

# Products & Practice

## AVA-3000

The AVA-3000 is used to measure air void parameters of fresh concrete. A mortar sample is obtained from a concrete placement with a sampling tool, and the sample is injected into the blue AVA release liquid (tinted glycerol) at the bottom of a riser column with water above. The mortar sample is then stirred gently, releasing air bubbles that rise through the water to a buoyancy pan at the top of the riser. The buoyancy pan is attached to a balance that measures the change in weight caused as the air bubbles displace water in the pan. Those changes in weight are continuously collected over the test duration, and the information is analyzed to determine the size distribution of the bubbles, as well as the air void spacing factor.

—Germann Instruments, [www.germanninstruments.com](http://www.germanninstruments.com)



## DEWALT POWERSHIFT

DEWALT announced DEWALT POWERSHIFT™, an equipment system designed to allow users to transition away from gas-powered equipment without compromising performance. All DEWALT POWERSHIFT tools are powered by a 554 Watt-hour battery and a high-speed charger. The line also delivers fully integrated connectivity with the DEWALT Site Manager app, providing users with data on tool location and use. The DEWALT POWERSHIFT line includes the following tools:

- Plate Compactor—provides 3370 ft-lb (4569 J) of energy with controls that are mounted on an ergonomically designed folding handle;
- Rammer—features 2660 ft-lb (3610 J) of energy and antivibration insulators and mounted controls on the two-position handle;
- Lightweight Backpack Vibrator—features a durable roll cage with fully adjustable hi-visibility harness;
- Powerpack Vibrator—optionally activated remotely through DEWALT Wireless Tool Control™ and carried with an over-body hi-visibility harness;
- Power Screenshot—features fully adjustable handles and controls that can be mounted on either handle; and
- Core Drill and Stand—requires minimal wall or ceiling clearance and features technology to limit rotation in a bind-up situation.

—DEWALT, [www.dewalt.com](http://www.dewalt.com)



## EXO-T-22 and DGH 130-22

Hilti North America launched new cordless tools on the 22 V Nuron battery platform to offer greater value through its subscription tool service, Fleet Management. Two of those tools are the EXO-T-22 and the DGH 130-22.

The EXO-T-22 Tool Balancer is a wearable, backpack-like device that helps workers perform wall breaking with less physical exertion. Ergonomically designed and built for heavy demolition work, the EXO-T-22 suspends a tool, distributing its weight (up to 37 lb [17 kg]) to the operator's hips and reducing strain on his or her upper body.

The DGH 130-22 Concrete Finishing Grinder is optimized to minimize effort required for concrete surface finishing and grinding. Featuring a variable speed brushless 5 in. (127 mm) motor, the DGH 130-22 has an integrated dust shroud, and its palm-style operation enables accurate movement while grinding. For additional safety, it includes a sensor that automatically turns off the tool in case of an accidental drop.

—Hilti, [www.hilti.com](http://www.hilti.com)



# Products & Practice

## Makinex Portable Power Box

Makinex launched the Portable Power Box that features three 15A outlets and two 5 V USB-A outlets to provide 6 kW of power. Its 15 kWh battery can be charged by a 240 V circuit. Features include a robust frame for easy storage and maneuverability. With residual-current device (RCD) and thermal overload protection, this IP44-rated unit provides weather resistance, ensuring reliability and durability for a long operational experience. The Portable Power Box is also safe for indoor use and use in confined spaces.

—Makinex, [www.makinex.com](http://www.makinex.com)



## Volatile Free Polyurethane Rubber

Volatile Free, Inc. announced a new addition to its liquid polyurethane rubber line. The product features characteristics that will put less stress on the casting during demolding, resulting in a much lower breakage rate. Initial field testing indicates an 80% reduction in breakage rate, equating to less material waste and longer-lasting molds. Volatile Free, Inc. manufactures polyurethane rubbers and plastics, epoxies, and silicones that are used by concrete producers across North America.

—Volatile Free, Inc., <https://volatilefree.com>

## Wavelogix REBEL Concrete Strength Sensing System

Wavelogix announced the launch of the REBEL™ Concrete Strength Sensing System. REBEL sensors rely upon piezoelectric technology and an artificial intelligence (AI)-guided signal processing algorithm to determine the mechanical properties of concrete. The sensors can deliver strength data whenever it is needed—in real time, directly to the user's cell phone or other device. REBEL can be installed and monitored by virtually anyone on the jobsite. This technology not only reduces destructive concrete testing, but also enables the collection, management, and analysis of large volumes of reliable, physics-based data to build confidence across the construction industry regarding actual in-place concrete strength.

—Wavelogix, <https://wavelogix.tech>



## Book Notes

### *Reflections on Slope Stability Engineering* by Edward N. Bromhead

Slope stability engineering is both an art and a science practiced by many civil and geotechnical engineers involved in work on landslides, earth dams, breakwaters, coastal defense, earthworks slopes for roads, canals, railways, pipelines, and housing developments. This book is written in an informal style and is presented as a practitioner's guide to landslides and slope problems and their investigation, analysis, and remediation, considering both natural and artificial slopes and earthworks. *Reflections on Slope Stability Engineering* is targeted primarily at practitioners working in the investigations of slope instability, especially those early in their careers, but also suits students who are developing an interest in the subject and even engineers with only a casual interest in this branch of geotechnics.

**130 USD (hardback); 198 pp.; ISBN 9781032549316**

—CRC Press, [www.routledge.com](http://www.routledge.com)



## Web Notes

### Determining Soil-Bearing Capacity

DICA released a resource on its website to help users better assess and understand ultimate soil strengths and allowable ground-bearing pressures. Before setting up a crane or other equipment with outriggers, it's essential to evaluate the ground conditions to properly position the equipment and to use appropriate pads (area, strength, and stiffness) to keep the equipment upright. Knowing the strength of the ground helps planners and operators identify the pad area needed to reduce bearing pressures to levels the ground can withstand. The resource page, *Determining Your Soil Bearing Capacity*, defines important terms such as ultimate bearing capacity and allowable ground-bearing pressure. It also includes a Soil Bearing Capacity Chart that outlines the ground type and density of state to determine the ultimate ground-bearing capacity and the allowable ground-bearing capacity. Also included are best practices to determine soil-bearing capacity, tips for equipment-specific planning, and lift-specific planning.

—DICA, <https://dicausa.com>



## ACI Welcomes **PREFABRICADOS DE CONCRETO SOLANA** as a New Sustaining Member



We are a highly equipped, modern, automated company that offer innovative solutions for products and services made of precast concrete, with a high added value that generates security and confidence.

Our prefabricated products are a guarantee of quality. We closely supervise the manufacturing processes and each input is verified according to the technical specifications required by each project.



<https://www.pcsolana.com/ventas@pcsolana.com>

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# Product Showcase

## Coatings & Sealers

### Cortec MCI Coatings

Cortec MCI® CorShield® is a water-based coating for reinforcing bar protection that cures to a soft, non-tacky film and eventually hardens. Results of bond strength testing in accordance with ASTM A944-99(2004) confirmed that MCI CorShield does not have to be removed prior to embedding in concrete, making it a highly convenient solution for interim protection during storage, transit, or construction delays.

MCI Peel-off Coating helps protect nonporous walls, ceilings, floors, windows, and doorframes from untimely nicks, abrasion, scratches, corrosion, and overspray. This water-based coating sprays on like normal paint, but when the job is done, workers can peel the coating off by hand and dispose of it as solid waste.

—Cortec Corporation, [www.cortecmci.com](http://www.cortecmci.com)



### SEAL-KRETE Performance Epoxy

SEAL-KRETE® Performance Epoxy is a 100% solids self-leveling, epoxy-based coating system that blends durability with tenacious adhesion properties. The coating can be used on a variety of substrates, including tile, laminates, and concrete. Ideal for larger indoor applications, SEAL-KRETE Performance Epoxy is versatile, chemical-resistant, and features low-odor formulation. The easy 2:1 mixture ratio is user-friendly and has a slower dry time. The Performance Epoxy is also compliant nationwide with near zero volatile organic compounds (VOCs). Applications include laboratories, school hallways, animal care facilities, manufacturing plants, warehouses, pharmaceutical facilities, hospitals, retail stores, showrooms, and more.

—Rust-Oleum, <https://hp.seal-krete.com/home>



### Alchemco Waterproofing

Alchemco's waterproofing and coating technology contains no VOCs and is potable water certified, having passed NSF/ANSI 61 test standards at Underwriters Laboratories. Using enzyme-modified sodium silicate (EMSS) technology, this subsurface waterproofing membrane forms a gel that protects concrete structures from inside the concrete. Alchemco's spray-applied formula provides full-system solutions for concrete structures of all types with protection from the elements and human-made deicing chemicals. When installed by an Alchemco Certified Applicator and supervised by an Alchemco Technical Rep, it can qualify for up to a 30-year labor and material warranty from Alchemco.

—Alchemco, <https://alchemco.com>



### ChemMasters Silencure SRT

ChemMasters' Silencure™ SRT is a one-step product that offers dual functionality that cures freshly placed concrete to ASTM C309-19 specifications and provides long-term penetrating protection. Silencure SRT is formulated with siloxane technology, which penetrates deep into concrete to create a water-resistant barrier that helps prevent damage from freezing-and-thawing cycles, deicing chemicals, and chloride penetration. It lasts longer than ordinary film-forming curing products and can be used in both interior and exterior applications. Additionally, Silencure SRT is non-yellowing, ensuring that concrete maintains its appearance and structural integrity over time, even when exposed to harsh environmental conditions.

—ChemMasters, Inc., [www.chemmasters.net](http://www.chemmasters.net)

