

TILT & ROTATE



Meet us at
our next event!



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WORK BECOMES
EASIER AND MORE
ENJOYABLE"

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Welcome to an exciting new year with engcon!

We continue with the same drive as before to develop new and existing products, so that you as a customer can increase your profitability and earn more money. Our focus on innovation, sustainability and quality ensures that we can offer you the best solutions on the market. Our vision is to change the world of excavation - we can only do this together with you. Our main focus is to have a close relationship with you, the users of our products, i.e. excavators operators worldwide. We continue to grow and expand into new markets. Last year we opened a sales office in Japan and we are convinced that it is a good complement to our sales offices in Australia and Korea in Asia. We want to make the whole world yellow!

We will put extra effort into meeting our customers in the coming year. We know that the best way to understand the benefits of tiltrotators is for operators to test and feel the difference. It also gives us the opportunity to showcase our latest innovations and meet customers and partners from around the world. In the coming year, we will therefore participate in a variety of fairs and demo days. We look forward to sharing our progress and vision for the future with you. Scan the QR code on this page to see where you can meet us to talk about how we can increase your profitability. We look forward to continuing to change the digging world together with you! First and foremost, sustainability is a central part of engcon's strategy. We strive to reduce our environmental impact by developing products that are more energy efficient and sustainable. This includes using recycled materials and implementing green manufacturing processes. In terms of profitability, engcon continues to grow and expand into new markets. We see strong demand for our products and services, which contributes to stable economic growth. In the coming year, we plan to launch several new products that will revolutionise the industry. These products are designed to improve efficiency and productivity for our customers, while reducing their environmental impact.

Martin Engström

Product Manager, engcon AB



CUSTOMER SURVEY

As we are constantly striving to improve our products and services, we would be delighted if you would take a moment to complete our short survey so that we can continue to improve.



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engcon has launched a new, improved machine coupler for excavators in the size 20-30 tons

engcon is constantly working to improve its products, with the end customer always in focus. As another step forward to enhance the end customer experience, engcon is now launching a new, improved S70 machine coupler for excavators in the size 20-30 tons.

A year ago, engcon launched a new machine coupler for excavators in the size 12-19 tons with the model S60. Now it's time for the S70, replacing the previous QS70 model, this coupler is now stronger. In addition, retrofitting with EC-Oil blocks will be easier because the new machine coupler no longer contains hoses and minimizes the risk of leakage. Like the S60, the S70 has an increased hydraulic flow, which is beneficial when using a hydraulic hammer or other tools that require a larger amount of oil.

– Thanks to our innovation-driven work with a focus on the end customer, you can trust that engcon will always deliver state-of-the-art technology. Our package must offer a comprehensive solution and be the premium product that our customers want, now and in the future, says Martin Engström, product manager at engcon.

The next step in product development in terms of machine coupler is the launch of the S40 for the 3-6 ton size class and the S45 for 6-11 ton as well as the

S80 for the 27-40 ton size class. These models will be launched in the first half of 2025.

Advantages with the improved machine coupler S70

- + EC-Oil block without a hose offers longer life and easier servicing, maintenance and retrofitting.
- + Less environmental impact and fewer machine stops as the risk of leakage is reduced.
- + Reinforced construction both laterally and in the digging direction.
- + Increased stability around attachment points to the machine which contributes to a more pleasant driving feeling.
- + Improved and more flexible hose routing between excavator and machine attachment.



engcon and RodRadar Partner to Transform On-Site Construction Automation and Safety

engcon today announced a strategic global collaboration with RodRadar, the developers of Live Dig Radar® (LDR), a patented technology for real-time underground utility strike avoidance.

This partnership will integrate RodRadar's innovative LDR system with engcon's quick couplers, delivering a seamless solution for contractors, utilities, and municipalities. The result is a transformative approach to safer, automated, and more efficient excavation.

RodRadar's LDR technology enhances excavator operations by enabling real-time detection and avoidance of underground utility infrastructure during excavation, without the need for off-site or offline expert analysis. The technology is embedded in the LDR Excavate digging bucket and complemented by an intuitive in-cabin operator display unit.

"This collaboration is fantastic news for our end customers," said Sam Ryan, Regional Director & Global OEM Manager at engcon. "By integrating our advanced tiltrotator technology with RodRadar's Live Dig Radar, we're enabling safer, automated, and more efficient digging operations while significantly reducing time and costs on-site."

The integration of engcon's machine couplers and RodRadar's LDR system is poised to modernize excavation processes, boost operator safety, and drive project efficiencies.

"We are thrilled to partner with engcon," said Yuval Barnea, VP of Sales and Marketing at RodRadar. "Their innovative solutions perfectly align with our Live Dig Radar system, creating a seamless integration that enhances contractors' safety, precision, and productivity. This partnership represents a significant step forward for both companies, enabling us to deliver unparalleled value to the construction industry and set new standards for operational excellence."

The solution will allow contractors to upgrade their engcon DC3 systems with EC-Oil technology, enabling seamless compatibility with the RodRadar LDR system. The machine coupler solution is available Q1 2025. The solution under the tiltrotator will be available later in the year.

About RodRadar

RodRadar is revolutionizing excavation with a groundbreaking technology platform that redefines underground utility detection and avoidance. By overcoming the limitations of traditional ground-penetrating radar, RodRadar delivers unmatched accuracy and confidence in detecting utilities at varying depths, improving jobsite safety, reducing costs, and boosting efficiency.

Established in 2013, RodRadar is supported by industry leaders and key investors, including Brick & Mortar Ventures, Mayer Group, Dysruptek, HOLT Ventures, and Garney construction. To learn more, visit www.rod radar.com.

The logo for engcon, featuring the word "engcon" in a bold, lowercase, sans-serif font. The text is black and is set against a bright yellow rectangular background. A small registered trademark symbol (®) is located to the upper right of the word.The logo for RodRadar, consisting of a stylized red and white graphic element on the left that resembles a curved, overlapping shape. To the right of this graphic, the word "RODRADAR" is written in a bold, uppercase, sans-serif font. Below "RODRADAR", the tagline "Break Ground, Not Pipes!" is written in a bold, red, sans-serif font.

Experienced machine operator learns new skills in major climate project

Torben Lund Hansen, Denmark, feels close to paradise in new Cat 325 with engcon DC3.

Machine operator Torben Lund Hansen, at the construction group Per Aarsleff A/S, has been operating Caterpillar excavators for just over three years now. Since 2020, he has been a permanent pilot in excavators, after a dozen years driving machines of all types for contractors.

Now it's time for Aarsleff and specifically the major climate adaptation project Kagsåparkens Regnvandsprojekt on the border between Herlev Municipality and Gladsaxe Municipality. Here, climate change has created major challenges, and now the project is being remodelled to protect homeowners and businesses from the increasingly violent weather. Kagsåparken will be transformed into a rainwater park, where depressions and rainwater basins will create space for up to 100,000 cubic metres of rainwater.

From DC2 to DC3

'I started the project in September 2024 in an older Cat 325F, which I had also

driven on Fehmarn. It was equipped with an engcon tiltrotator with DC2 control. Now I've got a new Cat 325 to drive, also with an engcon tiltrotator, but with the new DC3 control system,' says machine operator Torben Lund Hansen.

His new 28 tonne Cat 325 is one of three machines that Per Aarsleff A/S bought and equipped with engcon DC3 machine control.

'We have tiltrotators on 140-150 machines, and around 70 per cent of them are engcon. Aarsleff has a long-standing, good co-operation with engcon, who are good at developing durable and compact products. Access to service has always been good, and our own repairers find it easy to deal with engcon,' says Bo Mikkelsen, Machine Manager at Per Aarsleff A/S.

A lot to gain

'We're going to use EC-Oil more and more because there's really something to be gained from the system. The operator saves a lot of time by





being able to change the hydraulic tools without leaving the cabin. At the same time, the work is both faster and better because he always chooses the right attachments, precisely because they are easy to change,' says Bo Mikkelsen.

'Environmentally, there's also a benefit from, for example, adding a grab to sort waste from usable materials, instead of driving everything away as waste,' the chief engineer points out.

The man in the cabin, machine operator Torben Lund Hansen, agrees with the chief engineer that everything has become both easier and better with the new technology.

'I'm pleasantly surprised by both the machine and the tiltrotator. Previously, I've used an engcon tiltrotator with DC2 control and without EC-Oil. It's completely different with the new DC3 with EC-Oil, where I no longer have to go out and fit and remove hydraulic hoses. I used to have screw couplings for the hydraulic hoses, and then you can quickly spend 10 minutes at each end connecting and disconnecting. Now I can sit inside the cabin and do it all in 10 seconds,' explains Torben Lund Hansen enthusiastically.

The more standard, the better

All functions for both the machine and the tiltrotator are located in the joysticks, which with the DC3 control can be customised exactly as the operator wants and finds most appropriate.

'There are no changes to the standard setup in the

system. The factory setup works fine - and the more standard the better - it also makes it easy if a colleague has to replace me in the machine,' says the operator. The DC2 and DC3 are both of the largest controllers supplied by engcon and come with engcon's QSC locking system as standard. The system is designed to make quick changes easier to understand and operate and is therefore fitted with a separate control panel where it can be easily and visibly seen. You are guided by lights in the buttons, which switch on in the order they are operated, ensuring easier understanding and fewer calls to support to ask how to operate the bucket shift. The QSC system is, by default, prepared for any requirements now, and in the future, on construction sites to be fulfilled when needed.

Fewer floods

The major construction work in Kagsåparken started in August 2024 and will be completed in 2028. The plan is that the new rainwater park will improve water quality in Kagsåen and Harrestrup Å and reduce flooding in the local area. There will also be room for more recreational areas.

The project is a collaboration between Herlev Municipality, Gladsaxe Municipality and the municipal water and wastewater companies, Novafos and HOFOR. Rambøll and Gottlieb Paludan Architects have developed and designed the project, with Per Aarsleff A/S carrying out the practical construction work.

EC02 BASIC

The EC02 Basic is both affordable and easy to use, making it the ideal choice for simple excavation work that only requires tilt and rotation. The EC02 Basic offers the same high quality as engcon's larger and more advanced models, but in a reduced format that is perfect for smaller machines. It offers the excavator driver precision combined with unlimited rotation and $\pm 40^\circ$ tilt. It works directly with the excavator's proportional control system and makes installation easier than ever.

TECHNICAL DATA

Total length: 435 mm

Height: from 245 mm

Weight: 78 kg

Inclination: 2*40°

Mechanical mounting: S30

Weight of the basic machine: 1.5-3 t



EC204

The new EC204 model has EC-Oil both above and below the tiltrotator, which is unique for a small machine. This makes it easy to change attachments or simply disconnect the tiltrotator when needed. It offers a tilt angle of 45 degrees, unlimited rotation and the option of mounting a removable gripper or removable sweeper, which contributes to versatility and flexibility in excavation work. The model is also prepared for EPS, engcon's innovative positioning system.

TECHNICAL DATA

Total length: 463 mm

Height from 310 mm

Weight: 129 kg

Tilt: 2*45°

Standard attachment: S40

Maximum bucket width recommended for engcon: 1,000 mm

Weight of basic machine: 2-4 t

Compatible with tilt and rotation sensors.

Compatible with DC2, SS9, SS0. Compatible with DC3 soon.





‘Is there anything you can't do with the engcon-Tilt?’

If you call Philipp Kammel, Germany, there is a good chance that you will reach him hundreds of kilometres away from his company headquarters in Memmelsdorf, Franconia. For example, somewhere in northern Brandenburg, in the greater Berlin area or in the Ruhr area, where he is working on major projects as a subcontractor with his Lieberherr A 918 Compact wheeled excavator – equipped with the complete engcon package.

What at first glance appears unusual for a small company with currently four employees has a perfectly logical reason for the company director, who is just 27 years old. 'You have to be broadly positioned in economically difficult times like today,' says Philipp Kammel, who, with his company Pyramidenbau, founded three years ago, is primarily active in the areas of road construction, demolition and classic earthworks. Why the rather unusual name 'Pyramidenbau' for a company based in the Franconia region of Germany, where archaeologists have yet to discover a pyramid? 'It was a crazy idea of my best mate Basti during our training as construction equipment operators,' continues Philipp Kammel. 'And because the name has a high recognition value, I took it.'

The fact that he is working as a subcontractor on major infrastructure projects so far away from Memmelsdorf is, of course, also related to the current construction crisis. 'It has hit the Bamberg region hard. The price war is fierce, there are many insolvencies, even among my acquaintances,' says Philipp Kammel, who, through his work as a subcontractor, wanted to minimise the economic risk for his company as much as possible from the outset. That is why, for example, he has not purchased his second excavator, a Volvo EW 170, but has taken it out on a long-term rental agreement. 'I don't want to take too much risk with a company as young as mine.'

But it was also clear to him from the outset that he

wanted to use his Liebherr excavator for a range of different jobs – and that it would therefore need to be equipped with the complete engcon package. 'As an excavator operator, I have worked with a wide range of tiltrotators,' says Philipp Kammel, "and engcon's has by far been the most convincing for me". He says that an engcon tiltrotator has "more power than any other", is "very compact and not as heavy in relation to other manufacturers" – in other words, "simply perfect for a short-tail excavator".

The A 918 Compact is equipped with the EC219 tiltrotator and the fully automatic EC-Oil quick coupler QS60 including the detachable gripper clamp GRD and the machine control DC2 as well as the MIG2 joysticks. The engcon package also includes the SG19 stone and sorting grapples, the PC6000 compactor plate, the GH1200 pallet fork, the GRB2000 levelling bar, the R19 ripper tooth, the CB20 cable bucket and the DB06, DB12 and DB18 backhoe buckets. 'We have pretty much everything we need,' says Philipp Kammel. "And the good thing about it, in my opinion, is that it's all from a single source." This is also evident from the service. If, for example, there are any questions about fine-tuning, he can always rely on the expertise of engcon specialists Karl Bahr and Michael Häußlein at the German headquarters in Wertheim. 'They're always very easy to reach, take time and really know their stuff.'

He is impressed by the fact that there have 'never' been any technical problems with the engcon equipment



so far. 'The tiltrotator has now clocked up about 2,000 operating hours and never once has a screw been loose or a pipe leaked. It really is worth the money.' Philipp Kammel has also found that he can work much more precisely and flexibly with the tiltrotator, and 'at least 25 to 50 per cent faster'. For example, he once needed just two days for track work for Deutsche Bahn, the German railway, instead of the three days that had been planned. The amazed foreman commented, 'Is there anything you can't do with the engcon tiltrotator?'

Philipp Kammel has also found that thanks to engcon, he is also 'more sustainable on the road'. 'You can change the various attachments much faster and you have to move the excavator less for different jobs,' he says. This is of course noticeable in terms of fuel consumption. 'I estimate that I save up to 20 litres a week as a result.' 'All in all, it was the best decision for me to choose engcon as a partner,' emphasises Philipp Kammel. He also sees this confirmed in comments from customers, such as: 'You may be a bit more expensive than others, but you more than make up for it with your speed.'

Philipp Kammel is particularly proud of the fact that, after graduating from vocational school, completing his training and working as a grader driver at Strabag, he 'built the company from the ground up on his own'. This was something he was probably born with. 'Even as a small child, I always liked being on construction sites and sat on my grandpa's excavator's bucket,' he recalls. 'And I knew early on that I wanted to start my own company.' He worked hard for this and 'saved a lot'. With this and a 'reasonable business plan', he managed to secure the financing for the Liebherr excavator. He therefore has the following advice for those wishing to follow in his footsteps: 'Being self-employed is a privilege. If you want more than everyone else, you have to be willing to work harder than everyone else.'

Philipp Kammel also has a clear vision of how his company's construction business should develop. After his wedding in May this year to his girlfriend Laura, who is responsible for the commercial work, the purchase of a Takeuchi excavator in the five-tonne class is on the cards, and a second Liebherr A918 Compact is to be purchased by next year at the latest – both equipped with the engcon package, consisting of a tiltrotator, EC-Oil quick coupler and DC2 control. 'And in about three years, we want to move into our new company premises, because we are staying loyal to the region.'





The tiltrotator is revolutionising the excavator industry

engcon is constantly working to develop its products – always with the end customer in mind. Our vision is to change the world of excavating. We have revolutionised the industry by transforming the excavator into an implement carrier.

Sustainability is one of several driving forces behind engcon's innovation work. By using a tiltrotator, excavators can perform more tasks with greater precision and efficiency, which not only leads to greater profitability but also to lower energy consumption and thus a smaller carbon footprint. In absolute figures, using a tiltrotator can reduce an excavator's fuel consumption by up to 20%. Our third-generation tiltrotator is far ahead of its predecessors. Compared with the second generation, it reduces energy consumption by up to 30%.

In 2025, we will be launching more models in our third generation. The first of these is the EC309, which

will make its world debut at the Bauma trade fair in Germany in early April.

By continuously developing and implementing innovative solutions such as the tiltrotator, engcon is showing that it is possible to combine profitability and environmental responsibility. This is how we are changing the world of digging!

Read more about our work in the area of sustainability



"With engcon, work becomes easier and more enjoyable"





In Malmö, Sweden, where the city is being modernised to make way for new superbuses, Filip Inglesis - an experienced excavator operator works at Harlösa Last & Transport. With over ten years' experience in the industry and a long history with engcon, he has recently had the chance to drive a Volvo EWR170E equipped with the latest generation tiltrotator: the EC319.

'It works bloody well'

Filip has been using engcon for many years and particularly appreciates how smoothly it works in his daily work. 'It's a really nice thing to drive with. The new engcon tiltrotator has an easy-to-use system and the service is always top notch,' he says.

One of the biggest advantages of the third generation tiltrotator is the new self-learning configuration. The system adapts to the operator, making digging both more responsive and energy efficient. 'There's a lot

more customisation now, so you can adapt it to your own driving style,' explains Filip.

EC-Oil - 'really smooth'

For the first time, Filip has also been able to test EC-Oil, engcon's automatic quick hitch system. 'It's really easy! You don't have to jump out and connect hoses, there are fewer oil leaks, and tool changes are lightning fast,' he says. In his work, he often switches between different attachments - sweeper, soil vibrator and demolition grapple. 'I've been using the sweeper for six years, and

it's a great solution for keeping the workplace clean.' With EC-Oil, he can switch between attachments in seconds without leaving the cab.

Flexibility and safety in focus

Having the right equipment for the right job is crucial, and that's one of the reasons Filip favours engcon. 'The best thing about engcon is the flexibility. There are as many hydraulic attachments as you like, and you can get the system just the way you want it.'

In addition to the ease of working, he also appreciates the safety of engcon's solutions. 'We do a lot of deep excavation, and the ground vibrator is invaluable. Instead of someone standing in the shaft and working manually, I can do the job from the cab. It reduces the risk of collapse and creates a safer workplace.'

Variety and future

As a machinist, Filip gets to try out a range of different tasks - everything from fine-tuned landscaping to large projects with Skanska and ESS. 'Every day is different, and that's what I like most,' he says.

Harlösa Last & Transport, where he works, has around 50 employees and a large fleet of machinery, including excavators, trucks and other specialised machines. 'We get nice machines and can customise them to what we need. It makes the job more fun and more efficient.'

With the new generation tiltrotator and EC-Oil in his Volvo EWR170E, Filip is looking forward to the future of work. 'It just gets better and better. Engcon makes the job easier, smoother and more fun!'



engcon®



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