



[www.doosan-iv.eu](http://www.doosan-iv.eu)

## 7-Series Forklifts

### Pneumatic Diesel 6 to 9 ton Series

Euro Stage IIIB/ Euro Stage IV



*Lifting Your Dreams*

# About Doosan

## Values that drive our future growth

### **Trust in people is the foundation on which Doosan has built its century of success**

Doosan has always put 'People' first for the past 100 years, based on our management philosophies. - 'Business is not meant to make profits, but to help people grow.' (Late Too Pyung Park, First Chairman), and continues to spur corporate development with global competitiveness originated from human resources.

### **Doosan the oldest, but fastest growing company**

Doosan has recorded the longest business history since its inauguration in 1896, but has grown at its most rapid pace for the past 10 years.

### **Doosan-the global Infrastructure Support Business (ISB) company**

Doosan has created in excess of 90% of its sales within the ISB sector through vigorous reorganization of its business portfolio since 1998.

In the past, 70% of our business was concentrated on consumer goods, but we have successfully transformed our business DNA to the infrastructure support business that constructs and reinforces social infrastructure.

### **Doosan, surging as a global company**

Doosan has become the global ISB leader based on its world class products and services.

In addition, as a true global company, Doosan's overseas employees encompass 50% of its human resources, and overseas sales take more than over 60% of the total sales.





# Doosan Industrial Vehicle

## Major global player in the infrastructure support business with a proud heritage

With a proud history dating back to 1937, when we first started out as Chosun Machinery, Doosan Industrial Vehicle has grown into Korea's largest machinery manufacturer, playing a leading role in the development of the industry in Korea.

Today, we are a global enterprise. We operate large-scale plants and sales subsidiaries both at home and overseas and maintain an operational network that spans continents.

### Committed To Innovation

We remain committed to the advancement of new technologies and development of talented individuals, positioning us to respond effectively to the rapid changes taking place in the 21st century. Our mission is to strengthen our global position and become the industry leader well into the future.

### Committed To Our Customers

We are committed to our customers, providing superior products and excellent services to go with them.

### Our Promise

Doosan Industrial Vehicle will be the partner you can count on, always putting our commitment to you first.

### Award-Winning Machines

Doosan currently holds a number of export, design & safety awards, including five Forklift Truck Association awards for Design Excellence.

## 7 Series Highlights

- Superb performance and high power output, thanks to the new generation of Doosan's own G2 Diesel Engines.
- Rugged reliability has been a major part of Doosan's ethos for all of its products and the new 7-Series is no different.
- The strong and rigid chassis frame, designed mostly out of metal, ensures that Doosan is the best choice for all applications.
- The new Zeus Cabin provides a wide front view and excellent comfort for the operator.
- Reduced maintenance: extended service intervals mean increased uptime and reduced service cost.
- 55 kW engine installed models (D60/70S-7)
  - Meets and exceeds all Euro Stage IIIB emission regulations without a Diesel Particulate Filter (DPF).
  - Any additional maintenance such as regeneration or ash cleaning is not required.
- 80.9 kW engine installed models (D60/70/80/90S-7)
  - Meets and exceeds all Euro Stage IV emission regulations by the Diesel Oxidation Catalyst (DOC) and Selective Catalytic Reduction (SCR).
  - Regeneration and ash cleaning are not required.

### Well proven and reliable Doosan G2 engines and components

The powerful Doosan engine and components provide high-end torque at low engine rpm and reduced fuel consumption. Doosan turbo charged engines deliver great performance and reliability.

### Doosan multi-engine performance mapping system

Doosan offers 3 performance settings: Eco, Standard and Drive mode. The Eco mode limits the engine performance, but can reduce the fuel consumption by approximately 5%. The drive mode maximizes the engine performance, to provide the highest productivity.

### Well-tested load-sensing hydraulic system

All Doosan 7-Series with a G2 engine are equipped with a proven load-sensing hydraulic system, which provides increased fuel efficiency and better overall performance.



### Comfortable & convenient operator compartment

Designed to provide greater rigidity and comfort, the Zeus Cabin offers an outstanding visibility, a clear view on the dashboard and a high quality interior, along with an excellent heating and air conditioning system.

### Safety

OSS (Operator Sensing System)

- The truck will not move when the operator is not seated.
- The Lift and Lower function are disabled if the operator is not in the seat.
- The Tilt function will be locked if there is no operator on the seat.
- An alarm will sound if the operator leaves the seat without applying the parking brake.
- The seat belt warning light on the dashboard reminds the operator to fasten the seat belt.

### Meets the latest emission regulations

Doosan 3.4L diesel engine (D34) meets the latest emission regulations by using advanced technologies, including cooled exhaust gas recirculation, charged air cooling, diesel oxydation catalyst and selective catalytic reduction\*, but without Diesel Particulate Filter .



\* SCR is only necessary for 80.9 kW engine

# Greater durability and easier maintenance

The powerful Doosan's D34 electronic controlled engine, which delivers excellent fuel efficiency, is combined with proven transmission and drive axle technology.

This combination provides great productivity and durability for Doosan diesel forklifts.

Doosan's unique and innovative Ultra-low Particulate Matter Combustion system, using a Diesel Oxidation Catalyst and Selective Catalytic Reduction (80.9 kW only), ensures the most modern and reliable system, fitted to meet the latest emission regulations.

Doosan guarantees the highest quality of engines and its components because we use our own engines, which also means we can also guarantee the best supply of spare parts at the most competitive prices.

The robust chassis design and heavy duty build quality ensure Doosan's 7-series is tough enough for any application.

The Maintenance-free Oil-cooled Disc Brake system ensures maximum uptime, less damage, no maintenance and zero costs for you.

## Tiltable Operator Cabin

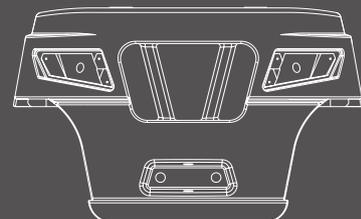
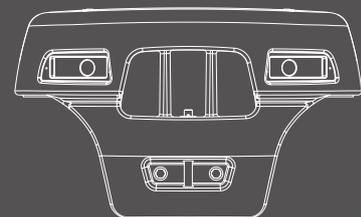
The tiltable operator cabin makes servicing all powertrain components quick and easy.

An electrically assisted hydraulic actuated cylinder tilts the operator compartment to the right side of the truck for easy access to inside truck components.



## Counterweight

The contemporary dynamic design not only represents the identity of the Doosan 7-Series, but also increases the radiator capacity by improving the inside air flow .



## 7-Series Forklifts

### 6 to 9 ton Series

#### Multi Engine Map : Standard Mode / Eco Mode / Drive Mode

We provide three engine settings - ECO mode, STD mode and Drive mode. Each customer can choose his own setting to suit their different applications. In drive mode, maximum travel speed increases by 5%.



#### New Air Cleaner

The increased capacity of the Dual Element Air Filter makes the new 7-series more durable. The integrated MAF sensor (Mass Air Flow) provides exact monitoring for optimal fuel efficiency and is easy to access.



#### Instrument Panel

The engine coolant temperature, transmission oil temperature, speed meter, fuel level gauge and hour meter keep the operator aware of the machine's working conditions. The engine oil pressure, alternator voltage, water separator gauge and pre-heater illuminate to alert the operator to any problem.



#### Easy to access

- Integrated Electrical Components.
- Wide hood opening range for best accessibility.
- Great location of fuel filter for serviceability.



#### Oil-cooled Disc Brakes (ODB)

Oil-cooled Disc Brakes (ODB) are standard on all 7-Series. This enclosed brake system eliminates outside contamination, significantly extending brake life and decreasing maintenance costs. Oil-cooled Disc Brakes have a 5 times longer service interval than conventional shoe brakes, and are virtually maintenance free.



#### LED lights (optional)

LED lights give greater visibility in dark working conditions and have a longer lifetime than conventional light bulbs.



#### Premium Suspension Seat (optional)

Designed with a low-profile mechanical suspension that significantly reduces vibrations, the Premium Suspension Seat helps you to stay comfortable, no matter how rough the day gets.



#### Anti Slip Step Plate

Increase safety when the operator mounts the forklift, especially in snowy or rainy weather.



#### Locking type gas spring for Hood

Improves the operator's safety and convenience with locking function.





# High Powered, Fuel efficient performance

Powerful and delivering excellent fuel efficiency, Doosan's D34 electronic controlled engine, combined with already proven transmission and oil-cooled disc brakes (ODB), provide excellent levels of productivity, durability and value for money.

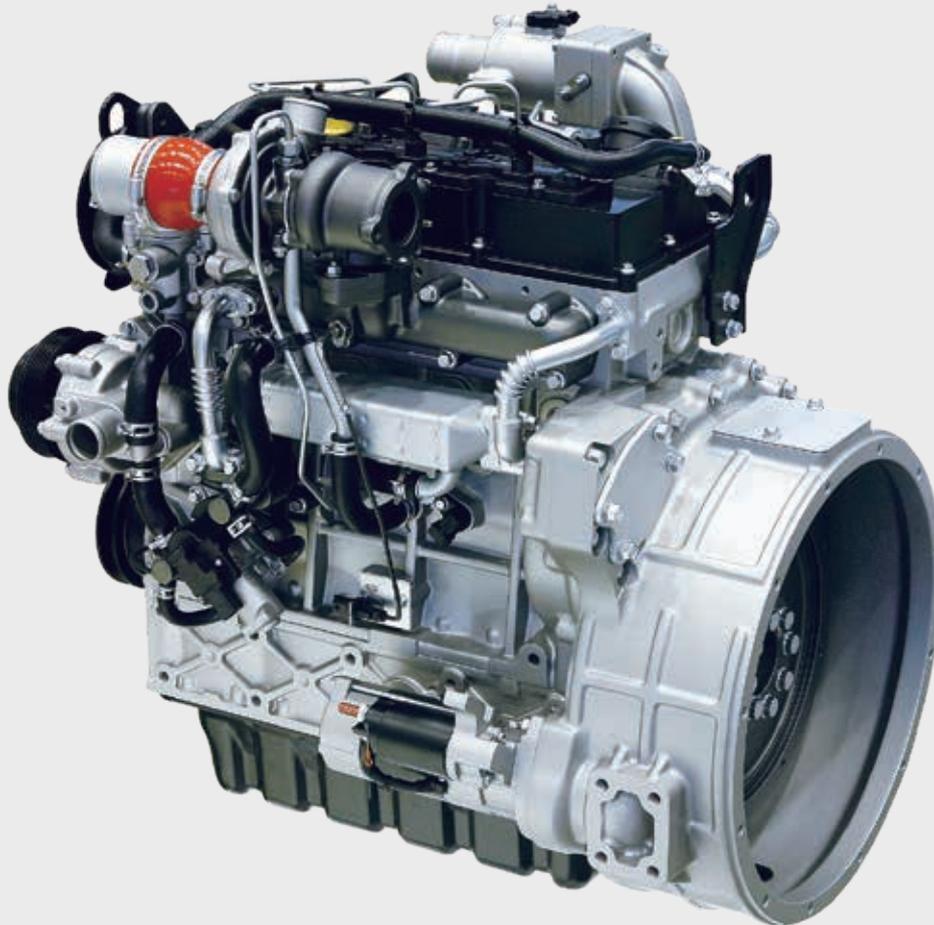


## Doosan Compact Diesel Engine

Doosan's Compact Diesel Engine offers high power output and maximum torque. It maintains the highest level of performance for the most challenging conditions in the most challenging applications.

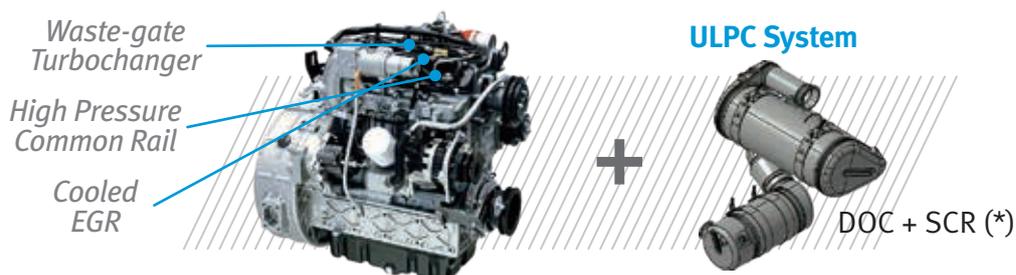
- Advanced fuel injection system : The advanced fuel injection system enables accurate fuel injection control thanks to its high pressure (1,800 bar) of the common rail.
- The unique technology of Doosan Compact Diesel Engine improves performance and fuel efficiency, while reducing emissions, noise and vibration.
- Turbo Charger : The wastegate type turbo charger with an intercooler helps to realize the best performance level.

Category	Unit	Doosan	
Model	-	D60/70S-7	D60/70/80/90S-7
Engine	-	Doosan D34NAP	Doosan D34P
Rated Output	kW/rpm	55 / 2,300	80.9 / 2,400
Max. Torque	Nm/rpm	330 / 1,400	375 / 1,600
No. of Cylinders	-	4	
No. of Cycle	-	4	
Displacement	cc	3,409	



### After Treatment System

- ULPC (Ultra Low Particulate Matter Combustion): Doosan's own system which optimizes combustion characteristics.
  - › Optimized piston bowl, injector and cylinder head swirl to use air as much as possible to reduce Particulate Matter (PM).
- SCR System (Stage IV only): Technology that uses a Diesel Exhaust Fluid (DEF) and a catalytic converter to significantly reduce NOx emissions.



\* Needs SCR cleaning process every 200 hrs / SCR Cleaning can be done anytime, when it suits you best.

# Eco-Friendly and more...

Doosan's unique and innovative Ultra-Low Particulate Matter Combustion system using Selective Catalytic Reduction (SCR) and Diesel Oxidation Catalyst (DOC) is the most modern and reliable system to comply to all emission regulations.

No Diesel Particulate Filter (DPF) and fully extended SCR cleaning interval means maximum uptime and minimum maintenance cost.

Doosan implements the regulations and emissions standards to protect the environment for the future of the earth.

## What is the EEA?

The European Environment Agency (EEA) is the department of the European Union that is responsible for writing and enforcing regulations based on laws to protect human health and the environment.

Directive 1999/94/EC requires the reduction of emissions, especially Particulate Matter (PM) and Nitrogen Oxides (NO<sub>x</sub>), in non-road diesel engine vehicles.

The different stages of the directive are based on engine power and are designed to phase in the new levels of requirements. The American counterpart of EEA is the Environment Protection Agency (EPA), responsible for Tier IV emission requirements.

## Diesel Off-Highway Emissions Evolution

EU Stage IV come in to effect from 2015 for over engines over 56 kW. For the implementation of regulations, PM and NO<sub>x</sub> should be reduced by 90% compared to EU Stage IIIB.

## Doosan's green technology to meet Euro Stage IIIB/IV emissions regulations

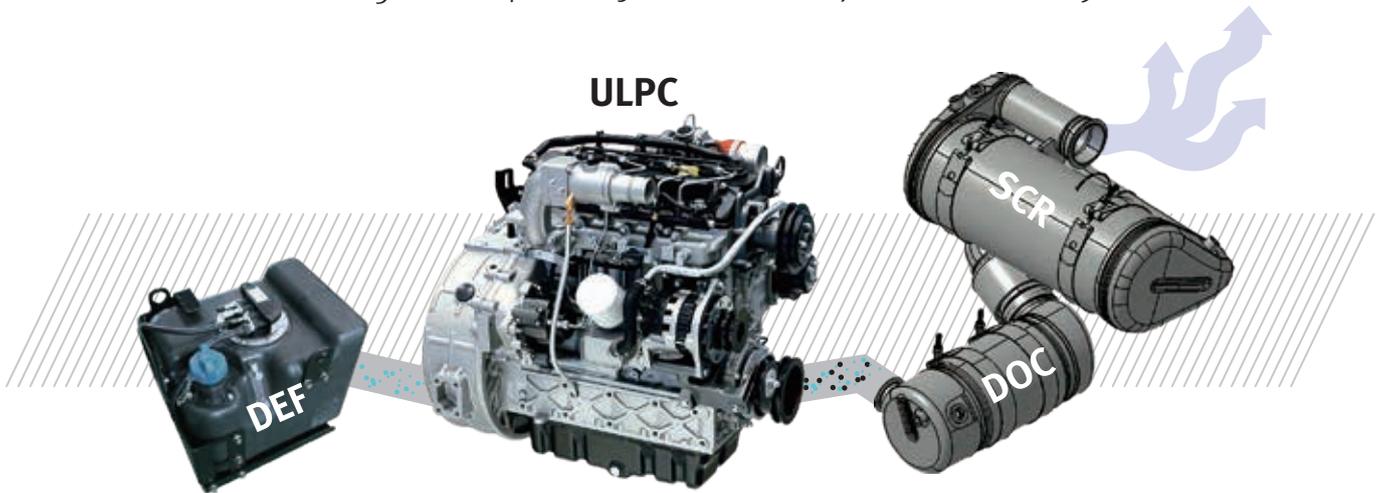
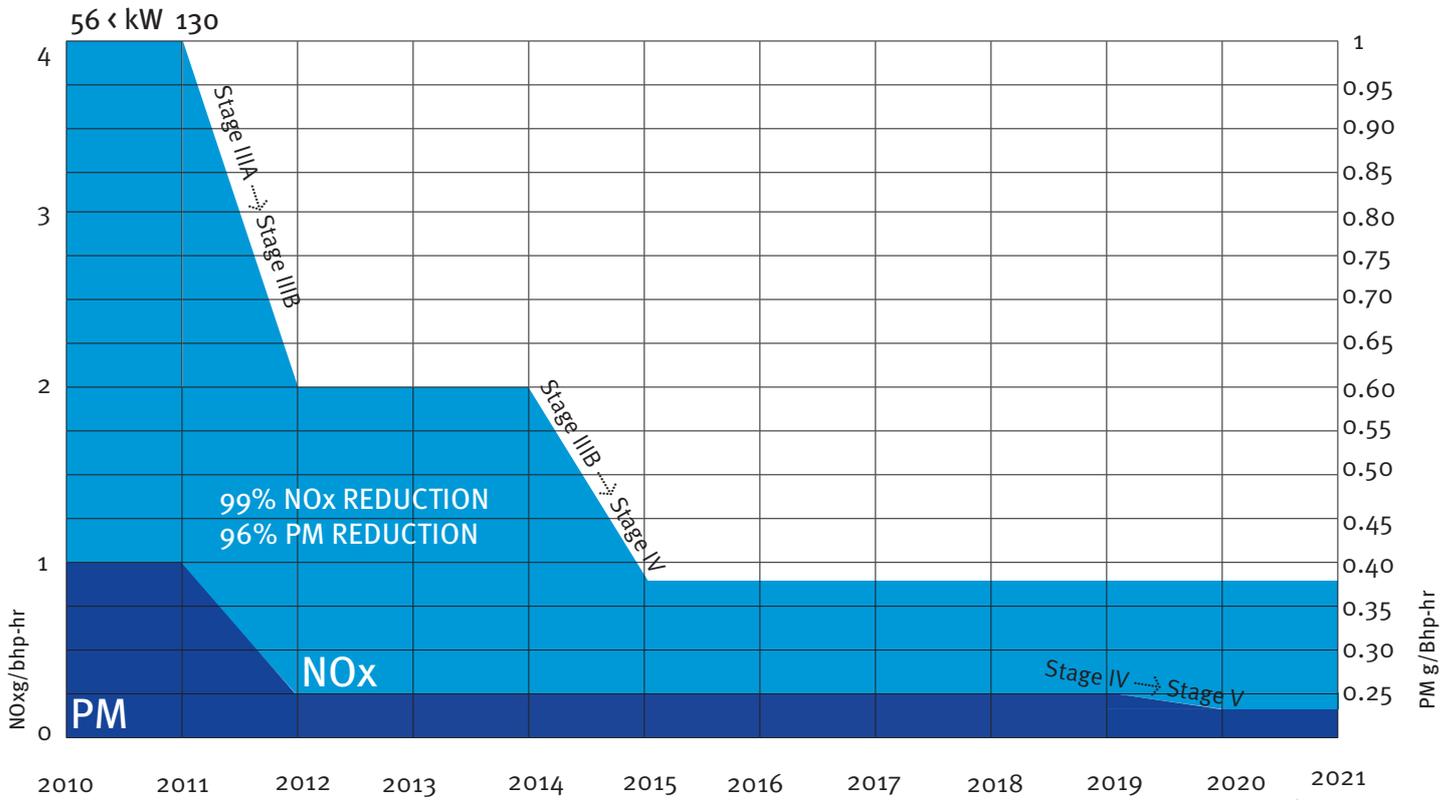
- Exhaust Gas Recirculation (EGR)
- Diesel Oxidation Catalyst (DOC):  
Oxidizing HC, CO, SOF and Converting NO into NO<sub>2</sub>
- Selective Catalytic Reduction (SCR) (only Stage IV):  
Reducing Nox
- Diesel Exhaust Fluid (DEF) (only Stage IV):  
Helps reducing Ammonia



## 7-Series Forklifts

### 6 to 9 ton Series

- PM Effects**
- adverse health effects in the form of respiratory issues.
  - reduced visibility/smog in urban areas
- NOx Effects**
- Forms acid rain
  - Contributes to Global Warming
  - Hampers the growth of plants
  - Produces ground-level smog



# Doosan Zeus Cabin, Great Comfort and Productivity

Doosan guarantees the best quality for the cabins and its components. The Zeus Cabin not only provides great comfort to the operator, but also higher productivity with ergonomically design features.



Tilting Cabin

## Ergonomic Design

- All switches are positioned for optimal operator's convenience.
- Extremely comfortable suspension seat.
- Ergonomic parking lever position at the left side of seat.

## Spacious Leg Room and Operator Comfort

- The neat and wide-open floorboard provides the operator with plenty of leg space to make the entry and exit a breeze.
- Low noise level and low vibration level.
- Telescopic Steering Column: infinitely adjustable to a wide range of positions to suit operators of all sizes.

## Wide Visibility

- Centered seat for better visibility.
- Wide visibility without distortion.



## 7-Series Forklifts

6 to 9 ton Series



Non-Tilting Cabin



Tilting Cabin

### 5" Full Color LCD Display

- DEF warning, DEF level gauge, SCR cleaning request, SCR cleaning inhibit, Engine RPM and the engine check lamp keep the operator aware of the machine's operating and maintenance conditions.



### Convenience Package

- Deck mounted control valve levers simplify the hydraulic operation. The convenience tray keeps paperwork and supplies organized and handy.

### Other Features

- Heater
- Air Conditioner
- Panoramic Mirror
- MP3 Player
- Front & Rear View Camera
- Defroster Fan
- Rear Grab Bar with Horn
- Siren & Microphone
- Air Compressor

# Proven Quality, Service and A Reliable Partner.

You will receive the best after-sales service from your authorized local or national factory-trained dealer, backed by Doosan's own customer service center.

Doosan provides a 100% parts inventory to insure any downtime is minimized.

When you own a Doosan forklift, our high quality, responsive customer support team comes with it.

The Doosan network starts with your local dealer and ends with a national team of highly qualified and experienced personnel standing ready to support all your material handling needs.



# Standard features and Option Availability

Safety	Standard	Option
Direction Lever Function	⊙	
Mast Lowering Interlock	⊙	
Operation Sensing System	⊙	
ELR Type Orange Seat Belt	⊙	
Autoshift Controller	⊙ (3-speed)	⊙ (2-speed)
Combination Lamps (LED)		⊙
Weight Scale		⊙
Anti-Surging		⊙
Panoramic Rear View Mirror		⊙
Rear View Camera		⊙
Strobe Light (Amber / Red)		⊙
Back-up Alarm		⊙
Ground Speed Control		⊙
Productivity	Standard	Option
Electronic Controlled TCI (Turbo Charged Intercooler) Doosan Engines	⊙	
Pedal Location (Accelerator, Brake and Inching)	⊙	
Inching Pedal	⊙	
Heavy Duty Cooling (Hydraulic/Driveaxle/Transmission)		⊙
Comfort	Standard	Option
Additional Thermostat for Transmission Oil	⊙	
Integrated Instrument Panel	⊙	
5" Color LCD Display (80.9 kW only)	⊙	
Easy to Service	⊙	
- Integrated Electric Components (Relays and Fuses)		
- Wide Hood Open Range		
Full Cabin with Heater or Airconditioner and Sound Suppression		⊙
Suspension		⊙
Steering Wheel Knob		⊙
Durability	Standard	Option
Engine Control Unit (ECU) Cover	⊙	
Use waterproof connectors	⊙	
Dual Element Air Cleaner	⊙	
Rigid Driveaxle (with ODB)	⊙	
Pre-Cleaner		⊙
Environment	Standard	Option
Emission Regulation (Euro Stage IIIB and Euro Stage IV)	⊙	
Ultra Low PM Combustion (ULPC) System (with DOC)	⊙	
ISO 9001 / ISO 14001	⊙	
2 Operation Modes (STD / ECO Mode)	⊙	
Homologation	Standard	Option
CE	⊙	

\* Other options are also available. Please ask your local Doosan representative for more details.  
 Remark: This list is based on factory data. Standard or optional options can vary for specific countries.



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AUTHORIZED DEALER