

Products & Practice

Aquajet Extension Kit, Rotolance, and Hybrid Kit

Aquajet introduced an Extension Kit, Rotolance, and Hybrid Kit for the Aqua Cutter 750V with patented infinity oscillation. The Extension Kit increases the 750V's reach for applications, such as bridges, berths, piers, and wastewater plants, while the Rotolance assists with surface preparation on steel bridges, roadways, pipes, and tunnels. The accessory expands the 750V's reach by 3.25 ft (1 m) to the sides and up to 6.5 ft (2 m) vertically. The Rotolance can be used to remove concrete, rubber coatings, paint, rust, plastic, and other materials. In addition, the Rotolance for the 750V comes in two versions: the 1000 and 2500, each with a working diameter of 13.7 ft (4 m). The 1000 achieves a maximum water pressure of 14,500 psi (100 MPa), and the 2500 achieves a maximum water pressure of 36,300 psi (250 MPa). The Hybrid Kit 3.0 attaches to the 750V and uses a system to automatically disengage the onboard diesel engine and convert to electric power. The Hybrid Kit 3.0 can be installed without any tools and features a built-in charger that powers the battery while the robot is working. Once connected, the 750V can run on either diesel or electric.

—Aquajet, www.aquajet.se



BLOCKSEAL Liquid Flashing

BLOCKSEAL™ Liquid Flashing is a low volatile organic compound (VOC), fast-drying acrylic adhesive that keeps moisture from penetrating door and window openings beneath a structure's exterior façade. The coating's high resin content provides adhesion to the substrate, eliminating the possibility of moisture penetration. BLOCKSEAL can be applied to a wide variety of surfaces, such as weathered wood, shakes, plywood, clapboard, primed metal, galvanized metal, urethane, polyester, adobe, brick, stucco, masonry, slate, and concrete, including concrete that has set but not yet hardened. Users can apply single-component BLOCKSEAL with a brush or roller. A wet film thickness between 10 to 16 mil (0.25 to 0.41 mm) is recommended, and a minimum of 4 hours of drying time is required before applying a compatible paint or other coating. BLOCKSEAL contains grit, so users do not need to cast sand on the surface after application.

—APV Engineered Coatings, www.apvcoatings.com

Makita 18V LXT Brushless Deep Capacity Rebar Tying Tool Kit

The 18V LXT Brushless Deep Capacity Rebar Tying Tool Kit (XRT02TK) has a tying capacity of 5000 ties of No. 4 x No. 4 reinforcing bar using an 18V LXT 5.0Ah battery. The tool has a maximum tying capacity of No. 8 x No. 7 reinforcing bar and a minimum tying capacity of No. 4 x No. 4 reinforcing bar. Each wire reel delivers up to 100 ties of No. 4 x No. 4 reinforcing bar. The 18V LXT Brushless Deep Capacity Rebar Tying Tool features two-mode operation that provides single or continuous wire tie actuation. The user can digitally adjust the tying strength to match various tension strength requirements. Features include an ergonomic rubberized soft handle and a belt clip. The trigger features a power lock-off switch that requires two actions to engage the tool. The XTR02 features an easy-load design with an automatic locking mechanism built into the protective cover. The Rebar Tying Tool weighs only 5.7 lb (2.6 kg) with an 18V LXT 5.0Ah battery installed.

—Makita U.S.A., Inc., www.makitatools.com



Bosch 18V Concrete Nailer and 18V Heat Gun

The GNB18V-12N PROFACTOR™ 18V Concrete Nailer features a cordless design and an on-tool user display that helps manage tool performance, troubleshooting, and battery life status. The device comes with a 22-shot collated magazine and a single-shot magazine. A 44-shot magazine is sold separately. This tool additionally allows for most competitive brand collated nails and single shots to be used. GNB18V-12N also includes a built-in sliding switch that adjusts the nail depth into the workpiece and a single-shot magazine and nosepiece that allows the user to easily swap between collated nails to single shots for mechanical, electrical, and plumbing (MEP) applications.

The GHG18V-50N 18V Heat Gun provides a maximum temperature of 930°F (500°C) and can heat up to 570°F (300°C) in 6 seconds. The device also features a lockout switch that prevents accidental activation when traveling or not in use. GHG18V-50N offers two temperature settings to switch heat levels, supporting a variety of applications.

—Bosch Power Tools, www.boschtools.com

New Holland E15X Electric Power Mini Excavator

The E15X Electric Power Mini Excavator runs on a 29-horsepower cobalt-free lithium-ion battery that powers a 21.5-horsepower motor. On a fully charged battery, this excavator can operate for up to 8 hours. The device can be recharged in 10 hours with a standard 110 V outlet or within an hour with its fast charge features. The E15X Electric Power Mini Excavator produces zero emissions and uses eco-friendly bio-hydraulic oil to extend service intervals. The machine features preset eco, standard, and power work modes with preset precision, normal, productivity, and individual control modes, and all modes can be independently adjusted. Power management software is used to monitor the oil flow and engine speed by detecting joystick movement and setting engine speed to reduce pressure on the hydraulics and battery.

—New Holland Construction, www.construction.newholland.com



MasterAtlas

Master Builders Solutions launched MasterAtlas, a virtual concrete assistant. MasterAtlas is a Software as a Service (SaaS) platform that integrates data from multiple sources, including batching data, GPS positions, and Internet of Things (IoT) devices, into one singular platform for monitoring concrete production. MasterAtlas integrates this data, regardless of any sensors or monitoring tools being used by the concrete producer. MasterAtlas augments the efforts of the experts within an organization to help extract value from incoming data in real time. The virtual monitoring, combined with data analysis, creates a continuous improvement platform that shows where a producer can save money while helping to monitor and manage those opportunities. MasterAtlas can be used to monitor special projects, train new employees, and optimize operations.

—Master Builders Solutions, www.master-builders-solutions.com

RedTeam Automatic Drawing Hyperlinks

RedTeam Software added automatic drawing hyperlinks to the drawing management process in RedTeam Flex and Fieldlens. Automatic hyperlinking functionality enables all project team members using drawings to access the information linked to project drawings directly from the office or jobsite. This information can include other drawings, page links, and related external web pages. The automatic hyperlinking feature improves document review processes in two ways. First, during the drawing upload process, hyperlinks between sheets are now automatically created, with the option to review and edit before committing the files. Second, project managers and administrators can use these hyperlinks to access and reference critical project information more efficiently throughout the project.

—RedTeam, www.redteam.com

Products & Practice

Rooster Asset Tracking System

The Rooster Asset Tracking System is an equipment management tool that captures powered, unpowered, and heavy equipment activity while automating reporting. The system is built to provide visibility, accountability, and efficiency for anything, from unpowered tools to heavy equipment and yellow iron. The Rooster Asset Tracking System consists of Rooster Hubs and Rooster Activity Trackers. Rooster Hubs are data portals that connect to the Cloud through an LTE-M cellular connection to deliver GPS location and activity data. Rooster Activity Trackers are small, rugged devices that, once installed to any piece of equipment, capture activity on a minute-by-minute basis, for up to 5 years, and relay that data to the nearest Rooster Hub. The Activity Tracker data transmits through most concrete and metal to any Rooster Hub within half a mile using a long-range, low-power pairing protocol based on the LoRa communications standard. The Activity Tracker has battery life of up to 5 years and includes a “sleep mode,” which reduces data and conserves battery power.

—Rooster LLC, www.rooster.com

Products & Service Literature & Videos

Design-Build Done Right: Design-Build Best Practices by Design-Build Institute of America

Design-Build Institute of America (DBIA) released updates to its *Design-Build Done Right®: Design-Build Best Practices*, first released

in 2014. DBIA updated the guide in response to the continued growth and evolution of design-build and the construction, architecture, and engineering (AEC) industry at large. The 2023 Best Practices incorporates several changes that reflect the current state and projected growth of design-build. These changes include the addition of guiding principles for the areas of ethical conduct, demonstrated competence, sustainable professional development, and support of diversity and inclusion. The updates also place a greater emphasis on the role of industry practitioners and how they can further contribute to project and team success. The 2023 Best Practices shows a clear distinction between a best-value procurement approach versus progressive design-build and is better organized than previous versions.

—Design-Build Institute of America, www.dbia.org

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Product Showcase

Inspection Tools

MIRA 3D Tomographer

Germann Instruments' MIRA 3D Tomographer creates a three-dimensional (3D) representation of internal defects that may be present in a concrete element. The instrument features an independent pulser-receiver channel in each probe along with a real-time image in each instrument position. The MIRA 3D Tomographer also detects and measures the crack tip location with open-crack depth sizing functionality. The device has a modular design with a flexible combination of two and more array units. Germann Instruments offers a single version of the MIRA 3D Tomographer that contains 32 transducers as well as a double, or PRO, version with 64 transducers.

—Germann Instruments, www.germanninstruments.com



Integrated High-Resolution Smart Camera

CONTROLS' integrated high-resolution smart camera can be fitted to an automatic compression machine to record testing, providing results that can be documented and shared. The device provides test results that cannot be altered as the load and strength values are displayed in real-time and watermarked. Recording can be automatically saved along with the test results in the PC software's archive to be viewed and consulted by third-party engineers, clients, head office, and branches alike. An automatic sample identification SID reader module can be activated in the PC software, allowing the smart camera to read and recognize the barcode on the sample. Before testing begins, the machine PC software connects to the smart camera to ensure the barcode on the sample matches the sample to be tested. The sample ID, read by the camera, will be displayed during the test and recorded along with the date, time, elapsed time, load, and strength values. Testing is automatically carried out up to failure, without any operator's interventions.

—CONTROLS, www.controls-group.com



Rebarscope

The James Rebarscope® is the digital version of a classic reinforcing bar locator that enables the user to locate reinforcing bars and determine their depth and size. The device is also capable of locating nonferrous metals, such as copper, aluminum, some stainless steels, and wire, so it can be used to find the location, depth, and size of post-tensioning tendons, copper, and conduit in concrete brick, masonry, or other nonmetallic construction materials. The Rebarscope features eddy current sensor design for greater accuracy with built in temperature compensation. It also includes a single sensor for all depth ranges and a separate sensor and main instrumentation unit to scan difficult to access areas. The Rebarscope has a rugged and splash-resistant case as well as a daylight-visible display.

—James Instruments, www.ndtjames.com



Moasure

The Moasure® ONE™ is a motion-based measuring tool used to calculate the area of indoor and outdoor spaces and evaluate changes in elevation. Working without the need for a phone signal or GPS, it uses accelerometers, gyroscopes, and advanced algorithms to measure its own movement in space. This motion-based technology allows users to measure and draw simultaneously, capturing data as the device is moved from one point to another. Paired by Bluetooth with Moasure's app, Moasure PRO, comprehensive 3-D drawings can be viewed on-screen in real time. Moasure ONE captures irregular shapes, measures perimeter and distance, and rapidly calculates areas, while factoring in gradients and elevations. The device also allows users to take measurements where obstacles or obstructed sight lines limit the use of traditional measuring tools. Users can also measure multiple areas in relation to each other with a feature called "Layers."

—Moasure, www.moasure.com

CTS-02v4 Nondestructive Concrete Tester

Nitto Construction's CTS-02v4 is a nondestructive concrete tester that estimates the compressive strength of concrete. The device measures and analyzes the quality of concrete by the waveform of impact force at the point of hammer and concrete contact, without causing damage. A built-in accelerometer measures blow force. The tester features easy USB connection and data transfer, 0.5 second result display, and a mean score of results in hammering that can be obtained for each measurement point.

—Nitto Construction, www.concretetester.com

Concrete Repair Code Requirements and Project Examples

ACI CODE-562-21 is the first code specifically for repairing reinforced concrete. The companion publication, "Guide to the Code for Assessment, Repair, and Rehabilitation of Existing Concrete Structures," includes chapter guides and project examples.



Looking for more on ACI CODE-562-21? ACI has produced a series of on-demand courses that review the process behind the ACI 562 repair code and showcase several project examples.

Visit www.concrete.org/ACI562



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