



TILT & ROTATE

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GREATER CAPACITY

NEWS SERIES 1, 2 & 3

THREE DIFFERENT
LEVELS OF
PERFORMANCE



CHANGE THE WORLD OF DIGGING

There's an engcon for everyone

As engcon continues to drive innovation within the excavator industry, we are now seeing an exciting change – new terminology and greater clarity regarding our tiltrotators.

The tiltrotator has long been at the heart of engcon's offering. It turns the excavator into a flexible tool carrier, saves time, reduces fuel consumption and increases safety on the job site. But with a growing global market and more products, we need a language that is as smart as the technology. Our new way of presenting our tiltrotators will make it easier for you, the customer, to choose the right solution for your needs.

From now on, Series 1, 2 and 3 represent three different levels of performance:

Series 1 is the first step into the world of tiltrotators and delivers basic tilt and rotation for immediate precision, efficiency and profitability.

Series 2 is our flexible all-in-one solution that boosts productivity and simplifies daily work, with EC-Oil as an option for optimised tool handling.

Series 3 is the ultimate tiltrotator experience with EC-Oil, future-proof technology that makes excavation work smarter, smoother and more efficient.

With these new names, we don't just want to simplify – we want to inspire. The tiltrotator is more than just an attachment; it is a symbol of smarter, safer and more sustainable excavation. As we now take the next step in our journey, it is about giving the technology a language that matches its significance.

This is how engcon is changing the world of excavation.



Martin Engström
Product Manager,
engcon AB



DIESEL DIRT & TURF EASTERN CREEK SPEEDWAY

engcon is attending the National Diesel Dirt & Turf Expo, Australia's largest construction expo. At the event, engcon showcases its products and innovative solutions, giving visitors the chance to experience its technology up close. The expo continues to grow each year, attracting exhibitors with strong business opportunities and impressive displays.

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ENGCON IS GROWING STEADILY

You are part of the journey

2025 has been an important year for engcon. We have continued to develop our products and increased our market share worldwide. We have met satisfied end customers at trade fairs and demonstration days. And the future looks bright – according to a new market study, the global tiltrotator market is expected to grow by 20% by 2030 – and you are part of that journey!

There are many factors that shape our future. The construction industry is changing rapidly. Digitalisation, sustainability requirements and new rules mean we have to think smart and stay one step ahead. That is exactly what we do – together with you, who use our products every day.

We are investing in connected tiltrotators that make the job easier and more efficient. Our latest model works not only with electric machines, but also with autonomous and semi-autonomous excavators. This is the future – and we are already there.

The construction industry accounts for a significant amount of emissions, and this is where we can make a difference. With engcon, the need for multiple machines is reduced, saving both money and fuel. The urban environment is another interesting sector facing major challenges. Construction in dense urban

environments requires precision and flexibility. The tiltrotator turns the excavator into a versatile problem-solver that saves time and delivers better results for you.

There is a shortage of labour in the industry, which is why it is important that machines do more. With a tiltrotator, you avoid unnecessary manual tasks and get the job done faster. This means satisfied customers and projects that stay within both budget and schedule.

We know that safety is paramount. Our control systems and features are designed to minimise risks and create a safe working environment. Stricter requirements mean that the right equipment is a must – and that's where we're at the forefront for you.

All of this together means that we can truly transform the world of excavation, grow and maintain our leading position – and you're part of it!





BROSSEN AB IN FALUN, SWEDEN

Sweeping clean with the new sweeper roller from engcon

It is a chilly November morning and the plan for the day is a visit to Brosse's rock-crushing plant just outside Falun. Brosse's owner, Per-Erik 'Perra' Gustavsson, meets us and invites us in for a cup of coffee at the office, which is located at the entrance to the plant.



- I joined the business as a gravel sales representative in 2018. After a short while, I was asked if I wanted to take over the entire business. It felt quite natural, as I had also worked in gravel sales previously.

When the takeover became a reality, the focus was mainly on blasting, and the business consisted of two employed blasters. Today, things look different. Gravel sales and materials recycling make up a large part of the business, and everything is run as a family business.

Perra's wife is in charge of the finances, and his son Albin works on planning drilling operations, measuring retaining walls and holes, and documenting blasting operations. The work has also been digitised. Using

drones and advanced software, Albin creates three-dimensional models of how the site is developing. When time and need arise, he also steps in as a machine operator.

The coffee has been drunk and now it's time to head out to see the business and, above all, check out how the new waste compactor from engcon works. We come across a convoy of lorries that have just had their beds filled with gravel by a Cat 980 and a Volvo L180, which are both filling the company's sorting plant and loading lorries in turn. We pass the wheel loaders and drive up onto a ledge where several excavators are preparing to blast a new bench.

"The rock must be completely clear of loose material

before we can blast, and when we saw engcon's low-flow-requiring waste roller, we thought it should work to run it on the feed under the tiltrotator," says Perra.

Excavator operator Kenta Alm takes care of the rough clearing first with a Cat 340. First, he digs away the loose material as far as possible. Then he sweeps a lorry tyre against the rock face. A large portion of the loose material comes away with it.

- It works well to clear the first pass like this. But to get it really clean, it needs to be swept and sometimes blown with compressed air, explains Kenta.

Once the rough clearing is done, it's Wille Kilde's turn to take over with a Volvo EC240 fitted with a knuckle boom, an engcon EC226 tiltrotator and the new sweeper roller.

- We've only just started using the sweeper roller and it seems to work really well in combination with the tiltrotator. It really gets to grips with the material, says Wille after sweeping part of the rock face.

Wille follows the uneven rock face with gentle movements and, thanks to the tiltrotator, he is able to sweep in all sorts of positions.

” The new waste compactor looks set to become a key part of the process, as it makes a big difference and reduces the amount of follow-up work required.

WILLE KILDE

“The new sweeper roller looks set to become an important part of the process as it makes a big difference, meaning less finishing work and a result that will also satisfy the blasters,” concludes Wille with satisfaction.

Watch the video from
Brossen AB





FACTS

BROSSEN AB,
SWEDEN

CEO & Owner: Per-Erik "Perra" Gustavsson

Employees: 9

Turnover: SEK 48.6 million (2024)

Fleet: Four wheel loaders, six excavators, one crawler excavator and two sorting plants. During the summer months, Brossten also hires out several of its excavators for external contracts.

Operations: Blasting, loading, gravel sorting, material recycling.





ENGCON AND KOMATSU

Enhanced integration through seamless tiltrotator technology

engcon is strengthening its collaboration with Komatsu to deliver greater efficiency and convenience for excavator operators. This partnership focuses on simplifying installation and reducing overall costs for end users of the Komatsu Dash 12 series.

“This collaboration marks a significant step toward smarter, more efficient excavation solutions, combining Komatsu’s advanced machine control with engcon’s tiltrotator technology,” says Sam Ryan, Global OEM Manager, engcon.

In this solution, engcon DC3 tiltrotators will integrate with Komatsu’s advanced systems, delivering superior precision and responsive control. This powerful combination unlocks the full potential of Komatsu’s intelligent Machine Control 3.0, offering semi-automatic control of the rotation and tilting of the bucket. It also includes features such as posture hold control, which automatically maintains attachment orientation. Connectivity is enhanced through engcon’s mobile app,

remote support, and smart tool programs, ensuring operators stay in control at all times.

“Komatsu is committed to enabling the seamless integration of attachments that offer significant customer value. Through partnership with engcon, we are advancing our commitment to provide integrated solutions that help customers work more productively and flexibly,” says Rob Macintyre, Product Manager at Komatsu Europe.

The Komatsu Dash 12 series – currently including PC220LC-12 and PC220LCi-12 – will soon expand with additional Dash12 models upon release.

The logo for Engcon, featuring the word "engcon" in a bold, lowercase, sans-serif font. The letters are black and are set against a bright yellow rectangular background. A registered trademark symbol (®) is located at the top right of the word.The logo for Develon, featuring the word "DEVELON" in a bold, uppercase, sans-serif font. The letters are black and are set against a white background.

ENGCON AND DEVELON JOIN FORCES

Launch Tiltrotator-Ready 9 series excavators

engcon announces the integration of its advanced tiltrotator technology with Develon's latest excavator models, the DX230LC-9 and DX260LC-9. With this collaboration, the new Develon 9 series excavators will now be delivered tiltrotator-ready, setting a new standard for ease of installation and operational efficiency.

The factory-prepared solution ensures a straightforward and time-efficient installation of engcon DC3 tiltrotators, significantly reducing the need for complex retrofitting. The integration supports both engcon sandwich solutions and direct-mounted DC3 tiltrotators, while maintaining full compatibility with Develon's 2D machine guidance systems and aftermarket 3D machine control systems.

For rental companies, this development provides a decisive advantage. Tiltrotator-ready excavators allow fleets to easily equip or interchange tiltrotators as needed, maximizing machine flexibility and utilization while simplifying fleet management. End users renting these machines benefit from immediate access to tiltrotator functionality, enabling higher productivity and efficiency from day one.

"This collaboration with Develon allows us to provide a more advanced and integrated solution for our end customers, while delivering a simplified installation process for our dealers and rental partners", says Sam Ryan, Global OEM Manager at engcon. "By ensuring the Develon 9 series excavators are tiltrotator-ready, we make it easier than ever to adopt tiltrotator technology on a global scale", he continues.

The partnership reflects a broader industry shift toward closer collaboration between excavator manufacturers and tiltrotator specialists, ensuring machines are designed to deliver maximum efficiency and productivity as standard.

An engcon for everyone

It's now easier than ever to choose the right tiltrotator from engcon. With our new way of presenting our product range, we're making the differences between the various models clear. This helps and inspires you to find the perfect solution more quickly.

From now on, Series 1, 2 and 3 represent three different performance levels.

Series 1 is the first step into the world of tiltrotators and offers basic tilt and rotation functions.

Series 2 is our flexible all-in-one solution that boosts productivity and streamlines daily work, with EC-Oil as an option for optimised tool handling.

Series 3 is the ultimate tiltrotator experience with EC-Oil, featuring future-proof technology that makes digging smarter, smoother and more efficient.

There's an engcon for everyone.

Comparison	Series 1	Series 2	Series 3*
Direct connect	✓	✓	✓**
Sandwich	✓	✓	✓
Tilt	✓	✓	✓
Rotation	✓	✓	✓
EC-Oil	-	✓***	✓
ePS sensor	-	✓****	✓
Load sensing	-	-	✓
Auto calibration	-	-	✓
SS0	✓	✓	-
SS1	✓	-	-
SS9	-	✓	-
DC2	-	✓	-
DC3	-	✓	✓

* Available in 2027

** EC314–EC333 only as sandwich.

*** Standard, but can be ordered without.

**** Standard, but can be ordered without.

Applies to EC204–EC209.

Find out more
on our website



SERIES 1



The simple and smart choice

Your first step into the world of tiltrotators, with core functions such as tilt and rotation.

Series 1 tiltrotators are designed for the smallest and most compact excavators on the market, up to six metric tons. With unlimited rotation and a tilt angle up to $\pm 45^\circ$, Series 1 ensures optimal control in any terrain or working conditions, such as narrow spaces and landscaping.

This model is ideal for operators who prefer simplicity, as it does not require an advanced control system. Series 1 works directly with the excavator's own hydraulic system, making installation and operation straightforward and efficient.

Series 1 comes equipped with a mechanical quick hitch and supports both direct mounting and sandwich solutions. It offers essential functionality for those new to tiltrotator technology, reducing the need for machine repositioning while increasing precision.

SERIES 2



Performance and flexibility

Series 2 is our most flexible, full-range solution that increases productivity and streamlines everyday work, with EC-Oil as optional for optimized tool handling.

Powerful tiltrotators designed to combine low weight and height with exceptional performance, for excavators up to 33 metric tons. It offers unlimited rotation and a tilt angle of up to $\pm 45^\circ$. Series 2 includes EC-Oil as optional, allowing the operator to connect the tiltrotator and hydraulic tools from the cab.

Safety and efficiency are prioritized through features such as the Q-Safe quick hitch, and load-holding valves on tilt cylinders. Series 2 is prepared for detachable tools like gripper and sweeper, as well as the locking system and sensors for excavator guidance integration*. Central lubrication simplifies maintenance and ensures correct oil levels.

Series 2 supports direct mounting or sandwich solutions and offers a variety of hydraulic quick hitches.

**ePS sensor standard for 214-233 (N/A 202)*



The latest technology

Series 3* is the ultimate tiltrotator experience with future-ready technology, featuring personalized settings and prepared for advanced functions such as return-to-zero, with upgrade capability for tool recognition.

The most advanced tiltrotator option for excavators up to 33 metric tons. It delivers more responsive digging and increased precision, making excavation work smoother, smarter and more efficient. Load-sensing hydraulics and energy-efficient technology can save 30% or more energy compared to Series 2. It is ready for electric machines and is sold as a complete engcon system.

Series 3 offers unlimited rotation and a tilt angle of up to $\pm 45^\circ$, ensuring maximum flexibility in all conditions. EC-Oil comes as standard, allowing hydraulic tools to be connected from the cab. The system comes with tilt- and rotation sensors pre-installed and supports detachable tools such as gripper and sweeper.

Series 3 also offers advanced functionality, Bluetooth connectivity and app support for iOS and Android.

** Available in 2027*



Ascend Earthworks says engcon tiltrotator is key to productivity

As the son of a dentist, there's an expectation that you will go to university and follow a similar course. Aaron Simpson commenced his studies for a science degree, and to help pay for university expenses, took on casual work with a local plumber.

Aaron enjoyed his plumbing job so much that he decided on a change of career. After he graduated, he continued working as a plumber instead of heading to a surgery or laboratory.

"I really loved the plumbing work much more than studying for a degree and decided after I graduated, that this would be my life. I enjoyed working outside and all aspects of plumbing, excavation and working with tools," Aaron said.

With thirty-two years' experience as a landscaper operating Ascend Earthworks, Aaron still revels in all aspects of landscaping. Most of the assignments are on residential properties in North-East Melbourne and beyond to regional Victorian sites.

Move to heavy landscaping

In the last three years, Ascend Earthworks has pivoted to 'heavy landscaping' that involves machine-based landscaping construction such as rock walls, retaining walls and other highly detailed work.

"I have three machines, one of which is a Cat Next Gen 303.5 excavator fitted with an engcon EC204 tiltrotator and EC-Oil system," said Aaron.

"My motivation for acquiring the tiltrotator was about replacing employees with a machine that could do their work. The aim was to reduce the manual labour aspect of my work, an objective in which the engcon tiltrotator has exceeded beyond my expectations."

Working smarter, not harder

Like many people who have worked with tools for much of their lives, Aaron wanted to reduce the physical impact on his body as he ages.

"I was aware of the limitations that some people in my position had experienced through continuing manual work. This meant I had to protect my body from wear and tear caused by excessive labour such as shovelling and lifting.

"That was when I discovered the engcon tiltrotator as the perfect solution. I had seen engcon systems via social media videos, of an operator in Sweden and another in the UK. The latter gave an excellent description of what the engcon tiltrotator had achieved for his business.

"My goal of never having to do any shovelling has been achieved. The engcon tiltrotator system has freed me from needing other people or additional machines for any of my assignments.

"I'm always working up against house walls, in awkward positions. Much of the work involves detailed excavation and material positioning for landscaping works such as pathways and driveways, garden beds and vegetation planting.

"Before having the engcon tiltrotator, care with this detail meant manual shovelling that was physically demanding and time-consuming. The engcon tiltrotator system has transformed my whole work method."

The engcon system used by Ascend Earthworks is an EC204 operated by the full cab control system and joy stick. Aaron has a suite of attachments that ensure he always has the right tool for the job. These including a detachable ripper, an engcon hydraulic grab, grading beam and a skeleton bucket for shaking out rubbish.

The right tools for every job

Aaron said, "This amazing versatile tiltrotator turns the machine into a 'Swiss Army Knife' for landscapers, because you've got the right attachment for every job, which can be changed hands-free and attached in seconds. It puts an end to the frustration of trying to achieve everything with a mud bucket or a standard machine.

"In one previous instance on a large acreage property we needed to spread mulch around feature plantings. This was a laborious and time-consuming exercise to ensure valuable vegetation was protected and needed bagged mulch. With the engcon system, I can now have bulk mulch on site and position ground coverage delicately, with speed and great efficiency.

"I can quickly mulch around the plants and around the paths. The tiltrotator eliminates manual raking because the engcon tools enable me to achieve the correct loads and angles, whether placing mulch, rocks or crushed aggregates. The engcon tiltrotator has been a real eye-opener for jobs like these."

Perfect for detailed landscaping

Aaron said virtually every job is a challenging site, particularly those that involve detailed work in highly constrained locations.

"Of great benefit is not having to change the position of the excavator to perform different tasks. The engcon system means I don't have to reposition the machine as much. I'm saving up to thirty percent on track wear.

"From one excavator position and I can grade, spread material, pick up rubbish and pull out trees – all without having to back up constantly.



"Working close to residential structures, gardens and services, there's always something in the ground you don't want to damage. The engcon tiltrotator lets me dig trenches, using the engcon 300mm gummy bucket that protects pipes when encountered.

"Since I acquired the engcon system, I have analysed jobs completed over a twelve-month period to see what difference having a tiltrotator would have made.

"Taking into account the impact made from a labour-saving perspective, by the tiltrotator, grab and specialised tools I quickly realised these would have made an enormous difference in saving my body, time and effort, while adding efficiency and producing a higher standard of finish."

Massive time-saving

Aaron said the time-saving from the engcon tiltrotator on many jobs was twenty to thirty percent. Additionally, due to the precision of the system, the work does not need fine trimming, without manual shovelling or raking. Even spreading crushed rock, the engcon tiltrotator achieves a quality result.

"The biggest benefit is just the physical labour saving. As a one-man business, reducing the amount of physical labour makes the engcon system worth every cent of the investment. And I'm not having to get out of the cab on a hot day!"

"The engcon EC-Oil system is one of the best tools in the world, meaning an end to the effort and time-wasting hydraulic hose changes that affect your personal efficiency.

"It's going to save me health costs, in that there is less strain on your back and body in general. It makes you faster and more efficient.

"Because the quality of the work is very good, this often prompts happy clients to request further tasks when they see the speed and results from using the tiltrotator. A well-finished job enhances your reputation. This way, the engcon tiltrotator can generate more profitable business.

Current job site

The current job is a four-hectare site for La Muxlow, one of Melbourne's renowned landscaper designers who is recognised for her award-winning garden designs.

"I'm just starting on this very steep site which involves new landscape works that involve grading, drilling and retaining walls," he said.





ENGCON'S NEW DC3 CONTROL SYSTEM

Now compatible with Cat wheeled excavators

engcon is strengthening the global tiltrotator market by enabling seamless installation on Caterpillar's Next Gen (NG) wheeled excavators. The solution will be available on the market from February 2026.

In addition to Caterpillar's crawler excavators, which have featured this solution for some time, the Caterpillar M314 NG–M322 NG models now offer quick installation of engcon's tiltrotators. This is thanks to engcon's DC3 control system and Cat's Software Enabled Attachment (SEA) technology. DC3 is engcon's latest control system for tiltrotators, built on a completely new hardware and software platform. DC3 simplifies installation via the excavator manufacturer's interface compared to traditional solutions.

"With increasing global demand for our products, it is crucial for us to make our products more accessible to our end customers. At the same time, it is equally important to ensure that the customer gets the full potential out of both the excavator and the tiltrotator. This solution makes it much easier to enter the tiltrotator market," says Sam Ryan, Global OEM Manager, engcon.

This launch reflects a clear trend within the industry; excavator manufacturers are making advanced attachments increasingly accessible. This plays a crucial role in increasing market penetration and enabling higher levels of machine utilisation and efficiency. When all functions are utilised to the full, excavation work becomes both smoother and saves time.

For more information on the latest launch, contact your local engcon dealer or Cat dealer.



ENGCON AND VOLVO CE

Make circular innovation a reality

engcon is leading the way in circular innovation through a new groundbreaking project. Together with Volvo CE, Mälardalen University and Stena Circular Consulting, engcon is participating in the Vinnova-funded project – Advancing Circular Lifecycles in Construction Equipment (CIRCLE-E) – with the aim of creating new business models and technical solutions that make circularity a natural part of the construction and civil engineering industry.

“This is an important step in engcon’s sustainability work. Our previous initiatives, such as joining the Science Based Targets initiative (SBTi) and the UN Global Compact, have laid the foundations. With CIRCLE-E, we are taking the next step to drive the industry towards more circular and resource-efficient solutions,” says Helena Nydahl, Sustainability Strategist at engcon.

CIRCLE-E addresses one of the most under-researched challenges in the construction industry: how we manage the end of the life cycle for machines and components in a way that preserves value, reduces environmental impact and creates new opportunities for reuse and recycling. By combining research, design feedback and business development, the project aims to develop methods and insights that can be scaled – not only within construction machinery, but also in other industries.

“For engcon, this initiative is not just about sustainability; it is about creating business value through innovation and collaboration. Our vision is to transform the world of excavation and to always be at the forefront of technology. Innovation happens when we work

together and challenge traditional ways of working. By developing solutions that combine business value with sustainability, we can create long-term value for customers, the industry and society,” says Krister Blomgren, CEO of engcon.

Volvo CE is also eagerly looking forward to the upcoming project:

“There is no doubt that tomorrow’s construction must be based on circular thinking to meet the challenges that are already reshaping our societies. This fundamental shift away from traditional methods is why research projects such as CIRCLE-E are so crucial. When industry and academia come together, innovation gains momentum, and ideas are transformed into scalable circular business models and practices in the real world – essential building blocks for taking steps in the right direction,” says Sander Jahilo, Head of Resource Sustainability at Volvo CE.

The project will run from 2026 to 2028 and is expected to deliver new service concepts, strategies for reuse and recycling, and a basis for industry standards and policy development.

The logo for engcon, featuring the word "engcon" in a bold, black, sans-serif font with a registered trademark symbol (®) to the upper right. The text is centered within a bright yellow rectangular background.

ENGCON AND TM BENNE

Strategic partnership to strengthen our presence in the Italian market

engcon is entering into a strategic partnership with the Italian company TM Benne. Under the partnership, TM Benne will market and sell engcon's products in the Italian market.

TM Benne specialises in the manufacture of buckets and attachments and has strong local roots combined with a high level of technical expertise. Their expertise makes them a key strategic partner for engcon in the Italian market. Through this partnership, engcon is strengthening its presence in the country and meeting the growing demand for efficient and sustainable solutions within the construction and civil engineering industry.

"We look forward to starting our collaboration with TM Benne. Their experience and strategic network make them an ideal partner for our expansion in Italy and are perfectly in line with our vision to transform the world of excavation," says Krister Blomgren, CEO of engcon.

"We are very pleased with the partnership with engcon. Interest in the tiltrotator in Italy is growing, and together we can create the conditions for strong growth in the Italian market," says Marco Franchi, CEO of TM Benne.

The launch of engcon's products in Italy via TM Benne will begin in the fourth quarter of 2025.

About TM Benne:

The company has been in operation since 2004 and specialises in the manufacture of buckets, attachments and tools for excavators. TM Benne is headquartered in Città di Castello and operates throughout Europe.

Less cabling, greater capacity

engcon's service contractors travelled from far and wide to High Point in North Carolina in November to learn the finer details of installing engcon's new DC3 control system during the opening of the company's new facility.

For Jordan Williams from GPS Alaska in Anchorage, Alaska, the long journey was well worth the effort. He and around 16 other engcon service representatives from various parts of the US and Canada worked alongside engcon's service engineers during a full day of practical training. The new DC3 system offers a smoother and more reliable experience for operators, but it was the reduced number of parts, the less complicated installation and the simple troubleshooting that really impressed the installers. Williams, who had previously installed the DC2 system, felt that the upgrade is a major step forward.

"It's going to be much simpler," said Williams as he leaned against an engcon tiltrotator in the company's new 66,000-square-foot warehouse, not far from Raleigh, North Carolina. "Everything is more plug-and-play with cabling instead of all those different special connectors. There's much less cabling running into the machine." "I still don't understand how they managed that," he said, clearly impressed.

The visiting service representatives installed the DC3 control system on two different excavators as well as on two John Deere machines, a 60 P-Tier and a 26-P. They were supervised by five engcon service engineers, three from the US and two from Sweden.

– It was hands-on training, said senior service engineer Brett Mallon. Everyone gained experience in computer work, troubleshooting and installation.

Williams recalled GPS Alaska's first delivery from engcon.

– When we received our first system in Alaska, we opened the boxes and it was overwhelming how much was in there. We were quite confused and generally overwhelmed. It was like: "What have we got ourselves into?"

But when he walked into the warehouse in High Point and saw what was laid out for his DC3 installation training, he thought: "Wow, this is half as much as the DC2."

– Many of the new cables and connectors are significantly more robust. The cables seem much stronger," he said. A bit better protection, so it feels like they'll last much longer.

The DC2 system has been in use since 2012, and demand for a more streamlined, modern and efficient control system prompted engcon's engineers to begin work on the DC3 around five years ago. Furthermore, the DC2 only worked with Android phones, whereas the DC3 also works with Apple devices. For senior service engineer Mallon, this is a major advantage.

Now, operators can communicate with their engcon and even control functions and settings, regardless of which phone platform they use.

"Everything is right there on their phones," he said, "and if a problem arises, a service engineer can also connect remotely."

"We can recalibrate, raise threshold values, lower pressure, troubleshoot and, in nine out of ten cases, resolve the issue whilst we're connected," said Mallon.

During the training, Boyce found it interesting to see how engcon's service experts handled installation and troubleshooting. Looking ahead, the DC3 has been developed with a focus on efficiency, particularly given the growing trend in Europe towards electric excavators, which are projected to generate \$3.5 billion in revenue by 2025.

Electric excavators, with fewer moving parts than diesel engines, lower maintenance, zero emissions and low noise levels, are expected to capture a significantly larger market share over the coming decade. The efficiency of the DC3 system will be part of that development, but will also enhance all existing diesel excavators currently using engcon.



“

I can see the future now. I can see that it's actually much simpler ... there's far less cabling involved.

DEVIN WENTWORTH

D.W. Diesel Repair
Charleston, South Carolina



“

I've already booked one for next week. When I first heard about the new DC system, I was honestly really excited about it, because I love new things ... I love mechanics, I love electronics.

GERRIN BOYCE

Owner/operator
G Boyce Enterprises
South Easton, Massachusetts



“

It was practical training. Everyone gained experience with computers, troubleshooting and installation.

BRETT MALLON

Senior Service Engineer
engcon



“

We decided to invite all our service partners to a training session on the new CAN bus control system that we are set to launch here in the US in 2026. And this is the first time we've had them all together.

ÅKE JOHANSSON

Senior Service Engineer
engcon





CAT305CR × engcon EC206 Opens Up the Frontline of New Erosion-Control Dam Construction

On-site Interview with Imai-gumi Co., Ltd.
In the mountainous region of Shikoku.

Beyond the deep forests, earthwork preparations for the construction of a new erosion control dam are quietly progressing. Standing out prominently on this job site is a single machine: a CAT305CR equipped with an engcon tiltrotator EC206. The operator is Mr. Yoshifumi Imai, President of Imai-gumi Co., Ltd. This time, Tilt & Rotate, engcon's official magazine, captured the authentic voice of the field through 30 minutes of on-site conversation.

“Mountain Cutting”—Neither Civil Engineering nor Forestry; a Unique Field Where EC206 Became Essential

President Imai refers to this work as “mountain cutting.”

They carve into mountains, shape terrain, build roads, and perform tree felling. Work on steep slopes resembles forestry, but at the same time requires the precision of civil engineering—making it an exceptionally specialized domain. “Excavation, felling, uprooting, road making... we do everything. Mountain cutting has many situations where ordinary heavy machinery simply won't work.” In such an environment, President Imai immediately recognized the value of the EC206. “Without sandwich setup, the advantages of a tiltrotator are cut in half. Absolutely.” On steep slopes, the machine's posture is inherently unstable, and attachment angle control determines the success or failure of the task. The EC206's full range of motion is not merely “convenient” for mountain cutting—it is indispensable.

Why the CAT305CR? — “Lightweight Yet Powerful” Requirements of Mountain Cutting

To maximize the performance of the EC206, selecting the right base machine is crucial. President Imai thoroughly compared various manufacturers and classes of excavators. “Digging force, balance, engine output, arm length, crawler width—the 4 ton class lacks power. Even the 5 ton class can be disadvantageous depending on conditions. After trying many machines, I concluded the 305CR was the one that ‘fits the mountain best.’” In mountain cutting, having power alone is not enough. The machine must be light enough to climb slopes, while still possessing adequate digging force. The combination of CAT305CR + EC206 naturally satisfied these requirements.

The Starting Point of Erosion-Control Dam Construction Is Mountain Cutting

The current project involves constructing an access road for a new erosion control dam. A 3–4 meter wide road must be opened so large machinery and materials can pass through. However, the terrain is complex, and in many areas, vegetation is so thick that surveying is impossible. “You can’t even see the

ground. You can’t get elevation data. But unless we build the road, the project can’t begin.” This reveals both the importance and the difficulty of mountain cutting. In locations where the terrain cannot be read, the operator relies solely on the machine and their own judgment. With the EC206, this challenge becomes a feasible task rather than an impossible one.

“I Love This Environment” — The Mountains, the Machines, and the Craftsmen

During the photoshoot, President Imai looked up at the mountain and smiled. “I love this atmosphere. I just love working in the mountains.” These words convey a quiet confidence—one that comes not just from operating machinery, but from years of facing and understanding the mountains. Mountain cutting takes place in untouched environments. Here, selection of the proper machine directly influences safety and efficiency. “Without this machine, this job wouldn’t be possible.” In Imai-gumi’s field operations, the CAT305CR × engcon EC206 combination has established itself not merely as equipment, but as the optimal solution for working in the mountains. ▶



A 100-Year Company Talks About “The Present State of Mountain Civil Engineering” and Why Tiltrotators Are Becoming Necessary

After finishing the on-site interview, we visited Imai-gumi's headquarters to speak in depth with President Imai. Continuing the on-site perspective, this “office interview” summarizes the company's history, its dedication to mountain civil engineering, and its deep understanding and expectations of tiltrotators.

Founded in 1923 — A 100-Year Company That Started with Charcoal Transport

Imai-gumi's history dates back to 1923 during the Taishō era. Its origins lie in the transportation of charcoal. The business naturally expanded into construction through handling charcoal produced in the mountains. “The founder—my great-grandfather—was a stonemason. It is said that he even worked on stone construction for the Ehime Prefectural Office. Later, when public works shifted from ‘direct management’ to ‘contracting,’ the company transitioned into construction.” Throughout changing times, one thing has remained consistent: the inherited DNA of “working in the mountains.”

Main Specialty: Mountain Civil Engineering — Accounting for 70–80% of all Projects

Imai-gumi's primary work is not general civil engineering but distinctly mountain civil engineering.

- Forest road and access road construction
- Erosion-control dams
- Bridge maintenance
- Felling and uprooting on steep slopes
- Ground stabilization work

“Fewer contractors can do mountain cutting now. That's why we compete in this field.

Rather than expanding recklessly, continuing mountain civil engineering reliably is our greatest strength.”

Annual sales are 250–300 million yen, with just over 15 employees. Their high level of specialization maintains a stable flow of contracts.

Encounter with Tiltrotators 15 Years Ago — Through YouTube

President Imai learned about tiltrotators 15 years ago—a time when the technology was almost unknown in Japan. His first exposure came from overseas videos. “The first one I saw was a Menzi Muck spider excavator video. I wondered, ‘What is that thing attached at the tip?’ European jobsites are incredible.” Continuing his research, he became convinced that “Japan will need tiltrotators someday.”

Decision to Introduce Tiltrotators — “If You Work in the Mountains, You'll Definitely Need Them”

Their first tiltrotator introduction was a Rototilt installed on a Volvo ECR145. The second was the CAT305CR × engcon EC206. The reasoning is clear: To achieve both “safety and efficiency” in mountain civil engineering “In mountain cutting, there are daily situations where only one side of the machine rests on the natural slope. Creating a footing in that state requires extreme caution—even for veterans.” “With a tiltrotator, a bucket that used to scoop from only one angle can now scoop from ‘any direction.’ The machine assists with tasks we used to rely solely on skill for. Even operators with less experience can work safely.”

The True Value of CAT305CR × EC206 According to Imai-gumi

Even when revisited during the office interview, the conclusion remained the same.

1. Optimal size balance for mountain cutting
“We mainly use 4–5 ton for small machines. We need both the lightness to climb slopes and the power to dig. The 305CR fit those conditions.”
2. Bucket usage changes fundamentally
“Scandinavian style buckets have a totally different way of scooping. Once you get used to them, your efficiency becomes completely different.”
3. A long-standing culture of mastering attachments
They have standardized quick couplers since the previous generation. This “do everything with one machine” concept aligns well with European jobsite styles. “In Northern Europe, it's common to load all tools onto a wheel excavator and head to the site. That's unusual in Japan, but we've had the same mindset for decades.”

The Decisive Advantage of the Sandwich Configuration

“It allows you to preserve the tiltrotator.” “With sandwich configuration, you can remove it immediately during overload work or in case of failure. It protects the EC206, and the base machine doesn't get crippled.” This backup capability is extremely valuable—it literally saves the job in real work situations.

Comparing Three Manufacturers to Determine What Is Truly Practical On-site

President Imai has uniquely extensive experience using Rototilt, Steelwrist, and engcon directly on harsh mountain worksites. His conclusions are unmistakable: “All three have their strengths, but overall, the easiest to use is engcon. No doubt.”



Locking mechanism reliability

“The engcon locking system is outstanding. It is designed so that the coupler connection is not easily strained when a load is applied, which gives a completely different sense of security when working in the mountains.”

Ease of cassette attachment/detachment

“engcon is overwhelmingly easiest. Being able to clearly see the status of the attachment/detachment operation gives the operator a sense of security.”

Best compatibility with sandwich setup

“If you’re using sandwich, engcon is the most logical choice. Weight doesn’t increase as much as expected, and handling feels light.”

Actual worksite efficiency

“Forget catalog values—what matters is ‘how it moves on-site.’ engcon operates stress free, and even daily use doesn’t cause fatigue.”

Maintainability

“There are small things I’d like improved, like minor oil seepage, but overall, it’s the easiest to maintain.”
“In terms of completion level and practical usability, engcon stands above the rest.” These insights come not from brochures, but from a professional who knows the harshest mountain job conditions firsthand.

Current Attachments in Use

Current attachments include: Narrow bucket, grading bucket, ripper, brush, pallet fork, tree shear (wood cutter). Desired future attachments: Grapple, compactor,

hydraulic pallet fork. “For the grapple especially, we want to choose carefully. We’re thinking about which type fits our tiltrotator operations best.”

Further Improvements Desired

Real, practical feedback only an actual user can provide:

- Increased torsional strength for gripper claws
- Improved sealing of hose connection points (occasional minor oil seepage)
- More features for soft handling to avoid damaging secondary materials
- Protective covers and other site specific enhancements

Tiltrotators Are the Answer to Japan’s Labor Shortage

“Usage will become polarized—people who use them and those who don’t. But considering the cost of a single worker, they pay off in 2–3 years. With Japan’s declining workforce, tiltrotators will definitely become valuable.”

Imai-gumi, with its long history and specialization in mountain civil engineering, speaks from a place of deep experience. “With tiltrotators, mountain work becomes safer and more rational. The EC206 is the ‘most user-friendly tool’ for that purpose.” This is not just the voice of a worksite operator— it is the insight of a 100-year-old company’s leader, pointing toward the future of mountain civil engineering.

Full EC-Oil, full flexibility!

With EC-Oil, you can effortlessly change hydraulic tools in approximately ten seconds, all from the comfort of your cabin. Say goodbye to time-consuming manual processes and embrace the convenience and efficiency of engcon's automatic quick hitch system. Experience the difference for yourself - get yours today!

For more information, visit engcon.com/ecoil