

RA 100 Concrete (RA 100 混凝土共振分析仪)

产品名称	RA 100 Concrete (RA 100 混凝土共振分析仪)
公司名称	中侨博联 (北京) 仪器设备有限公司
价格	.00/个
规格参数	
公司地址	北京市怀柔区雁栖经济开发区雁栖路33号院1号楼103室(集群注册) (注册地址)
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产品详情

RA 100 Concrete (RA 100 混凝土共振分析仪)

Non-destructive, Quick Determination of Compressive Strength and Modulus of Elasticity on Samples of Cement, Mortar and Concrete

Wide range of strength – Mortar, normal concrete up to Ultra High Performance Concrete RA 100 Concrete

Higher level of production monitoring and better quality assurance Easier and more precise than ultrasound

Measurement only takes a few seconds

Robust algorithms

No alignment effort

Mobile use – up to 6 hours battery operation

Validity of measurement immediately identifiable

On-going recordings of different factors influencing the strength development: Temperature, moisture, composition, age on the young concrete, freeze-thaw cycles, curing and other environmental impacts starting from the day of casting

For Laboratory, Production and Construction Site Measurements on Cylinder, Bar and Cube Samples

By mechanical stimulation of resonance frequencies, the RA 100 Concrete measures according to the impact of elasticity on concrete samples directly and with combination values: Compressive strength, static and dynamic modulus of elasticity

Test Bench

High quality steel - stainless steel design

Dimensions: 530 x 250 x 230 mm

Weight: 7 kg Max. load up to 100 kg

Mount for adapter and chuck Acrylic glass downpipe with steel balls

Integrated microphone 50 Hz – 18000 Hz

Test bench operating temperature -10 to +85 C °

Sample temperature range -40 to +150 C ° (temporary up to +250 C °)

Computer and Software

Standard 10 Inch Tablet (opt. rugged Toughpad)

Windows 8.1

External keyboard

USB connector cable

Pre-installed RA100 Concrete software

Extensive possibilities for documentation and archiving

Interface for easy data export (CSV, DIFF etc.)

Measurement Range

Compressive strength: 0,1 MPa - 200 MPa

Modulus of elasticity: 1 - 70 GPa

Sound velocity: 300 m/s - 6000 m/s

Reference to Standards

Resonance measurement ASTM C 0213, British BS 1881-209

Dynamic modulus of elasticity can be converted to static modulus of elasticity by established reference curves.

Compressive strength can directly be determined by calibrating with the measured sound velocity. Standard EN 12510 (mortar prisms) and American ASTM C 666 (cubes)

In the freeze-thaw resistance test standards Eurocode EN/TR 15177 and American ASTM C 666 the relative change of the dynamic modulus of elasticity is used to evaluate internal structural damage.

Samples

Test bench for common standard test samples of the concrete industry: Cylinders 300 x 150 mm, cubes 150 mm

More over 40 other shaped samples like drill cores with uniform profiles (cylinders and bars) with 1 - 16 cm diameter

Determining the modulus of elasticity of concrete with resonance analysis

Ein Probekörper wird durch einen definierten mit einer Stahllugel eingeleiteten Impuls zur Schwingung angeregt. Die Schwingung wird durch zwei definierte Punkte auf dem Probekörper gemessen. Aus den gemessenen Schwingungsdauern und der Probekörperlänge kann die Schwingungsgeschwindigkeit bestimmt werden. Diese wird dann mit der gemessenen Probekörperlänge multipliziert, um die Schwingungsgeschwindigkeit zu erhalten. Diese wird dann mit der gemessenen Probekörperlänge dividiert, um die Schwingungsgeschwindigkeit zu erhalten. Diese wird dann mit der gemessenen Probekörperlänge dividiert, um die Schwingungsgeschwindigkeit zu erhalten.