schmidt hammers

Concrete Test Hammer

The concrete test hammer was developed by Ernst O. Schmidt and introduced by Proceq at the beginning of the 1950's. It is without a doubt the most widely used NDT measuring instrument for a rapid assessment of the condition of a concrete structure. Its application has extended over the years to rock testing and paper roll hardness testing. The latest edition to the hammer family is the SilverSchmidt - the most advanced rebound hammer available.

Original Schmidt N/L Series

The benchmark against which all rebound hammers are compared and the basis of every international rebound hammer standard. Available with different impact energies to allow customers to test a wide variety of materials and types of structure.

Original Schmidt NR/LR Series

Ever popular version with impact values recorded on registration paper for ease of control. Greatly simplifies the calculation of the rebound value and in checking the uniformity of the object under test.

Digi-Schmidt ND/LD Series

The world's first digital rebound hammer with data storage, impact angle correction and direct display of compressive strength. Also allows correction for form factor and carbonation. Comes with a number of correlation curves pre-programmed, allowing the user to select the most suitable for the mixture under test.

SilverSchmidt N/L Series

The world's most advance rebound hammer, with unmatched dispersion characteristics, durability and measuring range. User defined correlation curves for customer specific mixtures may be downloaded onto the hammer for best possible assessment of compressive strength.

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Made in Switzerland

... more than 50 years of know-how you can measure!

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Original Schmidt Type N/L

Measuring range 10 to 70 MPa (1,450 to 10,152 psi). The rebound value is read directly from the scale. Typical applications are uniformity testing, identification of areas of poor concrete quality and compressive strength estimation. The type L Original Schmidt is the ideal option for testing thin walled items with a thickness between 50 to 100 mm (2 in. and 4 in.) or for analyzing small components. It is also suitable for examining cast stone components which are sensitive to impact. In rock mechanics, the type L Original Schmidt is commonly used for the classification of rock cores and brittle rock.

Original Schmidt Type NR/LR

Measuring range 10 to 70 MPa (1,450 to 10,152 psi). The rebound values are recorded as a bar chart on registration paper. One roll of paper can record up to 4'000 impacts.

Digi-Schmidt Type ND/LD

Measuring range 10 to 70 MPa (1,450 to 10,152 psi). The rebound values are stored in the electronic display device and may be converted automatically to compressive strength values. All data and parameters may be transferred to a PC for further evaluation with the ProVista software. The memory capacity on the display device is sufficient for up to 250 measurement series of 10 impacts each.

Type N

Standard impact energy 2.207 Nm (1.63 lb ft). The test object should have a min. thickness of 100 mm (3.9 in.) and be firmly fixed in the structure.

Type L

Low impact energy 0.735 Nm (0.54 lb ft). For brittle objects and structural units less than 100 mm (3.9 in.) thick.

Anvil

All major standards recommend to check the correct calibration of a Schmidt hammer on an anvil prior to testing. Proceq anvils are fully compliant with EN 12504-2.

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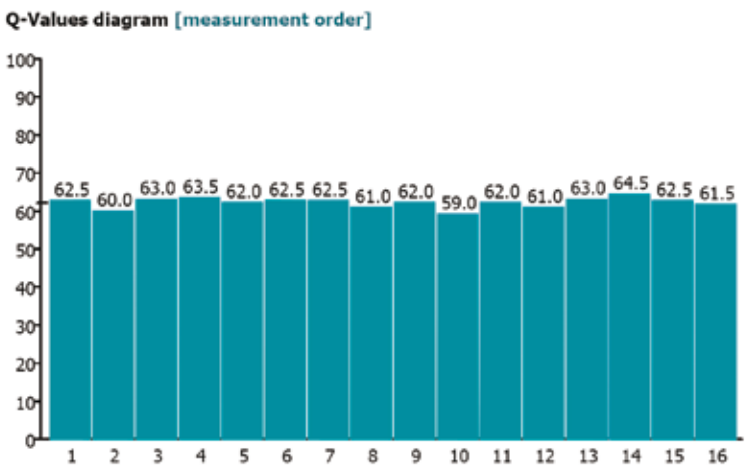
SilverSchmidt Type ST / PC (N/L)

Measuring range 10 to 100 MPa (1,450 to 14,500 psi). Extended range can be achieved with user defined curves. The SilverSchmidt sets a new benchmark for rebound hammer testing. It has a unique measurement principle and fully redesigned mechanics. Independent validation testing by BAM in Berlin has shown the SilverSchmidt to have less dispersion than the classical hammer over the entire range. Its inherent impact angle independence removes one possible source of user error completely. A large memory, automatic evaluation according to pre-defined statistical criteria and software analysis tools greatly enhance the uniformity assessment application. The SilverSchmidt makes it easy for the user to create custom conversion curves specific to the mix design under test, thereby greatly increasing the validity of compressive strength estimates. The SilverSchmidt makes it easy for the user to create custom curves specific to the mix design under test, thereby greatly increasing the validity of compressive strength estimates. This is the procedure recommended in all relevant international standards and guidelines.

Mushroom Plunger

The mushroom plunger is designed to operate exclusively with the SilverSchmidt PC Type L for measuring on fresh or low strength concrete, 5 - 30 MPa (725 to 4,351 psi). Typical applications are formwork removal and monitoring of strength development in tunnel linings.

Hammerlink Software



Q-Values

62.5
60.0
63.0
63.5
62.0
62.5
62.5
61.0
62.0
59.0
62.0
61.0
63.0
64.5
62.5
61.5

Statistics

Measurements	N = 16
Invalid measurements	Ni = 0 (0%)
Mean value	f = 74.5 N/mm² (62.0 Q)
Standard deviation	s = 1.5 N/mm² (1.3 Q)

Settings

Averaging mode	Mean
Conversion curve	REF N
Form factor	1.00
Carbonation depth	0.0 mm
Unit	N/mm²
Serial number	SH01-001-0115
Spring type	SilverSchmidt N

Comment

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Ordering Information

Units Schmidt Hammers

Part No.	Description
310 01 001	Original Schmidt Type N
310 02 000	Original Schmidt Type NR
310 03 002	Original Schmidt Type L
310 04 000	Original Schmidt Type LR
340 00 202	Digi-Schmidt ND
340 00 211	Digi-Schmidt LD

Units SilverSchmidt

Part No.	Description
341 30 000	SilverSchmidt ST Type N
341 40 000	SilverSchmidt ST Type L
341 31 000	SilverSchmidt PC Type N
341 41 000	SilverSchmidt PC Type L

Service and Warranty Information

Proceq is committed to providing complete support for a Concrete Test Hammer testing instruments by means of our global service and support facilities. Furthermore, each instrument is backed by the standard Proceq 2-year warranty and extended warranty options.

Standard warranty

- Electronic portion of the instrument: 24 months
- Mechanical portion of the instrument: 6 months

Extended warranty

When acquiring a Concrete Test Hammer, max. 3 additional years of warranty coverage can be purchased (for the electronic portion of the instrument). The additional warranty must be requested at time of purchase or within 90 days of purchase.

Applicable Standards

The following standards have been applied in the Concrete Test Hammers for the procedure to determine the rebound number and for the recommended method to estimate compressive strength:

EN12504-2 (European Standard)

ASTM C 805 (North American Standard)

JGJ/T 23-2001 (Chinese Standard)

EN 13791

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