

Concrete Rebound Hammer (Sclerometer) NOVOTEST MSh



Concrete rebound hammer (sclerometer) – is a device for concrete and other building materials strength testing. The engineer Ernst Schmidt invented the construction of the sclerometer.

The method is based on the impacting the impact plunger on the concrete surface with predetermined (normed) impacting energy and subsequent measuring of the height of the striker rebounding. The height of the striker rebounding will be proportional to the strength of concrete. The strength of concrete is determined with the calibration charts that are supplied with the instrument.

Concrete Rebound Hammer NOVOTEST MSh is very ease in operation, has good reliability of design and high measurement accuracy, so that this method is the most common method of measuring the strength of concrete in the world. The strength testing with the Concrete rebound hammer is correspond with ASTM C 805; ASTM D 5873 (for rock); DIN 1048, p. 2; ENV 206; EN 12 504-2; ISO / DIS 8045.

There are several versions of the device, which are different in impacting energy.

- The most “powerful” Rebound hammer is designed to measure the strength of concrete with a thickness of 70-100mm and more, also for the strength testing of massive rocks with impact energy – 2,207J (Nm). This is the base and the most common model of Rebound hammer, about 90% of the Rebound hammers in the world have the same impact energy.
- Average “powerful” Rebound hammer has the 735J (735 Nm) impacting energy. The impact energy is reduced threefold in compared with the base model. The main application of this instrument is measuring the strength of bricks and concrete products with a wall thickness less than 100 mm and small sizes of sample, also it used for testing the less strength stones and rocks.
- The least “powerful” Rebound hammer has 196J (196Nm) impact energy. The main purpose is the strength testing the mortar of brick masonry.

Depending on requerments tasks user always need to select the correct model of Rebound hammer. All models, independently of impact energy, are devices for non-destructive testing, so that they are not destroying the object of testing.

To verify the accuracy of Rebound hammer, a special calibrated anvil is used . Correctly functioning instrument have to display certain value testing the standard anvil.

- **Advantages**

Concrete Rebound Hammer NOVOTEST MSh has 3 modifications with different impacting energy, so that user can test all kinds of concrete and other building materials

- Specifications

| Names / model | Rebound Hammer NOVOTEST MSh-225 | Rebound Hammer NOVOTEST MSh-75 |
|---|------------------------------------|-----------------------------------|
| Measurement range of strength, MPa | 10 – 60 | 10 – 60 |
| Impact energy, J | 2207 | 735 |
| Minimum thickness of testing object, mm | 70 and more | 50 – 100 |
| Measurement accuracy, % | | 10 |
| Hardness value of impact plunger working surface, HRC, no less | | 60 |
| Surface roughness of testing object, Ra um, no worse | | 40 |
| Radius of impact plunger, mm | | 25 |
| Operating temperature range, ° C | | -20 ... +50 |
| Weight of the device, kg, no more | | 1 |
| Gross weight of package, kg | | 1.9 |
| Dimensions of the package, cm | | 20*34*10 |

- Available options

- Special calibrated anvil for verifying the accuracy of the device.
- There are several modifications of the measuring methods, which are different in impacting energy:
 - Concrete Rebound Hammer NOVOTEST MSh-225
 - Concrete Rebound Hammer NOVOTEST MSh-75
 - Concrete Rebound Hammer NOVOTEST MSh-20

- Standard package

- Rebound hammer (impacting energy as required)
- Grinder for surface preparation
- Operating manual
- Case