

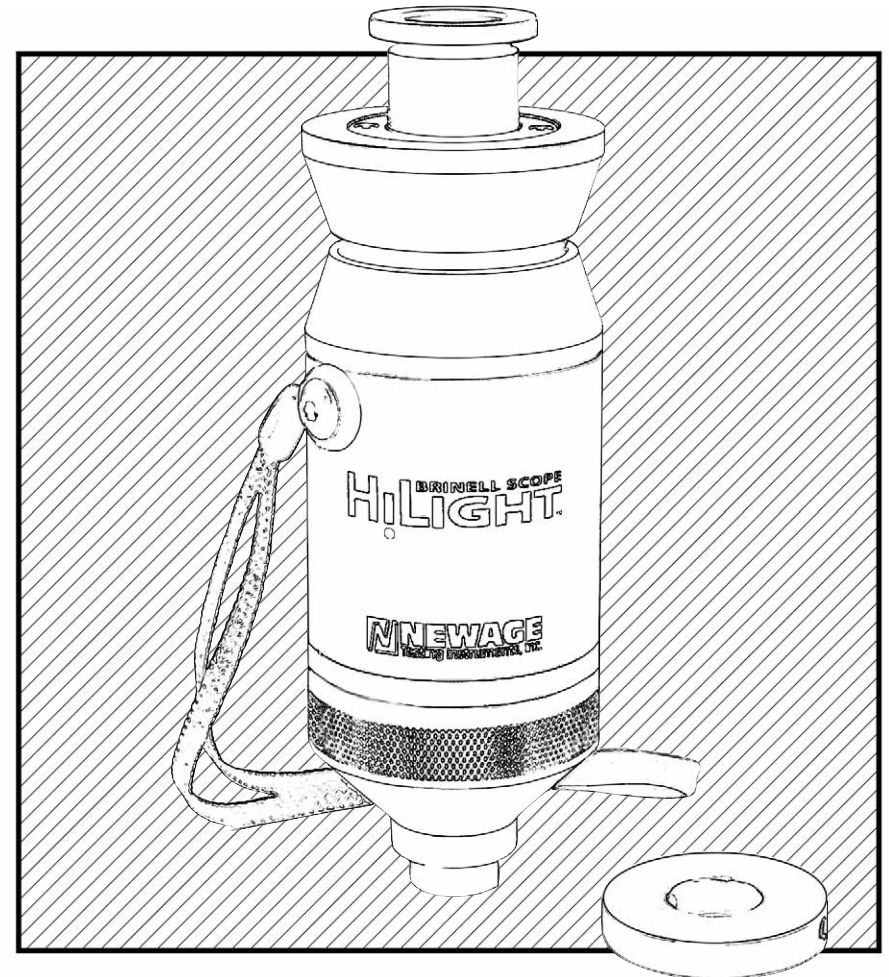
INDENTATION DIAMETER		HARDNESS NUMBER FOR EQUIVALENT LOAD		INDENTATION DIAMETER		HARDNESS NUMBER FOR EQUIVALENT LOAD	
MM.	500	3000		MM.	500	3000	
2.0	157.5	945.3		4.5	29.8	178.5	
2.1	142.7	856.5		4.6	28.4	170.4	
2.2	129.9	779.5		4.7	27.1	162.8	
2.3	118.7	712.4		4.8	25.9	155.6	
2.4	108.9	653.4		4.9	24.8	148.9	
2.5	100.2	601.5		5.0	23.8	142.6	
2.6	92.6	555.3		5.1	22.8	136.6	
2.7	85.7	514.2		5.2	21.8	131.0	
2.8	79.6	477.5		5.3	20.9	125.6	
2.9	74.1	444.4		5.4	20.1	120.6	
3.0	69.1	414.6		5.5	19.3	115.9	
3.1	64.6	387.7		5.6	18.6	111.4	
3.2	60.5	363.2		5.7	17.8	107.1	
3.3	56.8	340.9		5.8	17.2	103.0	
3.4	53.4	320.6		5.9	16.5	99.2	
3.5	50.3	302.0		6.0	15.9	95.5	
3.6	47.5	284.8		6.1	15.3	92.0	
3.7	44.9	269.1		6.2	14.8	88.7	
3.8	42.4	254.6		6.3	14.2	85.5	
3.9	40.2	241.2		6.4	13.7	82.5	
4.0	38.1	228.8		6.5	13.3	79.6	
4.1	36.2	217.2		6.6	12.8	76.8	
4.2	34.4	206.5		6.7	12.4	74.1	
4.3	32.8	196.5		6.8	11.9	71.6	
4.4	31.2	187.2		6.9	11.5	69.1	

ONE YEAR LIMITED WARRANTY

Newage Testing Instruments, Inc. warrants this product to be free from defects in material and workmanship for a period of one year from date of shipment. During this period Newage will repair or replace at Newage's facility, and at Newage's discretion, any defect of material or workmanship with the following exceptions:

- Damage caused by misuse, abuse, negligence or modifications.
- Batteries

It is expressly agreed that this warranty shall replace all warranties of fitness for any particular purpose and the warranty of merchantability. In no event, whether as a result of breach of contract or warranty or alleged negligence, shall supplier be liable for direct, indirect, special or consequential damage including, but not limited to, loss of cost of capital, cost of substitute products, facilities, or services, downtime costs, or claims of customers for such damage.



Model #5620-05

BRINELL SCOPES
HILIGHT™



820 Pennsylvania Blvd. Feasterville, PA 19053 Tel: 215-355-6900 Fax: 215-354-1803
newage.info@ametec.com www.hardnesstesters.com



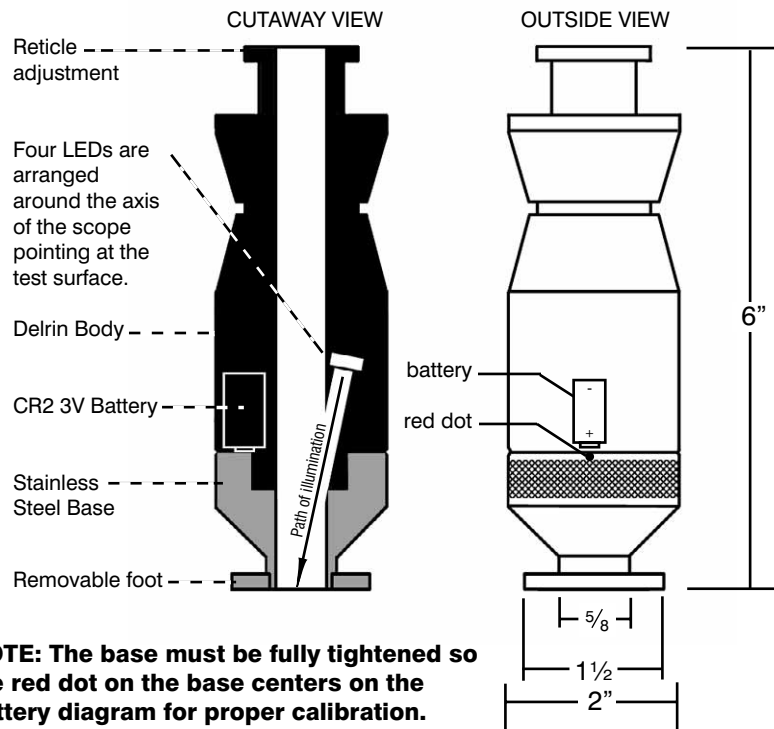
HiLight Scope Model #5620-05 Description

The HiLight scope supports accurate measurements of Brinell indentations. The HiLight scope has a 7 mm reticle in a flat field with 20x optical magnification suitable for measurement of Brinell impressions. An optional wrist strap may also be used to prevent the operator from accidentally dropping the scope.

The model 5620-05 has a self-contained illumination system which features highly efficient LED (light emitting diode) illumination with up to 200 hours of continuous duty per battery. The LEDs will seldom, if ever, require replacement over the life of the scope. The LEDs are directed down at a sharp angle directly at the test surface. The instrument is built to be used in both laboratory and shop environments.

Specifications

Magnification	20X
Reticle scale length	7 mm
Scale Divisions	.05 mm
Field Diameter	10 mm
Height x Diameter	6" x 2"
Scope Weight	2-1/2 lb.
Shipping weight	4 lb
Battery, Part #MC0143	CR2 , 3 V



NOTE: The base must be fully tightened so the red dot on the base centers on the battery diagram for proper calibration.

Operation

- 1) Determine whether the removable foot should be used. (The scope is shipped with the flat foot attached.) If a smaller diameter support is needed in order to test in a more confined area (down to 5/8"), take off the removable foot which snaps on and off with a ball detent.
- 2) Turn on the illumination by screwing the metal base against the Delrin body of the scope. There is a battery inside the scope that will make contact. **The base must be fully tightened so the red dot on the base centers on the battery diagram for proper calibration of the scope.**
- 3) Place the scope on a test surface so a Brinell impression is in view.
- 4) Focus on the reticle by turning the focal ring. The test surface should remain in sharp focus.
- 5) Put the scope directly on the test impression and move the scope so that the edge of the indentation meets the origin of the reticle and make the measurement across the diameter. Rotate the scope 90 degrees and remeasure.
- 6) Average the diameter measurements
- 7) Calculate the Brinell hardness by the following formula or use Table 1 or use a Brinell Hardness Conversion Chart.

$$H = \frac{P}{\pi D/2(D - \sqrt{D^2 - d^2})}$$

where H = Brinell Hardness Number
P = Machine Load Applied (Kgs)
D = Machine Ball Diameter (mm)
d = Indentation Diameter (mm)

Maintenance

- 1.) Keep fingers away from optical surfaces. Use lens tissue and an alcohol solution to clean surfaces.
- 2.) Occasionally clean the battery contact surface of the Metal base if the scope is being used in a corrosive environment.
- 3.) Battery Replacement: The battery is accessible by unscrewing the metal base from the Delrin body. The battery is 3 Volt, Type CR2, lithium.