The Series **DTR** Rockwell hardness tester significantly improves productivity

DT&T technology guarantees Rockwell results you can trust

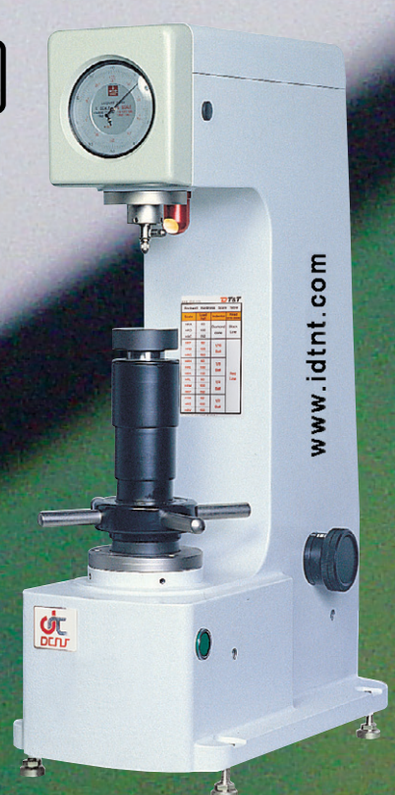
- Rockwell hardness testing is an indentation testing method. It is a general method for measuring the hardness of metallic and polymer materials. It's chief advantage is It's ability to display hardness values directly, thus obviating tedious calculations involved in other hardness measurement. Also, the relatively simple and inexpensive set-up makes it's second point. It involves the application of a minor load followed by a major load and it will show the hardness value directly from a dial or depth meters.
- Various indenter shapes and sizes combined with a range of test loads from a matrix of Rockwell hardness scales that are applicable to a wide variety of materials.
- DTR Series of Rockwell Hardness Testers are precision and relable.

The industry standard for accuracy and repeatability

FEATURES

- DTR Series or Rockwell hardness testers are classified according to depth sensor (Analog/digital). They are upgraded model to minimize their friction loss, and suitable for correct and reliable results.
- DTS-300N, An Automatic and digital machine and DTR-200N, A Semi-Auto and Analog machine are matorized.
- They are applied to the ISO-6508, ISO-17025 and ASTM-18. They are precision and reliable and can be used wide range of industry.

CE



ANALOG MODEL

DTR-200N

Economic design makes the DTR-300N Rockwell hardness tester a marvel of simplicity and efficiency

DIGITAL MODEL
DTR-300N

FUNDTIONS

- LCD Digital display
  - Selected scale and weight
  - Hardness value
  - Value conversion (ASTM / JIS)
  - Standard deviation / Average
  - 2 Languages (English / Korean)
  - Over load error message
- Serial interface
  - RS-232C / USB
- Calibration mode

WARRANTY

- One-year warranty

DIGITAL DISPLAY

PRINTER

DIGITAL DISPLAY

- Hardness value
- Average
- Standard deviation
- Test number
- Ø correction
- Other scales conversion
- Print out

TECHNICAL SPECIFICATIONS

Model	DTR-200N	DTR-300N
Vertical Capacity / Throat Depth	210 mm (8.3 in) / 135 mm (5.3 in)	
Test Scale	HR-A, B, C, D, E, F, G, H, K, L, M, P, R, S, V	
Readout	Analog color coded dial	Digital Panel
Preliminary Test Force (Minor Load)	10 kgf (98.0 7 N)	
Total test Force (Major Loads)	60 kgf (588.4 N), 100 kgf (980.7 N), 150 kgf (1471 N)	
Data Output	N/A	RS-232C & USB
Data Memory	N/A	200 tests
Standards Compliance / Accuracy	Applicable to ASTM E-18, ISO 6508 and ISO 17025	
Power Supply	220 V, 50 / 60 Hz, 4 A	
Machine Dimension	235×470×720 mm, (9.2×18.5×27.5 in)	
Machine Weight	81 kg (179 lbs)	

NEW DESIGN
DTR-400N

■ 기존 DTR-300N 모델의 기능에 수정, 보완한 기능과 감각적인 디자인으로 사용자의 만족을 높인 모델입니다.
■ 터치스크린을 채용하였으며 각도 조절이 가능한 조명이 설치되어 있습니다.

■ Thanks to the amended and complemented function of the existing DTR-300N model and a sensitive design, user satisfaction is improved.
■ A touch screen and a lighting apparatus whose angle is adjustable are applied.

※ 2011년 하반기 출시예정
※ This model will be available after end of year 2011

Standard Accessories

- Diamond indenter : 1 ea
- 1/16″ Ball indenter : 1 ea
- 1/16″ Tungsten ball : 1 ea
- Flat anvil (Ø63) :1 ea
- Flat anvil (Ø10) : 1 ea
- Vanvil (Ø40) : 1 ea
- Vanvil (Ø10) : 1 ea
- Power supply cable : 1 ea
- Manual, Cloth Cover : 1 ea

Optional Accessories

- Test block HRC
- Test block HRB
- Test block etc.
- Mini-printer (AP7200S/D)
- Data communication cable
- 1/8″ Ball indenter
- 1/4″ Ball indenter
- 1/2″ Ball indenter
- Flat anvul (Ø200)

The Series **DTB** Brinell hardness tester significantly improves productivity

DT&T technology guarantees Brinell results you can trust

- The Brinell scale characterizes the indentation hardness of materials through the scale of penetration of an indenter (Steel ball), loaded (500~3000kgf) on a material test piece. Refers to surface fatigue (Diameter or Depth) caused by loading, It is one of several definitions of hardness in materials science.
- There are 2types of Brinell measurement. The one is measure the diameter with microscope. It is manual and traditional. the other is automatic by depth meter or computerized vision system. This way is more credible and repeatable.
- DTB Series of Brinell hardness Tester are very precision and reliable, easy to operate. They are very suitable for metal industrial, especially casting and forging products.

The industry standard for accuracy and repeatability

FEATURES

- DTB Series of Brinell hardness testers are classified according to depth sensors (Analog/Digital). They are upgraded model more correct and reliable results.
- DTB-800A has full automated and computerized system with servo actuators (Moter or Hydraulic). DTB-600N has semi-auto system with DC pump motor, while DTB-500 has manual system and is driven by manual pump
- They are applied to the ISO-4498-1, ISO-6506-2 and ISO 17025. They are precise and reliable so that will be able to be used in Lab. And produce line of wide range of industry

ANALOG MODEL

DTB-500

Economic design makes the DTB-600N Brinell hardness tester a marvel of simplicity and efficiency

ANALOG MODEL
DTB-600N

FORCE DISPLAY

CONTROL PANEL

FUNCTIONS

- Force gauge
- Key switch touch type
- One touch loading system
- Loads changeable with manual
- Timer setting
- Easy operation permits high accuracy Brinell hardness testing (common)
- Suitable for testing molded or forged materials (common)
- Brinell value with scope

WARRANTY

- One-year warranty

Standard Accessories

- Scope :1 ea
- Ø10 Ball indenter : 1 ea
- Ø5 Ball indenter : 1 ea
- Ø10 Tungsten ball : 1 ea
- Ø5 Tungsten ball : 1 ea
- Flat anvil (Ø80) : 1 ea
- Vanvil (Ø60) : 1 ea
- Power supply cable : 1 ea
- Manual, Cloth Cover : 1 ea

Optional Accessories

- Test block etc.
- Flat anvill (Ø200)

TECHNICAL SPECIFICATIONS

Model	DTB-500	DTB-600N
Vertical Capacity / Throat Depth	105 mm (4.1 in) / 165 mm (6.5 in)	
Test Scale	500 kgf ~ 3000 kgf (4906 ~ 24,920 N)	
Readout	By weight exchange	
Preliminary Test Force (Minor Load)	Brinell value with scope	
Total test Force (Major Loads)	Ø5 mm and Ø10 mm	
Data Output	Manual	One touch lead
Data Memory	Applicable to ISO 4498-1, 6506-2 and ISO 17025	
Standards Compliance / Accuracy	Flat anvil (Ø80), V-anvil (Ø60), Scope	
Power Supply	N / A	220 V 50 / 60 Hz 4 A
Machine Dimension	(470×465×1100) mm / (18.5×18.3×43.3) in	
Machine Weight	138 kg (304 lbs)	140 kg (308 lbs)

Brinell Hardness Tester

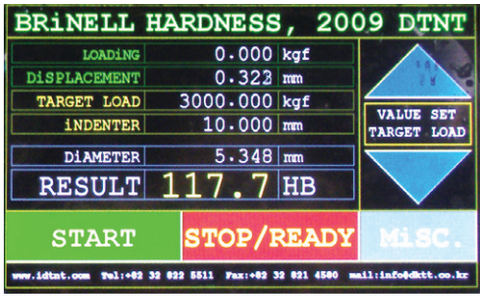
주문형 경도기

DTB-700S

FORCE	(5 ~ 30) kN, (500 ~ 3,000) kgf
SPEED	CROSS HEAD SPEED 150 mm/min
CONTROL	SEMI-AUTO, MANUAL
LOADING	HYD. CYLINDER
SAMPLE	CAST IRON
PRINT	THERMAL PRINTER(OPTION)
WORK SPACE	ORDER MADE
MEASURING	SCALE BY SCOPE

기본형에서 측정 할 수 없는 대형시료를 위해 제작 되었습니다.

This hardness tester is available for large samples which are difficult to measure with a basic harndess tester.

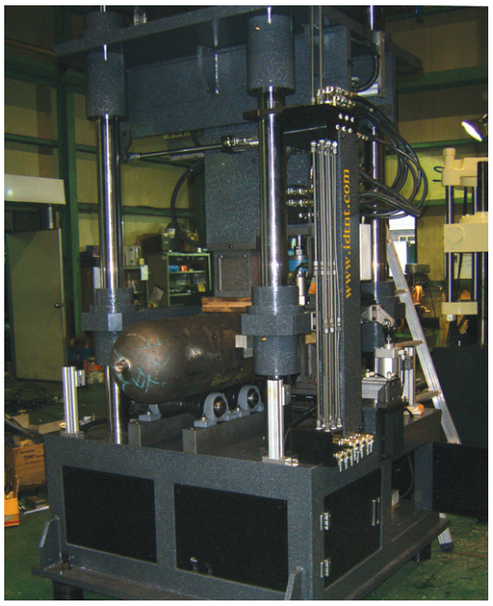


DTB-710S

FORCE	(5 ~ 30) kN, (500 ~ 3,000) kgf
SPEED	CROSS HEAD SPEED 150 mm/min
CONTROL	FULL-AUTO
LOADING	SERVO MOTOR
SAMPLE	CAST IRON
PRINT	THERMAL PRINTER(OPTION)
WORK SPACE	ORDER MADE
MEASURING	AUTOMATIC SCALE BY DSP

3점변위센서를 부착하여 시험과 동시에 브리넬 값을 측정 할 수 있는 진보된 시험기입니다.

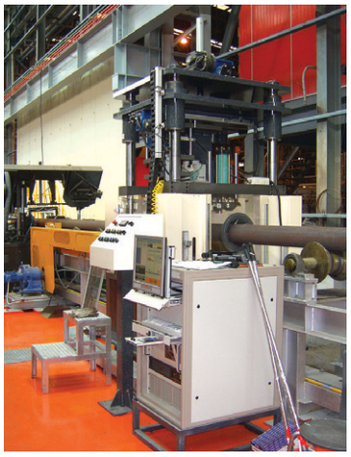
This hardness tester is an advanced tester equipped with a 3-point displacement sensor so that the user can perform the test and also measure the Brinell value at one time.



Brinell Hardness Tester

주문형 전수검사기

Full automatic measuring system for brinell hardness



DTB-720S

FORCE	30 kN, 3,000 kgf
SPEED	ORDER MADE
CONTROL	P.C CONTROL
LOADING	HYD. CYLINDER
SAMPLE	PRESSURE TANK
TEST	THE WHOLE TEST OF PRODUCT LINE
WORK SPACE	ORDER MADE
MEASURING	AUTOMATIC SCALE BY P.C

전수검사를 목적으로 생산라인에 설치하여 측정면을 단순연마한 뒤 시험과 동시에 브리넬 값을 측정 할 수 있는 가장 진보된 경도기입니다.

A top-level hardness tester installed on the production line for total inspection, this system can grind measuring planes simply and then perform the test and measure the Brinell value at one time.

Brinell Hardness Tester

RADIAL TYPE 브리넬 경도기

DTB-730S

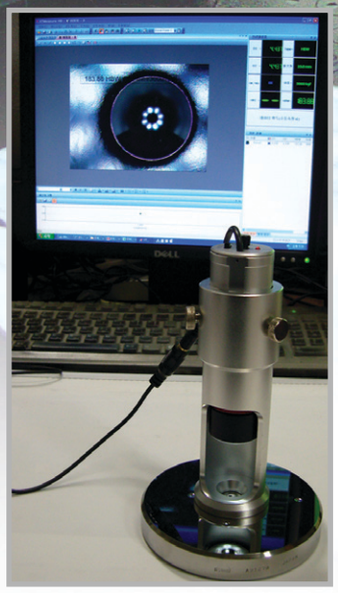
FORCE	(5 ~ 30) kN, (500 ~ 3000) kgf
FORCE DETECTOR	LOAD CELL
CONTROL	SEMI-AUTO, PC CONTROL
LOADING	SERVO MOTOR
SAMPLE	CAST IRON
MEASURING	SCALE BY SCOPE

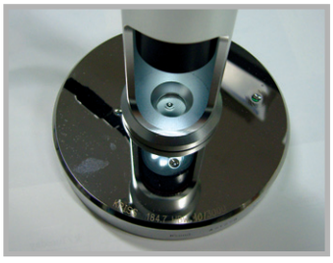
대형시험체를 시험하기 위한 목적으로 제작 되었습니다.

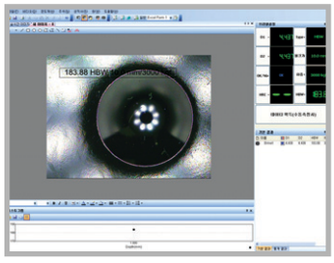
This system is manufactured to test large samples only.

Brinell Optical Scanning System

브리넬 압흔측정기

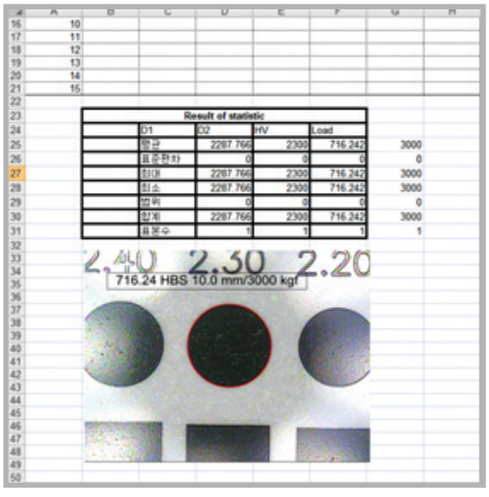


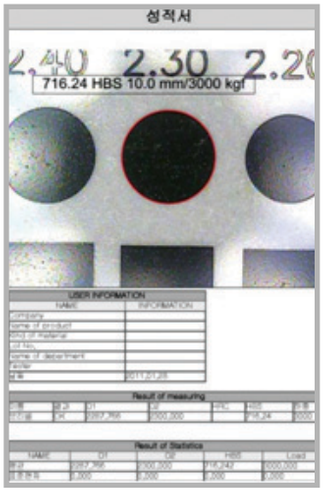




– 다양한 성적서 양식 지원 (Excel, Web, Txt)
– 셀프 교정 기능
– 다양한 환산테이블 지원
– 상/하한 제한 설정으로 빠른 검사 가능
– 모든 볼 사이즈와 하중 설정 가능
– 수동 측정 모드 지원

- Applying various type of report formation (Excel, Web, Txt)
- Self calibration
- Support various conversion units
- Max/Min limitation setting for speedy test
- Applying all sizes of ball diameter & loading weight
- Manual mode for tough treated sample





DTM-900X

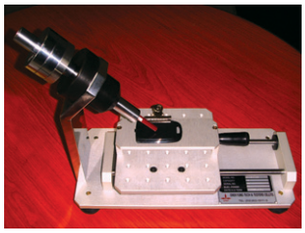
RANGE	(All diameter) mm
SCALE	HBW / HBS
CONVERSION	15 SCALES
CALIBRATION	SELF CALIBRATION
WEIGHT	250 ~ 3000 kg
DISTANCE	nm, um, mm, Cm, ect
CAMERA	SONY CCD CAMERA

브리넬 경도시험 후 측정시 자동으로 경도값을 측정하는 장치입니다. Brinell Optical Scanning System으로 사용이 간편하며, P.C나 노트북을 이용하여 현장이나 실험실 등 어디에서나 사용이 가능하다는 점이 장점입니다.

This tester is to measure the hardness value automatically after the Brinell hardness test.
Thanks to the "Brinell Optical Scanning System", the user can use this system easily in both field and laboratory using a desktop computer or a laptop computer.

Pencil Hardness Tester

연필 경도 시험기



DTP-800

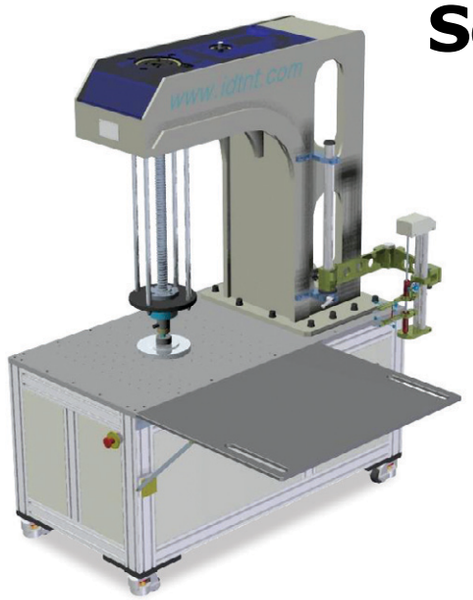
DEAD WEIGHT	100 gf ~ 1 kgf
SPEED	(10 ~ 120) mm/min
CONTROL	SEMI-AUTO, MANUAL
LOADING	GEARED MOTOR
SAMPLE	PLASTIC COATING
PENCIL	6B ~ 9H
WORK SPACE	(150 × 100) mm

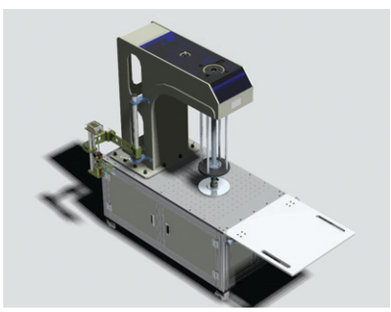
규정된 연필에 하중 및 각도를 설정하여 도장면에 밀착하여 일정한 속도로 이동하며 표면을 긁어 도막의 경도, 밀착성 및 물리적 성질을 측정하는데 사용합니다.

This tester is to measure the hardness, adhesion, and physical properties of paint films by scratching the coating surface. Set the load and angle of the designated pencil, adhere it to the coating surface, and move it at a constant speed to scratch the coating surface.

Seat Pad Hardness Tester

시트패드 경도 시험기





DTU-805

APACITY	5 kN, (500) kgf
STANDARD	MS, GM, SM
CONTROL	P.C CONTROL
LOADING	SERVO MOTOR
SAMPLE	CAR SEAT
TEST	AUTOMATIC CONTROL BY P.C
WORK SPACE	ORDER MADE
MEASURING	AUTOMATIC SCALE BY P.C

차량 또는 기타 Seat Pad의 경도를 측정하는 장비로 P.C에 의해 자동시험 및 결과를 측정할 수 있습니다.

This tester is to measure the hardness of vehicles or other seat pads. Its test result can be automatically measured by a personal computer.