

Utility Expo: Where the Industry Goes to Grow

With a new name, improved layout, expanded space and record-setting numbers of exhibitors, Utility Expo (formerly ICUEE) 2021 connected the biannual event utility professionals and contractors with the latest equipment, solutions and trends.

For the underground construction sector, innovative technologies and products included the following.

American Augers

americanaugers.com



Horizontal directional drill (HDD) operators know that utilizing clean drilling fluid is one of the best ways to increase production. The new American Augers M300DH fluid-cleaning system helps contractors working in tight job sites stay agile and efficient.

Compact, but with high cleaning ability, M300DH circulates drilling fluids with 100,000 to 240,000 pounds of pullback. In addition, its 480-volt generator can power the agitation system to keep solids suspended in fluid. Setting a new standard, the machine's first-cut cleaning capacity is rated up to 300 gallons per minute of 11-13 pounds of drilling mud.

M300DH also features a new Derrick Hyperpool shaker and a screen compression system that creates a more seamless transition when changing screens or adjusting to soil conditions.

The versatile M300DH can accommodate any job site, while being easily mobilized for a quick load-in and load-out and can be skid- or trailer-mounted.

Atlas Copco

atlascopco.us, atlascopcogroup.com



Atlas Copco Power Technique's two new sludge/trash pumps – WEDA

S30 and S60 – and new WEDA D80 drainage pump, offer a fast, efficient dewatering solution

These electric submersible pumps deliver optimal performance on a multitude of job sites, including construction and rental:

- Up to 15-percent more compact and 15- to 30-percent lighter than comparable models.
- Unique cable sealing and modular design make them among the most flexible pumps on the market.
- Consume up to 20-percent less energy than comparable models.

WEDA S30 is rated at 3 horsepower, with a weight of 55 pounds, and has a discharge of 3 inches. S60 is rated at 9.2 horsepower, with a weight of 143 pounds, and a 4-inch discharge.

Handling pH values from 5 to 8 of the pumped liquid, particles and debris of up to 2 inches can pass through the sludge/trash pumps' housing, with minimal wear. A robust pump-based design ensures stability, while enabling passage of large solids.

D80 is designed to pump clean or dirty water on construction sites, in manholes and industrial pits, with very low risk of clogging. It also handles pH values between 5 to 8 and can pass through small solids up to nearly ½-inch.

This new drainage pump, rated at 31 horsepower and weighing 400 pounds, allows discharges of 4 and 6 inches, and can be mounted either vertically or sideways.

CASE

casece.com



The 114-horsepower TV620B is the largest and most powerful compact track loader (CTL) ever built, taking CTL capabilities to a new

level. It leads the industry in major operational categories: 6,200-pound rated operating capacity, breakout force of 12,084 pounds (bucket) and 12,907 pounds (lift), and 74-inch track length.

Machine strength is further supported by a new heavy-duty undercarriage and heavy-duty, 17.7-inch rubber tracks that allow for minimal ground disturbance (6.1 psi) and enhanced performance on improved surfaces.

TV620B comes with more standardized features than previously available on any CASE CTL: adjustable electro-hydraulic controls, high-flow hydraulics, auto ride control, one-way self-leveling, a hydraulic coupler, auto-reversing fan, and LED lights.

A selection of buckets includes an industry-exclusive, heavy-duty, 84-inch, 1.25-cubic-yard bucket, also designed for use with other CASE heavy-duty attachments. Another exclusive is the new "hydraulic-on-demand" performance that allows the operator to easily select the percentage of auxiliary hydraulic flow to the attachment, via the machine's multi-function display.

CASE TV620B meets emissions regulations with a combination of cooled exhaust gas recirculation (CEGR), diesel oxidation catalyst (DOC) and selective catalytic reduction (SCR) technologies – and no diesel particulate filter (DPF). Further mitigating debris buildup in the engine compartment is a standard hydraulic auto-reversing fan, which the operator can easily set for running frequency and duration via the multi-function display in the cab.

Condux

condux.com; conduxtesmec.com

Condux International highlighted several pieces of new equipment that serve as the foundation of its Integrated Installation Solution.



The new GS500 fiber optic cable blower incorporates precision load cells and integrated electronics to make installation safe and efficient. Used in conjunction with Condux's Pull Monitoring Device (PMD) and new reel trailer, a single operator can control the payout speed of the cable on the reel, reducing the amount of labor needed.

Condux Tesmec, Inc. introduced the PD4500 hydraulic puller-tensioner, with four drums and capacity for 22,000 feet of ½-inch rope or 40,000 feet of ⅜-inch rope. It offers 2 x 5,000 foot/pounds of pull force and has four independent level winders, each hydraulically driven, and two can work simultaneously.

The unit features a new digital interface with a 7-inch color display, and integrated pull-and-speed recorder. A radio remote provides total user machine control, while integrating with the new digital HMI, to provide automatic power management and full safety controls.

In addition to its line of hydraulic pullers, tensioners, and puller-tensioners, Condux Tesmec offers one of the largest and most diverse selections of conductor blocks on the market. A full line of productivity-enhancing conductor stringing tools and accessories includes anti-twist rope, reel winders, reel stands and more.

Ditch Witch

ditchwitch.com



Built to enhance utility contractors' productivity while drilling through hard rock, the Ditch Witch AT32 directional drill offers maximum performance in a compact footprint. The mid-size, all-terrain drill is equipped with 32,000 pounds of thrust and pullback and a 155-horsepower Cummins Stage V diesel engine that meets European emissions standards for a cleaner job site.

Further improving productivity downhole, AT32 features a new rod loading system that gives operators the ability to carry 450 feet of all-terrain drill pipe on board – 30-percent more than its predecessor, AT30 – and manually inserts additional sticks of pipe when running low.

The drill has a higher-powered fluid pump that provides 40 percent more flow to minimize wear and tear on downhole tooling and offers maximum efficiency on longer bores with larger diameters.

AT32 comes with Ditch Witch's Switchback™ HDD Tooling System to help operators more easily make tooling changes for minimal downtime and boosted profitability.



Also improving utility contractors' efficiency, while drilling in hard rock, is AT40. It features an advanced, two-pipe, all-terrain drilling system – with 33-percent more torque than competitive units – designed to improve downhole operation.

An inner rod-design provides a flush system to improve tool joint durability and steering in hard rock conditions. To further improve steering and optimize fluid flow, a reliable all-terrain connection reduces risk of collar damage.

AT40 also leverages next generation features of the standard JT40 model, offering up to 40,000 pounds

of thrust and pullback. It's equipped with a 70-gallon-per-minute, 1,100-psi mud pump to increase fluid flow from the pump to the swivel. The 160-gross-horsepower unit has been newly enhanced with a Stage Five engine, which reduces engine emissions and allows it to work in more highly regulated job sites.



Ditch Witch also introduced the RT70 ride-on trencher, which is built to enhance utility and fiber contractors' experience, while tackling tough jobs on tight schedules.

The ergonomically designed operator station features an open layout with a 120-degree swivel seat, more leg room and intuitive controls. This enhanced visibility gives a full view of the machine – from front tire to back tire and the attachment – helping operators of any experience level increase productivity.

RT70 also includes a patented cooling fan to reduce temperature levels in the operator station, keeping workers safer and more comfortable during long days.

Fast and simple maintenance – via one, easy-to-access location and a single-piece, easy-open hood – means RT70 operators spend their valuable time where it matters most – on the job site.

HammerHead Trenchless

hammerheadtrenchless.com



HammerHead's HydroGuide® HG550 high-performance cable winch enables operators to precisely match tonnage and speed to a job's specific requirements. The winch is ideal for slitting plastic gas pipes and pulling back new product in lines ranging from ½-inch to 2-inch diameter.

The machine's high-tech features and options protect profit margins, through increased operational efficiency, and help ensure

customer satisfaction, even on the most demanding jobs.

HG550 provides infinite, proportional control of up to 5.5 tons of pulling force at payout/pullback speeds ranging from 3 inches to 110 feet per minute. This means not only precisely matching payout and pullback to the task but completing runs up to 20-percent faster than with competing winches.

Documentation from HG550's performance data tracking system can be used to meet reporting requirements; support operator training programs; or for internal project tracking, assessment and more. The easy-to-read, Precision Digital Job Data Recorder keeps track of line speed, distance, force and pressure. A USB flash drive makes it easy to store and download data; an optional printer provides a hardcopy right onsite.

HammerHead Trenchless is the only manufacturer that also offers an optional Electrical Strike Indicator Device (ESID) for increased safety working near utilities.

Infinity Tool Manufacturing

infinitytoolmfg.com



Ferocious power and replaceable cutters – for a never-ending supply of teeth – distinguish Infinity Tool's revolutionary Shark PDC Reamer.

The new reamer was born out of a simple concept: enable a rapid change of cutters onsite, minimizing downtime. Instead of sending reamers in for repair or buying new ones, fit a new segment and be back up and running in minutes.

Each cutter segment is installed with hand tools, maximizing reaming time and minimizing cost. In addition, every segment has the same design, no matter what its position on the reamer blade and no matter the size of the reamer.

Available in sizes from 14 to 48 inches, the patented Shark PDC Reamer also provides the following benefits:

- Increased penetration rates – up to five times conventional methods – for faster project completion.
- Reaming up to 12 inches of extra diameter in one pass.

- Less stress on the drill rig, with lower torque required and less vibration on the rods,.
- No moving parts for increased reliability.
- Clean holes with a consistent size.

John Deere

johndeere.com



The 470G LC is the latest model in the John Deere excavator lineup with a full range of grade management solutions.

Designed with operator comfort and convenience in mind, 470G LC features a premium, high-back, thermal heat and actively cooled, three-way, adjustable leather seat; single-pedal, hydraulic propel system; and deluxe LED lights at the cab front and rear to ensure the job gets done, even if it extends beyond daylight hours. A refined LCD monitor in the 470G LC cab utilizes a turn-and-tap rotary control that puts an abundance of performance and convenience features at the operator's fingertips.

Adding 3D SmartGrade further enhances 470G LC's productivity and quality. From digging trench and structural foundations, to shaping ditches or slopes, the grade control system enables excavation jobs to be completed quickly and accurately, the first time. Factory installed and calibrated from the dealer, the system is ready to work when it arrives at the job site.

John Deere SmartGrade excavators offer four grade management options for contractors: SmartGrade, SmartGrade-Ready with 2D, 3D Grade Guidance, and 2D Grade Guidance. Upgrade kits can be installed onto equipment later, as a contractor's needs change.

LiuGong North America

liugongna.com

LiuGong North America expanded its mini-class, F Series, excavators. Two new, powerful models, with compact dimensions and versatility, are ideal for working in tight spaces and for multiple applications.

The 1.8-metric-ton 9018F is the smallest of the powerfully efficient F-Series. A FOPS-rated closed-cab version stands just 7 feet 7 inches tall,



resulting in a lower height that all but eliminates headspace concerns while traveling in restricted spaces or being transported.

Its compact dimensions, foldable dozer blade and retractable undercarriage (to just 39 inches) make it especially useful in the utility and landscape markets.

Standard 9018F features include a low-speed, high-torque, Tier 4 Final Yanmar engine rated at 18.0 gross horsepower, as well as auto-idle and auto shutdown. Better fuel consumption is achieved through a more efficient hydraulic system using 15- to 20-percent less engine power than its predecessor.

An improved, load-sensitive hydraulic system, with 14.5-gallon-per-minute main pump displacement and proportional flow-control valve for all attachments, allows more-precise operation.



The 2.7-metric ton 9027F is a true zero tail-swing (ZTS) model, with a Tier 4 Final Yanmar engine rated at 20.4 net horsepower, inline hydraulic pumps and main control valve.

With a slew circuit of 2698 psi, the 9027F ZTS enables operators to dig parallel to the dozer blade, which is especially advantageous when close to walls and backfilling.

Equipped with a more efficient hydraulic system than its predecessor, 9027F ZTS offers improved fuel consumption and improved break-out force. Its improved load-sensitive hydraulic system, with 23.8-gallon-per-minute main pump displacement, utilizes a proportional

control valve for better management of hydraulic flow for all attachments.

Hydraulic control for travel, boom swing, arm and bucket machine functions are engaged through travel pedals and joysticks. Auxiliary hydraulic functions are controlled by electrical proportional solenoids for precise control.

Like all LiuGong F-series excavators, 9018F and 9027F ZTS are compatible with many third-party aftermarket technologies, such as Trimble, for gradeability and telematics.

Subsite Electronics

subsite.com



Designed for performance in high-interference environments, Subsite Electronics' Marksman HDD Guidance System features the widest range of frequencies in a single beacon available on the market.

Marksman's Bore Path Analyzer scans the most usable frequencies, selecting the best choice to avoid interference and helping operators drill more effectively. The new guidance system offers improved communication between the tracker and beacon at extended depths (130-plus feet). Also, the beacon's dual-power mode offers consistent performance across housing sizes to drive bore productivity.

The Marksman system features streamlined controls and the choice of user-friendly interfaces to boost operator productivity. For example, the all-new "Marksman View" is easy to learn, with intuitive graphics and clear data, while those already familiar with Subsite trackers will recognize the "Classic View" interface.

And with a single toggle control, and no extra buttons or triggers, operators benefit from the equipment's ease of use.

Thunder Creek

thundercreek.com



Thunder Creek Equipment launched its all-new Service and Lube Upfit (SLU) platform. Combining the tailored precision of the company's Service and Lube Trailer with the nimbleness of a medium-duty service body, SLU is uniquely equipped to thrive in tight, urban environments and compressed job sites.

With a total capacity of 690 gallons, it can be configured to carry up to eight oils or maintenance fluids, plus diesel, Diesel Exhaust Fluid, grease and compressed air.

The entire SLU pneumatic pumping system is powered by a built-in VMAC air compressor, which provides more storage in the truck body for filters, tools, and an optional grease keg. Fluid volumes are configurable in 115-, 55-, and 25-gallon tanks, depending on the customer's fleet maintenance needs.

Fluids supported include fresh oil, reclaimed oil, grease, antifreeze, reclaimed antifreeze, high flow oil, diesel fuel and diesel exhaust fluid.

All fluid maintenance systems are plumbed into the truck's all-new Utility Box, which features a completely streamlined control panel that makes it easy to use, with reduced training.

Additionally, operating the SLU does not require a Commercial Driver's License or a HAZMAT endorsement, saving customers from increased costs associated with insurance and hiring highly sought after CDL drivers.

Trencor

trenco.com



The Trencor T14 trencher can help pipeline construction professionals improve efficiency and decrease costs on each job site.

A 22-percent increase in gross power – a 755-horsepower CAT C18 engine, versus its predecessor's 613

horsepower – allows operators to tackle large-diameter pipeline installation projects and tough ground conditions.

With engine horsepower rated above 750, operators avoid the maintenance and potential service needs associated with diesel exhaust fluid (DEF) and AdBlue regulations, spending more time on the job site.

Additionally, the C18 engine allows T14 to be compliant with both EPA Tier 4 Final and European Union Stage 5 requirements. Meeting these high regulatory requirements means that the machine can be used on more job sites around the world.

The updated machine packages the engine, transmission, pumps and cooler all together onto one modular skid that is easily installed in or removed from the unit. In addition to simplifying repairs, this makes all of our inventories more flexible.

TT Technologies

tttechnologies.com



TT Technologies highlighted its Grundodrill 5X, the most advanced directional drill rig in its class.

The compact unit features a Tier 4F, 56-horsepower Kohler engine, a single push-button stake down system and independent front and rear lift. An all-weather, 7-inch touchscreen display delivers real-time bore data and operational performance. The unit offers 11,000 pounds of thrust and pullback, and 1,200 foot/pounds of torque.

In addition, the company displayed its full line of trenchless Grundomat piercing tools, Grundoram pipe ramming tools, and Grundoburst and Grundocrack pipe bursting tools.

Grundoburst utilizes a specially designed bladed cutter head to make bursting ductile iron and steel pipe possible. Grundocrack tools can be used to burst pipe from 4 to 54 inches.

Vanair

vanair.com

Vanair released the Cap•Start 3000-Plus Air Compressor and Cap•Start 3000 Hydraulic-driven machines. The Cap•Start product group offers the fastest and most reliable jump-starting device to get fleet industries,



construction, heavy-moving and mining, municipalities, and agriculture vehicles up and running.

The innovative design of the Light Air Compressor offers instantaneous engine starting power and boasts a weight savings of nearly 40 percent over other starting systems on the market.

It features a 25-horsepower EFI Kohler gasoline engine and two-stage, and a 24-cfm reciprocating air compressor, with 175-psi maximum air pressure, makes this unit even more valuable.

With up to 3240 amps starting capability, this unit has a 240-amp 12/24-volt DC alternator. The chassis battery is used to power the electric start on the Kohler engine. The drive system features Dual V and Micro V belts

The fuel system can be plumbed to the chassis, or an optional, integrated fuel tank can be used. Another option is a remote-mount, 30-gallon air tank, which can even be combined with the fuel tank.

The redesigned Cap•Start 3000 Hydraulic offers a weight savings of 40 percent over its predecessor. It features output of 240A at 12VDC and 24VDC, charging up to 3000A starting at 12VDC and 24VDC. With a single alternator, hydraulic gear motor at 2,800 revolutions per minute and requirements of 8 to 11.5 gallons per minute at 3,000 psi, it includes 0-to-25-gallon-per-minute flow control.

For safety and convenience, both the compressor and hydraulic come with a digital display for ease of reading diagnostics.



The company also highlighted Electrified Power Equipment (EPEQ), its innovative, end-to-end, patent-pending system of zero-emission, quiet and lighter products to be available to customers in 2022.

Powered by Vanair's specifically developed, industry-first ELiMENT

lithium iron phosphate batteries, EPEQ allows the vehicle's engine to be turned off and still run the equipment needed on the job site. In addition, the Battery Management System (BMS) has the exclusive ability to discharge power while being charged itself.

As a fully self-contained and independent system, EPEQ can be mounted on, or within, combustion engine vehicles, electric vehicles, or even on trailers. On electric vehicles, it can either work with the host vehicle's batteries, or independently.

The Smart Control I/O board has proprietary software technology designed to intelligently monitor and control all components in the EPEQ system. Each component can communicate signals to and from the board, allowing battery power to be adjusted based on various factors, such as temperature, heat build-up, duty cycle, assigned function priorities, and power remaining.

Vermeer

vermeer.com



Built with a 415-horsepower Cat C13 ACERT Tier 4 Final engine, the new D220x500 S3 horizontal directional drill (HDD) delivers up to 52,600 foot/pounds of torque at a spindle speed of 36 revolutions per minute; 240,400 pounds of thrust/pullback; and fluid flow rates of up to 350 gallons per minute, when the onboard pump is selected.

Even more power comes from its maximum versatility. Multiple configurations make it suited for large-diameter water and utility installs in urban areas, as well as challenging pipeline work.

D220x500 S3 is available with an onboard cab or stand-alone operator cab, and with a 30-foot (9.1-m) rod rack. Contractors can also choose between a rod stager or full-length catwalk, and can add an optional mud pump, crane or hydraulic scissor lift for optimum staging efficiency.

Outfitted with the rod rack, for example, D220x500 S3 allows crews to use a variety of Range 2 drill pipe at various diameters and in lengths from 29 feet to 32 feet (8.3 m to 9.8 m) – an ideal setup for performing pipeline work.

If paired with a stand-alone pump, D220x500 S3's four 1.5-inch (3.8-cm) mudlines and 3-inch (7.6-cm) head shaft, can accommodate 650 gallons per minute (2460.5 L/min) of downhole drilling fluid flow.

For more mobile operations, the D220x500 S3 can be equipped with an on-board excavator-style cab that has a view of the open-top vises, as well as the rack and rod stager.



Vermeer also debuted the diesel makeover of one of the HDD industry's most widely used mix systems. MX300D is equipped with a Caterpillar 3-cylinder, 24.7-horsepower (18.4-kW) diesel engine to power two pumps, for a two-tank mixing system. This design delivers a constant supply of fluid to the drill by moving fluids between tanks. After one tank is empty, HDD crews can begin mixing to replenish the fluid supply, without impacting fluid pressure to the drill.

Like the gas-powered MX300 mixing system, each pump on the new diesel version can produce up to 350 gallons per minute (1,324.9 L/min) of flow and can be paired with 750-gallon (2,839.1-L) or 1,000-gallon (3,785.4-L) tanks. The tanks are designed with a tapered bottom to help prevent additives from settling and building up, assisting with efficient drainage.

With a 40-inch (101.6-cm) tank width, MX300D and its two tanks can fit inside a standard-sized enclosed truck.

Volvo

volvo.com



Three new machines – L20 Electric compact wheel loader, and EC18 Electric and ECR18 Electric compact excavators – are the latest additions to Volvo Construction Equipment's commitment to bring power and performance in a more environmentally sensitive package.

With any of these electric machines, now totaling five, customers can operate in noise sensitive areas and non-standard hours, as well as

low-carbon projects and indoors, without the need for costly fume extraction systems.

The L20 Electric wheel loader is a proven concept, based on the larger L25 Electric model. It features a 1.8-ton payload and parallel-type linkage offering great visibility over the attachment being used, outstanding lifting height, as well as 100-percent parallel movements – making it a perfect fit for fork applications, too.

Expected to deliver up to six hours of active work per charge, the electric machine comes with a choice of battery pack (33kWh or 40kWh) and reduces maintenance by 30 percent. In addition to the more peaceful working conditions offered by its near-silence, operating comfort is enhanced, due to the new automatic park brake with hill-hold functionality and a range of customizable work modes.

The short, but tough, 1.8-ton ECR18 Electric excavator is set to provide the same best-in-class stability and operator experience customers expect from its diesel counterpart but with the benefit of low noise, low vibration and more responsive hydraulics due to the immediate torque.

With an anticipated four hours of active work per charge, depending on the environment and task, ECR18 also benefits from an ultra-short tail radius that's perfect for confined spaces. It's built with durability in mind – from its high-profile counterweight to all-round steel panels and hoses routed inside the boom.

Easy to operate and transport, the nimble EC18 Electric offers a cost-efficient, compact excavator working in 1.8-ton applications. Its variable undercarriage retracts to less than 1 meter and expands up to 1.35 meters, allowing it to squeeze into the tightest of areas.

The machine's design ensures the right frame corner, swing post and cylinder stay within the tracks' width, resulting in maximum visibility and a reduced risk of damage when working alongside obstacles. Other features include ergonomic controls, a spacious cab – with the option of an enclosed and heated cab – and a range of customizable settings.

All three machines come with an integrated on-board charger allowing them to charge from 0 to 100 percent in less than six hours. With an optional fast, off-board charger, L20 will fully charge in just two hours, and ECR18 and EC18 will charge up to 80 percent in a maximum of 1.25 hours. •