



VICKERS

as well as

VICKERS cum BRINELL

Hardness Testing Machine



Features :

BIE make Vickers as well as Vickers cum Brinell Hardness Testers Models: BV-50, BV-50-S, BV-120, BV-120-S, BV-250, BV-250-S, are suitable for Vickers and Brinell Hardness of steel and other metals. These machines are designed and manufactured for very high accuracy, reliability and ease of operation. The selection of load is effected with the push button control system. The measurements of diagonal / diameter of indentation is done with the help of built-in optical system with graduated readout with Micrometer. After taking indentation on the work piece, the objective lens is automatically swivelled into position and image of indentation appears on the focusing screen fitted in front of the machine. A push button is provided for starting the loading cycle and unloading is accomplished through hand lever. This machine conforms to IS: 1754-1986 for Vickers and IS: 2281-1983, BS: 240 for Brinell Test.

Vickers Hardness Testing Machine :

- BV-50** : Only for Vickers test load range 5 kgf to 50 kgf
- BV-50-S** : Only for Vickers test load range 1 kgf to 50 kgf
- BV-120** : Only for Vickers test load range 5 kgf to 120 kgf
- BV-120-S** : Only for Vickers test load range 1 kgf to 120 kgf

Vickers cum Brinell Hardness Testing Machine :

- BV-250** : For Vickers and Brinell Test load range 5 kgf to 250 kgf
- BV-250-S** : For Vickers and Brinell Test load range 1 kgf to 250 kgf



Mastering the fine art of testing

Salient Features :

- Testing range is very wide, from soft metal such as lead up to the hardest, like hardened steel.
- Thin sheet metal is perfectly tested because the load applied is very small .
- Same hardness number is obtained on the same specimen, regardless of the load applied.
- Built in projection screen to get accurate results.

Technical Data :

| Models | BV-50 | BV-50-S | BV-120 | BV-120-S | BV-250 | BV-250-S |
|---|---|--|---|--|---|--|
| Loads (kgf.) | 5, 10, 15, 20, 30, 40 & 50 (Loads for Vickers) | 1, 2, 5, 10, 15, 20, 30, 40 & 50 (Loads for Vickers) | 5, 10, 15, 20, 30, 40, 50 60, 100 & 120 (Loads for Vickers) | 1, 2, 5, 10, 15, 20, 30, 40, 50, 60, 100 & 120 (Loads for Vickers) | 5, 10, 15, 20, 30, 40, 50 60, 100 & 120 (Loads for Vickers) | 1, 2, 5, 10, 15, 20, 30, 40, 50, 60, 100 & 120 (Loads for Vickers) |
| | 15.625, 31.25 (Loads for Brinell) * | 15.625, 31.25 (Loads for Brinell) * | 15.625, 31.25, 62.5 (Loads for Brinell) * | 15.625, 31.25, 62.5 (Loads for Brinell) * | 15.625, 31.25, 62.5, 187.5, 250 (Loads for Brinell) | 15.625, 31.25, 62.5, 187.5, 250 (Loads for Brinell) |
| Optical Magnification(X) | 70X, 140X | 70X, 140X | 70X, 140X | 70X, 140X | 35X, 70X, 140X | 35X, 70X, 140X |
| Maximum Test Height (mm) | 250 | 250 | 250 | 250 | 250 | 250 |
| Sweep of Machine Frame (mm) | 150 | 150 | 150 | 150 | 150 | 150 |
| Weight Approx. (kgs) | 175 | 180 | 185 | 190 | 195 | 200 |
| Dimension L x W x H (mm) (Approx.) | 660 x 320 x 990 | 660 x 320 x 1130 | 660 x 320 x 990 | 660 x 320 x 1130 | 660 x 320 x 990 | 660 x 320 x 1130 |
| Mains Supply | 0.1 KVA, 1 Phase, AC, 220V, 50Hz | | | | | |
| • Loads can be supplied in Newtons also | | | • Least count of optical system 0.0005mm | | | |
| * These Brinell Loads can be used by purchasing suitable ball indenters and test blocks | | | | | | |
| Measuring Range Possible w.r.t Selected Optical Magnification | 1. | 0 to 3.2 mm on 35X Magnification | | | | |
| | 2. | 0 to 1.6 mm on 70X Magnification | | | | |
| | 3. | 0 to 0.8 mm on 140X Magnification | | | | |

Standard Accessories :

| Models | BV-50 | BV-50-S | BV-120 | BV-120-S | BV-250 | BV-250-S |
|--|--------|---------|--------|----------|--------|----------|
| Flat Table of 100 mm dia. | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. |
| Vee Table for Specimen - 6 to 80 mm dia. | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. |
| Vickers Diamond Indentor | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. |
| 2.5 mm Ball Indentor (without ball) | - | - | - | - | 1 no. | 1 no. |
| 5 mm Ball Indentor (without ball) | - | - | - | - | 1 no. | 1 no. |
| Vickers Hardness Test Block | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. |
| Brinell Hardness Test Block | - | - | - | - | 1 no. | 1 no. |
| Electrical Cord | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. | 1 no. |
| Instruction Manual | 1 Book | 1 Book | 1 Book | 1 Book | 1 Book | 1 Book |
| 2.5 mm T.C. Ball | - | - | - | - | 1 No. | 1 No. |
| 5 mm T.C. Ball | - | - | - | - | 1 No. | 1 No. |

We can also supply :

- Range of Hardness Testers (Brinell & Rockwell),
- Dynamic Balancing Machines,
- Universal Testing Machines,
- Tensile Testing Machines,
- Dynamic Hardness Tester,
- Impact Testing Machines
- Spring testing Machines.
- Digital Rockwell Hardness Tester

BIE reserves the right to change the specification without prior notice due to constant improvement in design



Manufactured By :

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