www.doosanlift.com



# **7 Series Forklifts**

# Pneumatic Diesel 22,000lb to 36,000lb Series

Tier-4 Final



# **Lifting Your Dreams**

# Doosan

### A name to be proud of

## The foundation on which Doosan has built its century of success is the trust in its people.

Doosan's management philosophy has always been "people first".

"Business is not meant to make profits, but to help people grow."

-Too Pyung Park, First Chairman

We believe this value drives our future growth and it continues to spur corporate development with global competitiveness.

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

Doosan holds the record for having the longest business history in Korea since its inauguration in 1896. We are also the fastest growing company, with steady growth rates over the years and reaching our fastest pace in the past 10 years.

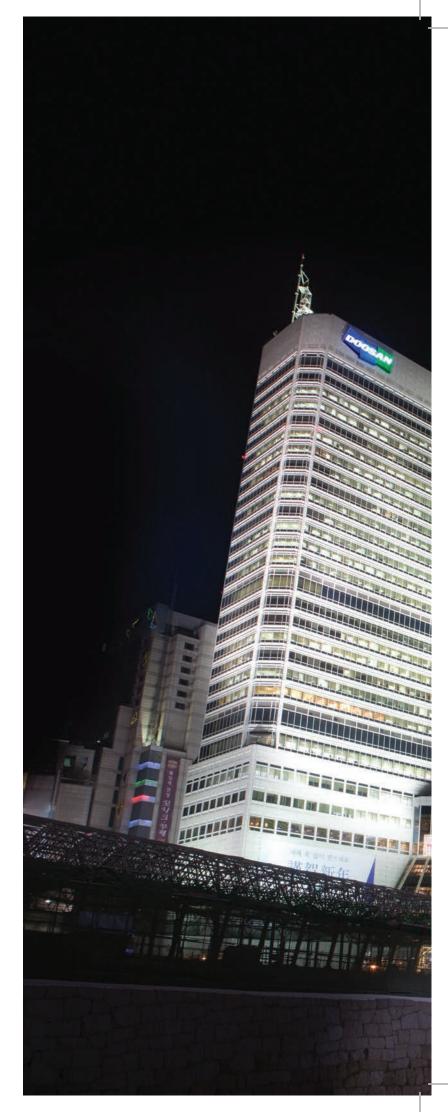
### Doosan - the global Infrastructure Support Business (ISB)

Doosan has achieved an excess of 90% of its sales within the ISB sector through vigorous reorganization of its business portfolio since 1998. Prior to the transformation in the late 90s, 70% of our business was concentrated on consumer goods, but we have successfully transformed our business DNA into an ISB, that constructs and reinforces social infrastructure.

### Doosan - surging as a global company

Doosan has become a global leader in the ISB by providing communities across five continents with the fundamental solutions, tools and structures they need to advance their societies.

With over 43,000 employees in 38 different countries, and 50% of its human resources being locally employed, Doosan is truly a global company.



# **Doosan Industrial Vehicle**

### Lifting Your Dreams

Since we first started out as Chosun Machinery in 1937, 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 in Korea and around the world, as well as maintain a massive operational network that spans over continents.

### **Committed To Innovation**

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

### **Our Promise**

Doosan Industrial Vehicle will be the partner you can count on, with our commitment to you a top priority.

### **Award-Winning Machines**

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



# **Pro-7 Series Highlights...**

- Meets all EPA Tier 4 Final emission regulations by utilizing a Diesel Oxidation Catalyst (DOC) and a SCR (Selective Catalytic Reduction) system.
- Superb performance and high power output thanks to the new generation of Doosan built diesel engines.
- Rugged reliability, a strong and rigid chassis frame, and a design that uses the best materials possible, ensures that Doosan products are durable enough to handle the most rigorous applications.
- A new Zeus cabin provides improved visability and excellent comfort for the operator.
- Extended SCR system cleaning intervals means increased uptime and reduced servicing costs.

### Proven and reliable Doosan DLo6P engines and components

Doosan engines and components provide high torque at low engine rpm, reduced fuel consumption, and meets all EPA requirements.

### **Provides great productivity**

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

### Load-sensing hydraulic system

All Doosan models are equipped with a load-sensing hydraulic system which provides increased fuel efficiency and better overall performance. THE PRO-7 SERIES FORKLIFTS

22,000 to 36,000 lb Series



# Comfortable & convenient operator compartment

Designed to provide greater rigidity and comfort, the Zeus cabin offers outstanding visibility, a well designed dashboard, high quality interior, and excellent heating and air conditioning systems.

## Operator Presence System (OPS)

The OPS (Operator Presence System) prevents the unit from moving and disables the unit's functionality when an operator is not seated in the truck. This and other safety features provide added protection to the operator and those working around it.

### Meets Emission Regulations (Tier 4 Final) with a SCR + a DOC System

An extended SCR cleaning interval means increased uptime and reduced servicing costs.

No ash cleaning is required.



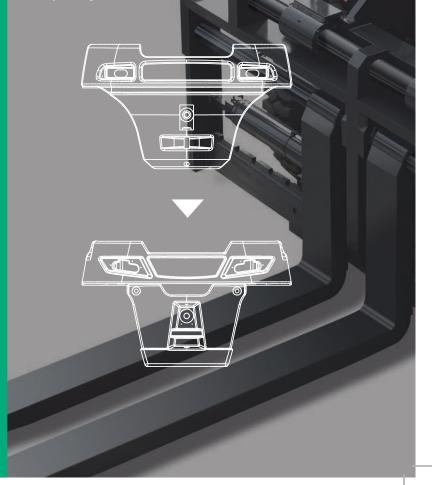
# Extreme durability and easy maintenance.

**Pro-7 Series Forklifts are built to tackle the most demanding applications.** 

An Oil-Cooled Disc Brake system guarantees maximum uptime and is virtually maintenance free to improve your bottom line.

### Counterweight

The sleek and unhindered styling of the Pro-7 Series counterweight helps to increase radiator efficiency by improving inside air flow.



### 22,000 to 36,000 lb Series

### New Air Cleaner

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

### Anti-Skid Step Plate

An Anti- Skid Step Plate increases safety when an operator enters and exits the forklift in inclement weather.

### Oil- Cooled Disc Brakes (ODB)

All Doosan 22,000 -36,000 lb Series Forklifts come equipped with Oil-Cooled Disc Brakes (ODB). The enclosed brake system eliminates outside contamination, significantly extends brake life, and decreases maintenance costs. The ODB service interval is five times longer than conventional shoe brakes.

### Hydraulic Motor Driven Remote-type Cooling Fan

A large capacity cooling fan is powered by a remote hydraulic motor and effectively manages operating temperatures. The fan helps to moderate engine wear and improve engine cooling capacity.

The fan speed also changes according to the truck's acceleration in order to maximize cooling capacity and minimize energy loss.

### **Instrument Panel**

**Easy Serviceability** 

Performing maintenance

compartment for better

access.

The Instrument Panel is loaded with a number of conveniences to provide additional ease of operation for users. Engine coolant temperature, speedometer, fuel level, and hour meter guages are just a few of the measurement tools that are available to help operators perform their jobs quickly, safely, and efficiently.







y when an is easier with a wider hood and exits opening range and an clement automatic tiltable operator

# Eco-Friendly and More

Doosan's unique and innovative Ultra-Low Particulate Matter Combustion system using a Selective Catalytic Reduction (SCR) and a Diesel Oxidation Catalyst (DOC) ensures the most modern 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 costs.

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

### What is the EPA?

The Environment Protection Agency (EPA) is responsible for writing and enforcing regulations that protect human health and the environment. Directive 1999/94/EC requires the reduction of emissions, specifically as it regards Particulate Matter (PM) and Nitrogen Oxides (NOx), on 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-4 Final & EU Stage 4 come in to effect from 2015 for over the 75 horsepower engine.

For the implementation of regulations PM and NOx should be reduced by 90% compare to EPA Tier-3.

### Doosan's green technology to meet Tier 4 Final emissions regulations

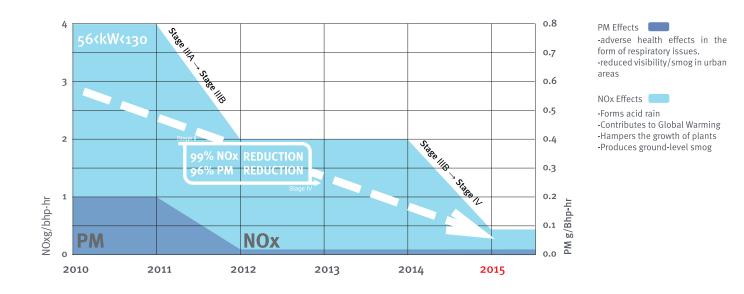
- Ultra Low PM Combustion (ULPC): Reducing Particulate Matter (PM)
- Diesel Oxidation Catalysts (DOC): Oxidizing HC, CO, SOF and Converting NO into NO2
- Selective Catalyst Reduction (SCR): Reducing Nox
- Diesel Exhaust Fluid (DEF): Reducing Ammonia

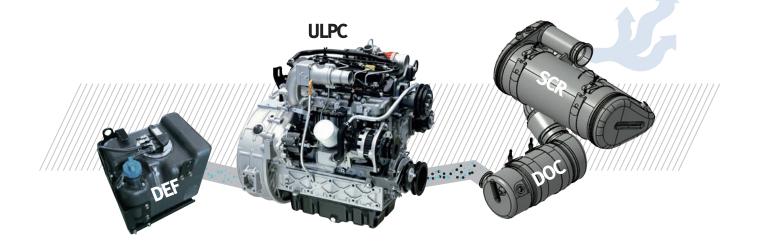
Below 56kW: Combination of ULPC and DOC Above 56kW: Combination of ULPC, DOC, DEF, and SCR

### The Pro-7 Series Forklifts

### 13,500 - 20,000 lb Series











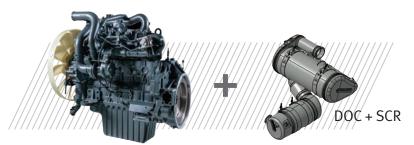
# Powerful & Fuel Efficient for performance.

Doosan's DLo6P electronically controlled engine, combined with already proven transmission and long-lasting Oil-Cooled Disc Brakes (ODB) provides excellent levels of productivity, durability, and value.



### **After Treatment System**

- Low fuel consumption offers excellent performance while complying with EPA Tier 4 Final emission regulations.
- -----> Through the combination of a highly efficient Exhaust Gas Reduction (EGR) system, a Diesel Oxydation Catalyst (DOC), and a Selective Catalyst Reduction (SCR) system, Doosan has been able to reduce exhaust emissions to their lowest levels.
- Selective Catalyst Reduction (SCR) system: The Pro-7 22,000 36,000 lb Series uses a Diesel Exhaust Fluid (DEF) as well as a catalytic converter to significantly reduce NOx emissions.
- \* SCR system cleaning is easily performed with a simple flip of a switch after 150 hours of successive operation. Most importantly, the cleaning can be performed on demand before you reach 150 hours when it is most convenient to you.



*THE PRO-7 SERIES FORKLIFTS* 22,000 to 36,000 lb Series



### **Engine Performance**

The new Doosan DLo6P 6.0 liter diesel engines are designed for efficiency and provide the performance and quality that you expect. A waste-gate turbo charger coupled with a high pressure common rail fuel injection system provides exceptionally high torque at low rpm with the bonus of lower fuel consumption.

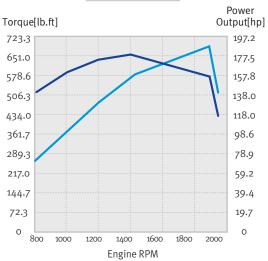
The DLo6P Doosan diesel engine meets all Tier 4 Final emission standards.

- DLo6P Tier 4 Final electronic controlled engine
- 6 cylinders, 4 cycles, 5,890 cc

- High torque at low rpm: 535 lb.ft @ 1,400 rpm

Unit	Doosan
-	D160S-7
-	DLo6P
hp / rpm	172.6 / 2,100
lb.ft / rpm	535 / 1,400
CC	5,890
	- - hp / rpm

### PERFORMANCE





# Redesigned Zeus Cabin Offers Increased Comfort & Enhanced Productivity

The Zeus cabin is constructed with the user in mind: promoting a comfortable environment with a number of ergonomic features to increase operator productivity.

### **Ergonomic Design**

The control switches and levers found within the Zeus cabin are conveniently positioned for ease of use. The Zeus cabin also features a quality suspension seat for maximum operator comfort.



### Spacious Leg Room and Enhanced Operator Comfort

- Entering and exiting the Zeus cabin is a breeze with its expanded floor space.
- Users benefit from low noise and vibration levels when operating the forklift from within the safe confines of the cabin.
- A telescopic steering column freely adjusts to accommodate operators of all sizes.

### **Improved Visibility**

The operator's seat is centered in the cabin for optimum visibility to guarantee safer operations and maneuverability during work shifts.



The Pro-7 Series Forklifts

22,000 to 36,000 lb Series



### **5" Full Color LCD Display**

The large LCD Display provides operators with important information like RPM, SCR cleaning indicator, check engine light, and DEF gauges.



### **Convenience Package**

A Convenience Package includes a convenience tray that helps operators keep paperwork and supplies organized.



### **Various Options**

The Zeus cabin may be enhanced with the following options:

- Heater
- Air Conditioner
- Panoramic Mirror
- CD or MP3 Player
- Rear View Camera
- Windshield Defroster Fan
- Rear Grab Bar with Horn
- Public Announcement (PA) System

# We are Your Reliable Partner.

Factory authorized service of Doosan forklifts is available from a dedicated network of local dealers. These dealers are fully backed by Doosan customer service support. When you own a Doosan forklift you can rest assured that there is a team of knowledgeable and responsive customer support professionals that will be available to help you get the most out of your investment.



# Standard features and Option Availability

Safety	Standard	Option	
Direction Lever Function	0		
Operator Presence System (OPS)	0		
Anti Cinching Type Orange Seat Belt	0		
Autoshift Controller	0		
Emergency Switch	0		
Panoramic Rear View Mirror	0		
Combination Lamps	0		
Back-up Alarm	0		
Weight Scale	0		
Public Announcement (PA) System		$\odot$	
Rear View Camera		0	ALC .
Rear View Camera (w/Steer Tire Indicator)		$\odot$	
Strobe Light (Amber/Red)		0	
Ground Speed Control		O	
Productivity	Standard	Option	SV/
Electric Controlled TCI (Turbo Charged Intercooler) Doosan Engine	0	S SV	
Ergonomic Pedals for Accelerator, Brake and Inching	0		A
All in one electronic Brake and Inching Pedal	0		
Rear Grab Bar (w/Horn)			
Two Additional Front Lights on Mast			
One Additional Rear Light on Counterweight			
Engine Block Heater		0	
Comfort	Standard	Option	1 Street
Telescopic Steering Column			10
Integrated Instrument Panel		Salk .	
Heated Suspension Seat	0		THE PARTY OF
Steering Knob	0		
Overhead Guard		0	M ·
Air Compressor		0	
Durability	Standard	Option	
Waterproof Connectors		Option	11 2
Dual Element Air Cleaner	0	in the second se	
Pre-Cleaner		fur:	
	DOOSAN		
Rigid Driveaxle (w/ODB)	DUSSAN		_
Full Autoshift Transmission			
Environment	Standard	Option	
Emission Regulation (Tier 4 Final)	0		
ISO 9001 / ISO 14001		Outline	
Certifications	Standard	Option	
	0		
		$\odot$	-
		5	
*Other options are also available. Please ask your local Doosan representative for more de	tails.		
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Product and specifications are subject to change without notice.

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