



www.doosan-iv.com

7 Series Forklifts

Pneumatic Diesel 6 to 9 ton Series

EPA Tier IV / 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 reorganisation 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

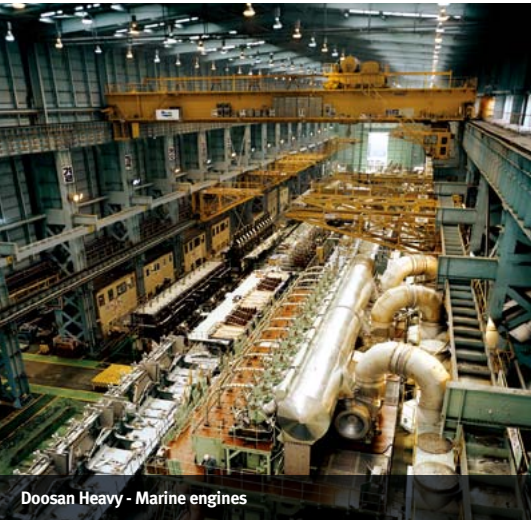
Doosan has become the global ISB leader based on its world class products and services. In addition, as a true global company, Doosan’s overseas employees encompass 50% of its human resources, and overseas sales take more than over 60% of the total sales.



Doosan Infracore - Construction equipment

Committed To Our Customers

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



Doosan Heavy - Marine engines

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.



Doosan Bobcat - Skid loader (with Doosan engine)



Doosan Way

The Doosan Way is our unique way of doing business; the philosophy and culture that will guide us to become the “Proud Global Doosan.”



Our Promise

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

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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.
- 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 service interval means increased uptime and Reduced servicing cost.
- For 55kW Engine installed models (D60/70S-7)
 - Meets and exceeds all EPA Tier IV and Euro Stage IIIB emission regulations without a Diesel Particulate Filter(DPF).
 - Any additional maintenance such as Regeneration or Ash cleaning does not required.
- For 80.4kW Engine installed models (D60/70/80/90S-7)
 - Meets and exceeds all EPA Tier IV and Euro Stage IV emission regulations by Diesel Oxidation Catalyst(DOC) and Selective Catalytic Reduction(SCR).
 - Only SCR Cleaning is required.(No regeneration and ash cleaning are required.)



Well proven and reliable Doosan G2 engines and components

The powerful Doosan engine and components provides high-end torque at low engine rpm, reduced fuel consumption. Doosan turbo charged engine delivers great performance and reliability.

Doosan multi-engine performance mapping system

Doosan offers 3 performance engine maps, which gives you Doosan offers 3 performance Eco mode and Drive mode. Eco mode limits engine performance but can reduce the fuel consumption by approximately 5%. Drive mode increases the Maximum travel speed so that the truck will provide higher productivity.

Well-tested load-sensing hydraulic system

All Doosan G2 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 ability.

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 the Latest Emission Regulation

Doosan 3.4L diesel engine(D34) meets the latest emission regulations by using lots of technologies, including cooled exhaust gas recirculation, chaged air cooling, diesel oxydation catalyst and selective catalystic reduction.



Greater durability and easier maintenance.

Powerful Doosan's D34 electronic controlled engine which delivers excellent fuel efficiency is combined with proven transmission and driveaxle.

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

Doosan's unique and innovative Ultra-low Particulate Matter Combustion system using Diesel Oxydation Catalyst and Selective Catalytic Reduction(80.4kW Only) ensures the most modern and reliable system is fitted to meet all the latest emission regulation.

Doosan can guarantee 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.

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.

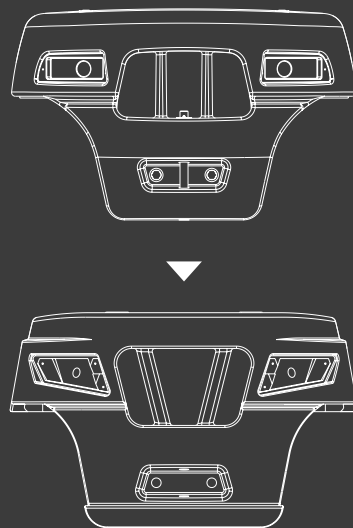
Tiltable Operator Cab

Tiltable operator cabin makes servicing of all powertrain components quick and easy. An electrically assisted hydraulic actuated cylinder tilts operator compartment to left side for easy access to inside truck components.



Counterweight

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



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

We provide three engine settings - STD mode, ECO mode and Drive mode. Each customer can choose their own setting to suit their different applications. In the drive mode, Maximum travel speed increases by 1km/h.



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.



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.



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 are available as a standard on all D70S-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.



LED lights(Optional)

LED lights give greater visibility in darker conditions and last much longer than conventional light bulbs.



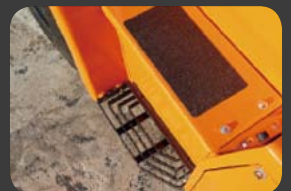
Premium Seats (Optional)

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



Anti Slip Step Plate

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



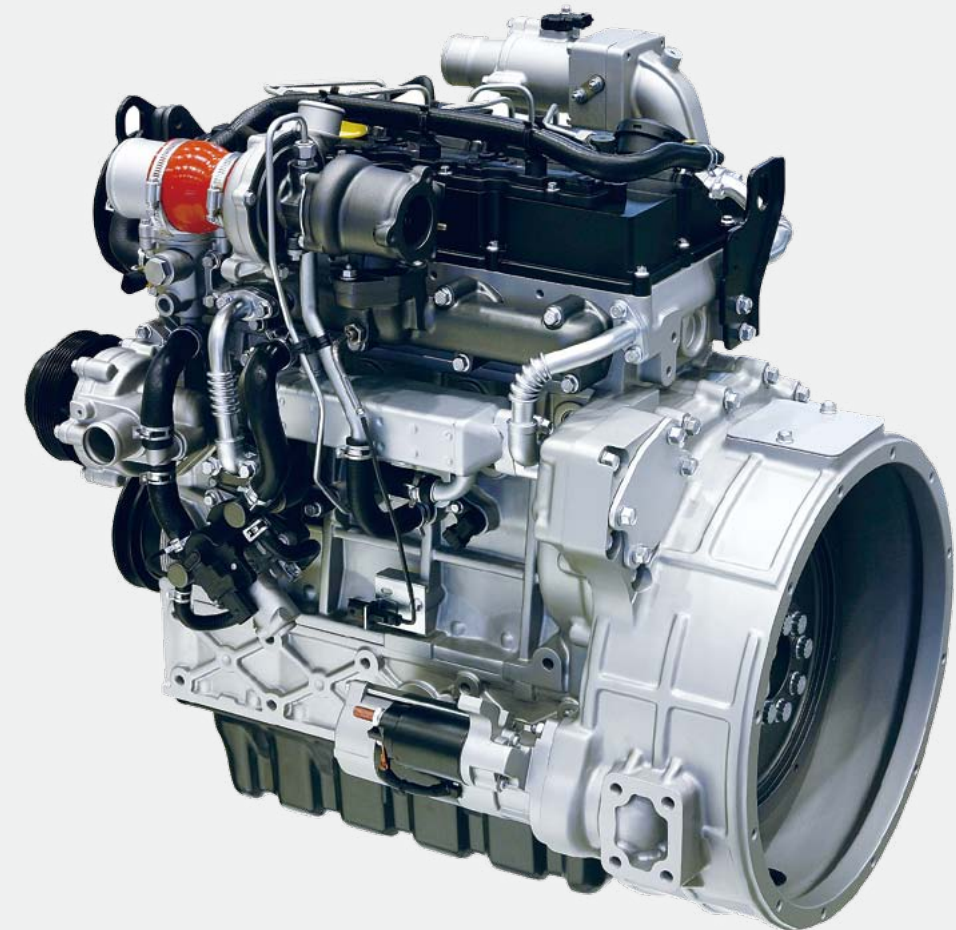
Locking type gas spring for Hood

Improve 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 Compact Diesel Engine offers high power output and Max. torque, moreover 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.

This 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 realize the best level performance.

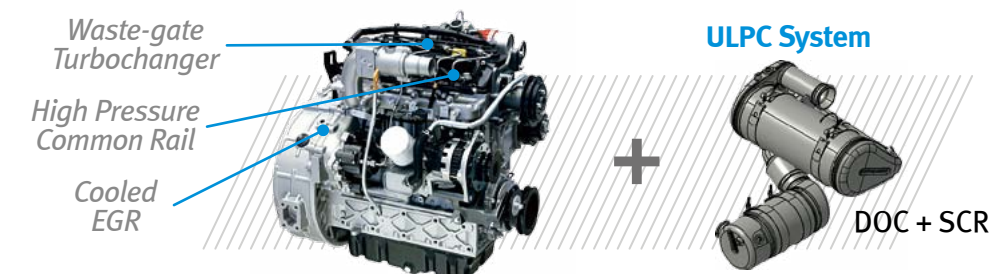
- Specification

| Category | Unit | Doosan | |
|------------------|--------|---------------|-----------------|
| Model | - | D60/70S-7 | D60/70/80/90S-7 |
| Engine | - | Doosan D34NAP | Doosan D34P |
| Rated Output | kW/rpm | 55 / 2,300 | 80.4 / 2,400 |
| Max. Torque | Nm/rpm | 330 / 1,400 | 375 / 1,600 |
| No. of Cylinders | - | 4 | |
| No. of Cycle | - | 4 | |
| Displacement | cc | 3,409 | |

Aftertreatment System

- ULPC(Ultra Low Particulate Matter Combustion) : Doosan's own system which optimizes combustion characteristics.
 - › Optimizing piston bowl, injector and cylinder head swirl to use air as much as possible for reducing Particulate Matter.
- Diesel Oxidation Catalyst(DOC) : The primary functions are oxidation of CO, unburned hydrocarbons, and NO, while active hydrocarbon oxidation can also be used to generate exotherms required for downstream components.
- SCR System : Technology that uses a Diesel Exhaust Fluid(DEF) and a catalytic converter to significantly reduce NOx emissions.

* Need SCR cleaning process every 200 hrs / SCR Cleaning is available anytime with its switch operation.



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) ensures the mostmodern and reliable system is fitted to ensure all emission regulations are met.

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

Doosan is responsible for the implementation of regulations and emissions standards to protect the environment for the future of the earth.

What is the EEA & EPA?

- EEA : European Environment Agency
- EPA : Environment Protection Agency

The EEA and EPA are the department of the European Union and the United States 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

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

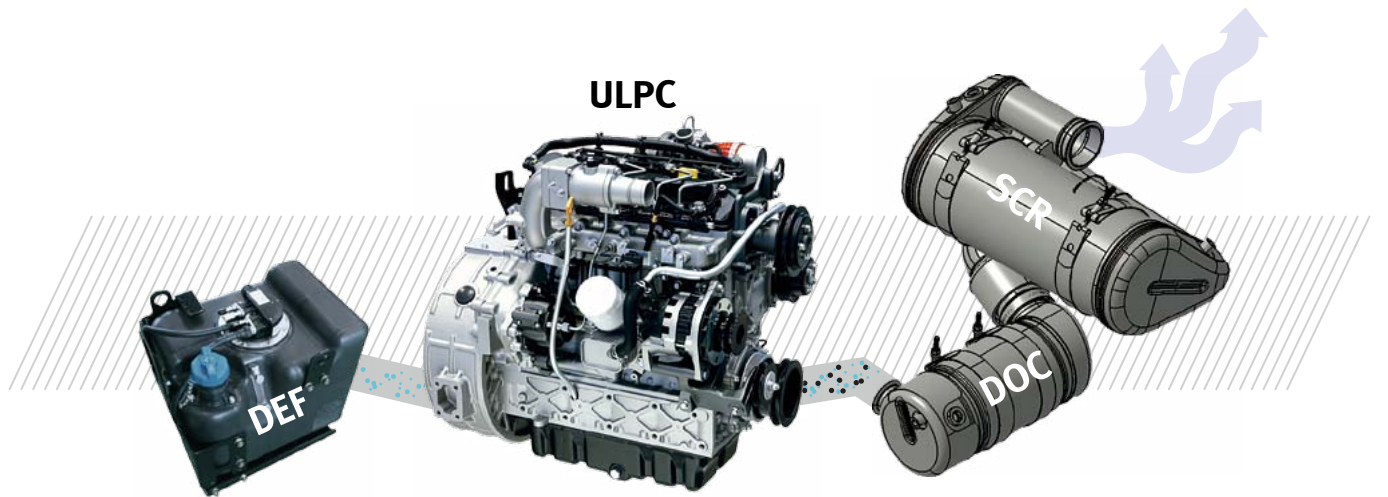
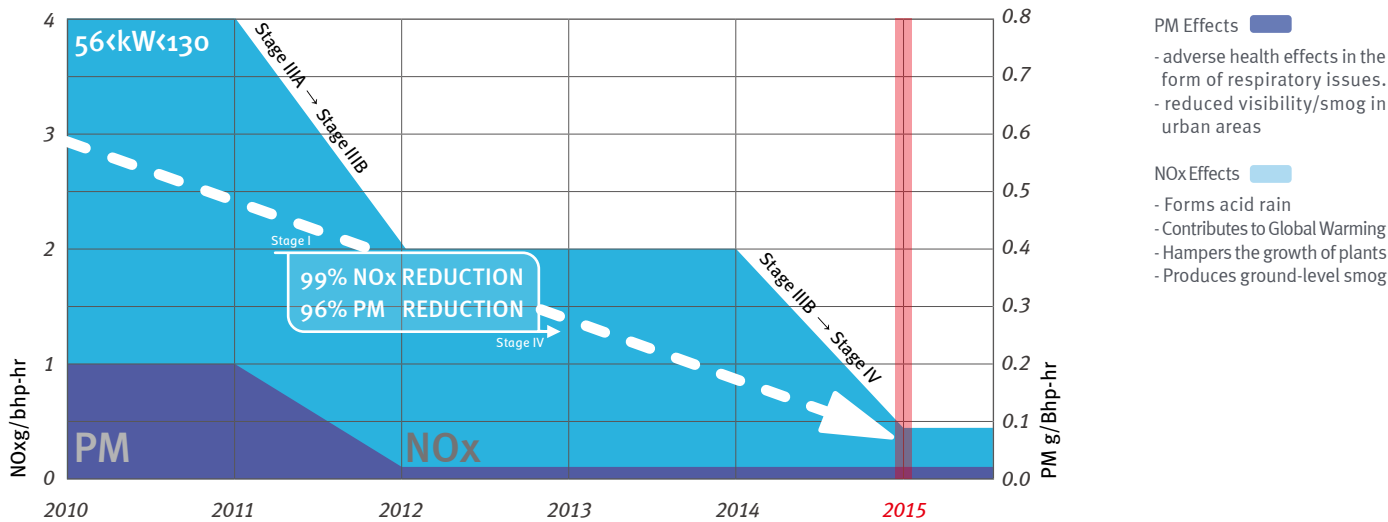
- Ultra Low PM Combustion(ULPC) : Reducing Particulate Matter(PM)
- Diesel Oxidation Catalysts (DOC) : Oxidizing HC, CO, SOF and Converting NO into NO2
- Selective Catalyst Reduction (SCR) : Reducing Nox
- Diesel Exhaust Fluid(DEF) : Reducing Ammonia

Below 56kW : Combination of ULPC and DOC
Above 56kW : Combination of ULPC, DOC, DEF and SCR



7 SERIES FORKLIFTS

6 to 9 Ton Series



Doosan Zeus Cabin, Great Comfort and Productivity

The 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.



Tilting Cabin



Non-Tilting Cabin



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. (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
- MP3 Player
- Front & 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 any downtime is minimized.

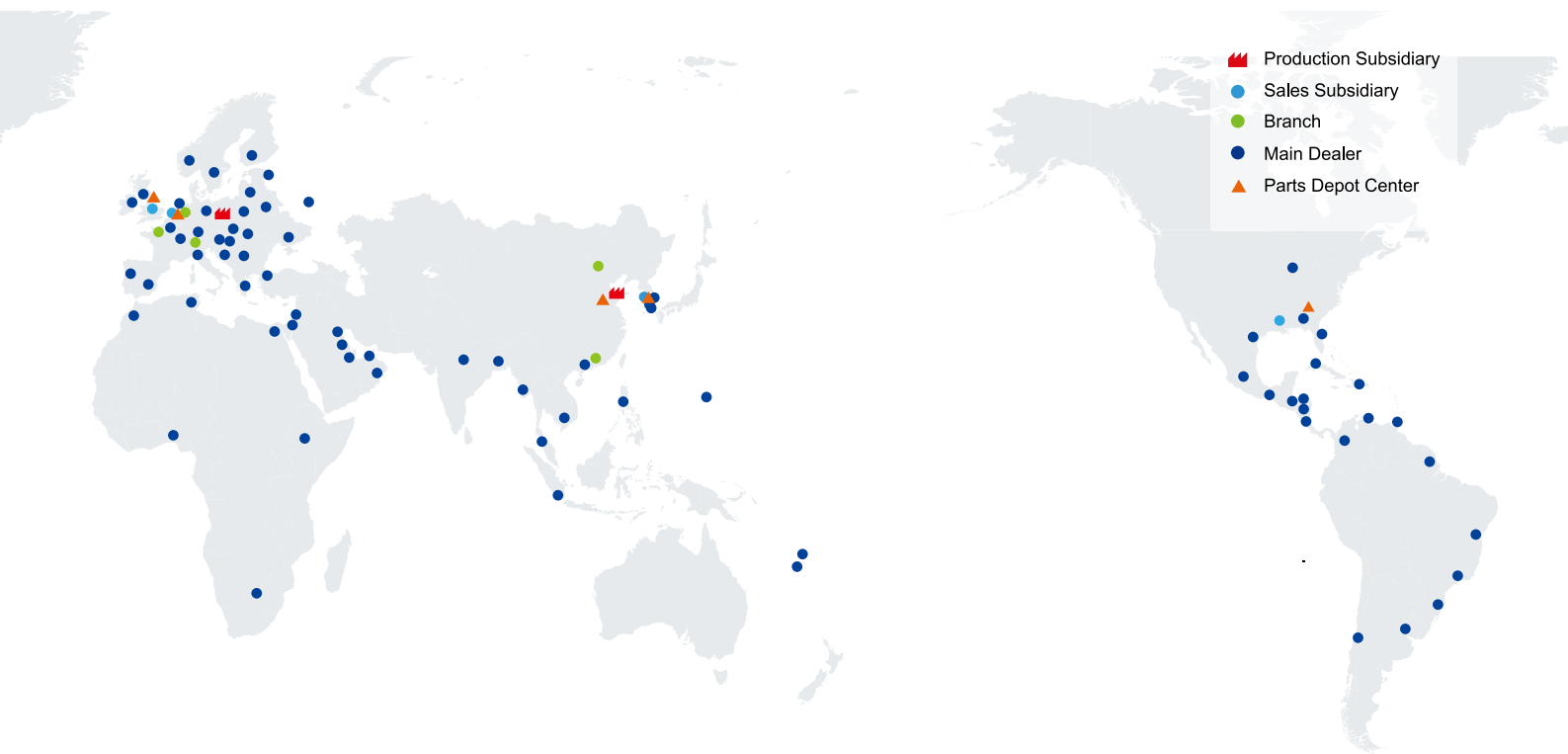
When you own a Doosan forklift, our high quality, responsive customer support team comes with it.

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 | ⦿(3speed) | ⦿(2speed) |
| Combination Lamps(LED) | | ⦿ |
| Weight Scale | | ⦿ |
| Tilt Anti-Surging | | ⦿ |
| Panoramic Rear View Mirror | | ⦿ |
| Rear View Camera | | ⦿ |
| Strobe Light(Amber / Red) | | ⦿ |
| Back-up buzzer | | ⦿ |
| Ground Speed Control | | ⦿ |
| Productivity | Standard | Option |
| Electric 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 | ⦿ | |
| 3.5" Black and white LCD display (55kW) | ⦿ | |
| 5" Color LCD Display (80.4 kW only) | ⦿ | |
| Easy to Service | ⦿ | |
| - Integrated Electric Components(Relays and Fuses) | | |
| - Wide Hood Open Range | | |
| Full Cabin(ZEUS) w/ Heater or Airconditioner | | ⦿ |
| Seat - Suspension | | ⦿ |
| Steering Knob | | ⦿ |
| Durability | Standard | Option |
| Electronic Control Units(ECU) Cover | ⦿ | |
| Use waterproof connectors | ⦿ | |
| Dual Element Air Cleaner | ⦿ | |
| Rigid Driveaxle(w/ ODB) | ⦿ | |
| Pre-Cleaner | | ⦿ |
| Environment | Standard | Option |
| Emission Regulation(EPA Tier IV and Euro Stage IV) | ⦿ | |
| Ultra Low PM Combustion(ULPC) System | ⦿ | |
| ISO 9001 / ISO 14001 | ⦿ | |
| 2 Operation Mode(STD / ECO Mode) | ⦿ | |
| Homologation | Standard | Option |
| UL | | ⦿ |
| CE | | ⦿ |

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



Doosan Corporation Industrial Vehicle
Web site : www.doosan-iv.com

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