

DOOSAN

Plug & Play Options

Doosan Smart Solutions



DOOSAN CONNECT



X_{site}[®]
Leica
Geosystems

 **Trimble** 

SMART SOLUTIONS – THE EASIEST FOR THE DIGITAL CONSTRUCTION WORLD

- 'Plug & Play' with all brands in the market and provide a factory-fit ready system
- Providing a 'Plug & Play' solution for all types of machine guidance systems for customers to choose whatever they want
- More intelligent support from Doosan Connect to allow customers to save costs and improve productivity

VERSATILITY – WORKS EVERYWHERE

OUR PLUG & PLAY STRATEGY ALLOWS OUR CUSTOMERS TO WORK EVERYWHERE WITH ALL TYPES OF TOOLS.

Powerful and stable, and compatible with almost all tools and brands, Doosan machines are the perfect carriers for all types of tools. Here are some examples of the broad range of compatible Doosan tools for excavators:



Plate compactor

ROAD CONSTRUCTION



Orange grapple

WASTE & RECYCLING



Log grapple



Wood grapple

FORESTRY



Ripper

DEMOLITION



Hydraulic breakers

QUARRY



Stone grapple

MULTIPLE TYPE OF CONSTRUCTION



engcon[®]

ENGCON CONTROL SYSTEM KIT

Tiltrotators - an excavator's flexible wrist - have become a given concept in the excavation business. Simply tilt and rotate the bucket or other tools for higher efficiency.

REDUCE WORKING TIME BY UP TO 50% WITH ENGCON!

TILTROTATORS

Engcon tiltrotators feature a cast body, which is stronger and lighter than the welded equivalents.

TILTROTATOR BENEFITS

- Do more from one spot and reduce the need to reposition the excavator
- Reduce working time by up to 50%
- Save fuel and environment
- Less need of manual labor
- Less damage to the ground
- Less wear on the undercarriage
- Save material
- Make work easier and safer for the operator and increase safety around the machine
- Reduce the need to close roads and other digging areas



TILTROTATOR EC233



Q-SAFE QUICK HITCH



MIG2 JOYSTICKS



DC2 CAB MODULE



DETACHABLE GRAB

ENGCON PROFITABLE CHOICES

QSC Standardized locking system

A system that minimizes the risk of activating the wrong button or function when releasing the excavator's bucket or other tools.

MIG2 Joysticks

Engcon's MIG2 joysticks combine maximum ergonomics and functionality. One joystick can be fitted with 3 rollers and 7 buttons – twice as many with 2 joysticks – giving the operator maximum efficiency. The roller controls are intended to be used by thumb, index and middle fingers – the operator can combine 6 rollers simultaneously. An integrated hand support can be adapted to different hand sizes.

DC2 Control system

DC2 meets the high safety standards that place high demands on hydraulics, electronics and software. It offers the option of track control and wheel steering as well as moving the boom. A smartphone app adds a remote control function as a complement to PC and USB cable connection.

ePS Positioning system

Reduces the need for a 'conventional' set-up, and the operator can see the exact excavation area via the machine control system's display in the cab. Works together with major machine guidance system brands.

Q-Safe Quick hitch

The world's safest quick hitch. With Q-Safe™, connecting the tool incorrectly due to 'human error' is no longer possible. The bucket or tool must achieve a certain ground contact pressure to allow connection or removal.

EC-Oil Automatic Quick Hitch System

EC-Oil makes connecting the tiltrotator under the excavator's quick coupler quick and easy; you can then connect hydraulic or mechanical tools under the tiltrotator. And all without leaving the cab!

In addition to the tiltrotator, EC-Oil also connects all hydraulic tools such as sorting grapples, compactor plates, pallet forks, hammers/breakers, etc. without having to leave the cab.

Detachable grab

An alternative to the conventional fixed gripper, the detachable gripper cassette (GRD) offers the benefit of being retrospectively fitted to the Q-Safe-D hitch.

For more information, please contact your local Engcon dealer.



SVAB



STEELWRIST

SVAB & STEELWRIST OPTIONS

The new factory-installed SVAB/Steelwrist options are now available as a factory fit on Doosan wheeled excavators through Doosan Smart Solutions.

SVAB CONTROL SYSTEM WITH USER-FRIENDLY INTERFACE AND AUTO-CALIBRATION

SVAB OPTIONS

SVAB control system

Increases productivity when using a tilt rotator. The ergonomic joysticks deliver soft, flexible and simultaneous operation of numerous functions. The user-friendly interface with the Auto Calibration function ensures optimal steering feedback and minimal fuel consumption.

Wheel joystick steering

This function moves the excavator while you continue to perform a specific task with the digging arm. You turn the wheels with one roller on the joystick and control the speed with your foot.

Automatic digging brake

The automatic digging brake keeps your wheeled excavator completely still when digging. After gently braking the excavator wheels, the system locks the wheels until you press the accelerator.

Gateway to MCS (Machine Control System)

The MCS display gets full feedback on the bucket position and allows full tilt rotator functionality in the MCS. This gives you maximum performance and reduced risk of broken pipes and cut wires.



Service tool

STEELWRIST OPTIONS

Steelwrist quick coupler and tilt rotators

- S60 quick coupler with front pin lock
- S60 quick coupler with front pin lock
- Direct fit X20 with S60 coupler
- Direct fit X20 with S60 coupler with gripper
- Sandwich X18 S60/S60
- Sandwich X18 S60/S60 with gripper
- Sandwich X20 S60/S60
- Sandwich X20 S60/S60 with gripper

BENEFITS

- The same installation on all 4 models (DX140W-5, DX160W-5, DX165W-5, DX170W-5) simplifies field support
- Shortens the machine's lead-time to end-user
- Doosan factory fit ensures a consistently high-quality installation
- The correct joysticks are factory-fitted, reducing cost and waste for customers
- Increased availability for reduced customer support time



AVAILABLE OPTIONS

Item Name	Machine models
Steelwrist tiltrotator X18 S60/S60 (2 hose tiltrotator)	DX140W-5, DX160W-5, DX165W-5
Steelwrist Tiltrotator X18 S60/S60 with gripper unit (2 hoses tiltrotator)	
Steelwrist tiltrotator X18 direct fit (2 hose tiltrotator)	
Steelwrist Tiltrotator X18 DIRECT FIT/S60 with Gripper unit (2 hoses tiltrotator)	
Steelwrist Tiltrotator X20 S60/S60 (2 hoses tiltrotator)	DX160W-5, DX165W-5, DX170W-5
Steelwrist tiltrotator X20 S60/S60 with gripper unit (2 hoses tiltrotator)	
Steelwrist Tiltrotator X20 DIRECT FIT/S60 (2 hose tiltrotator)	
Steelwrist Tiltrotator X20 DIRECT FIT/S60 with Gripper unit (2 hoses tiltrotator)	
Steelwrist Tiltrotator X20 DIRECT FIT/S60 (2 hoses tiltrotator)	DX140W-5, DX160W-5, DX165W-5
Steelwrist Tiltrotator X20 DIRECT FIT/S60 with Gripper unit (2 hoses tiltrotator)	DX170W-5
Steelwrist S60 FPL Quick coupler (Front Pin Lock) 60-80 mm shafts	DX140W-5, DX160W-5, DX165W-5 (pickup dimensions differs from DX170W-5)
Steelwrist S60 FPL Quick coupler (Front Pin Lock) 60-80 mm shafts	DX170W-5

For more information, please contact your local Doosan approved dealer.



TRIMBLE READY OPTIONS

Trimble Ready® kits include the necessary brackets, harnessing and sensors to allow for an easy aftermarket completion of a 2D or 3D Trimble GCS900 Grade Control System or Trimble Earthworks Grade Control Platform by a local SITECH® dealer.

SIMPLIFIED INSTALLATION OF A TRIMBLE® 2D OR 3D GRADE CONTROL SYSTEM

TRIMBLE GCS900 GRADE CONTROL SYSTEM

The most mature and proven grade control system on the market was introduced by Trimble more than 10 years ago and has been installed on thousands of excavators worldwide. Leverage the power and portability across your existing fleet of machines to get every ounce of productivity out of them.



TRIMBLE EARTHWORKS GRADE CONTROL PLATFORM

Take advantage of the next generation grade control platform from Trimble with easy-to-learn software that runs on an Android operating system. State-of-the-art hardware and software provide operators of any skill level the ability to work faster and more productively than ever before.



BENEFITS OF TRIMBLE GRADE CONTROL

47% less fuel used
when compared to
traditional methods



30% faster completion
of common excavation
tasks



32% fewer passes or
cycles to get the job
done



AVAILABLE OPTIONS

Trimble Ready Kit	Machine models	Monoboom Part no.	Artiboom Part no.
Doosan Trimble Ready for GCS900	14T-30T machines built in NL in EuCup excluding DX140LCR-5, DX165W-5, DX235LCR-5 and DX300LC-5	79701-GCS	79701-GCS-ARTI
Doosan Trimble Ready for Earthworks		79701-EW	79701-EW-ARTI

For more information, please contact your local Doosan approved dealer.



LEICA MACHINE CONTROL READY

The Leica-ready 3D machine control system not only boosts your productivity, it also offers unmatched flexibility. In brief, it will revolutionize the way you move dirt and fine-grade!

FULL 3D CONTROL OF YOUR EXCAVATOR

LEICA GEOSYSTEMS FOR EXCAVATOR 3D SOLUTION

Boost your productivity

Digitize your construction site with Leica Geosystems software and hardware platform to build complex designs with simpler workflows and less downtime.

Ease-of-use

Simple, clean and intuitive user interface with interactive user design. The assistive technology with wizards and help functions helps you drive the excavator and get more work done with high quality and less rework.

Robust design

With their robust design, the Leica MCP80 panel and the Leica MDS series docking station are prepared for the harshest environments and are truly resilient for the heavy construction industry.

Ultimate accuracy

Leica Geosystems machine control solution guides the operator using reference models and GNSS in 3D. Design information and real-time cut/fill indications are displayed in the cab on your control panel, allowing you to rapidly excavate to the reference design.

Less downtime

The operator can use the Create Model function to make even complex models directly on the panel without leaving the cab and without the assistance of a surveying engineer.

Cost and time savings

The sync function allows the excavator operator to work on the latest up-to-date design data. The operator collects and shares as-built data and can receive remote support via ConX. Therefore, thanks to ConX, the project manager of the construction site can track the productivity for the work that has been performed and have a real-time snapshot of the construction site's latest status.



IXE2/IXE3 - SEMI-AUTOMATIC EXCAVATOR SOLUTION

Semi-automatic solution for Leica iXE2/iXE3 excavator machine control systems helps the operator to perform complex fine grading jobs faster and more accurately by automating the movements of the boom, bucket, tilt bucket and tilt rotator, simplifying the operator's work. The semi-automatic excavator is a flexible solution allowing operator to easily switch between manual and auto modes to ensure maximum safety and productivity.

Features

- The design slopes are followed automatically only by operating the stick
- Intelligent slope detection with closest cross slope
- Surface protection (no tool point digs into your surface)
- Rotation control cross-cut
- Stick enabling (no push and hold on the button)
- Easy to switch between manual and the auto function with manual control when required

Benefits

- Less operator fatigue
- The job can be done faster as costly and time-consuming rework can be avoided
- Consistent quality of finished surface
- The semi-automatic functionality from Leica Geosystems is safe to use
- Flexible configurations suit any use case and machine configuration

AVAILABLE OPTIONS

Kit	Kit product number	Machine models
Leica 3D Ready - Mono boom	6014909	Crawler and wheeled excavators in the range from 14 tons to 30 tons Mono boom only
Leica 3D Ready - Arti boom	6014911	Crawler and wheeled excavators in the range from 14 tons to 30 tons Arti boom only

For more information, please contact your local Doosan approved dealer.



Xsite®
MACHINE CONTROL

NOVATRON/MOBA XSITE® READY OPTION

Novatron/Moba Xsite® ready kit includes the necessary brackets and harnessing to allow for an easy aftermarket completion of an Xsite® 2D Semi-Automation system

XSITE® 2D SEMI-AUTOMATION SYSTEM

EQUIP YOUR EXCAVATOR TODAY TO MEET THE DEMANDS OF TOMORROW

The automated boom, arm and bucket functions in the Xsite® 2D Semi-Automation system enable grading against target level and slope requiring only single lever operation to control movement and speed. The bucket assist function locks the bucket orientation to assist in loading work and other applications. The system also sets movement boundaries and limits for the boom, arm and bucket movement.

BENEFIT FROM INTEGRATED MACHINE GUIDANCE

The Xsite® 2D Semi-Automation system also provides integrated machine guidance measuring depth, distance and slope, to show the operator the elevation of their bucket, so they do not have to interrupt their work for grade checking.

READY KIT PROVIDES FLEXIBILITY

The ready kit option gives a customer flexibility as they are not obliged to install the complete Xsite® 2D Semi-Automation system immediately. The customer's excavator will have the main brackets and wiring installed in readiness for the rest of the automation system to be added at a later date. They enable a faster and simplified installation of the Xsite® 2D Semi-Automation system components with very little or no welding, re-painting, drilling or disassembly required.

THE BENEFITS OF THE NOVATRON/MOBA XSITE® MACHINE CONTROL SYSTEM

- The work gets done more efficiently and quickly as the operator can concentrate more on doing productive work. Less time spent on the contract means cost savings in terms of employees, fuel and machinery.
- No grade checking and jumping off the machine.
- No excess cutting or filling. Material and transportation costs decrease and transporting extra materials is no longer necessary.
- A higher level of accuracy results in more uniform quality of work throughout the contract. Machine control turns a good machine operator into a great operator!
- Improved job site security as surveying close to work machinery or during excavations is reduced.
- The system guides the operator in all weather conditions, thereby making the work easier, especially in poor conditions such as in the rain or in darkness.



XSITE® SEMI-AUTOMATION PANEL



AVAILABLE OPTIONS

Kit	Kit product number	Machine model
Xsite® 2D Semi-Automation Ready	204630	DX235LCR-5

For more information, please contact your local Doosan approved dealer.

DOOSAN GROUP – BUILDING YOUR TOMORROW TODAY

BE PART OF THE GREAT DOOSAN FAMILY

Founded in 1896, Doosan Group is the oldest company in Korea. Rapidly adapting to the changing global environment, it is one of the fastest growing companies in the world.

AFFILIATES

Doosan is making efforts to improve the foundation for life. Doosan can be found in various fields, ranging from the entire infrastructure support business that includes industrial facilities, machinery, equipment, and construction, to the consumer goods business.

Infrastructure Support Business

Doosan Heavy Industries & Construction
Doosan Infracore
Doosan Bobcat
Doosan Engineering & Construction
Doosan Mecatec
Doosan Robotics
Doosan Mobility Innovation
Doosan Solus
Doosan Fuel Cell

Holding Company

Doosan Electronics
Doosan Corporation Mottrol
Doosan Bio
Doosan Corporation Industrial Vehicle
Doosan Digital Innovation
Doosan Corporation Distribution

Customer & Services

Oricom
Hancomm
Doosan Magazines
Doosan Bears
Doosan Cuvex
Neoplux

39400

Doosan Group employees in
36 countries worldwide



DOOSAN INFRACORE – MANUFACTURING CONSTRUCTION EQUIPMENT FOR OVER 40 YEARS

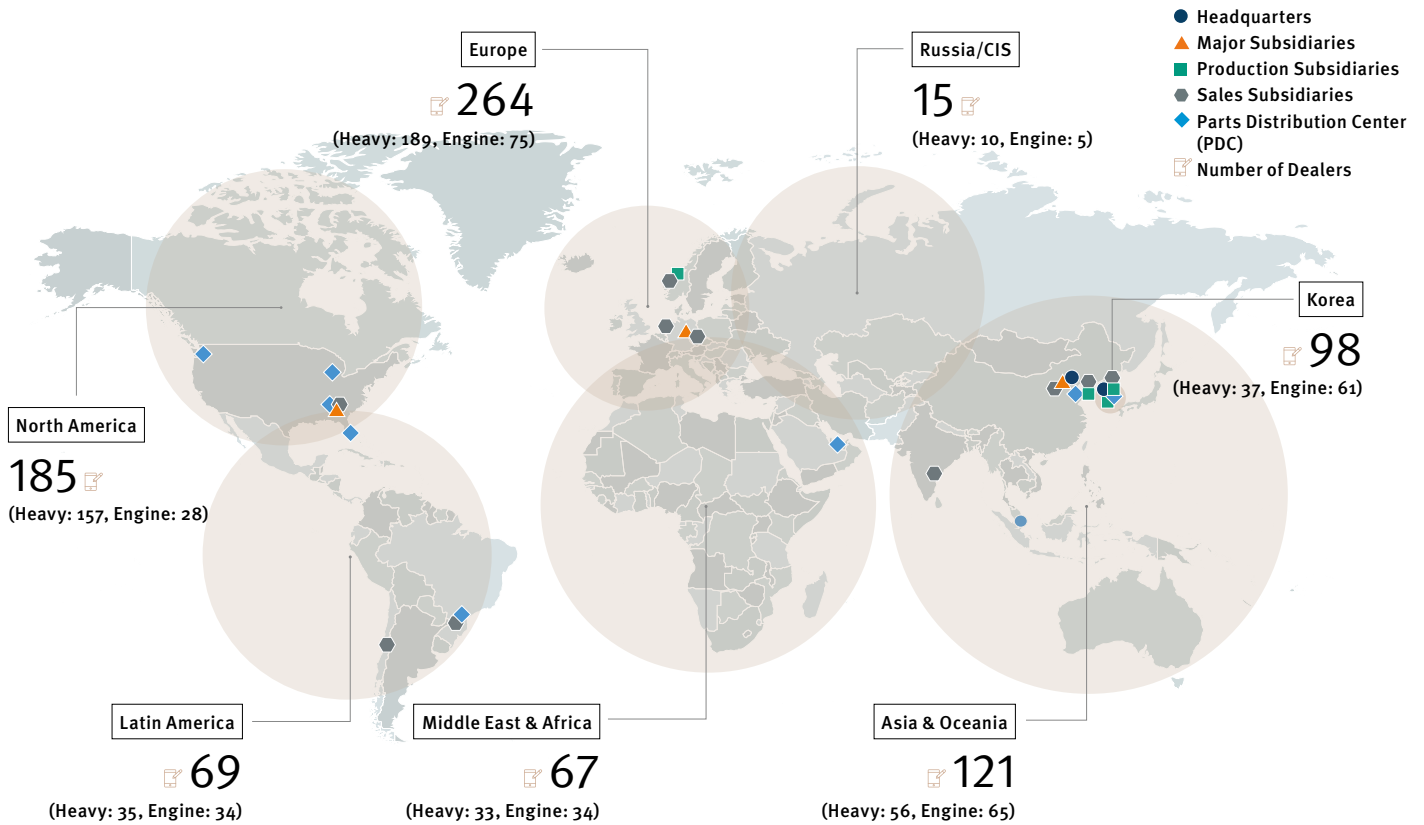
Doosan Infracore's construction equipment includes crawler and wheeled excavators, mini excavators, wheel loaders and articulated dump-trucks, and diverse attachments as well as diesel and gas engines. With No. 1 market share in Korea, Doosan Infracore is emerging as a global leader in construction equipment manufacturing.

EXPERIENCE THE DOOSAN PRODUCT RANGE!



GLOBAL NETWORK

A truly global player in every respect, we have large-scale factories, sales subsidiaries and dealers all over the world.



FROM MACHINE MANUFACTURER... TO FULL SOLUTION PROVIDER

Ask your dealer for a full range of services designed especially for you.

DOOSAN
CARE



DOOSAN
Financial Solutions



DOOSAN
CONNECT



CONCEPT-X

Doosan Infracore is not simply adopting digital technology but is seeking to revolutionize the construction machinery industry.

Concept-X is a solution based on technology optimized for future construction sites, such as automated construction site surveying tasks using drones, unmanned automation of equipment, and remote control based on 5G communication.



Powered by **Innovation**



DOOSAN