

ELECTRO-HYDRAULIC SERVO CONTROL UNIVERSAL TESTING MACHINE 1000kN

Standard: BS EN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

This NL 6000 Series UTM used for the mechanics property test such as the tensile, bending, compression and etc to various metallic and non-metallic materials. The testers have been developed according to BS EN 10002-1, ISO 7500-1 & ASTM A370 "Metal Tensile Test Method" with the adoption of the electro-hydraulic servo control and electronic measurement. It can automatically process the test result for statistical purpose and print default or user-defined test report.

NL 6000 Series UTM use the micro-computer automatic data collection and processing, real time display of the test data and curves. It has the functions such as unlimited storage of test result in the computer, printing the test results and curves, processing the batch test result report, managing the database and so on. It also has the network interface. It can automatically seek the multiple technical parameters such as elastic module E upper yield strength ReH, lower yield strength REL, stipulated non-proportional elongation intensity Rr, tensile strength Rm, stipulated total elongation intensity Rt, yield point percentage elongation and etc.

NL 6000 Series UTM have the features such as the high precision, advantage performance, high reliability, convenient operation and etc.

OPERATION DISPLAY

Computer Screen Display unit with the following functions

- *Test force display
- *Break detection
- *Full auto test range switching function
- *Auto return function
- *Peak / Break value display function
- *Test conditions

SAFETY FEATURES

The system include with the followings safety features

- *Emergency stop switch
- *Overload limiter
- *Ram-stroke limiter
- *Hydraulic pump motor over-current & over heating protection
- *Leak / over current protection
- *Automatic stop control
- *Safety Guard

CONTROL & DATA PROCESSING SOFTWARE

- *User friendly & easily due to clear and brief operation – operation interface
- *Automatically save the test conditions & results
- *User define test curves including : Stress / Strain, Force / Elongation, Strength / Time to suit various requirement
- *Individual or combine display test curves on the same screen to compare with other several data at the same time
- *Compatible with Microsoft Excel by import or export function
- *Base of testing with digital sample break detection, auto ranging, auto calibration, quick tare & auto return facilities
- *Exceeds all International Standards for accuracy, ASTM, DIN, ISO, JIS, EN, GB...etc
- *Tension, Compression, Shear, Cycling & Creep Test facilities
- *User define Real Time Display including Load, Stress, Elongation, Strain, Speed or Time
- *Advanced protection features with software setting or / & hardware switch upper & lower limit setting
- *Operation fully control by computer
- *USB communication system & ethernet
- *Grips & fixtures for tension, compression, flexural, shear & products testing available
- *Fully user define report including Report Sheet, Label, Chart & Bitmap or JPG
- *Report sheet consist of Load, Elongation, Yield, Break, Stress Modulus, Strain, Tear Strength, Peel Strength etc
- *Force display unit : kN, N, tons, & mN
- *Stress display unit : GPa, Mpa, Pa, psi, N/sq.mm, Kg/sq.mm & Tons/sq.inch
- *User define Yield Strength, Young Modulus, Offset Setting, Graph Offset, Export & Import test data, ...etc

Unique Feature :

- *Over size prestressed 4 column with twin screw
- *External Auto Hydraulic Cylinder Grip System (Easy Maintenance)
- *High toughness fragment safety guard
- *High precision load cell ram
- *Built-in shock absorbing system on base mounting
- *Desktop console unit

1000kN Specification

Technical Specifications :

Model Number	NL 6000 X / 013
Capacity	1000 kN
Machine Class	Class 1
Accuracy	±1%
Displacement Resolution	0.001 mm
Compression Space	600 mm
Tensile Space	700 mm
Piston Stroke	200 mm
Dia. of Round Specimen	14 - 40 mm
Thickness of Flat Specimen	Up to 40 mm
Max. Distance of Bending Test	300 mm
Dia. Size of Compression Plates	225 mm
Dimension (Frame)	900 x 700 x 2300 mm
Dimension (Control Console)	1100 x 750 x 900 mm
Power	415 V, 3ph, 2.2 kw/0.4 kw, 50/60 Hz
Weight (Control Console)	300 kg
Weight (Frame)	2600 kg

Unit Standard Accessories :

Description	Model Number	Qty
Flat Specimen Jaw Set (4 pcs)	NL 6000 X / 013 - P001	1 set
Round Specimen Jaw Set A (4 pcs)	NL 6000 X / 013 - P002	1 set
Round Specimen Jaw Set B (4 pcs)	NL 6000 X / 013 - P003	1 set
Compression Platen Set (225 mm Dia.)	NL 6000 X / 013 - P004	1 set
Bending Test Device	NL 6000 X / 013 - P005	1 set
Mounting Screw	NL 6000 X / 013 - P006	4 pcs
Compatible Personal Computer Set	NL CS-100	1 set
TEST MASTER Software	NL TMS	1 copy
Console Control Desk	NL 6000 CCD	1 unit

*1 Copy of Manual Instruction

Optional Accessories :

Electronic Extensometer	NL EST - 100
Axial Extensometer	3543-050M-050M-ST
Computer Printer	NL CP - 200



External Auto Grip



Front Grip

STANDARD ACCESSORIES



Anchoring Bar



Compression Platen Set



Bending Device



Electronic Extensometer



Printer

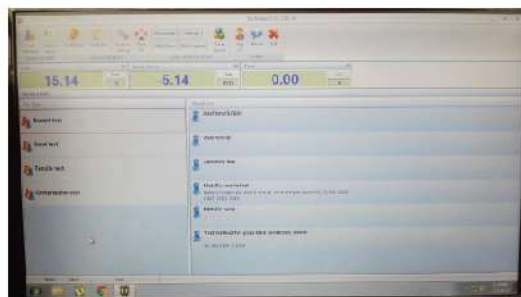
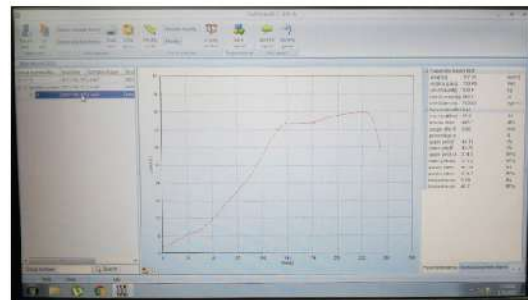


Computer with Software

OPTIONAL ACCESSORIES



SCREEN DISPLAY



ELECTRO-HYDRAULIC SERVO CONTROL UNIVERSAL TESTING MACHINE 600kN

Standard: BS EN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

This NL 6000 Series UTM used for the mechanics property test such as the tensile, bending, compression and etc to various metallic and non-metallic materials. The testers have been developed according to BS EN 10002-1, ISO 7500-1 & ASTM A370 "Metal Tensile Test Method" with the adoption of the electro-hydraulic servo control and electronic measurement. It can automatically process the test result for statistical purpose and print default or user-defined test report.

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NL 6000 Series UTM have the features such as the high precision, advantage performance, high reliability, convenient operation and etc.

OPERATION DISPLAY

Computer Screen Display unit with the following functions

- *Test force display
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- *Peak / Break value display function
- *Test conditions

SAFETY FEATURES

The system include with the followings safety features

- *Emergency stop switch
- *Overload limiter
- *Ram-stroke limiter
- *Hydraulic pump motor over-current & over heating protection
- *Leak / over current protection
- *Automatic stop control
- *Safety Guard

CONTROL & DATA PROCESSING SOFTWARE

- *User friendly & easily due to clear and brief operation – operation interface
- *Automatically save the test conditions & results
- *User define test curves including : Stress / Strain, Force / Elongation, Strength / Time to suit various requirement
- *Individual or combine display test curves on the same screen to compare with other several data at the same time
- *Compatible with Microsoft Excel by import or export function
- *Base of testing with digital sample break detection, auto ranging, auto calibration, quick tare & auto return facilities
- *Exceeds all International Standards for accuracy, ASTM, DIN, ISO, JIS, EN, GB...etc
- *Tension, Compression, Shear, Cycling & Creep Test facilities
- *User define Real Time Display Including Load, Stress, Elongation, Strain, Speed or Time
- *Advanced protection features with software setting or / & hardware switch upper & lower limit setting
- *Operation fully control by computer
- *USB communication system & ethernet
- *Grips & fixtures for tension, compression, flexural, shear & products testing available
- *Fully user define report including Report Sheet, Label, Chart & Bitmap or JPG
- *Report sheet consist of Load, Elongation, Yield, Break, Stress Modulus, Strain, Tear Strength, Peel Strength etc
- *Force display unit : kN, N, tons, & mN
- *Stress display unit : GPa, Mpa, Pa, psi, N/sq.mm, Kg/sq.mm & Tons/sq.inch
- *User define Yield Strength, Young Modulus, Offset Setting, Graph Offset, Export & Import test data, ...etc

Unique Feature :

- *Over size prestressed 4 column with twin screw
- *External Auto Hydraulic Cylinder Grip System (Easy Maintenance)
- *High toughness fragment safety guard
- *High precision load cell ram
- *Built-in shock absorbing system on base mounting
- *Desktop console unit



External Auto Grip



Front Grip

600kN Specification

Technical Specifications :

Model Number	NL 6000 X / 014
Capacity	600 kN
Machine Class	Class 1
Accuracy	±1%
Displacement Resolution	0.001 mm
Compression Space	600 mm
Tensile Space	700 mm
Piston Stroke	200 mm
Dia. of Round Specimen	13 - 40 mm
Thickness of Flat Specimen	Up to 20 mm
Max. Distance of Bending Test	300 mm
Dia. Size of Compression Plates	220 mm
Dimension (Frame)	800 x 620 x 2000 mm
Dimension (Control Console)	760 x 590 x 1600 mm
Power	2.8 kW
Weight (Control Console)	300 kg
Weight (Frame)	1900 kg

Unit Standard Accessories :

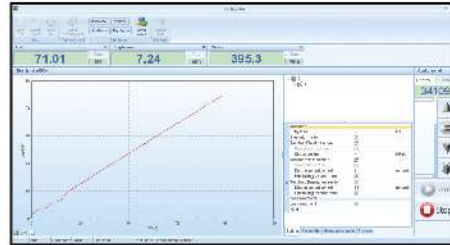
Capacity	600 kN
Main Frame	NL 6000 X / 014 - P001
Electro Hydraulic Servo Power Pack Unit	NL 6000 X / 015 - P002
TEST REPORT Internal Control Unit	NL TSC - 100
Latest Compatible Personel Computer	NL CS - 100
Set with TEST REPORT Software	
Flat Specimen Jaw Set (4 pcs)	NL 6000 X / 014 - P003
Round Specimen Jaw Set A (4 pcs)	NL 6000 X / 014 - P004
Round Specimen Jaw Set B (4 pcs)	NL 6000 X / 014 - P005
Compression Platen Set (225 mm Dia.)	NL 6000 X / 014 - P006
Bending Test Device	NL 6000 X / 014 - A001
Computer Desk	NL CD - 100

*1 Copy of Manual Instruction

Optional Accessories :

Electronic Extensometer	NL EST - 100
Computer Printer	NL CP - 200

TEST REPORT SOFTWARE



Elastic Graph



Yield Graph



Strengthen Graph

OPTIONAL ACCESSORIES



NL EST-100



NL CP - 200



STANDARD ACCESSORIES



Compression Plated Set



Bending Jig



V-Shaped & Flat Jaws



Mounting Screw

ELECTRO-HYDRAULIC SERVO CONTROL UNIVERSAL TESTING MACHINE 300kN

Standard: BS EN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

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OPERATION DISPLAY

Computer Screen Display unit with the following functions

- *Test force display
- *Break detection
- *Full auto test range switching function
- *Auto return function
- *Peak / Break value display function
- *Test conditions

SAFETY FEATURES

The system include with the followings safety features

- *Emergency stop switch
- *Overload limiter
- *Ram-stroke limiter
- *Hydraulic pump motor over-current & over heating protection
- *Leak / over current protection
- *Automatic stop control
- *Safety Guard

CONTROL & DATA PROCESSING SOFTWARE

- *User friendly & easily due to clear and brief operation – operation interface
- *Automatically save the test conditions & results
- *User define test curves including : Stress / Strain, Force / Elongation, Strength / Time to suit various requirement
- *Individual or combine display test curves on the same screen to compare with other several data at the same time
- *Compatible with Microsoft Excel by import or export function
- *Base of testing with digital sample break detection, auto ranging, auto calibration, quick tare & auto return facilities
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- *Tension, Compression, Shear, Cycling & Creep Test facilities
- *User define Real Time Display Including Load, Stress, Elongation, Strain, Speed or Time
- *Advanced protection features with software setting or / & hardware switch upper & lower limit setting
- *Operation fully control by computer
- *USB communication system & ethernet
- *Grips & fixtures for tension, compression, flexural, shear & products testing available
- *Fully user define report including Report Sheet, Label, Chart & Bitmap or JPG
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- *User define Yield Strength, Young Modulus, Offset Setting, Graph Offset, Export & Import test data, ...etc

Unique Feature :

- *Over size prestressed 4 column with twin screw
- *External Auto Hydraulic Cylinder Grip System (Easy Maintenance)
- *High toughness fragment safety guard
- *High precision load cell ram
- *Built-in shock absorbing system on base mounting
- *Desktop console unit



External Auto Grip



Front Grip

300kN Specification

Technical Specifications :

Model Number	NL 6000 X / 015
Capacity	300 kN
Machine Class	Class 1
Accuracy	±1%
Displacement Resolution	0.001 mm
Compression Space	600 mm
Tensile Space	700 mm
Piston Stroke	200 mm
Dia. of Round Specimen	10 - 32 mm
Thickness of Flat Specimen	Up to 20 mm
Max. Distance of Bending Test	300 mm
Dia. Size of Compression Plates	150 mm
Dimension (Frame)	800 x 620 x 1900 mm
Dimension (Control Console)	760 x 590 x 1600 mm
Power	2.2 kW
Weight (Control Console)	300 kg
Weight (Frame)	1600 kg

Unit Standard Accessories :

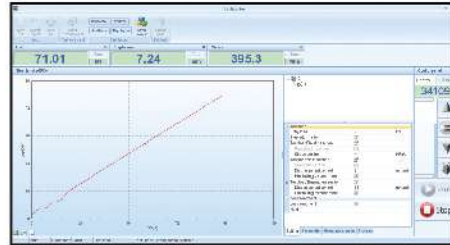
Capacity	300 kN
Main Frame	NL 6000 X / 015 - P001
Electro Hydraulic Servo Power Pack Unit	NL 6000 X / 015 - P002
TEST REPORT Internal Control Unit	NL TSC - 100
Latest Compatible Personal Computer	NL CS - 100
Set with TEST REPORT Software	
Flat Specimen Jaw Set (4 pcs)	NL 6000 X / 015 - P003
Round Specimen Jaw Set A (4 pcs)	NL 6000 X / 015 - P004
Round Specimen Jaw Set B (4 pcs)	NL 6000 X / 015 - P005
Compression Platen Set (225 mm Dia.)	NL 6000 X / 015 - P006
Bending Test Device	NL 6000 X / 015 - A001
Computer Desk	NL CD - 100

*1 Copy of Manual Instructions

Optional Accessories :

Electronic Extensometer	NL EST - 100
Computer Printer	NL CP - 200

TEST REPORT SOFTWARE



Elastic Graph



Yield Graph



Strengthen Graph

OPTIONAL ACCESSORIES



NL EST-100



NL CP - 200



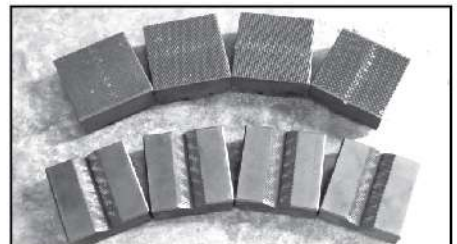
STANDARD ACCESSORIES



Compression Plated Set



Bending Jig



V-Shaped & Flat Jaws



Mounting Screw

ELECTRO-HYDRAULIC SERVO CONTROL UNIVERSAL TESTING MACHINE 2000kN

Standard: BS EN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

This NL 6000 Series UTM used for the mechanics property test such as the tensile, bending, compression and etc to various metallic and non-metallic materials. The testers have been developed according to BS EN 10002-1, ISO 7500-1 & ASTM A370 "Metal Tensile Test Method" with the adoption of the electro-hydraulic servo control and electronic measurement. It can automatically process the test result for statistical purpose and print default or user-defined test report.

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OPERATION DISPLAY

Computer Screen Display unit with the following functions

- *Test force display
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- *Test conditions

SAFETY FEATURES

The system include with the followings safety features

- *Emergency stop switch
- *Overload limiter
- *Ram-stroke limiter
- *Hydraulic pump motor over-current & over heating protection
- *Leak / over current protection
- *Automatic stop control
- *Safety Guard

CONTROL & DATA PROCESSING SOFTWARE

- *User friendly & easily due to clear and brief operation – operation interface
- *Automatically save the test conditions & results
- *User define test curves including : Stress / Strain, Force / Elongation, Strength / Time to suit various requirement
- *Individual or combine display test curves on the same screen to compare with other several data at the same time
- *Compatible with Microsoft Excel by import or export function
- *Base of testing with digital sample break detection, auto ranging, auto calibration, quick tare & auto return facilities
- *Exceeds all International Standards for accuracy, ASTM, DIN, ISO, JIS, EN, GB...etc
- *Tension, Compression, Shear, Cycling & Creep Test facilities
- *User define Real Time Display Including Load, Stress, Elongation, Strain, Speed or Time
- *Advanced protection features with software setting or / & hardware switch upper & lower limit setting
- *Operation fully control by computer
- *USB communication system & ethernet
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- *Fully user define report including Report Sheet, Label, Chart & Bitmap or JPG
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Unique Feature :

- *Over size prestressed 4 column with twin screw
- *External Auto Hydraulic Cylinder Grip System (Easy Maintenance)
- *High toughness fragment safety guard
- *High precision load cell ram
- *Built-in shock absorbing system on base mounting
- *Desktop console unit



External Auto Grip



Front Grip

2000kN Specification

Technical Specifications :

Model Number	NL 6000 X / 016
Capacity	2000 kN
Machine Class	Class 1
Accuracy	±1%
Displacement Resolution	0.001 mm
Compression Space	600 mm
Tensile Space	700 mm
Piston Stroke	200 mm
Dia. of Round Specimen	14 - 40 mm
Thickness of Flat Specimen	Up to 40 mm
Max. Distance of Bending Test	300 mm
Dia. Size of Compression Plates	225 mm
Dimension (Frame)	1050 x 800 x 2500 mm
Dimension (Control Console)	1100 x 750 x 900 mm
Power	415 V, 3ph, 2.2 kw/0.4 kw, 50/60 Hz
Weight (Control Console)	300 kg
Weight (Frame)	3200 kg

Unit Standard Accessories :

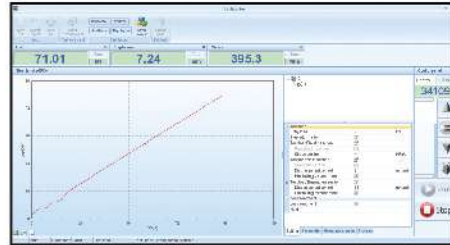
Description	Model Number	Qty
Flat Specimen Jaw Set (4 pcs)	NL 6000 X / 016 - P001	1set
Round Specimen Jaw Set A (4 pcs)	NL 6000 X / 016 - P002	1set
Round Specimen Jaw Set B (4 pcs)	NL 6000 X / 016 - P003	1set
Compression Platen Set (225 mm Dia.)	NL 6000 X / 016 - P004	1set
Bending Test Device	NL 6000 X / 016 - P005	1set
Mounting Screw	NL 6000 X / 016 - P006	4pcs
Compatible Personal Computer Set	NL CS-100	1set
TEST MASTER Software	NL TMS	1copy
Console Control Desk	NL 6000 CCD	1unit

*1 Copy of Manual Instruction

Optional Accessories :

Electronic Extensometer	NL EST - 100
Computer Printer	NL CP - 200

TEST REPORT SOFTWARE



Elastic Graph



Yield Graph



Strengthen Graph

OPTIONAL ACCESSORIES



NL EST-100



NL CP - 200



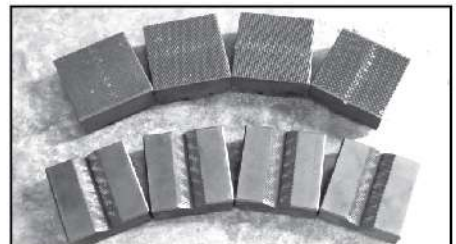
STANDARD ACCESSORIES



Compression Plated Set



Bending Jig



V-Shaped & Flat Jaws



Mounting Screw

ELECTRO-HYDRAULIC SERVO CONTROL UNIVERSAL TESTING MACHINE 1200kN (HEAVY DUTY VERSION)

Standard: BS EN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

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Unique Feature :

- *Over size prestressed 4 column with twin screw
- *External Auto Hydraulic Cylinder Grip System (Easy Maintenance)
- *High toughness fragment safety guard
- *High precision load cell ram
- *Built-in shock absorbing system on base mounting
- *Desktop console unit



External Auto Grip



Front Grip

1200kN Specification

Technical Specifications :

Model Number	NL 6000 X / 017
Capacity	1200 kN
Machine Class	Class 1
Accuracy	±1%
Displacement Resolution	0.001 mm
Compression Space	600 mm
Tensile Space	700 mm
Piston Stroke	200 mm
Dia. of Round Specimen	14 - 40 mm
Thickness of Flat Specimen	Up to 40 mm
Max. Distance of Bending Test	300 mm
Dia. Size of Compression Plates	225 mm
Dimension (Frame)	1050 x 800 x 2500 mm
Dimension (Control Console)	1100 x 750 x 900 mm
Power	415 V, 3ph, 2.2 kw/0.4 kw, 50/60 Hz
Weight (Control Console)	300 kg
Weight (Frame)	3200 kg

Unit Standard Accessories :

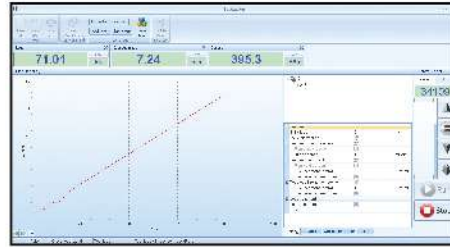
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Flat Specimen Jaw Set (4 pcs)	NL 6000 X / 017 - P001	1 set
Round Specimen Jaw Set A (4 pcs)	NL 6000 X / 017 - P002	1 set
Round Specimen Jaw Set B (4 pcs)	NL 6000 X / 017 - P003	1 set
Compression Platen Set (225 mm Dia.)	NL 6000 X / 017 - P004	1 set
Bending Test Device	NL 6000 X / 017 - P005	1 set
Mounting Screw	NL 6000 X / 017 - P006	4 pcs
Compatible Personal Computer Set	NL CS-100	1 set
TEST MASTER Software	NL TMS	1 copy
Console Control Desk	NL 6000 CCD	1 unit

*1 Copy of Manual Instruction

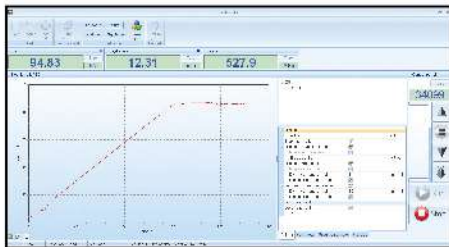
Optional Accessories :

Electronic Extensometer	NL EST - 100
Computer Printer	NL CP - 200

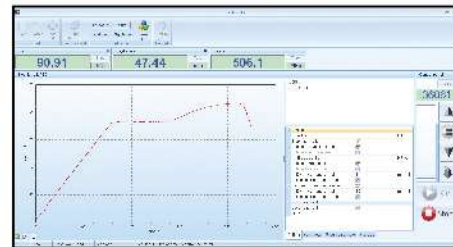
TEST REPORT SOFTWARE



Elastic Graph



Yield Graph



Strengthen Graph

OPTIONAL ACCESSORIES



NL EST-100



NL CP - 200



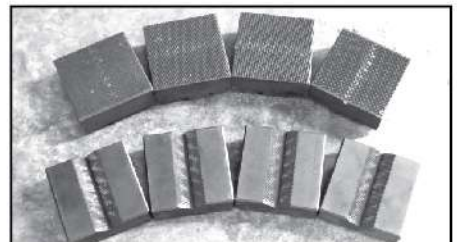
STANDARD ACCESSORIES



Compression Plated Set



Bending Jig



V-Shaped & Flat Jaws



Mounting Screw

SERVOTEC FULLY AUTOMATIC UNIVERSAL TENSILE MACHINE 100kN

Standard: BSEN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

NL Servotec Fully Automatic Universal Tensile Machine out tester adopts DC speed regulating servomotor & reduction gears as the power source. It real time displays test data & test status with LCD module. Professional designed servo control system realizes the PWM pulse width modulation control mode. It really comes up to with test speed closed loop control mode. It is controlled by single chip automatically control.

Main Use & Range

Used for measurement & test of mechanical property & analytical study of metal, non-metal & composite material, such as aviation, petrochemical, machinery manufacture, wire, cable, textile, fiber, plastic, rubber, ceramic, food, medicine packaging, aluminium plastic tube, plastic door & window, geo-textile, film, wood, paper, metal material & manufacture industry & etc.

It can record the max. test force, fracture value, yield value, max. compression value automatically. It can also calculate the fracture extension & all kind of strength value manually. The RA232 connector can do the function of communicating with computer to do the data work. It is a essential equipment for manufacture, construction unit, product quality supervision & inspection bureau & building material test department. It also could be used in the university for teaching purpose.

Main Technical Parameter :

Model Number	NL 6000 X / 018A
Max Test Force	100 kN
Structure Type	Twin Rigid Column With Twin High Precision Ball Screw
Max. Store	600 mm
Max. Width (Space)	560 mm
Test Force Accuracy	Class 1 (±0.5%)
Test Speed Range	0.01 - 500mm/min
Load Resolution	1/100 000
Measuring Range	1% - 100% F . S
Load Reading	Gf, kgf, N, kN, Lbf, etc.
Curves Display	Load/Elongation, Elongation/Time, Time/Elongation, Stress/Strain.
Data Display	Max. Force, Speed, Specimen Detail, Strength(Kpa, Mpa, N/mm, Nmm)
Main Drive Unit	Panasonic Servo Drive & Servo Motor
Software	NL TM2101
Safety Feature	Emergency Stop, Over Load Protection, Upper & Lower Limit Switch Load Sensor with Auto Retreat
Power Source	AC 220 V, 1Ph, 50/60 Hz
Dimension (LxWxH)	760 x 520 x 1940 mm
Approx Weight	500 kg

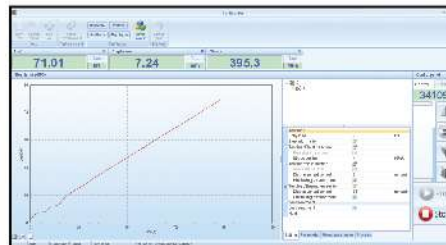
Unit Consists Of :

Model Number	Parts Description	Qty
NL LC - 100	100kN Load Cell	1 Unit.
NL 6000 - B401	Mechanical Wedge Grip (2T)	1 Set.
NL LT - 001	Compatible Laptop Unit	1 Unit.
NL TM 2101	Software	1 Copy

*1 Copy of Manual Instruction



TEST REPORT SOFTWARE



Elastic Graph



Yield Graph



Strengthen Graph

UNIVERSAL TENSILE MACHINE 50kN

Standard: BSEN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

NL Servotec Fully Automatic Universal Tensile Machine out tester adopts DC speed regulating servomotor & reduction gears as the power source. It real time displays test data & test status with LCD module. Professional designed servo control system realizes the PWM pulse width modulation control mode. It really comes up to with test speed closed loop control mode. It is controlled by single chip automatically control.

Main Use & Range

Used for measurement & test of mechanical property & analytical study of metal, non-metal & composite material, such as aviation, petrochemical, machinery manufacture, wire, cable, textile, fiber, plastic, rubber, ceramic, food, medicine packaging, aluminium plastic tube, plastic door & window, geo-textile, film, wood, paper, metal material & manufacture industry & etc.

It can record the max. test force, fracture value, yield value, max. compression value automatically. It can also calculate the fracture extension & all kind of strength value manually. The RA232 connector can do the function of communicating with computer to do the data work. It is a essential equipment for manufacture, construction unit, product quality supervision & inspection bureau & building material test department. It also could be used in the university for teaching purpose.



Main Technical Parameter :

Model Number	NL 6000 X / 019
Max Test Force	50 kN
Max. Vertical Space	1200 mm
Test Force Accuracy	Class 1 (±0.5%)
Test Speed Range	0.01 - 300 mm/min
Load Resolution	1/250 000
Software	NL TM2101
Safety Feature	Emergency Stop, Overload Protection Upper & Lower Limit Axial Sensor w Auto Stop
Power Source	AC 220 V, 1Ph, 50/60 Hz
Dimension (LxWxH)	970 x 760 x 2250 mm
Approx Weight	650kg.

Unit Consists Of :

Model Number	Parts Description	Qty
NL 6000 X / 019	Main Frame	1 Unit.
NL 6000 X / 019-P001	Computer Controlled Test System	1 Unit.
NL 6000 X / 019-P002	Flat Specimen Jaw Set 0-7 mm (4 pcs)	1 Unit.
NL 6000 X / 019-P003	Specimen Jaw Set Ø4 - Ø9 mm (4 pcs)	1 Unit.
NL CD-100	Computer Desk	1 no.
NL CS-100	Computer Set	1no.
NL LT-001	Compatible Laptop Unit	1 unit.

*1 Copy of Manual Instruction

Optional Accessories :

Model Number	Parts Description
NL EST-100	Electronic Extensometer
NL CP-200	Computer Printer

SERVOTEC FULLY AUTOMATIC UNIVERSAL TENSILE MACHINE 5kN

Standard: BSEN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

NL Servotec Fully Automatic Universal Tensile Machine out tester adopts DC speed regulating servomotor & reduction gears as the power source. It real time displays test data & test status with LCD module. Professional designed servo control system realizes the PWM pulse width modulation control mode. It really comes up to with test speed closed loop control mode. It is controlled by single chip automatically control.

Main Use & Range

Used for measurement & test of mechanical property & analytical study of metal, non-metal & composite material, such as aviation, petrochemical, machinery manufacture, wire, cable, textile, fiber, plastic, rubber, ceramic, food, medicine packaging, aluminium plastic tube, plastic door & window, geo-textile, film, wood, paper, metal material & manufacture industry & etc.

It can record the max. test force, fracture value, yield value, max. compression value automatically. It can also calculate the fracture extension & all kind of strength value manually. The RA232 connector can do the function of communicating with computer to do the data work. It is a essential equipment for manufacture, construction unit, product quality supervision & inspection bureau & building material test department. It also could be used in the university for teaching purpose.

Main Technical Parameter :

Model Number	NL 6000 X / 021
Max Test Force	5 kN
Structure Type	Single Rigid Column With Single High Precision Ball Screw
Max. Stroke	1400 mm
Max. Width (Space)	150 mm
Test Force Accuracy	Class 1 (±0.5%)
Test Speed Range	0.01 - 500mm/min
Load Resolution	1/250 000
Measuring Range	1% - 100% F . S
Load Reading	Gf, kgf, N, kN, Lbf, etc.
Curves Display	Load/Elongation, Elongation/Time, Time/Elongation, Stress/Strain.
Data Display	Max. Force, Speed, Specimen Detail, Strength(Kpa, Mpa, N/mm, Nmm)
Main Drive Unit	Panasonic Servo Drive & Servo Motor
Software	NL TM2101
Safety Feature	Emergency Stop, Over Load Protection, Upper & Lower Limit Switch Load Sensor with Auto Retreat
Power Source	AC 220 V, 1Ph, 50/60 Hz
Dimension (L x W x H)	570 x 450 x 1900 mm
Approx Weight	180kg.

Unit Consists Of :

Model Number	Parts Description	Qty
NL LC - 02	5kN Load Cell	1 Unit.
NL 6000 - B402	Mechanical Aluminium flat Vice Grip	1 Set.
NL LT - 001	Compatible Laptop Unit	1 Unit.
NL TM 2101	Software	1 Copy

*1 Copy of Manual Instruction



Panasonic Servo Motor & Drive



High Precision Ball Screw



Germany Brand TECSIS Load Cell - S Type

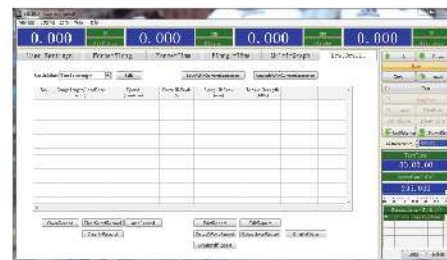


Branded Laptop

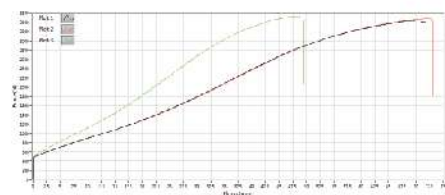
MAIN COMPONENTS



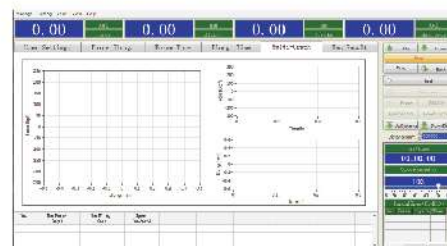
User Setting Page



Test Result Page



Test Curve Page



Curves Display Page

SERVOTEC FULLY AUTOMATIC UNIVERSAL TENSILE MACHINE 2kN

Standard: BSEN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

NL Servotec Fully Automatic Universal Tensile Machine out tester adopts DC speed regulating servomotor & reduction gears as the power source. It real time displays test data & test status with LCD module. Professional designed servo control system realizes the PWM pulse width modulation control mode. It really comes up to with test speed closed loop control mode. It is controlled by single chip automatically control.

Main Use & Range

Used for measurement & test of mechanical property & analytical study of metal, non-metal & composite material, such as aviation, petrochemical, machinery manufacture, wire, cable, textile, fiber, plastic, rubber, ceramic, food, medicine packaging, aluminium plastic tube, plastic door & window, geo-textile, film, wood, paper, metal material & manufacture industry & etc.

It can record the max. test force, fracture value, yield value, max. compression value automatically. It can also calculate the fracture extension & all kind of strength value manually. The RA232 connector can do the function of communicating with computer to do the data work. It is a essential equipment for manufacture, construction unit, product quality supervision & inspection bureau & building material test department. It also could be used in the university for teaching purpose.

Main Technical Parameter :

Model Number	NL 6000 X / 022
Max Test Force	2 kN
Structure Type	Single Rigid Column With Single High Precision Ball Screw (Desk Top Version)
Max. Stroke	900 mm
Max. Width (Space)	150 mm
Test Force Accuracy	Class 1 (±0.5%)
Test Speed Range	0.01 - 500mm/min
Load Resolution	1/250 000
Measuring Range	1% - 100% F . S
Load Reading	Gf, kgf, N, kN, Lbf, etc.
Curves Display	Load/Elongation, Elongation/Time, Time/Elongation, Stress/Strain.
Data Display	Max. Force, Speed, Specimen Detail, Strength(Kpa, Mpa, N/mm, Nmm)
Main Drive Unit	Panasonic Servo Drive & Servo Motor
Software	NL TM2101
Safety Feature	Emergency Stop, Over Load Protection, Upper & Lower Limit Switch Load Sensor with Auto Retreat
Power Source	AC 220 V, 1Ph, 50/60 Hz
Dimension (L x W x H)	640 x 650 x 1470 mm
Approx Weight	120kg.

Unit Consists Of :

Model Number	Parts Description	Qty
NL LC - 02	2kN Load Cell	1 Unit.
NL 6000 - B402	Mechanical Aluminium flat Vice Grip	1 Set.
NL LT - 001	Compatible Laptop Unit	1 Unit.
NL TM 2101	Software	1 Copy

*1 Copy of Manual Instruction



Panasonic Servo Motor & Drive



High Precision Ball Screw



Germany Brand TECSIS Load Cell - S Type

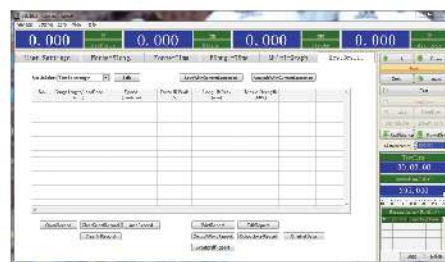


Branded Laptop

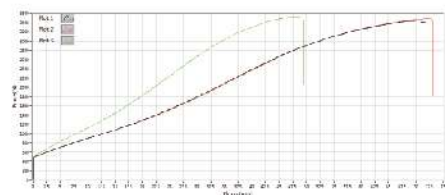
MAIN COMPONENTS



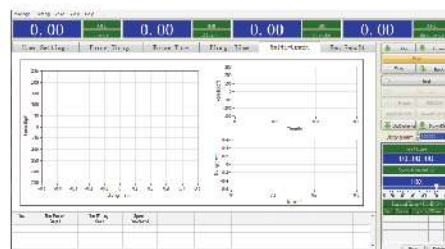
User Setting Page



Test Result Page



Test Curve Page



Curves Display Page

ELECTRO-HYDRAULIC SERVO CONTROL UNIVERSAL TESTING MACHINE (Multi Wire Strand) 1200kN

Standard: BS EN 10002-1, BS 5896, ISO 7500-1, ASTM A370, ASTM A1061/A

Tensile & Compression

This NL 6000 Series UTM used for the mechanics property test such as the tensile, bending, compression and etc to various metallic and non-metallic materials. The testers have been developed according to BS EN 10002-1, ISO 7500-1 & ASTM A370 "Metal Tensile Test Method" with the adoption of the electro-hydraulic servo control and electronic measurement. It can automatically process the test result for statistical purpose and print default or user-defined test report.

NL 6000 Series UTM use the micro-computer automatic data collection and processing, real time display of the test data and curves. It has the functions such as unlimited storage of test result in the computer, printing the test results and curves, processing the batch test result report, managing the database and so on. It also has the network interface. It can automatically seek the multiple technical parameters such as elastic module E upper yield strength ReH, lower yield strength REL, stipulated non-proportional elongation intensity Rr, tensile strength Rm, stipulated total elongation intensity Rt, yield point percentage elongation and etc.

NL 6000 Series UTM have the features such as the high precision, advantage performance, high reliability, convenient operation and etc.

OPERATION DISPLAY

Computer Screen Display unit with the following functions

- *Test force display
- *Break detection
- *Full auto test range switching function
- *Auto return function
- *Peak / Break value display function
- *Test conditions

SAFETY FEATURES

The system include with the followings safety features

- *Emergency stop switch
- *Overload limiter
- *Ram-stroke limiter
- *Hydraulic pump motor over-current & over heating protection
- *Leak / over current protection
- *Automatic stop control
- *Safety Guard

CONTROL & DATA PROCESSING SOFTWARE

- *User friendly & easily due to clear and brief operation – operation interface
- *Automatically save the test conditions & results
- *User define test curves including : Stress / Strain, Force / Elongation, Strength / Time to suit various requirement
- *Individual or combine display test curves on the same screen to compare with other several data at the same time
- *Compatible with Microsoft Excel by import or export function
- *Base of testing with digital sample break detection, auto ranging, auto calibration, quick tare & auto return facilities
- *Exceeds all International Standards for accuracy, ASTM, DIN, ISO, JIS, EN, GB...etc
- *Tension, Compression, Shear, Cycling & Creep Test facilities
- *User define Real Time Display Including Load, Stress, Elongation, Strain, Speed or Time
- *Advanced protection features with software setting or / & hardware switch upper & lower limit setting
- *Operation fully control by computer
- *USB communication system & ethernet
- *Grips & fixtures for tension, compression, flexural, shear & products testing available
- *Fully user define report including Report Sheet, Label, Chart & Bitmap or JPG
- *Report sheet consist of Load, Elongation, Yield, Break, Stress Modulus, Strain, Tear Strength, Peel Strength etc
- *Force display unit : kN, N, tons, & mN
- *Stress display unit : GPa, Mpa, Pa, psi, N/sq.mm, Kg/sq.mm & Tons/sq.inch
- *User define Yield Strength, Young Modulus, Offset Setting, Graph Offset, Export & Import test data, ...etc

Unique Feature :

- *Over size prestressed 4 column with twin screw
- *External Auto Hydraulic Cylinder Grip System (Easy Maintenance)
- *High toughness fragment safety guard
- *High precision load cell ram
- *Built-in shock absorbing system on base mounting
- *Desktop console unit



External Auto Grip



Front Grip

1200kN Specification

Technical Specifications :

Model Number	NL 6000 X / 029
Capacity	1200 kN
Machine Class	Class 1
Accuracy	±1%
Displacement Resolution	0.001 mm
Compression Space	900 mm
Tensile Space	900 mm
Piston Stroke	200 mm
Cross Head Speed (mm/min)	280 mm
Loading Speed	0.1 - 100 mm/min
Dia. of Wire Strand	8 - 18 mm
Dia. of Round Specimen	14 - 45 mm
Thickness of Flat Specimen	up to 40 mm
Max. Distance of Bending Test	300 mm
Dia. Size of Compression Platen	225 mm Dia.
Horizontal Clearance (max)	505 mm
Dimension (Frame)	1050(L) x 800(W) x 2800(H) mm
Dimension (Control Console)	1100 x 750 x 900 mm
Power	415 V, 3ph, 2.2 kw/0.4 kw, 50/60 Hz
Weight (Control Console)	300 kg
Weight (Frame)	3500 kg

Unit Standard Accessories :

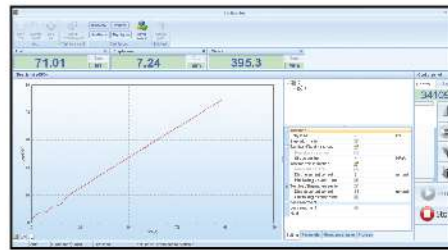
Description	Model Number	Qty
Wire Strand Jaw Set (Ø8 - Ø18) (4 pcs)	NL 6000 X / 029 - P007	1 set
Flat Specimen Jaw Set (4 pcs)	NL 6000 X / 029 - P001	1 set
Round Specimen Jaw Set A (4 pcs) (Ø14 - Ø32 mm)	NL 6000 X / 029 - P002	1 set
Round Specimen Jaw Set B (4 pcs) (Ø32 - Ø45 mm)	NL 6000 X / 029 - P003	1 set
Compression Platen Set (225 mm Dia.)	NL 6000 X / 029 - P004	1 set
Bending Test Device	NL 6000 X / 029 - P005	1 set
Aluminum Grip Piece (Wire Strand - Size 12.7 mm diameter)	NL 6000 X / 029 - A001	200 pcs
Aluminum Grip Piece (Wire Strand - Size 15.6 mm diameter)	NL 6000 X / 029 - A002	200 pcs
Electronic Extensometer (Re-Bar)	NL EST - 100	1 unit
Electronic Extensometer (Wire Steel Strand)	NL EST - 500	1 unit
Computer Printer	NL CP - 200	1 unit
Compatible Personal Computer	NL CS - 100	1 set
Test Master Software	NL TMS	1 copy
Console Control Desk	NL 6000 CCD	1 unit

*1 copy of Manual Instruction

Optional Accessories :

Electronic Extensometer	NL EST - 100
Computer Printer	NL CP - 200

TEST REPORT SOFTWARE



Elastic Graph



Yield Graph



Strengthen Graph



NL EST-100



NL CP - 200



NL EST-500



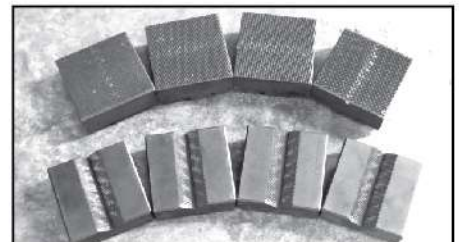
STANDARD ACCESSORIES



Compression Plated Set



Bending Jig



V-Shaped & Flat Jaws



Mounting Screw

COLD BEND TESTING MACHINE

Standard: BS EN ISO 15630-1 / 7438, ASTM A615, A615M

Cold Test Bending

Used for bending & re-bending reinforced concrete bar, the machine is mainly composed of transmission parts, racks, table & screw adjustment device, equipped with protective enclosures. **Supplied with bar puller and tool kit set.**

Technical Specifications :

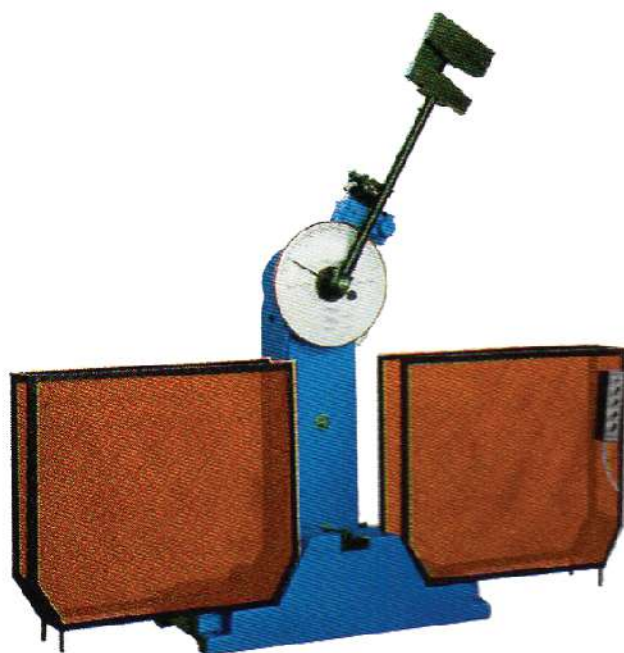
Model Number	NL 6001 X / 004
Specimen Diameter	6 - 40 mm
Max. Force	160 kN
Max. Specimen Length	800 mm
Max. Bending Angle	0° - 180°
Max. Re-Bending Angle	30° - 0°
Piston Speed	90/108 mm/min
Max. Piston Stroke	400 mm
Dimension	1495 (L) x 970 (W) x 1070 (H) mm
Approx. Weight	640 kg
Power	415 V, 3 ph, 0.75 KW 50/60 Hz, 1.99A

Optional Accessories :

Mandrel Model Number	Mandrel Dia. mm	Rebar Ø mm	Rebar Ø mm	Rebar Ø mm	Mandrel Holder Model Number
NL 6001 X / 004-A001	24	6	-	6	Type A
NL 6001 X / 004-A002	28	-	-	7	Type B
NL 6001 X / 004-A003	32	7	9.5	8	
NL 6001 X / 004-A004	36	-	-	9	
NL 6001 X / 004-A005	40	8	-	10	
NL 6001 X / 004-A006	44	-	12.7	-	Type C
NL 6001 X / 004-A007	48	-	-	12	
NL 6001 X / 004-A008	56	10	15.9	-	
NL 6001 X / 004-A009	64	12	-	16	
NL 6001 X / 004-A010	96	14	19.1	-	No Holder Directly fitted to the piston
NL 6001 X / 004-A011	112	16	22.2	-	
NL 6001 X / 004-A012	128	18	25.4	-	
NL 6001 X / 004-A013	132	20	-	-	
NL 6001 X / 004-A014	140	22	-	20	
NL 6001 X / 004-A015	175	-	-	25	
NL 6001 X / 004-A016	180	26	-	-	
NL 6001 X / 004-A017	200	28	28.7	-	
NL 6001 X / 004-A018	224	32	32.2	32	
NL 6001 X / 004-A019	250	-	35.8	-	
NL 6001 X / 004-A020	280	-	-	40	
NL 6001 X / 004-A021	320	38	-	-	
NL 6001 X / 004-A022	336	40	-	-	

*Mandrel which not in the range also can be ordered separately.





SEMI AUTOMATIC PENDULUM IMPACT TESTER (CHARPY TESTER)

Standards : BS EN ISO 148, ASTM E23

Resilience Test

This machine is mainly used to determine the anti-impact capability of ferrous metal with high toughness especially for steel and iron and their alloy, under dynamic load. Be applicable for continuing testing in different kinds of laboratories and other metallurgy industrial manufactories.

Technical Specification :

Model Number	NL 6002 X / 002
Testing Material	Steel
Impact Energy	500J
The distance between the pendulum shaft and impact tester.	8000 mm
Impact Speed	5.4 m/s
Pre-rising angle of the pendulum	150°
Specimen bearer span	40 mm
Round Angle Of The Jaw	R1-1.5 mm
Impact Cutter Radius	R2 - 2.5 mm
Standard full size specimen	10 x 10 x 55 mm with V notch in the middle
Dimension (LxWxH)	2200x650x1960 mm
Weight	550 kg
Power	415 V, 3 Ph, 2 Kw, 50/60 Hz

Unit Consists Of :

NL 6002 X / 002 - P001	Impact Hammer (500J)
NL 6002 X / 002 - P002	Safety Device
NL 6002 X / 002 - P003	Support Aligner
NL 6002 X / 002 - P004	Specimen Centralizer

*1 Copy of Manual Instruction

DIGITAL DISPLAY CHARPY IMPACT TESTING MACHINE 50J Standard: ISO179

Resilience Test

Digital Display Charpy Impact Testing Machine is single-chip microcomputer control, electric hammer block release, the impact energy display by the LCD. Each set of sample can do one to ten data, test data can be deleted arbitrarily. Automatically calculate the strength and average strength. Automatic print data report. Scope of application: hard plastic, fibre reinforced composite materials, glass fibre reinforced plastic, ceramic, asbestos etc. Nonmetal materials for impact test. Equipped with V and U notch.



Technical Specification :

Model Number	NL 6002 X / 003
Impact Energy	50 Joules
Pendulum Torque (Standard Configuration Is One Pendulum)	50 J Pendulum PL=25.77Nm
Dial Indexing Angle	1/100
Impact Speed	3.8 m/s
Pendulum Angle	160°
Round Angle of Impact Cutting Edge	R=2±0.5mm
Round Angle of The Jaw	R=1±0.1mm
Impact Blade Angle	30°
The Distance Between Pendulum Center & Sample Center	380 mm
Accuracy of Energy	0.001 J
Span of Support	95 mm
Energy Loss	0.5 %
Dimension	550mm x 350mm x 850mm
Weight	160 kg
Sample Type	Supporting Space
1)	10
2)	60
3)	70
4)	95

*1 Copy of Manual Instruction

BRINELL HARDNESS TESTER

Hardness Test

The hardness test method consists of identifying the test material with a diamond cone or hardened. Steel ball indenter.

Technical Specifications :

Model Number	NL 6004 X / 001
Hardness Testing Range	8 - 650 HBW
Power Supply	220 V, 50/60 Hz, 60 W
Dimensions	550(L) x 210(W) x 740(H) mm
Approx. Weight	112 kg
Packing Weight	140 kg

Unit Consists Of :

Model Number	Parts Description	Qty
NL 6004 X / 001 - P 001	20 x Readout Microscope	1 no.
NL 6004 X / 001 - P 002	2.5 Ball Indenter	1 no.
NL 6004 X / 001 - P 003	5 Ball Indenter	1 no.
NL 6004 X / 001 - P 004	10 Ball Indenter	1 no.
NL 6004 X / 001 - P 005	Small Plane Test Bench	1 no.
NL 6004 X / 001 - P 006	Large Plane Test Bench	1 no.
NL 6004 X / 001 - P 007	V-Type Test Bed	1 no.
Standard Brinell Hardness Block		
NL 6004 X / 001 - P 008	HBW/3000/10 (150-250)	1 no.
NL 6004 X / 001 - P 009	HBW/1000/10 (75-250)	1 no.
NL 6004 X / 001 - P 010	HBW/187.5/2.5 (150-250)	1 no.
NL 6004 X / 001 - P 011	Wooden Carrying Case	1 no.



ROCKWELL HARDNESS TESTER (Analogue Indicator)

Standard: ASTM E10-14, ISO 6506-2

Hardness Test

The working principle of Brinell hardness tester is to press the ball of certain diameter into the sample surface under a certain test force maintain time. Then unload the test force, and measure the diameter of the indentation. The Brinell value is the quotient of the test force divided by indentation surface area.

Technical Specifications :

Model Number	NL 6004 X / 002
Initial Test Force	98.07 N (10kgf)
Max. Distance from the centre of the indentation to the wall	130 mm
Max. Height of the test piece	170 mm
Total test force	588.4 N (60 kgf) 980.7 N (100 kgf) 1.171 kN (150 kgf)
Indicator Scale	C = 0 ~ 100 B = 30 ~ 130
Hardness Test Dimensions	457x240x629 mm (LWH)
Approx. Weight	75 kg



MOTORIZED REBAR MARKING MACHINE

Standard: GB 1499.1 - 2008

Steel Marking

This motorised handled rebar marking machine is designed for steel reinforcement elongation marking instruments. It is more accurate than manual marking. The efficiency can be increased by several times. This machine has features of precise height, easy operation and convenient movement. It is essential instrument for the laboratory.



Technical Specifications :

Model Number	NL 6005 X / 001
Type	Motorised
Print Gauge Length	5 mm/10 mm
Maximum Error	±1%
Steel Cone Hardness	HRC 62
Dimension	635 x 235 x 285 mm (LxWxH)
Approx. Weight	21 kg
Power	AC 220V, 50/60 Hz

*1 copy of manual instructions

