

LASERS, LEVELS, AND MEASUREMENT

THEY DON'T
READ YOUR
MIND, BUT
THEY'RE
WORKING
ON IT

No contractor is intimidated by a tape measure, but electronic instruments such as laser distance measures, rotary lasers and multi-function meters still face an uphill learning curve. Manufacturers are working hard to overcome that with new tools that focus on convenience features like Bluetooth and intuitive interfaces that simplify usage. Here are the latest and greatest from 11 industry leaders — and a tape measure, too!

OX TOOLS

Accuracy and durability are at the forefront of features that professionals look for in a tape measure and OX delivers on both. As an added bonus, rare earth magnets are embedded in the tang to stick to ferrous materials.

“User research indicated that traditional housings were not constructed to withstand the frequent drops that are common on the job site. Also, over time, heavy use would make the markings hard to read,” states John Diplock, managing director for OX Tools USA. “We over-designed this new tape measure to exceed user expectations.”

The 25-foot Pro SS Tape Measure showcases a 1 3/16-inch-wide tape with double-sided, easy-to-read inch fractional markings with 1/8-inch increments. The nylon coated tape blade boasts a nine-foot horizontal standout. The business end of the tape has a double-sided tang that offers multiple points to grasp the material and can also sit flush with metal.



OX Tools focuses on job site durability. The 25-foot Pro SS tape measure has a nylon coated 1 3/16-inch blade. Its bamboo mason's level has a tensile strength comparable to steel.



The stainless steel case protects the tape from the harsh workplace environment and the rugged over-molded cushion grip increases comfort and provides added slip resistance.

OX Tools also ensures accuracy and durability with its new bamboo mason's Level. Bamboo has a tensile strength comparable to steel and, when combined with lamination, provides exceptional durability. Extruded aluminum bindings add protection and strength. Bamboo is not affected by heat or cold like aluminum or plastic levels which tend to expand or contract with the cold, which affects accuracy. Plus, its vials are constructed from solid block acrylic for increased accuracy.

“A solid block acrylic vial is close to unbreakable — it is literally a block of acrylic with the vial tube machined or cast into the block,” Diplock explains. “The blocks are permanently calibrated and set in the factory, eliminating the need for future calibration.”

CALCULATED INDUSTRIES

Calculated Industries (CI) is one of the country's leading manufacturers of professional trade calculators and digital measuring tools. CI has developed tools for construction, carpentry, woodworking, masonry, electricians, machining and engineering.



GOEDDE

“CI has developed several new tools for laser, level and professional measurements, including the brand new DigiRoller Plus III digital measuring wheel,” begins Jen Goedde, sales and marketing communications manager for Calculated Industries.

“Built and designed for paving and concrete contractors, builders, estimators and landscapers, the DigiRoller Plus III measuring wheel takes measurements in multiple units and makes calculations for areas and volumes.”

CI's Laser Dimension Master 130 is an extremely accurate and compact digital laser distance measurer with a 130-foot range and a bright color display. It is easier and faster to use than a tape and small enough to fit in a tool belt or pocket. It is used primarily for indoor measurements.

“The AccuMaster nine-inch digital level is great for all kinds of construction jobs and the V-groove magnetic base makes it useful for electricians and pipe layers,” Goedde continues. “It accurately finds plumb, level and every angle in between — anywhere. You can easily read the bright LED display even if the level is upside down. It is IP67 certified waterproof and dustproof.”

The DigiRoller Plus III digital measuring wheel from Calculated Industries takes measurements in multiple units and makes calculations for areas and volumes. And it burns off calories, too! Yeah!



Another new CI offering, the AccuMASTER 2-in-1 digital level and angle gauge finds true level and precisely checks angles on any job requiring precise angle measuring — woodworking, engine building and more. The strong magnetized base lets users attach it directly to any metal surface — tables, blades, car/truck frames and more.

DEWALT

“DeWalt is helping loyal users expand their measuring capabilities with three new 20V MAX* rotary lasers,” begins Dustin Prevete, senior product manager for electronic tools. “Each runs on a 20V MAX* Lithium-ion battery platform for long run times and rechargeable convenience. Each model features a removable 5/8-inch thread adaptor with side and bottom ports for either vertical or horizontal orientation on a tripod or bracket. Improved drop test ratings take into account primary use on tripods and fall heights.”



PREVETE

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DeWalt is making a statement with multiple new red and green 12V and 20V MAX* cordless lasers. The new DW079LR 20V MAX* red rotary laser has an interior range of 250 feet and an exterior range of 2,000 feet.

with its Blaze line of laser measures, which are designed to set the standard for product innovation, size, speed, ease of use and accuracy,” says Stephanie Dahl, product manager. “In addition, Bosch Blaze laser measures are sized for convenience, fitting either in a pocket or on a tool belt. The Bosch Blaze laser measure offering represents the small, simple way to get cutting-edge accuracy on any job.”

Stepping up, the Bosch GLM 50 C laser measure offers the added advantages of Bluetooth technology. This professional device can measure up to 165 feet with 1/16-inch accuracy. It allows the user to toggle between length, area, volume, indirect measurements and other advanced functions. The GLM 50 C has large numbers and a color display that rotates and walks the user through easy-to-use functions. And it allows the user to make accurate measurements that can be transferred to smart devices via free Bosch mobile apps.

MAKITA

For the measurement phase early in the construction process, Makita offers four versatile laser instruments with features engineered for increased accuracy, durability and convenience.

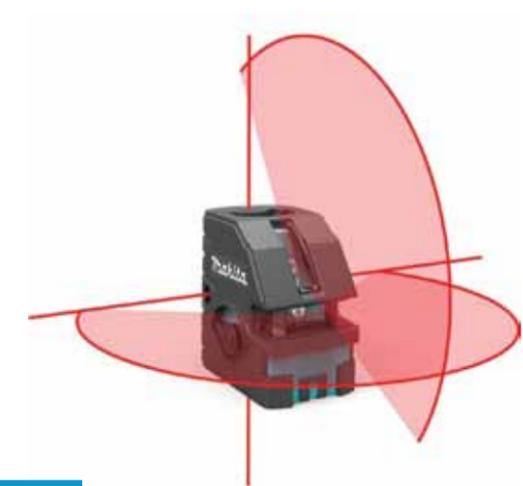
“The Makita model SK103PZ self-leveling combination cross-line/point laser gives contractors one instrument for all laser needs within a 50-foot range,” begins David Fernandez, product manager, metal working & concrete products for Makita U.S.A.



FERNANDEZ

“It provides vertical/horizontal reference lines and five points for level, align, plumb and square measurement

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The Makita Self-Leveling Combination Cross-Line/Point Laser (SK103PZ) gives contractors one instrument for all laser needs within a 50' distance range requirement.

product lifecycle and ease of use. At Johnson, we look to manufacture tools that simplify end-user ease of use and reduce total cost of ownership.”

In 2017, Johnson's focus is twofold: First, enhance the end-user experience. The best example of this is the new laser distance meter lineup launching next spring. Johnson has simplified the interfaces, standardized the interface across models and added in Bluetooth on two of the four models to improve end-user productivity.

“The second focus is on lowering overall cost of ownership,” Pfeifer continues. “The best example of this is the JLT dot lineup, launching in November of 2016. We increased the warranty, offer repair services at our facility and built in field calibration — eliminating downtime and extending tool life.

“We can't discuss too many details at this point, but 2017 will be a big year for Johnson, with quite a few new product launches in both lasers and spirit levels geared specifically towards meeting the needs of the professional end-user. Stay tuned to johnsonlevel.com for more!”

BOSCH TOOLS

In the market for laser measuring tools, professionals from a variety of disciplines are seeking tools that are intuitive and easy to use. And they're looking for a clear advantage to change from their current measure routine — like laser measures doing the math for square footage, wall surface, cubic volume and other functions.

In addition, new capabilities are being incorporated in these products like Bluetooth. The greater connectivity afforded by this technology means additional functionality on the job site for everything from basic measurement to making quick work of estimates.



DAHL

“Bosch is meeting the user demand for products that are easy to use and improve efficiency

The Bosch GLM 20 Blaze captures distances up to 65 feet +/- 1/8 inch. The GLM-50C adds Bluetooth connectivity and measures up to 165 feet with 1/16-inch accuracy.



Ideal's new Precision Levels feature an exclusive Thumb Winder conduit wheel which prevents dog-legs and ensures that bent conduit lines up correctly for perfect, labor-saving installations, no matter how many bends are made.

Levels currently available on the market suffer from two common problems: poor holding strength to the conduit being bent and difficult-to-replace vials. To address these issues, Ideal's Thumb Winder conduit wheel has a contoured screw that hugs the conduit's surface for a firm, stable hold that eliminates crooked or “dog-leg” conduit, even in the most complex bends. In addition, the vials are designed for easy field replacement just by removing a single setscrew, unlike most competitors' vials that are typically glued into the levels.

It all adds up to an easy, cost-effective and time-saving way to make perfect conduit bends every time.

JOHNSON LEVEL AND TOOL

A consistent theme you hear when talking with manufacturers in the category is that end-users demand increased speed and productivity from their tools while on the job site. The common industry trend is to address this need through product innovation, adding in features and function to enhance the tool's utility.

“In 2016 Johnson made getting back to the end-user a focus,” says Jesse Pfeifer, national sales manager, professional channel. “In talking with them, we found that their questions focused on warranty, service,



PFEIFER

Johnson Level's LDM series laser distance meters are named for their maximum ranges. The LDM 130 has a range of 130 feet and takes up to 10,000 measurements on a single pair of AA batteries — with ISO 16331-1 accuracy.



The 20V MAX* Rotary Lasers have scan modes in 15, 45 and 90 degrees with speed settings of 150, 300, 600 and 1,200 rpm. All models come standard in a DeWalt TSTAK storage case, model DWST17816.

The model DW074LR Red Rotary Laser is a single-slope laser with over-molded handles, two-meter drop protection and IP54 debris/water resistance. It is accurate +/- 1/8 inch at 100 feet. It has an interior range of 150 feet or an exterior range of 1,500 feet with the use of a detector.

The model DW079LR 20V MAX* Red Rotary Laser is a dual-slope laser (+/- 10 percent) that features an improved IP67 debris/water resistance and two meters of drop protection. It provides improved accuracy of +/- 1/16 inch at 100 feet and has an interior range of 250 feet or an exterior range of 2,000 feet with a detector.

The model DW079LG 20V MAX* green rotary laser features all of the benefits of the red rotary laser, but uses green beam technology for additional visibility. Advanced technology will allow run times to remain at 17 to 56 hours, similar to its red beam counterparts.

“We have some major surprises in the works too, so you can expect even more game-changing technology to come from DeWalt,” Prevete hints.

IDEAL ELECTRICAL

Ideal Electrical is in the business of meeting the needs of the professional electrician who's measuring and leveling needs are different than those of other craftsmen. An example of this is preventing “dog-legged” or crooked conduit by using a level.

When an electrician is making multiple bends in conduit, he needs to have them line up correctly. When things go wrong, as they often do, a dog-legged conduit is the result. To correct it, the electrician has to spend time he typically doesn't have to re-bend the conduit to make things fit. Installing a dog-legged conduit is considered highly unprofessional.

“We recently introduced a productivity-enhancing innovation in the form of a new line of precision levels for use when making saddle or offset bends to electrical conduit,” begins Jason Schaper, product manager. “Equipped with our exclusive Thumb Winder conduit wheel, Ideal precision levels ensure that bent conduit lines up correctly for perfect, labor-saving installations, no matter how many bends are made.”

applications. The laser line fan length spans well past the 90-degree point position to provide a 180-degree horizontal line and 120 vertical line for full reference line coverage, with a line and point accuracy of +/- 1/8 inches at 30 feet."

The Makita SK104Z self-leveling horizontal/vertical cross-line laser (SK104Z) has a line visibility range of up to 50 feet, with a laser line fan length that spans well past the 90-degree point position to provide a 180-degree horizontal line and 120 vertical line for full reference line coverage. For horizontal and vertical lines, it is accurate to +/- 1/8 inch at 30 feet. Both lasers include full oversized rubber over-mold and a pendulum lock that protects the laser diode during storage and allows for sloped applications.

"Makita also offers two distance measuring instruments, the model LD050P laser distance measure 164 (LD050P) and the LD080P laser distance measure 262," Fernandez adds. "The LD050P has a distance operating range of up to 164 feet with an accuracy of +/-5/64 inch. It provides both unit standards of measurement and seven measurement functions. The longer-range LD080P has a range of 262 feet with an accuracy of +/- 1/16 inch, with both unit standards of measurement and nine measurement functions for maximum versatility."

Both instruments are equipped with an industry standard Type 635nm/Class II Laser with up to 5,000 hours of run time on a single charge (AAA batteries sold separately).

SNAP-ON INDUSTRIAL

"The types of products now being manufactured are driving Snap-on Industrial to engineer more lightweight, digital-based torque tools," says John Ficcadenti, product manager, Snap-on Industrial. "Manufacturers are investing



heavily to reduce weight and improve fuel mileage by using a wide array of materials, like high-strength alloys, aluminum and engineered composites, which is making torque more important than ever.

"Improved capabilities and technology mean manufacturers can maintain exceptional tolerances on components: contingent on accurate, consistent torque and angle application. Tools like Snap-on Industrial's ControlTech (CTECH) aluminum industrial electronic torque wrench help make that happen."

Weighing just one pound, the CTECH provides instant data on the exact torque applied, reduces fatigue and enables more precise, reliable torque application, particularly in overhead use.

Snap-on Industrial's CTECH aluminum industrial electronic torque wrench is easily the smartest wrench in the box and weighs just one pound for ease of use, especially in overhead situations.

However, technicians need a full understanding of torque to accurately apply and read torque measurements.

Recognizing a need for more training, Snap-on Industrial has developed a torque certification program. Snap-on has partnered with the National Coalition of Certification Centers (NC3), which is a network of education providers and corporations that supports and validates new and emerging technology skills, to help facilitate torque certification.

This type of certification brings conformity and uniform standards for technical schools to teach in-depth instruction on tool use, theory and application. Upon completion of the course, technicians become certified in the proper use of torque products — making them more productive and well-rounded professionals.

SOUTHWIRE

"Southwire launched the award-winning MaintenancePRO meters earlier this year, and now we're following up with nine new models designed specifically to meet the needs of commercial and residential electricians," notes John Payne, product director for Southwire Tools. "Incorporating innovations like Bluetooth connectivity and fully backlit controls, these new meters reset the bar in performance and value for electricians."

The new 140-series TechnicianPRO line features

Southwire's virtuoso 16040T multimeter is a compact and rugged CAT III Bluetooth-enabled TrueRMS meter that can take full advantage of Southwire's MApp mobile application to document a host of functions.



three meters specifically designed for commercial electricians. These CAT IV 600V waterproof meters have an unprecedented feature set, including Bluetooth connectivity, TrueRMS, Low-Z, fully backlit controls and displays, built-in work lights and magnetic hanging straps.

The three 130-series ResidentialPRO multimeters are compact and ideal for residential electricians. CAT III 600V rated and waterproof, ResidentialPRO meters are available with Bluetooth connectivity, TrueRMS, Low-Z, built-in work lights and backlit displays.

The 160-series features three meters to address specific market needs. The 16020N is a very compact CAT IV 600V meter with an auto-resetting fuse. With its built-in flashlight, non-contact AC voltage detector, bright backlit display and built-in test leads, this is a meter for a wide variety of applications.

The 16030A is a TrueRMS meter that auto-selects between voltage and resistance, and features auto-hold to temporarily catch readings on the display. The 16040T is a compact and rugged CAT III Bluetooth-enabled meter. With a broad array of test functions, this meters allows electricians to take full advantage of the MApp mobile app.

"Southwire has a long history of developing, manufacturing and distributing innovative products for electricians. We are proud to extend this legacy with our latest generation of meters, bringing connectivity and durability to the job site," Payne adds.

TRIMBLE/SPECTRA PRECISION

The electronic laser and measuring instrument category is changing at an ever increasing pace. A laser product in a major application category that can successfully withstand the test of time is a rarity. The Dialgrade pipe laser is one of those few products.

"The Dialgrade has set the standard in the underground laser industry for 14 years and the word 'Dialgrade' has become the generic term for 'pipe laser' in many markets," says Simon Hyatt, worldwide sales and product marketing manager. "It has been one of the longest lasting models of lasers on the market due to its excellent engineering and robustness."



Laying gravity flow pipe is one of the toughest applications for lasers. The new DG613 and DG813 Dialgrade
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The DG813 (Shown) and DG816 pipe lasers from Spectra Precision have a grade range from -12 to +40 percent and a working range of 500 feet. The RC803 remote control provides full function control and uses infra-red communications when in the pipe.



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pipe lasers released this year retain the features and robustness that generated the long lifespan of their predecessors. Industry leading features such as the largest self-leveling range, superior ruggedness and a five-year warranty are included. Other improvements are easier setup due to a compact design, increased battery life, a large graphical interface on the laser and remote control, and high tech functions based on new communications between the target and laser.

“As we have with rotating lasers, we pack innovation and benefits into the receiving end of things as well as the laser itself,” Hyatt says. “The ST803 Spot Finder, included with the DG813, makes it the smartest pipe laser in the industry. Functions include automatic alignment, grade matching and grade checking to ensure setup is fast, easy and accurate.”

The underground pipe laser market used to be addressed by specialists, but now with the simplicity of the products, these lasers are increasingly sold through STAFDA distributors.

LEICA

Leica Geosystems introduced laser distance measuring technology over 20 years ago and the company prides itself on its commitment to providing customers with the best innovations and highest quality in the market. Leica has spent countless hours engineering solutions to better improve workflow and performance on the job.

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“With the Leica Disto S910, we have taken handheld innovation to a new level,” begins Steven Hobson, Disto key account manager. “The Disto S910 combines the functionality of a total station into a handheld laser — a world’s-first innovation. This solution makes it possible to take remote, point-to-point measurements at distances of up to 1,000 feet. In short, the Disto S910 sets itself apart from traditional laser distance meters. It also allows for taking measurements either as a DXF output or directly into CAD.”

The recently released Leica Disto D2 with Bluetooth takes measurements up to 330 feet with 1/16-inch accuracy. With traditional features like two- and three-point Pythagoras calculations, volume, area, add/subtract, intelligent end-piece and compact design, Leica has a small but powerful solution for its customers.

“As the market heads further into cloud-based workflows, our Bluetooth laser measuring devices continue to add value to customers looking for high accuracy and time savings,” Hobson adds. “We will continue to provide our customers with the best lasers on the market, and look forward to seeing you at the upcoming STAFDA show in Atlanta.” **CS**



Leica’s 100-meter Disto D2 has ISO 16331-1 accuracy and Bluetooth. The Disto S910 100-meter is the world’s first laser distance meter with the P2P Technology. It has a range of up to 300 meters.



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