



## APPLICATION NOTE

### RS8000 ROCK TEST HAMMER

Stonex India Pvt Ltd

#### Application requirement:

Stonex India Pvt Ltd required a non-destructive, accurate and easy to use hardness tester for evaluating marble and granite stone without affecting surface quality.

#### Solution:

The RS8000 - ISRM a Rebound value is utilised based on International Society of Rock Mechanics (ISRM) Standards for **in-situ testing for** measuring rebound value, which correlates to surface hardness (and variation across various batches), correlations to unconfined compressive strength (UCS) and rock classification types for identifying inconsistency in material quality, **without core sampling**.

Achieve faster, **more consistent hardness measurements**, improving **product sorting**, **reducing complaints** and reinforcing their reputation for premium quality.

Customer Name: - Stonex India Pvt Ltd



**Application requirement:**

To maintain their high standards for domestic and international clients, Stonex needed a device capable of testing a wide range of stone types—from softer marbles to denser granite—without damaging the surface or compromising aesthetic quality. The requirement was for a **non-destructive, highly accurate, and easy-to-use hardness tester** that could function effectively both in the factory and at the quarry site.

**Solution:**

The RS8000 offered critical features that aligned with Stonex's operational needs. Its **impact angle independence** ensured accurate rebound values regardless of test direction—ideal for uneven or angled stone surfaces. Built for **field durability**, the device is **dust- and dirt-resistant, lightweight, and ergonomically designed** for extended use in both quarry and factory environments.

The **intuitive touchscreen digital display interface**, combined with **USB/Bluetooth connectivity** and a dedicated **mobile application**, enabled real-time data syncing, easy remote operation, and on-the-go access to test reports and analytics. This significantly simplified quality tracking across multiple sites.

When used for natural stone or rock testing, the RS8000 may report **hardness classifications** per **ISRM standards** (International Society for Rock Mechanics), often in **rebound numbers** that correlate to rock hardness categories.

The RS8000 Rock Schmidt hammer is operated and utilised, generally in both of its versions which provide different levels of Impact energy:

- N: 2.207 Nm
- L: 0.735 Nm

The RS8000 also provides weathering grade determination.



The RS8000 is equipped with **preset statistical methods** as per **ISRM and ASTM standards**, allowing automatic calculation of rebound values. It supports critical functions such as **Unconfined Compressive Strength (UCS) testing, weathering grade evaluation, and Young's Modulus estimation** through correlation formulas—all essential for geological assessment and high-precision hardness evaluation in natural stone.

By integrating the RS8000, Stonex achieved **faster, consistent, and non-destructive hardness testing** on both **soft marble and hard granite**, leading to improved product

sorting, fewer customer complaints, and higher overall reliability. The mobile app further empowered their quality team by providing **instant access to results, remote device control, and seamless report generation**, strengthening both internal audits and client communication.



In conclusion, the RS8000 has become an **indispensable tool** in Stonex's quality assurance program—offering **technical precision, mobile-enabled efficiency, and long-term value** for stone testing operations. Its deployment reinforces Stonex's position as a trusted global supplier of high-quality natural stone.