

PRODUCT CATALOGUE

2022



We make convenience and safety our standard

Remain seated while replacing your hydraulic tools

In 2019, we introduced the EC-Oil automatic quick hitch system as our new standard. EC-Oil provides added value to our customers, as they no longer have to leave the cab to switch hydraulic tools. In addition, EC-Oil is included as standard on all of our hydraulic tools. Read more about EC-Oil on page 4.

Standardised lock enhances safety

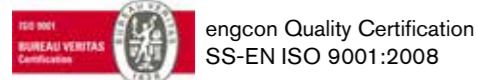
In the autumn of 2020, we introduced our next improvement, a standardised locking system that makes the quick hitch lock control procedure the same regardless of the machine it is installed in. The system means you always operate the quick hitch lock on the tiltrotator quick hitch with our intelligent control panel. Forget all those hidden switches that work differently depending on the type of machine you're operating. Now you always control the tiltrotator quick hitch lock in the same way regardless of machine make or model. Read more about QSC on page 22.

Simple and service friendly

Not only are we raising standards, we're continuing to rapidly improve our products. In 2020 we also introduced our easier-to-service quick hitch for all tiltrotators with S40-S70 hitches. This means no more tangled hoses inside the hitch. The only remaining hoses are those for the locking cylinder. You can add more EC-Oil blocks by bolting them in place without the need for hose routing.

Another unique feature of our service-friendly hitches is the ability to operate both with EC-Oil automatic oil connectors and 'regular' extra connections of type Tema or similar. This means you can use hydraulic tools with EC-Oil and those of your tools that still have regular hose connections. Read more about our hoseless hitch on page 8.

The above are just three reasons why you should choose engcon – you simply get so much more!



engcon is not responsible for any printing errors.
The illustrations in the catalogue show typical configurations.
Technical data may vary. We reserve the right to make changes without prior notice.

CHANGE THE WORLD OF DIGGING



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Switch jobs in an instant – from the cab

EC-Oil is the key to our system. It means you can quickly switch hydraulic tools and connect or disconnect the tiltrotator when you need more breakout force. The EC-Oil automatic hydraulic connector now comes as standard. In some applications, this can save an hour or more every day compared to manual connection – and time is money.

As a supplier we can help you with a total solution – everything from control systems, machine hitches, tiltrotators and associated tools. Use EC-Oil for instant tool and attachment changes directly from the cab. With EC-Oil on the machine hitch, above and below the tiltrotator and on the tool itself, you can disconnect from the tiltrotator and connect the machine hitch directly to a hydraulic or mechanical tool whenever you need extra breakout force.

This also saves weight, which means fuel savings and improved total efficiency. Together they create a system of tools that allow you to work quickly, efficiently and profitably. EC-Oil is designed for the highest operational reliability in demanding environments. The EC-Oil™ has no visible hoses or electrical cables that move around when connecting. This reduces the risk for pinch damage and wear. The engcon quick hitch system handles the connection of pressurised tools at full system pressure.

The proprietary oil and electrical connections are designed to be even better at withstanding the tough conditions excavators often have to work in. The connectors are designed for tough handling, as proven through destructive testing at 1600 bar operating pressure and field tests in difficult environments. EC-Oil™ also connects to central lubrication automatically.



EC-Oil™

EC-Oil block with drain line

EC-Oil block with:
1. Electrical connector, 12 pole
2. Two oil connectors (supply and return)
3. Central lubrication



EC-Oil in a nutshell

- » EC-Oil comes as standard with all purchases of engcon machine hitches, tiltrotators and proportional control systems
- » This lets you change hydraulic tools in around ten seconds without leaving the cab
- » Connects hydraulic tools automatically
- » Can be retrofitted to all types of hydraulic tools, regardless of manufacturer*
- » Requires no installation for return oil
- » Extremely durable connectors allow tool connection at full system pressure
- » Drip-free system = Lower environmental impact
- » Reduces problems with manual hydraulic connectors

* Check specifications and flow requirements.

Calculate your savings

If nothing goes wrong, connecting a tool manually takes around 90 seconds. With EC-Oil, the same tool change takes about 10 seconds. The number of times we switch attachments naturally varies, but certain tasks require around 50 tool changes a day. On days like that, EC-Oil will save you more than one hour of labour!

Automatic quick hitch system – our standard

When you order an engcon S40-S80 machine hitch with a tiltrotator and proportional control system, we include a single EC-OIL automatic oil connector in the machine hitch and the upper section of the tiltrotator**. If you order a hydraulic tool together with the above combination, we also include a single EC-Oil block as standard for the tiltrotator's quick hitch (S40-S80)

EC-Oil is ALWAYS included as standard, on all engcon hydraulic tools with S40-S80.

**EC206, S40 with EC-Oil will be launched in Q2, 2022.





engcon's automatic hydraulic hitches

Connect without leaving the cab:

Use the machine hitch and the tiltrotator (1) or disconnect the tiltrotator and connect your tools directly to the machine hitch when you need maximum breakout force or lifting capacity (2). All without leaving the cab!



engcon Hydraulic tools



engcon Mechanical tools

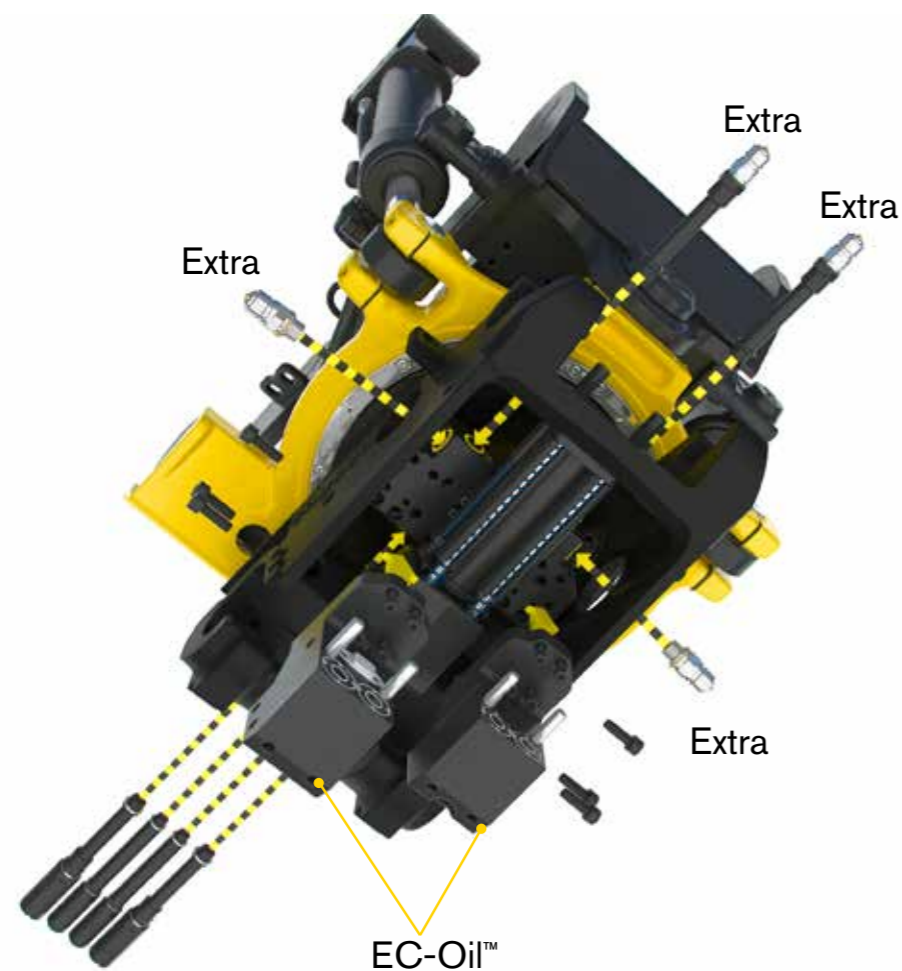


Adapt to fit your existing tools



SERVICE FRIENDLY MODULAR SYSTEM AND HIGH-FLOW SWIVEL

Makes the tiltrotator lighter, allows higher flows and requires less maintenance



The service friendly design provides superb simplicity and an uncluttered quick hitch. Because the block is bolted on without the need for hose runs, retrofitting engcon's EC-Oil automatic oil connection system is now simple. And it's just as easy to install and retrofit EC-Oil to engcon's new retrofittable, detachable gripper cassette and rotating brush.

New high-flow swivel

In parallel with the creation of the new modular quick hitch, engcon has developed a new high-flow swivel that permits hydraulic flows up to 200 l/min. This is achieved by feeding the hydraulic functions directly without oil having to pass through the tiltrotator's valves. The new high-flow swivel

also has a separate case drain line, which allows oil to be drained via the tiltrotator. What's more, engcon's new swivel is built for pressures up to 350 bar.

Modular construction

This development is part of our unique modular approach in which we offer a basic product allowing our customers to easily add functions later without having to run hoses inside the hitch. We also minimise the problems with hoses moving around in the quick hitch, with the risk of chafing and leaking over time.



PROFITABLE FREEDOM OF CHOICE

Build your own bespoke system with engcon



Standardised locking system

For safe quick hitch operation.



Automatic machine hitch excavator

The EC-Oil automatic oil, power and central lubrication connection system is standard on our automatic machine hitches.



Grading beam

Add now or select side extensions later.



Joystick

Select now or add later (fits all makes and types of control systems).



Control system

Select now or add a smartphone later for remote support.



engcon Positioning System

Select now or add later on models EC209, EC214, EC219, EC226 and EC233. Independent of the machine's control system.



EC-Oil | Speedy tool changes

The EC-Oil automatic oil, power and central lubrication connection system is standard.



Read more on page 4



Bracket | Bolt-on

Compactors, sorting grabs, grading beams, timber/combi grabs, rotating brushes – bolt-on bracket for easy hitch system replacement

Quick hitch

Safe, smart and service-friendly quick hitch without moving parts; developed for detachable grippers and rotating brushes, and the EC-Oil automatic quick hitch system.



Detachab
le Gripper



Detachab
le rotating
brush



EC-Oil



Tiltrotators

engcon's tiltrotators can be adapted to most excavators and backhoe loaders on the market, with machine weights of 1.5-33 metric tons.

Optional standard

engcon's tiltrotators are robustly built to a very high standard, and we provide the customer with many opportunities to select accessories right away or for retrofit. If you choose to retrofit, we've made it easy as in most cases it's just a matter of 'bolting on' the accessory afterwards – be it one week or one year later.

For example, all engcon S45-S70 quick hitches come ready for our detachable gripper and rotating brush. This means you can buy your tiltrotator without a gripper and retrofit one whenever it suits you. And there's no problem retrofitting your machine with an excavator guidance system; all of our tiltrotators from the EC206 and up come ready for installing the rotation sensor.

The following are standard on engcon tiltrotators

- » The EC-Oil automatic oil connection system comes as standard on tiltrotators*
- » Prepared for detachable gripper, S45-S70
- » Prepared for rotating brush, S45, S50 and S60
- » Prepared for engcon's standardised locking system to minimise risks with wrongly connected or dropped buckets
- » Comes ready for a rotation sensor for connection to an excavator guidance system (from EC206 and higher)
- » Up to ± 45-degree tilt angle for best access
- » Powerful tilting torque for heavy-duty jobs
- » Flows of up to 120 l/min on extra hydraulic outlets (from EC214 and higher)
- » Direct feed from the machine can provide 200 l/min (EC214 and higher). See page 8 for further info.
- » Central lubrication
- » Load-holding valves on tilt cylinders for even better safety
- » Hardened piston rods
- » 2-year warranty

Control

- » Control system remote support** via smartphone app****
- » The ability to operate 6 rollers simultaneously***
- » Track/wheel control**
- » Control, VA boom/joint**
- » Joystick wrist support for increased comfort and best ergonomics

* Read more on page 4

** DC2

*** DC2 in combination with MIG2

**** Android



The advantages of engcon tiltrotators

- » Tilt cylinders equipped with load-holding valves as standard equipment (requirement for pallet fork operations)
- » Protected hydraulic connections
- » Fitted with tight hose protection that prevents oil from spraying out, for example in the event of a hose breach
- » Robust tilt upper section with EC-Oil automatic oil, power and central lubrication connection system. Compatible with S40 and higher
- » Tilt angle up to 45 degrees
- » Stronger upper sections
- » Low height
- » Suitable for use with the engcon proportional control system and joysticks
- » Comes ready for tilt-sensor for most excavator guidance systems**
- » Comes ready for Auto-Tilt***
- » All grease points routed to a single grease point. Easy to connect to the excavator's central lubrication
- » Comes ready for connection to any excavator guidance system** (Compatible with EC206 and higher.)
- » Hardened cylinder rods
- » Heavy-duty bearings for increased service life
- » Heavy tilt torque
- » High rotator torque
- » Robust cast body
- » Robust lower sections
- » Engineered for high breakout torque
- » Comes with a high-flow swivel with up to 120 l/min flow to extra hydraulics as standard
- » Direct feed from the machine can provide 200 l/min (EC214 and higher)
- » In its standard version, quick hitch S45-70 is suitable for retrofitting grab cassettes
- » In its standard version, the S45-60 quick hitch is suitable for retrofitting rotating brushes
- » Unique, service-friendly design allows adjustment of lateral play without having to dismantle the tiltrotator
- » Hydraulic motor on left side for best possible visibility
- » Select EC-Oil for automatic hydraulic tool connection



engcon provides a two-year warranty on all new tiltrotators. We also offer the opportunity to register your tiltrotator and log service carried out.



Tiltrotator storage and transport stand

The engcon storage and transport stand makes it easy to stand, store or transport your tiltrotators without the risk of damage or dirt in the lower quick hitch. The stand is built from heavy-duty plate and can be fitted with optional attachment points for bolting to the chassis. Its dimensions are those of a Europallet, 80 × 120 cm, and the stand is designed to be lifted by forks from the sides or ends.

* Applies with selection of S40-S80 tilt upper section. EC206, S40 with EC-Oil will be launched in Q2, 2022.
** Requires ePS and works with e.g. Leica Geosystems, Scanlaser, Topcon, Trimble, Novatron and MOBA (2017). Check compatibility with your excavator guidance system supplier.
*** Check compatibility with your excavator guidance system supplier.



EC02B
1.5-2.5 tonnes

EC204
2-4 tonnes

EC206
4-6 tonnes

EC209
6-9 tonnes

EC214
9-14 tonnes

EC219
14-19 tonnes

EC226
19-26 tonnes

EC233
24-33 tonnes

SAVE MONEY, WORK MORE EFFICIENTLY

Applications for your tiltrotator

Pipelines, water mains and sewers

Digging ditches for water mains and sewers often involves working in confined spaces. In some cases, there's not even enough room to drive in or back out with the machine. The answer is an engcon tiltrotator – it will make your excavator more flexible than you ever could have dreamed of. A tiltrotator lets you dig at any angle, and you can excavate a manhole or a stop end without having to move the machine at all.

Construction sites

Not only does an engcon tiltrotator make excavation per se so much more efficient and profitable thanks to the ability to angle and rotate the bucket into positions that were previously impossible, but it also minimises the number of machine movements and thus enhances safety around the machine while reducing damage to the land.

Roadworks

Road construction involves many different tasks, and engcon's tiltrotators make the work a lot simpler. When you're ditching, removing topsoil, terracing, laying pipes or working with grabs, there's no need to move the machine.

Railway work

Working with excavators on railways demands extremely high standards. Safety always comes first, and this is where engcon provides important solutions. The use of an engcon tiltrotator transforms your excavator into a flexible, efficient and SAFE tool carrier.

Electrical work, telecoms and broadband

Excavation work in these areas is often associated with precision excavation in cramped locations and hard-to-get-at spaces. engcon tiltrotators are an elegant solution to such problems. Thanks to the ability to rotate and tilt the bucket, there's no need to constantly move the machine to gain access.

It also makes digging up existing cables easy. Rotate the bucket through 90 degrees and then tilt it to a suitable angle to excavate alongside, below or above an existing cable with the highest precision.

Landscape gardening

No work demands as much precision and feel as landscape gardening. The land and local area must be shaped such that it blends into the surroundings. There are often no plans, so creating a beautiful, elegant landscape is an entirely up to you, your feeling and imagination.



TILTROTATORS – THE BENEFITS

- How to change the world of digging



Financial

Tiltrotators save time and cut down on fuel consumption. They also reduce the need for additional machines and labour. What's more, their precision and flexibility means less material wastage.



Safety

Because of their high manoeuvrability and low space requirements, tiltrotators increase safety around the machine. They also significantly reduce the need for manual labour.



Flexibility

A tiltrotator makes it easy to rotate and tilt the bucket regardless of machine position. In addition to ordinary buckets, the machine can also be fitted with many different types of tools and replace many other machines at one and the same site.



Environmental impact

Fewer excavator movements means less damage to the ground, significantly reducing its environmental impact thanks to lower fuel consumption. Because it's possible to excavate around obstacles and in confined spaces, there is less need to move objects that are in the way.



Comfort and convenience

A tiltrotator and EC-Oil automatic quick hitch system allows the operator to remain comfortably in control in his work environment as there is no longer any need to leave the cab to connect hydraulic tools.

Select a grab cassette or sweeper NOW or LATER

New quick hitch and smart accessories for safety and greater freedom of choice.

Have you ever bought a product and later regretted that you didn't buy that extra feature with its added advantages? Relax; engcon has solved the problem for you by making our quick hitches even smarter. With our S45-S70 quick hitch on the tiltrotator, you can connect or disconnect your retrofittable grab cassette, and detachable rotating brush on the S45-S60.

The technique involves engcon tiltrotators and S45-S70 quick hitches that have two robust hooks mounted at the front and space for extra hydraulics. This makes it easy to hook up engcon's retrofittable detachable gripper cassette or rotating brush.

Gripper cassette - Gripper Detachable Quick

The gripper cassette simply hooks onto the quick hitch, whereupon the gripper cassette is locked on and the hydraulics connected in a single operation – a procedure that takes less than a minute.

Gripper cassette - Gripper Detachable Manual

The gripper cassette is also available with manual hydraulic connection in a version that bolts on to the quick hitch. This takes a little longer to install and is a more permanent solution for those who do not need to remove the gripper cassette or switch between gripper and rotating brush. Both versions are angled down 15 degrees for greater gripper reach.

Rotating brushes - Rotating brush Detachable

As with the gripper cassette, the rotating brush can be retrofitted on the quick hitch by hooking onto the hitch's two attachment hooks. The rotating brush is then locked and connected to the hydraulics in a single quick and easy operation. The sweeper cassette is only available in a quick version (Q) with locking and hydraulics connection

in a single operation. The sweeper is driven by a powerful hydraulic motor and is folded up or down with a hydraulic cylinder. It's extremely flexible design allows its width to be adjusted to accurately suit the work it has to do.

In its narrowest version, the sweeper can be adapted for e.g. cable sweeping, which facilitates excavation of existing cables or pipes – and most importantly, results in fewer cables or pipes being broken, as excavation is completed to a safe depth with the sweeper clearing away the rest. Thanks to our new rotating brushes, the need for manual labour is also minimised, which contributes to a safer work site. Safety is everything to us at engcon.

The wider version combined with a tiltrotator allows gravel or soil to be swept into the machine's bucket, making it easier to clear away material that has to be removed.

A new level of safety

In addition to our giving operators increased options, we are also improving safety. The two sturdy hooks provide enhanced safety because they continue to hold the gripper cassette or rotating brush in place; even if the lock function should fail, the load or the gripper cassette or rotating brush's own weight will press it securely against the quick hitch.

Quick hitch

Powerful suspension and stable locking on the engcon S45-S70 quick hitch and space for extra hydraulics enable the use of additional hydraulic attachments, such as engcon's new detachable gripper and rotating brush.



Detachable Gripper

Detachable rotating brush

engcon's automatic machine hitch and quick hitch

HITCH WITH ITS HOOKS FACING THE DIRECTION OF EXCAVATION WITH A FOCUS ON SAFETY

Hooks facing the direction of excavation

Probably the only quick hitch where the hooks face the direction of excavation thus distributing the forces across the entire hitch. The hooks are also wedge-shaped to minimise play between the hitch and the tool.

Minimise the risk of dropped buckets

The risk of dropped buckets and incorrectly connected tools due to the human factor has been minimised. That risk is minimised when engcon's quick hitch and standardised locking control is used on the excavator, as the bucket or tool must make ground contact.

With engcon's safe quick hitch for excavators, it's almost impossible to disconnect the bucket or tool while it is in mid-air.

Stay in safe control when switching tools

Activate the lock function*, apply light pressure to the ground with the bucket or tool, then disconnect the bucket or tool. If the engcon hitch loses contact with one of the bucket axles, the machine's slew function is locked. When both bucket axles are fully disconnected, the slew lock can be released.

Connecting the bucket/tool

Activate the lock function*, hook up the bucket or tool and lock it. The slew function is locked again when connecting the bucket or tool when the first axle reaches the hitch. Once the bucket/tool is properly locked, the slew lock can be lifted.

If the bucket/tool is not properly locked on both axles, the operator and people in the surroundings are alerted by audible and light warnings. The slew lock is also activated.

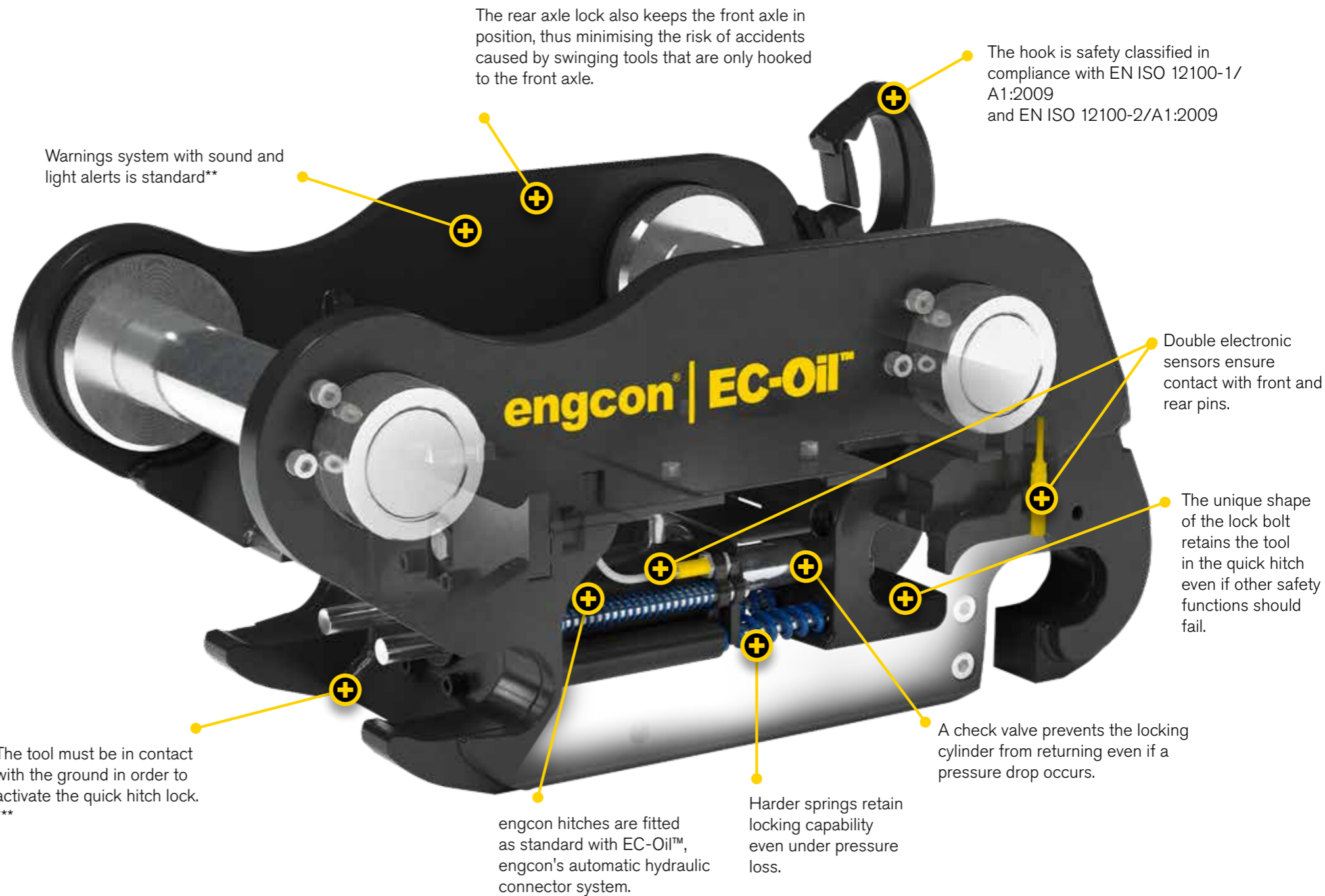
Once the bucket/tool is fully and correctly connected, the audible/light warning cease; the slew lock can now be lifted and the machine is ready to work with the bucket/tool safely and fully connected.

Read more about the engcon lock control on pages 22 and 23.

* Read more about standardised lock control on pages 22 and 23

** Read more about warning lights and sounds in the adjacent column

*** The ground pressure function requires the bucket/tool to exert pressure on the ground before it can be disconnected. The function is provided in combination with the engcon locking system.



Light Module



The combination of engcon's safe quick hitch and the warning light & sound module alerts both visually and audibly unless both bucket axles are in their correct locked positions.

The module is installed on the left side of the excavator dipper and its cabling is integrated into control system cabling. If a control system other than the DC2 is used, a separate cable is run for the warning module into the excavator cab. Order the full system with slew limitation

and ground contact for releasing tools in consultation with the machine supplier concerned.

Standardised locking system

Standardised operation of the machine hitch and tiltrotator quick hitch improves safety

Today there are around 20 major excavator manufacturers, all of whom have well-functioning systems for operating the machine and quick hitches. However, the operation and location of the lock buttons for these hitches differ between each machine manufacturer and model.

Consequently, in situations where the excavator operator uses different machine types, there is a clear risk of incorrect operation. It's comparable to having different positions for the brake and accelerator pedals depending on the make of a car.

Here at engcon, we're taking yet another step forward in our safety efforts. Our goal is to standardise and ensure safe operation of all quick hitches, for all excavators. With every purchase of an engcon machine hitch, tiltrotator and proportional control system, we include our standardised locking system for safe operation of the tiltrotator's quick hitch. An optional extra also enables machine hitch operation from the same panel.

engcon has developed a standardised locking system that minimises the risk of activating the wrong button or function. The locking system is compatible with most makes of excavators, tiltrotators and quick hitches on the market. The system consists of a control panel with a switch to activate the excavator's machine hitch and another to activate the tiltrotator's quick hitch. All functions are brought together in a panel that is always located in the same position in the operator's cab, where it is easily recognisable regardless of the excavator's make or model. An operator switching from one excavator to another must be able to easily recognise the controls and thus minimise the risk of dangerous mistakes.

When using the engcon locking system, the selected quick hitch – regardless of make or model – gains an additional unique safety function that requires ground



pressure on the bucket to release it. This means we've made it almost impossible to disconnect the bucket when it is in mid-air. Thus the risk of accidents caused by falling buckets is minimised.

” It's comparable to having different positions for the brake and accelerator pedals depending on the make of a car.

Together with the engcon locking system and quick hitch, safety is further increased by means of audible and visual warnings. Unless both bucket axles are correctly engaged, the system uses sound and light alerts while also activating the slew lock and boom lock functions.

For the engcon quick hitch and locking system combination, engcon offers a system for operating the quick hitch. This means the operator always knows what is happening and when it happens.

Standardised system for operating locks on the machine hitch and the quick hitch lock beneath the tiltrotator

- + engcon's intelligent, safe locking system comes as standard on engcon tiltrotators and optional extras for the machine hitch, which can then be operated from the same panel
- + Standardises operation – regardless of excavator make and model
- + Lock panel with auto-guidance, where the right button lights up
- + Meets applicable safety standards for machine hitches and quick hitches
- + Ground pressure sensor for greater safety when switching tools – not possible to open the bucket lock with the bucket in mid-air
- + Audiovisual alarm system that alerts with sound and light when coupling
- + If the optional extra of operating the machine hitch from the same panel is purchased, modifications are necessary to the machine manufacturer's machine hitch locking function

Read more on our website: www.engcon.com



Attachment brackets for EC-Oil

GS40-ECO*, GS45-ECO, GS50-ECO,
GS60-ECO, GS70-ECO, GS80-ECO

Adapt your hydraulic tools for EC-Oil.
Suitable for all excavators in the 6-33 tonne weight classes.

- » Bucket/attachment bracket suitable for EC-Oil™ connectors
- » Standard bolt pattern that fits engcon hydraulic tools or weld-on bracket
- » Possible to equip with one or two EC-Oil blocks
- » Easy to adapt to all types of hydraulic tools
- » Robust, reliable and affordable
- » Engineered in high-strength steel

EC-Oil™

** S40 with EC-Oil will be
launched in Q2, 2022.*



Bolt-on bracket with
EC-Oil block



Weld-on bracket with
EC-Oil block

Automatic machine hitch and quick hitch

S40–S80

Quick hitches with a new level of safety!
For all excavators in the 6-40 tonne weight classes.

Advantages

- » EC-Oil automatic quick hitch system connects the tiltrotator and hydraulic tools without the operator having to leave the cab.**
- » Hydraulic locking with fourfold safety:
 1. Electronic sensors detect when both axles are in contact
 2. A check valve prevents the hydraulic cylinder from opening in the event of a hose rupture or pressure-drop
 3. Powerful exterior springs keep the coupler locked even if the electronics and hydraulics fail.
 4. The unique design of the lock bolt provides additional safety in that the bucket axle bottoms against the hitch side plates, preventing it from dropping out of position even if all three of the preceding steps should fail.
- » The tool can only be removed when it is resting on the ground at a given pressure (with the engcon locking system). This minimises the risk of dropped buckets.
- » Front and rear locks minimise the risk of accidents caused by swinging tools
- » Supplied as standard with external audible and visible warning signals to alert the surrounding area
- » Wedge-shaped hooks to minimise play between the machine hitch and tool and between the quick hitch and tool



- » Probably the only quick hitch where the hooks face the direction of excavation thus distributing the forces across the entire hitch
- » Longer engagement hooks (shark jaws) to make picking up tools safer and easier
- » Manufactured from high-strength steel
- » Fits all excavators in the specified weight class independent of control system
- » The hook is safety classified in compliance with EN ISO 12100-1/A1:2009 and EN ISO 12100-2/A1:2009

** S40 with EC-Oil will be launched in Q2, 2022.*

*** Read more on page 4*

EC-Oil
STANDARD

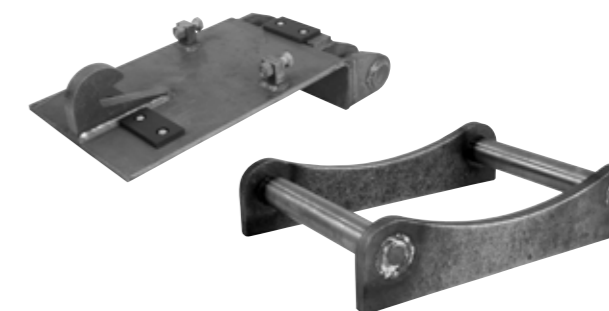
Read more on
page 4

Attachment brackets

GS30–GS80, GS1–GS3

For all excavators in the 1-33 tonne weight classes

- » Easy-to-modify buckets for engcon hitches
- » Robust, reliable and affordable
- » Welded, high-strength steel



Other quick hitches

S30, S1–S3

For all excavators in the 1-32 tonne weight classes

- » Can be supplied with hydraulic or mechanical locking
- » Hydraulic locking for speedy attachment and tool changes straight from the cab
- » Play-free connection
- » Changeable for deep and shallow excavation (S30)
- » Robust, reliable and affordable
- » Low installation height
- » Low weight
- » Welded, high-strength steel
- » Type-approved lifting hook (not S30)



Detachable Gripper

GRD45/50, GRD60, GRD70

engcon's detachable gripper cassette is also retrofittable. For excavators in the 6-26 tonne weight classes, quick hitch S45-70.

The gripper cassette simply hooks onto the quick hitch, whereupon the cassette is locked on and the hydraulics connected in a single operation* – a procedure that takes less than a minute. The gripper is angled 15 degrees to the tiltrotator, which extends gripper reach.



engcon's detachable gripper cassette comes in two different versions; quick locking and manual.



Quick locking

The gripper cassette is locked and the hydraulics connected in a single movement with a simple procedure using a 32 mm box end wrench. This means connection and disconnection take less than a minute.



Manual connection

The gripper cassette is attached to the back of the quick hitch by nuts and bolts. The hydraulics are connected manually using hose connectors.

**Applies to the quick locking model*



Detachable rotating brush

SWD45-SWD60

engcon's detachable rotating brush is also retrofittable. For excavators in the 6-19 tonne weight classes, quick hitch S45-60.

As with the gripper cassette, the rotating brush can be retrofitted on the quick hitch by hooking onto the hitch's two attachment hooks. The rotating brush is then locked and connected to the hydraulics in a single quick and easy operation. The rotating brush is driven by a powerful hydraulic motor and is folded up or down with a hydraulic cylinder.

The engcon rotating brush is flexible and its width can be adjusted to suit the job in hand, from cable sweeping to clearing large areas. Reduces the need for manual labour and makes work safer. The rotating brush is available in several widths and is suitable for the new engcon quick hitch.





Integrated gripper

GR05, GR30

**Integrated gripper for tiltrotators and rotators 3-6 tonnes;
24-33 tonnes**

- » The gripper arm is made from high-strength steel for strength and low weight
- » Safe lifting with load-holding valves in each gripper cylinder
- » The perfect workmate on the site
- » Versatile handling of posts and curbstones, for examples
- » Practical for pipe laying and manhole positioning
- » Available for tiltrotators/rotators EC204, EC206, and EC233
- » 3 finger claws as standard
- » Complies with European safety standards

Feature GR30 (S80 and S3):

- » Gripper width up to 1080 mm



Stone and sorting grab

SG03, SG06, SG12, SG19, SG26, SG33

For all excavators in the 1.5-33 tonne weight classes

engcon's stone & sorting grabs in the SG series are suitable for everything from sorting to light demolition works where a powerful grab is needed. When used in combination with the engcon tiltrotator, it provides the accessibility you need, and the EC-Oil automatic oil connection system is installed as standard*

The benefits of SG grabs

- » EC-Oil automatic quick hitch system connects hydraulics without the operator having to leave the cab
- » The grab's claws are fitted with reversible wear bars
- » The load valve and pressure accumulator maintain gripping force for extended periods to ensure safe lifting
- » Complies with European safety standards
- » Expander bushings in major joints
- » Bolt-on bracket/attachment point makes switching brackets easy

Accessories:

- » Tooth kit for better grip
- » Closed sides to convert the grab into a clamshell bucket

* Applies to grabs with S40-S80 attachment points.



With teeth
(accessory)



With closed sides
(accessory)



Integrated gripper

GR20R2

Integrated gripper for EC214 and EC219*

The new integrated gripper is specially developed for the tough environments that gripper are exposed to on the railway, where a gripper will often be used to pull and lift heavy rails with excavators.

Advantages:

- » Robust construction designed for heavy and demanding use such as in the railway industry
- » Angled up to 42 degrees
- » Large gripper width – 820 mm
- » Protected cylinders

* Standard hitch combinations: S45, S50, S60 and SMP2. Not compatible: S1 and S2. Other hitch combinations on request.

Timber/combi gripper

TG25HD–TG55HD

For all excavators in the 4-26 tonne weight classes

Used with a Tiltrotator, the engcon combi gripper is the ultimate tool for handling round timber and pipes, and light sorting jobs. The gripper are reinforced with high-strength steel wear bars with 400 Brinell hardness and can be adapted to fit a large number of attachment points.

Advantages:

- » EC-Oil automatic quick hitch system connects hydraulics without the operator having to leave the cab
- » Gripper arms in high-strength steel for increased service life
- » Gripper tips have wear bars; 400 Brinell hardness for best durability
- » A check valve built into the hydraulic cylinder and an accumulator installed directly on the cylinder without hoses, keep the load safe and secure should any pressure drop occur
- » Expander bolts in joints prevent unnecessary play
- » Bolt-on bracket/attachment point makes switching brackets easy
- » Bolt-on bracket/attachment point means dealers need keep fewer timber/combi grabs of the same size in stock



Read more on page 4

Pallet fork

GH1000, GH1200, GHH1200, GHH1200L, GH1500, GHH1500

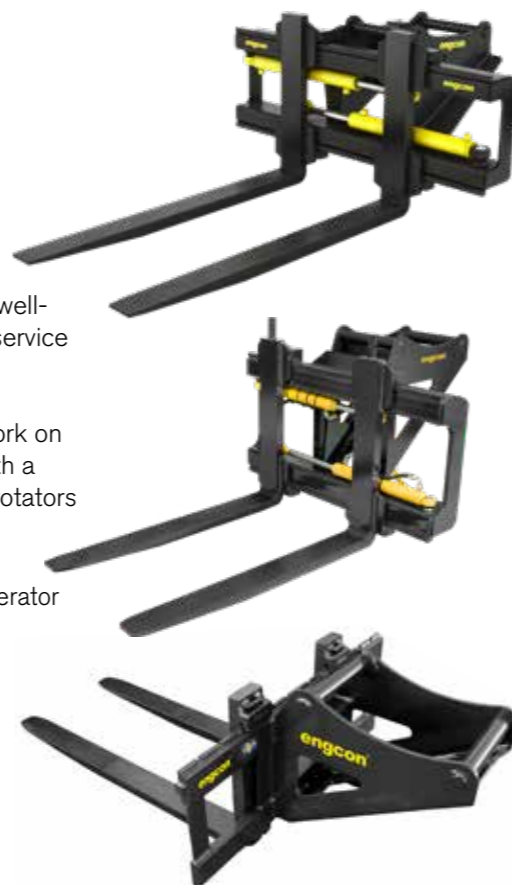
For all excavators in the 4-33 tonne weight classes.

Hydraulic and mechanical pallet forks for all excavators. – A robust and well-conceived design for best through-visibility. Tempered tines assure long service life.

NOTE! Always check which safety instructions apply for use of a pallet fork on the type of machine being used. When using the pallet forks together with a tiltrotator, a load-holding valve must be fitted to the tiltrotator. engcon tiltrotators are fitted with load holding valves on the tilt cylinders as standard.

- » EC-Oil automatic quick hitch system connects hydraulics without the operator having to leave the cab
- » Hydraulic pallet forks are operated from the cab
- » Mechanical pallet forks are held in position with robust catches, and fork positions are adjusted manually
- » Forged tines for greater durability and service life

GH = Mechanical fork widening,
GHH = Hydraulic fork widening
GHH1200L = Hydraulic fork widening,
 Light version for lighter machines.



Read more on page 4

Rotating brush

SR800–SR2000

For excavators in the 6-33 tonne weight classes

Used with a tiltrotator, engcon rotating brushes extend an excavator's abilities and open up previously undreamed-of possibilities in a wide range of specialist areas. Regardless of whether you'll be sweeping snow, sand, gravel or soil, this will soon become a favourite tool that you just cannot live without. In the winter, you can use it in areas such as pedestrian crossings, walkways, railway points, etc. where snow normally has to be cleared manually.

In the summer, the brush can be used for sweeping road sand and gravel, brushing grassed areas, foundations, rocks and more. The only limit is your imagination. A hydraulic motor provides the power, and a geared chain drive enables brush rotation speed to be adjusted.



Read more on page 4

The open design allows unsurpassed service-friendly access, and the standard polypropylene brushes can be replaced quickly and easily. Easily adaptable for the EC-Oil automatic oil connector system and can thus be connected without the operator having to leave the cab. The EC-Oil automatic oil connection system is the engcon standard. Thus the rotating brush can be connected without the operator having to leave the cab. Bolt-on bracket/attachment point makes switching brackets easy whenever necessary and reduces the need for dealers to keep multiple rotating brushes of the same size in stock.



Compactor

PP350, PP600, PP950

For all excavators in the 6-33 tonne weight classes

- » The EC-Oil automatic quick hitch system connects hydraulics
- » Compaction plate in hard-wearing steel
- » Side plating for grading mass fill
- » Open short ends make cleaning the plate topside easy
- » Joined using rubber elements of adequate stiffness for grading and positioned for effective vibration damping
- » The vibration unit and hydraulic parts are well-protected inside the side plates
- » Can be fitted with optional attachment point
- » Complete with flow control valve
- » Complies with European safety standards
- » Tandem-connected weights
- » Bolt-on bracket/attachment point makes switching brackets easy
- » Bolt-on bracket/attachment point reduces the need for dealers to keep multiple compactors of the same size in stock



Best in test!

engcon's PP600 ground compactor achieved the best result in an impartial test conducted by geologist Dr. H. Seeliger in Kassel, Germany. The compaction level was remarkable with 103.2% after two passes and 101.6% after six passes.

EC-Oil
STANDARD

Read more on
page 4

Compactor

PP3200

For all excavators in the 6-26 tonne weight classes

- » The EC-Oil automatic quick hitch system connects hydraulics
- » Low flow requirement (35 litres) allows the PP3200 to be run directly off the extra connections on the tiltrotator
- » Variable working width
- » Specially adapted pack cushions
- » Compaction plate in hard-wearing steel
- » Side plating for grading mass fill
- » Open short ends make cleaning the plate topside easy
- » Joined using rubber elements of adequate stiffness for grading and positioned for effective vibration damping
- » The vibration unit and hydraulic parts are well-protected inside the side plates
- » Can be fitted with optional attachment point
- » Complies with European safety standards
- » Supplied as standard excluding attachment point and machine hoses
- » Bolt-on bracket/attachment point makes switching brackets easy
- » Bolt-on bracket/attachment point reduces the need for dealers to keep multiple compactors of the same size in stock

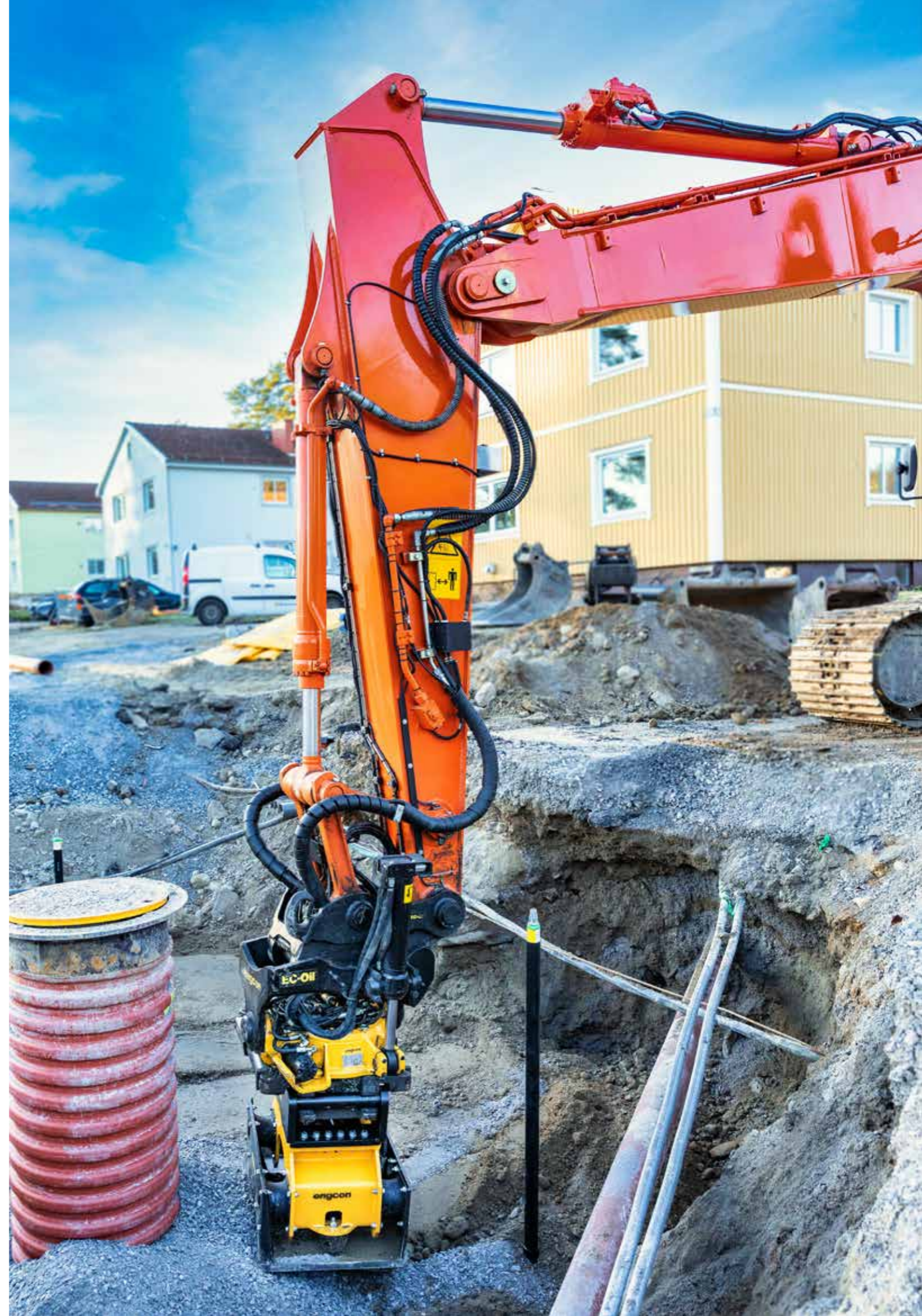


Accessory:

Extension plates, trenching blade, specially adapted compactor pads for e.g. packing in sheet-pilings.

EC-Oil
STANDARD

Read more on
page 4



Grading beam

GRB1250–GRB3000

With engcon's grading beam, you can grade large areas quickly and efficiently.

The grading beam is a smart, flexible solution as it has a bolt-on bracket/attachment point with the same bolt pattern as other tools (e.g. stone and sorting grab, compactors and rotating brushes) from engcon. The side beams can be extended with bolt-on 500 mm extensions. This means that our dealers do not need to carry several different grading beam versions since a single model covers various configurations. End-users and contractors can also get by with a single beam for several machines if they do not need to use more than one at a time.

What's more, engcon's grading beam has cutters on the leading edge and wear bars under the entire structure. This means a long life, making the gradingbeam even more profitable. The journalled compactor roller can be raised and lowered to achieve the best setting for your particular needs. engcon's grading beam comes in five different widths to cover almost any need for efficient grading.



Advantages

- » More efficient surface grading means greater profitability
- » Robust design
- » Bolt-on bracket/attachment point
- » Cutters at the leading edge
- » Wear bars under the entire structure
- » Extendable side beams
- » Journalled compactor roller
- » Compactor roller can be raised and lowered
- » Bolt-on bracket/attachment point makes switching brackets easy
- » Bolt-on bracket/attachment point reduces the need for dealers to keep multiple grading beams of the same size in stock

NOTE. the engcon grading beam is even more efficient when used with a tiltrotator, but it is then important to consider the loads the tiltrotator will be subjected to. Use the grading beam for its intended purpose – grading. Large quantities of material can be moved quickly and efficiently with engcon's range of buckets.

Cable bucket

CB01–CB29

For all excavators in the 1.5-33 tonne weight classes

engcon's cable bucket – developed for precision excavation with minimal width for e.g. cables or other utilities requiring narrow trenches. Its deep profile means better accessibility beneath intersecting cables and pipes and also allows deep trenching without any need for the tiltrotator to go below surface level.

engcon's cable buckets are available in two models – **Standard and tapered (C)**, **Standard** is of conventional type with straight side plates for excavating ditches with vertical sides. **The tapered** model has a narrower blade than the standard cable bucket but with the same width top, producing a narrower trench bottom with slightly sloping sides.

engcon's cable buckets are made from high-quality steel. As with other engcon buckets, the cutters and other exposed wear surfaces have a hardness of 500 Brinell.

A factory-installed tooth kit is available as an optional extra.



Tooth kit, type Cat



Blade teeth provide smooth ditch bottoms



Standard



Conical

Deep-digging bucket

DB01–DB32

For all excavators in the 1.5-33 tonne weight classes

engcon deep-digging bucket – Robust design for tough jobs. A favourite for anyone needing to excavate and dig in difficult conditions where fast penetration and easy filling are priorities, e.g. in trenching and other soil removal requiring capacity.

On request, the bucket can be fitted with the following accessories:

- » Tooth kit*
- » Tooth cover
- » Blade teeth

* When selecting a tooth kit, engcon buckets are fitted with the Cat J system as standard equipment. For other tooth systems, check availability with engcon



Sorting bucket

SB02–SB29

For all excavators in the 1.5-33 tonne weight classes

The engcon series of sorting buckets are designed for quick, simple sorting. Sorting buckets require no hydraulics; they are made from high quality steel. Cutters and bars have a hardness of 500 Brinell – the same high quality as every other engcon bucket. All for greater efficiency and a long service life.



Sorting bucket

SKB02–SKB29

For all excavators in the 1.5-33 tonne weight classes

The engcon sorting bucket is designed to more easily get beneath the material intended for sorting. It has a slightly narrower shape than the engcon SP sorting bucket and its long base and low side panels make it easier to get beneath e.g. asphalt or other material intended for sorting. The base ribs run along the length of the bucket, allowing material to slide easily in and out.

The SKB sorting bucket requires no hydraulics and is thus ideal for simple sorting work where e.g. finer material is required for backfill or some other use. The cutters, lower side plates and ribs are made of high-strength wear bar with a hardness of up to 500 Brinell, thus guaranteeing high efficiency and long service life.



Grading bucket

GB01-GB29

For all excavators in the 1.5-33 tonne weight classes

engcon grading bucket – Optimised together with experienced contractors for use together with the tiltrotator. -Chamfered corners from the base all the way to the top plate to avoid striking house walls and other objects that are susceptible to damage from the rotating bucket. Tapered shape for easier filling and an adapted 16 degree-angle between the attachment point and base for easier bucket rotation without losing material.



engcon grading bucket features

- 1 Chamfered corners to avoid collisions
- 2 Bucket top plate angle adapted for tiltrotator
- 3 Hardox reinforcements on other wear surfaces
- 4 Tapered for easier filling and better release
- 5 Wear bar and cutter – hardness 500 Brinell



Water & sewerage bucket

TB07-TB23

For all excavators in the 8-23 tonne weight classes

engcon water/sewerage bucket – Specially designed for excavating water and sewerage trenches and other utilities tasks that call for a deep-digging bucket with a slightly longer base and a cutter without teeth. Like other buckets in the engcon range, the water/sewerage bucket is reinforced with Hardox at the most exposed points.



Asphalt cutters

TC02-TC20

For all excavators in the 1.5-33 tonne weight classes

engcon asphalt cutter – the engcon asphalt cutter allows you to make first-rate cuts and avoid expensive costs with asphalt dug up unnecessarily. Can also be used for first-rate cuts on grass surfaces and other locations where precision is called for.



Grab-adapted bucket series

A new grab-adapted bucket series has been developed in parallel with the GRD, the detachable gripper, where the rear of the bucket is designed with a recess that aligns with the grab's counterhold and consequently functions as an extended support for the gripped item, such as a pole or pipe.



Ripper

R5-R30

For all excavators in the 1.5-33 tonne weight classes

engcon ripper – With the engcon ripper you'll find no problem in penetrating frozen and hard ground. The ripper is optimised for the best ripping ability and breakout force in hard material.



ENGCON JOYSTICKS

Enjoy your work with good ergonomics and functionality



engcon joysticks for excavators combine comfort and efficiency with functionality. The joystick was developed to comply with requirements for increased safety and more control functions.

engcon joysticks were designed in collaboration with contractors and a company specialised in industrial design. Each one can be fitted with three rollers and seven buttons, providing twice the number of buttons and rollers with two levers. The operator is therefore able to work at maximum efficiency while also sparing the body strenuous

movements and stressful working positions. The joystick has an integrated hand support for the wrist to rest on without affecting the excavator movements. The hand rest is flexible and can be adjusted to suit different hand sizes.

The engcon joystick is not only ergonomic, but also provides the operator with new capabilities on the job. The joystick rollers are designed for the thumb, index and middle fingers – a unanimous demand by all concerned. In this way the operator can combine six rollers simultaneously when necessary.

ENGCON CONTROL SYSTEM

Proportional control system with remote support

Our proportional control system meets the high standards demanded of all components such as hydraulics, electronics and software. Used together with engcon tiltrotators and quick hitches, the control system creates a safer work environment. The engcon control system provides the ability for e.g. track or wheel control and boom slew. A smartphone app allows remote support as a complement to PC and USB cable connection. The product meets the ISO 13849-1 safety standard.

Advantages:

- » Proportional / infinitely variable tiltrotator and tool control
- » Complies with international machine safety standard SS-EN ISO 13849-1
- » Speedy installation with all connections made using socket connectors
- » The MicroConf PC-programme enables you to make fine adjustments and instantly follows the effect of changes made when the tiltrotator is in use
- » The system makes a back-up of all the settings from the cab module to the aggregate module
- » Display for alarm and for making system settings
- » Double feeder function
- » Robust design increases operational safety
- » Option of track control, wheel control and boom slew
- » Settings via Bluetooth and smartphone as an alternative to PC and USB cables
- » Control with up to six rollers
- » Suitable for most machines on the market
- » Possible to create three individual operator profiles
- » Multiple CAN integrations for excavator manufacturers for ease of installation and a seamless experience



engcon Positioning Solution

During the past year, engcon has standardised ePS sensors on EC214 tiltrotators and higher. The advantage is that rotation and the tilt angle can be obtained for integrated, aftermarket installed machine control systems.* Because the sensors are standard, it's also easier to retrofit ePS. In other news this year, we now offer ePS for the EC206 and upwards, as a factory option or upgrade**

Conditions

The technology is based on signals from the system to the excavator guidance system used on the customer's excavator. engcon supplies the rotation sensor and tilt sensor.

The auto-tilt and auto-rotation functions are available for the engcon Positioning System in combination with certain makes of excavator guidance systems and excavator marques. Contact your excavator guidance system supplier for further information.

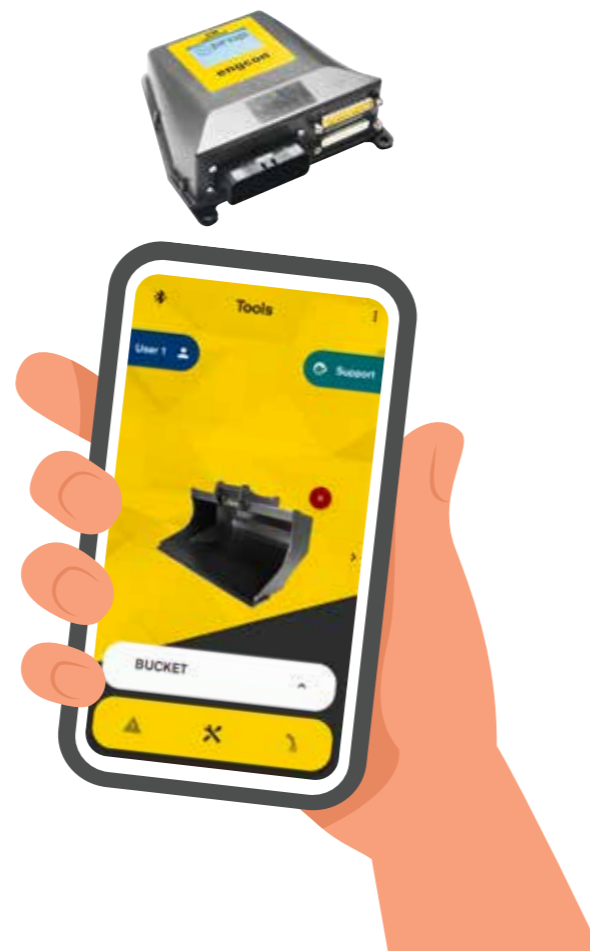
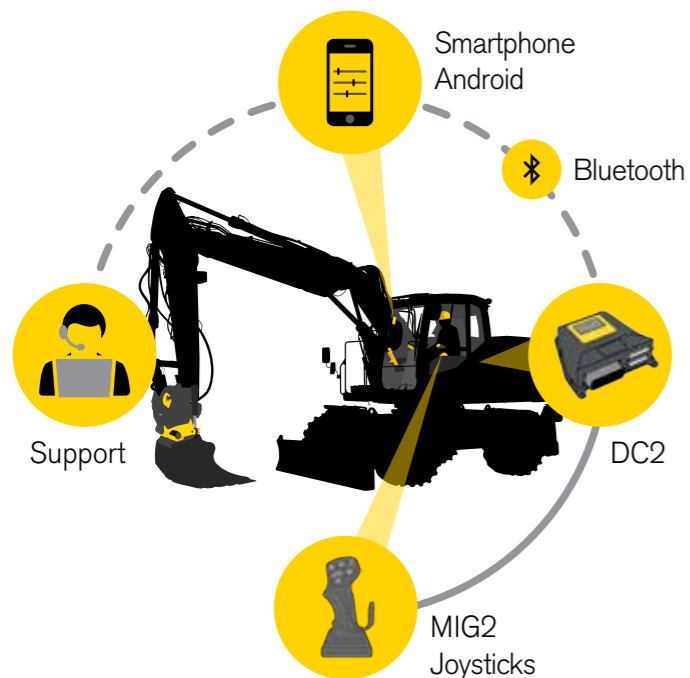
* This through our machine control rated sensors

** EC206, engcon has standardised sensors for this tiltrotator

Advantages

Together with the selected excavator guidance system, the engcon Positioning System reduces the need for a conventional set-up, and the operator can view the precise excavation area on the machine control system display in the cab. This control, which ensures the exact right amount of material is excavated, provides many advantages:

- » Reduced job time
- » Reduced fuel consumption
- » Reduced wear on machines and tools
- » Saves time for other units, such as trucks/dumpers
- » Adapted to the engcon proportional system but also possible to install on other control systems
- » Fully independent of control system make or model via own cabling



Technical data

Please direct any questions to your local engcon office.
 Technical data may vary. We reserve the right to make changes without prior notice.

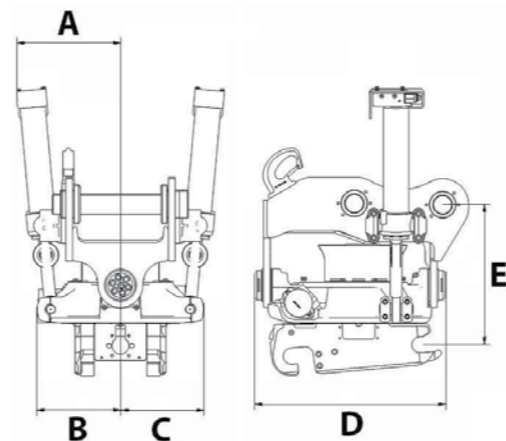
Tiltrotator

Specifications	EC02B	EC204	EC206	EC209	EC214	EC219	EC226	EC233
Width A: (mm)*	180	267	286	277	320	396	426	501
Width B: (mm)*	155	161	220	250	285	315	340	385
Width C: (mm)*	160	169	219	273	303	310	340	385
Total length D: (mm)*	435	463	500	561	665	737	760	878
Build height E: (mm)*	from 245	from 310	from 380	from 425	from 457	from 480	from 500	from 673
Weight: (kg)*	77	116	170	287	385	447	632	812
Tilt:	2x40°	2x45°	2x45°	2x45°	2x45°	2x45°	2x45°	2x45°
Rec. hydraulic flow DC2/SS10 (l/min):	25	30	40	60	80	120	120	120
Rec. hydraulic flow SS9 tilt/rotation (l/min):	7/20	10/25	15/30	35/40	35/50	65/70	70/70	70/70
Max hydraulic pressure: (MPa)	22	22	22	22	22	22	22	25
Standard hitches:	S30	S40	S40, S45, S50	S45, S50	S45, S50, S60	S60	S70	S70, S80, S2
Max bucket width rec engcon: (mm)	900	1000	1,200	1,300	1,600	1,700	2,000	2200
Max breakout torque: (kNm)	20	28	45	74	126	186	270	340
Base machine weight: (t)	1.5-2.5	2-4	4-6	6-9	9-14	14-19	19-26	24-33

*Standard attachment

Tiltrotator storage and transport stand

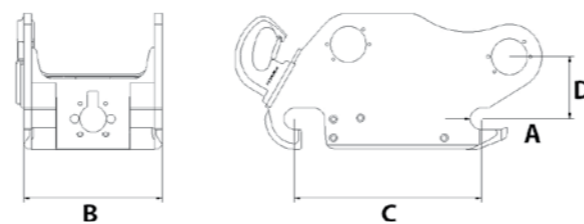
Specifications	
Length: (mm)	1200
Width: (mm)	800
Height without attachment point: (mm)	150
Weight without attachment point: (kg)	82



Automatic quick hitch

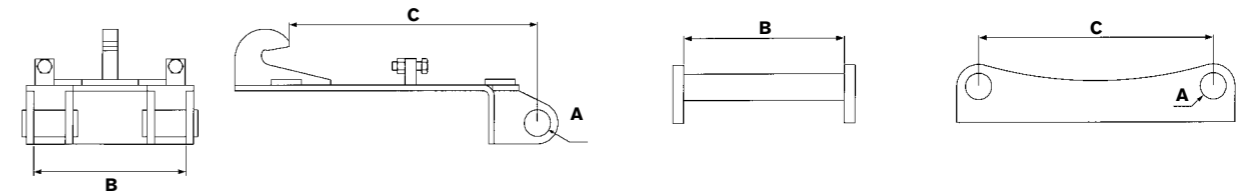
Specifications	S40	S45	S50	S60	S70	S80
Axle diameter A: (mm)	Ø40	Ø45	Ø50	Ø60	Ø70	Ø80
Width B: (mm)	200	290	270	340	450	590
Length C: (mm)	300	430	430	480	600	670
Build height D: (mm)	135	140	140	170	190	270
Weight*: (kg)	50	100	100	180	290	370
Recommended hydraulic pressure open/closed (MPa)	21-25	21-25	21-25	21-25	21-25	21-25
Max hydraulic pressure: (MPa)	35	35	35	35	35	35
Base machine weight: (t)	2-6	6-11	6-11	12-19	20-30	27-40

*Depending on attachment point



Attachment brackets

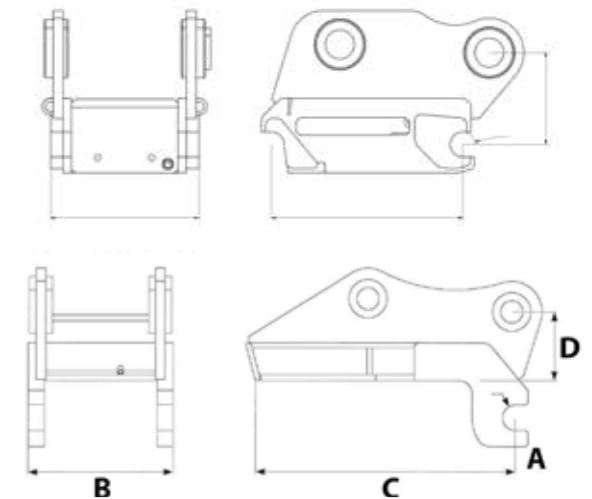
Specifications	GS30/150	GS30/180	GS40/200	GS40/240	GS45	GS50	GS60	GS70	GS80	GS1	GS2/27	GS3
Axle diameter A: (mm)	Ø30	Ø30	Ø40	Ø40	Ø45	Ø50	Ø60	Ø70	Ø80	Ø70	Ø80	Ø100
Width B: (mm)	150	180	200	240	290	270	340	450	590	400	450	620
Length C: (mm)	200	230	300	300	430	430	480	600	670	750	810	870
Suitable for engcon RF:	S30	S30	S40	S40	S45	S50	S60	S70	S80	S1	S2/27	S3



Other quick hitches

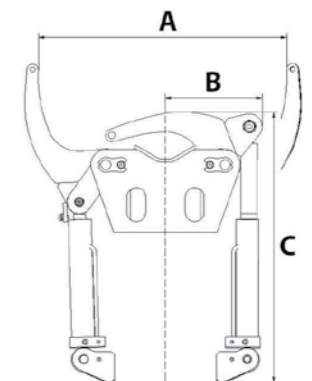
Specifications	S30	S30	S1	S2	S3
Axle diameter: (mm)	Ø30	Ø30	Ø70	Ø80	Ø100
Width: (mm)	150	180	400	450	620
Length: (mm)	200	230	750	810	870
Build height: (mm)*	110	110	130	170	230
Weight: (kg)*	10	15	170	215	300
Recommended hydraulic pressure open/closed	21/3-6	21/3-6	21/3-6	21/3-6	21/3-6
Max hydraulic pressure: (MPa)	22	22	35	35	35
Base machine weight: (t)	1-2	1-2	18-26	22-32	25-32

*Depending on attachment point



Detachable Gripper

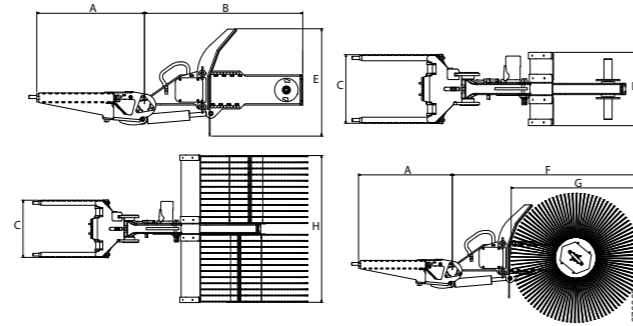
Specifications	GRD45/50	GRD60	GRD70
Grab width: (mm)	610	820	950
Width B: (mm)	270	355	410
Length C: (mm)	720	870	900
Clamping force (tip to tip) at 21 Mpa: (kg)	1500	2200	2200
Max load: (kg)	1500	2,000	2,000
Weight: (kg)*	99	143	158
Max hydraulic pressure: (MPa)	22	22	22
Fits quick hitch:	S45, S50	S60	S70



Detachable rotating brush

Specifications	SWD45	SWD60
Length, cassette A: (mm)	586	665
Length, arm B: (mm)*	875	975
Width, cassette C: (mm)	362	423
Width, guard D: (mm)**	450 & 1,100 & 1,600	450 & 1,100 & 1,600
Height, guard E: (mm)	660	660
Max total length A+F (mm)**	1501	1998
Diameter, sweeper brush G: (mm)***	600, 700, 915	600, 700, 915
Width, sweeper brush H: (mm)	420, 1,100, 1,600	420, 1,100, 1,600
Maximum weight: (kg)**	186	210
Oil flow min/max: (l/min)	20/60	20/60
Fits quick hitch:	S45, S50	S60

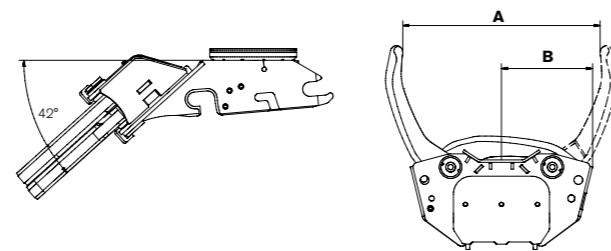
* In the standard version
 ** Depends on sweeper brush
 *** 915 mm can only be used with long arm (975 mm)



Integrated gripper (railway use)

Specifications	GR20R2
Widest grab width A: (mm)	820
Width B: (mm)	380
Length: (mm)	Depending on the hitch
Weight: (kg)	140
Clamping force at 21 Mpa: (kg)	1750
Angled at 35-42° depending on the bracket	
Detachable	
Protected cylinders	

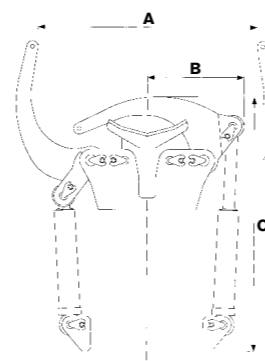
Note! GR20R2 cannot be combined with all quick hitches on the market. Contact engcon for further information.



Integrated gripper

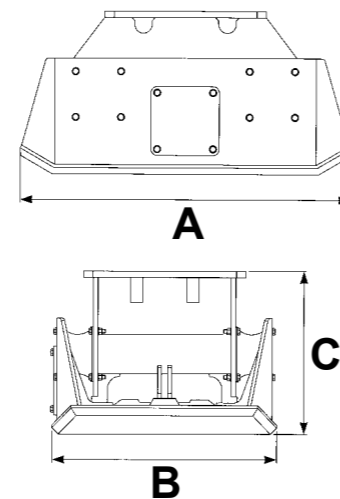
Specifications	GR05	GR30*
Widest grab width A: (mm)	350	1080
Width B: (mm)	200	440
Length C: (mm)	585	980
Clamping force, tip to tip, at 21 MPa: (kg)	1654	1956
Max load: (kg)	1000	2200
Weight: (kg)*	50	148
Max hydraulic pressure: (MPa)	22	22

* Depending on bracket.



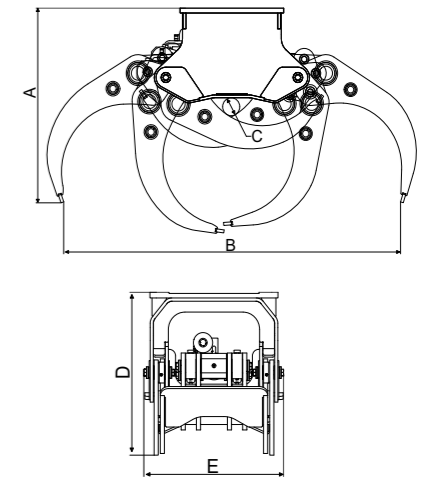
Compactor

Specifications	PP350	PP600	PP950	PP3200
Compaction force: (kg)	3500	6000	9500	3200
Compaction area: (m ²)	0.42	0.58	0.90	0.4-0.56
Max hydraulic pressure: (MPa)	22	22	22	22
Recommended hydraulic flow: (l/min)	68	120	120	34
Max recommended return line pressure: (MPa)	1	1	1	2.5
Weight excl. attachment point: (kg)	390	620	900	470
Length A: (mm)	890	1050	1270	1000
Width B: (mm)	620	720	900	500-700
Height C: (mm)	450	520	600	590



Timber/combi gripper

Specifications	TG25HD	TG28HD	TG42HD	TG55HD
Max grab width B: (mm)	1450	1540	1900	2510
Max load: (t)	3	5	6	10
Height, fully open A: (mm)	759	889	1039	1146
Height, fully closed D: (mm)	526	659	751	946
Width E: (mm)	460	595	677	802
Gripping force, tip to tip, at 21 Mpa (kN)	6.8	12.42	20.4	31.86
Max hydraulic pressure: (MPa)	22	22	22	22
Weight: (kg)	195	360	595	1070
Grab area C: (m ²)	0.25	0.28	0.42	0.55
Recommended machine weight: (t)	4-9	9-14	12-19	19-26



Pallet fork

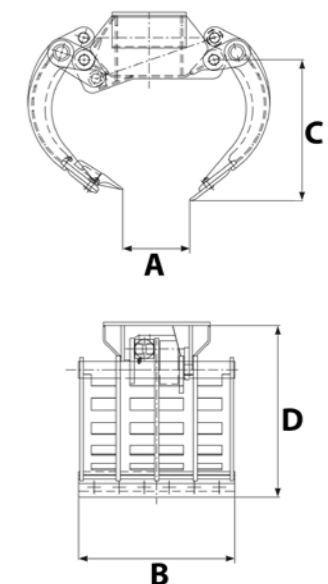
Specifications	GH1000	GH1200	GH1200	GH1200	GH1500
Width: (mm)	1000	1,200	1,200	1,200	1500
Fork: (mm)	100x40x1 200	125x45x1 200	125x50x1 200	125x50x1 500	125x50x1 500
Weight: (kg)*	180	360	372	409	420
TP500	2.9 t	4.7 t	5.7 t	5.7 t	5.7 t

Specifications	GHH1200	GHH1200L	GHH1200L	GHH1500
Width: (mm)	1,200	1,200	1,200	1500
Fork: (mm)	125x45x1 200	100x40x1 200	125x45x1 200	125x50x1 500
Weight: (kg)*	400	260	313	570
TP500	4.7 t	2.9 t	4.7 t	5.7 t

* Depending on hitch

Stone and sorting grab

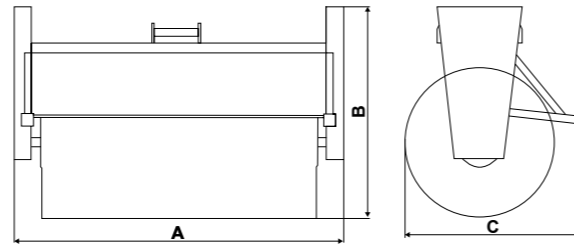
Specifications	SG03	SG06	SG12	SG19	SG26	SG33
Max grapple width A: (mm)	750	1110	1660	1790	1990	2575
Min grapple width A: (mm)	0	0	0	0	0	0
Cutting width B: (mm)	400	505	715	860	860	1170
Jaw length C: (mm)	490	460	680	790	870	1180
Height D: (mm)	550	580	790	960	1070	1360
Volume, with side plates: (l)	42	83	220	336	420	930
Gripping force: (kN)	5.7	8.7	15	19	25	45
Max hydraulic pressure: (MPa)	22	22	22	22	22	22
Weight: (kg)*	108	180	425	646	755	1400
Grab area: (m ²)	0.12	0.17	0.34	0.42	0.52	0.85
Rec. machine weight (t)	1.5-3	3-6	6-12	12-19	18-26	24-33
Recommended tiltrotator:	EC02	EC204 EC206	EC206 EC209 EC214	EC214 EC219	EC219 EC226	EC226 EC233



* Depending on attachment point

Rotating brush

Specifications	SR800	SR1300	SR1600	SR1800	SR2000
Min hydraulic flow: (l/min)	20	20	20	20	20
Max hydraulic flow: (l/min)	60	60	60	60	60
Weight excl attachment point: (kg)	210	240	260	275	290
Width A: (mm)	800	1,300	1,600	1800	2,000
Height B: (mm)	1257	1257	1257	1257	1257
Length C: (mm)	1060	1060	1060	1060	1060



Grading beam

Specifications	GRB1250	GRB1500L	GRB1500	GRB 2000	GRB 2500	GRB 3000
Width (mm):	1250	1500	1500	2,000	2500	3000
Depth (without extensions) (mm):	962	962	1000	1000	1000	1000
Height (without attachment point) (mm):	275	275	387	387	387	387
Diameter (roller) (mm):	178	178	245	245	245	245
Weight (kg):	195	233	306	482	563	645

Deep-digging bucket

Specifications	DB01	DB02	DB02	DB02	DB03	DB05	DB06	DB06	DB07	DB07	DB09	DB09	DB11	DB11	DB11	DB12	DB12	DB12
Volume: (l)	50	70	90	90	120	160	200	200	250	250	350	350	400	400	400	500	500	500
Width: (mm)	400	450	550	550	550	600	600	600	700	700	700	700	700	700	700	800	800	800
Weight: (kg)	35	50	55	60	75	100	125	140	210	215	230	235	280	285	300	320	320	330
Attachment point:	S30	S30	S30	S40	S40	S40	S40	S45	S45	S50	S45	S50	S45	S50	S60	S45	S50	S60

Specifications	DB13	DB13	DB14	DB14	DB16	DB16	DB18	DB18	DB18	DB21	DB21	DB23	DB23	DB26	DB26	DB26	DB29	DB29	DB32
Volume: (l)	600	600	650	650	750	750	900	900	900	1100	1100	1250	1250	1400	1400	1400	1,600	1,600	1800
Width: (mm)	850	850	900	900	1000	1000	1000	1000	1000	1100	1100	1,200	1,200	1,300	1,300	1,300	1450	1450	1,700
Weight: (kg)	500	570	520	590	600	630	680	715	710	940	920	1150	1150	1330	1350	1320	1440	1450	1720
Attachment point:	S60	S1	S60	S1	S60	S1	S60	S70	S1	S70	S1	S70	S2	S70	S80	S2	S70	S2	S80

Cable bucket

Specifications	CB01	CB02	CB03	CB03	CB05	CB05	CB05	CB08	CB08	CB08	CB10	CB10C
Volume: (l)	35	60	90	90	130	130	130	155	155	155	160	130
Width: (mm)	240	290	290	290	340	340	340	400	400	400	460	300
Weight: (kg)	25	35	55	55	70	85	85	83	95	95	160	170
Attachment point:	S30	S30	S30	S40	S40	S45	S50	S40	S45	S50	S50	S50

Specifications	CB15	CB15C	CB15	CB15C	CB20	CB20	CB20	CB25	CB25	CB29	CB29	CB29
Volume: (l)	350	350	350	350	400	400	400	550	550	800	800	800
Width: (mm)	560	300	560	300	660	660	660	600	600	700	700	700
Weight: (kg)	290	255	320	285	320	360	360	590	615	744	777	798
Attachment point:	S60	S60	S1	S1	S60	S70	S1	S70	S80	S70	S80	S2

Sorting bucket

Specifications	SB02	SB02	SB02	SB04	SB06	SB06	SB08	SB08	SB11	SB11	SB14	SB15	SB17	SB20	SB24	SB29
Volume: (l)	90	30	130	200	300	300	370	370	500	500	650	750	900	1100	1400	1,600
Width: (mm)	900	900	900	1000	1,200	1,200	1,300	1,300	1400	1400	1,600	1,600	1,700	1,700	2,000	2,000
Diameter: (mm)	22	22	22	22	22	22	30	30	30	30	30	45	45	45	45	45
Gap: (mm)	30	40	40	50	50	50	50	50	50	50	50	65	70	70	70	70
Weight: (kg)	80	86	91	44	166	177	292	295	320	323	442	628	697	920	1046	1268
Attachment point:	S30	S30	S40	S40	S40	S45	S45	S50	S45	S50	S60	S60	S60	S70	S70	S70

Sorting bucket

Specifications	SKB02	SKB04	SKB06	SKB09	SKB14	SKB17	SKB23	SKB29
Volume: (l)	70	170	220	400	620	850	1,300	550
Width: (mm)	600	600	800	1000	1 300	1,300	1500	1500
Gap: (mm)	44	41	47	51	62	62	62	62
Weight: (kg)	49	108	166	291	496	604	1072	1231
Attachment point:	180	S40	S45	S45	S60	S60	S70	S70

Grading bucket

Specifications	GB01	GB02	GB02	GB02	GB03	GB04	GB04	GB05	GB05	GB06	GB06	GB08	GB08	GB08	GB08	GB11	GB11	GB11
Volume: (l)	55	90	130	130	150	200	200	250	250	300	300	370	370	400	400	450	500	500
Width: (mm)	800	900	900	900	1100	1000	1000	1,200	1,200	1,200	1,200	1,300	1,300	1400	1400	1400	1400	1400
Weight: (kg)	60	75	80	85	110	135	140	145	155	155	160	260	260	255	265	320	370	370
Attachment point:	S30	S30	S30	S40	S40	S40	S45	S40	S45	S40	S45	S45	S50	S40	S50	S45	S45	S50

Specifications	GB13	GB13	GB14	GB15	GB15	GB17	GB17	GB17	GB20	GB20	GB20	GB20	GB22	GB24	GB24	GB29	GB29	GB29
Volume: (l)	600	600	650	750	750	900	900	900	1100	1100	1100	1100	1250	1400	1400	1,600	1,600	1,600
Width: (mm)	1,600	1,600	1,600	1,600	1,600	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1900	2,000	2,000	2,000	2,000	2,000
Weight: (kg)	450	490	460	660	690	700	740	730	940	980	970	980	1060	1150	1150	1460	1490	1460
Attachment point:	S60	S1	S60	S60	S1	S60	S70	S1	S60	S70	S1	S2	S70	S70	S2	S70	S80	S2

Water & sewerage bucket

Specifications	TB07	TB07	TB07	TB09	TB12	TB12	TB14	TB14	TB14	TB14	TB16	TB16	TB18	TB21	TB23
Volume: (l)	250	250	250	350	500	500	600	600	650	650	700	700	900	1100	1250
Width: (mm)	600	600	600	700	800	800	800	800	830	830	900	900	900	1100	1,200
Weight: (kg)	202	213	214	250	325	340	510	520	525	520	550	550	750	1075	1,300
Attachment point:	S40	S45	S50	S50	S50	S60	S60	S1	S60	S1	S60	S70	S70	S70	S70

Asphalt cutters

Specifications	TC02	TC02	TC05	TC10	TC10	TC15	TC20	TC20	TC20
Diameter: (mm)	Ø370	Ø370	Ø370	Ø470	Ø470	Ø470	Ø470	Ø470	Ø470
Cutting depth: (mm)	100	100	100	150	150	150	150	150	150
Weight: (kg)	29	30	40	55	60	70	90	110	200
Attachment point:	S30/150	S30/180	S40	S45	S50	S60	S70	S80	S1

Ripper

Specifications	R5	R5	R10	R10	R15	R20	R20	R20	R30	R30	R30
Height: (mm)	600	600	700	700	900	1,200	1,200	1,200	1400	1400	1400
Weight: (kg)	50	65	110	110	170	370	410	390	680	720	690
Attachment point:	S30	S40	S45	S50	S60	S60	S70	S1	S70	S80	S2



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