

## 7 Series Forklifts

Electric 1.5 to 2.0 ton capacity



*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.

**Leading the way.  
World class new 7 Series  
electric trucks from  
Doosan.**

The new 7 Series of 3 and 4 wheel electric counter balance forklift trucks, continue to follow the core Doosan tradition of delivering simple, powerful performance, whilst most of all, delivering the best possible value for our customers.

The specially designed ergonomic operator compartment keeps the operator in complete control at all times, improving productivity and reducing stress and fatigue. The new cell offers improved visibility and the latest design in ergonomic hydraulic controls. Thanks to an improved durable design and an additional stability system, Doosan's new 7 Series electric trucks exceed the highest demands for safe operation.

Extended maintenance intervals and advanced technology components reduce the overall cost of maintenance. The latest in AC control systems provide an unbeatable combination of power, performance and reliability. Each parameter is fully adjustable to perfectly match every customer's individual requirement, providing maximum control and accuracy for every function.



7 Series Electric Forklifts  
1.5 to 2.0 Ton Series



Reliable, Stable Operation  
IP65 Rated  
Curtis Controller



Simple, Powerful  
IP43 Rated Enclosed Type  
Drive & Pump Motor



Optimize Steer Axle Clamp Angle  
BT (3 Wheel Truck) : 90°  
BX (4 Wheel Truck) : 86°



Rounded Design  
Counter weight



Easy to Read and Diagnosis  
Instrument Panel



### Powerful & Reliable Technology

Using the latest technology in AC control systems of Curtis controller provides an unbeatable combination of power, performance and functionality. Infinitely adjustable, optimized controllability and exceptional reliability makes the new Doosan 7 Series, the operators choice of truck. The AC drive and hydraulic motors deliver smooth and seamless power whilst offering the lowest possible energy consumption.

### Industry Leading Performance

Doosan's 7 Series delivers high performance in the drive, lifting & lowering functions and offers the highest levels of efficiency and productivity. The specially designed Electro-magnetic Auto Parking Brake also gives the operator maximum safety and convenience. Whenever the operator leaves the seat, the truck's electro-magnetic parking brake is automatically applied with an unlimited ramp-hold function, ensuring there is no danger of the machine rolling away, especially if left unattended on a ramp or slope

### Maximized Productivity in Warehouse Applications

Effective storage is the primary goal for many warehouse managers. The 3 wheel models steer axles all turn to a perfect 90° angle thus minimizing the area needed to turn the machine in the tightest of spaces. The 4 wheel models have a brand new steer axle, which has been carefully designed to minimize the turning radius and can now achieve a superb 86° steer angle. In addition, the newly designed round shape of the counter-weight enables the truck to move comfortably in and out of narrow spaces, reducing damage costs.

### Outdoor Operations

The Doosan 7 Series electric forklifts are truly waterproof and safe for outdoor use. The new sealed controllers are rated to IP65 and the motors are rated to IP43 enclosed type, with all related wiring & connectors being silicon sealed. This means they are fully protected from "Dust, Debris and Liquid", and are capable of being used outdoors.

## Optimum Visibility & Safety

Visibility issues play an important role in forklift truck-related accidents and often reduces the productivity of the operation.

The precise designed overhead guard profile with angled roof bars provides a clear view upwards whilst ensuring ultimate strength for safety. Rear view or Panoramic mirrors offer additional safety to reduce accidents and unnecessary damage to the truck, products or racking.

The Fork Lift Truck Association award-winning Doosan Rear Grab Handle with Horn make reversing more comfortable and safe. The easy grip handle gives a comfortable place to locate your hand, instead of around the overhead guard, which could lead to damaged fingers or hands. The integrated horn button means that operators do not need to release the handle to push the horn on the steering wheel, but instead, they can continue looking in the direction they are travelling and press the horn without having to turn around.

Neatly arranged hydraulic hoses and chains provide clear front visibility through the wide view mast. All auxiliary hoses for attachments, such as integrated side-shift are aligned behind the mast chain and cylinders, which allows excellent forward visibility.



**Panoramic Mirror**  
Provides the operator a clear view of the whole back & rear working area, improving, working safety & efficiency.



**Rear Grab Bar with Horn**  
Adds to safety, comfort and convenience when traveling in reverse.



**Neatly arranged Hydraulic Hoses**  
Reduce width providing better visibility, silent staging, and added strength.

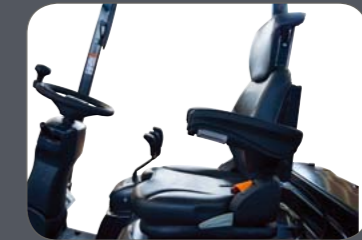


**LED Lights**  
Brighter and last longer than traditional sealed beams or halogen lights.



## Ergonomic Interior Design

Operators perform best when their working conditions are perfect and the Doosan 7 Series has been designed to make this a reality. The steering column and full suspension comfort seat, armrest and optional headrest are all fully adjustable to accommodate every operator's individual preferences. All of the control functions and displays are ideally situated for maximum comfort. In addition, operators can control the truck's performance settings during operation, simply by navigating the instrumental panel. The effortless new Doosan finger-tip control system or mechanical hydraulic levers enables the most effective operation. Also specially designed Convenience box uses combinations of new and old favorites give great added value, such as large cup holder, USB port & 12V cigar jack, clip board holder. These items can give operator a comfort.



## Easy to Control

**Choosing Hydraulic Levers :** Simple, reliable and familiar. The direction switch is also located on the hydraulic lever, meaning quick change of forward to backward is no problem and completely safe as there is no need to take your hands off the steering wheel or hydraulic levers.

**Choosing New Finger-tip Controls :** Optimal ergonomics giving optimal performance. Fast, precise and infinitely controllable makes operating the new Doosan 7-Series effortless and most efficient.



## Ease of Access Ensures Maximum Safety

Many operators have the need to get on and off the truck regularly for many different reasons. So, we have designed a number of features to make this easier and safer than ever before.

- Large entry step plate with an anti-slip pattern ensures sure footing even for large safety boots
- Easy grip handle makes entering and exiting the machine safer
- Large uncluttered floor plate with no trip hazards also gives improved comfort and more leg room
- Angled floor plate reduces strain on ankles and large pedals ensure maximum safety and ease of operation





## Maximum Safety & Stability in Operation

Like all Doosan equipment, Doosan 7 Series Electric Trucks are specially designed to contribute Safety & Stability driving. The Guardian Stability System (GSS) will dynamically protect the operator and the load to reduce risk of accidents. It not only meets all current and emerging demands for operator Safety & Stability in every application.

### Unlimited Ramp Hold

Electro-magnetic Auto Parking Brake (EPB) prevent the forklift from rolling back at a stop on an upslope. Operator can get-off truck easily without any braking on slope.

### Quiet & Smooth Operation

The modulating hydraulic cushioned valve is included in secondary cylinder of FF and FFT mast to prevent staging noise and it will give the quiet staging to the operator.

### Brake Oil Level Indicator

When the brake oil level in the brake oil reservoir is lower than minimum level, the low brake oil level indicator in the instrumental panel will flash.

### Low Battery Alarm

Lifting is limited to guide charging battery at 80% battery discharge during operation. This function can prevent sudden truck stop due to discharged battery.

### Automatic Speed Control

The angle sensing information controls the travel speed at sharp turning. It automatically reduces the travel speed to the optimum speed at the cornering.

### Mast Tilt Lock (ISO3691)

Hydraulic locking for preventing natural lowering and tilting.

### Mast Lowering Inter-Lock (ISO3691)

On condition that an operator keys off or getting off seat after lifting or tilting mast, the hydraulic lift & tilt locking system will prevent motion of truck such as lifting, tilting lowering and so on.



### OSS (Operator Sensing System)

Whenever the operator leaves the seat, the truck travel and mast lifting will stop.

### Seat Belt Indicator

When the driver starts the forklift, the warning Indicator in the instrumental panel will flash if the seat belt is not fastened. It is only for warning so there is no interlock to truck operation.

### Additional Features

- Decrease of Travel Speed (50%) when mast raised above primary stage
- Forward tilt reduced 2degree when mast raised above primary stage
- Alarm when mast raised above primary stage with mast tilted more than 2degree
- Auto Tilt Leveling Returns the mast to vertical position easily by tilt angle sensing

### Turtle Mode

Pushing the slow travel speed button when the truck operates in warehouse, the truck travel speed will slow down to the previously set speed without lifting speed reduction, the truck will start.

### Lever Neutral Position to Start

If the driver lever is forward or backward position when the operator key on, the truck will be automatically interrupted. After returning the direction lever to neutral position, the truck will start.





**B18T-7 Series**  
B15/18/20T-7, B18/20TL-7  
36 or 48V 3 Wheel Truck



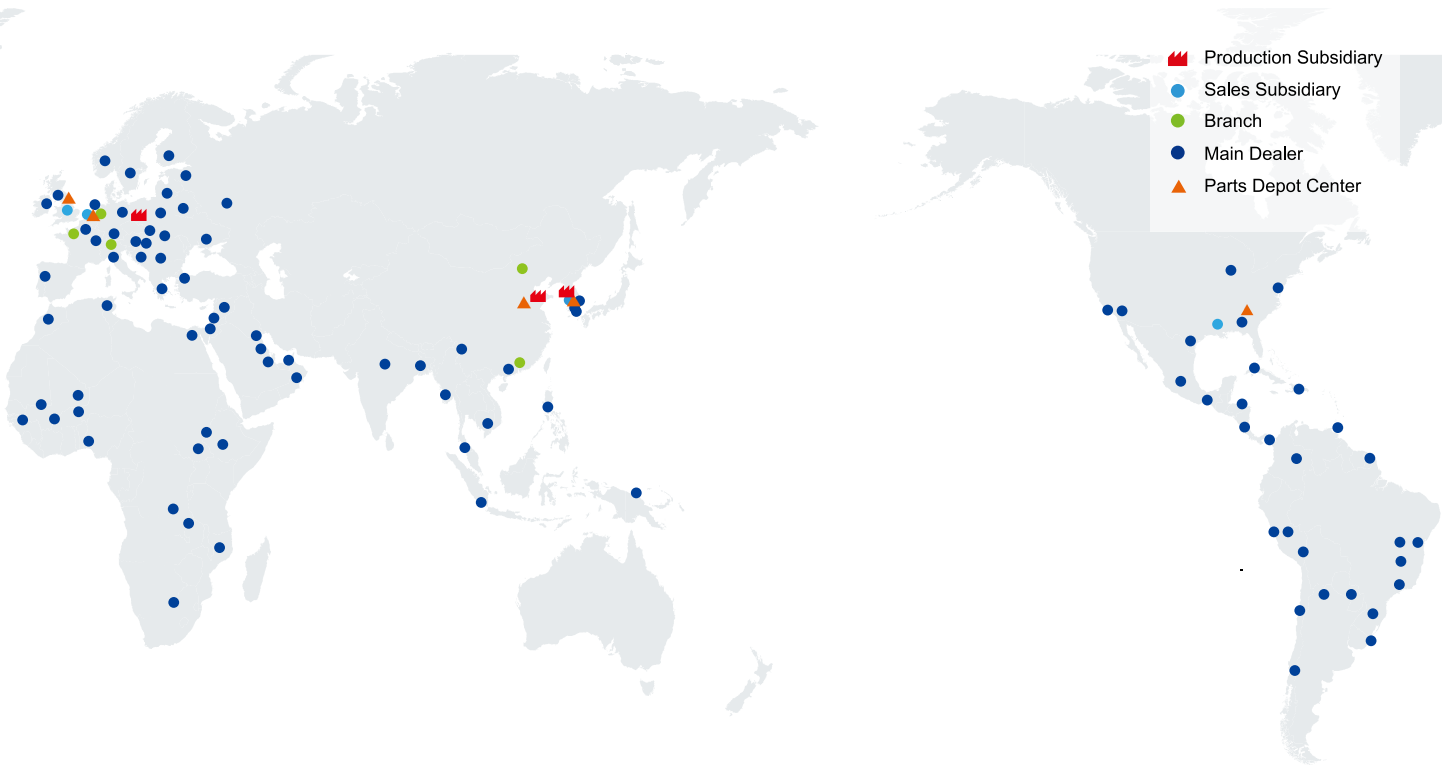
**B18X-7 Series**  
B16/18/20X-7  
48V, 4 Wheel truck

Major Specification		B15T-7	B18T-7	B18TL	B20T-7	B20TL-7	B16X-7	B18X-7	B20X-7
Classification		3 Wheel Electric					4 Wheel Electric		
Capacity	kg	1500	1750	1750	2000	2000	1600	1800	2000
Load Center	mm	500							
Wheel Base	mm	1323	1423	1554	1446	1554	1495	1495	1495
Turning Radius	mm	1515	1615	1756	1648	1756	1886	1886	1886
Load Moment Center	mm	376	376	376	381	381	376	376	381
Travel speed	km/h	17/17	17/17	17/17	17/17	17/17	17/17	17/17	17/17
Lift speed	m/s	0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6
Lowering speed	m/s	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45
Max. Gradeability (at 1.6km/h, Loaded)	%	26	25	25	24	24	26	25	24
Max. Drawbar Pull (Loaded)	Kgf	1300	1300	1300	1300	1300	1300	1300	1300
Right Angle Stacking Aisle Width; 1000 x 1200	mm	3216	3316	3457	3354	3462	3446	3466	3471
Right Angle Stacking Aisle Width; 800 x 1200	mm	3341	3441	3582	3479	3587	3665	3665	3670
S/A Clamp Angle	deg.	90	90	90	90	90	86	86	86

### Standard Features and Optional Extras

	STANDARD	OPTION
<b>SAFETY &amp; STABILITY, Guardian Stability System (GSS)</b>		
OSS (Operator Sensing System)	0	
Neutral Position for Start	0	
Unlimited Ramp Hold	0	
Low Battery Warning Alarm	0	
Brake Oil & Seat Belt Indicator	0	
(ISO 3691) Mast Lowering Inter-Lock & Tilt Lock	0	
Emergency Stop Switch		0
Rear Grab Bar with Horn Switch		0
Auto Tilt Leveling		0
Guardia Stability System : Option		0
- Decrease of Travel Speed (Up to 50%) when Mast Raised Above Primary Stage		
- Forward Tilt Reduced 2 Degree when Mast Raised Above Primary Stage		
- Alarm when Mast Raised Above Primary Stage with Mast Tilted more than 2 Degree		
<b>PRODUCTIVITY</b>		
Full AC System Chassis	0	
Rounded Design Counterweight	0	
IP65 Rated Curtis Controller	0	
IP43 Rated PAL Enclosed Type Motors	0	
86° (BX)/ 90° (BT) Steer Axle Clamp Angle	0	
Electro-Magnetic Automatic Parking Brake (EPB)	0	
Hydraulic Cushioned Valve in Secondary Cylinder (FFL & FFT)	0	
Accessory for DIN Type Battery Installation		0
Battery Lift In and Out System		0
Cooling Options : Fans & Fin Type Controller		0
Application Packages : Cold & Freezer, Beverage, Fishery		0
<b>Operator Comfort (Ergonomic)</b>		
Entry Grip Entry Bar & Large Entry Step with Anti-Slip Pattern	0	
Large & Angled Floor Plate (Leg Room) with Rubber Cushion	0	
Rounded Design Battery Hood Cover	0	
Easy to Read Instrument Panel	0	
Adjustable Tilt Steering Column & Easy Grip (Φ280 Size) Steering Wheel	0	
Hydraulic Control Lever with Direction Switch	0	
Large Cup Holder, USB Port & 12V Electric Jack, Clip Board	0	
New Finger-Tip Control		0
Power Grip Knob		0
Premium Seats : Grammer MSG65 Series		0
Panoramic Mirrior		0
LED Lights		0
Special Height Overhead Guards		0
Mono Pedals		0
Modular Cabins		0
<b>DURABILITY &amp; SERVICEABILITY</b>		
Robust Frame Structure & Strong Structure Overhead Guard	0	
Easy to Access Controller & Motors Room	0	
Wide Open Battery Hood Cover	0	
Tool-Less Side Cover with Air Ventilation	0	
Oil-Cooled Disc Brakes (ODB)	0	
Durable Heat-Resisting(38"SQ)Cables	0	
Easy Diagnostic & Fine-Tune	0	





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