source, dimensions, weight may differ by specifications.

No. 215 SCRAPE TESTER



No.215
Option: Safety Cover

JIS-(C3003), C3216-3, IEC-60851-3, NEMA-C9.5

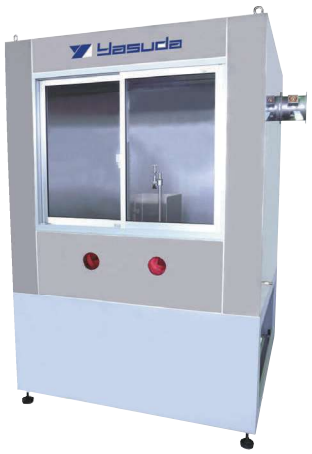
FEATURE

This tester is used for evaluating the abrasion resistance of enameled wire. The enamel wire specimen is abraded with a piano wire which continuously increases in load during abrasion, and the operator is to check the load at which conduction occurs. By rotating the test specimen, a single test specimen can be tested 3 times.

SPECIFICATION

Abrading Distance	100 mm
Abrading Speed	400 ± 40 mm/min
Weight Load Range	Initial 100 gf to Max. 3.2 kgf
Scraping Piano Wire	φ0.23 ± 0.01 mm
Specimen Rotating Angle	0˚, 120˚, 240˚
Option	Safety Cover
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W550 × D420 × H475 mm/ 40 kg

No. 252-UL-1581 ELECTRIC WIRE FLAMMABILITY TESTER



No.252-UL-1581 (Chamber)

Burning Device

Calibration Device

UL-1581, ASTM-D5025, D5207

FEATURE

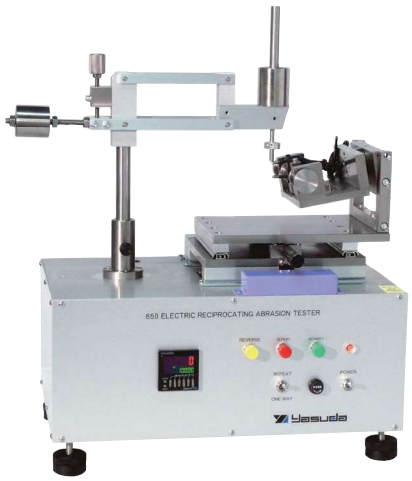
This tester is for evaluating the flammability resistance of electric wire by conducting a vertical flammability test. The operator is to fix the test specimen to the upper and lower Chuck and tilt the burner 20° to burn the test specimen for 15 seconds.

SPECIFICATION

Chamber	1.6 × 1.6 × 1.6m (Volume Approx. 4 m^3)
Specimen	L450 ± 10 mm
Burner	L100 ± 10 mm, Inner Diameter φ9.5 ± 0.3 mm
Burner Base	Inclination Angle 20˚
Burner Calibration Device	Flow Meter: Max. 1,000 ml/min (Scale 10 ml/min) (Standard 965 ml/min) Manometer: Max. 400 (± 200) mmH_2O (Scale 1 mmH_2O) (Standard 125 ± 15 mmH_2O) Timer, Thermometer, Slug
Accessories	Gas Lighter, Flame Gauge, Ring Stand, Gauge for Slug, Dry Cotton Pad
Power Source	Main Body: AC 100 V, 1-Phase, 3 A, 50/60 Hz Calibration Device: AC 100 V, 1-Phase, 3 A, 50/60 Hz
Heat Source	Methane Gas (Purity: Over 98 %)
Dimensions/ Weight (Approx.)	W1,700 × D1,700 × H2,500 mm/ 380 kg (Chamber)

*Power source, dimensions, weight may differ by specifications.

No. 253 ELECTRIC RECIPROCATING ABRASION TESTER (FOR PLUG PIN)



No.253

JIS-C8282-1, IEC-60884-1

FEATURE

This tester is used to evaluate the abrasion resistance of insulated sleeves in plug pins by abrading the test specimen with a U-shaped copper wire at a desired abrading speed, length, number, and load. After test completion, the operator is to check whether there is any damage, holes, or wrinkles visible on the test specimen.

SPECIFICATION

Stroke	Left-Right Max. 100 mm (Length Setting Sensor Attached) (Standard 9 mm), Front-Back Max. 50 mm
Abrading Angle	10°
Abrading Speed	30 times/min
Test Load	4 N
U-shape Copper Wiring	φ1 mm
Accessories	Spirit Level
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz
Dimensions/ Weight (Approx.)	W450 × D300 × H550 mm/ 30 kg Differs by Specifications.

No. 254 PLUG FLEXING TESTER

No.254 (1 Hanging)
Option: Conduction Device

No.254 (3 Hangings)
Option: Conduction Device

JIS-C3662-2, C8306, IEC-60227-2

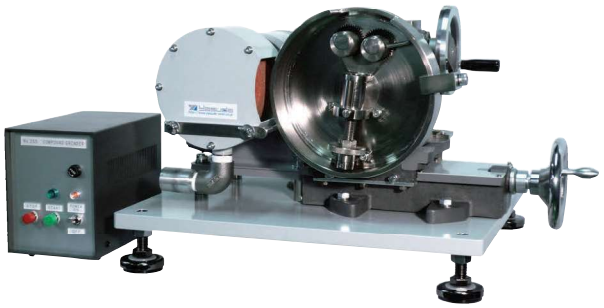
FEATURE

This tester is used to test the bending endurance of plugs by hanging a prescript weight on one end of the plug, and repeatedly bending the other end 60° back and forth for a prescript number of times. After a prescript number of times the plug has been bent, the operator is to check the disconnection rate of the plug to determine the bend stress strength. In addition, to test chloride insulated cables, the plug will be flexed left and right repeatedly at a 90° angle.

SPECIFICATION

Hanging	1 Hanging, 2 Hangings, 3 Hangings, 4 Hangings (4 kinds)
Flexing Angle	Left-Right 60°, 90° (2 Stage Type)
Flexing Speed	40 times/min (20 rt/min)
Weight	500 g
Bracing	300 mm from Pivot, Spacing 40 mm
Counter	6 Digits Preset Counter
Option	Conduction Device
Power Source	AC 100 V, 1-Phase, 10 A, 50/60 Hz
Dimensions/ Weight (Approx.)	Differs by Specifications.

No. 255 COMPOUND GRINDER



No.255

JIS-C8306

FEATURE

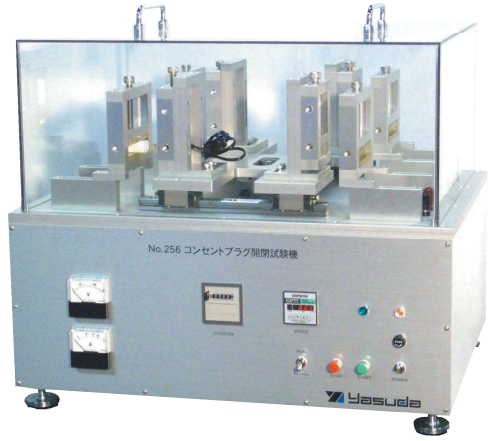
This machine is used to process test specimens using insulated materials such as electric wires and sheaths for tensile tests. The operator can grind the test specimen to a desired thickness by attaching the test specimen to the drum and bringing it into contact with the rotating abrasion wheel to grind.

SPECIFICATION

Specimen	W Max. 40 mm, L Max. 520 mm
Drum	Outer Diameter φ220 mm, W2"
Abrasion Wheel	T2", Material A, Grit #36, Wheel Outer Diameter φ125 mm
Wheel Rotation Speed	2,500 to 3,500 rpm
Dial Gauge	Scale 1/100 mm, Stroke Max. 10 mm
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz
Dimensions/ Weight (Approx.)	Main Body: W650 × D500 × H400 mm/ 70 kg Control Box: W140 × D250 × H200 mm/ 3 kg

*Power source, dimensions, weight may differ by specifications.

No. 256 OUTLET PLUG DURABILITY TESTER



No.256

JIS-C8306

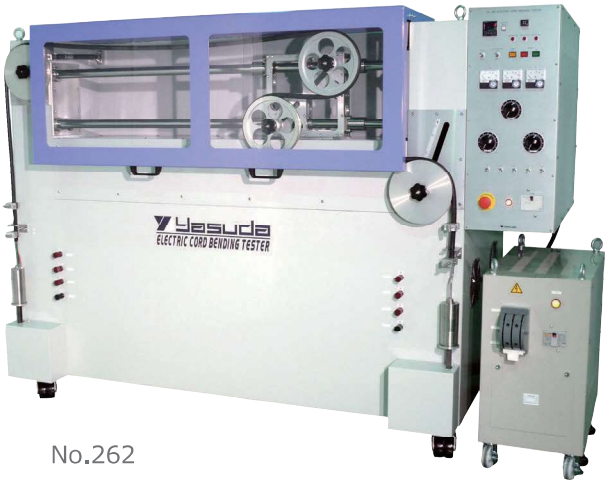
FEATURE

This tester is used to conduct opening and closing tests on electric equipments. The operator is to evaluate the durability of the samples by fixing the plug and the outlet to a chuck and horizontally opening and closing them repeatedly. It can also be possible to connect a Stress Device to the tester.

SPECIFICATION

Hanging	2 Hangings, 4 Hangings, 6 Hangings (3 kinds)
In-Out Speed	10 times/min, 20 times/min (2 Stage Type)
Counter	6 Digits Preset Counter
Option	A-meter, V-meter, Energizing Terminal, Stress Device
Power Source	AC 100 V, 1-Phase, 5 A, 50/60 Hz
Dimensions/ Weight (Approx.)	2 Hangings: W650 × D250 × H450 mm/ 50 kg 4 Hangings: W650 × D500 × H600 mm/ 60 kg

No. 262 ELECTRIC CORD BENDING TESTER



No.262

JIS-C3662-2, C3663-2, IEC-60227-2, 60245-2

FEATURE

This tester is used to evaluate the flexibility of vinyl chloride and rubber insulated cable. The operator is to attach the test specimen in an S-shape using the 2 pulleys which are fixed on both ends of the machine, and 2 pulleys that are fixed to the slider which moves right and left. The test load will be applied to both ends, and the slider will slide parallel so as tensile force will be applied in the opposite direction that the slider is moving. The tester is designed with short circuit detection compatibility during the test.

SPECIFICATION

Specimen Sectional Area	0.5 to 4.0 mm^2
Pulley	Choose from φ60, 80, 120, 160 or 200 mm
Slider Speed	0.33 m/sec
Slider Length	More than 1 m
Weight Load	Choose from Initial 0.5 to 9.0 kg
Load Device	Electric Current Range: 0.1 to 30 A per Phase
Power Source	Primary: AC 200 V, 3-Phase, Star Connect, 20 kVA, 50/60 Hz Secondary: AC 230 V, 1-Phase/ AC 400 V (Attached with Voltage Changer), 3-Phase, Star Connection, 3-Phase 4 Line, Neutral Line Earth
Dimensions/ Weight (Approx.)	W2,200 × D1,100 × H1,600 mm/ 950 kg

*Power source, dimensions, weight may differ by specifications.