



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

## 7 Series Forklifts

### Pneumatic Diesel 10 to 16 ton Series

EPA Tier IV / 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 Vehicles 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..

- Meets and exceeds all EPA Tier IV and Euro Stage IV emission regulations by Diesel Oxidation Catalyst(DOC) and SCR(Selective Catalytic Reduction).
- Superb Performance and high power, output thanks to the new generation of Doosan's own 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.
- A strong and rigid chassis frame along with more metal than plastic design ensures that Doosan is the best choice for all applications.
- New Zeus Cabin provides wide front view and excellent comfort to operator.
- Reduced maintenance - extended SCR cleaning intervals means increased uptime and Reduced servicing costs.



### Well proven and reliable Doosan DL06P engines and components

The powerful Doosan engine and components provides high-end torque at low engine rpm, reduced fuel consumption and meets all EPA Tier IV / Euro Stage IV regulations without the need for a Diesel Particulate Filter(DPF).

### Provide Great Productivity

Thanks to the use of a new generation Doosan engine and the excellent synchronisation of the drive train with the hydraulics system, drawbar pull and gradeability is much higher than our previous model.

### Well-tested load-sensing hydraulic system

All Doosan models 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, clear dashboard and high quality interior, along with excellent heating and air conditioning.

### Safety

OSS (Operator Sensing System)

- Truck will not move without an operator in the seat.
- Lift and Lower function disabled if the operator is not in the seat.
- Tilt function will be locked if no operator is in the seat.
- Alarm will sound if operator leaves the seat without applying parking brake.
- Seat belt warning light on dashboard to remind operator to fasten seat belt.

### Meet Emission Regulation (Tier IV & Stage IV) with SCR + DOC System

Extended SCR cleaning interval means increased uptime and reduced servicing cost. No Ash Cleaning or any changing needed.



# Greater durability and easier maintenance.

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

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

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



**New Air Cleaner**

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



**Anti Slip Step Plate**

Increase safety when operator enters the forklift, especially in the snowy weather.



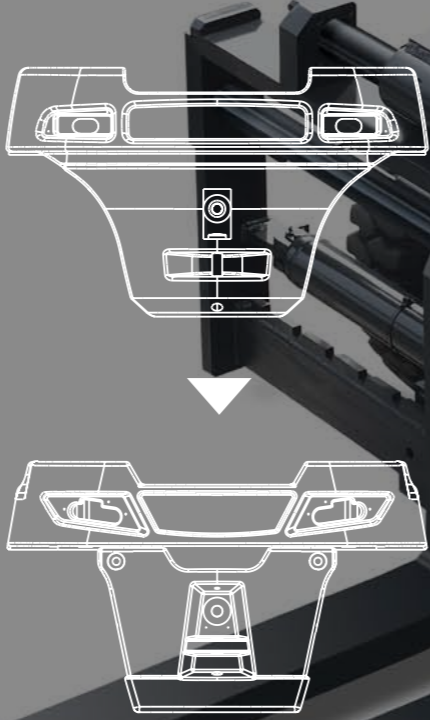
**Easy to access**

Wide hood opening range and automatic tiltable operator cell for the best accessibility.



**Counterweight**

Increase radiator capacity by improving inside air flow. It shows the identity of Doosan 7 Series IC truck by dynamic concept design.



**Oil- Cooled Disc Brakes (ODB)**

Oil cooled disc brakes are available as a standard on all D160S-7 Series. This enclosed Brake system eliminates outside contamination, significantly extending brake life and decreasing maintenance cost. Oil cooled disc brakes have service interval 5 times longer than conventional shoe brakes, and are virtually maintenance free.



**Hydraulic Motor Driven Remote type Cooling Fan**

A large capacity cooling fan driven by a remote hydraulic motor effectively manages operating temperatures, to minimize engine wear and maximal engine efficiency. Fan speed changes according to acceleration, for maximum cooling capacity and minimum energy loss.



**Instrument Panel**

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

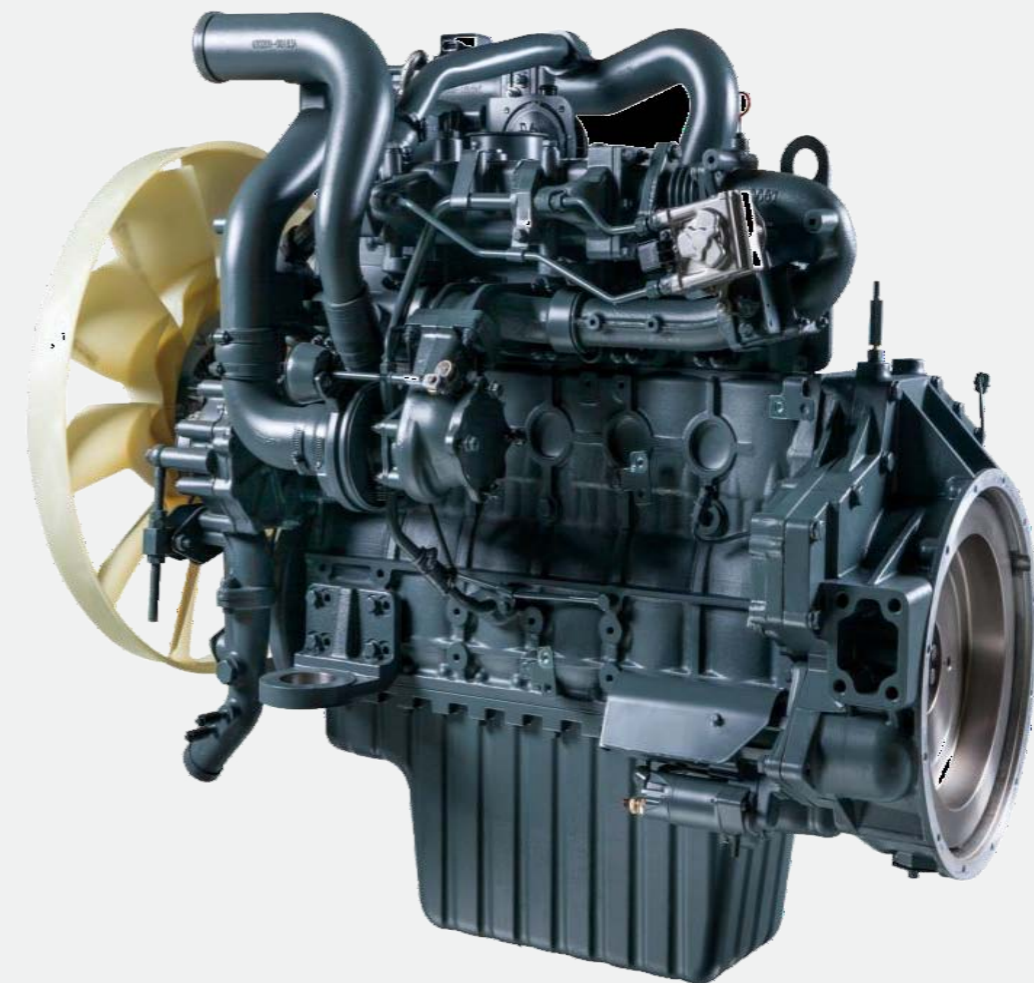


**Rugged Front End Design**

Rugged Front End design and heavy duty build quality ensure D160S-7 is tough enough for any application.  
- J-Hook mounting : Stronger, easier to remove mast for service.  
- Six Roller Carriage : Superior strength and durability for wider and longer loads.  
- Nested Rails : Reduced width providing better visibility, silent staging, and added strength.

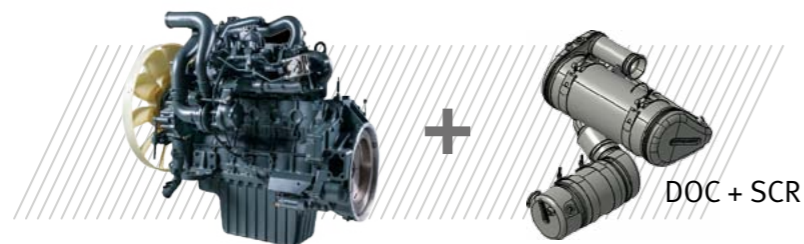
## High Powered, Fuel efficient performance.

Powerful and delivering excellent fuel efficiency, Doosan's DL06P electronic controlled engine, combined with already proven transmission and oil-cooled disc brakes(ODB) provide excellent levels of productivity, durability and value for money.



### After Treatment System

- Thanks to low fuel consumption and an excellent after treatment system, the engine complies Euro Stage IV and Tier IV emission regulation, whilst offering high performance.
  - ›Through the combination of a highly efficient Exhaust Gas Reduction(EGR) system, Diesel Oxydation Catalyst(DOC) and Selective Catalyst Reduction(SCR), we are able to reduce exhaust emissions to their lowest levels ever.
  - SCR System : Technology that uses a Diesel Exhaust Fluid(DEF) and a catalytic converter to significantly reduce NOx emissions.
- \* Need SCR cleaning Process every 150hrs / SCR cleaning is available anytime with the push of a button.



### ENGINE PERFORMANCE

The new Doosan DL06P 5.9 Litre diesel engine provides excellent performance.

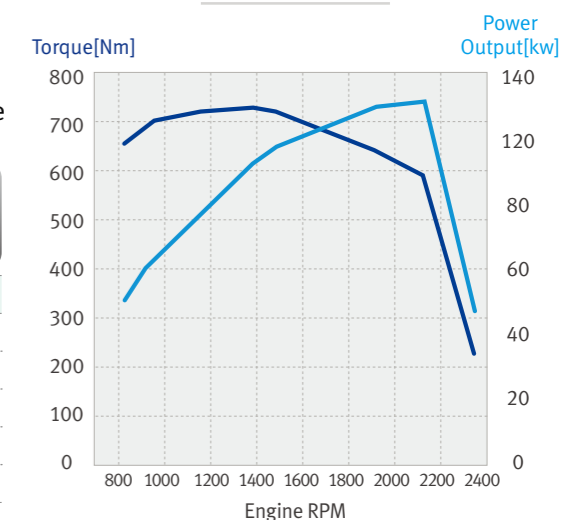
The powerful Doosan engine provides high torque at low rpm or at low engine speed, reduces fuel consumption, and meets Tier IV / Stage IV Regulation

- D34 Tier IV/Stage IV Electronic Controlled ENGINE
- 6 cylinders, 4 cycles, 5,890 cc
- High torque at low rpm. : 725.7 Nm @1,400 rpm



Category	Unit	Doosan
Model	-	D160S-7
Engine	-	DL06P
Rated output	ps(kw) / rpm	175(128.7) / 2,100
Max. torque	N.m / rpm	725.7 / 1,400
Displacement	cc	5,890

### PERFORMANCES



## 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 up-time and minimum maintenance cost.

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

### What is the EPA?

The Environment Protection Agency 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(NOx), 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.

### What is the EEA?

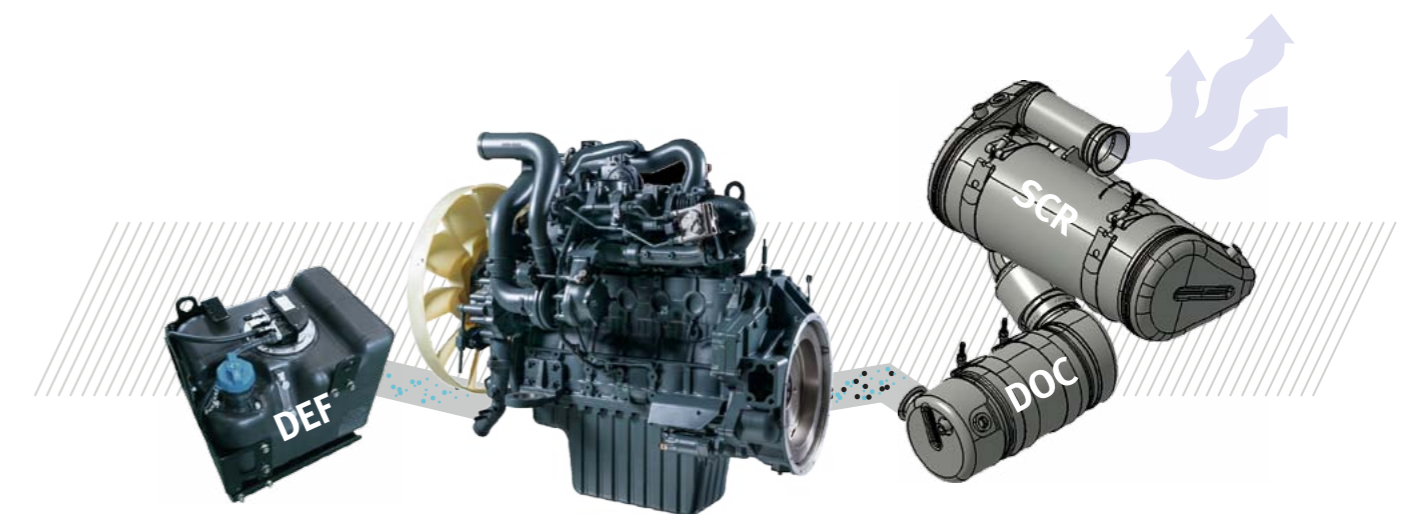
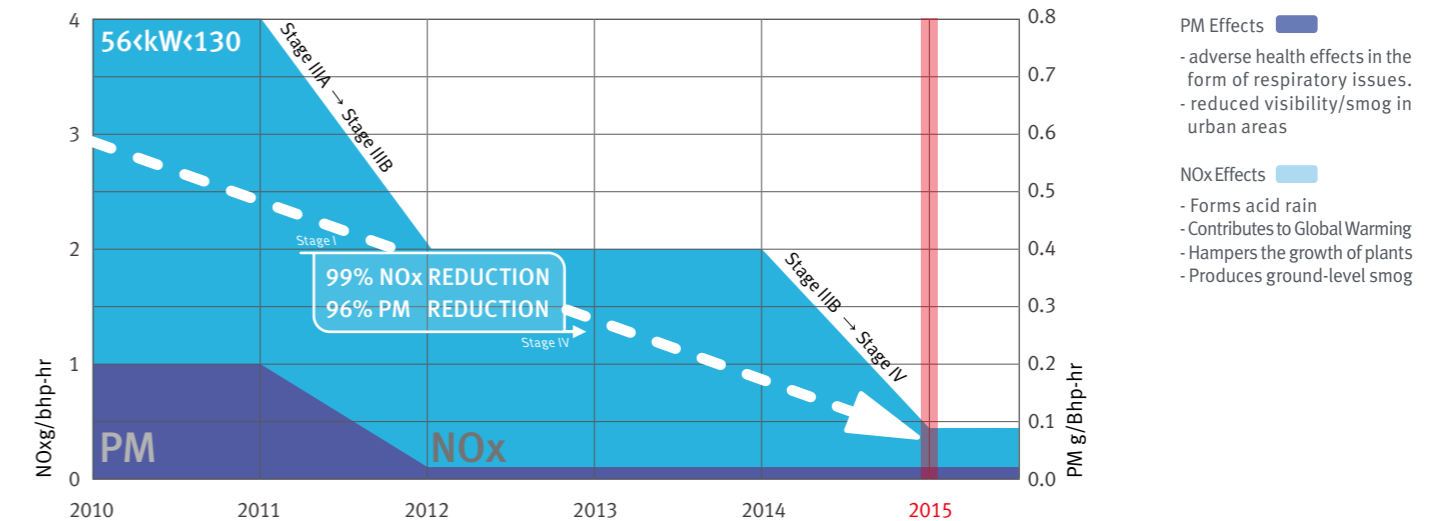
The European Environment Agency (EEA) is the department of the European Union that is responsible for writing and enforcing regulations based on laws to protect human health and the environment. Directive 1999/94/EC requires the reduction of emissions, especially Particulate Matter(PM) and Nitrogen Oxides(NOx), 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: Euro Stage IV. The American counterpart of EEA is the Environment Protection Agency (EPA), responsible for Tier IV emission requirements.

### Diesel Off-Highway Emissions Evolution

EPA Tier IV & EU Stage IV come in to effect from 2015 for over 56kW engine. For the implementation of regulations PM and NOx should be reduced by 90% compare to EPA Tier III / EU Stage IIIA.

### Doosan's green technology to meet Tier IV(Stage IV) emissions regulations

- Exhaust Gas Reduction (EGR)
- Diesel Oxidation Catalysts (DOC) : Oxidizing HC, CO, SOF and Converting NO into NO2
- Selective Catalyst Reduction (SCR) : Reducing Nox
- Diesel Exhaust Fluid(DEF) : Helping reduce Ammonia



## New Zeus Cabin, Great Comfort and Productivity

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



### 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. (Left side of seat)

### Spacious Leg Room and Operator Comfort

- The neat and wide-open floorboard provides operator with plenty of leg space to make entry and exit a breeze.
- Low Noise Level and Low Vibration Level.
- Telescopic Steering Column : Infinitely adjusts to a wide range for operators of all sizes.

### Wide Visibility

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



### 5" Full Color LCD Display

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



### Convenience Package

- Deck mounted control valve levers simplify hydraulic actuation. Convenience tray keeps paperwork and supplies organized and handy.



### Other Features

- Heater
- Air Conditioner
- Panoramic Mirror
- CD or MP3 Player
- Rear View Camera
- Defrost 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.

And Doosan provides 100% parts inventory, to insure downtime is kept to a strict minimum.

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

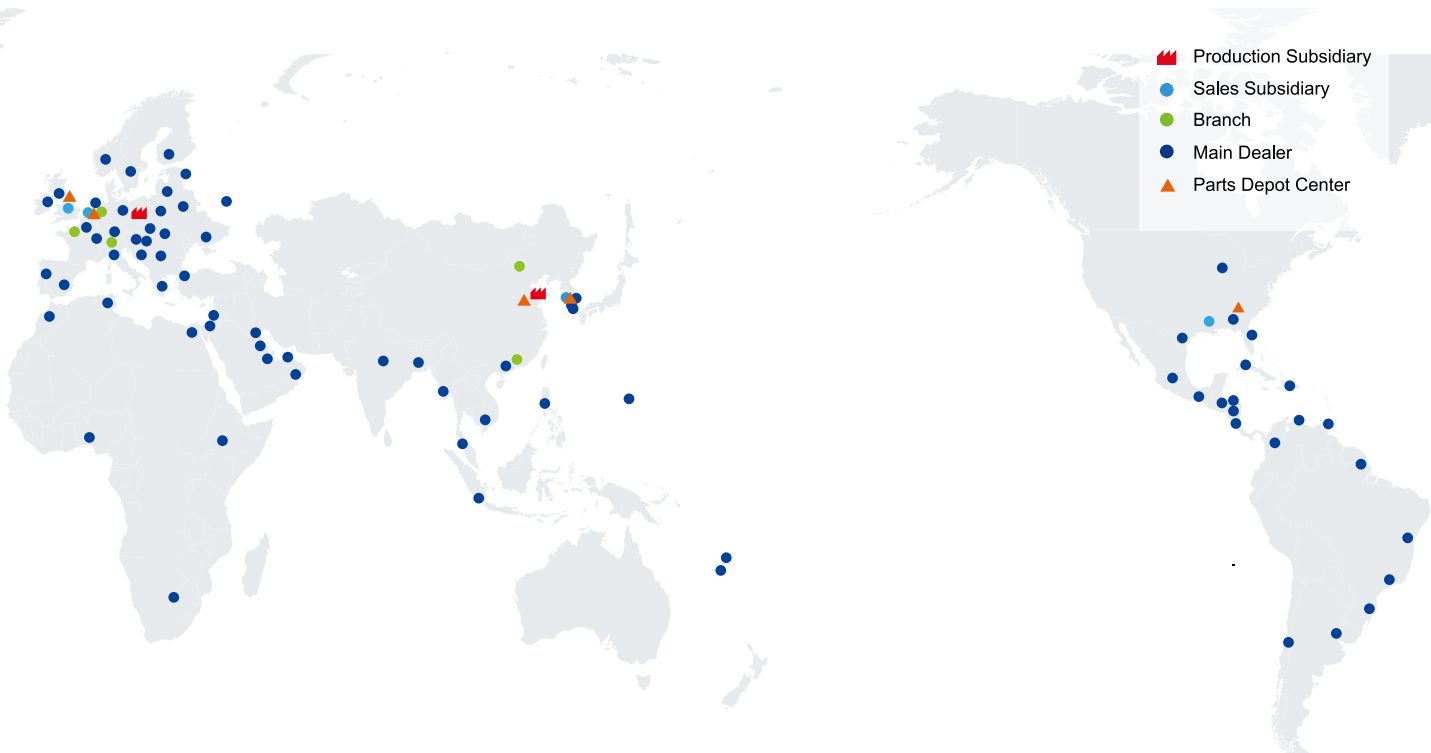
The Doosan network starts with your local dealer and ends with a national team of highly qualified and experienced personnel standing ready to support all your material handling needs.

## Standard features and Option Availability

Safety	Standard	Option
Direction Lever Function	<input checked="" type="radio"/>	
Operation Sensing System	<input checked="" type="radio"/>	
Anti Cinching Type Orange Seat Belt	<input checked="" type="radio"/>	
Autoshift Controller	<input checked="" type="radio"/>	
Emergency Switch	<input checked="" type="radio"/>	
Panoramic Rear View Mirror	<input checked="" type="radio"/>	
Combination Lamps	<input checked="" type="radio"/>	
Back-up buzzer	<input checked="" type="radio"/>	
Weight Scale	<input checked="" type="radio"/>	
Siren and Microphone		<input type="radio"/>
Rear View Camera		<input type="radio"/>
Rear View Camera(w/ Steer tire anle)		<input type="radio"/>
Strobe Light(Amber / Red)		<input type="radio"/>
Ground Speed Control		<input type="radio"/>
Productivity	Standard	Option
Electric Controlled TCI(Turbo Charged Intercooler) Doosan Engines	<input checked="" type="radio"/>	
Pedal Location(Accelerator, Brake and Inching)	<input checked="" type="radio"/>	
All in one electronic Brake and Inching Pedal	<input checked="" type="radio"/>	
Rear Grab Bar(w/ Horn)	<input checked="" type="radio"/>	
Additional 2 Front Lights on Mast		<input type="radio"/>
Additional 1 Rear Lights on Counterweight		<input type="radio"/>
Engine Block Heater		<input type="radio"/>
Comfort	Standard	Option
Telescopic Steering column	<input checked="" type="radio"/>	
Integrated Instrument Panel	<input checked="" type="radio"/>	
Seat - Suspension w/ Heat Rays	<input checked="" type="radio"/>	
Steering Knob	<input checked="" type="radio"/>	
Overhead Guard	<input checked="" type="radio"/>	
Easy to Service	<input checked="" type="radio"/>	
- Integrated Electric Components(Relays and Fuses)		
- Automatic Tilttable OPC		
- Wide Hood Open Range		
Full Cabin(ZEUS)		<input type="radio"/>
- Wide Front and Rear View		
- Low noise & Low Vibration Level		
- Automatic Tilttable		
- Front, Rear & Top Wiper		
- CD & MP3 Player		
- Sun Visor		
Heater or Air Conditioner		<input type="radio"/>
Air Compressor		<input type="radio"/>
Durability	Standard	Option
Use waterproof connectors	<input checked="" type="radio"/>	
Dual Element Air Cleaner	<input checked="" type="radio"/>	
Pre-Cleaner	<input checked="" type="radio"/>	
Rigid Driveaxle(w/ ODB)	<input checked="" type="radio"/>	
Full Autoshift Transmission	<input checked="" type="radio"/>	
Environment	Standard	Option
Emission Regulation(Tier IV and Stage IV)	<input checked="" type="radio"/>	
ISO 9001 / ISO 14001	<input checked="" type="radio"/>	
Homologation	Standard	Option
UL		<input type="radio"/>
CE		<input type="radio"/>

\* Other options are also available. Please ask your local Doosan representative for more details.





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AUTHORIZED DEALER