

TILT & ROTATE



ACQUIRES 200TH
HITACHI EXCAVATOR
AND EMBRACES
CUTTING-EDGE
ENGCON TILTROTATOR
TECHNOLOGY

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ENGCON
COMPATIBILITY:
CAT® NEXT GEN
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UK WELCOMES
FIRST KUBOTA
KX085-5
EXCAVATOR
WITH ENGCON
TILTROTATOR

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A continued focus on innovation and partnerships for a sustainable future

Partnership with the CE Dealer Team

The World Championship in Rallycross is in full swing and engcon continues to be a partner in initiatives that focus on electric vehicles. Just like last season, we are proud partners of the Construction Equipment Dealer Team (CE Dealer Team) with drivers Klara Andersson and Niclas Grönholm. The season began on 1–2 June in Montalegre, Portugal and has now reached its final stage with the seventh round taking place in October in Cape Town, South Africa. Because engcon is at the forefront of sustainable excavation, it's especially gratifying that we're also involved in this year's sustainability initiative in rallycross.

New, improved machine hitch for excavators in the 12–19 tonne range

engcon works constantly on product improvement and always with a focus on the end customer. In May, we launched a new, improved machine hitch for excavators in the 12–19 tonne range as a further step in our improvements for the end customer. One of the advantages of the new machine hitch is its hoseless EC-Oil block, which provides longer life and ease of service, maintenance and retrofitting. Read more about the new S60 machine hitch on page 11.

Open solutions make things easier for the end customer

We passed an important milestone in May when world-leading excavator manufacturer Caterpillar chose to follow our strategy of creating open interfaces where the end customer is able to benefit from all of the advantages the excavator and the tiltrotator both have to offer. Read more about this new feature on page 12.

Unique collaboration between engcon and upper secondary school in Strömsund

Through its collaboration with engcon, Hjalmar Strömer school in Strömsund in Sweden is able to provide its students with the very best environment for their future careers. Thanks to the latest technology from engcon and unlimited time in the cab, the world of excavation lies at their feet. Read more about the collaboration on page 18 and let us know about any interest in a similar collaboration near you.



Martin Engström

Product Manager, engcon AB

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EDITORIAL STAFF

Editor-in-chief: Viktoria Winberg

Writers: Paul Argent, Viktoria Winberg, Moa Lundqvist

Photographers: Paul Argent, Sten Strömgren, Janne Ahola, Magnus Wattman, Janus Ree, Moa Lundqvist

Layout: Moa Lundqvist



**engcon continues
its electric rallycross
initiative** ▶



The FIA World RX Championship, the electric rallycross World Championship series, began the season with competitions in Montalegre, Portugal 1–2 June and has now reached its final stage, with the seventh round taking place in October in Cape Town, South Africa. Just like last season, engcon is proud to partner the Construction Equipment Dealer Team (CE Dealer Team) with drivers Klara Andersson and Niclas Grönholm.

2022 was the first time that a World Championship was held with fully electric cars – a major step toward sustainability in the world of motorsport. The initiative is wholly in line with engcon's ambitions when it comes to climate transition in the world of excavation.

"The partnership has been very beneficial for us," says Martin Engström, Product Manager at engcon. "Our vision of sustainability for the world of excavators is a perfect fit with the new electric World Championship

series and the EV initiative. It's clear we're pulling in the same direction. With our new generation of tiltrotators, engcon is focusing on energy savings. Our innovative solutions reduce dependence on fossil fuels and provide energy-optimised excavators that are even smoother to drive," he continues.

Aki Järvinen, engcon's country manager in Sweden, is also very positive about working together with the CE Dealer Team.

"We're delighted to take part in such an exciting sustainability initiative. Not only is the initiative a step toward a more sustainable society, it also enables competitive motorsport. The all-electric cars, with a motor output of 680 hp, can accelerate from 0–100 kph in less than two seconds, which is faster than in Formula 1," says Aki Jarvinen.

” The partnership has been very beneficial for us.

MARTIN ENGSTRÖM

In conjunction with the World Championship series last year, we launched a product known as the recovery plate, a tool for use when moving live electric vehicles on the race track. The ability to move cars on the race track quickly without the intervention of track staff enhances safety during such operations. The recovery plate is used together with a tiltrotator, making operations even more efficient as the tiltrotator provides great flexibility through its unique tilt and rotation capabilities. The product was developed in a collaboration between engcon, Volvo CE and Granfors Racing.

Great interest was shown in the electric World Championship series in 2022. Motorsport electrification is in its infancy and the eyes of fans and partners the world over were keenly focused on the various races. Both Klara Andersson and Niclas Grönholm have signed a multi-year contract with CE Dealer Team; last season Klara finished seventh and Niclas third in the trailblazing rallycross series. Interest has remained great throughout this year's season, and engcon is looking forward to cheering on Klara and Niclas at the last two events of the season in Cape Town, South Africa.

For further information, visit cedealerteam.com/events.





SHANNONSIDE CIVIL ENGINEERING:

Acquires 200th Hitachi Excavator and Embraces Cutting-Edge engcon Tiltrotator Technology



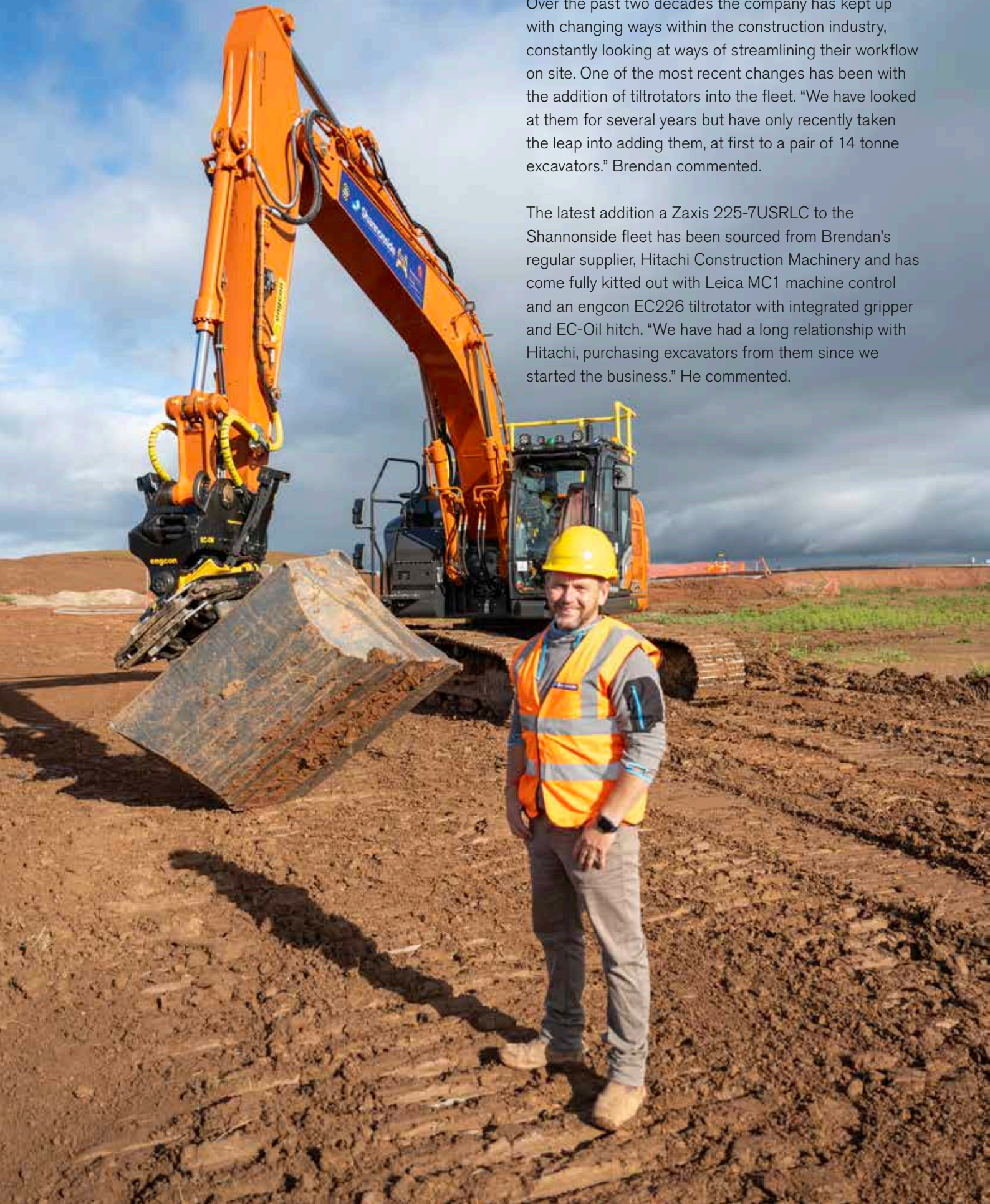
Redditch based Shannonside Civil Engineering have recently purchased their 200th Hitachi excavator. And to mark this special occasion, Managing Director and company founder, Brendan Carty has also added his first engcon tiltrotator to the fleet. ▶

Shannonside have been undertaking civil engineering works for the UK housebuilding industry almost 20 years and has grown from a single site operation with six men to a multiple site operation with a workforce of close

to 500. During this time, Brendan and his team have built an enviable reputation for delivering projects to a consistently high standard and to the total satisfaction of their Blue-Chip clientele.

Over the past two decades the company has kept up with changing ways within the construction industry, constantly looking at ways of streamlining their workflow on site. One of the most recent changes has been with the addition of tiltrotators into the fleet. "We have looked at them for several years but have only recently taken the leap into adding them, at first to a pair of 14 tonne excavators." Brendan commented.

The latest addition a Zaxis 225-7USRLC to the Shannonside fleet has been sourced from Brendan's regular supplier, Hitachi Construction Machinery and has come fully kitted out with Leica MC1 machine control and an engcon EC226 tiltrotator with integrated gripper and EC-Oil hitch. "We have had a long relationship with Hitachi, purchasing excavators from them since we started the business." He commented.



“They are a very well-made product, reliable and we know we are going to get good residuals from them. For our latest addition to the fleet, we realised that having the excavator fitted with a tiltrotator will further the machine’s versatility and chose to purchase the engcon system as it allowed us to seamlessly integrate it with our Leica machine control.”

The entire package was supplied through Hitachi Connected Technology’s facility based at Hebburn, where engcon has entered into a supply partnership allowing the dealer to specify and fit the full range of engcon tiltrotators and hitches to their machines prior to them being delivered to the customer, ready to go straight to work.

” We chose to purchase the engcon system as it allowed us to seamlessly integrate it with our Leica machine control.

BRENDAN CARTY

Tilt & Rotate met up with Tim Philpotts, the experienced operator entrusted with the keys for the new machine. Tim has been working for Shannonside for over 8 years and says they are ‘a great company to work for’. One of the first projects Tim and his new machine were sent to was a new housing development on the outskirts of Ledbury in Herefordshire.

“This is my third Hitachi Zaxis 225 and second Dash 7 model.” Tim commented. “I’ve had the Leica MC1 on the previous machine but having it all integrated into the new engcon has opened up so many new opportunities for what I can achieve on a daily basis.”

Tim’s first job of the day was to stack some concrete gully pots which he had unloaded. Prior to the arrival of the engcon, this job would have been a time-consuming project involving putting an operative on the trailer and using a sling to lift each pot. Tim showed just how easy it was to do this safely on his own using the integrated gripper unit by carefully picking up each unit and stacking them safely for use later on in the project. “Until you have the option of using the gripper, you don’t realise just how useful it is!” Tim exclaimed. “Handling the pots, pipes, buckets, anything to be honest, is just made so much easier and safer. The gripper is a powerful tool too, so I do have to be careful when handling some items although the precision you get through the joysticks is unbelievable.”

Whilst the gripper has been a revelation for Tim, he says the addition of EC-Oil allowing him to remove the tiltrotator without having to get out of the cab will be very useful when it comes to working inside a trench

box. “Most of our work allows me to keep the tiltrotator on, but there will be occasions where I need to reduce the width to work inside a narrow trench and having the opportunity to quickly remove it, will remove the possibility of causing any damage to it.” He commented. “We currently don’t have any hydraulic attachments to run under the EC-Oil hitch, but I would like to try a compactor plate to see how it compares with our trench roller we use.”

At the time of our visit, Tim was engaged on site stripping works ahead of constructing a new spine road into the site. Working from the edge of the previously completed roundabout, Tim showed off the

engcon’s versatility immediately to build up the levels and compact material around existing drainage pipes. Sitting in one spot he was able to infill the area with material spreading it carefully around the markers for the pipe ends and profile the sides of the excavation without having to turn a track. “As this is my first



tiltrotator, it does take some getting used to.” He commented. “I did have a tilt bucket on my last machine which has given me a little head start! What is good about the engcon DC2 operating system is that we were able to swap the tilt and rotate functions over on the joysticks to match my old set-up very easily.”

Whilst not only offering Tim the ability to undertake a wider variety of tasks, the addition of the engcon has offered the company significant time savings undertaking certain operations. “On certain jobs where

material needs to be placed accurately, we would have turned the bucket around. Whilst this would only take a few seconds to do, doing this several times per hour can certainly add up. The engcon does away with that.” He comments. “Just the time taken in repositioning the excavator to undertake certain tasks has been massively reduced thanks to having the tiltrotator on.

When linked to the MC1 system, just advances things to another level having no need for surveyors installing pegs and profile boards. It just allows me the ability to undertake a multitude of jobs single-handedly. It is surprising how quickly you get used to using the tiltrotator. I for one wouldn't want to go back to not having it on my machine!”

On a personal note, the 200th Hitachi to be purchased by the company also carries a special livery with the counterweight of the machine is adorned with the logo of the Birmingham Children's Hospital Charity. Tim's

son Jack, who is now six, was diagnosed with a brain tumour at just 6 months of age and whilst treatment has removed the tumour, the side effects such as hydrocephalus has meant Tim and his family have spent many hours under the expert care of the Children's Hospital as Jack receives treatment. “The entire team at Shannonside have been amazing with us throughout

Jack's treatment and when Brendan said he wanted to do something special for my machine, I didn't expect this.” Tim said. “Brendan kindly donated to the hospital's charity that has helped Jack and

many other families throughout their treatment and for that we thank them sincerely. The company have been amazing with me when I have needed time off, sometimes at short notice and to have them hand me this machine with the charity's logo on, was something very special.”

” Just the time taken in repositioning the excavator to undertake certain tasks has been massively reduced thanks to having the tiltrotator on.

TIM PHILPOTTS



engcon has launched a new and improved machine hitch for excavators in the size of 12–19 tons

engcon, the leading, global manufacturer of tiltrotators, quick hitches and accessories for excavators, is constantly working to improve its products, with the end customer always in the focus. To further enhance the end customer experience, engcon is now launching a new, improved machine hitch for excavators in the size of 12–19 tons.

In addition to making the machine hitch stronger, the retrofitting with EC-Oil blocks will be easier as the new machine hitch contains almost no hoses and minimises the risk of leaks. The end customer will also notice that the new bolt-on EC-Oil block has an increased hydraulic flow.

“Thanks to our innovation-driven work with a focus on the end customer, our customers can rely on engcon to always deliver state-of-the-art technology. Our package should be the complete solution and the premium product that our customers want, now and in the future,” says Martin Engström, Product Manager at engcon.

Advantages with the improved machine coupler S60:

- ▶ EC-Oil block without hoses, this means a longer service life, easier for repairs, maintenance, and retrofitting.
- ▶ Reinforced construction both laterally and in the digging direction.
- ▶ Increased stability around attachment points to the machine that contributes to a better operating experience.
- ▶ Improved and more flexible hose routing between excavator and machine hitch.
- ▶ Bolted lifting hook and possibility with lifting eye.



Read more





engcon compatibility: Cat® Next Gen excavators (NGH)

engcon is proud to announce that its next generation DC3 steering system is compatible with Cat® NGH excavators in the 13 to 35 tonne weight range. This will make installation of engcon's tiltrotators and control systems on Caterpillar excavators much simpler than before.

DC3 - the next generation control system for engcon tiltrotators, is based on a new hardware and software platform that makes installation and connection

to interfaces supplied by machine manufacturers easier compared to today's conventional aftermarket installations. By using the third party tiltrotator support



interface now available on Cat® NGH, the installation of engcon tiltrotators is completed in a few hours, instead of days.

“With demand for our products increasing on a global scale, it is essential that we make our tiltrotator more available to the customer. Making sure the customer can enjoy the full value of what the tiltrotators and machine have to offer is equally important. Now that the new third-party tiltrotator support interface is available on Cat® NGH and our DC3 control system, both can be achieved,” says Tomas Wall, Solutions Architect for Control Systems at engcon.

By making engcon's next generation tiltrotator control system compatible with the Caterpillar third-party interface, installation is not only simplified, but customers can now also enjoy all the technical features offered by Cat® NGH combined with engcon's tiltrotator.

The interface allows the tiltrotator to be controlled seamlessly via the Cat® NGH joysticks. It is also fully compatible with engcon's second generation positioning solution, ePS v2, which allows the tiltrotator to transmit both tilt and rotation information directly to the machine. The positioning information can then be used in Cat® NGH functions such as Cat Grade, Cat Payload, and Cat E-Fence. Because tiltrotators from engcon are now fully compatible, customers can take advantage of all the technology Cat NGH excavators have to offer, while leaving the cab intact and free from additional sensors.

engcon's DC3 control system, compatible with the CAT third-party tiltrotator interface, will be available later this year; for further information about the product, contact your local engcon dealer.



GAME-CHANGING COMBO:

UK Welcomes First Kubota KX085-5 Excavator with engcon Tiltrotator

Twenty two year old Jack Dickson has just become the proud owner of the first Kubota KX085-5 excavator with two-piece boom and engcon tiltrotator to arrive in the UK.

Jack hails from the Lake District where his family run a successful caravan and holiday park and whilst Jack has spent numerous hours helping with the maintenance and redevelopment of the park over the last few years, having his own machine and undertaking his own work has always been a dream of his.

” The tiltrotator is a great addition to the machine. It not only makes our lives easier on the ground, but it also makes it safer.

Already operating a Kubota KX080-4A excavator now with 3600 almost trouble-free hours on it, when the new -5 model was announced, he quickly inquired as to its price and availability with local dealer, PV Dobson at Kendal. “I had heard some very encouraging reviews about the increase in performance and productivity from the -5 and whilst the older machine was still doing fine, I just wanted an upgrade with a two-piece boom to increase my versatility when it comes to certain operations.” Jack commented. “I have dealt with Dobson, as have my family, for many years and they are an absolute dream to deal with.”

The new excavator was to push the outside works Jack had started to pick up in larger quantities and was originally going to take the place of the existing 8 tonne machine. “We agreed a deal with Matthew at Dobsons for a trade-in on the older machine.” Jack Commented. “But with additional contracts being secured, we decided to keep the -4A machine for a while longer.”

While the new -5 comes with an improved hydraulic specification, increased cab comforts and a variety of other improvements, it was the addition of a two-piece boom and more-so the fitment of a new engcon EC209 tiltrotator complete with EC-Oil on both top and bottom hitches, that has given Jack a bigger boost in productivity than he ever imagined.

I already had a standard tilting ditcher on my old machine, and it just opened up a raft of possibilities when it came to certain works. I thought that the tiltrotator would take that a step further when in fact, it's given us a huge leap instead.” He explains. While the choice of base machine was almost a given thanks to the excellent relationship with Dobson, Jack took the time to look at all brands of tiltrotators available before making his decision. “They all have their pros and cons, but it was the recommendation of Jack Hull by Matthew at Dobson that swung it for me.” He comments. “Jack specified the EC209 for us and fitted it all prior to delivery from Dobson. The machine was ready to go to work when it landed, although I do have a few more extras I want to add when I have the time!”

With much of Jack's work centring around the Lake District, one of the first major projects for him and the machine was in the centre of Bradford where he is working on a long-term project from Darwen based ERH Contracting. ERH have been asked to undertake the excavation and installation of new district heating pipes through the city centre. Used to distribute hot water to heat public and civic buildings, the new pipework will eventually be connected to a new waste to energy plant currently in construction. The twin steel pipes are insulated and coated in impact and wear resistant plastic before being buried almost 2.5m below the city's streets and pavements. To undertake this work, the new Kubota is proving to be the ideal machine



thanks to its compact dimensions and impressive reach. "With the two-piece boom fully extended I can easily reach the bottom of the cut, but also having the ability to curl it in tight means we don't need a full road closure in which to operate." Jack comments. "I can also sit outside of the line of the cut and still dig a flat-bottomed trench out thanks to the engcon."

Jack is currently awaiting his breaker and grab to be converted to EC-Oil headstocks to allow him to utilise the hitch to its full potential. "I have a range of buckets to use with the machine and a brush due soon too, but the Scandi-style engcon bucket is ideal for doing everything here. It's the perfect size for the trench, lightweight and will dig through the harder material with ease." He explained.

On the day that Tilt & rotate met up with Jack in Bradford, he was tasked with excavating around an existing 600mm diameter water main. Under the watchful eye of his banksman, Richard, Jack was able to carefully remove the material from around the HDPE pipe. As the trench stays open for a few days for the pipe installation, Jack was then asked to clean the sides of the excavation to allow the installation of

some lightweight piles to ensure the excavation stayed safe. With the sheet piles put in place by hand, it was a simple task for Jack to apply just a little pressure on the top of them to secure them in the ground before the hydraulic bracing was installed. Careful and considered movement of the bucket saw Jack clean the sides of the trench and with having the ability to rotate the bucket any way he wanted, there was very little work left for Richard to undertake with the shovel. "The tiltrotator is a great addition to the machine." Richard commented. "It not only makes our lives easier on the ground, but it also makes it safer. We don't have to be using a pick or a shovel to dig around services as Jack just spins the bucket around and does it so much quicker and easier."

In Jack's short time using the engcon, he has quickly realised the benefits associated with running the system. "It's a big financial investment to make." He comments. "But what we are able to do with it and the added productivity gains we get, I envisage that it will pay for itself in just 12 months."



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Innovative collaboration with engcon gives students opportunities for promising careers

Thanks to the collaboration with engcon, Hjalmar Strömer school in Strömsund is able to provide its students with the very best environment for their future careers. Using the latest technology from engcon and unlimited time in the cab, the world of excavation lies at their feet.

"We're truly grateful and proud of our collaboration with engcon," says Klas Norlén, teacher in the construction course at the upper secondary school in Strömsund. "Were it not for our collaboration with engcon, the course would not have attained the level it has," he continues.

The collaboration began back in 2019 as there was a need for suitably trained machine operators in the industry. Today, the majority of students have jobs even before they have taken their high school finals, largely because they had the opportunity to use the latest products from engcon during their studies.

” This is definitely something the rest of the world should emulate.

KLAS NORLÉN

The machine currently used by students during school hours is a Volvo EWR150 equipped with an S60 machine coupler, an EC219 tiltrotator and a detachable grab cassette that is easily switched to a sweeper cassette. The machine is also equipped with EPS,

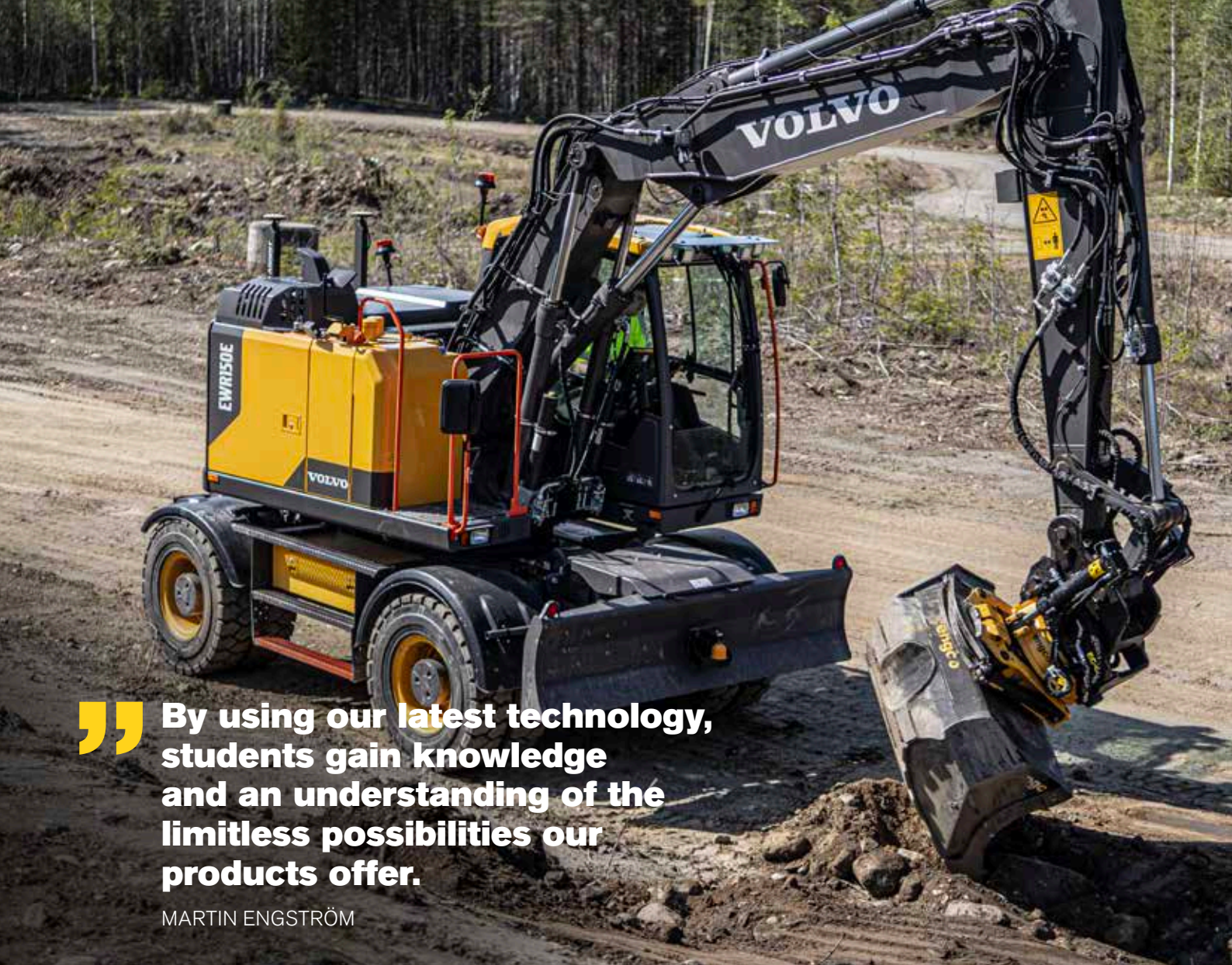
Volvo's Dig Assist, which communicates easily with engcon's tiltrotator and control system.

Klas Norlén also tells us that engcon employees from the rest of the world frequently make study visits to get insights into how the collaboration works.

"This is definitely something the rest of the world should emulate, as it would safeguard the skills supply for the industry," he said.

Martin Engström, product owner at engcon, also takes a positive view of the collaboration and would be happy to see other countries do the same.

"Considering the generational switch the industry is facing, engcon is not averse to collaborations with schools in other parts of the world," he said. By using our latest technology, students gain knowledge and an understanding of the limitless possibilities our products offer. It also helps us find innovative entrepreneurs who can help us develop the products of the future," continues Martin Engström.



” **By using our latest technology, students gain knowledge and an understanding of the limitless possibilities our products offer.**

MARTIN ENGSTRÖM

Do you know of any school that would be interested in collaborating with engcon?
If so, get in touch with us!

Scan here



The image shows a close-up of an excavator's hydraulic arm and bucket. The arm is yellow and black, with the 'engcon' logo visible on several parts. The bucket is black and has 'engcon | EC-Oil' written on it. The background is a blurred outdoor setting with other construction equipment.

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