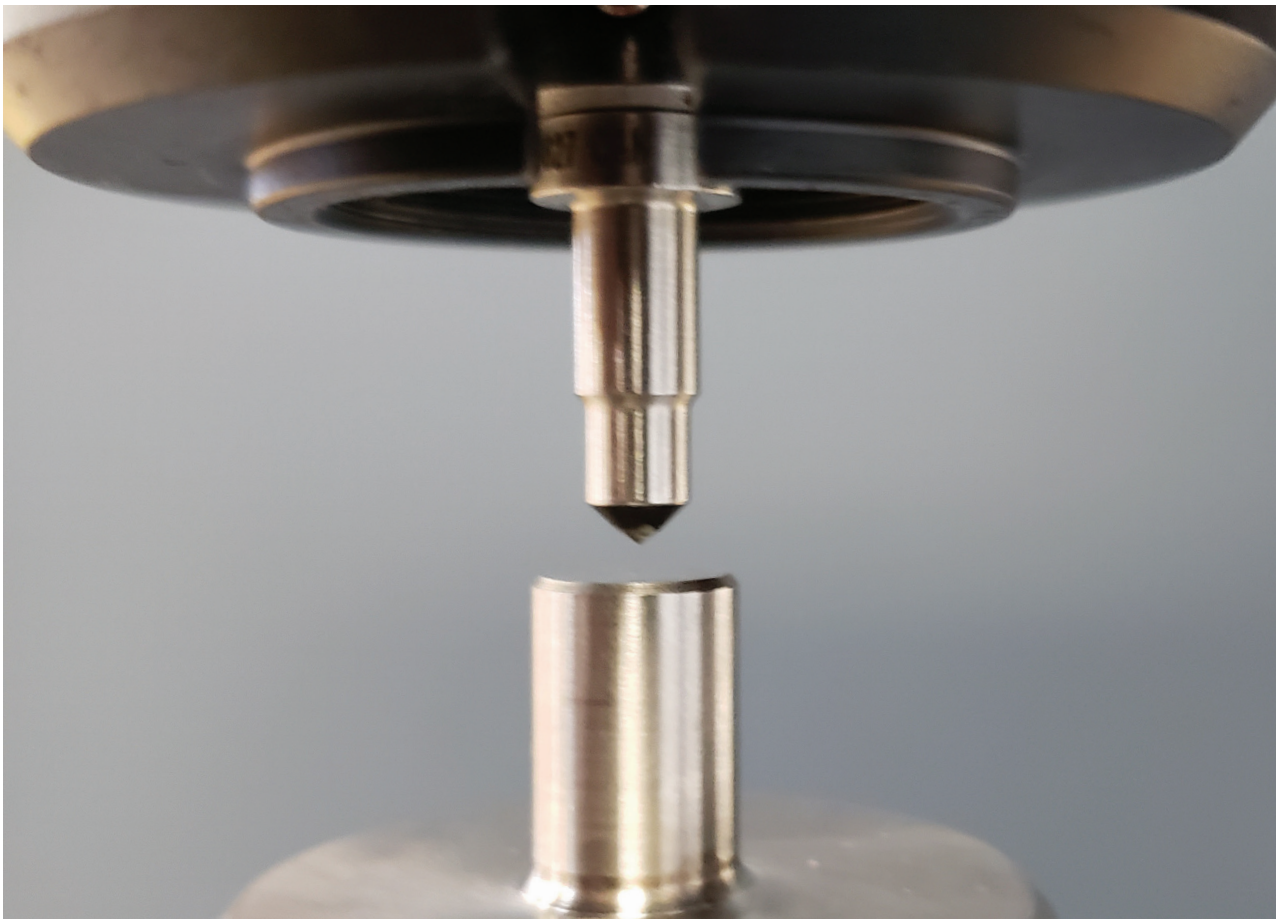




The first name in materials testing

# Evotech 1\*\*\* Series

Rockwell hardness testing system



## Features:

- Automatic
- Load cell
- Closed loop
- Force feedback

## Test types:

- Rockwell
- Superficial rockwell
- Brinell



# Rockwell systems of Evotech series

The Rockwell Hardness test is a hardness measurement based on the net increase in depth of impression when a load is applied. Hardness values are commonly given in the A, B, C, R, L, M, E and K scales. The higher the value in each of the scales, the harder the material.

A minor load of 3kg or 10kg is first applied, causing an initial penetration and holding the indenter in place. Then, the dial is set to zero and the major load is applied. Upon removal of the major load, the depth reading is taken while the minor load is still on. The hardness number may then be read directly from the scale.

The Rockwell scale characterizes the indentation hardness of materials through the depth of penetration of an indenter, loaded on a material sample and compared to the penetration in some reference material. It is one of several definitions of hardness in materials science. Its hardness values are noted by HR'X' is the letter for the scale used. Hardness relation to strength is that both are measures of the pressure it takes to get plastic deformation to occur in materials.



Evotech 1010



Evotech 1020



Evotech 1310



Evotech 1330



Evotech 1610



Evotech 1620

# Model Evotech 1010



The model Evotech 1010 combines today's load application technology with a top class depth measuring system. Rockwell, Superficial Rockwell & Brinell scales are part of the machine's capabilities. High accurate test results and fast operation make it the best in its class today. This model provides a smart user interface, easy to learn and with internal and external data storage options. Test forces range from 1-250kgf, which means that even this basic model is equipped with Rockwell, Superficial Rockwell and Brinell load settings. System control is managed via a simple-to-use 6.5" full color industrial touchscreen. The touchscreen will also display results and statistics.

## Features and benefits

- Loadcell, closed loop, force feedback system
- Load range 1-250kgf (9.8-2452N)
- Meets or exceeds ISO, ASTM and JIS standards
- Direct depth measurement on indenter shaft
- Depth reading tolerance 0.05µm
- Clamping nose to fix workpiece & indenter protection
- Integrated LED sample illumination
- Industrial 6.5" touch screen
- USB connectivity
- Massive full steel C-frame for best GR & R results
- Replaceable ABS bottom cover avoids body damage



## STANDARD ACCESSORIES

- Power cable
- Four adjustable feet
- Certificate
- Installation and user manual

## MODEL DETAILS

EV-030-1010	3-150kgf	Rockwell, Superficial Rockwell
	1-250kgf	Brinell (optional)

# Specifications

EV 1010 specifications	
Item #	EV-030-1010
Hardness scales	Rockwell, Superficial Rockwell and Brinell
Load application	Load cell, force feedback, closed loop system
Rockwell pre and main load	10kgf and 60kgf, 100kgf, 150kgf
Superficial Rockwell pre and main load	3kgf and 15kgf, 30kgf, 45kgf
Rockwell test scales available	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V
Superficial Rockwell scales available	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y
Brinell test load	1-250kgf
Brinell test scales (optional)	HBW1/2.5, 1/5, 1/10, 1/30 HBW2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HBW5/25, 5/31.25, 5/62.5, 5/125, 5/250 HBW10/100, 10/125, 10/250
Plastic (ISO 2039-1/2)	49N, 132N, 358N, 961N
HVD (HVT)	HV1, 5, 10, 20, 25, 30, 40, 50, 60, 100, 120, 125, 150
HBD (HBT)	HB1/5, 1/10, 1/30 HB2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HB5/25, 5/31.25, 5/62.5, 5/125, 5/250 HB10/100, 10/125, 10/250
Carbon	HR2.5/7, 5/7, 5/15, 5/20, 5/40, 5/60, 5/100, 5/150 HR10/20, 10/40, 10/60, 10/100, 10/150

EV 1010 specifications	
Display	6.5" full color industrial touchscreen, testing results, statistics
Standards	Meets or exceeds ISO, ASTM, JIS standards
Test cycles	Motorized, automatic, pre-load, load, dwell, unload process
Indenters (optional)	Rockwell diamond cone: 120° Rockwell balls: 1/16in, 1/8in, 1/4in, 1/2in Brinell balls: 1mm, 2.5mm, 5mm, 10mm
Dwell time (user defined)	Pre-load 1-99 seconds, Main load 1-99 seconds, Recovery 1-99 seconds
Connectivity	USB-2
Workpiece accommodation	Vertical capacity 240mm Horizontal capacity 150mm (from indenter center-line)
Machine dimensions	270 x 580 x 770 mm (WxDxH)
Weight	115kg (254lb)
Test force tolerance	<0.5%
Operating temperature range	10-35°C (50-95°F) non-condensing
Power supply	100-240V AC, 50Hz/60Hz, single phase
Humidity	10-90%, non-condensing
<b>*Calibration of scales is required prior to use. Please specify desired scales at the time of ordering</b>	

# Model Evotech 1020



The model Evotech 1020 combines today's load application technology with a top class depth measuring system. Rockwell, Superficial Rockwell & Brinell scales are part of the machine's capabilities. High accurate test results and fast operation make it the best in its class today. This model provides a smart user interface, easy to learn and with internal and external data storage options. Test forces range from 1-250kgf, which means that even this basic model is equipped with Rockwell, Superficial Rockwell and Brinell load settings. System control is managed via a simple-to-use 6.5in full color industrial touchscreen. The touchscreen will also display results and statistics.

## Features and benefits

- Loadcell, closed loop, force feedback system
- Load range 1-250kgf (9.8-2452N)
- Meets or exceeds ISO, ASTM and JIS standards
- Direct depth measurement on indenter shaft
- Depth reading tolerance 0.05µm
- Clamping nose to fix workpiece & indenter protection
- Integrated LED sample illumination
- Integrated industrial PC, windows 10 licensed
- Industrial 6.5" touch screen
- Multi USB, LAN, WLAN connectivity
- Massive full steel C-frame for best GR & R results
- Replaceable ABS bottom cover avoids body damage



## MODEL DETAILS

EV-030-1020    3-150kgf    Rockwell, Superficial Rockwell  
 1-250kgf    Brinell (optional)

## STANDARD ACCESSORIES

- Power cable, Four adjustable feet
- Certificate, Installation and user manual
- Keyboard & Mouse

# Specifications

EV 1020 specifications	
Item #	EV-030-1020
Hardness scales	Rockwell, Superficial Rockwell and Brinell
Load application	Load cell, force feedback, closed loop system
Rockwell pre and main load	10kgf and 60kgf, 100kgf, 150kgf
Superficial Rockwell pre and main load	3kgf and 15kgf, 30kgf, 45kgf
Rockwell test scales available	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V
Superficial Rockwell scales available	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y
Brinell test load	1-250kgf
Brinell test scales (optional)	HBW1/2.5, 1/5, 1/10, 1/30 HBW2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HBW5/25, 5/31.25, 5/62.5, 5/125, 5/250 HBW10/100, 10/125, 10/250
Plastic (ISO 2039-1/2)	49N, 132N, 358N, 961N
HVD (HVT)	HV1, 5, 10, 20, 25, 30, 40, 50, 60, 100, 120, 125, 150
HBD (HBT)	HB1/5, 1/10, 1/30 HB2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HB5/25, 5/31.25, 5/62.5, 5/125, 5/250 HB10/100, 10/125, 10/250
Carbon	HR2.5/7, 5/7, 5/15, 5/20, 5/40, 5/60, 5/100, 5/150 HR10/20, 10/40, 10/60, 10/100, 10/150

EV 1020 specifications	
Display	6.5in full color industrial touchscreen, testing results, statistics
Standards	Meets or exceeds ISO, ASTM, JIS standards
Test cycles	Motorized, automatic, pre-load, load, dwell, unload process
Indenters (optional)	Rockwell diamond cone: 120° Rockwell balls: 1/16in, 1/8in, 1/4in, 1/2in Brinell balls: 1mm, 2.5mm, 5mm, 10mm
Dwell time (user defined)	Pre-load 1-99 seconds, Main load 1-99 seconds, Recovery 1-99 seconds
Connectivity	LAN, W-LAN, USB-3
Workpiece accommodation	Vertical capacity 240mm Horizontal capacity 150mm (from indenter center-line)
Machine dimensions	270 x 580 x 770mm (WxDxH)
Weight	115kg (254lb)
Test force tolerance	<0.5%
Operating temperature range	10-35°C (50-95°F) non-condensing
Power supply	100-240V AC, 50Hz/60Hz, single phase
Humidity	10-90%, non-condensing
<b>*Calibration of scales is required prior to use. Please specify desired scales at the time of ordering</b>	



# Model Evotech 1310



The model Evotech 1310 is a new generation of hardness testing instrument with protruding nose design. This long nose design allows you to reach as far as 150mm inside a bore or just on flat material similar to any other Rockwell hardness tester.

A twin scale Rockwell machine that also provides Brinell testing. Easy to use, excellent workpiece overview. Test forces range from 1-187.5kgf, which means that even this basic model is equipped with Rockwell, Superficial Rockwell and Brinell load settings. System control is managed via a simple-to-use 6.5" full color industrial touchscreen. The touchscreen will also display results and statistics.

## Features and benefits

- Load cell, closed loop, force feedback system
- 150mm protruding nose, 200mm throat depth
- Load range 1-187.5kgf (9.8-1839N)
- Meets or exceeds ISO, ASTM and JIS standards
- Force(load) measurement at the indenter position
- Absolute linear applied test force, no lever construction
- 250mm workpiece height
- Power LED light near indenter for bright sample illumination
- Removable workpiece clamp, with interchangeable inserts, clamps/holds sample firmly in position (optional)
- Industrial 6.5" touch screen
- ABS cover included, protecting machine base against falling objects
- Optional Brinell microscope package, for Brinell measurement

## Specifications

EV 1310 specifications	
Item #	EV-025-1310
Hardness scales	Rockwell, Superficial Rockwell and Brinell
Load application	Load cell, force feedback, closed loop system
Rockwell pre and main load	10kgf and 60kgf, 100kgf, 150kgf
Superficial Rockwell pre and main load	3kgf and 15kgf, 30kgf, 45kgf
Rockwell test scales available	A, B, C, D, E, F, G, H, K, L, M, P
Superficial Rockwell scales available	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X
Brinell test load	1-187.5kgf
Brinell test scales	HBW1/1, 1/1.25, 1/2.5, 1/5, 1/10, 1/30 HBW2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HBW5/25, 5/31.25, 5/62.5, 5/125
Plastic (ISO 2039-1/2)	49N, 132N, 358N, 961N
ASTM D785 parts A/B	For plastics and electric insulation materials
ISO 24343-1	For resilient materials and laminate floor coverings
HVD (HVT)	HV5, 10, 20, 25, 30, 40, 50, 60, 100, 120, 125, 150
HBD (HBT)	HB1/5, 1/10, 1/30 HB2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/125 HB5/25, 5/31.25, 5/62.5, 5/125
Carbon	HR2.5/7, 5/7, 5/15, 5/20, 5/40, 5/60, 5/100, 5/150



## MODEL DETAILS

EV-025-1310    3-150kgf    Rockwell, Superficial Rockwell  
1-187.5kgf    Brinell (optional)

## STANDARD ACCESSORIES

- Power cable
- Four adjustable feet
- Certificate
- Installation and user manual

EV 1310 specifications	
Display	6.5" full color industrial touchscreen, testing results, statistics, can also be operated by mouse and keyboard
Standards	Meets or exceeds ISO, ASTM, JIS standards
Test cycles	Motorized, automatic, pre-load, load, dwell, unload process
Indenters (optional)	Rockwell diamond cone: 120° Rockwell balls: 1/16in, 1/8in, 1/4in, 1/2in Brinell balls: 1mm, 2.5mm, 5mm
Dwell time (user defined)	Pre-load 1-99 seconds, Main load 1-99 seconds, Recovery 1-99 seconds
Connectivity	USB-2
Workpiece accommodation	Vertical capacity 250mm Horizontal capacity 200mm (from indenter center-line)
Machine dimensions	360 x 600 x 765 mm (WxDxH)
Weight	120kg (265lb)
Test force tolerance	<0.5%
Operating temperature range	10-35°C (50-95°F) non-condensing
Power supply	100-240V AC, 50Hz/60Hz, single phase
Humidity	10-90%, non-condensing
*Calibration of scales is required prior to use. Please specify desired scales at the time of ordering	

# Model Evotech 1320



The model Evotech 1320 is a new generation of hardness testing instrument with protruding nose design. This long nose design allows you to reach as far as 150mm inside a bore or just on flat material similar to any other Rockwell hardness tester.

A twin scale Rockwell machine that also provides Brinell testing. Easy to use, excellent workpiece overview. Test forces range from 1-187.5kgf, which means that even this basic model is equipped with Rockwell, Superficial Rockwell and Brinell load settings. System control is managed via a simple-to-use 6.5" full color industrial touchscreen. The touchscreen will also display results and statistics.

## Features and benefits

- Load cell, closed loop, force feedback system
- 150mm protruding nose, 200mm throat depth
- Load range 1-187.5kgf (9.8-1839N)
- Meets or exceeds ISO, ASTM and JIS standards
- Force(load) measurement at the indenter position
- Absolute linear applied test force, no lever construction
- 400mm workpiece height
- Power LED light in nose for bright sample illumination
- Removable workpiece clamp, with interchangeable inserts, clamps/holds sample firmly in position (optional)
- Industrial 6.5" touch screen
- ABS cover included, protecting machine base against falling objects
- Optional Brinell microscope package for Brinell measurement



## MODEL DETAILS

EV-040-1320 3-150kgf Rockwell, Superficial Rockwell  
1-187.5kgf Brinell (optional)

## STANDARD ACCESSORIES

- Keyboard & mouse
- Power cable, Four adjustable feet
- Certificate, Installation and user manual

## Specifications

EV 1320 specifications	
Item #	EV-040-1320
Hardness scales	Rockwell, Superficial Rockwell and Brinell
Load application	Load cell, force feedback, closed loop system
Rockwell pre and main load	10kgf and 60kgf, 100kgf, 150kgf
Superficial Rockwell pre and main load	3kgf and 15kgf, 30kgf, 45kgf
Rockwell test scales available	A, B, C, D, E, F, G, H, K, L, M, P
Superficial Rockwell scales available	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X
Brinell test load	1-187.5kgf
Brinell test scales	HBW1/1, 1/1.25, 1/2.5, 1/5, 1/10, 1/30 HBW2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HBW5/25, 5/31.25, 5/62.5, 5/125
Plastic (ISO 2039-1/2)	49N, 132N, 358N, 961N
ASTM D785 parts A/B	For plastics and electric insulation materials
ISO 24343-1	For resilient materials and laminate floor coverings
HVD (HVT)	HV5, 10, 20, 25, 30, 40, 50, 60, 100, 120, 125, 150
HBD (HBT)	HB1/5, 1/10, 1/30 HB2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/125 HB5/25, 5/31.25, 5/62.5, 5/125
Carbon	HR2.5/7, 5/7, 5/15, 5/20, 5/40, 5/60, 5/100, 5/150

EV 1320 specifications	
Display	8.5" full color industrial touchscreen, testing results, statistics, can also be operated by mouse and keyboard
Standards	Meets or exceeds ISO, ASTM, JIS standards
Test cycles	Motorized, automatic, pre-load, load, dwell, unload process
Indenters (optional)	Rockwell diamond cone: 120° Rockwell balls: 1/16in, 1/8in, 1/4in, 1/2in Brinell balls: 1mm, 2.5mm, 5mm
Dwell time (user defined)	Pre-load 1-99 seconds, Main load 1-99 seconds, Recovery 1-99 seconds
Connectivity	LAN, W-LAN, USB-3
Workpiece accommodation	Vertical capacity 400mm Horizontal capacity 200mm (from indenter center-line)
Machine dimensions	360 x 600 x 915mm (WxDxH)
Weight	140kg (309lb)
Test force tolerance	<0.5%
Operating temperature range	10-35°C (50-95°F) non-condensing
Power supply	100-240V AC, 50Hz/60Hz, single phase
Humidity	10-90%, non-condensing
<b>*Calibration of scales is required prior to use. Please specify desired scales at the time of ordering</b>	

# Model Evotech 1330



The model Evotech 1330 is a new generation of hardness testing instrument with protruding nose design. This long nose design allows you to reach as far as 150mm inside a bore or just on flat material similar to any other Rockwell hardness tester.

A twin scale Rockwell machine that also provides Brinell testing. Easy to use, excellent workpiece overview. Test forces range from 1-187.5kgf, which means that even this basic model is equipped with Rockwell, Superficial Rockwell and Brinell load settings. System control is managed via a simple-to-use 8.5" full color industrial touchscreen. The touchscreen will also display results and statistics.

## Features and benefits

- Load cell, closed loop, force feedback system
- 150mm protruding nose, 200mm throat depth
- Load range 1-187.5kgf (9.8-1839N)
- Meets or exceeds ISO, ASTM and JIS standards
- Force(load) measurement at the indenter position
- Absolute linear applied test force, no lever construction
- Hysteresis free mechanical system
- 400mm workpiece height
- Motorized spindle for fully automatic clamping & testing (optional)
- Power LED light in nose for bright sample illumination
- Removable workpiece clamp, with interchangeable inserts, clamps/holds sample firmly in position (optional)
- Integrated high performance system controller, mSSD hard drive storage
- Industrial 8.5" touch screen
- LAN, W-LAN, USB connectivity
- Wireless keyboard & mouse
- ABS cover included, protecting machine base against falling objects
- Optional palm scanner for automatic Brinell measurement



## MODEL DETAILS

EV-040-1330    3-150kgf    Rockwell, Superficial Rockwell  
                    1-187.5kgf    Brinell (optional)

## STANDARD ACCESSORIES

- Keyboard & mouse
- Power cable
- Four adjustable feet
- Certificate, Installation and user manual

# Specifications

EV 1330 specifications	
Item #	EV-040-1330
Hardness scales	Rockwell, Superficial Rockwell and Brinell
Load application	Load cell, force feedback, closed loop system
Rockwell pre and main load	10kgf and 60kgf, 100kgf, 150kgf
Superficial Rockwell pre and main load	3kgf and 15kgf, 30kgf, 45kgf
Rockwell test scales available	A, B, C, D, E, F, G, H, K, L, M, P
Superficial Rockwell scales available	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X
Brinell test load	1-187.5kgf

EV 1330 specifications	
Brinell test scales	HBW1/1, 1/1.25, 1/2.5, 1/5, 1/10, 1/30 HBW2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HBW5/25, 5/31.25, 5/62.5, 5/125
Plastic (ISO 2039-1/2)	49N, 132N, 358N, 961N
ASTM D785 parts A/B	For plastics and electric insulation materials
ISO 24343-1	For resilient materials and laminate floor coverings
HVD (HVT)	HV5, 10, 20, 25, 30, 40, 50, 60, 100, 120, 125, 150
HBD (HBT)	HB1/5, 1/10, 1/30 HB2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/125 HB5/25, 5/31.25, 5/62.5, 5/125

# Specifications



EV 1330 specifications	
Carbon	HR2.5/7, 5/7, 5/15, 5/20, 5/40, 5/60, 5/100, 5/150
Display	8.5" full color industrial touchscreen, testing results, statistics, can also be operated by mouse and keyboard
Standards	Meets or exceeds ISO, ASTM, JIS standards
Test cycles	Motorized, automatic, pre-load, load, dwell, unload process
Indenters (optional)	Rockwell diamond cone: 120° Rockwell balls: 1/16in, 1/8in, 1/4in, 1/2in Brinell balls: 1mm, 2.5mm, 5mm
Dwell time (user defined)	Pre-load 1-99 seconds, Main load 1-99 seconds, Recovery 1-99 seconds

EV 1330 specifications	
Connectivity	LAN, W-LAN, USB-3
Workpiece accommodation	Vertical capacity 400mm Horizontal capacity 200mm (from indenter center-line)
Machine dimensions	360 x 600 x 915mm (WxDxH)
Weight	140kg (309lb)
Test force tolerance	<0.5%
Operating temperature range	10-35°C (50-95°F) non-condensing
Power supply	100-240V AC, 50Hz/60Hz, single phase
Humidity	10-90%, non-condensing
*Calibration of scales is required prior to use. Please specify desired scales at the time of ordering	

## Model Evotech 1610

The model Evotech 1610 features Load cell, force feedback, closed loop system, fully automatic, servo motor driven. The test forces can range from 3kgf to 150kgf and can perform Rockwell, Superficial Rockwell and Brinell Hardness tests. System control is managed via a simple-to-use 6.5" color display which will also display results and statistics. It can accommodate workpiece of 345 x 220mm.

### Features and benefits

- Load cell, closed loop, linear force actuator
- Load range 3-150kgf (29.4-1471N)
- Meets or exceeds ISO, ASTM and JIS standards
- Fixed workpiece position
- Descending test head
- Extended indenter base with high force clamping attachment and indenter protection
- Embedded high quality electronic system with 6.5" color display
- Optional Brinell scale
- Large workpiece accommodation: 345x220mm (HxD)
- Top-class replaceable body parts, shock proof ABS covers



### MODEL DETAILS

EV-061-1610	3-150kgf	Rockwell, Superficial Rockwell
	1-250kgf	Brinell (optional)

### STANDARD ACCESSORIES

- Power cable
- Four adjustable feet
- Certificate
- Installation and user manual
- Keyboard & Mouse



# Specifications



EV 1610 specifications	
Item #	EV-061-1610
Hardness scales	Rockwell, Superficial Rockwell and Brinell
Load application	Load cell, force feedback, closed loop system, fully automatic
Rockwell pre and main load	10kgf and 60, 100, 150kgf
Superficial Rockwell pre and main load	3kgf and 15, 30, 45kgf
Rockwell test scales available	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V
Superficial Rockwell scales available	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y
Brinell test load	1-250kgf
Brinell test scales (optional) (EN-ISO 6506, ASTM E10, JIS Z 2243)	HBW1/1, 1/1.25, 1/2.5, 1/5, 1/10, 1/30 HBW2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5 HBW5/25, 5/62.5, 5/125, 5/250 HBW10/100, 10/250
HVD (HVT)	HV5, 10, 20, 25, 30, 40, 50, 60, 100, 120, 125, 150
HBD (HBT)	HBT1/5, 1/10, 1/30kgf HBT2.5/6.25, 2.5/15.625, 2.5/31.25, 2.5/62.5 HBT5/25, 5/62.5, 5/125, 5/250kgf HBT10/100, 10/250kgf
Carbon	HR2.5/7, 5/7, 5/15, 5/20, 5/40, 5/60, 5/100, 5/150 HR10/20, 10/40, 10/60, 10/100, 10/150
Display	6.5in full color display

EV 1610 specifications	
Display resolution	0.01HR, 0.5HBW
Standards	Meets or exceeds ISO, ASTM, JIS standards
Test cycles	Motorized, fully automatic, pre-load, load, dwell, unload process
Indenters (optional)	Rockwell diamond cone: 120° Rockwell balls: 1/16in, 1/8in, 1/4in, 1/2in Brinell balls: 1mm, 2.5mm, 5mm, 10mm
Dwell time (user defined)	Pre-load 1-250 seconds, Main load 1-250 seconds, Recovery 1-250 seconds
Connectivity	2 x USB
Workpiece accommodation	Vertical capacity 345mm Horizontal capacity 220mm (from indenter center-line)
Machine dimensions	448 x 738 x 1300 mm (WxDxH)
Weight	150kg (331lb)
Test force tolerance	<0.5%
Operating temperature range	10-35°C (50-95°F) non-condensing
Power supply	100-240V AC, 50Hz/60Hz, single phase
Humidity	10-90%, non-condensing
<b>*Calibration of scales is required prior to use. Please specify desired scales at the time of ordering</b>	

## Model Evotech 1620

The model Evotech 1620 features Load cell, force feedback, closed loop system, fully automatic, servo motor driven. The test forces can range from 3kgf to 150kgf and can perform Rockwell, Superficial Rockwell and Brinell Hardness tests. This fully integrated windows controller, SSD hard disk, windows 10 operated system also includes automatic measurement, 15" full color touch screen and a motorized descending test head with collision detection. It can accommodate workpiece of 345 x 220mm.

### Features and benefits

- Load cell, closed loop, ball bearing linear force actuator
- Load range 3-150kgf (29.4-1471N)
- Meets or exceeds ISO, ASTM and JIS standards
- Descending test head with collision detection system
- Built-in laser positioning system (optional)
- Full color industrial 15" touch screen interface
- Adjustable workpiece illumination
- Manual, motorized stages
- Large workpiece accommodation: 345x220mm (HxD)

### STANDARD ACCESSORIES

- Power cable
- Four adjustable feet
- Certificate
- Installation and user manual
- Keyboard & Mouse



### MODEL DETAILS

EV-062-1620	3-150kgf 1-250kgf	Rockwell, Superficial Rockwell Brinell (optional)
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# Specifications



EV 1620 specifications	
Item #	EV-062-1620
Hardness scales	Rockwell, Superficial Rockwell and Brinell
Load application	Load cell, force feedback, closed loop system, fully automatic
Rockwell pre and main load	10kgf and 60, 100, 150kgf
Superficial Rockwell pre and main load	3kgf and 15, 30, 45kgf
Rockwell test scales available	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V
Superficial Rockwell scales available	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y
Brinell test load	1-250kgf
Brinell test scales (optional) (EN-ISO 6506, ASTM E10, JIS Z 2243)	HBW1/1, 1/1.25, 1/2.5, 1/5, 1/10, 1/30 HBW2.5/6.25, 2.5/7.8125, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5 HBW5/25, 5/31.25, 5/62.5, 5/125, 5/250 HBW10/100, 10/125, 10/250
HVD (HVT)	HV5, 10, 20, 30, 50, 100, 120
HBD (HBT)	HBT1/5, 1/10, 1/30kgf HBT2.5/6.25, 2.5/15.625, 2.5/31.25, 2.5/62.5, 2.5/187.5kgf HBT5/25, 5/31.25, 5/62.5, 5/125, 5/250kgf HBT10/100, 10/125, 10/250kgf
Carbon	HR2.5/7, 5/7, 5/15, 5/20, 5/40, 5/60, 5/100, 5/150 HR10/20, 10/40, 10/60, 10/100, 10/150
Display	15in full color industrial touchscreen, testing results, statistics

EV 1620 specifications	
Display resolution	0.01HR, 0.1HBW
Standards	Meets or exceeds ISO, ASTM, JIS standards
Test cycles	Motorized, fully automatic, pre-load, load, dwell, unload process
Indenters (optional)	Rockwell diamond cone: 120° Rockwell balls: 1/16in, 1/8in, 1/4in, 1/2in Brinell balls: 1mm, 2.5mm, 5mm, 10mm
Dwell time (user defined)	Pre-load 1-250 seconds, Main load 1-250 seconds, Recovery 1-250 seconds
Connectivity	LAN, W-LAN, USB-3, Bluetooth (optional)
Workpiece accommodation	Vertical capacity 345mm Horizontal capacity 220mm (from indenter center-line)
Machine dimensions	450 x 650 x 1440 mm (WxDxH)
Weight	242kg (534lb)
Test force tolerance	<0.5%
Operating temperature range	10-35°C (50-95°F) non-condensing
Power supply	100-240V AC, 50Hz/60Hz, single phase
Humidity	10-90%, non-condensing
<b>*Calibration of scales is required prior to use. Please specify desired scales at the time of ordering</b>	

# Optional accessories



The models of Evotech Rockwell hardness systems have optional accessories in support of different types of tests and/or materials.

Factory options		models
FH-053-0001	Brinell upgrade to Rockwell machine: Brinell scales; **analog microscope 40x	EV1010, EV1310
FH-053-0002	Brinell opt: inc: scanner, 5/10mm Brinell scales Ø1.6-6mm	EV1020, EV1320, EV1330, EV1610, EV1620
FH-053-0003	Brinell opt: inc: scanner, 1/2.5mm Brinell scales Ø0.5-1.5mm	EV1020, EV1320, EV1330, EV1610, EV1620
FH-053-0012	Overview camera & software FoV 35x50mm upto 200x180mm lights & laser pointer	EV1620
FH-053-0013	Auto spindle motorized "Z"	EV1320, EV1330

Stage/Anvil	models
FH-050-0266	60mm flat anvil
FH-050-0117	Testing table flat 80mm
FH-050-0041	Pedestal spot anvil 5mm
FH-050-0037	10mm spot anvil
FH-050-0040	V-Anvil Ø40mm for 6-60mm
FH-050-0326	V-Anvil Ø63mm for 10-100mm
FH-050-0025	V-Anvil Ø80mm for 3.3-20mm
FH-050-0026	V-Anvil Ø80mm for 12-80mm
FH-050-0027	V-Anvil Ø80mm for 20-140mm
FH-050-0235	Anvil ball type specimen Ø6-25.4mm
FH-050-0324	Cylindrical V-Anvil 6-80mm
FH-050-0325	Cylindrical V-Anvil 50-200mm
FH-050-0029	Test table 100x100mm, V-Grove 20mm wide, 10mm deep
FH-001-0006	Testing table flat 180mm
FH-002-0034	Testing table flat 235mm, screwfix
FH-050-0346	Clamping nose base
FH-050-0347	Clamp nose attachment - flat (set of 2)
FH-050-0348	Clamp nose attachment - V-25-38 (set)
FH-050-0349	Clamp nose attachment - V-38-70 (set)
FH-050-0350	Clamp nose attachment - concave-R-30 (set)

Stage/Anvil	models
FH-050-0351	Clamp nose attachment - convex-R-30 (set)
FH-050-0352	Clamp nose attachment - V-70-150 (set)
FH-050-0336	Anvil; rounds Ø6-25.4mm
FH-006-1008	Small V-Anvil 3-20mm requires base plate(requires manual/automated XY stage)
FH-006-1009	Large V-Anvil 20-75mm requires base plate(requires manual/automated XY stage)
FH-050-0028	Flat test table Ø200mm screwfix
FH-050-0079	Large flat surface testing table 350x250mm, with 2 T-Slots
FH-050-0030	450x350mm flat test table w/ 2 T-Slots for large components
FH-050-0034	Flat test table 600x300mm w/ 2 T-Slots for large components

Stage/Acc	models
FH-050-0290	Vibration isolation table
FH-050-0036	Manual XY stage w/ analogue micrometers, 100x160mm/ cap 250kg
FH-049-0012	Motorized 237x188mm XY CNC stage, max 100kg, displacement 100x100mm
FH-049-0013	Motorized 257x188mm XY stage, max 400kg, displacement 120x120mm
FH-049-0001	Motorized 307x208mm XY stage, max 400kg, displacement 170x120mm
FH-049-0002	Motorized 357x208mm XY stage, max 400kg, displacement 220x120mm
FH-049-0014	Motorized 337x238mm XY stage max 400kg displacement 200x150mm
FH-049-0015	Motorized 437x238mm XY stage max 450kg displacement 300x150mm
FH-049-0016	Motorized 630x238mm XY stage max 450kg displacement 400x150mm
FH-049-0017	Motorized 410x280mm XY stage max 4000kg displacement 200x150mm
FH-049-0018	Motorized 510x280mm XY stage max 4000kg displacement 300x150mm
FH-049-0019	Motorized 630x238mm XY stage max 4000kg displacement 400x150mm

Items required for fitment of anvil or XY stage	models
FH-050-0335	Quick release mounting plate
FH-050-0285	Quick change anvil base mount, CNC stage
FH-050-0279	Fixing plate for XY stage
FH-049-0028	Cable set for connecting CNC stage to embedded driver
FH-050-0138	Locking ring

# Optional accessories



Indenters		models
FH-200-1002	Rockwell C Diamond Indenter. Ø3mm. certified ISO 6508/2 & ASTM-E18 A3	EV1310, EV1320, EV1330
FH-200-1004	Rockwell Indenter 1/16". Includes 1 carbide ball. Ø3mm ISO 6508/2 & ASTM-E18 A3	EV1310, EV1320, EV1330
FH-200-1005	Rockwell Indenter 1/8". Includes 1 carbide ball. Ø3mm. ISO 6508/2 & ASTM-E18 A3	EV1310, EV1320, EV1330
FH-200-1006	Rockwell Indenter 1/4". Includes 1 carbide ball. Ø3mm. ISO 6508/2 & ASTM-E18 A3	EV1310, EV1320, EV1330
FH-200-1007	Rockwell Indenter 1/2". Includes 1 carbide ball. Ø3mm ISO 6508/2 & ASTM-E18 A3	EV1310, EV1320, EV1330
FH-200-1008	Brinell Indenter 1mm. Includes 1 carbide ball. Ø3mm ISO 6506/2 & ASTM-E10 A3	EV1310, EV1320, EV1330
FH-200-1009	Brinell Indenter 2.5mm. Includes 1 carbide ball. Ø3mm ISO 6506/2 & ASTM-E10 A3	EV1310, EV1320, EV1330
FH-200-1014	Rockwell C Diamond Indenter acc. to ISO 6508/2 & ASTM-E18 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1015	Rockwell Indenter 1/16". Incl: 1 carbide ball ISO 6508/2 & ASTM-E18 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1016	Rockwell Indenter 1/8". Incl: 1 carbide ball ISO 6508/2 & ASTM-E18 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1017	Rockwell Indenter 1/4". Incl: 1 carbide ball ASTM-E18 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1018	Rockwell Indenter 1/2". Incl: 1 carbide ball ASTM-E18 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1019	Brinell Indenter 1mm. Incl: 1 carbide ball ISO 6506/2 & ASTM-E10 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1020	Brinell Indenter 2.5mm. Incl: 1 carbide ball. ISO 6506/2 & ASTM-E10 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1021	Brinell Indenter 5mm. Incl: 1 carbide ball ISO 6506/2 & ASTM-E10 A3 (17mm)	EV1010, EV1020, EV1610, EV1620
FH-200-1022	Brinell Indenter 10mm. Incl: 1 carbide ball ISO 6506/2 & ASTM-E10 A3 (17mm)	EV1610, EV1620
FH-200-1023	1/16" carbide ball acc. to ISO 6508/2 & ASTM-E18 A3	EV1010, EV1020, EV1610, EV1620
FH-200-1024	1/8" carbide ball acc. to ISO 6508/2 & ASTM-E18 A3	EV1010, EV1020, EV1610, EV1620
FH-200-1025	1/4" carbide ball acc. to ISO 6508/2 & ASTM-E18 A3	EV1010, EV1020, EV1610, EV1620
FH-200-1026	1/2" carbide ball acc. to ISO 6508/2 & ASTM-E18 A3	EV1010, EV1020, EV1610, EV1620
FH-200-1027	1.0mm carbide ball Spare acc. to ISO 6506/2 & ASTM-E10 A3	EV1010, EV1020, EV1610, EV1620
FH-200-1028	2.5mm carbide ball Spare acc. to ISO 6506/2 & ASTM-E10 A3	EV1010, EV1020, EV1610, EV1620
FH-200-1029	5.0mm carbide ball Spare acc. to ISO 6506/2 & ASTM-E10 A3	EV1010, EV1020, EV1610, EV1620
FH-200-1030	10.0mm carbide ball Spare acc. to ISO 6506/2 & ASTM-E10 A3	EV1610, EV1620
Software modules		models
FH-500-0014	Pattern testing software module	EV1620
FH-500-0021	Adv coordinate manual pattern configurator, CHD, SHD, NHD W/ edge detection	EV1620
FH-500-0022	Image stitching full stage overview & sample overview-high resolution	EV1620
FH-500-0024	Drawing and measuring (distance & angles) application	EV1620
FH-500-0015	CHD, Nht, Rht Configurator and graphic interface	EV1620
FH-500-0030	Q-DAS certified connectivity protocol	EV1620
FH-500-0031	Artificial intelligence deep learning Brinell module	EV1620

Fixtures/Vice		models
FH-050-0340	Polished precision vice with lock, opening width 25mm, opens 20mm	EV1610, EV1620
FH-050-0341	Polished precision vice with lock, opening width 36mm, opens 42mm	EV1610, EV1620
FH-050-0342	Polished precision vice with lock, opening width 48mm, opens 75mm	EV1610, EV1620
FH-050-0343	Polished precision vice with lock, opening width 75mm, opens 100mm	EV1610, EV1620
FH-050-0067	Axle chuck (cap 62.5kgf)	EV1620
FH-050-0073	Universal clamp & leveling device (cap 62.5kgf)	EV1620
FH-050-0076	Thin metal clamp - micro testing	EV1620
FH-050-0345	V-Grove small clamp ø0.8-5mm	EV1620
FH-050-0075	Wire testing fixture	EV1620
FH-050-0112	Fixture for Jominy testing. 1 quench end test sample with quick release	EV1620
FH-050-0113	Fixture for Jominy testing. 3 quench end test sample with quick release	EV1620
FH-050-0068	Small parts vice (cap 62.5kgf) W 55mm open 50mm max	EV1620
Tables/Cabinets		models
FH-095-1006	Cabinet/table for bench machines 710 x 750 x 700 mm (grey/black top)	EV1610, EV1620
FH-095-1008	Cabinet/table for bench machines 710 x 750 x 800 mm (grey/black top)	EV1010, EV1020, EV1310, EV1320, EV1330
FH-095-1009	Cabinet/table for bench machines 1500 x 750 x 800 mm (grey/black top)	EV1010, EV1020, EV1310, EV1320, EV1330, EV1610, EV1620
Cover		models
FH-052-0005	Tester cover 35x55x77cm	EV1320, EV1330, EV1610, EV1620
FH-052-0006	Tester cover 35x55x87cm	EV1020
Connectivity		models
FH-500-0011	EV-series connection w/ external Horizon (add. requirements per EV-model)	EV1020, EV1320, EV1330, EV1610, EV1620
Calibration options		models
FH-051-0000	Direct calibration; ISO 17025-A2LA compliant/per scale (factory)	EV1010, EV1020, EV1310, EV1610, EV1620
FH-051-0002	Additional scales calibration	EV1010, EV1020, EV1310, EV1610, EV1620
FH-051-0006	BRINELL direct and indirect verification/calibration & certification in compliance with ISO & ASTM, NADCAP. Includes direct force and indirect verification report (block readings), GR & R report	EV1010, EV1020, EV1310, EV1610, EV1620
FH-051-0008	ROCKWELL direct and indirect verification/calibration & certification in compliance with ISO & ASTM, NADCAP. Includes direct force and indirect verification report (block readings), GR & R report	EV1010, EV1020, EV1310, EV1610, EV1620



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