



BPS INSTRUMENT CO.,LTD.

HV-1000 Manual Turret LCD Display Micro Vickers Hardness Tester



1.Application:

HV-100 Manual Turret LCD Display Micro Vickers Hardness Tester used to determine the Vickers hardness of steel, non-ferrous metals, ceramics, treated layers of metal surface, and the hardness grades of carburized, nitrided and hardness layers of metals. It is also suitable to determine the Vickers hardness of micro and super thin parts.

2.Feature:

- 2.1 HV-1000 is Manual Turret Switching.
- 2.2 Manual data input, LCD automatically displays hardness value.
- 2.3 High- precision optical measuring systems, precision coordinate testing table.
- 2.4 Automatic testing process, easy to operate, no human operating error.
- 2.5 Frictionless loading shaft, high precision testing force.
- 2.6 Convert various hardness values.
- 2.7 Precision conforms to GB/T 4340.2, ISO 6507-2 and ASTM E384.

3.Specifications:

Model	HV-1000
Hardness Measuring Range	5~3000 HV



Test Force	0.09807, 0.2452, 0.4904, 0.9807, 1.961, 2.942, 4.904, 9.807N. (10, 25, 50, 100, 200, 300, 500, 1000gf)
Measurement System Magnification	400X, 100X
Maximum Specimen Permitted Height	90 mm
Distance Between Pressure Head Center And Its Wall	120 mm
Power Supply	AC 220V, 50Hz
Dimensions	530 * 290 * 490 mm
Weight	40 KG

4.Standard Accessories:

Coordinate Testing Table	1 PIECE
Thin shaft Testing Table	1 PIECE
Sheet Testing Table	1 PIECE
Small Flat-clamp Testing Table	1 PIECE
Large V-shaped Block	1 PIECE
Small V-shaped Block	1 PIECE
Diamond Quadrangular Pyramid Indenter	1 PIECE
Standard Micro Hardness Block	2 PIECE

5.Optional Accessories:

5.1 Knoop Indenter: Can Measuring Some High Hardness Materials.

5.2 CCD Camera And Image Processing System.



BPS INSTRUMENT CO.,LTD.

HV-1000A Automatic Turret LCD Display Micro Vickers Hardness Tester



1.Application:

HV-1000A Automatic Turret LCD Display Micro Vickers Hardness Tester used to determine the Vickers hardness of steel, non-ferrous metals, ceramics, treated of metal surface, and the hardness grades of carburized, nitrided and hardened layers of metals.

It is also suitable to determine the Vickers hardness of micro and super thin parts.

2.Feature:

- 2.1 HV-1000A is Automatic Turret Switching.
- 2.2 Manual data input, LCD automatically displays hardness value.
- 2.3 High-precision optical measuring systems, precision coordinate testing table.
- 2.4 Automatic testing process, easy to operate, no human operating error.
- 2.5 Frictionless loading shaft, high precision testing force.
- 2.6 Convert various hardness values.
- 2.7 Precision conforms to GB/T 4340.2, ISO 6507-2 and ASTM E384.

3.Specifications:

Model	HV-1000A
Hardness Measuring Range	5~3000 HV



Test Force	0.09807, 0.2452, 0.4904, 0.9807, 1.961, 2.942, 4.904, 9.807N. (10, 25, 50, 100, 200, 300, 500, 1000gf)
Measurement System Magnification	400X, 100X
Maximum Specimen Permitted Height	90 mm
Distance Between Pressure Head Center And Its Wall	120 mm
Power Supply	AC 220V, 50Hz
Dimensions	530 * 290 * 490 mm
Weight	40 KG

4.Standard Accessories:

Coordinate Testing Table	1 PIECE
Thin shaft Testing Table	1 PIECE
Sheet Testing Table	1 PIECE
Small Flat-clamp Testing Table	1 PIECE
Large V-shaped Block	1 PIECE
Small V-shaped Block	1 PIECE
Diamond Quadrangular Pyramid Indenter	1 PIECE
Standard Micro Hardness Block	2 PIECE

5.Optinal Accessories:

5.1 Knoop Indenter: Can Measuring Some High Hardness Materials.

5.2 CCD Camera And Image Processing System.



BPS INSTRUMENT CO.,LTD.

HV-1000 Manual Turret Digital Display Micro Vickers Hardness Tester



1.Application:

HVS-1000 Manual Turret Digital Display Micro Vickers Hardness Tester used to determine the Vickers hardness of steel, non-ferrous metals, ceramics, treated layers of metal surface, and the hardness grades of carburized, nitrided and hardened layers of metals.

It is also suitable to determine the Vickers hardness of micro and super thin parts.

2.Feature:

- 2.1 HVS-1000 is Manual Turret Switching.
- 2.2 Automatic data input, LCD automatically displays hardness value, the printer will print hardness test results.
- 2.3 High-precision optical measuring systems, precision coordinate testing table.
- 2.4 Automatic testing process, easy to operate, no human operating error.
- 2.5 Convert various hardness values.
- 2.6 Precision conforms to GB/T 4340.2, ISO 6507-2 and ASTM E384.

3.Specifications:

Model	HVS-1000
Hardness Measuring Range	5~3000 HV
Test Force	0.09807, 0.2452, 0.4904, 0.9807, 1.961, 2.942, 4.904, 9.807N. (10, 25, 50, 100, 200, 300, 500, 1000gf)
Measurement System Magnification	400X, 100X
Maximum Specimen Permitted Height	90 mm
Distance Between Pressure Head Center And Its Wall	120 mm



Power Supply	AC 220V, 50Hz
Dimensions	530 * 290 * 490 mm
Weight	40 KG

4. Standard Accessories:

Coordinate Testing Table	1 PIECE
Thin shaft Testing Table	1 PIECE
Sheet Testing Table	1 PIECE
Small Flat-clamp Testing Table	1 PIECE
Large V-shaped Block	1 PIECE
Small V-shaped Block	1 PIECE
Diamond Quadrangular Pyramid Indenter	1 PIECE
Standard Micro Hardness Block	2 PIECE

5. Optinal Accessories:

5.1 Knoop Indenter: Can Measuring Some High Hardness Materials.

5.2 CCD Camera And Image Processing System.



BPS INSTRUMENT CO.,LTD.

HV-1000A Automatic Turret Digital Display Micro Vickers Hardness Tester



1.Application:

HVS-1000 Automatic Turret Digital Display Micro Vickers Hardness Tester used to determine the Vickers hardness of steel, non-ferrous metals, ceramics, treated layers of metal surface, and the hardness grades of carburized, nitrided and hardened layers of metals. It is also suitable to determine the Vickers hardness of micro and super thin parts.

2.Feature:

- 2.1 HVS-1000A is Automatic Turret Switching.
- 2.2 Automatic data input, LCD automatically displays hardness value, the printer will print hardness test results.
- 2.3 High-precision optical measuring systems, precision coordinate testing table.
- 2.4 Automatic testing process, easy to operate, no human operating error.
- 2.5 Frictionless loading shaft, high precision testing force.
- 2.6 Convert various hardness values.
- 2.7 Precision conforms to GB/T 4340.3, ISO 6507-2 and ASTM E384

3.Specifications:

Model	HVS-1000A
Hardness Measuring Range	5~3000 HV
Test Force	0.09807, 0.2452, 0.4904, 0.9807, 1.961, 2.942, 4.904, 9.807N. (10, 25, 50, 100, 200, 300, 500, 1000gf)
Measurement System Magnification	400X, 100X
Maximum Specimen Permitted Height	90 mm
Distance Between Pressure Head Center And Its Wall	120 mm



Power Supply	AC 220V, 50Hz
Dimensions	530 * 290 * 490 mm
Weight	40 KG

4.Stanard Accessories:

Coordinate Testing Table	1 PIECE
Thin shaft Testing Table	1 PIECE
Sheet Testing Table	1 PIECE
Small Flat-clamp Testing Table	1 PIECE
Large V-shaped Block	1 PIECE
Small V-shaped Block	1 PIECE
Diamond Quadrangular Pyramid Indenter	1 PIECE
Standard Micro Hardness Block	2 PIECE

5.Optional Accesssies:

5.1 Knoop Indenter: Can Measuring Some High Hardness Materials.

5.2 CCD Camera And Image Processing System.



BPS INSTRUMENT CO.,LTD.

HV-5 Vickers Hardness Tester



1.Main Features:

HV-5 Vickers Hardness Tester is basic of microscopic hardness tester, this machine adopts LCD display screen, through the operation panel of hardness or HK each file ruler HV benchmark test tome by choice, the lighting source can do promise regulation. Operation can be measured D1 eyepiece, D2 value after the direct input, hardness value in LCD display screen is directly on display.

2.Technical Specifications:

Model	HV-5
Min. Measuring Unit	0.5 μ m
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、1.0Kgf(9.8N)、2.0Kgf(19.6N)、3.0Kgf(29.4N)、5.0Kgf(49.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	200X(Measuring), 100X(Observation)
Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg



3.Standard Accesories:

Item	Quantity	Item	Quantity
Weight	3	Vickers Hardness Block	2
“V” Shaped Testing Table	1	Fuse(2A)	2
Circular Testing Table	1	Power Cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



BPS INSTRUMENT CO.,LTD.

HV-10 Vickers Hardness Tester



1.Main Features:

HV-10 Vickers Hardness Tester is basic of microscopic hardness tester, this machine adopts LCD display screen, through the operation panel of hardness or HK each file ruler HV benchmark test time by choice, the lighting source can do promise regulation. Operation can be measured D1 eyepiece, D2 value after the direct input, hardness value in LCD display screen is directly on display.

2.Technical Specification:

Model	HV-10
Min. Measuring Unit	0.5μm
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、 1.0Kgf(9.8N)、2.0Kgf(19.6N)、 3.0Kgf(29.4N)、5.0Kgf(49.0N)、10.0Kgf(98.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	200X(Measuring), 100X(Observation)
Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg



3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers Hardness Block	2
“V” Shaped Testing Table	1	Fuse(2A)	2
Circular Testing Table	1	Power Cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



BPS INSTRUMENT CO.,LTD.

HV-30 Vickers Hardness Tester



1.Main Features:

HV-30 Vickers Hardness Tester is micro hardness of basic plan, the aircraft used LCD display screen, through the operation panel of hardness or HK each file ruler HV benchmark test time by choice, the lighting source can do promise regulation.

Operation can be measured D1 eyepiece, D2 value after the direct input, hardness value in LCD display screen is directly on display.

2.Technical Specifications:

Model	HV-30
Min. Measuring Unit	1.0μm
Test Force	1.0Kgf(9.8N)、3.0Kgf(29.4N)、5.0Kgf(49.0N)、10Kgf(98.0N)、20Kgf(196N)、30Kgf(294N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X (Observation)
Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg



3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers Hardness Block	2
“V” Shaped Testing Table	1	Fuse(2A)	2
Circular Testing Table	1	Power Cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



BPS INSTRUMENT CO.,LTD.

HV-50 Vickers Hardness Tester



1.Main Features:

HV-50 Vickers Hardness Tester is the Vickers hardness of basic plan, the aircraft used LCD display screen, through the operation panel of hardness or HK each file ruler HV benchmark test time by choice, the lighting source can do promise regulation.

Operation can be measured D1 eyepiece, D2 value after the direct input, hardness value in LCD display screen is directly on display.

2.Technical Specifications:

Model	HV-50
Min. Measuring Unit	1.0 μ m
Test Force	1.0Kgf(9.8N)、5.0Kgf(49.0N)、10Kgf(98.0N)、20Kgf(196N)、30Kgf(294N)、50Kgf(490N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X (Observation)
Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg



3. Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers Hardness Block	2
“V” Shaped Testing Table	1	Fuse(2A)	2
Circular Testing Table	1	Power Cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



BPS INSTRUMENT CO.,LTD.

HV-5Z

Automatic Turret Vickers Hardness Tester



1.Main Features:

HV-5Z Automatic Turret Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display. For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing with RS-232 interface, and computer online. This machine is digital, high degree of automation. hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HV-5Z Automatic Turret Vickers Hardness Tester with digital display when the pressure head and the objective to switch to each other, the test point to be automatic positioning precision.

2.Technical Specifications:

Model	HV-5Z
Min. Measuring Unit	0.5μm
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、1.0Kgf(9.8N)、 2.0Kgf(19.6N)、3.0Kgf(29.4N)、5Kgf(49.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	200X(Measuring), 100X(Observation)



Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



BPS INSTRUMENT CO.,LTD.

HV-10Z

Automatic Turret Vickers Hardness Tester



1.Main Features:

HV-10Z Automatic Turret Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, of hardness value, automatic input, automatic display. For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing with RS-232 interface, and computer online. This machine is digital, high degree of automation.

Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HV-10Z Automatic Turret Vickers Hardness Tester with digital display when the pressure hard and the objective to switch to each other, the test point to be automatic positioning precision.

2.Technical Specifications:

Model	HV-10Z
Min. Measuring Unit	0.5μm
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、 1.0Kgf(9.8N)、2.0Kgf(19.6N)、 3.0Kgf(29.4N)、5Kgf(49.0N)、10Kgf(98.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force



Test Microscope Magnification	200X(Measuring), 100X(Observation)
Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



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HV-30Z

Automatic Turret Vickers Hardness Tester



1.Main Features:

HV-30Z Automatic Turret Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input. automatic display. For all kinds of hardness value mutual, and computer online. This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HV-30Z Automatic Turret Vickers Hardness Tester with digital display when the pressure head and the objective to switch to each other, the test point to be automatic positioning precision.

2.Technical Specifications:

Model	HV-30Z
Min. Measuring Unit	0.5μm
Test Force	1.0Kgf(9.8N)、3.0Kgf(29.4N)、5Kgf(49.0N)、10Kgf(98.0N)、20Kgf(196.0N)、30Kgf(294.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X(Observation)



Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



BPS INSTRUMENT CO.,LTD.

HV-50Z

Automatic Turret Vickers Hardness Tester



1.Main Features:

HV-50Z Automatic Turret Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display. For all kinds of hardness value mutual conversion, and the testing result result is automatic storage, processing, printing with RS-232 interface, and computer online. This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HV-50Z Automatic Turret Vickers Hardness Tester with digital display when the pressure head and the objective to switch to each other, the test point to be automatic positioning precision.

2.Technical Specifications:

Model	HV-50Z
Min. Measuring Unit	0.5μm
Test Force	1.0Kgf(9.8N)、5Kgf(49.0N)、10Kgf(98.0N)、 20Kgf(196.0N)、30Kgf(294.0N)、50Kgf(490.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X(Observation)



Duration Time	0~60s
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Manual	1



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HVS-5 Digital Display Vickers Hardness Tester



1.Applications:

HVS-5 Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display.

For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online.

This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

2.Specifications:

Model	HVS-5
Min. Measuring Unit	0.0625 μ m
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、1.0Kgf(9.8N)、2.0Kgf(19.6N)、3.0Kgf(29.4N)、5.0Kgf(49.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X, 200X
Duration Time	0~60s
Data Out	LCD Display, With Printer And RS-232 Interface



Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



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HVS-10 Digital Display Vickers Hardness Tester



1.Applications:

HVS-10 Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display.

For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online.

This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

2.Specifications:

Model	HVS-10
Min. Measuring Unit	0.0625μm
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、 1.0Kgf(9.8N)、2.0Kgf(19.6N)、 3.0Kgf(29.4N)、5.0Kgf(49.0N)、10Kgf(98.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X, 200X
Duration Time	0~60s



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Data Out	LCD Display, With Printer And RS-232 Interface
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



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HVS-30 Digital Display Vickers Hardness Tester



1.Applications:

HVS-30 Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display.

For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online.

This machine is digital, high degree of automation. hardness value error can be modified through software input, hardness value more accurate meets the requirement.

2.Specifications:

Model	HVS-30
Min. Measuring Unit	0.125μm
Test Force	1.0Kgf(9.8N)、3.0Kgf(29.4N)、5.0Kgf(49.0N)、10Kgf(98.0N)、20.0Kgf(196.0N)、30Kgf(294.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X, 200X
Duration Time	0~60s
Data Out	LCD Display, With Printer And RS-232 Interface



Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



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HVS-50 Digital Display Vickers Hardness Tester



1.Applications:

HVS-50 Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display.

For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online.

This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

2.Specifications:

Model	HVS-50
Min. Measuring Unit	0.125μm
Test Force	1.0Kgf(9.8N)、3.0Kgf(29.4N)、 5.0Kgf(49.0N)、10Kgf(98.0N)、 20.0Kgf(196.0N)、30Kgf(294.0N)、50Kgf(490.0N)
Max. Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	100X, 200X
Duration Time	0~60s



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Data Out	LCD Display, With Printer And RS-232 Interface
Power Supply	AC220V+5%, 50Hz
Overall Dimension	520*190*650mm
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



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HVS-5Z

Automatic Turret Digital Display Vickers Hardness Tester



1.Applications:

HVS-5Z Automatic Turret Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display. for all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online. This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HVS-5Z Automatic Turret Digital Display Vickers Hardness Tester with digital display when the pressure hardness head and the objective to switch to each other, the test point to be automatic positioning precision.

2.Specifications:

Model	HVS-5Z
Min Measuring Unit	0.0625μm
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、1.0Kgf(9.8N)、2.0Kgf(19.6N)、3.0Kgf(29.4N)、5Kgf(49.0N)
Max Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force



Test Microscope Magnification	200X, 100X
Duration Time	0~60s
Data Output	LCD Display, With Printer And RS-232 Interface
Overall Dimension	520*190*650mm
Power Supply	AC220V+5%, 50Hz
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



BPS INSTRUMENT CO.,LTD.

HVS-10Z

Automatic Turret Digital Display Vickers Hardness Tester



1.Applications:

HVS-10Z automatic Turret Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness or rod HK, test of hardness value, automatic input, automatic display. For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online. This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HVS-10Z Automatic Turret Digital Display Vickers Hardness Tester with digital display when the pressure head and the objective to switch to each other, the test point to be automatic positioning precision.

2.Specifications:

Model	HVS-10Z
Min Measuring Unit	0.0625μm
Test Force	0.3Kgf(2.94N)、0.5Kgf(4.9N)、 1.0Kgf(9.8N)、2.0Kgf(19.6N)、 3.0Kgf(29.4N)、5Kgf(49.0N)、10Kgf(98.0N)
Max Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV



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Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force
Test Microscope Magnification	200X, 100X
Duration Time	0~60s
Data Output	LCD Display, With Printer And RS-232 Interface
Overall Dimension	520*190*650mm
Power Supply	AC220V+5%, 50Hz
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



BPS INSTRUMENT CO.,LTD.

HVS-30Z

Automatic Turret Digital Display Vickers Hardness Tester



1.Applications:

HVS-30Z Automatic Turret Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display. For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online. This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HVS-30Z Automatic Turret Digital Display Vickers Hardness Tester with digital display when the pressure hard and the objective to switch to each other, the test point to be automatic positioning precision.

2.Specifications:

Model	HVS-30Z
Min Measuring Unit	0.0625μm
Test Force	1.0Kgf(9.8N)、3.0Kgf(29.4N)、5Kgf(49.0N)、10Kgf(98.0N)、20Kgf(196.0N)、30Kgf(294.0N)
Max Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force



Test Microscope Magnification	200X, 100X
Duration Time	0~60s
Data Output	LCD Display, With Printer And RS-232 Interface
Overall Dimension	520*190*650mm
Power Supply	AC220V+5%, 50Hz
Net Weight	About 40Kg

3.Standard Accessories:

Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



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HVS-50Z

Automatic Turret Digital Display Vickers Hardness Tester



1.Applications:

HVS-50Z Automatic Turret Digital Display Vickers Hardness Tester with large screen LCD display, use the menu interface type structure, can be in operation panel choose hardness HV or rod HK, test of hardness value, automatic input, automatic display. For all kinds of hardness value mutual conversion, and the testing result is automatic storage, processing, printing, with RS-232 interface, and computer online. This machine is digital, high degree of automation. Hardness value error can be modified through software input, hardness value more accurate meets the requirement.

HVS-50Z Automatic Turret Digital Display Vickers Hardness Tester with digital display when the pressure hard and the objective to switch to each other, the test point to be automatic positioning precision.

2.Specifications:

Model	HVS-50Z
Min Measuring Unit	0.0625μm
Test Force	1.0Kgf(9.8N)、5Kgf(49.0N)、10Kgf(98.0N)、20Kgf(196.0N)、30Kgf(294.0N)、50Kgf(490.0N)
Max Height Of Specimen	160mm
Distance Of Indenter To Outer Wall	135mm
Hardness Measuring Range	8~2900HV
Method Of Testing Force Applied	Automatic Loading, Unloading Testing Force



BPS INSTRUMENT CO.,LTD.

Test Microscope Magnification	200X, 100X
Duration Time	0~60s
Data Output	LCD Display, With Printer And RS-232 Interface
Overall Dimension	520*190*650mm
Power Supply	AC220V+5%, 50Hz
Net Weight	About 40Kg

3.Standard Accessories:

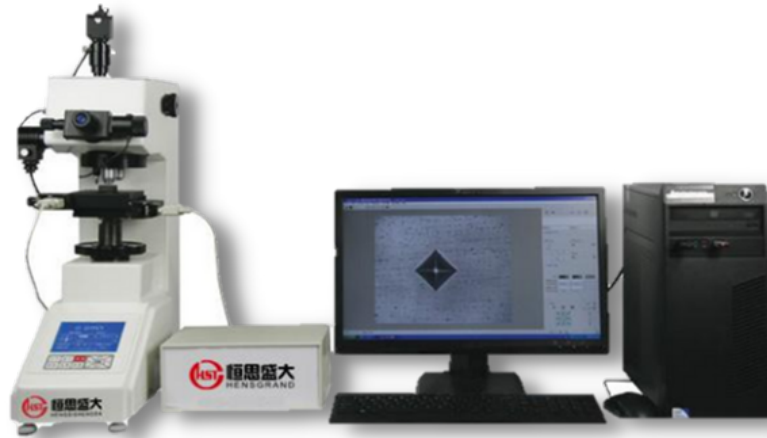
Item	Quantity	Item	Quantity
Weight	3	Vickers hardness block	2
“V” shaped Testing Table	1	Fuse(2A)	2
Circular testing table	1	Power cable	1
Large Testing Table	1	Product Certificate	1
Objective 10X	1	Printer manual, Manual	Each 1



BPS INSTRUMENT CO.,LTD.

HVS-1000ZF

Fully Automatic Vickers Hardness Tester



1.Application:

HVS-1000ZF Fully Automatic Vickers Hardness Tester is mainly used to test the micro Vickers hardness values for various metals and some non-metals materials.

It is suitable to test hardness value for various parts such as machining parts, forging parts, cast iron and steel; non-ferrous metals and parts after heat treatment, etc.

At the same time, it is also fit for testing the depth of effective hardened layers, coating layers and heat affected area of welding parts. Besides, it is used to observe the metallurgical structure inside the various kinds of metal parts and capture its images, display and print output, especially fit to test out the distribution curves of hardness gradient for work-pieces.

2.Main Functions:

- 2.1 Test table moves in Z axis direction automatically and image of indentation will be focused automatically as well.
- 2.2 Motorized turret with 2 different objectives 10X & 40X, it can scan the profile of specimen in larger range with lower amplification or accurately measure the hardness value with higher amplification according to requirement.
- 2.3 The system can be used in whole or separate, it is very flexible.
- 2.4 With built-in step motor to control the position of automatic test table, press the mouse to control, the system has multiple controlling models; therefore it is with high position precision, good repeatability precision, fast moving speed and high working efficiency.
- 2.5 The software can control the hardware operation of the hardness tester, they may communicate each other.
- 2.6 The automatic position test table may move in double directions and equips up a safe to avoid the damage to the tester caused by error operations.
- 2.7 The image capturing device with fast reflecting speed, high automatic measuring accuracy and good repeatability improves the efficiency and precision of hardness test.
- 2.8 The thin test line with 1 pixel, measures fine test precision even when manually test.



Model	HVS-1000ZF Fully Automatic Vickers Hardness Tester & Control System
System Description	After choose a test method, whole test process including the indentation pressing, dwelling, readout and data record will be continuously, promptly and automatically finished. According to different requirements, select straight line, Z-shaped line, circle, arc line, optional point, matrix or self-learn method. By means of data handling software, the system increases the readable of non-clear indentation on not smooth surface. The depth values of hardened layers which continuously test from the specimen may be displayed as a table form. It is easy to output various data such as test data, hardness value table, depth value of hardened layers, Max value, Average Value and Min. Value.
Hardness Tester Control	Automatically control the hardness tester: motorized turret (automatically shift among the status of objective, indenter, objective); automatically loading; automatic measuring control; set the luminosity of light source for micro Vickers hardness tester. Select the exchange of controlling objective and change the calculating specifications which reflect at the software interface. Select or start to control the loading position which the indenter of hardness tester will automatically turn for loading; loading, dwelling and unloading, and the automatically return back to measuring objective position. The load value set on the hardness tester will display on the page of software.
Control Method Of Test Table Moving (Patten)	The software system can control the motorized test table to move under instruction of program. It may: (1) Test mode (Random A) With this model to press indentation and readout it's data at an optional point. (2) Test mode (Random B) Test and readout optional point. Turn optional angle to select the coordinate position. (3) Press and readout the indentation in cross direction (X axis direction) (4) Press and readout the indentation in longitudinal direction (Y axis direction) (5) Test mode (Line Set A) With this model to press indentation and readout at the direction with an angle to the surface.(Z-shaped moving, the broken line moving for depth test of hardened layer.) (6) Test mode (Line Set B) With this model to press indentation and readout at a fixed intervals. (7) The pathway coordinate's moving, etc. to make program method. Above method can set 8 straight lines at same time, each line may set 999 positions.
Test Method	Automatic mode: <u>automatically load</u> + <u>automatically measure</u> + <u>automatically display test result</u>. May select manually mode to test.
Image's Capture	Adopt high quality and high-resolution camera with 1.3 mega-pixels. Large size original image can be captured, and many image compressing methods are easy to use (normal file forms like BMP and JPG, etc are used as storage forms for image's capturing and test results.) Adopted technique of pixels recognition, the automatic Vickers indentation test system analyses the image of indentation by means of the special Vickers hardness indentation analysis software.



& Recognition Method	The analysis software adopts digital image handling technique, the edge cut algorithm to pick up the edge of test indentation; analyses the signals picked up from the test indentation with the wavelet multi resolution theory; and use least square method to fit the straight line at the edge of indentation, then pick up the indentation edge of micro hardness. Realize to quickly and accurately pick up the indentation edge range of microstructure Vickers hardness test, and automatically calculate the Vickers hardness values. Increase the readable for non-clear indentation on the not smooth plane.
Automatic Test Time	About 0.3 second/ per indentation
Test Repeatability	$\pm 1.0\%$ (700HV/500gf)
Min. Testable Indentation	About 5 μ m (automatically test)
Min. Test Unit	0.01 μ m
Language	English
Data Output Forms & Edit Functions	Make the inspection report according to client's requirement: With data handling software, the hardened layer's depth values caused from continuously test of specimen may be displayed in table form. It can easy output the various test data such as table of hardness values, depth values of hardened layers, Max value, average value and Min. value. Display and output the color image with hardness values. The hardness value, hardness table, depth drawing of hardened layers and image or inserted data, etc. can be edited in "WORD" (or "EXCEL") flexibly and printed out the test report including mathematical statistics and depth values curve lines of hardened layers, stored in Word (or Excel) form. The shaped drawing of specimens can be printed out, observed and stored. The indentation and its background microstructure can be reflected, at the same time, do metallurgical analysis and observation under the objectives of different amplification.