

# BENCH (ROCKWELL) HARDNESS TESTER TH300/301/310/320



TH320

## Features:

- Horizontal protrudent nose design, testing on surfaces difficult to reach
- Testing internal surface of ring parts whose diameter is not less than 23mm (0.900")
- Testing external surface of round bars whose diameter is not less than 3mm (0.120")
- Automatic test process
- High definition backlight LCD
- Simple and easy selectable operation menu
- RS-232/USB data output
- TH300: Rockwell hardness tester
- TH301: Rockwell hardness tester with auto-switch of test force.
- TH310: Rockwell superficial hardness tester
- TH320: Rockwell & Rockwell superficial hardness tester



Horizontal protrudent nose design



TH300



# BENCH (ROCKWELL) HARDNESS TESTER TH300/301/310/320

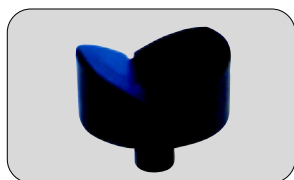
## Technical Specification:

|                 | TH300                                                                                                                                                                                                                                                                                                                         | TH301                                                                                                                                                                                                                                                                                                                                               | TH310                                                                                                                                                                                                                                                                                                                    | TH320                                                                                                                                                                                                                                                                                                                         |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hardness scales | Rockwell A, B, C,D,E,F, G, H, K ,L, M ,P, R, S, V                                                                                                                                                                                                                                                                             | Rockwell A, B , C, D,E, F, G, H,K, L, M, P, R, S, V                                                                                                                                                                                                                                                                                                 | Rockwell superficial 15/30/45N,T, W, X, Y                                                                                                                                                                                                                                                                                | Rockwell A,B,C,D,E,F,G,H,K, L,M,P,R,S,V Rockwell superficial15/30/45N,T,W,X,Y                                                                                                                                                                                                                                                 |
| Resolution      | 0.1Rockwell unit                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Pre-load        | 98.07N/10kgf                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                     | 29.42N/3kgf                                                                                                                                                                                                                                                                                                              | 98.07N/10kgf, 29.42N/3kgf                                                                                                                                                                                                                                                                                                     |
| Total load      | 588.4N/60kgf, 980.7N/100kgf, 1471N/150kgf                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                     | 147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf                                                                                                                                                                                                                                                                                 | 588.4N/60kgf, 980.7N/100kgf, 1471N/150kgf, 147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf                                                                                                                                                                                                                                           |
| Display         | Matrix backlight LCD                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Language        | English, French, Germany                                                                                                                                                                                                                                                                                                      | English                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Operation       | Menu selectable, Membrane keypad                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Test process    | Automatic                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Load duration   | 2-50 seconds, Can be set, dynamic displayed and stored                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Functions       | <ul style="list-style-type: none"><li>● Upper / lower hardness limits setting and alarming</li><li>● Data statistics : Ave., Max., Min., standard Deviation</li><li>● Convert tested values to HB, HV, HLD and <math>\delta_b</math> (Tensile-strength)</li><li>● Curvature correction: cylinder and sphere surface</li></ul> | <ul style="list-style-type: none"><li>● Upper / lower hardness limits setting and alarming</li><li>● Data statistics : Ave., Max., Min., standard Deviation</li><li>● Convert tested values to HB, HV, HLD, Rockwell Superficial and <math>\delta_b</math> (Tensile-strength)</li><li>● Curvature correction: cylinder and sphere surface</li></ul> | <ul style="list-style-type: none"><li>● Upper / lower hardness limits setting and alarming</li><li>● Data statistics : Ave., Max., Min., standard Deviation</li><li>● Convert tested values to HB, HV and <math>\delta_b</math> (Tensile-strength)</li><li>● Curvature correction: cylinder and sphere surface</li></ul> | <ul style="list-style-type: none"><li>● Upper / lower hardness limits setting and alarming</li><li>● Data statistics : Ave., Max., Min., standard Deviation</li><li>● Convert tested values to HB, HV, HLD and <math>\delta_b</math> (Tensile-strength)</li><li>● Curvature correction: cylinder and sphere surface</li></ul> |
| Data output     | RS232                                                                                                                                                                                                                                                                                                                         | RS232, USB                                                                                                                                                                                                                                                                                                                                          | RS232                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                               |
| Tester standard | ISO6508.2 , ASTM E-18                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Testing space   | Vertical: 250mm (9.85″)                                                                                                                                                                                                                                                                                                       | Vertical: 260mm (10.24″)                                                                                                                                                                                                                                                                                                                            | Vertical: 250mm (8.66″)                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                               |
|                 | Horizontal:150mm (5.91″)                                                                                                                                                                                                                                                                                                      | Horizontal:150mm (5.91″)                                                                                                                                                                                                                                                                                                                            | Horizontal:150mm (6.00″)                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                               |
| Work piece size | External surface cylinder: Min.Φ3mm (0.120″)<br>Internal surface cylinder: Min.Φ23mm (0.900″)                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Power supply    | 220v/110v, 50Hz, 4A                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                               |
| Dimensions      | 715mm × 225mm × 790mm                                                                                                                                                                                                                                                                                                         | 715mm × 225mm × 790mm                                                                                                                                                                                                                                                                                                                               | 720mm × 225mm × 790mm                                                                                                                                                                                                                                                                                                    | 720mm × 240mm × 815mm                                                                                                                                                                                                                                                                                                         |
| Weight          | 100kg                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                     | 70kg                                                                                                                                                                                                                                                                                                                     | 120kg                                                                                                                                                                                                                                                                                                                         |

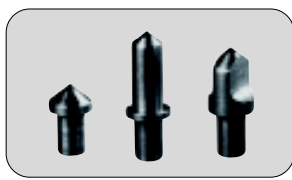
# BENCH (ROCKWELL) HARDNESS TESTER TH300/301/310/320

## Standard delivery

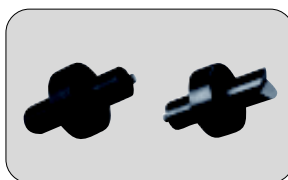
| TH300                         | TH301                         | TH310                         | TH320                         |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Main Unit                     | Main unit                     | Main unit                     | Main unit                     |
|                               | Test Block A                  |                               | Test Block A, B, C            |
| Test Block B                  | Test Block B                  | Test Block 15N                | Test Block 15N                |
| Test Block C                  | Test Block C                  | Test Block 30N                | Test Block 30N                |
|                               | USB driver disk               | Test Block 30T                | Test Block 30T                |
| 120° cone diamond indenter    | 120° cone diamond indenter    | 120° cone diamond indenter    | 120° cone diamond indenter    |
| 1/16"(1.5875mm) ball indenter | 1/16"(1.5875mm) ball indenter | 1/16"(1.5875mm) ball indenter | 1/16"(1.5875mm) ball indenter |
| 1/16"(1.5875mm) spare ball    | 1/16"(1.5875mm) spare ball    | 1/16"(1.5875mm) spare ball    | 1/16"(1.5875mm) spare ball    |
| Screw for indenter            | Screw for indenter            | Screw for indenter            | Screw for indenter            |
| Round flat anvil $\phi 70$    | Round flat anvil $\phi 70$    | Round flat anvil $\phi 70$    | Round flat anvil $\phi 70$    |
| Large Vee anvil               | Large Vee anvil               | Large Vee anvil               | Large Vee anvil               |
| Screw driver                  | Screw driver                  | Screw driver                  | Screw driver                  |
| Power supply cable            | Power supply cable            | Power supply cable            | Power supply cable            |
| Instruction manual            | Instruction manual            | Instruction manual            | Instruction manual            |
| Warranty card                 | Warranty card                 | Warranty card                 | Warranty card                 |
| TIME Certificate              | TIME Certificate              | TIME Certificate              | TIME Certificate              |



large Vee anvil



Short diamond indenter  
Slim diamond indenter  
Flat diamond indenter



Point/Vee anvil



Flat/Vee anvil



Round flat anvil  $\phi 70$



Round flat anvil  
 $\phi 225$



Round flat anvil  
 $\phi 150$



## Optional Accessory

- Printer TA230 (see page 47)
- Connecting cable
- Short diamond indenter
- Flat diamond indenter
- Slim diamond indenter
- 1/8" ( $\phi 3.175\text{mm}$ ) indenter and spare ball
- 1/4" ( $\phi 6.350\text{mm}$ ) indenter and spare ball
- 1/2" ( $\phi 12.70\text{mm}$ ) indenter and spare ball
- Round flat anvil  $\phi 225$
- Round flat anvil  $\phi 150$
- Small Vee anvil
- Flat /Vee anvil
- Assistant support
- Assistant joist

# BENCH (ROCKWELL) HARDNESS TESTER TH550



## Features:

- Operating Rockwell hardness testing of hard alloy, carbon steel, alloy steel and non-ferrous metal
- High digital display resolution
- Easy operation with auto loading and unloading of test force, and auto holding of test force.
- Standards: BS EN ISO 6508, ISO 6598.2 and ASTM E18

## Technical Specification

|                          |                                                                           |
|--------------------------|---------------------------------------------------------------------------|
| Pre-load                 | 98.1N (10kgf)                                                             |
| Total load               | 588.4N (60kgf), 980.7N (100kgf), 1471N (150kgf)                           |
| Rockwell Scales          | 1~100HRA, 0~130 HRB, 0~100HRC                                             |
| Testing resolution       | 0.1Rockwell unit                                                          |
| Working method           | Auto loading of main test force, auto hold and digital display of results |
| Vertical testing space   | 200mm (7.87")                                                             |
| Horizontal testing space | 160mm (6.30")                                                             |
| Dimension                | 580 × 270 × 740mm                                                         |
| Weight                   | 105kg                                                                     |

## Standard Delivery

- Main unit 1
- Test block A 1
- Test block B 1
- Test block C 1
- 1/16" (1.5875mm) ball indenter 1
- 1/16" (1.5875mm) spare ball 3
- Diamond indenter 1
- Screw for indenter 1
- Flat anvil 1
- Vee anvil 1
- Instruction manual 1
- TIME certificate 1
- Warranty card 1

## Optional Accessory

- $\phi$ 70mm flat anvil
- $\phi$ 80mm flat anvil
- $\phi$ 120mm flat anvil
- $\phi$ 150mm flat anvil
- $\phi$ 70mm Vee anvil
- $\phi$ 80mm Vee anvil
- Small Vee/point anvil
- Other test blocks

# BENCH (ROCKWELL) HARDNESS TESTER TH500



## Features:

- Measuring the Rockwell hardness of ferrous and non-ferrous metals such as hard alloy, carbon steel, alloy steel, cast iron
- Applied in the factories, scientific research institutes and laboratories of colleges etc
- Fresh design, easy to use, stable display value, convenient maintenance
- Standards conforming to: BSEN10109-96, ISO6508.2

## Standard delivery

|                          |                                                 |
|--------------------------|-------------------------------------------------|
| Pre-load                 | 98.1N (10kgf)                                   |
| Total load               | 588.4N (60kgf), 980.7N (100kgf), 1471N (150kgf) |
| Rockwell scales          | HRC: 0-100, HRB: 0 - 100                        |
| Testing range            | 20~88HRA, 20~100HRB, 20~70HRC                   |
| Testing resolution       | 0.5HR Rockwell unit                             |
| Vertical testing space   | 200mm (7.87")                                   |
| Horizontal testing space | 160mm (6.30")                                   |
| Dimensions               | 580 × 270 × 740mm                               |
| Net weight               | 100kg                                           |

## Standard Delivery

- Main unit 1
- Test block A 1
- Test block B 1
- Test block C 1
- 1/16" (1.5875mm) ball indenter 1
- 1/16" (1.5875mm) spare ball 3
- Diamond indenter 1
- Flat anvil 1
- Vee anvil 1
- Weights 3
- Ground bolts 4
- Instruction manual 1
- TIME certificate 1
- Warranty card 1

## Optional Accessory

- $\phi$  70mm flat anvil
- $\phi$  80mm flat anvil
- $\phi$  120mm flat anvil
- $\phi$  150mm flat anvil
- $\phi$  70mm Vee anvil
- $\phi$  80mm Vee anvil
- Vee/point anvil
- Other test blocks

# BENCH (BRINELL) HARDNESS TESTER TH600



## Features:

- Measuring the Brinell hardness of unquenched steels, cast iron, non-ferrous metals and soft bearing-alloys etc
- High testing precision, extensive testing range, automatic load system
- High accuracy, wide measuring range
- Automatic force loading
- Standards conforming to: ASTM E-10, ISO6506.2

## Technical Specification

|                          |                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------|
| Test force               | 1839N (187.5kgf), 2452N (250kgf), 7355N (750kgf), 9807N (1000kgf), 29420N (3000kgf) |
| Indenter ball diameter   | 2.5mm, 5mm and 10mm                                                                 |
| Test force dwell time    | 6~99s adjustable                                                                    |
| Testing range            | 8~650HBW                                                                            |
| Vertical testing space   | Max.230mm (9")                                                                      |
| Horizontal testing space | Max.120mm (4.7")                                                                    |
| Power supply             | 220V/110V, 50~60Hz, 2A                                                              |
| Net weight               | 218kg                                                                               |
| Dimensions               | 730 × 230 × 890mm                                                                   |

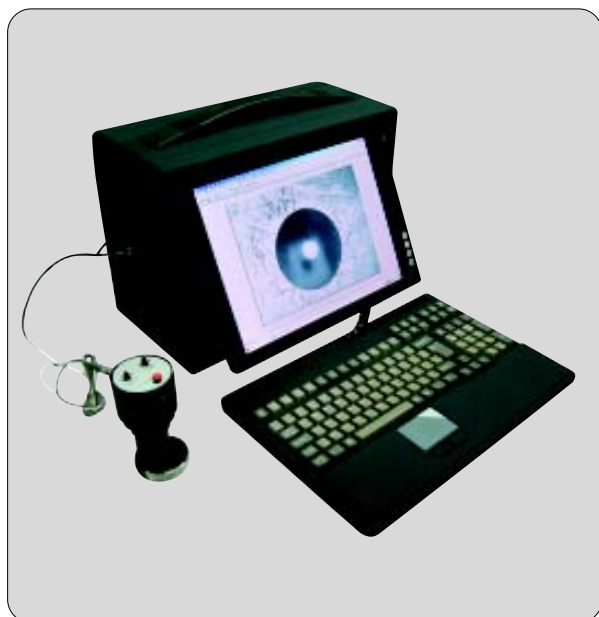
## Standard Delivery

- Main unit 1
- Test block 1
- 20 × microscope 1
- $\phi$ 10mm hard alloy ball indenter 1
- $\phi$ 120mm round flat anvil 1
- Vee anvil 1
- Power supply cable 1
- Weight 7
- Ground bolt 4
- Instruction manual 1
- TIME certificate 1
- Warranty card 1

## Optional Accessory

- $\phi$ 2.5mm hard alloy ball
- $\phi$ 5mm hard alloy ball
- $\phi$ 10mm hard alloy ball
- $\phi$ 60mm anvil
- $\phi$ 70mm anvil
- $\phi$ 150mm anvil
- $\phi$ 2.5mm hard alloy ball indenter
- $\phi$ 5mm hard alloy ball indenter
- $\phi$ 80mm round flat anvil
- Other test blocks

# BRINELL HARDNESS TESTING SYSTEM TH100



## Features:

- High accuracy measurement of Brinell testing impress
- Store and display the images and hardness values by calculating on computer with special software
- Equipped with advanced CCD device of high sampling resolution
- Conforming to standards: ISO 6506, ASTM E10

## Technical Specification

|                                 |                                                                        |
|---------------------------------|------------------------------------------------------------------------|
| Measurable diameter of indenter | 2.5mm, 5mm, 10mm                                                       |
| Measuring range                 | No.1 lens: 3~6mm<br>No.2 lens: 1.5~3mm<br>No.3 lens: 0.7~1.5mm         |
| Measuring hardness range        | 8~650HBW                                                               |
| Max. sampling resolution        | 0.1HRW                                                                 |
| Power                           | Monophase, 220V, 50HZ~60Hz, 2A                                         |
| Weight                          | Sampling probe: 0.5kg, computer:10~25kg                                |
| Dimension                       | Sampling probe: 150mm × 70mm × 70mm<br>Computer: 400mm × 291mm × 213mm |

## Standard Delivery

- Sampling probe (lens1 and 3 integrated) 1
- Computer (optional portable model or desk model) 1
- No.2 lens 1
- Standard hardness test block 3
- Socket ring for connector 1 1
- Socket ring for connector 2 1
- Socket ring for connector 3 1
- Encrypted lock 1
- Software 1
- Cable 1
- Instruction manual 1
- TIME Certificate 1
- Warranty card 1

## Brinell hardness measurment and storage

