

## DRILLING

### Caterpillar's MD6250 blasthole drill features automated operation

who are operating compact-size drills are demanding more performance.

"We listened and responded by optimising the horsepower, thrust, rotation and carriage speed of the new D10x15 S3 to help utility contractors install more feet per day."

The D10x15 S3 features a 44.7kW Deutz TD2.9 Tier 4 Final engine, which Vermeer said was a 36% power boost compared to its predecessor. Vermeer also increased the thrust/pullback to 44.5kN, the maximum torque to 2,033.7Nm, and the maximum spindle speed to 220rpm.

"Measuring just 3.8m long, the D10x15 S3 has one of the smallest footprints in its class," said Michael. "When a crew is working in a residential area with limited space, they may have to set up in the street. The compact design of the D10x15 S3 helps minimise traffic disruptions in a neighbourhood."

Also with utility contractors in mind, Ditch Witch has added the new JT40 horizontal directional drill (HDD) to its fleet of drills.

The new unit is equipped with two 7in (178mm) LED displays which the company said provided a direct, transparent view into all critical machine functions and operations.

In addition to the digital displays, the



machine's real-time carriage-position indicator tells the operator the exact carriage location, for increased productivity and more intuitive operation.

Ditch Witch said a multifunctional, radial operator control was highlighted on the display for better control efficiency, including

mud flow, rotation and more. A new feature on the JT40, tracker information is integrated into the advanced displays for enhanced visibility into all jobsite functions beyond drill operation.

Senior product manager, horizontal directional drills, Seth Matthesen said, "As with all of our products, we continue to seek customer feedback to improve uptime, profitability and performance, and this machine features several new pending patents to do exactly that."

### DRILLING EFFICIENCY

Ditch Witch said that for greater drilling efficiency, the JT40 offered an innovative, two-speed, rotational drive system that produced 7,457Nm of torque. It said the machine minimised pipe-entry distance, giving operators increased drill pipe support as it entered the ground.

When it comes to drill bits, Rockmore International has introduced its new Xtrac bit design.

The tapered body retrac bit is said to have been designed to improve top-hammer drill-and-blast operations.

Rockmore said the Xtrac bit increased >

## Danish fibre network project

A project to connecting the island of Orø to the mainland of Zealand, Denmark, with fibre network was undertaken by Entreprenør Jacob Post, which installed 700m of 140mm pipes under seawater with a Vermeer D40x55 S3.

Jacob Post, owner and director of the firm, admitted there were a number of challenges, saying, "First, the distance of the drilling was longer than we could be sure the machine would be able to manage. Secondly, the length of the drilling also made it difficult to manoeuvre at the end of the drilling.

"Due to heavy wind, the first day of the project mostly went with preparations, as it was hard to control the rope ferry containing the monitoring gear," he said. "On the second day we started out drilling 200m. The next day we drilled the remaining 500m and then pulled back the pipe. All together 26 hours of non-stop drilling and pulling back."

He said another challenge was how to use the search equipment through seawater, as the signals do not work through saline.

"The solution was to hire one of the two rope ferries on the route. On the ferry, we placed an excavator on which we mounted a large PE pipe with closed bottom at one end. At the bottom of the tube we placed a surface monitor that we connected with an antenna at the top of the tube. Then we placed the pipe on the seabed and moved it as the drilling progressed.

"On the ferry, three men worked. One was managing the ferry, another was controlling the digger with the pipe, and a third was reading the signals through a camera."

At the other side, they hit an old concrete block. At that time the machine was pushed to the limit of its capacity and there was hardly any traction left, he said.

"Therefore, we could not pull back trying to change the direction. The only solution, in addition to starting over, was to try drilling through the concrete. This luckily succeeded and the drilling finally came through. When we were pulling back, the rotation was a bit difficult, but the further we came, the smoother it became."

Seawater and distance were among





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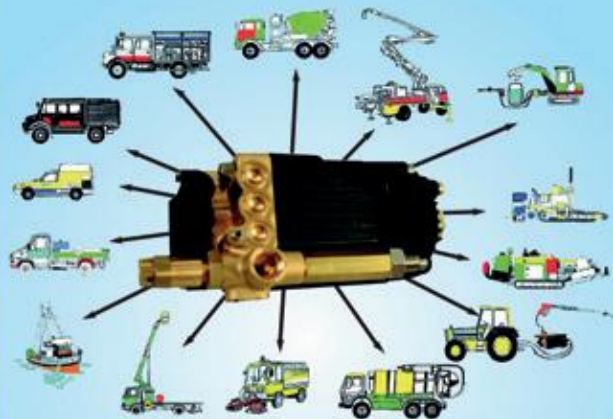
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overall drilling productivity by incorporating enhancements in the bit body design, as well as improvements in the configuration of flushing geometry.

It said this promoted straighter holes, faster penetration rates and longer bit life.

The bit features multiple flat spline grooves with extended cutting edges which the company said led to smoother retraction of the bit. It is available in conical, semi-ballistic, crown point, hemispherical and multipoint carbide profiles.

Numa claims to offer one of the largest ranges of DTH rock drilling hammers and bits available in the industry. The company boasts over 110 DTH products for drilling holes 89mm to 1,219mm in all types of conditions, applications, and industries.

Numa said it worked with drillers on job sites around the world to support its products and gain first hand insight for advancing DTH product design.

Its range of DTH products includes 18 different small diameter hammers for diverse drilling conditions. Said to be built specifically for longevity and penetration rate, Numa's Patriot hammers and bits drill at high frequency and require less air – even against high heads of water – the company said.

Numa's mid-range hammers and bits provide a combination of speed and life to excel against hard, abrasive and just plain nasty conditions, it said. A simplified hammer design with less internal components promotes less vibration and smooth operation.

Numa said it had pioneered the large hammer industry and led the market in performance and reliability. It said its forward thinking designs had proved themselves again and again in demanding applications around the world.

It also has reverse circulation products that can bring all cuttings up the centre of the hammer and drill string to be collected safely at the surface, and Super Jaws bits



**The Rockmore Xtrac bit has a tapered body**

for simultaneous drilling and casing in hard rock and overburden formations.

## WATER MANAGEMENT

And among other drilling accessories, Hilti is promising constant water supply and a clean jobsite during drilling with its DD-WMS 100 water management system, which it describes as a new way of diamond drilling.

It said it knew that diamond drilling involved many time-consuming repetitive steps, of which the actual drilling process may be one of the shortest. Keeping the jobsite clean and maintaining a constant water supply, it said, often occupied much more time and reduced productivity.

It claimed that the new DD-WMS 100 water management system made such tedious tasks a thing of the past.

Hilti said that all that was needed was to fill up the water tank and insert a filter bag,

## Leica in Liebherr positioning system

Liebherr and Leica Geosystems have got together with the iCON rig solution being integrated into LIPOS – Liebherr Positioning System.

The Leica iCON rig solution for drilling and piling machines will be directly implemented into the LIPOS factory-mounted add-on kit, which includes a fixture for the easy and quick installation of hardware without the need to change the machine structure. The rig solution will now be part of the process for data recording and reporting in Liebherr deep foundation machinery.

Leica said the iRD3/iRP3 solutions created a 30% time and cost saving with every drilling/piling job, reducing the need for stakeout work. They also offer wireless update of project files and remote support via telematics.



**Leica's iCon will be in Liebherr machines**

adding that as the water was recycled up to seven times, this was equivalent to about 100 litres of continuous water supply. Large wheels and handle bar made it easy to move around on the jobsite, said the company.

Once the filter is full and suction power begins to drop off, it was said to be easy to get rid of the slurry with disposable filter bags.

The patented multi-layer filter bags of the DD-WMS 100 are especially designed for collecting drilling slurry. Slurry collection reaches maximum capacity during the filtration process thanks to the effective use of the filter's surface. The water management system has three modes of operation – recycling mode, vacuum cleaning mode and water supply mode.

The DD-WMS 100 is compatible with all Hilti diamond drilling machines.

It was originally launched in France, Spain, Belgium, Luxembourg and Portugal, and has now been made available in Germany, Austria, Switzerland, and many other EU countries. It is expected to be in all the other countries before the end of this year.

Minnich Manufacturing, manufacturer of concrete dowel pin drills, has a dust collection system for dowel-pin drills.

Featuring Venturi-style suction and manual or automatic purge control, the pneumatic dust collector removes dust from the air as the operator drills. The canister-style unit can be retrofitted to any Minnich on-grade, on-slab, machine-mounted or utility drill model. It can also be adapted to fit other dowel pin drill makes and models.

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**A Minnich A-2C with the dust collection system**



**Hilti's DD-WMS 100 water management system**