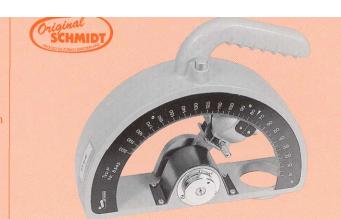
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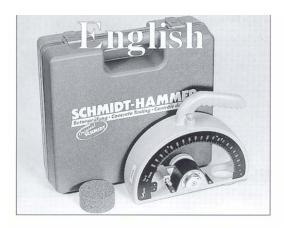


Operating Instructions
Mode d'emploi

Baustoffprüfhammer Building Material Test Hammer Scléromètre à matériau de construction

P/PT/PM





The building material test hammer SCHMIDT is designed for the non-dtesting of the following materials:

Type P: Concrete, light weight concrete, plaster work, plaster floors a coatings with low hardness and compressive strength and als testing of the early strength (time for removal of casings).

Measuring range from 5 to 30 N/mm² compressive strength.

**Type PT:** Light weight concrete, gypsum and similar extremely soft bu materials. Measuring range from 0.2 to 5 N/mm<sup>2</sup> compressive

Type PM: Masonry

The compressive strength and uniformity of building materials are meas. The test hammer strikes the building material with a defined energy. A behavior bounds depending on the hardness of the tested material. The rebound material from a scale.

Subject to change

## rm Supplied

### Hammer P/PT/PM

act energy: 0.883 Nm

isuring range type P: 5 to 30 N/mm² compressive strength asuring range type PT: 0.2 to 5 N/mm² compressive strength isuring range type PM: see Fig. 9

nding stone, operating instructions, calibration certificate carrying case 325 x 295 x 105 mm  $\,$ 

ıl weight 3.2 kg

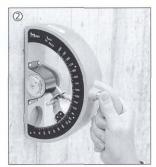
#### essories

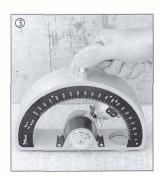
ing anvil no. 31010000

## A. Measuring Procedure

Each test point should be tested with at least 8 to 10 impacts. Distance between impact points minimum 20 mm. Avoid measurements on gravel particles. Values which are abnormally high or low should be eliminated, for example the largest and the smallest value. The conversion curves (Fig. 1-8) can be used to convert the rebound value read (mean value) into the compressive strength. Classification (Fig. 9) is possible in the case of mortar (type PM). For all other construction materials, it is advisable in each case to carry out a special test series to determine the relationship between rebound value and material quality.







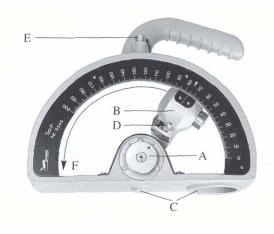
- ① Smooth test area with a ding stone (remove plas paint).
- ② Place pendulum-type havertical in the case of w (position V)
- ③ or horizontal in the case floors (position H) to th area (contact surfaces (( make good contact).

ip lever (D) and bring hammer (B) to the top end position (F). gger impact by means of pushbutton (E) and read rebound value.

ter the pendulum-type hammer has been used, switch knurled bb (A) to position V and bring the hammer (B) to the top end sition (F) by means of lever (D) and push lever (D) upwards to k it

# nange position vertical - horizontal

r adjusting the position V or H, the hammer (B) must be fixed 75 on the scale and the knurled knob (A) turned to the desil position.



#### **B.** Corrections

#### 1. Shape Factor as



The PROCEQ conversion curve for a concrete age of 14 to 56 days has been defined with  $200 \times 200 \times 200$  mm test specimens. If the strength is defined on specimens of different dimensions, the strength determined from the curve is to be multiplied by the shape factor  $\alpha$ s. The relevant shape factor is to be obtained from the standards. For cubes of  $150 \times 150 \times 150 \, \text{mm}$ ,  $\alpha s = 1.05$ , for cylinders dia. 6" x 12",  $\alpha s = 0.85$ .

#### 2. General Information

- Type P: A low-sand, dry-mixed and insufficiently process concrete may have externally invisible gravel acc lation which impairs its strength but not the surfa hardness.
  - For indicated values of < 40, i.e. in the case of cu compressive strengths of less than 10 N/mm², at 1 2 or 3 cubes or drill cores must be taken from the structure in critical cases.</li>
- **Type PT:** In tests on horizontal surfaces, it is advantageous test specimen is placed on a heavy table or stone or on the floor.

e PM: The Dutch institute TNO was comissioned with the development of methods for testing pointing in masonry. After intensive studies the institute found the most suitable method to be the SCHMIDT building material test hammer. For this purpose the test hammer is fitted with a special head for testing in the mortar joint. Table for classification, see page 27.

### C. Performance Check

After 1000 measurements, the pendulum-type hammer should be checked on the testing anvil (Art. no. 31010000).



The testing anvil must be placed or a rigid and smooth surface (stone floor). The contact surfaces of anvil and hammer head must be cleaned. The SCHMIDT hammer for construction materials must reach the calibration value stated for the corresponding type on the anvil. If this is not the case, the unit must be overhauled by a service centre. The hammer (B) and its brake track in the housing should always

be clean and grease-free. If the hammer does not lock properly after the rebound, the brake track must be carefully cleaned with light naphtha.

# Conversion Curves (page 23 to 27)

Test Specimens	Type P		Type PT		Type PM
	N/mm <sup>2</sup>	fc'psi	N/mm <sup>2</sup>	pc'psi	
Cube 200/200/200	Fig. 1	Fig. 3	Fig. 5	Fig. 7	see
Cylinder	Fig. 2	Fig. 4	Fig. 6	Fig. 8	Fig. 9