

Webster Hardness Tester

- A Portable, Fast, Accurate Hardness Gauge Available in Several Models for Testing Materials such as Aluminum, Brass, Copper and Mild Steel.
- Quickly identify tempers.
- Tests a variety of shapes that other testers cannot check: Extrusions, Tubing and Flat Stock.

USES AND APPLICATIONS

- For identifying heat-treated from non-heat-treated parts
- Provides correlation between a bench mounted hardness tester and the production line
- For segregating materials in stock
- For differentiating between soft or work-hardened material
- For identifying parts made from improper or substandard alloys
- Checking for proper heat-treatment response
- Useful in conjunction with stationary laboratory hardness testers. Gives a rapid 100% check on parts which would consume many man-hours with slower operating test equipment
- can be used on assemblies which cannot be brought to the laboratory

Each tester is shipped in a fitted case with a spare penetrator, adjusting wrench and standard test strip

FEATURES

- One hand operation and portability
- Round 3/8 inch diameter anvil permits testing a great variety of shapes
- Simple operation permits readings independent of the operator's skill
- Test is made by simply applying pressure to the handles until "bottom" is felt
- Easy-to-read dial indicator with 20 graduations permits use of the tester as "go" and "no-go" gauge, or values can be converted to other standard scales
- Standard hardness gauge tests materials up to 1/4 inch in thickness
- Increased capacities available up to 1 inch

OPERATION

This sectional view shows the basic design principle of the Webster Hardness Tester. The different models vary only in penetrator and load spring design. These combinations give the ability to test a wide range of hardnesses and metals.

The penetrator housing, which contains the penetrator and load spring, slides vertically in the frame of the tester when pressure is applied to the handles. Only sufficient pressure is needed to "bottom" the lower face of the housing against the work. Resistance of the work to the penetrator causes the penetrator to recede into the housing against the spring pressure. The degree of penetration on the test specimen is indicated on the dial indicator sitting on top of the housing assembly. The load can be varied by adjusting the nut above the load spring, permitting the dial reading to be easily corrected against a test block of known hardness.

A penetration of 0.010 inch produces a full scale reading on the dial indicator. Therefore materials in the softer hardness range should be of sufficient thickness so that the anvil will not influence the test and produce an "anvil effect". In general, soft materials under 0.025 - 0.030 in thickness will not give true readings.

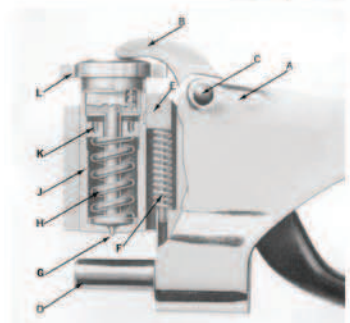


FIG. 9

WEBSTER HARDNESS TESTER

Parts List for Models B, B-75 and BB-75

A	Part No.	MODEL		
		B	B-75	BB-75
B	103	103	103	103
B	104-B	104-A	104-A	104-A
C	108	108	108	108
D	107	107	107	107
E	112	112	112	112
F	111	111	111	111
G	116	117	117	117
H	110-B	110	110-B	110-B
J	118	118	118	118
K	106	106	106	106
L	125-B	125-B	125-B	125-B

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DIFFERENT MODELS

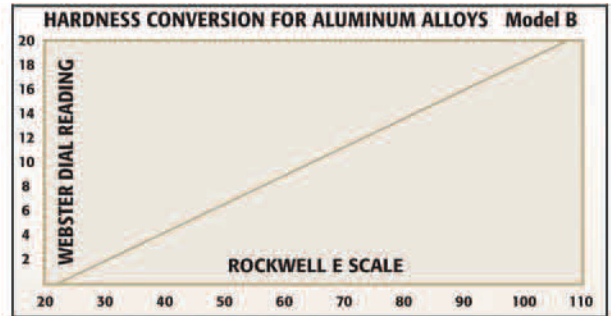
Webster hardness testers are available in the following three models:

WEBSTER HARDNESS TESTER MODEL B FOR ALUMINUM ALLOYS

The Model B Tester is designed to cover the hardness of aluminum alloys from the 1100 to the 7075 series. The 20 graduations on the Webster dial indicator covers the range between 25 and 110 on the Rockwell E scale.

The graphs on this page show the range covered by the Model B Tester. The lines for these graphs were derived from many tests on a variety of alloys and show an average curve. Production lots of alloys can vary in workhardening characteristics which may result in instances where readings do not fall precisely on the curve.

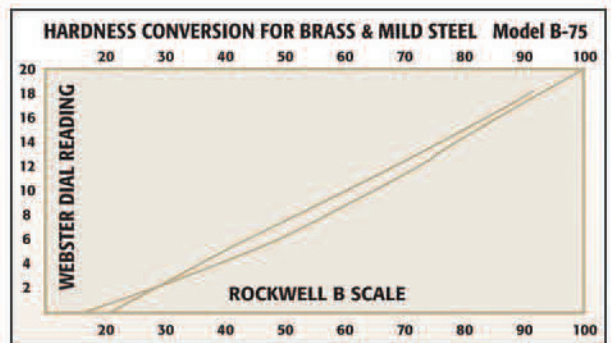
All tests were conducted with the Model B Tester set to read 16 on a standard test strip of 6061-T6 aluminum alloy of Rockwell E 90 ± 1 hardness.



WEBSTER B-75 HARDNESS TESTER FOR BRASS AND MILD STEEL

The model B-75 Tester was developed to obtain more sensitive response to slight changes in the upper range of hardness covered by the Model B. This sensitivity is particularly useful in testing mild steel and the stronger aluminum alloys. For brass the B-75 covers the range from annealed to full-hard. This added sensitivity is accomplished by incorporating a penetrator of slightly different contour and a heavier load spring than used in the Model B. The 20 graduations on the Webster dial indicator covers the range between 20 and 100 on the Rockwell B scale.

The graphs on this page show the range covered by the Model B-75 Tester. Results were derived from many samples, and show the average curve. All tests were conducted with the Model B-75 Tester set to read 5 on a standard test strip of 6061-T6 aluminum alloy of Rockwell E 90 ± 1 hardness.



WEBSTER HARDNESS TESTER BB-75 FOR COPPER

The model BB-75 Tester was developed to answer the need of certain industries for a method of rapidly testing the hardness of electro-deposited copper and copper in the low hardness range.

The B-75 penetrator is used to give sensitivity and the Model B load spring is employed to give light pressures. This combination allows the user to test the soft range of many common materials. The graph below shows the range covered by the Model BB-75 Tester on copper. Results were derived from many samples, and show the average curve. All tests were conducted with the Model BB-75 Tester set to read 17 on a standard test strip of 6061-T6 aluminum alloy of Rockwell E 90 ± 1 hardness.

